INFORMATION HANDOUT

For Contract No. 07-1193U4
At 07-LA-10-37.2/42.4

Identified by
Project ID 0713000007

PERMITS

County of Los Angeles-DWP General Construction Permit PCCO 201304410

MATERIALS INFORMATION

Foundation Report for Citrus Street UC (Widen) (Br No. 53-0670)
Foundation Report for Grand Ave UC (Widen) (Br No. 53-1528)
Foundation Report for Holt Ave UC (Widen) (Br No. 53-0671)
Foundation Report for Via Verde UC (Widen) (Br No. 53-0870)
Foundation Report for Kellogg Drive UC (Widen) (Br No. 53-2008)
Geotechnical Design Report for Retaining/Sound Wall Nos. 1971, 1975, 2002, 2004, 2005, 2026, 2035, 2050, 2064, 2068, 2074, 2076, 2084, 2093, 2104, 2110, 2116, 2118, 2128, 2130, 2134, 2137, 2138, 2140, 2145, 2146, 2150, 2159, 2161, 2166 and 2220
Geotechnical Design Report for Retaining Wall No. 2181
Revised Geotechnical Design Report for Interstate 10 Sound walls
Battery backup system connection diagrams and foundation details
Asbestos Containing Materials Survey Report
Aerially Deposited Lead Site Investigation Report
Lead Site Investigation Report Interstate 10 HOV Widening Project
Supplemental Aerially Deposited Lead Site Investigation Report for Bridge Structures and Retaining Walls

County of Los Angeles-DWP
General Construction Permit
PCCO 201304410

Tract #:

Issued By: GASANCHEZ
Issued Date: 29-OCT-13

Permit #: **PCCO 201304410**

AMEND #1 EXTEND PERMIT UNTIL 12/31/15

Permit Office: 6

PC-GENCONS
GENERAL CONSTRUCTION PERMIT

COUNTY OF LOS ANGELES-DPW
Department Of Public Works
Alhambra, CA 91803 - (626)458-3129

Construction Permit

Individual's / Company Name	Address / City, State Zip	Work Phone	Home Phone
(APP) STATE OF CALIFORNIA//CALTRA	100 S. MAIN ST. # 100, MS 13		
MAY P. FUNG	LS ANGELES, CA 90012		
(CNT) STATE OF CALIFORNIA//CALTRA	100 S. MAIN ST #100, MS 13	213-897-6362	
MASOUD NOURI	LS ANGELES, CA 90012		

Emergency Contact

Location

Site Address:
Description: LAC - VIA VERDE RD PARK & RIDE, VIA VERDE (PCA - LRDCALTRAN)

Scope of Work

PURPOSE : To replace portion of 60" pipe with 4'x4'x18' RCB, relocate M.H., and relocate (curb opening) catch basin as shown on the attached plans.

*****AMENDMENT #1 1/20/2015 EXTEND PERMIT EXPIRATION DATE TO 12/31/2015**********

1- Road work such as, but not limited to, excavation, trenching, backfilling, and paving shall be per Los Angeles County road codes, standards, and requirements.

2- Permittee shall maintain traffic flow at all times and shall follow the traffic control requirements set forth in the most recent edition of the California MUTCD Part 6 (California Manual of Temporary Traffic Controls).

3- Excavations are to be plated unless otherwise directed by the inspector. The plates shall be installed flush with the existing pavement. All gaps surrounding the plates must be filled to the satisfaction of the inspector.

4- Excavations 2' wide or less, within the travelled roadway, require the use of one (1) sack slurry or other approved Controlled Low Strength Material (CLSM) as backfill.

5- This permit does not authorize the installation of any facility on private property.

6- Only CalTrans is permitted to do work under this permit. No other contractor shall be allowed to work under this permit without submittal and approval of its insurance as stipulated in section 7-3 and 7-4 of the "GREENBOOK" and "GRAYBOOK". It is the responsibility of the permittee/owner to submit the proper insurance documents (general liability, workers comp, and additional insured endorsement showing LA County as an additional insured) prior to the start of construction.

7-Should evidence of the renewal or replacement of the contractor's insurance policy not be filed with the County prior to its expiration or cancellation date, the County will stop all work and no further work shall be performed until new insurance coverage has been obtained by the Contractor, as stipulated in section 7-3 and 7-4 of the "GREENBOOK" and "GRAYBOOK".

cc: Programs Development Division (Transit Operations)

Permit Detail

ATTACHMENT	:	LAPWRP612R - PCBMPATTAC
INSPECTION CHARGE #:		LRDCALTRAN
INSURANCE EXPIRE		TBD
LOCATION 1:		VIA VERDE
PLAN CHECK CHARGE #		LRDCALTRAN
ROAD DEPARTMENT NO. :		518 - PO1
THOMAS GUIDE	:	599 H7

Comments

WHASSABE	22-OCT-13	All Charges for this permit will be against PCA # LRDCALTRAN
LRADLE	20-JAN-15	AMEND#1 EXTEND PERMIT EXPIRATION DATE TO 12/31/2015.

PCCO 20130410

REPORT: lapwrp028

Tract #:

Issued By: GASANCHEZ
Issued Date: 29-OCT-13

Permit #: **PCCO 201304410**

AMEND #1 EXTEND PERMIT UNTIL 12/31/15

Permit Office: 6

Fees	Fee Code	Acount Code	Amount
			$0.00
		Total Fees:	$0.00

Permittee is hereby permitted to perform the scope of work described above at the location described above, subject to all applicable provisions of the County of Los Angeles Highway Permit Ordinance (Division 1 of Title 16, Los Angeles County Code), and/or any Municipal Code or Ordinance governing the area where this work is to be done. Permittee's activities in connection with this Permit shall also be subject to the provisions and conditions contained in this Permit and any attachments, which are incorporated herein. This Permit is revocable by the County if the County determines that the public interest and welfare require such revocation and shall be deemed void if the Permittee is not in compliance with Section 3800 of the Labor Code.

Performance of the work of activity under this permit is tantamount to agreeing to the conditions of this permit. A copy of this permit shall be kept at the work site during the period of operation within road right of way and shall be shown to the County's representative or any law enforcement officer upon demand.

INSPECTION REQUIRED

CALL PERMIT OFFICE AT LEAST ONE (1) WORKING DAY BEFORE STARTING WORK UNDER THIS PERMIT. FAILURE TO DO SO IS CAUSE FOR REVOCATION OF THIS PERMIT. THIS PERMIT IS VOID IF WORK IS NOT STARTED WITHIN 60 DAYS FROM THE DATE OF ISSUANCE.

PERMIT OFFICE NO. 1
Baldwin Park Office
14747 EAST RAMONA BOULEVARD
BALDWIN PARK, CA 91706
PHONE NO. 626-338-9515
FAX NO. 626-814-1763

PCCO 20130441Ø

REPORT: lapwrp028

FOUNDATION REPORT
FOR
CITRUS STREET UC
(Br No. 53-0670)

State of California **Business, Transportation and Housing Agency**
DEPARTMENT OF TRANSPORTATION

M e m o r a n d u m

Flex your power!
Be energy efficient!

To: HOWARD NG
OFFICE OF STRUCTURE DESIGN
SOUTH 2

Date: March 6, 2014
File: 07-LA-10 -PM 37.48
EA07-1193U1
Citrus Street UC (Widen)
BR. No. 53-0670

Attn.: Dawit Worku

From: **DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
GEOTECHNICAL SERVICES
OFFICE OF GEOTECHNICAL DESIGN – SOUTH 1

Subject: **Final Foundation Report for Citrus Street UC (Widen)**

The following is the foundation report (FR) for the proposed widening of Citrus Street Undercrossing (Bridge No. 53-0670) on Route 10, in the city of West Covina, Los Angeles County.

SCOPE OF WORK

The scope of work for this geotechnical study includes:

- Review of the as-built plans and the log of test borings (LOTBs)
- Subsurface Exploration
- Laboratory testing of soil samples obtained during field investigation
- Evaluation of site geology, subsurface conditions, and groundwater
- Site seismicity study
- Engineering analyses
- Geotechnical foundation recommendations and construction considerations

This foundation report supersedes the preliminary foundation report, *addition of high occupancy vehicle lanes (HOV) on Route Interstate 10 from Citrus Avenue to State Route 57, 71 and 210 Interchange, Los Angeles County, California*, prepared by AESCO Inc., dated March 28, 2002.

PROJECT DESCRIPTION

The proposed project is to widen both eastbound and westbound I-10 from west of Citrus Street in the City of West Covina to State Route 57 in the City of Pomona (PM 37.2 to PM42.4), in order to accommodate one HOV lane in each direction of Route 10 freeway.

As the first of five bridge structures to be widened from west, the existing Citrus Street Bridge is a two-span cast-in-place (CIP)/pre-stressed (PS) concrete box girder bridge with a total length of about 160 feet. Both sides of the bridge are to be widened. The widening width will be approximately 13.5 feet to 23.8 feet in westbound direction, and 22.3 to 23.7 feet in eastbound direction, respectively. Pre-cast pre-stressed (post-tensioned) box girder will be used for the widened portion of the super structure, with each side of the widening supported by single column bent and seat type abutments.

SUBSURFACE EXPLORATION AND TESTING PROGRAM

The subsurface exploration program consists of three Cone Penetration Tests (CPT soundings) and three exploratory borings (two hollow-stem auger borings and one rotary wash boring). Standard Penetration Tests (SPT) was performed in compliance with ASTM D 1586. Pocket penetrometer readings were also taken from cohesive soil samples at the selected depth for strength evaluation. Hogentogler electric cone was used in CPT soundings, which were performed in compliance with ASTM D 5778.

The information on locations, elevations, and investigation depths of all soundings and drillings is summarized in Table 1 below.

Table 1 Summary of Subsurface Exploration

Exploratory Boring No.	Station	Offset (ft)	Approx. Top of Hole Elevation (ft)	Approx. Borehole Depth (ft)	Exploration Method	Equipment
A-09-001	1980+25.4	141.9 R	473.3	82	Hollow Stem Auger	CME85
A-09-002	1979+32.3	133.4 L	475.8	115	Hollow Stem Auger	CME75
RW-09-051	1980+26.5	121.0 R	472.7	121	Rotary Wash	CME85
CPT-09-015	1980+25.4	130.1 R	473.0	25	Cone Penetration	Hogentogler Electric
CPT-09-016	1979+34.6	100.1 L	475.2	11	Cone Penetration	Hogentogler Electric
CPT-09-025	1980+24.0	118.6 R	472.7	10	Cone Penetration	Hogentogler Electric

LABORATORY TESTING PROGRAM

During subsurface exploration, relatively undisturbed soil specimens were retrieved using Modified California Samplers (MC) and sealed with plastic caps and tapes in brass tubes. SPT samples and bulk samples were collected for future soil engineering property and corrosion evaluation.

The laboratory testing program consists of Atterberg limit tests, particle size analyses, and direct shear tests. The laboratory test results are available for viewing in Translab, Sacramento.

SITE GEOLOGY AND SUBSURFACE CONDITIONS

Site Geology

The Site is located in the San Gabriel Valley, which is a broad, relatively flat to slightly sloping basin filled with Tertiary (65 million years) or younger sediments derived from surrounding hills and mountains. The Site is underlain by artificial fill which may overly undifferentiated Holocene alluvial-fan deposits primarily consisting of gravel and sand.

Geologic Map of the Baldwin Park 7.5' Quadrangle (A Digital Database dated 1998, by Siang S. Tan) was reviewed during the project study. Based on cross section A-A' of the map, quaternary deposits may be 100 feet in thickness at the project site.

Subsurface Conditions

As can be seen on the LOTBs, predominantly sandy materials were encountered during the current subsurface exploration. The densities of those sandy materials are generally from medium dense to very dense. Layers of stiff to medium stiff clay with thickness ranging from 3 feet to 5 feet were encountered at depths of 28 feet and 61 feet for Boring No. A-09-001, and depth of 62 feet for Boring No. A-09-002, respectively.

The As-Built LOTBs from subsurface exploration performed in August 1969 for the original bridge also indicate that soils at the project site are mostly medium dense to dense sandy soils down to the bottom of exploratory boring, which was terminated at Elev. 435 feet.

The idealized soil profile and soil strength properties for foundation design are presented in following table.

Table 2

Interpreted Soil Profile and Engineering Properties					
Approximate Elevation (ft)	Predominant Soil Type, USCS	Average Blowcount, N60	Total Unit Weight (pcf)	Apparent Friction Angle (degree)	Undrained Shear Strength (psf)
+474' to +465'	SM	10	110	31	N/A
+465' to +460'	ML	14	110	N/A	1000
+460' to +455'	SP	60	123	40	N/A
+455' to +445'	SP/SM	17	112	30	N/A
+445' to 430'	CL/ML	18	112	N/A	1500
+430' to +412'	SM/SP	32	120	32	N/A
+412' to +407'	ML/CL	26	115	N/A	1200
+407' to +391'	SM/SC	>70	125	40	N/A

Groundwater

According to the as-built LOTBs, groundwater was not encountered during August 1969 subsurface exploration down to approximately Elev. 435 feet. The recent borehole (A-09-001) that terminated at the depth of 82 feet (Elev. 391.3 feet) did not encounter ground water. But groundwater table was encountered at a depth of approximately 114.5 feet (Elev. 361.3 feet) in hollow-stem-auger boring A-09-002, on 4/30/2009.

The information on Los Angeles County Department of Public Work (LADPW) Ground Water Wells website shows four monitoring wells (3112B, 3113A, 3102, and 3103) located within 0.65 miles from the project site. The wells indicate that the high water levels are in the range of Elev.345 to 370 feet except Well 3112B, where unreliable groundwater reading was presented on the record.

From the above records, the highest measured groundwater table at the job site is at Elev. +370 feet. Therefore, groundwater table is relatively low and is not a concern for the design and construction of the proposed bridge foundations. However, groundwater may fluctuate with the change of season, and local irrigation.

CORROSION EVALUATION

The bulk samples obtained from soil boring A-09-001 were shipped to Caltrans' Materials Laboratory, and tested for pH value and minimum electrical resistivity. The corrosion test results are presented in Table 3 below. Based on Caltrans Corrosion Guidelines (Version 1.0, September 2003), the test results indicated the soils are non-corrosive to structure foundation.

Table 3 Corrosion Test Summary

Location	Depth of Sample (ft)	pH	Soluble Sulfates	Soluble Chlorides	Minimum Resistivity
A-09-001	Composite	5.84	N/A	N/A	4407 ohm-cm

Note: Caltrans currently considers a site to be corrosive to foundation elements if one or more of the following conditions exist: Chloride concentration is greater than or equal to 500 ppm, sulfate concentration is greater than or equal to 2000 ppm, or the pH is 5.5.or less. It is the practice of Caltrans Corrosion Technology Section (with the exception of MSE Walls) if the minimum resistivity of the sample is greater than 1000 ohm-cm and the pH is greater than 5.5, the sample is considered to be noncorrosive.

SEISMIC RECOMMENDATIONS

Ground Motion

The job site is within a seismically active region, and close to a number of active faults. Based on subsurface conditions, a shear wave velocity (V_{s30}) of 240m/sec for the upper 100 feet (30 meters) of foundation soils was used for the ground motion evaluation. Information regarding the faults in the vicinity of the project site was obtained from the Caltrans ARS Online Tool (v2.2.06), and summarized in Table 4 below:

Table 4 Summary of the Adjacent Faults

Fault Name	Magnitude	Fault Type	Distance, (miles)	PGA, (g)
San Jacinto (San Bernardino)	7.7	Strike-Slip	4.9	0.3
Fontana	6.5	Strike-Slip	1.8	0.4
San Jacinto (San Bernardino Valley)	7.7	Strke-Slip	7.6	0.3

However, based on the USGS 2008 Interactive Deaggregations, the design response spectrum is controlled by 5% probability of exceedance over 50 years. The peak ground acceleration for the job site under Probabilistic scenario is approximately 0.6g. The corresponding design response spectrum was plotted and tabulated in the attachment of this foundation report.

Liquefaction Hazard

According to the Seismic Hazard Zones of Baldwin Quadrangle Map released March 25, 1999, the project site is outside of the identified liquefaction zones. More importantly, as mentioned in groundwater section above, groundwater level is deep. Therefore, liquefaction potential is negligible. The potential of lateral spreading is also negligible, as it is triggered by liquefaction, and affected by factors such as ground geometry.

Ground Rupture

Since no known fault crosses the project site, the potential of ground rupture at this site due to fault movement is negligible.

AS-BUILT FOUNDATION DATA

The existing bridge is a continuous, two-span, CIP/PS concrete box-girder (24 cells) bridge on a seven-column bent and two open-end retaining wall abutments, with pinned-to-the-end diaphragms. Seven 10 feet by 11 feet spread footings are supporting columns at the bent. Six and half feet wide and 10-foot wide strip footings were used for Abutments 1 and 3, respectively. The as-built foundation data for the existing bridge is summarized in Table 5 below.

Table 5 Existing Bridge Foundation Data

Support Location	Shallow Foundation Type	Approx. Footing Dimension (L X B), ft	Quantity	Allowable Bearing Capacity, tsf	Bottom of Footing Elevation*, ft
Abutment 1	Strip Footing	193.75 X 6.5	1	3.5	478.5
Bent 2	Isolated Rectangular Footing	11X10	7	4.5	465
Abutment 3	Strip Footing	200 X 10	1	2.5	472

Note: * Approximately 2.4 feet need to be added to the elevation on as-built plans (NGVD29 datum) to match current vertical datum (NAVD 88).

The soil borings shown on as-built plans were located on top of the embankment near Abutments 1 and 3 of the bridge. Subsurface materials are mostly medium dense to very dense sandy silt to gravelly sand, except for the embankment fills near westbound Abutment 3, where loose sand were encountered during subsurface exploration performed on 8/20/1969.

FOUNDATION RECOMMENDATIONS

Foundation Type Selection

Existing spread footings at all structure support locations have performed well, with no bearing capacity and settlement related structure distress reported. However, due to increased design live load, more stringent settlement control criteria under current design specifications, and high seismicity at the project site, deep foundations is recommended for the proposed widening.

Among available deep foundation options, twenty-four inch diameter cast-in-drilled-hole (CIDH) piles are recommended for all support locations of this bridge. The CIDH pile option is recommended because it generates less noise and vibration compared with pile driving, and is more suitable for the job site, which is in an urban area.

Foundation Data Provided by Structural Designers

Based on the Department policy, Load and Resistance Factor Design (LRFD) is used for design of the bent foundations, and Work Stress Design (WSD) is used for the abutment foundations. The foundation design data and load data were provided by structure designers and presented in follow tables:

Table 6.1 Deep Foundation Data (Left Widening)

Support ID	Design Method	Pile Type	Finish Grade Elevation (ft)	Bottom of Footing Elevation (ft)	Pile Cap Size (ft)		Number of Piles per column	Permissible Settlement under Service Load (in)
					B	L		
Abut 1	WSD	24” CIDH	485	479.88	16	7.5	4	1”
Bent 2	LRFD	24” CIDH	474	468	16	17	10	1”
Abut 3	WSD	24” CIDH	479	473.38	25.83	9	7	1”

Table 6.2 LRFD Service Limit State I Load Data (Left Widening)

Support ID	Total Vertical Load, kip		Permanent Loads Per Support, kip
	Per Support	Max. Per Pile	Per Support
Abut 1	340	107	260
Bent 2	670	131	470
Abut 3	740	146	580

Table 6.3 LRFD Strength and Extreme Limit States Load Data (Left Widening)

Support ID	Strength Limit State (Controlling Group, Kip)				Extreme Limit State (Controlling Group, kip)			
	Compression		Tension		Compression		Tension	
	Per Support	Max. Per Pile	Per Support	Max. Per Pile	Per Support	Max. Per Pile	Per Support	Max. Per Pile
Abut 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bent 2	1657	238	-	-	676	331	-	-196
Abut 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 7.1 Deep Foundation Data (Right Widening)

Support ID	Design Method	Pile Type	Finish Grade Elevation (ft)	BOF Elevation (ft)	Pile Cap Size Size (ft)		Number of Piles per column	Permissible Settlement under Service Load (in)
					B	L		
Abut 1	WSD	CIDH 24”	485	479.88	24.3	7.5	5	1”
Bent 2	LRFD	CIDH 24”	473	467	16	17	10	1”
Abut 3	WSD	CIDH 24”	479	473.38	25.5	9	7	1”

Table 7.2 LRFD Service Limit State I Load Data (Right Widening)

Support ID	Total Vertical Load, kip		Permanent Loads Per Support, kip
	Per Support	Max. Per Pile	Per Support
Abut 1	570	147	410
Bent 2	1087	187	768
Abut 3	835	153	660

Table 7.3 LRFD Strength and Extreme Limit States Load Data (Right Widening)

Support ID	Strength Limit State (Controlling Group, kip)				Extreme Limit State (Controlling Group, kip)			
	Compression		Tension		Compression		Tension	
	Per Support	Max. Per Pile	Per Support	Max. Per Pile	Per Support	Max. Per Pile	Per Support	Max. Per Pile
Abut 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bent 2	2092	283	-	-	1124	372	-	-177
Abut 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Axial Capacity

The foundation design recommendations for abutments and bents are presented on Tables 8.1 and 8.2, respectively. The Pile Data Table to be included in contract plans is presented on Table 8.3. The CIDH piles are designed using SHAFT 5.0 program (Ensoft Inc.), which is based on O'Neil and Reese Method (1999) described in chapter 10 of the AASHTO LRFD Bridge Design Specifications (BDS, 2007). Since loose, residual materials may accumulate at the bottom of the drilled holes even after bottom cleaning during shaft installation, only skin friction portion of the pile resistance is taken into account as nominal geotechnical resistance. Pile group effects are considered at all support locations based on pile layout on the contract plans provided by Structure Design and AASHTO LRFD BDS (2007).

Table 8.1

Abutment Foundation Design Recommendations								
Support Location	Pile Type	Cut-Off Elevation (ft)	LRFD Service-I Limit State Load per Support (kip)		LRFD Service-I Limit State Load per Pile in Compression (kip)	Required Nominal Resistance (kip)	Design Tip Elevation (ft)	Specified Tip Elevation (ft)
			Total	Permanent				
Abut 1(L)	24" Standard CIDH	480.13	340	260	107	220	447 (a) 463 (c) 454 (d)	447
Abut 1(R)	24" Standard CIDH	480.13	570	410	147	300	441 (a) 457 (c) 454 (d)	441
Abut 3(L)	24" Standard CIDH	473.63	740	580	146	300	430 (a) 455 (c) 446 (d)	430
Abut 3(R)	24" Standard CIDH	473.63	835	660	153	310	429 (a) 454 (c) 446 (d)	429

Notes:

1. *Design Tip Elevations for Abutments are controlled by: (a) Compression, (c) Settlement, and (d) Lateral load.*
2. *CIDH pile specified tip elevation shall not be raised.*

Table 8.2

Bent Foundation Design Recommendations										
Support Location	Pile Type	Cut-off Elevation (ft)	Service-I Limit State Load per Support (kip)	Total Permissible Support Settlement (inch)	Required Factored Nominal Resistance (kip)				Design Tip Elevations (ft)	Specified Tip Elevation (ft)
					Strength Limit		Extreme Event			
					Compression (ψ =0.7)	Tension (ψ =0.7)	Compression (ψ =1)	Tension (ψ =1)		
Bent 2(L)	24" Standard CIDH	468.25	670	1	238	N/A	331	196	418 (a-I) 420 (a-II) 423 (b-II) 449 (c) 439 (d)	418
Bent 2(R)	24" Standard CIDH	467.25	1087	1	287	N/A	372	177	413 (a-I) 415 (a-II) 425 (b-II) 439 (c) 438 (d)	413

Notes:

1. *Design Tip Elevations for Bents are controlled by: (a-I) Compression (Strength Limit State), (b-I) Tension (Strength Limit State), (a-II) Compression (Extreme Event), (b-II) Tension (Extreme Event), (c) Settlement, (d) Lateral load.*
2. *CIDH pile specified tip elevation shall not be raised.*

Table 8.3

Pile Data Table					
Support Location	Pile Type	Nominal Resistance (kip)		Design Tip Elevation (ft)	Specified Tip Elevation (ft)
		Compression	Tension		
Abut 1(L)	24" Standard CIDH	220	0	447 (a) 463 (c) 454 (d)	447
Abut 1(R)	24" Standard CIDH	300	0	441 (a) 457 (c) 454 (d)	441
Bent 2(L)	24" Standard CIDH	340	200	418 (a) 423 (b) 449 (c) 439 (d)	418
Bent 2(R)	24" Standard CIDH	410	180	413 (a) 425 (b) 439 (c) 438 (d)	413
Abut 3(L)	24" Standard CIDH	300	0	430 (a) 455 (c) 446 (d)	430
Abut 3(R)	24" Standard CIDH	310	0	429 (a) 454 (c) 446 (d)	429

Notes:
1. *Design Tip Elevations are controlled by: (a) Compression, (b) Tension, (c) Settlement, (d) Lateral load.*
2. *CIDH pile specified tip elevation shall not be raised.*

Lateral Capacity

Lateral analyses of piles were performed using LPILE PLUS 5.0 program (Ensoft Inc.). Non-linear EI for the reduction of pile section modulus due to the section crack and “P” reduction factor for the modified soil spring value under group pile condition are considered in these analyses, together with the influence of axial load on moment capacity of piles.

For the abutments, both fixed (rigid) and hinge (pinned) boundary conditions at pile top representing possible pile-to-cap structural connections are considered for the evaluation of deflection controlled lateral pile capacity under service condition. The results of lateral pile analysis under lateral loads and lateral deflections at pile top are presented in Tables 9.1 and 9.2. The calculated maximum bending moments and locations of the maximum moment under each lateral load and deflection are also presented in the tables.

Table 9.1 Summary of Lateral Pile Analysis for Abut 1

Load vs Pile Top Deflection of 24" Dia. CIDH Piles at Abut 1 (BR53-0670) (Pile info: Length =45', Cut-off Depth =5' below FG)					
Pile Top Deflection (in)	Assuming Pile/Cap Hinge Connection			Assuming Pile/Cap Rigid Connection	
	Lateral Load on Pile Top (Max. Shear) (lbs)	Maximum Bending Moment (lb-ft)	Depth to Maximum Moment from Pile Top (ft)	Lateral Load on Pile Top (Max. Shear) (lbs)	Maximum Bending Moment (on Pile Top) (lbs-ft)
0.25	32190	88560	5.9	61181	204065
0.50	45909	133239	5.9	Moment capacity of piles (325 kips-ft) will be reached at lateral deflection of 0.50 in. at pile top, with corresponding shear at approximately 91 kips	
0.75	57792	172943	5.9		
1.00	68827	210066	5.9		
Notes:					
1) Material Stengths and reinforcement information are shown on Plate B2-5 of Standard Plan (May, 2006);					
2) Group Reduction Factor (P-Multiplier) is assumed to be 0.7;					
3) Axial Load is assumed to be 100 kips on each pile;					
4) Lateral controlled pile tip is 26 ft below pile top for hinge condtion.					

Table 9.2 Summary of Lateral Pile Analysis for Abut 3

Load vs Pile Top Deflection of 24" Dia. CIDH Piles at Abut 3 (BR53-0670) (Pile info: Length =45', Cut-off Depth =5' below FG)					
Pile Top Deflection (in)	Assuming Pile/Cap Hinge Connection			Assuming Pile/Cap Rigid Connection	
	Lateral Load on Pile Top (Max. Shear) (lb)	Maximum Bending Moment (lb-ft)	Depth to Maximum Moment from Pile Top (ft)	Lateral Load on Pile Top (Max. Shear) (lb)	Maximum Bending Moment (on Pile Top) (lb-ft)
0.25	30358	87048	6.3	58187	199436
0.50	43520	130860	6.3	Moment capacity of piles (325 kips-ft) will be reached at lateral deflection of 0.53 in. at pile top, with corresponding shear at approximately 89 kips	
0.75	54962	169931	6.3		
1.00	65562	204832	6.3		
Notes:					
1) Material strengths and reinforcement information are shown on Plate B2-5 of Standard Plans (May, 2006);					
2) Group Reduction Factor (P-Multiplier) is assumed to be 0.7;					
3) Axial Load is assumed to be 100 kips on each pile;					
4) Lateral controlled pile tip is 28 ft below pile top.					

In lateral pile analysis for bent foundations, pile and pile cap is assumed to be hinge-connected based on information provided Structure Designer. The results of lateral pile analysis on lateral loads and lateral deflections at pile top are presented in Tables 9.3 below. The calculated maximum bending moment and location of the maximum moment under each lateral load and deflection are also presented in the table. The ultimate lateral pile capacity is defined as the maximum lateral shear at pile top. Under this load, the moment capacity, plastic moment, will be reached and the second hinge will be developed in CIDH pile.

Table 9.3 Summary of Lateral Pile Analysis for Bent 2

Load vs Pile Top Deflection of 24" Dia. CIDH Piles at Bent 2 (BR53-0670) (Pile info: Length =45', Cut-off Depth =6' below FG)			
Pile Top Deflection (in)	Assuming Pile/Cap Hinge Connection		
	Lateral Load on Pile Top (Max. Shear) (lb)	Maximum Bending Moment (lb-ft)	Depth to Maximum Moment from Pile Top (ft)
0.25	26009	78826	5.9
0.50	40626	123941	5.4
0.75	51678	164781	5.9
1.00	59806	198133	5.9
1.50	67372	245116	6.8
2.50	70281	296201	7.7
3.00	71373*	299479*	8.1*
Notes:			
1) Material strengths and reinforcement information are shown onPlate B2-5 of Standard Plan (May, 2006);			
2) Group Reduction Factor (P-Multiplier) is assumed to be 0.5;			
3) Axial load is assumed to be 60 kips on each pile;			
4) Lateral controlled pile tip is 29 ft below pile top for hinge condition;			
* Pile moment capacity (300 kips-ft) reached at top deflection of 3 in. with corresponding shear of 71 kips on pile top.			

The analyses for lateral controlled pile tip are also performed for CIDH piles at all structure support locations. The lateral controlled pile tip is defined as a critical pile length, beyond which, the increase of that length will not lead to reduction of pile deflection under specific lateral load. The critical pile length under maximum lateral load is considered as the lateral controlled pile length. Its corresponding tip elevation is defined as lateral load controlled pile tip elevation. The lateral load controlled pile tip elevations are presented in foundation design recommendations and pile data tables, Tables 8.1 to 8.3.

ABUTMENT RETAINING WALLS (WINGWALLS)

The standard Type 1 retaining wall with spread footing (Standard Plans 2006) and special design Type 1SWB retaining wall with soundwall on spread footings (Standard Drawing, July 2011) will be used for the westbound and eastbound widening respectively. The new abutment wingwalls will be constructed outside of the existing wingwalls. The existing wingwalls are also supported by spread footing and performed well over years. A minimum factor of safety of 3.0 can be achieved for the bearing capacity of the proposed wingwall footings with design wall height up to 12 feet, based on foundation soil profiles on as-built LOTBs for the construction of original bridge and general property of embankment fill with 95% relative compaction.

According to Section 4.4.5.1 of Bridge Design Specifications (2004), a minimum horizontal distance of 4 feet, measured at the top of the footing, should be maintained between the near face of the footing to the face of finished slope. With the exception of embankment end slope, all side slopes of approach embankment should be graded to no steeper than two (horizontal) to one (vertical) slope.

EARTHWORK

Sliver fills of various thicknesses will be placed at the approach embankments. Due to deep groundwater table and predominantly medium dense to dense sandy soils below the existing grade, settlement under the embankment fills will be negligible, and expected to complete during construction.

CONSTRUCTION CONSIDERATIONS

1) Based on the findings from subsurface exploration, observed groundwater table is below footing excavation and the tip of CIDH piles.

2) Foundation materials are mostly granular. Though cave-in depth was not measured in any of the hollow-stem-auger boreholes, cave-in potential for the drilled holes is high. Preventive measures such as using temporary casing or cement-slurry backfill into an enlarged hole due to case-in followed by re-drill may be needed.

3) For CIDH piles with center-to-center spacing of four times of pile diameter and less (FHWA, May 2010), the installation of CIDH piles adjacent to a completed CIDH pile

must be performed only after the Portland cement concrete of the completed pile has reached “initial set” and developed sufficient strength.

If you have any question, please contact Haitao Liu at (916) 227-0992.

Report by:

HAITAO LIU, P.E
Transportation Engineer - Civil
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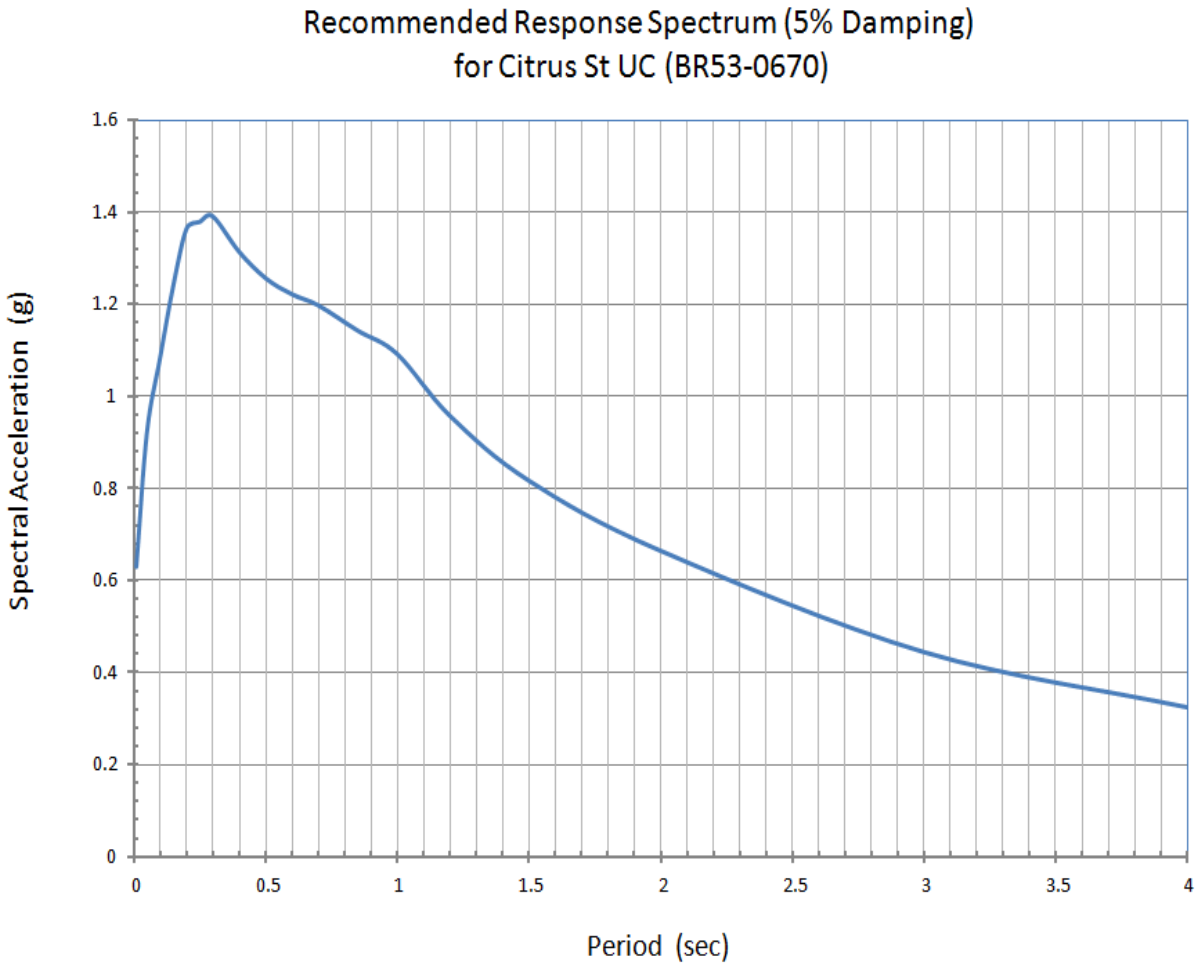
cc: OGDS-1 (Sacramento)
Mehdi Salehinik, D07 Project Manager
Structure Construction R.E. Pending File
Kristen Stahl, District Material Engineer

ATTACHMENTS



Citrus Ave	
Period, Sec.	Spectral Acceleration, g
0.01	0.63
0.05	0.92
0.1	1.08
0.15	1.24
0.2	1.36
0.25	1.38
0.3	1.39
0.4	1.31
0.5	1.26
0.6	1.22
0.7	1.20
0.85	1.14
1	1.09
1.2	0.96
1.5	0.82
2	0.67
3	0.45
4	0.33

Figure 1 Recommended Acceleration Response Spectra (ARS) Curve, BR53-0670

FOUNDATION REPORT
FOR
GRAND AVE UC
(Br No. 53-1528)

State of California **Business, Transportation and Housing Agency**
DEPARTMENT OF TRANSPORTATION

M e m o r a n d u m

Flex your power!
Be energy efficient!

To: HOWARD NG
OFFICE OF STRUCTURE DESIGN
SOUTH 2

Date: March 6, 2014
File: 07-LA-10 -PM 38.52
EA07-1193U1
Grand Ave UC (Widen)
BR. No. 53-1528

Attn.: Dawit Worku

From: **DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
GEOTECHNICAL SERVICES
OFFICE OF GEOTECHNICAL DESIGN – SOUTH 1

Subject: **Final Foundation Report for Grand Ave UC (Widen)**

The following is the foundation report (FR) for the proposed widening of Grand Ave Undercrossing (Bridge No. 53-1528) on Route 10, in the city of West Covina, Los Angeles County.

SCOPE OF WORK

The scope of work for this geotechnical study includes:

- Review of the as-built plans and the log of test borings (LOTBs)
- Subsurface exploration
- Laboratory testing of soil samples obtained during field investigation
- Evaluation of site geology, subsurface conditions, and groundwater
- Site seismicity study
- Engineering analyses
- Geotechnical foundation recommendations and construction considerations

This foundation report supersedes the preliminary foundation report, *addition of high occupancy vehicle lanes (HOV) on Route Interstate 10 from Citrus Avenue to State Route 57, 71 and 210 Interchange, Los Angeles County, California*, prepared by AESCO Inc., dated March 28, 2002.

PROJECT DESCRIPTION

The proposed project is to widen both eastbound and westbound I-10 from west of Citrus Street in the City of West Covina to State Route 57 in the City of Pomona (PM 37.2 to PM42.4), in order to accommodate one HOV lane in each direction of Route 10 freeway.

As the second of five bridge structures to be widened from west, the existing Grand Ave Undercrossing is a two-span cast-in-place (CIP) reinforced concrete T-girder bridge with a total length of about 81 feet. Both sides of the bridge are to be widened. The width of widening will be approximately 5 feet and 11 inches. CIP pre-stressed (post-tensioned) reinforced concrete T-girder will be used for the widened portion of the super structure, which will be supported by single column bent in the middle and high cantilever seat type abutments at both ends of the bridge.

The intermittent infill walls between columns at bent are also proposed for the seismic retrofit of the existing structure.

SUBSURFACE EXPLORATION AND TESTING PROGRAM

The subsurface exploration program consists of two Cone Penetration Tests (CPT soundings) and two exploratory borings (one hollow-stem auger boring and one rotary wash boring). Standard Penetration Tests (SPT) were performed in compliance with ASTM D 1586. Pocket penetrometer readings were also taken from cohesive soil samples at the selected depth for strength evaluation. Hogentogler electric cone was used in CPT soundings, which were performed in compliance with ASTM D 5778.

The information on locations, elevations, boring depths, and equipments for all soundings and drillings is summarized in Table 1 below.

Table 1 Summary of Subsurface Exploration

Exploratory Boring No.	Station	Offset (ft)	Approx. Top of Hole Elevation (ft)	Approx. Borehole Depth (ft)	Exploration Method	Equipment
A-09-007	2033+55.5	119.2 R	525.3	87	Hollow Stem Auger	CME85
RW-09-053	2033+61.0	133.0 R	525.3	122	Rotary Wash	CME85
CPT-09-017	2033+56.0	128.0 R	525.4	29	Cone Penetration	Hogentogler Electric
CPT-09-016	2033+56.7	148.5 R	525.6	14	Cone Penetration	Hogentogler Electric

LABORATORY TESTING PROGRAM

During subsurface exploration, relatively undisturbed soil specimens were retrieved using Modified California Samplers and sealed with plastic caps and tapes in brass tubes. SPT samples and bulk samples were collected for future soil engineering property and corrosion evaluation.

The laboratory testing program consists of Atterberg limit tests, particle size analyses, and direct shear tests. The laboratory test results are available for viewing in Translab, Sacramento.

SITE GEOLOGY AND SUBSURFACE CONDITIONS

Site Geology

The Site is located in the San Gabriel Valley, which is a broad, relatively flat to slightly sloping basin filled with Tertiary (65 million years) or younger sediments derived from surrounding hills and mountains.

The Geologic Map of the San Dimas 7.5-minute Quadrangle (A Digital Database dated 1998, by Siang S. Tan) was reviewed during the project study. According to the map, the Site is underlain by undifferentiated Pleistocene (younger than 2 million years) alluvial-fan deposits primarily consisting of silt and clay. No generalized cross section for the project location was found. Site geology was verified by field observation and subsurface exploration. Based on subsurface exploration, the Site is underlain by approximately 85 feet of Quaternary Alluvium consisting primarily of sand. The Site is most likely underlain by Puente formation at a depth greater than 85 feet.

Subsurface Conditions

As can be seen on the LOTBs, predominantly sandy materials were encountered during recent subsurface exploration. The densities of those granular materials are generally from medium dense to very dense. The medium stiff to very stiff clay layers were also encountered at depths of 41 feet, 66 feet and 73 feet respectively, with their thickness ranging from 2 feet to 5 feet.

The As-Built LOTBs from subsurface exploration performed in 1969 and 1970 for the first widening of the original bridge also indicate that soils at the project site are mostly medium dense to dense sandy soils down to the bottom of exploratory boring that was terminated at Elev. 475 feet above mean sea level (MSL).

The idealized soil profile and soil strength properties for foundation design are presented in following table.

Table 2

Interpreted Soil Profile and Engineering Properties					
Approximate Elevation (ft)	Predominant Soil Type, USCS	Average Blowcount, N60	Total Unit Weight (pcf)	Apparent Friction Angle (degree)	Cohesion or Undrained Shear Strength (psf)
+525' to +517'	SW	31	120	40	N/A
+517' to +512'	SP/SM	19	115	33	N/A
+512' to +507'	SW	27	115	34	N/A
+507' to +500'	SM	21	115	31	N/A
+500' to +495'	ML	29	110	30	300
+495' to +488'	SW/SP	67	120	40	N/A
+488' to +477'	ML/CH/CL	19	110	N/A	1250
+477' to +472'	SP	36	115	32	N/A

Groundwater

According to recent subsurface exploration, groundwater was not encountered in hollow-stem-auger boring (A-09-007) terminated at approximately Elev. 439 feet (86.5 feet in depth). However, the groundwater was reached at Elev. 481.8 feet in one of the soil borings (B-5, 2/23/1970) during subsurface exploration for the widening of the original bridge.

Since no other groundwater information is available near the job site, the highest measured groundwater table from as-built LOTBs can be used for the proposed widening. Considering the difference in vertical datum, the design groundwater table is assumed to be at Elev. 484 feet (NAVD88).

CORROSION EVALUATION

The bulk samples obtained from soil boring A-09-007 were shipped to Caltrans' Materials Laboratory, and tested for pH value / minimum electrical resistivity. The corrosion test results are presented in Table 3 below. Based on Caltrans Corrosion Guidelines (Version 1.0, September 2003), the test results indicate the soils are non-corrosive to structure foundation.

Table 3 Corrosion Test Summary

Location	Depth of Sample (ft)	pH	Soluble Sulfates	Soluble Chlorides	Minimum Resistivity
A-09-007	Composite	6.19	N/A	N/A	4063 ohm-cm

Note: Caltrans currently considers a site to be corrosive to foundation elements if one or more of the following conditions exist: Chloride concentration is greater than or equal to 500 ppm, sulfate concentration is greater than or equal to 2000 ppm, or the pH is 5.5.or less. It is the practice of Caltrans Corrosion Technology Section (with the exception of MSE Walls) if the minimum resistivity of the sample is greater than 1000 ohm-cm and the pH is greater than 5.5, the sample is considered to be noncorrosive.

SEISMIC RECOMMENDATIONS

Ground Motion

The job site is within a seismically active region, and close to a number of active faults. Based on subsurface conditions, a shear wave velocity (V_{s30}) of 270m/sec for the upper 100 feet (30 meters) of foundation soils was used for the ground motion evaluation. Information regarding the faults in the vicinity of the project site was obtained from the Caltrans ARS Online Tool (v2.2.06), and summarized in Table 4 below:

Table 4 Summary of the Adjacent Faults

Fault Name	Magnitude	Fault Type	Distance, (miles)	PGA, (g)
San Jose	6.6	Strike-Slip	1.6	0.5
Sierra Madre Fault Zone	7.2	Reverse	5.2	0.3
Indfian Hill Fault	6.4	Strike-Slip	1.5	0.4

However, based on the USGS 2008 Interactive Deaggregations, the design response spectrum is controlled by 5% probability of exceedance over 50 years. The peak ground

acceleration for the job site under Probabilistic scenario is approximately 0.6g. The corresponding design response spectrum was plotted and tabulated in the attachment of this foundation report.

Liquefaction Hazard

Based on the description in Groundwater section, groundwater table is generally deep, and the foundation materials below the design high water table are dense to very dense. Therefore, liquefaction potential is negligible. The potential of lateral spreading is also negligible, as it is triggered by liquefaction, and affected by factors such as ground geometry.

Ground Rupture

Since no known fault crosses the project site, the potential for ground rupture at this site due to fault movement is negligible.

AS-BUILT FOUNDATION DATA

The existing bridge is a continuous, two-span, CIP reinforced concrete (RC) T-girder bridge on ten-column bent and RC strutted abutments. Shallow foundations were used at all structure support locations, with the exception of some northern portion of abutment 1 where the short diaphragm abutment on CIDH piles was used behind the existing strutted retaining wall on spread footing during the bridge modification in 1975. Strip footings and isolated spread footings were used for the abutments and bent, respectively. The as-built foundation data for the existing bridge is summarized in Table 5 below.

Table 5 Existing Bridge Foundation Data

Support Location	Shallow Foundation Type	Approx. Foundation Dimension	Quantity	Allowable Bearing Capacity	Bottom of Foundation Elevation*, ft
Abutment 1	Strip Footing	7.25' - 9.5' (width)	1	3.0 tsf	518.9 - 519.9
	CIDH Pile	16" (diameter)	5	70 ton	489.6
Bent 2	Isolated Rectangular Footing	11'X11', 11'X10', 10'X9'	10	4.0 tsf	517.4 - 519.4
Abutment 3	Strip Footing	9.5' - 10.25' (width)	1	4.0 tsf	518.9 - 519.9

Note: * Approximately 2.4 feet need to be added to the elevation on as-built plans (NGVD29 datum) to match current vertical datum (NAVD 88).

According to the foundation recommendations, dated 7/14/1969, for the modification and widening of the original bridge, sub-excavation was performed down to 7.5 feet below the bottom of the footing at northern part of abutment 1, due to the low penetrometer reading (B4, 4/18/1969) obtained during subsurface exploration. The excavation was backfilled by selected granular materials with 95% relative compaction,

The soil borings near the proposed widening shown on as-built plans were located on top of the cut near Abutments 1 and 3 of the bridge. Subsurface materials are mostly medium dense to very dense silty sand to “gravelly sand” (sand with gravel), which are very close to the findings from recent subsurface exploration.

FOUNDATION RECOMMENDATIONS

Foundation Type Selection

Existing spread footings at all structure support locations have performed well, with no bearing capacity and settlement related structure distress reported. However, due to the high seismicity at the project site, deep foundations should be used for the abutment of proposed improvement, based on the requirements on Memo To Designer 5-1 (MTD, 1996) for multiple span bridge.

Twenty-four inch diameter cast-in-drilled-hole (CIDH) piles are recommended at both abutment locations. CIDH pile construction generates less noise and vibration compared with pile driving, and is more suitable for the job site, which is in an urban area. The

14'x14' isolated spread footing with 2.5 feet footing thickness will be used at Bent 2 location.

Foundation Data Provided by Structural Designers

Based on the Department policy, Load and Resistance Factor Design (LRFD) is used for design of the bent foundations, and Work Stress Design (WSD) is used for the abutment foundations. The foundation design data and load data were provided by structure designers and presented in follow tables:

Table 6.1 Deep Foundation Data

Support No.	Design Method	Pile Type	Finish Grade Elevation (ft)	BOF Elevation (ft)	Pile Cap Size Size (ft)		Number of Piles per column	Permissible Settlement under Service Load (in)
					B	L		
Abut 1	WSD	24" CIDH	525.139	519.96	14.5	10.85	5	1"
Bent 2								
Abut 3	WSD	24" CIDH	525.36	519.96	16.5	16	8	1"

Table 6.2 Shallow Foundation Data

Support No.	Design Method	Finished Grade Elevation (ft)	BOF Elevation (ft)	Minimum Footing Size (ft)		Permissible Settlement under Service Load (in)
				B	L	
Abut 1						
Bent 2	LRFD	525.7	519.46	14	14	1"
Abut 3						

Table 7.1 LRFD Service Limit States I Load Data for Abutments

Support No.	Total Vertical Load (Kip)		Permanent Loads Per Support (kip)
	Per Support	Max. Per Pile	Per Support
Abut 1	371	88	314
Bent 2			
Abut 3	415	158	358.1

Table 7.2 LRFD Service Limit States I Load Data for Bent

Support No.	Total Load				Permanent Load		
	Vertical Load (kip)	Effective Footing Dimensions (ft)		Horizontal Load in Long. Direction (kip)	Vertical Load (kip)	Effective Footing Dimensions (ft)	
		B'	L'			B'	L'
Abut 1							
Bent 2	307	13.9	12.8	N/A	165	14	13.7
Abut 3							

Table 7.3 LRFD Strength and Extreme Event Limit States for Bent

Support No.	Total Load			Permanent Load		
	Vertical Load (kip)	Effective Footing Dimensions (ft)		Vertical Load (kip)	Effective Footing Dimensions (ft)	
		B'	L'		B'	L'
Abut 1						
Bent 2	656	14	13	315	10.4	12.9
Abut 3						

Axial Capacity

The abutments and bents foundation design recommendations are presented on Table 8.1 and Table 8.2, respectively. The Pile Data Table and Spread Footing Data Table to be included in contract plans are presented on Table 8.3 and Table 8.4 respectively.

The CIDH piles are designed using SHAFT 5.0 program (Ensoft Inc.), which is based on O'Neil and Reese Method (1999) described in chapter 10 of the AASHTO LRFD Bridge Design Specifications (BDS, 2007). Since loose, residual materials may accumulate at the bottom of the drilled hole even after bottom cleaning during shaft installation, only skin friction portion of the pile resistance is taken into account as nominal geotechnical resistance. Pile group effects are considered at all support locations based on pile layout on the contract plans provided by structure designers, and the AASHTO LRFD BDS.

Table 8.1

Abutment Foundation Design Recommendations								
Support Location	Pile Type	Cut-Off Elevation (ft)	LRFD Service-I Limit State Load per Support (kip)		LRFD Service-I Limit State Load per Pile in Compression (kip)	Required Nominal Resistance (kip)	Design Tip Elevation (ft)	Specified Tip Elevation (ft)
			Total	Permanent				
Abut 1	24" Standard CIDH	520.21	371	314	88	180	494 (a) 506 (c) 494 (d)	494
Abut 3	24" Standard CIDH	520.21	415	358	158	320	477 (a) 498 (c) 494 (d)	477

Notes:

1. *Design Tip Elevations for Abutments are controlled by: (a) Compression, (c) Settlement, (d) Lateral load, respectively.*
2. *CIDH pile specified tip elevation shall not be raised.*

Table 8.2

Bent Foundation Design Recommendations (Spread Footing)									
Support Location	Footing Size (ft)		Bottom of Footing Elevation (ft)	Minimum Footing Embed. Depth (ft)	WSD (LRFD Service-I Limit State Load Combination)		LRFD		
							Service	Strength ϕ_b =0.45	Extreme Event ϕ_b =1.0
	B	L			Permissible Gross Contact Stress (ksf)	Allowable Gross	Permissible net Contact Stress (ksf)	Factored Gross Nominal Bearing Resistance (ksf)	Factored Gross Nominal Bearing Resistance (ksf)
Bent 2	14	14	519.46	6.24	N/A	N/A	3.1	16	34

Table 8.3

Pile Data Table					
Support Location	Pile Type	Nominal resistance (kip)		Design Tip Elevation (ft)	Specified Tip Elevation (ft)
		Compression	Tension		
Abut 1	24" Standard CIDH	180	0	494 (a) 506 (c) 494 (d)	494
Abut 3	24" Standard CIDH	320	0	477 (a) 498 (c) 494 (d)	477

Notes:

1. *Design Tip Elevations are controlled by: (a) Compression, (c) Settlement, (d) Lateral load, respectively.*
2. *CIDH pile specified tip elevation shall not be raised.*

Table 8.4

Spread Footing Data Table			
Support Location	Load and Resistance Factor Design (LRFD)		
	Service Permissible Net Contact Stress (Settlement), ksf	Strength Factored Gross Nominal Bearing Resistance, (ϕ_b = 0.45), ksf	Extreme Event Factored Gross Nominal Bearing Resistance, (ϕ_b = 1.0), ksf
Bent 2	3.1	16	34

Lateral Capacity

Lateral analyses of piles were performed using LPILE PLUS 5.0 program (Ensoft Inc.). Non-linear EI for the reduction of pile section modulus due to the section crack and "P" reduction factor for the modified soil spring value under group pile condition are considered in these analyses, together with the influence of axial load on moment capacity of piles.

For the abutments, both fixed (rigid) and hinge (pinned) boundary conditions at pile top representing possible pile-to-cap structural connections are considered for the evaluation of deflection controlled lateral pile capacity under service condition. The results of lateral pile analysis on lateral loads and lateral deflections at pile top are presented in Table 9. The calculated maximum bending moments and locations of the maximum moment under each lateral load and deflection are also presented in the table.

The analyses for lateral controlled pile tip are also performed for CIDH piles at abutment locations. The lateral controlled pile tip is defined as a critical pile length, beyond which, the increase of that length will not lead to reduction of pile deflection under specific lateral load. The critical pile length under maximum lateral load is considered as the lateral controlled pile length. Its corresponding tip elevation is defined as lateral load controlled pile tip elevation. The lateral load controlled pile tip elevations for the abutments are presented in foundation design recommendations and pile data table, Tables 8.1 and 8.3.

Table 9 Summary of Lateral Pile Analysis for Abut 1

Load vs Pile Top Deflection of 24" Dia. CIDH Piles at Abuts (BR53-1528) (Pile info: Length =45', Cut-off Depth =5' from FG)					
Pile Top Deflection (in)	Assuming Pile/Cap Hinge Connection			Assuming Pile/Cap Rigid Connection	
	Lateral Load on Pile Top (Max. Shear) (lb)	Maximum Bending Moment (lb-ft)	Depth to Maximum Moment from Pile Top (ft)	Lateral Load on Pile Top (Max. Shear) (lb)	Maximum Bending Moment (on Pile Top) (lb-ft)
0.25	41497	97003	5.4	77285	229029
0.50	59013	146738	5.4	Moment capacity of piles (325 kips-ft) will be reached at lateral deflection of 0.40 in. at pile top, with corresponding shear at approximately 100 kips	
0.75	74314	192021	5.4		
1.00	88512	234062	5.4		

Notes:

1) Material Stengths and reinforcement information are shown on Plate B2-5 of Standard Plan (May, 2006);

2) Group Reduction Factor (P-Multiplier) is assumed to be 0.67;

3) Axial Load is assumed to be 100 kips on each pile;

4) Lateral controlled pile tip is 26 ft below pile top for hinge condition.

For lateral resistance of spread footing foundation, friction along the base of the footing and passive pressure against the face of footing will be developed to resist sliding of structure foundation. It is recommended that 100% of the base friction with a frictional coefficient of 0.67 can be used for static condition. For seismic condition, 100% of the passive resistance and 100% of the base friction with a frictional coefficient of 0.45 can be combined against lateral sliding of the structure foundation.

ABUTMENT RETAINING WALLS (WINGWALLS)

The standard Type 1 walls (Standard Plans 2006) with spread footings will be used for the eastbound abutment wingwalls. The new abutment wingwalls will be constructed adjacent to the existing wingwalls, which will be partially demolished during widening. The existing wingwalls are also supported by spread footing and performed well over years. A minimum factor of safety of 3.0 can be achieved for the bearing capacity of the proposed

wingwall footings with design wall height up to 26 feet, based on foundation soil profiles on as-built LOTBs for the construction of original bridge.

EARTHWORK

Only limited amount of sliver fills will be placed at the approach embankments according to the project plans. Due to deep groundwater table and predominantly medium dense to dense sandy materials below the existing grade, settlement under the new embankment fills will be negligible, and expected to complete during construction.

CONSTRUCTION CONSIDERATIONS

1) Based on the findings from subsurface exploration, observed groundwater table is below footing excavation at all support locations and the tip of CIDH pile installation for Abutment 1.

2) Groundwater may be encountered during CIDH pile installation at Abutment 3 location. Wet method will be needed for CIDH pile installation for the presence of groundwater. Temporary steel casing, if used, should be removed from the hole during the concrete placement.

3) Foundation materials are mostly granular. Though cave-in depth was not measured in any of the hollow-stem-auger boreholes, cave-in potential of the drilled holes is high. Preventive measures such as using temporary casing or backfilling cement-slurry into enlarged hole due to cave-in followed by re-drill may be needed.

4) For CIDH piles with center-to-center spacing of four times of pile diameter and less, the installation of CIDH piles adjacent to a completed CIDH pile must be performed only after the Portland cement concrete of the completed pile has reached “initial set” and developed sufficient strength.

If you have any question, please contact Haitao Liu at (916) 227-0992.

Report by:

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Branch A

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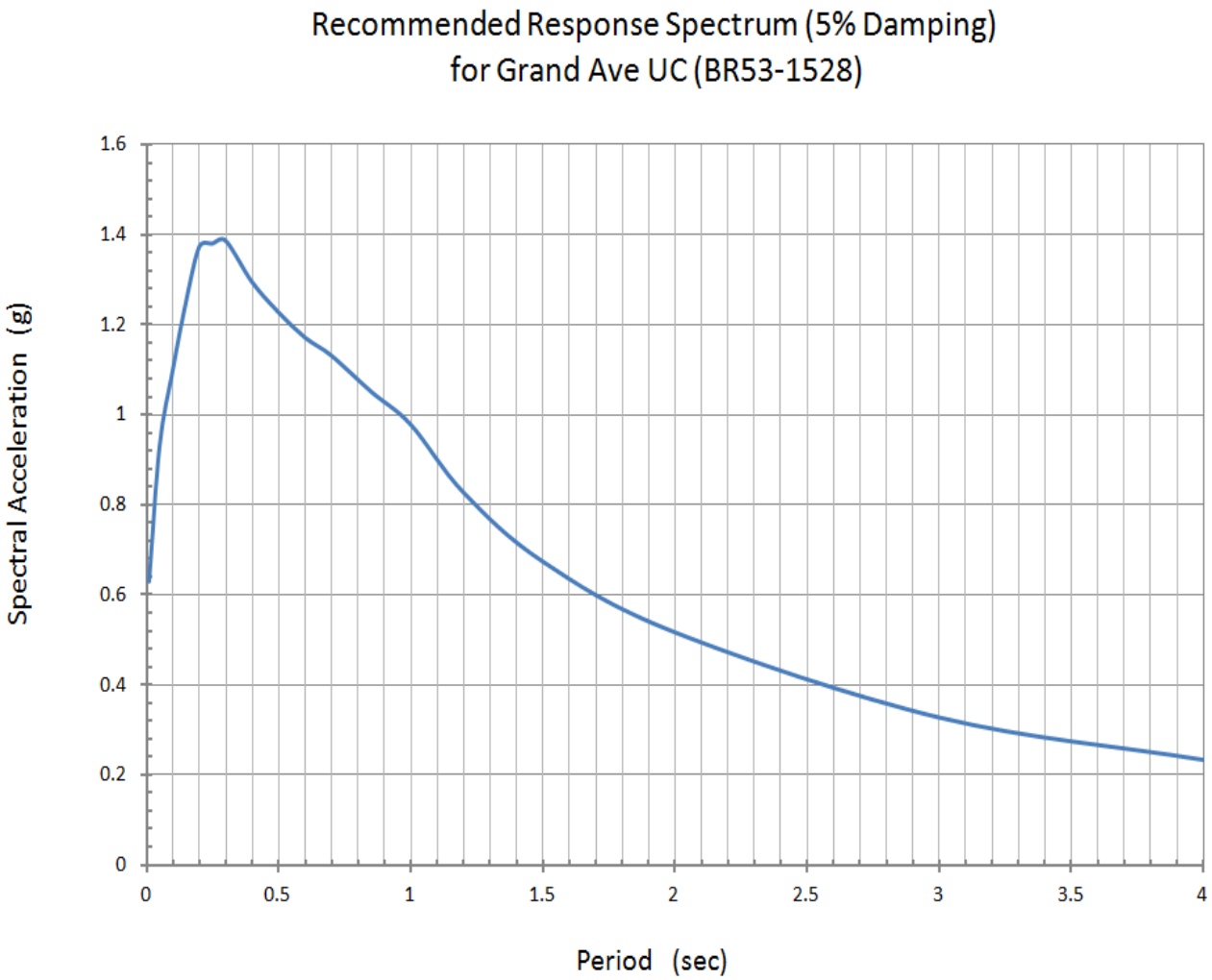
Structure Construction R.E. Pending File
Kristen Stahl, District Material Engineer

ATTACHMENTS



Grand Ave	
Period, Sec.	Spectral Acceleration, g
0.01	0.63
0.05	0.93
0.1	1.10
0.15	1.25
0.2	1.37
0.25	1.38
0.3	1.39
0.4	1.29
0.5	1.23
0.6	1.17
0.7	1.13
0.85	1.05
1	0.98
1.2	0.83
1.5	0.67
2	0.52
3	0.33
4	0.23

Figure 1 Recommended Acceleration Response Spectra (ARS) Curve for Grand Ave UC (BR53-1528)

FOUNDATION REPORT
FOR
HOLT AVE UC
(Br No. 53-0671)

State of California **Business, Transportation and Housing Agency**
DEPARTMENT OF TRANSPORTATION

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To: HOWARD NG
OFFICE OF STRUCTURE DESIGN
SOUTH 2

Date: March 6, 2014
File: 07-LA-10 -PM 39.0
EA07-1193U1
Holt Ave UC (Widen)
BR. No. 53-0671

Attn.: Dawit Worku

From: **DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
GEOTECHNICAL SERVICES
OFFICE OF GEOTECHNICAL DESIGN – SOUTH 1

Subject: **Final Foundation Report for Holt Ave UC (Widen)**

The following is the foundation report (FR) for the proposed widening of Holt Ave Undercrossing (Bridge No. 53-0671) on Route 10, in the city of West Covina, Los Angeles County.

SCOPE OF WORK

The scope of work for this geotechnical study includes:

- Review of the as-built plans and the log of test borings (LOTBs)
- Subsurface Exploration
- Laboratory testing of soil samples obtained during field investigation
- Evaluation of site geology, subsurface conditions, and groundwater
- Site seismicity study
- Engineering analyses
- Geotechnical foundation recommendations and construction considerations

This foundation report supersedes the preliminary foundation report, *addition of high occupancy vehicle lanes (HOV) on Route Interstate 10 from Citrus Avenue to State Route 57, 71 and 210 Interchange, Los Angeles County, California*, prepared by AESCO Inc., dated March 28, 2002.

PROJECT DESCRIPTION

The proposed project is to widen both eastbound and westbound I-10 from west of Citrus Street in the City of West Covina to State Route 57 in the City of Pomona (PM 37.2 to PM42.4), in order to accommodate one HOV lane in each direction of Route 10 freeway.

As the third bridge from the west among five bridge structures to be widened, the existing Holt Ave Undercrossing is a two-span cast-in-place (CIP)/pre-stressed (PS) concrete box girder bridge with a total length of about 203 feet. Both sides of the bridge are to be widened. The width of the widening will be approximately 11.6 feet to 13.9 feet in eastbound direction, and more than 15.6 feet in westbound direction. Pre-cast pre-stressed (post-tensioned) box girder will be used for the widened portion of the super structure, with each side of the widening supported by non-prismatic column bent in the middle and diaphragm abutments with footings at the ends.

SUBSURFACE EXPLORATION AND TESTING PROGRAM

The subsurface exploration program consists of four Cone Penetration Tests (CPT soundings) and three exploratory borings (one hollow-stem auger boring and two rotary wash wire-line borings). Standard Penetration Tests (SPT) were performed in compliance with ASTM D 1586. Pocket penetrometer readings were also taken from cohesive soil samples at the selected depth for strength evaluation. Hogentogler electric cone was used in CPT soundings, which were performed in compliance ASTM D 5778.

The information on locations, investigation depths and equipments used for all drillings and soundings is presented in Table 1 below.

Table 1 Summary of Subsurafce Exploration

Exploratory Boring No.	Station	Offset (ft)	Approx. Top of Hole Elevation (ft)	Approx. Borehole Depth (ft)	Exploration Method	Equipment
A-09-009	2058+08.1	105.9 R	569	73	Hollow Stem Auger	CME85
RW-09-010	2059+43	99 L	575	102	Rotary Wash	CME75
RW-09-052	2058+01.6	112.8 R	568.9	117	Rotary Wash	CME85
CPT-09-019	2058+03.0	109.7 R	569.0	29	Cone Penetration	Hogentogler Electric
CPT-09-039	2058+24.3	88.2 R	569.5	24	Cone Penetration	Hogentogler Electric
CPT-09-040	2059+45.3	107.9 L	574.9	37	Cone Penetration	Hogentogler Electric
CPT-09-040B	2059+47.5	102.0 L	574.8	38	Cone Penetration	Hogentogler Electric

LABORATORY TESTING PROGRAM

During subsurface exploration, relatively undisturbed specimens were retrieved using Modified California Samplers (MC) and sealed with plastic caps and tapes in brass tubes. SPT samples and bulk samples were collected for future soil engineering property and corrosion evaluation.

The laboratory testing program consists of Atterberg limit tests, particle size analyses, and direct shear tests. The laboratory test results are available for viewing in Tranlab, Sacramento.

SITE GEOLOGY AND SUBSURFACE CONDITIONS

Site Geology

The Site is located along the base of the northwest side of the San Jose Hills. The San Jose Hills form the southeast boundary of the San Gabriel Valley which is a broad, relatively flat to slightly sloping basin filled with Tertiary (65 million years) or younger sediments derived from surrounding hills and mountains. The San Jose Hills are an anticlinal tectonic structure formed by folding of generally fine grained sedimentary deposits called the Puente formation.

Geologic Map of the San Dimas 7.5' Quadrangle (A Digital Database, by Siang S. Tan, dated 1998 (DMG open file report 98-30) was reviewed during project study. According to the map, the Site is underlain by undifferentiated Holocene alluvial-fan deposits primarily consisting of sand and some gravel. No generalized cross section was found for the project site. Based on subsurface exploration, the Site is underlain by 10 feet of artificial fill, and 65 feet of primarily fine grained Quaternary alluvium. The Puente formation, in the area of the project site, is a soft to moderately hard siltstone to claystone overlain by 75 feet of fill and alluvium.

Subsurface Conditions

The results of recent field investigations for the proposed improvement show some differences between the subsurface materials near eastbound widening and those from westbound widening. Based on Boring No. A-09-009 near eastbound widening, the foundation soils at the site consist of medium stiff to very stiff lean clay, which is interbedded with layers of medium dense to dense poorly graded clayey sand. From sixty-one feet below the existing grade (or Elev. 508 ft), the soils become predominantly very

dense, poorly graded clayey sand and gravel. The boring records (RW-09-010) from the field investigations near westbound widening show the similar soil profile for the first 24 feet below the ground surface. However, from Elev. 550 feet and below, the subsurface materials are predominantly sand and silty sand with density ranging from medium dense to very dense.

The idealized soil profile and soil strength properties for foundation design are presented on Table 2 of this report.

Groundwater

According to the as-built LOTBs, groundwater was not encountered during subsurface exploration performed on February 1952 for the construction of original bridge, which was terminated at Elev. 513 feet. The same conclusion was also drawn on June 1969, based on subsurface exploration performed at the same site with the exploratory borings advanced down to Elev. 509 feet. Recent field investigation (Boring #A-09-009) shown that groundwater was not encountered at the bottom of borehole at 498 feet above MSL, or 71.5 feet below ground surface (bgs).

Even though no other groundwater information near the job site is available, the groundwater should be relatively low and beyond reasonable limits for design consideration.

CORROSION EVALUATION

The bulk samples obtained from soil boring A-09-009 were shipped to Caltrans' Materials Laboratory, and tested for pH value and minimum electrical resistivity. The tests for sulfate and chloride are not conducted since the resistivity of the tested soils was more than 1000 Ohm-cm. The corrosion test results are presented in Table 3 below. Based on Caltrans Corrosion Guidelines (Version 1.0, September 2003), the test results indicate the soils are non-corrosive to structure foundation.

Table 2

IDEALIZED SOIL PROFILE AND STRENGTH PARAMETERS					
Approximate Elevation (ft)	Predominant Soil Type, USCS	Average Blowcount, N_{60}	Total Unit Weight (pcf)	Apparent Friction Angle (degree)	Undrained Shear Strength (psf)
Abutment 1(L), Bent 2(L), and Abutment 3(L)					
+575' to +567'	CL	7	110	N/A	800
+567' to +557'	SC	7	110	30	N/A
+557' to +551'	CL	N/A	112	N/A	2000
+551' to +547'	SP	26	115	32	N/A
+547' to 537'	SW	>50	120	38	N/A
+537' to +527'	SC	40	120	34	N/A
+527' to +512'	GC-SC	>50	120	36	N/A
+512' to +490'	CL	30	120	N/A	3000
Abutment 1(R), Bent 2(R), and Abutment 3(R)					
+569' to +558'	CL	8	110	N/A	1000
+558' to +551'	SP-SC	17	112	31	N/A
+551' to +546'	CL	15	112	N/A	2000
+546' to +541'	SP-SC	40	120	37	N/A
+541' to 531'	CL	13	112	N/A	1750
+531' to +521'	SP-SC	37	120	33	N/A
+521' to +508'	CL	20	115	N/A	2250
+508' to +498'	SP-SC	>50	120	36	N/A

Table 3 Corrosion Test Summary

Location	Depth of Sample (ft)	pH	Soluble Sulfates	Soluble Chlorides	Minimum Resistivity
A-09-009	Composite	6.22	N/A	N/A	1785 ohm-cm
Caltrans Criteria for Non-corrosive Area		> 5.5	< 2000 PPM	< 500 PPM	> 1000 Ohm-cm

SEISMIC RECOMMENDATIONS

Ground Motion

The job site is within a seismically active region, and close to a number of active faults. Based on subsurface conditions, a shear wave velocity (V_{s30}) of 240m/sec for the upper 100 feet (30 meters) of foundation soils was used for the ground motion evaluation. Information regarding the faults in the vicinity of the project site was obtained from the Caltrans ARS Online Tool (v2.2.06), and summarized in Table 4 below:

Table 4 Summary of the Adjacent Faults

Fault Name	Magnitude	Fault Type	Distance, (miles)	PGA, (g)
San Jose	6.6	Strike-Slip	1.3	0.5
Sierra Madre Fault Zone	7.2	Reverse	5.3	0.3
Indfian Hill Fault	6.4	Strike-Slip	1.7	0.4

However, based on the USGS 2008 Interactive Deaggregations, the design response spectrum is controlled by 5% probability of exceedance over 50 years. The peak ground acceleration for the job site under Probabilistic scenario is approximately 0.6g. The corresponding design response spectrum was plotted and tabulated in the attachment of this foundation report.

Liquefaction Hazard

Based on the results of subsurface exploration, groundwater was not encountered within reasonable depth for soil liquefaction. Therefore, liquefaction potential is negligible. The

potential of lateral spreading is also negligible, as it is triggered by liquefaction, and affected by factors such as ground geometry.

Ground Rupture

Since no known fault crosses the project site, the potential for ground rupture at this site due to fault movement is negligible.

AS-BUILT FOUNDATION DATA

The existing bridge is a continuous, two-span, CIP/PS concrete box-girder (24 cells) bridge on nine-column bent and open-end diaphragm abutments. Driven pile foundations (HP10X57) were used at the structure support locations, with six 9 feet by 9 feet and three 6 feet by 9 feet footings being used at the bent location. The width at the bottom of diaphragm abutments is 2.5 feet. The as-built foundation data for the existing bridge is summarized in Table 5 below.

Table 5 Existing Bridge Foundation Data

Support Location	Foundation Type	Approx. Footing Dimension, ft	Footing Bottom Elevation*, ft above MSL	Pile Service Demand, kip	Approx. Average Pile Tip Elevation*, ft
Abutment 1	HP10X57 Steel Driven Piles	2.5 (width at bottom of diaphragm)	575.8 to 580.5	140	524.5
Bent 2	HP10X57 Steel Driven Piles	9X9, 6X9	561.5 to 565.5	140	524.3
Abutment 3	HP10X57 Steel Driven Piles	2.5 (width at bottom of diaphragm)	578.5 to 581.0	140	523.5

Note: * Approximately 2.4 feet need to be added to the elevation on as-built plans (NGVD29 datum) to match current vertical datum (NAVD 88).

Based on as-built LOTB for soil boring B-1 (June, 1969) located on top of the embankment at northern part of existing Abutments 3, the embankment materials are mostly stiff silt and medium dense silty sand. Although the foundation soil profiles presented on as-built are very close to those from recent subsurface explorations, the density and consistency on as-built LOTBS are relatively higher. Therefore, the soil parameters based on recent borings will be used for the foundation design and analysis.

FOUNDATION RECOMMENDATIONS

Foundation Type Selection

Low density/consistency materials were encountered at the project location during subsurface investigations, which may create settlement issue for the improvement should shallow foundation be used as structure foundations. Additionally, due to high seismicity at the project site, deep foundations should be a better option for the proposed widening. Although driven steel H piles were used for the foundations of the existing bridge, twenty-four inch diameter cast-in-drilled-hole (CIDH) piles are recommended at all bridge support locations. CIDH pile construction generates less noise and vibration compared with pile driving, and is more suitable for the job site, which is in an urban area.

Foundation Data Provided by Structural Designers

Based on the Department policy, Load and Resistance Factor Design (LRFD) is used for design of the bent foundations, and Work Stress Design (WSD) is used for the abutment foundations. The foundation design data and load data were provided by structure designers and presented in follow tables:

Table 6.1 Deep Foundation Data (Left Widening)

Support No.	Design Method	Pile Type	Finish Grade Elevation (ft)	BOF Elevation (ft)	Pile Cap Size Size (ft)		Number of Piles per column	Permissible Settlement under Service Load (in)
					B	L		
Abut 1	WSD	24” CIDH	588.52	579.4	6.5	25.91	5	1”
Bent 2	LRFD	24” CIDH	573.5	568	16	19	11	1”
Abut 3	WSD	24” CIDH	586.5	578.97	6.5	32.22	5	1”

Table 6.2 LRFD Service Limit States I Load Data (Left Widening)

Support No.	Total Vertical Load (kip)		Permanent Loads Per Support (kip)
	Per Support	Max. Per Pile	Per Support
Abut 1	810	170	650
Bent 2	1733	186	1363
Abut 3	890	190	730

Table 6.3 LRFD Strength and Extreme Limit States Load Data (Left Widening)

Support No.	Strength Limit State (Controlling Group, kip)				Extreme Limit State (Controlling Group, kip)			
	Compression		Tension		Compression		Tension	
	Per Support	Max. Per Pile	Per Support	Max. Per Pile	Per Support	Max. Per Pile	Per Support	Max. Per Pile
Abut 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bent 2	2600	265	-	-	1600	325	-	-72
Abut 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 7.1 Deep Foundation Data (Right Widening)

Support No.	Design Method	Pile Type	Finish Grade Elevation (ft)	BOF Elevation (ft)	Pile Cap Size Size (ft)		Number of Piles per column	Permissible Settlement under Service Load (in)
					B	L		
Abut 1	WSD	CIDH 24”	580.24	573.52	6.5	21	4	1”
Bent 2	LRFD	CIDH 24”	569	563	16	19	11	1”
Abut 3	WSD	CIDH 24”	583.20	572.75	6.5	21	4	1”

Table 7.2 LRFD Service Limit States I Load Data (Right Widening)

Support No.	Total Vertical Load (kip)		Permanent Loads Per Support (kip)
	Per Support	Max. Per Pile	Per Support
Abut 1	530	155	440
Bent 2	1514	191	1233
Abut 3	530	155	440

Table 7.3 LRFD Strength and Extreme Limit States Load Data (Right Widening)

Support No.	Strength Limit State (Controlling Group, kip)				Extreme Limit State (Controlling Group, kip)			
	Compression		Tension		Compression		Tension	
	Per Support	Max. Per Pile	Per Support	Max. Per Pile	Per Support	Max. Per Pile	Per Support	Max. Per Pile
Abut 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bent 2	2220	271	-	-	1373	280	-	-106
Abut 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Axial Capacity

The abutments and bents foundation design recommendations are presented on Table 8.1 and Table 8.2, respectively. The Pile Data Table to be included in contract plans is presented on Table 8.3. The CIDH piles are designed using SHAFT 5.0 program (Ensoft Inc.), which is based on O'Neil and Reese Method (1999) described on chapter 10 of the AASHTO LRFD Bridge Design Specifications (BDS, 2007). Since loose, residual materials may accumulate at bottom of the drilled hole even after bottom cleaning during shaft installation, only skin friction portion of the pile resistance is taken into account as nominal geotechnical resistance. Pile group effects are considered at all support locations based on pile layout on the contract plans provided by structure designers, and AASHTO LRFD BDS, 2007.

Table 8.1

Abutment Foundation Design Recommendations								
Support Location	Pile Type	Cut-Off Elevation (ft)	LRFD Service-I Limit State Load per Support (kip)		LRFD Service-I Limit State Load per Pile in Compression (kip)	Required Nominal Resistance (kip)	Design Tip Elevation (ft)	Specified Tip Elevation (ft)
			Total	Permanent				
Abut 1(L)	24" Standard CIDH	579.65	810	650	170	340	533 (a) 550 (c) 552 (d)	533
Abut 1(R)	24" Standard CIDH	573.77	530	440	155	310	527 (a) 549 (c) 546 (d)	527
Abut 3(L)	24" Standard CIDH	579.22	890	730	190	380	532 (a) 548 (c) 552 (d)	532
Abut 3(R)	24" Standard CIDH	573.00	530	440	155	310	528 (a) 550 (c) 546 (d)	528

Notes:

1. *Design Tip Elevations for Abutments are controlled by: (a) Compression, (c) Settlement, (d) Lateral load, respectively.*
2. *CIDH pile specified tip elevation shall not be raised.*

Table 8.2

Bent Foundation Design Recommendations										
Support Location	Pile Type	Cut-off Elevation (ft)	Service-I Limit State Load per Support (kip)	Total Permissible Support Settlement (inch)	Required Factored Nominal Resistance (kip)				Design Tip Elevations (ft)	Specified Tip Elevation (ft)
					Strength Limit		Extreme Event			
					Compression (ϕ=0.7)	Tension (ϕ=0.7)	Compression (ϕ=1)	Tension (ϕ=1)		
Bent 2(L)	24" Standard CIDH	568.25	1733	1	265	0	325	72	522 (a-I) 528 (a-II) 545(b-II) 544 (c) 539 (d)	522
Bent 2(R)	24" Standard CIDH	563.25	1514	1	271	0	280	106	506 (a-I) 523 (a-II) 536 (b-II) 534 (c) 536 (d)	506

Notes:

1. *Design Tip Elevations for Bents are controlled by: (a-I) Compression (Strength Limit State), (b-I) Tension (Strength Limit State), (a-II) Compression (Extreme Event), (b-II) Tension (Extreme Event), (c) Settlement, (d) Lateral load, respectively.*
2. *CIDH pile specified tip elevation shall not be raised.*

Table 8.3

Pile Data Table					
Support Location	Pile Type	Nominal Resistance (kip)		Design Tip Elevation (ft)	Specified Tip Elevation (ft)
		Compression	Tension		
Abut 1(L)	24" Standard CIDH	340	0	533 (a) 550 (c) 552 (d)	533
Abut 1(R)	24" Standard CIDH	310	0	527 (a) 549 (c) 546 (d)	527
Bent 2(L)	24" Standard CIDH	380	80	522 (a) 545 (b) 544 (c) 539 (d)	522
Bent 2(R)	24" Standard CIDH	390	110	506 (a) 536 (b) 534 (c) 536 (d)	506
Abut 3(L)	24" Standard CIDH	380	0	532 (a) 548 (c) 552 (d)	532
Abut 3(R)	24" Standard CIDH	310	0	528 (a) 550 (c) 546 (d)	528

Notes:
1. *Design Tip Elevations are controlled by: (a) Compression, (b) Tension, (c) Settlement, (d) Lateral load.*
2. *CIDH piles specified tip elevation shall not be raised.*

Lateral Capacity

Lateral analyses of 24” diameter CIDH piles were performed using LPILE PLUS 5.0 program (Ensoft Inc.). Non-linear EI for the reduction of pile section modulus due to the section crack and “P” reduction factor for the modified soil spring value under group pile condition are considered in these analyses, together with the influence of axial load on moment capacity of piles.

For the abutments, both fixed (rigid) and hinge (pinned) boundary conditions at pile top representing possible pile-to-cap structural connections are considered for the evaluation of deflection controlled lateral pile capacity under service condition. The results of lateral pile analysis on lateral loads and lateral deflections at pile top are presented from Tables 9.1 to 9.4. The calculated maximum bending moments and locations of the maximum moment under each lateral load and deflection condition are also presented in the tables.

Table 9.1 Summary of Lateral Pile Analysis for Abut 1 (Left Widen)

Load vs Pile Top Deflection of 24" Dia. CIDH Piles at Abut 1(L) (BR53-0671)					
Pile Top Deflection (in)	Assuming Pile/Cap Hinge Connection			Assuming Pile/Cap Rigid Connection	
	Lateral Load on Pile Top (Max. Shear) (lb)	Maximum Bending Moment (lb-ft)	Depth to Maximum Moment from Pile Top (ft)	Lateral Load on Pile Top (Max. Shear) (lb)	Maximum Bending Moment (on Pile Top) (lb-ft)
0.25	17806	80960	8.5	31650	147339
0.50	21392	99638	8.5	Moment capacity of piles (325 kips-ft) will be reached at lateral deflection of 1.1 in. at pile top, with corresponding shear at approximately 57 kips	
0.75	24651	119763	9.0		
1.00	27403	137713	9.0		

Notes:

1) Material Stengths and reinforcement information are shown on Plate B2-5 of Standard Plan (May, 2006);

2) Group Reduction Factor (P-Multiplier) is assumed to be 0.8;

3) Axial Load is assumed to be 100 kips on each pile;

4) Lateral controlled pile tip is 27 ft below pile top for hinge condtion.

Table 9.2 Summary of Lateral Pile Analysis for Abut 1 (Right Widen)

Load vs Pile Top Deflection of 24" Dia. CIDH Piles at Abut 1(R) (BR53-0671)					
Pile Top Deflection (in)	Assuming Pile/Cap Hinge Connection			Assuming Pile/Cap Rigid Connection	
	Lateral Load on Pile Top (Max. Shear) (lb)	Maximum Bending Moment (lb-ft)	Depth to Maximum Moment from Pile Top (ft)	Lateral Load on Pile Top (Max. Shear) (lb)	Maximum Bending Moment (on Pile Top) (lb-ft)
0.25	19697	83299	8.0	35610	156222
0.50	24148	106096	8.5	Moment capacity of piles (325 kips-ft) will be reached at lateral deflection of 1.0 in. at pile top, with corresponding shear at approximately 60 kips	
0.75	27810	127284	8.5		
1.00	30859	145668	8.5		

Notes:

1) Material Stengths and reinforcement information are shown on Plate B2-5 of Standard Plan (May, 2006);

2) Group Reduction Factor (P-Multiplier) is assumed to be 0.8;

3) Axial Load is assumed to be 100 kips on each pile;

4) Lateral controlled pile tip is 27 ft below pile top for hinge condtion.

Table 9.3 Summary of Lateral Pile Analysis for Abut 3 (Left Widen)

Load vs Pile Top Deflection of 24" Dia. CIDH Piles at Abut 3(L) (BR53-0671)					
Pile Top Deflection (in)	Assuming Pile/Cap Hinge Connection			Assuming Pile/Cap Rigid Connection	
	Lateral Load on Pile Top (Max. Shear) (lbs)	Maximum Bending Moment (lb-ft)	Depth to Maximum Moment from Pile Top (ft)	Lateral Load on Pile Top (Max. Shear) (lb)	Maximum Bending Moment (on Pile Top) (lb-ft)
0.25	17833	80915	8.5	32174	149264
0.50	21417	99811	8.5	Moment capacity of piles (325 kips-ft) will be reached at lateral deflection of 1.0 in. at pile top, with corresponding shear at approximately 58 kips	
0.75	24812	121336	9.0		
1.00	27776	141535	9.5		

Notes:

1) Material strengths and reinforcement information are shown on Plate B2-5 of Standard Plans (May, 2006);

2) Group Reduction Factor (P-Multiplier) is assumed to be 0.8;

3) Axial Load is assumed to be 100 kips on each pile;

4) Lateral controlled pile tip is 26 ft below pile top.

Table 9.4 Summary of Lateral Pile Analysis for Abut 3 (Right Widen)

Load vs Pile Top Deflection of 24" Dia. CIDH Piles at Abut 3(R) (BR53-0671)					
Pile Top Deflection (in)	Assuming Pile/Cap Hinge Connection			Assuming Pile/Cap Rigid Connection	
	Lateral Load on Pile Top (Max. Shear) (lb)	Maximum Bending Moment (lb-ft)	Depth to Maximum Moment from Pile Top (ft)	Lateral Load on Pile Top (Max. Shear) (lb)	Maximum Bending Moment (on Pile Top) (lb-ft)
0.25	19679	83164	8.0	35753	157071
0.50	24131	105982	8.5	Moment capacity of piles (325 kips-ft) will be reached at lateral deflection of 1.0 in. at pile top, with corresponding shear at approximately 60 kips	
0.75	27806	127328	8.5		
1.00	30880	145980	9.0		

Notes:

1) Material strengths and reinforcement information are shown on Plate B2-5 of Standard Plans (May, 2006);

2) Group Reduction Factor (P-Multiplier) is assumed to be 0.8;

3) Axial Load is assumed to be 100 kips on each pile;

4) Lateral controlled pile tip is 27 ft below pile top.

In lateral pile analysis for bent foundations, pile and pile cap is assumed to be hinge-connected, according to information provided by structure designer. The results of lateral pile analysis on lateral loads and lateral deflections at pile top are presented in Tables 9.5 and 9.6. The calculated maximum bending moment and location of the maximum moment under each lateral load and deflection condition are also presented in the table. The ultimate lateral pile capacity is defined as the maximum lateral shear at pile top. Under this load, the moment capacity, plastic moment, will be reached and the second hinge will be developed on CIDH pile.

Table 9.5 Summary of Lateral Pile Analysis for Bent 2 (Left Widening)

Load vs Pile Top Deflection of 24" Dia. CIDH Piles at Bent 2(L) (BR53-0671)			
Pile Top Deflection (in)	Assuming Pile/Cap Hinge Connection		
	Lateral Load on Pile Top (Max. Shear) (lb)	Maximum Bending Moment (lb-ft)	Depth to Maximum Moment from Pile Top (ft)
0.25	20445	72936	7.0
0.50	29104	104894	6.5
0.75	37138	137006	7.0
1.00	44880	168213	7.0
1.50	57299	225234	7.0
2.00	65140	268800	7.0
2.70	69815	297866	7.0

Notes:

1) Material strengths and reinforcement information are shown on Plate B2-5 of Standard Plan (May, 2006);

2) Group Reduction Factor (P-Multiplier) is assumed to be 0.5;

3) Axial load is assumed to be 60 kips on each pile;

4) Lateral controlled pile tip is 29 ft below pile top for hinge condition;

***** Pile moment capacity (300 kips-ft) reached at top deflection of 2.7 in. with corresponding shear of 70 kips on pile top.

Table 9.6 Summary of Lateral Pile Analysis for Bent 2 (Right Widening)

Load vs Pile Top Deflection of 24" Dia. CIDH Piles at Bent 2(R) (BR53-0671)			
Pile Top Deflection (in)	Assuming Pile/Cap Hinge Connection		
	Lateral Load on Pile Top (Max. Shear) (lb)	Maximum Bending Moment (lb-ft)	Depth to Maximum Moment from Pile Top (ft)
0.25	18426	72588	7.5
0.50	24212	100948	7.5
0.75	29600	130127	7.5
1.00	34537	158171	7.5
1.50	43505	210562	7.5
2.00	51370	257152	8.0
3.20	59503	303868	7.5

Notes:

1) Material strengths and reinforcement information are shown on Plate B2-5 of Standard Plan (May, 2006);

2) Group Reduction Factor (P-Multiplier) is assumed to be 0.5;

3) Axial load is assumed to be 60 kips on each pile;

4) Lateral controlled pile tip is 27 ft below pile top for hinge condition;

***** Pile moment capacity (300 kips-ft) reached at top deflection of 3.2 in. with corresponding shear of 60 kips on pile top.

The analyses for lateral controlled pile tip are also performed for CIDH piles at all structure support locations. The lateral controlled pile tip is defined as a critical pile length, beyond which, the increase of the pile length will not lead to the reduction of pile deflection under specific lateral load. The above critical pile length under maximum lateral load is considered as the lateral controlled pile length. Its corresponding tip elevation is defined as lateral load controlled pile tip elevation. The lateral load controlled pile tip elevations are presented in foundation design recommendations and pile data tables, Tables 8.1 to 8.3.

EARTHWORK

Sliver-fill of more than fifteen-foot wide and eleven-foot wide will be placed at the westbound and eastbound approach embankments respectively, according to the project plans. The groundwater table at the job site is relatively deep. Settlement under the embankment fills will be negligible, and expected to complete during construction.

CONSTRUCTION CONSIDERATIONS

1) Based on the findings from subsurface exploration, observed groundwater is below footing excavation and the tip of CIDH piles.

2) Granular materials were encountered during soil exploration near the proposed foundation sites. Although cave-in depth was not measured in the hollow-stem-auger borehole, cave-in potential of the drilled holes is high. Preventive measures such as using temporary casing or backfilling cement-slurry into an enlarged hole due to cave-in followed by re-drill may be needed.

3) For CIDH pile with center-to-center spacing of four times of pile diameter and less, the installation of CIDH pile adjacent to a completed CIDH pile must be performed only after the Portland cement concrete of the completed pile has reached “initial set” and developed sufficient strength.

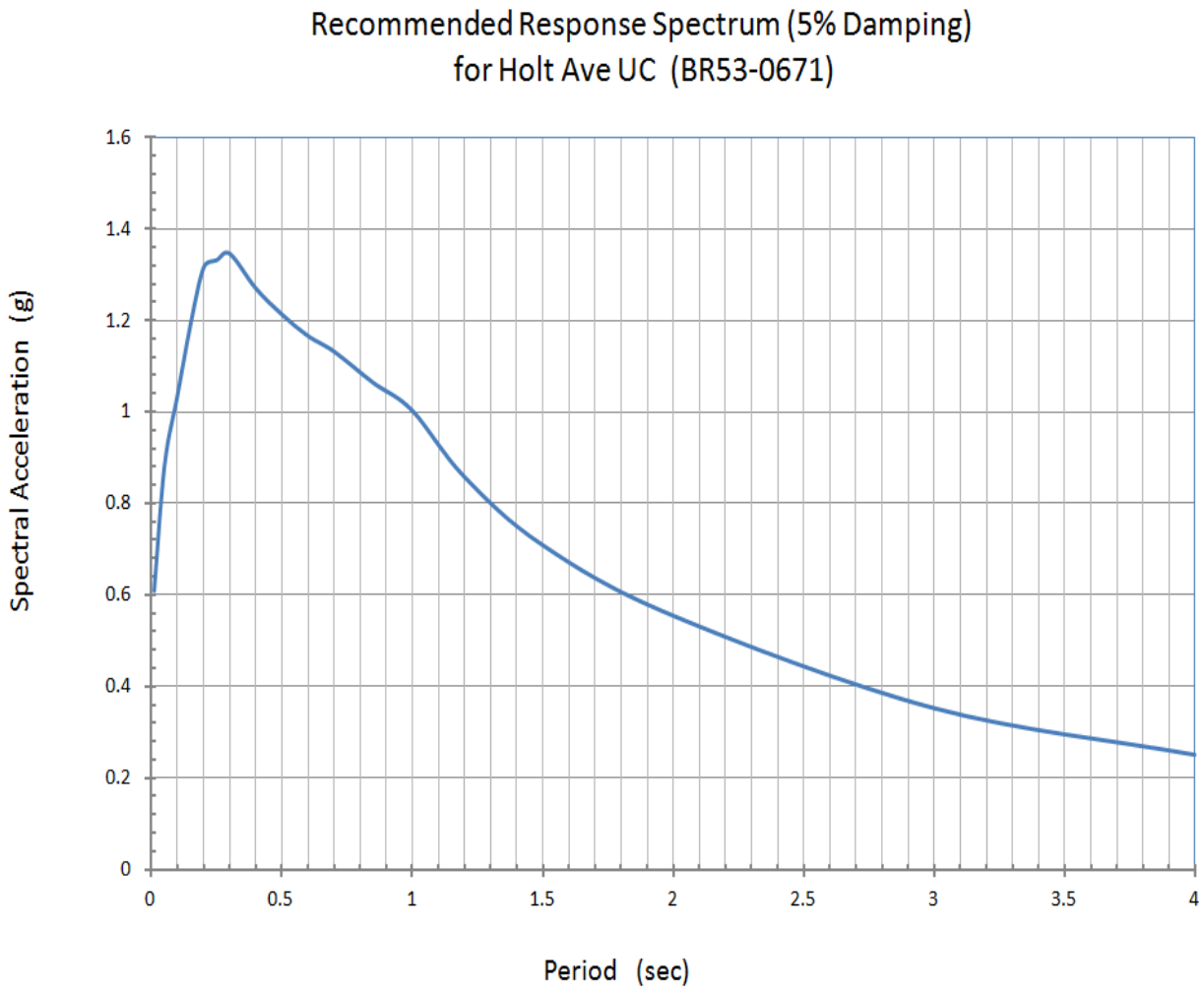
If you have any question, please contact Haitao Liu at (916) 227-0992.

Report by:

HAITAO LIU, P.E
Transportation Engineer - Civil
Branch A

cc: OGDS-1 (Sacramento)
Mehdi Salehinik, D07 Project Manager
Structure Construction R.E. Pending File
Kristen Stahl, District Material Engineer

ATTACHMENTS



Holt Ave	
Period, Sec.	Spectral Acceleration, g
0.01	0.61
0.05	0.88
0.1	1.04
0.15	1.19
0.2	1.32
0.25	1.33
0.3	1.35
0.4	1.27
0.5	1.21
0.6	1.17
0.7	1.13
0.85	1.06
1	1.00
1.2	0.86
1.5	0.71
2	0.55
3	0.35
4	0.25

Figure 1 Recommended Acceleration Response Spectra (ARS) Curve, BR53-0671

FOUNDATION REPORT
FOR
VIA VERDE UC
(Br No. 53-0870)

State of California **Business, Transportation and Housing Agency**
DEPARTMENT OF TRANSPORTATION

M e m o r a n d u m

Flex your power!
Be energy efficient!

To: HOWARD NG
OFFICE OF STRUCTURE DESIGN
SOUTH 2

Date: March 6, 2014
File: 07-LA-10 -PM 40.5
EA07-1193U1
Via Verde UC (Widen)
BR. No. 53-0870

Attn.: Dawit Worku

From: **DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
GEOTECHNICAL SERVICES
OFFICE OF GEOTECHNICAL DESIGN – SOUTH 1

Subject: **Final Foundation Report for Via Verde UC (Widen)**

The following is the foundation report (FR) for the proposed widening of Via Verde Undercrossing (Bridge No. 53-0870) on Route 10, in the city of West Covina, Los Angeles County.

SCOPE OF WORK

The scope of work for this geotechnical study includes:

- Review of the as-built plans and the log of test borings (LOTBs)
- Subsurface exploration
- Laboratory testing of soil samples obtained during field investigation
- Evaluation of site geology, subsurface conditions, and groundwater
- Site seismicity study
- Engineering analyses
- Geotechnical foundation recommendations and construction considerations

This foundation report supersedes the preliminary foundation report, *addition of high occupancy vehicle lanes (HOV) on Route Interstate 10 from Citrus Avenue to State Route 57, 71 and 210 Interchange, Los Angeles County, California*, prepared by AESCO Inc., dated March 28, 2002.

PROJECT DESCRIPTION

The proposed project is to widen both eastbound and westbound I-10 from west of Citrus Street in the City of West Covina to State Route 57 in the City of Pomona (PM 37.2 to PM42.4), in order to accommodate one HOV lane in each direction of Route 10 freeway.

As the fourth bridge from the west among five bridge structures to be widened, the existing Via Verde Undercrossing is a partly one-span, partly three-span reinforced concrete (RC) slab and cast-in-place (CIP) / pre-stressed (PS) RC slab bridge. Both sides of bridge are to be widened. The widening width will be approximately 14.5 feet in eastbound direction, and 22.9 feet in westbound direction. Pre-cast / pre-stressed concrete slab with 5-inch deck topping will be used for the widened portion of the superstructure, with each side of the widening supported by pier wall bents with pile footing/cap in the middle and short seat abutments with pile footing/cap at the ends.

SUBSURFACE EXPLORATION AND TESTING PROGRAM

The subsurface exploration program consists of three Cone Penetration Tests (CPT soundings) and two rotary wash borings. Standard Penetration Tests (SPT) were performed in compliance with ASTM D 1586. Pocket penetrometer readings were also taken from cohesive soil samples at the selected depth for strength evaluation. Hogentogler electric cone was used in CPT soundings, which were completed in compliance with ASTM D 5778.

The information on locations, investigation depths and equipments used for all drillings and soundings is presented in Table 1 below.

Table 1 Summary of Subsurface Exploration

Exploratory Boring No.	Station	Offset (ft)	Approx. Top of Hole Elevation (ft)	Approx. Borehole Depth (ft)	Exploration Method	Equipment
RW-09-011	2136+00.8	122.9 R	912.9	71.5	Rotary Wash	CME85
RW-09-012	2137+44.1	136.1 L	905.2	71.5	Rotary Wash	CME85
CPT-09-021	2137+20.6	126.2 R	912.7	54.9	Cone Penetration	Hogentogler Electric
CPT-09-022	2136+07.1	133.7 L	904.4	24	Cone Penetration	Hogentogler Electric
CPT-09-042	2135+96.9	133.3 L	904.9	27.5	Cone Penetration	Hogentogler Electric

LABORATORY TESTING PROGRAM

During subsurface exploration, relatively undisturbed soil specimens were retrieved using Modified California Samplers and sealed with plastic caps and tapes in brass tubes. SPT samples and bulk samples were collected for future soil engineering property and corrosion evaluation.

The laboratory testing program consists of Atterberg limit tests, particle size analyses, and direct shear tests. The laboratory test results are available for viewing in Translab, Sacramento.

SITE GEOLOGY AND SUBSURFACE CONDITIONS

Site Geology

The Site is located in the San Jose Hills. The San Jose Hills form the southeast boundary of the San Gabriel Valley which is a broad, relatively flat to slightly sloping basin filled with Tertiary (65 million years) or younger sediments derived from surrounding hills and mountains. The San Jose Hills are an anticlinal tectonic structure formed by folding of generally fine grained sedimentary deposits called the Puente formation.

Geologic Map of the San Dimas 7.5' Quadrangle (A Digital Database, by Siang S. Tan, dated 1998 (DMG open file report 98-30) was reviewed during project study. According to the map, the drainage where the Site is located is represented as a canyon that is narrower than the Site and is filled by quaternary alluvial sediments consisting primarily of sand. In addition, the Site overlies the La Vida member of the Puente formation, a tertiary sedimentary deposit consisting of platy siltstone interbedded with sandstone, conglomerate, limestone and tuff. No generalized cross section was found for the project site. Based on subsurface exploration, the Site is underlain by 10 feet of artificial fill overlying fine grained Puente formation. The Puente formation at the project site is characterized as soft to moderately hard siltstone and claystone.

Subsurface Conditions

The results of recent field investigations on the approach embankments for the proposed retaining walls near the subject bridge (Boreholes #RW-010-108, RW-010-110, RW-010-139, and RW-010-140) indicated that different fill materials were used between eastbound and westbound part of existing embankments near the bridge abutments. Predominantly fine materials, mostly very stiff lean clay and silt, were encountered on northern portion of the approach embankment near both ends of the bridge. In southern portion of the existing

embankments, however, the fill materials are more granular, and mostly consist of medium dense to dense silty sand and clayey sand.

Two rotary wash boreholes drilled at the street grade near Via Verde St for the proposed widening shown the similar native soil profile below the fill that is approximately ten feet thick on both sides of the bridge. The native materials underneath are mostly intensely weathered/fractured claystone and siltstone with equivalent consistency of stiff to hard.

The idealized soil profile and soil strength properties for foundation design are presented on Table 2 of this memo.

Groundwater

According to the as-built LOTBs and Foundation Recommendations, groundwater was encountered during subsurface exploration, construction of original bridge, and bridge widening.

Two recent rotary wash borings (RW-09-011 and RW-09-012) for the proposed widening were converted into groundwater observation wells after drilling, with groundwater leveloggers installed for long-term monitoring of the groundwater.

The historical groundwater information is summarized in Table 3 below:

Table 3 Goundwater Record

Date of Record	Feb, 1956	Nov, 1960	April, 1969		Feb, 2010	
GW Elev (ft)	+887.5*	+877.5*	+897.3*	+898.3*	+902.5**	+888.5**
Approx. Distance from Bridge Centerline	40' Right	67' Left	79' Right	97' Right	123' Right	136' Left

Notes: * Elevation converted to match current vertical datum (NAVD88)
** Represent the record high from Dec, 2009 to June, 2010, based on levelogger readings

The above historical groundwater level data and other available information show that the direction of groundwater flow beneath the site is to the north-northeast, following a hydraulic gradient of approximately 0.05 ft/ft. Based on the above data, a groundwater table of +902.5 ft above mean sea level (MSL) is assumed at the bridge supports for eastbound widening, and +890 ft above MSL is assumed at the bridge supports for westbound widening.

Table 2

IDEALIZED SOIL PROFILE AND STRENGTH PARAMETERS					
Approximate Elevation (ft)	Predominant Soil Type, USCS	Average Blowcount, N_{60}	Total Unit Weight (pcf)	Apparent Friction Angle (degree)	Undrained Shear Strength (psf)
Abuts 1&4 (Left), Bents 2&3 (Left)					
+937' to +907'	ML-CL	24	120	N/A	2000
+907' to +895'	CH	10	110	N/A	1000
+895' to +872'	ML (Siltstone)	30	122	N/A	2500
+872' to +860'	ML (Siltstone)	>50	130	N/A	4000
+860' to 855'	SP (Sandstone)	32	120	33	N/A
+855' to +850'	ML (Siltstone)	40	125	N/A	3500
+850' to +840'	CL (Claystone)	25	122	N/A	2000
Abuts 1&4 (Right), Bents 2&3 (Right)					
+931' to +912'	SM to SC	21	120	34	N/A
+912' to +904'	SM	13	110	31	N/A
+904' to +894'	CL (Claystone)	16	115	N/A	1500
+894' to +884'	ML (Siltstone)	30	122	N/A	1800
+884' to 874'	ML (Siltstone)	50	125	N/A	3000
+874' to +868'	CL (Claystone)	30	122	N/A	3000
+868' to +864'	ML (Siltstone)	>100	130	N/A	4000
+864' to +846'	CL (Shale)	>50	130	N/A	3500

CORROSION EVALUATION

The bulk samples obtained from soil borings RW-09-011 and RW-09-012 were shipped to Caltrans' Materials Laboratory, and tested for pH value and minimum electrical resistivity. The tests for sulfate and chloride are not conducted since the resistivity of the tested soils was more than 1000 Ohm-cm. The corrosion test results are presented in Table 4. Based on Caltrans Corrosion Guidelines (Version 1.0, September 2003), the test results indicate the soils are non-corrosive to structure foundation.

Table 4 Corrosion Test Summary

Location	Depth of Sample (ft)	pH	Soluble Sulfates	Soluble Chlorides	Minimum Resistivity
RW-09-011 & RW-09-012	Composite	6.69	N/A	N/A	3689 ohm-cm
Caltrans Criteria for Non-corrosive Area		> 5.5	< 2000 PPM	< 500 PPM	> 1000 Ohm-cm

SEISMIC RECOMMENDATIONS

Ground Motion

The job site is within a seismically active region, and close to a number of active faults. Based on subsurface conditions, a shear wave velocity (V_{s30}) of 240m/sec for the upper 100 feet (30 meters) of foundation soils was used for the ground motion evaluation. Information regarding the faults in the vicinity of the project site was obtained from the Caltrans ARS Online Tool (v2.2.06), and summarized in Table 5 below:

Table 5 Summary of the Adjacent Faults

Fault Name	Magnitude	Fault Type	Distance, (miles)	PGA, (g)
San Jose	6.6	Strike-Slip	0.6	0.5
Sierra Madre Fault Zone	7.2	Reverse	4.9	0.3
Indfian Hill Fault	6.4	Strike-Slip	2.3	0.4

However, based on the USGS 2008 Interactive Deaggregations, the design response spectrum is controlled by 5% probability of exceedance over 50 years. The peak ground acceleration for the job site under Probabilistic scenario is approximately 0.6g. The corresponding design response spectrum was plotted and tabulated in the attachment of this foundation report.

Liquefaction Hazard

Although groundwater level is relatively shallow, the foundation soils at the bridge site below the groundwater table are predominantly cohesive, with relatively high soil consistency (Puente Formation). Therefore, liquefaction potential is negligible. The potential of lateral spreading is negligible, as it is triggered by liquefaction, and affected by factors such as ground geometry.

Ground Rupture

Since no known fault crosses the project site, the potential for ground rupture at this site due to fault movement is negligible.

AS-BUILT FOUNDATION DATA

The existing Via Verde Undercrossing is a partly one-span, partly three-span reinforced concrete (RC) slab and cast-in-place (CIP) / pre-stressed (PS) RC slab bridge with short diaphragm abutments and pier wall bents. The original bridge was built in 1957 as a single span bridge with span length of 42.6 feet. Two subsequent widening had been conducted since then. In 1962, a 12.5 feet wide widening was performed on both sides of the highway, with new abutments being built 31 feet behind the alignment extension of the existing abutments. As a result of above widening, two new pier bents for the widened portion of the bridge were constructed just in line with the original bridge abutments, making Via Verde UC a three-span structure as it is now. The second widening that is 11.6 feet in width, was conducted in 1975 in eastbound direction, following the similar geometric configuration as the first widening with CIP/PS slab being used as superstructure. The as-built foundation data for the existing bridge is summarized in Table 6 below.

Table 6 Existing Bridge Foundation Data

Support Location		Foundation Type	Footing Bottom Elevation*, ft above MSL	Pile Service Demand, kip	Approx. Average Pile Tip Elevation*, ft
Abutment 1	1962 Widening	16" Dia. CIDH	N/A	N/A	887.5
	1975 Widening	HP10X42 Steel	N/A	90	885.6
Bent 2	1957 (Original Bridge Abut 1)	20" Dia. CIDH	907	N/A	890.5
	1962 Widening	16" Dia. CIDH	905 (N) 907 (S)	N/A	887.5
	1975 Widening	16" Dia. CIDH	905 (S)	90/140	885.5/881.5
Bent 3	1957 (Original Bridge Abut 2)	20" Dia. CIDH	907	N/A	890.5
	1962 Widening	16" Dia. CIDH	905 (N) 907 (S)	N/A	887.5
	1975 Widening	HP10X42 Steel	907 (S)	90	883.0
Abutment 4	1962 Widening	16" Dia. CIDH	N/A	N/A	887.5
	1975 Widening	HP10X42 Steel	N/A	90	883.5

Note: * Approximately 2.5 feet need to be added to the elevation on as-built plans (NGVD29 datum) to match current vertical datum (NAVD 88).

Based on as-built LOTB for soil boring B-1 (April, 1969) located south of the existing bridge centerline, the soil mantle at the site primarily consisted of stiff silt and medium dense sand and silty sand to an elevation of 887’ above MSL. Dense to very dense shale was encountered below the soil mantle to the bottom of borehole at Elev. 860 feet. All penetration borings in records suggested significant increase of tip resistance from Elev. 885 feet to Elev.889 feet, which are close to the tip elevations for most of the piles in as-builts of previous improvements.

FOUNDATION RECOMMENDATIONS

Foundation Type Selection

Both CIDH piles and driven steel H piles were used for the existing structure foundations. The presence of groundwater at relatively shallow depth based on the recently levelogger

readings and the presence of the compressible materials based on as-built LOTBs suggested that settlement may still be an issue for, at least, part of the proposed improvements. Due to the above reason and high seismicity at the project site, deep foundations should be a better option for the proposed widening. Twenty-four inch diameter cast-in-drilled-hole (CIDH) piles as specified in Caltrans Standard Plans are recommended at all bridge support locations. The CIDH pile construction generates less noise and vibration compared with pile driving, and is more suitable for the job site, which is in an urban area. However, at abutment wingwall locations where soundwalls will be installed, standard precast/pre-stressed concrete driven piles are recommended with the front row battered to satisfy the relatively higher lateral demand.

Foundation Data Provided by Structural Designers

Based on the Department policy, Load and Resistance Factor Design (LRFD) is used for design of the bent foundations, and Work Stress Design (WSD) is used for the abutment foundations. The foundation design data and load data were provided by structure designers and presented in follow tables:

Table 7.1 Deep Foundation Data (Left Widening)

Support No.	Design Method	Pile Type	Finish Grade Elevation (ft)	BOF Elevation (ft)	Pile Cap Size (ft)		Number of Piles	Permissible Settlement under Service Load (inch)
					B	L		
Abut 1	WSD	24" CIDH	926.04	Step1: 920.70 Step2: 924.70	10	26.15	8	1
Bent 2	LRFD	24" CIDH	905.7	901	12	24	12	1
Bent 3	LRFD	24" CIDH	905.7	901	12	24	12	1
Abut 4	WSD	24" CIDH	926.75	Step1: 922.47 Step2: 926.47	10	26.15	8	1
Wingwall (Abut1)	WSD	Class 90	924.42	920.7	9.5	27	9	1
Wingwall (Abut4)	WSD	Class 90	925.14	922.47	9.5	27	9	1

Table 7.2 LRFD Service Limit States I Load Data (Left Widening)

Support No.	Total Vertical Load (kip)		Permanent Loads Per Support (kip)
	Per Support	Max Per Pile	Per Support
Abut 1	581	88	452
Bent 2	872	96	686
Bent 3	872	96	686
Abut 4	581	88	452
Wingwall (Abut 1)	377	69	347
Wingwall (Abut 4)	377	69	347

Table 7.3 LRFD Strength and Extreme Limit States Load Data (Left Widening)

Support No.	Strength Limit State (Controlling Group, kip)				Extreme Limit State (Controlling Group, kip)			
	Compression		Tension		Compression		Tension	
	Per Support	Max Per Pile	Per Support	Max Per Pile	Per Support	Max Per Pile	Per Support	Max Per Pile
Abut 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bent 2	1265	142	0	0	772	317	0	-188
Bent 3	1265	142	0	0	772	317	0	-188
Abut 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 8.1 Deep Foundation Data (Right Widening)

Support No.	Design Method	Pile Type	Finish Grade Elevation (ft)	BOF Elevation (ft)	Pile Cap Size (ft)		Number of Piles	Permissible Settlement under Service Load (inch)
					B	L		
Abut 1	WSD	24" CIDH	921.48	917.73	10	15.5	5	1
Bent 2	LRFD	24" CIDH	910.39	905.48	10	16	6	1
Bent 3	LRFD	24" CIDH	910.39	906.48	10	16	6	1
Abut 4	WSD	24" CIDH	923.06	919.31	10	15.5	5	1

Table 8.2 LRFD Service Limit States I Load Data (Right Widening)

Support No.	Total Vertical Load (kip)		Permanent Loads Per Support (kip)
	Per Support	Max Per Pile	Per Support
Abut 1	245	68	190
Bent 2	415	105	287
Bent 3	415	105	287
Abut 4	245	68	190

Table 8.3 LRFD Strength and Extreme Limit States Load Data (Right Widening)

Support No.	Strength Limit State (Controlling Group, kip)				Extreme Limit State (Controlling Group, kip)			
	Compression		Tension		Compression		Tension	
	Per Support	Max Per Pile	Per Support	Max Per Pile	Per Support	Max Per Pile	Per Support	Max Per Pile
Abut 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bent 2	591	153	0	0	313	163	0	-81
Bent 3	591	153	0	0	313	163	0	-81
Abut 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Axial Capacity

The abutments and bents foundation design recommendations are presented on Table 9.1 and Table 9.2, respectively. The Pile Data Table to be included in contract plans is presented on Table 9.3. The CIDH piles are designed using SHAFT 5.0 program (Ensoft Inc.), which is based on O'Neil and Reese Method (1999) described in chapter 10 of the AASHTO LRFD Bridge Design Specifications (BDS, 2007). Since loose, residual materials may accumulate at bottom of the drilled holes even after bottom cleaning during shaft installation, only skin friction portion of the pile resistance is taken into account as nominal geotechnical resistance. Pile group effects are considered at all support locations based on pile layout on the contract plans provided by structure designers and AASHTO LRFD BDS, 2007. The driven piles (Alternative "X") are designed using pile design and analysis computer program APILE Plus 5.0 (Ensoft), where Nordlund's method and α-method were used for pile side resistance in cohesionless and cohesive soils, respectively.

Table 9.1

Abutment Foundation Design Recommendations

Support Location	Pile Type	Cut-Off Elevation (ft)	LRFD Service-I Limit State Load per Support (kip)		LRFD Service-I Limit State Load per Pile in Compression (kip)	Required Nominal Resistance (kip)	Design Tip Elevation (ft)	Specified Tip Elevation (ft)	Required Nominal Driving Resistance (kip)
			Total	Permanent					
Abut 1 (Left)	24" Standard CIDH	Step 1: 920.95 Step 2: 924.95	581	452	88	180	879 (a) 898 (c) 893 (d)	879	N/A
Wingwall Abut 1 (Left)	Class 90 PPC Pile	920.95	377	347	69	140	876 (a)	876	180
Abut 1 (Right)	24" Standard CIDH	917.95	245	190	68	140	886 (a) 904 (c) 889 (d)	886	N/A
Abut 4 (Left)	24" Standard CIDH	Step 1: 922.72 Step 2: 926.72	581	452	88	180	879 (a) 900 (c) 894 (d)	879	N/A
Wingwall Abut 4 (Left)	Class 90 PPC Pile	922.72	377	347	69	140	876 (a)	876	180
Abut 4 (Right)	24" Standard CIDH	919.56	245	190	68	140	886 (a) 905 (c) 891 (d)	886	N/A

Notes:

1. *Design Tip Elevations for Abutments are controlled by: (a) Compression, (c) Settlement, (d) Lateral load.*
2. *CIDH pile specified tip elevation shall not be raised.*
3. *Percast / prestressed concrete piles (Alternative "X")for abutment wing wall foundations will be driven in holes predrilled down to Elev. 907 feet.*

Table 9.2

Bent Foundation Design Recommendations										
Support Location	Pile Type	Cut-off Elevation (ft)	Service-I Limit State Load per Support (kip)	Total Permissible Support Settlement (inch)	Required Factored Nominal Resistance (kip)				Design Tip Elevations (ft)	Specified Tip Elevation (ft)
					Strength Limit		Extreme Event			
					Compression (ϕ =0.7)	Tension (ϕ =0.7)	Compression (ϕ =1)	Tension (ϕ =1)		
Bent 2(L)	24" Standard CIDH	901.25	872	1	142	0	317	188	867 (a-I) 860 (a-II) 864 (b-II) 884 (c) 874 (d)	860
Bent 2(R)	24" Standard CIDH	905.73	415	1	153	0	163	81	865 (a-I) 871 (a-II) 880 (b-II) 886 (c) 878 (d)	865
Bent 3(L)	24" Standard CIDH	901.25	872	1	142	0	317	188	867 (a-I) 860 (a-II) 864 (b-II) 884 (c) 874 (d)	860
Bent 3(R)	24" Standard CIDH	906.73	415	1	153	0	163	81	865 (a-I) 871 (a-II) 880 (b-II) 886 (c) 879(d)	865

Notes:

1. *Design Tip Elevations for Bents are controlled by: (a-I) Compression (Strength Limit State), (b-I) Tension (Strength Limit State), (a-II) Compression (Extreme Event), (b-II) Tension (Extreme Event), (c) Settlement, (d) Lateral load.*
2. *CIDH pile specified tip elevation shall not be raised.*

Table 9.3

Pile Data Table						
Support Location	Pile Type	Nominal Resistance (kip)		Design Tip Elevation (ft)	Specified Tip Elevation (ft)	Required Nominal Driving Resistance (kip)
		Compression	Tension			
Abut 1(L)	24" Standard CIDH	180	0	879 (a) 898 (c) 893 (d)	879	N/A
Wingwall Abut 1(L)	Class 90 PPC Pile	140	0	876 (d)	876	180
Abut 1(R)	24" Standard CIDH	140	0	886 (a) 904 (c) 889 (d)	886	N/A
Bent 2(L)	24" Standard CIDH	320	190	860 (a) 864 (b) 884 (c) 874 (d)	860	N/A
Bent 2(R)	24" Standard CIDH	220	90	865 (a) 880 (b) 886 (c) 878 (d)	865	N/A
Bent 3(L)	24" Standard CIDH	320	190	860 (a) 864 (b) 884 (c) 874 (d)	860	N/A
Bent 3(R)	24" Standard CIDH	220	90	865 (a) 880 (b) 886 (c) 879 (d)	865	N/A
Abut 4(L)	24" Standard CIDH	180	0	879 (a) 900 (c) 894 (d)	879	N/A
Wingwall Abut 4(L)	Class 90 PPC Piles	140	0	876 (d)	876	180
Abut 4(R)	24" Standard CIDH	140	0	886 (a) 905 (c) 891 (d)	886	N/A

Notes:

1. *Design Tip Elevations are controlled by: (a) Compression, (b) Tension, (c) Settlement, (d) Lateral load.*
2. *CIDH pile specified tip elevation shall not be raised.*

Lateral Capacity

Lateral analyses of 24" diameter CIDH piles were performed using LPILE PLUS 5.0 program (Ensoft Inc.). Non-linear EI for the reduction of pile section modulus due to the section crack and "P" reduction factor for the modified soil spring value under group pile condition are considered in these analyses, together with the influence of axial load on moment capacity of piles.

For the abutments, both fixed (rigid) and hinge (pinned) boundary conditions at pile top representing possible pile-to-cap structural connections are considered for the evaluation of deflection controlled lateral pile capacity under service condition. The results of lateral pile analysis on lateral loads and lateral deflections at pile top are presented from Tables 10.1 to 10.3. The calculated maximum bending moments and locations of the maximum moment under each lateral load and deflection are also presented in these tables.

Table 10.1 Summary of Lateral Pile Analysis for Abuts 1 & 4 (Left Widen)

Load vs Pile Top Deflection of 24" Dia. CIDH Piles at Abuts 1&4 (Left) (BR53-0870)					
Pile Top Deflection (in)	Assuming Pile/Cap Hinge Connection			Assuming Pile/Cap Rigid Connection	
	Lateral Load on Pile Top (Max. Shear) (lb)	Maximum Bending Moment (lb-ft)	Depth to Maximum Moment from Pile Top (ft)	Lateral Load on Pile Top (Max. Shear) (lb)	Maximum Bending Moment (on Pile Top) (lb-ft)
0.25	25261	74694	5.9	47434	166999
0.50	33172	107135	6.3	Moment capacity of piles (290 kips-ft) will be reached at lateral deflection of 0.70 in. at pile top, with corresponding shear at approximately 71 kips	
0.75	39208	134085	6.8		
1.00	44329	158413	6.8		
3.20	Moment capacity of piles (290 kips-ft) will be reached with corresponding shear at approximately 68 kips on pile top		7.8		

Notes:

1) Material Stengths and reinforcement information are shown on Plate B2-5 of Standard Plan (May, 2006);

2) Group Reduction Factor (P-Multiplier) is assumed to be 0.70;

3) Axial Load is assumed to be 30 kips on each pile;

4) Lateral controlled pile tip is 28 ft below pile top for hinge condition.

Table 10.2 Summary of Lateral Pile Analysis for Abut 1 (Right Widen)

Load vs Pile Top Deflection of 24" Dia. CIDH Piles at Abut 1 (Right) (BR53-0870)					
Pile Top Deflection (in)	Assuming Pile/Cap Hinge Connection			Assuming Pile/Cap Rigid Connection	
	Lateral Load on Pile Top (Max. Shear) (lb)	Maximum Bending Moment (lb-ft)	Depth to Maximum Moment from Pile Top (ft)	Lateral Load on Pile Top (Max. Shear) (lb)	Maximum Bending Moment (on Pile Top) (lb-ft)
0.25	15705	60587	6.8	33816	141367
0.50	22077	89714	6.8	Moment capacity of piles (290 kips-ft) will be reached at lateral deflection of 0.8 in. at pile top, with corresponding shear at approximately 61 kips	
0.75	27253	115799	7.2		
1.00	32047	140592	7.2		
3.40	Moment capacity of piles (290 kips-ft) will be reached with corresponding shear at approximately 54 kips on pile top		8.1		

Notes:

1) Material Stengths and reinforcement information are shown on Plate B2-5 of Standard Plan (May, 2006);

2) Group Reduction Factor (P-Multiplier) is assumed to be 0.70;

3) Axial Load is assumed to be 30 kips on each pile;

4) Lateral controlled pile tip is 28 ft below pile top for hinge condition.

Table 10.3 Summary of Lateral Pile Analysis for Abut 4 (Right Widen)

Load vs Pile Top Deflection of 24" Dia. CIDH Piles at Abut 4 (Right) (BR53-0870)					
Pile Top Deflection (in)	Assuming Pile/Cap Hinge Connection			Assuming Pile/Cap Rigid Connection	
	Lateral Load on Pile Top (Max. Shear) (lb)	Maximum Bending Moment (lb-ft)	Depth to Maximum Moment from Pile Top (ft)	Lateral Load on Pile Top (Max. Shear) (lb)	Maximum Bending Moment (on Pile Top) (lb-ft)
0.25	17924	66368	6.3	38215	155084
0.50	25444	100557	6.3	Moment capacity of piles (298 kips-ft) will be reached at lateral deflection of 0.7 in. at pile top, with corresponding shear at approximately 65 kips	
0.75	31235	129124	6.8		
1.00	36531	155442	7.2		
3.20	Moment capacity of piles (298 kips-ft) will be reached with corresponding shear at approximately 59 kips on pile top		7.7		

Notes:

1) Material Stengths and reinforcement information are shown on Plate B2-5 of Standard Plan (May, 2006);

2) Group Reduction Factor (P-Multiplier) is assumed to be 0.80;

3) Axial Load is assumed to be 50 kips on each pile;

4) Lateral controlled pile tip is 28 ft below pile top for hinge condition.

In lateral pile analysis for bent foundations, pile and pile cap is assumed to be hinge-connected, based on information provided by structure designer. The results of lateral pile analysis on lateral loads and lateral deflections at pile top are presented in Tables 10.4 and 10.5 respectively. The calculated maximum bending moment and location of the maximum moment under each lateral load and deflection are also presented in the table. The ultimate lateral pile capacity is defined as the maximum lateral shear at pile top. Under such lateral load, the moment capacity, plastic moment, will be reached, and the second hinge will be developed on CIDH pile.

Table 10.4 Summary of Lateral Pile Analysis for Bent 2 & 3 (Left Widening)

Load vs Pile Top Deflection of 24" Dia. CIDH Piles at Bents 2&3 (Left) (BR53-0870)			
Pile Top Deflection (in)	Assuming Pile/Cap Hinge Connection		
	Lateral Load on Pile Top (Max. Shear) (lb)	Maximum Bending Moment (lb-ft)	Depth to Maximum Moment from Pile Top (ft)
0.25	16992	63123	7.2
0.50	22223	90578	8.4
1.00	30968	146379	9.0
2.00	43975	239546	9.5
3.30*	51199	286118	9.5

Notes:

1) Material strengths and reinforcement information are shown on Plate B2-5 of Standard Plan (May, 2006);

2) Group Reduction Factor (P-Multiplier) is assumed to be 0.6;

3) Axial load is assumed to be 30 kips on each pile;

4) Lateral controlled pile tip is 27 ft below pile top for hinge condition;

***** Pile moment capacity (290 kips-ft) reached at top deflection of 3.3 in. with corresponding shear of 51 kips on pile top.

Table 10.5 Summary of Lateral Pile Analysis for Bent 2 & 3 (Right Widening)

Load vs Pile Top Deflection of 24" Dia. CIDH Piles at Bents 2&3 (Right) (BR53-0870)			
Pile Top Deflection (in)	Assuming Pile/Cap Hinge Connection		
	Lateral Load on Pile Top (Max. Shear) (lb)	Maximum Bending Moment (lb-ft)	Depth to Maximum Moment from Pile Top (ft)
0.25	23555	78508	6.8
0.50	30054	105287	7.2
1.00	40143	151786	7.7
2.00	52316	229134	8.6
3.50	61713	290566	9.0

Notes:

1) Material strengths and reinforcement information are shown on Plate B2-5 of Standard Plan (May, 2006);

2) Group Reduction Factor (P-Multiplier) is assumed to be 0.67;

3) Axial load is assumed to be 60 kips on each pile;

4) Lateral controlled pile tip is 27 ft below pile top for hinge condition;

***** Pile moment capacity (303 kips-ft) reached at top deflection of 3.8 in. with corresponding shear of 63 kips on pile top.

The analyses for lateral controlled pile tip are also performed for CIDH piles at all structure support locations. The lateral controlled pile tip is defined as a critical pile length, beyond which, the increase of the pile length will not lead to the reduction of pile deflection under specific lateral load. The above critical pile length under maximum lateral load is considered as the lateral controlled pile length. Its corresponding tip elevation is defined as lateral load controlled pile tip elevation. The lateral load controlled pile tip elevations are presented in foundation design recommendations and pile data table, Tables 9.1 to 9.3.

EARTHWORK

Sliver fills of more than fourteen feet and twenty-two feet wide will be placed at the eastbound and westbound directions, respectively. The maximum fill height will be 17 feet

in eastbound direction, and 30 feet in westbound direction. The maximum settlement in the order of three inches is anticipated, with most of the settlement created as immediate compression of foundation soils under the compacted sliver fills. Although the groundwater is relatively shallow, its presence was found within the Puente Formation. Long-term settlement under the new approach fills is negligible. The negative effect generated from above settlement to the structure foundation is also negligible.

CONSTRUCTION CONSIDERATIONS

1) Based on the findings from subsurface exploration, the observed groundwater is below footing excavation for the bents.

2) Groundwater will be encountered during CIDH pile installation. Cave-in potential for the drilled holes is high due to existence of groundwater. Wet method will be needed for CIDH pile installation. Temporary steel casing, if used, should be removed from the hole during the concrete placement.

3) For CIDH piles with center-to-center spacing of four times of pile diameter and less, the installation of CIDH pile adjacent to a completed CIDH pile must be performed only after the Portland cement concrete of the completed pile has reached “initial set” and developed sufficient strength.

4) For the installation of driven PPC piles at abutment wing wall foundation, over-sized pre-drill through the embankment fills will be needed per Section 49-2.01C(4) of Standard Specifications (Caltrans, 2010). The bottom elevation of the pre-drilled hole should be at +907 ft above MSL.

5) Piles should be driven at least to the specified tip elevation with the driving resistance value verified by the acceptance criteria described in Section 49-2.01A of Standard Specifications (Caltrans, 2010). However, if specified tip elevation is reached without attaining the required driving resistance, pile driving should continue until bearing is achieved. In this case, it is prudent to allow the pile to “set up” before resuming pile driving.

If you have any question, please Haitao Liu at (916) 227-0992.

Report by:

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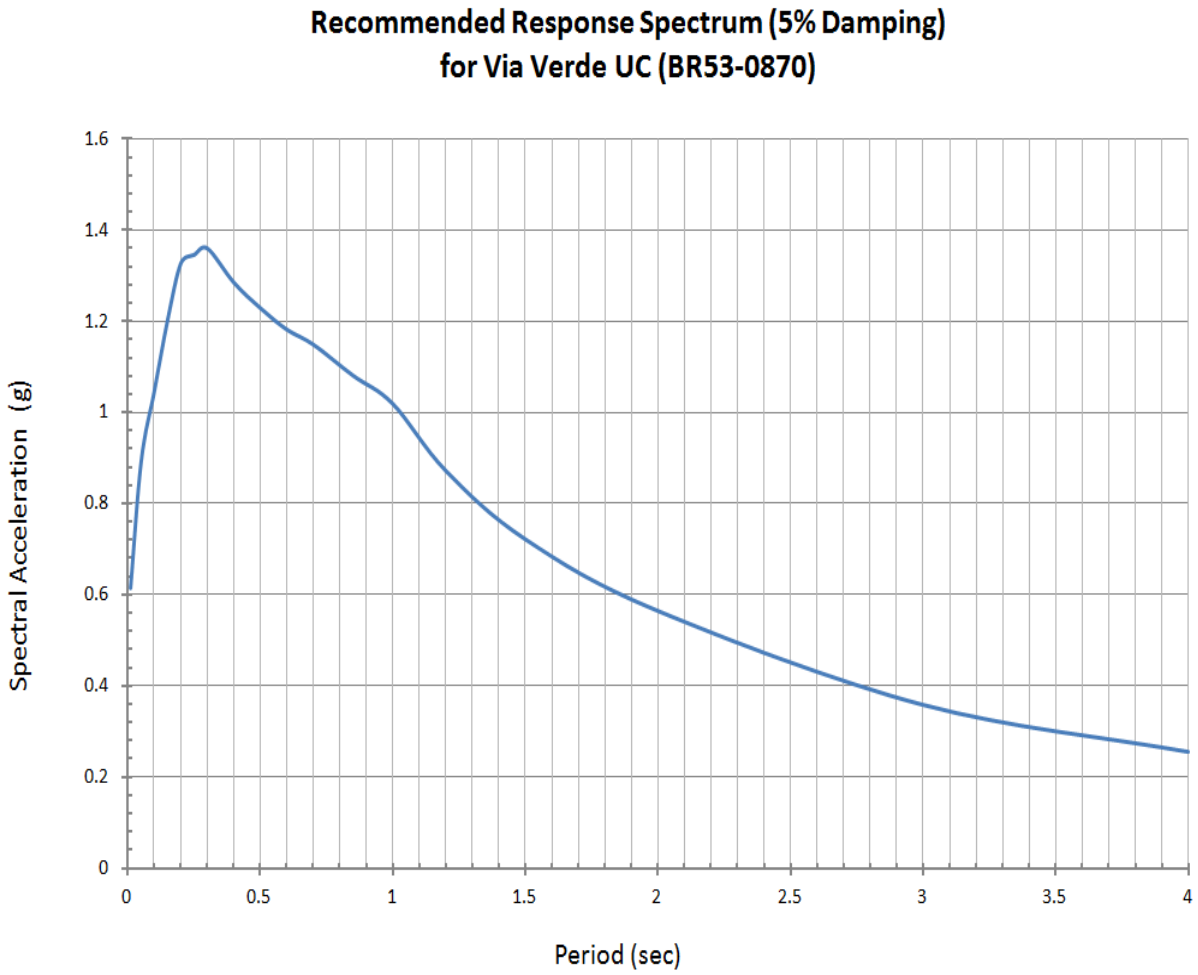
Transportation Engineer - Civil
Branch A

cc: OGDS-1 (Sacramento)
Mehdi Salehinik, D07 Project Manager
Structure Construction R.E. Pending File
Kristen Stahl, District Material Engineer

ATTACHMENTS



Via Verde	
Period, Sec.	Spectral Acceleration, g
0.01	0.62
0.05	0.89
0.1	1.05
0.15	1.20
0.2	1.33
0.25	1.35
0.3	1.36
0.4	1.29
0.5	1.23
0.6	1.18
0.7	1.15
0.85	1.08
1	1.02
1.2	0.87
1.5	0.72
2	0.57
3	0.36
4	0.26
5	0.21

Figure 1 Recommended Acceleration Response Spectra (ARS) Curve, BR53-0870

FOUNDATION REPORT
FOR
KELLOGG DRIVE UC
(Br No. 53-2008)

State of California **Business, Transportation and Housing Agency**
DEPARTMENT OF TRANSPORTATION

M e m o r a n d u m

Flex your power!
Be energy efficient!

To: HOWARD NG
OFFICE OF STRUCTURE DESIGN
SOUTH 2

Date: March 6, 2014
File: 07-LA-10 -PM 42.2
EA07-1193U1
Kellogg Dr UC (Widen)
BR. No. 53-2008

Attn.: Dawit Worku

From: **DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
GEOTECHNICAL SERVICES
OFFICE OF GEOTECHNICAL DESIGN – SOUTH 1

Subject: **Final Foundation Report for Kellogg Dr UC (Widen)**

The following is the foundation report (FR) for the proposed widening of Kellogg Dr Undercrossing (Bridge No. 53-2008) on Route 10, in the city of Pomona, Los Angeles County.

SCOPE OF WORK

The scope of work for this geotechnical study includes:

- Review of the as-built plans and the log of test borings (LOTBs)
- Subsurface exploration
- Laboratory testing of soil samples obtained during field investigation
- Evaluation of site geology, subsurface conditions, and groundwater
- Site seismicity study
- Engineering analyses
- Geotechnical foundation recommendations and construction considerations

This foundation report supersedes the preliminary foundation report, *addition of high occupancy vehicle lanes (HOV) on Route Interstate 10 from Citrus Avenue to State Route 57, 71 and 210 Interchange, Los Angeles County, California*, prepared by AESCO Inc., dated March 28, 2002.

PROJECT DESCRIPTION

The proposed project is to widen both eastbound and westbound I-10 from west of Citrus Street in the City of West Covina to State Route 57 in the City of Pomona (PM 37.2 to PM42.4), in order to accommodate one HOV lane in each direction of Route 10 freeway.

The existing Kellogg Drive Undercrossing consists of two single span bridges, with the main structure carrying I-10 on north, and a ramp structure carrying EB I-10/SB Route 57 connector over Kellogg Drive on south. Both bridges were constructed in 1972, and have cast-in-place (CIP) / pre-stressed (PS) reinforced concrete box girder superstructure with strutted type abutments. Both sides of main bridge and right side of ramp structure are to be widened. The widening width will be approximately 5.75 feet in westbound direction, 21.53 to 23.66 feet in eastbound direction for the main bridge, and 8.39 to 9.51 feet on the right side of connector ramp. CIP/PS reinforced concrete box girder will be used for the widened portion of the superstructure, all supported by cantilever seat type abutment.

SUBSURFACE EXPLORATION AND TESTING PROGRAM

The subsurface exploration program consists of three Cone Penetration Tests (CPT soundings) and two rotary wash borings. Standard Penetration Tests (SPT) were performed in compliance with ASTM D1586. Pocket penetrometer readings were also taken from cohesive soil samples at the selected depth for strength evaluation. Hogentogler electric cone was used in CPT soundings, which were performed in compliance with ASTM D 5778.

The information on locations, investigation depths and equipments used for all drillings and soundings is presented in Table 1 below.

Table 1 Summary of Subsurface Exploration

Exploratory Boring No.	Station	Offset (ft)	Approx. Top of Hole Elevation (ft)	Approx. Borehole Depth (ft)	Exploration Method	Equipment
RW-09-013	2224+07.4	144.3 R	740.3	106.5	Rotary Wash	CME85
RW-09-014	2223+70.3	75.3 L	746.7	91.5	Rotary Wash	CME85
CPT-09-023	2224+09.2	157.2 R	739.9	27.0	Cone Penetration	Hogentogler Electric
CPT-09-024	2224+09.5	69.7 L	746.5	21.5	Cone Penetration	Hogentogler Electric
CPT-09-044	2223+71.9	70.1 L	746.5	19.0	Cone Penetration	Hogentogler Electric

LABORATORY TESTING PROGRAM

During subsurface exploration, relatively undisturbed soil specimens were retrieved using Modified California Samplers and sealed with plastic caps and tapes in brass tubes. SPT samples and bulk samples were collected for future soil engineering property and corrosion evaluation.

The laboratory testing program consists of Atterberg limit tests, particle size analyses, direct shear tests and consolidated undrained triaxial tests. The laboratory test results are available for viewing in Translab, Sacramento.

SITE GEOLOGY AND SUBSURFACE CONDITIONS

Site Geology

The Site is located along the southeast base of the San Jose Hills, the northwest edge of a ½ mile to 1 ½ mile wide alluviated valley that is the drainage course for the San Jose Creek. The valley continues down gradient to the southwest and trends southwest to northeast along the southeast side of the San Jose Hills. The San Jose Hills are an anticlinal tectonic structure formed by folding of generally fine grained sedimentary deposits called the Puente formation. Toward the east end of the San Jose Hills the Sedimentary formations become interlayered with the Glendora Volcanics. The Glendora Volcanics at the location of the Site consist of volcanic conglomerate and basalt flows.

Geologic Map of the San Dimas 7.5' Quadrangle (A Digital Database, by Siang S. Tan, dated 1998 (DMG open file report 98-30) was reviewed during project study. According to the map, the Site partially overlies Holocene alluvial fan deposits consisting primarily of clay and the La Vida member of the Puente formation, a tertiary sedimentary deposit consisting of platy siltstone interbedded with sandstone, conglomerate, limestone and tuff. No generalized cross section was found for the project site. Based on subsurface exploration, the Site is underlain by 5 feet of artificial fill overlying fine and coarse grained Puente formation. The Puente formation at the project site is characterized as soft to moderately hard claystone, siltstone and sandstone.

Subsurface Conditions

Based on recent subsurface exploration (borehole #RW-09-013), more than 65 feet thick alluvial deposits were found at approximately 144 feet south of highway centerline. Those alluvial materials are mainly composed of medium dense to dense silty sand and clayey sand. On the other hand, the exploratory borehole (RW-09-014) located at approximately

75 feet north of highway centerline indicated that only few feet of artificial fills exist above Puente formation. The Puente formation underlying alluvial deposits and artificial fills at the project site can be mostly classified as claystone and siltstone with equivalent consistency of stiff to hard.

The recent subsurface exploration shows that the top of Puente formation is approximately at one (vertical) to three (horizontal) down gradient to the south/southwest across the Site.

The idealized soil profile and soil strength properties for foundation design are presented on Table 2 of this memo.

Groundwater

Rotary wash method was used for the subsurface exploration with no groundwater monitoring device installed near the proposed improvements. Only limited groundwater information is available at the project site. The groundwater was encountered at 737.8 feet to 738.5 feet above MSL (NGVD29) within several exploratory boreholes near the project site for the construction of the original bridge, in August 1966. Groundwater tables are likely to continue to fluctuate with change of season, as the bridge site is located at the alluviated valley, receiving runoff from adjacent hills. Therefore, the highest measured groundwater of 741 feet above MSL (NAVD88) is recommended for the project after vertical datum adjustment.

CORROSION EVALUATION

The bulk samples obtained from soil borings RW-09-013 and RW-09-014 were shipped to Caltrans' Materials Laboratory, and tested for pH value and minimum electrical resistivity. The tests for sulfate and chloride are conducted since the resistivity of the tested soils was less than 1000 Ohm-cm. The corrosion test results are presented in Table 3. Based on Caltrans Corrosion Guidelines (Version 1.0, September 2003), the test results indicate the soils are non-corrosive to structure foundation.

Table 2

IDEALIZED SOIL PROFILE AND STRENGTH PARAMETERS					
Approximate Elevation (ft)	Predominant Soil Type, USCS	Average Blowcount, N_{60}	Total Unit Weight (pcf)	Apparent Friction Angle (degree)	Undrained Shear Strength (psf)
Abutment 1(Left), Abutment 2 (Left)					
+747' to +744'	CL	N/A	110	N/A	700
+744' to +739'	MH (Siltstone)	N/A	125	N/A	2000
+739' to +729'	CL to MH (Claystone)	35	125	N/A	2000
+729' to +719'	CL to MH (Claystone)	50	130	N/A	2500
+719' to 709'	MH-ML (Siltstone)	55	130	N/A	>4000
+709' to +689'	SM (Sandstone)	42	125	36	N/A
+689' to +684'	GC (Conglomerate)	>70	130	38	N/A
+684' to +674'	SM-SP (Sandstone)	>100	135	40	N/A
Abutments 1(Right), 1(Ramp), 2(Right), and 2(Ramp)					
+740' to +732'	GW-GP	11	110	32	N/A
+732' to +722'	SC	20	112	34	N/A
+722' to +716'	SC	30	115	34	N/A
+716' to +707'	SC	40	120	36	N/A
+707' to 702'	SM	31	115	32	N/A
+702' to +697'	SC	65	125	38	N/A
+697' to +687'	SM	61	122	36	N/A
+687' to +672'	SC	51	120	34	N/A

Table 3 Corrosion Test Summary

Location	Depth of Sample (ft)	pH	Soluble Sulfates	Soluble Chlorides	Minimum Resistivity
RW-09-013 & RW-09-014	Composite	6.38	1372	8	635 ohm-cm
Caltrans Criteria for Non-corrosive Area		> 5.5	< 2000 PPM	< 500 PPM	> 1000 Ohm-cm

SEISMIC RECOMMENDATIONS

Ground Motion

The job site is within a seismically active region, and close to a number of active faults. Based on subsurface conditions, a shear wave velocity (V_{s30}) of 290m/sec for the upper 100 feet (30 meters) of foundation soils was used for the ground motion evaluation. Information regarding the faults in the vicinity of the project site was obtained from the Caltrans ARS Online Tool (v2.2.06), and summarized in Table 5 below:

Table 4 Summary of the Adjacent Faults

Fault Name	Magnitude	Fault Type	Distance, (miles)	PGA, (g)
San Jose	6.6	Strike-Slip	0.2	0.5
Sierra Madre Fault Zone	7.2	Reverse	4.7	0.3
Indfian Hill Fault	6.4	Strike-Slip	2.9	0.3

However, based on the USGS 2008 Interactive Deaggregations, the design response spectrum is controlled by 5% probability of exceedance over 50 years. The peak ground acceleration for the job site under Probabilistic scenario is approximately 0.6g. The corresponding design response spectrum was plotted and tabulated in the attachment of this foundation report.

Liquefaction Hazard

Although groundwater level is relatively shallow, the foundation soils at the bridge site below the historical high groundwater table are either predominantly cohesive with relatively high soil consistency (Puente Formation), or gravelly materials and sandy

materials with relatively high density and/or high percentage of fine content (alluvial deposits). Nevertheless, liquefaction analyses were still conducted using computer program Cliq v.1.3 (Geologismiki) based on CPT data obtained from recent soundings (CPT-09-023, CPT-09-024, and CPT-09-044) near the job site. According to the results from the above analyses, liquefaction potential is negligible, with maximum cumulative seismic-induced settlement less than 0.5 in.

The potential of lateral spreading is also negligible, as it is triggered by liquefaction, and affected by other factors such as ground geometry.

Ground Rupture

Since no known fault crosses the project site, the potential for ground rupture at this site due to fault movement is negligible.

AS-BUILT FOUNDATION DATA

Constructed in 1972, the existing Kellogg Dr UC consists of two single span bridges with cast-in-place (CIP) / pre-stressed (PS) reinforced concrete box girder superstructures and strutted type abutments.

Spread footings were used for the foundations of both the main bridge and the connector bridge. The foundation information for existing bridge is presented in Table 5 below:

Table 5 Existing Bridge Foundation Data

Support Location	Approx. Footing Width, ft	Quantity	Allowable Bearing Capacity, tsf	Bottom of Footing Elevation*, ft
Abutment 1	6.5 - 12	1	2.0 - 3.0	740.5 to 746.5
Abutment 1 (Connector Ramp)	6.5 - 12	1	2.0 - 3.0	740
Abutment 2	6.5 - 12	1	2.0 - 3.0	740.5 to 747.6
Abutment 2 (Connector Ramp)	6.5 - 12	1	2.0 - 3.0	740.5

Note: * Approximately 2.4 feet need to be added to the elevation on as-built plans (NGVD29 datum) to match current vertical datum (NAVD 88).

Based on as-built LOTBs from subsurface exploration performed on August 1966 for the original bridges, native materials, which was identified as compact to very dense weathered shale, was encountered from Elev. 760 feet at north of the existing main bridge centerline to Elev. 740 feet at south of the centerline for the existing connector bridge. Because of the availability of more refined interpretation of the foundation soils at the project site, recent findings in subsurface investigation, instead of as-built LOTBs, are used for the bridge foundation design and analysis.

FOUNDATION RECOMMENDATIONS

Foundation Type Selection

Existing bridge foundations have performed well, with no bearing capacity and settlement related structure distress reported. However, due to the high seismicity of the Site, the design load increase and more stringent settlement control criteria based on current LRFD design specifications, deep foundations are recommended for the bridge widening.

Cast-in-drilled-hole (CIDH) piles were considered at first for their relatively low installation noise and vibration during construction. However, the design height of abutment wall requires that higher lateral resistance be mobilized within 0.25 in of allowable horizontal displacement against the lateral thrust from behind the abutment under service condition. Driven battered piles are recommended to satisfy the above requirement due to the relative large lateral capacity created by the horizontal component of the pile axial resistance.

Based on the surface topography of the Puente formation and the density of the foundation materials, driven steel H piles are proposed for their better drivability through relatively hard layer.

Foundation Data Provided by Structural Designers

Based on the Department policy, Load and Resistance Factor Design (LRFD) is used for design of the bent foundations, and Work Stress Design (WSD) is used for the abutment foundations. The foundation design data and load data were provided by the structural designers and presented in follow tables:

Table 6.1 Deep Foundation Data

Support No.	Design Method	Driven Pile Type	Finish Grade Elevation (ft)	BOF Elevation (ft)	Pile Cap Size (ft)		Number of Piles	Permissible Settlement under Service Load (inch)
					B	L		
Abut 1 (Left Widening)	WSD	HP14X89	753,50	749.00	10	13.42	4	1
Abut 1 (Right Widening)	WSD	HP14X89	747.50	743.00	14.5	36.3	14	1
Abut 1 (Ramp Widening)	WSD	HP14X89	747.00	742.50	13	19.75	6	1
Abut 2 (Left Widening)	WSD	HP14X89	754.50	750.00	10	13.75	4	1
Abut 2 (Right Widening)	WSD	HP14X89	747.50	743.00	14.5	31.92	14	1
Abut 2 (Ramp Widening)	WSD	HP14X89	747.50	743.00	13	19.25	6	1

Table 6.2 LRFD Service Limit States I Load Data

Support No.	Total Vertical Load (kip)		Permanent Loads Per Support (kip)
	Per Support	Max Per Pile	Per Support
Abut 1 (Left Widening)	463	136	344
Abut 1 (Right Widening)	1765	188	1606
Abut 1 (Ramp Widening)	820	156	701
Abut 2 (Left Widening)	446	126	326
Abut 2 (Right Widening)	1590	147	1351
Abut 2 (Ramp Widening)	786	158	667

Axial Capacity

The abutments foundation design recommendations are presented on Table 7.1. The Pile Data Table to be included in contract plans is presented on Table 7.2. The driven HP14X89 piles are designed using pile design/analysis computer program DRIVEN 1.2 (FHWA), where Nordlund's method and α-method were used for pile side resistance within cohesionless and cohesive soils, respectively.

Table 7.1

Abutment Foundation Design Recommendations									
Support Location	Pile Type	Cut-Off Elevation (ft)	LRFD Service-I Limit State Load per Support (kip)		LRFD Service I Limit State Load per Pile in Compression (kip)	Required Nominal Resistance (kip)	Design Tip Elevation (ft)	Specified Tip Elevation (ft)	Nominal Driving Resistance Required (kip)
			Total	Permanent					
Abut 1 (Left)	HP 14X89	749.42	463	344	136	280	704 (a) 722 (d)	704	280
Abut 1 (Right)	HP 14X89	743.42	1765	1606	188	380	675 (a) 719 (d)	675	380
Abut 1 (Ramp)	HP 14X89	742.92	820	701	156	320	682 (a) 718 (d)	682	320
Abut 2 (Left)	HP 14X89	750.42	446	326	126	260	706 (a) 723 (d)	706	260
Abut 2 (Right)	HP 14X89	743.42	1590	1351	147	300	683 (a) 719 (d)	683	300
Abut 2 (Ramp)	HP 14X89	743.42	786	667	158	320	682 (a) 719 (d)	682	320

Notes:

1. *Design Tip Elevations are controlled by: (a) Compression, (d) Lateral load.*
2. *The specified tip elevation shall not be raised above design tip elevations for lateral.*

Table 7.2

Pile Data Table						
Support Location	Pile Type	Nominal Resistance (kip)		Design Tip Elevation (ft)	Specified Tip Elevation (ft)	Nominal Driving Resistance Required (kip)
		Compression	Tension			
Abut 1 (Left)	HP14X89	280	0	704 (a) 722 (d)	704	280
Abut 1 (Right)	HP14X89	380	0	675 (a) 719 (d)	675	380
Abut 1 (Ramp)	HP14X89	320	0	682 (a) 718 (d)	682	320
Abut 2 (Left)	HP14X89	260	0	706 (a) 723 (d)	706	260
Abut 2 (Right)	HP14X89	300	0	683 (a) 719 (d)	683	300
Abut 2 (Ramp)	HP14X89	320	0	682 (a) 719 (d)	682	320

Notes:
1. *Design Tip Elevations are controlled by: (a) Compression, (d) Lateral load.*
2. *The specified tip elevation shall not be raised above design tip elevations for lateral.*

Lateral Capacity

Lateral analyses for HP14X89 steel driven piles were performed using LPILE PLUS 5.0 program (Ensoft Inc.). The hinged (pinned) boundary condition at pile top representing proposed pile-to-cap structural connection is considered for the evaluation of pile lateral capacity. Since the piles are battered in the longitudinal vertical plane, only transverse direction, where the weak axes of steel H piles are oriented, is selected for the analyses. The results of lateral pile analysis on lateral loads and lateral deflections at pile top are presented from Tables 8.1 to 8.3. The calculated maximum bending moments and locations of the maximum moment under each lateral load and deflection are also presented in the tables.

The ultimate pile lateral capacity is defined as the maximum lateral shear on pile top, under which, the moment capacity (plastic moment) will be reached (or the second hinge introduced) on 14X89 steel H piles.

Table 8.1 Summary of Lateral Pile Analysis for Left Widening

Load vs Pile Top Deflection of HP14X89 Steel Driven Piles at Abuts 1&2 (Left) (BR53-2008)			
Pile Top Deflection (in)	Assuming Pile/Cap Hinge Connection		
	Lateral Load on Pile Top (lb)	Maximum Bending Moment (lb-ft)	Depth to Maximum Moment from Pile Top (ft)
0.25	10087	42262	5.9
0.50	16214	74463	5.9
1.00	24645	124544	6.3
2.00	30806	181284	7.7
4.00	30151	221397	10.8
6.60*	31181	253359	13.1

Notes:

1) Group Reduction Factor (P-Multiplier) is assumed to be 0.93;

2) Axial Load is assumed to be 100 kips on each pile;

3) Lateral controlled pile tip is 27 ft below pile top under hinge condition.

4) Lateral analysis conducted for transverse direction (weak axis of HP shape) with moment of inertia of 326 in^3.

***** Pile moment capacity (254 kips-ft) reached at top deflection of 6.6 in. with corresponding shear of 31 kips on pile top.

Table 8.2 Summary of Lateral Pile Analysis for Right Widening

Load vs Pile Top Deflection of HP14X89 Steel Driven Piles at Abuts 1&2 (Right) (BR53-2008)			
Pile Top Deflection (in)	Assuming Pile/Cap Hinge Connection		
	Lateral Load (max. shear) on Pile Top (lb)	Maximum Bending Moment (lb-ft)	Depth to Maximum Moment from Pile Top (ft)
0.25	8554	27436	5.4
0.50	13331	48626	5.9
1.00	20956	87223	6.8
2.00	30698	154386	7.2
3.80*	41920	252751	8.6

Notes:

1) Group Reduction Factor (P-Multiplier) is assumed to be 0.85;

2) Axial Load is assumed to be 100 kips on each pile;

3) Lateral controlled pile tip is 24 ft below pile top under hinge condition.

4) Lateral analysis conducted for transverse direction (weak axis of HP shape) with moment of inertia of 326 in^3.

***** Pile moment capacity (254 kips-ft) reached at top deflection of 3.8 in. with corresponding shear of 42 kips on pile top.

Table 8.3 Summary of Lateral Pile Analysis for Ramp Widening

Load vs Pile Top Deflection of HP14X89 Steel Driven Piles at Abuts 1&2 (Ramp) (BR53-2008)			
Pile Top Deflection (in)	Assuming Pile/Cap Hinge Connection		
	Lateral Load (max. shear) on Pile Top (lb)	Maximum Bending Moment (lb-ft)	Depth to Maximum Moment from Pile Top (ft)
0.25	8887	28116	5.4
0.50	13831	49788	5.9
1.00	21721	89167	6.3
2.00	31786	157731	7.2
3.70*	42867	253173	8.1

Notes:

1) Group Reduction Factor (P-Multiplier) is assumed to be 0.9;

2) Axial Load is assumed to be 100 kips on each pile;

3) Lateral controlled pile tip is 24 ft below pile top under hinge condition.

4) Lateral analysis conducted for transverse direction (weak axis of HP shape) with moment of inertia of 326 in^3.

***** Pile moment capacity (254 kips-ft) reached at top deflection of 3.7 in. with corresponding shear of 43 kips on pile top.

The analyses for lateral controlled pile tip are also performed for Driven steel H piles at all structure support locations. The lateral controlled pile tip is defined as a critical pile length, beyond which, the increase of the pile length will not lead to the reduction of pile deflection under specific lateral load. The above critical pile length under maximum lateral load on pile top is considered as the lateral controlled pile length. Its corresponding tip elevation is defined as lateral load controlled pile tip elevation. The lateral load controlled pile tip elevations are presented in foundation design recommendations and pile data table, Tables 7.1 and 7.2, in previous section.

EARTHWORK

Sliver fills of less than six feet and ten feet wide will be placed at the left side of the main bridge and right side of connector ramp, respectively. The sliver fills to be placed at the right side of the main bridge are approximately twenty-four feet wide. Settlement due to the placement of the additional fills is negligible, with most of the settlement completed as immediate compression of foundation soils based on the subsurface condition at the job site. The negative effect from above settlement to the structure foundation is also negligible.

ABUTMENT RETAINING WALLS (WINGWALLS)

With the exception of right widening for the Abutment 1 of the main bridge, standard Type 1 walls (Standard Plans 2006) with spread footings will be used for all abutment wingwalls. The new abutment wingwalls will be constructed adjacent to the existing wingwalls, which are also supported by spread footing and performed well over years. The new abutment wingwall footings should be constructed on top of compacted structural backfills. A minimum factor of safety of 3.0 can be achieved for the bearing capacity of wingwall footings with design wall height up to 20 feet, based on foundation soil profiles on as-built LOTBs and general properties for structural backfills.

According to Section 4.4.5.1 of Bridge Design Specifications (2004), a minimum horizontal distance of 4 feet, measured at the top of the footing, should be maintained between the near face of the footing to the face of finished slope. With the exception of embankment end slope, all side slopes of approach embankment should be graded to no steeper than two (horizontal) to one (vertical) slope.

CONSTRUCTION CONSIDERATIONS

1) Groundwater will not be encountered during footing excavation for the structural foundations according to the available groundwater information.

2) Piles should be driven at least to the specified tip elevation with the driving resistance value verified by the acceptance criteria described in Section 49-2.01A of Standard Specifications (Caltrans, 2010). However, if specified tip elevation is reached without attaining the required driving resistance, pile driving should continue until bearing is achieved. In this case, it is prudent to allow the pile to “setup” before resuming pile driving.

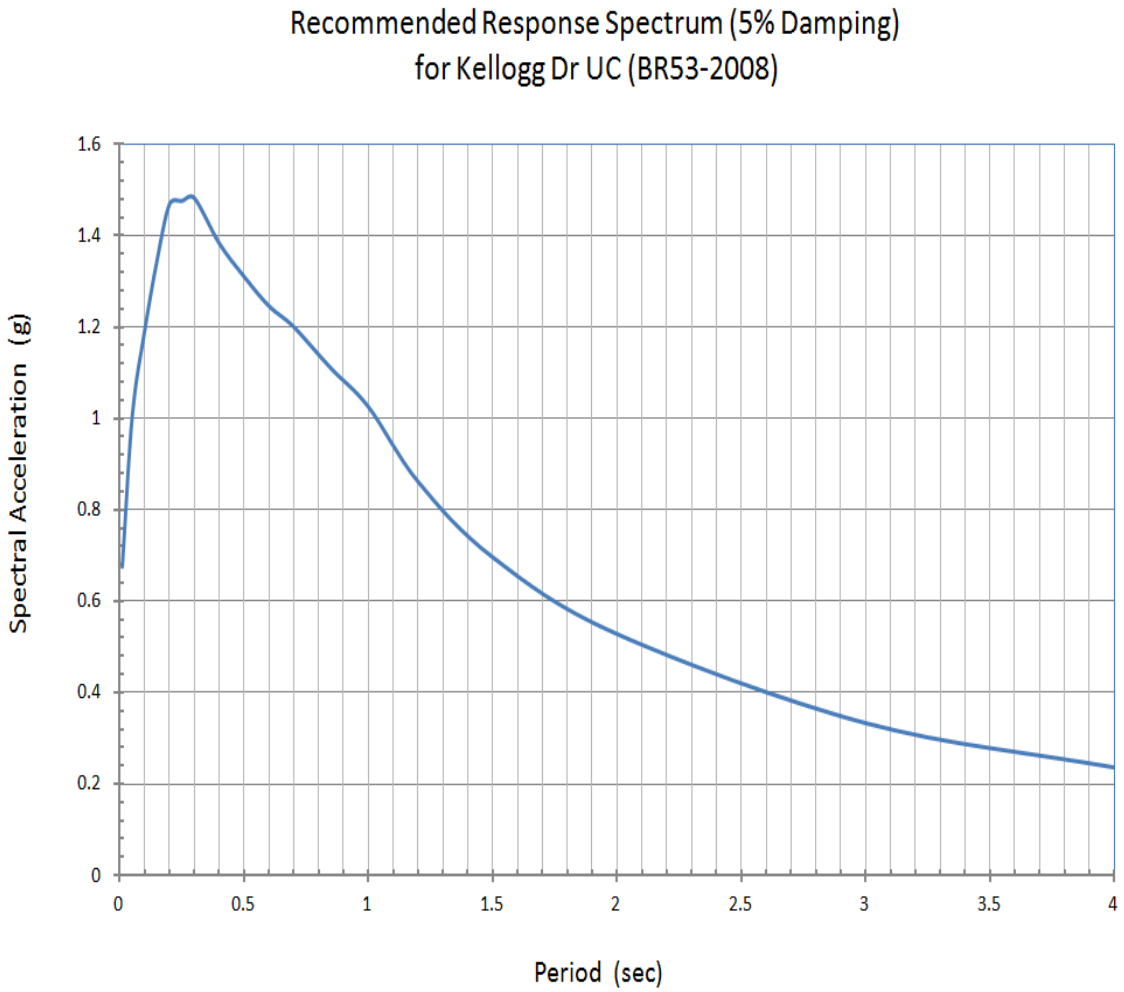
If you have any question, please contact Haitao Liu at (916) 227-0992.

Report by:

HAITAO LIU, P.E
Transportation Engineer - Civil
Branch A

cc: OGDS-1 (Sacramento)
Mehdi Salehinik, D07 Project Manager
Structure Construction R.E. Pending File
Kristen Stahl, District Material Engineer

ATTACHMENTS



Kellogg Dr UC	
Period, Sec.	Spectral Acceleration, g
0.01	0.675
0.05	1.005
0.1	1.192
0.15	1.347
0.2	1.469
0.25	1.476
0.3	1.482
0.4	1.383
0.5	1.31
0.6	1.246
0.7	1.2
0.85	1.109
1	1.025
1.2	0.861
1.5	0.696
2	0.528
3	0.333
4	0.236

Figure 1 Recommended Acceleration Response Spectra (ARS) Curve, BR53-2008

GEOTECHNICAL DESIGN REPORT FOR RETAINING/SOUNDWALL Nos.

1971, 1975, 2002, 2004, 2005, 2026, 2035, 2050, 2064, 2068, 2074, 2076, 2084, 2093, 2104, 2110, 2116, 2118, 2128, 2130, 2134, 2137, 2138, 2140, 2145, 2146, 2150, 2159, 2161, 2166, and 2220

State of California **Business, Transportation and Housing Agency**

M e m o r a n d u m

To: **MR. MIKE POPE**
Branch Chief
Structural Design – Branch 18

Attn.: Mr. Richard Schendel
Senior Engineer

Date: June 26, 2014

File No. 07-LA-10
PM 37.2/42.4
EA 07-1193U1
Retaining/Sound Walls

From: **DEPARTMENT OF TRANSPORTATION**
Division of Engineering Services
Mets and Geotechnical Services
Office of Geotechnical Design – South 1

Subject: Geotechnical Design Report for Retaining/Sound Wall Nos. 1971, 1975, 2002, 2004, 2005, 2026, 2035, 2050, 2064, 2068, 2074, 2076, 2084, 2093, 2104, 2110, 2116, 2118, 2128, 2130, 2134, 2137, 2138, 2140, 2145, 2146, 2150, 2159, 2161, 2166, and 2220

1.0 INTRODUCTION

The Office of Geotechnical Design-South 1 (OGDS-1) has prepared this memorandum to provide geotechnical recommendations for the proposed retaining/sound walls along westbound and eastbound of I-10 in the City of West Covina and Pomona.

1.1 Project Description

The proposed improvement project is to provide a HOV lane in each direction on I-10 freeway from west of Citrus Street in the City of West Covina (PM 37.2) to State Routes 57, 71, and 210 Interchange in the City of Pomona (PM 42.4).

1.2 Proposed Earth Retaining Systems

The combined total length of the 31 proposed walls is approximately 23,200 feet and the maximum wall heights range from 3 to 50 feet. Information on the proposed walls is summarized in Table 1.

Table 1 – Information of the Proposed Retaining /Sound Walls

Item	Wall ID No.	Wall Type	Begin Station	End Station	Length (ft)	Max. Design Height (ft)	Associated Boreholes	Location
1	RW 1971	Type 5SWB	72+50 "B2" Line	77+25 "B2" Line	479	12.0	R-09-101	Eastbound, Citrus Ave. Off-ramp
2	RW 1975	Type 1SWB	1975+75.05 "A" Line	1978+91.16 "A" Line	317	10.0	R-09-101	Eastbound, Citrus Ave. Off-ramp
3	RW 2002	Type 7 (Mod)	101+99.88 "C1" Line	105+11.00 "C1" Line	311	14.9	A-10-216	Westbound, Barranca St. On-ramp
4	RW 2004	Soldier Pile	2003+60.00 "A" Line	2006+17.45 "A" Line	258	10.8	A-09-120 B-2 (CT 1975, Barranca St OC)	Westbound, Barranca St. Bridge Abutment 3
		Ground Anchor	2006+17.45 "A" Line	2007+50.92 "A" Line	134	11.5		
		Soldier Pile	2007+50.92 "A" Line	2008+48.12 "A" Line	97	10.8		
5	RW 2005	Soldier Pile	2004+23.30 "A" Line	2006+21.32 "A" Line	199	16.1	A-09-119 B-1 (CT 1975, Barranca St OC)	Eastbound, Barranca St. Bridge Abutment 1
		Ground Anchor	2006+21.32 "A" Line	2007+53.30 "A" Line	129	16.8		
		Soldier Pile	2007+53.30 "A" Line	2007+96.34 "A" Line	49	16.1		
6	RW 2026	Type 1	25+90.00 “D2” Line	29+84.88 “D2” Line	353	14.0	CPT-09-006 B-1, B-4, B-7 (CT 1971, Frontage Rd UC Off-Ramp)	Westbound, Grand Ave. On-Ramp
7	RW 2035	Type 7	42+94.20 "D3" Line	44+79.13 "D3" Line	184	14.0	A-09-108	Eastbound, East of Grand Ave.
8	RW 2050	Type 1SWB	2051+08.14 “A” Line	2056+61.87 “A” Line	577	10.0	A-09-113	Westbound, E Holt Ave. On-Ramp
9	RW 2064	Type 7	63+00 "E6" Line	66+84.43 "E6" Line	323	22.0	R-10-122	Westbound, E Holt Ave. Off-Ramp
10	RW 2068	Cantilever Drilled Shaft	67+50.00 "Ramp E6" Line	73+01.79 "Ramp E6" Line	544	20.5	R-13-001 thru 003 R-10-121 B-1, B-2 (CT 1993 RW265)	Westbound, near E Holt Ave. Off-Ramp
11	RW 2074	Type 736 S/SV and Type 736 S/SV (Mod)	2073+00.00 "B" Line	2075+79.03 "B" Line	269	4.5	B-2 (CT 1993, RW265)	Westbound, near E Holt Ave. Off-Ramp
		Type 5SWB	2075+79.03 "B" Line	2076+75.00 "B" Line	93	8.0		
12	RW 2076	Type 7SW	2076+75.00 "B" Line	2077+26.59 "B" Line	50	16.0	R-10-120 B-3, B-4 (CT 1993 RW265)	Westbound, near E Holt Ave. Off-Ramp
		Cantilever Drilled Shaft	2077+26.59 "B" Line	2077+89.90 "B" Line	61	10.2		
		Type 7SW	2077+89.90 "B" Line	2083+95.89 "B" Line	586	24.0		

Table 1 – Information of the Proposed Retaining /Sound Walls (continued)

Item	Wall ID No.	Wall Type	Begin Station	End Station	Length (ft)	Max. Design Height (ft)	Associated Boreholes	Locations
13	RW 2084	Type 5SWB	2083+95.91 "B" Line	2104+49.35 "B" Line	2,067	26.0	R-10-117 thru R-10-119 B-5 thru B-9 (CT 1993, RW265)	Westbound, between E Via Verde St. and E Holt Ave.
14	RW 2093	Soil Nail	2093+75.00 "B" Line	2135+08.21 "B" Line	4,101	34.5	R-11-221 thru 224 R-10-131 thru 138 R-09-301 R-09-011 B-1 thru B-6 (CT 1993, RW294)	Eastbound, E Via Verde St. Off-Ramp
15	RW 2104	Soil Nail and Type 7SW	2104+49.34 "B" Line	2104+97.34 "B" Line	48	10.0	R-10-115, R-10-116, B-10, B-11 (CT 1993, RW265)	Westbound, between E Via Verde St. and E Holt Ave.
		Soil Nail	2104+97.34 "B" Line	2110+25.00 "B" Line	528	25.0		
16	RW 2110	Soil Nail and Type 736B MOD	2110+25.00 "B" Line	2113+50.49 "B" Line	319	14.0	R-10-114 B-12 (CT 1993, RW265)	Westbound, between E Via Verde St. and E Holt Ave.
17	RW 2116	Soil Nail	2115+54.00 "B" Line	2127+88.02 "B" Line	1,229	27.6	R-11-227 and 228 R-10-113 R-09-117 B-1 thru B-4 (CT 1993, RW309)	Westbound, E Via Verde St. On-Ramp
18	RW 2118	Type 736S/SV	2117+31.67 "B" Line	2119+62.85 "B" Line	226	4.0	R-11-227 R-11-228 R-09-117	Westbound, E Via Verde St.
		Type 5SWB	2119+62.85 "B" Line	2126+37.87 "B" Line	676	8.0		
		Type 736S/SV	2126+37.87 "B" Line	2127+88.96 "B" Line	156	3.0		
19	RW 2128	Type 1SWB	2127+88.01 "B" Line	2129+69.76 "B" Line	189	14.0	R-10-111 B-4, B-5 (CT 1993 RW309)	Westbound, E Via Verde St. On-Ramp
20	RW 2130	Type 736S/SV	2129+69.71 "B" Line	2130+17.23 "B" Line	50	4.0	R-10-111 B-4, B-5 (CT 1993 RW309)	Westbound, E Via Verde St. On-Ramp
		Type 1SWB	2130+17.23 "B" Line	2133+95.37 "B" Line	400	14.0		
21	RW 2134	Type 1SWB	2132+60.00 “B” Line	2135+68.64 “B” Line	309	10.0	R-10-110 B-1 (CT 1993, RW319)	Westbound, E Via Verde St. On-Ramp
22	RW 2137	Type 1	2137+74.72 "B" Line	2141+18.47 "B" Line	328	8.0	R-10-141 B-1 (CT 1993, RW350)	Eastbound, E Via Verde St. On-Ramp
23	RW 2138	Type 1	37+63.30 "F3" Line	42+90.58 "F3" Line	544	24.0	R-10-108 R-10-109 R-09-012 B-1 (CT 1993, RW331)	Westbound, E Via Verde St. Off-Ramp
		Type 1SWB	42+90.58 "F3" Line	44+74.01 "F3" Line	184	32.0		
		Type 5SWB	44+74.01 "F3" Line	45+69.76 "F3" Line	96	28.0		

Table 1 – Information of the Proposed Retaining /Sound Walls (continued)

Item	Wall ID No.	Wall Type	Begin Station	End Station	Length (ft)	Max. Design Height (ft)	Associated Boreholes	Locations
24	RW 2140	Type 1SWBP	2137+49.12 "B" Line	2140+24.94 "B" Line	285	14.0	R-10-108 R-10-109 R-09-012 B-2, B-3 (CT 1993 RW319)	Westbound, E Via Verde St. Off-Ramp
		Type 1SWB	2140+24.94 "B" Line	2141+20.00 "B" Line	96	10.0		
		736 S/SV	2141+20.00 "B" Line	2143+28.00 "B" Line	208	--		
25	RW 2145	736B Mod	2144+62.17 "B" Line	2144+88.16 "B" Line	26	--	R-11-225 R-10-142 R-10-144 B-4 thru B-7 (CT 1993, RW350)	Eastbound, E Via Verde St. On-Ramp
		Soil Nail	2144+88.16 "B" Line	2157+58.21 "B" Line	1,264	14.5		
		Type 1	2157+58.21 "B" Line	2159+22.00 "B" Line	160	10.0		
26	RW 2146	Type 7SW	2145+10.05 "B" Line	2145+36.64 "B" Line	27	18.0	R-10-107 B-2 (CT 1993, RW331)	Westbound, E Via Verde St. Off-Ramp
		Type 7B(Mod)	2145+36.64 "B" Line	2148+87.60 "B" Line	352	32.0		
		Type 7SW	2148+87.60 "B" Line	2149+60.00 "B" Line	73	18.0		
27	RW 2150	Type 5SW	2149+60.00 "B" Line	2165+38.67 "B" Line	1,601	22.0	R-10-104 thru B-10-106 B-3 thru B-6 (CT 1993, RW331)	Westbound, East of E Via Verde St. Off-Ramp
28	RW 2159	Type 1	2159+22.00 "B" Line	2160+39.00 "B" Line	114	16.0	B-7 (CT 1993, RW350)	Eastbound, East of E Via Verde St. On-Ramp
29	RW 2161	Type 736B modified	2160+39.00 "B" Line	2160+59.47 "B" Line	20	--	R-11-226 R-10-145 B-8 (CT 1993, RW350)	Eastbound, East of E Via Verde St. On-Ramp
		Soil Nail	2160+59.47 "B" Line	2163+93.02 "B" Line	326	7.0		
		Type 736B modified	2163+93.02 "B" Line	2164+25.78 "B" Line	32	--		
30	RW 2166	Soil Nail	2165+38.67 "B" Line	2185+40.00 "B" Line	1,951	50.0	R-10-101 R-10-102A R-10-103	Westbound, between E Via Verde Street and Kellogg Dr.
31	RW 2220	Type 1	21+50.00 "H1" Line	22+83.00 "H1" Line	133	10.0	R-10-218 R-09-014	Westbound, Kellogg Dr. On-Ramp

2.0 SCOPE OF WORK

The work performed to produce this report includes:

- Review project plans and relevant plans;
- Review published historical groundwater levels;
- Monitor groundwater levels;

- Review of previous LOTBs;
- Perform subsurface exploration, includes drilling 56 boreholes, with a maximum depth of 110 feet;
- Evaluate laboratory tests;
- Evaluate data obtained from above activities and perform engineering analyses; and
- Draft the report.

3.0 SITE EXPLORATION

3.1 Subsurface Exploration

Subsurface exploration for this project was performed between July 2009 and January 2013, which includes advancing 56 boreholes to a maximum depth of 110 feet below the existing ground surface. The boreholes were drilled using truck-mounted drill rigs fitted with a 4–1/2 inch rotary wash drill bit or hollow–stem auger.

The locations of the boreholes are shown on LOTBs.

Standard Penetration Test (SPT) was performed during subsurface exploration and complies with ASTM D1586.

Sampling consisted of:

- Collecting samples retrieved from the SPT split spoon;
- Collecting bulk samples;
- Collecting soil samples at selected locations using Modified California Samplers; and
- Collecting rock core samples.

The relevant boreholes for each wall are shown in Table 1.

3.2 Laboratory Test

The soil samples obtained during the subsurface exploration were selected and assigned for laboratory tests. The soils were classified in accordance with Caltrans 2010 Soil and Rock Logging, Classification, and Presentation Manual.

The laboratory tests performed include corrosivity series tests (minimum resistivity and pH), gradation, Atterberg Limits, and direct shear tests.

4.0 SITE CONDITIONS

4.1 Regional Geology

The proposed retaining/sound walls, listed in Table 1 as items one to item seven, are located within the southeastern part of the San Gabriel Valley. From Citrus Avenue, at the west extent of the project, I-10 continues east to Grand Avenue, overlying a relatively flat to slightly sloping part of the San Gabriel Valley basin. The basin is filled with Tertiary or younger sediments, composed of loosely to moderately consolidated clay, silt, sand and gravel, and form alluvial fans and stream channels. The sedimentary deposits found in the San Gabriel Valley are derived from surrounding hills and mountains which form the boundaries of the valley. The northern extent of the valley is formed by the San Gabriel Mountains which rise to greater than 10,000 feet amsl. South of the San Gabriel Valley, the Repetto Hills, Merced Hills, Puente Hills and San Jose Hills rise about 500 feet or more from the valley floor to separate the valley from the coastal plains. These hills bound the valley on the west, south, and east. For this report, we reviewed the State of California, Department of Water Resources', Bulletin 104-2, Planned Utilization of Groundwater Basins, San Gabriel Valley, Appendix A: Geohydrology (Bulletin 104-2). Based on Plate 9A, Plate 10, and cross section Z of Bulletin 104-2, the Quaternary deposits within the San Gabriel Valley may be as deep as 1,500 feet thick through the center of the valley. The base of the Quaternary deposits becomes shallower toward the hills that bound the valley to the south and east.

Items 6 to item 13, listed in Table 1, are located along the southeastern edge of the San Gabriel Valley, where the I-10 traverses a geologic transition from a sedimentary basin to tectonically uplifted hills. I-10 continues to the east from Holt Avenue, over Quaternary Older Alluvium that forms terrace deposits and low hills and ridges, composed of pale to dark reddish-brown weathered gravel, sand, silt, and clay. The eastern extent of this geologic transition is approximately two thirds of a mile east of Holt Avenue.

East of Holt Avenue, I-10 begins to ascend a grade that leads into the center of the San Jose Hills, approximately a mile northeast of Buzzard Peak. The highway grade reaches an elevation of approximately 930 ft. At this location, on and off ramps provide access to Via Verde Street from I-10. We reviewed The Geologic Map of the San Dimas and Ontario Quadrangles, Los Angeles and San Bernardino Counties, California, by Thomas Dibblee (2002)(Dibblee). According to Dibblee, I-10 in this area is underlain by the La Vida Shale Member of the Puente Formation. This geologic formation is a very soft to moderately hard sedimentary rock which is composed of siliceous shale, clay shale, and siltstone. The La Vida member is typically weathered and has a color that is white, yellow or very pale brown. Some strata contain very pale brown dolomite and sandstone. The La Vida Shale Member is generally thinly bedded and platy.

I-10 reaches an elevation of approximately 1,000 ft approximately a ½ mile east of the east bound Via Verde Street off ramp. At this point I-10 continues eastward down a grade along a south facing hill locally called "Kellogg Hill". At the top of the downward grade, north facing rock slopes are located along the south side of the highway. The rock slopes are excavated in moderately hard to hard Topanga Sandstone. According to Dibblee, the Topanga formation that is exposed at this rock slope is light gray or yellowish brown, bedded, arkosic, locally pebbly and

may include interbedded siltstone or clay shale. Site reconnaissance by our office has revealed that Glendora Volcanics are also present along this slope.

Eastward from the top of the grade, I-10 descends into the San Jose Wash, which is an area along the southeast edge of the San Jose Hills and forms the western extent of the Pomona Valley. The main campus for the California Polytechnic University at Pomona (Calpoly) is located along the south side of I-10 until the interchange with California State Route 57 (SR-57). The south facing slopes of Kellogg Hill are located along the north side of the highway. A prehistoric landslide has been remediated in this area between 1958 and 1962. A buttress fill was constructed along the north side of I-10, across from the Calpoly, around 1962. I-10 is underlain by La Vida member in this area. The geologic formation is typically very soft, light brown claystone, which can be considered soil with regard to material strength. Toward the bottom of the grade, I-10 is underlain by quaternary alluvium composed of loosely to moderately consolidated clay, silt, sand, and gravel.

4.2 Subsurface Soil and Rock Conditions

The generalized subsurface profile at the borehole locations consisted of sandy silt, silty sand, and clayey materials overlying bedrock (siltstone, sandstone, or claystone). The recorded SPT N values indicate that the sandy soil layers are mostly medium dense to very dense. The clayey soil layers are mostly stiff.

4.3 Groundwater and Seepage

Six piezometers (R-09-011, 012, 228, 235, R-10-135, and 136) were installed within the project site to monitor groundwater levels. Measured ground water table levels varied from zero (R-10-135) to 60 (R-09-235) feet below existing grade between December 2009 and January 2013.

Table 2 – Measured Groundwater

Borehole No.	Ground Surface Elevation (ft)	Groundwater Table		Date Measured	Notes
		Depth Below Ground Surface (ft)	Elevation (ft)		
R-09-011	912.9	10.7	902.2	1/6/2011	Highest level
		14.0	898.9	12/29/2009	Lowest level
R-09-012	905.2	16.6	888.6	1/6/2011	Highest level
		20.5	884.7	5/30/2012	Lowest level
R-09-228	754.5	11.9	742.6	4/6/2010	Highest level
		14.2	740.3	12/29/2009	Lowest level
R-09-235	868.8	39.7	829.1	4/6/2010	Highest level
		60.2	808.6	1/7/2013	Lowest level
R-10-135	875.3	0.0	875.3	1/7/2013	Highest level
		0.0	875.3	1/6/2011	Lowest level
R-10-136	911.2	6.5	904.7	4/6/2011	Highest level
		11.6	899.6	5/30/2012	Lowest level

4.4 Faulting and Seismicity

The proposed retaining/sound wall sites are located within a seismically active region and close to a number of active faults. The shear wave velocity (V_{s30}) of the soil and rock at the site varies from 1,080 ft/sec (320 m/sec) to 1,970 ft/sec (600 m/sec) in the upper 100 feet (30 m).

Based on the Caltrans ARS Online Tool (v2.2.06, 2009), the job site is 1.2 miles north of the San Jose fault. This fault, nearest from the site, is capable of generating a maximum earthquake (M_{max}) moment magnitude of 6.6. The design, median, peak ground acceleration (PGA) for this site is 0.6g. Other nearby faults, including the Sierra Madre fault (Sierra Madre E) and Indian Hill fault, have a lesser potential impact on the retaining/sound walls and seismicity than the San Jose fault.

Table 3 – Summary of Faults

Fault	Fault Style	Magnitude (M_W)	Distance (miles)	PGA (g)
San Jose	SS	6.6	1.2	0.6
Sierra Madre fault zone	Reverse	7.2	5.4	0.3
Indian Hill fault	SS	6.4	1.8	0.4

5.0 ANALYSIS AND DESIGN

5.1 Foundation Materials and Lateral Earth Pressures

Estimated soil engineering properties and generalized soil stratigraphy used for geotechnical analysis and design are summarized in Tables 4 to 37. The soil engineering properties were derived from laboratory test and estimated from corrected SPT N values (Bowles, 1977).

Table 4 – Retaining Wall No. 1971, Type 5SWB

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1*	0-30	Silty/Clayey SAND	30	Flat

Note: 1. Depths are measured from top of wall
2.*Layer where footing will be located
3. Traffic surcharge is not included in estimating active equivalent fluid pressure

Table 5 – Retaining Wall No. 1975, Type 1SWB

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1*	0-30	Silty/Clayey SAND	32	Flat

Note: 1. Depths are measured from top of wall
2.*Layer where footing will be located
3. Traffic surcharge is not included in estimating active equivalent fluid pressure

Table 6 – Retaining Wall No. 2002, Type 7 (Mod)

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1	Behind Wall	N/A	35	Flat
2*	0-20	Clayey SAND	--	--

Note: 1. Depths are measured from design finish grade of on-ramp
2.*Layer where footing will be located
3. Traffic surcharge is not included in estimating active equivalent fluid pressure

Table 7 – Retaining Wall No. 2004, Cantilever Soldier Pile

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1	Above Finish Grade	FILL	50	2H:1V
2	0-10	SAND with SILT and GRAVEL	45	--
3	10-35	SAND with SILT and GRAVEL	40	--

Note: 1. Depths are measured from design finish grade of freeway
2. Traffic surcharge is not included in estimating active equivalent fluid pressure

Table 8 – Retaining Wall No. 2004, Ground Anchor

Layer No.	Depth (ft)	Soil Type	SPT Blow Counts	Estimated Soil Engineering Parameters
1	0-10	Silty SAND with GRAVEL	32	γ = 130 pcf φ = 34˚
2	10-50	Sandy SILT	>50	γ = 125 pcf φ = 36˚

Note: 1. Depths are measured from existing grade on Barranca Ave

Table 9 – Retaining Wall No. 2005, Cantilever Soldier Pile

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1	Above Finish Grade	FILL	50	2H:1V
2	0-10	Silty SAND	60	--
3	10-35	Sandy SILT	55	--

Note: 1. Depths are measured from design finish grade of freeway
2. Traffic and existing building surcharge are not included in estimating active equivalent fluid pressure

Table 10 – Retaining Wall No. 2005, Ground Anchor

Layer No.	Depth (ft)	Soil Type	SPT Blow Counts	Estimated Soil Engineering Parameters
1	0-14	Gravelly SAND	24, 53	γ = 130 pcf φ = 38˚
2	14-30	Silty SAND	10 to >50	γ = 120 pcf φ = 34˚
3	30-65	Silty SAND	31 to >50	γ = 125 pcf φ = 38˚

Note: 1. Depths are measured from existing grade on Barranca Ave

Table 11 – Retaining Wall No. 2026, Type 1

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1	Behind Wall	FILL	35	Flat
2*	0-7	Silty SAND	--	--
3	7-15	Silty SAND/ Silty CLAY/ Clayey SILT	--	--
4	Below 15	Silty SAND	--	--

Note: 1. Depths are measured from design finish grade of freeway
2.*Layer where footing will be located

Table 12 – Retaining Wall No. 2035, Type 7

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1	Behind Wall	FILL	50	2H:1V
2*	0-5	SAND	--	--
3	5-20	Silty SAND	--	--

Note: 1. Depths are measured from design finish grade of freeway
2.*Layer where footing will be located

Table 13 – Retaining Wall No. 2050, Type 1SWB

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1	Behind Wall	FILL	35	Flat
2*	0-10	Silty SAND	--	--
3	5-20	SAND	--	--

Note: 1. Depths are measured from finish grade on E Garvey Ave N
2.*Layer where footing will be located
3. Traffic surcharge is not included in estimating active equivalent fluid pressure

Table 14 – Retaining Wall No. 2064, Type 7

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1*	0-40	Silty SAND	35	Flat

Note: 1. Depths are measured from top of wall
2.*Layer where footing will be located
3. Traffic surcharge is not included in estimating active equivalent fluid pressure

Table 15 – Retaining Wall No. 2068 (Sta. 2067+30.51 to 2071+83.00), Cantilever Drilled Shaft

Layer No.	Depth (ft)	Soil Type	SPT Blow Counts	Estimated Engineering Parameters
1	0-40	Silty SAND	23 to 44	γ = 120 pcf φ = 36˚
2	40-45	Lean CLAY	27	γ = 118 pcf C_u = 1200 psf
3	45-50	SILT	>50	γ = 138 pcf φ = 42˚
4	50-60	SANDSTONE	36 to >50	γ = 130 pcf φ = 38˚

Note: 1. Depths are measured from top of wall

Table 16 – Retaining Wall No. 2068 (Sta. 2071+83.00 to 2073+00), Cantilever Drilled Shaft

Layer No.	Depth (ft)	Soil Type	SPT Blow Counts	Estimated Engineering Parameters
1	0-25	Silty SAND	22 to 32	γ = 120 pcf φ = 35˚
2	25-35	Silty SAND	14	γ = 115 pcf φ = 32˚
3	35-50	Silty SAND	24 to 34	γ = 120 pcf φ = 33˚

Note: 1. Depths are measured from top of wall

Table 17 –Retaining Wall No. 2074 (Sta. 2073+00 to 2075+79.03), Type 736S/SV and Type 736S/SV Mod

Layer No.	Depth (ft)	Soil Type	SPT Blow Counts	Estimated Soil Engineering Parameters
1	0-5	Poorly Graded GRAVEL	12	γ = 112 pcf φ = 32˚
2	5-10	Sandy SILT	17	γ = 117 pcf φ = 33˚
3	10-20	Silty SAND	20, 37	γ = 120 pcf φ = 33˚

Note: 1. Depths are measured from design finish grade of freeway

Table 18 – Retaining Wall No. 2074 (Sta. 2075+79.03 to 2076+75.00), Type 5SWB

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1	Behind Wall	FILL	33	Flat
2	0-5	Poorly Graded GRAVEL	--	--
3*	5-10	Sandy SILT	--	--
4	10-20	Silty SAND	--	--

Note: 1. Depths are measured from design finish grade of freeway
2.*Layer where footing will be located
3. Traffic surcharge is not included in estimating active equivalent fluid pressure

Table 19 – Retaining Wall No. 2076 (Sta. 2076+75.00 to 2077+26.59 and 2077+89.90 to 2083+95.89), Type 7SW

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1	Above finish grade	Silty SAND	35	Flat
2*	0-15	Silty SAND	--	--
3	15-20	Lean CLAY with SAND	--	--
4	Below 20	SANDSTONE	--	--

Note: 1. Depths are measured from design finish grade of freeway
2. *Layer where footing will be located

Table 20 – Retaining Wall No. 2076 (Sta. 2077+26.59 to 2077+89.90), Cantilever Drilled Shaft

Layer No.	Depth (ft)	Soil Type	SPT Blow Counts	Estimated Soil Engineering Parameters
1	Above finish grade	Silty SAND	N/A	γ = 120 pcf φ = 32°
2	0-15	Silty/Clayey SAND	23	γ = 122 pcf φ = 34°
3	15-20	Lean CLAY with SAND	N/A	γ = 120 pcf C_u = 600 psf
4	Below 20	SILTSTONE	24	γ = 125 pcf φ = 35° C_u = 1400 psf

Note: 1. Depths are measured from design finish grade of freeway

Table 21 – Retaining Wall No. 2084, Type 5SWB

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1	Behind Wall	FILL	34	Flat
2	5-10	Clayey SAND	--	--
3	10-15	Sandy Lean CLAY	--	--
4*	Below 15	SILTSTONE/ CLAYSTONE	--	--

Note: 1. Depths are measured from top of wall
2. *Layer where footing will be located
3. Traffic surcharge is not included in estimating active equivalent fluid pressure

Table 22 – Retaining Wall No. 2118 (Sta. 2117+31.67 to 2119+62.85), Type 736S/SV

Layer No.	Depth (ft)	Soil Type	SPT Blow Counts	Estimated Soil Engineering Parameters
1	0-15	SILTSTONE	33, 48	γ = 130 pcf φ = 42˚
2	15-20	SILTSTONE	17	γ = 110 pcf φ = 34˚
3	20-55	SILTSTONE	>50	γ = 130 pcf φ = 42˚

Note: 1. Depths are measured from existing grade of E Via Verde Street

Table 23 – Retaining Wall No. 2118 (Sta. 2119+62.85 to 2126+37.87), Type 5SWB

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1*	0-15	SILTSTONE	34	Flat
2	Below 15	SILTSTONE	--	--

Note: 1. Depths are measured from top of wall
2. *Layer where footing will be located
3. Traffic surcharge is not included in estimating active equivalent fluid pressure

Table 24 – Retaining Wall No. 2118 (Sta. 2126+37.87 to 2127+88.96), Type 736S/SV

Layer No.	Depth (ft)	Soil Type	SPT Blow Counts	Estimated Soil Engineering Parameters
1	0-20	Clayey SAND/Sandy SILT	11 to 16	γ = 115 pcf φ = 33˚
2	20-50	SILTSTONE	36 to 56	γ = 110 pcf φ = 34˚ C_u = 200 psf

Note: 1. Depths are measured existing grade of E Via Verde Street

Table 25 – Retaining Wall No. 2128, Type 1SWB

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1	0-10	Sandy SILT/ Silty SAND	34	Flat
2*	Below 15	CLAYSTONE	--	--

Note: 1. Depths are measured from design finish grade freeway
2. *Layer where footing will be located
3. Traffic surcharge is not included in estimating active equivalent fluid pressure

Table 26 – Retaining Wall No. 2130 (Sta. 2129+69.71 to 2130+17.23), Type 736S/SV

Layer No.	Depth (ft)	Soil Type	SPT Blow Counts	Estimated Soil Engineering Parameters
1	0-10	Sandy SILT/ Silty SAND	>50	γ = 120 pcf φ = 34°
2	Below 10	CLAYSTONE	19 to >50	γ = 122 pcf φ = 32°

Note: 1. Depths are measured from design finish grade of freeway

Table 27 – Sound Wall No. 2130 (Sta. 2130+17.23 to 2133+95.37), Type 1SWB

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1	0-10	Sandy SILT/ Silty SAND	34	Flat
2*	Below 10	CLAYSTONE	--	--

Note: 1. Depths are measured from top of wall
2. *Layer where footing will be located
3. Traffic surcharge is not included in estimating active equivalent fluid pressure

Table 28 – Retaining Wall No. 2134, Type 1SWB

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1*	0-15	Sandy Lean CLAY	34	Flat
2	Below 15	SILTSTONE	--	--

Note: 1. Depths are measured from top of wall
2. *Layer where footing will be located
3. Traffic surcharge is not included in estimating active equivalent fluid pressure

Table 29 – Retaining Wall No. 2137, Type 1

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1	Behind Wall	Sandy Silt (Fill)	38	5H:1V
2	0-5	Sandy Silt (Fill)	--	--
3*	5-30	SILTSTONE	--	--

Note: 1. Depths are measured from design finished grade of freeway
2. *Layer where footing will be located
3. Traffic surcharge is not included in estimating active equivalent fluid pressure

Table 30 – Retaining/Sound Wall No. 2138, Type 1/1SWB/5SWB

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1	0-5	Silty Sand with Gravel	34	Flat
2	5-15	Sandy lean Clay	34	--
3*	15-40	Claystone	--	--
4	40-60	Siltstone	--	--

Note: 1. Depths are measured from top of wall
2. *Layer where footing will be located
3. Traffic surcharge is not included in estimating active equivalent fluid pressure

Table 31 – Retaining Wall No. 2140, Type 1SWB (Sta. 2140+24.94 to 2141+20.00)

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1	0-5	Silty SAND	34	Flat
1	5-20	Sandy Lean CLAY	--	--
2*	Below 20	SILTSTONE	--	--

Note: 1. Depths are measured from top of wall
2. *Layer where footing will be located
3. Traffic surcharge is not included in estimating active equivalent fluid pressure

Table 32 – Retaining Wall No. 2140, Type 736S/SV (Sta. 2141+20.00 to 2143+28.00)

Layer No.	Depth (ft)	Soil Type	SPT Blow Counts	Estimated Soil Engineering Parameters
1	0-5	Sandy SILT	13	γ = 113 pcf φ = 32˚
2	5-15	Sandy Lean CLAY	11	γ = 115 pcf φ = 31˚
3	Below 15	CLAYSTONE	28 to 50	γ = 120 pcf φ = 36˚

Table 33 – Retaining/Sound Wall No. 2145, Type 1 (Sta. 2157+58.21 to 2159+22.00)

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1	Behind wall	SAND	42	4H:1V
2*	0-10	Silty SAND/ Clayey SAND	--	--
3	10-15	CLAYSTONE	--	--
4	Below 15	SILTSTONE	--	--

Note: 1. Depths are measured from design finished grade of freeway
2. *Layer where footing will be located

Table 34 – Retaining Wall No. 2146, Type 7B (Mod)/7SW

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1	Behind Wall	SILTSTONE	34	Flat
2*	Below Finish Grade	SILTSTONE	--	--

Note: 1. *Layer where footing will be located

Table 35 – Retaining/Sound Wall No. 2150, Type 5SW

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1	0-20	Clayey SAND	34	Flat
2*	Below 20	CLAYSTONE/ SANDSTONE/ SILTSTONE	--	--

Note: 1. Depths are measured from top of wall
2. *Layer where footing will be located
3. Traffic surcharge is not included in estimating active equivalent fluid pressure

Table 36 – Retaining Wall No. 2159, Type 1

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1*	0-20	Selected Fill	34	Flat

Note: 1. Depths are measured from top of wall
2. *Layer where footing will be located

Table 37 – Retaining Wall No. 2220, Type 1

Layer No.	Depth (ft)	Soil Type	Estimated Active Equivalent Fluid Pressure (pcf)	Slope Condition behind Wall
1	Behind Wall	Silty SAND	46	3H:1V
2*	0-5	Lean Clay	--	--
3	5-30	SILTSTONE/ CLAYSTONE	--	--

Note: 1. Depths are measured from design finished grade of on-ramp
2. *Layer where footing will be located and subgrade preparation is required
3. Traffic surcharge is not included in estimating active equivalent fluid pressure

5.2 Bearing Resistance of Shallow Foundation

The foundation dimensions provided in the Structural Plan sheets for the proposed maximum wall height and the bearing resistance estimated using the soil parameters summarized above for each wall location are included in Table 38.

Table 38 – Estimated Bearing Resistance

Wall ID. No.	Wall Type	Maximum Design Wall Height (ft)	Base Width (ft)	Effective Footing Width (ft)	Required Gross Uniform Bearing Stress (ksf)	Bearing Resistance[3] (ksf)	Nominal Bearing Resistance[3] (ksf)
						Strength Limit State	Extreme Limit State
1971	Type 5SWB	12.0	10.25	2.1	9.2[4]	--	10.0
1975	Type 1SWB	10.0	8.0	1.7	6.4[4]	--	10.0
2002	Type 7 (Mod)	14.0	10.0	6.6	1.7[5]	5.0	--
2026	Type 1	14.0	9.6	4.3	3.8[5]	5.0	--
2035	Type 7	14.0	10.75	6.6	1.7[5]	5.0	--
2050	Type 1SWB	10.0	8.0	1.7	6.4[4]	--	10.0
2064	Type 7	22.0	10.0	3.5	9.3[4]	--	14.0
2074	Type 5SWB	8.0	9.0	3.0	4.7[4]	--	10.0
2076	Type 7SW	24.0	12.25	4.3	10.4[4]	--	12.0
2084	Type 5SWB	26.0	21.0	3.6	21.6[4]	--	22.0
2104	Type 7SW	10.0	7.5	4.2	2.8[5]	5.0	--
2118	Type 5SWB	8.0	9.0	3.0	4.7[4]	--	6.0
2128	Type 1SWB	14.0	10.0	1.3	13.3[4]	--	15.0
2130	Type 1SWB	14.0	10.0	1.3	13.3[4]	--	15.0
2134	Type 1SWB	10.0	8.0	1.7	6.4[4]	--	6.5
2137	Type 1	8.0	7.25	3.6	2.3[5]	5.0	--
2138	Type 1	24.0	15.75	5.3	7.6[4]	--	15.0
	Type 1SWB	32.0	25.25	8.1	10.5[4]	--	15.0
	Type 5SWB	28.0	22.75	3.9	23.2[4]	--	25.0
2140	Type 1SWB	10.0	8.0	1.7	6.4[4]	--	8.0
2145	Type 1	10.0	7.58	3.0	3.3[5]	5.0	--
2146	Type 7/7SW	32.0	14.5	4.9	12.4[4]	--	15.0
2150	Type 5SW	22.0	17.25	2.9	18.4[4]	--	19.0
2159	Type 1	16.0	10.75	3.6	5.7[4]	--	10.0
2220[2]	Type 1	10.0	11.0	3.8	6.5[4]	--	10.0

Note: 1. Minimum footing embedded depth is 3 ft
2. Subgrade preparation for wall footing is required
3. Bearing resistance is estimated based on the effective footing width with maximum design wall height
4. Controlling limit state: Extreme Limit State
5. Controlling limit state: Strength Limit State

5.3 Backfill Materials

On-site excavated soils may be used as wall backfill materials. Table 39 summarizes laboratory test results of sand equivalent and sieve analysis of samples collected within or near the proposed wall locations.

Table 39 - Sand Equivalent and Sieve Analysis Results

Sample Number	Sample Depth (ft)	Approx. Station	Passing Rate (%)				Sand Equivalent	Proposed Wall Number
			Sieve Size					
			3"	No 4	No 30	No 200		
B01	0 – 1	2007+00	100	99	87	51	11	2005
B02	0 – 2	2036+00	100	96	62	32	22	2035
B03	0 – 3	2095+00	100	100	89	68	14	2093
B04	0 – 3	2111+50	100	86	65	37	13	2093
B05	0 – 2	2124+50	100	94	75	56	12	2093
B06	0 – 3	2166+30	100	94	68	24	31	2161
B07	0 – 2	2167+00	100	95	78	59	12	2145
B08	0 – 2	2146+00	100	86	74	56	8	2145
B09	0 – 2	2177+20	100	83	50	21	31	2166
B10	0 – 3	2146+00	100	99	95	66	10	2146
B11	0 – 3	2124+50	100	100	94	75	10	2116
B12	0 – 3	2112+50	100	86	74	56	9	2110
B13	0 – 3	2108+00	100	86	73	60	12	2104
B14	0 – 2	2072+50	100	99	80	51	11	2068
B15	0 – 2	2066+00	100	88	75	58	8	2064
B16	0 – 3	2005+00	100	87	70	34	18	2004

5.4 Structural Design Information

CIDH and Soldier Pile Wall

The structural design information of the proposed CIDH and soldier pile walls is summarized in Table 40.

Table 40 – Structural Design Information

Wall ID No.	Pile Diameter (ft)	Pile Spacing (ft)	Facing Type	Lagging Type
2004	2.5	10.0	Concrete facing with architectural treatment	wood
2005	3.0	8.0 10.0		wood
2068	2.0	3.0		None
	3.0	3.5 4.0		
2076	3.0	4.0		

5.5 Seismic Design Analyses

5.5.1 Liquefaction

Groundwater table varies from zero to 60 feet below existing grade as presented in Subsection 4.3, Groundwater.

Based on the presence of generally medium dense to very dense soil below this depth, the job site is not susceptible to soil liquefaction during seismic events.

5.5.2 Seismically Induced Settlement

In the absence of soil liquefaction, potential seismically induced ground settlement at the site is negligible.

6.0 RECOMMENDATIONS

6.1 Recommendations for Shallow Foundation and Pile Foundation

6.1.1 Subgrade Preparation for Retaining Wall No. 2220

Within these portions of the proposed wall limits, on-site materials should be excavated to a depth of five feet from the bottom of the proposed footings or to the bedrock, whichever reaches first, and replaced with structure backfills.

The lateral extent of the over-excavation of subgrade beyond the proposed footing limits of the wall should be at least equal to the depth of over-excavation.

6.1.2 Bearing Resistance of Spread Footing

Bearing resistances of soil under the wall foundations have been estimated assuming wall foundations to be founded on the interpreted soil layers shown in Tables 4 to 37. The estimated bearing resistances of footings shown in Table 38 are all greater than the imposed footing stresses.

During construction, if it is found that soil under wall foundations is different than assumed in this report, this office should be notified and revisions of soil bearing resistances may be provided, if necessary.

The top of footing should be at least 1.5 feet below finish grade. For footings constructed on slope, the footing should be at least 4 feet away from the finish grade of the slope measuring horizontally at the top of footing elevation.

6.1.3 Unbonded Length of Vertical Ground Anchor for RWs 2064 and 2076

The unbonded length of the vertical ground anchors should be at least 15 feet.

6.1.4 Global Stability

Global stability analysis of all walls for both static and seismic conditions indicated satisfactory factors of safety.

6.1.5 Masonry Block on Type 736 S/SV Barrier for Retaining/Sound Wall Nos. 2074, 2118, 2130, and 2140

The proposed retaining/sound walls will be supported by drilled shafts as shown in Caltrans Sound Wall, Masonry Block on Type 736 S/SV Barrier, Standard Plans (May, 2010). The friction angles of subsurface soils summarized from Tables 4 to 37 may be used for walls and piles selection.

6.1.6 Pile Design Parameters for RW/SW 2140 (Sta. 2137+49.12 to 2140+24.94)

The designed pile data is summarized in Table 41. Pre-drilling will be needed for the 10 piles proposed near the existing drainage structure. The bottom elevation of the pre-drilled holes is 893 feet and the tip elevation of the pre-drilled piles is 870 feet.

Table 41 – Pile Data Table

Pile Type	Cut-off Elevation (ft)	Service State Load (kips)/Pile (Compression)	Nominal Resistance (kips)	Design Tip Elevation (ft)*	Specified Tip Elevation (ft)	Nominal Driving Resistance Required (kips)
Class 90 (Alternative "Y")	922.75	90	180	892.5/869.5	892.5/869.5	180
	923.75			893.5	893.5	
	924.75			894.5	894.5	
	925.75			895.5	895.5	
	926.75			896.5	896.5	
	927.75			897.5	897.5	
	928.75			898.5	898.5	

Note: * Design tip elevations are controlled by compression

Group Effect

For driven pile groups in cohesionless soil, the nominal axial resistance of the pile group is the sum of the nominal resistance of all of the piles in the group.

The efficiency factor should be 1.0 where the pile cap is or is not in contact with ground for a center-to-center pile spacing of 2.5 diameters or greater.

6.1.7 Corrosion Evaluation

Minimum resistivity and pH tests were conducted on composite samples at various depths performed for the proposed retaining/sound walls and pertinent bridges. The test results are summarized in Table 42. Based on Caltrans Corrosion Guidelines, version 1.0, September 2003, the test results indicate that the soils at this site are considered non-corrosive.

Table 42 – Soil Corrosion Test Summary

Location	SIC Number	Minimum Resistivity (Ohm-Cm)	pH	Chloride Content (ppm)	Sulfate Content (ppm)
R-10-104	C702343	1,221	6.64	N/A	N/A
R-10-105 R-10-106	C702344	1,020	7.23	N/A	N/A
R-10-108	C702350	1,638	9.9	N/A	N/A
R-10-114	C702345	1,003	7.45	N/A	N/A
R-10-118 R-10-122	C702346	6,903	7.53	N/A	N/A
R-10-145	C702349	4,807	8.02	N/A	N/A
R-11-221	C702368	891	6.7	15	434
R-11-224	C702369	2,862	7.7	N/A	N/A
R-11-225	C702370	1,298	7.6	N/A	N/A
R-11-226	C702371	2,228	7.5	N/A	N/A
R-11-227	C702372	675	7.3	398	163

Note: Caltrans currently considers a site to be corrosive to foundation elements if one or more of the following conditions exist: Chloride concentration is greater than or equal to 500 ppm, sulfate concentration is greater than or equal to 2000 ppm, or the pH is 5.5.or less. It is the practice of Caltrans Corrosion Technology Section (with the exception of MSE Walls) if the minimum resistivity of the sample is greater than 1000 ohm-cm and the pH is greater than 5.5, the sample is considered to be noncorrosive.

6.2 ERS Type-Specific Recommendations

6.2.1 Special Design ERS

6.2.1.1 Soil Nail Wall

For the design of the recommended soil nail walls, the computer program SNAILZWIN was used. Following are the geotechnical design criteria for the soil nail walls:

- Static Case
  Minimum Factor of Safety: 1.5

- Seismic Case
  Minimum Factor of Safety: 1.1
  Non-dimensional horizontal seismic coefficient k_h: = 0.2

The results of design calculation are summarized in Tables 43 to 49.

Table 43 – Design Information for Soil Nail Wall No. 2093

Wall Zone	Station ("B" Line)	Max. Wall Height (ft)	Min. Nail Embedment Length (ft)	Max. Vertical Nail Spacing (ft)	Max. Horizontal Nail Spacing (ft)	Pullout Resistance Qd[4] (lb/ft)	Rebar[5]		Min. Allowable Facing Resistance[5] (kips)	
							Grade (ksi)	Diameter (inch)	Static	Seismic
1	2093+75 to 2101+00	8.5	10	5	5	2,720	75	1.0	30	38
2	2101+00 to 2109+00	7.7	10	5	5	2,720	75	1.0	30	38
3	2109+00 to 2115+00	10.4	20	5	5	2,720	75	1.0	30	38
4	2115+00 to 2121+00	11.7	20	5	5	2,720	75	1.0	30	38
5	2121+00 to 2125+00	25.7	35	5	5	3,200	75	1.0	30	38
6	2125+00 to 2127+50	34.5	35	5	5	3,200	75	1.0	30	38
7	2127+50 to 2127+96	34.4	30	5	5	3,200	75	1.0	30	38
	2127+96 to 2128+50	32.7	30	4	4	3,200	75	1.0	30	38
8	2128+50 to 2129+50	30.5	25	4	4	3,200	75	1.0	30	38
9	2129+50 to 2130+50	26.6	20	4	4	3,200	75	1.0	30	38
10	2130+50 to 2132+50	23.1	15	4	4	3,200	75	1.0	30	38
11	2132+50 to 2134+73	14.7	10	4	4	3,200	75	1.0	30	38
	2134+73 to 2135+08.21	4.5	9	4	4	3,200	75	1.0	30	38

Notes:
1. Wall height is a vertical distance from the finished grade of roadway to the finished grade behind the wall.
2. Inclination angle of nails is 15 degree measured from horizontal.
3. The first row of the nails is placed 2.5 feet below the finished grade behind the wall for nail spacing of 5 feet. The first row of the nails is placed 2.0 feet below the finished grade behind the wall for nail spacing of 4 feet.
4. Pullout resistance of the soil nail should be tested through verification and proof test in accordance with the test procedure of the Special Provisions.
5. For structural design, appropriate structural factor of safety should be applied.

Table 44 – Design Information for Soil Nail Wall No. 2104

Wall Zone	Station ("B" Line)	Max. Wall Height (ft)	Min. Nail Embedment Length (ft)	Max. Vertical Nail Spacing (ft)	Max. Horizontal Nail Spacing (ft)	Pullout Resistance Qd[4] (lb/ft)	Rebar[5]		Min. Allowable Facing Resistance[5] (kips)	
							Grade (ksi)	Diameter (inch)	Static	Seismic
1	2104+49.34 to 2104+97.34	7.4	10	5	5	2,720	75	1.0	30	38
2	2104+97.34 to 2107+65.00	18.3	20	4	4	3,620	75	1.0	30	38
3	2107+65.00 to 2109+75.00	25.0	30	4	4	3,620	75	1.0	30	38
	2109+75.00 to 2110+25.00	13.0	10	4	4	3,620	75	1.0	30	38

Notes:
1. Wall height is a vertical distance from the finished grade of roadway to the finished grade behind the wall.
2. Inclination angle of nails is 15 degree measured from horizontal.
3. The first row of the nails is placed 3.5 feet below the finished grade behind the wall, and nail spacing needs to be adjusted in areas with geometric constraints.
4. Pullout resistance of the soil nail should be tested through verification and proof test in accordance with the test procedure of the Special Provisions.
5. For structural design, appropriate structural factor of safety should be applied.

Table 45 – Design Information for Soil Nail Wall No. 2110

Wall Zone	Station ("B" Line)	Max. Wall Height (ft)	Min. Nail Embedment Length (ft)	Max. Vertical Nail Spacing (ft)	Max. Horizontal Nail Spacing (ft)	Pullout Resistance Qd[4] (lb/ft)	Rebar[5]		Min. Allowable Facing Resistance[5] (kips)	
							Grade (ksi)	Diameter (inch)	Static	Seismic
1	2110+25.00 to 2113+50.49	15.0	10	5	5	2,720	75	1.0	30	38

Notes:
1. Wall height is a vertical distance from the finished grade of roadway to the finished grade behind the wall.
2. Inclination angle of nails is 15 degree measured from horizontal.
3. The first row of the nails is placed 3.5 feet below the finished grade behind the wall, and nail spacing needs to be adjusted in areas with geometric constraints.
4. Pullout resistance of the soil nail should be tested through verification and proof test in accordance with the test procedure of the Special Provisions.
5. For structural design, appropriate structural factor of safety should be applied.

Table 46 – Design Information for Soil Nail Wall No. 2116

Wall Zone	Station ("B" Line)	Max. Wall Height (ft)	Min. Nail Embedment Length (ft)	Max. Vertical Nail Spacing (ft)	Max. Horizontal Nail Spacing (ft)	Pullout Resistance Qd[4] (lb/ft)	Rebar[5]		Min. Allowable Facing Resistance[5] (kips)	
							Grade (ksi)	Diameter (inch)	Static	Seismic
1	2115+54.00 to 2116+50.00	13.0	15	4	4	2,720	75	1.0	30	38
2	2116+50.00 to 2126+00	27.6	25	4	4	2,720	75	1.0	30	38
3	2126+00 to 2127+87.93	20.0	20	4	4	2,720	75	1.0	30	38

Notes:
1. Wall height is a vertical distance from the finished grade of roadway to the finished grade behind the wall.
2. Inclination angle of nails is 15 degree measured from horizontal.
3. The first row of the nails is placed 3.5 feet below the finished grade behind the wall, and nail spacing needs to be adjusted in areas with geometric constraints.
4. Pullout resistance of the soil nail should be tested through verification and proof test in accordance with the test procedure of the Special Provisions.
5. For structural design, appropriate structural factor of safety should be applied.

Table 47 – Design Information for Soil Nail Wall No. 2145

Wall Zone	Station ("B" Line)	Max. Wall Height (ft)	Min. Nail Embedment Length (ft)	Max. Vertical Nail Spacing (ft)	Max. Horizontal Nail Spacing (ft)	Pullout Resistance Qd[4] (lb/ft)	Rebar[5]		Min. Allowable Facing Resistance[5] (kips)	
							Grade (ksi)	Diameter (inch)	Static	Seismic
1	2144+88.16 to 2154+90.10	14.5	10	5	5	2,720	75	1.0	30	38
	2154+90.10 to 2157+58.21			4	4					

Notes:
1. Wall height is a vertical distance from the finished grade of roadway to the finished grade behind the wall.
2. Inclination angle of nails is 15 degree measured from horizontal.
3. The first row of the nails is placed 3 feet below the finished grade behind the wall, and nail spacing needs to be adjusted in areas with geometric constraints.
4. Pullout resistance of the soil nail should be tested through verification and proof test in accordance with the test procedure of the Special Provisions.
5. For structural design, appropriate structural factor of safety should be applied.

Table 48 – Design Information for Soil Nail Wall No. 2161

Wall Zone	Station ("B" Line)	Max. Wall Height (ft)	Min. Nail Embedment Length (ft)	Max. Vertical Nail Spacing (ft)	Max. Horizontal Nail Spacing (ft)	Pullout Resistance Qd[4] (lb/ft)	Rebar[5]		Min. Allowable Facing Resistance[5] (kips)	
							Grade (ksi)	Diameter (inch)	Static	Seismic
1	2160+59.47 to 2163+93.02	7.0	10	5	5	2,720	75	1.0	30	38

Notes:
1. Wall height is a vertical distance from the finished grade of roadway to the finished grade behind the wall.
2. Inclination angle of nails is 15 degree measured from horizontal.
3. The first row of the nails is placed 1.67 feet below the finished grade behind the wall, and nail spacing needs to be adjusted in areas with geometric constraints.
4. Pullout resistance of the soil nail should be tested through verification and proof test in accordance with the test procedure of the Special Provisions.
5. For structural design, appropriate structural factor of safety should be applied.

Table 49 – Design Information for Soil Nail Wall No. 2166

Wall Zone	Station	Max. Wall Height (ft)	Min. Nail Length (ft)	Max. Vertical Nail Spacing (ft)	Max. Horizontal Nail Spacing (ft)	Pullout Resistance Qd[4] (lb/ft)	Rebar[5]		Allowable Facing Resistance[5] (kips)	
							Grade (ksi)	Diameter (inch)	Static	Seismic
1	2165+38.69 "B" Line to 66+00 LOL	15.0	15	4	4	2,950	75	1.0	30	38
2	66+00 to 67+00 LOL	20.0	25	4	4	2,950	75	1.0	30	38
3	67+00 to 69+50.00 LOL	32.0	40	4	4	3,620	75	1.13	30	38
4	69+50.00 to 71+00 LOL	40.0	50	4	4	4,200	75	1.27	30	38
5	71+00 to 73+00 LOL	43.5	50	4	4	4,200	75	1.27	30	38
6	73+00 to 75+70.72 LOL	41.0	50	4	4	4,200	75	1.27	30	38
7	75+70.72 to 77+20 LOL	50.0	50	4	3	4,200	75	1.27	30	38
8	77+20.00 to 78+65.00 LOL	38.5	30	3	3	4,200	75	1.13	30	38
9	78+65.00 to 79+50.00 LOL	27.2	25	3	3	4,200	75	1.13	30	38
10	79+50.00 to 79+54.7 LOL	23.0	20	3	3	3,200	75	1.13	30	38
	79+54.7 LOL to 2185+40.00 "B" Line			4	4					

Notes:
1. Wall height is a vertical distance from the finished grade of roadway to the finished grade behind the wall.
2. Inclination angle of nails is 15 degree measured from horizontal.
3. The first row of the nails is placed 3.5 feet below the finished grade behind the wall, and nail spacing needs to be adjusted in areas with geometric constraints.
4. Pullout resistance of the soil nail should be tested through verification and proof test in accordance with the test procedure of the Special Provisions.
5. For structural design, appropriate structural factor of safety should be applied.

For the seismic stability analysis, pseudo-static method was used. In the pseudo-static method, the earthquake-induced forces of inertial varying in time are replaced by equivalent pseudo-static force acting on the center of gravity of the analyzed block.

Soil Nail layout

- Soil nails should be placed in a generally rectangular pattern.
- Soil nail lengths should be uniform throughout each wall zone.
- The bottom of the wall should be at least two feet below the finished grade.
- In the wall zone with five-foot maximum spacing, the bottom row of soil nails should be placed no more than three feet above the finished grade. At locations where the locations of the bottom row of soil nails need to be adjusted to accommodate the above requirement, place the bottom row of soil nails three feet below the soil nails above.
- In the wall zone with four-foot maximum spacing, the bottom row of soil nails should be placed no more than two feet above the finished grade. At locations where the locations of the bottom row of soil nails need to be adjusted to accommodate the above requirement, place the bottom row of soil nails two feet below the soil nails above.

Soil Nails and Underground Utilities Conflict Mitigation

To avoid conflict with underground utilities, soil nail inclination should be adjusted to maintain a minimum clearance of 6 inches between soil nails and utilities, and adjacent soil nails. The maximum allowable rotation of soil nail alignment is 10 degrees both horizontally and vertically.

Search Limits of Analyses

Potential failure surfaces were searched and analyzed based on the following criteria:

- Upper search limit: extending a distance of three times the wall height horizontally from the top of the wall; and
- Lower search limit: at finished grade in front of wall.

Horizontal drain for RW 2093

One row of slotted PVC pipe (SCH 80, four-inch in diameter, 42 slots per linear foot, 4 rows of slots, and 0.01-inch wide slot) wrapped with Class “A” filter fabric should be placed at a spacing of 50 feet from Station 2112+00 to 2127+00. The lengths of horizontal drain should be at least 50 feet from Station 2112+00 to 2124+00 and 30 feet from Station 2124+00 to 2127+00. The inclination of drain should be 5 degree measured from horizontal.

Slope Protection and Rockfall Mitigation

Loose materials were observed on slopes above some proposed retaining walls during site investigation. To prevent potential surficial failure and rockfall, mitigation is needed. A sketch of rockfall fence is shown in Figure 2, and options and locations of the areas that require mitigation are summarized in Table 50.

Table 50 – Surficial Failure and Rockfall Mitigation

Wall ID No.	Stations	Mitigation Method	Note
2104	2104+87.34 to 2110+25.00 "B" Line	Rockfall fence and Rockfall drapery (wire mesh covering the slope face)	--
2116	2115+54.00 to 2126+13.00 "B" Line	Rockfall fence	--
2161	2160+60.00 to 2164+25.78 "B" Line	Rockfall drapery (wire mesh covering the slope face)	5 foot wide bench is not required at the top of the wall
2166	2165+34.00 to 2184+19.16 "B" Line	Rockfall fence	--

6.2.1.2 Ground Anchor Wall

Ground anchor soldier pile wall with cast-in-place concrete facing is recommended for RWs 2004 and 2005 (Barranca Street OC Bridge abutments).

Ground anchors should be inclined 15 degrees (no less than 10 degrees) from horizontal.

Unbonded Length

The unbonded length of the ground anchors should be at least 15 feet.

Lateral Earth Pressure

Ground anchor walls should be designed to resist a trapezoidal lateral earth pressure as shown in Figure 3. To estimate lateral earth pressure, soil engineering properties shown on Tables 8 and 10 can be used.

In addition to these pressures, retaining wall should be designed to resist footing loads imposed by the existing abutments.

Lateral resistance of facing elements can be assumed to be provided by passive pressure below the bottom of excavation. Allowable passive pressure equivalent to a fluid pressure of 350 pounds per cubic foot is recommended. We recommend using a triangular earth pressure distribution increasing linearly with depth of the excavation with a limiting passive earth pressure of 4,000 lb/ft^2.

7.0 CONSTRUCTION CONSIDERATIONS

7.1 Notes for Specification Development

SS Section 19 Earthwork

Section 19-3.03A Unstable Material below the Footings

Within these portions of the proposed wall limits, on-site materials should be excavated to a depth of five feet from the bottom of the proposed footings or to the bedrock, whichever reaches first, and replaced with structure backfills.

Structure No.	Begin Station	End Station
RW 2220	21+50.00 "H1" Line	22+83.00 "H1" Line

Section 19-3.03B(1) Surface or Ground Water is Expected during Structure Excavation

Seasonal rainfall and fluctuating groundwater elevations may result in perched groundwater to be encountered in wall footing excavations. Dewatering system may be required.

SS Section 46 Ground Anchors and Soil Nails

SS 46-2 Ground Anchors

Section 46-2.03A Geotechnical Issues during Ground Anchor Installation

- Cave-in potential of the slope materials should be anticipated in areas with granular materials, cobble, and boulder during ground anchor wall construction.
- Special equipment may be needed for ground anchor construction because boulder size rock debris and dense soil materials were observed during subsurface exploration.
- A monitoring program must be implemented to monitor the stability of the existing abutments of Barranca Ave bridge during ground anchor and soldier pile installation. In the event of any vertical or lateral movement occurs, construction must be stopped immediately. Mitigation measures must be proposed by the contractor and accepted by the Engineer before construction resume.

SS 46-3 Soil Nails

Section 46-3.01D(2)(b)(iii) Two Percent of Total Number of Production Soil Nails

Wall ID No.	Total Production Soil Nails	2% of Total Production Soil Nails
2093	2,710	55
2104	603	12
2110	113	3
2116	1,712	35
2145	556	12
2161	118	3
2166	3,165	63

Section 46-3.03A Geotechnical Issues during Soil Nail Installation

- Special equipment may be needed for the soil nail wall construction because boulder size rock debris and dense soil materials were observed during subsurface exploration.
- Cave-in potential of the slope materials should be anticipated in areas with granular materials, cobble, and boulder during the soil nail wall construction.
- Hard excavating into bedrock and seepage water should be anticipated during soil nail wall construction.
- Seepage water should be anticipated during soil nail wall construction.

SS Section 49 Piling

SS 49-1 General

Section 49-1.03 Expected Difficult Pile Installation

- Hard driving resistance should be expected within bedrocks for precast concrete pile installation.
- Pre-drilling, if needed, should be approved by the Engineer before pile construction.
- Pre-drilling, if used, should be considered in the driveability analysis.

Section 49-3.02C(1) Drilling Sequence for CIDH Piling Center-to-Center Spacing less than 3 Pile Diameters

- Pile construction sequence is important for pile groups with center-to-center (CTC) spacing equal to or less than three times of pile diameter. Construction of adjacent piles

should be performed only after the Portland cement concrete of the previously installed piles properly set and developed adequate strength.

- A monitoring program must be implemented to monitor the stability of the existing structures during CIDH pile installation for RWs 2068 and 2076. In the event of any vertical or lateral movement occurs, construction must be stopped immediately. Mitigation measures must be proposed by the contractor and accepted by the Engineer before construction resume.
- In the event of caving of soil or water seepage into the pile excavation, casing should be used. Casing may be pulled as the pile excavation is filled with concrete.

7.2 Non-Standard Special Provisions (NSSPs)

Section 46-3.01D(2)(b)(1) General

A minimum bonded length of 8 feet may be used in determining the test load for the following retaining walls.

Wall ID No.	Begin Station	End Station
2093	2133+87.00 “B” Line	2135+08.21 “B” Line
2110	2110+25.00 “B” Line	2113+50.49 “B” Line
2145	2154+90.10 “B” Line	2157+58.21 “B” Line

8.0 APPENDICES

- APPENDIX A: FIGURES
- APPENDIX B: PHOTOS OF CORE BOXES
- APPENDIX C: LABORATORY TEST RESULTS
- APPENDIX D: ANALYSES AND CALCULATIONS

If you have any questions or comments, please contact Hung Po Yang (916) 227-4534

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Appendix A

Figures

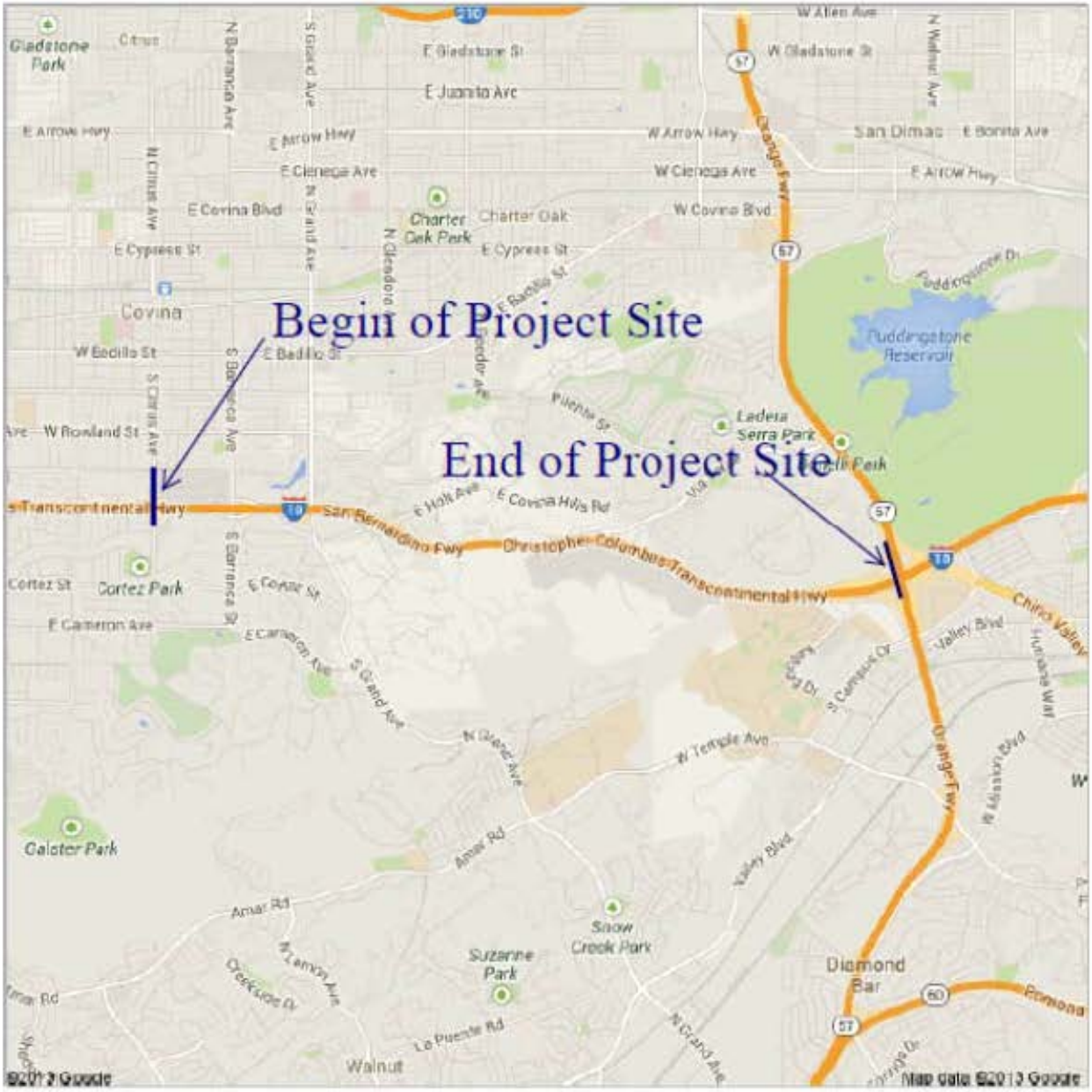


Figure 1 – PROJECT SITE LOCATION

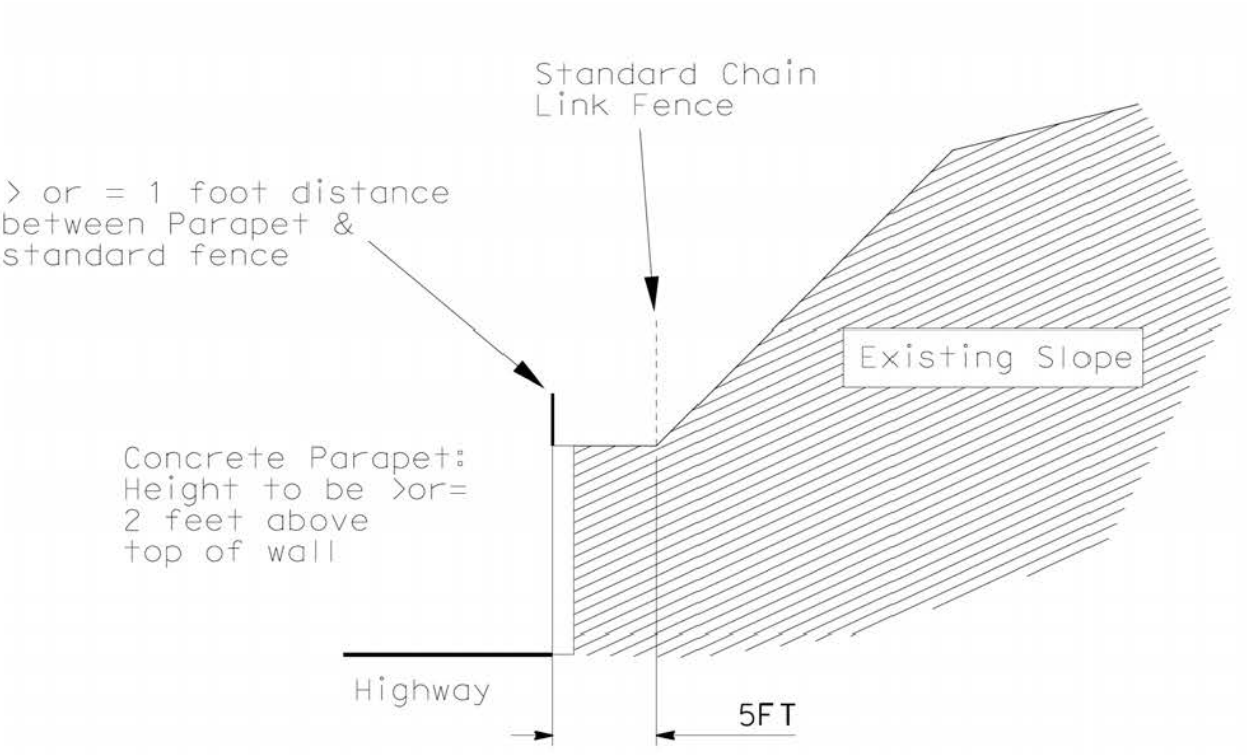
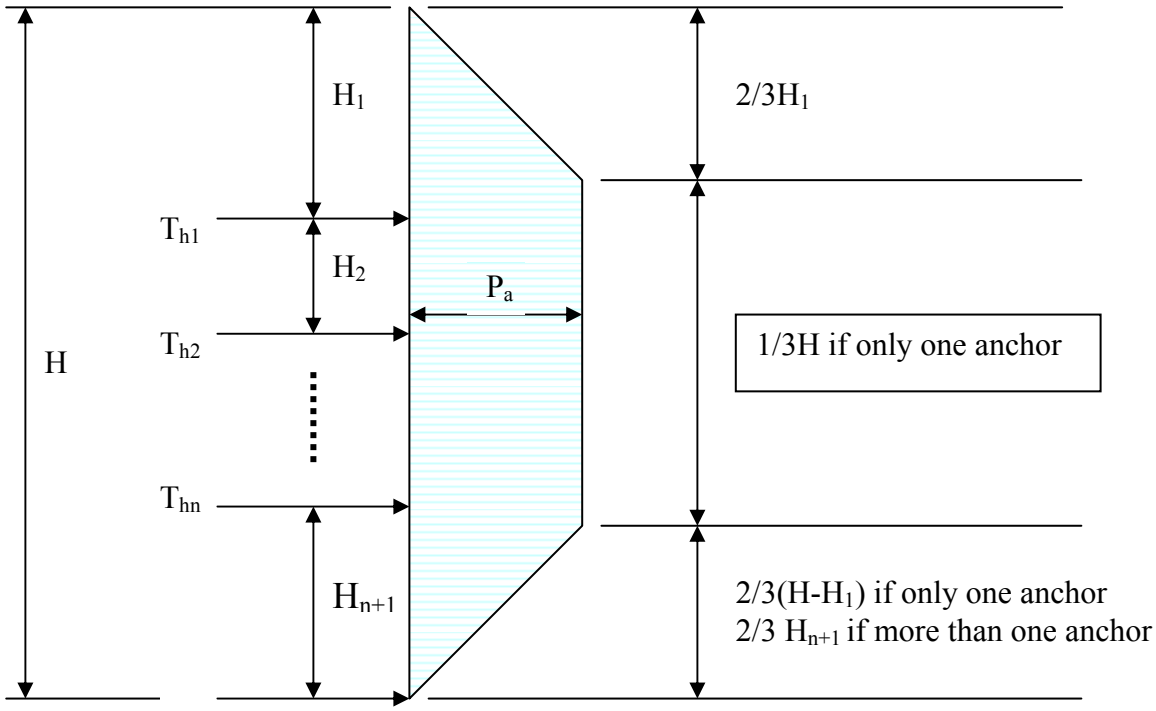


FIGURE 2 – ROCKFALL FENCE



H = Total excavation depth (ft)

H_1 = Distance from ground surface to uppermost ground anchor (ft)

H_{n+1} = Distance from base of excavation to lowermost ground anchor (ft)

T_{hi} = Horizontal load in ground anchor I (kip/ft)

P_a = Maximum ordinate of pressure diagram = $(K_a \gamma_s' H^2)/[1.5H-0.5H_1-0.5H_{N+1}]$ (ksf)

γ_s' = effect unit weight of soil (kcf)

K_a = active earth pressure coefficient

FIGURE 3 – LATERAL EARTH PRESSURE

Appendix B

Photos of Core Boxes

EA 11934 I R-11-22 |

I-10 HOV (F.L.)

From 25' → 40.7'

Box # 1 OF 7

EA 11934 |

I-10 HOV (F.L.)

R-11-22 |

From 40.7 → 52.8'

Box # 2 OF 7

EA11934 /

I-10 HOV (F.L.)

R-11-22 /

From 52.8 → 67'

Box # 3 OF 7

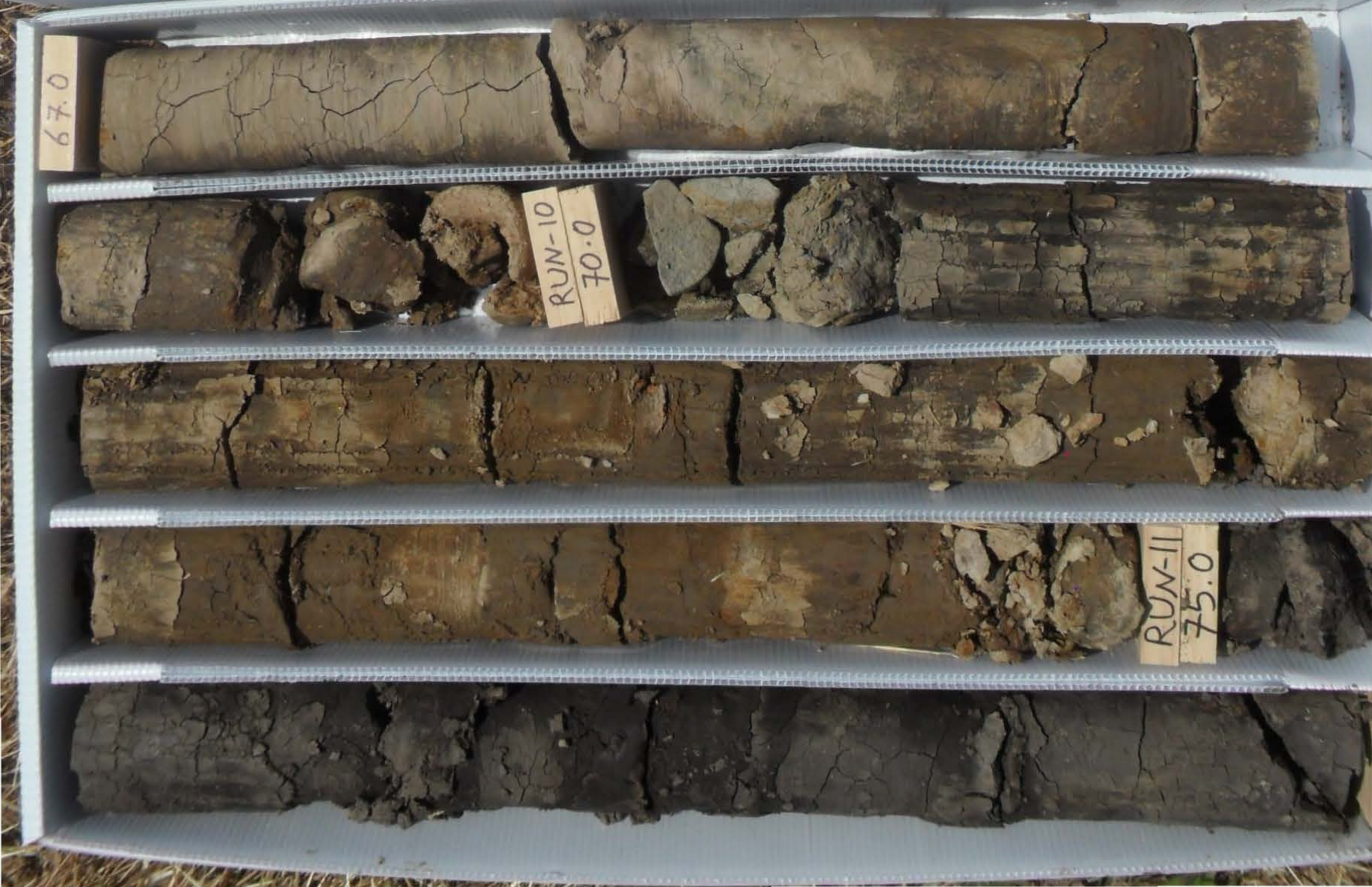
EA11934 |

I-10 HOV (F.L.)

R-11-22 |

From 67 → 77.3'

Box # 4 of 7



EA 119341

I-10 HOV (F.L.)

R-11-221

From 77.3 → 86.4'

BOX # 5 OF 7

EA 11934 /
I-10 HOV (F.L.)

R-11-22 /

From 86.4 → 95.3'

Box # 6 OF 7

EA 119341

I-10 HOV (F.L.)

R-11-22 /

From 95.3' → 100'

BOX # 7 OF 7

EA 119341

I-10 Hov (FL)

R-11-222

Box 1 of 6

From 15.0 ft → 27.0 ft

EA 119341

I-10 Hov (FL)

R-11-222

Box 2 of 6

From 27.0ft → 39.0ft

EA 119341

I-10 Hov (FL)

R-11-222

Box 3 of 6

From 39.0 ft → 50.3 ft

EA 119341

I-10 HOV (FL)

R-11-222

Box 4 of 6

From 50.3 ft → 62.8 ft

EA 119341

I-10 HOV (FL)

R-11-222

Box 5 of 6

From 62.8 ft → 73.0 ft

EA 119341

I-10 HOV (FL)

R-11-222

Box 6 of 6

From 73.0 ⟶ 80 ft

EA 119341

I-10 widening (FL)

R-11-223

Box 1 of 4

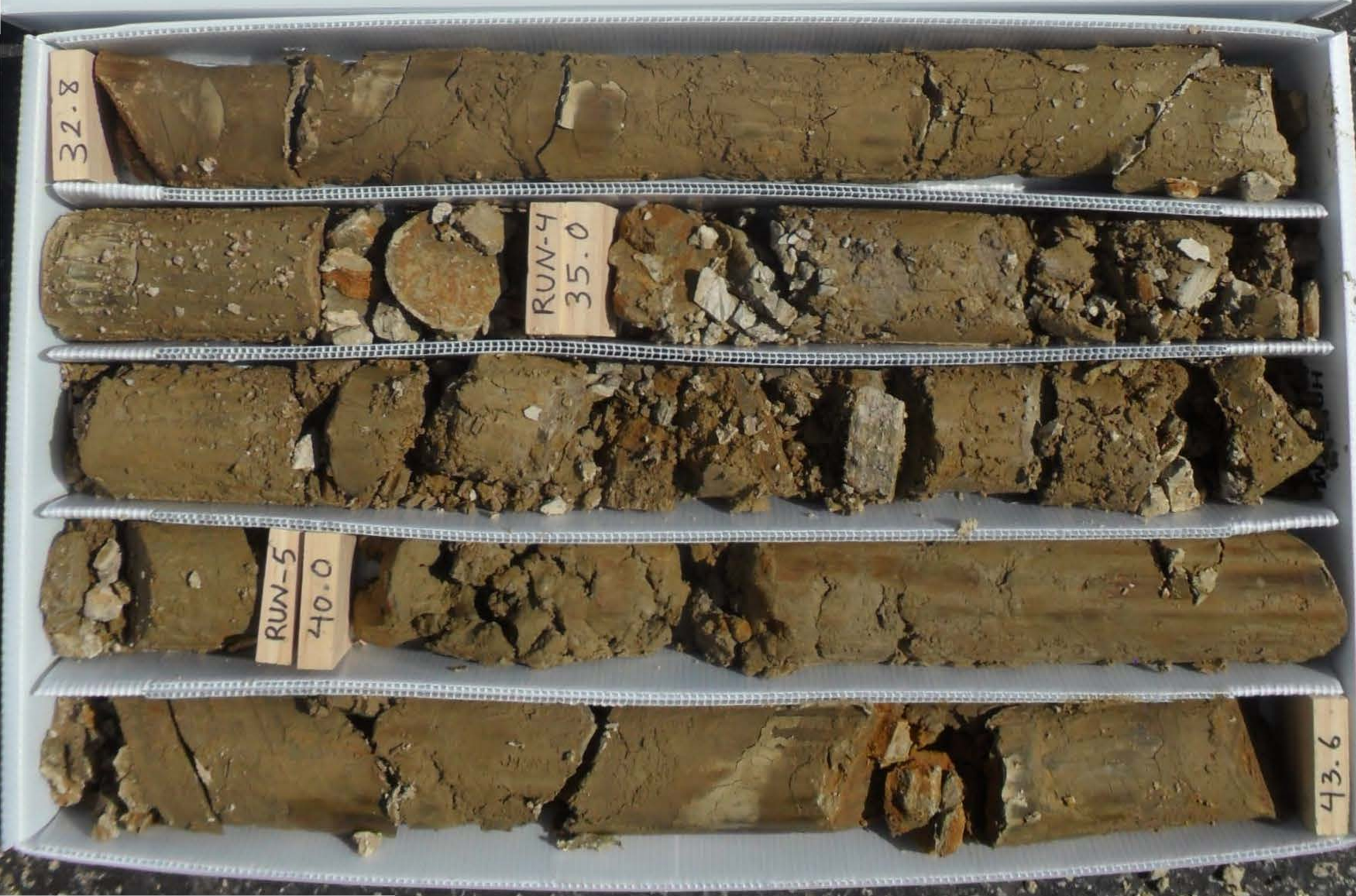
From 20.0 → 32.8 ft

EA11934 | I-10 HOV (F.L.)

R-11-223

From 32.8' → 43.6'

Box # 2 of 4



EA 119341

I-10 HOV (F.L.)

R-11-223

From 43.6' →

Box # 3 OF 4

EA11934 I

I-10 HOV (F.L.)

R-11-223

From 53.3' → 60'

Box # 4 of 4

RUN-2
45.0
RUN-1
42.5
55.0
RUN-4
50.0
RUN-3
58.0
45.0

58.0

RUN-5
60.0

RUN-6
65.0

68.0

PROJECT I-10 HOV WIDENING HOLE NO. R-

68.0

RUN-7
70.0

RUN-8
75.0

RUN-9
80.0

81.5

PROJECT I-10 HOV (FOREST LAWN) HOLE NO. R-11-#25

81.5

RUN-10
85.0

RUN-11

90.0

HQ BTM

RUN-12
95.0

98.5

98.5

100.0
END

HD BT

EA11934-1

I-10 HOV (F.L.)

R-11-226

From 20' → 35'

Box # 1

PROJECT I-10 widening; Forest Lawn HOLE NO. R-11-226
FROM 20.0 TO 35' BOX NO. 1

EA 11934 |

I-10 HOV (F.L.)

R-11-226

From 35' → 51.2'

Box # 2

EA 119341

I-10 HOV (F.L.)

R-11-226

FROM 51.2' → 63.8'

BOX #3.

EA 119341

I-10 HOV (E.L.)

R-11-226

From 628' → To

Box # 4

EA1193411

K-13-202

73.5' → 75'

Box # 2

RUN 65
73.5→75'

BTM

EA119341

R-13-002

RW2068

Box #1

50' To 73.5'

RW#1 NO REC. 50'→55'
RW#2 55'→60'
RW#3 60'→65'
RW#4 65'→70'
RW#5 70'→75'

EA1193411

R-13-003

Box # 1

55' → 68'

RUN #3
65' → 70'
RUN #2
60 → 65'
RUN #1
55' → 60'

EA 119341 RW 2068

Box # 2

68' → 80'

R-13-003

RUN #5
75'→80'
RUN #4
70→75'
68→70'

Appendix C

Laboratory Test Results

<Rudy_C_Lopez@dot.ca.gov>
05/17/2010 09:02 AM

To <yoojoong_choi@dot.ca.gov>
cc
bcc
Subject Corrosion Test Summary Report - Soil, EA: 07-119341 (Corr. # CR100371)

Division of Engineering Services
Materials Engineering and Testing Services
Corrosion Technology Branch
Report Date: 5/17/2010
Reported By: Lopez, Rudy

CORROSION TEST SUMMARY REPORT - Soil/Water

Bridge Name: **VIA VERDE UC**
Bridge Number: **53-0870**
EA No.: **07-119341**
Dist/Co/Rte/PM or KP: **07 / LA / 10 / 40.46**

SIC Number (TL101)	Sample Location	Sample Type	Sample Depth	Minimum Resistivity[1] (ohm-cm)	pH[2]	Chloride Content[3] (ppm)	Sulfate Content[4] (ppm)
C701104	SOIL CUTTING A-09-011&012	SOIL	BULK/A-09-011& A-09-012	3689	6.69		

This site is not corrosive to foundation elements (see note below for MSE wall backfill).

Note: For MSE wall structure backfill material, minimum resisitivity must be 2000 ohm-cm or greater,

pH must be between 5.5 and 10.0, chloride content must not be greater than 250 ppm, and sulfate content must not be greater than 500 ppm.

[1,2]CTM 643, [3]CTM 422, [4]CTM 417

<Rudy_C_Lopez@dot.ca.gov>
08/13/2010 08:06 AM

To <hung_po_yang@dot.ca.gov>
cc
bcc
Subject Corrosion Test Summary Report - Soil, EA: 07-119341, EFIS 0700000097 (Corr. #s CR100562-CR100570)

History: This message has been replied to and forwarded.

Division of Engineering Services
Materials Engineering and Testing Services
Corrosion Technology Branch
Report Date: 8/13/2010
Reported By: Lopez, Rudy

CORROSION TEST SUMMARY REPORT - Soil/Water

Bridge Name:
Bridge Number:
EA No.: **07-119341**
EFIS No.: **0700000097**
Dist/Co/Rte/PM or KP: **07 / LA / 10 / 37/42**

SIC Number (TL101)	Sample Location	Sample Type	Sample Depth	Minimum Resistivity[1] (ohm-cm)	pH[2]	Chloride Content[3] (ppm)	Sulfate Content[4] (ppm)
C702343		SOIL	5, 15 FEET/R-10-104	1221	6.64		
C702344		SOIL	10FEET/R-10-105; 5,15 FEET/R-10-106	1020	7.23		
C702345		SOIL	5,10 FEET/R-10-114	1003	7.45		
C702346		SOIL	10 FEET/R-10-118;10 FEET/R-10-122	6903	7.53		
C702347		SOIL	10 FEET/R-10-133;10 FEET R-10-136	1075	7.77		
C702348		SOIL	10, 20 FEET/R-10-138	932	7.83	35	100
C702349		SOIL	5 FEET/R-10-145	4807	8.02		
C702350		SOIL	15 FEET/R-10-108	1638	9.90		
C702351		SOIL	10,15,&20 FEET/R-10-110	996	8.58	81	51

This site is not corrosive to foundation elements (see note below for MSE wall backfill).

Note: For MSE wall structure backfill material, minimum resisitivity must be 2000 ohm-cm or greater,
pH must be between 5.5 and 10.0, chloride content must not be greater than 250 ppm, and sulfate content must not be greater than 500 ppm.

[1,2]CTM 643, [3]CTM 422, [4]CTM 417

<Rudy_C_Lopez@dot.ca.gov>
07/26/2011 09:41 AM

To <hung_po_yang@dot.ca.gov>
cc
bcc
Subject Corrosion Test Summary Report - EA: 07-119341, PID 0700000097 (Corr. #s CR110323-CR110327)

Division of Engineering Services
Materials Engineering and Testing Services
Corrosion And Structural Concrete Field Investigation Branch
Report Date: 7/26/2011
Reported By: Lopez, Rudy

TEST SUMMARY REPORT - Soil/Water

Bridge Name:
Bridge Number:
EA No.: **07-119341**
EFIS No.: **0700000097**
Dist/Co/Rte/PM or KP: **07 / LA / 10 / 37/42**

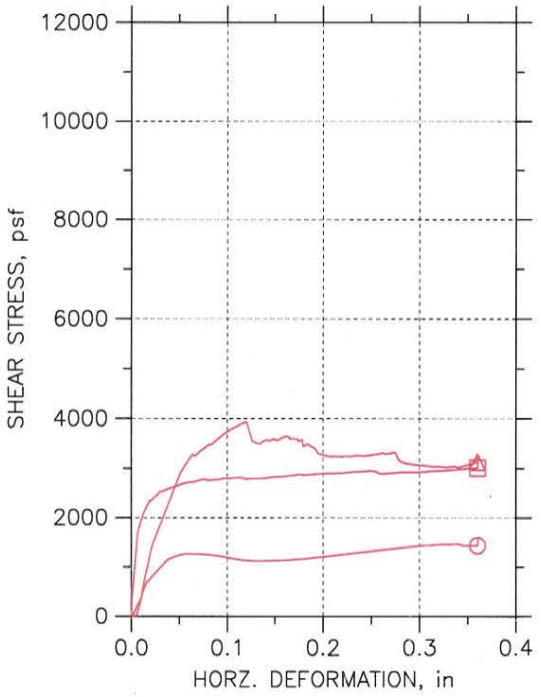
SIC Number (TL101)	Sample Location	Sample Type	Sample Depth	Minimum Resistivity[1] (ohm-cm)	pH[2]	Chloride Content[3] (ppm)	Sulfate Content[4] (ppm)
C702368	BULK,SPT SAMPLE	SOIL	1,15,&75 FEET/ BORE#R-11-221	891	6.71	15	434
C702369	BULK	SOIL	1.5 FEET/BORE #R-11-224	2862	7.79		
C702370	BULK + SPT	SOIL	0-2, 25, 45 FEET/ BORE #R-11-225	1298	7.62		
C702371	BULK + SPT	SOIL	1.5, 15 FEET/ BORE #R-11-226	2228	7.55		
C702372	SPT	SOIL	5, 28, 80 FEET/ BORE #R-11-227	675	7.33	398	163

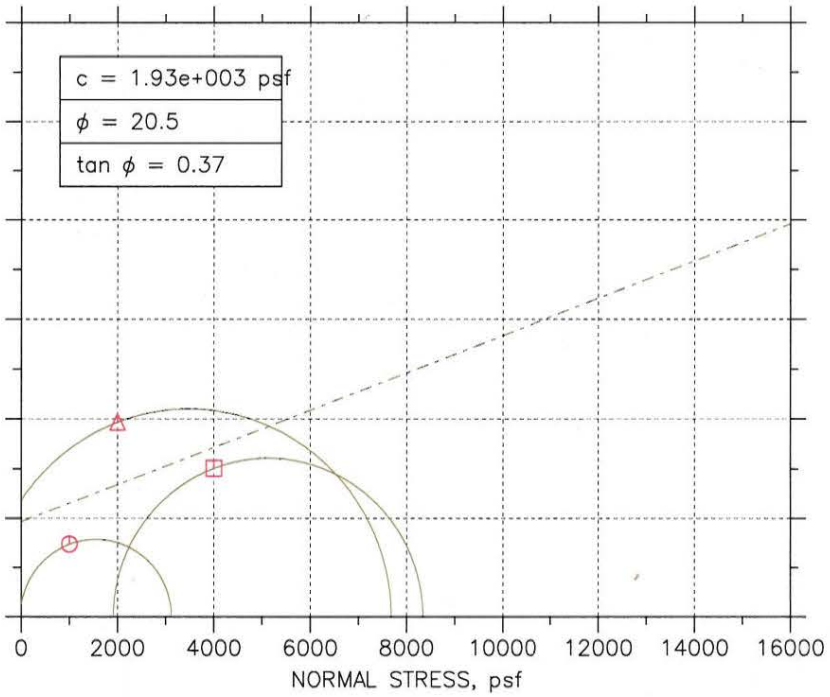
This site is not corrosive to foundation elements (see note below for MSE wall backfill).

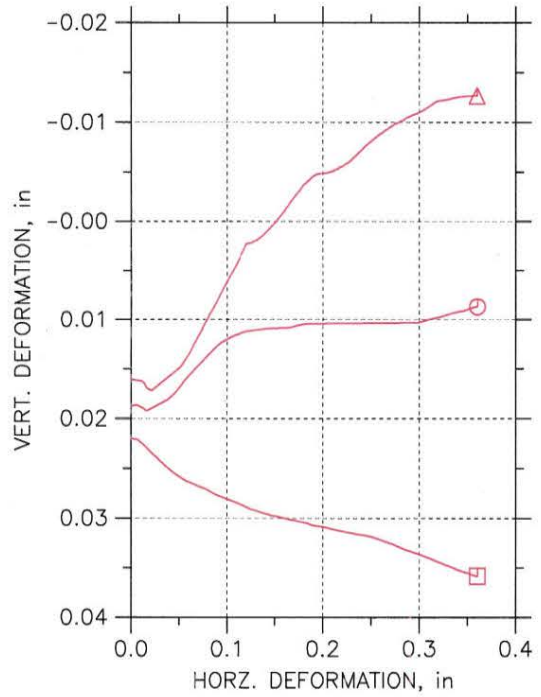
Note: For MSE wall structure backfill material, minimum resisitivity must be 2000 ohm-cm or greater,
pH must be between 5.5 and 10.0, chloride content must not be greater than 250 ppm, and sulfate content must not be greater than 500 ppm.

[1,2]CTM 643, [3]CTM 422, [4]CTM 417

DIRECT SHEAR TEST REPORT







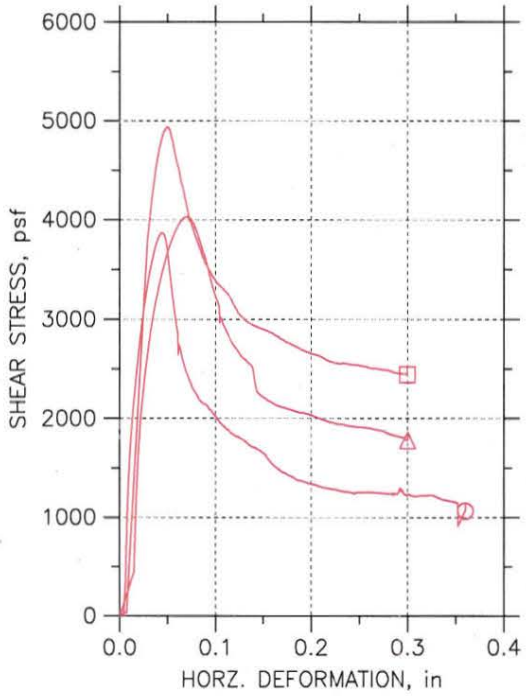
Symbol		⏲	△	⊡	
Test No.		DS10090A	DS10090B	DS10090C	
Sample No.		S01-1	S01-1	S01-1	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	2.375	2.375	2.375	
	Area, in^2	4.4301	4.4301	4.4301	
	Height, in	1	1	1	
	Water Content, %	42.00	42.35	41.36	
	Dry Density, pcf	78.425	76.963	79.629	
	Saturation, %	98.66	96.07	100.00	
	Void Ratio	1.1493	1.1901	1.1168	
Consol. Height, in		0.98296	0.98502	0.97894	
Consol. Void Ratio		1.1126	1.1573	1.0722	
Final	Water Content, %	41.67	45.03	38.44	
	Dry Density, pcf	79.113	76.001	82.589	
	Saturation, %	99.51	99.83	99.72	
	Void Ratio	1.1306	1.2178	1.0409	
Normal Stress, psf		1000.5	2002.8	4000	
Max. Shear Stress, psf		1469.3	3938.5	3009.5	
Ult. Shear Stress, psf		1432.8	3125.1	3009.5	
Time to Failure, min		34.73	12.821	36.84	
Disp. Rate, in/min		0.01	0.01	0.01	
Implied Specific Gravity		2.70	2.70	2.70	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

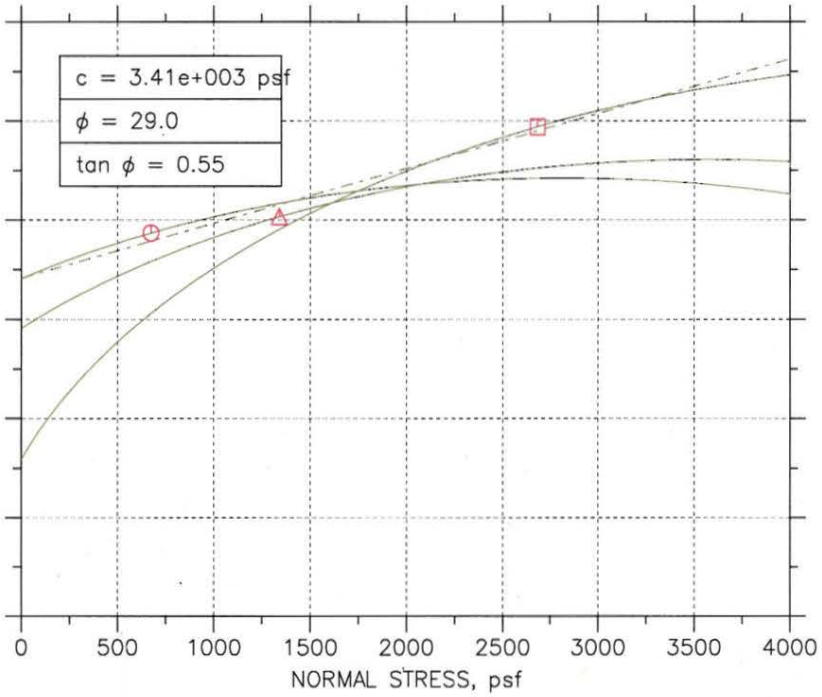
Project: I-10 HOV WIDENING
Location: 07-LA-10-37.2-42.4
Project No.: 07-119341
Boring No.: R-10-102
Sample Type: BRASS
Description: Moist, Very Firm w/Stiff Clods, Brown, Silty Clay. Patched.
Remarks: ASTM D 3080.

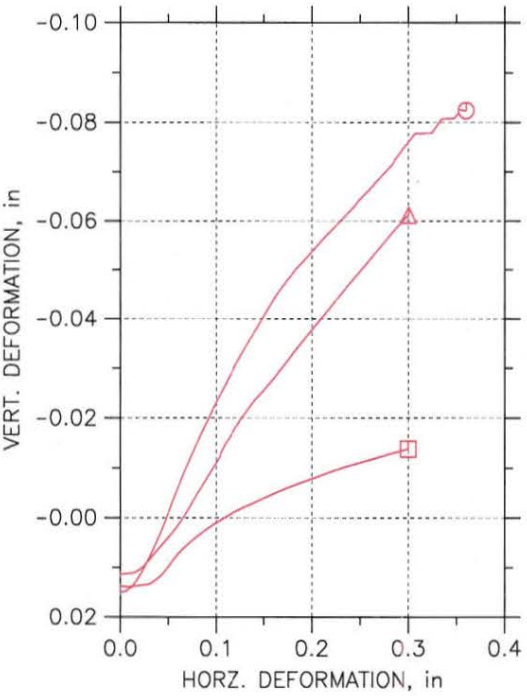
wo 10/5

Tue, 05-OCT-2010 13:55:49

DIRECT SHEAR TEST REPORT







Symbol		⏲	△	⊡	
Test No.		DS10091A	DS10091B	DS10091C	
Sample No.		S01-1	S01-1	S01-1	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	2.375	2.375	2.375	
	Area, in^2	4.4301	4.4301	4.4301	
	Height, in	1	1	1	
	Water Content, %	20.15	19.97	20.07	
	Dry Density, pcf	100.7	98.633	100.7	
	Saturation, %	80.75	76.04	80.41	
	Void Ratio	0.67388	0.70891	0.67388	
Consol. Height, in		0.98478	0.98847	0.98648	
Consol. Void Ratio		0.64841	0.68921	0.65126	
Final	Water Content, %	29.89	29.90	25.62	
	Dry Density, pcf	93.034	92.95	99.327	
	Saturation, %	99.41	99.26	99.25	
	Void Ratio	0.81176	0.81339	0.69697	
Normal Stress, psf		674.06	1340.6	2683.7	
Max. Shear Stress, psf		3868.9	4032.9	4939.5	
Ult. Shear Stress, psf		1062.9	1777.8	2445	
Time to Failure, min		5.1801	7.8405	5.7761	
Disp. Rate, in/min		0.01	0.01	0.01	
Implied Specific Gravity		2.70	2.70	2.70	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

Project: I-10 HOV WIDENING

Location: 07-LA-10-37.2-42.4

Project No.: 07-119341

Boring No.: R-10-105

Sample Type: BRASS

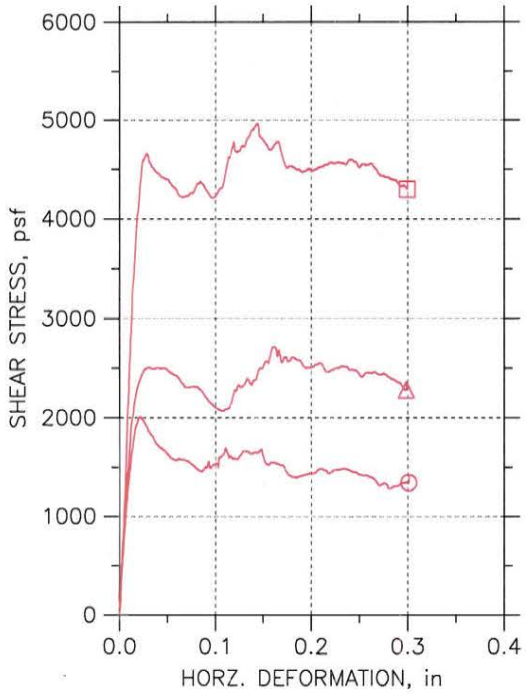
Description: Moist, Very Stiff, w/Hard Clods, Tan w/White, Clayey Silt. Patched.

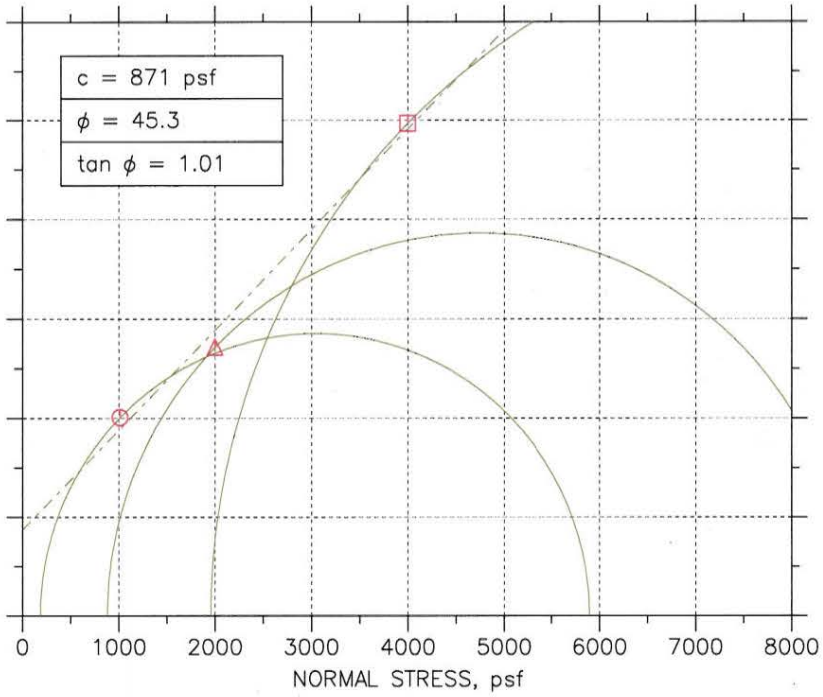
Remarks: ASTM D 3080.

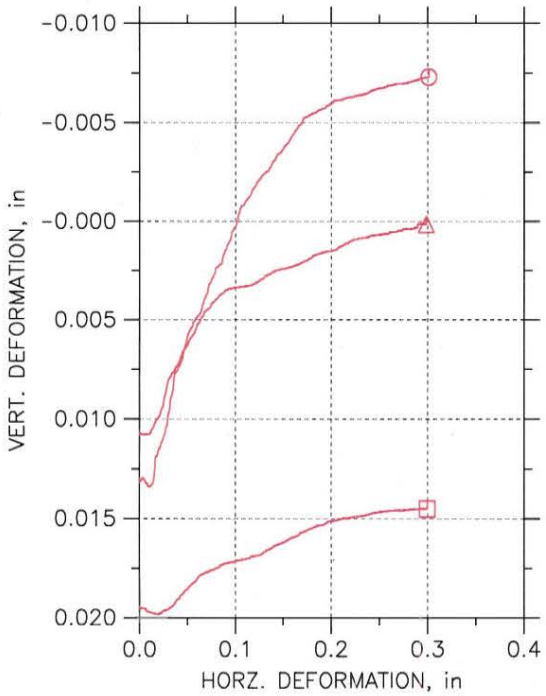
10/5/10

Mon, 04-OCT-2010 16:44:28

DIRECT SHEAR TEST REPORT







Symbol		○	△	□	
Test No.		DS10092A	DS10092B	DS10092C	
Sample No.		S01	S01	S01	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	1.944	1.944	1.944	
	Area, in^2	2.9681	2.9681	2.9681	
	Height, in	1	1	1	
	Water Content, %	57.20	50.58	55.49	
	Dry Density, pcf	60.581	66.742	61.993	
	Saturation, %	85.78	88.46	86.24	
	Void Ratio	1.8338	1.5722	1.7693	
Consol. Height, in		0.98804	0.98961	0.98047	
Consol. Void Ratio		1.7999	1.5455	1.7152	
Final	Water Content, %	64.62	57.12	60.25	
	Dry Density, pcf	60.143	66.753	62.907	
	Saturation, %	95.82	99.93	95.82	
	Void Ratio	1.8545	1.5718	1.7291	
Normal Stress, psf		1012.5	2000.1	4000.3	
Max. Shear Stress, psf		2008.4	2717.9	4966.8	
Ult. Shear Stress, psf		1340.7	2280.2	4297.7	
Time to Failure, min		2.7046	16.936	15.342	
Disp. Rate, in/min		0.01	0.01	0.01	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

Project: 1-10 HOV WIDENING

Location: 07-LA-10-37.2-42.4

Project No.: 07-119341

Boring No.: R-10-116

Sample Type: BRASS

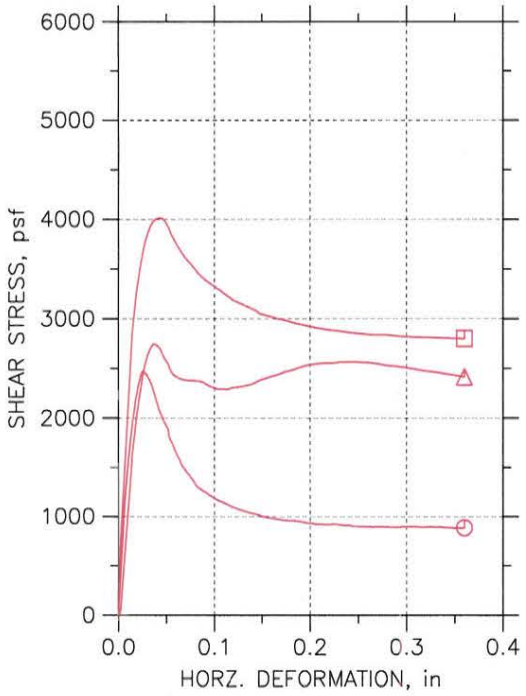
Description: Moist, Very Stiff to Hard, Orangish Tan, Silt. Patched.

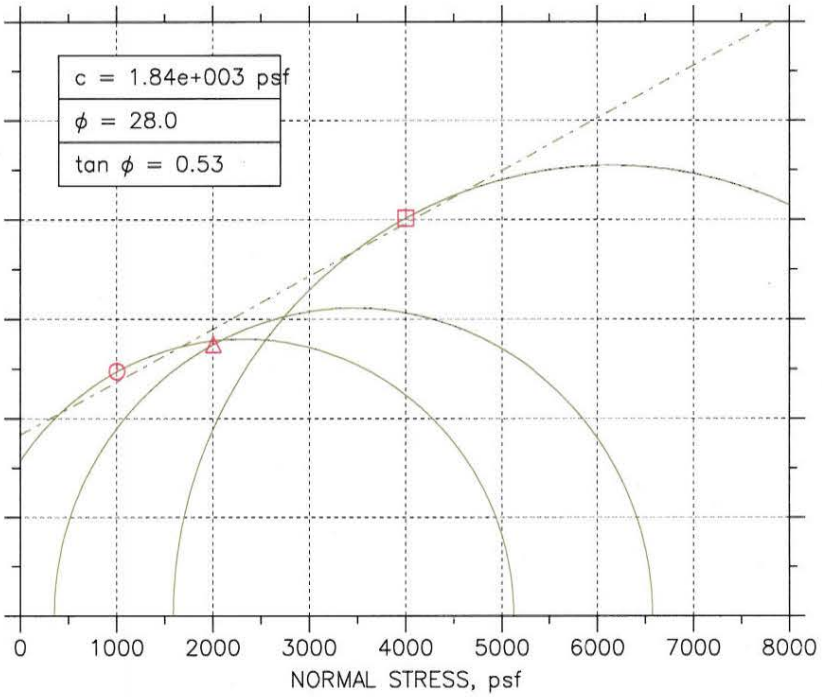
Remarks: ASTM D 3080.

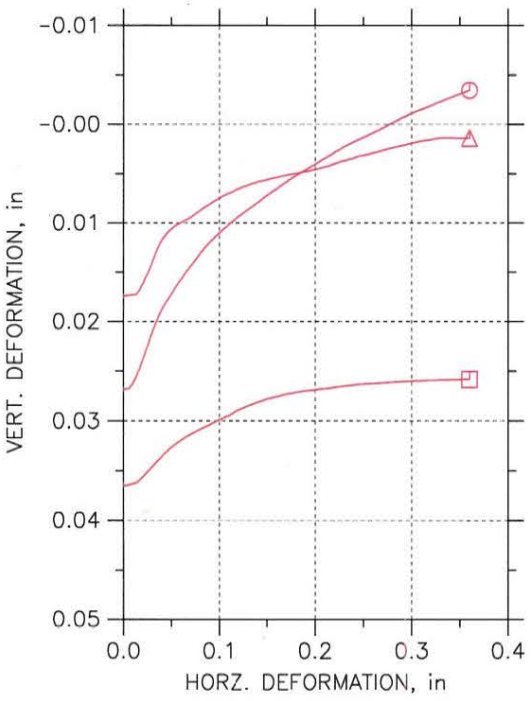
WP 10/5

Mon, 04-OCT-2010 15:33:49

DIRECT SHEAR TEST REPORT





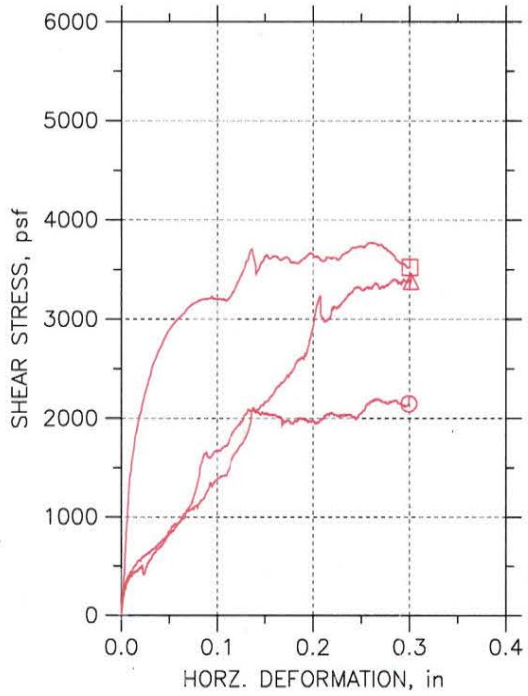


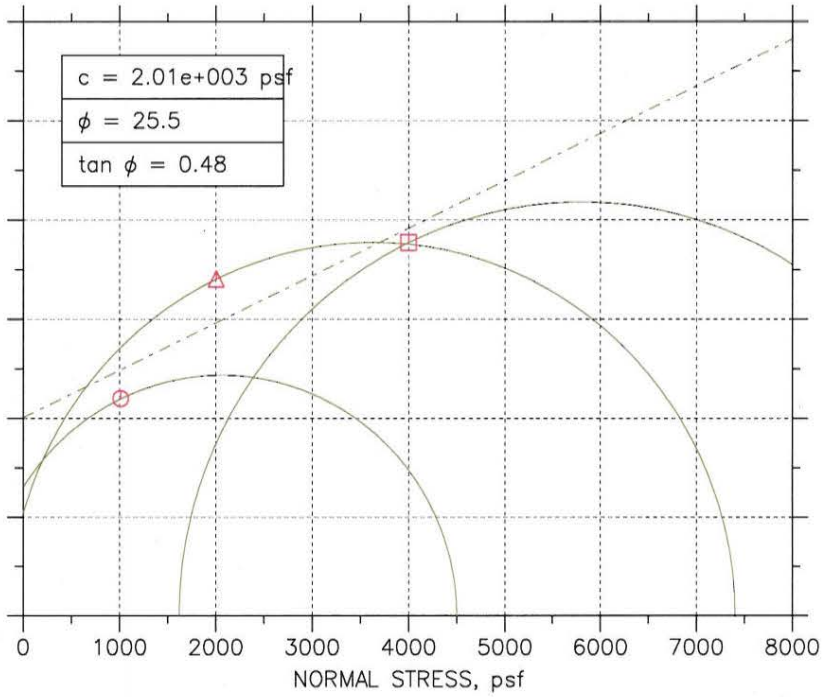
Symbol		○	△	□	
Test No.		DS10093A	DS10093B	DS10093C	
Sample No.		S01-1	S01-1	S01-1	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	1.944	1.944	1.944	
	Area, in^2	2.9681	2.9681	2.9681	
	Height, in	1	1	1	
	Water Content, %	35.16	33.08	35.23	
	Dry Density, pcf	81.759	85.353	81.245	
	Saturation, %	89.43	91.63	88.51	
	Void Ratio	1.0616	0.97481	1.0746	
Consol. Height, in		0.97324	0.98263	0.96363	
Consol. Void Ratio		1.0064	0.9405	0.99919	
Final	Water Content, %	39.40	35.79	37.76	
	Dry Density, pcf	81.479	85.474	83.398	
	Saturation, %	99.55	99.42	99.84	
	Void Ratio	1.0687	0.972	1.0211	
Normal Stress, psf		1005.2	2005.6	4002.9	
Max. Shear Stress, psf		2474.8	2747.7	4014.6	
Ult. Shear Stress, psf		883.05	2415	2801.5	
Time to Failure, min		2.8256	4.2737	4.8696	
Disp. Rate, in/min		0.01	0.01	0.01	
Implied Specific Gravity		2.70	2.70	2.70	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

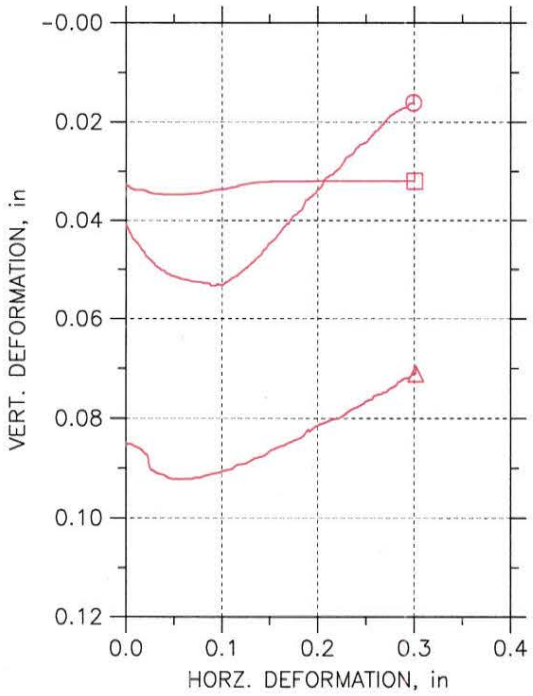
Project: I-10 HOV WIDENING
Location: 07-LA-10-37.2-42.4
Project No.: 07-119341
Boring No.: R-10-117
Sample Type: BRASS
Description: Moist, Very Stiff, Tan-Mottled, Silty Clay
Remarks: ASTM D 3080.

Tue, 05-OCT-2010 09:32:42

DIRECT SHEAR TEST REPORT







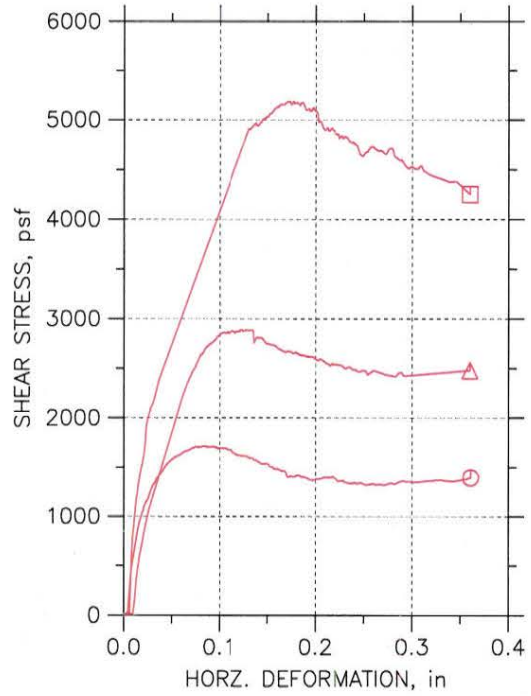
Symbol		○	△	□	
Test No.		DS10094A	DS10094B	DS10094C	
Sample No.		S01	S01	S01	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	1.944	1.944	1.944	
	Area, in^2	2.9681	2.9681	2.9681	
	Height, in	1	1	1	
	Water Content, %	5.77	4.55	32.88	
	Dry Density, pcf	108.97	107.3	84.711	
	Saturation, %	27.58	20.83	88.07	
	Void Ratio	0.57546	0.59996	1.0266	
Consol. Height, in		0.96507	0.91814	0.96785	
Consol. Void Ratio		0.52044	0.469	0.96145	
Final	Water Content, %	16.37	13.28	34.85	
	Dry Density, pcf	110.76	115.51	87.51	
	Saturation, %	81.86	75.09	99.64	
	Void Ratio	0.55004	0.48628	0.96179	
Normal Stress, psf		1012.5	2005.4	4000.3	
Max. Shear Stress, psf		2200.5	3406.6	3772.4	
Ult. Shear Stress, psf		2148.2	3383	3524.2	
Time to Failure, min		27.58	28.788	26.338	
Disp. Rate, in/min		0.01	0.01	0.01	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

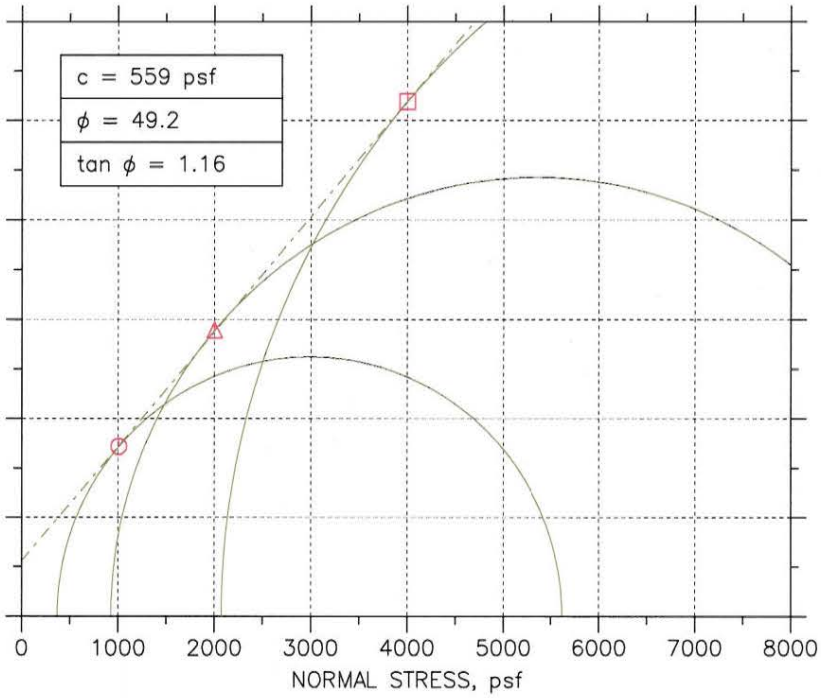
Project: I-10 HOV WIDENING
Location: 07-LA-10-37.2-42.4
Project No.: 07-119341
Boring No.: R-10-119
Sample Type: BRASS
Description: Moist, Loose, Greyish Brown, Sand and Grave; And Stiff, Brown, Silty Clay (Specimen C). Patched Extensively.
Remarks: ASTM D 3080.

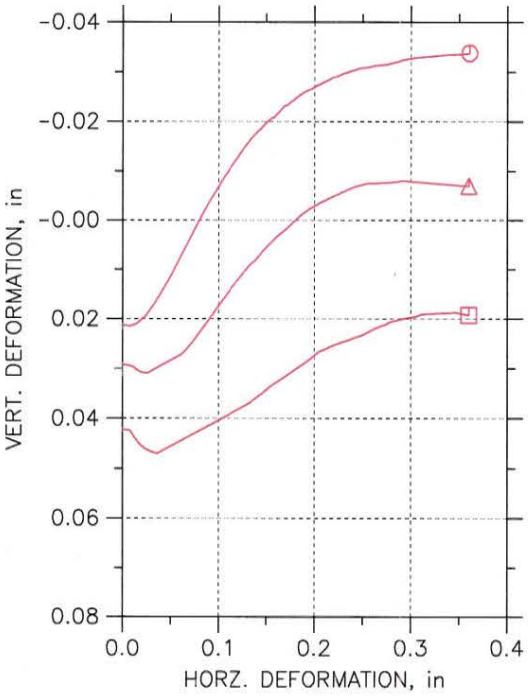
10/5/10

Tue, 05-OCT-2010 09:38:39

DIRECT SHEAR TEST REPORT







Symbol		○	△	□	
Test No.		DS10095A	DS10095B	DS10095C	
Sample No.		S01-1	S01-1	S01-1	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	2.375	2.375	2.375	
	Area, in^2	4.4301	4.4301	4.4301	
	Height, in	1	1	1	
	Water Content, %	11.54	9.59	7.94	
	Dry Density, pcf	117.72	117.47	116.95	
	Saturation, %	72.17	59.53	48.59	
	Void Ratio	0.43179	0.43493	0.44126	
Consol. Height, in		0.9806	0.97176	0.95846	
Consol. Void Ratio		0.40401	0.39441	0.38139	
Final	Water Content, %	16.51	15.89	15.00	
	Dry Density, pcf	113.88	116.66	119.25	
	Saturation, %	92.83	96.41	97.94	
	Void Ratio	0.48015	0.44489	0.41351	
Normal Stress, psf		1007.3	2003.4	4003.7	
Max. Shear Stress, psf		1715.3	2893.3	5189	
Ult. Shear Stress, psf		1394.4	2480.9	4251.7	
Time to Failure, min		8.6057	13.069	18.221	
Disp. Rate, in/min		0.01	0.01	0.01	
Implied Specific Gravity		2.70	2.70	2.70	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

Project: I-10 HOV WIDENING

Location: 07-LA-10-37.2-42.4

Project No.: 07-119341

Boring No.: R-10-120

Sample Type: BRASS

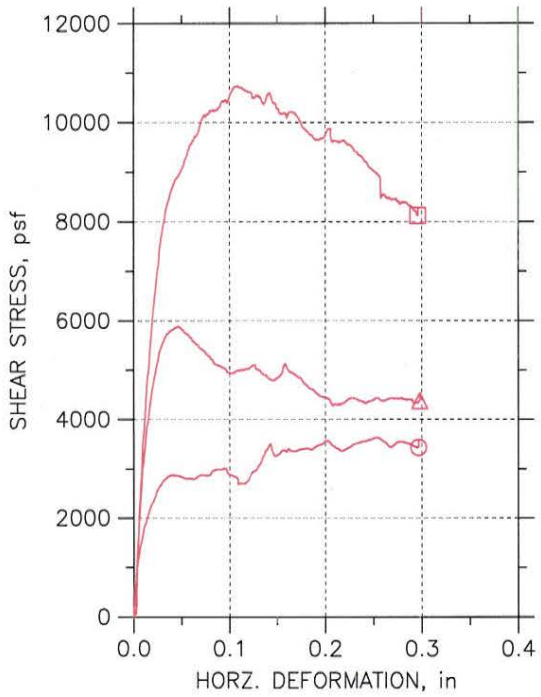
Description: Moist, Dense, Red, Silty Coarse Sand with Gravel. Patched.

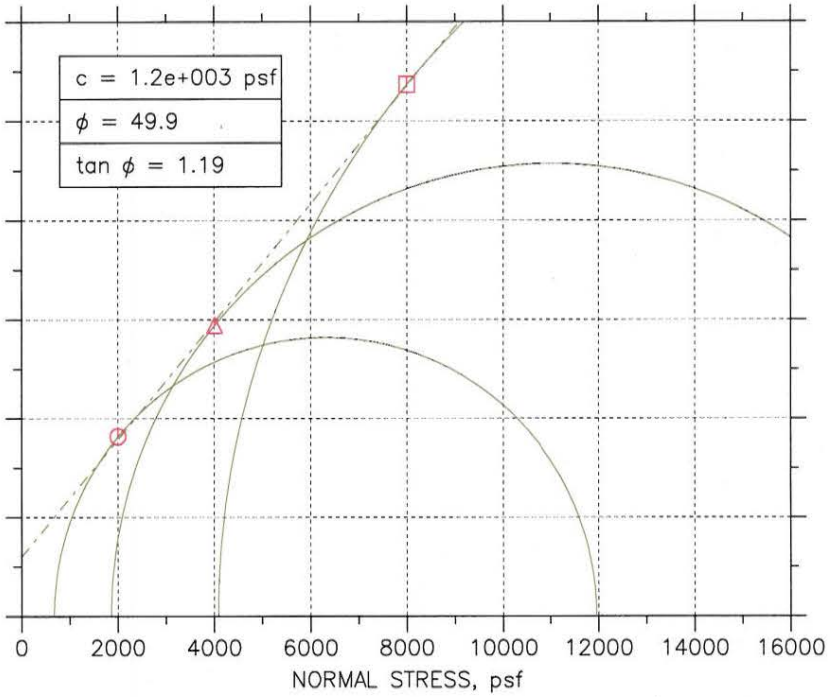
Remarks: ASTM D 3080.

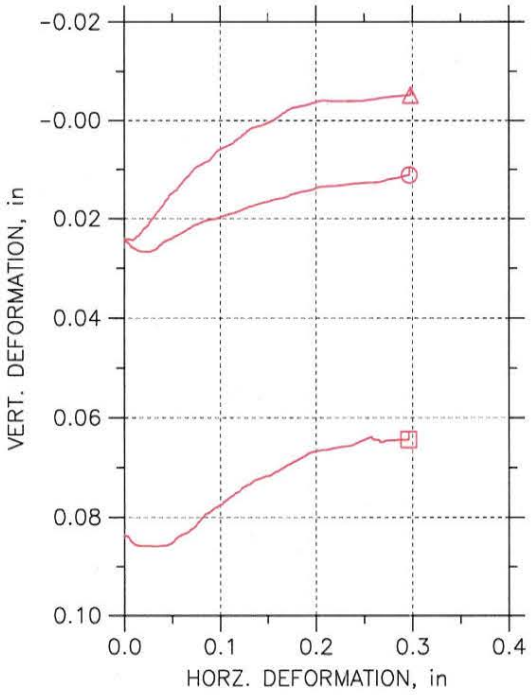
Wp 10/15

Tue, 05-OCT-2010 09:41:24

DIRECT SHEAR TEST REPORT







Symbol		⏲	△	⏍	
Test No.		DS10096A	DS10096B	DS10096C	
Sample No.		S03	S03	S03	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	1.944	1.944	1.944	
	Area, in^2	2.9681	2.9681	2.9681	
	Height, in	1	1	1	
	Water Content, %	33.27	35.37	35.55	
	Dry Density, pcf	69.437	73.673	73.288	
	Saturation, %	62.14	73.11	72.82	
	Void Ratio	1.4724	1.3303	1.3425	
Consol. Height, in		0.97579	0.97596	0.91686	
Consol. Void Ratio		1.4125	1.2742	1.1478	
Final	Water Content, %	49.35	47.21	43.26	
	Dry Density, pcf	70.222	73.297	78.332	
	Saturation, %	93.94	96.73	99.83	
	Void Ratio	1.4448	1.3422	1.1917	
Normal Stress, psf		2001.4	4012	8004.4	
Max. Shear Stress, psf		3632.6	5888	10735	
Ult. Shear Stress, psf		3431.4	4380.1	8129	
Time to Failure, min		26.253	5.6288	11.981	
Disp. Rate, in/min		0.01	0.01	0.01	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

Project: 1-10 HOV WIDENING	
Location: 07-LA-10-37.2-42.4	
Project No.: 07-119341	
Boring No.: R-10-119	
Sample Type: BRASS	
Description: Moist, Very Stiff w/Hard Mixed, Mottled Light Tan, Silty Clay. Patched.	
Remarks: ASTM D 3080.	

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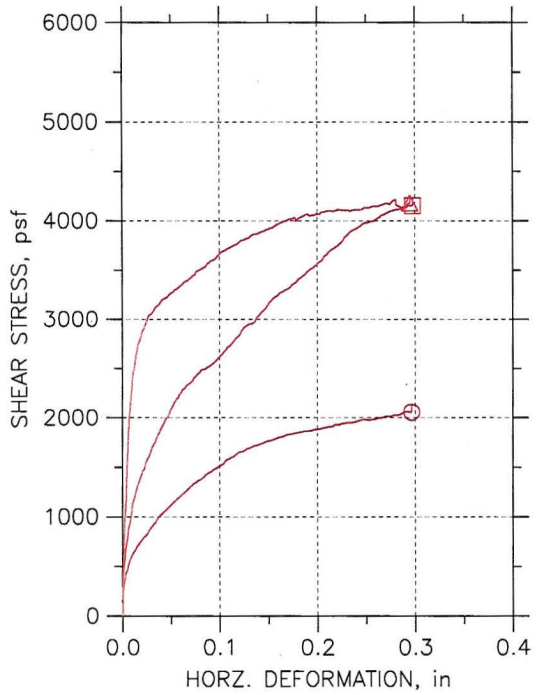
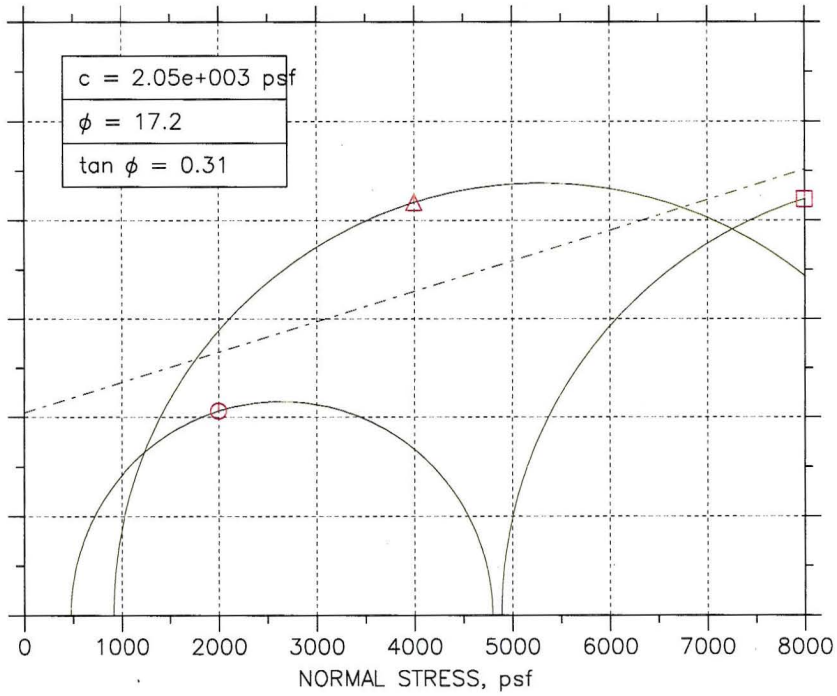
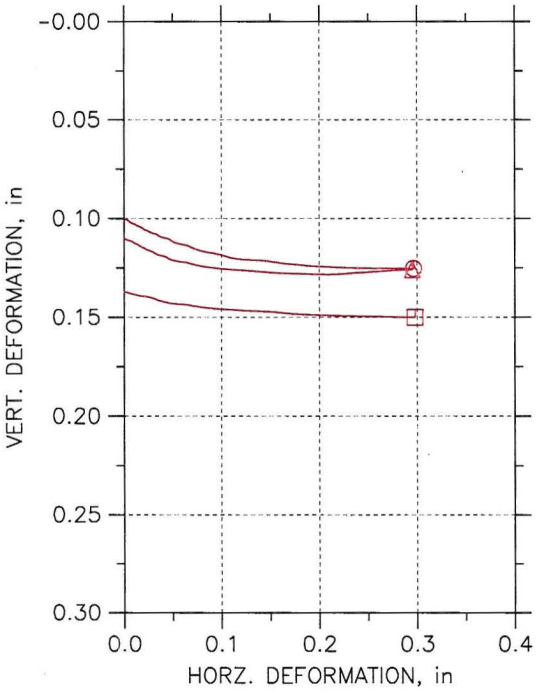
Tue, 05-OCT-2010 09:43:04

DIRECT SHEAR TEST REPORT







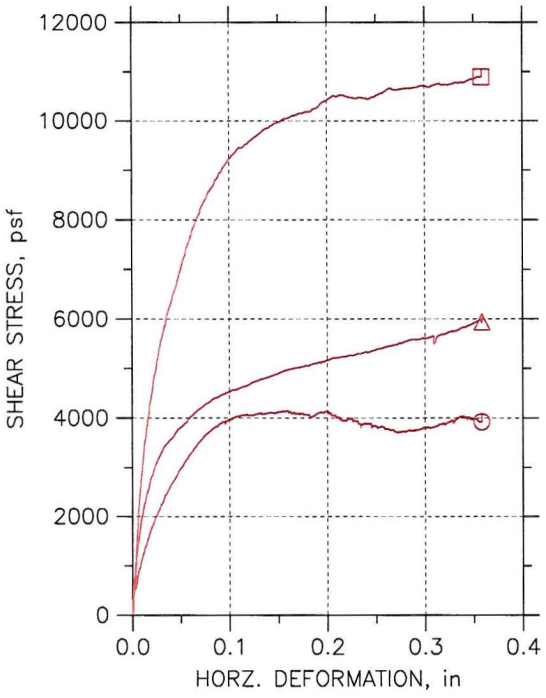
Symbol		⊙	△	□	
Test No.		DS11023A	DS11023B	DS11023C	
Sample No.		S-03-2	S-03-2	S-03-2	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	2.375	2.375	2.375	
	Area, in^2	4.4301	4.4301	4.4301	
	Height, in	1	1	1	
	Water Content, %	57.89	33.01	52.57	
	Dry Density, pcf	62.087	71.632	63.463	
	Saturation, %	90.20	65.00	84.79	
	Void Ratio	1.7651	1.3967	1.7052	
Consol. Height, in		0.90279	0.89302	0.86757	
Consol. Void Ratio		1.4963	1.1403	1.3469	
Final	Water Content, %	49.72	39.74	45.80	
	Dry Density, pcf	70.991	81.952	74.67	
	Saturation, %	96.41	99.81	96.95	
	Void Ratio	1.4183	1.0948	1.2991	
Normal Stress, psf		1998.3	4000	7999.2	
Max. Shear Stress, psf		2063.5	4181.2	4215.4	
Ult. Shear Stress, psf		2056.5	4181.2	4155.9	
Time to Failure, min		74.628	76.578	72.488	
Disp. Rate, in/min		0.004	0.004	0.004	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

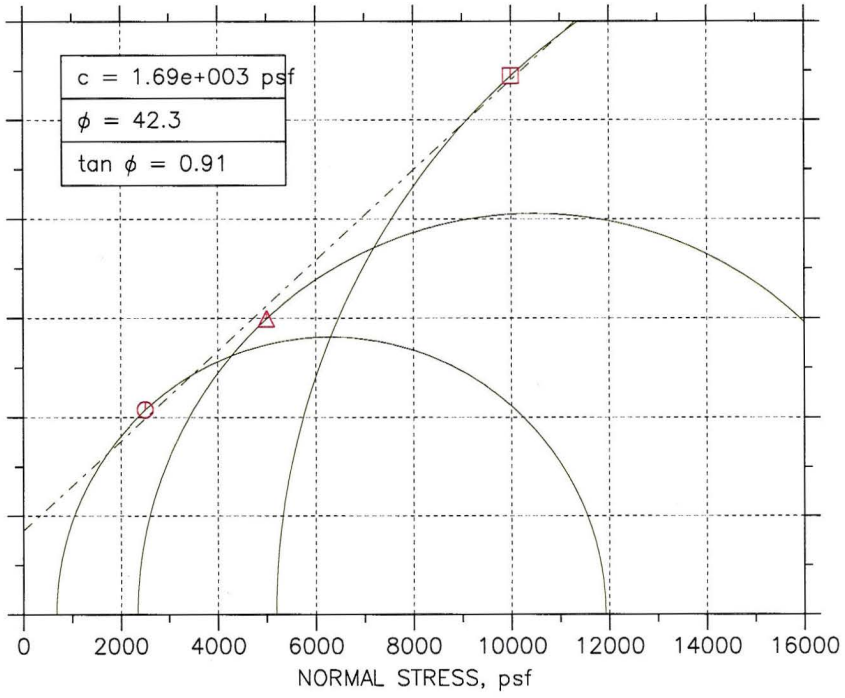
Project: I-10 HOV WIDENING
Location: 07-LA-10-37.2-42.4
Project No.: 07-119341
Boring No.: R-11-221
Sample Type: Brass
Description: Moist, Very Soft to Stiff, Brown Silty Clay with Large Gravel (up to 1 1/2"). Extensively patched & reshaped.
Remarks: ASTM D 3080. Specimens sheared only to12.6%

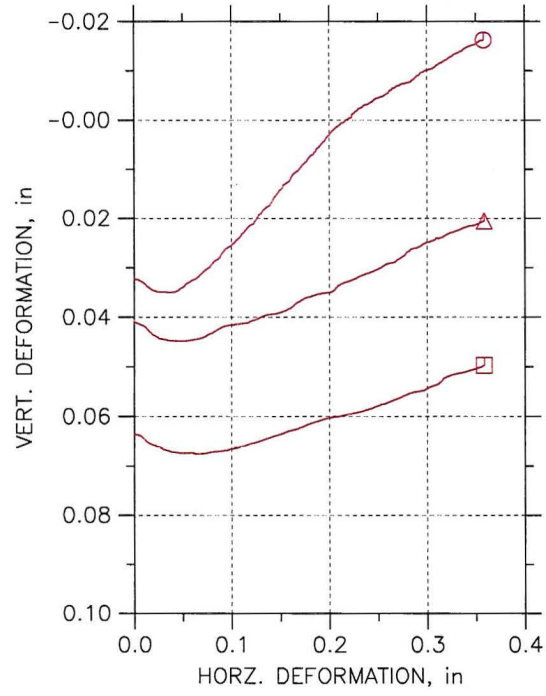
8/5/11

Fri, 05-AUG-2011 11:36:07

DIRECT SHEAR TEST REPORT







Symbol		○	△	□	
Test No.		DS11024A	DS11024B	DS11024C	
Sample No.		S-05-2	S-05-2	S-05-2	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	2.375	2.375	2.375	
	Area, in^2	4.4301	4.4301	4.4301	
	Height, in	1	1	1	
	Water Content, %	36.56	38.14	44.14	
	Dry Density, pcf	75.501	75.072	71.89	
	Saturation, %	78.93	81.51	87.45	
	Void Ratio	1.2738	1.2868	1.3881	
Consol. Height, in		0.96938	0.96077	0.93689	
Consol. Void Ratio		1.2042	1.1971	1.2373	
Final	Water Content, %	40.77	40.55	45.69	
	Dry Density, pcf	74.296	76.648	75.65	
	Saturation, %	85.55	89.94	98.99	
	Void Ratio	1.3107	1.2398	1.2694	
Normal Stress, psf		2512.9	5000.5	10003	
Max. Shear Stress, psf		4155	5993.5	10893	
Ult. Shear Stress, psf		3922.1	5940.9	10888	
Time to Failure, min		16.657	37.265	36.874	
Disp. Rate, in/min		0.01	0.01	0.01	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

Project: I-10 HOV WIDENING

Location: 07-LA-10-37.2-42.4

Project No.: 07-119341

Boring No.: R-11-221

Sample Type: Brass

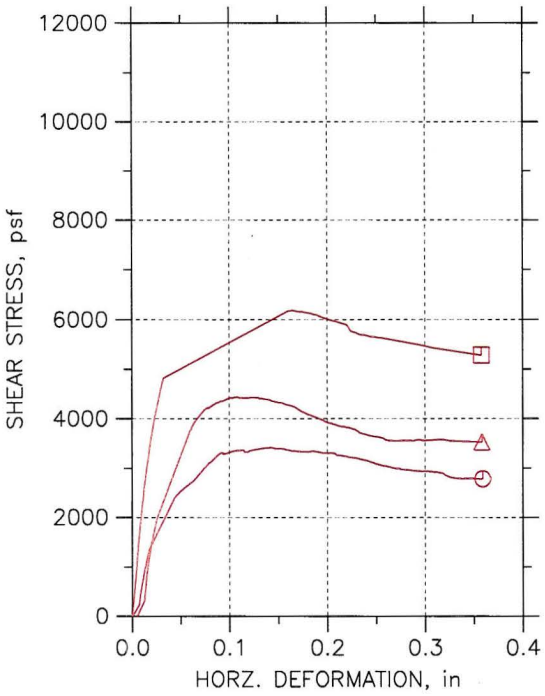
Description: Moist, Brown, Stiff, Silty Clay to Decomposed mudstone. Heavily patched.

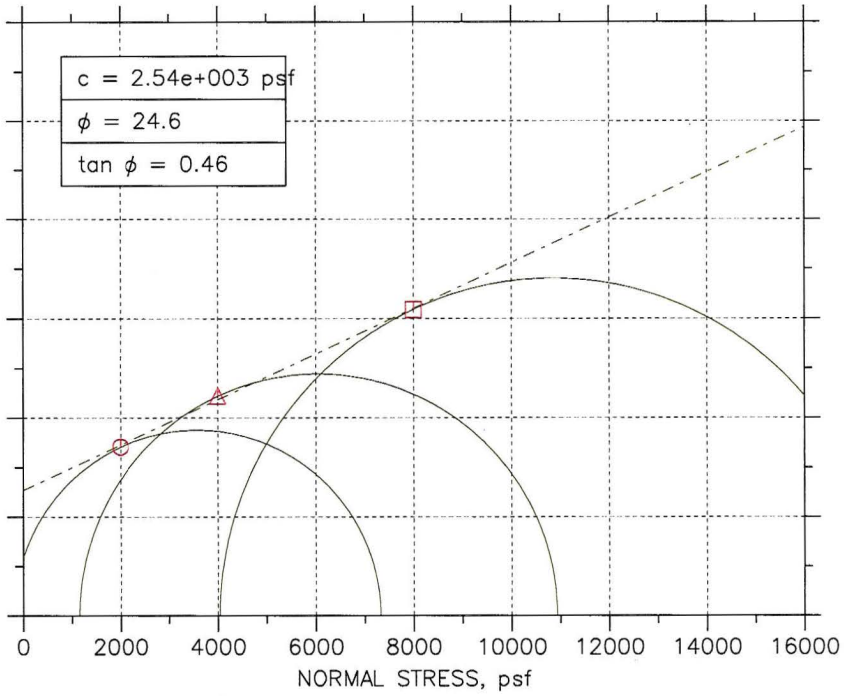
Remarks: ASTM D 3080.

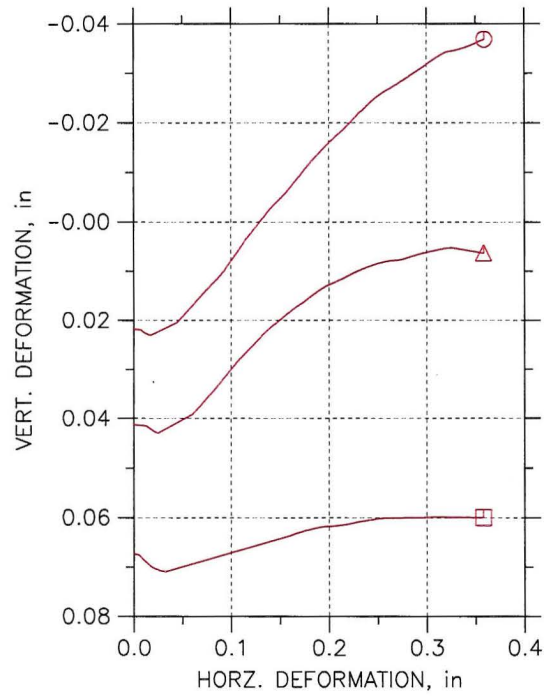
8/16/11

Tue, 16-AUG-2011 09:06:25

DIRECT SHEAR TEST REPORT







Symbol		○	△	□	
Test No.		DS11025A	DS11025B	DS11025C	
Sample No.		S03-2	S03-2	S03-2	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	2.375	2.375	2.375	
	Area, in^2	4.4301	4.4301	4.4301	
	Height, in	1	1	1	
	Water Content, %	38.66	39.13	38.30	
	Dry Density, pcf	75.845	76.705	77.909	
	Saturation, %	85.40	88.22	88.88	
	Void Ratio	1.2224	1.1974	1.1635	
Consol. Height, in		0.97947	0.95943	0.93279	
Consol. Void Ratio		1.1767	1.1083	1.0181	
Final	Water Content, %	46.26	43.72	38.19	
	Dry Density, pcf	73.148	77.193	82.883	
	Saturation, %	95.76	99.74	99.76	
	Void Ratio	1.3043	1.1836	1.0337	
Normal Stress, psf		2001.6	4003.1	8006.9	
Max. Shear Stress, psf		3414.1	4444	6189.4	
Ult. Shear Stress, psf		2777.1	3525.6	5284.5	
Time to Failure, min		14.921	11.538	16.838	
Disp. Rate, in/min		0.01	0.01	0.01	
Implied Specific Gravity		2.70	2.70	2.70	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

Project: I-10 HOV Widening

Location: 07-LA-10-37.2-42.4

Project No.: 07-119341

Boring No.: R-11-222

Sample Type: Brass

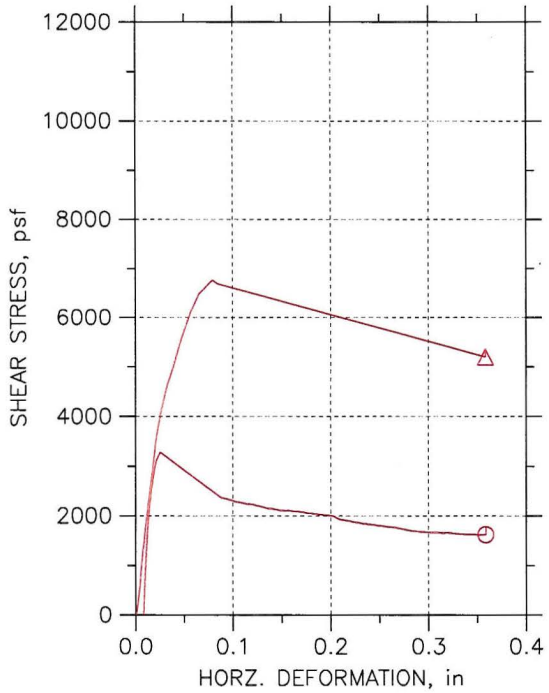
Description: Moist, Brown, Stiff, Silty Clay (bottom) to Decomposed Mudstone, Heavily Patched.

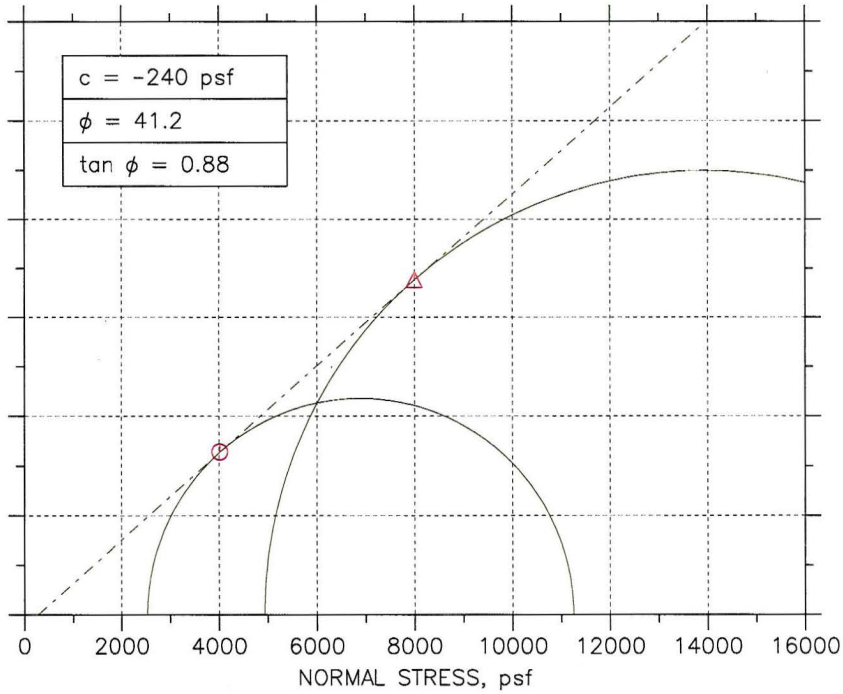
Remarks: ASTM D 3080.

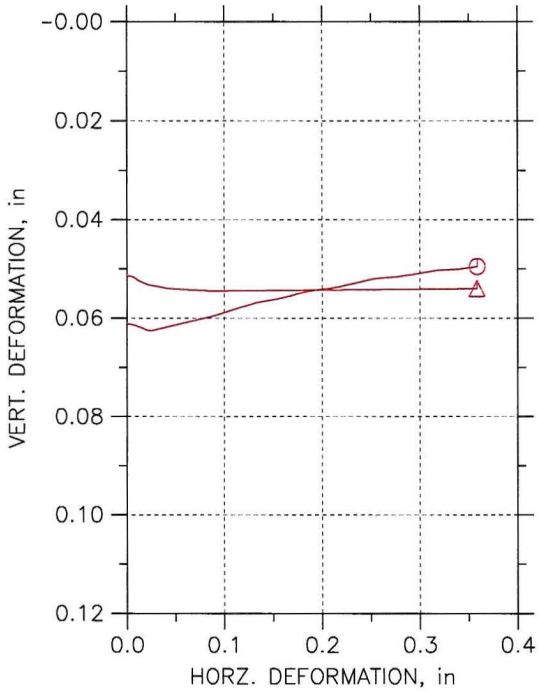
8/4/11

Thu, 04-AUG-2011 16:25:10

DIRECT SHEAR TEST REPORT







Symbol		⊙	△		
Test No.		DS11026B	DS11026C		
Sample No.		S03-3	S03-3		
Shape		Circular	Circular		
Initial	Dimension, in	2.375	2.375		
	Area, in^2	4.4301	4.4301		
	Height, in	1	1		
	Water Content, %	38.62	38.85		
	Dry Density, pcf	78.597	79.457		
	Saturation, %	91.11	93.55		
	Void Ratio	1.1445	1.1213		
Consol. Height, in		0.94047	0.94951		
Consol. Void Ratio		1.0169	1.0142		
Final	Water Content, %	38.40	37.23		
	Dry Density, pcf	82.692	83.989		
	Saturation, %	99.86	99.83		
	Void Ratio	1.0383	1.0069		
Normal Stress, psf		4017.5	8000.6		
Max. Shear Stress, psf		3278.4	6766.9		
Ult. Shear Stress, psf		1619.2	5202.6		
Time to Failure, min		2.6663	8.6692		
Disp. Rate, in/min		0.01	0.01		
Implied Specific Gravity		2.70	2.70		
Liquid Limit		---	---		
Plastic Limit		---	---		
Plasticity Index		---	---		

Project: I-10 HOV Widening

Location: 07-LA-10-37.2-42.4

Project No.: 07-119341

Boring No.: R-11-224

Sample Type: Brass

Description: Moist, Reddish Brown, Hard Decomposed Mudstone or Cemented Soil with Clayey Silt. Patched.

Remarks: ASTM D 3080. Specimen A was invalid due to the large size & quantity of hard shale-like particles.

8/11/11

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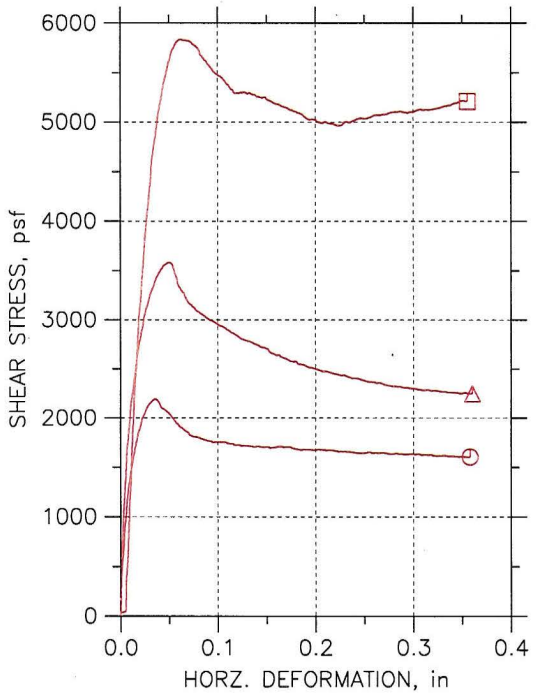
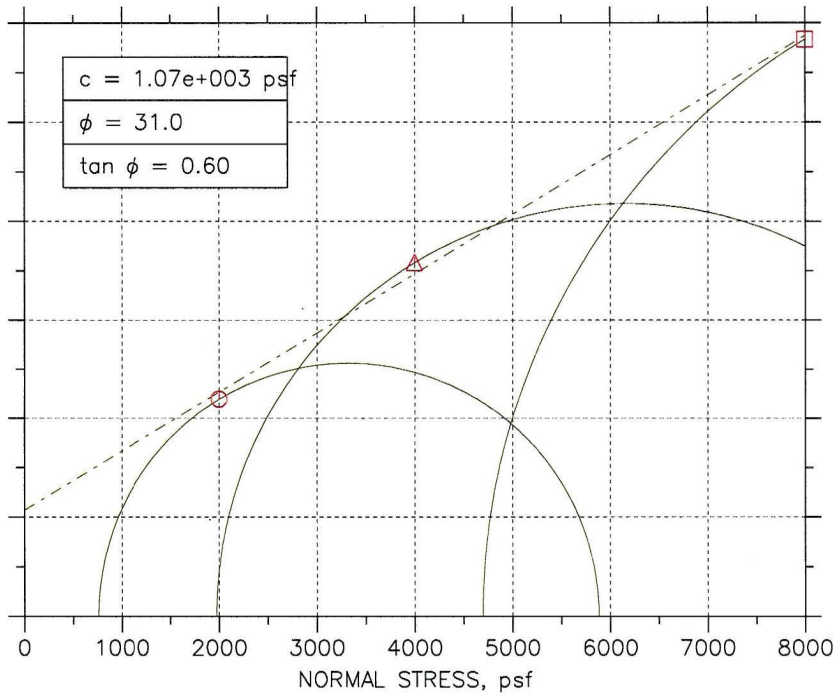
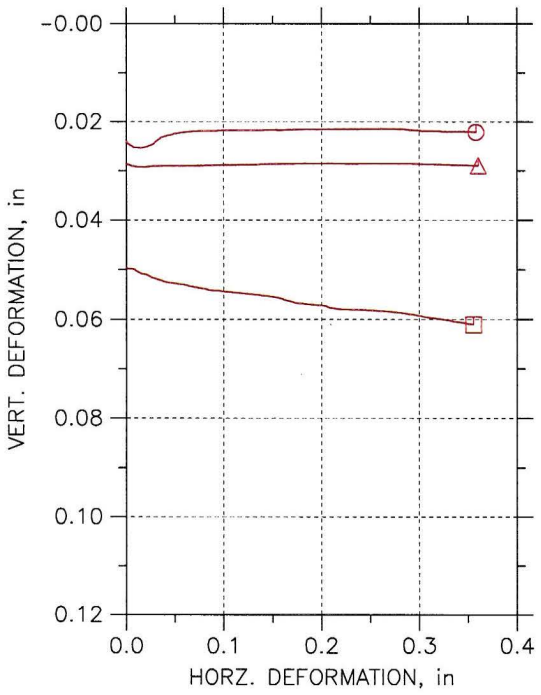




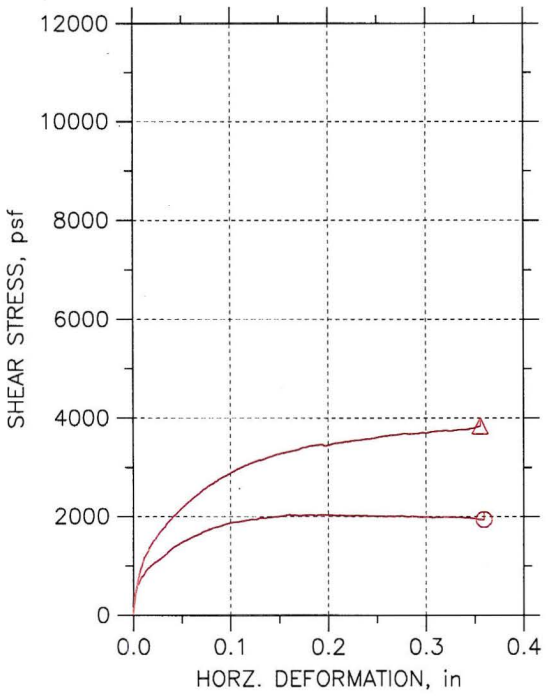


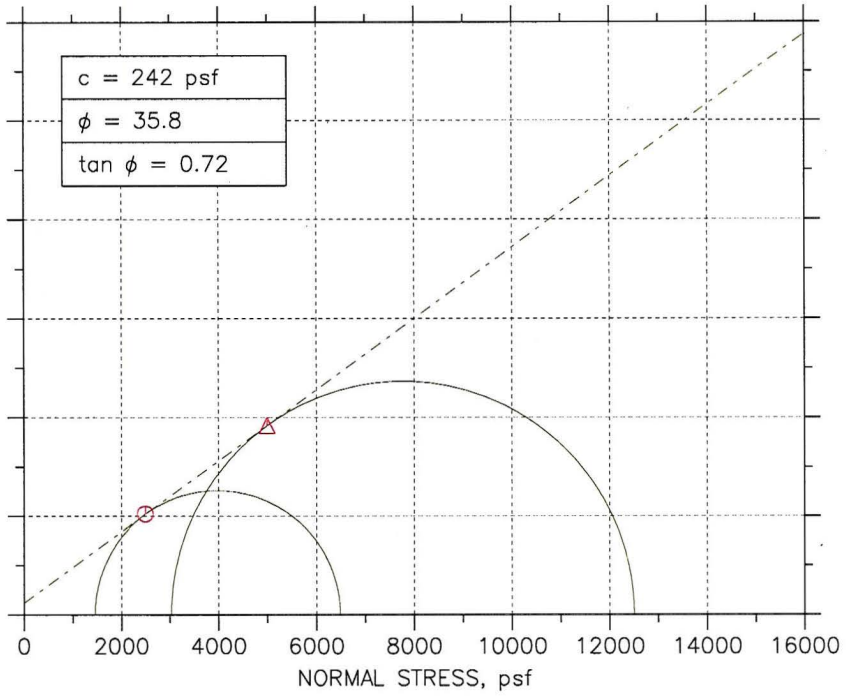
Symbol		⏲	△	⏍	
Test No.		DS11027A	DS11027B	DS11027C	
Sample No.		S-03-1	S-03-1	S-03-1	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	2.375	2.375	2.375	
	Area, in^2	4.4301	4.4301	4.4301	
	Height, in	1	1	1	
	Water Content, %	40.28	38.60	36.87	
	Dry Density, pcf	80.489	81.091	82.553	
	Saturation, %	97.77	95.02	93.93	
	Void Ratio	1.1329	1.1171	1.0796	
Consol. Height, in		0.97695	0.97174	0.951	
Consol. Void Ratio		1.0838	1.0573	0.9777	
Final	Water Content, %	39.42	38.28	34.58	
	Dry Density, pcf	82.318	83.514	87.919	
	Saturation, %	99.87	99.72	99.83	
	Void Ratio	1.0855	1.0557	0.95266	
Normal Stress, psf		2000.9	4000	7998.3	
Max. Shear Stress, psf		2195.7	3582.4	5835.9	
Ult. Shear Stress, psf		1603.9	2249.1	5210.8	
Time to Failure, min		15.364	20.096	24.59	
Disp. Rate, in/min		0.003	0.003	0.003	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

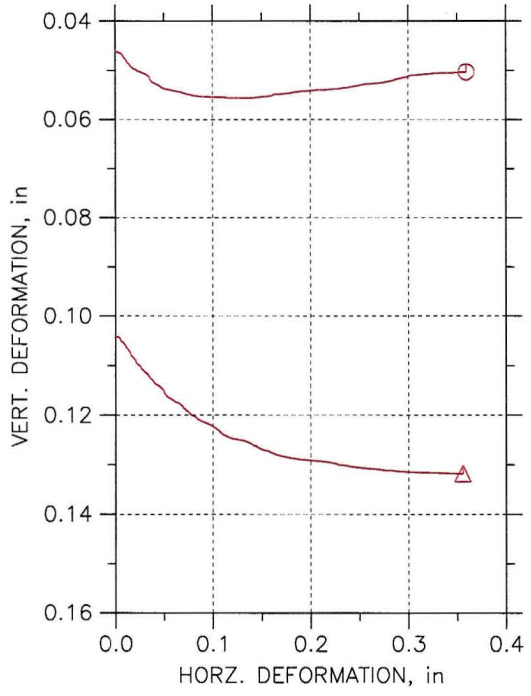
Project: I-10 HOV WIDENING
Location: 07-LA-10-37.2-42.4
Project No.: 07-119341
Boring No.: R-11-225
Sample Type: Brass
Description: Moist, Stiff, Brown with Red, Silty Clay with Sand.
Remarks: ASTM D 3080.

8/11/11

DIRECT SHEAR TEST REPORT







Symbol		⏲	△		
Test No.		DS11028A	DS11028B		
Sample No.		S-05-2	S-05-2		
Shape		Circular	Circular		
Initial	Dimension, in	2.375	2.375		
	Area, in^2	4.4301	4.4301		
	Height, in	1	1		
	Water Content, %	46.56	47.46		
	Dry Density, pcf	69.998	66.128		
	Saturation, %	88.15	81.78		
	Void Ratio	1.4526	1.5961		
Consol. Height, in		0.95431	0.8972		
Consol. Void Ratio		1.3405	1.3292		
Final	Water Content, %	48.28	45.51		
	Dry Density, pcf	73.71	76.171		
	Saturation, %	99.90	99.82		
	Void Ratio	1.3291	1.2538		
Normal Stress, psf		2500.7	4999.6		
Max. Shear Stress, psf		2042.5	3841.6		
Ult. Shear Stress, psf		1935.7	3841.6		
Time to Failure, min		42.12	90.925		

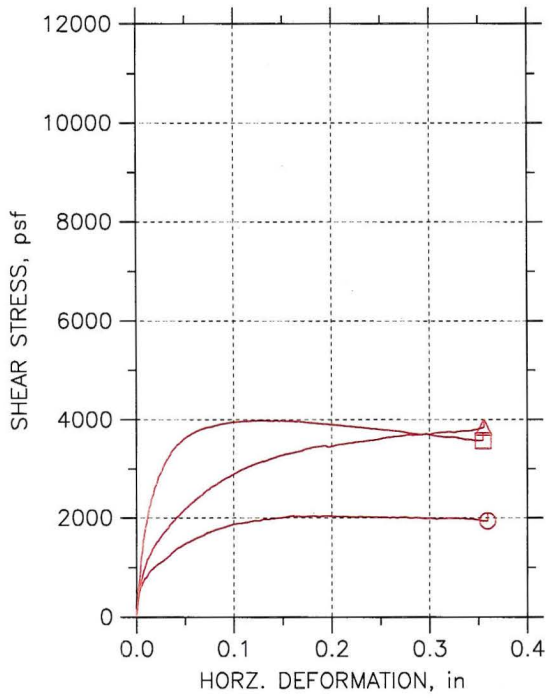
Project: I-10 HOV WIDENING	Disp. Rate, in/min	0.004	0.004		
Location: 07-LA-10-37.2-42.4	Implied Specific Gravity	2.75	2.75		
Project No.: 07-119341	Liquid Limit	---	---		
Boring No.: R-11-225	Plastic Limit	---	---		
Sample Type: Brass	Plasticity Index	---	---		

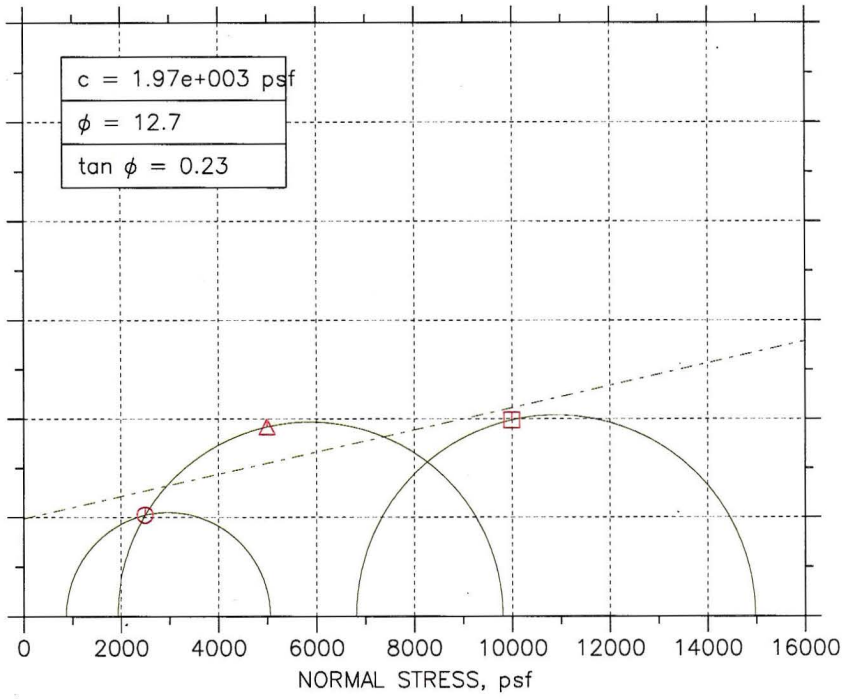
Description: Moist, Stiff, Brown, Silty Clay. Partial Tube. Patched.

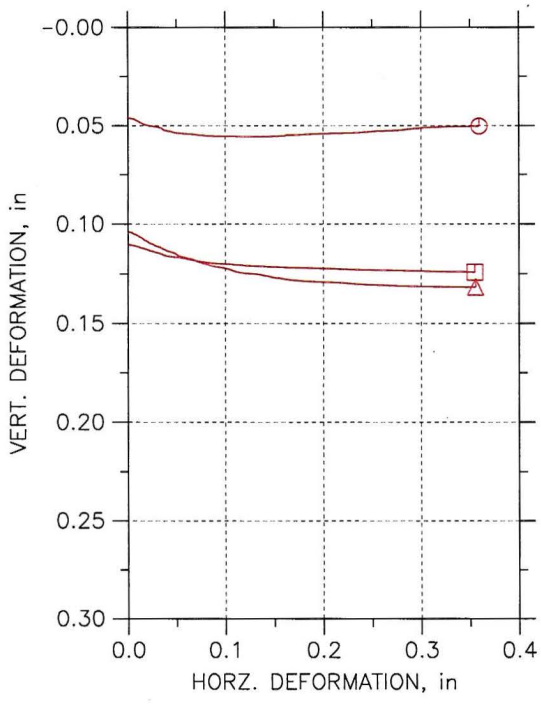
Remarks: ASTM D 3080. Two points using samples A and B are recommended. 8/11/11

Thu, 11-AUG-2011 14:29:25

DIRECT SHEAR TEST REPORT







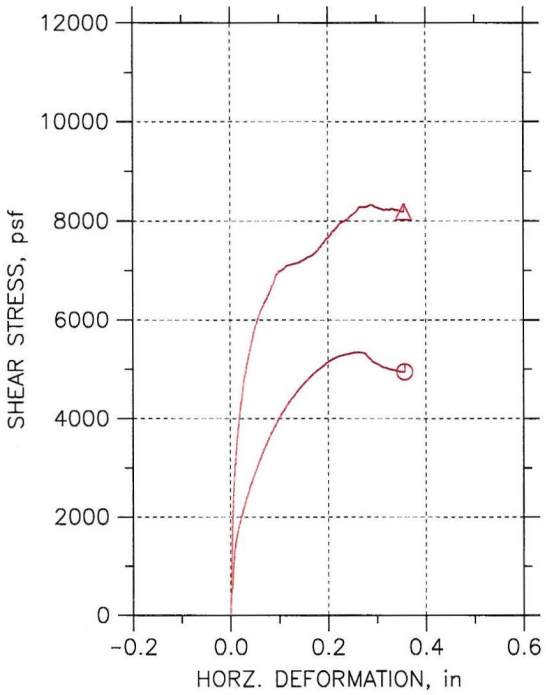
Symbol		⏲	△	⏍	
Test No.		DS11028A	DS11028B	DS11028C	
Sample No.		S-05-2	S-05-2	S-05-2	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	2.375	2.375	2.375	
	Area, in^2	4.4301	4.4301	4.4301	
	Height, in	1	1	1	
	Water Content, %	46.56	47.46	44.19	
	Dry Density, pcf	69.998	66.128	74.728	
	Saturation, %	88.15	81.78	93.67	
	Void Ratio	1.4526	1.5961	1.2974	
Consol. Height, in		0.95431	0.8972	0.89029	
Consol. Void Ratio		1.3405	1.3292	1.0453	
Final	Water Content, %	48.28	45.51	36.71	
	Dry Density, pcf	73.71	76.171	85.332	
	Saturation, %	99.90	99.82	99.77	
	Void Ratio	1.3291	1.2538	1.0119	
Normal Stress, psf		2500.7	4999.6	9998.3	
Max. Shear Stress, psf		2042.5	3841.6	3980.8	
Ult. Shear Stress, psf		1935.7	3841.6	3569.3	
Time to Failure, min		42.12	90.925	34.797	
Disp. Rate, in/min		0.004	0.004	0.004	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

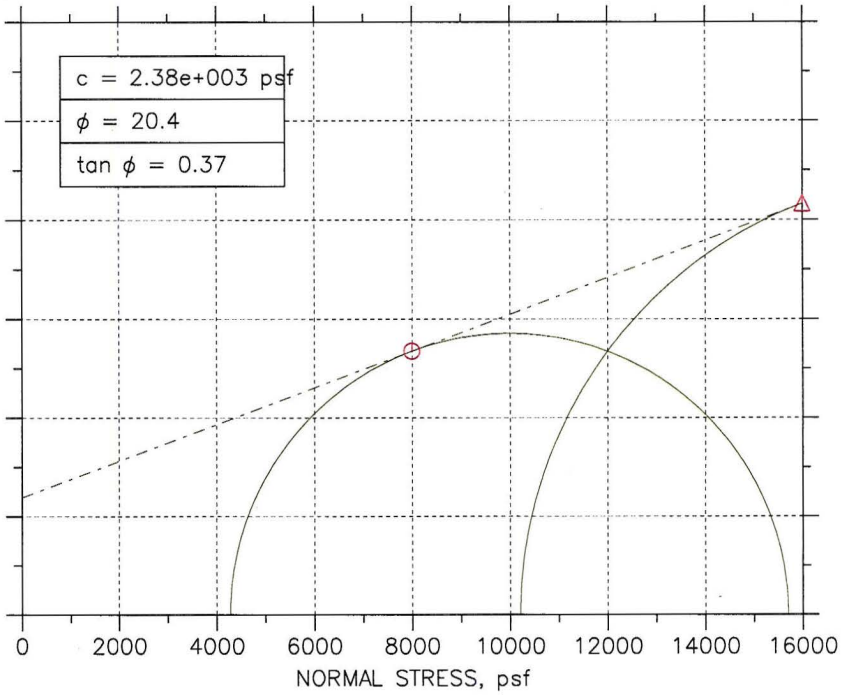
Project: I-10 HOV WIDENING
Location: 07-LA-10-37.2-42.4
Project No.: 07-119341
Boring No.: R-11-225
Sample Type: Brass
Description: Moist, Stiff, Brown, Silty Clay. Partial Tube. Patched.
Remarks: ASTM D 3080. Two points using Samples A & B are recommended.

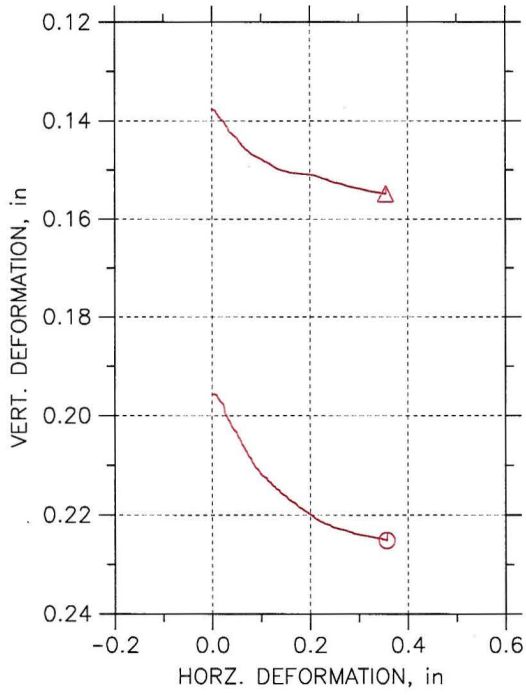
Tue, 09-AUG-2011 15:42:42

3/11/11

DIRECT SHEAR TEST REPORT







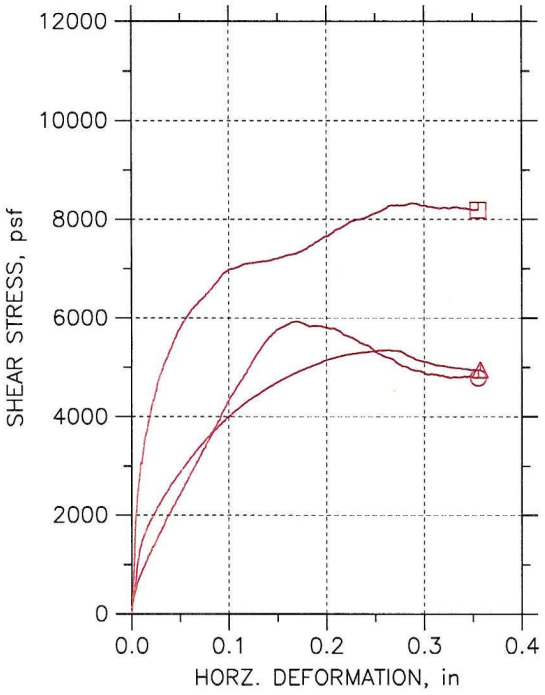
Symbol		⏲	△		
Test No.		DS11029B	DS11029C		
Sample No.		S-08-2	S-08-2		
Shape		Circular	Circular		
Initial	Dimension, in	2.375	2.375		
	Area, in^2	4.4301	4.4301		
	Height, in	1	1		
	Water Content, %	61.78	65.85		
	Dry Density, pcf	59.851	59.679		
	Saturation, %	90.93	96.49		
	Void Ratio	1.8684	1.8767		
Consol. Height, in		0.81047	0.86352		
Consol. Void Ratio		1.3248	1.4841		
Final	Water Content, %	44.25	51.87		
	Dry Density, pcf	77.243	70.617		
	Saturation, %	99.54	99.68		
	Void Ratio	1.2225	1.4311		
Normal Stress, psf		7998.3	15998		
Max. Shear Stress, psf		5354.4	8327.5		
Ult. Shear Stress, psf		4949.9	8183.9		
Time to Failure, min		66.634	76.895		
Disp. Rate, in/min		0.004	0.004		
Implied Specific Gravity		2.75	2.75		
Liquid Limit		---	---		
Plastic Limit		---	---		
Plasticity Index		---	---		

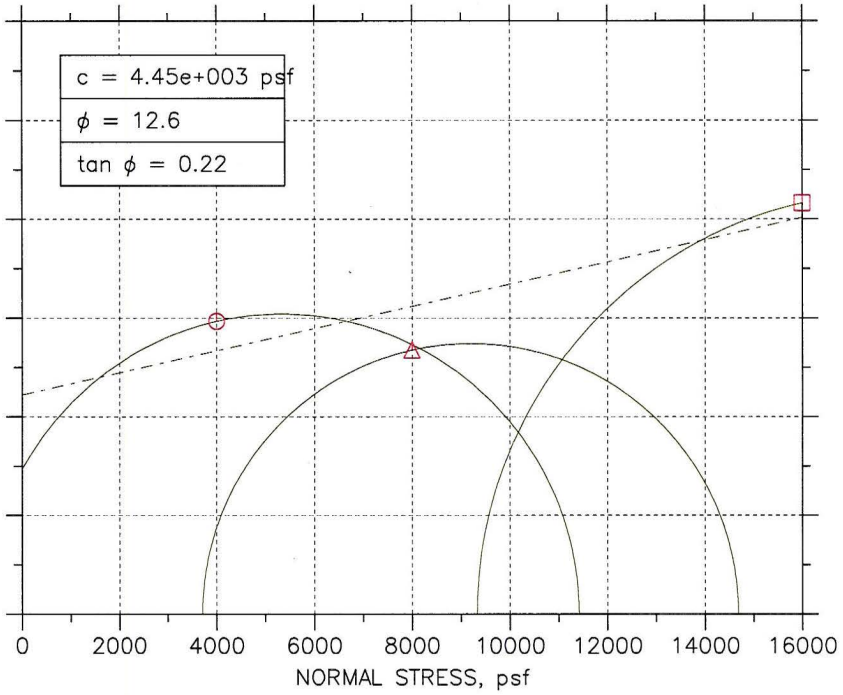
Project: I-10 HOV WIDENING
Location: 07-LA-10-37.2-42.4
Project No.: 07-119341
Boring No.: R-11-225
Sample Type: Brass
Description:
Remarks: ASTM D 3080. Results of 2 points using samples B & C are recommended.

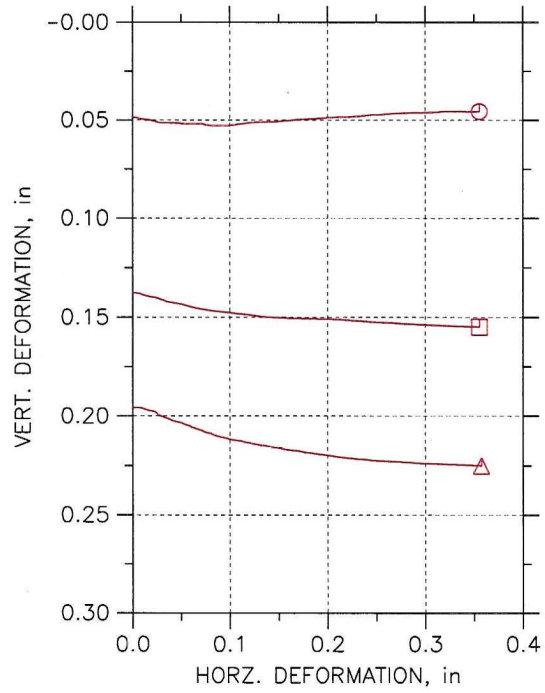
Thu, 11-AUG-2011 14:41:44

8/11/11

DIRECT SHEAR TEST REPORT







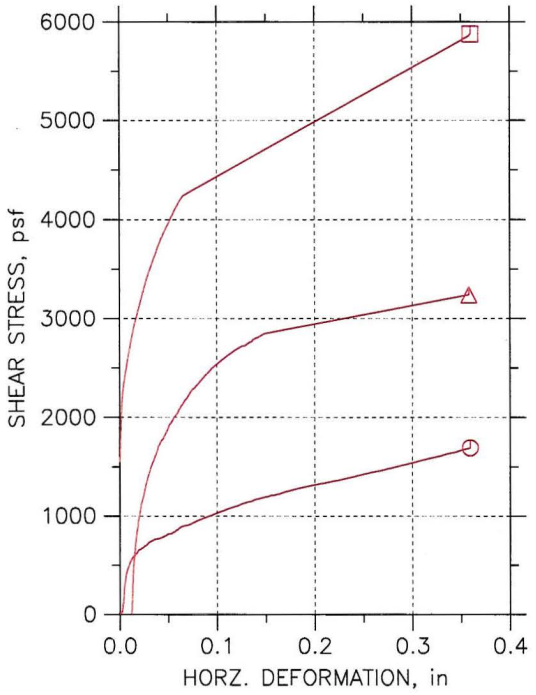
Symbol		○	△	□	
Test No.		DS11029A	DS11029B	DS11029C	
Sample No.		S-08-2	S-08-2	S-08-2	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	2.375	2.375	2.375	
	Area, in^2	4.4301	4.4301	4.4301	
	Height, in	1	1	1	
	Water Content, %	45.06	61.78	65.85	
	Dry Density, pcf	71.374	59.851	59.679	
	Saturation, %	88.18	90.93	96.49	
	Void Ratio	1.4053	1.8684	1.8767	
Consol. Height, in		0.95195	0.81047	0.86352	
Consol. Void Ratio		1.2898	1.3248	1.4841	
Final	Water Content, %	46.99	44.25	51.87	
	Dry Density, pcf	74.788	77.243	70.617	
	Saturation, %	99.74	99.54	99.68	
	Void Ratio	1.2955	1.2225	1.4311	
Normal Stress, psf		4000.9	7998.3	15998	
Max. Shear Stress, psf		5936.6	5354.4	8327.5	
Ult. Shear Stress, psf		4787.1	4949.9	8183.9	
Time to Failure, min		45.368	66.634	76.895	
Disp. Rate, in/min		0.004	0.004	0.004	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

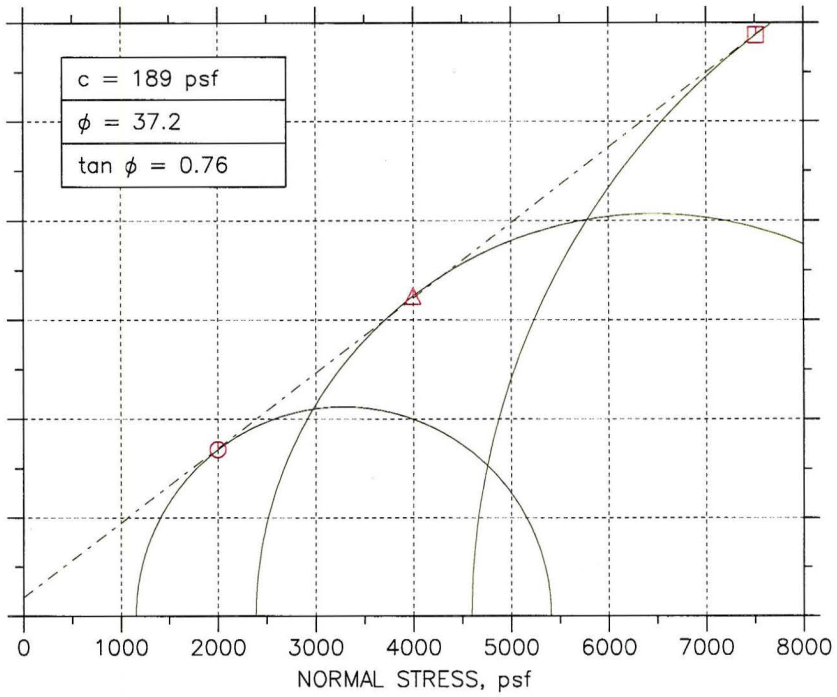
Project: I-10 HOV WIDENING
Location: 07-LA-10-37.2-42.4
Project No.: 07-119341
Boring No.: R-11-225
Sample Type: Brass
Description: Moist, Soft, Brown, Silty Clay with decomposed mudstone or slightly cemented soil. Sliightly patched.
Remarks: ASTM D 3080. Results of these 2 Points using Samples B & C are recommended.

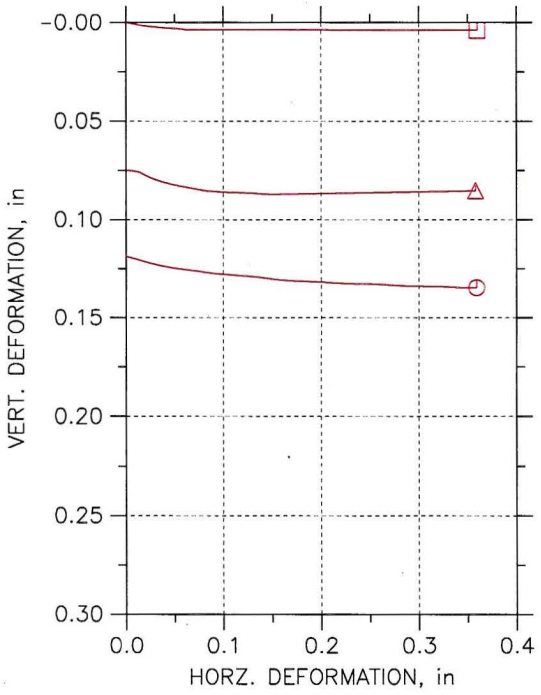
Wed, 10-AUG-2011 11:54:11

8/11/11

DIRECT SHEAR TEST REPORT







Symbol		○	△	□	
Test No.		DS11030A	DS11030B	DS11030C	
Sample No.		S03-3	S03-3	S03-3	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	2.375	2.375	2.375	
	Area, in^2	4.4301	4.4301	4.4301	
	Height, in	1	1	1	
	Water Content, %	25.62	17.87	17.02	
	Dry Density, pcf	97.688	107.32	114.71	
	Saturation, %	95.34	84.55	97.89	
	Void Ratio	0.72546	0.57061	0.46935	
Consol. Height, in		0.88232	0.92574	1	
Consol. Void Ratio		0.5224	0.45398	0.46935	
Final	Water Content, %	18.13	16.03	16.57	
	Dry Density, pcf	112.9	117.33	115.16	
	Saturation, %	99.33	99.10	96.48	
	Void Ratio	0.4929	0.43662	0.46364	
Normal Stress, psf		2000.3	3999.4	7517.2	
Max. Shear Stress, psf		1692.3	3241.3	5879.7	
Ult. Shear Stress, psf		1692.3	3241.3	5879.7	
Time to Failure, min		60.944	60.213	60.295	
Disp. Rate, in/min		0.006	0.006	0.006	
Implied Specific Gravity		2.70	2.70	2.70	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

Project: I-10 HOV Widening
Location: 07-LA-10-37.2-42.4
Project No.: 07-119341
Boring No.: R-11-226
Sample Type: Brass
Description: Moist, Very Stiff, Reddish Brown, Sandy Clay with Silt.
Remarks: ASTM D 3080.

8/11/11

Wed, 10-AUG-2011 12:11:04

CALIFORNIA DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL LABORATORY

GL TRACKING NO : 09-055
Dist - EA: 07-119341
Report Date: February 4, 2010

CLASSIFICATION TEST SUMMARY

SAMPLE ID	% FINER THAN																	ATTERBERG LIMITS		AS RECEIVED		Gs
	3"	2 1/2"	2"	1 1/2"	1"	3/4"	1/2"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	5μ	1μ	LL	PI	γd (pcf)	%m	
R-09-101_SPT 1						100	90	86	78	72	66	61	53	44	34	10	3	23	4		13.4	
R-09-101_SPT 3								100	98	96	93	85	68	44	25	11	7				11.2	
R-09-101_SPT 5								100	99	97	91	80	66	56	48	21	13	23	6		14.5	
R-09-101_SPT 6								100	97	95	90	83	70	56	44	24	17	24	9		14.1	
R-09-103_SPT 1						100	91	81	70	61	54	46	35	24	17	3	1				3.8	
R-09-103_SPT 4								100	99	97	95	89	77	59	40	17	11				10.0	
R-09-108_SPT 3					100	98	96	95	86	78	69	55	38	23	14	3	1				2.3	
R-09-108_SPT 7								100	98	97	97	96	92	81	59	15	10				6.8	
R-09-109_SPT 2						100	96	94	89	79	68	54	36	22	13	8	6				3.4	
R-09-109_SPT 6										100	99	97	85	61	41	14	8				10.2	
R-09-113_SPT 2								100	99	96	93	87	78	57	36	12	7				11.2	
R-09-113_SPT 8									100	98	96	91	80	60	41	19	13				8.3	
R-09-119_SPT 1						100	97	95	92	88	82	73	60	46	33	17	13				4.9	
R-09-119_SPT 2						100	97	96	91	84	77	66	52	34	21	10	7				6.0	
R-09-119_SPT 3								100	99	98	97	94	86	59	31	14	10				10.3	
R-09-119_SPT 6									100	98	96	92	76	41	21	13	10				6.4	
R-09-120_SPT					100	98	90	87	76	68	57	42	27	16	9	5	4				3.4	

2																						
R-09-120_SPT 4					100	98	94	93	78	69	60	49	33	18	11	6	5				3.5	
R-09-120_SPT 6						100	96	93	84	75	61	41	24	13	7	5	4				2.5	

CALIFORNIA DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL LABORATORY

GL TRACKING NO : 11-020
Dist - EA: 07-119341
Report Date: April 8, 2011
Page: 1/1

CLASSIFICATION TEST SUMMARY

SAMPLE ID	% FINER THAN																	ATTERBERG LIMITS		AS RECEIVED		Gs
	3"	2 1/2"	2"	1 1/2"	1"	3/4"	1/2"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	5μ	1μ	LL	PI	γ_d (pcf)	%m	
B_01								100	99	95	92	87	79	65	51	24	17					
B_02						100	99	99	96	82	72	62	51	40	32	16	8					
B_03									100	95	92	89	84	77	68	36	10					
B_04						100	97	94	86	79	73	65	55	45	37	22	13					
B_05						100	99	99	94	85	80	75	71	65	56	31	17					
B_06						100	99	97	94	89	81	68	49	33	24	9	5					
B_07						100	99	99	95	88	83	78	72	66	59	36	22					
B_08				100	93	93	91	91	86	81	78	74	70	65	56	32	20					
B_09				100	94	94	93	90	83	74	63	50	36	26	21	9	5					
B_10								100	99	98	96	95	92	82	66	33	17					
B_11									100	98	96	94	91	86	75	39	22					
B_12						100	96	92	86	81	78	74	68	62	56	31	16					
B_13							100	97	86	80	77	73	70	66	60	34	14					
B_14								100	99	95	90	80	69	59	51	25	16					
B_15				100	96	92	89	89	88	84	80	75	69	63	58	41	26					
B_16				100	95	94	92	90	87	83	78	70	58	44	34	12	7					

Appendix C

Analysis and Calculations

EA1193U1 **RW 1971 - Type 5SWB** 2/4/2014

Ultimate Bearing Capacity Determination (for continuous spread footings

general equation: $Q_u = cN_c + qN_q + 0.5W_uBN_{Wu}$ where c = cohesion (psf)

q = surcharge
= footing depth x soil unit weight
= Df x Wu

B = width of footing (or diameter)

p = internal friction angle

$N_q = e^{(3.14)\tan(p)} \tan^2(45 + p/2)$

$N_c = (Nq - 1)\cot(p)$

$N_{Wu} = 2(Nq + 1)\tan(p)$

(After Vesic, 1973)

Type 5SWB **H(ft)= 12**

c (psf) =	0	W_u (pcf) =	100	Nq =	20.63
Df (ft) =	4	B (ft) =	2.1	Nc =	32.67
		Extrem Limit State			
p (deg) =	31	F.S. =	3	Nw =	25.99
	0.54 rad				

Q_u (psf) = 10982

Q_a (psf) = 3661 (ultimate bearing capacity with Factor of Safety)

FOR ALTERNATE FOOTING CONFIGURATIONS:

Q = 0 + Df 688 + B 433

LRFD resistant factor = 0.45 Q_R = 4.9 ksf

Friction Factor

f = 0.40

Equivalent Fluid Pressure

Back Slope	Active (pcf)	Passive (pcf)
Flat	32	312
2:1	50	
1.5:1	73	

	Lateral Pressure Coefficient	Equivalent Fluid Weight (pcf)
Free Cantilever	0.3201	32.0099
Restrained	0.48496	48.49619

EA1193U1 **RW 1975 - Type 1SWB** 2/4/2014

Ultimate Bearing Capacity Determination (for continuous spread footings

general equation: $Q_u = cN_c + qN_q + 0.5W_uBN_{Wu}$ where c = cohesion (psf)

q = surcharge
= footing depth x soil unit weight
= Df x Wu

$N_q = e^{(3.14)\tan(p)} \tan^2(45 + p/2)$

B = width of footing (or diameter)

$N_c = (Nq - 1)\cot(p)$

p = internal friction angle

$N_{Wu} = 2(Nq + 1)\tan(p)$

(After Vesic, 1973)

Type 1SW **H(ft)= 10**

c (psf) =	0	W_u (pcf) =	100	Nq =	20.63
Df (ft) =	5	B (ft) =	1.7	Nc =	32.67
		Extrem Limit State			
p (deg) =	31	F.S. =	3	Nw =	25.99
	0.54 rad				

Q_u (psf) = 12525

Q_a (psf) = 4175 (ultimate bearing capacity with Factor of Safety)

FOR ALTERNATE FOOTING CONFIGURATIONS:

Q = 0 + Df 688 + B 433

LRFD resistant factor = 0.45 Q_R = 5.6 ksf

Friction Factor

f = 0.40

Equivalent Fluid Pressure

Back Slope	Active (pcf)	Passive (pcf)
Flat	32	312
2:1	50	
1.5:1	73	

	Lateral Pressure Coefficient	Equivalent Fluid Weight (pcf)
Free Cantilever	0.3201	32.0099
Restrained	0.48496	48.49619

EA1193U1 **RW 2002 - Type 7B** 2/4/2014

Ultimate Bearing Capacity Determination (for continuous spread footings

general equation: $Q_u = cN_c + qN_q + 0.5W_uBN_{Wu}$ where c = cohesion (psf)

q = surcharge
= footing depth x soil unit weight
= Df x Wu

$N_q = e^{(3.14)\tan(p)} \tan^2(45 + p/2)$

B = width of footing (or diameter)

$N_c = (Nq - 1)\cot(p)$

p = internal friction angle

$N_{Wu} = 2(Nq + 1)\tan(p)$

(After Vesic, 1973) **Type 7B** **H(ft)= 14**

c (psf) =	0	W_u (pcf) =	114	Nq =	23.18
Df (ft) =	3	B (ft) =	6.6	Nc =	35.49
		Strength Limit State			
p (deg) =	32	F.S. =	3	Nw =	30.21
	0.56 rad				

Q_u (psf) = 19293

Q_a (psf) = 6431 (ultimate bearing capacity with Factor of Safety)

FOR ALTERNATE FOOTING CONFIGURATIONS:

Q = 0 + Df 881 + B 574

LRFD resistant factor = 0.45 Q_R = 8.7 ksf

Friction Factor

f = 0.42

Equivalent Fluid Pressure

Back Slope	Active (pcf)	Passive (pcf)
Flat	35	371
2:1	54	
1.5:1	82	

	Lateral Pressure Coefficient	Equivalent Fluid Weight (pcf)
Free Cantilever	0.30726	35.0275
Restrained	0.47008	53.5892

Ultimate Bearing Capacity Determination (for continuous spread footings)

general equation: $Q_u = cN_c + qN_q + 0.5W_uBN_{Wu}$ where c = cohesion (psf)

q = surcharge
= footing depth x soil unit weight
= Df x Wu

B = width of footing (or diameter)

p = internal friction angle

$N_q = e^{(3.14)\tan(p)} \tan^2(45 + p/2)$

$N_c = (Nq - 1)\cot(p)$

$N_{Wu} = 2(Nq + 1)\tan(p)$

(After Vesic, 1973)

Type 1 **H(ft)= 14**

c (psf) =	0	W_u (pcf) =	115	Nq =	20.63
Df (ft) =	3	B (ft) =	4.3	Nc =	32.67
		Strength Limit State			
p (deg) =	31	F.S. =	3	Nw =	25.99
	0.54 rad				

Q_u (psf) = 13545

Q_a (psf) = 4515 (ultimate bearing capacity with Factor of Safety)

FOR ALTERNATE FOOTING CONFIGURATIONS:

Q =	0	+ Df	791	+ B	498

LRFD resistant factor = 0.45 Q_R = 6.1 ksf

Friction Factor

f = 0.40

Equivalent Fluid Pressure

Back Slope	Active (pcf)	Passive (pcf)
Flat	37	359
2:1	58	
1.5:1	84	

	Lateral Pressure Coefficient	Equivalent Fluid Weight (pcf)
Free Cantilever	0.3201	36.8114
Restrained	0.48496	55.77062

EA1193U1 **RW 2035** 2/4/2014

Ultimate Bearing Capacity Determination (for continuous spread footings

general equation: $Q_u = cN_c + qN_q + 0.5W_uBN_{Wu}$ where c = cohesion (psf)

q = surcharge
= footing depth x soil unit weight
= Df x Wu

$N_q = e^{(3.14)\tan(p)} \tan^2(45 + p/2)$

B = width of footing (or diameter)

$N_c = (Nq - 1)\cot(p)$

p = internal friction angle

$N_{Wu} = 2(Nq + 1)\tan(p)$

(After Vesic, 1973) **Type 7** **H(ft)= 14**

c (psf) =	0	W_u (pcf) =	123	Nq =	26.09
Df (ft) =	3	B (ft) =	6.6	Nc =	38.64
		Strength Limit State			
p (deg) =	33	F.S. =	3	Nw =	35.19
	0.58 rad				

Q_u (psf) = 23911

Q_a (psf) = 7970 (ultimate bearing capacity with Factor of Safety)

FOR ALTERNATE FOOTING CONFIGURATIONS:

Q = 0 + Df 1070 + B 721

LRFD resistant factor = 0.45 Q_R = 10.8 ksf

Friction Factor

f = 0.43

Equivalent Fluid Pressure

Back Slope	Active (pcf)	Passive (pcf)
Flat	36	417
2:1	54	
1.5:1	87	

	Lateral Pressure Coefficient	Equivalent Fluid Weight (pcf)
Free Cantilever	0.2948	36.2605
Restrained	0.45536	56.0094

EA1193U1 **RW 2050** 2/11/2014

Ultimate Bearing Capacity Determination (for continuous spread footings

general equation: $Q_u = cN_c + qN_q + 0.5W_uBN_{Wu}$ where c = cohesion (psf)

q = surcharge
= footing depth x soil unit weight
= Df x Wu

B = width of footing (or diameter)

p = internal friction angle

$N_q = e^{(3.14)\tan(p)} \tan^2(45 + p/2)$

$N_c = (Nq - 1)\cot(p)$

$N_{Wu} = 2(Nq + 1)\tan(p)$

(After Vesic, 1973)

Type 1SWB **H(ft)= 10**

c (psf) =	0	W_u (pcf) =	121	Nq =	26.09
Df (ft) =	3	B (ft) =	1.7	Nc =	38.64
		Extrem Limit State			
p (deg) =	33	F.S. =	3	Nw =	35.19
	0.58 rad				

Q_u (psf) = 13090

Q_a (psf) = 4363 (allowable bearing capacity with Factor of Safety)

FOR ALTERNATE FOOTING CONFIGURATIONS:

Q =	0	+ Df	1052	+ B	710

LRFD resistant factor = 0.45 Q_R = 5.9 ksf

Friction Factor

f = 0.43

Equivalent Fluid Pressure

Back Slope	Active (pcf)	Passive (pcf)
Flat	36	410
2:1	53	
1.5:1	85	

	Lateral Pressure Coefficient	Equivalent Fluid Weight (pcf)
Free Cantilever	0.2948	35.6709
Restrained	0.45536	55.09868

EA1193U1 **RW 2064** 2/4/2014

Ultimate Bearing Capacity Determination (for continuous spread footings

general equation: $Q_u = cN_c + qN_q + 0.5W_uBN_{Wu}$ where c = cohesion (psf)

q = surcharge
= footing depth x soil unit weight
= Df x Wu

$N_q = e^{(3.14)\tan(p)} \tan^2(45 + p/2)$

B = width of footing (or diameter)

$N_c = (Nq - 1)\cot(p)$

p = internal friction angle

$N_{Wu} = 2(Nq + 1)\tan(p)$

(After Vesic, 1973) **Type 7** **H(ft)= 22**

c (psf) =	0	W_u (pcf) =	120	Nq =	29.44
Df (ft) =	3	B (ft) =	3.5	Nc =	42.16
		Extrem Limit State			
p (deg) =	34	F.S. =	3	Nw =	41.06
	0.59 rad				

Q_u (psf) = 19222

Q_a (psf) = 6407 (ultimate bearing capacity with Factor of Safety)

FOR ALTERNATE FOOTING CONFIGURATIONS:

Q = 0 + Df 1178 + B 821

LRFD resistant factor = 0.45 Q_R = 8.6 ksf

Friction Factor

f = 0.45

Equivalent Fluid Pressure

Back Slope	Active (pcf)	Passive (pcf)
Flat	34	424
2:1	50	
1.5:1	73	

	Lateral Pressure Coefficient	Equivalent Fluid Weight (pcf)
Free Cantilever	0.28271	33.9258
Restrained	0.44081	52.89685

EA1193U1 **RW 2074** 2/4/2014

Ultimate Bearing Capacity Determination (for continuous spread footings

general equation: $Q_u = cN_c + qN_q + 0.5W_uBN_{Wu}$ where c = cohesion (psf)

q = surcharge
= footing depth x soil unit weight
= Df x Wu

$N_q = e^{(3.14)\tan(p)} \tan^2(45 + p/2)$

B = width of footing (or diameter)

$N_c = (Nq - 1)\cot(p)$

p = internal friction angle

$N_{Wu} = 2(Nq + 1)\tan(p)$

(After Vesic, 1973)

Type 5SWB **H(ft)= 8**

c (psf) =	0	W_u (pcf) =	117	Nq =	26.09
Df (ft) =	3	B (ft) =	3	Nc =	38.64
		Extrem Limit State			
p (deg) =	33	F.S. =	3	Nw =	35.19
	0.58 rad				

Q_u (psf) = 15334

Q_a (psf) = 5111 (ultimate bearing capacity with Factor of Safety)

FOR ALTERNATE FOOTING CONFIGURATIONS:

Q = 0 + Df 1018 + B 686

LRFD resistant factor = 0.45 Q_R = 6.9 ksf

Friction Factor

f = 0.43

Equivalent Fluid Pressure

Back Slope	Active (pcf)	Passive (pcf)
Flat	34	397
2:1	52	
1.5:1	82	

	Lateral Pressure Coefficient	Equivalent Fluid Weight (pcf)
Free Cantilever	0.2948	34.4917
Restrained	0.45536	53.27723

EA1193U1 **RW 2076** 2/4/2014

Ultimate Bearing Capacity Determination (for continuous spread footings

general equation: $Q_u = cN_c + qN_q + 0.5W_uBN_{Wu}$ where c = cohesion (psf)

q = surcharge
= footing depth x soil unit weight
= Df x Wu

$N_q = e^{(3.14)\tan(p)} \tan^2(45 + p/2)$

B = width of footing (or diameter)

$N_c = (Nq - 1)\cot(p)$

p = internal friction angle

$N_{Wu} = 2(Nq + 1)\tan(p)$

(After Vesic, 1973) **Type 7SW** **H(ft)= 18**

c (psf) =	0	W_u (pcf) =	122	Nq =	29.44
Df (ft) =	3	B' (ft) =	3.3	Nc =	42.16
		Extreme Limit State			
p (deg) =	34	F.S. =	3	Nw =	41.06
	0.59 rad				

Q_u (psf) = 19041

Q_a (psf) = 6347 (ultimate bearing capacity with Factor of Safety)

FOR ALTERNATE FOOTING CONFIGURATIONS:

Q = 0 + Df 1197 + B 835

LRFD resistant factor = 0.45 Q_R = 8.6 ksf

Friction Factor

f = 0.45

Equivalent Fluid Pressure

Back Slope	Active (pcf)	Passive (pcf)
Flat	34	432
2:1	51	
1.5:1	75	

	Lateral Pressure Coefficient	Equivalent Fluid Weight (pcf)
Free Cantilever	0.28271	34.4912
Restrained	0.44081	53.77847

EA119341
I-10 Segment III Widening

RW 2084

Ultimate Bearing Capacity Determination (for continuous spread footings)

general equation: $Q_u = cN_c + qN_q + 0.5W_uBN_{Wu}$

$N_q = e^{(3.14)\tan(p)} \tan^2(45 + p/2)$

$N_c = (Nq - 1)\cot(p)$

$N_{Wu} = 2(Nq + 1)\tan(p)$

(After Vesic, 1973)

where c = cohesion (psf)
q = surcharge
= footing depth x soil unit weight
= Df x Wu
B = width of footing (or diameter)
p = internal friction angle

Type 5 SWB **H(ft)= 26**

R-10-118 Siltstone

c (psf) =	1200	W_u (pcf) =	97	Nq =	0.00
Df (ft) =	7.5	B (ft) =	3.6	Nc =	5.00
p (deg) =	34	F.S. =	3	Nw =	120.00
	0.59 rad				

Q_u (psf) = 26952

Q_a (psf) = 8984 (ultimate bearing capacity with Factor of Safety)

FOR ALTERNATE FOOTING CONFIGURATIONS:

Q = 2000 + Df 0 + B 1940

Friction Factor

f = 0.45

Equivalent Fluid Pressure

Back Slope	Active (pcf)	Passive (pcf)
Flat	27	343
2:1	40	
1.5:1	59	

	Lateral Pressure Coefficient	Equivalent Fluid Weight (pcf)
Free Cantilever	0.28271	27.4233
Restrained	0.44081	42.75829

Ultimate Bearing Capacity Determination (for continuous spread footings)

general equation: $Q_u = cN_c + qN_q + 0.5W_uBN_{Wu}$ where c = cohesion (psf)

q = surcharge
= footing depth x soil unit weight
= Df x Wu

$N_q = e^{(3.14)\tan(p)} \tan^2(45 + p/2)$

B = width of footing (or diameter)

$N_c = (Nq - 1)\cot(p)$

p = internal friction angle

$N_{Wu} = 2(Nq + 1)\tan(p)$

(After Vesic, 1973)

Type 7SW **H(ft)= 10**

c (psf) =	0	W_u (pcf) =	122	Nq =	37.75
Df (ft) =	4	B (ft) =	4.2	Nc =	50.59
p (deg) =	36	F.S. =	3	Nw =	56.31
	0.63 rad				

Q_u (psf) = 32850

Q_a (psf) = 10950 (ultimate bearing capacity with Factor of Safety)

FOR ALTERNATE FOOTING CONFIGURATIONS:

Q =	0	+ Df	1535	+ B	1145

Friction Factor

f = 0.48

Equivalent Fluid Pressure

Back Slope	Active (pcf)	Passive (pcf)
Flat	32	470
2:1	45	
1.5:1	58	

	Lateral Pressure Coefficient	Equivalent Fluid Weight (pcf)
Free Cantilever	0.25962	31.6732
Restrained	0.41221	50.2902

EA1193U1
I-10 HOV Widening

Sound Wall 2118
Type 5SWB, Hmax = 8'

2/4/2014

Ultimate Bearing Capacity Determination (for continuous spread footings)

general equation: $Q_u = cN_c + qN_q + 0.5W_uBN_{Wu}$ where c = cohesion (psf)

q = surcharge
= footing depth x soil unit weight
= Df x Wu

$N_q = e^{(3.14)\tan(p)} \tan^2(45 + p/2)$

B = width of footing (or diameter)

$N_c = (Nq - 1)\cot(p)$

p = internal friction angle

$N_{Wu} = 2(Nq + 1)\tan(p)$

(After Vesic, 1973)

Type 5SW **H(ft)= 8**

Soil Type: Claystone

c (psf) =	400	W_u (pcf) =	110	Nq =	0.00
Df (ft) =	8	B (ft) =	3	Nc =	5.00
p (deg) =	38	F.S. =	3	Nw =	25.00
	0.66 rad				

Q_u (psf) = 6125

Q_a (psf) = 2042 (ultimate bearing capacity with Factor of Safety)

FOR ALTERNATE FOOTING CONFIGURATIONS:

Q =	667	+ Df	0	+ B	458

Friction Factor

f = 0.52

Equivalent Fluid Pressure

Back Slope	Active (pcf)	Passive (pcf)
Flat	26	462
2:1	36	
1.5:1	45	

	Lateral Pressure Coefficient	Equivalent Fluid Weight (pcf)
Free Cantilever	0.23788	26.1671
Restrained	0.38434	42.27724

Ultimate Bearing Capacity Determination (for continuous spread footings)

general equation: $Q_u = cN_c + qN_q + 0.5W_uBN_{Wu}$

$N_q = e^{(3.14)\tan(p)} \tan^2(45 + p/2)$

$N_c = (Nq - 1)\cot(p)$

$N_{Wu} = 2(Nq + 1)\tan(p)$

(After Vesic, 1973)

where c = cohesion (psf)
q = surcharge
= footing depth x soil unit weight
= Df x Wu
B = width of footing (or diameter)
p = internal friction angle

Type 1SWB **H(ft)= 14**

Soil Type Fill

c (psf) =	300	W_u (pcf) =	122	Nq =	23.18
Df (ft) =	3	B (ft) =	1.3	Nc =	35.49
p (deg) =	32	F.S. =	3	Nw =	30.21
	0.56 rad				

Q_u (psf) = 21526

Q_a (psf) = 7175 (ultimate bearing capacity with Factor of Safety)

FOR ALTERNATE FOOTING CONFIGURATIONS:

Q = 3549 + Df 943 + B 614

Friction Factor

f = 0.42

Equivalent Fluid Pressure

Back Slope	Active (pcf)	Passive (pcf)
Flat	37	397
2:1	57	
1.5:1	88	

	Lateral Pressure Coefficient	Equivalent Fluid Weight (pcf)
Free Cantilever	0.30726	37.4855
Restrained	0.47008	57.34985

Ultimate Bearing Capacity Determination (for continuous spread footings)

general equation: $Q_u = cN_c + qN_q + 0.5W_uBN_{Wu}$

$N_q = e^{(3.14)\tan(p)} \tan^2(45 + p/2)$

$N_c = (Nq - 1)\cot(p)$

$N_{Wu} = 2(Nq + 1)\tan(p)$

(After Vesic, 1973)

where c = cohesion (psf)
q = surcharge
= footing depth x soil unit weight
= Df x Wu
B = width of footing (or diameter)
p = internal friction angle

Type 1SWB **H(ft)= 10**

Soil Type Fill

c (psf) =	500	W_u (pcf) =	125	Nq =	0.00
Df (ft) =	8	B (ft) =	1.7	Nc =	5.70
p (deg) =	40	F.S. =	3	Nw =	100.00
	0.70 rad				

Q_u (psf) = 13475

Q_a (psf) = 4492 (ultimate bearing capacity with Factor of Safety)

FOR ALTERNATE FOOTING CONFIGURATIONS:

Q = 950 + Df 0 + B 2083

Friction Factor

f = 0.56

Equivalent Fluid Pressure

Back Slope	Active (pcf)	Passive (pcf)
Flat	27	575
2:1	37	
1.5:1	44	

	Lateral Pressure Coefficient	Equivalent Fluid Weight (pcf)
Free Cantilever	0.21744	27.1804
Restrained	0.35721	44.65155

Ultimate Bearing Capacity Determination (for continuous spread footings)

general equation: $Q_u = cN_c + qN_q + 0.5W_uBN_{Wu}$

$N_q = e^{(3.14)\tan(p)} \tan^2(45 + p/2)$

$N_c = (Nq - 1)\cot(p)$

$N_{Wu} = 2(Nq + 1)\tan(p)$

(After Vesic, 1973)

where c = cohesion (psf)
q = surcharge
= footing depth x soil unit weight
= Df x Wu
B = width of footing (or diameter)
p = internal friction angle

Type 1 **H(ft)= 8**

Soil Type Fill

c (psf) =	0	W_u (pcf) =	120	Nq =	48.93
Df (ft) =	3	B (ft) =	3.6	Nc =	61.35
p (deg) =	38	Strength limit state F.S. =	3	Nw =	78.02
	0.66 rad				

Q_u (psf) = 34469

Q_a (psf) = 11490 (ultimate bearing capacity with Factor of Safety)

FOR ALTERNATE FOOTING CONFIGURATIONS:

Q = 0 + Df 1957 + B 1560

Q = 0.45 *Q_u = 15.5 ksf

Friction Factor

f = 0.52

Equivalent Fluid Pressure

Back Slope	Active (pcf)	Passive (pcf)
Flat	29	504
2:1	40	
1.5:1	49	

	Lateral Pressure Coefficient	Equivalent Fluid Weight (pcf)
Free Cantilever	0.23788	28.5460
Restrained	0.38434	46.12062

Ultimate Bearing Capacity Determination (for continuous spread footings)

general equation: $Q_u = cN_c + qN_q + 0.5W_uBN_{Wu}$

where c = cohesion (psf)
q = surcharge
= footing depth x soil unit weight
= Df x Wu
B = width of footing (or diameter)
p = internal friction angle

$N_q = e^{(3.14)\tan(p)} \tan^2(45 + p/2)$

$N_c = (Nq - 1)\cot(p)$

$N_{Wu} = 2(Nq + 1)\tan(p)$

(After Vesic, 1973)

Type 5SW **H(ft)= 28**

Soil Type: Claystone

c (psf) =	0	W_u (pcf) =	135	Nq =	33.30
Df (ft) =	3	B (ft) =	3.9	Nc =	46.12
		extreme limit state			
p (deg) =	35	F.S. =	3	Nw =	48.03
	0.61 rad				

Q_u (psf) = 26128

Q_a (psf) = 8709 (ultimate bearing capacity with Factor of Safety)

FOR ALTERNATE FOOTING CONFIGURATIONS:

Q =	0	+ Df	1498	+ B	1081

Friction Factor

f = 0.47

Equivalent Fluid Pressure

Back Slope	Active (pcf)	Passive (pcf)
Flat	37	498
2:1	53	
1.5:1	72	

	Lateral Pressure Coefficient	Equivalent Fluid Weight (pcf)
Free Cantilever	0.27099	36.5837
Restrained	0.426424	57.56718

Ultimate Bearing Capacity Determination (for continuous spread footings)

general equation: $Q_u = cN_c + qN_q + 0.5W_uBN_{Wu}$

$N_q = e^{(3.14)\tan(p)} \tan^2(45 + p/2)$

$N_c = (Nq - 1)\cot(p)$

$N_{Wu} = 2(Nq + 1)\tan(p)$

(After Vesic, 1973)

where c = cohesion (psf)
q = surcharge
= footing depth x soil unit weight
= Df x Wu
B = width of footing (or diameter)
p = internal friction angle

Type 1SWB **H(ft)= 10**

Soil Type Fill

c (psf) =	500	W_u (pcf) =	125	Nq =	0.00
Df (ft) =	8	B (ft) =	1.7	Nc =	5.70
p (deg) =	40	F.S. =	3	Nw =	100.00
	0.70 rad				

Q_u (psf) = 13475

Q_a (psf) = 4492 (ultimate bearing capacity with Factor of Safety)

FOR ALTERNATE FOOTING CONFIGURATIONS:

Q = 950 + Df 0 + B 2083

Friction Factor

f = 0.56

Equivalent Fluid Pressure

Back Slope	Active (pcf)	Passive (pcf)
Flat	27	575
2:1	37	
1.5:1	44	

	Lateral Pressure Coefficient	Equivalent Fluid Weight (pcf)
Free Cantilever	0.21744	27.1804
Restrained	0.35721	44.65155

Ultimate Bearing Capacity Determination (for continuous spread footings)

general equation: $Q_u = cN_c + qN_q + 0.5W_uBN_{Wu}$ where c = cohesion (psf)

q = surcharge
= footing depth x soil unit weight
= Df x Wu

$N_q = e^{(3.14)\tan(p)} \tan^2(45 + p/2)$

B = width of footing (or diameter)

$N_c = (Nq - 1)\cot(p)$

p = internal friction angle

$N_{Wu} = 2(Nq + 1)\tan(p)$

(After Vesic, 1973)

Type 7 **H(ft)= 32**

c (psf) =	150	W_u (pcf) =	120	Nq =	29.44
Df (ft) =	3.5	B (ft) =	4.9	Nc =	42.16
		extreme limit state			
p (deg) =	34	F.S. =	3	Nw =	41.06
	0.59 rad				

Q_u (psf) = 30762

Q_a (psf) = 10254 (ultimate bearing capacity with Factor of Safety)

FOR ALTERNATE FOOTING CONFIGURATIONS:

Q = 2108 + Df 1178 + B 821

Friction Factor

f = 0.45

Equivalent Fluid Pressure

Back Slope	Active (pcf)	Passive (pcf)
Flat	34	424
2:1	50	
1.5:1	73	

	Lateral Pressure Coefficient	Equivalent Fluid Weight (pcf)
Free Cantilever	0.28271	33.9258
Restrained	0.44081	52.89685

EA1193U1
I-10 HOV Seg III

RW 2150

2/4/2014

Ultimate Bearing Capacity Determination (for continuous spread footings)

general equation: $Q_u = cN_c + qN_q + 0.5W_uBN_{Wu}$ where c = cohesion (psf)

q = surcharge
= footing depth x soil unit weight
= Df x Wu

$N_q = e^{(3.14)\tan(p)} \tan^2(45 + p/2)$

B = width of footing (or diameter)

$N_c = (Nq - 1)\cot(p)$

p = internal friction angle

$N_{Wu} = 2(Nq + 1)\tan(p)$

(After Vesic, 1973)

Type 5SWB **H(ft)= 22**

c (psf) =	900	W_u (pcf) =	125	Nq =	0.00
Df (ft) =	8	B (ft) =	2.9 Extrem	Nc =	5.50
p (deg) =	40	F.S. =	3	Nw =	75.00
	0.70 rad				

Q_u (psf) = 18544

Q_a (psf) = 6181 (ultimate bearing capacity with Factor of Safety)

FOR ALTERNATE FOOTING CONFIGURATIONS:

Q = 1650 + Df 0 + B 1563

Friction Factor

f = 0.56

Equivalent Fluid Pressure

Back Slope	Active (pcf)	Passive (pcf)
Flat	27	575
2:1	37	
1.5:1	44	

	Lateral Pressure Coefficient	Equivalent Fluid Weight (pcf)
Free Cantilever	0.21744	27.1804
Restrained	0.35721	44.65155

EA119341 Retaiing Wall 2159 2/4/2014

I-10 HOV Widening Segment III

Ultimate Bearing Capacity Determinatior (for continuous spread footings)

general equation: $Q_u = cN_c + qN_q + 0.5W_uBN_{Wu}$ where c = cohesion (psf)

q = surcharge
= footing depth x soil unit weight
= Df x Wu

$N_q = e^{(3.14)\tan(p)} \tan^2(45 + p/2)$

B = width of footing (or diameter)

$N_c = (Nq - 1)\cot(p)$

p = internal friction angle

$N_{Wu} = 2(Nq + 1)\tan(p)$

(After Vesic, 1973)

Type 1 **H(ft)= 16**

c (psf) =	0	W_u (pcf) =	120	Nq =	29.44
Df (ft) =	3	B (ft) =	3.6	Nc =	42.16
p (deg) =	34	F.S. =	3	Nw =	41.06
	0.59 rad				

Q_u (psf) = 19468

Q_a (psf) = 6489 (ultimate bearing capacity with Factor of Safety)

FOR ALTERNATE FOOTING CONFIGURATIONS:

Q =	0	+ Df	1178	+ B	821

Friction Factor

f = 0.45

Equivalent Fluid Pressure

Back Slope	Active (pcf)	Passive (pcf)
Flat	34	424
2:1	50	
1.5:1	73	

	Lateral Pressure Coefficient	Equivalent Fluid Weight (pcf)
Free Cantilever	0.28271	33.9258
Restrained	0.44081	52.89685

Ultimate Bearing Capacity Determination (for continuous spread footings)

general equation: $Q_u = cN_c + qN_q + 0.5W_uBN_{Wu}$

where c = cohesion (psf)
q = surcharge
= footing depth x soil unit weight
= Df x Wu
B = width of footing (or diameter)
p = internal friction angle

$N_q = e^{(3.14)\tan(p)} \tan^2(45 + p/2)$

$N_c = (Nq - 1)\cot(p)$

$N_{Wu} = 2(Nq + 1)\tan(p)$

(After Vesic, 1973)

c (psf) =	0	W_u (pcf) =	120	Nq =	29.44
Df (ft) =	3	B (ft) =	3.8	Nc =	42.16
p (deg) =	34	F.S. =	0.45	Nw =	41.06
	0.59 rad				

Q_u (psf) = 19961

Q_a (psf) = 8982 (ultimate bearing capacity with Factor of Safety)

FOR ALTERNATE FOOTING CONFIGURATIONS:

Q = 0 + Df 1178 + B 821

Friction Factor

f = 0.45

Equivalent Fluid Pressure

Back Slope	Active (pcf)	Passive (pcf)
Flat	34	424
2:1	42	
1.5:1	73	

	Lateral Pressure Coefficient	Equivalent Fluid Weight (pcf)
Free Cantilever	0.28271	33.9258
Restrained	0.44081	52.89685

GEOTECHNICAL DESIGN REPORT FOR RETAINING WALL No. 2181

State of California **Business, Transportation and Housing Agency**
DEPARTMENT OF TRANSPORTATION

M e m o r a n d u m

Flex your power!
Be energy efficient!

To: Howard Ng
Branch Chief
Bridge Design Branch 20

Attn.: Dawit Worku
Mohammad Muqtadir

Date: March 4, 2014

File: 07-LA-010-PM 37.2/42.4
1193U1
RW 2181

Project No.: 713000007

From: **DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
GEOTECHNICAL SERVICES
OFFICE OF GEOTECHNICAL DESIGN – SOUTH 1

Subject: Geotechnical Design Report for Retaining Wall No.2181

1 INTRODUCTION

This memorandum presents the geotechnical recommendations for the proposed Earth Retaining System (ERS), Retaining Wall 2181, on Interstate 10 freeway (I-10) Eastbound in the City of Pomona, Los Angeles County.

1.1 Project Description

The proposed project is to add an HOV lane in each direction on I-10 from City of Covina (PM 37.2) to State Routes 57, 71, and 210 Interchange in City of Pomona (PM 42.4).

1.2 Proposed Earth Retaining System

The proposed retaining wall consists of:

- Type I Retaining Wall (Standard)
  - Stations 80+92 to 83+72 RW LOL
- Type I Retaining Wall (Modified) with Piles
  - Stations 83+72 to 113+73.33 RW LOL
- Soil Nail Reinforced Slope
  - Stations 93+00 to 100+28 RW LOL
  - Stations 101+88 to 108+12 RW LOL

The information on the proposed retaining wall is summarized in Table 1.1 as presented below.

Table 1.1 Description of the Proposed Earth Retaining System

ERS ID No.	ERS Type	Begin			End			Approx. Length	Design Height [feet]	
		Station	Latitude	Longitude	Station	Latitude	Longitude	[feet]	Min	Max
2181	Type1 / Type1(Mod) Soil Nails	2180+92 "B" Line 80+92 RW LOL	Approx. 34.06378	Approx. -117.82616	2213+47.02 "B" Line 113+73.33 RW LOL	Approx. 34.06336	Approx. -117.81535	3281 along RW LOL	6	34

For this retaining wall, the MSE wall option has been considered by the design team, and geotechnical recommendations have been provided for the design by this office (dated July 13, 2011). However, the wall type needs to be changed to Caltrans Type 1 Retaining Wall due to the necessity of placing storm drainages behind and parallel the wall, which renders the MSE options unfavorable.

2 SCOPE OF WORK

The work performed for this report includes:

- Review the project plans and relevant information
- Perform subsurface exploration and retrieve soil and formation material specimens
- Assign and perform laboratory tests
- Evaluate site geology, subsurface conditions, and groundwater
- Perform engineering analysis and design
- Provide geotechnical recommendations and construction considerations

3 SITE EXPLORATION

Subsurface exploration and the laboratory tests performed to obtain the subsurface information for the retaining wall are described herein.

3.1 Subsurface Exploration

The subsurface exploration performed for this retaining wall includes:

- A total of thirty two Cone Penetration Tests (CPTs) were performed in May 2009 and in August 2013. Twenty six CPTs (CPT-09-201 to CPT-09-215, and CPT-09-217 to CPT-09-227) were advanced along the existing shoulder on the Eastbound I-10, and four CPTs (CPT-13-001 to CPT-13-004) were conducted along the existing shoulder on the I-10 Eastbound off-ramp to Kellogg Drive exit

- A total of eleven bore holes were drilled using rotary wash method in November and December, 2009 (8 holes) and in March 2010 (3 holes). Eight bore holes (R-09-231 to R-09-238) were drilled along the existing shoulder on the Eastbound of I-10, and three bore holes were drilled in the campus of California State Polytechnic University, Pomona

The locations, elevations, and the investigation depths of CPTs and boreholes are summarized in Table 3.1.

Table 3.1 List of CPTs and Bore Holes

ID	Station "B" Line	Offset (-L/+R)	Surface Elevation [feet]	Termination Elevation [feet]	Depth [feet]
CPT-09-201	2183+89.83	54.6	937.4	904.2	33.2
CPT-09-202	2185+38.70	54.2	928.7	886.5	42.2
CPT-09-203	2187+02.77	52.3	920.4	908.2	12.2
CPT-09-204	2187+19.34	52.9	919.5	908.9	10.7
CPT-09-205	2188+43.04	51.9	913.2	891.8	21.4
CPT-09-206	2188+55.94	51.5	912.6	888.9	23.7
CPT-09-207	2189+43.10	50.2	908.3	887.0	21.3
CPT-09-208	2189+58.87	50.8	907.5	889.4	18.2
CPT-09-209	2190+67.66	49.6	902.4	885.9	16.5
CPT-09-210	2190+81.90	49.4	901.7	883.1	18.6
CPT-09-211	2191+68.58	47.9	897.3	895.4	1.9
CPT-09-212	2191+80.47	48.2	896.7	856.8	39.9
CPT-09-213	2192+67.31	48.2	892.7	846.3	46.4
CPT-09-214	2192+86.69	48.0	891.9	846.4	45.4
CPT-09-215	2193+68.80	49.4	888.0	847.0	41.0
CPT-09-217	2195+65.11	49.9	878.9	805.5	73.4
CPT-09-218	2196+47.53	48.8	875.1	825.7	49.4
CPT-09-219	2197+37.00	48.3	870.8	786.1	84.7
CPT-09-220	2198+28.07	46.8	866.2	796.8	69.4
CPT-09-221	2199+09.75	48.3	862.1	821.3	40.8
CPT-09-222	2200+08.49	48.3	857.2	790.7	66.6
CPT-09-223	2201+24.17	48.0	851.5	808.6	43.0
CPT-09-224	2202+40.03	48.3	845.7	776.5	69.2
CPT-09-225	2203+57.99	48.8	839.3	773.0	66.3
CPT-09-226	2204+88.54	50.1	832.3	768.1	64.2
CPT-09-227	2206+37.27	53.7	824.5	770.5	54.0
R-09-231	2184+61.60	52.8	933.1	842.3	90.8
R-09-232	2187+79.05	48.9	916.6	833.4	83.2

R-09-233	2190+33.61	46.5	904.1	832.7	71.3
R-09-234	2195+37.81	49.2	880.2	810.4	69.8
R-09-235	2197+97.08	45.5	867.7	758.8	108.9
R-09-236	2201+37.14	45.4	850.9	744.2	106.7
R-09-237	2204+34.98	46.1	835.1	738.4	96.7
R-09-238	2207+69.23	61.2	818.3	736.8	81.5
R-10-201	2197+60.26	329.3	792.9	743.1	49.8
R-10-202	2206+58.81	202.8	768.6	717.1	51.5
R-10-203	2208+26.49	196.0	763.9	731.7	32.2
CPT-13-001	2208+85.15	70.0	812.2	759.2	53.0
CPT-13-002	2209+94.00	78.1	806.0	747	59.0
CPT-13-003	2210+97.63	88.3	800.0	744	56.0
CPT-13-004	2212+19.74	103.3	793.0	737	56.0

During drilling, Standard Penetration Tests (SPT) were performed at selected depths. The tests were performed in compliance with ASTM D 1586. Samples were obtained using Standard Penetration Test (SPT) sampler, Modified California Sampler, and Core Sampler. In addition, Bulk samples were also obtained.

A piezometer was installed at the bore hole R-09-235 to monitor groundwater table. The measured groundwater table is presented in Section 4.3.

Photo of some samples collected during the subsurface exploration are presented in Appendix C.

3.2 Laboratory Tests

Soil and formational material specimens retrieved from subsurface exploration were selected and assigned to laboratory tests.

Laboratory tests performed include Atterberg Limit Tests, Particle Size Analyses, Direct Shear Tests, Isotropically Consolidated Undrained Triaxial Compression Tests, Consolidation Tests, and Corrosion Tests. The tests were performed in compliance with applicable ASTM and AASHTO methods.

Laboratory test results are presented in Appendix B.

4 SITE CONDITIONS

4.1 Site Geology

For this report we reviewed The Geologic Map of the San Dimas and Ontario Quadrangles, Los Angeles and San Bernardino Counties, California, by Thomas W. Dibblee, Jr.,2002(Dibblee).

The proposed retaining wall site is along the south side of the east bound Interstate 10 (I-10) in San Dimas and Pomona, California. The pavement grade of I-10 reaches an elevation of approximately 1000 ft amsl, about a half mile east of the east bound Via Verde Street on ramp. From this point I-10 continues eastward down a grade along a south facing hill locally called "Kellogg Hill". The south facing slopes of Kellogg Hill are located along the north side of the highway. Eastward from the top of the grade, I-10 descends into the San Jose Wash, which is an area along the southeast edge of the San Jose Hills and forms the western extent of the Pomona Valley.

The main campus for the California Polytechnic University at Pomona (Calpoly) is located along the south side of I-10 until I-10 meets the interchange with California State Route 57.

Structural geology data such as bedding orientation and structural interpretation (folds and small scale faults) throughout the San Jose Hills are presented by Dibblee and other geologic maps. Based on this information and field reconnaissance we consider the sedimentary bedding (and any interbedded Volcanics) in the project area to be folded. Bedding orientations due to local folding may have amplitudes of approximately 500 to 1000 feet or less between limbs.

Within the area of the wall alignment, the closest known bedding orientation is located around RW LOL 87+16 Rt 271 feet, which is near the single family structure located across a small valley from the highway on the uphill portion of the Calpoly campus. The bedding orientation at this location is dipping nearly 15° from horizontal, in a favorable direction (with respect to the wall geometry and slope orientation) that is approximately 35° east of due north. No other recorded bedding orientation was identified from published information or from field reconnaissance within the wall alignment area. There does not appear to be any dependable outcrops where bedding information can be obtained.

The next closest known orientation is presented by Dibblee as planar structural geology data measured from layers of Glendora Volcanics. The location is approximately north of the north end of Kellogg Drive. According to Dibblee, the geologic formation at this location is dipping 22°, in an unfavorable direction (with respect to the wall geometry and slope orientation) of approximately 30° west of due south.

The applicability of either orientation to the interpretation of geological structure through the wall alignment is uncertain. Dibblee and other geologic maps show folded bedding approximately 3000 feet north of the highway along the project limits. The geologic information indicates that there is a likelihood of small scale folding along the wall alignment that will adversely affect the stability of the slope which I-10 is constructed along. We conservatively assume that bedding is dipping out of slope approximately 20° along this length of the retaining wall layout line.

Area A (Stations Approximately 81 to 93 RW LOL)

At the top of the grade, north facing rock cut slopes are located along the south side of the highway. The rock slopes are excavated in moderately hard to hard Topanga Sandstone. According to Dibblee, the Topanga formation that is exposed at this rock slope is light gray or yellowish brown, bedded, arkosic, and locally pebbly. The formation may include interbedded siltstone or clay shale. Site reconnaissance by our office has revealed that Glendora Volcanics are also present along this slope. The retaining wall begins in front of (i.e. north of) the east portion of these slopes. The beginning of the retaining wall marks the transition of I-10 from a "cut" highway overlying poorly indurated coarse sand and gravel sandstone (or soil derived from the slope excavation of this formation) to being partially underlain by clayey embankment fill and soft fine sedimentary formation.

Area B (Stations Approximately 93 to 105 RW LOL)

In this area, a prehistoric landslide has been remediated between 1958 and 1962. A buttress fill was constructed around 1962 along the north side of I-10, across from Calpoly and west of the eastbound Kellogg Drive off-ramp. I-10 is underlain by La Vida member in this area. The geologic formation is typically very soft, light brown claystone, which can be considered as soil when evaluating the material strength of the formation

This section of I-10 was constructed in 1952 and widened in 1960. The widening required infilling small drainage canyons and excavating a portion of the south side of Kellogg Hill. Before the presence of I-10, the 1937 topographic (Covina Quadrangle) map produced by the USGS shows the area is traversed by "Pomona Road". The Covina quadrangle shows Pomona road was originally at 1040 ft amsl at the saddle of Kellogg Hill.

Area C (Stations Approximately 105 to 113 RW LOL)

Toward the bottom of the grade, I-10 is underlain by quaternary alluvium composed of loosely to moderately consolidated clay, silt, sand, and gravel. Regional tectonic uplift to form the San Jose Hills has occurred by the San Jose Fault which is a shallowly north dipping thrust fault that runs southwest to northeast along the southern edge of the San Jose Hills. The San Jose Fault has been documented by several authors and as such the fault trace varies significantly at map scales of 1:24,000 or smaller.

4.2 Subsurface Soil and Rock Conditions

Area A (Stations Approximately 81 to 93 RW LOL)

Geomaterials that underlie the beginning of the retaining wall are characterized as coarse sand and gravel with boulders. The material is most likely derived from excavation of the north facing rock cut slopes directly to the west of this location. I-10 traverses drainage at LOL station 92 that appears to have been a natural canyon drainage before the initial widening of the highway in the 1950s.

Subsurface conditions through this length of the proposed retaining wall are typified in borings R-09-231, R-09-232, and R-09-233. Fill in this area varies from 10 to 20 feet in depth and consists of brown, medium dense, coarse to fine, clayey sand to brown, medium stiff, sandy clay. The fill is underlain by fine to coarse, soft, poorly indurated sandstone. The sandstone is part of the Topanga formation and is interbedded with coarse-grained, moderately soft, poorly indurated conglomerate. The Topanga Formation was encountered up to depths of approximately 70 feet. Below 70 feet below ground surface (bgs) Topanga sandstone is underlain by claystone, siltstone and shale that form the La Vida member of the Puente formation.

Area B (Stations Approximately 93 to 105 RW LOL)

I-10 overlies fine grained materials through this length of retaining wall, which was mapped by Dibblee as an ancient landslide. Caltrans remediated this area in the early 1960s by removing soil from the north side of the highway, installing a battery of dewatering wells and constructing a buttress fill.

Subsurface conditions through this length of retaining wall are typified in borings R-09-234, R-09-235, R-09-236, and R-09-237. Embankment fill is approximately 10 to 20 feet thick and consist of soft, brown, sandy clay to medium dense, brown fine clayey sand. Below 20 feet (bgs), we encountered the La Vida member of the Puente formation, which generally consists of interbedded shale, claystone, and siltstone. The sedimentary rock encountered was distinguished from fill by the presence of sedimentary bedding, which was generally dipping between 15 degrees and 30 degrees. The depth of the soft fine grained sedimentary formation extends to approximately 100 feet bgs. At depths greater than 100 feet we encountered moderately hard, fine to coarse gravel conglomerate. In R-09-235, the thickness of conglomerate was approximately 15 feet and was underlain by five foot thick basalt.

Area C (Station Approximately 105 to 113 RW LOL)

In this area I-10 transitions from the ancient landslide to a fill. The off ramp to Kellogg Drive from the eastbound I-10 overlies a fill which was constructed on quaternary alluvium.

Subsurface conditions through this length of the proposed retaining wall are typified in borings R-09-237 and R-09-238. Fill varies in depth from 10 feet to 20 feet and consists of brown, stiff sandy silt to brown, medium dense, clayey sand. At the top of Kellogg Drive off ramp, below a depth of 20 feet, we encountered soft La Vida member claystone and siltstone interbedded with conglomerate.

4.3 Groundwater

A piezometer was installed at R-09-235 to monitor groundwater table upon completion of the drilling on November 4, 2009. Groundwater table was measured by both: (1) intermittent manual reading and (2) continual levelogger reading.

The manual reading of groundwater table are summarized in Table 4.1 and the levelogger readings are presented in Figure 4.1 in Appendix A.

Table 4.1 Measured Groundwater

Bore hole No.	Ground Surface Elevation	Groundwater Table		Date Measured
		Depth Below Ground Surface	Elevation	
	[feet]	[feet]	[feet]	
R-09-235	868.8	39.7	829.1	4/6/2010
		40.8	828.0	6/8/2010
		50.6	818.2	9/14/2010
		36.6	832.3	1/6/2011
		36.0	832.8	4/6/2011
		52.8	816.0	11/15/2011
		50.6	818.2	5/30/2012
		60.2	808.6	1/7/2013

A groundwater table depth of 38 feet was assumed for design after reviewing both manual reading and levelogger reading.

4.4 Ground Motion

The Peak Ground Acceleration (PGA) at the proposed wall location was estimated using the Caltrans ARS online (v.2.2.06).

Upper 30m shear wave velocities (Vs30) are estimated based on SPT N values recorded at bore holes R-09-231 to R-09-238. The values are presented in Table 4.2

Table 4.2 Estimated Upper 30m Shear Wave Velocities

Borehole ID	Vs30 [m/sec]
R-09-231	354
R-09-232	421
R-09-233	354
R-09-234	261
R-09-235	336
R-09-236	297
R-09-237	277
R-09-238	297

Due to (1) various subsurface conditions along the wall as presented in Section 4.2 and (2) the substantial length (more than 3000 feet) of the wall, two representative locations, instead of one, have been selected for the peak ground acceleration (PGA) calculation:

- Location 1: representing the areas explored by bore holes R-09-231 - R-09-233 (i.e., Area A). For this location, an upper 30m shear wave velocity has been calculated to be 376 m/s (i.e., average Vs30m of R-09-231 - R-09-233)
- Location 2: representing the areas explored by bore holes R-09-234 - R-09-238 (i.e., Area B and C). For this location, an upper 30m shear wave velocity has been calculated to be 294 m/s (i.e., average Vs30m of R-09-234 - R-09-238)

The probabilistic seismic hazard analysis (PSHA) governs at the spectral period T=0.01 sec (i.e., PGA) at both locations. The calculated PGAs for ‘Location 1’ and ‘Location 2’ are 0.68 and 0.678, respectively. Accordingly, a PGA of 0.68 g is recommended as the design peak ground acceleration (PGA) for the entire wall.

5 ANALYSIS AND DESIGN

To analyze and design the wall, ten representative cross-sections along the wall have been selected. The information on these ten cross-sections is presented in Table 5.1.

Table 5-1 Information on the Ten Representative Cross-Sections

X-section	Station - "B" Line	Area	Associated Bore holes/CPTs
1	2186+00	A	CPT-09-202
2	2190+25	A	R-09-233
3	2192+25	A	CPT-09-213 & 214
4	2195+25	B	R-09-234, CPT-09-217
5	2197+75	B	R-09-235
6	2201+25	B	R-09-236
7	2204+25	B	R-09-237
8	2205+50	C	CPT-09-226 & 227, R-09-237 & 238
9	2207+50	C	R-09-238, R-10-203
10	2208+75	C	CPT-13-001

The representative cross sections with generalized subsurface models are presented in Figure 5.1 – 5.10 in Appendix A.

It is noted that, as discussed in Section 4.1, a bedding angle of approximately 20° was used in the analyses and designs.

5.1 Material Properties

The results of the subsurface exploration and laboratory tests were used to evaluate the material properties of the project site.

Effective shear strength envelopes of the Claystone/Siltstone at both the fully softened condition and the residual condition are presented in Figure 5.11 in Appendix A. The results of direct shear tests and isotropically consolidated undrained triaxial tests were used to develop the fully softened shear strength envelope. Residual shear strength envelope of the Claystone/Siltstone was back-calculated assuming existing factor of safety at Station 2195+25 is equal to 1.3.

Area A (Station Approximately 81 to 93 RW LOL)

For Stations 80+92 to 83+72 RW LOL where Type I Retaining Wall – Standard was proposed, CPT data shows predominantly sandy materials from the ground surface to the depth of approximately 8 feet. From about 8 to 20 feet bgs predominantly silty materials were encountered. From approximately 20 to 34 feet bgs predominantly sandy materials were encountered. The interpreted engineering properties of these materials are:

Table 5.2 (a) Material Properties (Stations 80+92 to 83+72 RW LOL)

Approximate Depth Below Ground Surface	Unit Weight	Shear Strength Parameters
[feet]	[pcf]	[degree]
0 - 8	120	ϕ=28
8 - 20	120	ϕ=30
20 -34	120	ϕ=34

For Stations 83+72 to ~ 93 where Type I Retaining Wall – Modified with Piles is proposed, as shown in Figures 5.1 – 5.3 in Appendix A, the subsurface profile consists of mainly three materials: (1) Embankment Backfill, (2) Weathered Sandstone, and (3) Sandstone. Table 5.2 (b) shows the interpreted engineering properties of these materials at three cross-sections.

Table 5.2 (b) Material Properties (Area A)

Cross section	2186+00			2190+25			2192+25		
Material	Unit Weight	Shear Strength Parameters		Unit Weight	Shear Strength Parameters		Unit Weight	Shear Strength Parameters	
	[pcf]	Effective	Undrained	[pcf]	Effective	Undrained	[pcf]	Effective	Undrained
Embankment Backfill	120	ϕ=24 c=270 psf	Su=2200 psf	120	ϕ=28 c=200 psf	Su=1900 psf	120	ϕ=21 c=270 psf	Su=2400 psf
Weathered Sandstone	125	ϕ=34	ϕ=34	125	ϕ=34	ϕ=34	125	N/A	N/A
Sandstone	125	ϕ=45	Su=8000 psf	125	ϕ=45	Su=8000 psf	125	ϕ'=45	Su=8000 psf

Area B (Station Approximately 93 to 105 RW LOL)

As shown in Figures 5.4 - 5.7, the subsurface profile in the Area B consists of mainly two or three following materials: (1) Embankment Backfill, (2) Claystone/Siltstone, and (3) Sandstone/Conglomerate. In addition, the top soil layer was added to model the top portion of the historical landslide areas currently occupied by avocado trees. Table 5.2 (c) shows the material properties used for four cross-sections in Area B

Table 5.2 (c) Material Properties (Area B)

Cross section	2195+25			2197+75		
Material	Unit Weight	Shear Strength Parameters		Unit Weight	Shear Strength Parameters	
	[pcf]	Effective	Undrained	[pcf]	Effective	Undrained
Embankment Backfill	120	ϕ=28	N/A	120	ϕ=19 c=250 psf	N/A
Claystone/ Siltstone	120	(1)	Su=2200 psf	125	(1)	Su=2200 psf
Sandstone/ Conglomerate	125	ϕ=45	Su=8000 psf	125	ϕ=45	Su=8000 psf
Top Soil	115	ϕ=28	N/A	115	ϕ=28	N/A

Cross section	2201+25			2204+25		
Material	Unit Weight	Shear Strength Parameters		Unit Weight	Shear Strength Parameters	
	[pcf]	Effective	Undrained	[pcf]	Effective	Undrained
Embankment Backfill	120	ϕ=32	N/A	120	ϕ=19 c=250 psf	N/A
Claystone/ Siltstone	125	(1)	Su=2200 psf	125	(1)	Su=2200 psf
Top Soil	115	ϕ=28	N/A	115	ϕ=28	N/A

Note: (1) See Figure 5.11 (b) Residual Condition

Area C (Station Approximately 105 to 113 RW LOL)

As shown in Figures 5.8 – 5.10, the subsurface profile in the Area C consists of mainly two or three of the following materials: (1) Embankment Backfill, (2) Claystone/Siltstone, and (3) Sandstone/Conglomerate.

Table 5.2 (d) Material Properties (Area C)

Cross section	2205+50			2207+50			2208+75		
Material	Unit Weight	Shear Strength Parameters		Unit Weight	Shear Strength Parameters		Unit Weight	Shear Strength Parameters	
	[pcf]	Effective	Undrained	[pcf]	Effective	Undrained	[pcf]	Effective	Undrained
Embankment Backfill	120	ϕ=24 c=270 psf	N/A	120	ϕ=28 c=50 psf	N/A	120	ϕ=29	N/A
Claystone/ Siltstone	120	(1)	Su=2200 psf	125	(1)	Su=2200 psf	125	(1)	Su=2200 psf
Sandstone/ Conglomerate	N/A[(2)]	N/A[(2)]	N/A[(2)]	125	ϕ=45	Su=8000 psf	(3)		

Notes: (1) See Figure 5.11 (a) Fully Softened Condition
(2) Sandstone/Conglomerate was not modeled
(3) CPT-13-001 cannot confirm the existence of Sandstone/Conglomerate

The engineering properties assumed for structure backfill material and concrete are:

Table 5.2 (e) Material Properties

Material	Unit Weight [pcf]	Shear Strength Parameters
Structure Backfill	120	ϕ=34
Concrete	150	3600 psi

In addition, the following engineering properties were estimated for the embankment backfill materials for earth pressure calculation purpose.

Table 5.2 (f) Material Properties of Embankment Backfill – Earth Pressure Calculation Only [(1)]

Station RW LOL			Unit Weight [pcf]	Shear Strength Parameters	
				ϕ [degree]	c [psf]
83+72	to	84+20	120	32	0
84+20	to	84+68	120	32	0
84+68	to	86+92	120	24	270
86+92	to	89+72	120	34	0
89+72	to	90+44	120	28	200
90+44	to	91+10	120	32	0
91+10	to	93+00	120	21	270
108+12	to	113+73	120	29	0

Note: (1) A unit weight of 120 [pcf] and a friction angle of 34 [degree] were assumed for the areas where the soil nails were proposed.

5.2 Bearing Capacity of Standard Retaining Wall Type I (Station 80+92 to 83+72 RW LOL)

Bearing capacities for Standard Type I RW proposed between Station 80+92 and 83+72 were calculated using (1) the interpreted engineering properties presented in Section 5.1 and (2) the Vesic method. The revised standard plan RSP B3-1A updated April 20, 2012 was used for the analysis. The estimated bearing capacities for the footing are all greater than the imposed bearing stresses.

5.3 Modified Type I Retaining Wall (Station 83+72 to 113.73+33 RW LOL)

To (1) reduce settlements, (2) increase bearing capacity, and (3) increase additional stabilizing force to the slope, pile foundation is recommended between Stations 83+72 and 113+73.33 RW LOL

The geotechnical recommendations for pile foundation design are presented in Section 6.

5.4 Soil Nails (Station 93+00 to 108+12 RW LOL)

Slope between Stations 93+00 and 100+13, and Slope between Stations 101+88 and 108+12 require additional reinforcement behind the retaining wall to provide additional stabilizing force to the slope.

The recommended design for the soil nails are presented in Section 6.

5.5 Slope Stability

Limit equilibrium analyses were performed at the representative cross-sections to evaluate the global stabilities of:

- Existing slope
- Proposed wall with slope

It should be noted that the slope north of I-10 was not included in the global slope stability analyses performed in this study.

The computer program SLOPE/W with the Morgenstern-Price method was used in these analyses. A surcharge of 240 psf was applied on the highway to model traffic loads.

The criteria adopted for slope stability analysis in this report are:

- Static Analysis
  - $FS_{\text{Slope with Proposed ERS}} \geq FS_{\text{Existing Slope}}$ or $FS_{\text{Slope with Proposed ERS}} \geq 1.5$
- Seismic Analysis
  - $FS_{\text{Slope with Proposed ERS}} \geq 1.1$
    - $k_h = 0.227g$ (1/3 of the estimated PGA in Section 4.4)

The calculated Factor of Safeties (FS) at the ten cross-sections are summarized in Table 5.3

Table 5.3 Results of Slope Stability Analysis (Factor of Safety)

X-Station "B" Line	Static			Seismic	
	$FS_{\text{Existing Slope}}$	$FS_{\text{Slope with Proposed ERS}}$	Stability Criteria	$FS_{\text{Slope with Proposed ERS}}$	Stability Criteria
2186+00	1.2	1.4	Satisfied	1.5	Satisfied
2190+25	1.7	1.8	Satisfied	1.2	Satisfied
2192+25	1.4	1.4	Satisfied	1.7	Satisfied
2195+25	1.3	1.4	Satisfied	1.1	Satisfied
2197+75	1.5	1.5	Satisfied	1.1	Satisfied
2201+25	1.9	1.9	Satisfied	1.2	Satisfied
2204+25	1.4	1.5	Satisfied	1.1	Satisfied
2205+50	1.1	1.1	Satisfied	1.2	Satisfied
2207+50	1.0	1.2	Satisfied	1.5	Satisfied
2208+75	1.2	1.3	Satisfied	1.1	Satisfied

5.6 Lateral Capacity of Piles

Pile lateral capacity analyses were performed on the proposed HP10 x 42 steel piles presented in Section 6 at the ten representative cross-sections. The computer program L-Pile was used in the analyses.

The lateral pile design loads and section properties used for the analyses were provided by the Structure Design and are presented in section 5.8.1.

The results of the lateral pile capacity analyses indicate that the proposed HP10x42 steel pile meets the pile lateral capacity criteria.

5.7 Settlement of Piles

Settlement analyses were performed on the proposed HP10 x 42 steel piles at the locations of the ten representative cross-sections. The elastic compression of the piles and the primary consolidation settlement were estimated in these analyses.

The results of the laboratory tests and the in-situ tests (i.e., CPTs and SPTs) together with structure loads presented in Section 5.8.2 were used in the analyses.

The estimated settlement at the top of the piles is in the order of one to two inches.

5.8 Structural Design Information

5.8.1 Lateral Capacity of Piles

The pile capacity criteria provided by Structure Design and the sectional properties of the proposed pile are presented in Table 5.4 (a) and (b), respectively.

Table 5.4 (a) Lateral Pile Design Loads provided by Structure Design

Service Limit State(1) [kips]	Strength Limit State [kips]	Extreme Event Limit State [kips]	Resistance factor (ϕ) for Strength Limit State	Resistance factor (ϕ) for Extreme Event Limit State
13	29	40	1.0	1.0

Note: (1) Pile displacement associated with Service Limit State is 0.5 inches

Table 5.4 (b) Sectional Properties of the Proposed Pile Provided by Structure Design

Pile Type	Yield Strength [ksi]	Plastic Modulus [in^3]	Nominal Moment Capacity [kips-in]	Moment Capacity(1) [kips-in]
HP 10 x 42	50	48.3	2415	2415

Note: (1) Resistance factor for strength and extreme event limit is 1.0

5.8.2 Structural Load

The structural loads on the proposed retaining wall with pile sections provided by Structure Design are shown in Table 5.5.

Table 5.5 Structural Loads – Type I RW Modified with Piles

Design Wall Height [ft]	W [ft]	B [ft]	C [ft]	F [ft]	Vertical Load/ft [kips/ft]
6	8.00	6.00	2.00	2.00	7.80
8	8.00	6.00	2.00	2.00	9.31
10	8.75	6.75	2.00	2.00	12.00
12	8.75	6.00	2.75	2.00	12.73
14	9.25	6.25	3.00	2.17	15.12
16	10.00	6.67	3.33	2.17	17.85
18	12.00	8.42	3.58	2.17	24.16
20	13.00	9.25	3.75	2.17	28.67
22	13.25	9.25	4.00	2.25	31.26
24	14.75	10.33	4.42	2.75	38.47
26	15.75	11.00	4.75	2.92	44.04
28	17.50	12.42	5.08	3.17	53.14
30	19.50	13.92	5.58	3.50	63.75
32	20.50	14.42	6.08	3.75	70.53
34	24.00	17.58	6.42	4.00	90.16

6 RECOMMENDATIONS

6.1 Pile Foundation (Stations 83+72 to 113+73.33 RW LOL)

The recommendations for pile foundation are as follows:

- Pile Type: HP10x42 steel pile
    - Yield Strength (Fy): 50 ksi
- Construction Method: Driven Pile
- Design Capacity
    - Compression: 90 kip (service state) / 180 kip (nominal axial resistance)

The recommended pile tip elevations are presented in Table 6.1(a) and (b).

Table 6.1 (a) Recommended Pile Tip Elevations (Stations 83+72 to 95+32)

Station RW LOL	Height of Wall [feet]	Length of Wall [feet]	Bottom of Footing Elevation [feet]	Row	Vertical/Battered	Pile Tip Elevation [feet]
83+72 to 83+80	14	8	925.45	1	B	875.5
				2	V	883.7
83+80 to 83+96	16	16	921.53	1	B	874.6
				2	V	882.9
83+96 to 84+04	18	8	918.98	1	B	874.3
				2	B	875.6
				3	V	882.6
84+04 to 84+12	20	8	916.23	1	B	874.1
				2	B	875.3
				3	V	882.2
84+12 to 84+20	24	8	912.69	1	B	873.6
				2	B	874.8
				3	V	882.1
84+20 to 84+36	26	16	909.1	1	B	872.8
				2	B	874.1
				3	V	881.3
84+36 to 84+52	28	16	905.44	1	B	871.1
				2	B	872.4
				3	V	878.0
				4	V	879.8
84+52 to 84+68	30	16	901.44	1	B	868.4
				2	B	869.7
				3	B	870.9
				4	V	875.9
				5	V	877.4
84+68 to 84+84	34	16	898.00	1	B	865.7
				2	B	867.0
				3	B	868.2
				4	V	873.5
				5	V	875.2

Table 6.1 (a) Recommended Pile Tip Elevations (Stations 83+72 to 95+32) (continues)

Station RW LOL	Height of Wall [feet]	Length of Wall [feet]	Bottom of Footing Elevation [feet]	Row	Vertical/Battered	Pile Tip Elevation [feet]
84+84 to 84+96	34	12	898.00	1	B	863.5
				2	B	864.7
				3	B	866.0
				4	V	871.5
				5	V	873.2
84+96 to 85+08	34	12	898.00	1	B	861.1
				2	B	862.3
				3	B	863.6
				4	V	869.4
				5	V	871.1
85+08 to 85+24	34	16	895.45	1	B	858.6
				2	B	859.9
				3	B	861.1
				4	V	867.1
				5	V	869.1
85+24 to 85+56	34	32	893.8	1	B	858.9
				2	B	860.1
				3	B	861.4
				4	V	867.1
				5	V	869.1
85+56 to 85+88	34	32	891.12	1	B	859.2
				2	B	860.5
				3	B	861.7
				4	V	867.1
				5	V	869.1
85+88 to 86+12	34	24	889.38	1	B	862.0
				2	B	863.2
				3	B	864.5
				4	V	869.3
				5	V	871.3

Table 6.1 (a) Recommended Pile Tip Elevations (Stations 83+72 to 95+32) (continues)

Station RW LOL	Height of Wall [feet]	Length of Wall [feet]	Bottom of Footing Elevation [feet]	Row	Vertical/Battered	Pile Tip Elevation [feet]
86+12 to 86+36	34	24	888.13	1	B	864.0
				2	B	865.2
				3	B	866.5
				4	V	870.9
				5	V	872.9
86+36 to 86+60	34	24	888.13	1	B	865.9
				2	B	867.2
				3	B	868.4
				4	V	872.6
				5	V	872.6
86+60 to 86+92	34	32	888.13	1	B	867.8
				2	B	869.1
				3	B	870.3
				4	V	873.4
				5	V	873.4
86+92 to 87+32	30	40	888.63	1	B	869.9
				2	B	871.1
				3	B	872.4
				4	V	873.6
				5	V	873.6
87+32 to 87+56	28	24	888.97	1	B	870.4
				2	B	871.7
				3	V	874.0
				4	V	874.0
87+56 to 87+88	28	32	886.98	1	B	868.4
				2	B	869.7
				3	V	872.0
				4	V	872.0
87+88 to 88+12	28	24	885.63	1	B	867.1
				2	B	868.3
				3	V	870.6
				4	V	870.6

Table 6.1 (a) Recommended Pile Tip Elevations (Stations 83+72 to 95+32) (continues)

Station RW LOL	Height of Wall [feet]	Length of Wall [feet]	Bottom of Footing Elevation [feet]	Row	Vertical/Battered	Pile Tip Elevation [feet]
88+12 to 88+28	28	16	884.5	1	B	865.9
				2	B	867.2
				3	V	869.5
				4	V	869.5
88+28 to 88+60	28	32	882.58	1	B	864.0
				2	B	865.3
				3	V	867.6
				4	V	867.6
88+60 to 89+00	28	40	880.22	1	B	861.7
				2	B	862.9
				3	V	865.2
				4	V	865.2
89+00 to 89+40	28	40	878.64	1	B	860.1
				2	B	861.3
				3	V	863.6
				4	V	863.6
89+40 to 89+56	26	16	878.72	1	B	855.5
				2	B	856.7
				3	V	862.4
89+56 to 89+72	26	16	878.72	1	B	852.7
				2	B	853.9
				3	V	859.9
89+72 to 89+84	24	12	878.64	1	B	850.6
				2	B	851.9
				3	V	857.8
89+84 to 89+96	24	12	878.64	1	B	848.5
				2	B	849.7
				3	V	855.9
89+96 to 90+16	24	20	877.63	1	B	848.6
				2	B	849.9
				3	V	855.9

Table 6.1 (a) Recommended Pile Tip Elevations (Stations 83+72 to 95+32) (continues)

Station RW LOL	Height of Wall [feet]	Length of Wall [feet]	Bottom of Footing Elevation [feet]	Row	Vertical/Battered	Pile Tip Elevation [feet]
90+16 to 90+28	24	12	877.63	1	B	847.1
				2	B	848.4
				3	V	854.6
90+28 to 90+44	24	16	877.63	1	B	845.2
				2	B	846.4
				3	V	852.9
90+44 to 90+60	26	16	873.46	1	B	843.8
				2	B	845.1
				3	V	851.5
90+60 to 90+76	26	16	873.46	1	B	841.9
				2	B	843.1
				3	V	849.8
90+76 to 90+92	26	16	873.46	1	B	840.0
				2	B	841.2
				3	V	848.1
90+92 to 91+08	28	16	869.21	1	B	838.5
				2	B	839.7
				3	V	844.9
				4	V	846.7
91+08 to 91+24	28	16	869.21	1	B	836.5
				2	B	837.8
				3	V	843.2
				4	V	845.0
91+24 to 91+40	28	16	869.21	1	B	834.6
				2	B	835.8
				3	V	841.5
				4	V	843.3
91+40 to 91+56	28	16	869.21	1	B	832.7
				2	B	833.9
				3	V	839.8
				4	V	841.6

Table 6.1 (a) Recommended Pile Tip Elevations (Stations 83+72 to 95+32) (continues)

Station RW LOL	Height of Wall [feet]	Length of Wall [feet]	Bottom of Footing Elevation [feet]	Row	Vertical/Battered	Pile Tip Elevation [feet]
91+56 to 91+72	28	16	869.21	1	B	830.7
				2	B	832.0
				3	V	838.1
				4	V	839.9
91+72 to 91+88	28	16	866.96	1	B	829.0
				2	B	830.2
				3	V	836.3
				4	V	838.1
91+88 to 92+04	28	16	866.96	1	B	826.8
				2	B	828.1
				3	V	834.4
				4	V	836.2
92+04 to 92+20	28	16	866.96	1	B	824.8
				2	B	826.0
				3	V	832.6
				4	V	834.4
92+20 to 92+36	28	16	866.96	1	B	822.7
				2	B	824.0
				3	V	830.8
				4	V	832.6
92+36 to 92+52	28	16	866.96	1	B	820.7
				2	B	821.9
				3	V	829.0
				4	V	830.8
92+52 to 92+68	28	16	866.96	1	B	818.6
				2	B	819.9
				3	V	827.2
				4	V	829.0
92+68 to 92+84	28	16	862.92	1	B	820.1
				2	B	821.3
				3	V	828.0
				4	V	829.8

Table 6.1 (a) Recommended Pile Tip Elevations (Stations 83+72 to 95+32) (continues)

Station RW LOL	Height of Wall [feet]	Length of Wall [feet]	Bottom of Footing Elevation [feet]	Row	Vertical/Battered	Pile Tip Elevation [feet]
92+84 to 93+00	28	16	862.92	1	B	818.3
				2	B	819.5
				3	V	826.4
				4	V	828.2
93+00 to 93+16	28	16	862.92	1	B	816.5
				2	B	817.7
				3	V	824.8
				4	V	826.6
93+16 to 93+32	28	16	859.98	1	B	815.0
				2	B	816.3
				3	V	823.2
				4	V	825.0
93+32 to 93+44	28	12	859.98	1	B	813.7
				2	B	814.9
				3	V	822.0
				4	V	823.8
93+44 to 93+56	28	12	859.98	1	B	812.3
				2	B	813.6
				3	V	820.8
				4	V	822.6
93+56 to 93+72	30	16.0	855.9	1	B	810.9
				2	B	812.1
				3	B	813.3
				4	V	819.8
				5	V	821.3
93+72 to 93+88	30	16	855.9	1	B	809.0
				2	B	810.3
				3	B	811.5
				4	V	818.2
				5	V	819.7

Table 6.1 (a) Recommended Pile Tip Elevations (Stations 83+72 to 95+32) (continues)

Station RW LOL	Height of Wall [feet]	Length of Wall [feet]	Bottom of Footing Elevation [feet]	Row	Vertical/Battered	Pile Tip Elevation [feet]
93+88 to 94+00	30	12	855.9	1	B	807.7
				2	B	808.9
				3	B	810.2
				4	V	817.0
				5	V	818.5
94+00 to 94+12	30	12	855.9	1	B	806.4
				2	B	807.7
				3	B	808.9
				4	V	815.9
				5	V	817.4
94+12 to 94+28	32	16.0	851.6	1	B	805.0
				2	B	806.2
				3	B	807.5
				4	V	814.5
				5	V	816.2
94+28 to 94+40	32	12	851.6	1	B	803.6
				2	B	804.9
				3	B	806.1
				4	V	813.3
				5	V	815.0
94+40 to 94+52	32	12	851.6	1	B	802.2
				2	B	803.5
				3	B	804.7
				4	V	812.1
				5	V	813.8
94+52 to 94+76	30	24.0	851.9	1	B	799.7
				2	B	800.9
				3	B	802.2
				4	V	809.5
				5	V	811.0

Table 6.1 (a) Recommended Pile Tip Elevations (Stations 83+72 to 95+32) (continues)

Station RW LOL	Height of Wall [feet]	Length of Wall [feet]	Bottom of Footing Elevation [feet]	Row	Vertical/Battered	Pile Tip Elevation [feet]
94+76 to 94+92	30	16.0	850.1	1	B	798.1
				2	B	799.4
				3	B	800.6
				4	V	807.9
				5	V	809.4
94+92 to 95+08	30	16	850.1	1	B	796.3
				2	B	797.5
				3	B	798.8
				4	V	806.3
				5	V	807.8
95+08 to 95+32	30	24	850.1	1	B	793.6
				2	B	794.8
				3	B	796.0
				4	V	803.9
				5	V	805.4

Table 6.1 (b) Recommended Pile Tip Elevations (Stations 95+32 to 113+73.33)

Station RW LOL			Height of Wall [feet]	Length of Wall [feet]	Bottom of Footing Elevation [feet]	Pile Tip Elevation [feet]
95+32	to	95+72	28	40	850.42	801.4
95+72	to	96+20	24	48	852.55	806.1
96+20	to	96+68	22	48	853.05	807.1
96+68	to	97+00	20	32	853.13	808.1
97+00	to	97+24	18	24	853.13	809.1
97+24	to	97+72	18	48	851.3	807.3
97+72	to	98+12	18	40	849.5	805.5
98+12	to	98+60	18	48	846.87	802.9
98+60	to	98+92	20	32	843.93	798.9
98+92	to	99+24	18	32	843.93	799.9
99+24	to	99+48	16	24	843.94	800.4
99+48	to	99+88	16	40	842.09	798.6
99+88	to	100+28	16	40	841.07	797.6
100+28	to	100+44	14	16	839.42	796.4
100+44	to	101+00	14	56	839.42	796.4
101+00	to	101+40	12	40	839.58	796.6
101+40	to	101+88	14	48	835.62	792.6
101+88	to	102+20	16	32	832.04	788.5
102+20	to	102+52	18	32	828.21	784.2
102+52	to	102+84	20	32	824.28	779.3
102+84	to	103+08	22	24	821.04	775.0
103+08	to	103+32	24	24	817.39	770.9
103+32	to	103+56	26	24	813.95	766.5
103+56	to	103+72	26	16	811.86	764.4
103+72	to	103+88	30	16	807.27	757.8
103+88	to	104+04	32	16	804.19	753.2
104+04	to	104+36	30	32	804.44	754.9
104+36	to	104+68	30	32	803.44	753.9
104+68	to	105+16	30	48	801.08	751.6

Table 6.1 (b) Recommended Pile Tip Elevations (Stations 95+32 to 113+73.33) (continues)

Station RW LOL			Height of Wall [feet]	Length of Wall [feet]	Bottom of Footing Elevation [feet]	Pile Tip Elevation [feet]
105+16	to	105+56	28	40	801.42	752.4
105+56	to	105+96	30	40	797.53	748.0
105+96	to	106+20	28	24	797.87	748.9
106+20	to	106+68	28	48	795.63	746.6
106+68	to	107+16	26	48	795.88	748.4
107+16	to	107+48	24	32	796.05	749.6
107+48	to	107+80	22	32	796.55	750.6
107+80	to	108+12	20	32	796.62	751.6
108+12	to	108+60	16	48	798.85	755.4
108+60	to	108+84	14	24	798.85	755.4
108+84	to	108+92	16	8	794.85	751.4
108+92	to	109+08	20	16	790.83	745.8
109+08	to	109+16	20	8	790.83	745.8
109+16	to	109+40	16	24	794.83	751.3
109+40	to	109+80	12	40	795	752.0
109+80	to	110+12	12	32	793.52	750.5
110+12	to	110+68	12	56	790.78	747.8
110+68	to	111+00	12	32	787.56	744.6
111+00	to	111+40	10	40	787.56	744.6
111+40	to	111+88	10	48	785.72	742.7
111+88	to	112+28	10	40	782.9	739.9
112+28	to	112+52	8	24	782.9	739.9
112+52	to	112+76	6	24	782.9	739.9
112+76	to	113+08	6	32	781.47	738.5
113+08	to	113+40	6	32	780.23	737.2
113+40	to	113+73.33	6	33.33	778.32	735.3

6.2 Soil Nails

The design recommendations for soil nails are:

- Nail Bar Size: # 11 Bar
- Nail Bar Yield Strength (Fy): 75 ksi
- Nail Length: 60 feet except Row 5 and Row 6 between Stations 93+00 and 93+40 RW LOL
    - Length of soil nail is 50 feet for Row 5 and Row 6 between Stations 93+00 and 93+40 RW LOL
- Pullout Resistance
    - Zone 1: 2630 lb/ft (Stations 93+00 to 100+28 RW LOL)
    - Zone 2: 2630 lb/ft (Stations 101+88 to 104+68 RW LOL)
    - Zone 3: 3283 lb/ft (Stations 104+68 to 108+12 RW LOL)
- Nails inclination angle: 15 degrees measured from horizontal
- Place soil nails in rectangular pattern
- Soil nail length should be uniform throughout each wall zone
- The first row of the nails should be placed no more than three feet below the finished grade
- Place the bottom row of soil nails no more than four feet above the excavated grade. At locations where the locations of the bottom row of soil nails need to be adjusted to accommodate the above requirement, place the bottom row of soil nails four feet below the soil nails above
- Proof test nails (8% of the total number of soil nails) need to be shown on the plan
- To avoid conflict with underground utilities, soil nail inclination can be adjusted to maintain a minimum clearance of six inches between soil nails and utilities, and adjacent soil nails. The maximum allowable rotation of soil nail alignment is 10 degrees both horizontally and vertically.

The information on the recommended soil nail design is presented in Table 6.2.

Table 6.2 Information on the Soil Nails (Station 93+00 to 108+12 RW LOL)

Wall Zone	Station [RW LOL]			Distance [ft]	Rows	Horizontal Spacing [ft]	Vertical Spacing [ft]	Nail Length [ft]	Upper Elevation [ft]	Lower Elevation [ft]
1	93+00	to	95+72	272	6	4	5.5	60 (1)	Top of Wall Line	Bottom of Wall Line
	95+72	to	96+20	48	5	4	5.5	60		
	96+20	to	97+00	80	4	4	5.5	60		
	97+00	to	99+24	224	4	5	5.5	60		
	99+24	to	100+28	104	4	5	5.5	60		
2	101+88	to	102+20	32	3	5	5.5	60	Top of Wall Line	Bottom of Wall Line
	102+20	to	103+08	88	4	5	5.5	60		
	103+08	to	103+72	64	5	5	5.5	60		
	103+72	to	104+36	64	6	5	5.5	60		
	104+36	to	104+68	32	6	4	5.5	60		
3	104+68	to	106+68	200	6	4	5.5	60	Top of Wall Line	Bottom of Wall Line
	106+68	to	107+32	64	5	4	5.5	60		
	107+32	to	107+48	16	5	4	5.5	60		
	107+48	to	107+56	8	5	4	5.5	60		
	107+56	to	107+80	24	4	4	5.5	60		
	107+80	to	108+12	32	4	4	5.5	60		

Note: (1) Length of soil nail is 50 feet for Row 5 and Row 6 between 93+00 and 93+40.

6.3 Corrosion

The results of corrosion tests performed on the samples obtained from drilling indicate 'non-corrosive' to foundation elements as presented in Table 6.3.

Table 6.3 Corrosion Test Results

Borehole No.	Minimum Resistivity [ohm-cm]	pH	Chloride Content [ppm]	Surfate Content [ppm]
R-09-231 R-09-232 R-09-233	1475	6	17	324
R-09-234 R-09-235 R-09-236 R-09-237 R-09-238	623	6	3	350

Note: For Structural Elements, the Department considers a site corrosive if one or more of the following conditions exist: pH is 5.5 or less, chloride concentration is 500 ppm or greater, sulfate concentration is 2000 ppm or greater. Resistivity is not considered for Structural Elements.

6.4 Structural Discontinuity

To minimize potential differential settlements,

- Provide structural discontinuity at the transition between Type I RW Standard and Type I RW Modified with Piles
- Provide structural discontinuities at each expansion joint location

7 CONSTRUCTION CONSIDERATIONS

7.1 Notes for Specification Development

SS Section 2 Bidding

Section 2-1.06B Supplement Project Information

- Preserved specimens from the subsurface exploration are available for viewing at the Transportation Laboratory.

SS Section 19 Earthwork

Section 19-3.01A (3)(b) Soil Nail Wall Zones

The wall zones for the soil nail wall at RW2181 are shown in the following table:

Wall Zone	Station RW LOL			Upper Elevation [ft]	Lower Elevation [ft]
1	93+00	to	100+28	Top of Wall Line	Bottom of Wall Line
2	101+88	to	104+68	Top of Wall Line	Bottom of Wall Line
3	104+68	to	108+12	Top of Wall Line	Bottom of Wall Line

Section 19-3.03B (1) Surface or Groundwater is expected during Structure Excavation

- Fluctuating groundwater elevation and seasonal rainfall may result in groundwater to be encountered in footing excavations. Dewatering system may be required.

SS Section 46-3 Soil Nails

Section 46-3.01D(2)(b)(iii) Two percent of Total Number of Production Soil Nails

Wall Zone	Station RW LOL			Additional Proof Test Soil nails
1	93+00	to	100+28	16
2	101+88	to	104+68	6
3	104+68	to	108+12	9

Section 46-3.03A Geotechnical Issues during Soil Nail Installation

- Seepage water may be anticipated during soil nail construction
- Hard excavation into the formation materials may be anticipated during soil nail construction

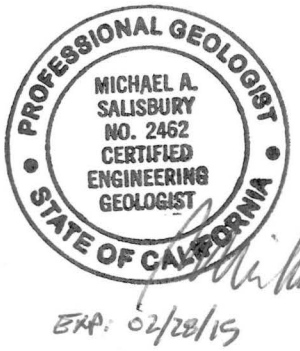
SS Section 49-2 Driven piling

Section 49-2.01A(3)(b) Driving System Submittal

- Before installing piles, the contractor must provide a driving system submittal including drivability analyses

If you have any questions, please contact me at 916-227-5241 or Deh-Jeng Jang at 916-227-5722.

Prepared by Date: 3/4/2014



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Appendix A. Figures

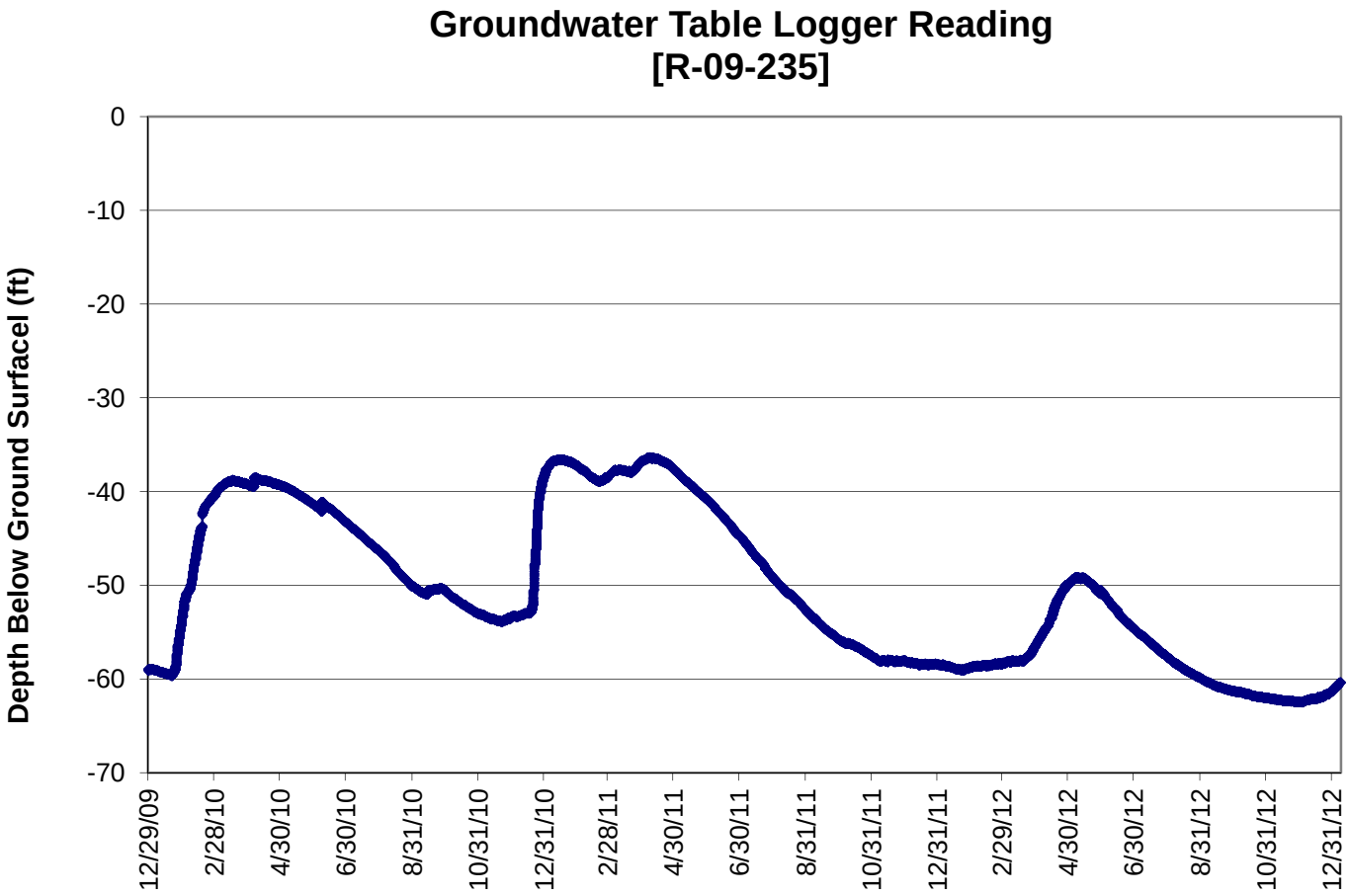
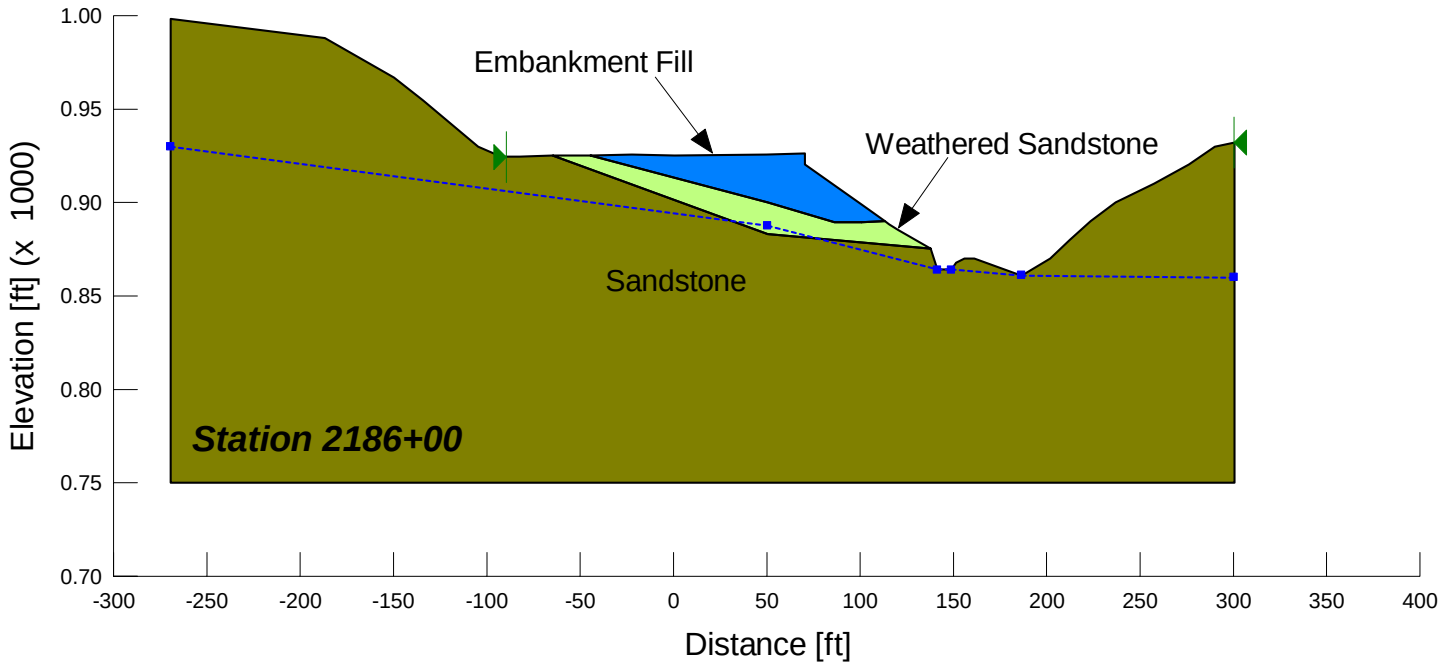
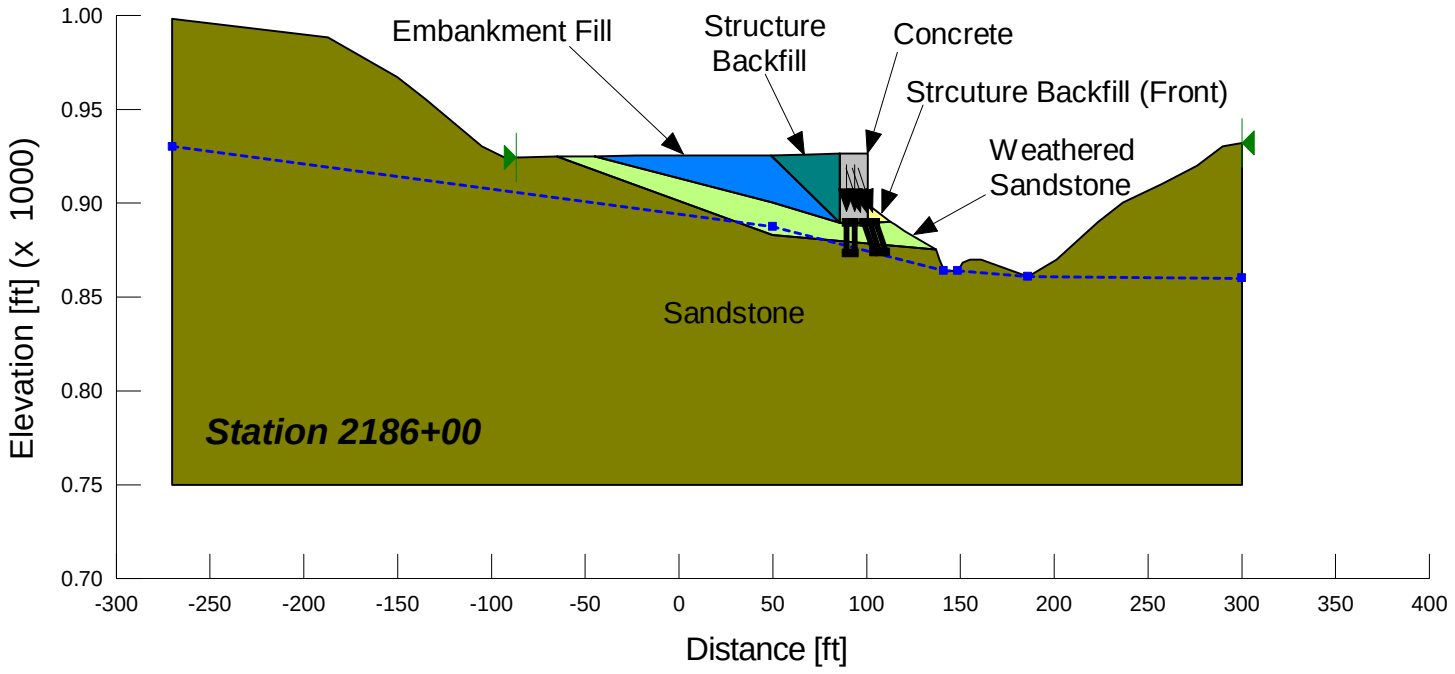


Figure 4.1 Groundwater Table Logger Readings [R-09-235]



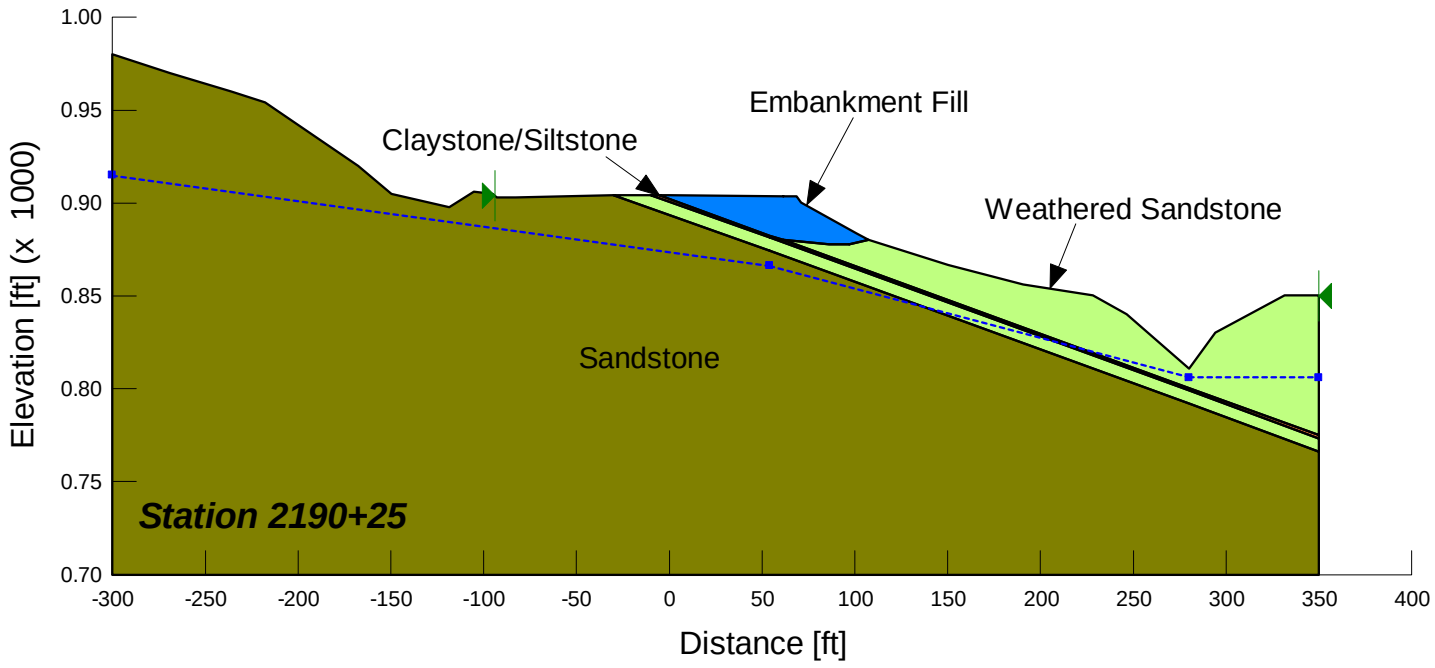
(a) Existing Slope



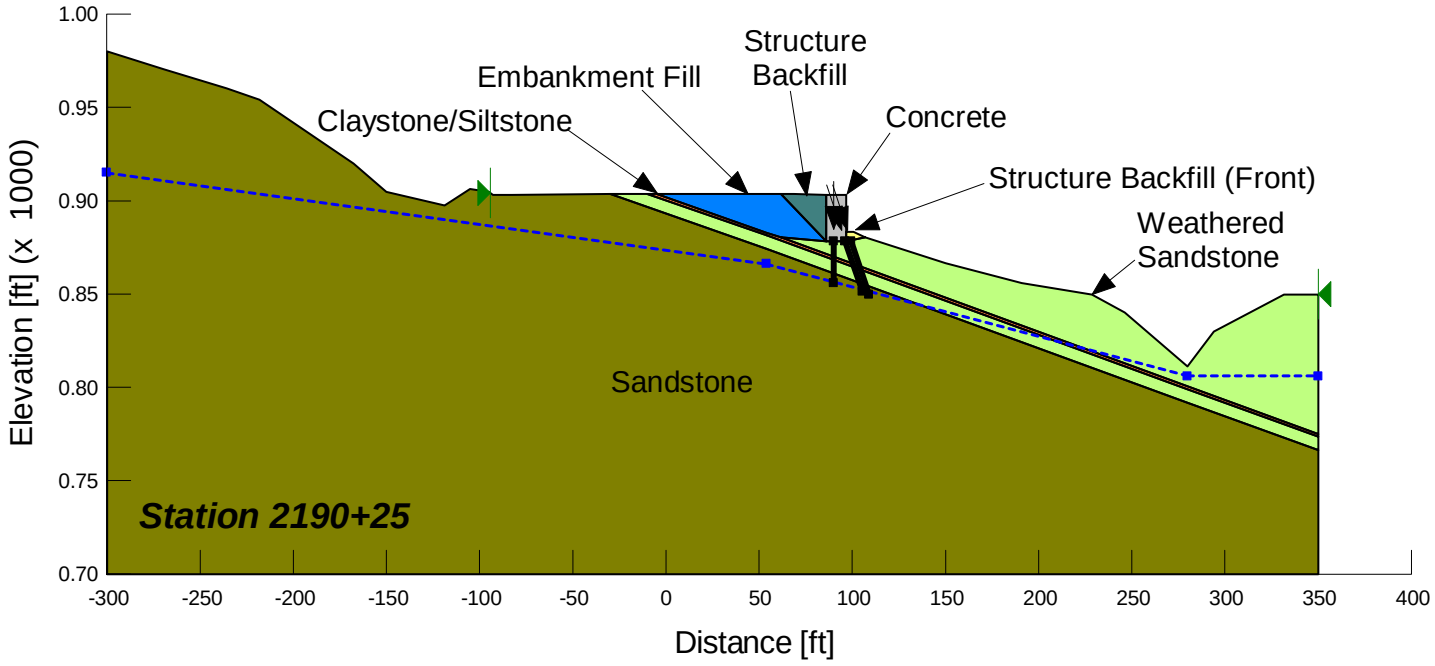
(b) Slope with Proposed ERS

[Notes] 1. Design features are not to scale.
2. Cross-sections are representative models only

Figure 5.1 Generalized Cross Section – Station 2186+00



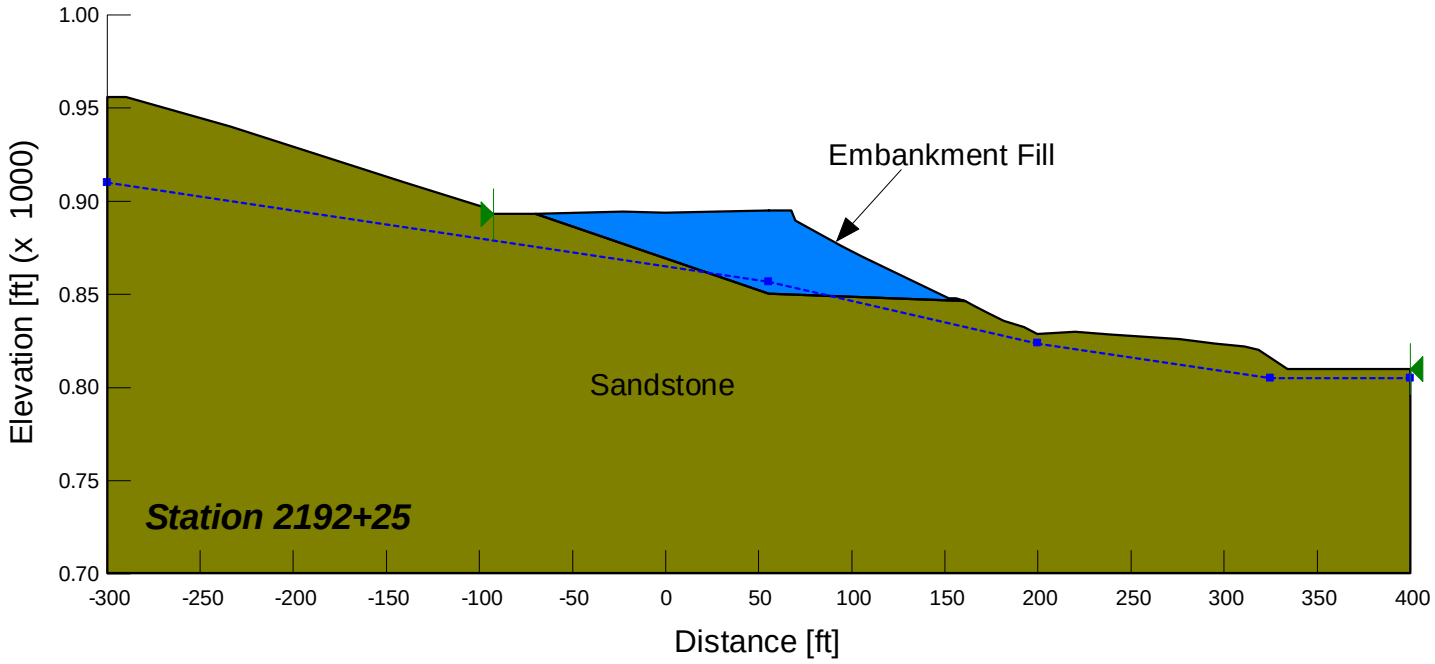
(a) Existing Slope



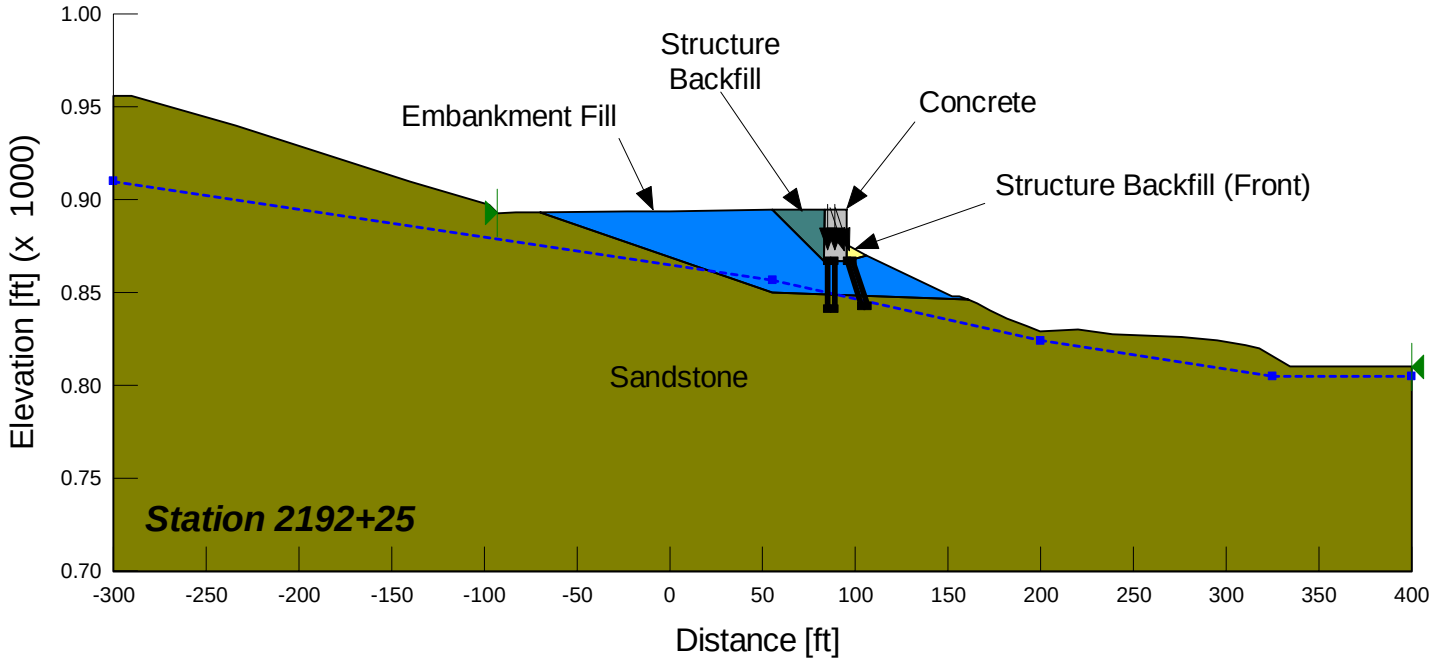
(b) Slope with Proposed ERS

[Notes] 1. Design features are not to scale.
2. Cross-sections are representative models only

Figure 5.2 Generalized Cross Section – Station 2190+25



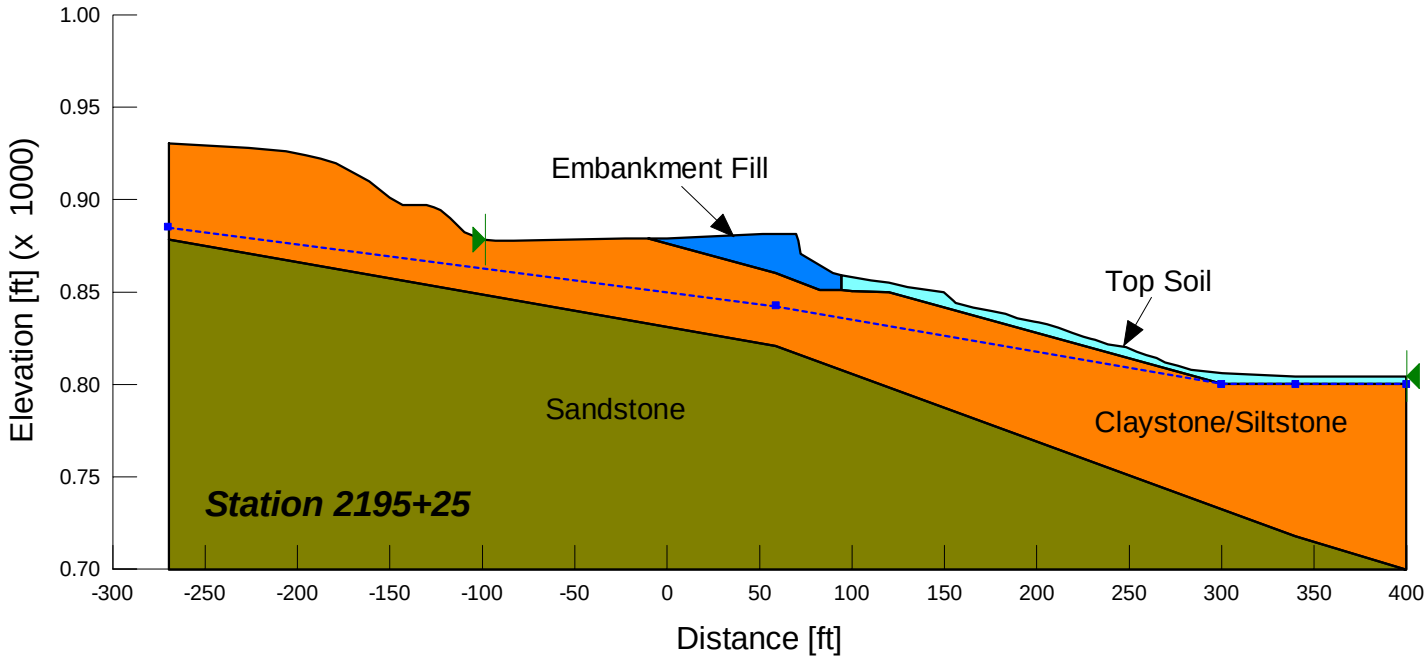
(a) Existing Slope



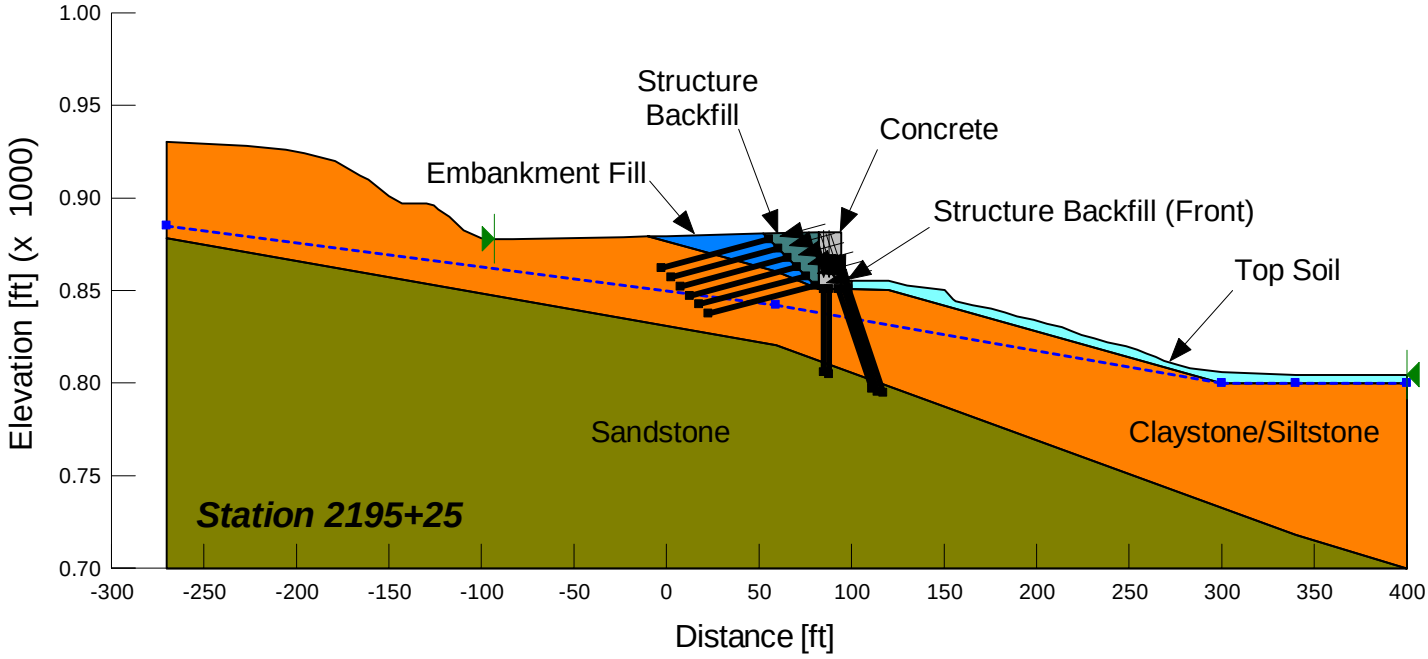
(b) Slope with Proposed ERS

[Notes] 1. Design features are not to scale.
2. Cross-sections are representative models only

Figure 5.3 Generalized Cross Section – Station 2192+25



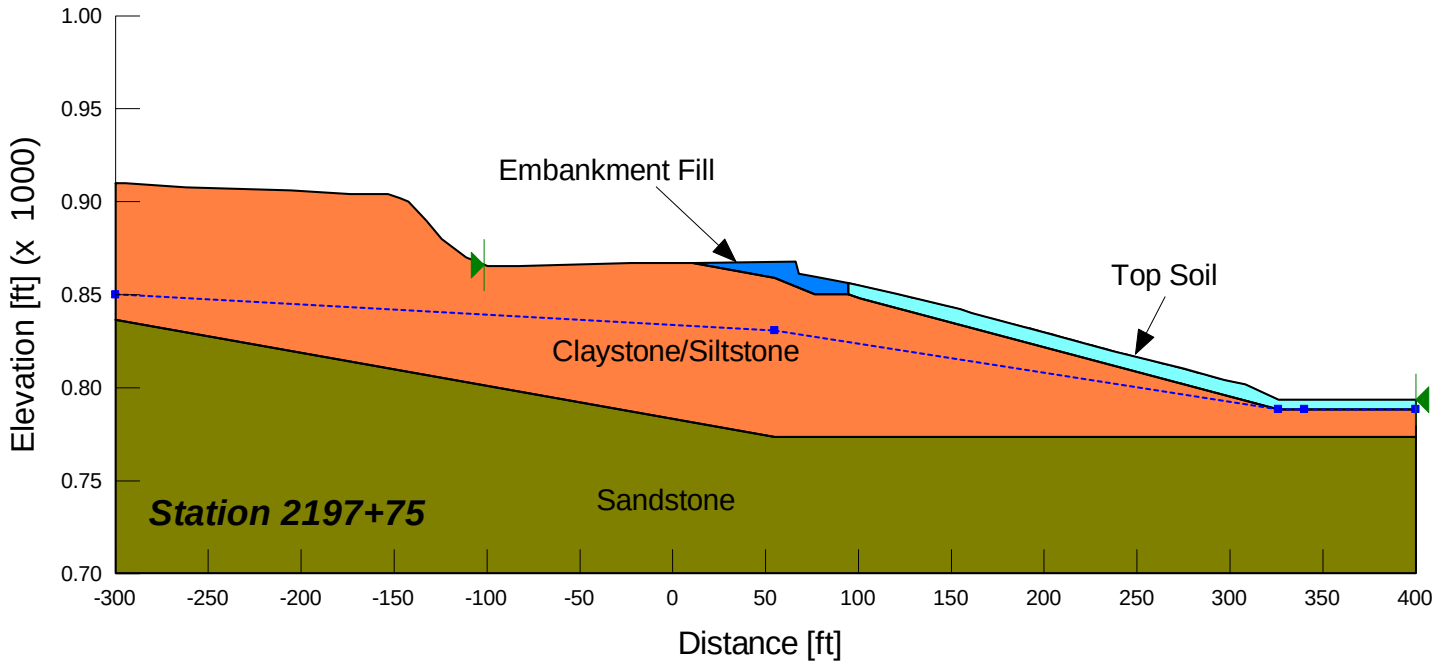
(a) Existing Slope



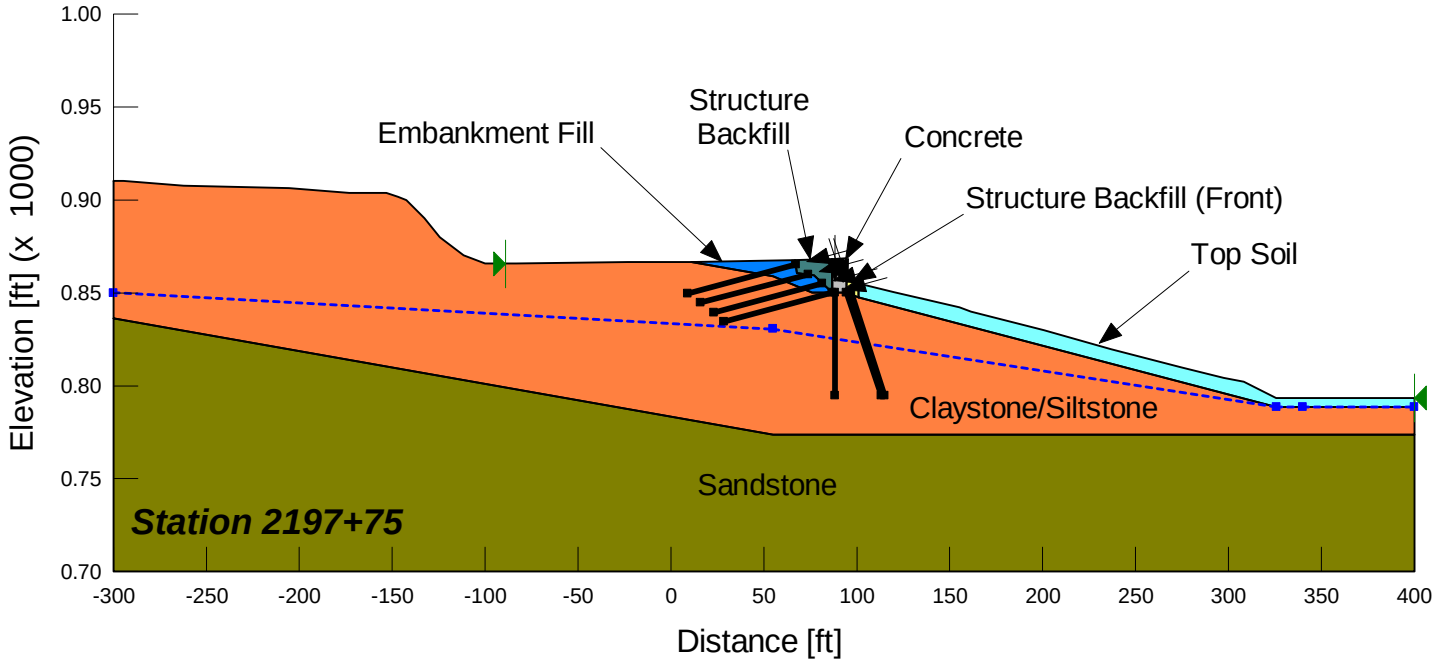
(b) Slope with Proposed ERS

[Notes] 1. Design features are not to scale.
2. Cross-sections are representative models only

Figure 5.4 Generalized Cross Section – Station 2195+25



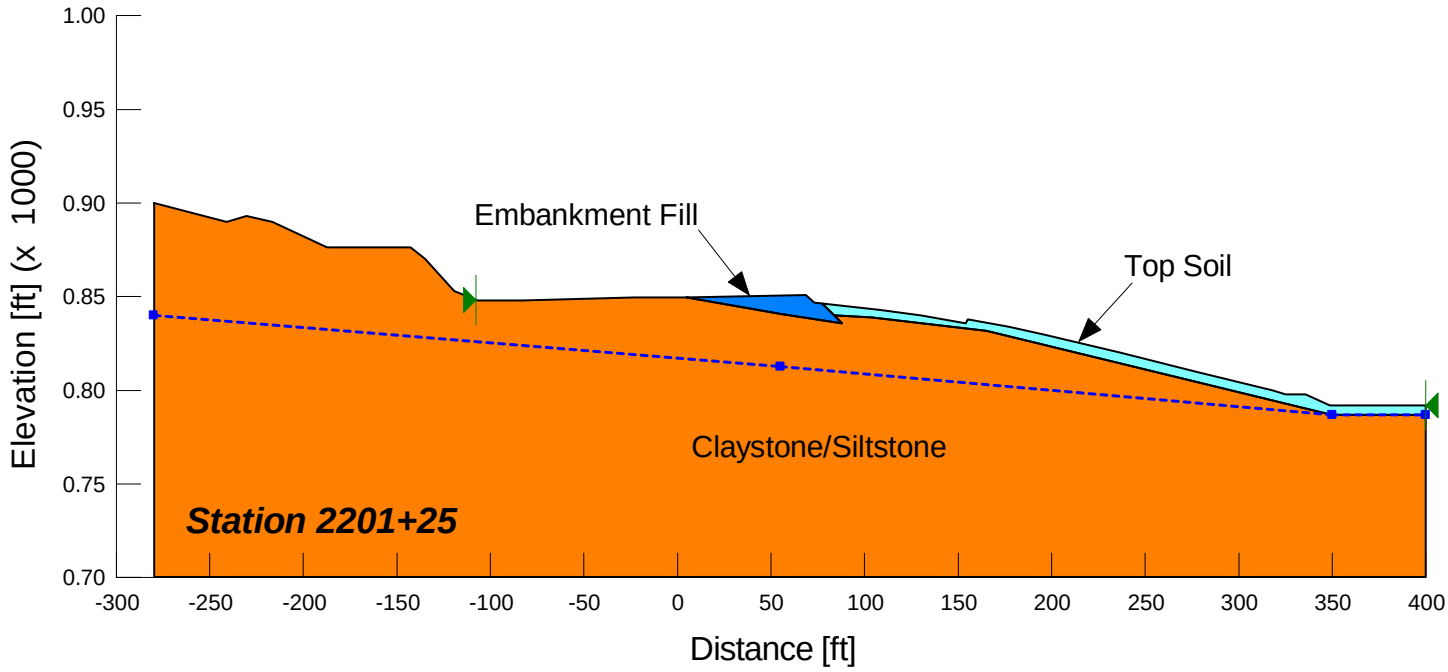
(a) Existing Slope



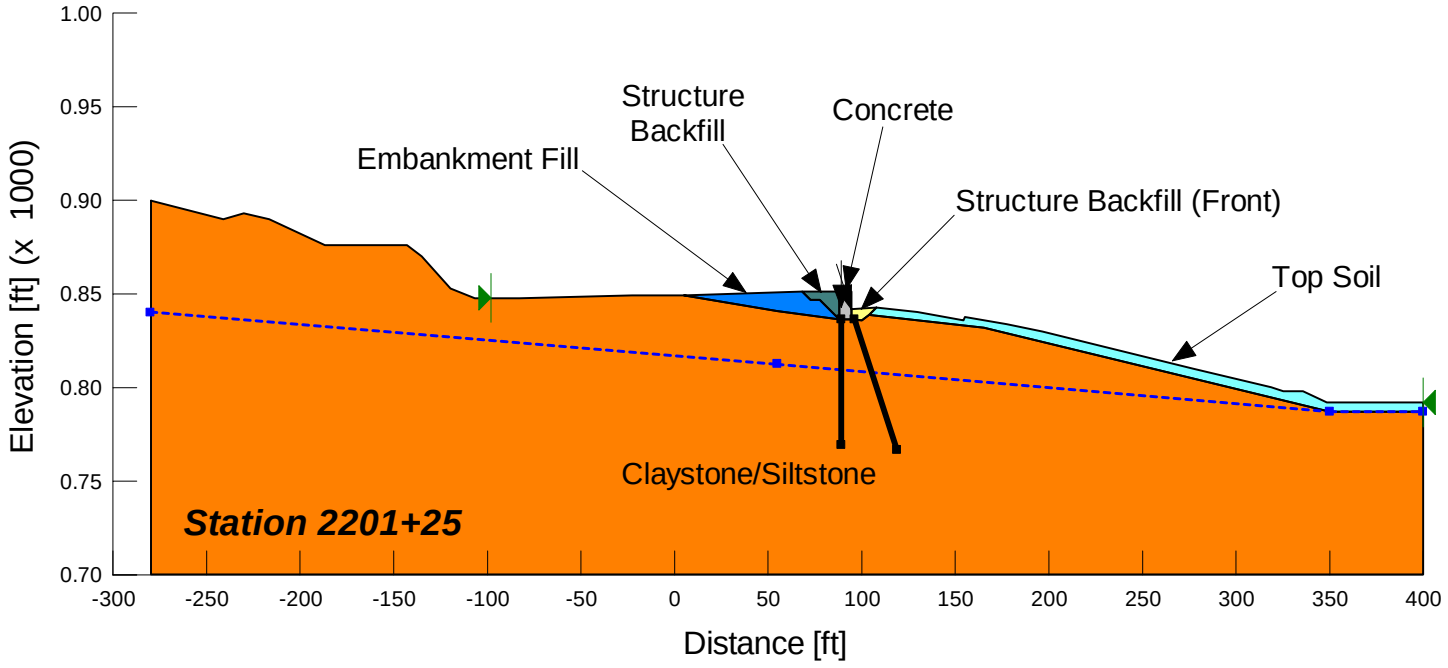
(b) Slope with Proposed ERS

[Notes] 1. Design features are not to scale.
2. Cross-sections are representative models only

Figure 5.5 Generalized Cross Section – Station 2197+75



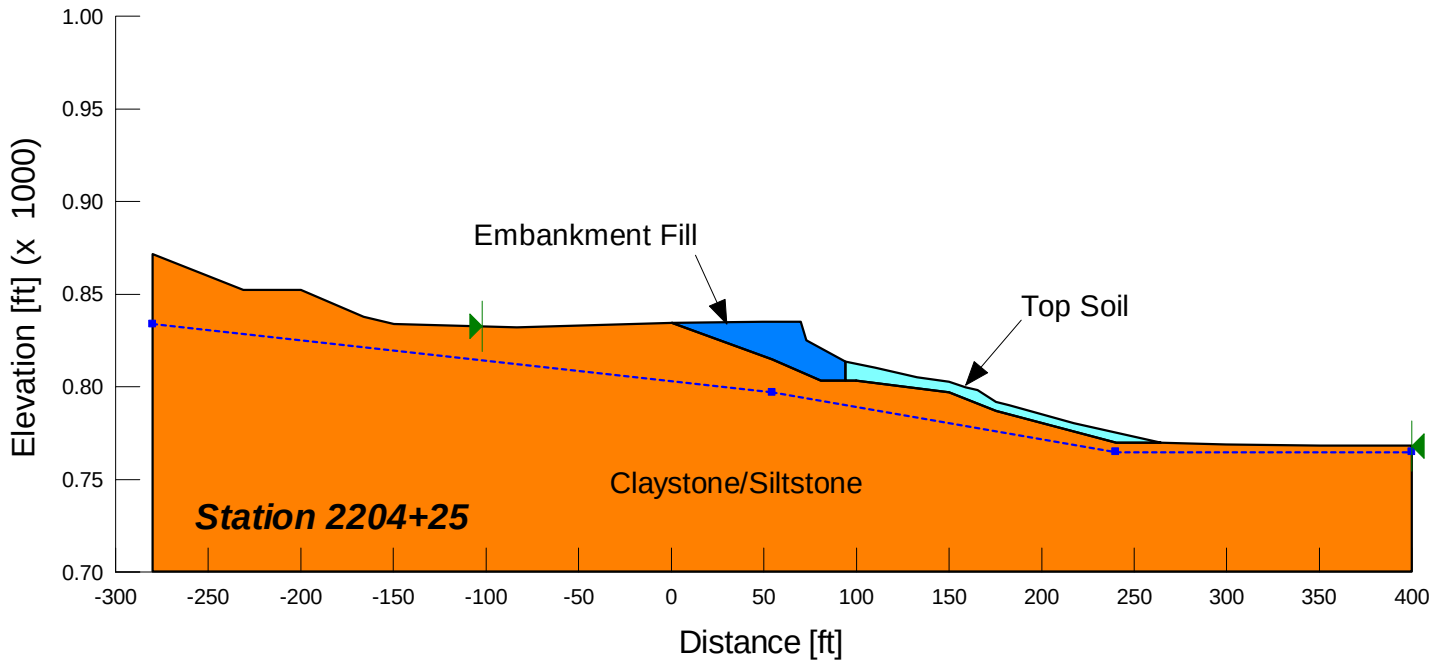
(a) Existing Slope



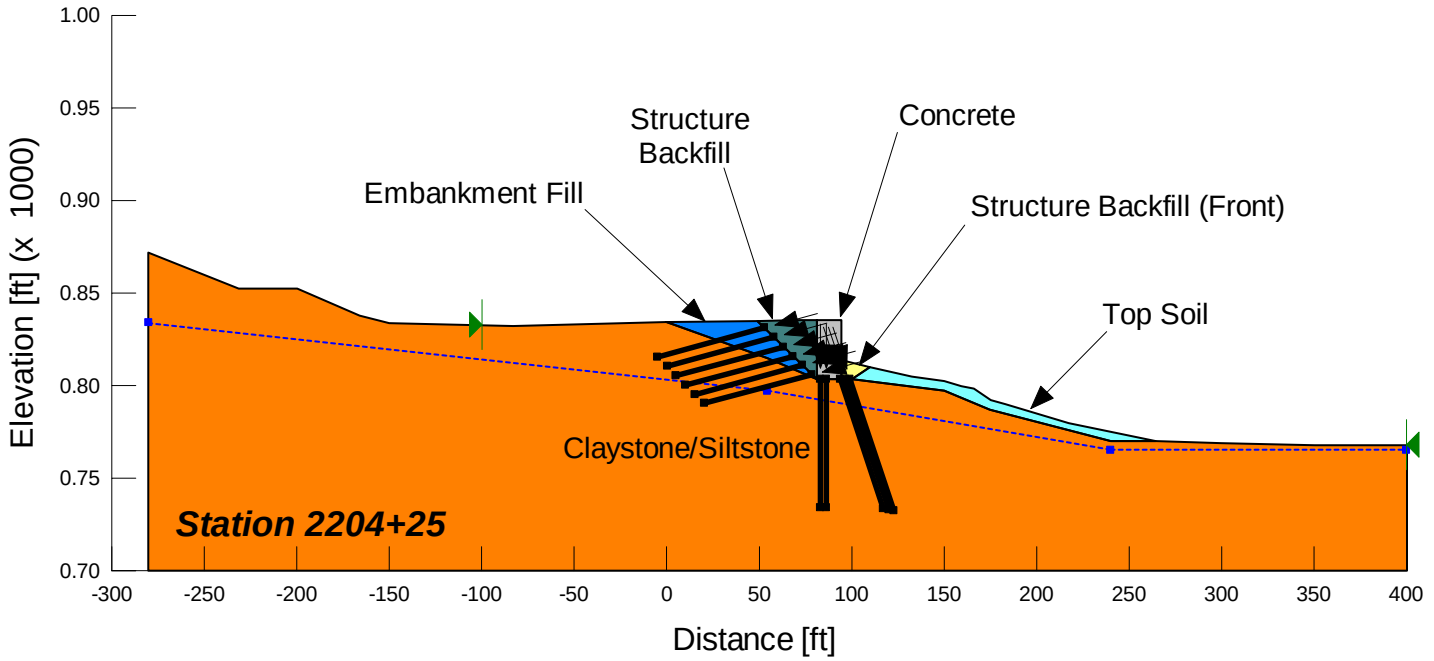
(b) Slope with Proposed ERS

[Notes] 1. Design features are not to scale.
2. Cross-sections are representative models only

Figure 5.6 Generalized Cross Section – Station 2201+25



(a) Existing Slope

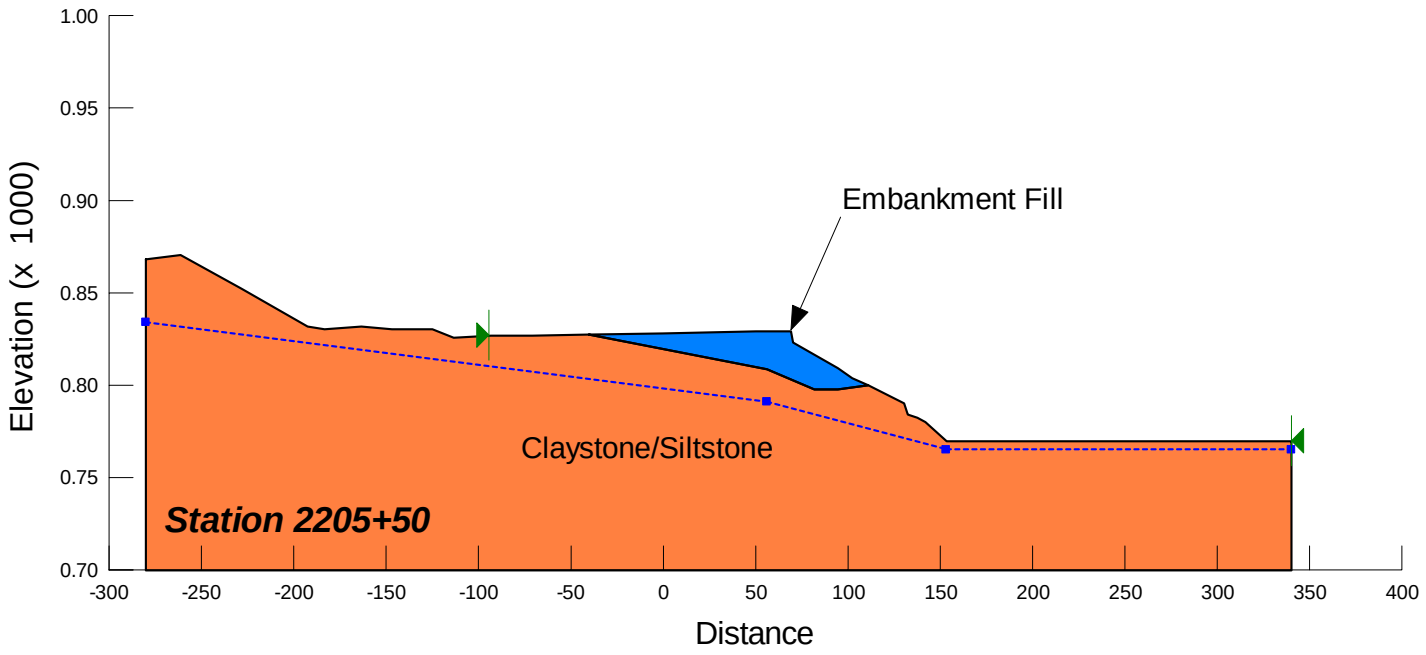


(b) Slope with Proposed ERS

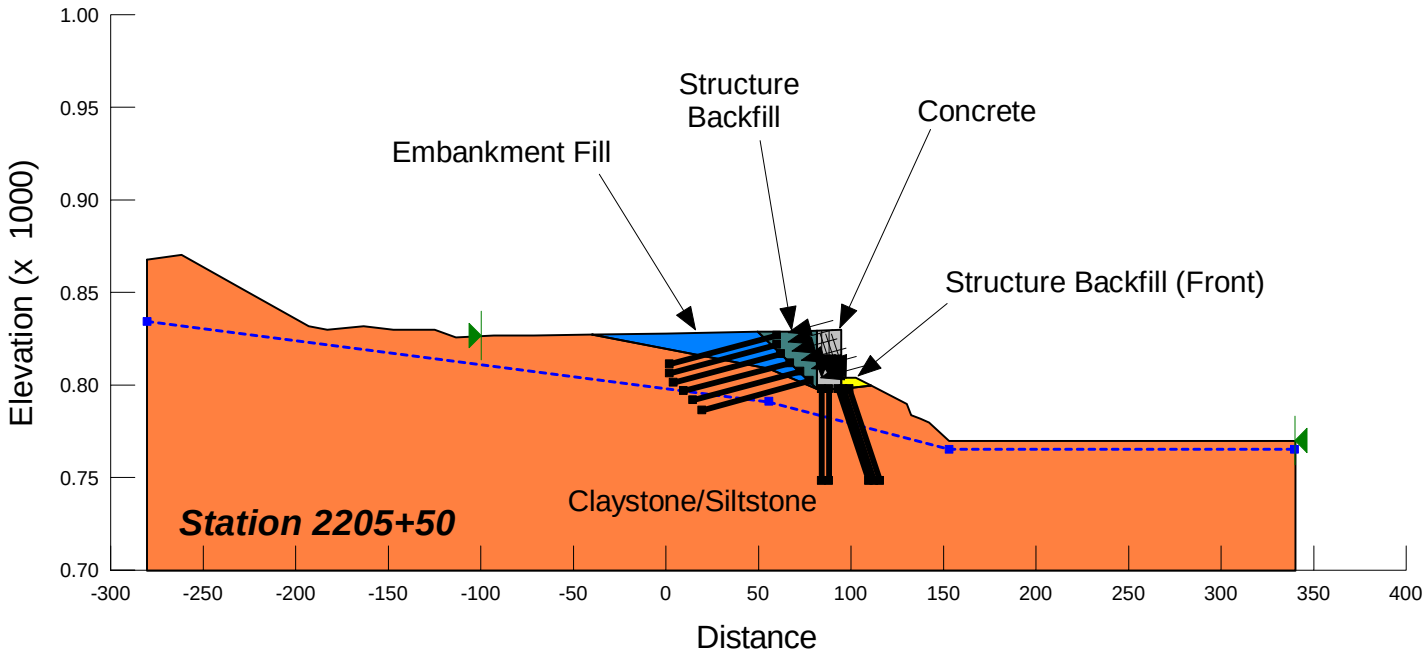
[Notes] 1. Design features are not to scale.

2. Cross-sections are representative models only

Figure 5.7 Generalized Cross Section – Station 2204+25



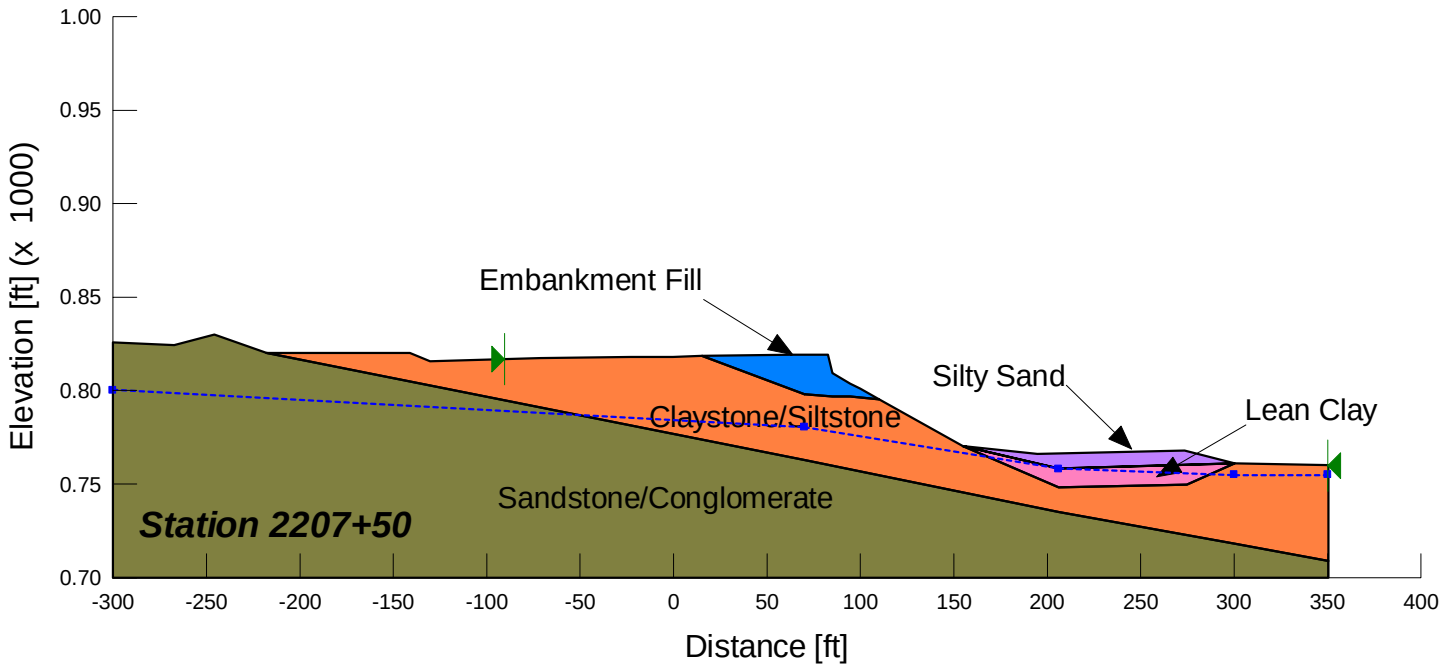
(a) Existing Slope



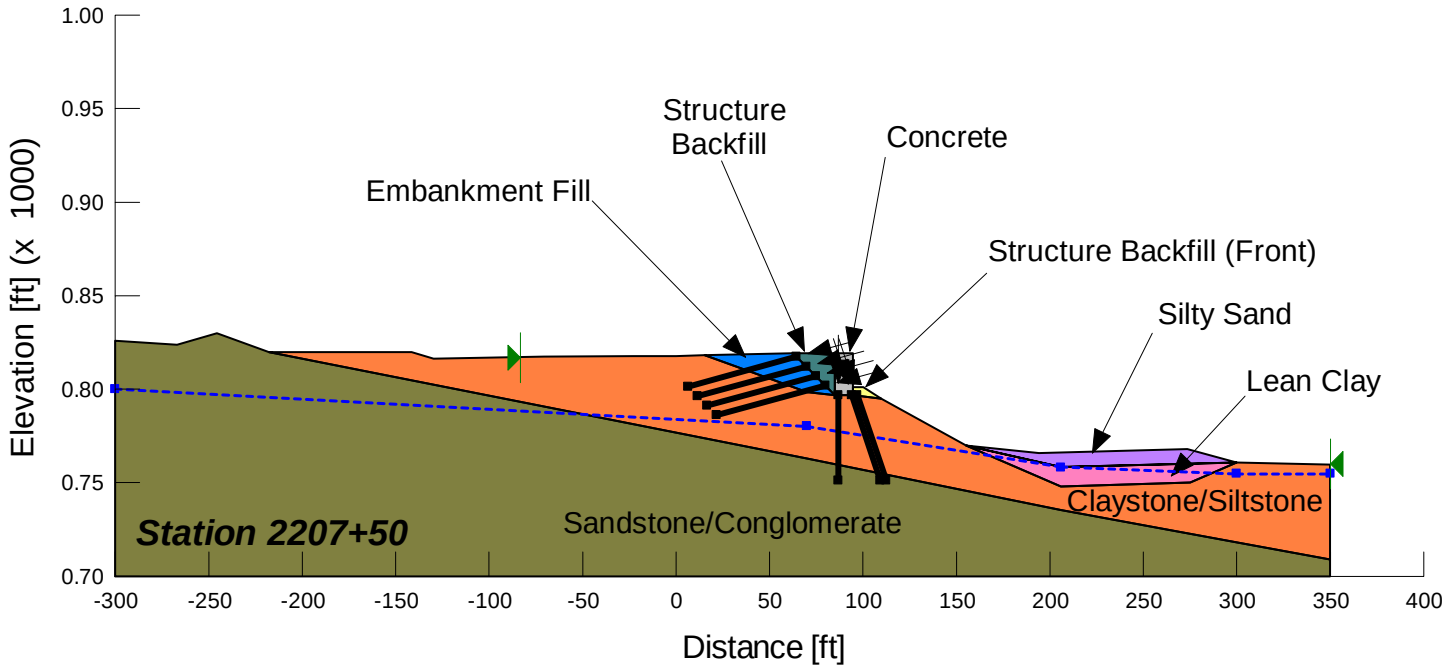
(b) Slope with Proposed ERS

[Notes] 1. Design features are not to scale.
2. Cross-sections are representative models only

Figure 5.8 Generalized Cross Section – Station 2205+50



(a) Existing Slope

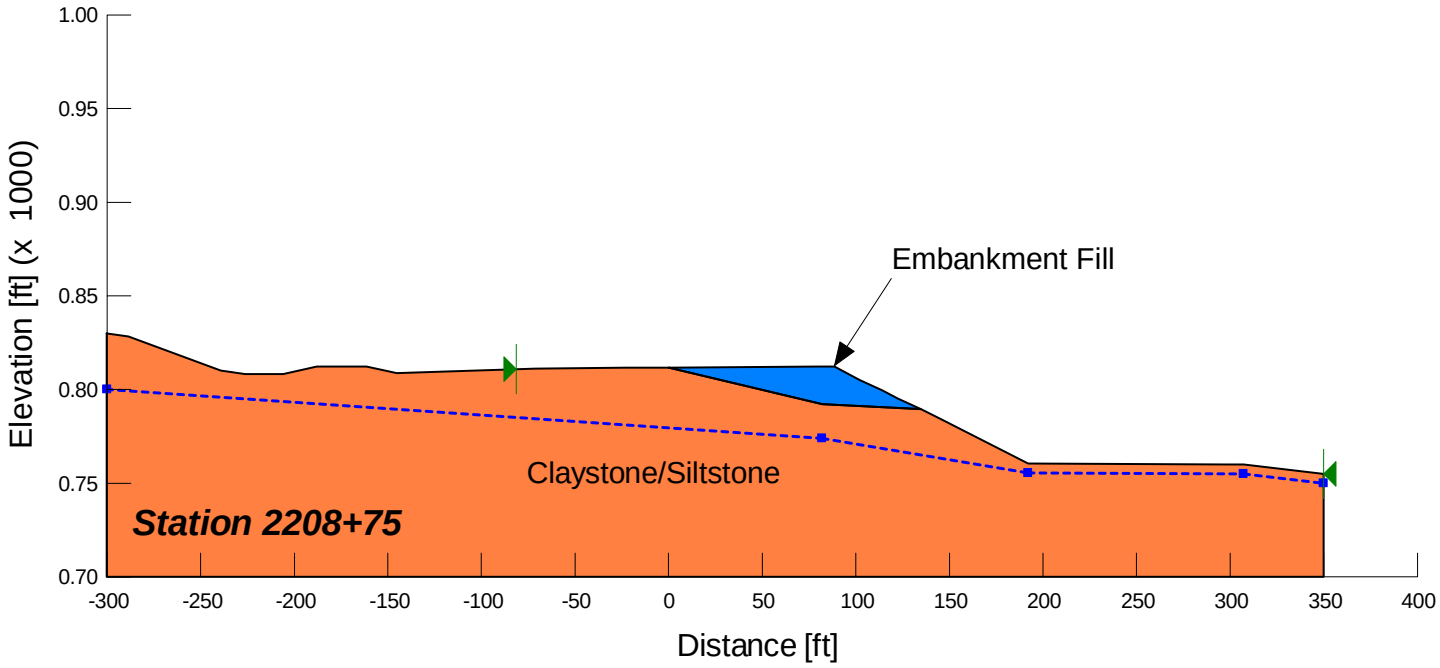


(b) Slope with Proposed ERS

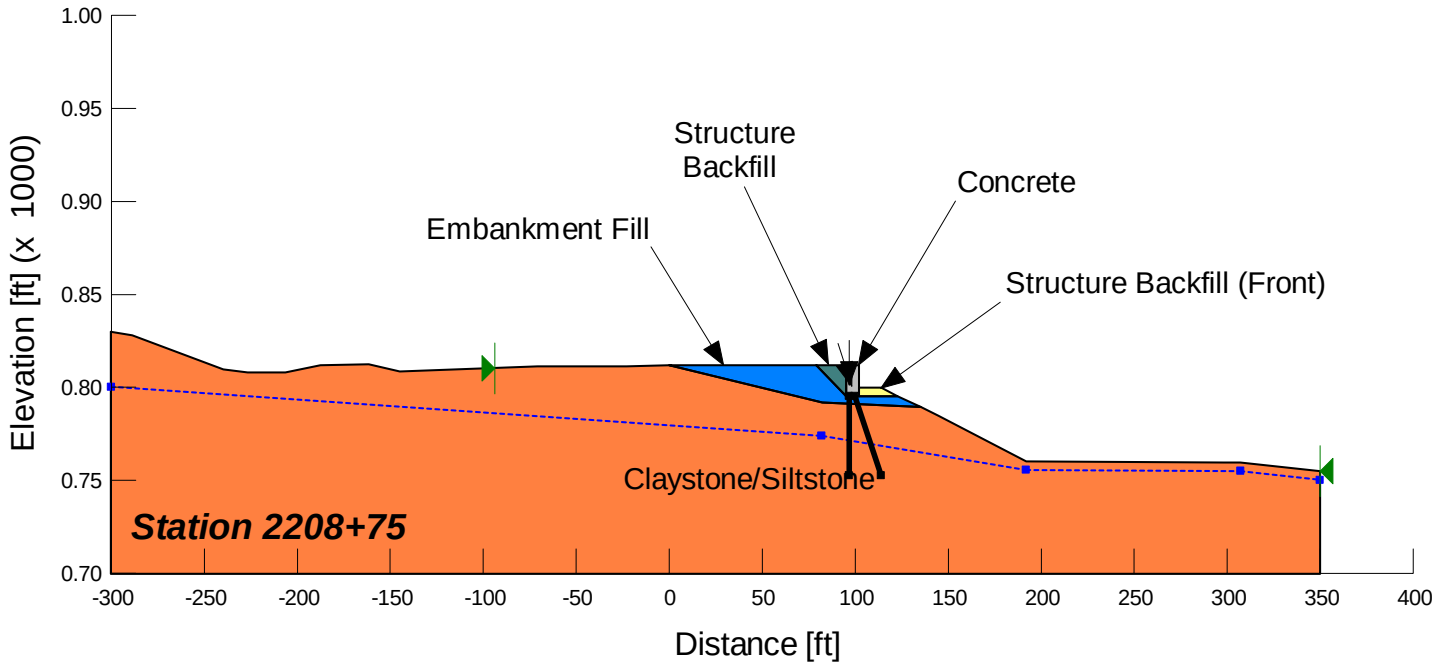
[Notes] 1. Design features are not to scale.

2. Cross-sections are representative models only

Figure 5.9 Generalized Cross Section – Station 2207+50



(a) Existing



(b) Slope with Proposed ERS

[Notes] 1. Design features are not to scale.

2. Cross-sections are representative models only

Figure 5.10 Generalized Cross Section – Station 2208+75

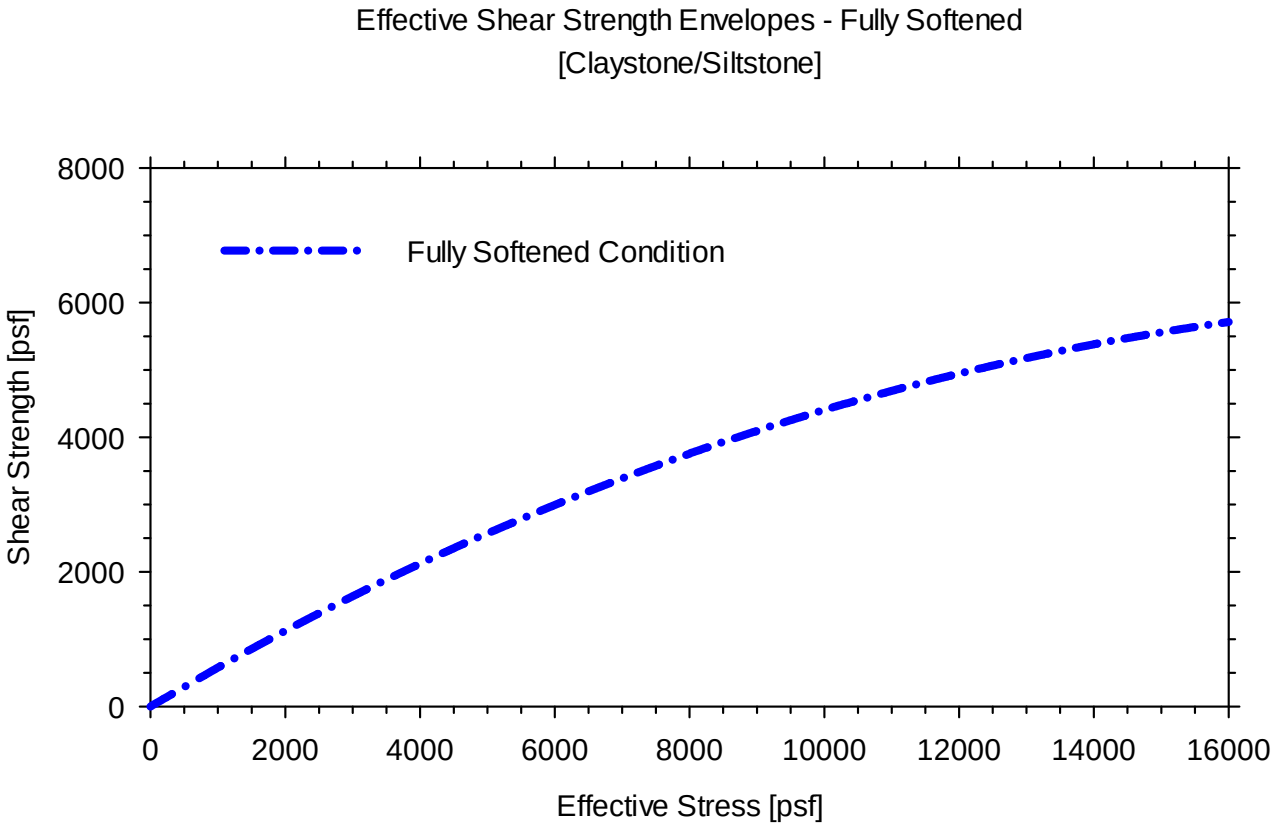


Figure 5.11 (a) Effective Shear Strength Envelopes – Fully Softened [Claystone/Siltstone]

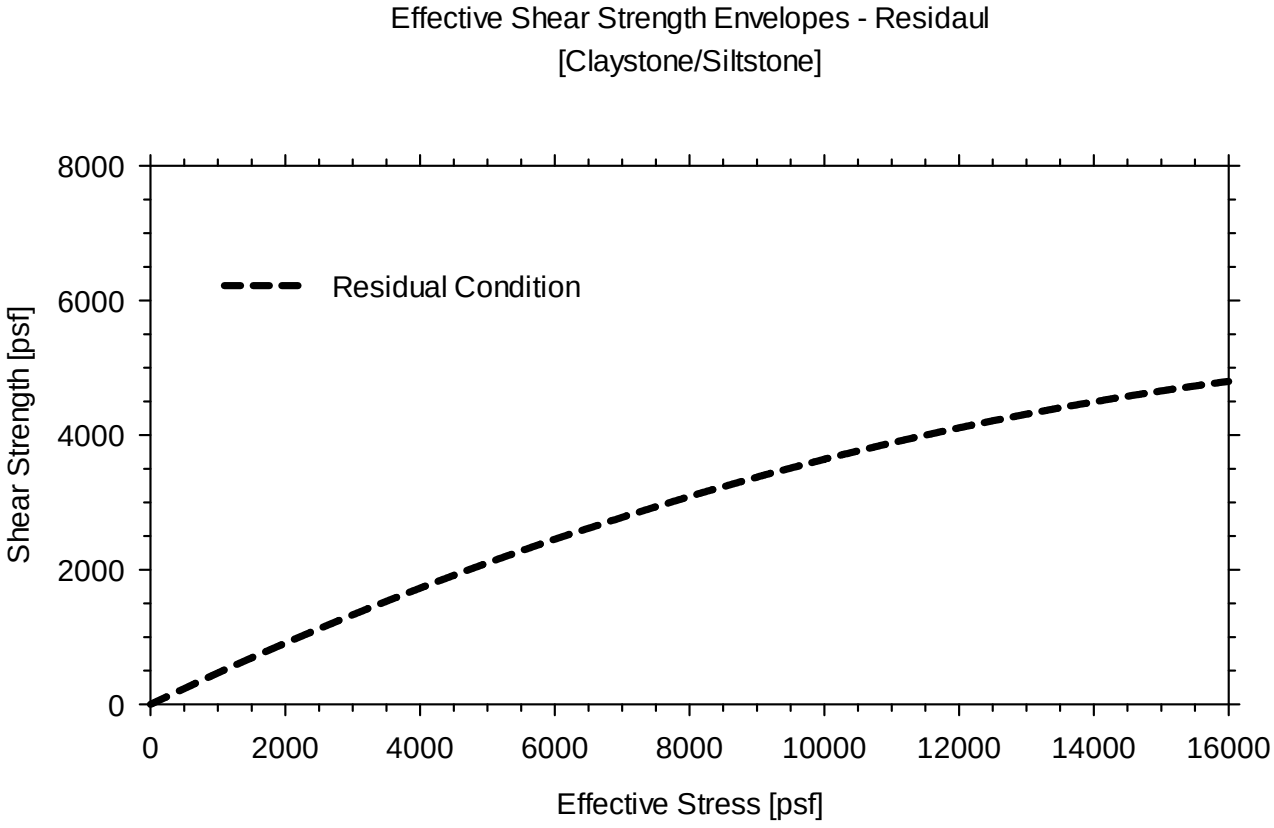


Figure 5.11 (b) Effective Shear Strength Envelopes – Residual [Claystone/Siltstone]

Appendix B. Laboratory Test Results

It should be noted that the interpreted values and associated plots for the direct shear tests, the isotropically consolidated undrained triaxial tests, and the consolidation tests presented in this Appendix were generated by the testing equipments. Due to the void of professional judgment, these machine interpreted values should be evaluated by a licensed engineer to arrive at technically sound assessment.

CALIFORNIA DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL LABORATORY

GL TRACKING NO : 10-042
Dist - EA: 07-119341
Report Date: August 5, 2010

CLASSIFICATION TEST SUMMARY

SAMPLE ID	% FINER THAN																	ATTERBERG LIMITS		AS RECEIVED		Gs
	3"	2 1/2"	2"	1 1/2"	1"	3/4"	1/2"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	5μ	1μ	LL	PI	γ_d (pcf)	%m	
R-09-231_BT-4																		74	36		55.4	
R-09-231_C5-1								100	94	90	85	81	75	69	60	40	25				40.7	2.69
R-09-231_S06					100	93	86	83	57	52	48	44	39	35	32	20	14	61	29		36.7	
R-09-231_S07					100	97	95	95	91	82	69	52	37	25	19	6	3				16.4	
R-09-231_S09							100	99	94	86	76	61	43	30	23	5	3				17.3	
R-09-231_S14					100	92	92	90	78	66	54	41	29	21	16	5	3				17.3	
R-09-231_SPT 1					100	77	73	69	61	53	45	37	30	23	19	10	7				14.4	
R-09-232_S01				100	71	63	63	59	54	49	44	38	34	30	26	14	8	47	22		15.4	
R-09-232_S02					100	98	97	96	85	77	66	54	41	32	27	12	8				18.9	
R-09-232_S04					100	97	95	93	85	77	64	49	34	24	18	6	4				15.5	
R-09-232_S06					100	95	90	88	75	66	56	41	26	17	13	4	2				12.6	
R-09-232_S11					100	99	95	91	69	58	47	35	24	17	13	4	3				18.5	
R-09-232_S13					100	90	89	87	71	59	51	43	33	26	21	11	7	38	14		15.4	
R-09-232_S15				100	81	81	79	77	68	61	53	41	28	20	16	7	4	25	4		13.8	
R-09-233_CP3-1				100	89	86	81	78	72	65	55	41	28	20	15	8	6		NP		12.9	
R-09-233_CP6-1																						
R-09-233_S08					100	96	96	96	91	86	73	54	37	26	20	10	7				15.6	
R-09-233_S11				100	94	94	90	88	79	70	54	38	26	18	15	6	4				17.3	
R-09-233_SPT 02																		55	22		28.1	
R-09-233_SPT 05																		52	25		33.2	
R-09-233_SPT 15						100	94	93	83	75	66	55	41	32	25	7	1				19.6	
R-09-234_C05-1																						
R-09-234_C08-1																					50.6	2.67

R-09-234_C10-1																					
R-09-234_S04																	75	40		41.1	
R-09-234_S07																	74	40		46.7	
R-09-234_S11																	71	38		37.2	
R-09-234_S13																	82	40		47.6	

CLASSIFICATION TEST SUMMARY

SAMPLE ID	% FINER THAN																	ATTERBERG LIMITS		AS RECEIVED		Gs
	3"	2 1/2"	2"	1 1/2"	1"	3/4"	1/2"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	5μ	1μ	LL	PI	γd (pcf)	%m	
R-09-234_S14					100	95	89	85	72	65	57	46	36	28	23	7	2	43	13		23.3	
R-09-234_S16				100	92	92	80	72	58	49	42	35	30	27	24	12	4				13.6	
R-09-235_C04-1																						
R-09-235_C04-2																						
R-09-235_C06-1																					36.3	2.67
R-09-235_C08-1																						
R-09-235_C08-2																						
R-09-235_C10-1																						
R-09-235_C10-2																						
R-09-235_C10-3																						
R-09-235_C10-4																					28.1	2.67
R-09-235_C15-1																						
R-09-235_C15-2																						
R-09-235_C15-3																						
R-09-235_C17-2																					20.0	2.63
R-09-235_S01																		70	38		30.1	
R-09-235_S03																		60	20		38.6	
R-09-235_S07																		74	40		37.2	
R-09-235_S12																		68	28		38.1	

R-09-235_S16																		58	22		29.5	
R-09-236_C02-1																					38.3	2.69
R-09-236_C04-1																						
R-09-236_C04-2																						
R-09-236_C04-3																						
R-09-236_C08-1																						
R-09-236_C08-2																		72	31		39.1	2.72
R-09-236_C10-1																					33.4	2.77
R-09-236_C12-1																						

CLASSIFICATION TEST SUMMARY

SAMPLE ID	% FINER THAN																	ATTERBERG LIMITS		AS RECEIVED		Gs
	3"	2 1/2"	2"	1 1/2"	1"	3/4"	1/2"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	5μ	1μ	LL	PI	γ_d (pcf)	%m	
R-09-236_C12-2																						
R-09-236_C12-3																						
R-09-236_C16-1																						
R-09-236_C16-2																						
R-09-236_C16-3																					30.0	2.66
R-09-236_S05																		72	33		38.5	
R-09-236_S09																		69	31		39.0	
R-09-236_S13																		53	22		27.5	
R-09-236_S15																		57	21		28.4	
R-09-236_S17																		56	25		24.4	
R-09-237_C02-1																						
R-09-237_C02-2																						
R-09-237_C02-3					100	99	94	90	84	79	75	73	70	67	60	28	15	59	29		25.1	
R-09-237_C04-1																		70	37		28.1	2.69
R-09-237_C04-2									100	99	98	97	96	92	85	46	36				24.0	
R-09-237_C06-1																						
R-09-237_C06-2																						
R-09-237_C06-3																						
R-09-237_C08-1																						

CLASSIFICATION TEST SUMMARY

SAMPLE ID	% FINER THAN																	ATTERBERG LIMITS		AS RECEIVED		Gs
	3"	2 1/2"	2"	1 1/2"	1"	3/4"	1/2"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	5μ	1μ	LL	PI	γd (pcf)	%m	
R-09-237_C14-2																						
R-09-237_C16-1																						
R-09-237_C16-2																						
R-09-237_C16-3																		59	11		35.8	
R-09-237_C18-1																					36.5	2.69
R-09-237_S07																		70	35		39.3	
R-09-237_S09																		71	36		40.2	
R-09-237_S19																		68	19		37.8	
R-09-238_C05-1																						
R-09-238_C05-2																					33.8	2.69
R-09-238_C08-1																						
R-09-238_C08-2																						
R-09-238_C08-3																						
R-09-238_C10-1																						
R-09-238_C12-2																						
R-09-238_S03																		36	14		20.9	
R-09-238_S04																		58	23		32.7	
R-09-238_S09																		32	12		13.4	
R-09-238_S11																		57	18		44.6	
R-09-238_S13					100	83	80	76	58	50	39	31	27	23	21	6	2	39	8		18.0	

Results sent to: YOOJOONG CHOI

Division of Engineering Services
Materials Engineering and Testing Services
Corrosion and Structural Concrete Field Investigation Branch

Report Date: 7/12/2010
Reported by Rudy Lopez

CORROSION TEST SUMMARY REPORT - SOIL

EA **07-119341**

EFIS: **0713000007**

Dist/Co/Rte/PM **07 / LA /010/ / - PM**

CORROSION LAB #	TL101 #	BORE #	DEPTH () START	DEPTH () END	MINIMUM RESISTIVITY[1] (ohm-cm)	pH[1]	CHLORIDE CONTENT[2] (ppm)	SULFATE CONTENT[3] (ppm)	IS SAMPLE CORROSIVE?
SOIL SAMPLE FROM:									
CR20100488†	C701116	R-09-231, 232, 233			1475	6	17	324	NO
CR20100489†	C701117	R-09-234, 235, 236, 237, 238			623	6	3	350	NO

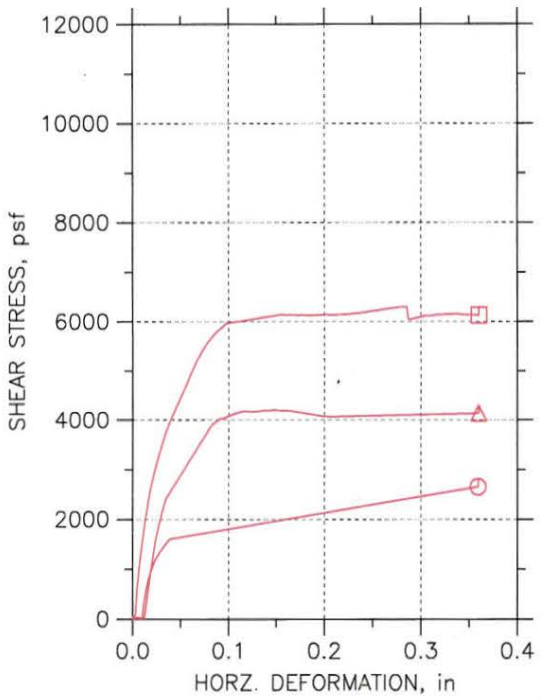
This site is not corrosive to foundation elements (see note below).

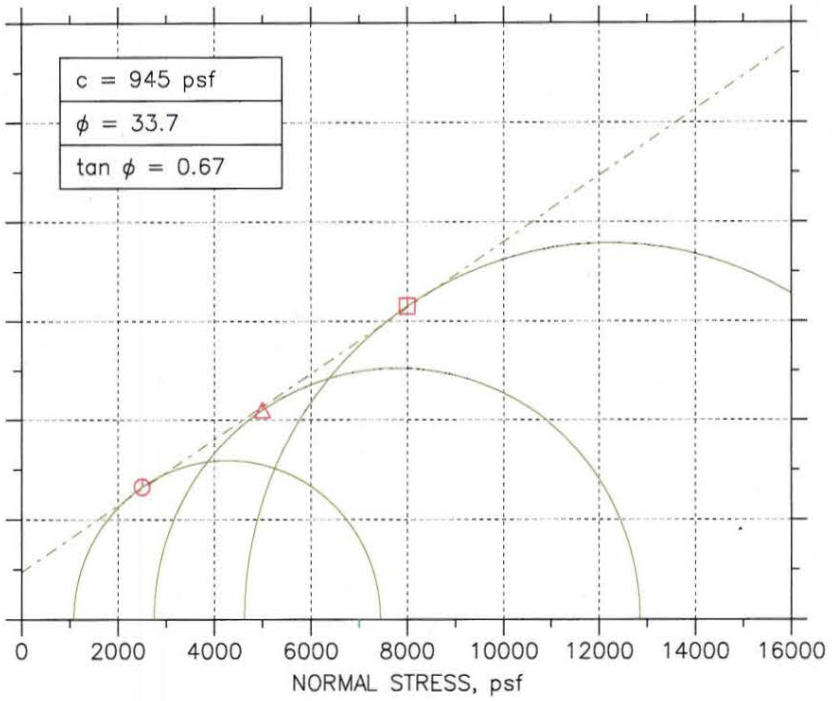
†Comment: Yoojoong Choi of Geotechnical Services requested that this sample be reevaluated as a Structural Element versus the original MSE evaluation (5/16/2013).

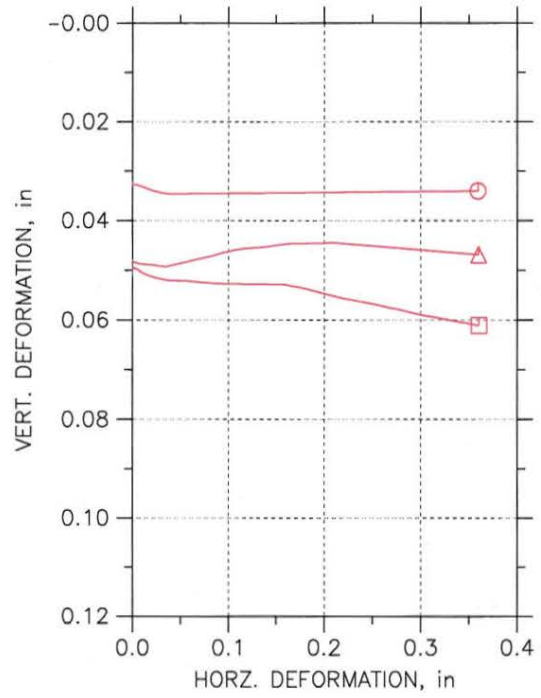
Note: For Structural Elements, the Department considers a site corrosive if one or more of the following conditions exist: pH is 5.5 or less, chloride concentration is 500 ppm or greater, sulfate concentration is 2000 ppm or greater. Resistivity is not considered for Structural Elements. MSE backfill shall conform to the requirements of section 47-2.02C Structure Backfill in the 2010 Standard Specifications.

[1]CT 643, [2]CT 422, [3]CT 417

DIRECT SHEAR TEST REPORT







Symbol		⊙	△	□	
Test No.		DS10071A	DS10071B	DS10071C	
Sample No.		CP6-1	CP6-1	CP6-1	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	2.375	2.375	2.375	
	Area, in^2	4.4301	4.4301	4.4301	
	Height, in	1	1	1	
	Water Content, %	33.37	31.30	32.57	
	Dry Density, pcf	87.11	87.368	85.821	
	Saturation, %	96.36	90.94	91.21	
	Void Ratio	0.93496	0.92925	0.96405	
Consol. Height, in		0.96933	0.95373	0.95126	
Consol. Void Ratio		0.87561	0.83998	0.86832	
Final	Water Content, %	32.08	30.81	30.96	
	Dry Density, pcf	90.181	91.667	91.401	
	Saturation, %	99.67	99.17	99.03	
	Void Ratio	0.86908	0.83878	0.84414	
Normal Stress, psf		2499.3	4999.2	8000	
Max. Shear Stress, psf		2647.9	4204.5	6304.4	
Ult. Shear Stress, psf		2647.9	4135.5	6128	
Time to Failure, min		61.33	25.462	49.147	
Disp. Rate, in/min		0.006	0.006	0.006	
Implied Specific Gravity		2.70	2.70	2.70	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

Project: I-10 HOV	
Location: 07-LA-10	
Project No.: 07-119341	
Boring No.: R-09-233	
Sample Type:	
Description: Moist, Stiff, Brown Speckled, Clay and Silt.	
Remarks: ASTM D 3080.	Wo 9/9

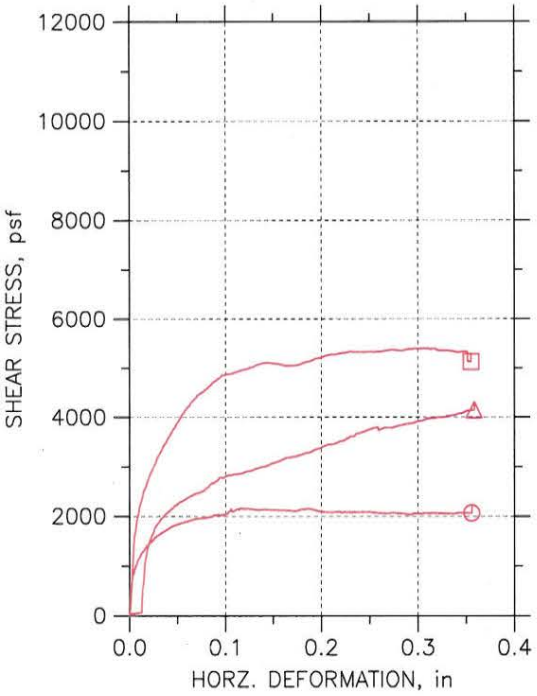
Tue, 07-SEP-2010 17:01:05

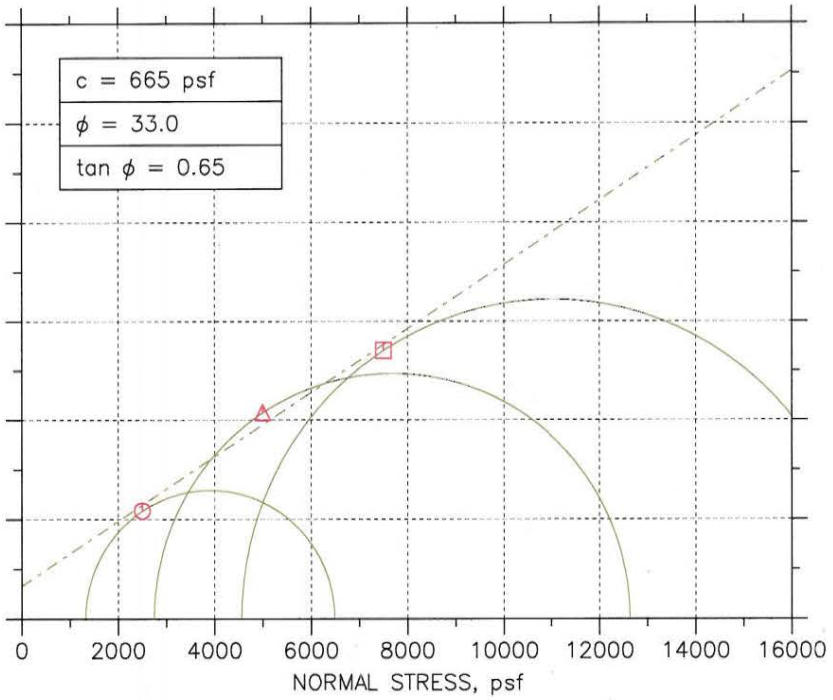
DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-233_CP6-1
Test Specimen A

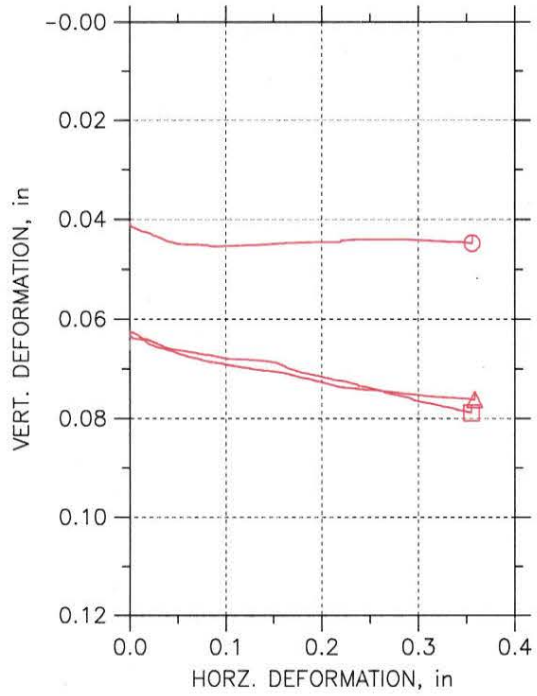
DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-233_CP6-1
Test Specimen B

DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-233_CP6-1
Test Specimen C

DIRECT SHEAR TEST REPORT







Symbol		⏲	△	⊡	
Test No.		DS10072A	DS10072B	DS10072C	
Sample No.		C05-1	C05-1	C05-1	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	2.375	2.375	2.375	
	Area, in^2	4.4301	4.4301	4.4301	
	Height, in	1	1	1	
	Water Content, %	47.15	46.20	44.70	
	Dry Density, pcf	73.868	74.642	75.415	
	Saturation, %	97.92	97.73	96.30	
	Void Ratio	1.3241	1.3	1.2764	
Consol. Height, in		0.96048	0.93797	0.94231	
Consol. Void Ratio		1.2323	1.1573	1.1451	
Final	Water Content, %	44.24	40.78	39.68	
	Dry Density, pcf	77.334	80.801	81.873	
	Saturation, %	99.72	99.72	99.49	
	Void Ratio	1.22	1.1247	1.0969	
Normal Stress, psf		2500.7	4998.7	7498.5	
Max. Shear Stress, psf		2165.9	4147.1	5406.9	
Ult. Shear Stress, psf		2063.5	4144.5	5127.6	
Time to Failure, min		21.63	61.745	53.517	
Disp. Rate, in/min		0.006	0.006	0.006	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

Project: I-10 HOV
Location: 07-LA-10
Project No.: 07-119341
Boring No.: R-09-234
Sample Type: BRASS
Description: Moist, Stiff, Brown, Silty Clay
Remarks: ASTM D 3080.

WP 9/9

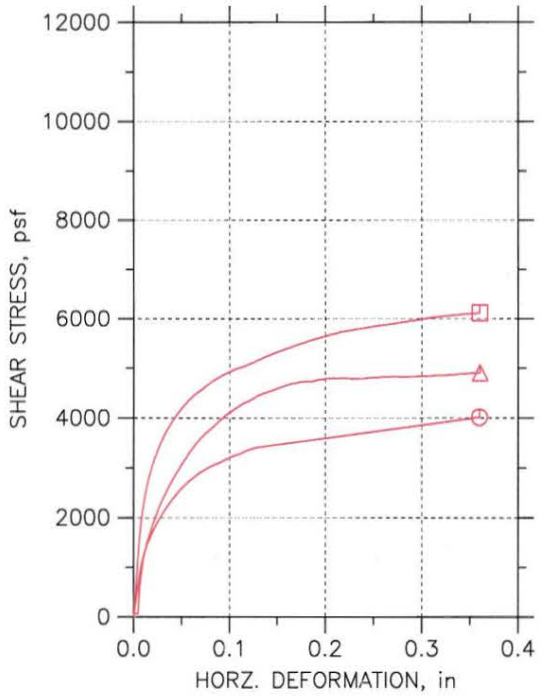
Wed, 08-SEP-2010 13:31:08

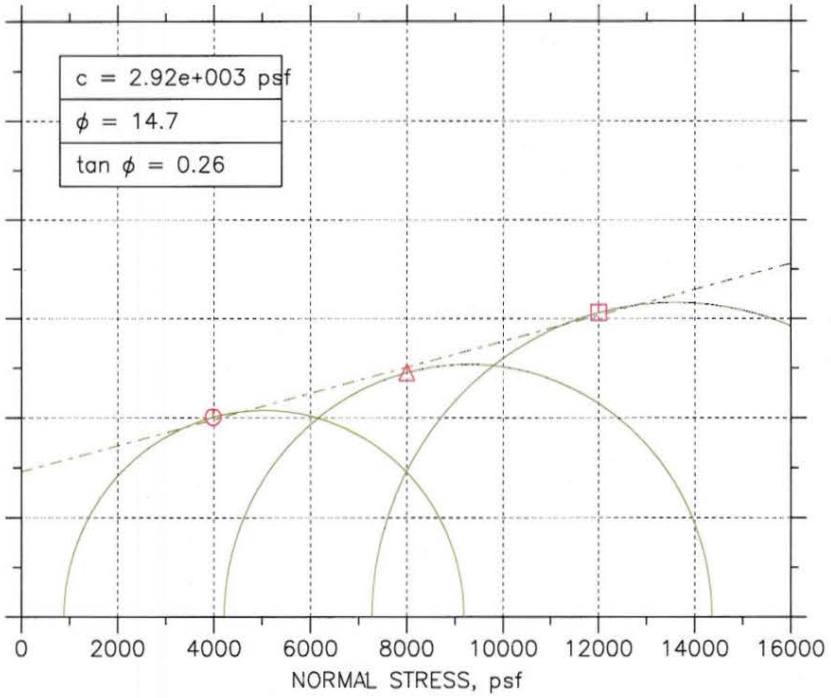
DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-234_C05-1
Test Specimen A

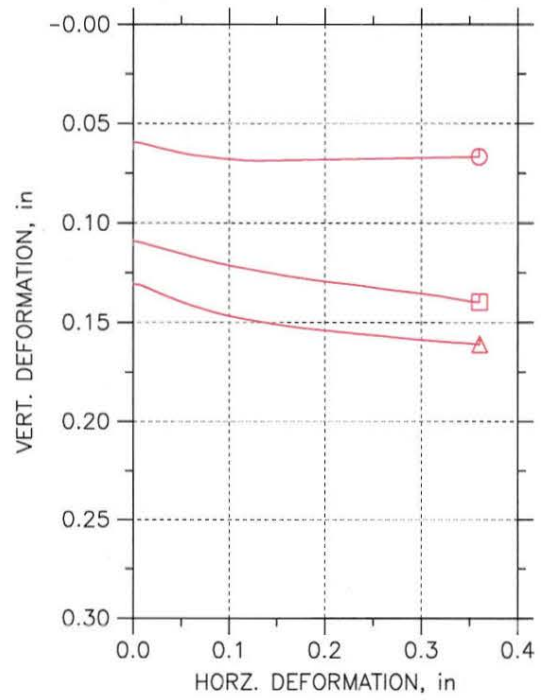
DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-234_C05-1
Test Specimen B

DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-234_C05-1
Test Specimen C

DIRECT SHEAR TEST REPORT







Symbol		⊙	△	□	
Test No.		DS10073A	DS10073B	DS10073C	
Sample No.		C08-1	C08-1	C08-1	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	2.375	2.375	2.375	
	Area, in^2	4.4301	4.4301	4.4301	
	Height, in	1	1	1	
	Water Content, %	43.99	49.87	48.97	
	Dry Density, pcf	73.696	68.622	71.288	
	Saturation, %	92.27	92.47	96.91	
	Void Ratio	1.2872	1.4563	1.3644	
Consol. Height, in		0.94315	0.87118	0.89253	
Consol. Void Ratio		1.1572	1.1399	1.1103	
Final	Water Content, %	42.01	39.22	38.24	
	Dry Density, pcf	78.976	81.795	82.874	
	Saturation, %	99.99	99.84	99.86	
	Void Ratio	1.1343	1.0607	1.0339	
Normal Stress, psf		3981.2	7998.1	11999	
Max. Shear Stress, psf		4014.6	4908.2	6119.2	
Ult. Shear Stress, psf		4014.6	4908.2	6119.2	
Time to Failure, min		61.326	61.501	61.436	
Disp. Rate, in/min		0.006	0.006	0.006	
Implied Specific Gravity		2.70	2.70	2.70	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

Project: I-10 HOV	
Location: 07-LA-10	
Project No.: 07-119341	
Boring No.: R-09-234	
Sample Type:	
Description: Moist, Stiff, Brown, Silty Clay with Gravel up to 1.5". Extensively Patched.	
Remarks: ASTM D 3080.	

WP 9/9

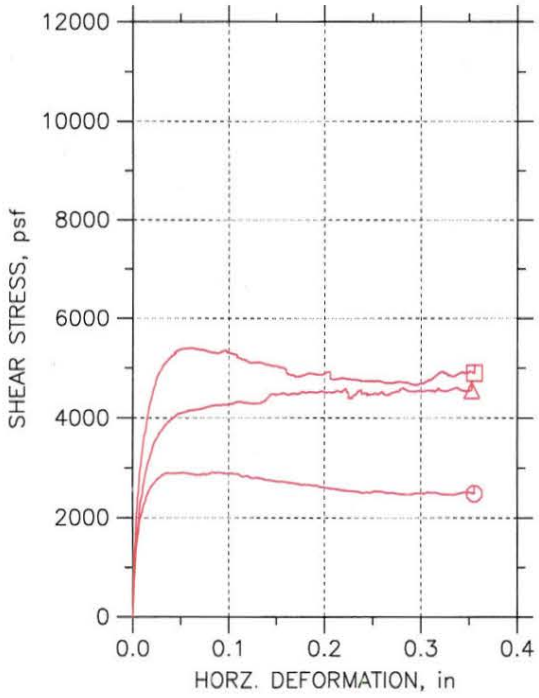
Wed, 08-SEP-2010 13:38:02

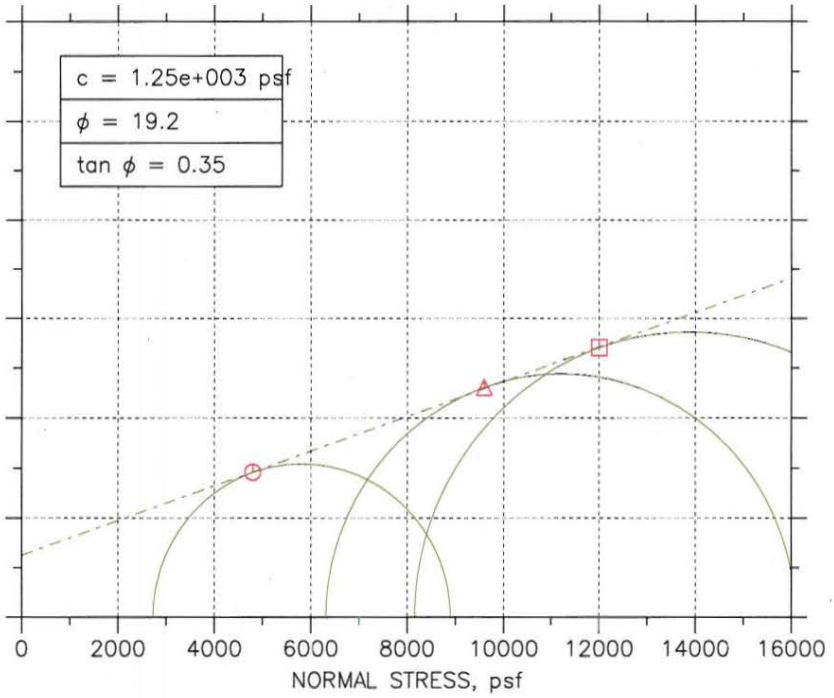
DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-234_C08-1
Test Specimen A

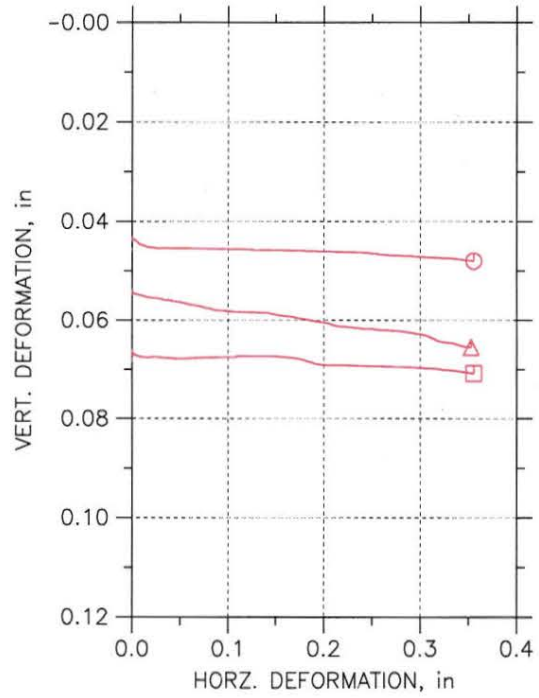
DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-234_C08-1
Test Specimen B

DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-234_C08-1
Test Specimen C

DIRECT SHEAR TEST REPORT







Symbol		⏲	△	⊡	
Test No.		DS10074A	DS10074B	DS10074C	
Sample No.		C10-1	C10-1	C10-1	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	2.375	2.375	2.375	
	Area, in^2	4.4301	4.4301	4.4301	
	Height, in	1	1	1	
	Water Content, %	37.98	35.21	36.95	
	Dry Density, pcf	82.639	87.196	84.015	
	Saturation, %	96.94	99.93	97.38	
	Void Ratio	1.0774	0.96885	1.0434	
Consol. Height, in		0.95742	0.94674	0.94107	
Consol. Void Ratio		0.98897	0.86399	0.923	
Final	Water Content, %	35.48	30.47	32.65	
	Dry Density, pcf	86.81	93.309	90.417	
	Saturation, %	99.81	99.78	99.91	
	Void Ratio	0.97762	0.83987	0.89873	
Normal Stress, psf		4799.2	9597.5	12000	
Max. Shear Stress, psf		2912.7	4612.8	5407.8	
Ult. Shear Stress, psf		2476.7	4556.8	4900	
Time to Failure, min		17.042	58.995	12.51	
Disp. Rate, in/min		0.006	0.006	0.006	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

Project: I-10 HOV

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-234

Sample Type: BRASS

Description: Moist, Very Stiff, Grey Silty Clay

Remarks: ASTM D 3080.

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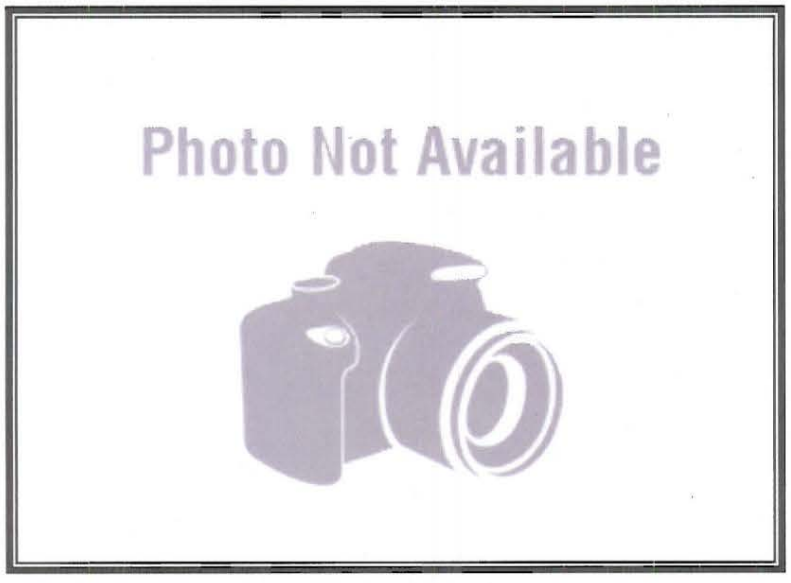
Wed, 08-SEP-2010 14:33:23

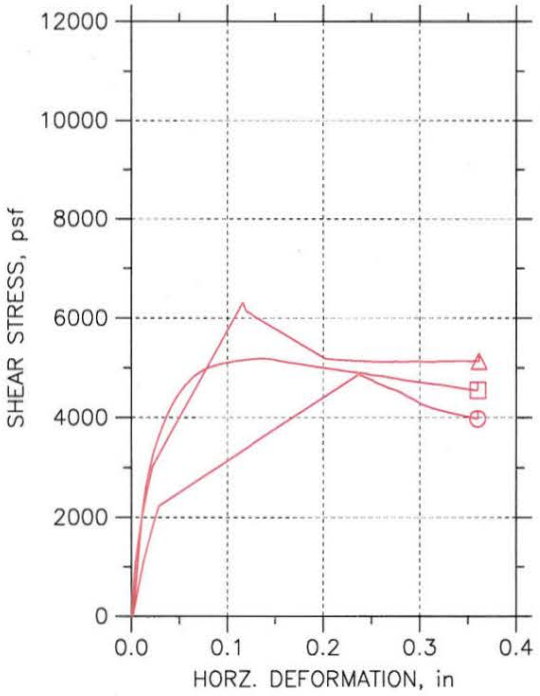
DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-234_C10-1
Test Specimen A

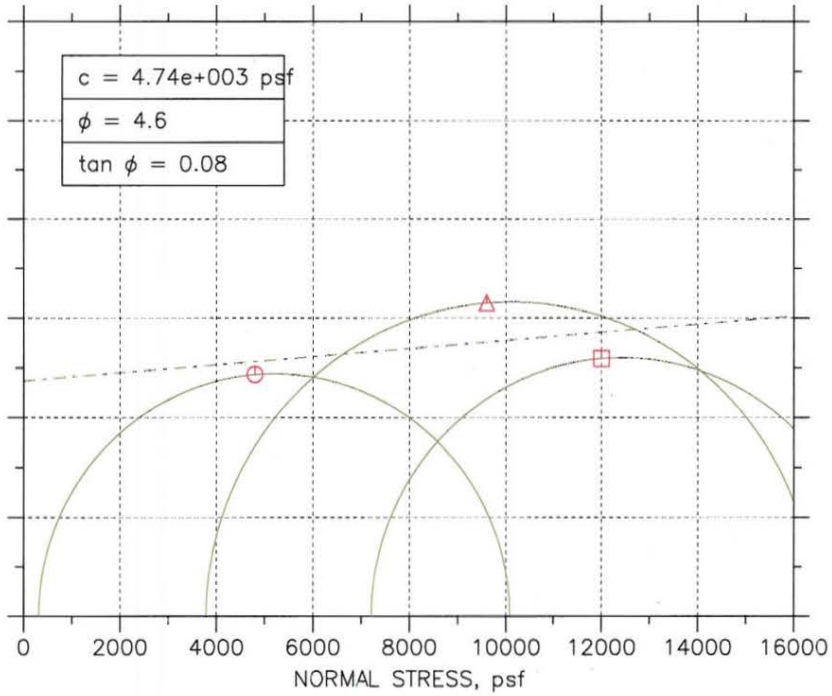
DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-234_C10-1
Test Specimen B

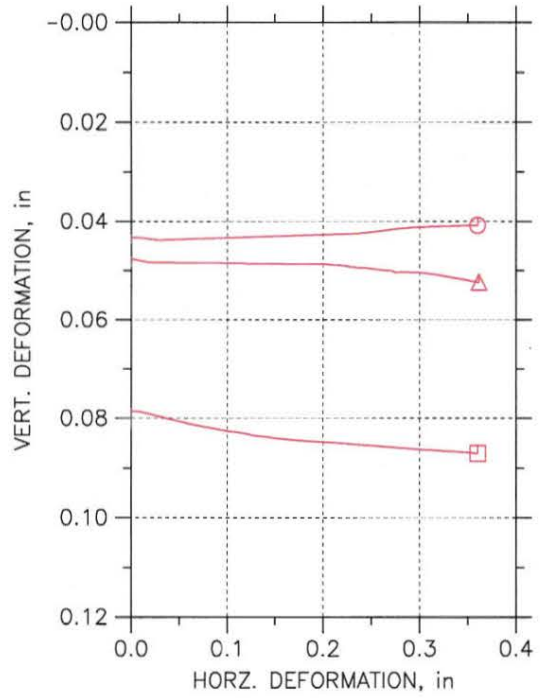


DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-234_C10-1
Test Specimen C

DIRECT SHEAR TEST REPORT







Symbol		⏲	△	⊡	
Test No.		DS10075A	DS10075B	DS10075C	
Sample No.		C08-1	C08-1	C08-1	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	2.375	2.375	2.375	
	Area, in^2	4.4301	4.4301	4.4301	
	Height, in	1	1	1	
	Water Content, %	39.67	32.74	38.53	
	Dry Density, pcf	78.683	87.196	80.575	
	Saturation, %	93.78	94.75	95.27	
	Void Ratio	1.1422	0.93305	1.0919	
Consol. Height, in		0.95753	0.95314	0.92293	
Consol. Void Ratio		1.0512	0.84248	0.93068	
Final	Water Content, %	38.80	30.67	33.51	
	Dry Density, pcf	82.034	92.017	88.261	
	Saturation, %	99.32	99.56	99.46	
	Void Ratio	1.0547	0.83178	0.90974	
Normal Stress, psf		4801	9601.3	11998	
Max. Shear Stress, psf		4867.5	6305.6	5190.2	
Ult. Shear Stress, psf		3974.5	5134.1	4553.1	
Time to Failure, min		41.03	20.533	24.427	
Disp. Rate, in/min		0.006	0.006	0.006	
Implied Specific Gravity		2.70	2.70	2.70	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

Project: I-10 HOV
Location: 07-LA-10
Project No.: 07-119341
Boring No.: R-09-236
Sample Type:
Description: Moist, Very Stiff, Brown, Silty Clay. Loose in tube.
Remarks: ASTM D 3080.

9/9/10

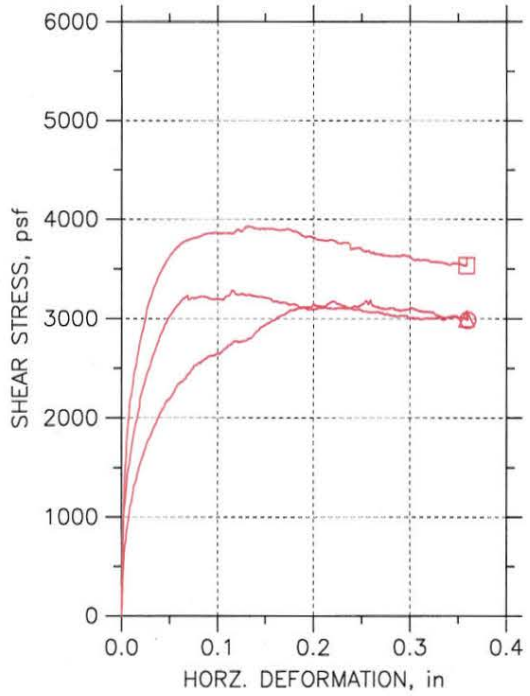
Wed, 08-SEP-2010 14:02:58

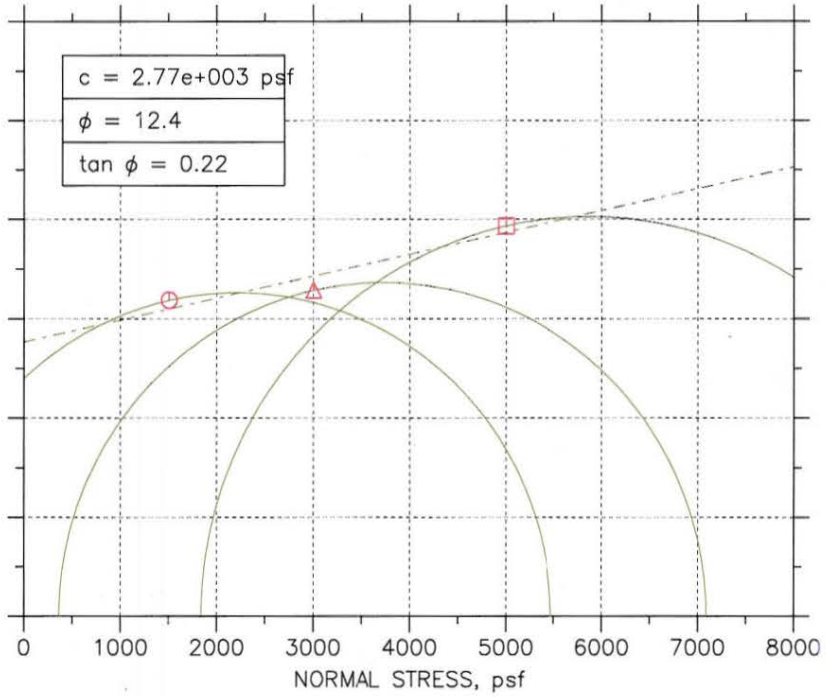
DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-236_C08-1
Test Specimen A

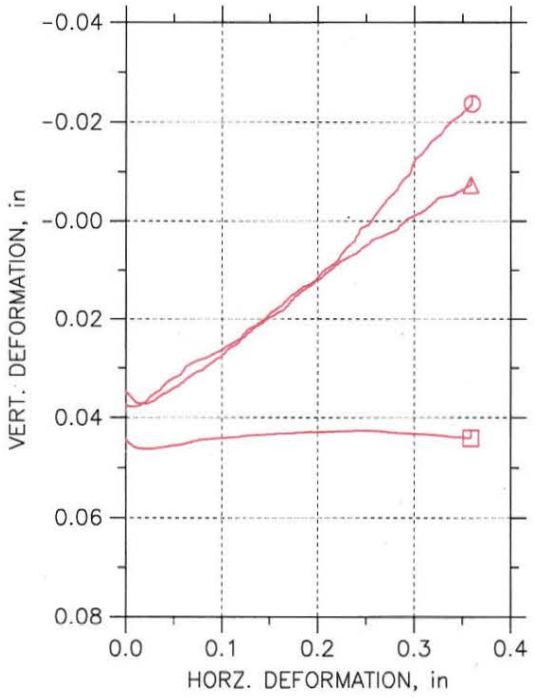
DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-236_C08-1
Test Specimen B

DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-236_C08-1
Test Specimen C

DIRECT SHEAR TEST REPORT







Symbol		⏲	△	⏍	
Test No.		DS10076A	DS10076B	DS10076C	
Sample No.		C02 -1	C02 -1	C02 -1	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	2.375	2.375	2.375	
	Area, in^2	4.4301	4.4301	4.4301	
	Height, in	1	1	1	
	Water Content, %	17.67	21.15	16.05	
	Dry Density, pcf	102.68	95.968	100.18	
	Saturation, %	72.31	73.72	61.85	
	Void Ratio	0.67204	0.7889	0.71366	
Consol. Height, in		0.96942	0.96487	0.95638	
Consol. Void Ratio		0.62091	0.72605	0.63892	
Final	Water Content, %	25.71	27.78	20.69	
	Dry Density, pcf	100.3	95.278	104.8	
	Saturation, %	99.36	95.26	89.16	
	Void Ratio	0.71162	0.80186	0.63806	
Normal Stress, psf		1507.2	3004.8	5000.5	
Max. Shear Stress, psf		3185	3284.8	3932.6	
Ult. Shear Stress, psf		2986.2	2997.6	3534.3	
Time to Failure, min		44.314	21.776	23.822	
Disp. Rate, in/min		0.006	0.006	0.006	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

Project: I-10 HOV
Location: 07-LA-10
Project No.: 07-119341
Boring No.: R-09-237
Sample Type: BRASS

Description: Moist, Very Stiff/Dense, Mottled Brown, Clay and Sand with Silt and Gravel. Heavily Patched.

Remarks: ASTM D 3080.

9/2/10

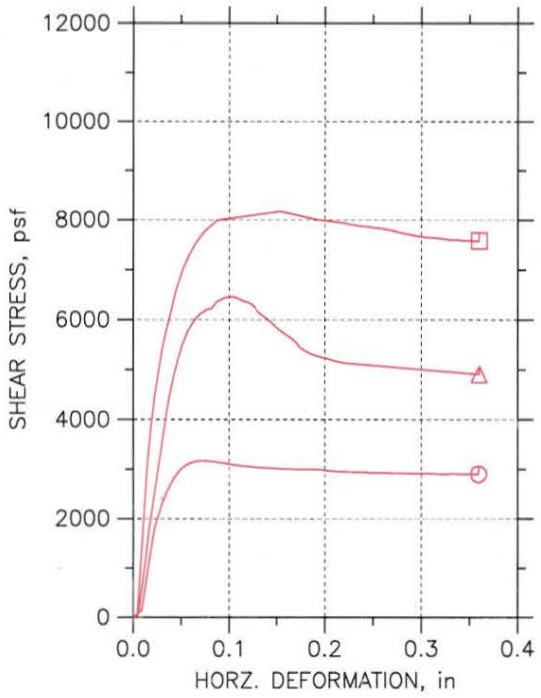
Wed, 08-SEP-2010 14:08:49

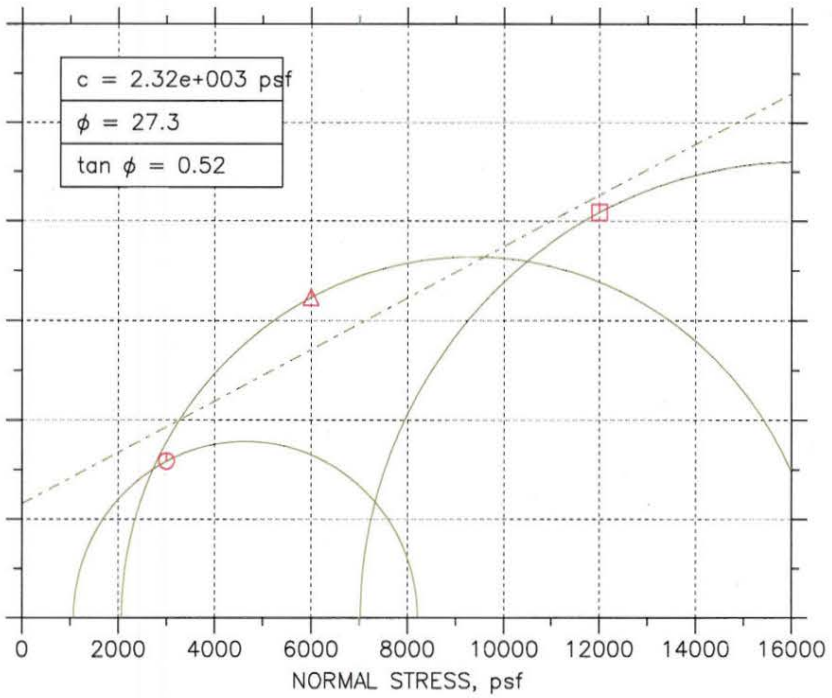
DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-237_C02-1
Test Specimen A

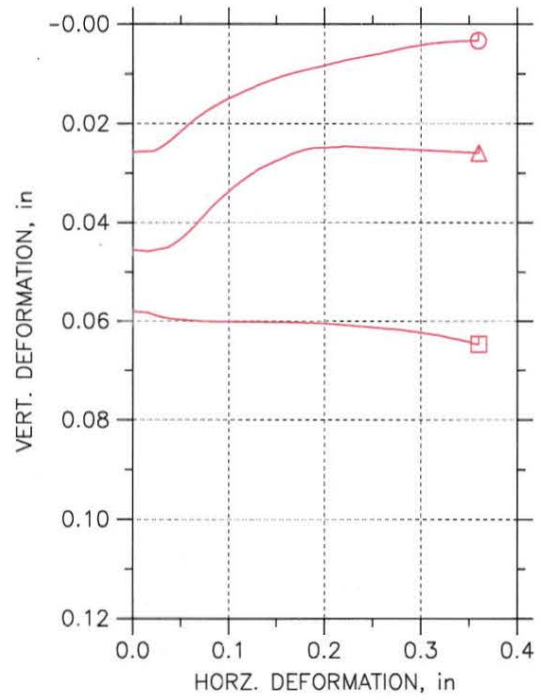
DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-237_C02-1
Test Specimen B

DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-237_C02-1
Test Specimen C

DIRECT SHEAR TEST REPORT







Symbol		⊙	△	□	
Test No.		DS10077A	DS10077B	DS10077C	
Sample No.		C05-1	C05-1	C05-1	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	2.375	2.375	2.375	
	Area, in^2	4.4301	4.4301	4.4301	
	Height, in	1	1	1	
	Water Content, %	31.84	31.87	31.53	
	Dry Density, pcf	88.572	86.079	89.174	
	Saturation, %	95.21	89.80	95.64	
	Void Ratio	0.90303	0.95816	0.89018	
Consol. Height, in		0.9751	0.95521	0.9439	
Consol. Void Ratio		0.85564	0.87045	0.78414	
Final	Water Content, %	33.01	33.47	28.35	
	Dry Density, pcf	88.871	88.376	95.342	
	Saturation, %	99.40	99.60	99.68	
	Void Ratio	0.89663	0.90726	0.76791	
Normal Stress, psf		3000.1	6002.2	12001	
Max. Shear Stress, psf		3171.7	6463.7	8174.3	
Ult. Shear Stress, psf		2898	4910	7581.5	
Time to Failure, min		13.357	18.458	27.019	
Disp. Rate, in/min		0.006	0.006	0.006	
Implied Specific Gravity		2.70	2.70	2.70	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

Project: I-10 HOV	
Location: 07-LA-10	
Project No.: 07-119341	
Boring No.: R-09-238	
Sample Type:	
Description: Moist, Very Sitff, Mottled Brown, Clay with Silt, Sand & Gravel. Patched.	
Remarks: ASTM D 3080.	

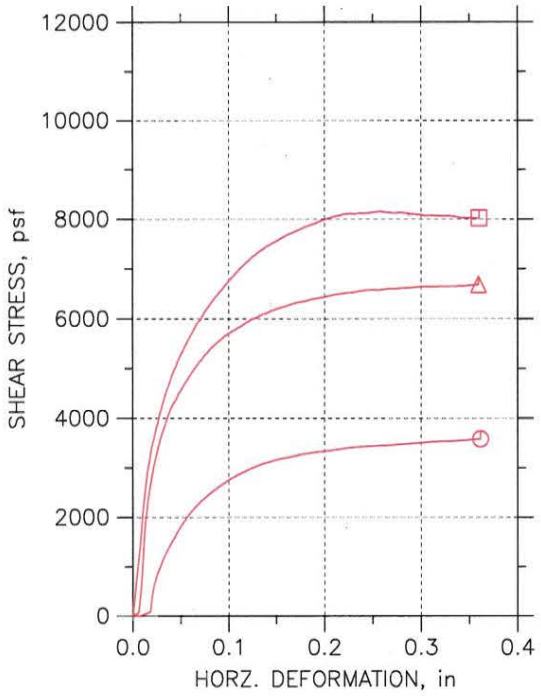
Wed, 08-SEP-2010 14:18:05

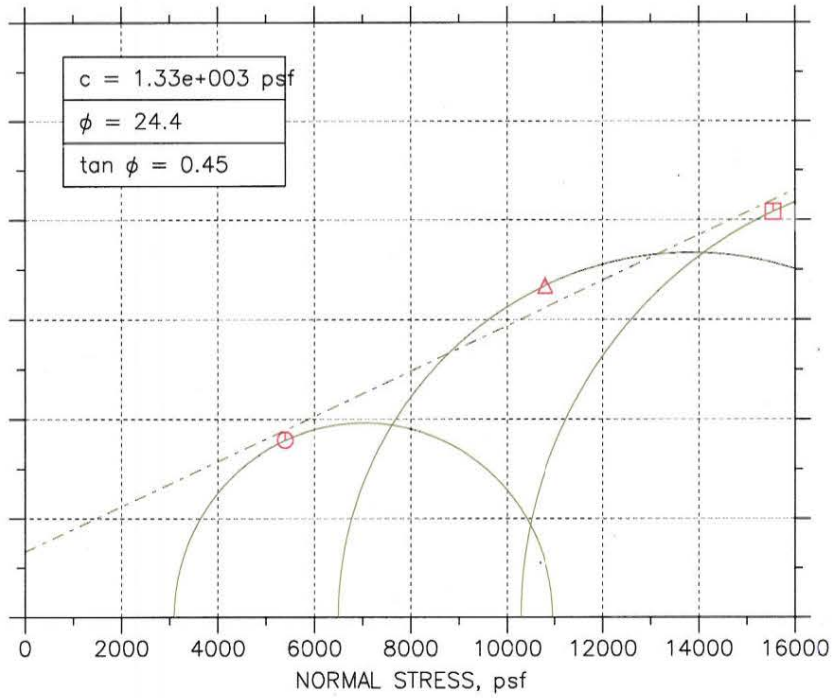
DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-238_C05-1
Test Specimen A

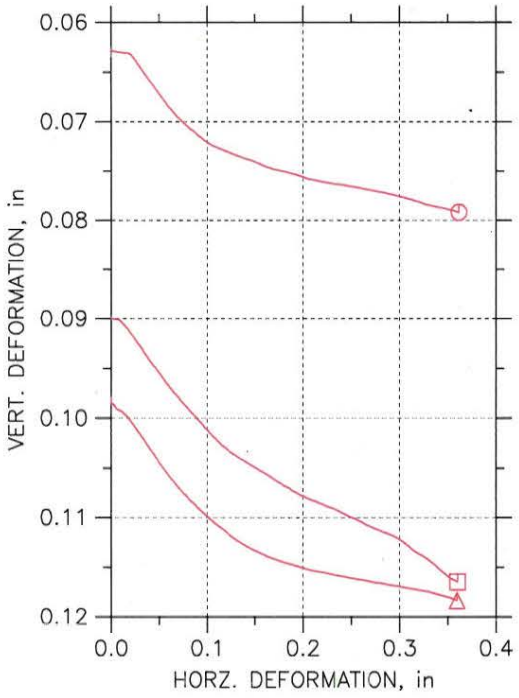
DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-238_C05-1
Test Specimen B

DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-238_C05-1
Test Specimen C

DIRECT SHEAR TEST REPORT







Symbol		⏲	△	⏍	
Test No.		DS10078A	DS10078B	DS10078C	
Sample No.		C10-1	C10-1	C10-1	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	2.375	2.375	2.375	
	Area, in^2	4.4301	4.4301	4.4301	
	Height, in	1	1	1	
	Water Content, %	44.31	43.00	43.44	
	Dry Density, pcf	76.275	77.995	77.393	
	Saturation, %	98.88	99.99	99.58	
	Void Ratio	1.2098	1.1611	1.1779	
Consol. Height, in		0.93849	0.90291	0.91281	
Consol. Void Ratio		1.0739	0.95127	0.98801	
Final	Water Content, %	38.11	33.41	34.11	
	Dry Density, pcf	82.837	88.468	87.598	
	Saturation, %	99.43	99.64	99.65	
	Void Ratio	1.0348	0.90528	0.9242	
Normal Stress, psf		5398.1	10799	15541	
Max. Shear Stress, psf		3579.9	6680.7	8160.1	
Ult. Shear Stress, psf		3579.9	6680.7	8020.3	
Time to Failure, min		122.92	123	88.738	
Disp. Rate, in/min		0.003	0.003	0.003	
Implied Specific Gravity		2.70	2.70	2.70	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

Project: I-10 HOV	
Location: 07-LA-10	
Project No.: 07-119341	
Boring No.: R-09-238	
Sample Type:	
Description: Moist, Mottled Grey, Very Firm Clay with Gravel	
Remarks: ASTM D 3080.	

Wp 9/9

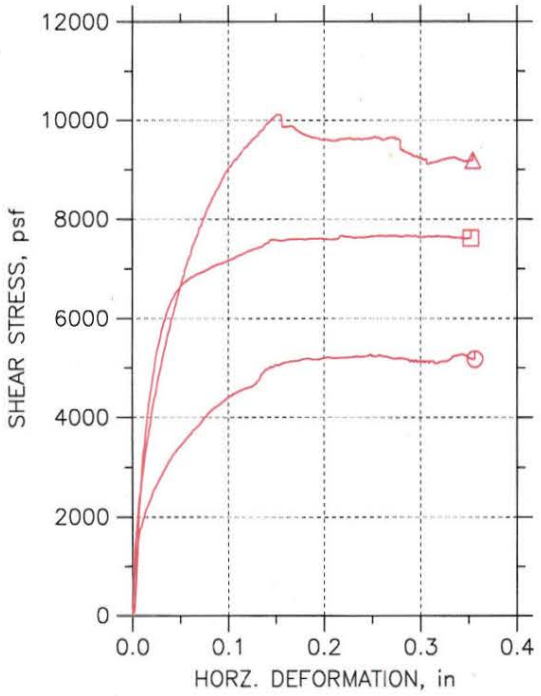
Wed, 08-SEP-2010 14:28:12

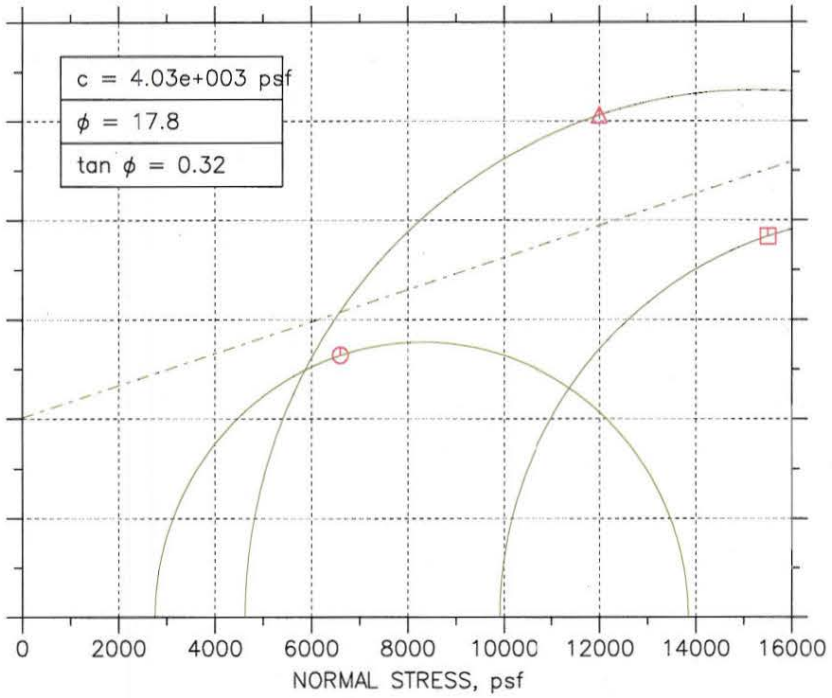
DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-238_C10-1
Test Specimen A

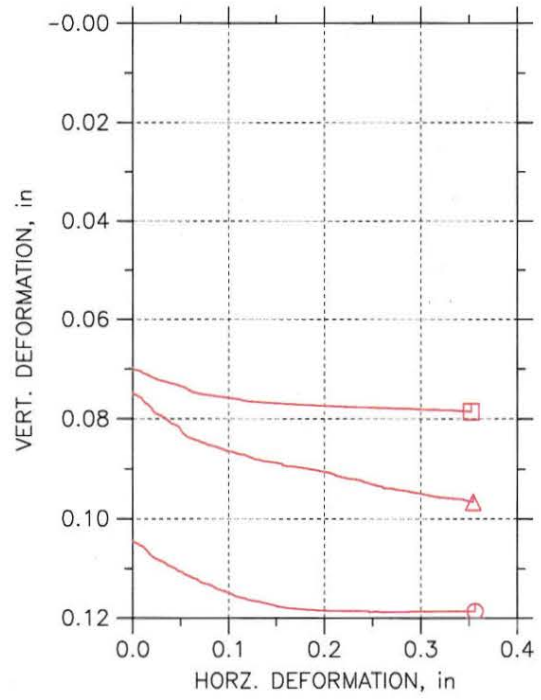
DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-238_C10-1
Test Specimen B

DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-238_C10-1
Test Specimen C

DIRECT SHEAR TEST REPORT







Symbol		⏲	△	⏍	
Test No.		DS10079A	DS10079B	DS10079C	
Sample No.		C012-2	C012-2	C012-2	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	2.375	2.375	2.375	
	Area, in^2	4.4301	4.4301	4.4301	
	Height, in	1	1	1	
	Water Content, %	42.22	36.31	31.77	
	Dry Density, pcf	77.393	82.897	90.12	
	Saturation, %	95.31	93.23	96.56	
	Void Ratio	1.2182	1.071	0.90498	
Consol. Height, in		0.90225	0.92547	0.9306	
Consol. Void Ratio		1.0014	0.91662	0.77277	
Final	Water Content, %	34.44	31.54	27.29	
	Dry Density, pcf	87.82	91.772	97.806	
	Saturation, %	99.20	99.60	99.37	
	Void Ratio	0.95487	0.87068	0.75527	
Normal Stress, psf		6599.6	11997	15499	
Max. Shear Stress, psf		5279.1	10118	7670	
Ult. Shear Stress, psf		5175.8	9182.8	7618.3	
Time to Failure, min		35.598	16.979	30.114	
Disp. Rate, in/min		0.01	0.01	0.01	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

Project: I-10 HOV

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-238

Sample Type: BRASS

Description: Moist, Very Firm, Reddish Light Brown with Marbled White, Silt with Gravel. Crumbly. Patched.

Remarks: ASTM D 3080.

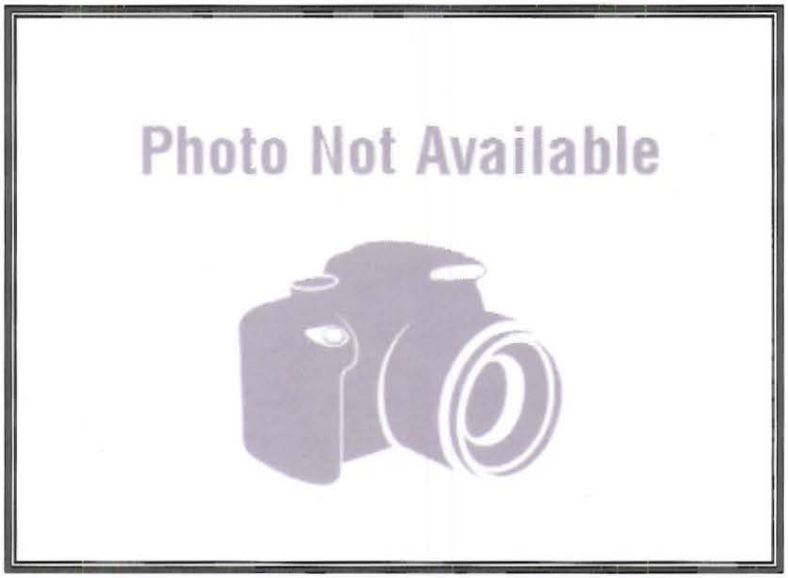
jw 9/9

Wed, 08-SEP-2010 14:41:03

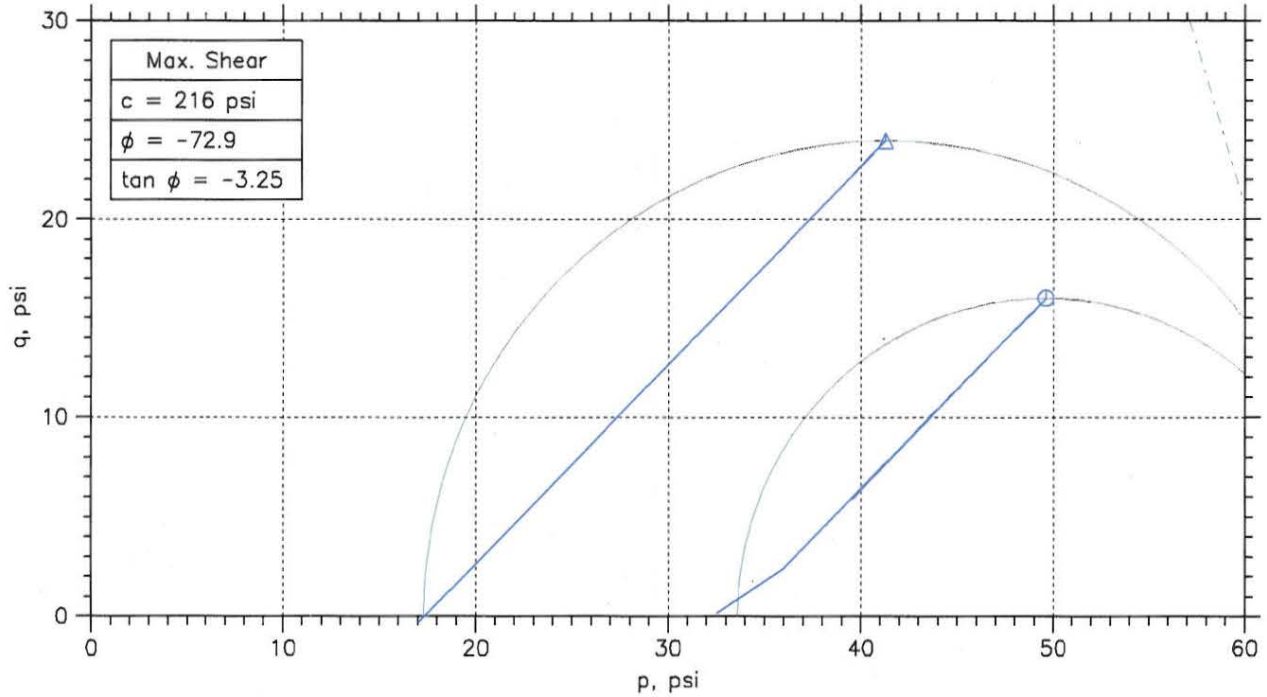
DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-238_C12-2
Test Specimen A

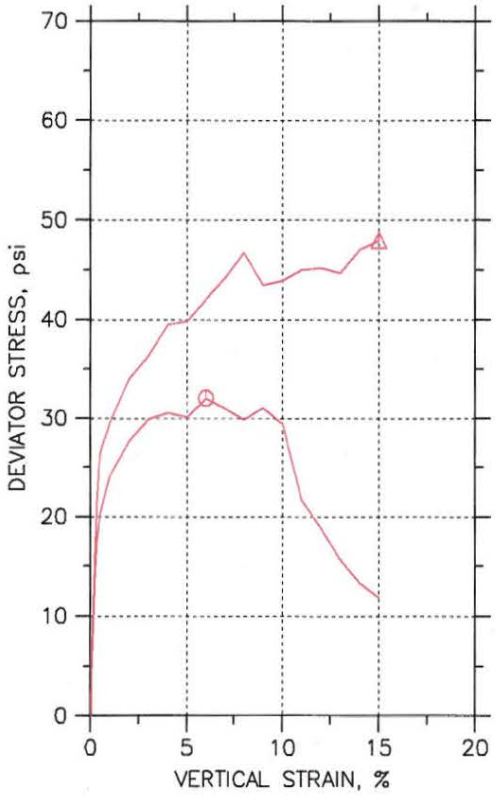
DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-238_C12-2
Test Specimen B

DIRECT SHEAR
JOB #: 07-119341
SAMPLE #: R-09-238_C12-2
Test Specimen C



CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⏲	△		
Sample No.		C04-1	C04-2		
Test No.		C10-024A	C10-024B		
Depth		20	20		
Initial	Diameter, in	2.375	2.375		
	Height, in	6	6		
	Water Content, %	34.9	32.2		
	Dry Density, pcf	84.8	89.09		
	Saturation, %	93.7	95.5		
	Void Ratio	1.02	0.927		
Before Shear	Water Content, %	40.3	34.9		
	Dry Density, pcf	81.29	87.61		
	Saturation*, %	99.7	100.0		
	Void Ratio	1.11	0.96		
	Back Press., psi	93.25	102.		
Ver. Eff. Cons. Stress, psi		34.72	17.34		
Shear Strength, psi		16.01	23.97		
Strain at Failure, %		6	15		
Strain Rate, %/min		0.1	0.1		
B-Value		1.00	1.00		
Implied Specific Gravity		2.75	2.75		
Liquid Limit		---	---		
Plastic Limit		---	---		

Caltrans

Project:

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-235

Sample Type: Brass

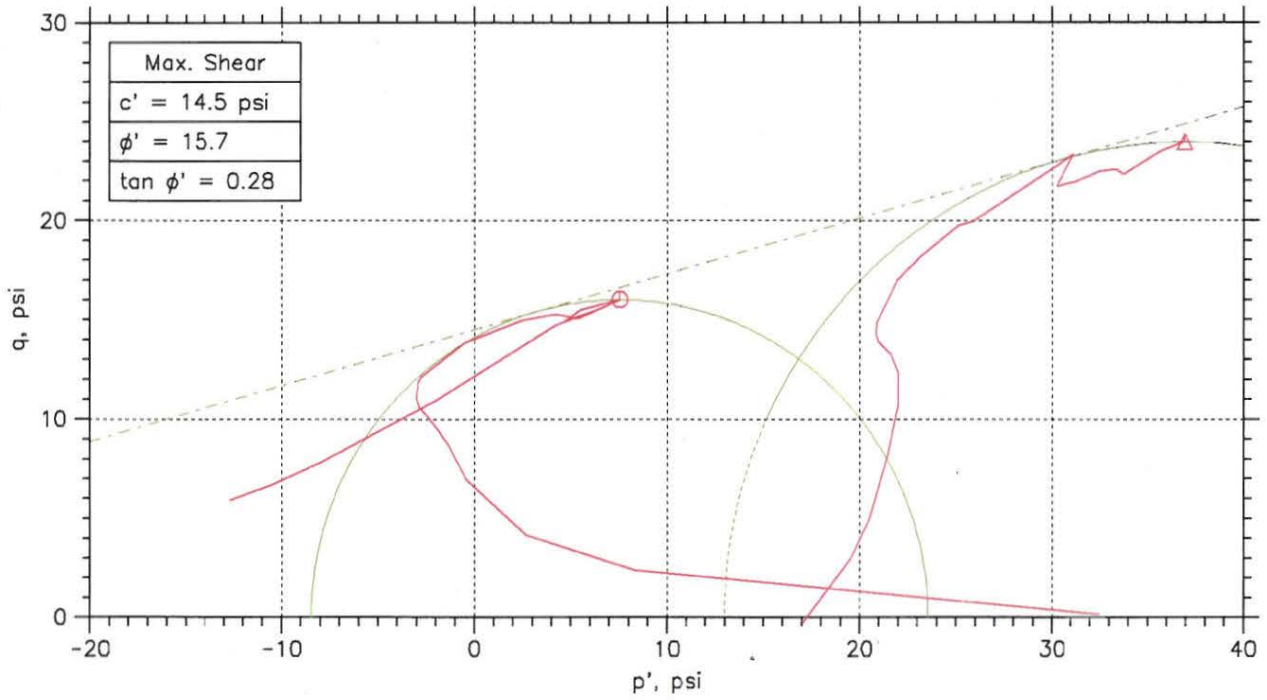
Description: Moist, Very Stiff, Brown with Dark Grey, White & Red, Silt and Clay.

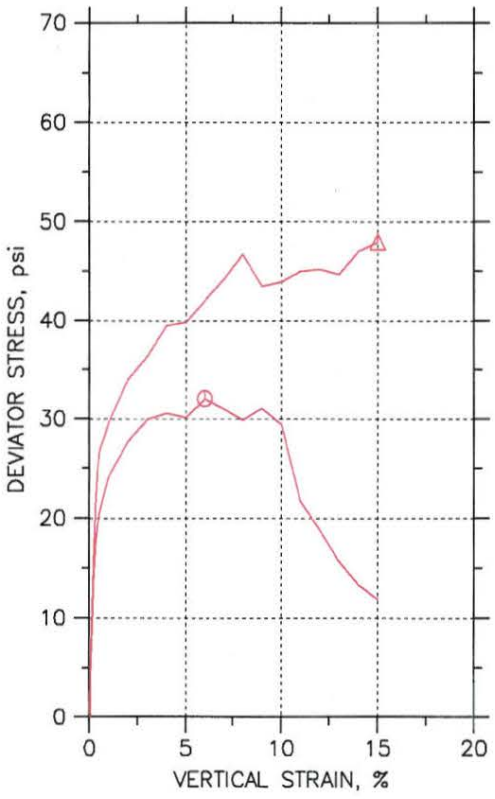
Remarks: GL NO. 10-042

10/13/10

Phase calculations based on start and end of test.

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⊙	△		
Sample No.		C04-1	C04-2		
Test No.		C10-024A	C10-024B		
Depth		20	20		
Initial	Diameter, in	2.375	2.375		
	Height, in	6	6		
	Water Content, %	34.9	32.2		
	Dry Density, pcf	84.8	89.09		
	Saturation, %	93.7	95.5		
	Void Ratio	1.02	0.927		
Before Shear	Water Content, %	40.3	34.9		
	Dry Density, pcf	81.29	87.61		
	Saturation*, %	99.7	100.0		
	Void Ratio	1.11	0.96		
	Back Press., psi	93.25	102.		
Ver. Eff. Cons. Stress, psi		34.72	17.34		
Shear Strength, psi		16.01	23.97		
Strain at Failure, %		6	15		
Strain Rate, %/min		0.1	0.1		
B-Value		1.00	1.00		
Implied Specific Gravity		2.75	2.75		
Liquid Limit		---	---		
Plastic Limit		---	---		

Caltrans

Project:

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-235

Sample Type: Brass

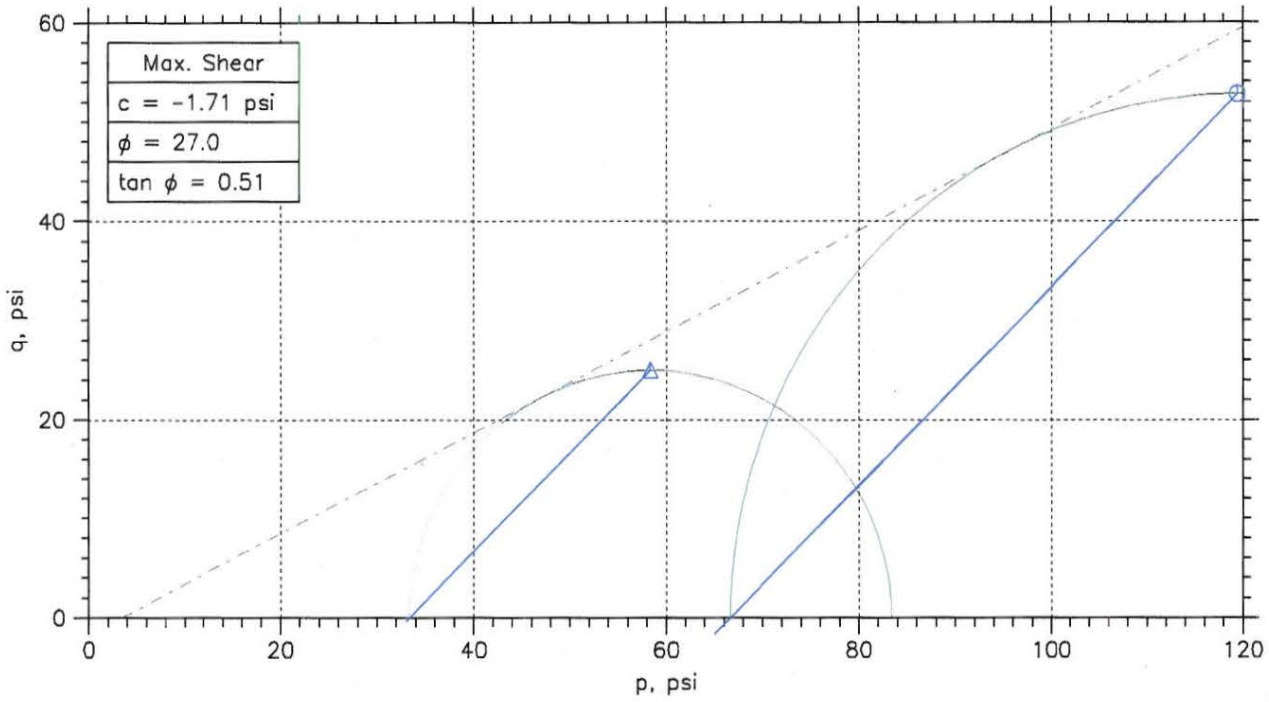
Description: Moist, Very Stiff, Brown with Dark Grey, White & Red, Silt and Clay.

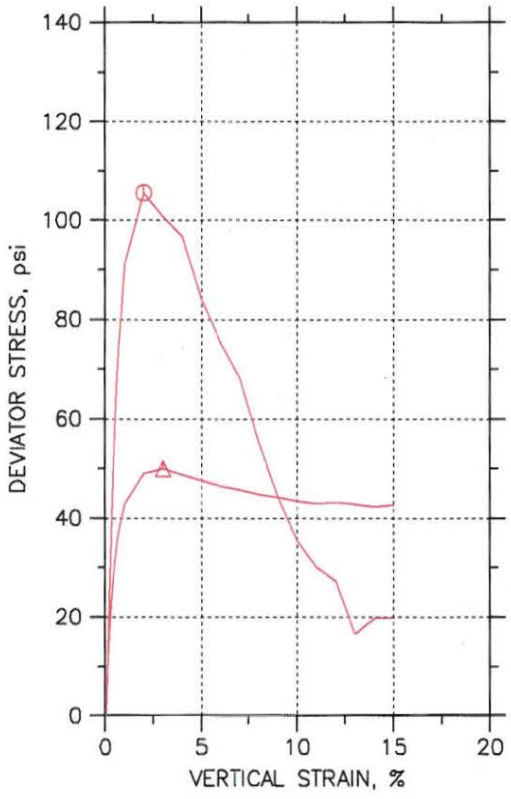
Remarks: GL NO. 10-042

10/7/10

Phase calculations based on start and end of test.

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⏲	△		
Sample No.		C08-1	C08-2		
Test No.		C10-025A	C10-025B		
Depth		40	40		
Initial	Diameter, in	2.375	2.375		
	Height, in	6	5.95		
	Water Content, %	32.6	34.4		
	Dry Density, pcf	88.73	85.78		
	Saturation, %	95.8	94.6		
	Void Ratio	0.935	1		
Before Shear	Water Content, %	34.8	35.2		
	Dry Density, pcf	87.21	87.26		
	Saturation*, %	98.8	100.0		
	Void Ratio	0.969	0.967		
	Back Press., psi	102.	63.		
Ver. Eff. Cons. Stress, psi		66.69	33.33		
Shear Strength, psi		52.78	25.01		
Strain at Failure, %		2	3		
Strain Rate, %/min		0.1	0.1		
B-Value		0.74	1.00		
Implied Specific Gravity		2.75	2.75		
Liquid Limit		---	---		
Plastic Limit		---	---		

Caltrans

Project:

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-235

Sample Type: Brass

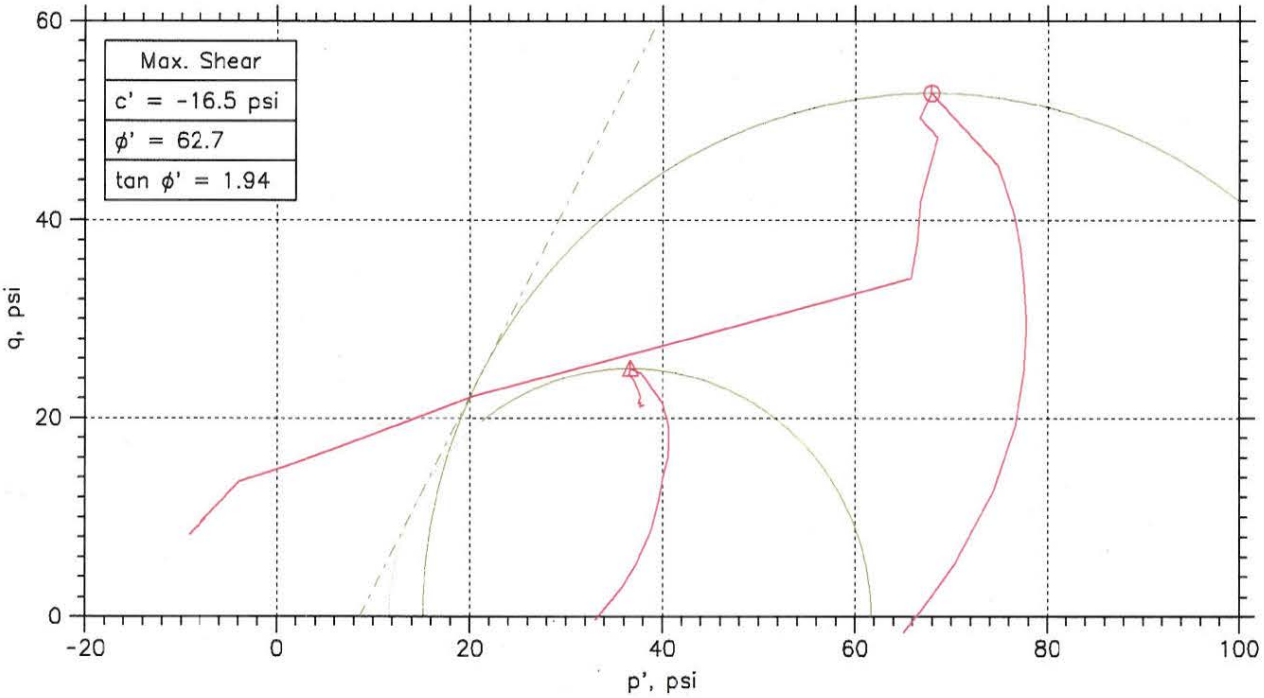
Description: Moist, Very Stiff, Brown with Dark Grey w/Red, Silt and Clay.

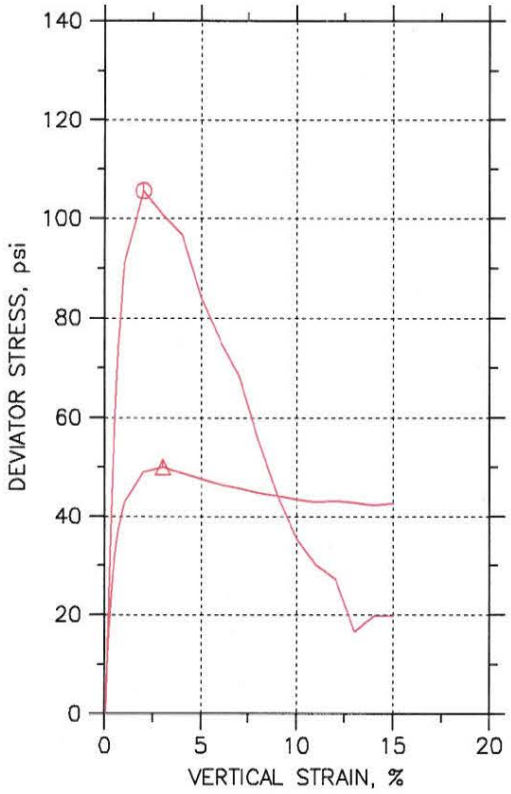
Remarks:

10/3/10

Phase calculations based on start and end of test.

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⏀	△		
Sample No.		C08-1	C08-2		
Test No.		C10-025A	C10-025B		
Depth		40	40		
Initial	Diameter, in	2.375	2.375		
	Height, in	6	5.95		
	Water Content, %	32.6	34.4		
	Dry Density, pcf	88.73	85.78		
	Saturation, %	95.8	94.6		
	Void Ratio	0.935	1		
Before Shear	Water Content, %	34.8	35.2		
	Dry Density, pcf	87.21	87.26		
	Saturation*, %	98.8	100.0		
	Void Ratio	0.969	0.967		
	Back Press., psi	102.	63.		
Ver. Eff. Cons. Stress, psi		66.69	33.33		
Shear Strength, psi		52.78	25.01		
Strain at Failure, %		2	3		
Strain Rate, %/min		0.1	0.1		
B-Value		0.74	1.00		
Implied Specific Gravity		2.75	2.75		
Liquid Limit		---	---		
Plastic Limit		---	---		

Caltrans

Project:

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-235

Sample Type: Brass

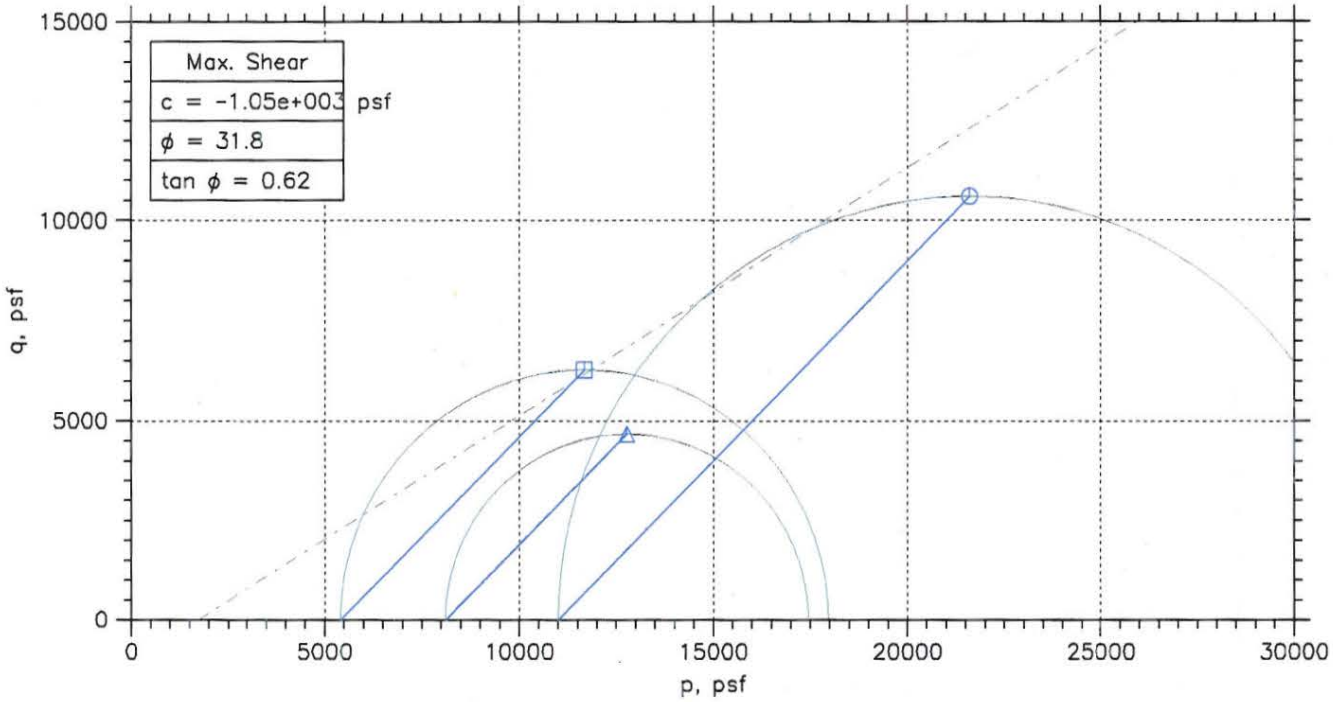
Description: Moist, Very Stiff, Brown with Dark Grey w/Red, Silt and Clay.

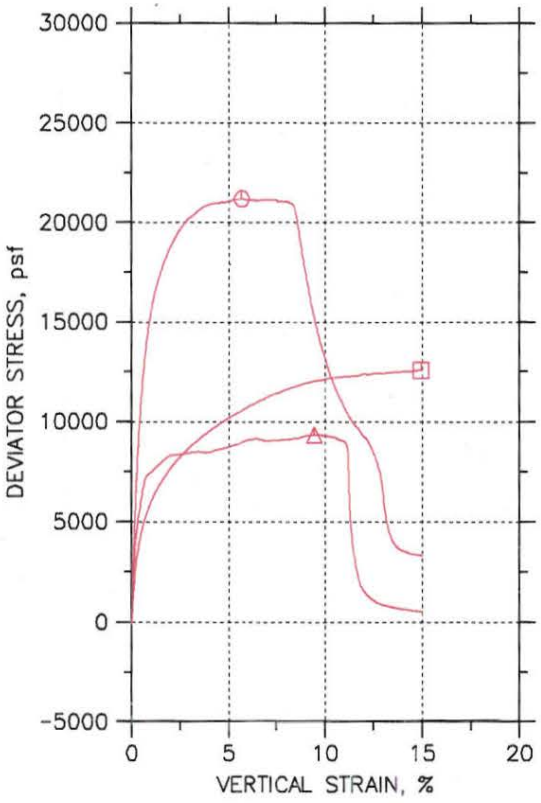
Remarks:

10/3/10

Phase calculations based on start and end of test.

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⏲	△	⏍	
Sample No.		C10-1	C10-2	C10-3	
Test No.		U10-026A	U10-026B	U10-026C	
Depth		50	50	50	
Initial	Diameter, in	2.375	2.375	2.375	
	Height, in	6.03	6.01	5.98	
	Water Content, %	27.1	25.8	28.9	
	Dry Density, pcf	91.6	96.91	88.38	
	Saturation, %	85.2	92.0	84.4	
	Void Ratio	0.874	0.772	0.942	
Before Shear	Water Content, %	31.0	29.9	32.5	
	Dry Density, pcf	92.61	94.28	90.66	
	Saturation*, %	100.0	100.0	100.0	
	Void Ratio	0.854	0.821	0.894	
	Back Press., psf	14830	14830	14830	
Ver. Eff. Cons. Stress, psf		11000	8099	5400	
Shear Strength, psf		10600	4669	6279	
Strain at Failure, %		5.71	9.45	15	
Strain Rate, %/min		0.1	0.1	0.1	
B-Value		0.95	0.95	0.95	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	

Caltrans

Project: I-10 HOV

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-235

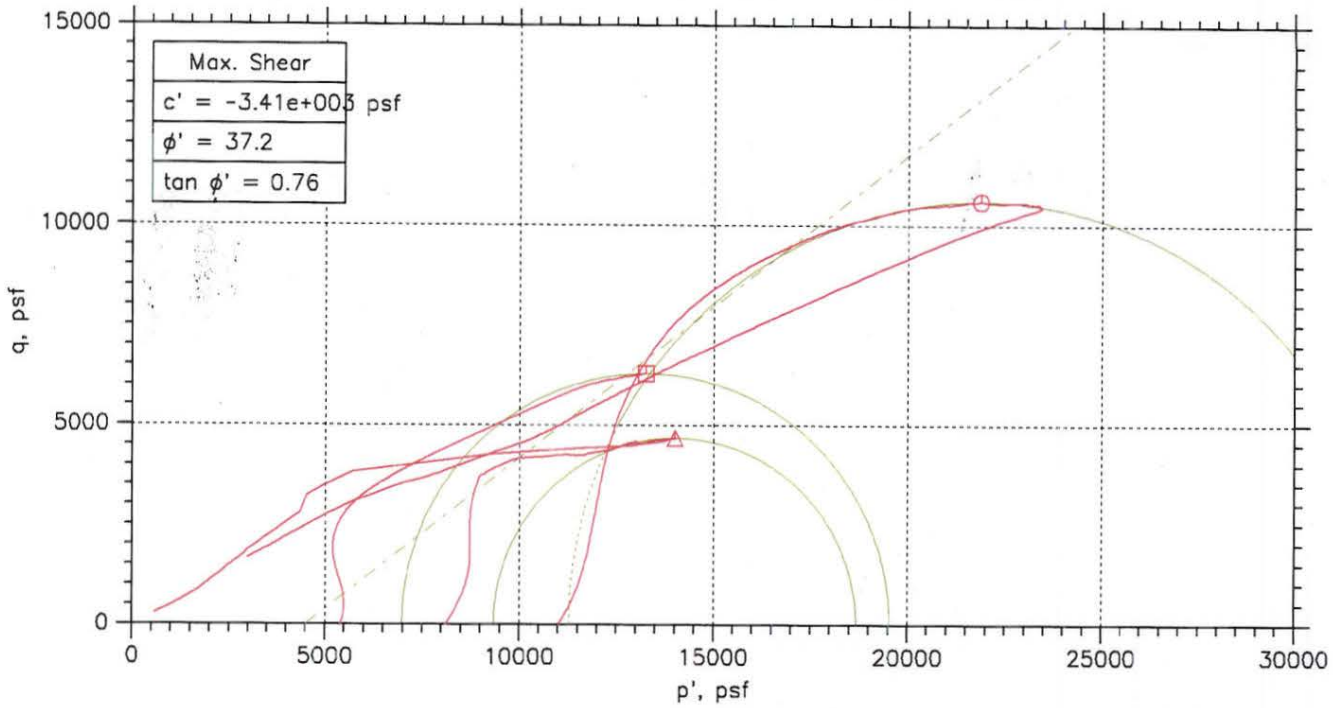
Sample Type: BRASS

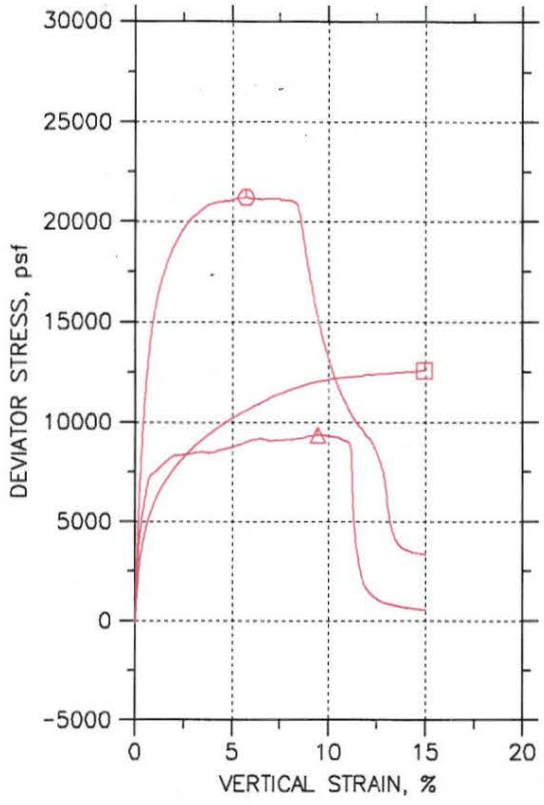
Description: Moist, Very Stiff, Dark Brown, Silty Clay.

Remarks: GL NO. 10-042

11/9/10

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⊙	△	⊡	
Sample No.		C10-1	C10-2	C10-3	
Test No.		U10-026A	U10-026B	U10-026C	
Depth		50	50	50	
Initial	Diameter, in	2.375	2.375	2.375	
	Height, in	6.03	6.01	5.98	
	Water Content, %	27.1	25.8	28.9	
	Dry Density, pcf	91.6	96.91	88.38	
	Saturation, %	85.2	92.0	84.4	
	Void Ratio	0.874	0.772	0.942	
Before Shear	Water Content, %	31.0	29.9	32.5	
	Dry Density, pcf	92.61	94.28	90.66	
	Saturation*, %	100.0	100.0	100.0	
	Void Ratio	0.854	0.821	0.894	
	Back Press., psf	14830	14830	14830	
Ver. Eff. Cons. Stress, psf		11000	8099	5400	
Shear Strength, psf		10600	4669	6279	
Strain at Failure, %		5.71	9.45	15	
Strain Rate, %/min		0.1	0.1	0.1	
B-Value		0.95	0.95	0.95	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	

Caltrans

Project: I-10 HOV

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-235

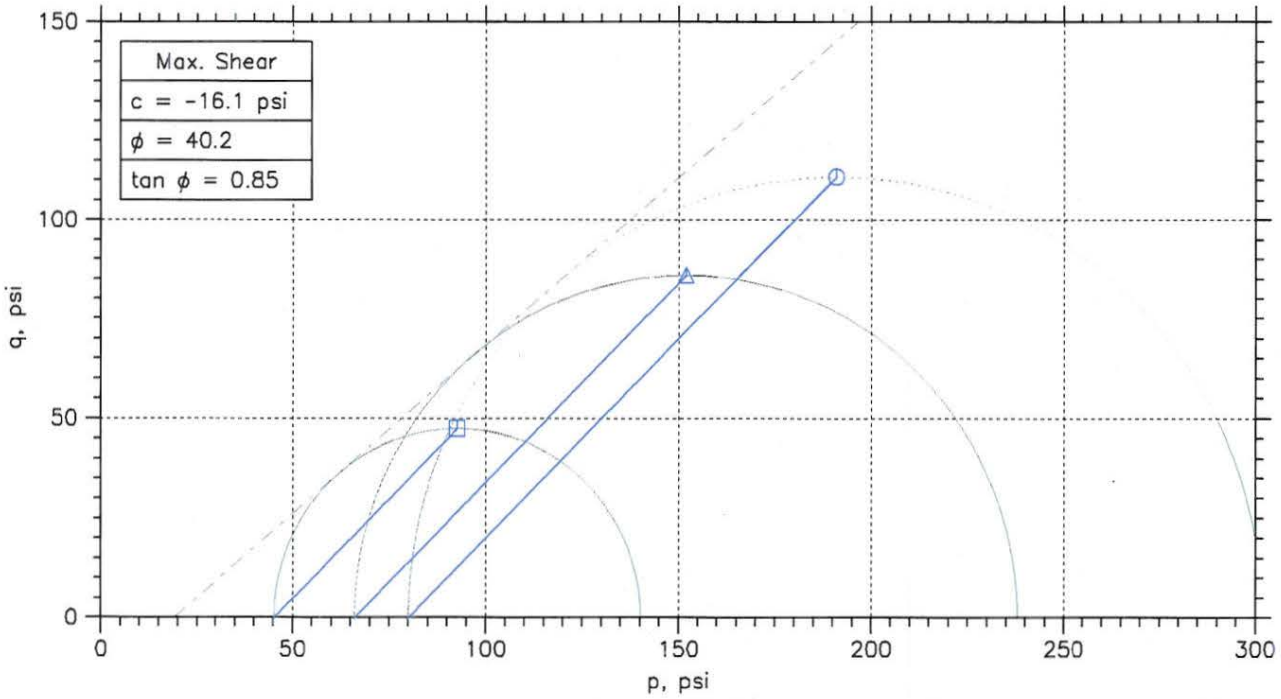
Sample Type: BRASS

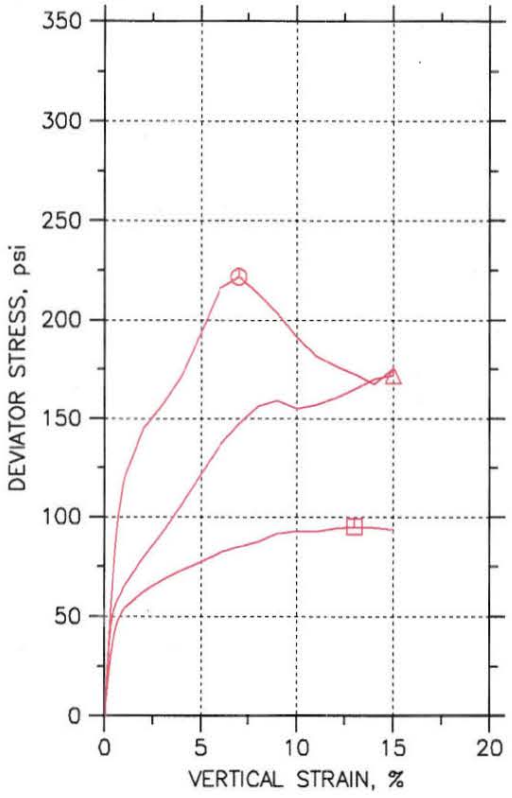
Description: Moist, Very Stiff, Dark Brown, Silty Clay.

Remarks: GL NO. 10-042

11/9/10

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⊙	△	⊡	
Sample No.		C15-1	C15-2	C15-3	
Test No.		C10-027A	C10-027B	C10-027C	
Depth		70	70	70	
Initial	Diameter, in	2.374	2.375	2.375	
	Height, in	5.75	6	6	
	Water Content, %	28.7	19.4	32.8	
	Dry Density, pcf	88.41	94.45	84.26	
	Saturation, %	83.9	65.3	86.8	
	Void Ratio	0.942	0.818	1.04	
Before Shear	Water Content, %	30.7	28.9	33.0	
	Dry Density, pcf	93.15	95.62	90.02	
	Saturation*, %	100.0	100.0	100.0	
	Void Ratio	0.843	0.795	0.907	
	Back Press., psi	103.	103.	103.	
Ver. Eff. Cons. Stress, psi		80.01	65.99	45.14	
Shear Strength, psi		110.9	85.93	47.49	
Strain at Failure, %		7	15	13	
Strain Rate, %/min		0.1	0.1	0.1	
B-Value		0.98	0.95	0.96	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	

Caltrans

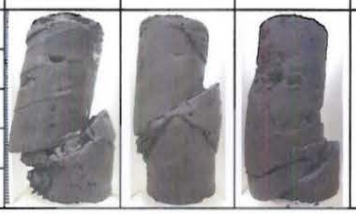
Project:

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-235

Sample Type: Brass



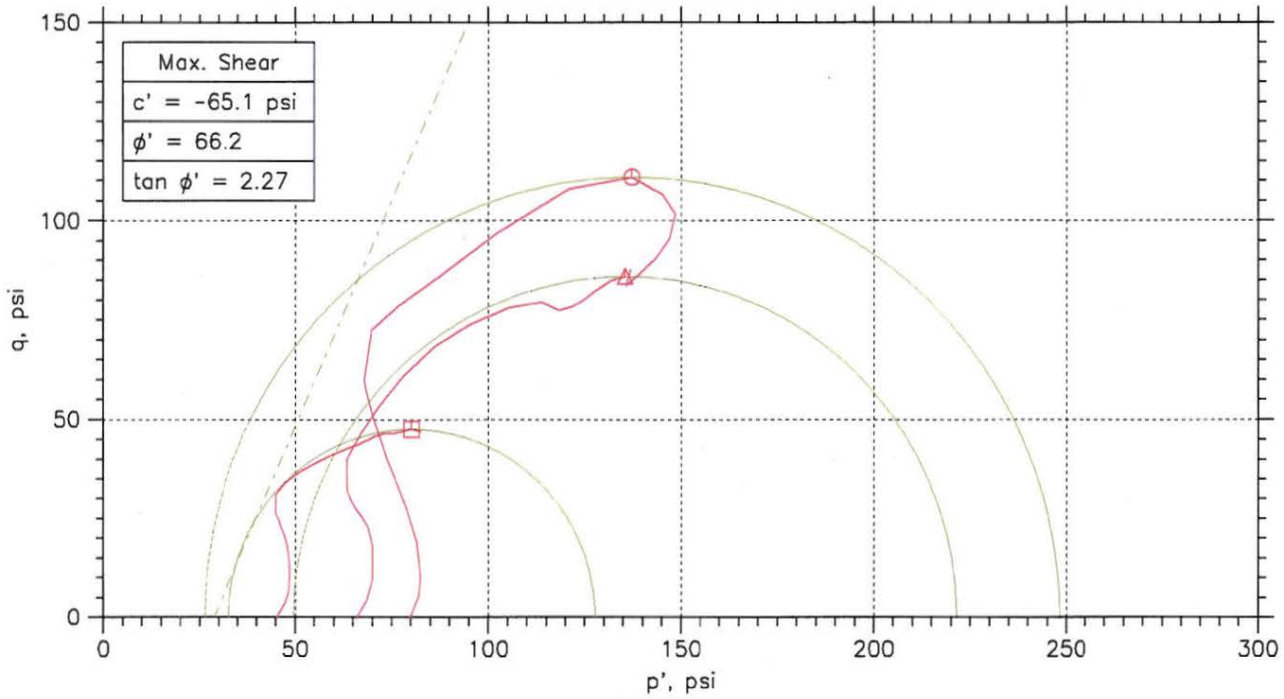
Description: Moist, Stiff, Very Dark Brown, Silty Clay.

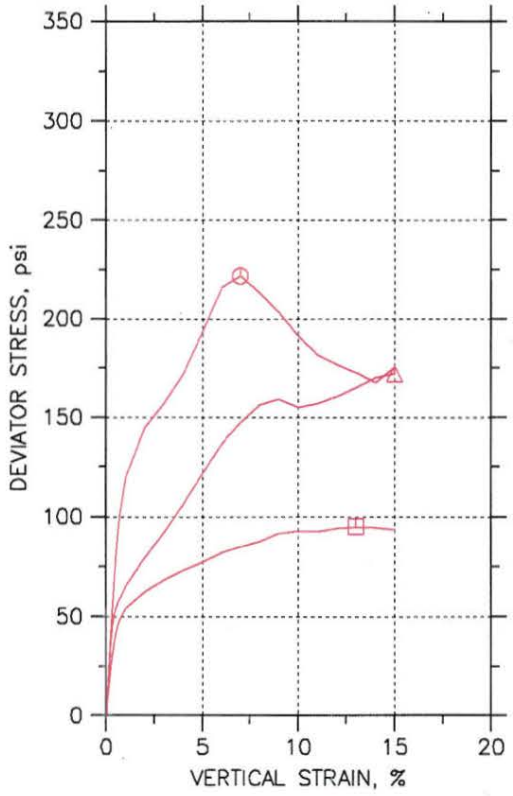
Remarks:

10/3/10

Phase calculations based on start and end of test.

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⏲	△	⏍	
Sample No.		C15-1	C15-2	C15-3	
Test No.		C10-027A	C10-027B	C10-027C	
Depth		70	70	70	
Initial	Diameter, in	2.374	2.375	2.375	
	Height, in	5.75	6	6	
	Water Content, %	28.7	19.4	32.8	
	Dry Density, pcf	88.41	94.45	84.26	
	Saturation, %	83.9	65.3	86.8	
	Void Ratio	0.942	0.818	1.04	
Before Shear	Water Content, %	30.7	28.9	33.0	
	Dry Density, pcf	93.15	95.62	90.02	
	Saturation*, %	100.0	100.0	100.0	
	Void Ratio	0.843	0.795	0.907	
	Back Press., psi	103.	103.	103.	
Ver. Eff. Cons. Stress, psi		80.01	65.99	45.14	
Shear Strength, psi		110.9	85.93	47.49	
Strain at Failure, %		7	15	13	
Strain Rate, %/min		0.1	0.1	0.1	
B-Value		0.98	0.95	0.96	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	

Caltrans

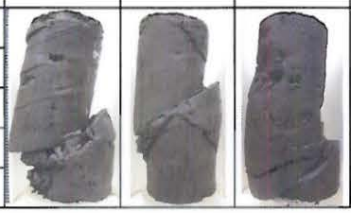
Project:

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-235

Sample Type: Brass



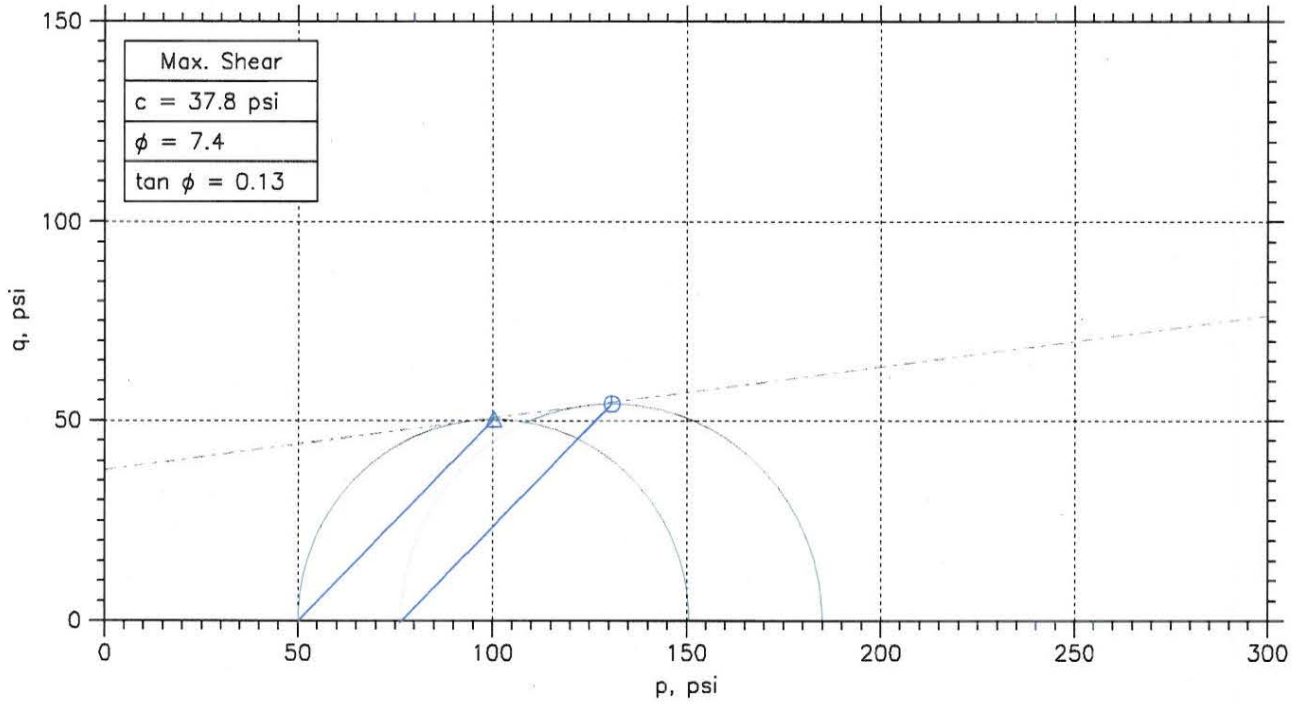
Description: Moist, Stiff, Very Dark Brown, Silty Clay.

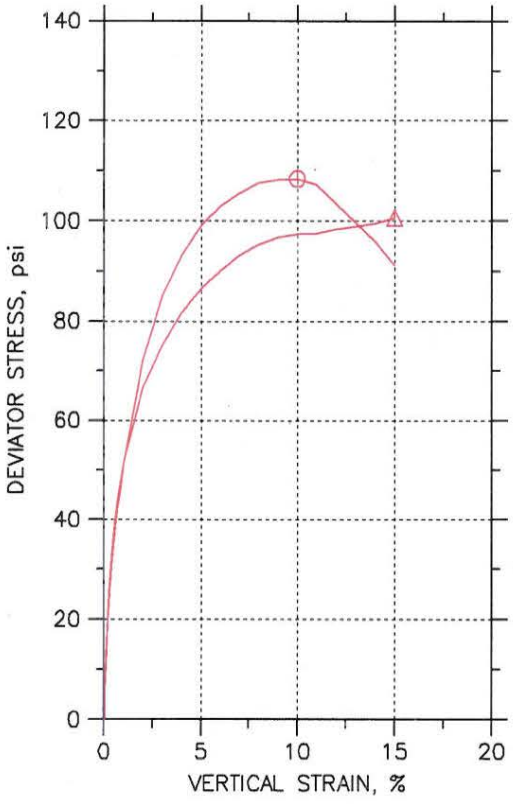
Remarks:

10/31/10

Phase calculations based on start and end of test.

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⏀	△		
Sample No.		C16-1	C16-2		
Test No.		C10-030A	C10-030B		
Depth		80	80		
Initial	Diameter, in	2.375	2.375		
	Height, in	6	5.89		
	Water Content, %	22.3	20.9		
	Dry Density, pcf	97.3	99.37		
	Saturation, %	80.1	79.1		
	Void Ratio	0.764	0.728		
Before Shear	Water Content, %	24.7	23.4		
	Dry Density, pcf	102.3	104.4		
	Saturation*, %	100.0	100.0		
	Void Ratio	0.679	0.644		
	Back Press., psi	103.	103.		
Ver. Eff. Cons. Stress, psi		76.5	50.		
Shear Strength, psi		54.18	50.29		
Strain at Failure, %		10	15		
Strain Rate, %/min		0.1	0.1		
B-Value		0.10	0.84		
Implied Specific Gravity		2.75	2.75		
Liquid Limit		---	---		
Plastic Limit		---	---		

Caltrans

Project: I-10 HOV

Location: 07-LA-10

Project No.: 07-119341

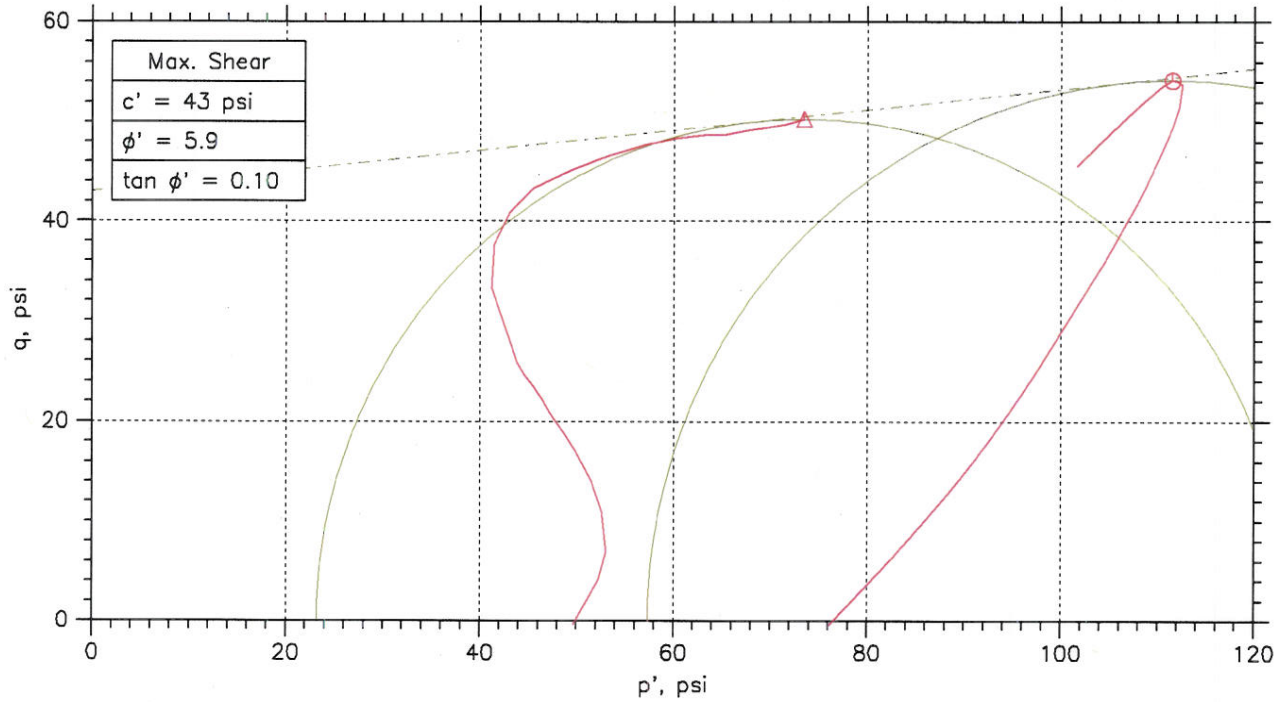
Boring No.: R-09-236

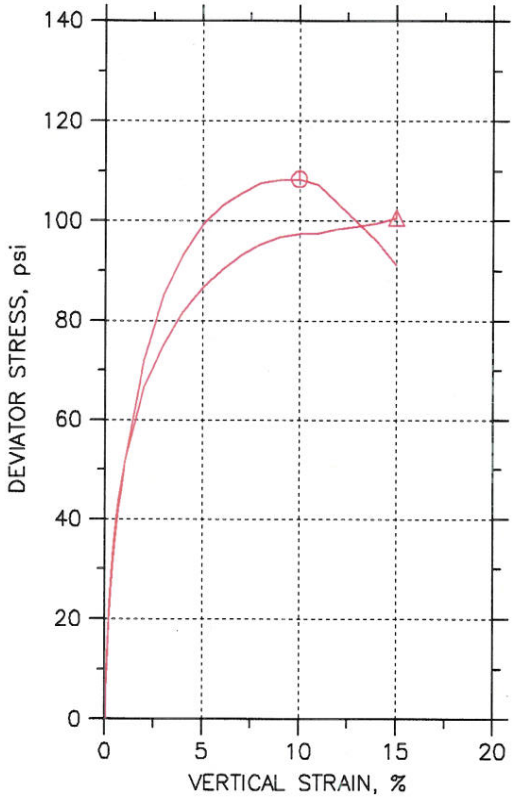
Sample Type: Brass

Description: Moist, Very Stiff, Dark Brown, Clay w/Sand Lens in Horizontal Layers

Remarks: GL NO. 10-042

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⊙	△		
Sample No.		C16-1	C16-2		
Test No.		C10-030A	C10-030B		
Depth		80	80		
Initial	Diameter, in	2.375	2.375		
	Height, in	6	5.89		
	Water Content, %	22.3	20.9		
	Dry Density, pcf	97.3	99.37		
	Saturation, %	80.1	79.1		
	Void Ratio	0.764	0.728		
Before Shear	Water Content, %	24.7	23.4		
	Dry Density, pcf	102.3	104.4		
	Saturation*, %	100.0	100.0		
	Void Ratio	0.679	0.644		
	Back Press., psi	103.	103.		
Ver. Eff. Cons. Stress, psi		76.5	50.		
Shear Strength, psi		54.18	50.29		
Strain at Failure, %		10	15		
Strain Rate, %/min		0.1	0.1		
B-Value		0.10	0.84		
Implied Specific Gravity		2.75	2.75		
Liquid Limit		---	---		
Plastic Limit		---	---		

Caltrans

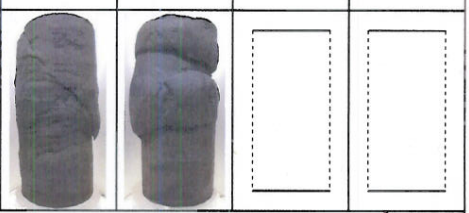
Project: I-10 HOV

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-236

Sample Type: Brass

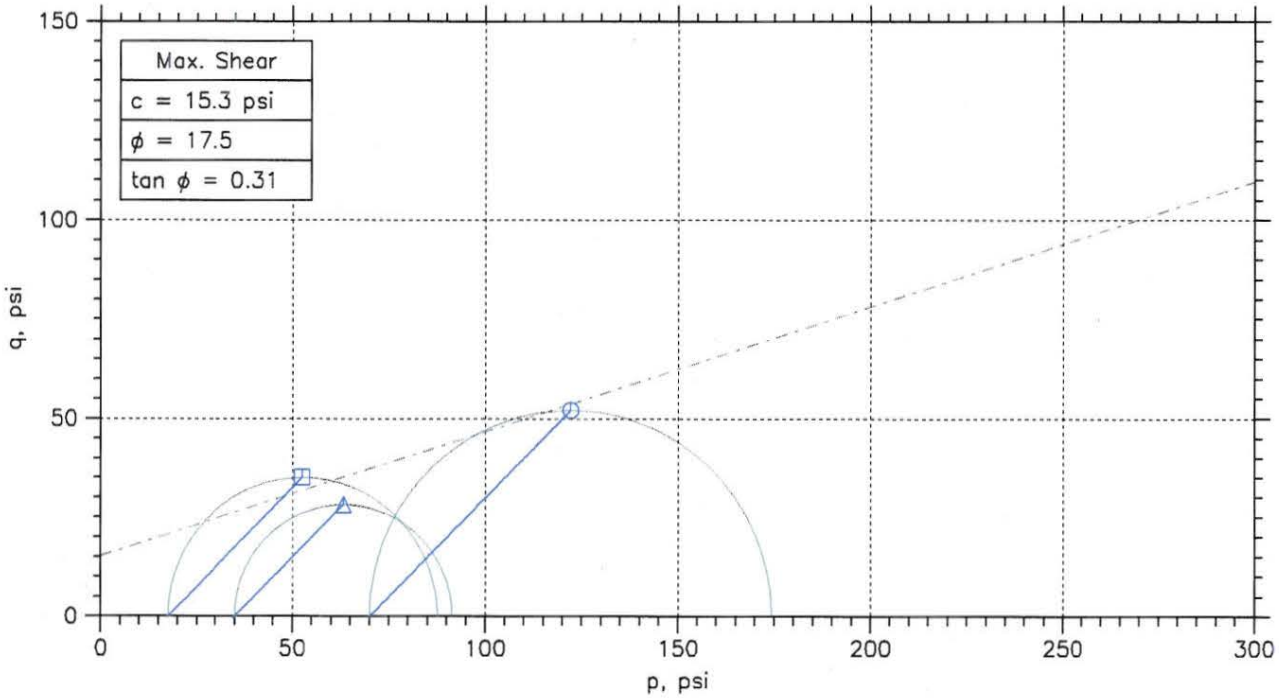


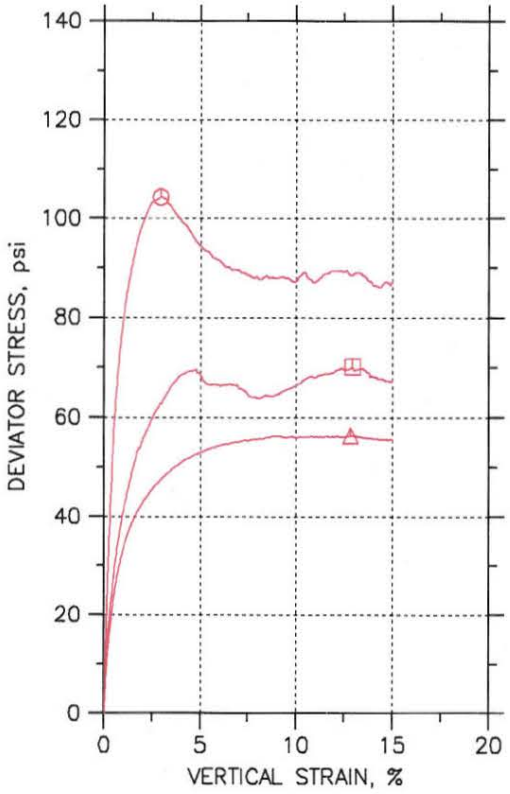
Description: Moist, Very Stiff, Dark Brown, Clay w/Sand Lens in Horizontal Layers

Remarks: GL NO. 10-042

1/29/10

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⏀	△	⧈	
Sample No.		C04-1	C04-2	C04-3	
Test No.		C10-028A	C10-028B	C10-028C	
Depth		20	20	20	
Initial	Diameter, in	2.37	2.37	2.37	
	Height, in	5.96	5.99	6.25	
	Water Content, %	39.1	41.1	38.3	
	Dry Density, pcf	79.02	75.14	78.92	
	Saturation, %	91.8	88.0	89.7	
	Void Ratio	1.17	1.28	1.18	
Before Shear	Water Content, %	39.5	49.7	42.5	
	Dry Density, pcf	82.24	72.54	79.15	
	Saturation*, %	100.0	100.0	100.0	
	Void Ratio	1.09	1.37	1.17	
	Back Press., psi	103.	63.	103.	
Ver. Eff. Cons. Stress, psi		69.99	34.99	17.5	
Shear Strength, psi		52.12	28.15	35.01	
Strain at Failure, %		2.93	12.8	12.9	
Strain Rate, %/min		0.1	0.1	0.1	
B-Value		0.96	0.96	0.97	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	

Caltrans

Project:

Location:

Project No.: 07-119341

Boring No.: R-09-236

Sample Type: BRASS

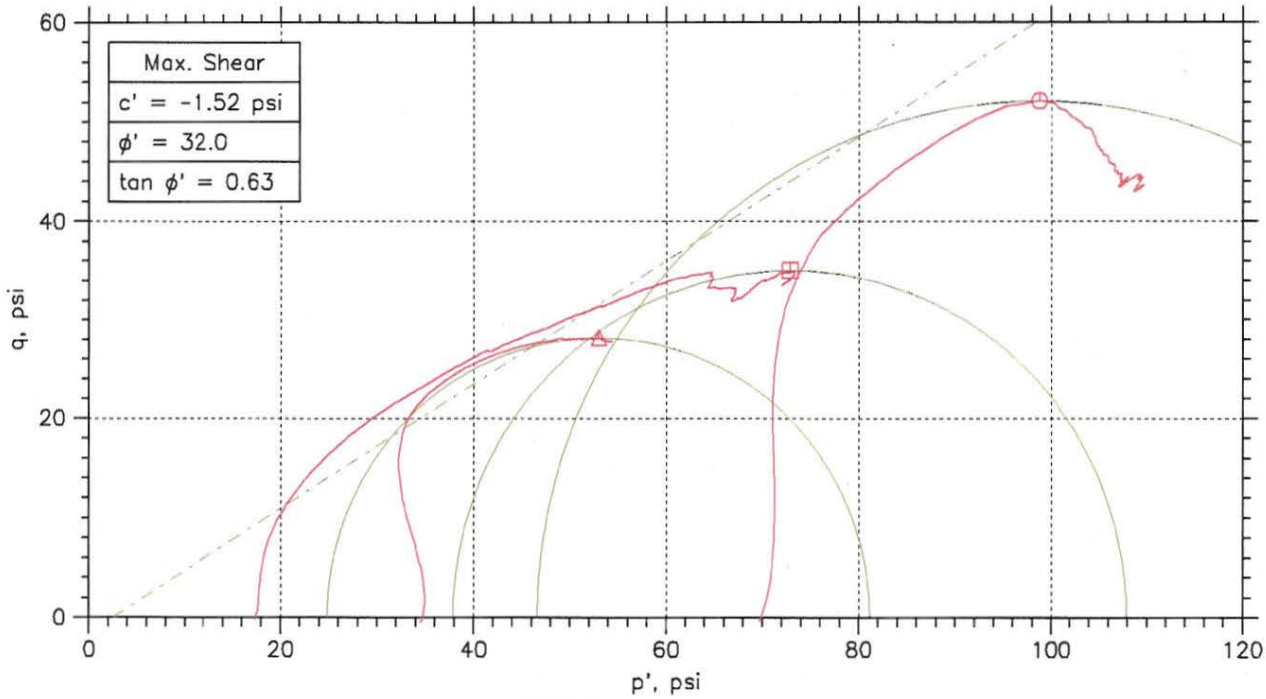
Description: Moist, Very Stiff, Brown, Silty Clay

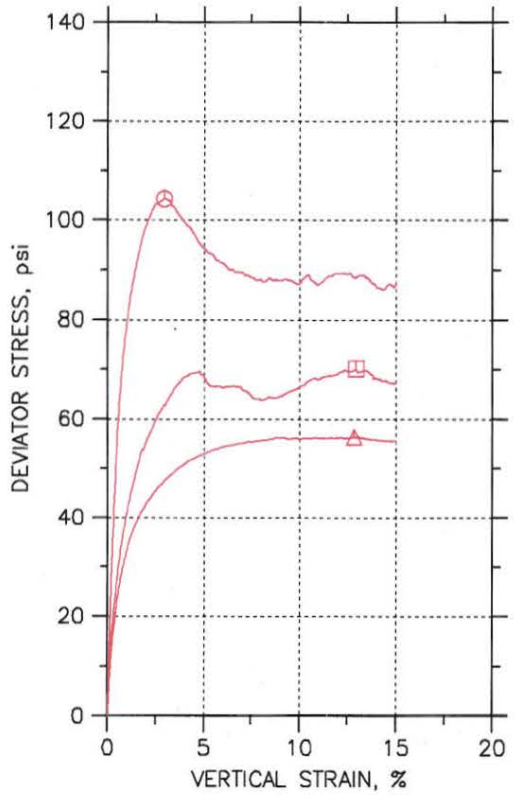
Remarks: GL NO. 10-042

10/3/10

Phase calculations based on start and end of test.

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⊙	△	⊡	
Sample No.		C04-1	C04-2	C04-3	
Test No.		C10-028A	C10-028B	C10-028C	
Depth		20	20	20	
Initial	Diameter, in	2.37	2.37	2.37	
	Height, in	5.96	5.99	6.25	
	Water Content, %	39.1	41.1	38.3	
	Dry Density, pcf	79.02	75.14	78.92	
	Saturation, %	91.8	88.0	89.7	
	Void Ratio	1.17	1.28	1.18	
Before Shear	Water Content, %	39.5	49.7	42.5	
	Dry Density, pcf	82.24	72.54	79.15	
	Saturation*, %	100.0	100.0	100.0	
	Void Ratio	1.09	1.37	1.17	
	Back Press., psi	103.	63.	103.	
Ver. Eff. Cons. Stress, psi		69.99	34.99	17.5	
Shear Strength, psi		52.12	28.15	35.01	
Strain at Failure, %		2.93	12.8	12.9	
Strain Rate, %/min		0.1	0.1	0.1	
B-Value		0.96	0.96	0.97	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	

Caltrans

Project:

Location:

Project No.: 07-119341

Boring No.: R-09-236

Sample Type: BRASS

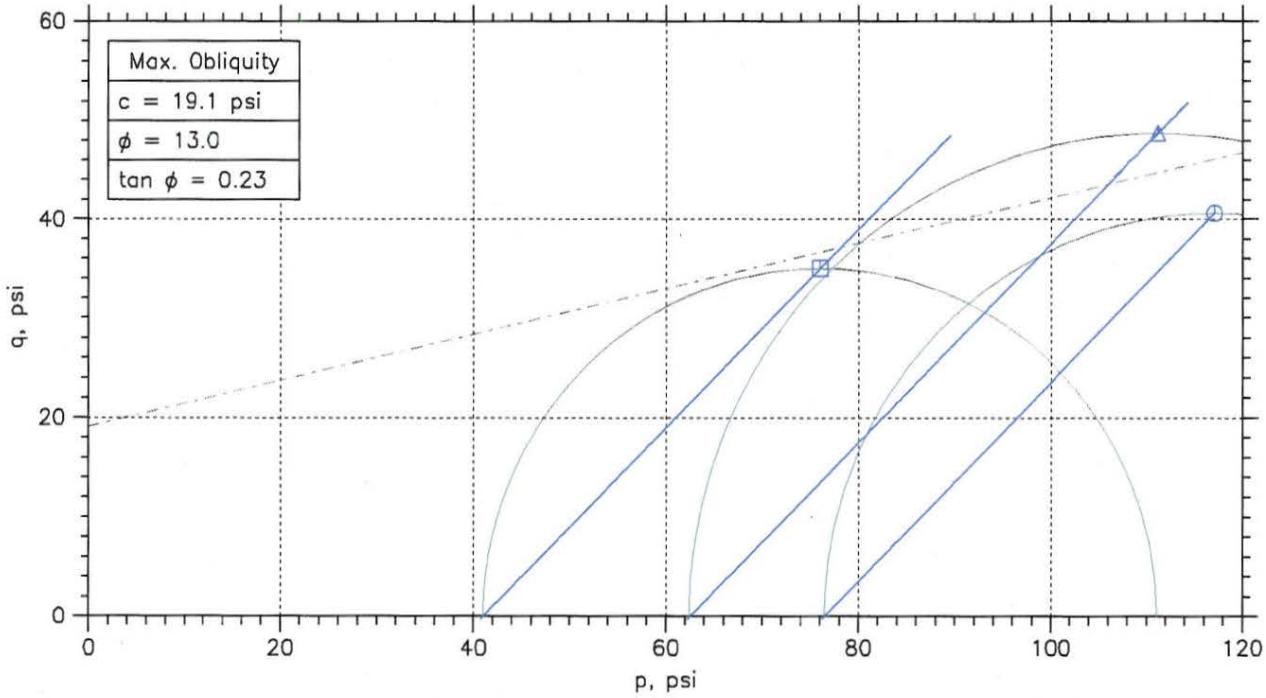
Description: Moist, Very Stiff, Brown, Silty Clay

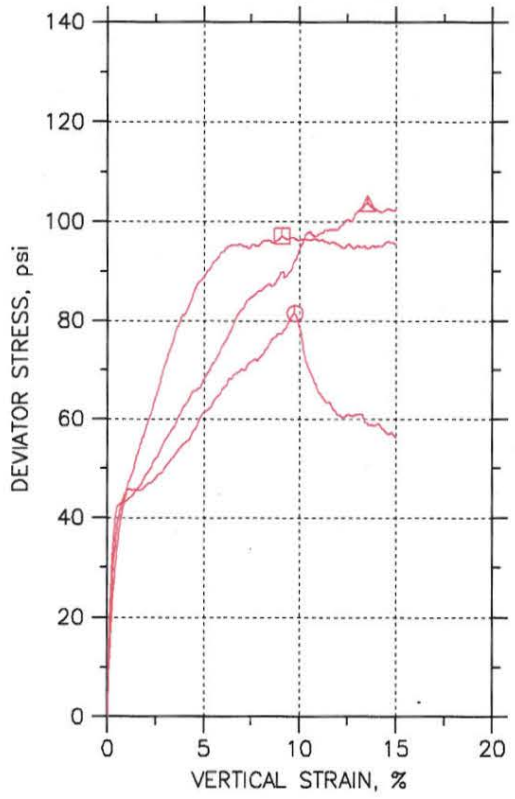
Remarks: GL NO. 10-042

10/13/10

Phase calculations based on start and end of test.

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⊙	△	⊡	
Sample No.		C12-1	C12-2	C12-3	
Test No.		C10-029A	C10-029B	C10-029C	
Depth		61	61	61	
Initial	Diameter, in	2.375	2.375	2.375	
	Height, in	6	6	5.89	
	Water Content, %	26.0	26.4	28.6	
	Dry Density, pcf	94.86	94.25	92.24	
	Saturation, %	88.2	88.3	91.2	
	Void Ratio	0.81	0.822	0.861	
Before Shear	Water Content, %	26.4	26.6	28.7	
	Dry Density, pcf	99.52	99.13	95.91	
	Saturation*, %	100.0	100.0	100.0	
	Void Ratio	0.725	0.732	0.79	
	Back Press., psi	103.	103.	103.	
Ver. Eff. Cons. Stress, psi		76.46	62.51	40.99	
Shear Strength, psi		40.72	51.86	48.51	
Strain at Failure, %		9.77	13.5	9.09	
Strain Rate, %/min		0.1	0.1	0.1	
B-Value		0.95	0.96	0.96	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	

Caltrans

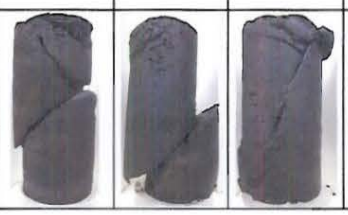
Project:

Location:

Project No.: 07-119341

Boring No.: R-09-236

Sample Type: BRASS



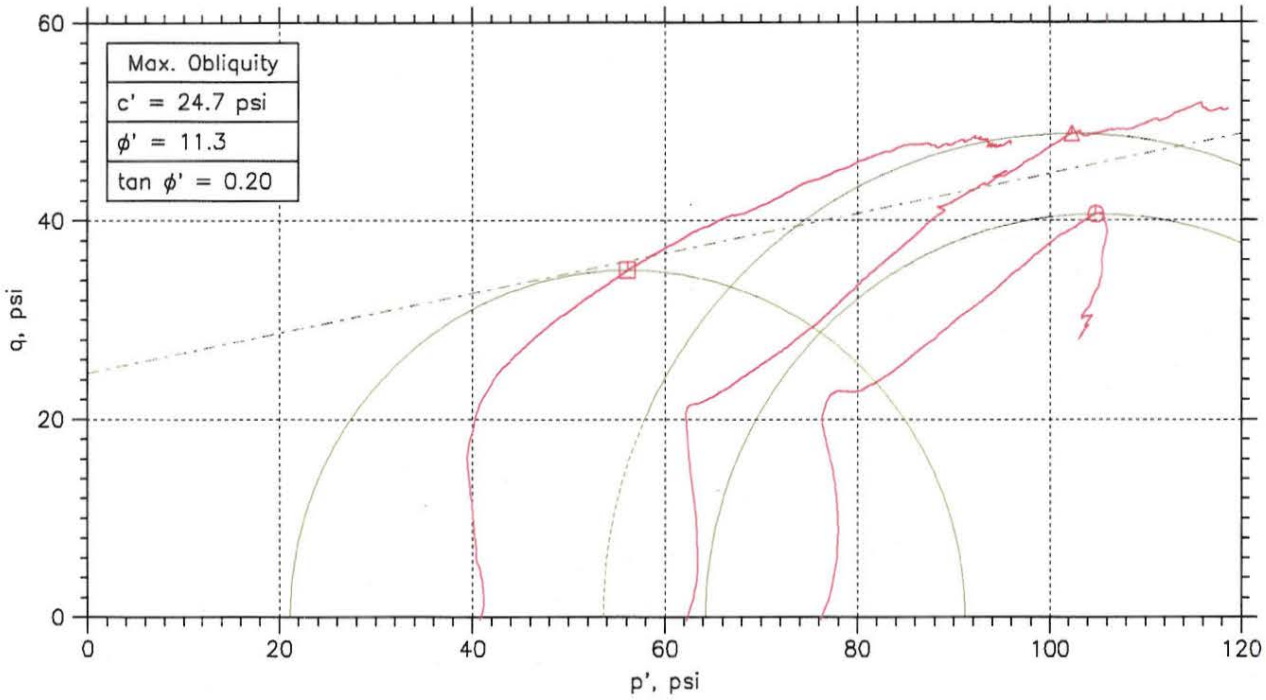
Description: Moist, Very Stiff, Very Dark Brown, Silty Clay.

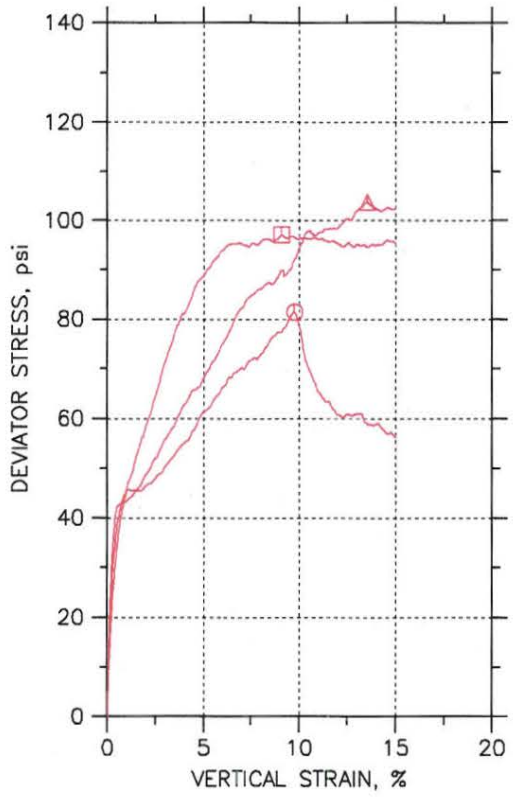
Remarks: GL NO. 10-042

10/3/10

Phase calculations based on start and end of test.

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		○	△	□	
Sample No.		C12-1	C12-2	C12-3	
Test No.		C10-029A	C10-029B	C10-029C	
Depth		61	61	61	
Initial	Diameter, in	2.375	2.375	2.375	
	Height, in	6	6	5.89	
	Water Content, %	26.0	26.4	28.6	
	Dry Density, pcf	94.86	94.25	92.24	
	Saturation, %	88.2	88.3	91.2	
	Void Ratio	0.81	0.822	0.861	
Before Shear	Water Content, %	26.4	26.6	28.7	
	Dry Density, pcf	99.52	99.13	95.91	
	Saturation*, %	100.0	100.0	100.0	
	Void Ratio	0.725	0.732	0.79	
	Back Press., psi	103.	103.	103.	
Ver. Eff. Cons. Stress, psi		76.46	62.51	40.99	
Shear Strength, psi		40.72	51.86	48.51	
Strain at Failure, %		9.77	13.5	9.09	
Strain Rate, %/min		0.1	0.1	0.1	
B-Value		0.95	0.96	0.96	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	

Caltrans

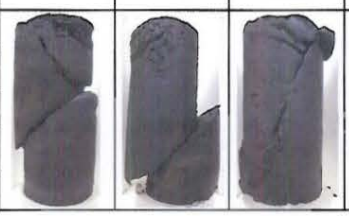
Project:

Location:

Project No.: 07-119341

Boring No.: R-09-236

Sample Type: BRASS



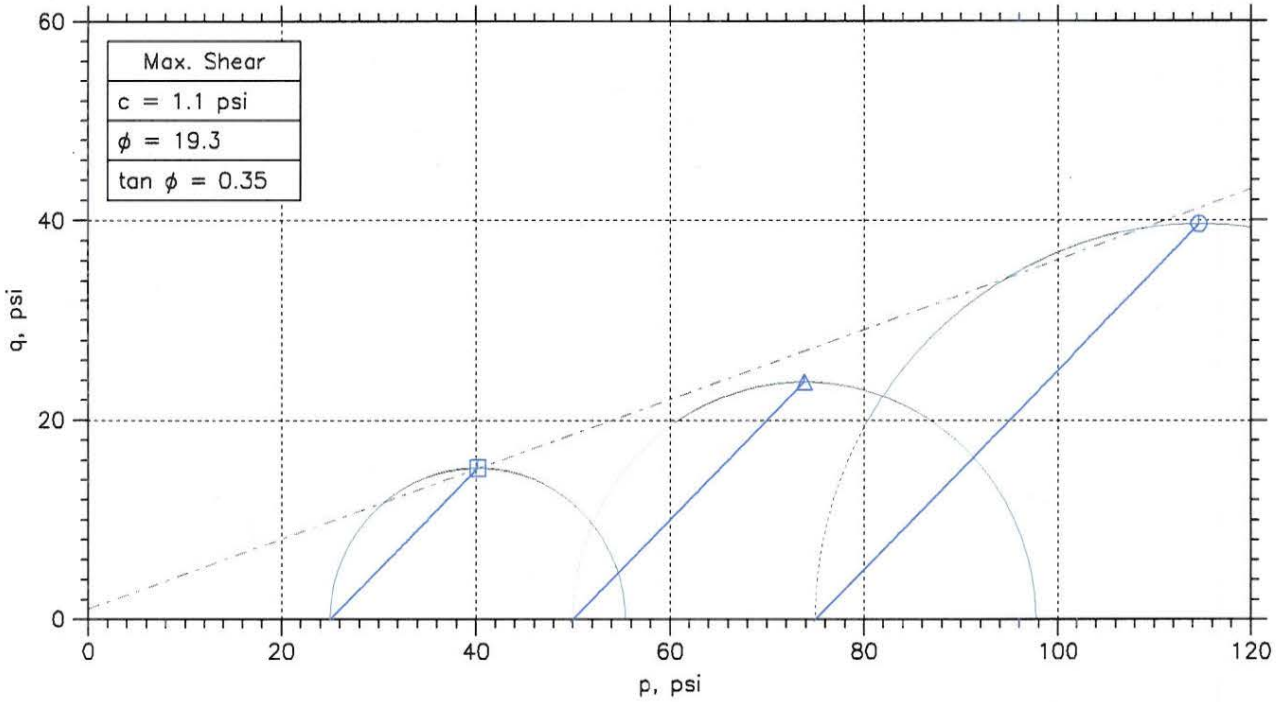
Description: Moist, Very Stiff, Very Dark Brown, Silty Clay.

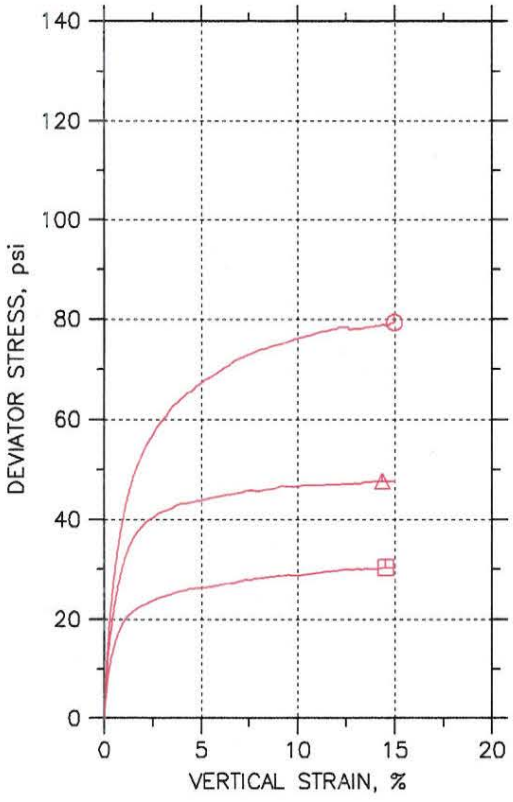
Remarks: GL NO. 10-042

10/18/10

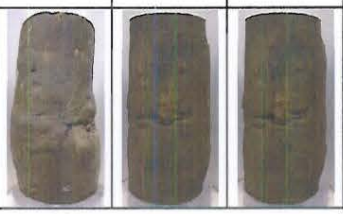
Phase calculations based on start and end of test.

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⊙	△	⊡	
Sample No.		C06-1	C06-2	C06-3	
Test No.		U10-031A	U10-031B	U10-031C	
Depth		30	30	30	
Initial	Diameter, in	2.37	2.375	2.37	
	Height, in	5.7	6.03	6	
	Water Content, %	23.2	25.9	24.2	
	Dry Density, pcf	91.07	84.71	86.24	
	Saturation, %	72.2	69.3	67.2	
	Void Ratio	0.885	1.03	0.991	
Before Shear	Water Content, %	26.8	33.6	31.5	
	Dry Density, pcf	98.83	89.27	92.	
	Saturation*, %	100.0	100.0	100.0	
	Void Ratio	0.737	0.923	0.866	
	Back Press., psi	103.	103.	103.	
Ver. Eff. Cons. Stress, psi		74.99	49.98	24.99	
Shear Strength, psi		39.65	23.84	15.2	
Strain at Failure, %		15	14.4	14.5	
Strain Rate, %/min		0.1	0.1	0.1	
B-Value		0.95	0.95	0.95	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	



Project: I-10 HOV

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-237

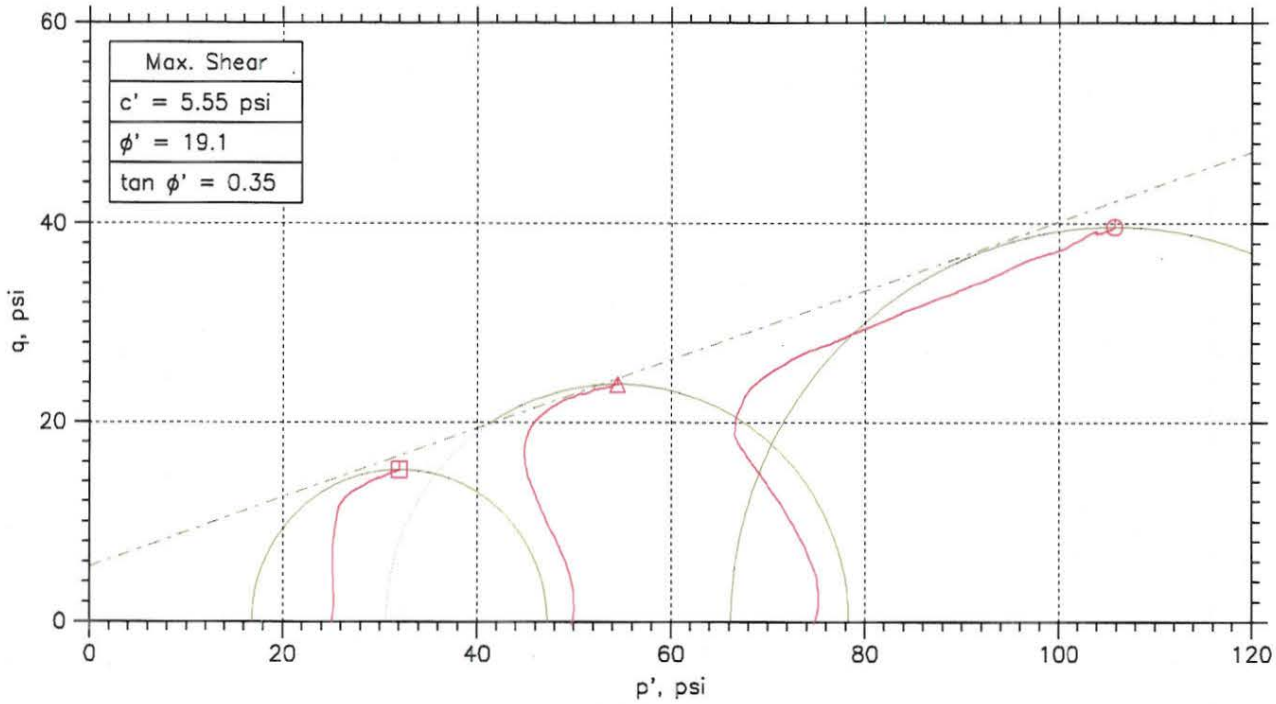
Sample Type: BRASS

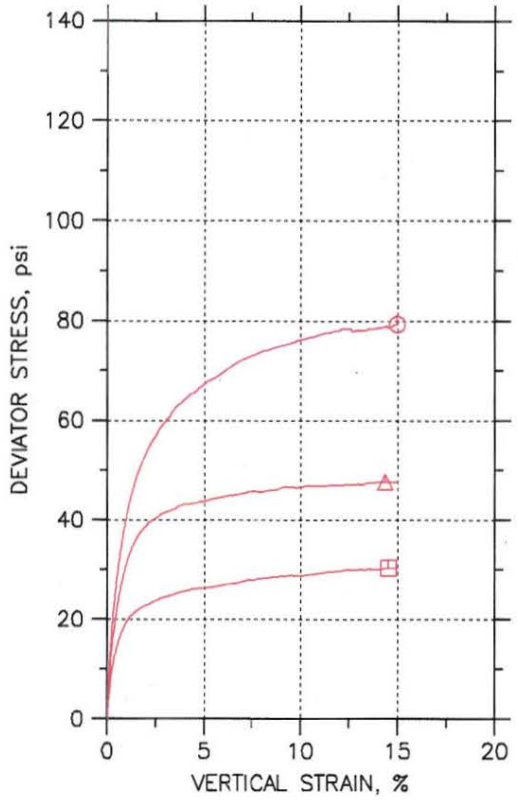
Description: Moist, Stiff, Tan & Brown, Silty Clay with Gravel and Voids.

Remarks: GL NO. 10-042

1/26/10

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⊙	△	⊡	
Sample No.		C06-1	C06-2	C06-3	
Test No.		U10-031A	U10-031B	U10-031C	
Depth		30	30	30	
Initial	Diameter, in	2.37	2.375	2.37	
	Height, in	5.7	6.03	6	
	Water Content, %	23.2	25.9	24.2	
	Dry Density, pcf	91.07	84.71	86.24	
	Saturation, %	72.2	69.3	67.2	
	Void Ratio	0.885	1.03	0.991	
Before Shear	Water Content, %	26.8	33.6	31.5	
	Dry Density, pcf	98.83	89.27	92.	
	Saturation*, %	100.0	100.0	100.0	
	Void Ratio	0.737	0.923	0.866	
	Back Press., psi	103.	103.	103.	
Ver. Eff. Cons. Stress, psi		74.99	49.98	24.99	
Shear Strength, psi		39.65	23.84	15.2	
Strain at Failure, %		15	14.4	14.5	
Strain Rate, %/min		0.1	0.1	0.1	
B-Value		0.95	0.95	0.95	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	

Caltrans

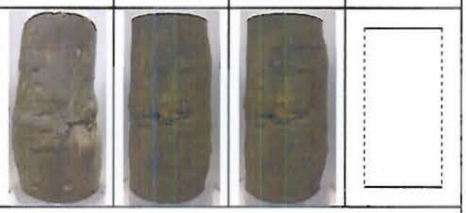
Project: I-10 HOV

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-237

Sample Type: BRASS

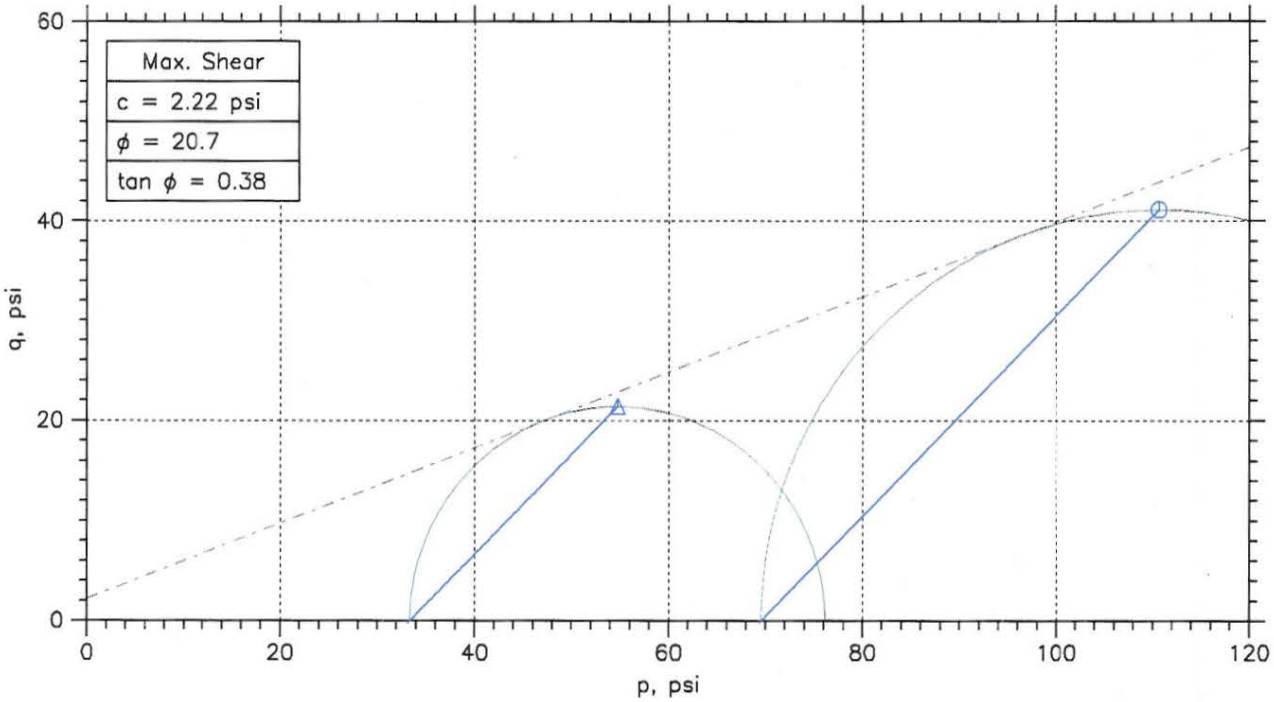


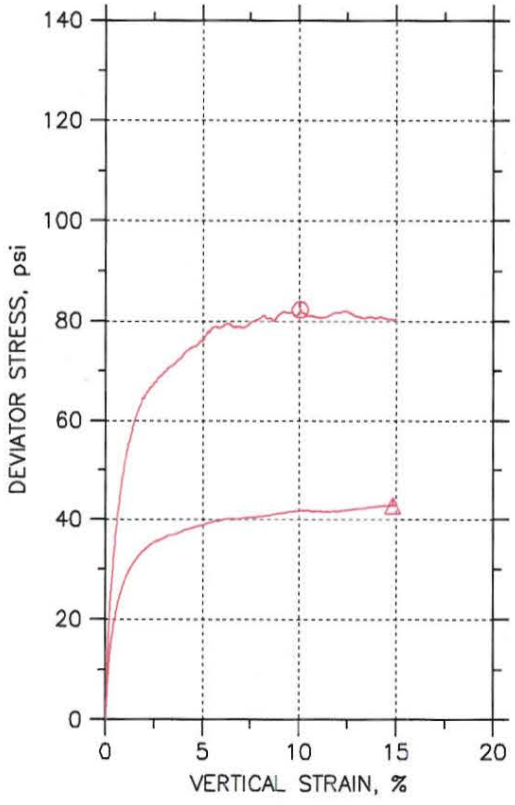
Description: Moist, Stiff, Tan & Brown, Silty Clay with Gravel and Voids.

Remarks: GL NO. 10-042

11/24/10

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⊙	△		
Sample No.		C08-1	C08-2		
Test No.		U10-032A	U10-032B		
Depth		40	40		
Initial	Diameter, in	2.375	2.375		
	Height, in	6.01	6.01		
	Water Content, %	29.1	34.5		
	Dry Density, pcf	85.91	81.34		
	Saturation, %	80.3	85.5		
	Void Ratio	0.998	1.11		
Before Shear	Water Content, %	35.4	35.5		
	Dry Density, pcf	87.	86.83		
	Saturation*, %	100.0	100.0		
	Void Ratio	0.973	0.977		
	Back Press., psi	103.	103.		
Ver. Eff. Cons. Stress, psi		69.51	33.34		
Shear Strength, psi		41.13	21.39		
Strain at Failure, %		10.1	14.8		
Strain Rate, %/min		0.1	0.1		
B-Value		0.95	0.95		
Implied Specific Gravity		2.75	2.75		
Liquid Limit		---	---		
Plastic Limit		---	---		

Caltrans

Project: I-10 HOV

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-237

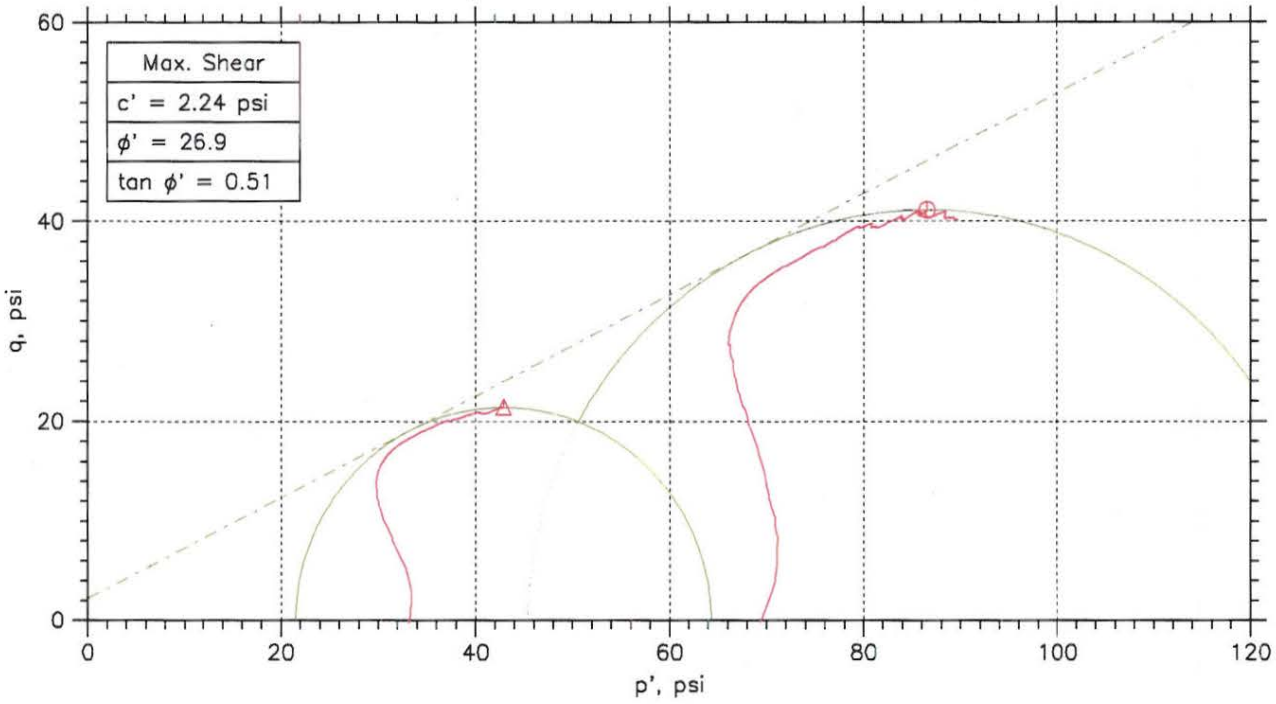
Sample Type: BRASS

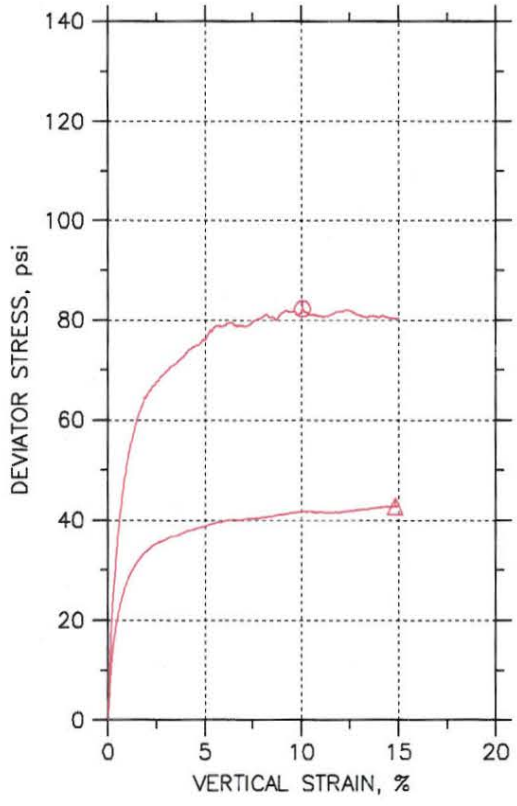
Description: Moist, Brown, Very Stiff, Silty Clay w/Sand & Gravel

Remarks: GL NO. 10-042

11/29/10

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⊙	△		
Sample No.		C08-1	C08-2		
Test No.		U10-032A	U10-032B		
Depth		40	40		
Initial	Diameter, in	2.375	2.375		
	Height, in	6.01	6.01		
	Water Content, %	29.1	34.5		
	Dry Density, pcf	85.91	81.34		
	Saturation, %	80.3	85.5		
	Void Ratio	0.998	1.11		
Before Shear	Water Content, %	35.4	35.5		
	Dry Density, pcf	87.	86.83		
	Saturation*, %	100.0	100.0		
	Void Ratio	0.973	0.977		
	Back Press., psi	103.	103.		
Ver. Eff. Cons. Stress, psi		69.51	33.34		
Shear Strength, psi		41.13	21.39		
Strain at Failure, %		10.1	14.8		
Strain Rate, %/min		0.1	0.1		
B-Value		0.95	0.95		
Implied Specific Gravity		2.75	2.75		
Liquid Limit		---	---		
Plastic Limit		---	---		

Caltrans

Project: I-10 HOV

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-237

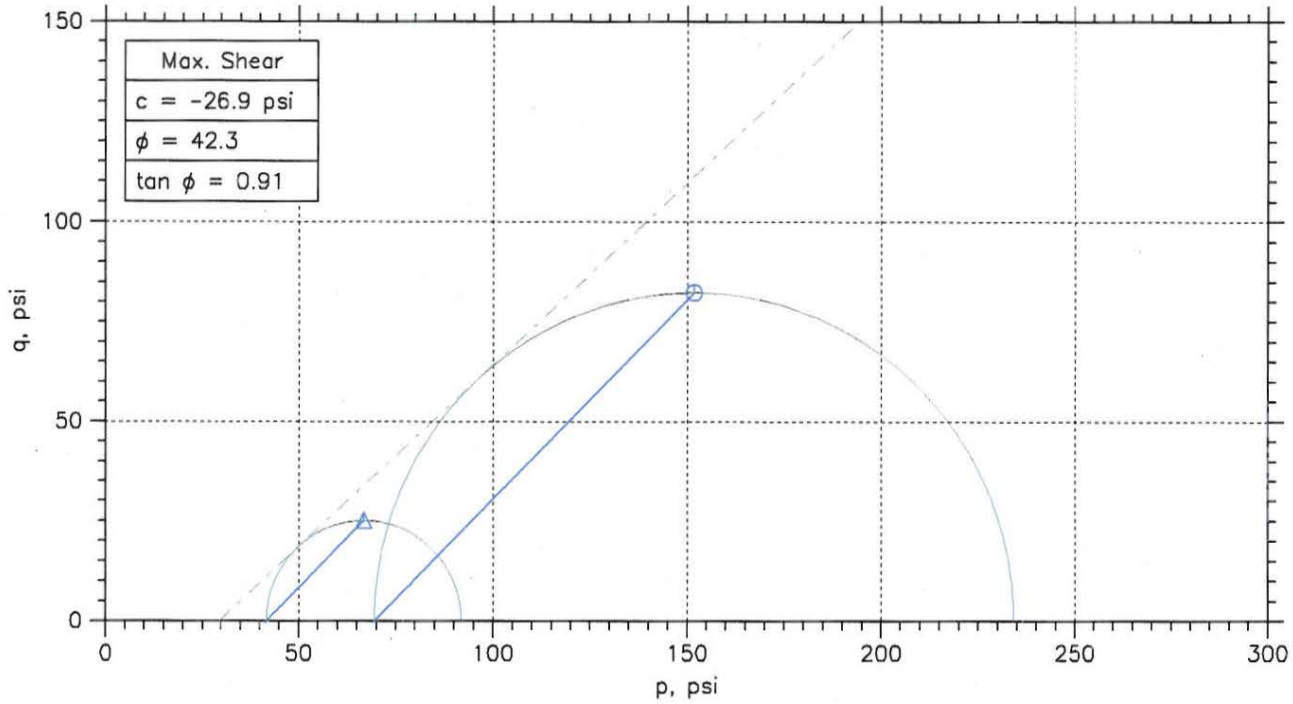
Sample Type: BRASS

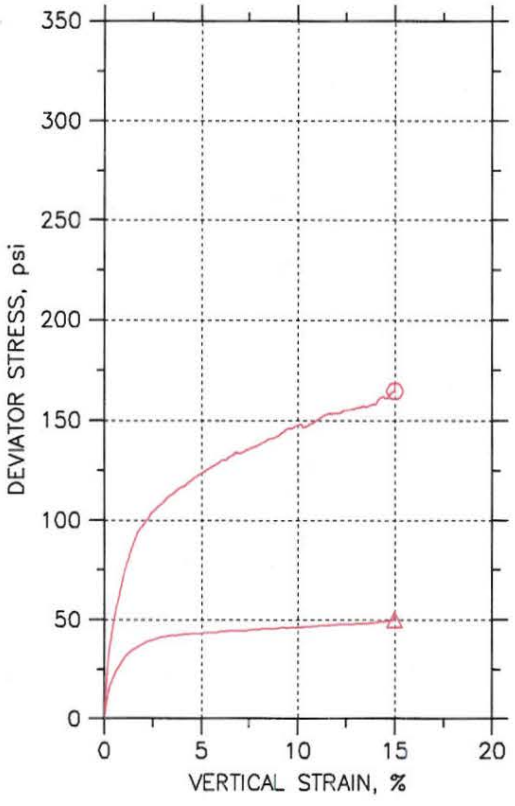
Description: Moist, Brown, Very Stiff, Silty Clay w/Sand & Gravel

Remarks: GL NO. 10-042

1/31/10

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⏀	△		
Sample No.		C10-1	C10-2		
Test No.		U10-033A	U10-033B		
Depth		50	50		
Initial	Diameter, in	2.375	2.375		
	Height, in	5.76	5.75		
	Water Content, %	15.5	19.2		
	Dry Density, pcf	110.3	106.4		
	Saturation, %	76.8	86.0		
	Void Ratio	0.556	0.613		
Before Shear	Water Content, %	18.8	20.1		
	Dry Density, pcf	113.2	110.6		
	Saturation*, %	100.0	100.0		
	Void Ratio	0.516	0.552		
	Back Press., psi	80.99	86.99		
Ver. Eff. Cons. Stress, psi		69.45	41.67		
Shear Strength, psi		82.33	25.04		
Strain at Failure, %		15	15		
Strain Rate, %/min		0.1	0.1		
B-Value		0.95	0.96		
Implied Specific Gravity		2.75	2.75		
Liquid Limit		---	---		
Plastic Limit		---	---		

Caltrans

Project: I-10 HOV

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-237

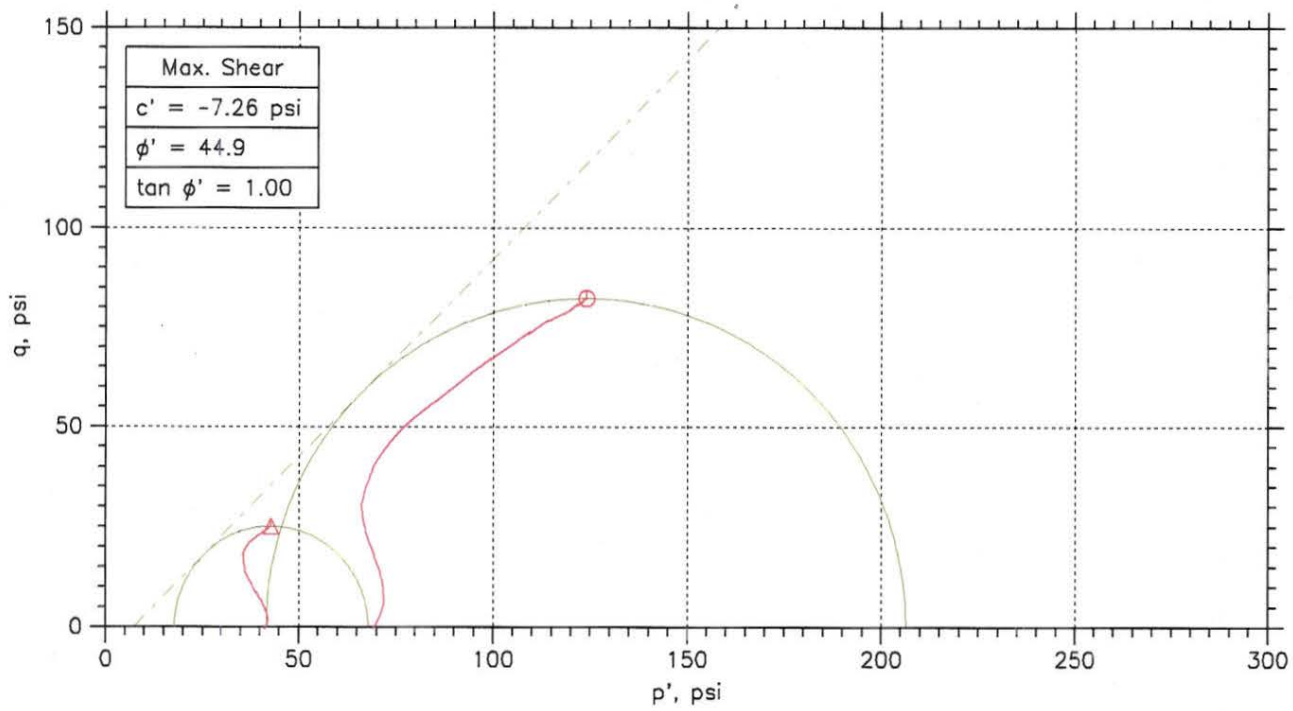
Sample Type: BRASS

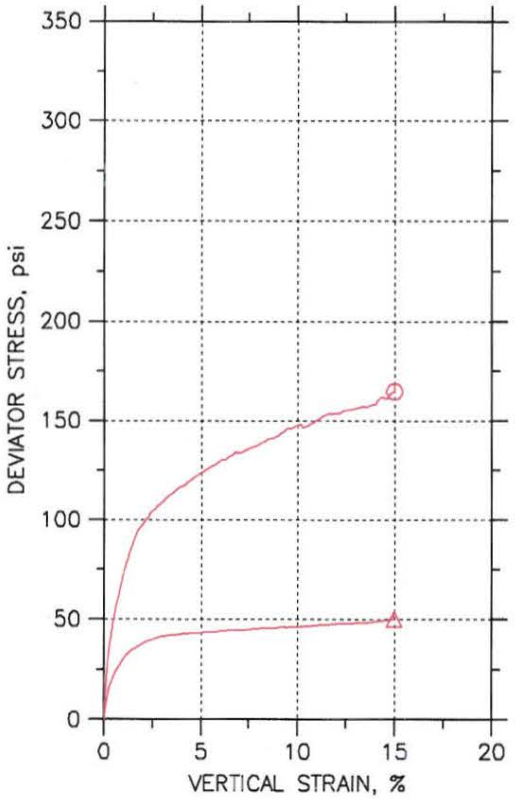
Description: Moist, Very Stiff, Light Orange Silt & Cemented Soil

Remarks: GL NO. 10-042

1/29/10

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⏀	△		
Sample No.		C10-1	C10-2		
Test No.		U10-033A	U10-033B		
Depth		50	50		
Initial	Diameter, in	2.375	2.375		
	Height, in	5.76	5.75		
	Water Content, %	15.5	19.2		
	Dry Density, pcf	110.3	106.4		
	Saturation, %	76.8	86.0		
	Void Ratio	0.556	0.613		
Before Shear	Water Content, %	18.8	20.1		
	Dry Density, pcf	113.2	110.6		
	Saturation*, %	100.0	100.0		
	Void Ratio	0.516	0.552		
	Back Press., psi	80.99	86.99		
Ver. Eff. Cons. Stress, psi		69.45	41.67		
Shear Strength, psi		82.33	25.04		
Strain at Failure, %		15	15		
Strain Rate, %/min		0.1	0.1		
B-Value		0.95	0.96		
Implied Specific Gravity		2.75	2.75		
Liquid Limit		---	---		
Plastic Limit		---	---		

Caltrans

Project: I-10 HOV

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-237

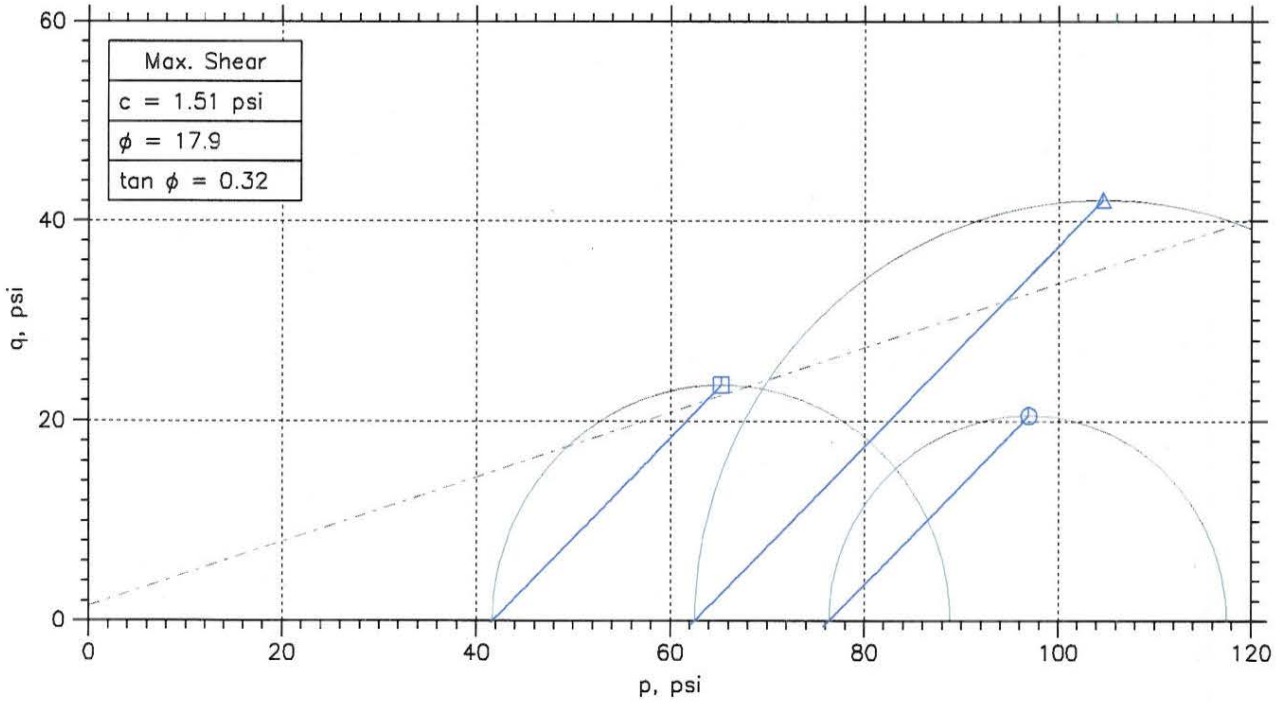
Sample Type: BRASS

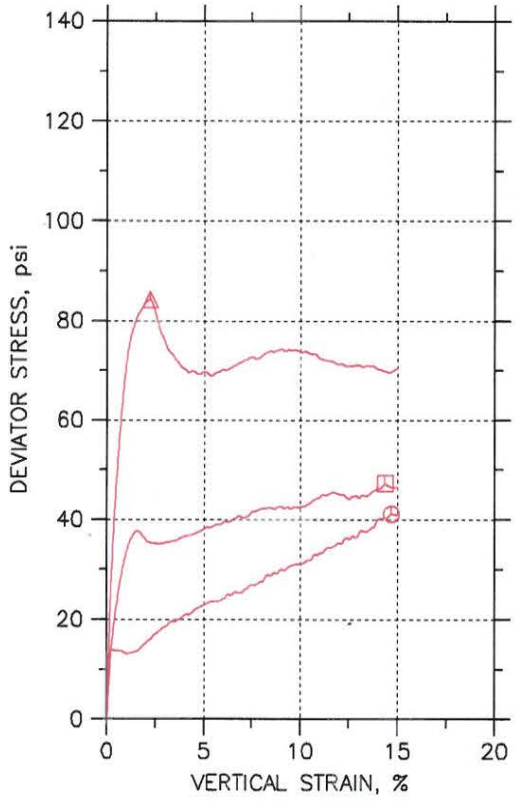
Description: Moist, Very Stiff, Light Orange Silt & Cemented Soil

Remarks: GL NO. 10-042

1/29/10

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⊙	△	⊡	
Sample No.		C12-1	C12-2	C12-3	
Test No.		U10-034A	U10-034B	U10-034C	
Depth		61	61	61	
Initial	Diameter, in	2.375	2.375	2.375	
	Height, in	6.01	5.78	6.01	
	Water Content, %	35.0	31.7	30.4	
	Dry Density, pcf	83.83	87.29	88.78	
	Saturation, %	91.9	90.0	89.5	
	Void Ratio	1.05	0.967	0.934	
Before Shear	Water Content, %	39.4	34.9	33.7	
	Dry Density, pcf	82.41	87.61	89.17	
	Saturation*, %	100.0	100.0	100.0	
	Void Ratio	1.08	0.959	0.925	
	Back Press., psi	68.06	103.	103.	
Ver. Eff. Cons. Stress, psi		76.3	62.47	41.66	
Shear Strength, psi		20.54	42.13	23.56	
Strain at Failure, %		14.7	2.21	14.4	
Strain Rate, %/min		0.1	0.1	0.1	
B-Value		0.95	0.95	0.95	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	

Caltrans

Project: I-10 HOV

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-237

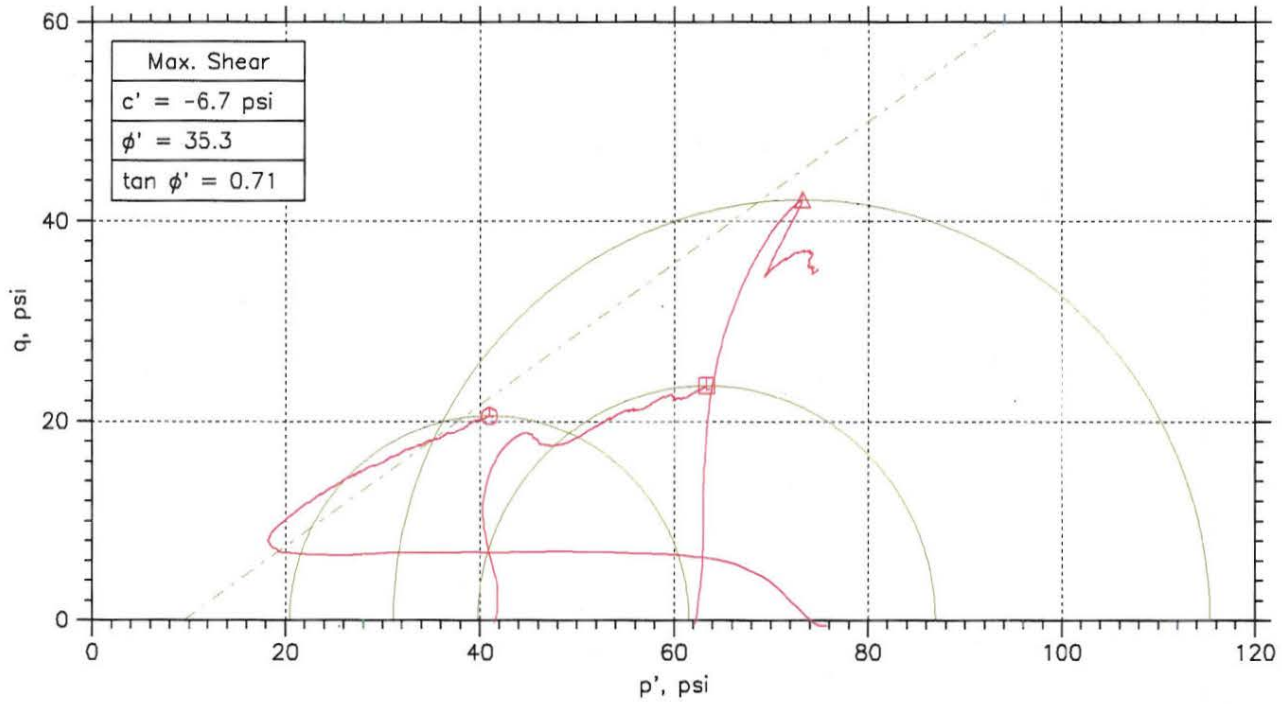
Sample Type: BRASS

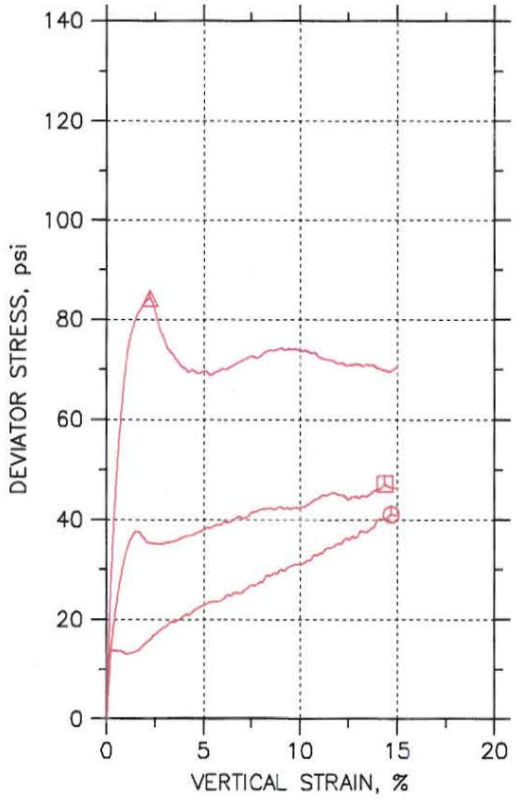
Description: Moist, MottledBrown, Very Stiff, Silty Clay

Remarks: GL NO. 10-042

1/29/10

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⊙	△	⊡	
Sample No.		C12-1	C12-2	C12-3	
Test No.		U10-034A	U10-034B	U10-034C	
Depth		61	61	61	
Initial	Diameter, in	2.375	2.375	2.375	
	Height, in	6.01	5.78	6.01	
	Water Content, %	35.0	31.7	30.4	
	Dry Density, pcf	83.83	87.29	88.78	
	Saturation, %	91.9	90.0	89.5	
	Void Ratio	1.05	0.967	0.934	
Before Shear	Water Content, %	39.4	34.9	33.7	
	Dry Density, pcf	82.41	87.61	89.17	
	Saturation*, %	100.0	100.0	100.0	
	Void Ratio	1.08	0.959	0.925	
	Back Press., psi	68.06	103.	103.	
Ver. Eff. Cons. Stress, psi		76.3	62.47	41.66	
Shear Strength, psi		20.54	42.13	23.56	
Strain at Failure, %		14.7	2.21	14.4	
Strain Rate, %/min		0.1	0.1	0.1	
B-Value		0.95	0.95	0.95	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	

Caltrans

Project: I-10 HOV

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-237

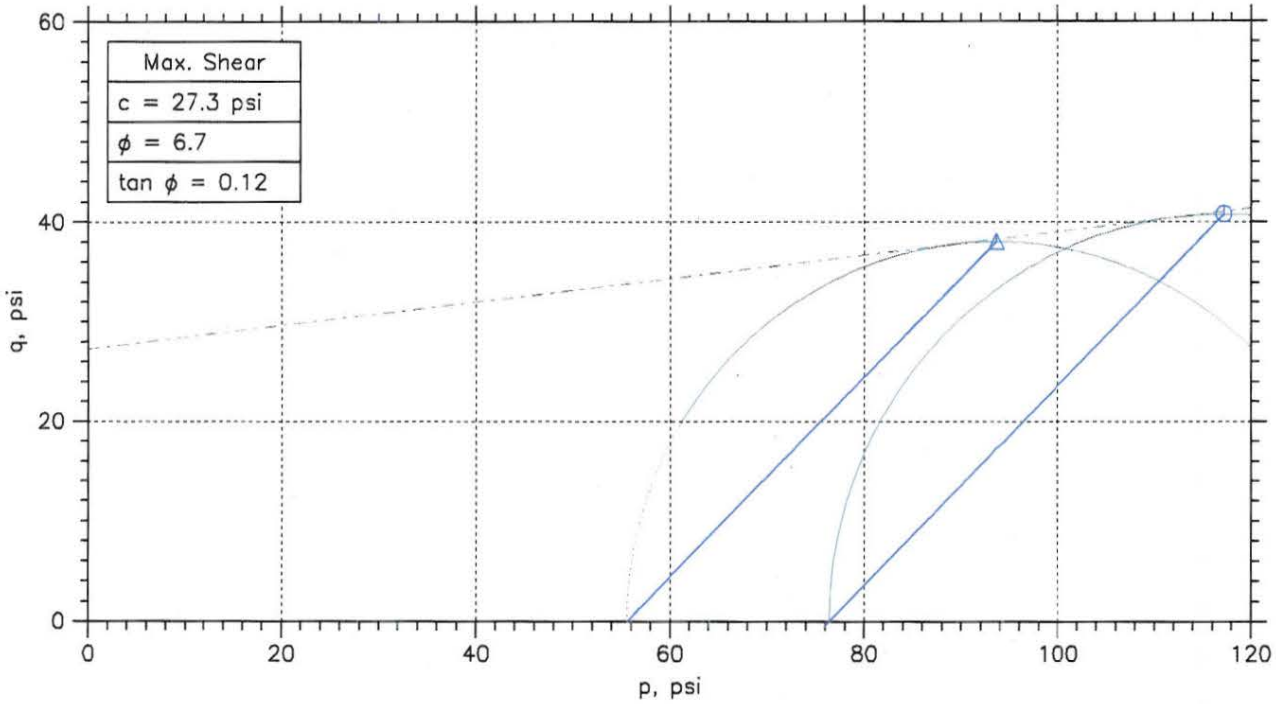
Sample Type: BRASS

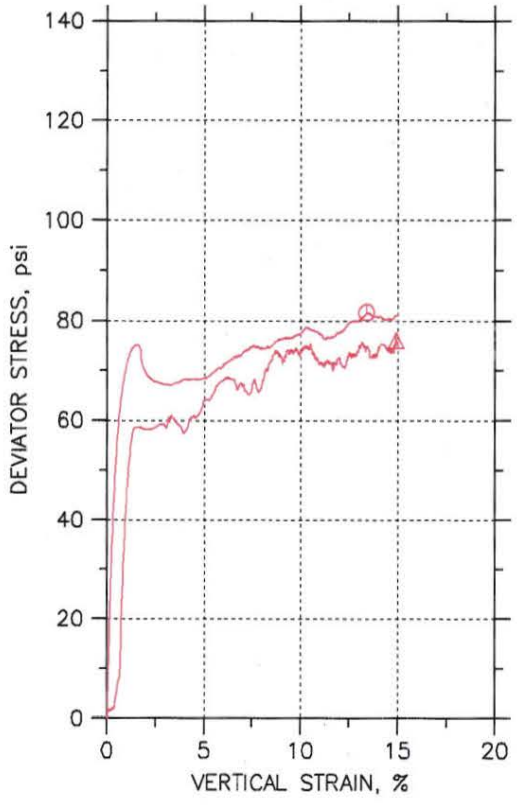
Description: Moist, MottledBrown, Very Stiff, Silty Clay

Remarks: GL NO. 10-042

11/30/10

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⏀	△		
Sample No.		C16-1	C16-2		
Test No.		U10-035A	U10-035B		
Depth		80	80		
Initial	Diameter, in	2.375	2.375		
	Height, in	5.95	6		
	Water Content, %	36.4	34.9		
	Dry Density, pcf	81.64	84.2		
	Saturation, %	90.7	92.5		
	Void Ratio	1.1	1.04		
Before Shear	Water Content, %	38.3	36.0		
	Dry Density, pcf	83.62	86.25		
	Saturation*, %	100.0	100.0		
	Void Ratio	1.05	0.99		
	Back Press., psi	103.	103.		
Ver. Eff. Cons. Stress, psi		76.39	55.55		
Shear Strength, psi		40.81	38.05		
Strain at Failure, %		13.4	14.9		
Strain Rate, %/min		0.1	0.1		
B-Value		0.96	0.96		
Implied Specific Gravity		2.75	2.75		
Liquid Limit		---	---		
Plastic Limit		---	---		

Caltrans

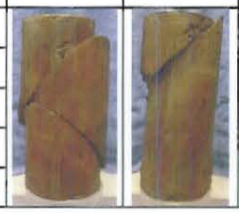
Project: I-10 HOV

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-237

Sample Type: BRASS

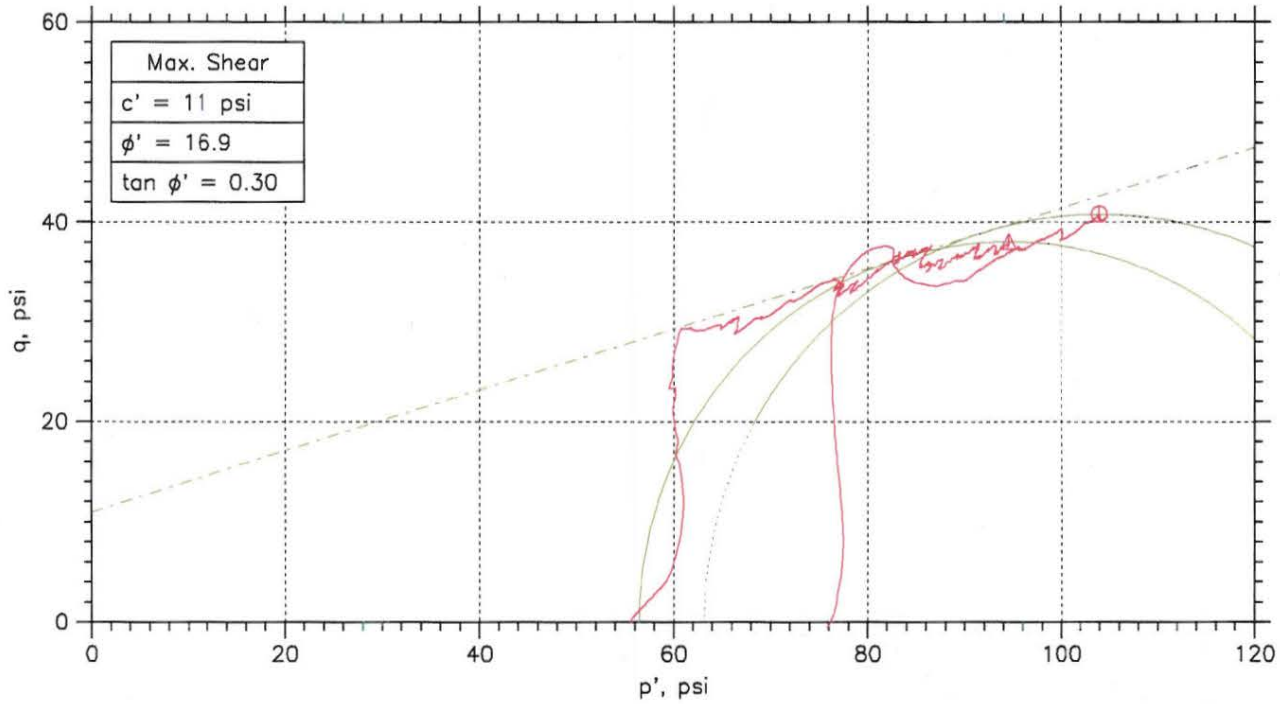


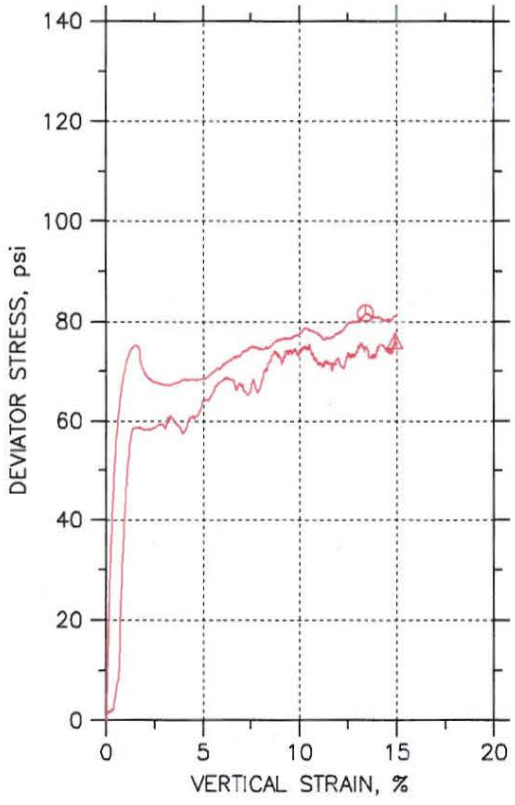
Description: Moist, Very Stiff, Dark Brown Clay

Remarks: GL NO. 10-042

10/9/10

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⏀	△		
Sample No.		C16-1	C16-2		
Test No.		U10-035A	U10-035B		
Depth		80	80		
Initial	Diameter, in	2.375	2.375		
	Height, in	5.95	6		
	Water Content, %	36.4	34.9		
	Dry Density, pcf	81.64	84.2		
	Saturation, %	90.7	92.5		
	Void Ratio	1.1	1.04		
Before Shear	Water Content, %	38.3	36.0		
	Dry Density, pcf	83.62	86.25		
	Saturation*, %	100.0	100.0		
	Void Ratio	1.05	0.99		
	Back Press., psi	103.	103.		
Ver. Eff. Cons. Stress, psi		76.39	55.55		
Shear Strength, psi		40.81	38.05		
Strain at Failure, %		13.4	14.9		
Strain Rate, %/min		0.1	0.1		
B-Value		0.96	0.96		
Implied Specific Gravity		2.75	2.75		
Liquid Limit		---	---		
Plastic Limit		---	---		

Caltrans

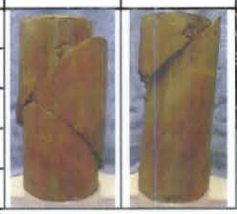
Project: I-10 HOV

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-237

Sample Type: BRASS

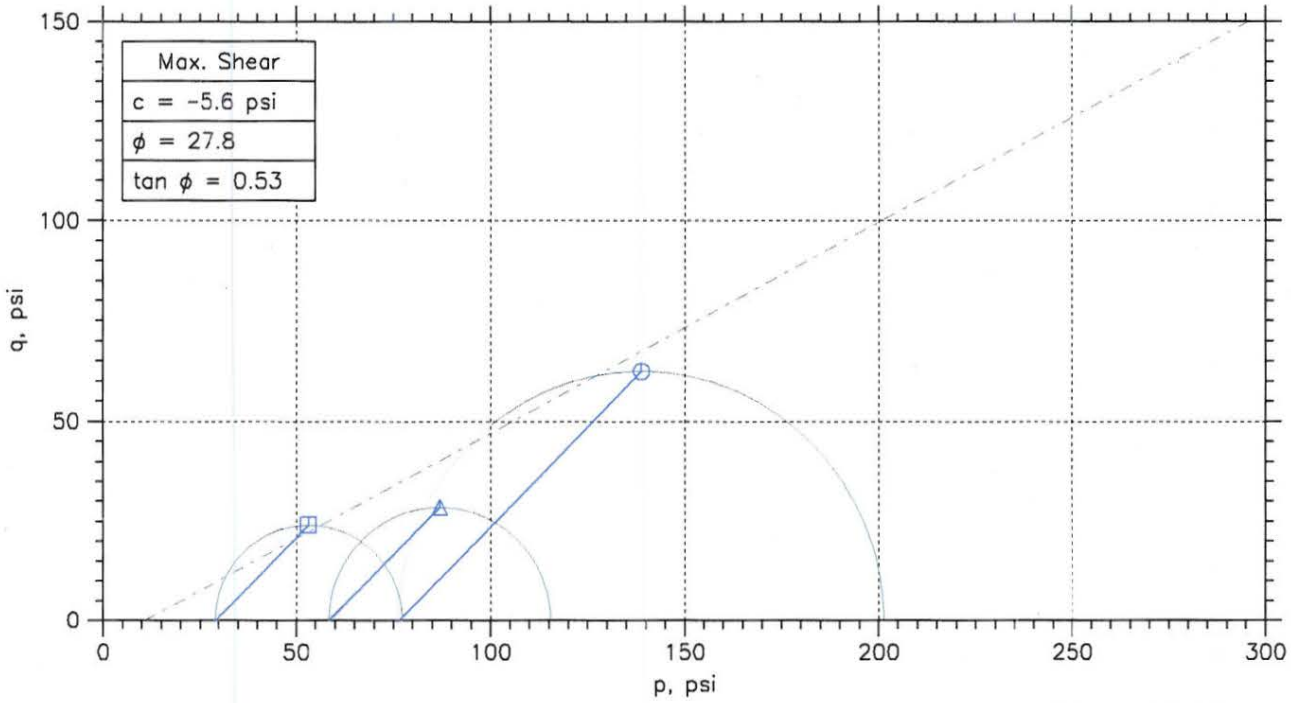


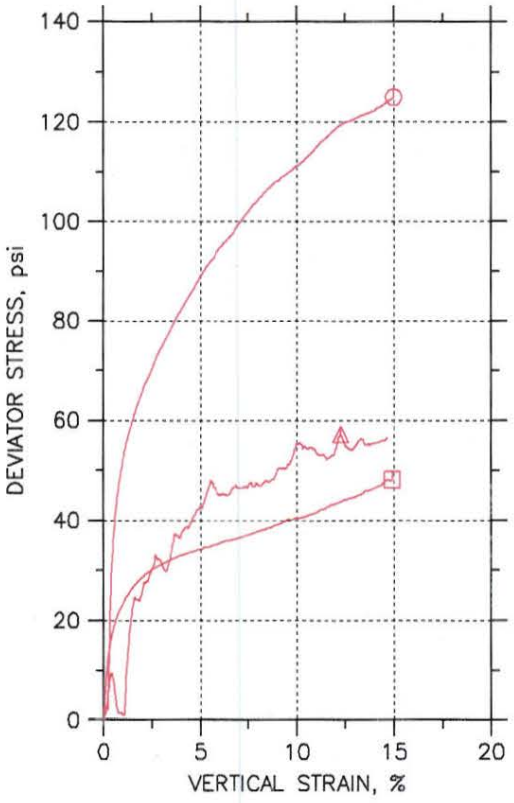
Description: Moist, Very Stiff, Dark Brown Clay

Remarks: GL NO. 10-042

11/9/10

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⏲	△	⊡	
Sample No.		C8-1	C8-2	C8-3	
Test No.		U10-036A	U10-036B	U10-036C	
Depth		35	35	35	
Initial	Diameter, in	2.375	2.375	2.375	
	Height, in	5.66	5.8	5.69	
	Water Content, %	15.9	18.7	24.4	
	Dry Density, pcf	115.1	107.6	95.57	
	Saturation, %	89.0	86.5	84.4	
	Void Ratio	0.491	0.595	0.796	
Before Shear	Water Content, %	15.1	27.2	24.0	
	Dry Density, pcf	121.4	98.16	103.3	
	Saturation*, %	100.0	100.0	100.0	
	Void Ratio	0.414	0.749	0.661	
	Back Press., psi	103.	103.	103.	
Ver. Eff. Cons. Stress, psi		76.39	58.35	29.15	
Shear Strength, psi		62.48	28.52	24.06	
Strain at Failure, %		15	12.3	14.9	
Strain Rate, %/min		0.1	0.1	0.1	
B-Value		0.92	0.95	0.95	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	

Caltrans

Project: I-10 HOV

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-238

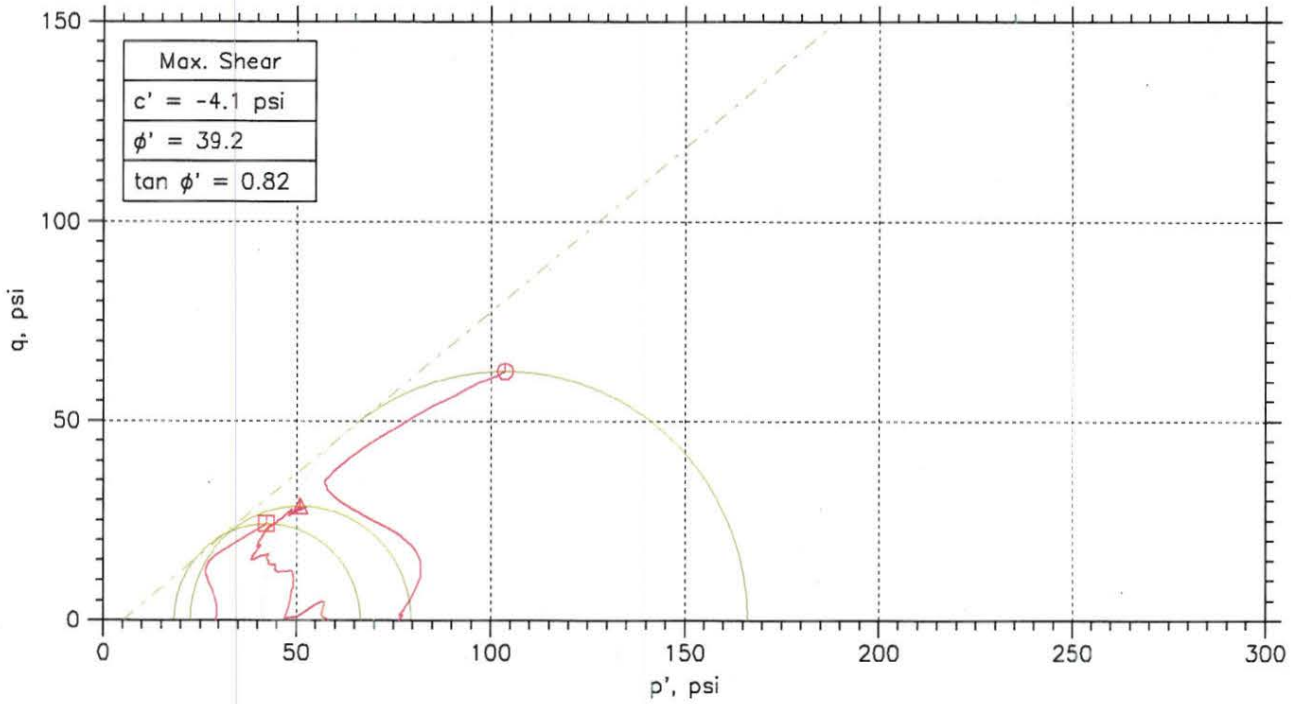
Sample Type: BRASS

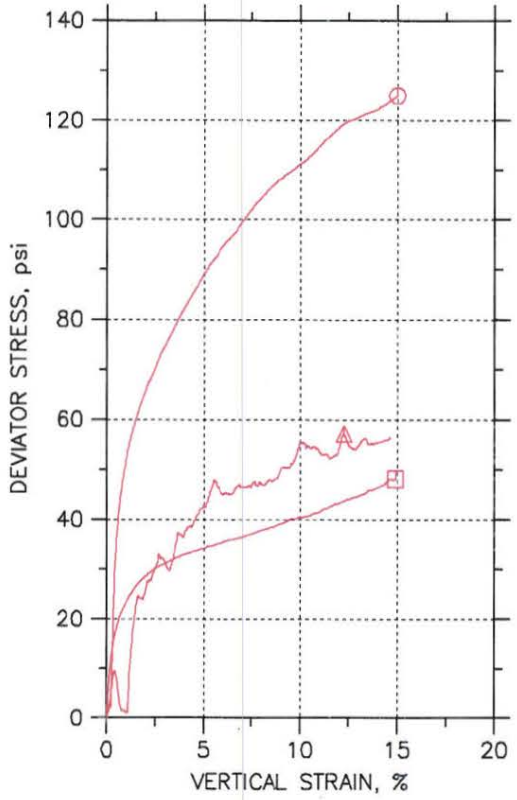
Description: Moist, Stiff, Sandy Clay w/Silt & Gravel (A) to Clay (bottom) w/Brown Sand (top) (B&C)

Remarks:

11/9/10

CONSOLIDATED UNDRAINED TRIAXIAL TEST





Symbol		⊙	△	⊡	
Sample No.		C8-1	C8-2	C8-3	
Test No.		U10-036A	U10-036B	U10-036C	
Depth		35	35	35	
Initial	Diameter, in	2.375	2.375	2.375	
	Height, in	5.66	5.8	5.69	
	Water Content, %	15.9	18.7	24.4	
	Dry Density, pcf	115.1	107.6	95.57	
	Saturation, %	89.0	86.5	84.4	
	Void Ratio	0.491	0.595	0.796	
Before Shear	Water Content, %	15.1	27.2	24.0	
	Dry Density, pcf	121.4	98.16	103.3	
	Saturation*, %	100.0	100.0	100.0	
	Void Ratio	0.414	0.749	0.661	
	Back Press., psi	103.	103.	103.	
Ver. Eff. Cons. Stress, psi		76.39	58.35	29.15	
Shear Strength, psi		62.48	28.52	24.06	
Strain at Failure, %		15	12.3	14.9	
Strain Rate, %/min		0.1	0.1	0.1	
B-Value		0.92	0.95	0.95	
Implied Specific Gravity		2.75	2.75	2.75	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	

Caltrans

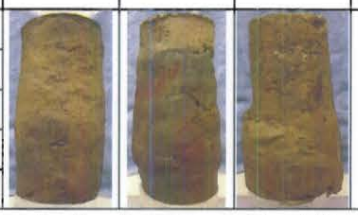
Project: I-10 HOV

Location: 07-LA-10

Project No.: 07-119341

Boring No.: R-09-238

Sample Type: BRASS



Description: Moist, Stiff, Sandy Clay w/Silt & Gravel (A) to Clay (bottom) w/Brown Sand (top) (B&C)

Remarks:

10/9/10

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-231
Sample No.: C5-I
Test No.: 10-030-G1

Location: 07-LA-10
Tested By: AZM
Test Date: 7/8/10
Sample Type: Tube

Project No.: 07-119341
Checked By: GL# 10-042
Depth: 18-18.5
Elevation: WP 8/4

Soil Description: Moist, brown, very stiff silty clay
Remarks:

Measured Specific Gravity: 2.69
Initial Void Ratio: 1.18
Final Void Ratio: 1.08

Liquid Limit: 0
Plastic Limit: 0
Plasticity Index: 0

Initial Height: 1.00 in
Specimen Diameter: 2.38 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID		RING		
Wt. Container + Wet Soil, gm	218.3	218.3	216	216
Wt. Container + Dry Soil, gm	180.2	180.2	180.2	180.2
Wt. Container, gm	90.6	90.6	90.6	90.6
Wt. Dry Soil, gm	89.6	89.6	89.6	89.6
Water Content, %	42.52	42.52	39.96	39.96
Void Ratio	---	1.18	1.08	---
Degree of Saturation, %	---	96.98	99.86	---
Dry Unit Weight, pcf	---	77.049	80.881	---

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-231
Sample No.: C5-I
Test No.: 10-030-G1

Location: 07-LA-10
Tested By: AZM
Test Date: 7/8/10
Sample Type: Tube

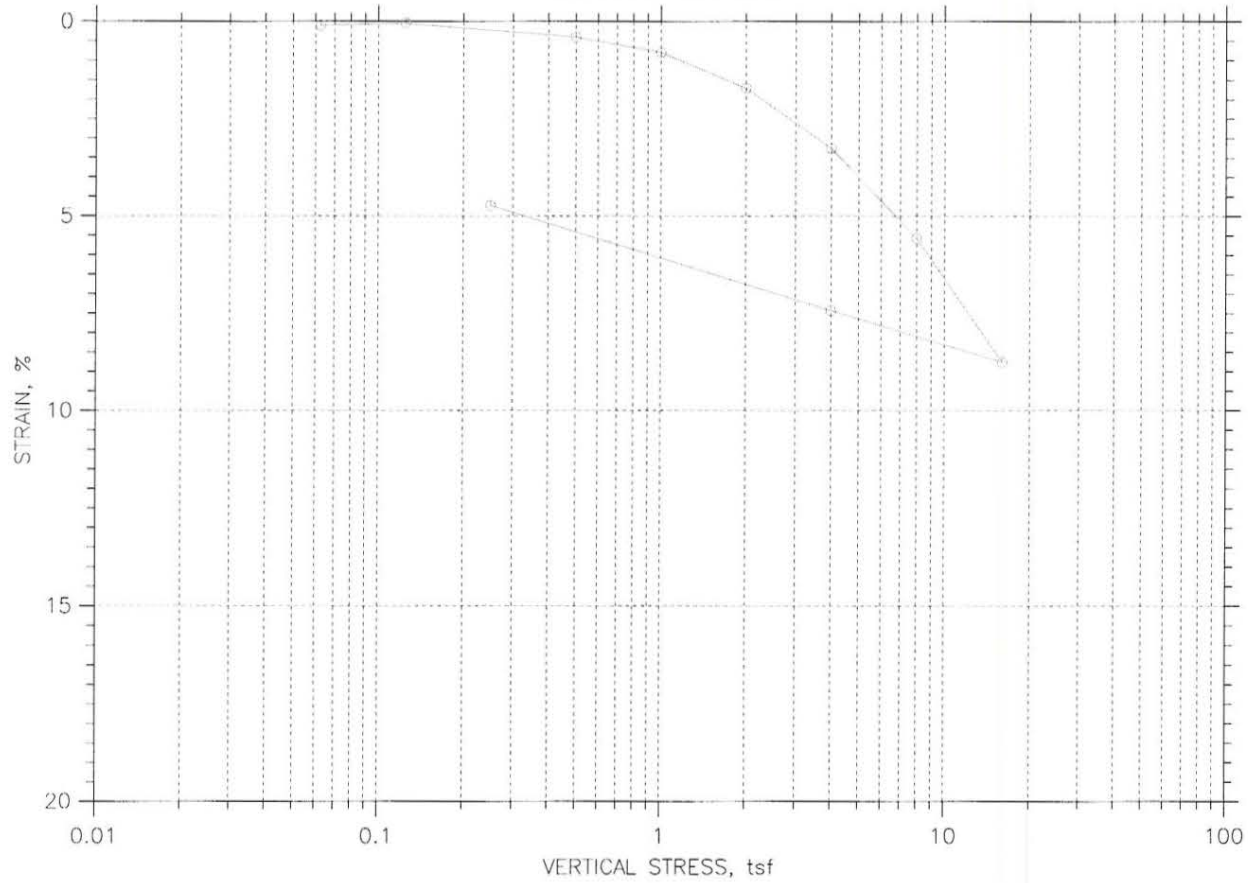
Project No.: 07-119341
Checked By: GL# 10-042
Depth: 18-18.5
Elevation:

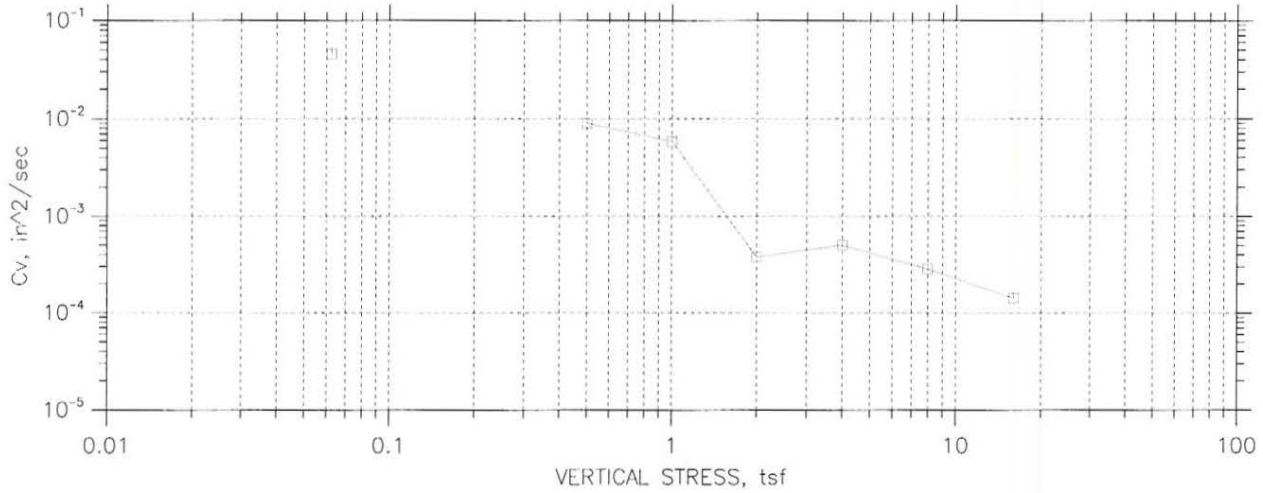
Soil Description: Moist, brown, very stiff silty clay
Remarks:

	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting Sq.Rt. min	T50 Fitting Log min	Coefficient of Consolidation Sq.Rt. in^2/sec	Coefficient of Consolidation Log in^2/sec	Coefficient of Consolidation Ave. in^2/sec
1	0.0625	0.0011	1.177	0.11	0.0	0.0	4.53e-002	4.57e-002	4.55e-002
2	0.125	0.000551	1.178	0.06	0.0	0.0	0.00e+000	0.00e+000	0.00e+000
3	0.5	0.00407	1.171	0.41	0.1	0.0	9.00e-003	0.00e+000	9.00e-003
4	1	0.007993	1.162	0.80	0.2	0.1	4.03e-003	1.07e-002	5.86e-003
5	2	0.0171	1.142	1.71	3.4	0.8	2.33e-004	1.00e-003	3.78e-004
6	4	0.03259	1.108	3.26	2.0	1.1	3.82e-004	7.21e-004	4.99e-004
7	8	0.05577	1.058	5.58	3.2	2.1	2.34e-004	3.56e-004	2.82e-004
8	16	0.08766	0.988	8.77	7.0	3.0	1.01e-004	2.38e-004	1.42e-004
9	4	0.07433	1.018	7.43	1.5	0.0	4.78e-004	0.00e+000	4.78e-004
10	0.25	0.04737	1.076	4.74	10.8	0.0	6.70e-005	0.00e+000	6.70e-005

CONSOLIDATION TEST DATA

SUMMARY REPORT



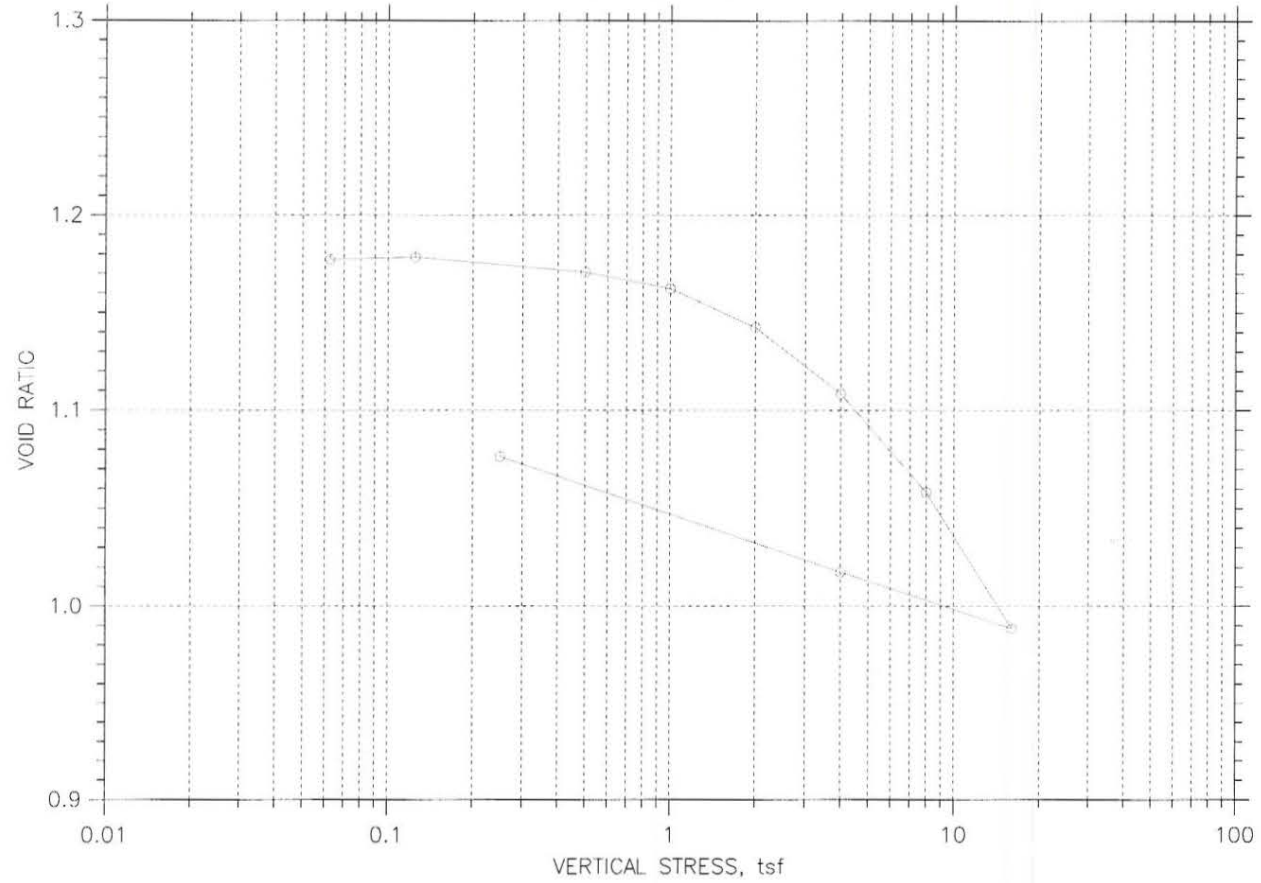


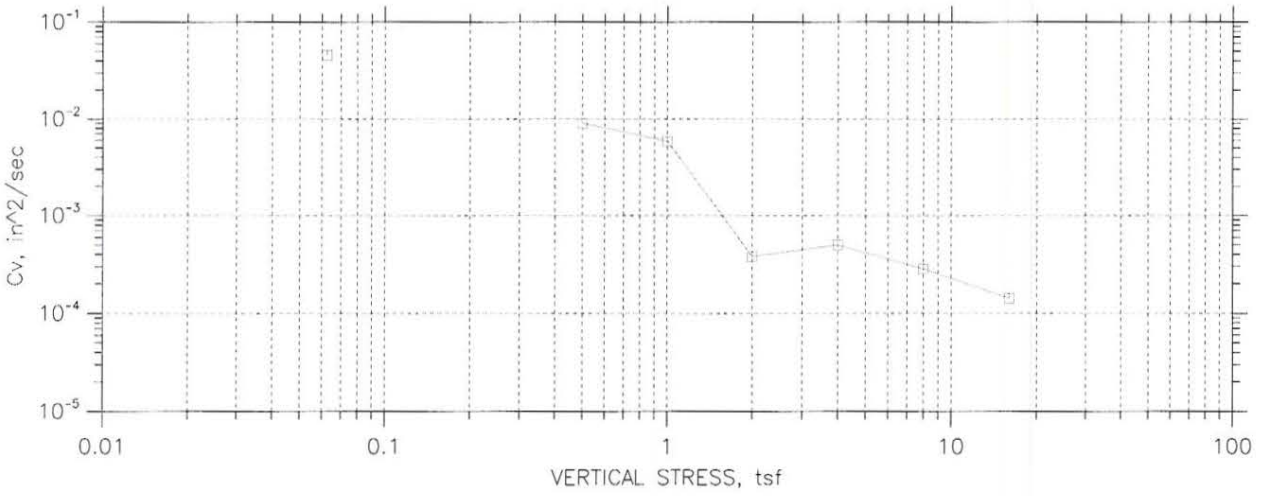
	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-231	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C5-I	Test Date: 7/8/10	Depth: 18-18.5
	Test No.: 10-030-G1	Sample Type: Tube	Elevation:
	Description: Moist, brown, very stiff silty clay		
	Remarks:		

Thu, 29-JUL-2010 15:28:57

CONSOLIDATION TEST DATA

SUMMARY REPORT



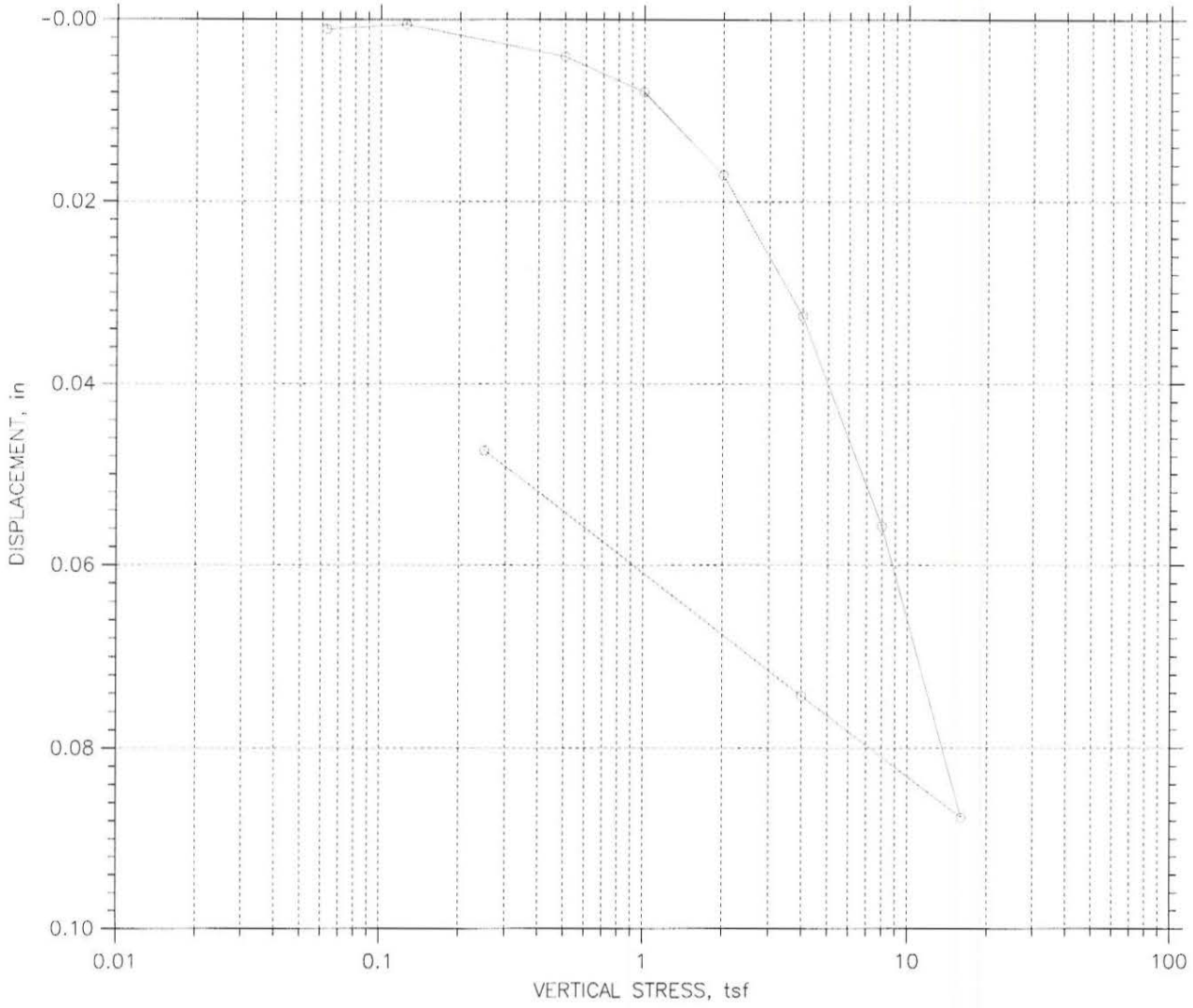


	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-231	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C5-I	Test Date: 7/8/10	Depth: 18-18.5
	Test No.: 10-030-G1	Sample Type: Tube	Elevation:
	Description: Moist, brown, very stiff silty clay		
	Remarks:		

Thu, 29-JUL-2010 15:29:18

CONSOLIDATION TEST DATA

SUMMARY REPORT



					Before Test	After Test
Overburden Pressure: 8.864e-312 tsf				Water Content, %	42.52	39.96
Preconsolidation Pressure: 3.612e-311 tsf				Dry Unit Weight, pcf	77.05	80.88
Compression Index: 2.75859e-313				Saturation, %	96.98	99.86
Diameter: 2.375 in		Height: 1 in		Void Ratio	1.18	1.08
LL: 0	PL: 0	PI: 0	GS: 2.69			

	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-231	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C5-I	Test Date: 7/8/10	Depth: 18-18.5
	Test No.: 10-030-G1	Sample Type: Tube	Elevation:
	Description: Moist, brown, very stiff silty clay		
	Remarks:		

Thu, 29-JUL-2010 15:29:44

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-234
Sample No.: C05-1
Test No.: 10-051-G1

Location: 07-LA-10
Tested By: AZM
Test Date: 8/16/10
Sample Type: Tube

Project No.: 07-119341
Checked By: GL# 10-042
Depth: 21.5
Elevation:

Soil Description: Moist, brown, soft, silt
Remarks:

Measured Specific Gravity: 2.67
Initial Void Ratio: 1.28
Final Void Ratio: 1.04

Liquid Limit: 0
Plastic Limit: 0
Plasticity Index: 0

Initial Height: 1.00 in
Specimen Diameter: 2.38 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID		RING		
Wt. Container + Wet Soil, gm	214.2	214.2	208.3	208.3
Wt. Container + Dry Soil, gm	175.2	175.2	175.2	175.2
Wt. Container, gm	90.1	90.1	90.1	90.1
Wt. Dry Soil, gm	85.1	85.1	85.1	85.1
Water Content, %	45.83	45.83	38.90	38.90
Void Ratio	---	1.28	1.04	---
Degree of Saturation, %	---	95.68	99.73	---
Dry Unit Weight, pcf	---	73.18	81.701	---

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-234
Sample No.: C05-1
Test No.: 10-051-G1

Location: 07-LA-10
Tested By: AZM
Test Date: 8/16/10
Sample Type: Tube

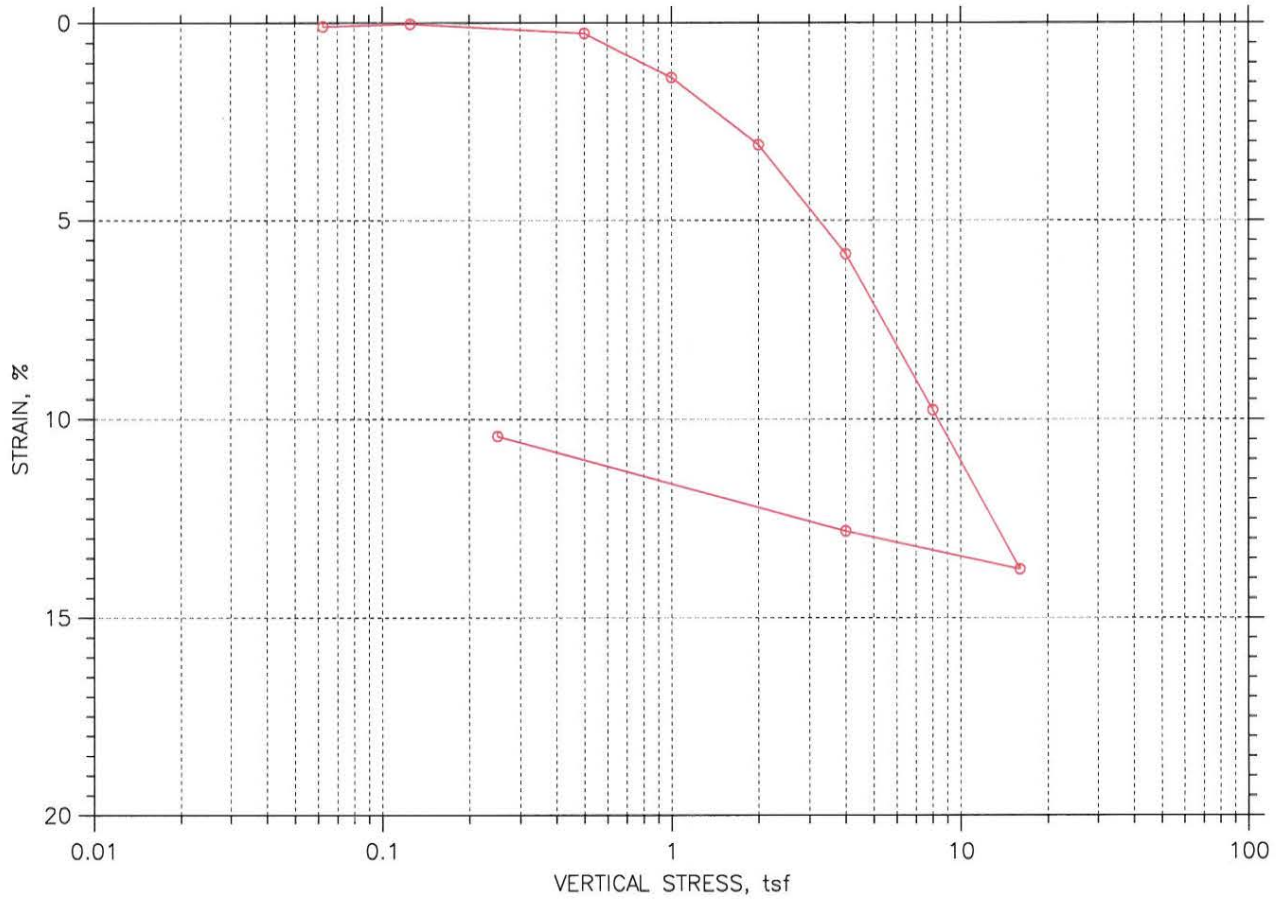
Project No.: 07-119341
Checked By: GL# 10-042
Depth: 21.5
Elevation:

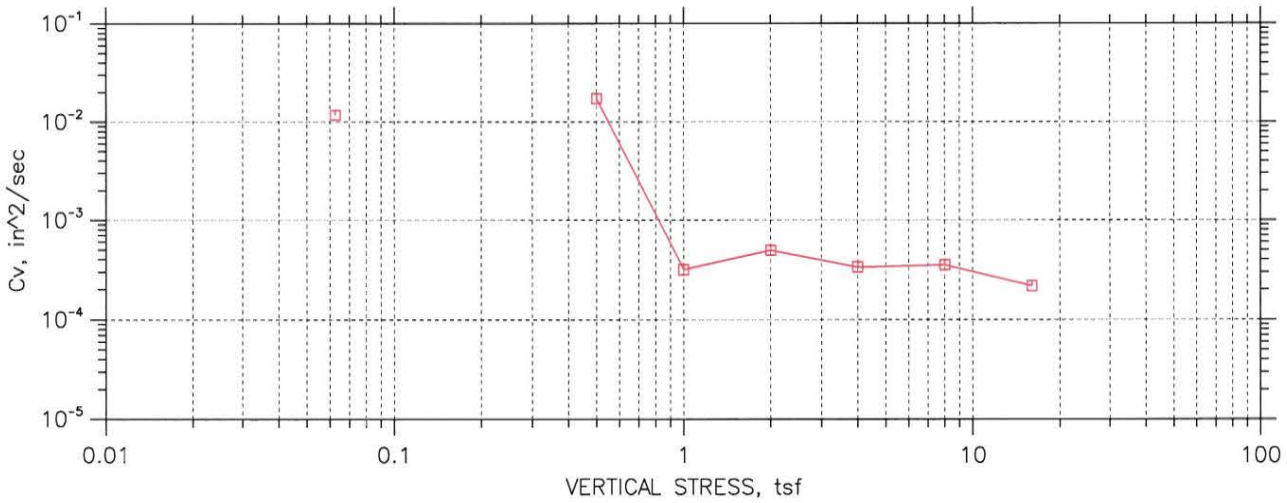
Soil Description: Moist, brown, soft, silt
Remarks:

	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting Sq.Rt. min	T50 Fitting Log min	Coefficient of Consolidation Sq.Rt. in^2/sec	Coefficient of Consolidation Log in^2/sec	Coefficient of Consolidation Ave. in^2/sec
1	0.0625	0.0008483	1.278	0.08	0.1	0.1	1.01e-002	1.39e-002	1.17e-002
2	0.125	0.0002492	1.280	0.02	0.0	0.0	0.00e+000	0.00e+000	0.00e+000
3	0.5	0.002611	1.274	0.26	0.0	0.0	1.72e-002	0.00e+000	1.72e-002
4	1	0.01378	1.249	1.38	3.2	1.9	2.49e-004	4.25e-004	3.14e-004
5	2	0.03083	1.210	3.08	2.1	1.1	3.72e-004	7.19e-004	4.91e-004
6	4	0.05849	1.147	5.85	2.5	2.0	2.98e-004	3.77e-004	3.33e-004
7	8	0.09767	1.058	9.77	2.3	1.7	2.99e-004	4.21e-004	3.50e-004
8	16	0.1378	0.966	13.78	3.2	2.7	1.98e-004	2.37e-004	2.16e-004
9	4	0.1282	0.988	12.82	0.5	0.0	1.29e-003	0.00e+000	1.29e-003
10	0.25	0.1043	1.042	10.43	9.6	0.0	6.70e-005	0.00e+000	6.70e-005

CONSOLIDATION TEST DATA

SUMMARY REPORT



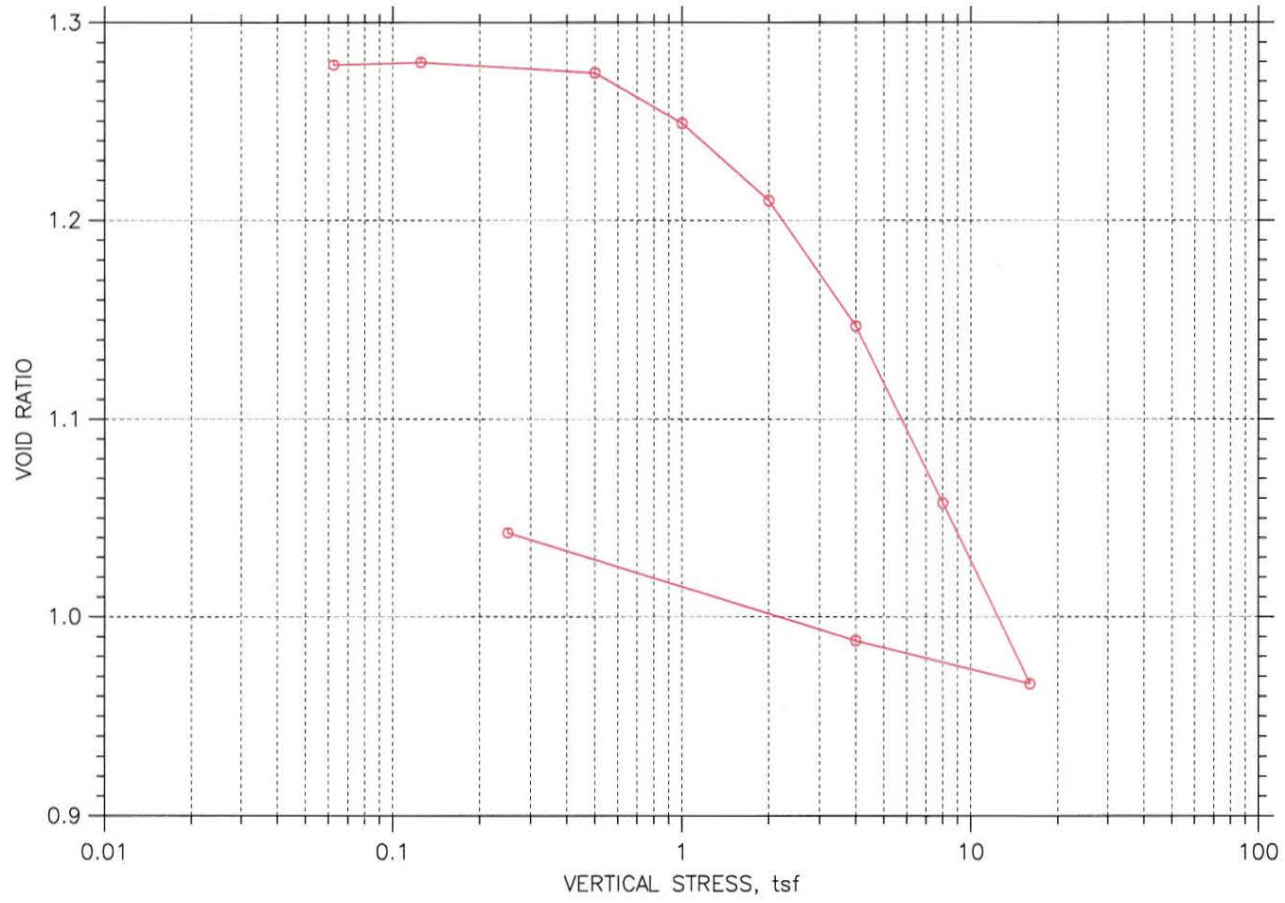


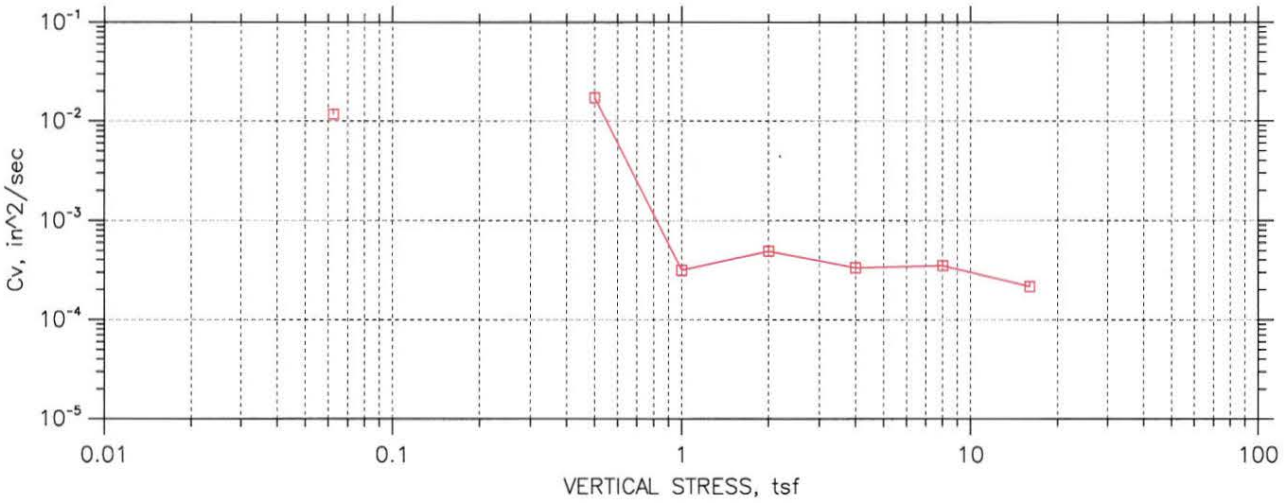
	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-234	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C05-1	Test Date: 8/16/10	Depth: 21.5
	Test No.: 10-051-G1	Sample Type: Tube	Elevation:
	Description: Moist, brown, soft, silt		
	Remarks:		

Mon, 23-AUG-2010 11:09:52

CONSOLIDATION TEST DATA

SUMMARY REPORT



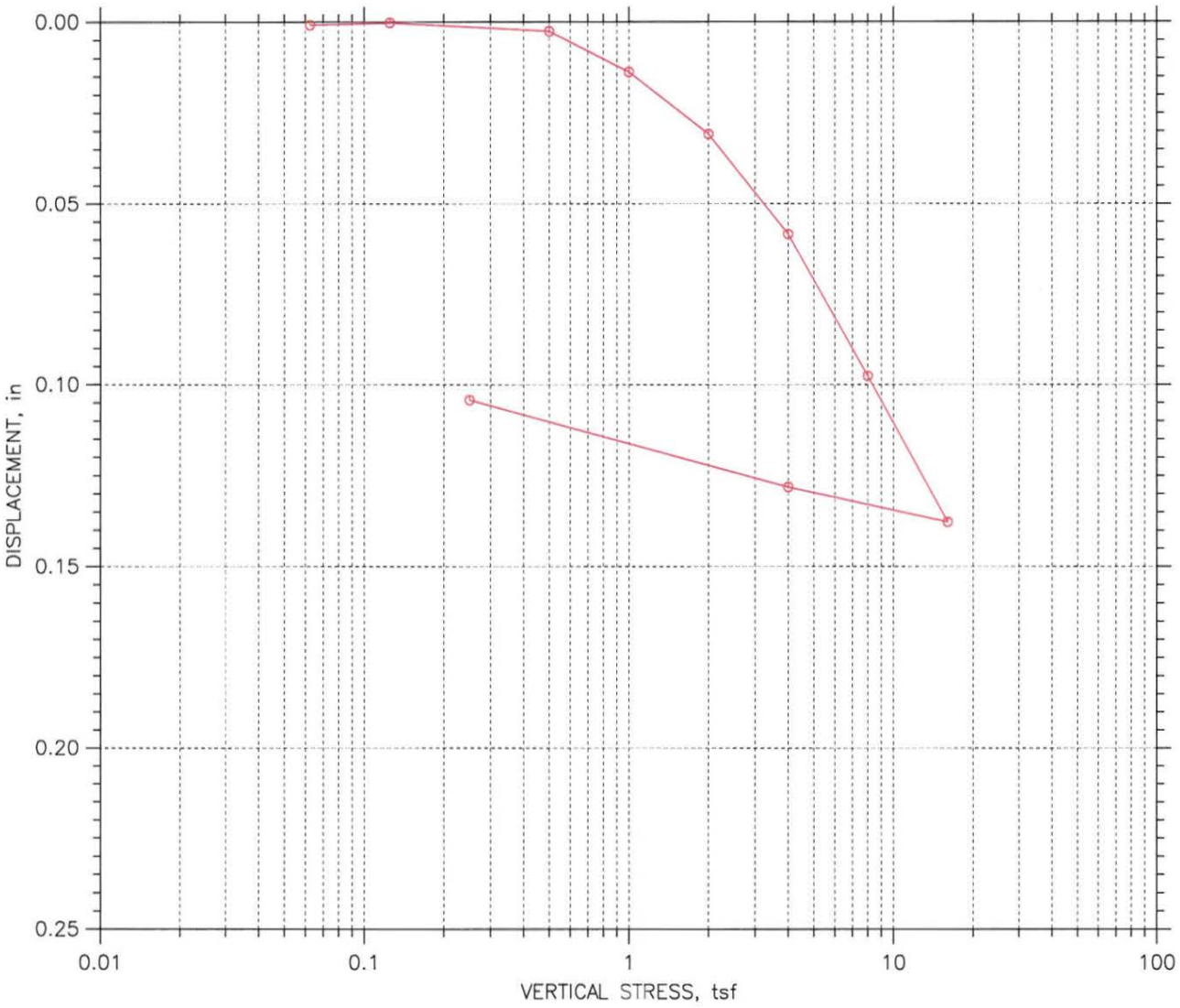


	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-234	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C05-1	Test Date: 8/16/10	Depth: 21.5
	Test No.: 10-051-G1	Sample Type: Tube	Elevation:
	Description: Moist, brown, soft, silt		
	Remarks:		

Mon, 23-AUG-2010 11:10:16

CONSOLIDATION TEST DATA

SUMMARY REPORT



				Before Test	After Test
Overburden Pressure: 8.864e-312 tsf				Water Content, %	45.83	38.90
Preconsolidation Pressure: 3.612e-311 tsf				Dry Unit Weight, pcf	73.18	81.7
Compression Index: 2.75859e-313				Saturation, %	95.68	99.73
Diameter: 2.375 in		Height: 1 in		Void Ratio	1.28	1.04
LL: 0	PL: 0	PI: 0	GS: 2.67			

	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-234	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C05-1	Test Date: 8/16/10	Depth: 21.5
	Test No.: 10-051-G1	Sample Type: Tube	Elevation:
	Description: Moist, brown, soft, silt		
	Remarks:		

Mon, 23-AUG-2010 11:11:45

CONSOLIDATION TEST DATA

Project: 1-10-HOV
Boring No.: R09-234
Sample No.: C10-1
Test No.: 10-052-G3

Location: 07-LA-10
Tested By: AZM
Test Date: 8/16/2010
Sample Type: Tube

Project No.: 07-119341
Checked By: GL#10-042
Depth: 40
Elevation:

Soil Description: Moist,tan-olive, soft, silt
Remarks:

Measured Specific Gravity: 2.68
Initial Void Ratio: 1.42
Final Void Ratio: 0.85

Liquid Limit: 0
Plastic Limit: 0
Plasticity Index: 0

Initial Height: 1.00 in
Specimen Diameter: 2.38 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID		RING		
Wt. Container + Wet Soil, gm	211.9	211.9	196.2	196.2
Wt. Container + Dry Soil, gm	170.9	170.9	170.9	170.9
Wt. Container, gm	90.6	90.6	90.6	90.6
Wt. Dry Soil, gm	80.3	80.3	80.3	80.3
Water Content, %	51.06	51.06	31.51	31.51
Void Ratio	---	1.42	0.85	---
Degree of Saturation, %	---	96.27	99.71	---
Dry Unit Weight, pcf	---	69.052	90.517	---

CONSOLIDATION TEST DATA

Project: 1-10-HOV
Boring No.: R09-234
Sample No.: C10-1
Test No.: 10-052-G3

Location: 07-LA-10
Tested By: AZM
Test Date: 8/16/2010
Sample Type: Tube

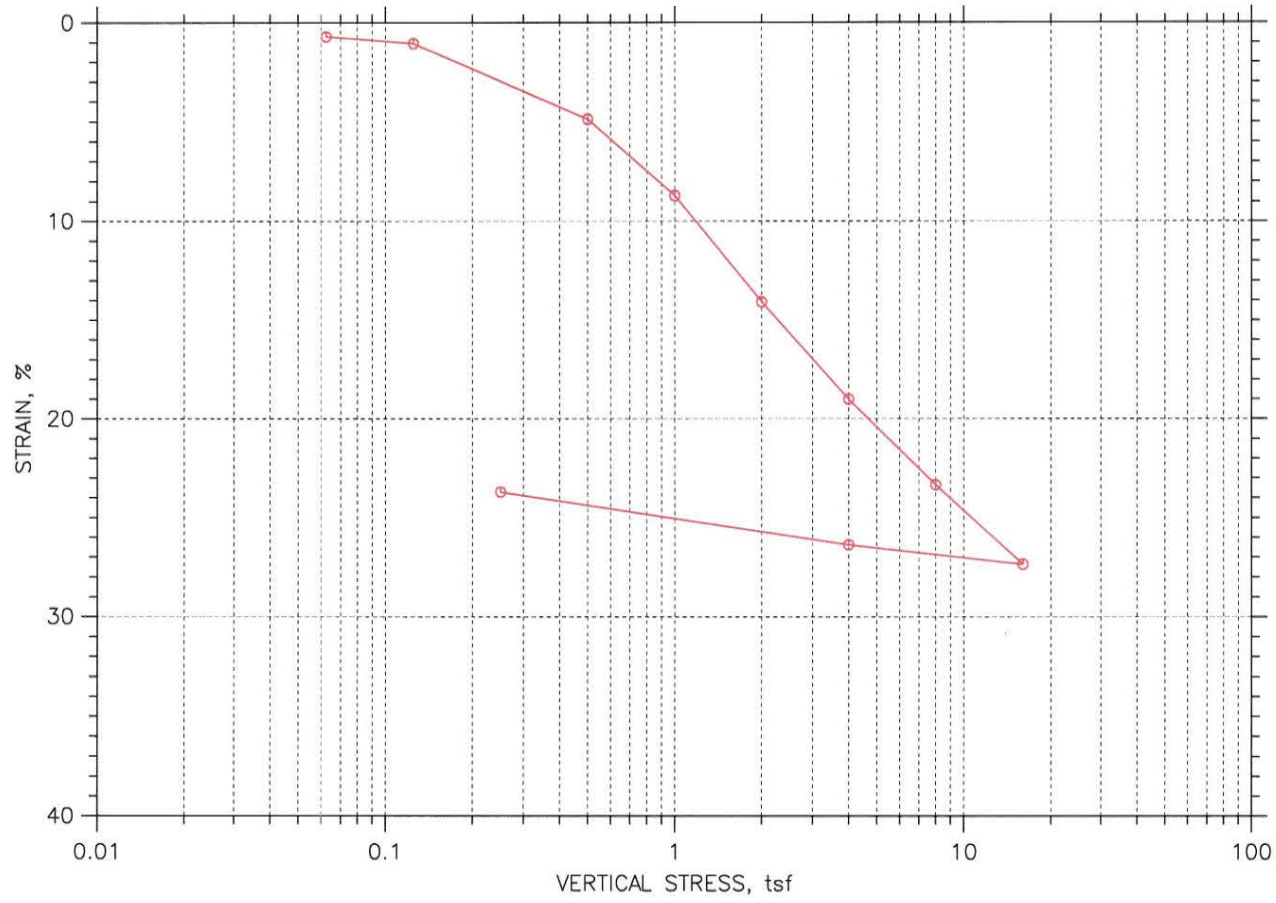
Project No.: 07-119341
Checked By: GL#10-042
Depth: 40
Elevation:

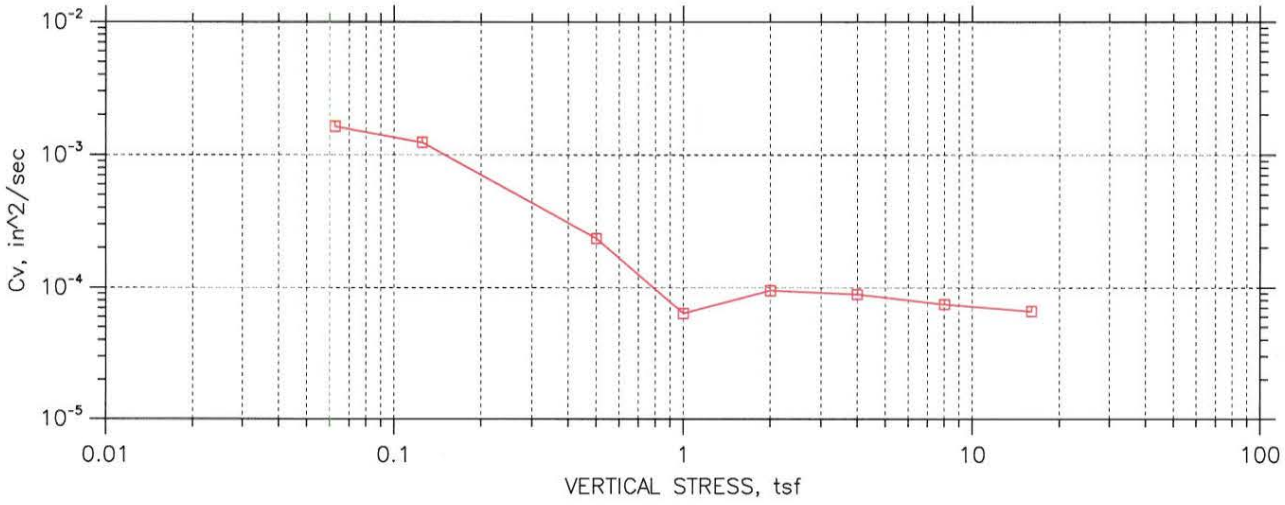
Soil Description: Moist,tan-olive, soft, silt
Remarks:

	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting Sq.Rt. min	T50 Fitting Log min	Coefficient of Consolidation Sq.Rt. in^2/sec	Coefficient of Consolidation Log in^2/sec	Coefficient of Consolidation Ave. in^2/sec
1	0.0625	0.007032	1.402	0.70	0.5	0.0	1.64e-003	0.00e+000	1.64e-003
2	0.125	0.01052	1.394	1.05	0.6	0.0	1.24e-003	0.00e+000	1.24e-003
3	0.5	0.04882	1.301	4.88	3.3	3.3	2.32e-004	2.36e-004	2.34e-004
4	1	0.08717	1.208	8.72	11.3	0.0	6.34e-005	0.00e+000	6.34e-005
5	2	0.1409	1.078	14.09	6.8	0.0	9.46e-005	0.00e+000	9.46e-005
6	4	0.1902	0.959	19.02	7.3	5.6	7.81e-005	1.02e-004	8.86e-005
7	8	0.2336	0.854	23.36	6.9	0.0	7.44e-005	0.00e+000	7.44e-005
8	16	0.2737	0.757	27.37	7.0	0.0	6.59e-005	0.00e+000	6.59e-005
9	4	0.264	0.781	26.40	2.3	0.0	1.92e-004	0.00e+000	1.92e-004
10	0.25	0.2371	0.846	23.71	29.3	0.0	1.58e-005	0.00e+000	1.58e-005

CONSOLIDATION TEST DATA

SUMMARY REPORT



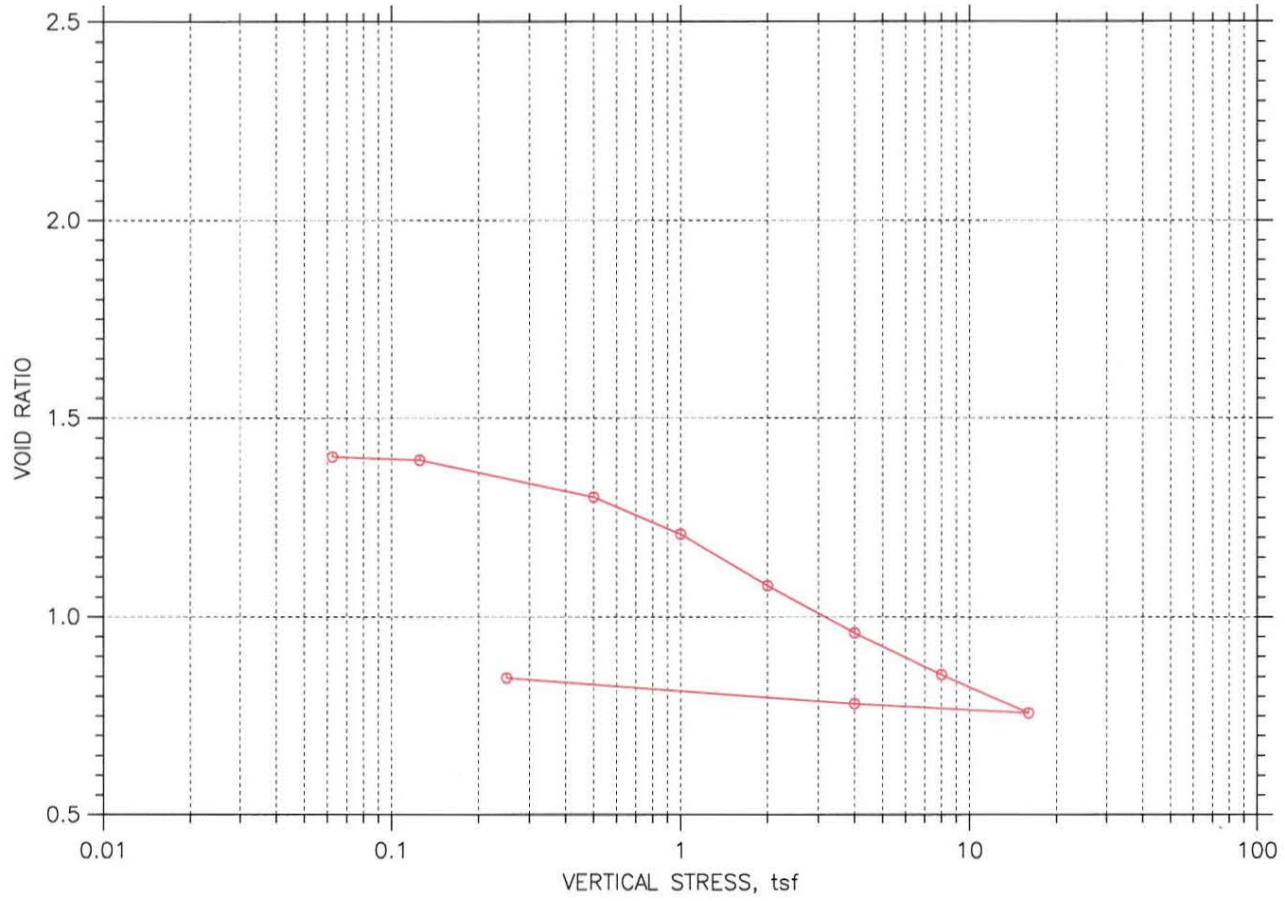


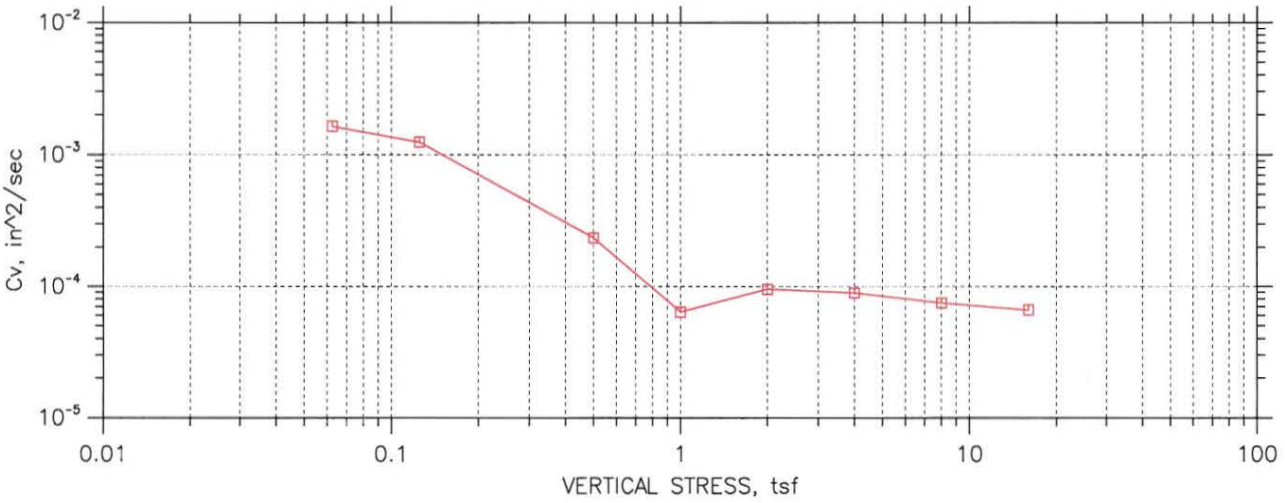
	Project: 1-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-234	Tested By: AZM	Checked By: GL#10-042
	Sample No.: C10-1	Test Date: 8/16/2010	Depth: 40
	Test No.: 10-052-G3	Sample Type: Tube	Elevation:
	Description: Moist,tan-olive, soft, silt		
	Remarks:		

Mon, 23-AUG-2010 11:18:56

CONSOLIDATION TEST DATA

SUMMARY REPORT



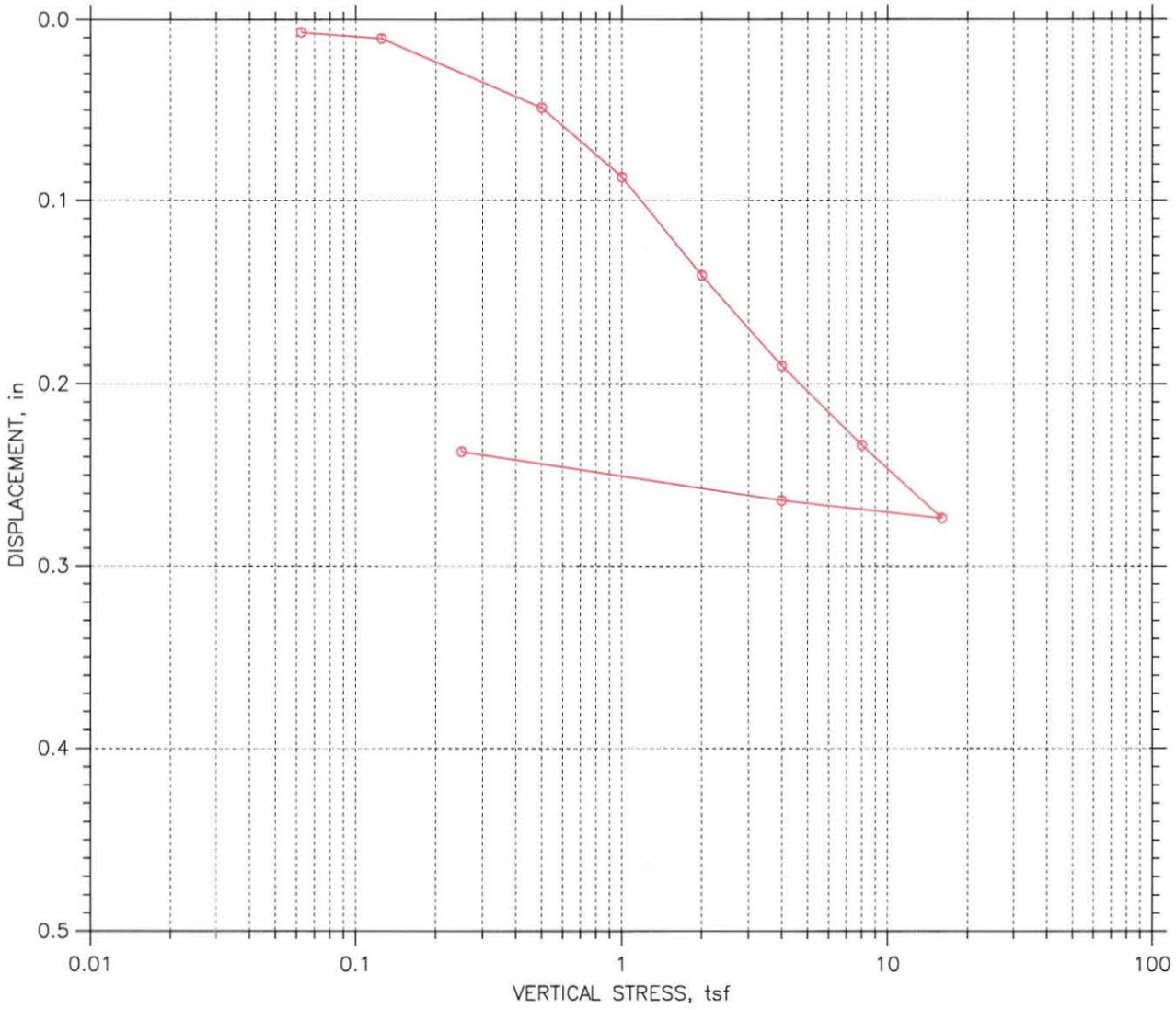


	Project: 1-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-234	Tested By: AZM	Checked By: GL#10-042
	Sample No.: C10-1	Test Date: 8/16/2010	Depth: 40
	Test No.: 10-052-G3	Sample Type: Tube	Elevation:
	Description: Moist,tan-olive, soft, silt		
	Remarks:		

Mon, 23-AUG-2010 11:19:18

CONSOLIDATION TEST DATA

SUMMARY REPORT



					Before Test	After Test
Overburden Pressure: 8.864e-312 tsf				Water Content, %	51.06	31.51
Preconsolidation Pressure: 3.612e-311 tsf				Dry Unit Weight, pcf	69.05	90.52
Compression Index: 2.75859e-313				Saturation, %	96.27	99.71
Diameter: 2.375 in		Height: 1 in		Void Ratio	1.42	0.85
LL: 0	PL: 0	PI: 0	GS: 2.68			

	Project: 1-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-234	Tested By: AZM	Checked By: GL#10-042
	Sample No.: C10-1	Test Date: 8/16/2010	Depth: 40
	Test No.: 10-052-G3	Sample Type: Tube	Elevation:
	Description: Moist,tan-olive, soft, silt		
	Remarks:		

Mon, 23-AUG-2010 11:19:42

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-234
Sample No.: C08-1
Test No.: 10-031-G4

Location: 07-LA-10
Tested By: AZM
Test Date: 7/8/2010
Sample Type: TUBE

Project No.: 07-119341
Checked By: GL# 10-042
Depth: 32
Elevation: WP 8/5

Soil Description: Moist, brown, soft, silt
Remarks:

Measured Specific Gravity: 2.67
Initial Void Ratio: 1.38
Final Void Ratio: 1.27

Liquid Limit: ---
Plastic Limit: ---
Plasticity Index: ---

Initial Height: 1.00 in
Specimen Diameter: 2.38 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID		RING		
Wt. Container + Wet Soil, gm	213.6	213.6	209.9	209.9
Wt. Container + Dry Soil, gm	171.9	171.9	171.9	171.9
Wt. Container, gm	90.5	90.5	90.5	90.5
Wt. Dry Soil, gm	81.4	81.4	81.4	81.4
Water Content, %	51.23	51.23	46.68	46.68
Void Ratio	---	1.38	1.27	---
Degree of Saturation, %	---	99.13	98.26	---
Dry Unit Weight, pcf	---	69.998	73.428	---

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-234
Sample No.: C08-1
Test No.: 10-031-G4

Location: 07-LA-10
Tested By: AZM
Test Date: 7/8/2010
Sample Type: TUBE

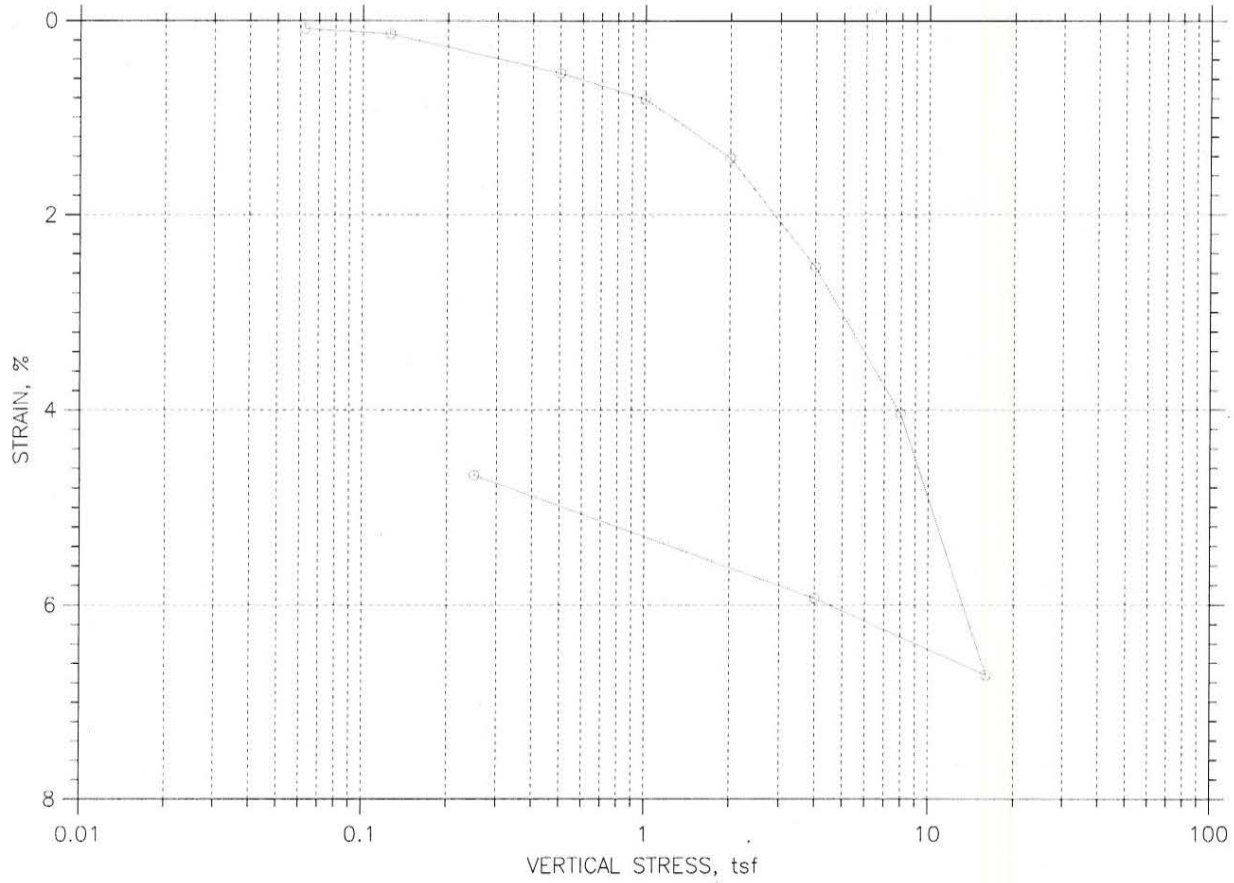
Project No.: 07-119341
Checked By: GL# 10-042
Depth: 32
Elevation:

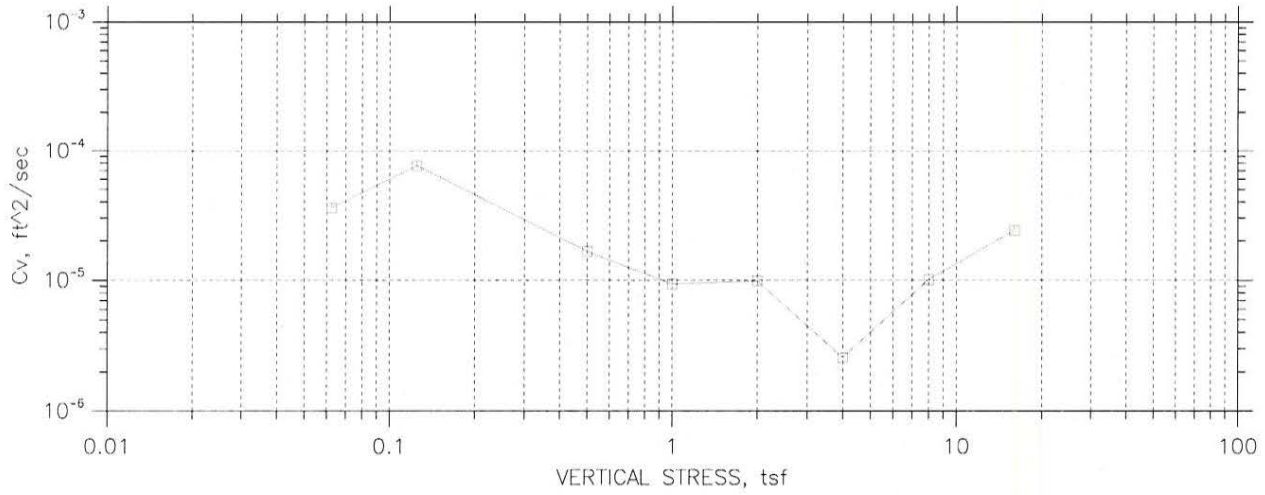
Soil Description: Moist, brown, soft, silt
Remarks:

	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting Sq.Rt. min	T50 Fitting Log min	Coefficient of Consolidation Sq.Rt. ft^2/sec	Coefficient of Consolidation Log ft^2/sec	Coefficient of Consolidation Ave. ft^2/sec
1	0.0625	0.0008236	1.376	0.08	0.2	0.0	3.59e-005	0.00e+000	3.59e-005
2	0.125	0.001365	1.374	0.14	0.1	0.1	6.84e-005	8.63e-005	7.63e-005
3	0.5	0.00544	1.365	0.54	0.3	0.0	1.65e-005	0.00e+000	1.65e-005
4	1	0.00818	1.358	0.82	0.6	0.0	9.34e-006	0.00e+000	9.34e-006
5	2	0.0142	1.344	1.42	0.6	0.0	9.86e-006	0.00e+000	9.86e-006
6	4	0.02538	1.317	2.54	2.1	0.0	2.57e-006	0.00e+000	2.57e-006
7	8	0.04044	1.282	4.04	0.5	0.0	1.01e-005	0.00e+000	1.01e-005
8	16	0.06723	1.218	6.72	0.2	0.0	2.40e-005	0.00e+000	2.40e-005
9	4	0.05933	1.237	5.93	0.0	0.0	3.45e-004	0.00e+000	3.45e-004
10	0.25	0.04671	1.267	4.67	2.7	0.0	1.89e-006	0.00e+000	1.89e-006

CONSOLIDATION TEST DATA

SUMMARY REPORT



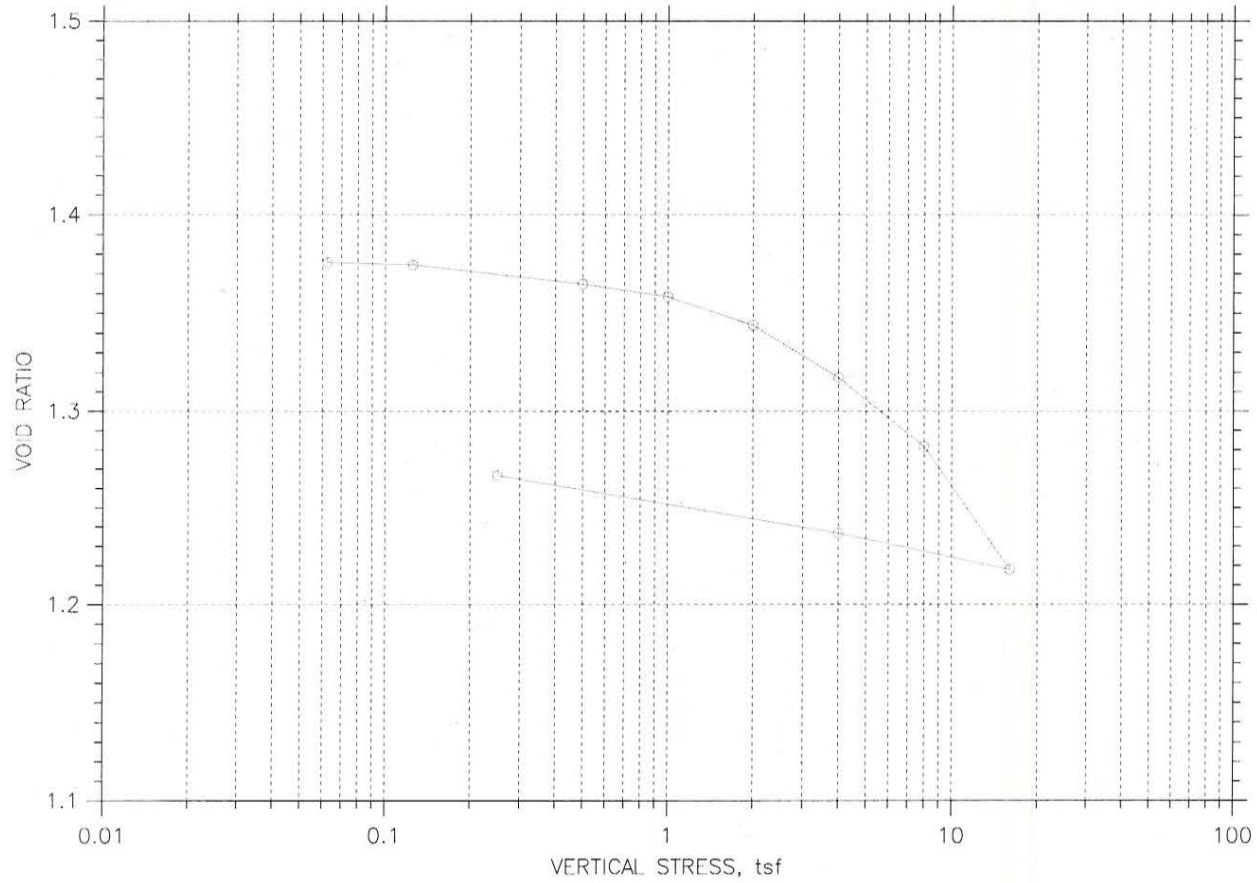


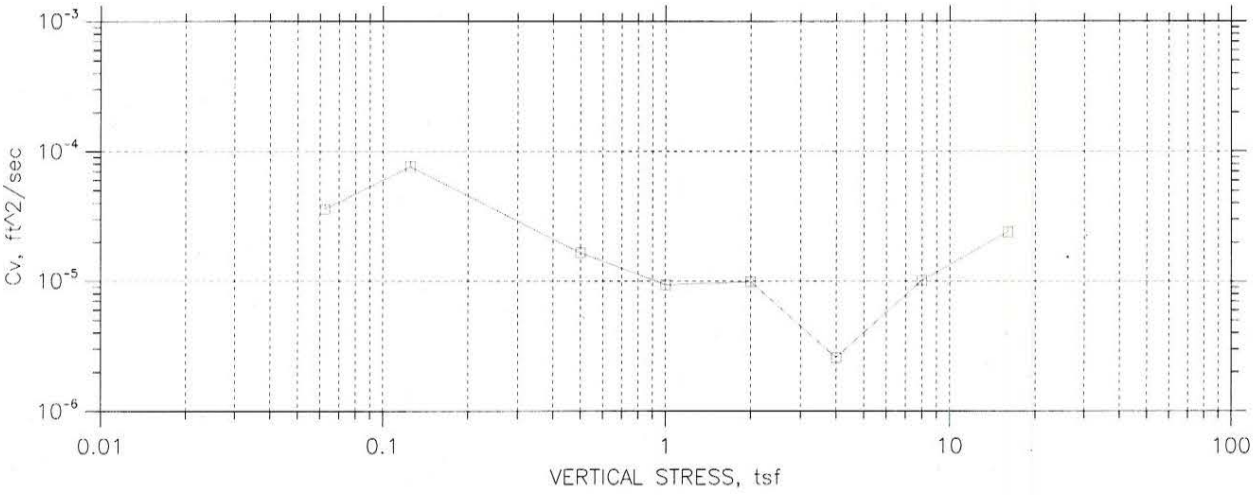
	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-234	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C08-1	Test Date: 7/8/2010	Depth: 32
	Test No.: 10-031-G4	Sample Type: TUBE	Elevation:
	Description: Moist, brown, soft, silt		
	Remarks:		

Thu, 29-JUL-2010 15:34:50

CONSOLIDATION TEST DATA

SUMMARY REPORT



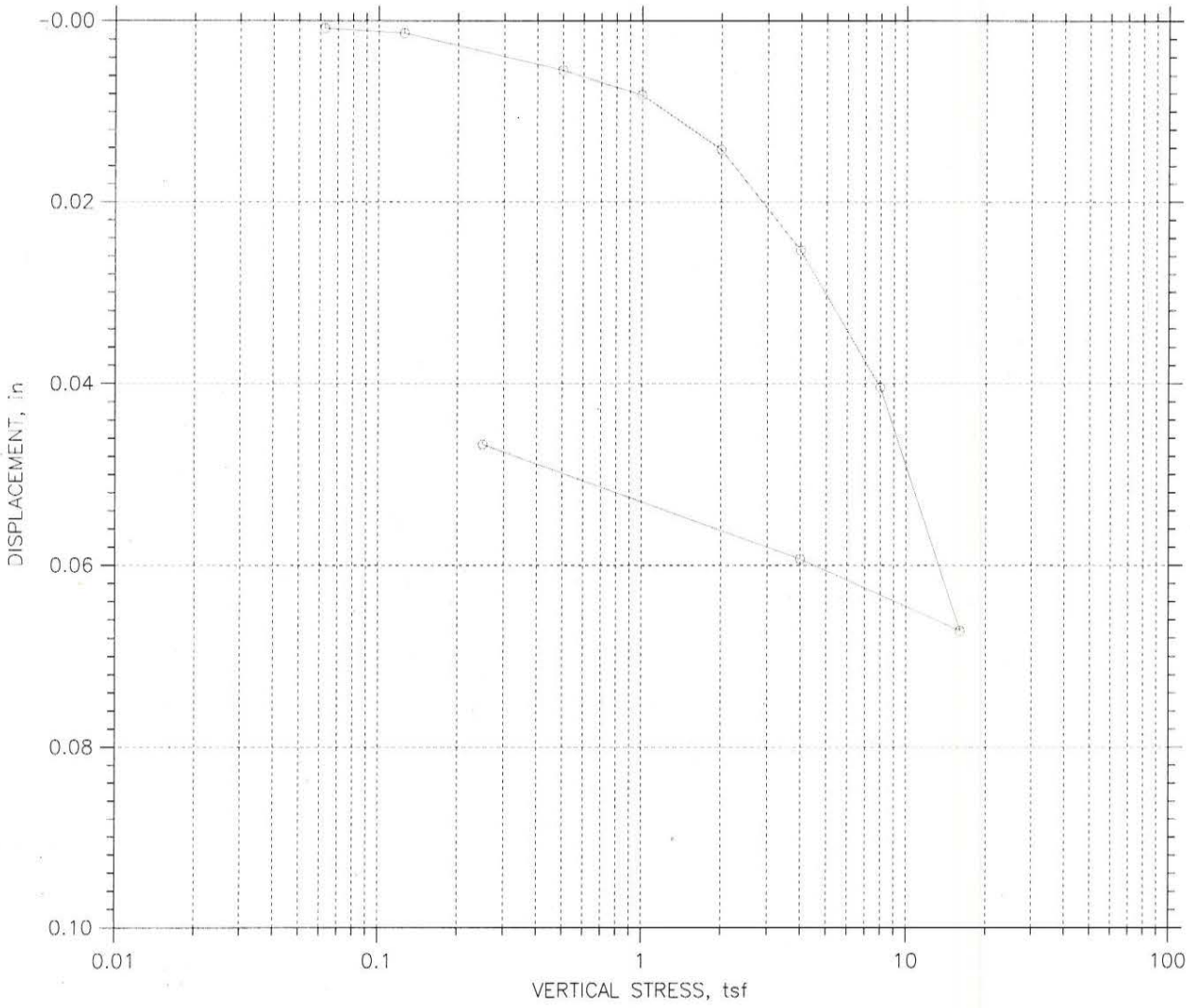


	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-234	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C08-1	Test Date: 7/8/2010	Depth: 32
	Test No.: 10-031-G4	Sample Type: TUBE	Elevation:
	Description: Moist, brown, soft, silt		
	Remarks:		

Thu, 29-JUL-2010 15:35:19

CONSOLIDATION TEST DATA

SUMMARY REPORT



				Before Test	After Test
Overburden Pressure: 0 tsf				Water Content, %	51.23	46.68
Preconsolidation Pressure: 0 tsf				Dry Unit Weight, pcf	70.	73.43
Compression Index: 3.81959e-313				Saturation, %	99.13	98.26
Diameter: 2.375 in		Height: 1 in		Void Ratio	1.38	1.27
LL: ---	PL: ---	PI: ---	GS: 2.67			

	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-234	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C08-1	Test Date: 7/8/2010	Depth: 32
	Test No.: 10-031-G4	Sample Type: TUBE	Elevation:
	Description: Moist, brown, soft, silt		
	Remarks:		

Thu, 29-JUL-2010 15:35:45

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-235
Sample No.: C06-I
Test No.: 10-032-G1

Location: 07-LA-10
Tested By: AZM
Test Date: 7/9/10
Sample Type: Tube

Project No.: 07-119341
Checked By: GL# 10-042
Depth: 30
Elevation: WPSJS

Soil Description: Moist, brown-grey, hard, silty clay
Remarks:

Measured Specific Gravity: 2.67
Initial Void Ratio: 0.94
Final Void Ratio: 0.93

Liquid Limit: 0
Plastic Limit: 0
Plasticity Index: 0

Initial Height: 1.00 in
Specimen Diameter: 2.38 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID		RING		
Wt. Container + Wet Soil, gm	224.7	224.7	225.1	225.1
Wt. Container + Dry Soil, gm	190.5	190.5	190.5	190.5
Wt. Container, gm	90.5	90.5	90.5	90.5
Wt. Dry Soil, gm	100	100	100	100
Water Content, %	34.20	34.20	34.60	34.60
Void Ratio	---	0.94	0.93	---
Degree of Saturation, %	---	97.35	99.81	---
Dry Unit Weight, pcf	---	85.993	86.545	---

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-235
Sample No.: C06-I
Test No.: 10-032-G1

Location: 07-LA-10
Tested By: AZM
Test Date: 7/9/10
Sample Type: Tube

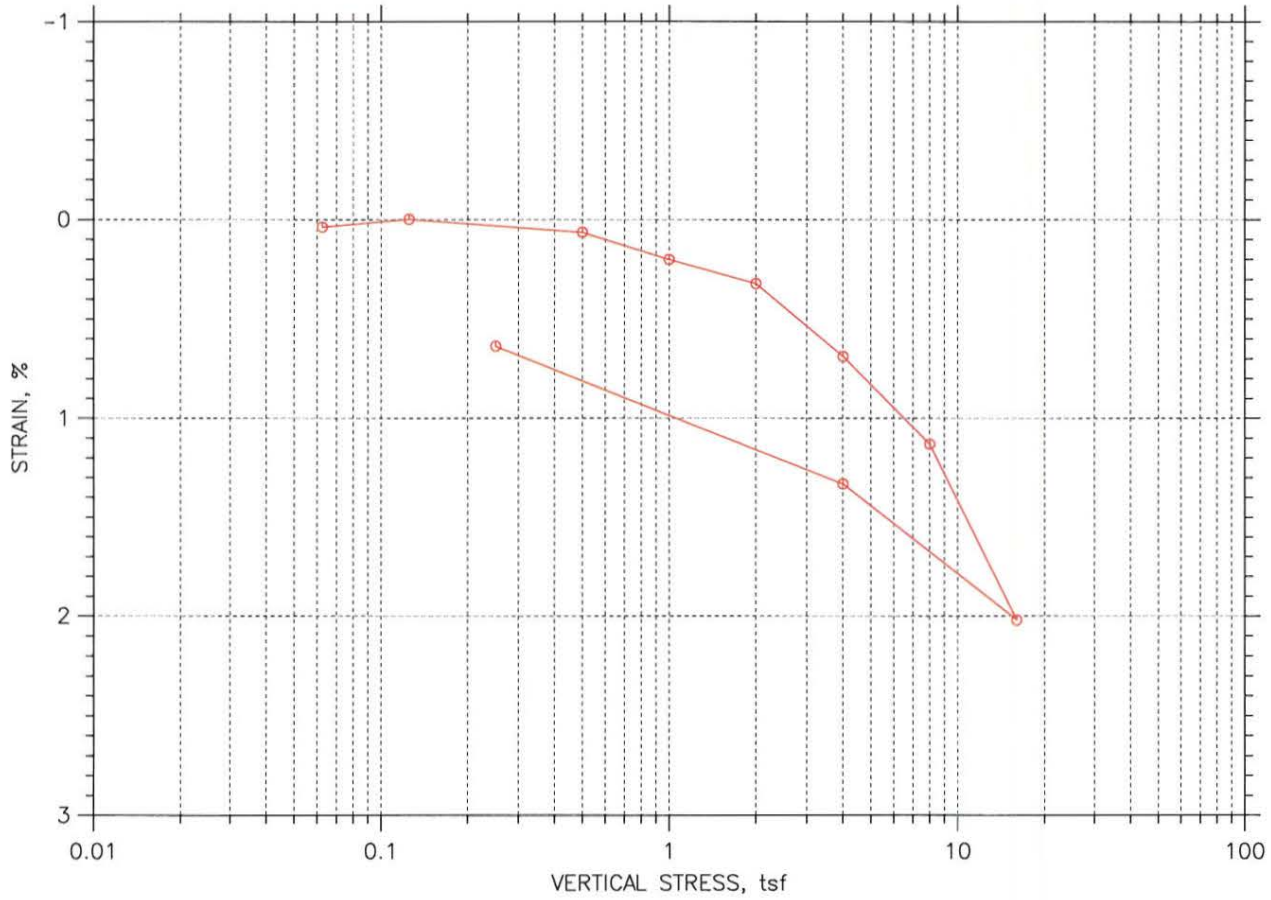
Project No.: 07-119341
Checked By: GL# 10-042
Depth: 30
Elevation:

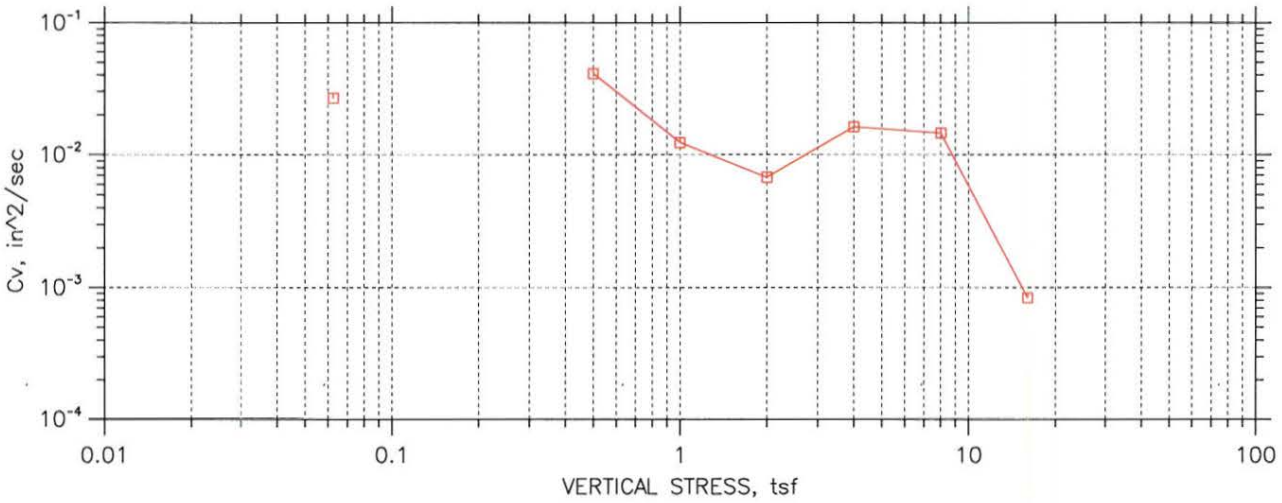
Soil Description: Moist, brown-grey, hard, silty clay
Remarks:

	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting Sq.Rt. min	T50 Fitting Log min	Coefficient of Consolidation Sq.Rt. in^2/sec	Coefficient of Consolidation Log in^2/sec	Coefficient of Consolidation Ave. in^2/sec
1	0.0625	0.0003957	0.937	0.04	0.0	0.0	2.66e-002	0.00e+000	2.66e-002
2	0.125	-2.214e-006	0.938	-0.00	0.0	0.0	0.00e+000	0.00e+000	0.00e+000
3	0.5	0.0006498	0.936	0.06	0.0	0.0	4.07e-002	0.00e+000	4.07e-002
4	1	0.002008	0.934	0.20	0.1	0.0	7.98e-003	2.68e-002	1.23e-002
5	2	0.003217	0.931	0.32	0.2	0.0	3.65e-003	4.60e-002	6.76e-003
6	4	0.00689	0.924	0.69	0.1	0.0	9.87e-003	4.48e-002	1.62e-002
7	8	0.01132	0.916	1.13	0.1	0.1	1.43e-002	1.47e-002	1.45e-002
8	16	0.02022	0.898	2.02	1.0	0.0	8.32e-004	0.00e+000	8.32e-004
9	4	0.01333	0.912	1.33	0.1	0.0	1.37e-002	4.70e-002	2.12e-002
10	0.25	0.006382	0.925	0.64	0.2	0.0	3.65e-003	0.00e+000	3.65e-003

CONSOLIDATION TEST DATA

SUMMARY REPORT



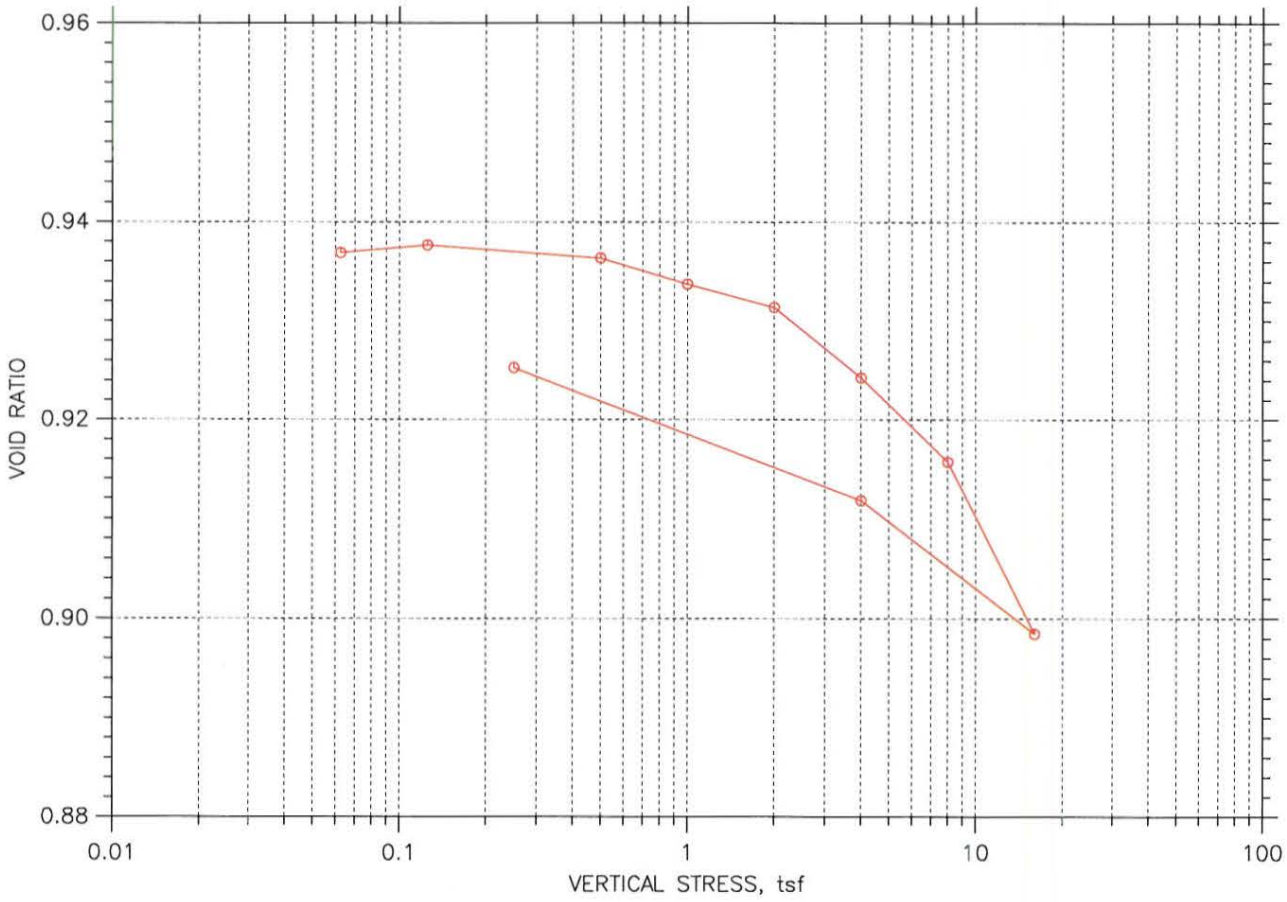


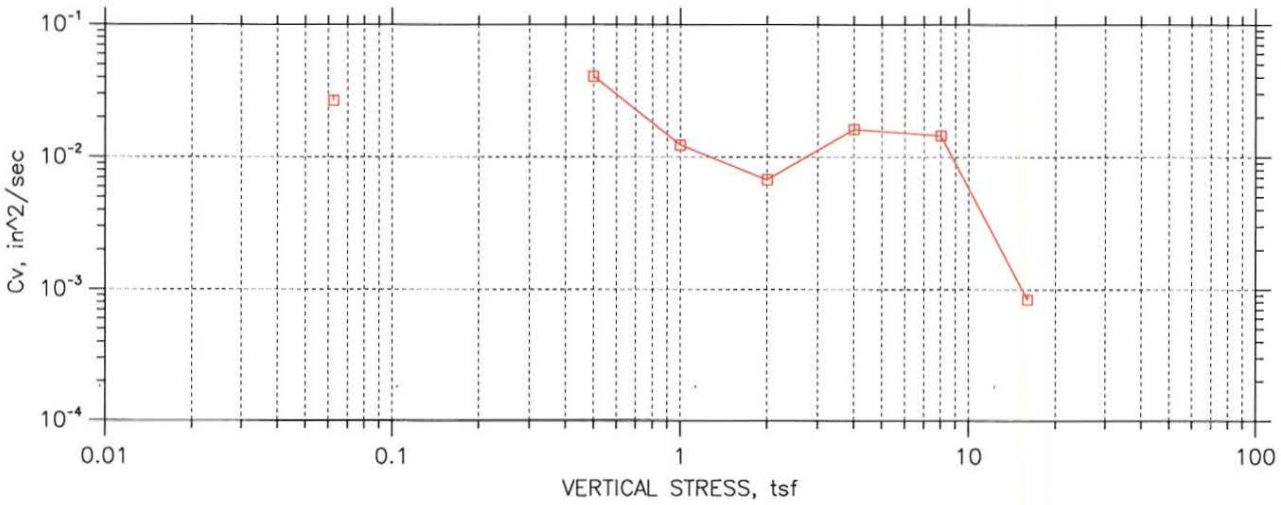
	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-235	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C06-I	Test Date: 7/9/10	Depth: 30
	Test No.: 10-032-G1	Sample Type: Tube	Elevation:
	Description: Moist, brown-grey, hard, silty clay		
	Remarks:		

Thu, 05-AUG-2010 09:39:16

CONSOLIDATION TEST DATA

SUMMARY REPORT



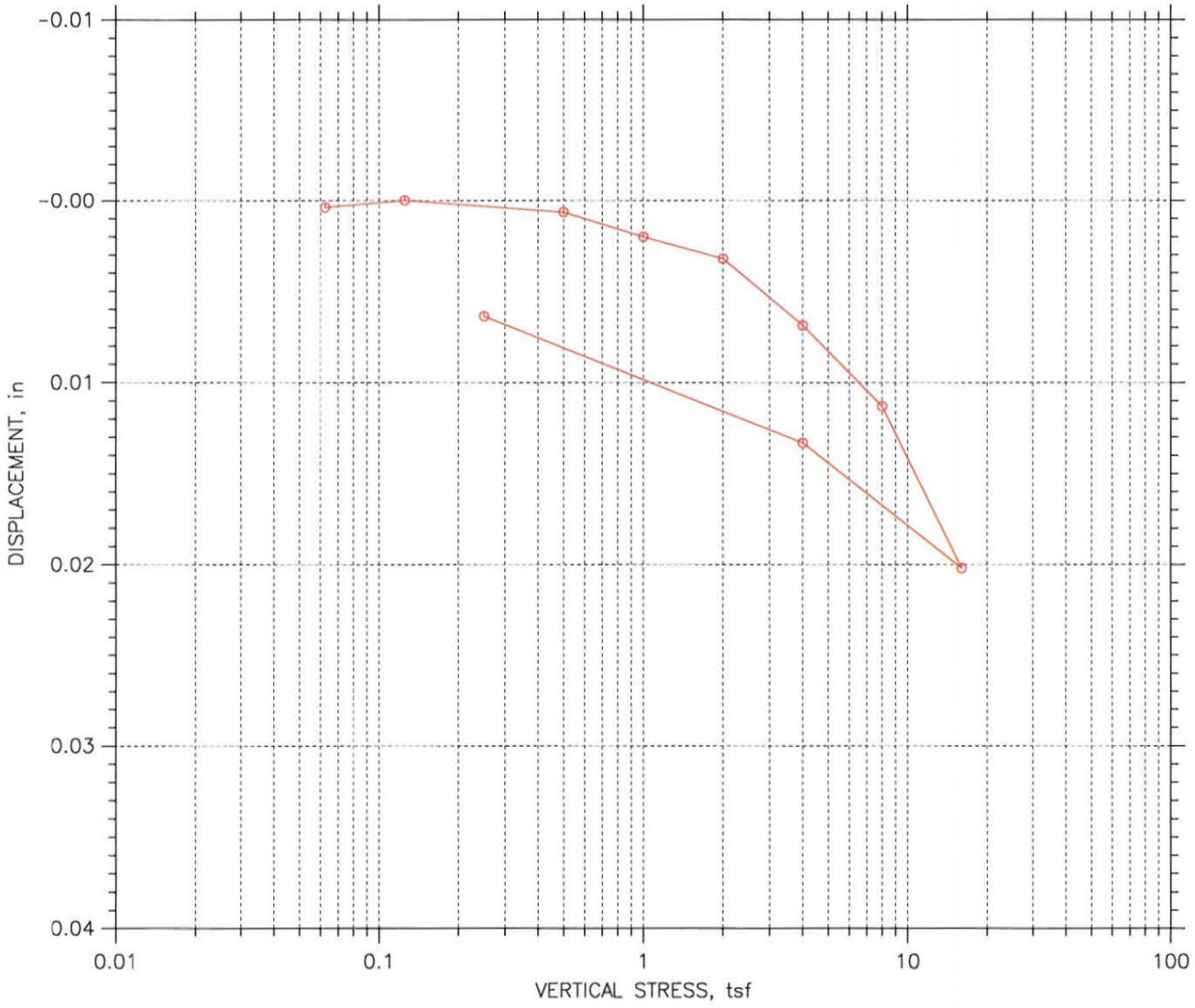


	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-235	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C06-I	Test Date: 7/9/10	Depth: 30
	Test No.: 10-032-G1	Sample Type: Tube	Elevation:
	Description: Moist, brown-grey, hard, silty clay		
	Remarks:		

Thu, 05-AUG-2010 09:39:45

CONSOLIDATION TEST DATA

SUMMARY REPORT



				Before Test	After Test
Overburden Pressure: 8.864e-312 tsf				Water Content, %	34.20	34.60
Preconsolidation Pressure: 3.612e-311 tsf				Dry Unit Weight, pcf	85.99	86.54
Compression Index: 2.75859e-313				Saturation, %	97.35	99.81
Diameter: 2.375 in		Height: 1 in		Void Ratio	0.94	0.93
LL: 0	PL: 0	PI: 0	GS: 2.67			

	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-235	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C06-I	Test Date: 7/9/10	Depth: 30
	Test No.: 10-032-G1	Sample Type: Tube	Elevation:
	Description: Moist, brown-grey, hard, silty clay		
	Remarks:		

Thu, 05-AUG-2010 09:40:07

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-235
Sample No.: C10-4
Test No.: 10-033-G1

Location: 07-LA-10
Tested By: AZM
Test Date: 7/12/10
Sample Type: Tube

Project No.: 07-119341
Checked By: GL# 10-042
Depth: 50
Elevation: WP 5/5

Soil Description: Moist, dark brown, hard, silt w/clay
Remarks:

Measured Specific Gravity: 2.67
Initial Void Ratio: 0.83
Final Void Ratio: 0.73

Liquid Limit: 0
Plastic Limit: 0
Plasticity Index: 0

Initial Height: 1.00 in
Specimen Diameter: 2.38 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID		RING		
Wt. Container + Wet Soil, gm	228.4	228.4	225.8	225.8
Wt. Container + Dry Soil, gm	196.8	196.8	196.8	196.8
Wt. Container, gm	91.1	91.1	91.1	91.1
Wt. Dry Soil, gm	105.7	105.7	105.7	105.7
Water Content, %	29.90	29.90	27.44	27.44
Void Ratio	---	0.83	0.73	---
Degree of Saturation, %	---	95.90	99.86	---
Dry Unit Weight, pcf	---	90.894	96.068	---

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-235
Sample No.: C10-4
Test No.: 10-033-G1

Location: 07-LA-10
Tested By: AZM
Test Date: 7/12/10
Sample Type: Tube

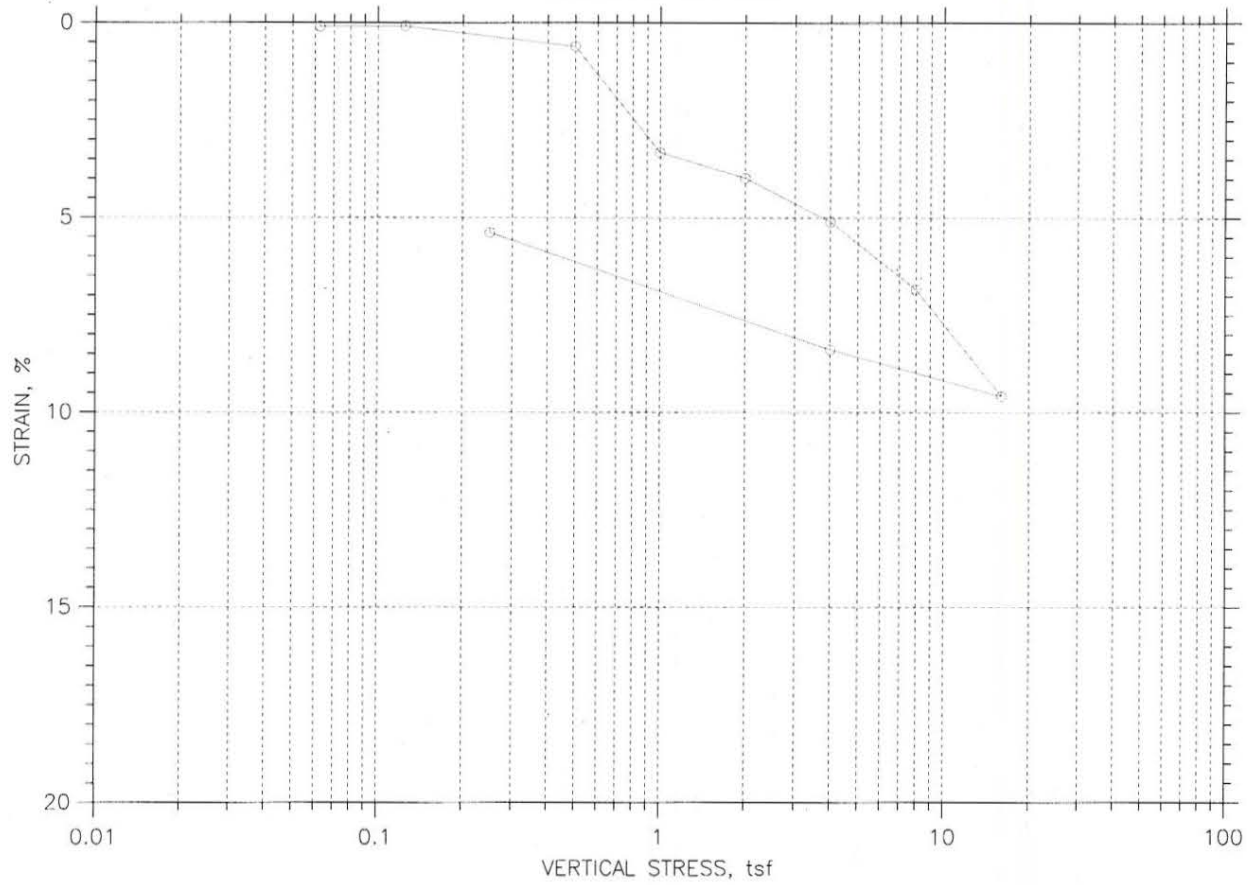
Project No.: 07-119341
Checked By: GL# 10-042
Depth: 50
Elevation:

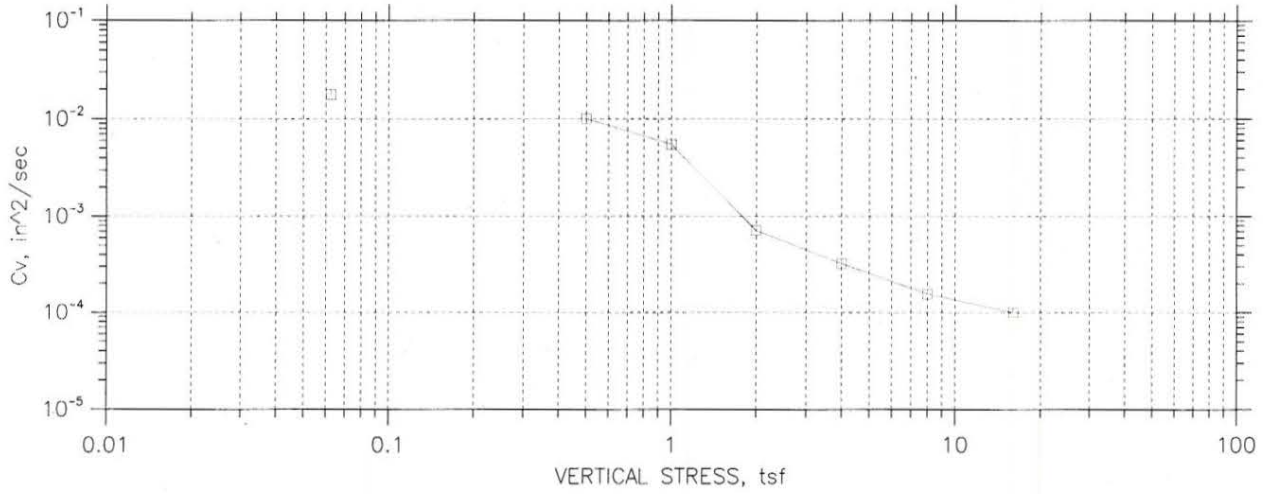
Soil Description: Moist, dark brown, hard, silt w/clay
Remarks:

	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting Sq.Rt. min	T50 Fitting Log min	Coefficient of Consolidation Sq.Rt. in^2/sec	Coefficient of Consolidation Log in^2/sec	Coefficient of Consolidation Ave. in^2/sec
1	0.0625	0.001049	0.829	0.10	0.0	0.0	1.76e-002	0.00e+000	1.76e-002
2	0.125	0.000903	0.829	0.09	0.0	0.0	0.00e+000	0.00e+000	0.00e+000
3	0.5	0.006081	0.820	0.61	0.1	0.0	1.00e-002	0.00e+000	1.00e-002
4	1	0.03324	0.770	3.32	0.1	0.0	5.48e-003	0.00e+000	5.48e-003
5	2	0.03983	0.758	3.98	1.1	0.0	7.12e-004	0.00e+000	7.12e-004
6	4	0.0511	0.738	5.11	2.3	0.0	3.22e-004	0.00e+000	3.22e-004
7	8	0.06845	0.706	6.84	6.8	2.5	1.08e-004	2.87e-004	1.57e-004
8	16	0.09586	0.656	9.59	7.0	0.0	9.93e-005	0.00e+000	9.93e-005
9	4	0.08394	0.677	8.39	3.7	0.7	1.85e-004	9.17e-004	3.07e-004
10	0.25	0.05386	0.732	5.39	17.8	0.0	4.01e-005	0.00e+000	4.01e-005

CONSOLIDATION TEST DATA

SUMMARY REPORT



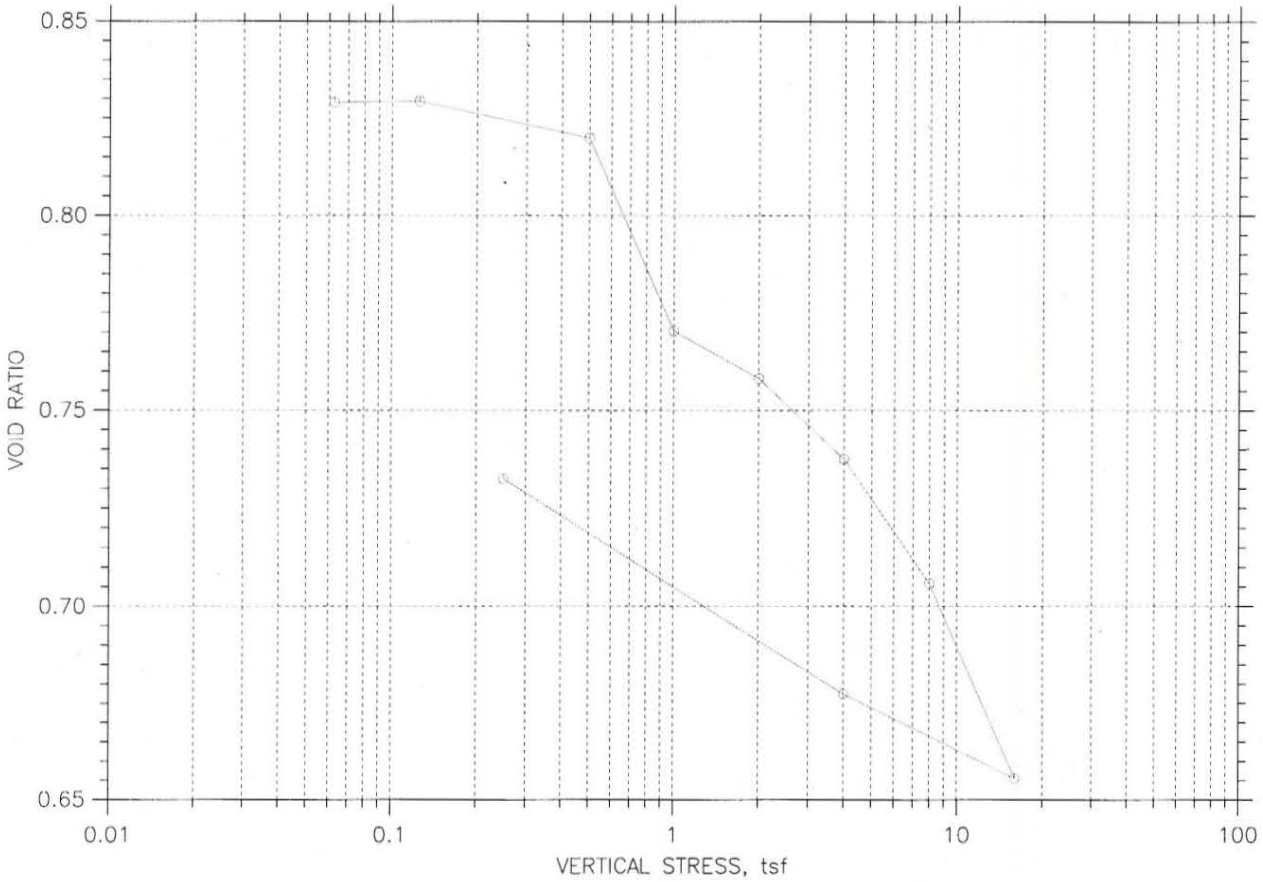


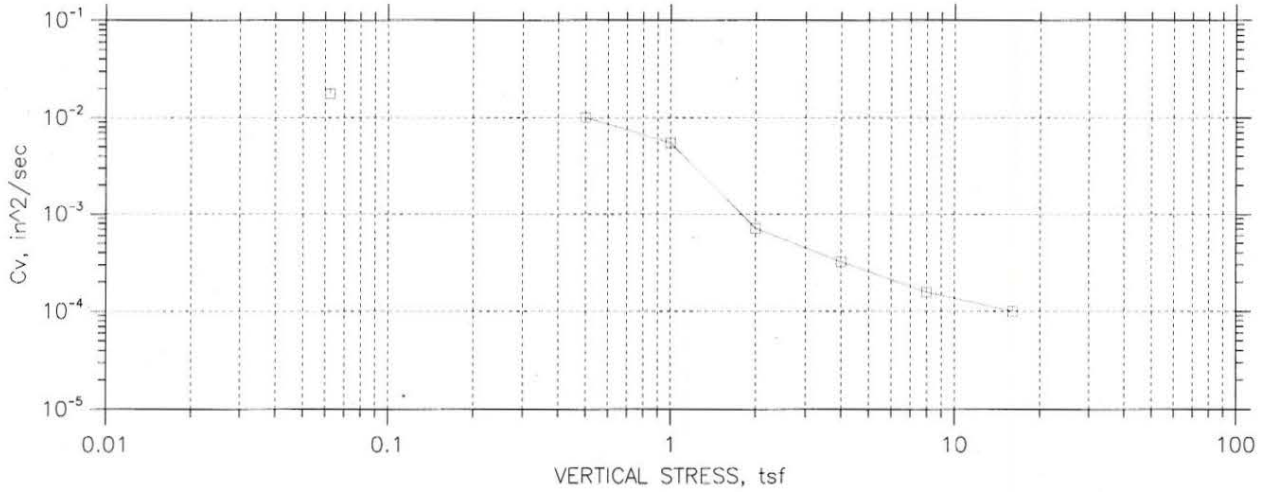
	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-235	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C10-4	Test Date: 7/12/10	Depth: 50
	Test No.: 10-033-G1	Sample Type: Tube	Elevation:
	Description: Moist, dark brown, hard, silt w/clay		
	Remarks:		

Thu, 29-JUL-2010 16:28:29

CONSOLIDATION TEST DATA

SUMMARY REPORT



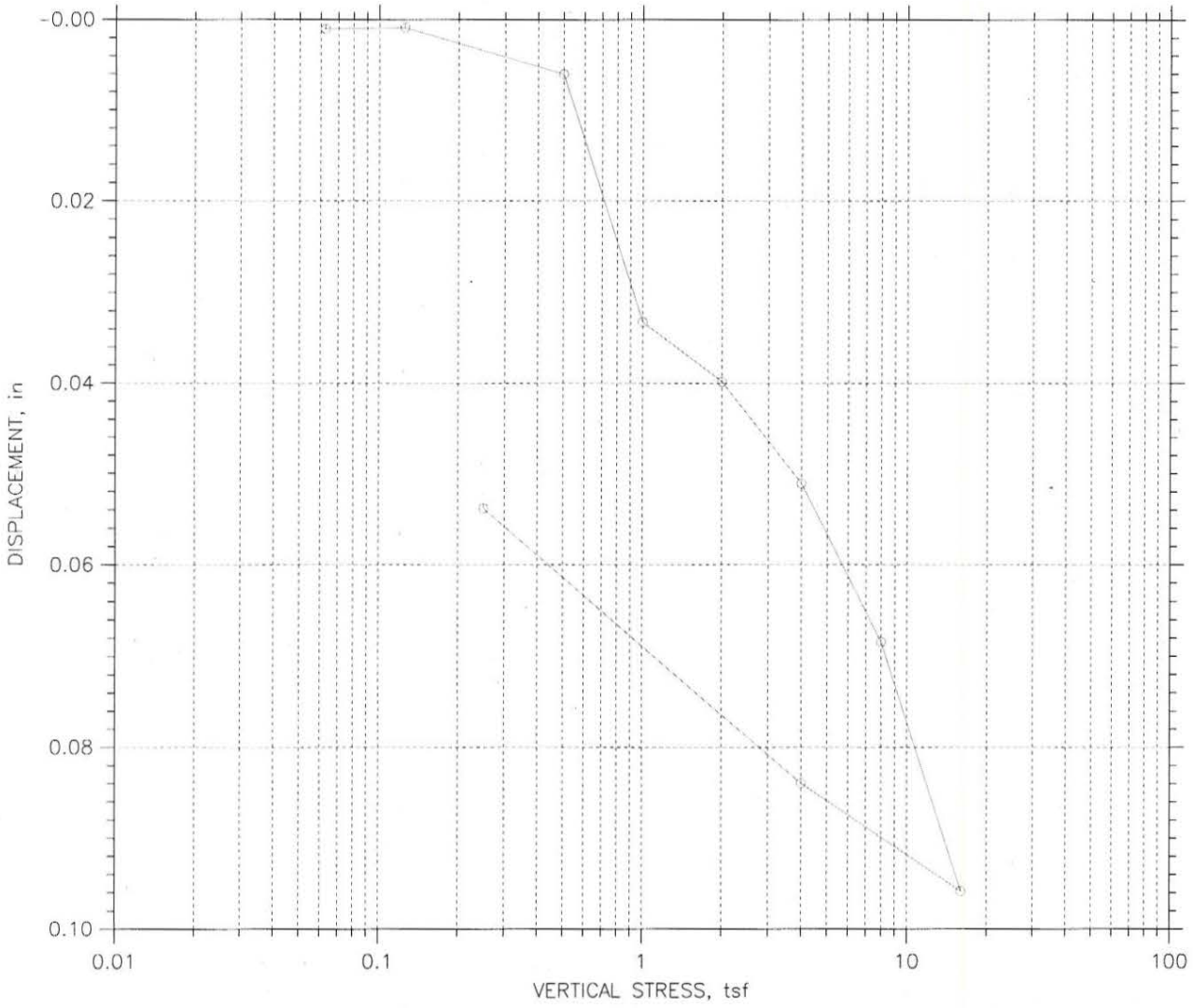


	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-235	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C10-4	Test Date: 7/12/10	Depth: 50
	Test No.: 10-033-G1	Sample Type: Tube	Elevation:
	Description: Moist, dark brown, hard, silt w/clay		
	Remarks:		

Thu, 29-JUL-2010 16:29:01

CONSOLIDATION TEST DATA

SUMMARY REPORT



				Before Test	After Test
Overburden Pressure: 8.864e-312 tsf				Water Content, %	29.90	27.44
Preconsolidation Pressure: 3.612e-311 tsf				Dry Unit Weight, pcf	90.89	96.07
Compression Index: 2.75859e-313				Saturation, %	95.90	99.86
Diameter: 2.375 in		Height: 1 in		Void Ratio	0.83	0.73
LL: 0	PL: 0	PI: 0	GS: 2.67			

	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-235	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C10-4	Test Date: 7/12/10	Depth: 50
	Test No.: 10-033-G1	Sample Type: Tube	Elevation:
	Description: Moist, dark brown, hard, silt w/clay		
	Remarks:		

Thu, 29-JUL-2010 16:29:23

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-235
Sample No.: C17-2
Test No.: 10-034-G3

Location: 07-LA-10
Tested By: AZM
Test Date: 7/12/2010
Sample Type: TUBE

Project No.: 07-119341
Checked By: GlL#10-042
Depth: 80
Elevation: ip875

Soil Description: Moist, dark brown-grey, hard, clay w/silt
Remarks:

Measured Specific Gravity: 2.63
Initial Void Ratio: 0.59
Final Void Ratio: 0.58

Liquid Limit: 0
Plastic Limit: 0
Plasticity Index: 0

Initial Height: 1.00 in
Specimen Diameter: 2.38 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID		RING		
Wt. Container + Wet Scil, gm	235.9	235.9	237.3	237.3
Wt. Container + Dry Scil, gm	210.8	210.8	210.8	210.8
Wt. Container, gm	90.4	90.4	90.4	90.4
Wt. Dry Soil, gm	120.4	120.4	120.4	120.4
Water Content, %	20.85	20.85	22.01	22.01
Void Ratio	---	0.59	0.58	---
Degree of Saturation, %	---	93.35	99.94	---
Dry Unit Weight, pcf	---	103.54	104.07	---

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-235
Sample No.: C17-2
Test No.: 10-034-G3

Location: 07-LA-10
Tested By: AZM
Test Date: 7/12/2010
Sample Type: TUBE

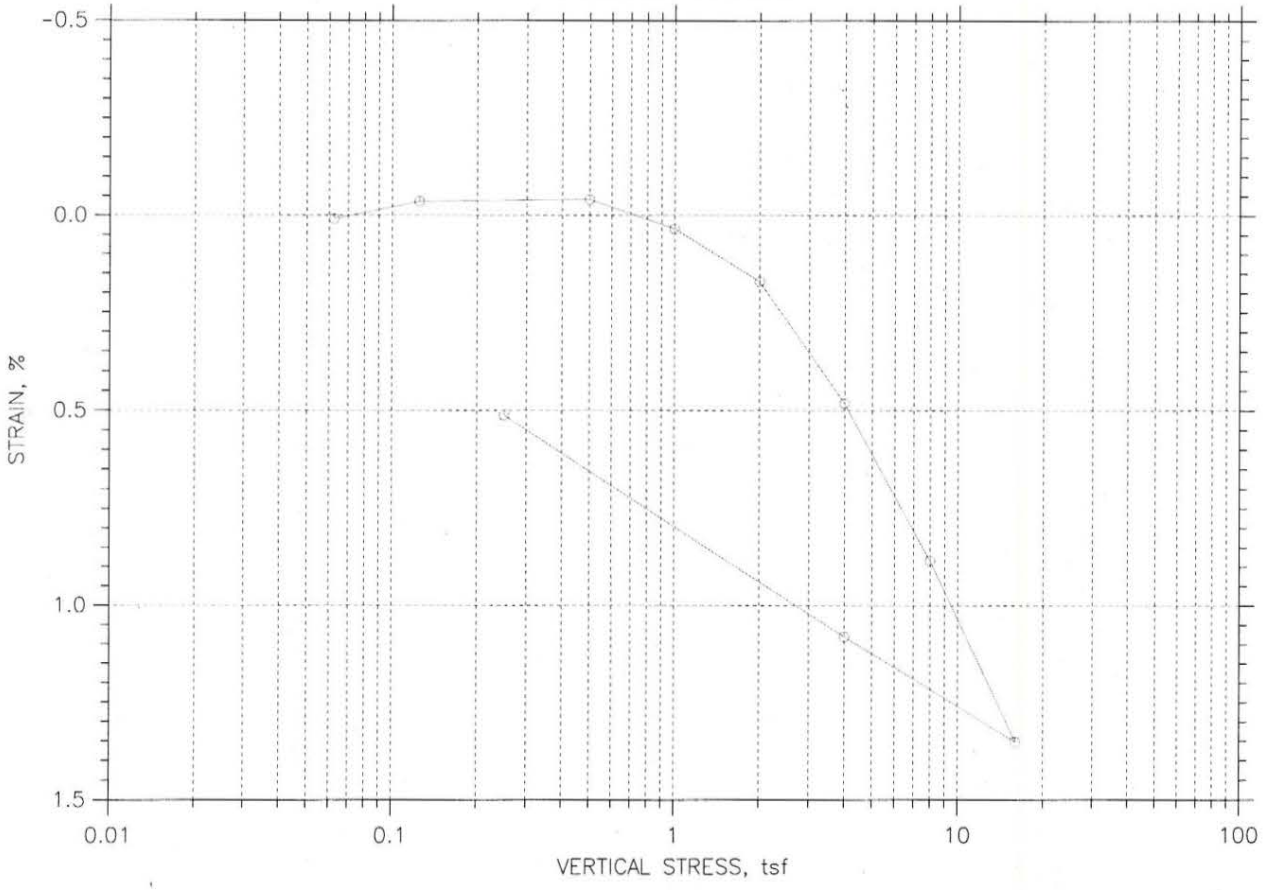
Project No.: 07-119341
Checked By: GlL#10-042
Depth: 80
Elevation:

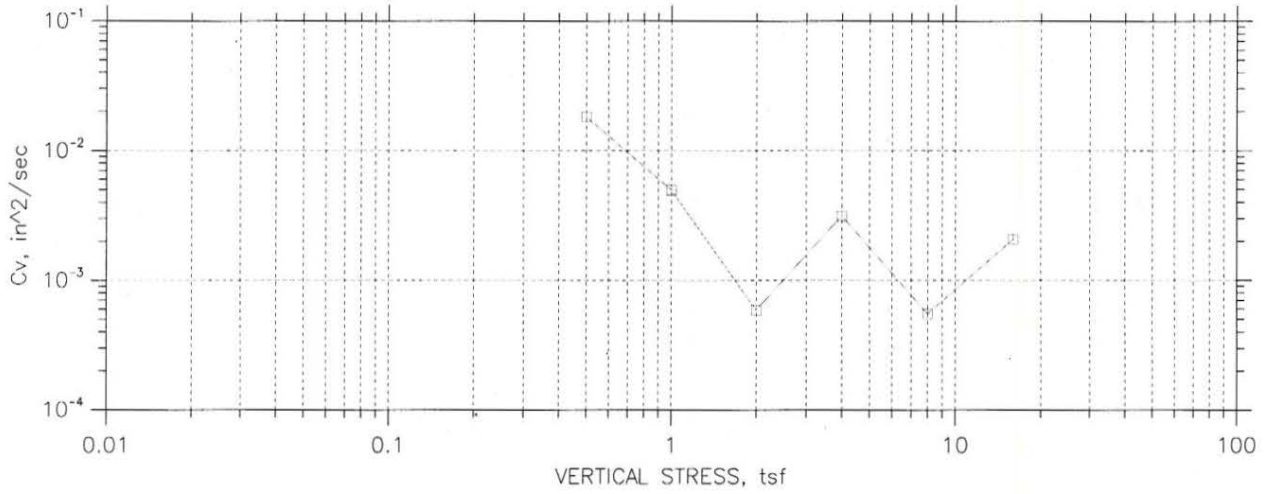
Soil Description: Moist, dark brown-grey, hard, clay w/silt
Remarks:

	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting Sq.Rt. min	T50 Fitting Log min	Coefficient of Consolidation Sq.Rt. in^2/sec	Coefficient of Consolidation Log in^2/sec	Coefficient of Consolidation Ave. in^2/sec
1	0.0625	9.39e-005	0.588	0.01	0.0	0.0	0.00e+000	0.00e+000	0.00e+000
2	0.125	-0.0003543	0.589	-0.04	0.0	0.0	0.00e+000	0.00e+000	0.00e+000
3	0.5	-0.0004063	0.589	-0.04	0.0	0.0	1.81e-002	0.00e+000	1.81e-002
4	1	0.0003483	0.588	0.03	0.2	0.0	4.95e-003	0.00e+000	4.95e-003
5	2	0.001709	0.585	0.17	1.4	0.0	5.87e-004	0.00e+000	5.87e-004
6	4	0.004828	0.581	0.48	0.4	0.1	2.13e-003	5.90e-003	3.13e-003
7	8	0.008851	0.574	0.89	1.5	0.0	5.50e-004	0.00e+000	5.50e-004
8	16	0.01353	0.567	1.35	0.7	0.1	1.11e-003	1.42e-002	2.07e-003
9	4	0.01081	0.571	1.08	3.4	0.0	2.35e-004	0.00e+000	2.35e-004
10	0.25	0.005125	0.580	0.51	2.7	0.0	3.03e-004	0.00e+000	3.03e-004

CONSOLIDATION TEST DATA

SUMMARY REPORT



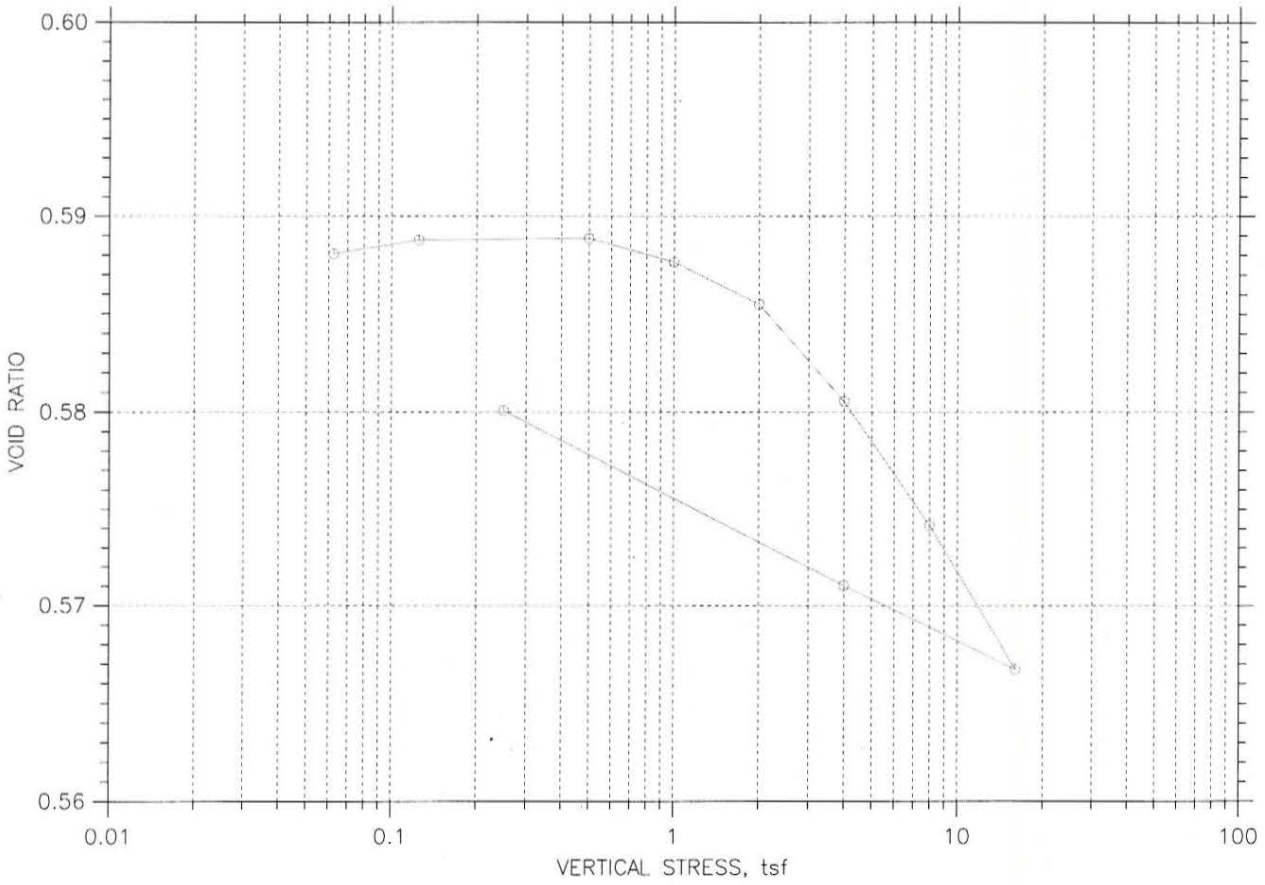


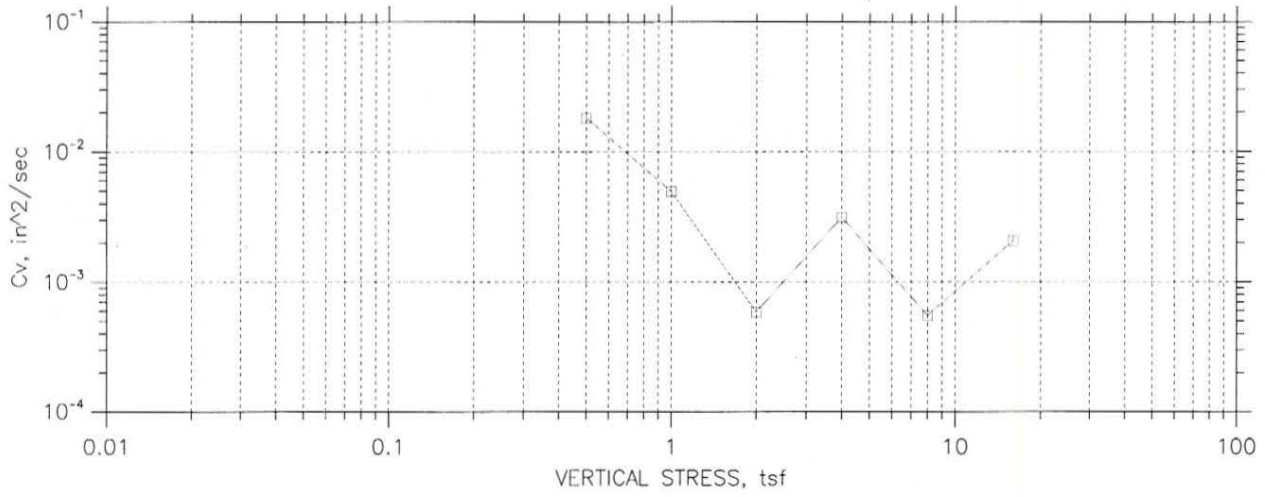
	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-235	Tested By: AZM	Checked By: GIL#10-042
	Sample No.: C17-2	Test Date: 7/12/2010	Depth: 80
	Test No.: 10-034-G3	Sample Type: TUBE	Elevation:
	Description: Moist, dark brown-grey, hard, clay w/silt		
	Remarks:		

Thu, 29-JUL-2010 16:34:10

CONSOLIDATION TEST DATA

SUMMARY REPORT



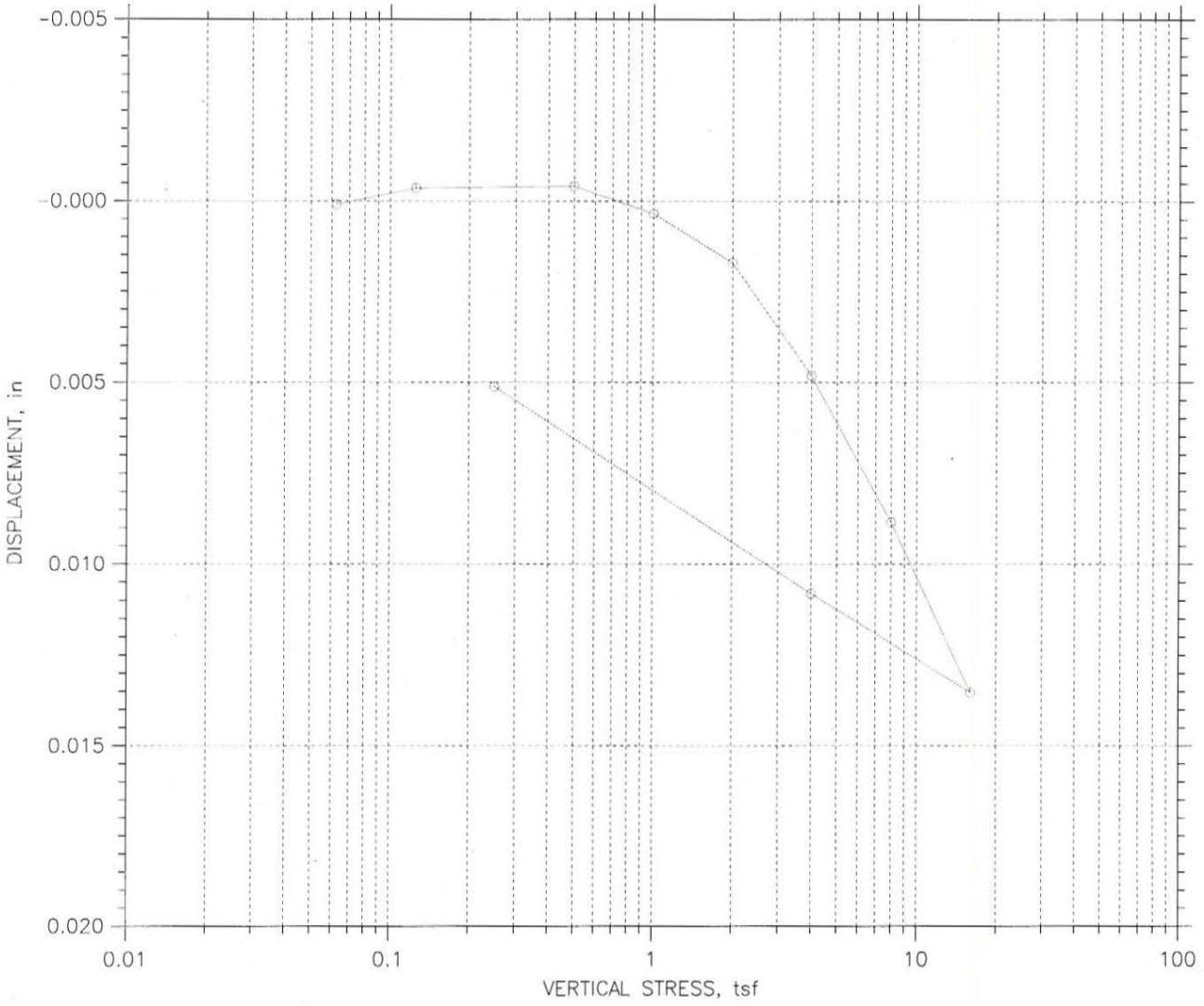


	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-235	Tested By: AZM	Checked By: GIL#10-042
	Sample No.: C17-2	Test Date: 7/12/2010	Depth: 80
	Test No.: 10-034-G3	Sample Type: TUBE	Elevation:
	Description: Moist, dark brown-grey, hard, clay w/silt		
	Remarks:		

Thu, 29-JUL-2010 16:34:28

CONSOLIDATION TEST DATA

SUMMARY REPORT



				Before Test	After Test
Overburden Pressure: 8.864e-312 tsf				Water Content, %	20.85	22.01
Preconsolidation Pressure: 3.612e-311 tsf				Dry Unit Weight, pcf	103.5	104.1
Compression Index: 2.75859e-313				Saturation, %	93.35	99.94
Diameter: 2.375 in		Height: 1 in		Void Ratio	0.59	0.58
LL: 0	PL: 0	PI: 0	GS: 2.63			

	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-235	Tested By: AZM	Checked By: GIL#10-042
	Sample No.: C17-2	Test Date: 7/12/2010	Depth: 80
	Test No.: 10-034-G3	Sample Type: TUBE	Elevation:
	Description: Moist, dark brown-grey, hard, clay w/silt		
	Remarks:		

Thu, 29-JUL-2010 16:34:48

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-236
Sample No.: C02-1
Test No.: 10-035-G4

Location: 07-LA-10
Tested By: AZM
Test Date: 7/13/2010
Sample Type: TUBE

Project No.: 07-119341
Checked By: GL# 10-042
Depth: 10
Elevation: WP 575

Soil Description: Moist, olive, hard, clay, w/silt
Remarks:

Measured Specific Gravity: 2.69
Initial Void Ratio: 1.19
Final Void Ratio: 1.17

Liquid Limit: ---
Plastic Limit: ---
Plasticity Index: ---

Initial Height: 1.00 in
Specimen Diameter: 2.38 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID		RING		
Wt. Container + Wet Soil, gm	213.8	213.8	215.9	215.9
Wt. Container + Dry Soil, gm	177.2	177.2	177.2	177.2
Wt. Container, gm	87.9	87.9	87.9	87.9
Wt. Dry Soil, gm	89.3	89.3	89.3	89.3
Water Content, %	40.99	40.99	43.34	43.34
Void Ratio	---	1.19	1.17	---
Degree of Saturation, %	---	92.81	99.91	---
Dry Unit Weight, pcf	---	76.791	77.542	---

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-236
Sample No.: C02-1
Test No.: 10-035-G4

Location: 07-LA-10
Tested By: AZM
Test Date: 7/13/2010
Sample Type: TUBE

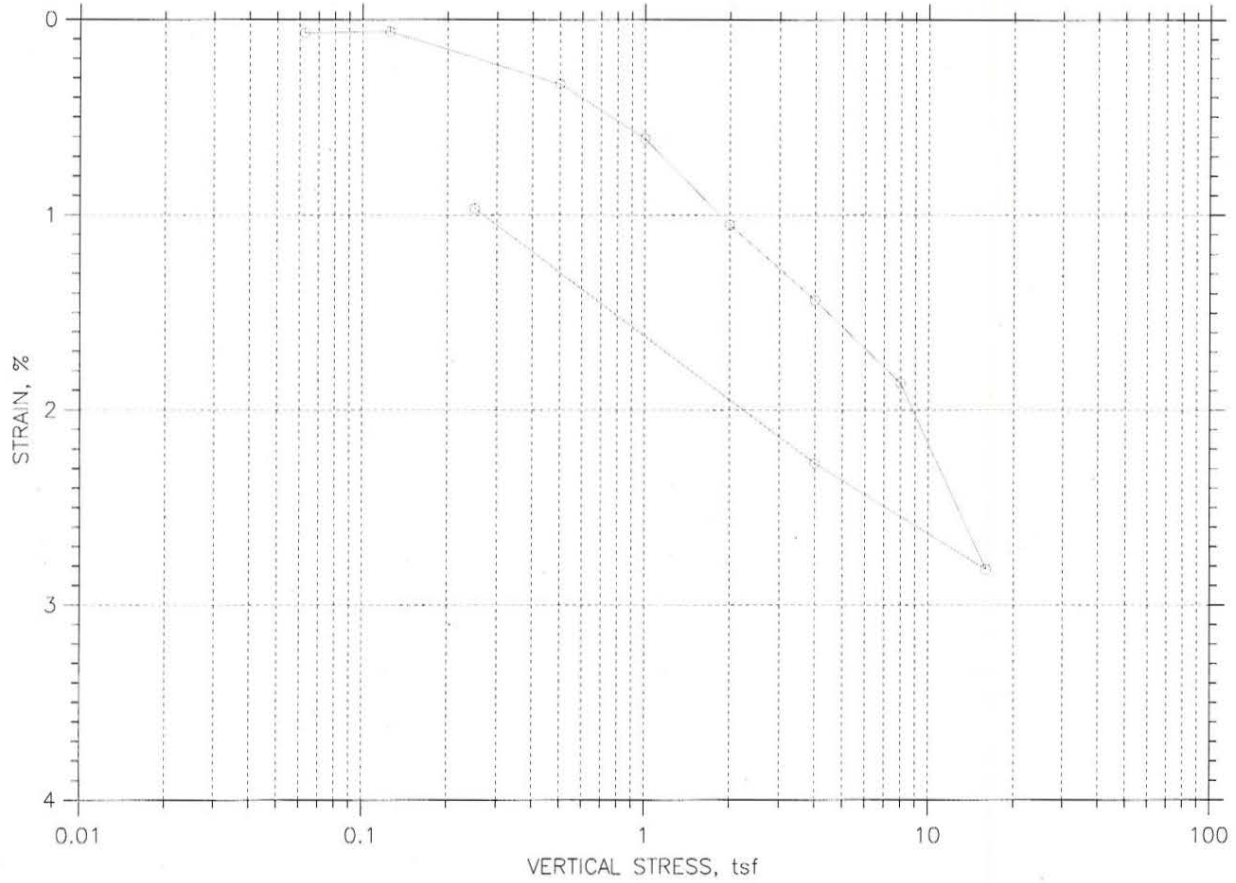
Project No.: 07-119341
Checked By: GL# 10-042
Depth: 10
Elevation:

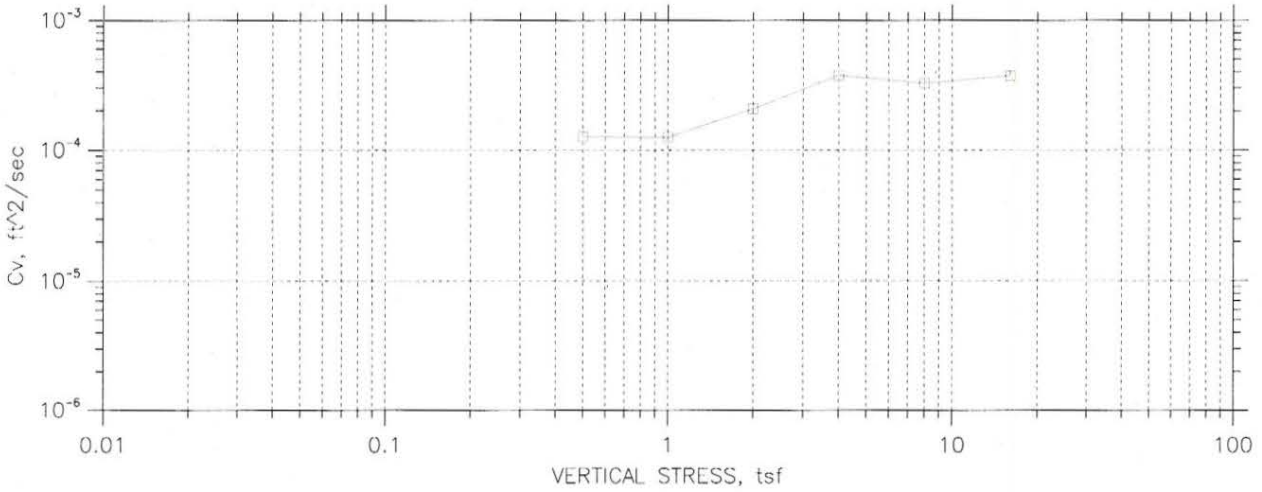
Soil Description: Moist, olive, hard, clay, w/silt
Remarks:

	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting Sq.Rt. min	T50 Fitting Log min	Coefficient of Consolidation Sq.Rt. ft^2/sec	Coefficient of Consolidation Log ft^2/sec	Coefficient of Consolidation Ave. ft^2/sec
1	0.0625	0.0006962	1.188	0.07	0.0	0.0	0.00e+000	0.00e+000	0.00e+000
2	0.125	0.0006325	1.188	0.06	0.0	0.0	0.00e+000	0.00e+000	0.00e+000
3	0.5	0.003338	1.182	0.33	0.0	0.0	1.26e-004	0.00e+000	1.26e-004
4	1	0.00611	1.176	0.61	0.1	0.0	8.59e-005	2.30e-004	1.25e-004
5	2	0.01051	1.166	1.05	0.0	0.0	1.65e-004	2.73e-004	2.06e-004
6	4	0.01436	1.158	1.44	0.0	0.0	3.73e-004	0.00e+000	3.73e-004
7	8	0.01863	1.149	1.86	0.0	0.0	3.25e-004	0.00e+000	3.25e-004
8	16	0.02819	1.128	2.82	0.0	0.0	4.01e-004	3.46e-004	3.71e-004
9	4	0.02274	1.140	2.27	0.0	0.0	3.85e-004	0.00e+000	3.85e-004
10	0.25	0.009674	1.168	0.97	1.2	0.0	4.44e-006	0.00e+000	4.44e-006

CONSOLIDATION TEST DATA

SUMMARY REPORT



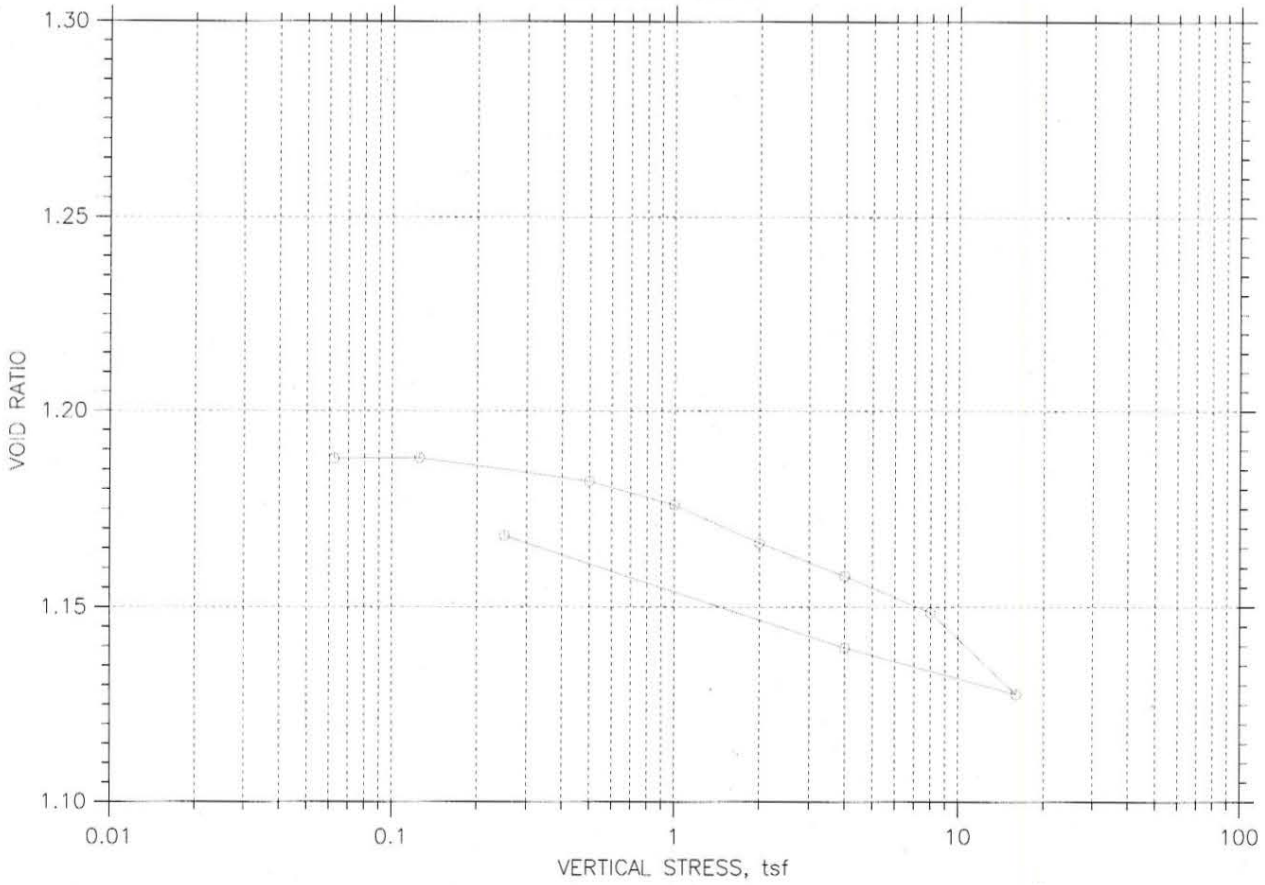


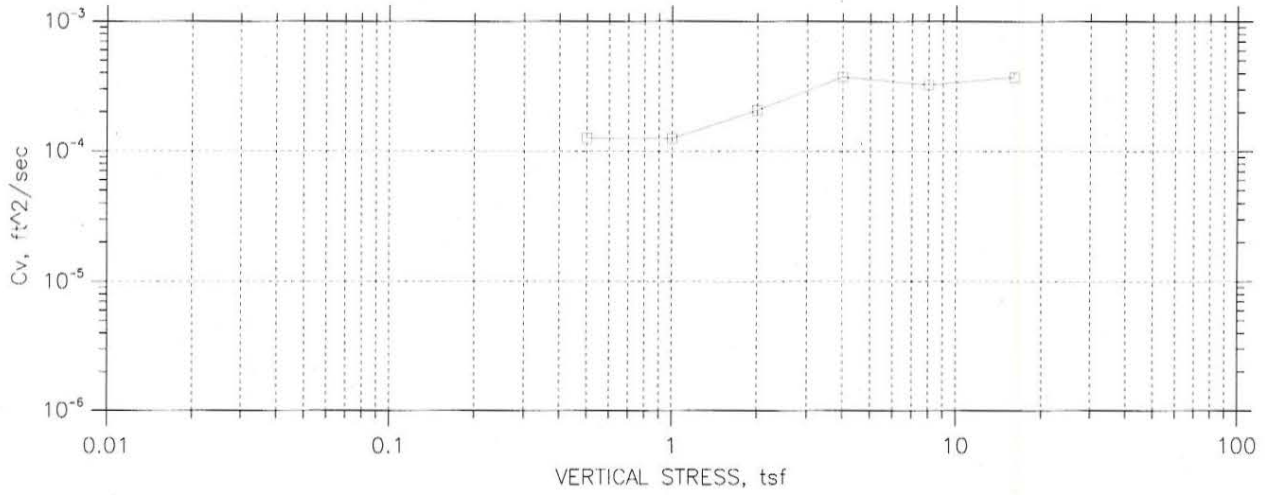
	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-236	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C02-1	Test Date: 7/13/2010	Depth: 10
	Test No.: 10-035-G4	Sample Type: TUBE	Elevation:
	Description: Moist, olive, hard, clay, w/silt		
	Remarks:		

Fri, 30-JUL-2010 10:39:47

CONSOLIDATION TEST DATA

SUMMARY REPORT



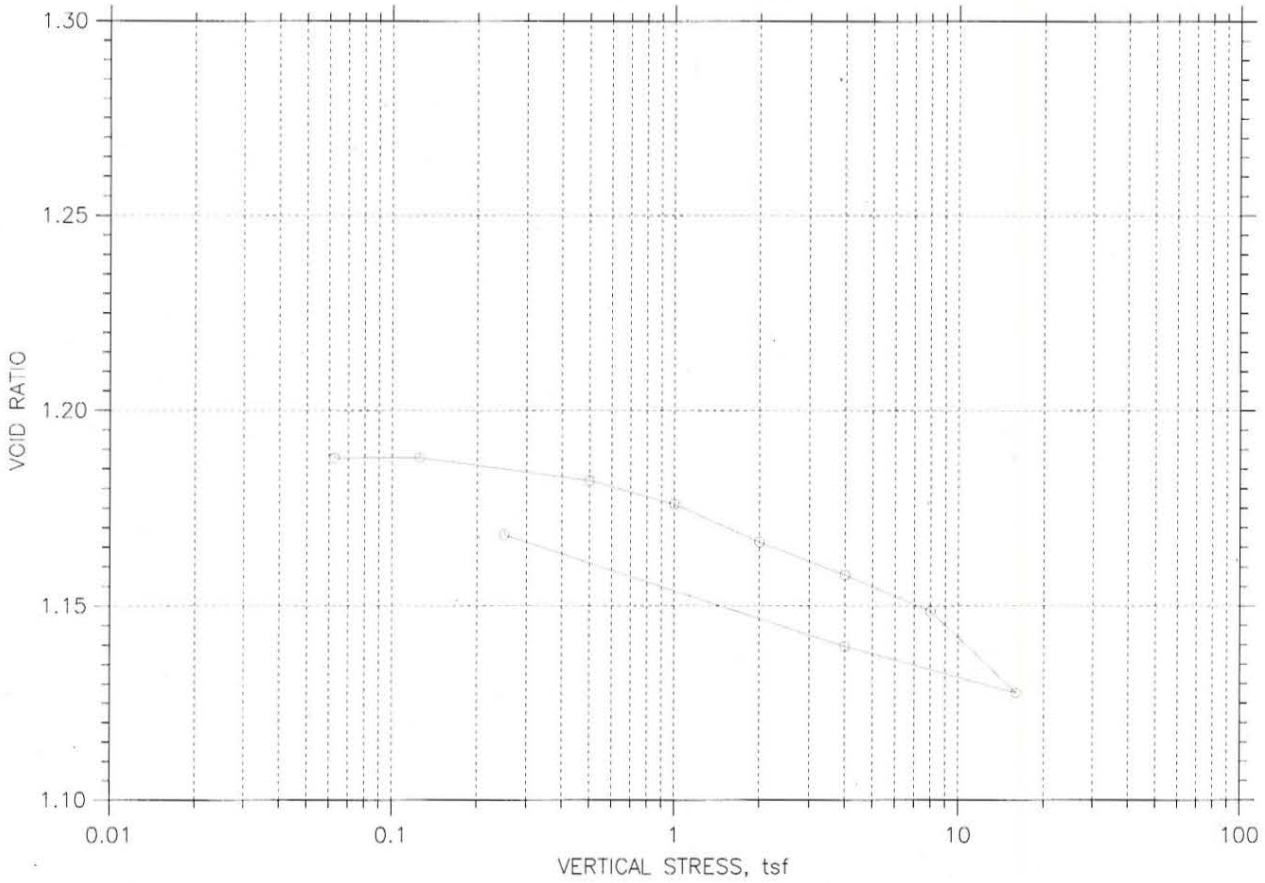


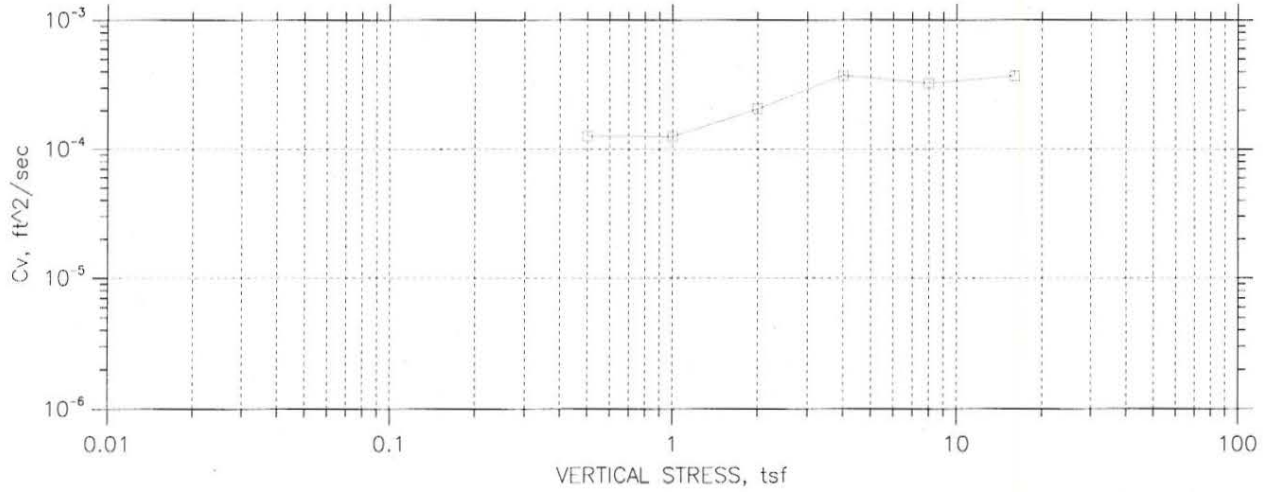
	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-236	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C02-1	Test Date: 7/13/2010	Depth: 10
	Test No.: 10-035-G4	Sample Type: TUBE	Elevation:
	Description: Moist, olive, hard, clay, w/silt		
	Remarks:		

Fri, 30-JUL-2010 10:40:22

CONSOLIDATION TEST DATA

SUMMARY REPORT



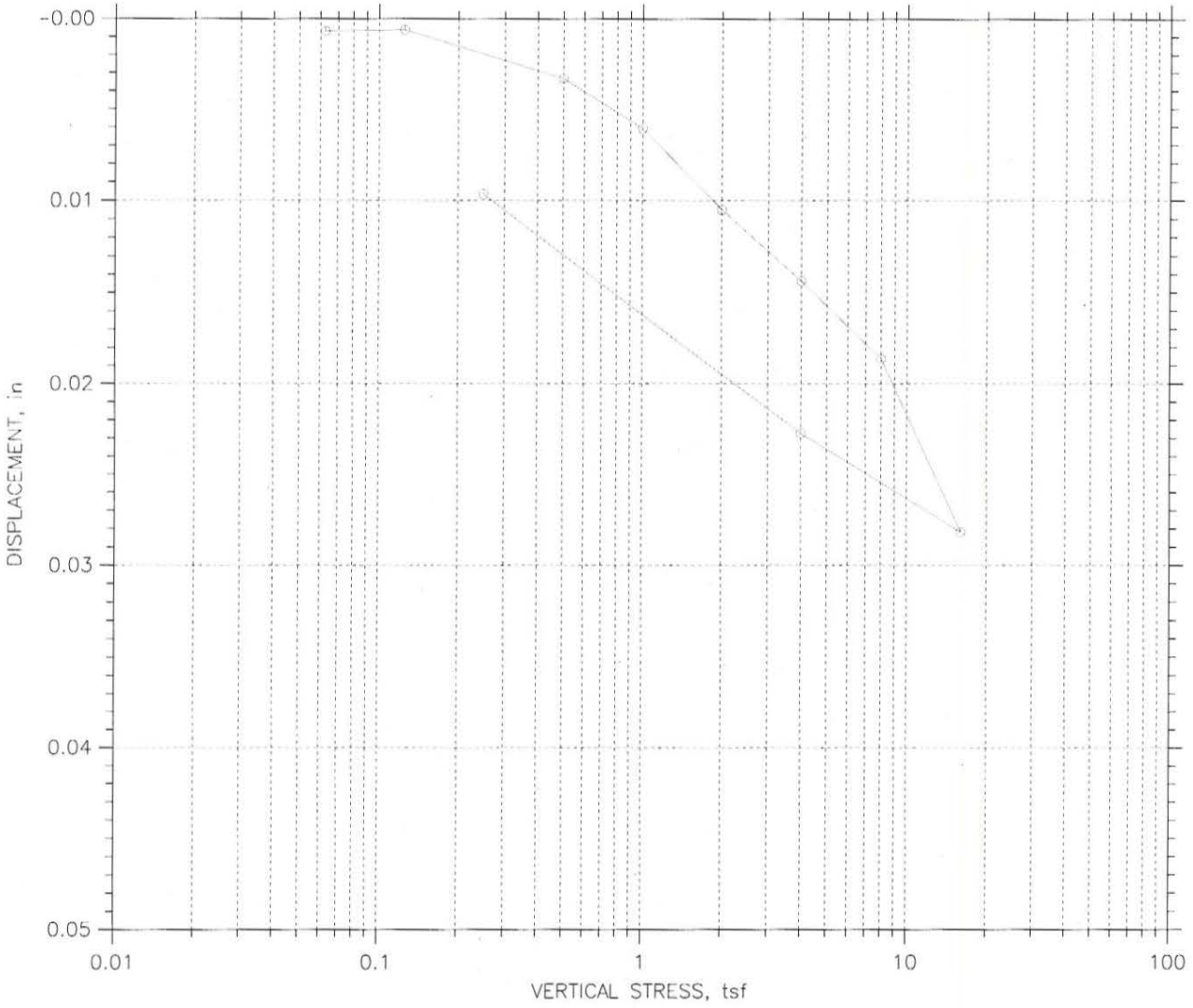


	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-236	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C02-1	Test Date: 7/13/2010	Depth: 10
	Test No.: 10-035-G4	Sample Type: TUBE	Elevation:
	Description: Moist, olive, hard, clay, w/silt		
	Remarks:		

Fri, 30-JUL-2010 10:41:18

CONSOLIDATION TEST DATA

SUMMARY REPORT



					Before Test	After Test
Overburden Pressure: 0 tsf				Water Content, %	40.99	43.34
Preconsolidation Pressure: 0 tsf				Dry Unit Weight, pcf	76.79	77.54
Compression Index: 3.81959e-313				Saturation, %	92.81	99.91
Diameter: 2.375 in		Height: 1 in		Void Ratio	1.19	1.17
LL: ---	PL: ---	PI: ---	GS: 2.69			

	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-236	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C02-1	Test Date: 7/13/2010	Depth: 10
	Test No.: 10-035-G4	Sample Type: TUBE	Elevation:
	Description: Moist, olive, hard, clay, w/silt		
	Remarks:		

Fri, 30-JUL-2010 10:41:44

CONSOLIDATION TEST DATA

Project: 1-10-HOV
Boring No.: R09-236
Sample No.: C08-2
Test No.: 10-036-G1

Location: 07-la-10
Tested By: AZM
Test Date: 7/15/2010
Sample Type: Tube

Project No.: 07-119341
Checked By: GL#10-042
Depth: 40
Elevation: WP 8/5

Soil Description: Moist, brown very stiff, silty clay
Remarks:

Measured Specific Gravity: 2.72
Initial Void Ratio: 1.32
Final Void Ratio: 1.23

Liquid Limit: 0
Plastic Limit: 0
Plasticity Index: 0

Initial Height: 1.00 in
Specimen Diameter: 2.38 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID		RING		
Wt. Container + Wet Soil, gm	212.4	212.4	211.5	211.5
Wt. Container + Dry Soil, gm	174.8	174.8	174.8	174.8
Wt. Container, gm	89.8	89.8	89.8	89.8
Wt. Dry Soil, gm	85	85	85	85
Water Content, %	44.24	44.24	43.18	43.18
Void Ratio	---	1.32	1.23	---
Degree of Saturation, %	---	90.89	95.92	---
Dry Unit Weight, pcf	---	73.094	76.363	---

CONSOLIDATION TEST DATA

Project: 1-10-HOV
Boring No.: R09-236
Sample No.: C08-2
Test No.: 10-036-G1

Location: 07-1a-10
Tested By: AZM
Test Date: 7/15/2010
Sample Type: Tube

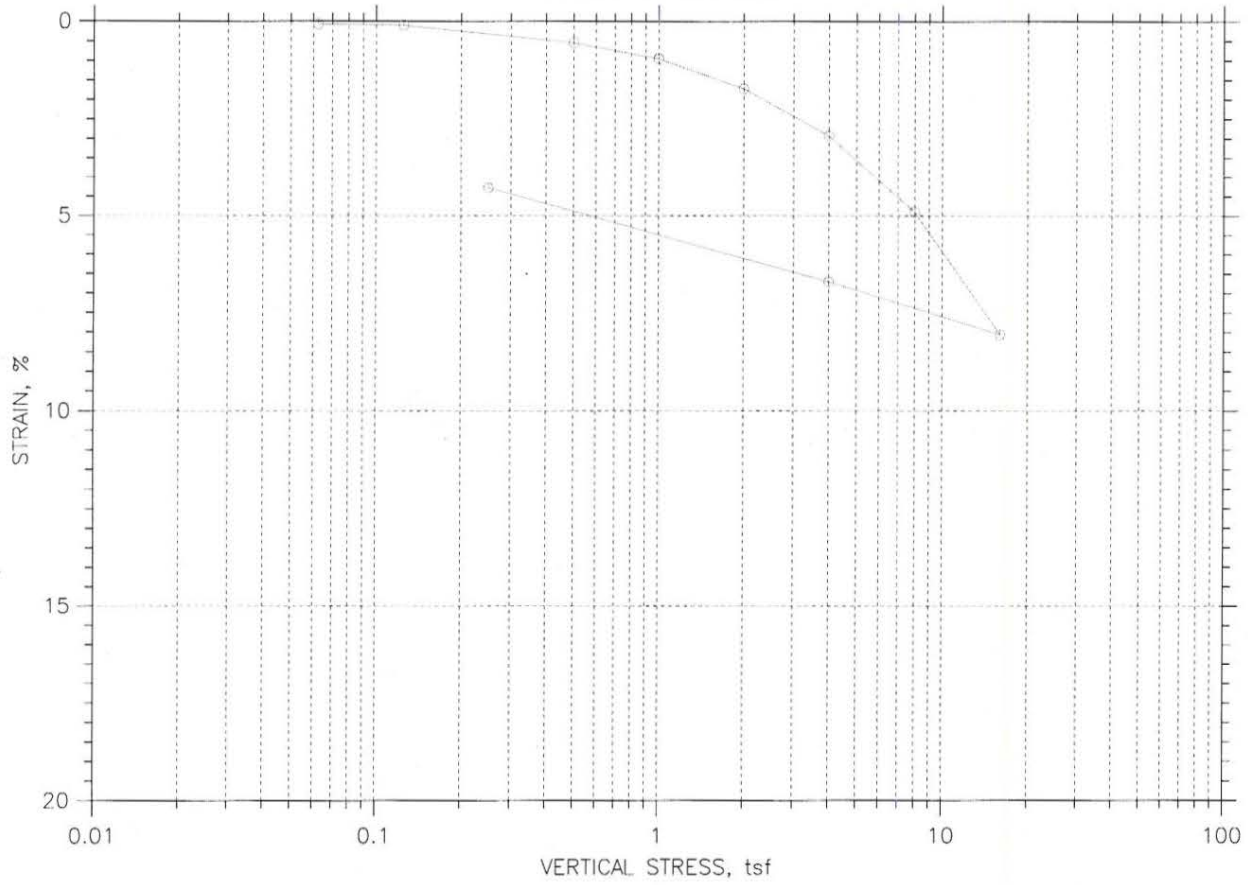
Project No.: 07-119341
Checked By: GL#10-042
Depth: 40
Elevation:

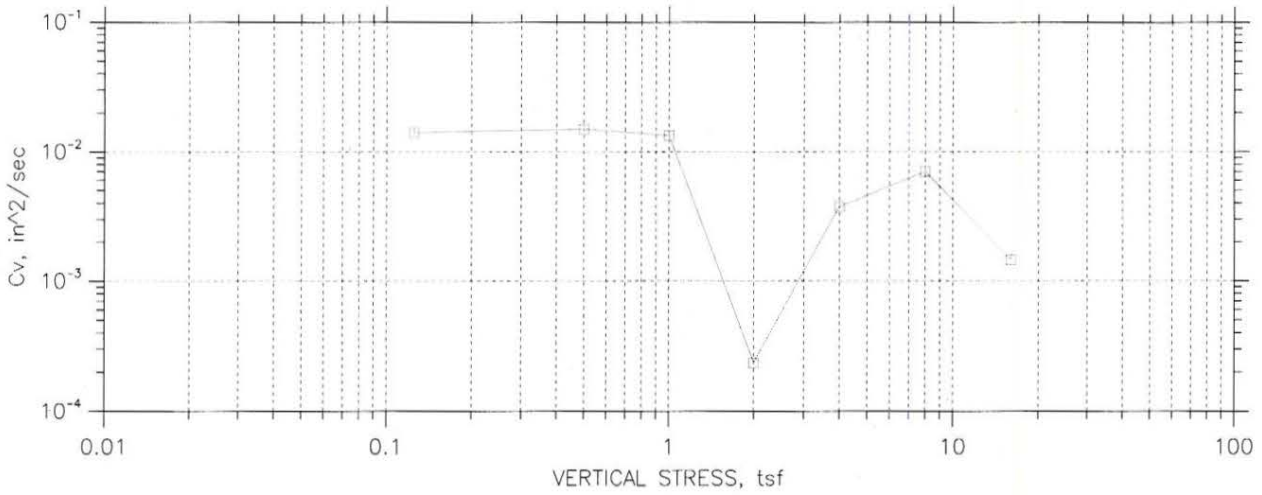
Soil Description: Moist, brown very stiff, silty clay
Remarks:

	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting Sq.Rt. min	T50 Fitting Log min	Coefficient of Consolidation Sq.Rt. in^2/sec	Coefficient of Consolidation Log in^2/sec	Coefficient of Consolidation Ave. in^2/sec
1	0.0625	0.0007345	1.323	0.07	0.0	0.0	0.00e+000	0.00e+000	0.00e+000
2	0.125	0.001073	1.322	0.11	0.1	0.0	1.40e-002	0.00e+000	1.40e-002
3	0.5	0.005429	1.312	0.54	0.1	0.0	1.32e-002	1.71e-002	1.49e-002
4	1	0.009544	1.303	0.95	0.1	0.1	1.20e-002	1.49e-002	1.33e-002
5	2	0.01724	1.285	1.72	3.4	0.0	2.35e-004	0.00e+000	2.35e-004
6	4	0.02936	1.257	2.94	0.2	0.0	3.73e-003	0.00e+000	3.73e-003
7	8	0.04911	1.211	4.91	0.1	0.1	5.47e-003	9.58e-003	6.96e-003
8	16	0.08064	1.137	8.06	0.7	0.3	9.98e-004	2.61e-003	1.44e-003
9	4	0.06709	1.169	6.71	0.1	0.0	6.34e-003	0.00e+000	6.34e-003
10	0.25	0.04282	1.225	4.28	3.4	1.0	2.14e-004	7.05e-004	3.28e-004

CONSOLIDATION TEST DATA

SUMMARY REPORT



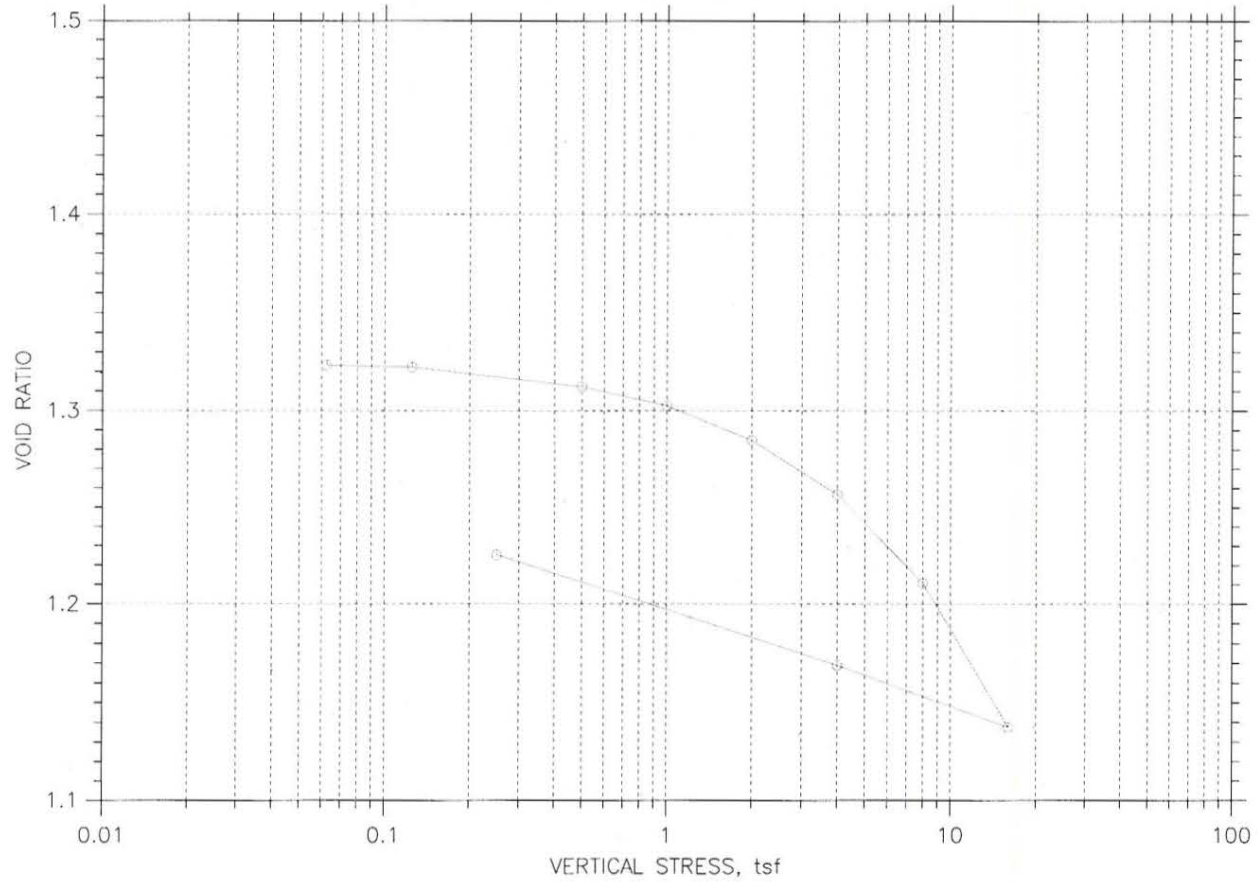


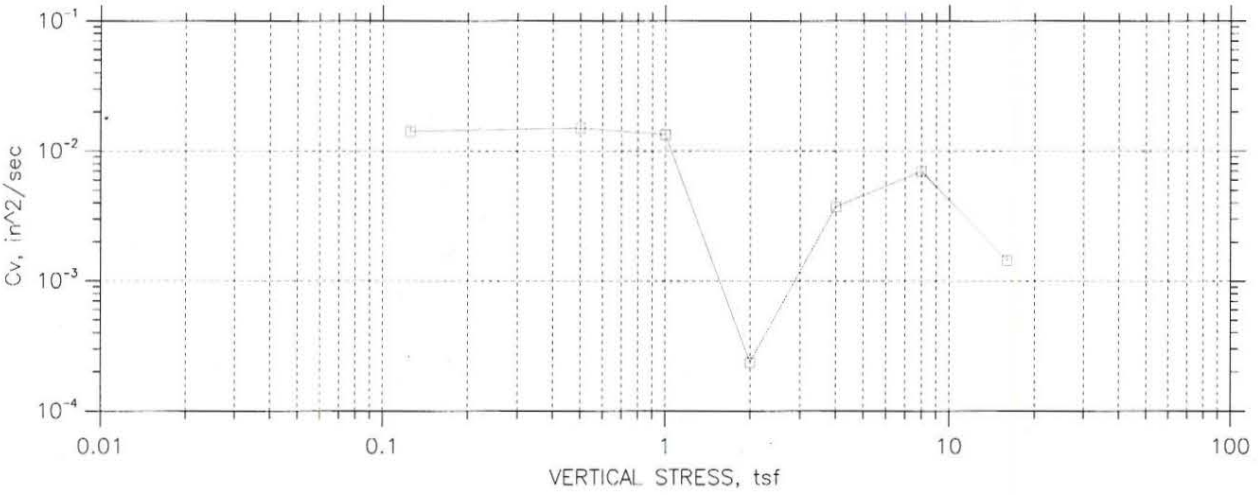
	Project: 1-10-HOV	Location: 07-la-10	Project No.: 07-119341
	Boring No.: R09-236	Tested By: AZM	Checked By: GL#10-042
	Sample No.: C08-2	Test Date: 7/15/2010	Depth: 40
	Test No.: 10-036-G1	Sample Type: Tube	Elevation:
	Description: Moist, brown very stiff, silty clay		
	Remarks:		

Fri, 30-JUL-2010 10:45:57

CONSOLIDATION TEST DATA

SUMMARY REPORT



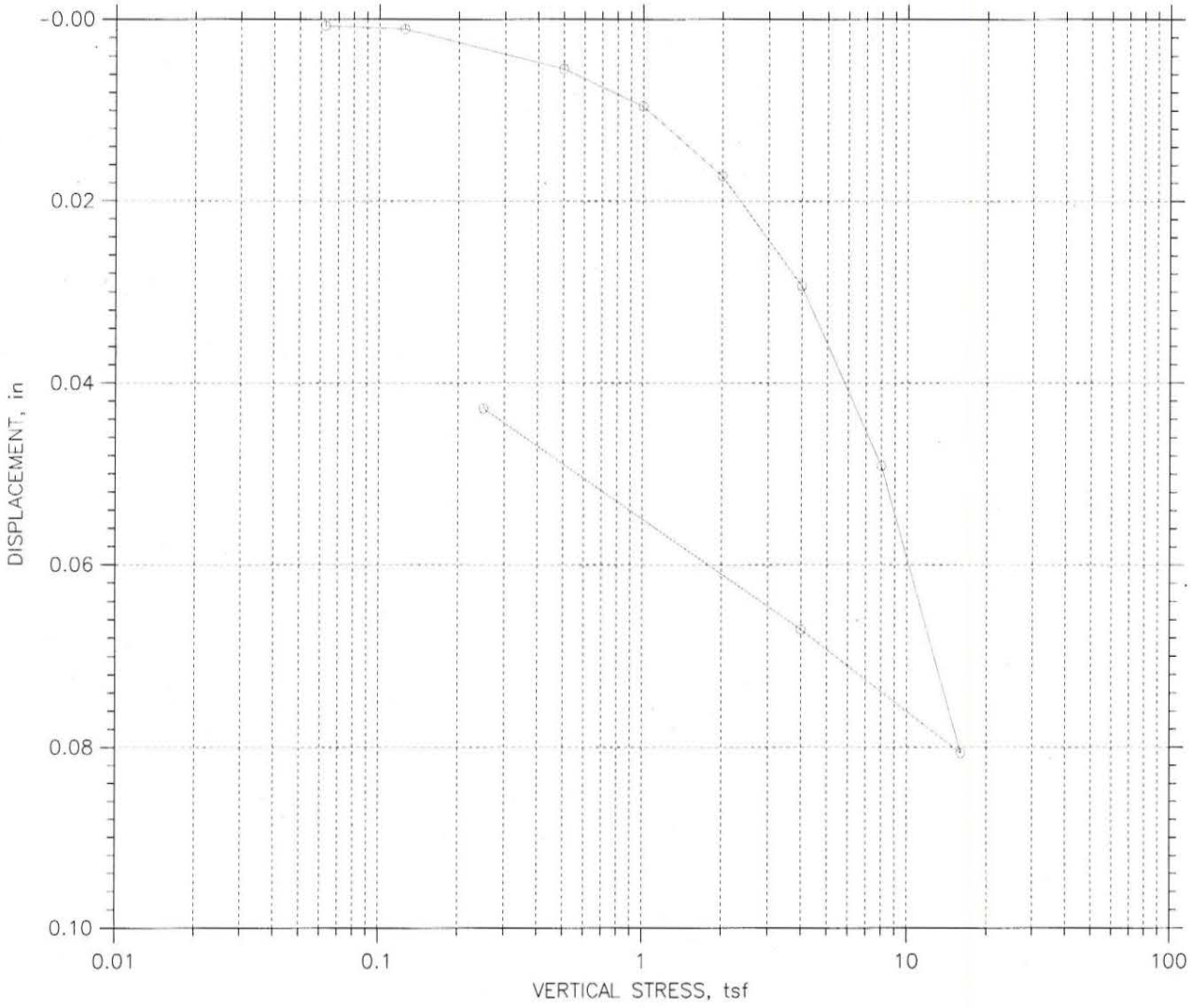


	Project: 1-10-HOV	Location: 07-Ia-10	Project No.: 07-119341
	Boring No.: R09-236	Tested By: AZM	Checked By: GL#10-042
	Sample No.: C08-2	Test Date: 7/15/2010	Depth: 40
	Test No.: 10-036-G1	Sample Type: Tube	Elevation:
	Description: Moist, brown very stiff, silty clay		
	Remarks:		

Fri, 30-JUL-2010 10:46:21

CONSOLIDATION TEST DATA

SUMMARY REPORT



					Before Test	After Test
Overburden Pressure: 8.864e-312 tsf				Water Content, %	44.24	43.18
Preconsolidation Pressure: 3.612e-311 tsf				Dry Unit Weight, pcf	73.09	76.36
Compression Index: 2.75859e-313				Saturation, %	90.89	95.92
Diameter: 2.375 in		Height: 1 in		Void Ratio	1.32	1.23
LL: 0	PL: 0	PI: 0	GS: 2.72			

	Project: 1-10-HOV	Location: 07-Ia-10	Project No.: 07-119341
	Boring No.: R09-236	Tested By: AZM	Checked By: GL#10-042
	Sample No.: C08-2	Test Date: 7/15/2010	Depth: 40
	Test No.: 10-036-G1	Sample Type: Tube	Elevation:
	Description: Moist, brown very stiff, silty clay		
	Remarks:		

Fri, 30-JUL-2010 10:46:43

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-236
Sample No.: C10-1
Test No.: 10-037-G1

Location: 07-LA-10
Tested By: AZM
Test Date: 7/19/10
Sample Type: Tube

Project No.: 07-119341
Checked By: GL# 10-042
Depth: 50
Elevation: NP 875

Soil Description: Moist, grey- brown, hard, silt
Remarks:

Measured Specific Gravity: 2.77
Initial Void Ratio: 1.06
Final Void Ratio: 0.88

Liquid Limit: 0
Plastic Limit: 0
Plasticity Index: 0

Initial Height: 1.00 in
Specimen Diameter: 2.38 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID		RING		
Wt. Container + Wet Soil, gm	216.1	216.1	216	216
Wt. Container + Dry Soil, gm	185	185	185	185
Wt. Container, gm	87.6	87.6	87.6	87.6
Wt. Dry Soil, gm	97.4	97.4	97.4	97.4
Water Content, %	31.93	31.93	31.83	31.83
Void Ratio	---	1.06	0.88	---
Degree of Saturation, %	---	83.16	99.79	---
Dry Unit Weight, pcf	---	83.757	91.758	---

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-236
Sample No.: C10-1
Test No.: 10-037-G1

Location: 07-LA-10
Tested By: AZM
Test Date: 7/19/10
Sample Type: Tube

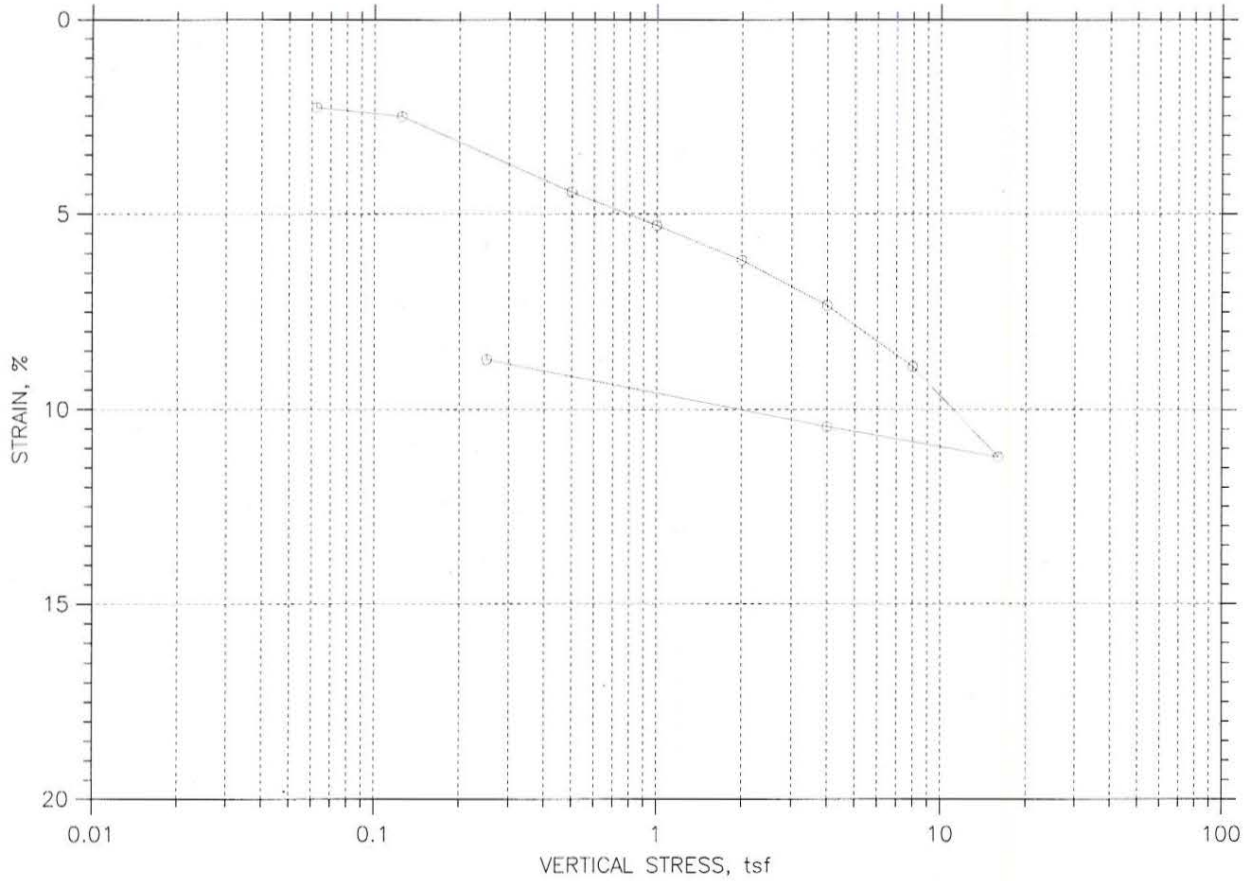
Project No.: 07-119341
Checked By: GL# 10-042
Depth: 50
Elevation:

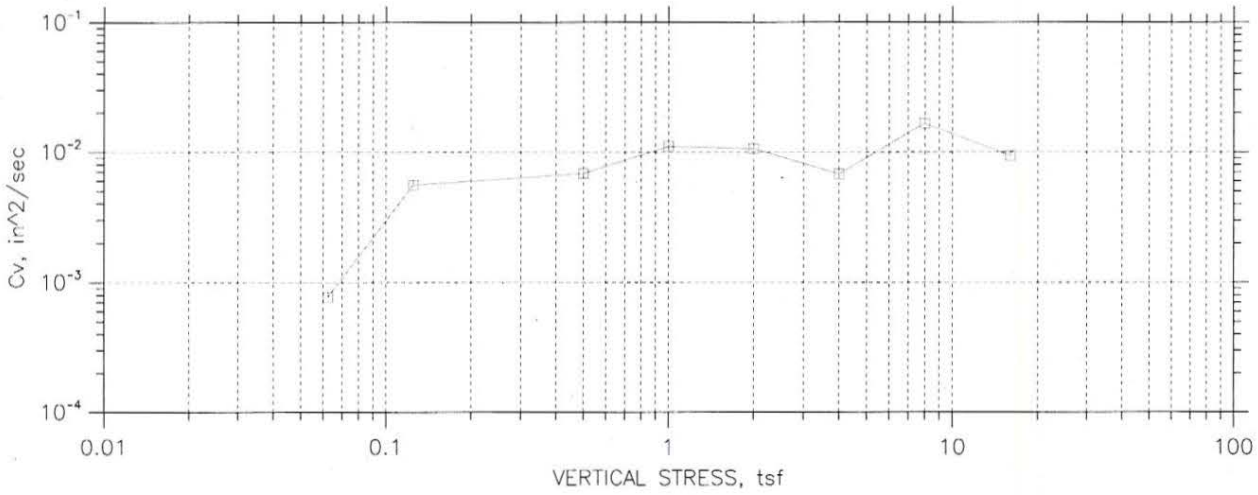
Soil Description: Moist, grey- brown, hard, silt
Remarks:

	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting Sq.Rt. min	T50 Fitting Log min	Coefficient of Consolidation Sq.Rt. in^2/sec	Coefficient of Consolidation Log in^2/sec	Coefficient of Consolidation Ave. in^2/sec
1	0.0625	0.02288	1.015	2.29	1.4	0.7	5.66e-004	1.21e-003	7.71e-004
2	0.125	0.02519	1.010	2.52	0.1	0.0	5.56e-003	0.00e+000	5.56e-003
3	0.5	0.0445	0.971	4.45	0.1	0.1	6.45e-003	7.27e-003	6.84e-003
4	1	0.05295	0.953	5.30	0.1	0.1	9.48e-003	1.31e-002	1.10e-002
5	2	0.06186	0.935	6.19	0.1	0.0	7.75e-003	1.68e-002	1.06e-002
6	4	0.07338	0.911	7.34	0.2	0.0	3.81e-003	2.92e-002	6.75e-003
7	8	0.08897	0.879	8.90	0.1	0.0	1.15e-002	3.00e-002	1.66e-002
8	16	0.1123	0.831	11.23	0.1	0.0	5.54e-003	2.99e-002	9.35e-003
9	4	0.1044	0.847	10.44	0.0	0.0	3.43e-002	3.61e-002	3.52e-002
10	0.25	0.0872	0.883	8.72	0.3	0.0	2.68e-003	1.46e-002	4.54e-003

CONSOLIDATION TEST DATA

SUMMARY REPORT



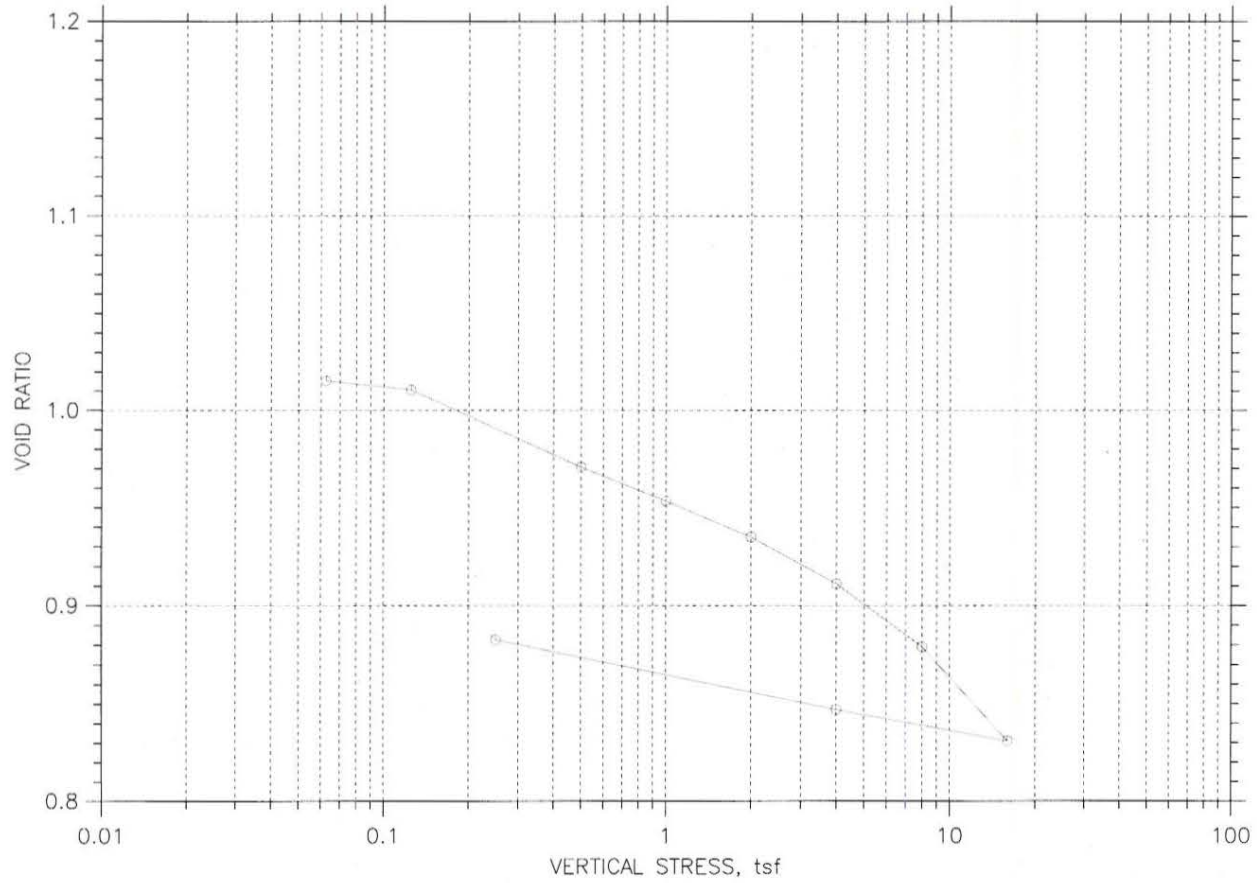


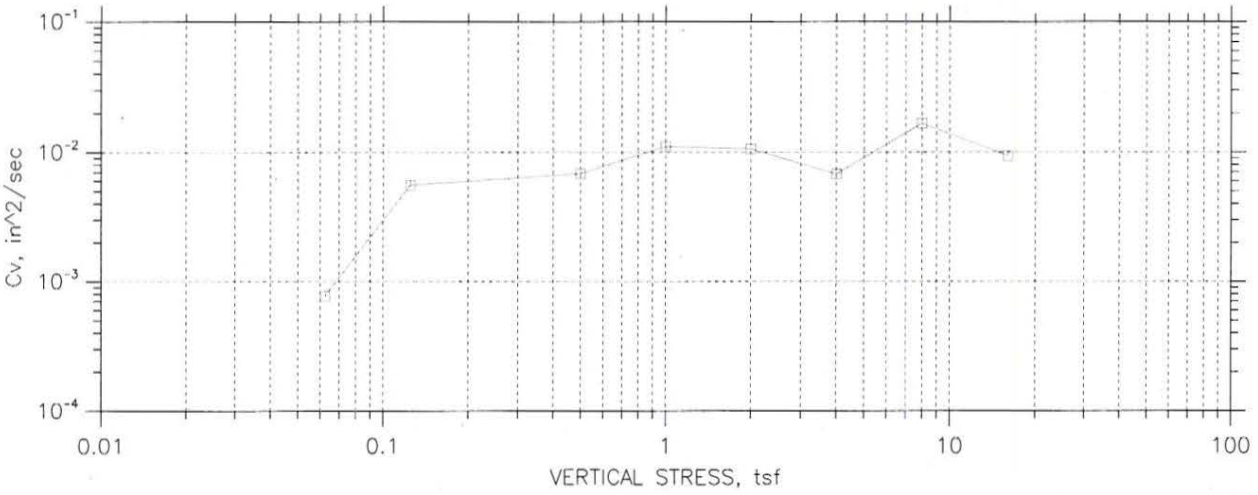
	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-236	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C10-1	Test Date: 7/19/10	Depth: 50
	Test No.: 10-037-G1	Sample Type: Tube	Elevation:
	Description: Moist, grey- brown, hard, silt		
	Remarks:		

Fri, 30-JUL-2010 11:03:01

CONSOLIDATION TEST DATA

SUMMARY REPORT



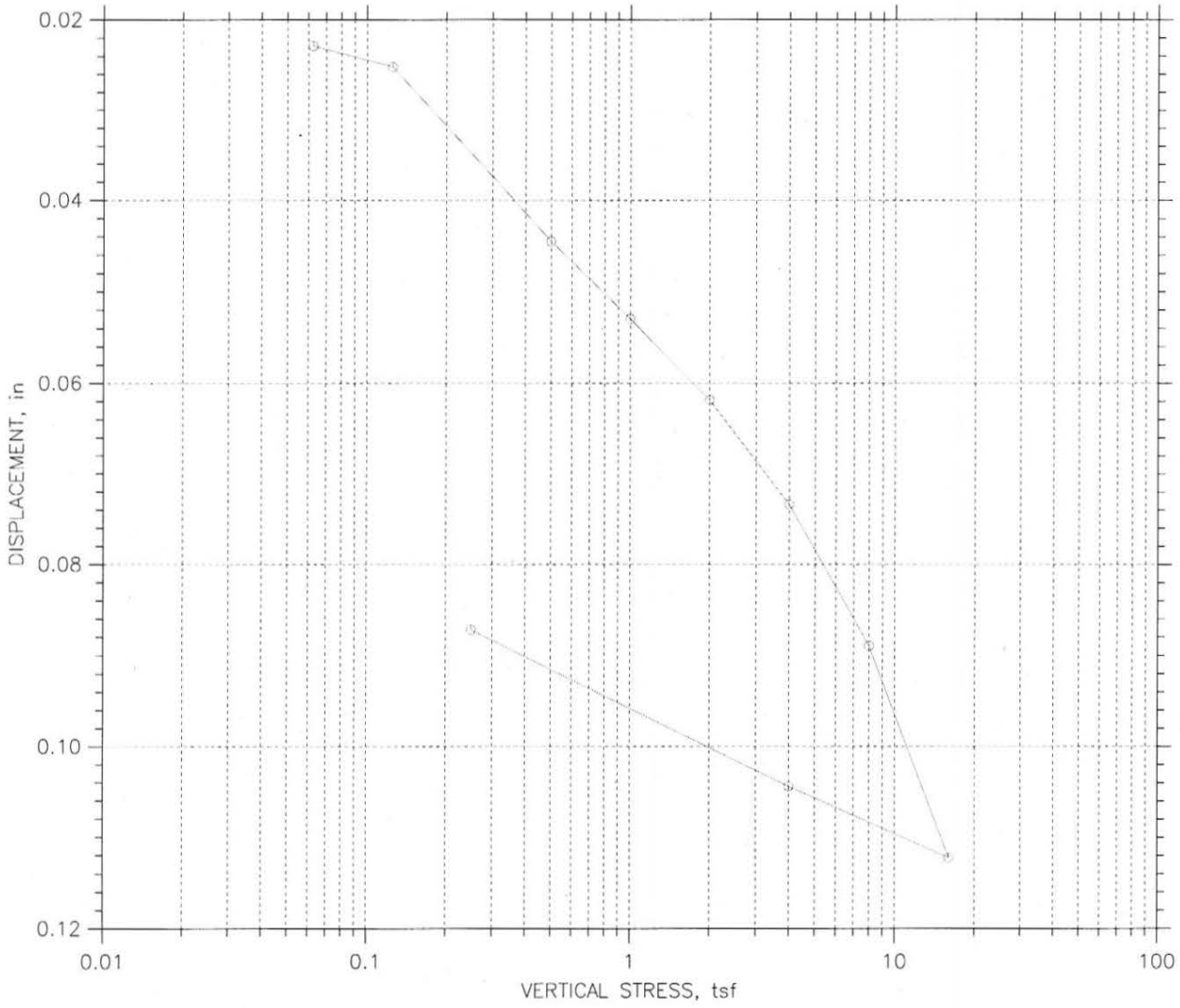


	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-236	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C10-1	Test Date: 7/19/10	Depth: 50
	Test No.: 10-037-G1	Sample Type: Tube	Elevation:
	Description: Moist, grey- brown, hard, silt		
	Remarks:		

Fri, 30-JUL-2010 11:03:28

CONSOLIDATION TEST DATA

SUMMARY REPORT



					Before Test	After Test
Overburden Pressure: 8.864e-312 tsf				Water Content, %	31.93	31.83
Preconsolidation Pressure: 3.612e-311 tsf				Dry Unit Weight, pcf	83.76	91.76
Compression Index: 2.75859e-313				Saturation, %	83.16	99.79
Diameter: 2.375 in		Height: 1 in		Void Ratio	1.06	0.88
LL: 0	PL: 0	PI: 0	GS: 2.77			

	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-236	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C10-1	Test Date: 7/19/10	Depth: 50
	Test No.: 10-037-G1	Sample Type: Tube	Elevation:
	Description: Moist, grey- brown, hard, silt		
	Remarks:		

Fri, 30-JUL-2010 11:04:02

CONSOLIDATION TEST DATA

Project: 1-10-HOV
Boring No.: R09-236
Sample No.: C16-3
Test No.: 10-038-G3

Location: 07-LA-10
Tested By: AZM
Test Date: 7/19/2010
Sample Type: Tube

Project No.: 07-119341
Checked By: GL#10-042
Depth: 80
Elevation: WP 815

Soil Description: Moist,dark-brown -black very stiff, silt w/clay
Remarks:

Measured Specific Gravity: 2.66
Initial Void Ratio: 0.84
Final Void Ratio: 0.80

Liquid Limit: 0
Plastic Limit: 0
Plasticity Index: 0

Initial Height: 1.00 in
Specimen Diameter: 2.38 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID		RING		
Wt. Container + Wet Soil, gm	228.1	228.1	228.8	228.8
Wt. Container + Dry Soil, gm	197.1	197.1	197.1	197.1
Wt. Container, gm	92.1	92.1	92.1	92.1
Wt. Dry Soil, gm	105	105	105	105
Water Content, %	29.52	29.52	30.19	30.19
Void Ratio	---	0.84	0.80	---
Degree of Saturation, %	---	93.67	99.75	---
Dry Unit Weight, pcf	---	90.292	91.959	---

CONSOLIDATION TEST DATA

Project: 1-10-HOV
Boring No.: R09-236
Sample No.: C16-3
Test No.: 10-038-G3

Location: 07-LA-10
Tested By: AZM
Test Date: 7/19/2010
Sample Type: Tube

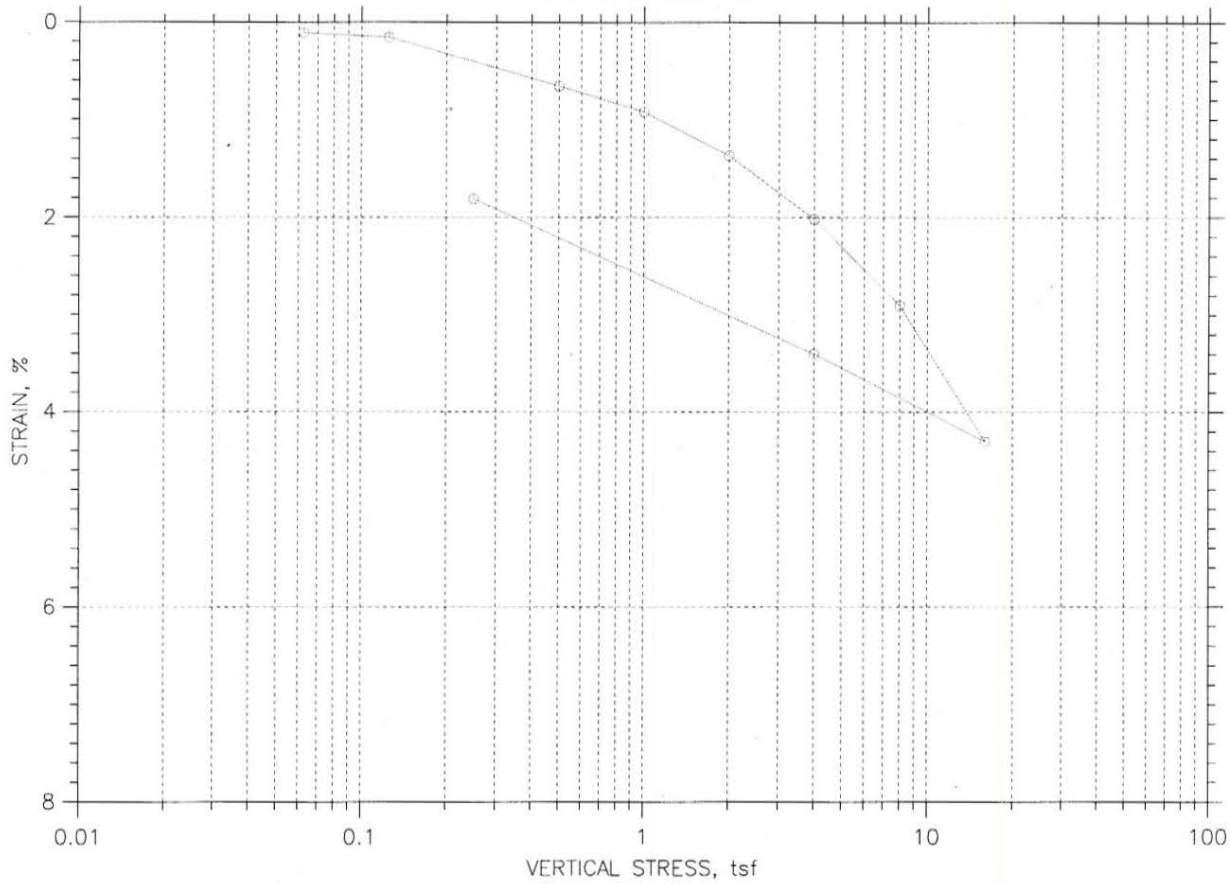
Project No.: 07-119341
Checked By: GL#10-042
Depth: 80
Elevation:

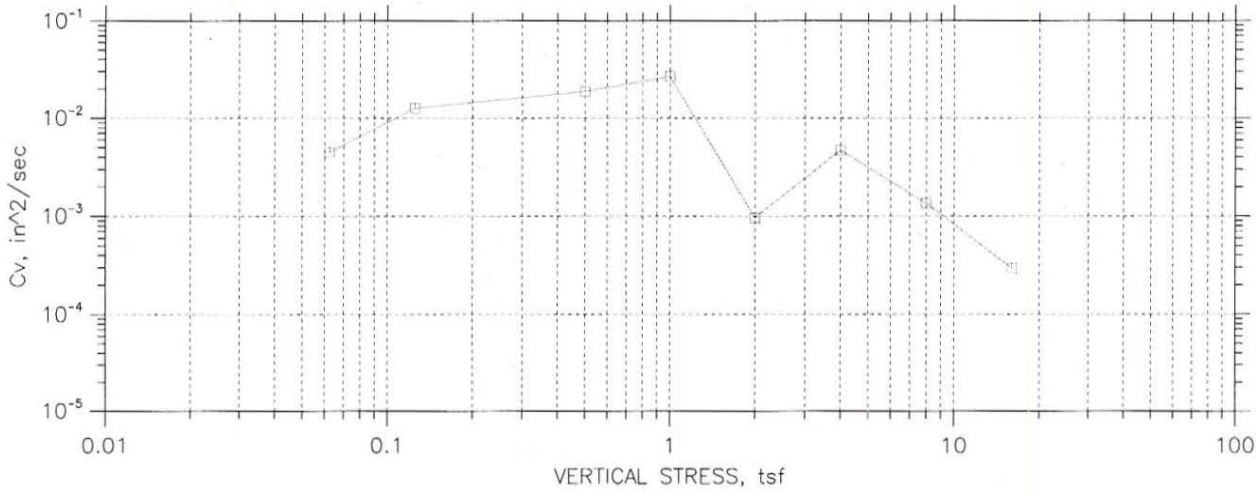
Soil Description: Moist,dark-brown -black very stiff, silt w/clay
Remarks:

	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting Sq.Rt. min	T50 Fitting Log min	Coefficient of Consolidation Sq.Rt. in^2/sec	Coefficient of Consolidation Log in^2/sec	Coefficient of Consolidation Ave. in^2/sec
1	0.0625	0.001128	0.836	0.11	0.2	0.0	4.45e-003	0.00e+000	4.45e-003
2	0.125	0.001565	0.835	0.16	0.1	0.0	1.26e-002	0.00e+000	1.26e-002
3	0.5	0.00661	0.826	0.66	0.0	0.0	1.70e-002	2.08e-002	1.87e-002
4	1	0.009249	0.821	0.92	0.0	0.0	2.65e-002	0.00e+000	2.65e-002
5	2	0.01369	0.813	1.37	0.8	0.0	9.58e-004	0.00e+000	9.58e-004
6	4	0.02021	0.801	2.02	0.3	0.1	2.94e-003	1.13e-002	4.67e-003
7	8	0.02904	0.784	2.90	0.6	0.0	1.35e-003	0.00e+000	1.35e-003
8	16	0.04305	0.759	4.31	2.6	0.0	2.95e-004	0.00e+000	2.95e-004
9	4	0.03403	0.775	3.40	0.0	0.0	2.92e-002	0.00e+000	2.92e-002
10	0.25	0.01812	0.804	1.81	21.9	0.6	3.56e-005	1.21e-003	6.92e-005

CONSOLIDATION TEST DATA

SUMMARY REPORT



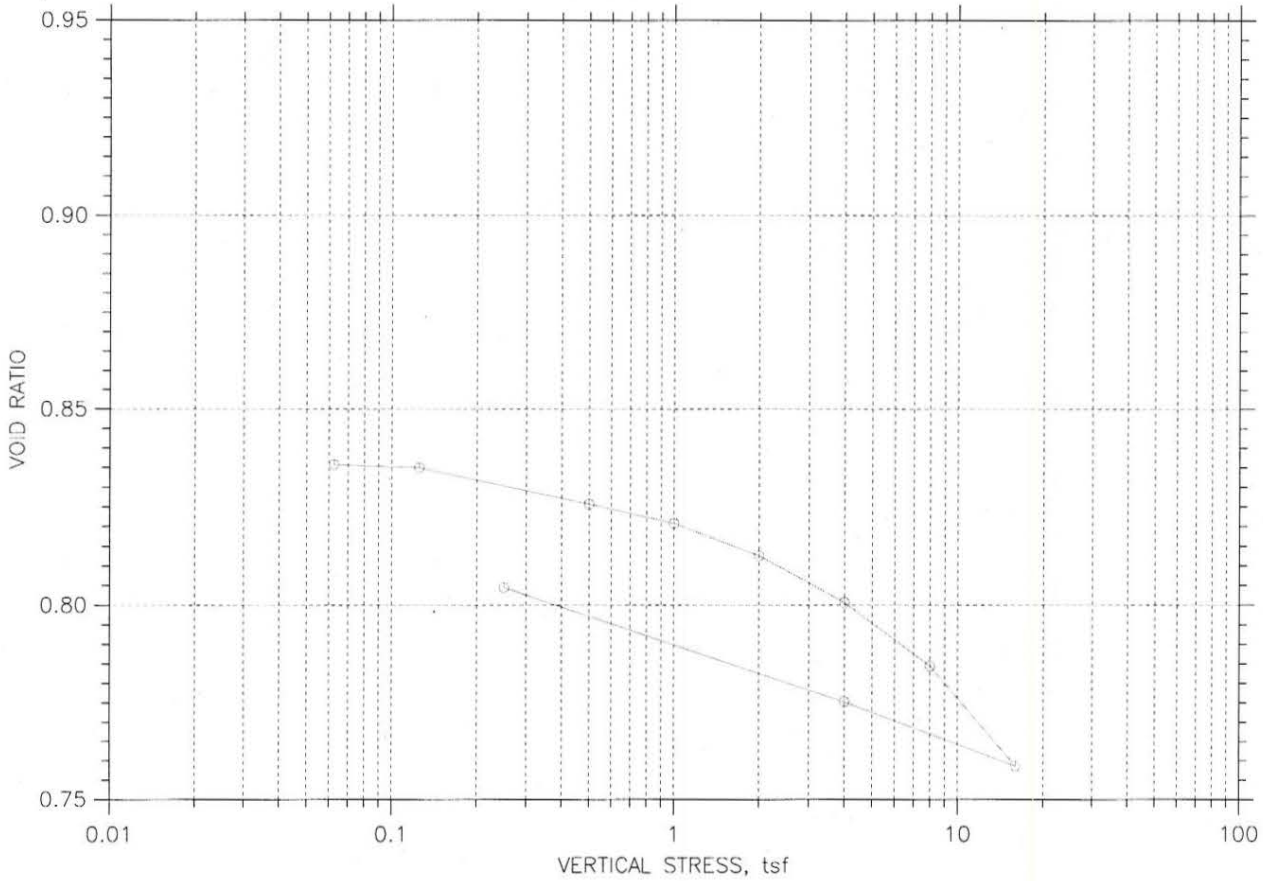


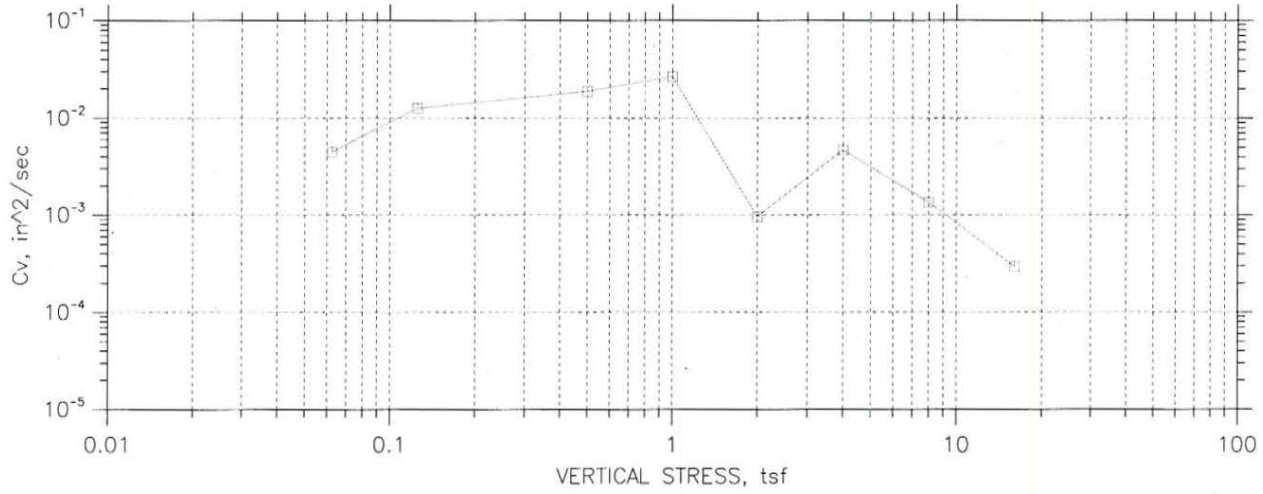
	Project: 1-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-236	Tested By: AZM	Checked By: GL#10-042
	Sample No.: C16-3	Test Date: 7/19/2010	Depth: 80
	Test No.: 10-038-G3	Sample Type: Tube	Elevation:
	Description: Moist,dark-brown -black very stiff, silt w/clay		
	Remarks:		

Fri, 30-JUL-2010 11:15:53

CONSOLIDATION TEST DATA

SUMMARY REPORT



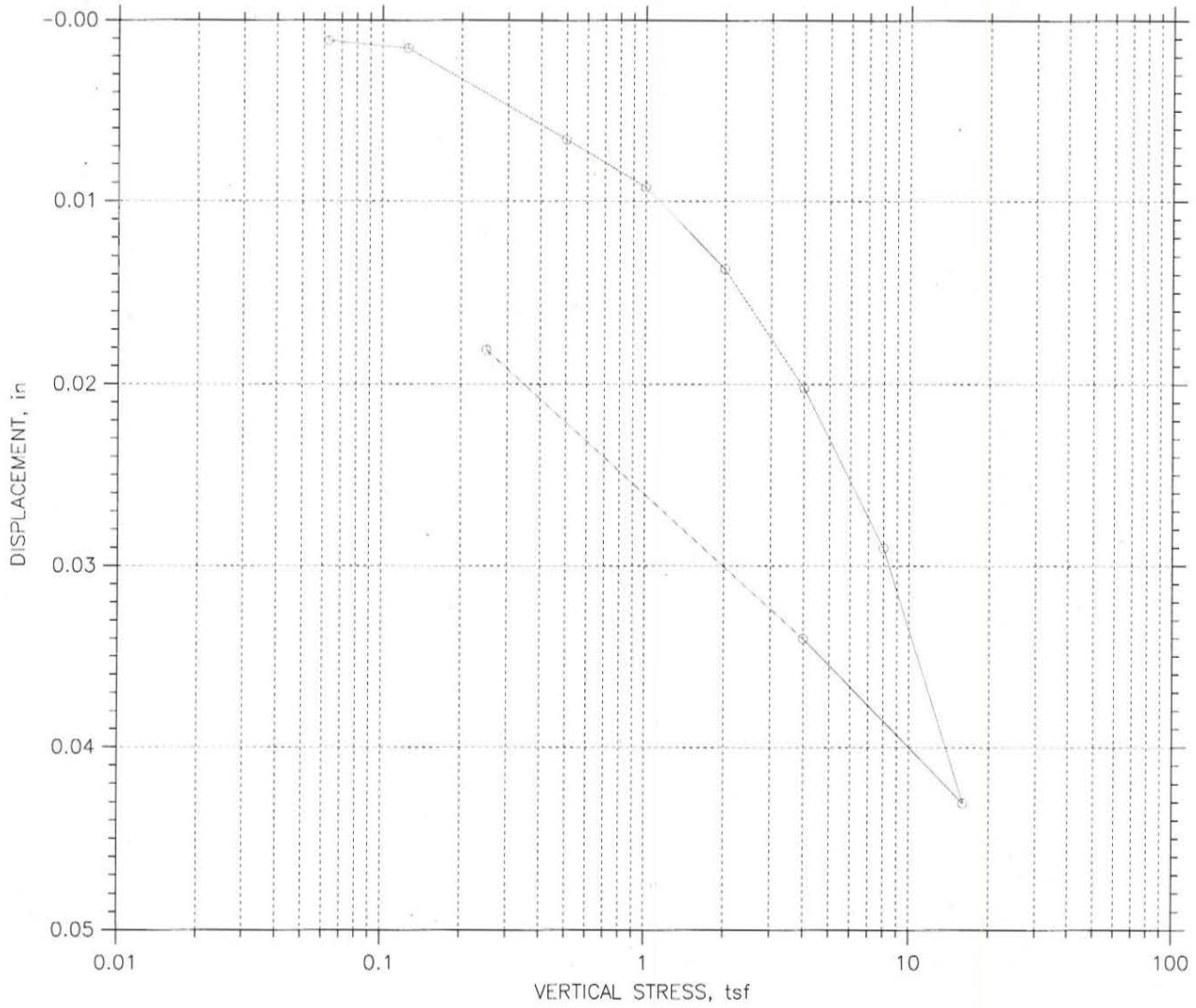


	Project: 1-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-236	Tested By: AZM	Checked By: GL#10-042
	Sample No.: C16-3	Test Date: 7/19/2010	Depth: 80
	Test No.: 10-038-G3	Sample Type: Tube	Elevation:
	Description: Moist,dark-brown -black very stiff, silt w/clay		
	Remarks:		

Fri, 30-JUL-2010 11:16:13

CONSOLIDATION TEST DATA

SUMMARY REPORT



					Before Test	After Test
Overburden Pressure: 8.864e-312 tsf				Water Content, %	29.52	30.19
Preconsolidation Pressure: 3.612e-311 tsf				Dry Unit Weight, pcf	90.29	91.96
Compression Index: 2.75859e-313				Saturation, %	93.67	99.75
Diameter: 2.375 in		Height: 1 in		Void Ratio	0.84	0.80
LL: 0	PL: 0	PI: 0	GS: 2.66			

	Project: 1-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-236	Tested By: AZM	Checked By: GL#10-042
	Sample No.: C16-3	Test Date: 7/19/2010	Depth: 80
	Test No.: 10-038-G3	Sample Type: Tube	Elevation:
	Description: Moist,dark-brown -black very stiff, silt w/clay		
	Remarks:		

Fri, 30-JUL-2010 11:16:32

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-237
Sample No.: C04-1
Test No.: 10-039-G4

Location: 07-LA-10
Tested By: AZM
Test Date: 7/19/2010
Sample Type: TUBE

Project No.: 07-119341
Checked By: GL# 10-042
Depth: 20
Elevation: WP 8/5

Soil Description: Moist, brown-tan, hard, silt w/clay
Remarks:

Measured Specific Gravity: 2.69
Initial Void Ratio: 0.82
Final Void Ratio: 0.87

Liquid Limit: ---
Plastic Limit: ---
Plasticity Index: ---

Initial Height: 1.00 in
Specimen Diameter: 2.38 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID		RING		
Wt. Container + Wet Soil, gm	222.7	222.7	228.8	228.8
Wt. Container + Dry Soil, gm	194.4	194.4	194.4	194.4
Wt. Container, gm	87.3	87.3	87.3	87.3
Wt. Dry Soil, gm	107.1	107.1	107.1	107.1
Water Content, %	26.42	26.42	32.12	32.12
Void Ratio	---	0.82	0.87	---
Degree of Saturation, %	---	86.25	99.93	---
Dry Unit Weight, pcf	---	92.098	90.097	---

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-237
Sample No.: C04-1
Test No.: 10-039-G4

Location: 07-LA-10
Tested By: AZM
Test Date: 7/19/2010
Sample Type: TUBE

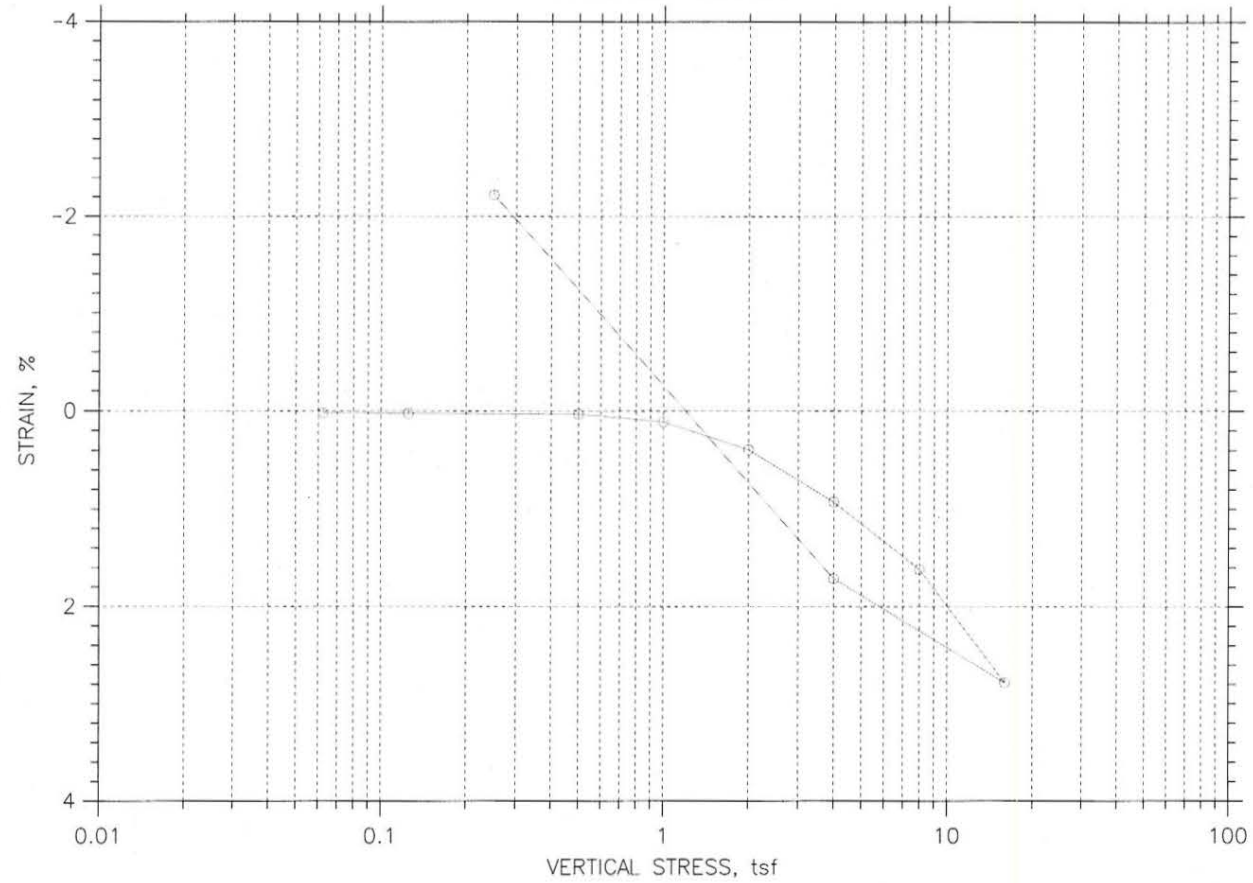
Project No.: 07-119341
Checked By: GL# 10-042
Depth: 20
Elevation:

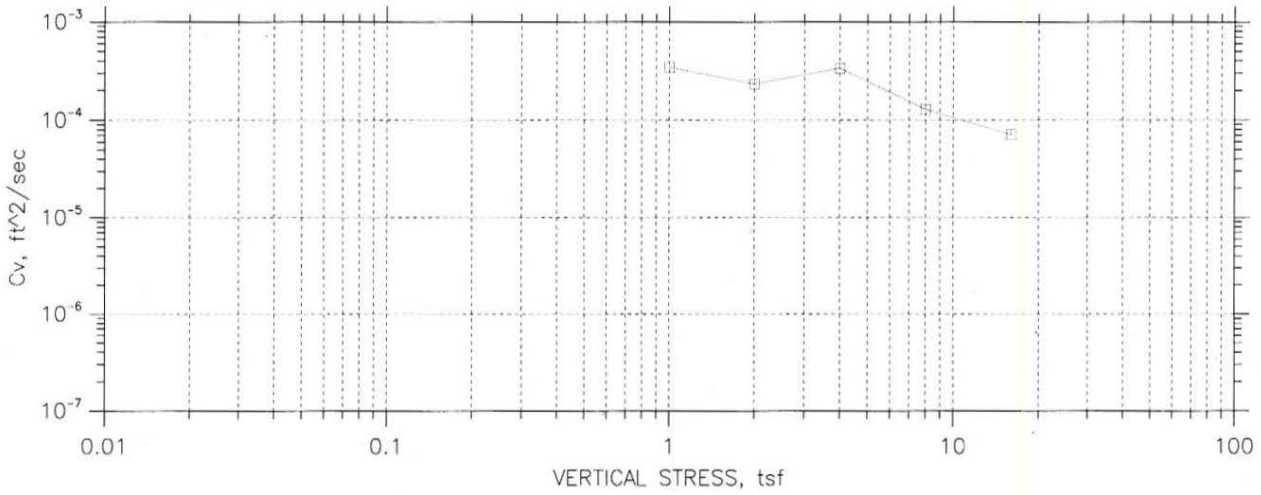
Soil Description: Moist, brown-tan, hard, silt w/clay
Remarks:

	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting Sq.Rt. min	T50 Fitting Log min	Coefficient of Consolidation Sq.Rt. ft^2/sec	Coefficient of Consolidation Log ft^2/sec	Coefficient of Consolidation Ave. ft^2/sec
1	0.0625	0.0001867	0.824	0.02	0.0	0.0	0.00e+000	0.00e+000	0.00e+000
2	0.125	0.0002504	0.824	0.03	0.0	0.0	0.00e+000	0.00e+000	0.00e+000
3	0.5	0.0003446	0.824	0.03	0.0	0.0	0.00e+000	0.00e+000	0.00e+000
4	1	0.00111	0.823	0.11	0.0	0.0	3.45e-004	0.00e+000	3.45e-004
5	2	0.003947	0.818	0.39	0.0	0.0	1.73e-004	3.52e-004	2.32e-004
6	4	0.009268	0.808	0.93	0.0	0.0	3.36e-004	0.00e+000	3.36e-004
7	8	0.01618	0.795	1.62	0.1	0.0	8.10e-005	3.06e-004	1.28e-004
8	16	0.02787	0.774	2.79	0.1	0.0	4.01e-005	3.12e-004	7.10e-005
9	4	0.01713	0.793	1.71	0.1	0.0	3.86e-005	0.00e+000	3.86e-005
10	0.25	-0.0222	0.865	-2.22	53.6	0.0	1.07e-007	0.00e+000	1.07e-007

CONSOLIDATION TEST DATA

SUMMARY REPORT



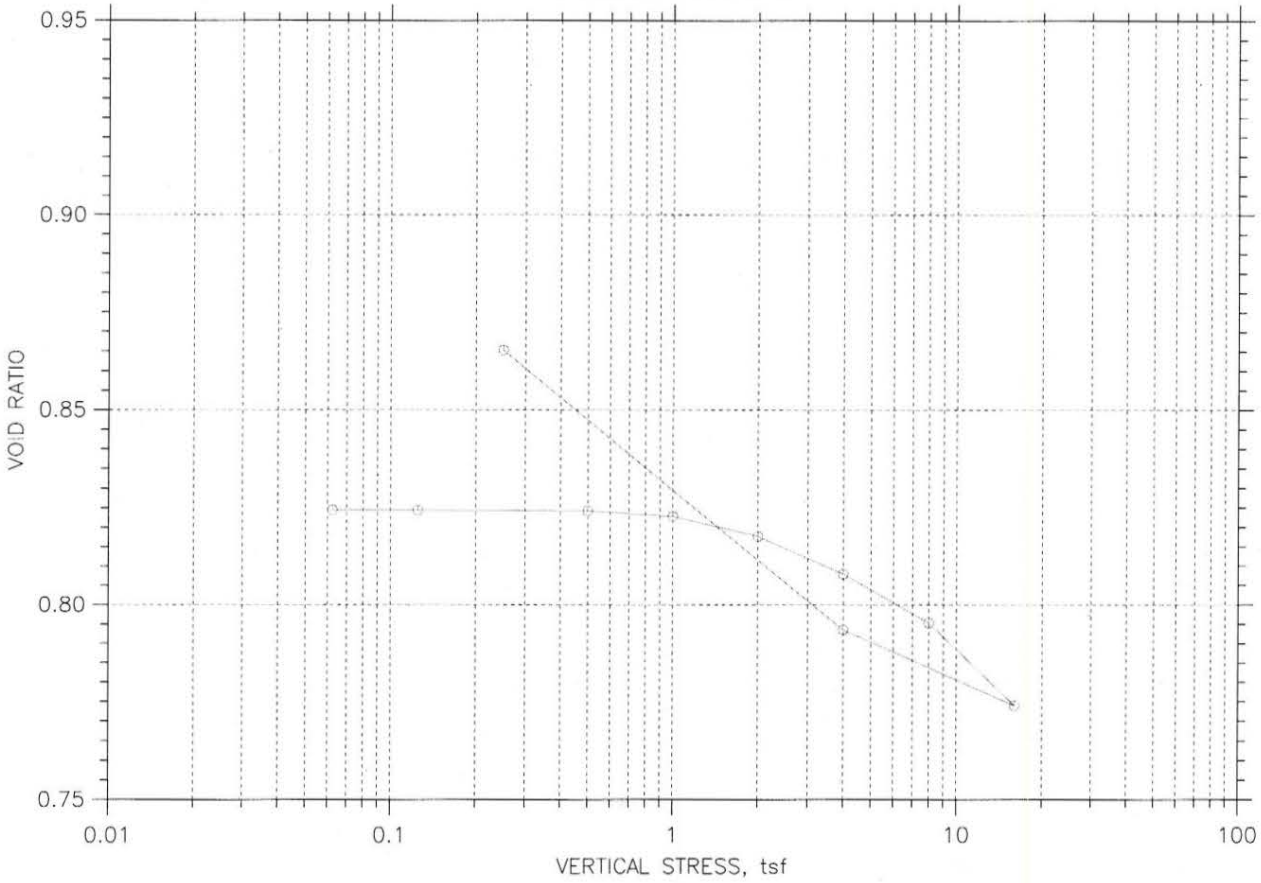


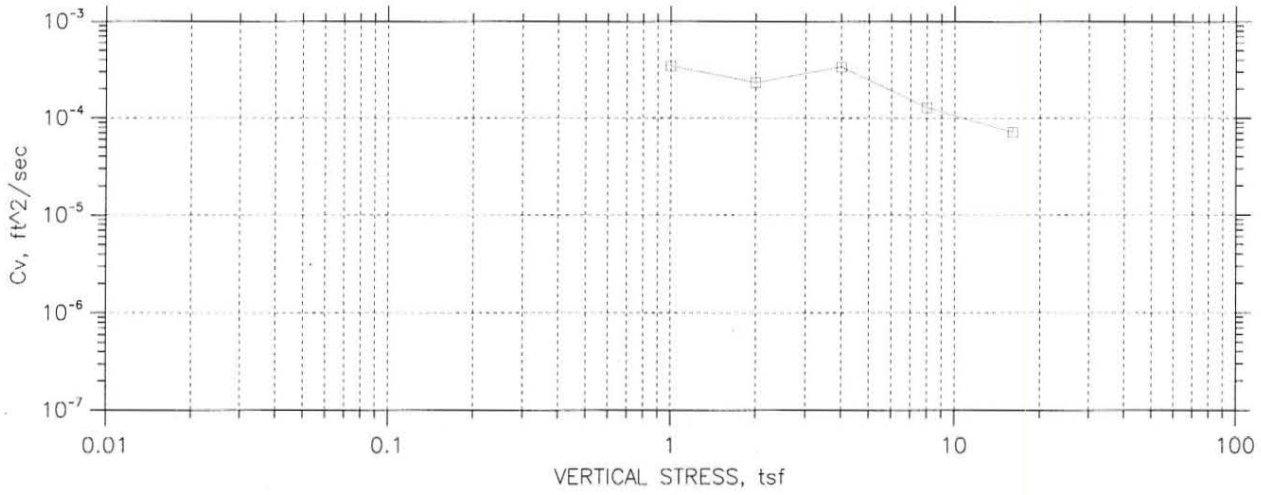
	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-237	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C04-1	Test Date: 7/19/2010	Depth: 20
	Test No.: 10-039-G4	Sample Type: TUBE	Elevation:
	Description: Moist, brown-tan, hard, silt w/clay		
	Remarks:		

Fri, 30-JUL-2010 11:30:05

CONSOLIDATION TEST DATA

SUMMARY REPORT



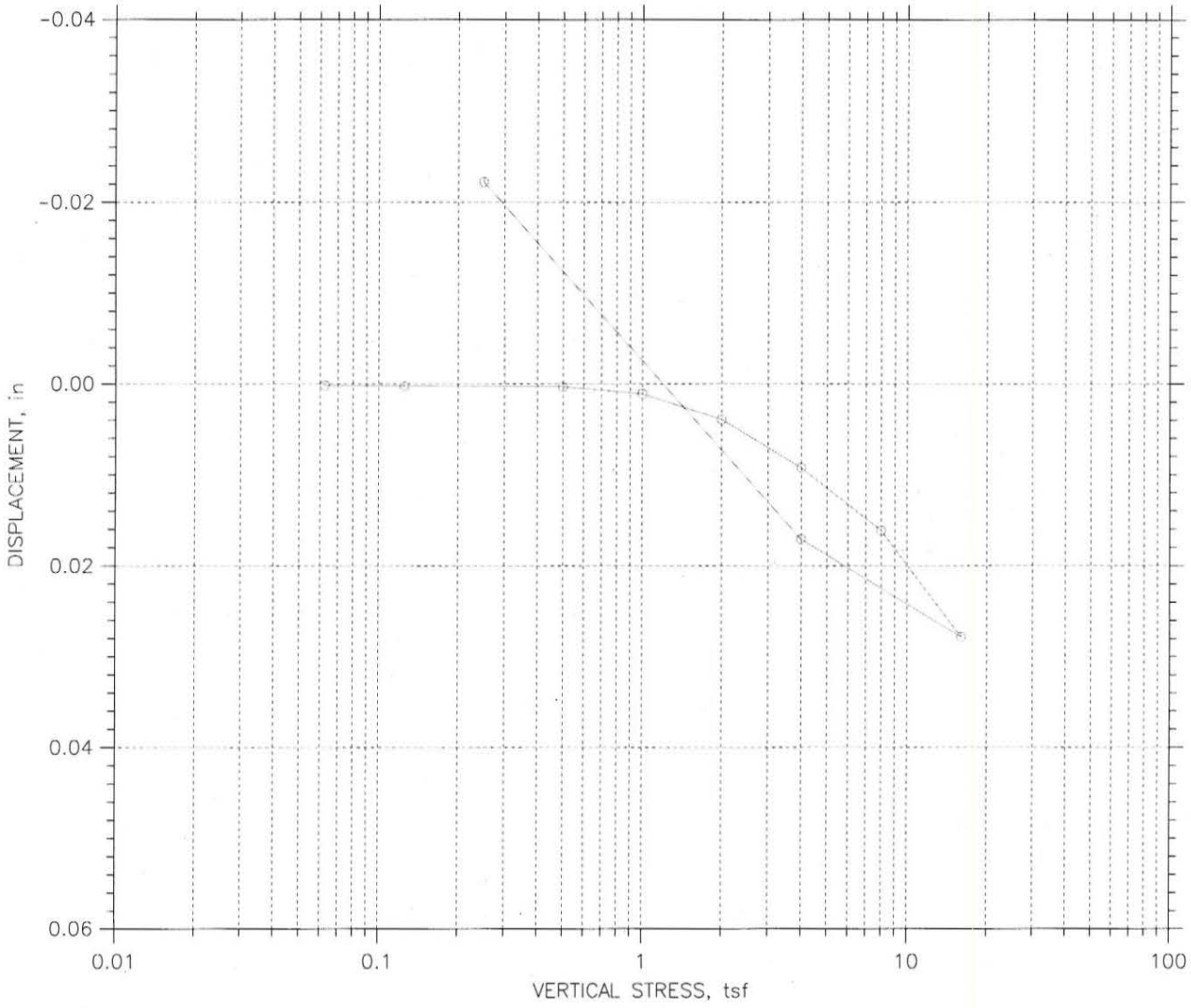


	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-237	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C04-1	Test Date: 7/19/2010	Depth: 20
	Test No.: 10-039-G4	Sample Type: TUBE	Elevation:
	Description: Moist, brown-tan, hard, silt w/clay		
	Remarks:		

Fri, 30-JUL-2010 11:30:34

CONSOLIDATION TEST DATA

SUMMARY REPORT



				Before Test	After Test
Overburden Pressure: 0 tsf			Water Content, %	26.42	32.12
Preconsolidation Pressure: 0 tsf			Dry Unit Weight, pcf	92.1	90.1
Compression Index: 3.81959e-313			Saturation, %	86.25	99.93
Diameter: 2.375 in	Height: 1 in		Void Ratio	0.82	0.87
LL: ---	PL: ---	PI: ---	GS: 2.69		

	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-237	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C04-1	Test Date: 7/19/2010	Depth: 20
	Test No.: 10-039-G4	Sample Type: TUBE	Elevation:
	Description: Moist, brown-tan, hard, silt w/clay		
	Remarks:		

Fri, 30-JUL-2010 11:30:57

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-237
Sample No.: C08-3
Test No.: 10-040-G1

Location: 07-LA-10
Tested By: AZM
Test Date: 7/22/10
Sample Type: Tube

Project No.: 07-119341
Checked By: GL# 10-042
Depth: 40
Elevation: hp 8/5

Soil Description: Moist, tan- brown, stiff, silty clay
Remarks:

Measured Specific Gravity: 2.70
Initial Void Ratio: 1.16
Final Void Ratio: 0.98

Liquid Limit: 0
Plastic Limit: 0
Plasticity Index: 0

Initial Height: 1.00 in
Specimen Diameter: 2.38 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID		RING		
Wt. Container + Wet Soil, gm	218.7	218.7	215	215
Wt. Container + Dry Soil, gm	182	182	182	182
Wt. Container, gm	91.1	91.1	91.1	91.1
Wt. Dry Soil, gm	90.9	90.9	90.9	90.9
Water Content, %	40.37	40.37	36.30	36.30
Void Ratio	---	1.16	0.98	---
Degree of Saturation, %	---	94.18	99.85	---
Dry Unit Weight, pcf	---	78.167	85.105	---

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-237
Sample No.: C08-3
Test No.: 10-040-G1

Location: 07-LA-10
Tested By: AZM
Test Date: 7/22/10
Sample Type: Tube

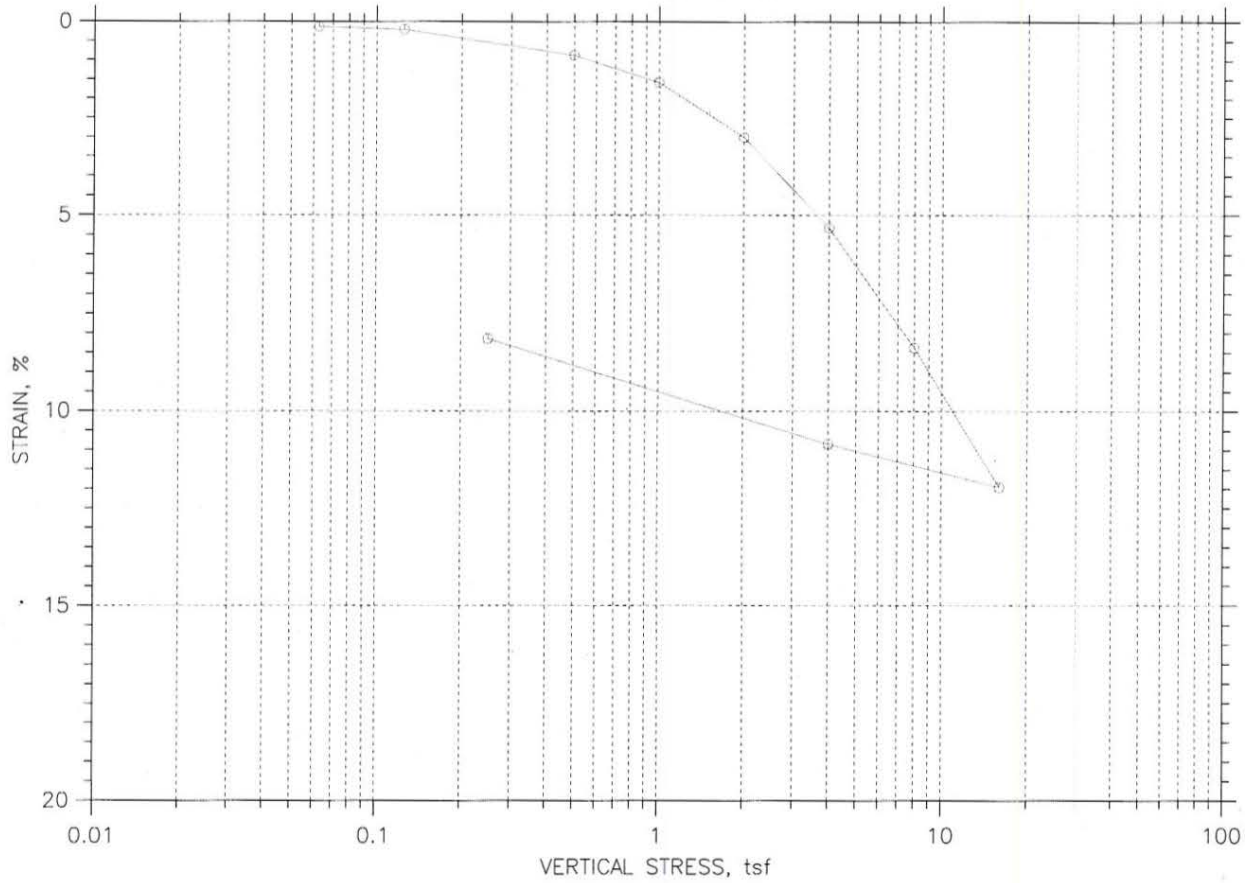
Project No.: 07-119341
Checked By: GL# 10-042
Depth: 40
Elevation:

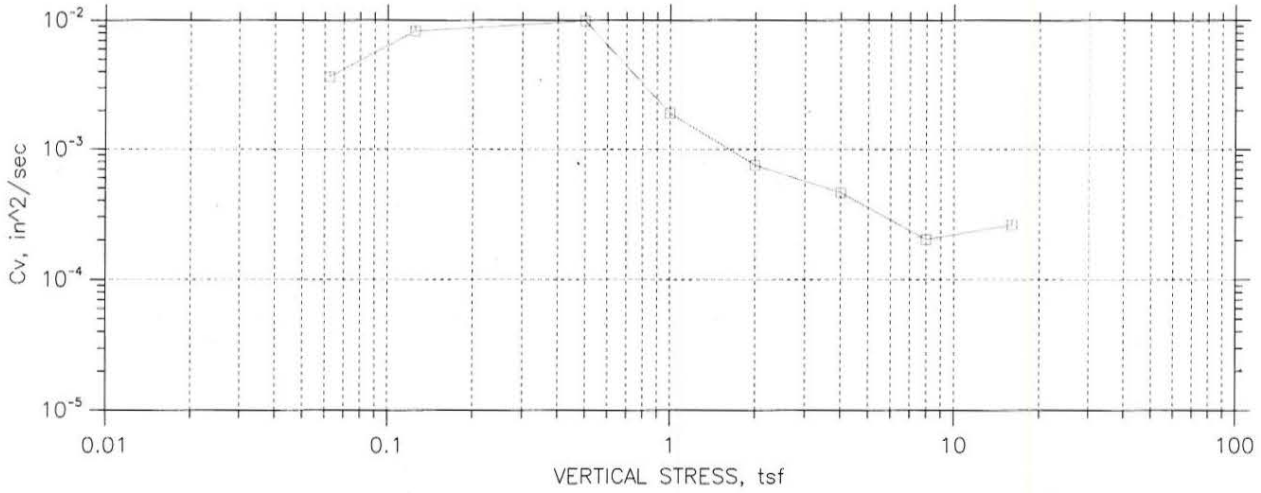
Soil Description: Moist, tan- brown, stiff, silty clay
Remarks:

	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting Sq.Rt. min	T50 Fitting Log min	Coefficient of Consolidation Sq.Rt. in^2/sec	Coefficient of Consolidation Log in^2/sec	Coefficient of Consolidation Ave. in^2/sec
1	0.0625	0.001401	1.156	0.14	0.2	0.0	3.64e-003	0.00e+000	3.64e-003
2	0.125	0.00211	1.154	0.21	0.1	0.0	8.26e-003	0.00e+000	8.26e-003
3	0.5	0.008797	1.140	0.88	0.1	0.1	8.30e-003	1.21e-002	9.84e-003
4	1	0.01584	1.125	1.58	0.7	0.2	1.16e-003	5.16e-003	1.90e-003
5	2	0.03012	1.094	3.01	1.0	0.0	7.52e-004	0.00e+000	7.52e-004
6	4	0.05321	1.044	5.32	2.5	0.7	2.98e-004	1.04e-003	4.62e-004
7	8	0.08379	0.978	8.38	3.5	0.0	2.02e-004	0.00e+000	2.02e-004
8	16	0.1197	0.900	11.97	3.3	1.8	2.01e-004	3.73e-004	2.61e-004
9	4	0.1085	0.924	10.85	0.5	0.0	1.34e-003	0.00e+000	1.34e-003
10	0.25	0.08152	0.983	8.15	14.6	0.0	4.63e-005	0.00e+000	4.63e-005

CONSOLIDATION TEST DATA

SUMMARY REPORT



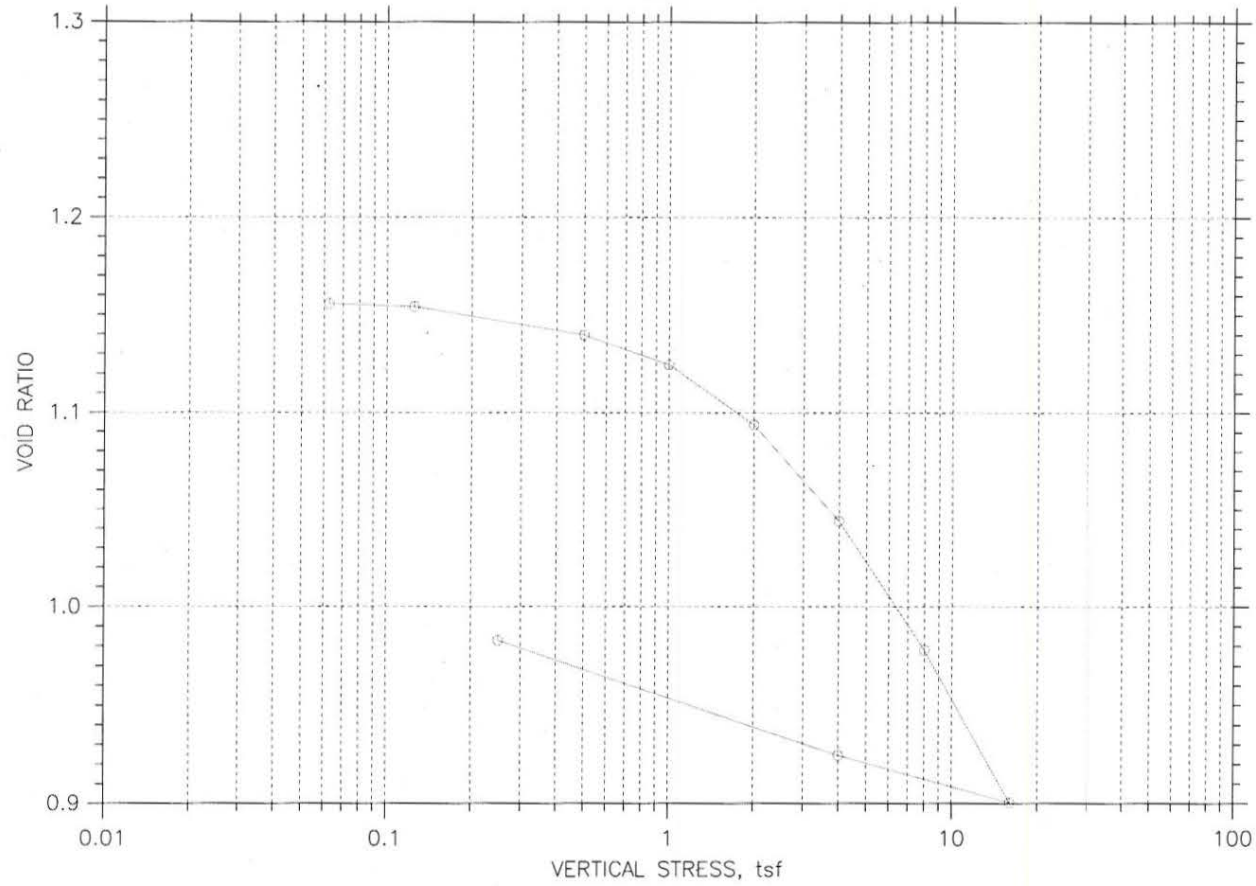


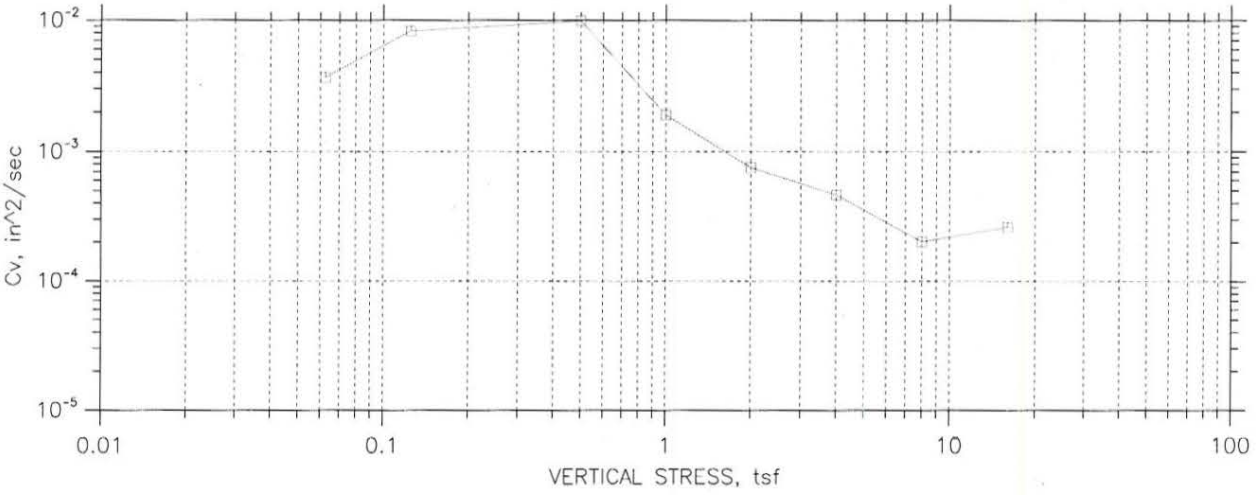
	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-237	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C08-3	Test Date: 7/22/10	Depth: 40
	Test No.: 10-040-G1	Sample Type: Tube	Elevation:
	Description: Moist, tan- brown, stiff, silty clay		
	Remarks:		

Fri, 30-JUL-2010 11:47:53

CONSOLIDATION TEST DATA

SUMMARY REPORT



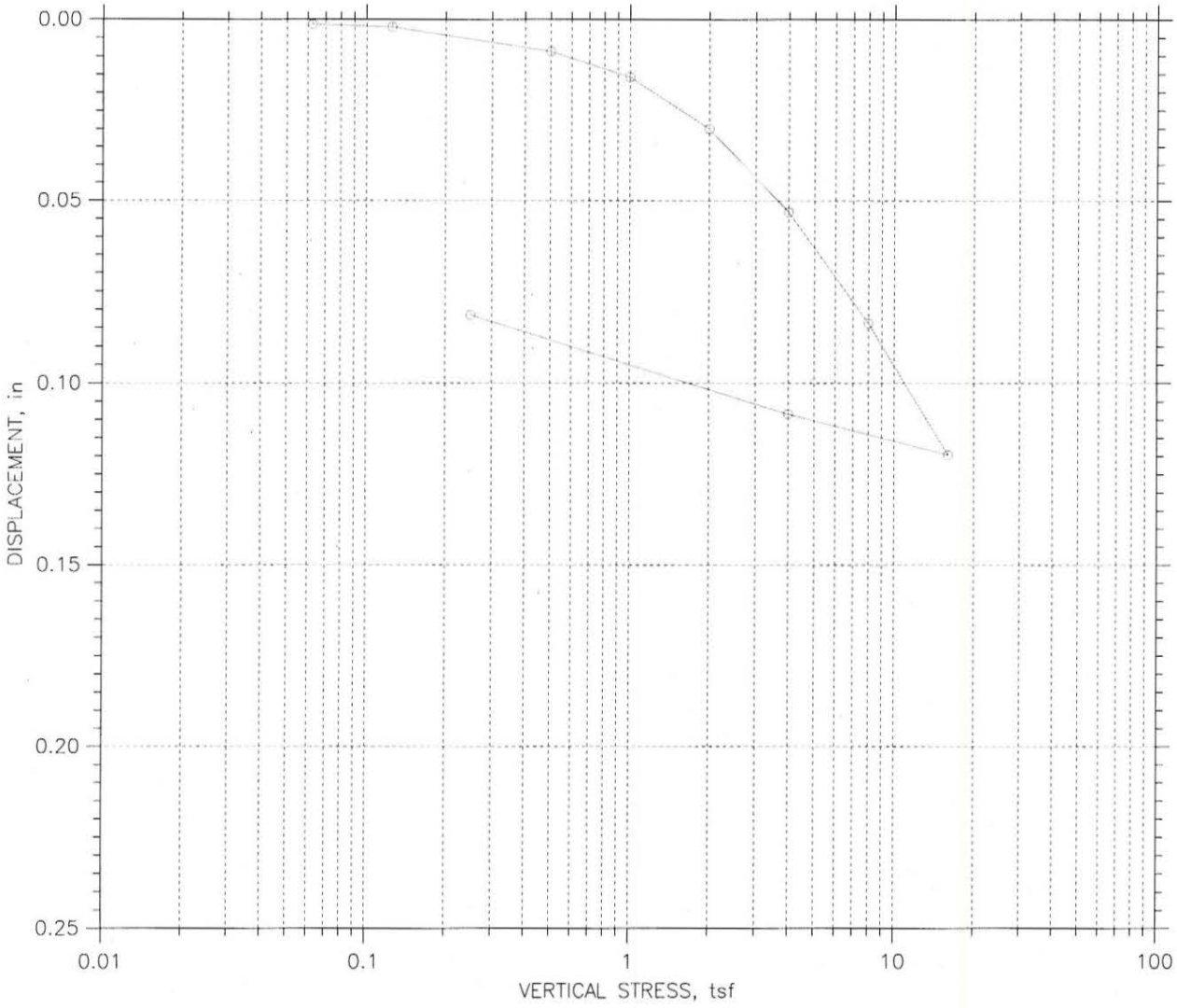


	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-237	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C08-3	Test Date: 7/22/10	Depth: 40
	Test No.: 10-040-G1	Sample Type: Tube	Elevation:
	Description: Moist, tan- brown, stiff, silty clay		
	Remarks:		

Fri, 30-JUL-2010 11:48:11

CONSOLIDATION TEST DATA

SUMMARY REPORT



					Before Test	After Test
Overburden Pressure: 8.864e-312 tsf				Water Content, %	40.37	36.30
Preconsolidation Pressure: 3.612e-311 tsf				Dry Unit Weight, pcf	78.17	85.1
Compression Index: 2.75859e-313				Saturation, %	94.18	99.85
Diameter: 2.375 in		Height: 1 in		Void Ratio	1.16	0.98
LL: 0	PL: 0	PI: 0	GS: 2.70			

	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-237	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C08-3	Test Date: 7/22/10	Depth: 40
	Test No.: 10-040-G1	Sample Type: Tube	Elevation:
	Description: Moist, tan- brown, stiff, silty clay		
	Remarks:		

Fri, 30-JUL-2010 11:49:03

CONSOLIDATION TEST DATA

Project: 1-10-HOV
Boring No.: R09-237
Sample No.: C10-3
Test No.: 10-041-G3

Location: 07-LA-10
Tested By: AZM
Test Date: 7/22/2010
Sample Type: Tube

Project No.: 07-119341
Checked By: GL#10-042
Depth: 50
Elevation: WP 815

Soil Description: Moist,light-brown , soft, clay w/silt
Remarks:

Measured Specific Gravity: 2.80
Initial Void Ratio: 1.24
Final Void Ratio: 0.95

Liquid Limit: 0
Plastic Limit: 0
Plasticity Index: 0

Initial Height: 1.00 in
Specimen Diameter: 2.38 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID		RING		
Wt. Container + Wet Soil, gm	220.8	220.8	213.4	213.4
Wt. Container + Dry Soil, gm	182.6	182.6	182.6	182.6
Wt. Container, gm	91.8	91.8	91.8	91.8
Wt. Dry Soil, gm	90.8	90.8	90.8	90.8
Water Content, %	42.07	42.07	33.92	33.92
Void Ratio	---	1.24	0.95	---
Degree of Saturation, %	---	95.02	99.88	---
Dry Unit Weight, pcf	---	78.081	89.646	---

CONSOLIDATION TEST DATA

Project: 1-10-HOV
Boring No.: R09-237
Sample No.: C10-3
Test No.: 10-041-G3

Location: 07-LA-10
Tested By: AZM
Test Date: 7/22/2010
Sample Type: Tube

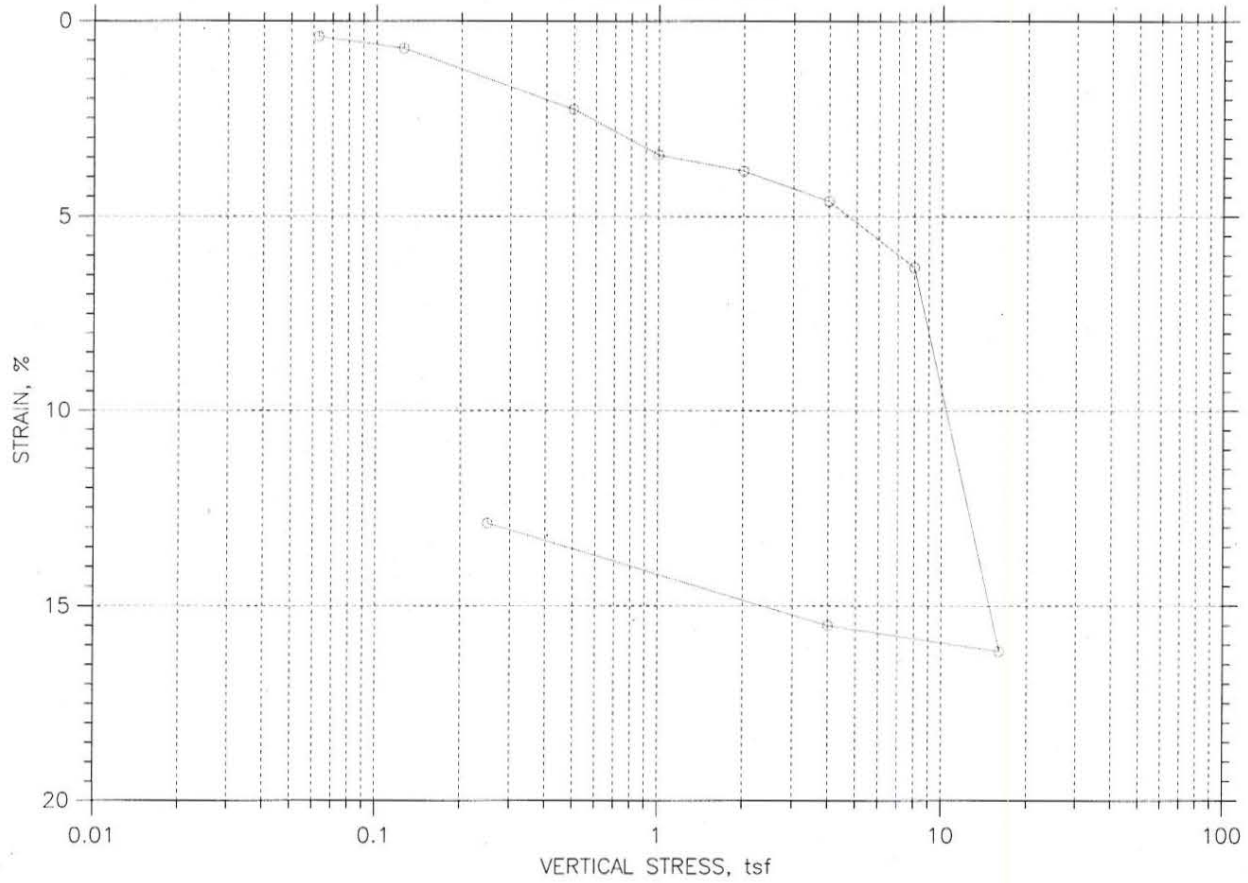
Project No.: 07-119341
Checked By: GL#10-042
Depth: 50
Elevation:

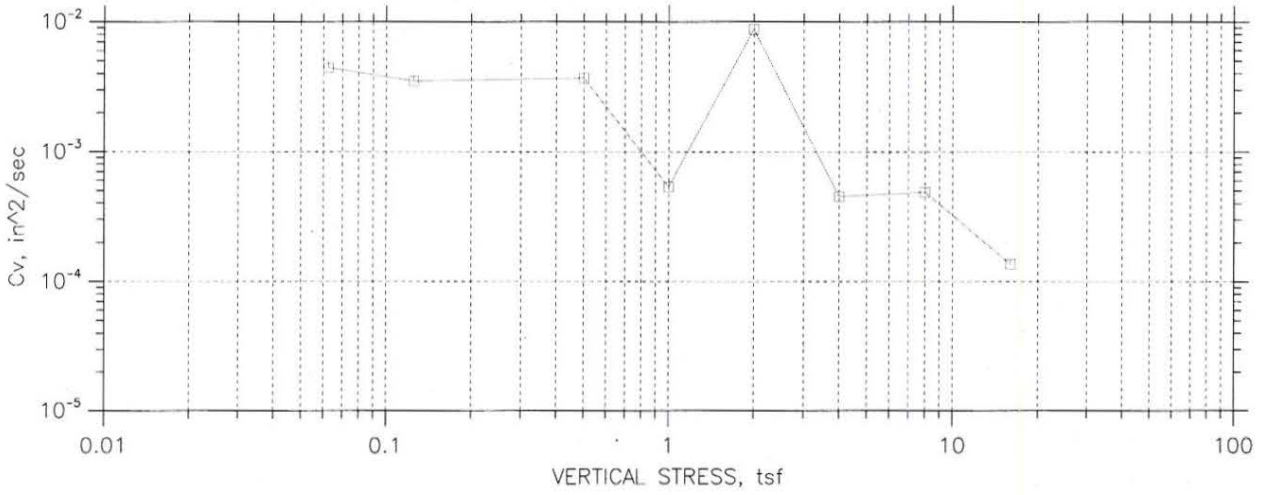
Soil Description: Moist,light-brown , soft, clay w/silt
Remarks:

	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting Sq.Rt. min	T50 Fitting Log min	Coefficient of Consolidation Sq.Rt. in^2/sec	Coefficient of Consolidation Log in^2/sec	Coefficient of Consolidation Ave. in^2/sec
1	0.0625	0.003981	1.232	0.40	0.2	0.2	4.51e-003	4.37e-003	4.44e-003
2	0.125	0.007075	1.225	0.71	0.3	0.2	3.08e-003	4.09e-003	3.52e-003
3	0.5	0.02275	1.190	2.27	0.3	0.1	2.34e-003	8.76e-003	3.69e-003
4	1	0.03434	1.164	3.43	1.5	0.0	5.34e-004	0.00e+000	5.34e-004
5	2	0.03849	1.155	3.85	0.1	0.0	5.13e-003	2.95e-002	8.74e-003
6	4	0.04619	1.138	4.62	1.7	0.0	4.51e-004	0.00e+000	4.51e-004
7	8	0.06308	1.100	6.31	2.8	0.2	2.58e-004	4.63e-003	4.89e-004
8	16	0.1617	0.879	16.17	6.7	2.9	9.70e-005	2.27e-004	1.36e-004
9	4	0.155	0.894	15.50	1.8	0.0	3.23e-004	0.00e+000	3.23e-004
10	0.25	0.129	0.952	12.90	6.9	0.0	8.73e-005	0.00e+000	8.73e-005

CONSOLIDATION TEST DATA

SUMMARY REPORT



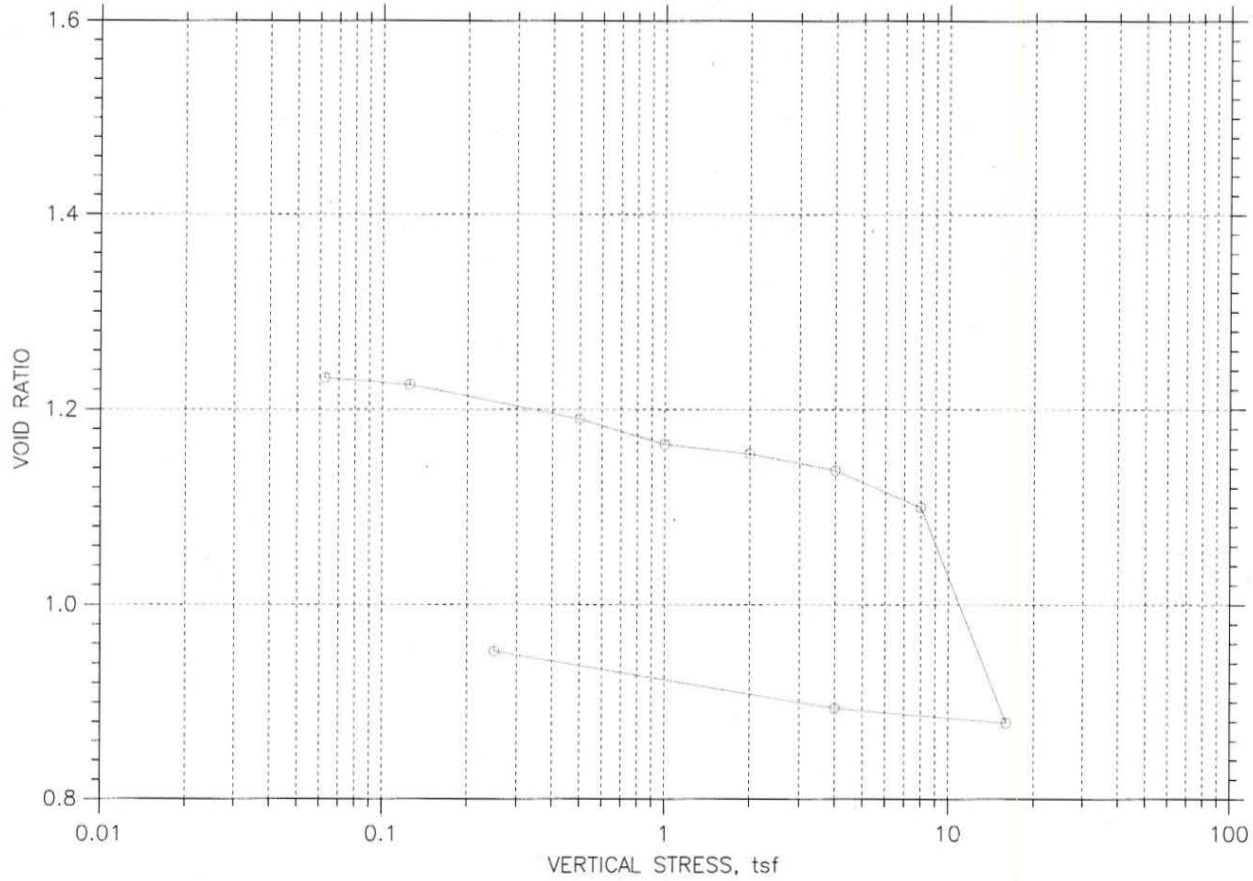


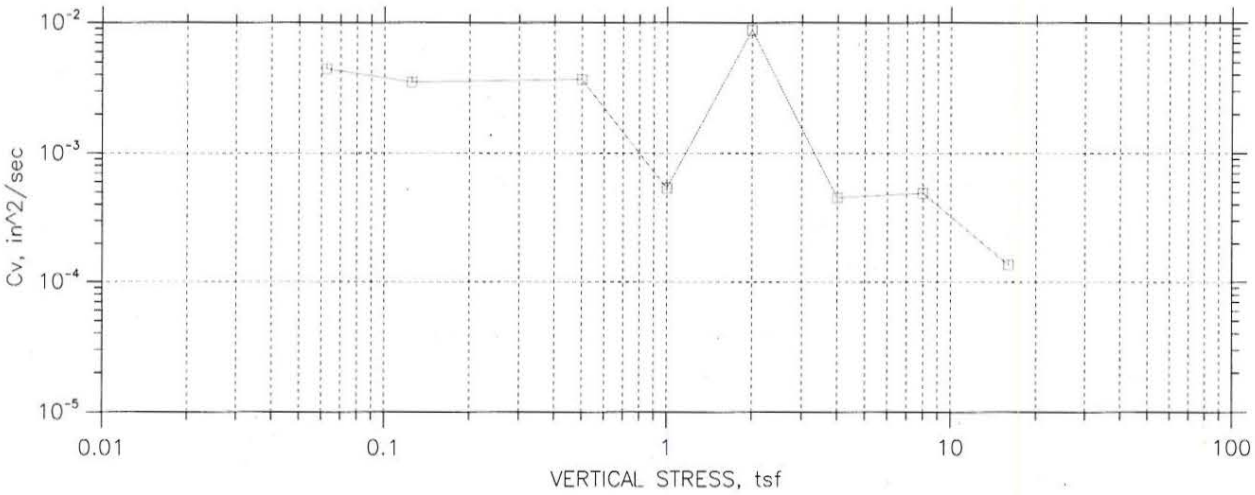
	Project: 1-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-237	Tested By: AZM	Checked By: GL#10-042
	Sample No.: C10-3	Test Date: 7/22/2010	Depth: 50
	Test No.: 10-041-G3	Sample Type: Tube	Elevation:
	Description: Moist,light-brown , soft, clay w/silt		
	Remarks:		

Fri, 30-JUL-2010 12:01:37

CONSOLIDATION TEST DATA

SUMMARY REPORT



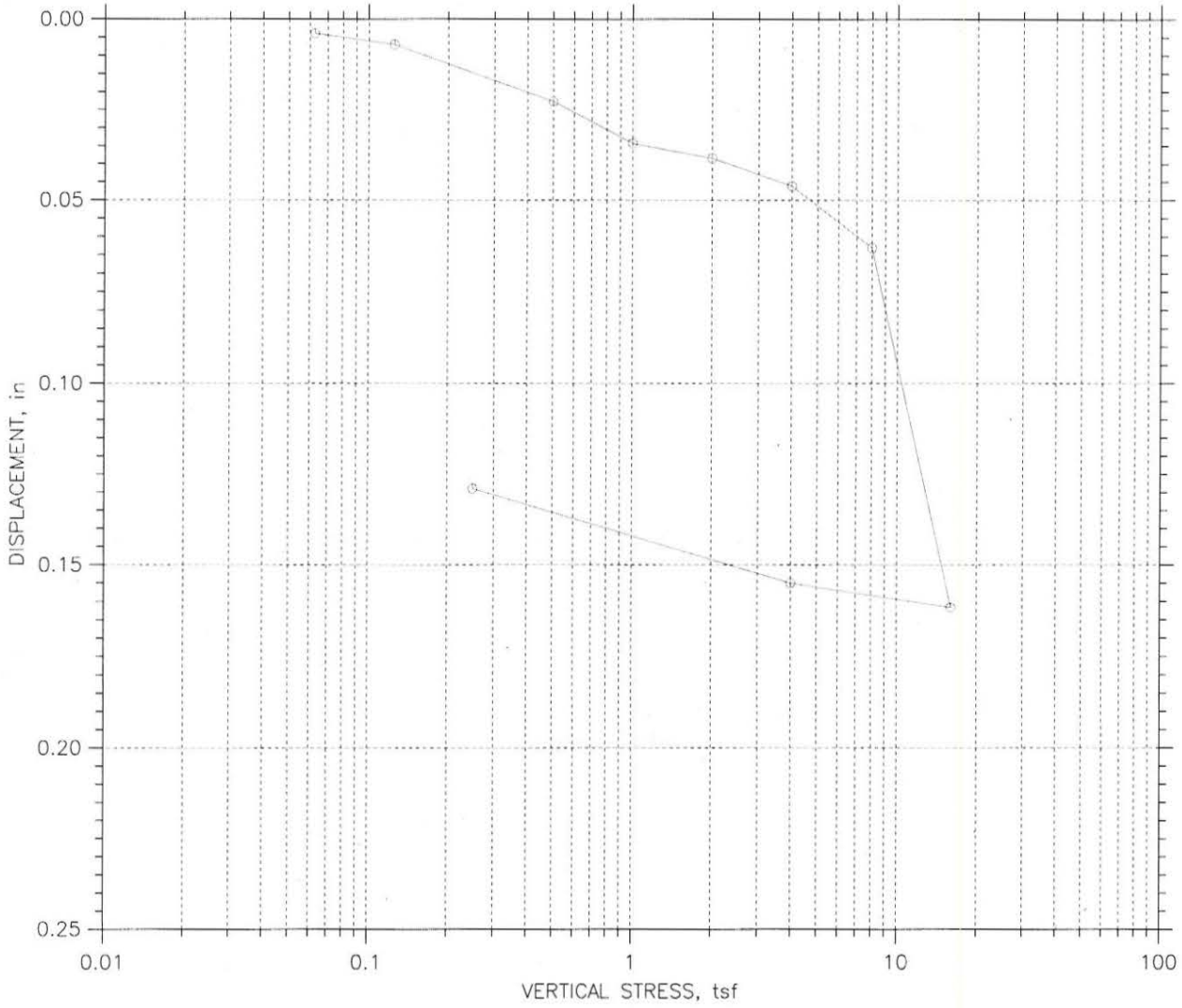


	Project: 1-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-237	Tested By: AZM	Checked By: GL#10-042
	Sample No.: C10-3	Test Date: 7/22/2010	Depth: 50
	Test No.: 10-041-G3	Sample Type: Tube	Elevation:
	Description: Moist,light-brown , soft, clay w/silt		
	Remarks:		

Fri, 30-JUL-2010 12:01:59

CONSOLIDATION TEST DATA

SUMMARY REPORT



					Before Test	After Test
Overburden Pressure: 8.864e-312 tsf				Water Content, %	42.07	33.92
Preconsolidation Pressure: 3.612e-311 tsf				Dry Unit Weight, pcf	78.08	89.65
Compression Index: 2.75859e-313				Saturation, %	95.02	99.88
Diameter: 2.375 in		Height: 1 in		Void Ratio	1.24	0.95
LL: 0	PL: 0	PI: 0	GS: 2.80			

	Project: 1-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-237	Tested By: AZM	Checked By: GL#10-042
	Sample No.: C10-3	Test Date: 7/22/2010	Depth: 50
	Test No.: 10-041-G3	Sample Type: Tube	Elevation:
	Description: Moist,light-brown , soft, clay w/silt		
	Remarks:		

Fri, 30-JUL-2010 12:02:28

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-237
Sample No.: C14-1
Test No.: 10-042-G1

Location: 07-LA-10
Tested By: AZM
Test Date: 7/26/10
Sample Type: Tube

Project No.: 07-119341
Checked By: GL# 10-042
Depth: 70
Elevation: WP 8|5

Soil Description: Moist, tan- brown, med-stiff, silty clay
Remarks:

Measured Specific Gravity: 2.71
Initial Void Ratio: 1.21
Final Void Ratio: 1.04

Liquid Limit: 0
Plastic Limit: 0
Plasticity Index: 0

Initial Height: 1.00 in
Specimen Diameter: 2.38 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID		RING		
Wt. Container + Wet Soil, gm	216.2	216.2	213.2	213.2
Wt. Container + Dry Soil, gm	179.1	179.1	179.1	179.1
Wt. Container, gm	90.4	90.4	90.4	90.4
Wt. Dry Soil, gm	88.7	88.7	88.7	88.7
Water Content, %	41.83	41.83	38.44	38.44
Void Ratio	---	1.21	1.04	---
Degree of Saturation, %	---	93.17	99.76	---
Dry Unit Weight, pcf	---	76.275	82.696	---

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-237
Sample No.: C14-1
Test No.: 10-042-G1

Location: 07-LA-10
Tested By: AZM
Test Date: 7/26/10
Sample Type: Tube

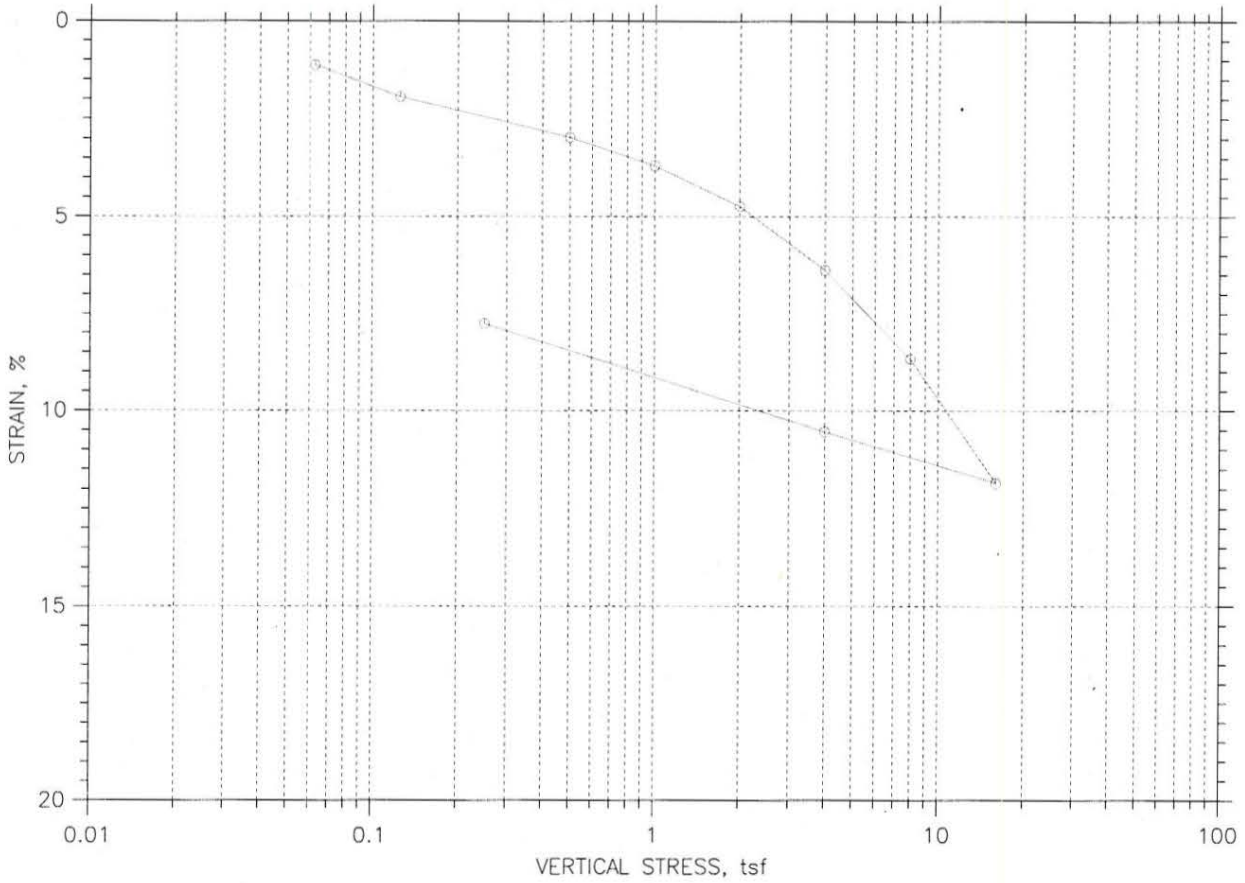
Project No.: 07-119341
Checked By: GL# 10-042
Depth: 70
Elevation:

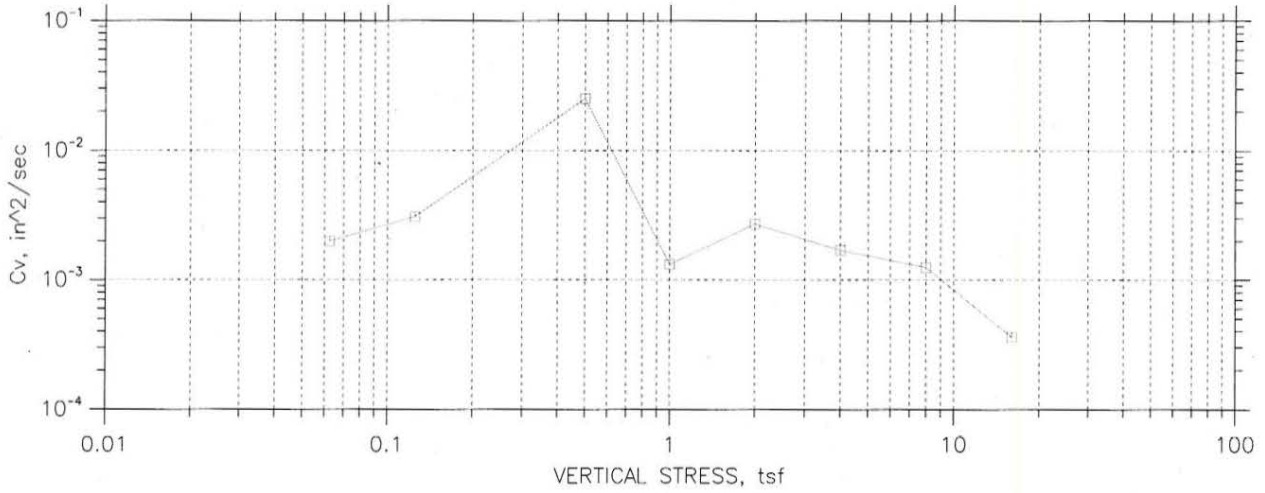
Soil Description: Moist, tan- brown, med-stiff, silty clay
Remarks:

	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting Sq.Rt. min	T50 Fitting Log min	Coefficient of Consolidation Sq.Rt. in^2/sec	Coefficient of Consolidation Log in^2/sec	Coefficient of Consolidation Ave. in^2/sec
1	0.0625	0.01131	1.190	1.13	0.0	0.4	0.00e+000	1.98e-003	1.98e-003
2	0.125	0.01941	1.172	1.94	0.3	0.0	3.07e-003	0.00e+000	3.07e-003
3	0.5	0.02977	1.149	2.98	0.0	0.0	2.46e-002	2.56e-002	2.51e-002
4	1	0.03701	1.133	3.70	0.6	0.0	1.31e-003	0.00e+000	1.31e-003
5	2	0.04742	1.110	4.74	0.5	0.1	1.61e-003	8.48e-003	2.70e-003
6	4	0.06382	1.073	6.38	0.7	0.2	1.03e-003	4.64e-003	1.69e-003
7	8	0.0868	1.022	8.68	1.0	0.1	6.82e-004	7.21e-003	1.25e-003
8	16	0.1185	0.952	11.85	1.9	1.8	3.57e-004	3.64e-004	3.60e-004
9	4	0.1054	0.981	10.54	0.2	0.0	2.72e-003	0.00e+000	2.72e-003
10	0.25	0.07765	1.043	7.76	6.6	0.0	1.03e-004	0.00e+000	1.03e-004

CONSOLIDATION TEST DATA

SUMMARY REPORT



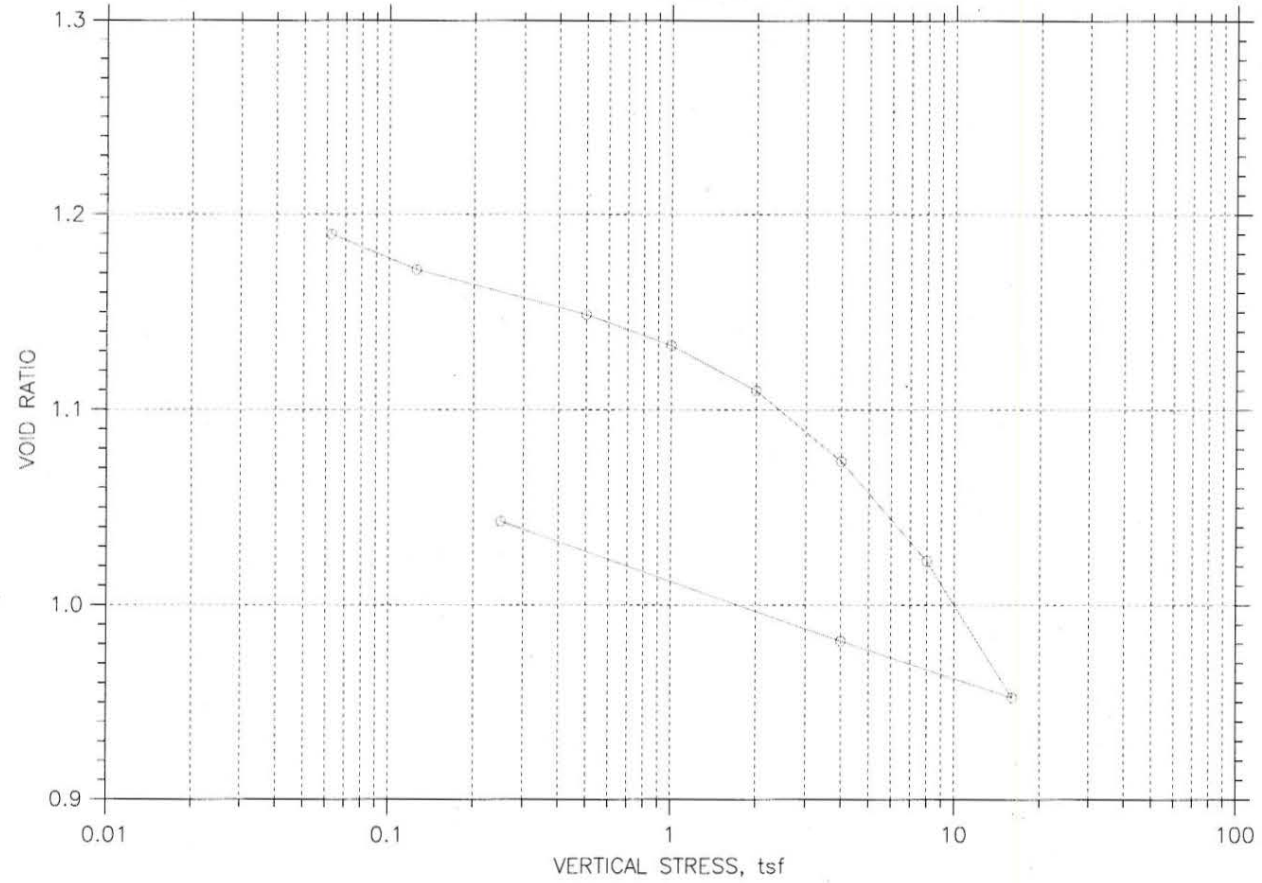


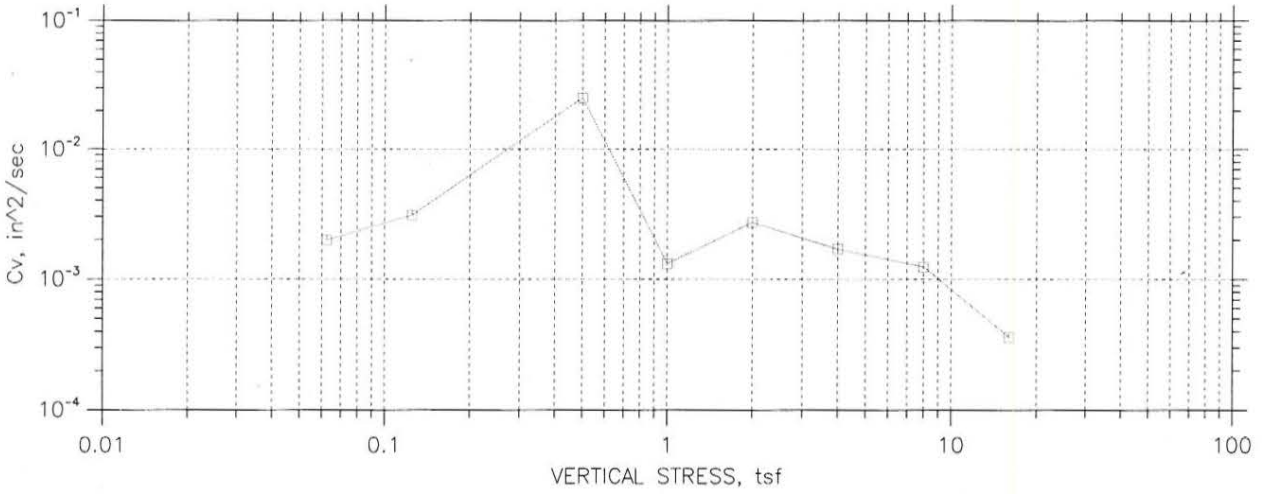
	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-237	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C14-1	Test Date: 7/26/10	Depth: 70
	Test No.: 10-042-G1	Sample Type: Tube	Elevation:
	Description: Moist, tan- brown, med-stiff, silty clay		
	Remarks:		

Fri, 30-JUL-2010 12:31:29

CONSOLIDATION TEST DATA

SUMMARY REPORT



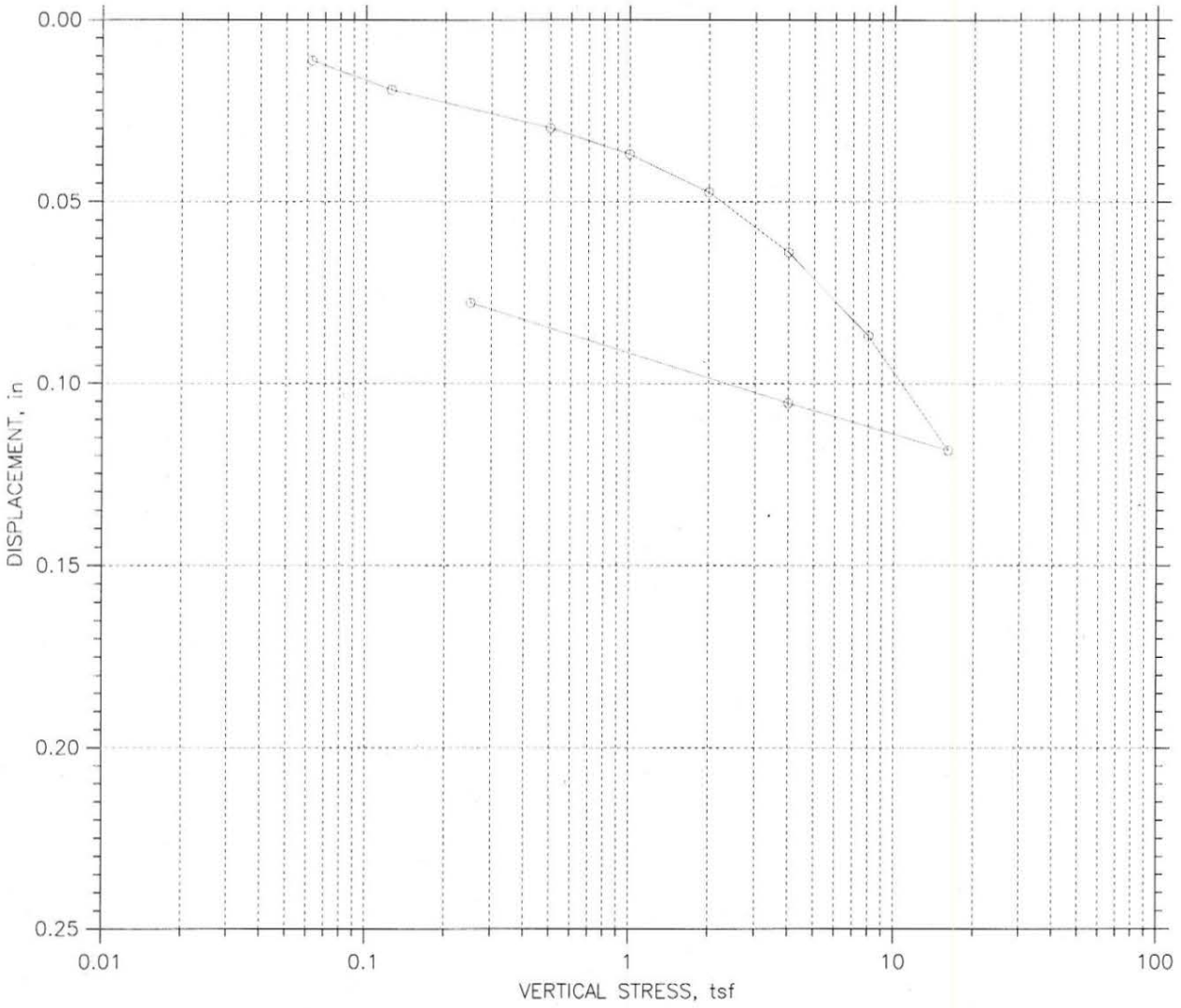


	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-237	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C14-1	Test Date: 7/26/10	Depth: 70
	Test No.: 10-042-G1	Sample Type: Tube	Elevation:
	Description: Moist, tan- brown, med-stiff, silty clay		
	Remarks:		

Fri, 30-JUL-2010 12:31:49

CONSOLIDATION TEST DATA

SUMMARY REPORT



				Before Test	After Test
Overburden Pressure: 8.864e-312 tsf			Water Content, %	41.83	38.44
Preconsolidation Pressure: 3.612e-311 tsf			Dry Unit Weight, pcf	76.28	82.7
Compression Index: 2.75859e-313			Saturation, %	93.17	99.76
Diameter: 2.375 in		Height: 1 in	Void Ratio	1.21	1.04
LL: 0	PL: 0	PI: 0	GS: 2.71		

	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-237	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C14-1	Test Date: 7/26/10	Depth: 70
	Test No.: 10-042-G1	Sample Type: Tube	Elevation:
	Description: Moist, tan- brown, med-stiff, silty clay		
	Remarks:		

Fri, 30-JUL-2010 12:32:13

CONSOLIDATION TEST DATA

Project: 1-10-HOV
Boring No.: R09-237
Sample No.: C18-1
Test No.: 10-043-G3

Location: 07-LA-10
Tested By: AZM
Test Date: 7/26/2010
Sample Type: Tube

Project No.: 07-119341
Checked By: GL#10-042
Depth: 90
Elevation: pp 8/10

Soil Description: Moist,tan-brown , hard, silt w/clay
Remarks:

Measured Specific Gravity: 2.69
Initial Void Ratio: 0.99
Final Void Ratio: 0.91

Liquid Limit: 0
Plastic Limit: 0
Plasticity Index: 0

Initial Height: 1.00 in
Specimen Diameter: 2.38 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID		RING		
Wt. Container + Wet Soil, gm	221.1	221.1	219.4	219.4
Wt. Container + Dry Soil, gm	186.3	186.3	186.3	186.3
Wt. Container, gm	88.1	88.1	88.1	88.1
Wt. Dry Soil, gm	98.2	98.2	98.2	98.2
Water Content, %	35.44	35.44	33.71	33.71
Void Ratio	---	0.99	0.91	---
Degree of Saturation, %	---	96.28	99.72	---
Dry Unit Weight, pcf	---	84.445	88.023	---

CONSOLIDATION TEST DATA

Project: 1-10-HOV
Boring No.: R09-237
Sample No.: C18-1
Test No.: 10-043-G3

Location: 07-LA-10
Tested By: AZM
Test Date: 7/26/2010
Sample Type: Tube

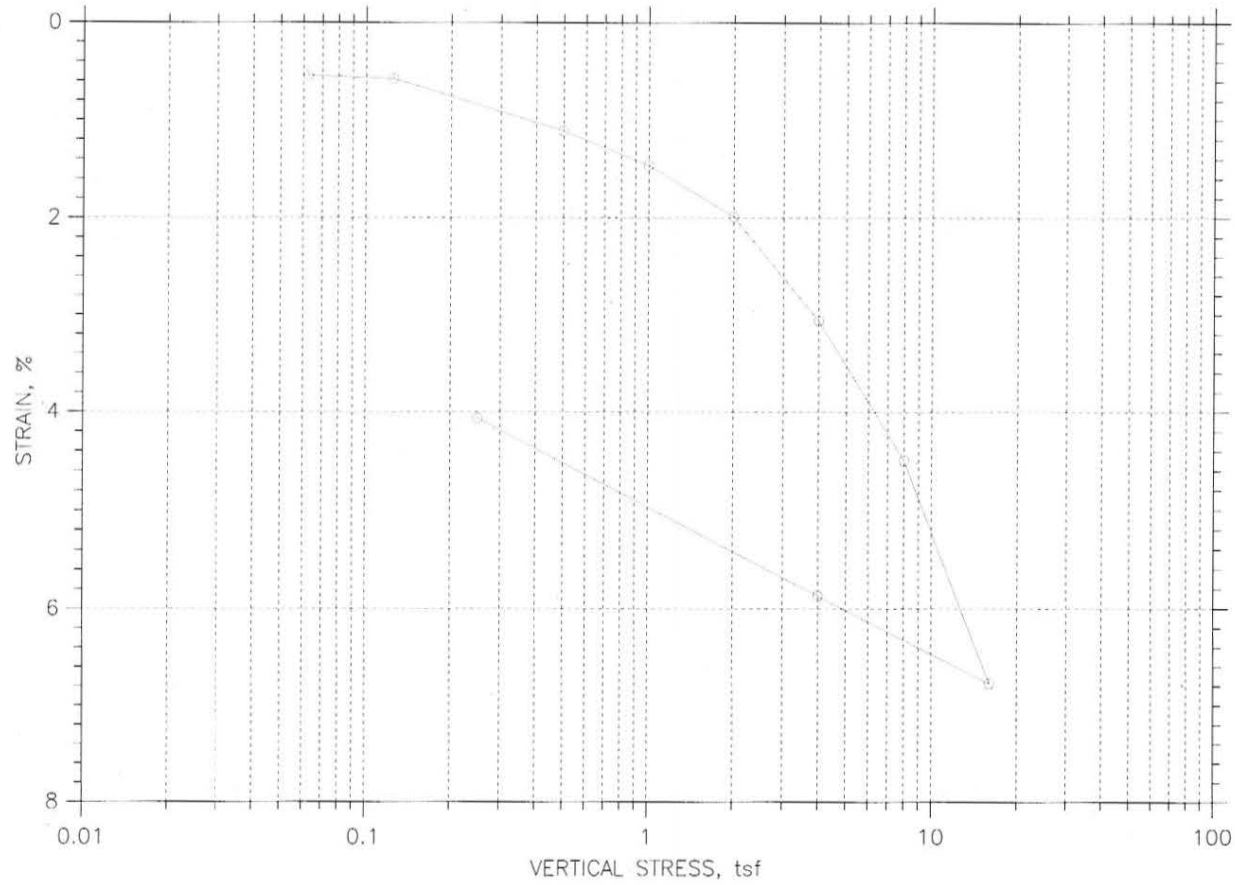
Project No.: 07-119341
Checked By: GL#10-042
Depth: 90
Elevation:

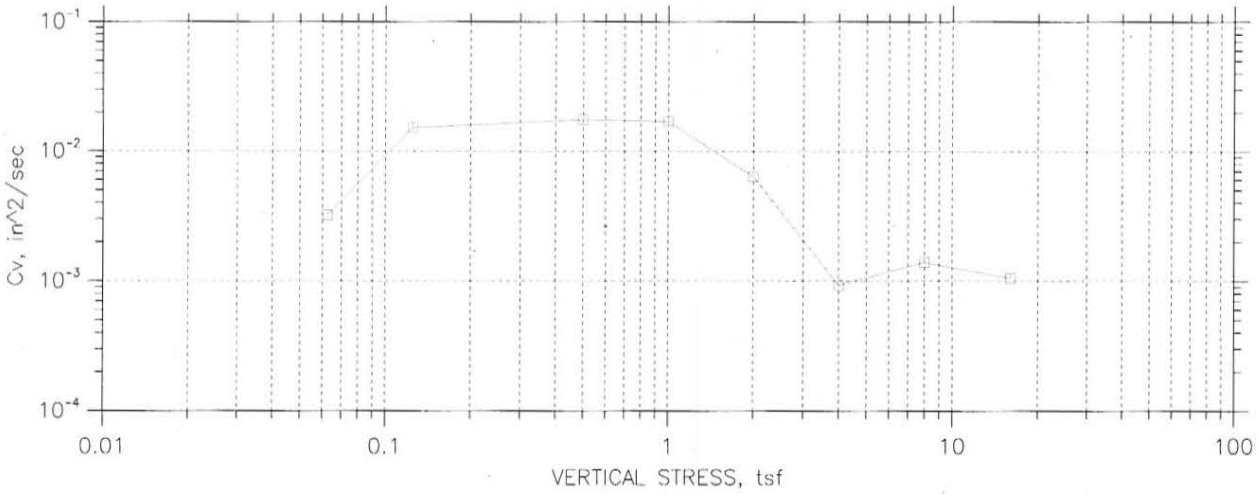
Soil Description: Moist,tan-brown , hard, silt w/clay
Remarks:

	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting Sq.Rt. min	T50 Fitting Log min	Coefficient of Consolidation Sq.Rt. in^2/sec	Coefficient of Consolidation Log in^2/sec	Coefficient of Consolidation Ave. in^2/sec
1	0.0625	0.005457	0.981	0.55	0.3	0.2	2.82e-003	3.67e-003	3.19e-003
2	0.125	0.005796	0.980	0.58	0.1	0.0	1.52e-002	0.00e+000	1.52e-002
3	0.5	0.01114	0.969	1.11	0.0	0.0	1.67e-002	1.84e-002	1.75e-002
4	1	0.01466	0.962	1.47	0.1	0.0	1.27e-002	2.55e-002	1.70e-002
5	2	0.01989	0.952	1.99	0.1	0.0	6.36e-003	0.00e+000	6.36e-003
6	4	0.03064	0.931	3.06	0.8	0.0	9.25e-004	0.00e+000	9.25e-004
7	8	0.04498	0.902	4.50	0.5	0.0	1.39e-003	0.00e+000	1.39e-003
8	16	0.06775	0.857	6.77	0.7	0.0	1.05e-003	0.00e+000	1.05e-003
9	4	0.05873	0.875	5.87	0.7	0.0	1.04e-003	0.00e+000	1.04e-003
10	0.25	0.04065	0.911	4.07	2.3	1.5	3.24e-004	5.06e-004	3.95e-004

CONSOLIDATION TEST DATA

SUMMARY REPORT



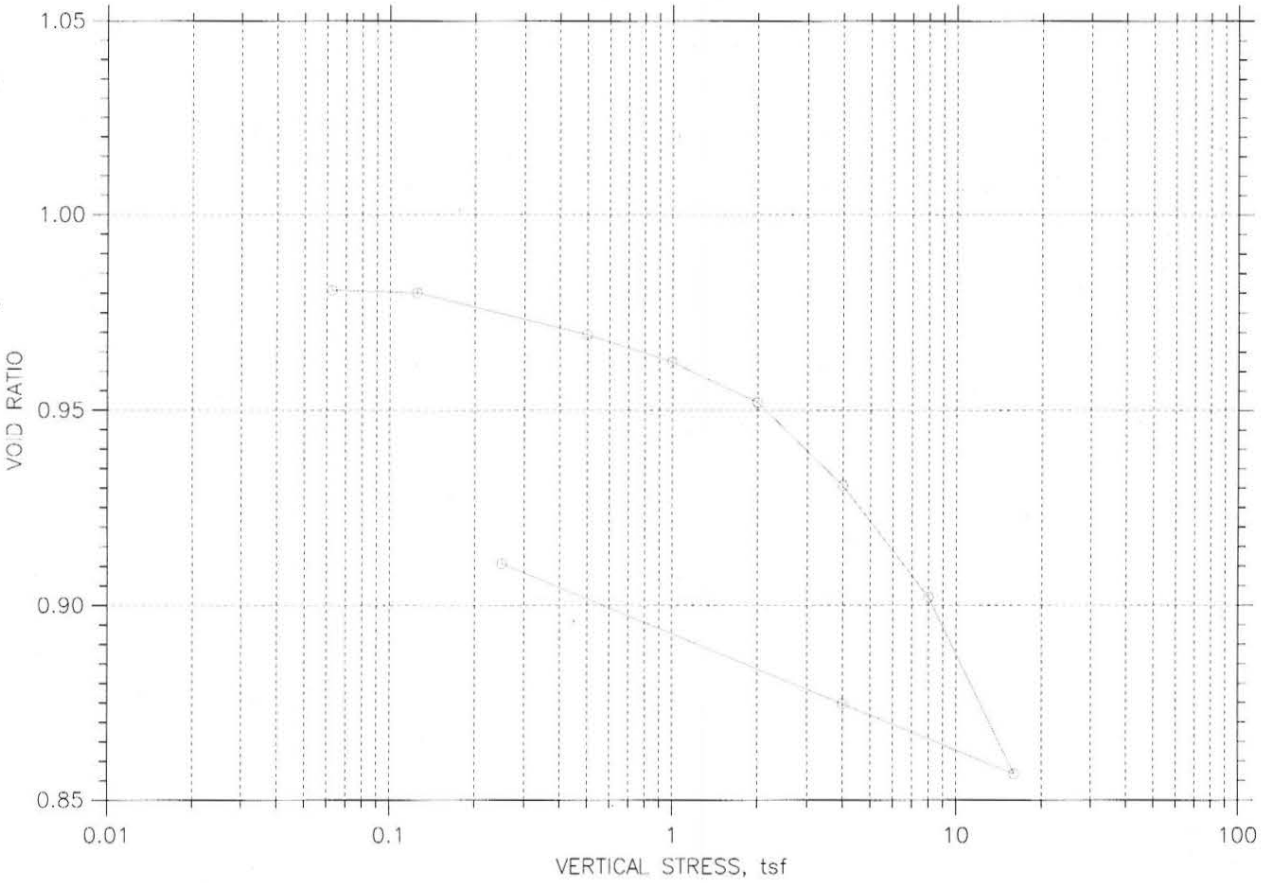


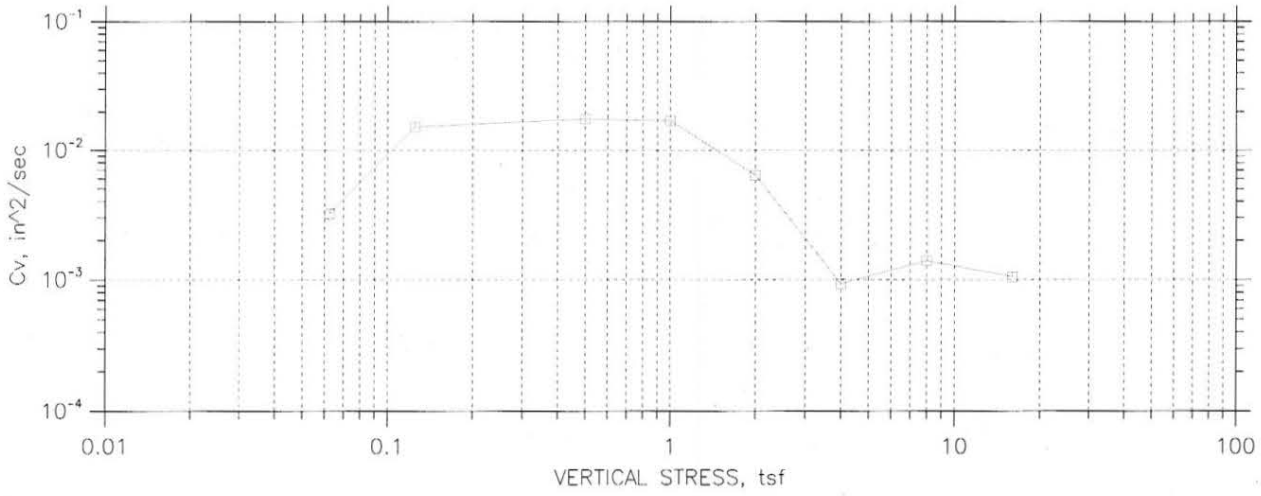
	Project: 1-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-237	Tested By: AZM	Checked By: GL#10-042
	Sample No.: C18-1	Test Date: 7/26/2010	Depth: 90
	Test No.: 10-043-G3	Sample Type: Tube	Elevation:
	Description: Moist,tan-brown , hard, silt w/clay		
	Remarks:		

Thu, 05-AUG-2010 14:07:27

CONSOLIDATION TEST DATA

SUMMARY REPORT



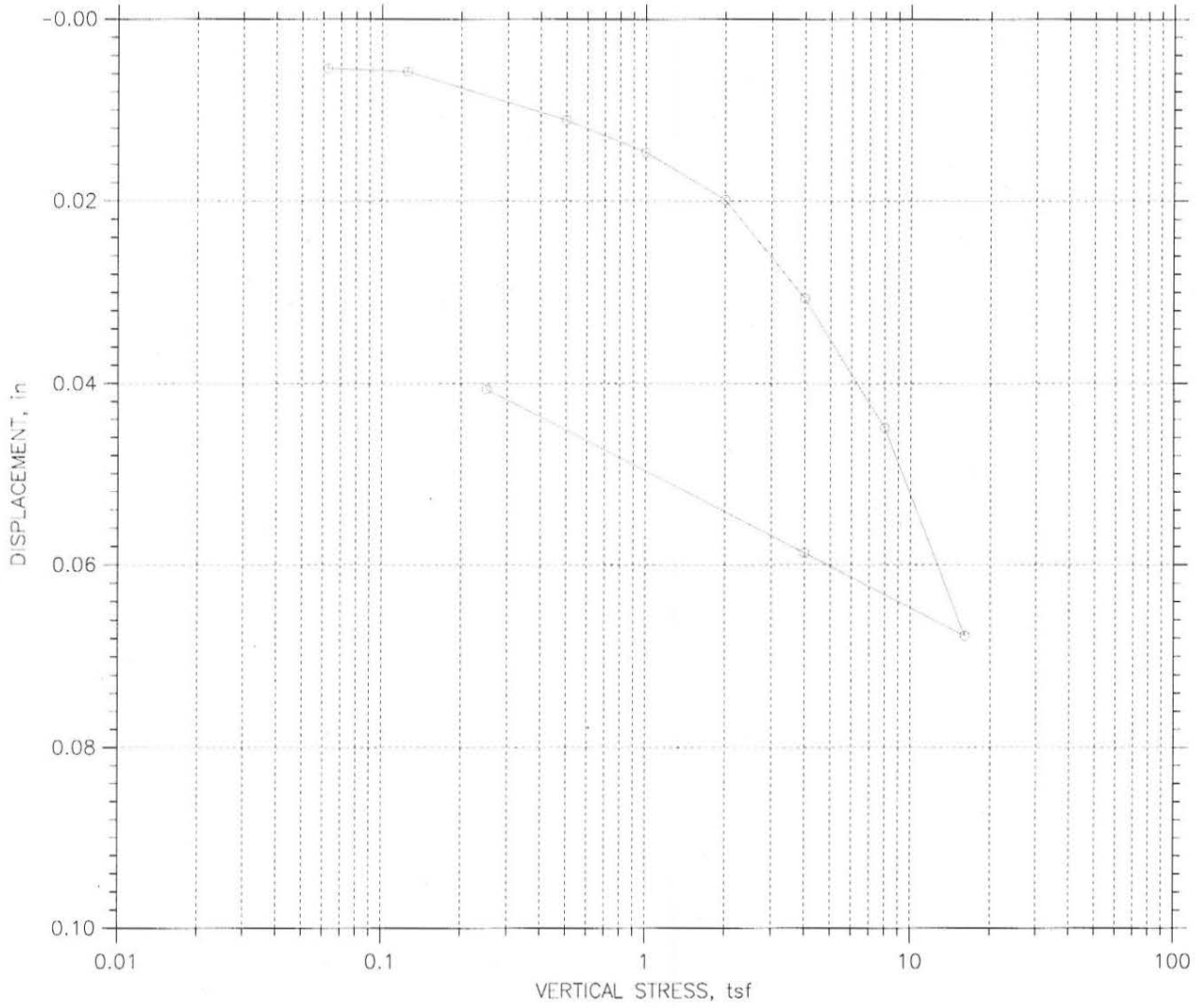


	Project: 1-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-237	Tested By: AZM	Checked By: GL#10-042
	Sample No.: C18-1	Test Date: 7/26/2010	Depth: 90
	Test No.: 10-043-G3	Sample Type: Tube	Elevation:
	Description: Moist,tan-brown , hard, silt w/clay		
	Remarks:		

Thu, 05-AUG-2010 14:07:47

CONSOLIDATION TEST DATA

SUMMARY REPORT



					Before Test	After Test
Overburden Pressure: 8.864e-312 tsf				Water Content, %	35.44	33.71
Preconsolidation Pressure: 3.612e-311 tsf				Dry Unit Weight, pcf	84.44	88.02
Compression Index: 2.75859e-313				Saturation, %	96.28	99.72
Diameter: 2.375 in		Height: 1 in		Void Ratio	0.99	0.91
LL: 0	PL: 0	PI: 0	GS: 2.69			

	Project: 1-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-237	Tested By: AZM	Checked By: GL#10-042
	Sample No.: C18-1	Test Date: 7/26/2010	Depth: 90
	Test No.: 10-043-G3	Sample Type: Tube	Elevation:
	Description: Moist,tan-brown , hard, silt w/clay		
	Remarks:		

Thu, 05-AUG-2010 14:09:18

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-238
Sample No.: C05-2
Test No.: 10-044-G1

Location: 07-LA-10
Tested By: AZM
Test Date: 7/27/10
Sample Type: Tube

Project No.: 07-119341
Checked By: GL# 10-042
Depth: 25
Elevation: WP 8/10

Soil Description: Moist, tan- brown, soft, silt w/clay
Remarks:

Measured Specific Gravity: 2.69
Initial Void Ratio: 1.00
Final Void Ratio: 0.84

Liquid Limit: 0
Plastic Limit: 0
Plasticity Index: 0

Initial Height: 1.00 in
Specimen Diameter: 2.38 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID		RING		
Wt. Container + Wet Soil, gm	220.9	220.9	218.2	218.2
Wt. Container + Dry Soil, gm	187.7	187.7	187.7	187.7
Wt. Container, gm	89.8	89.8	89.8	89.8
Wt. Dry Soil, gm	97.9	97.9	97.9	97.9
Water Content, %	33.91	33.91	31.15	31.15
Void Ratio	---	1.00	0.84	---
Degree of Saturation, %	---	91.67	99.99	---
Dry Unit Weight, pcf	---	84.187	91.378	---

CONSOLIDATION TEST DATA

Project: I-10-HOV
Boring No.: R09-238
Sample No.: C05-2
Test No.: 10-044-G1

Location: 07-LA-10
Tested By: AZM
Test Date: 7/27/10
Sample Type: Tube

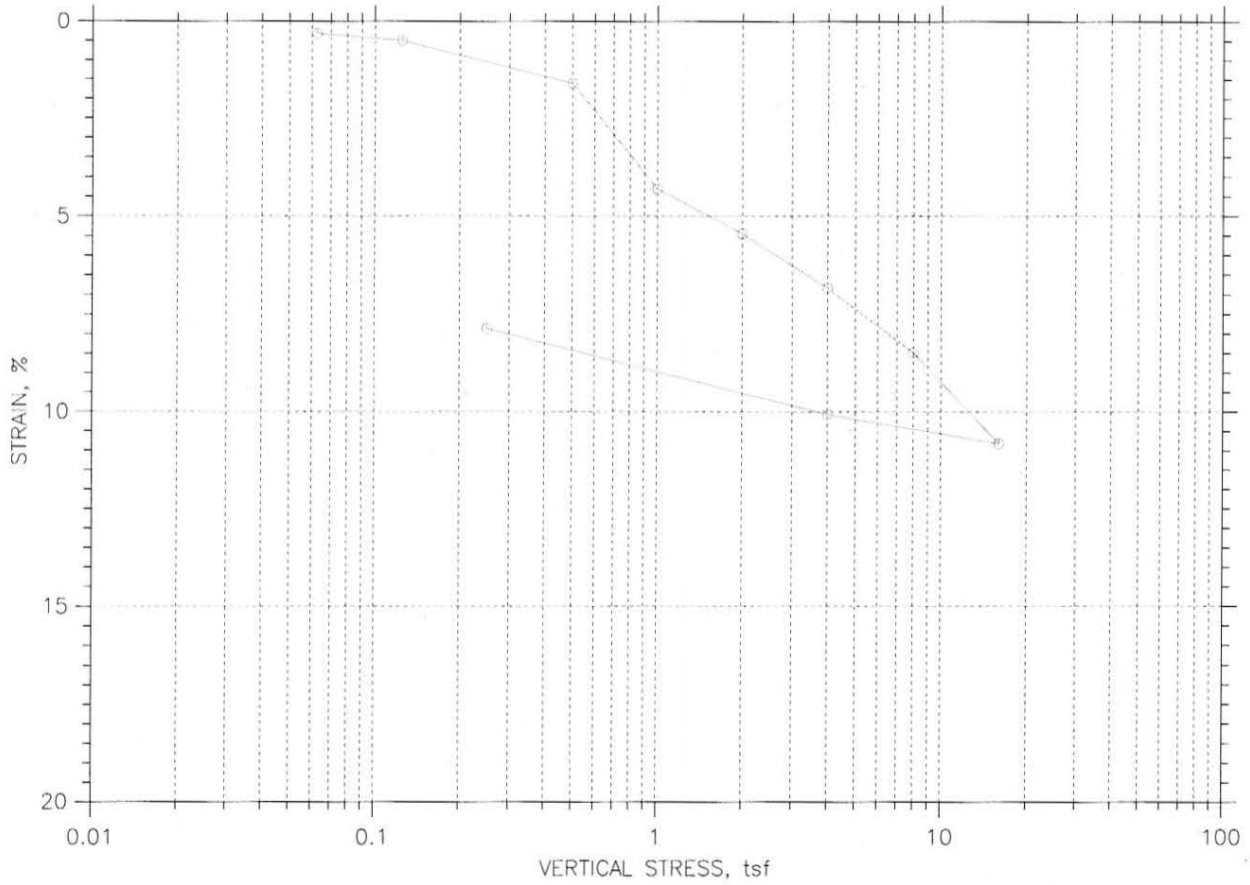
Project No.: 07-119341
Checked By: GL# 10-042
Depth: 25
Elevation:

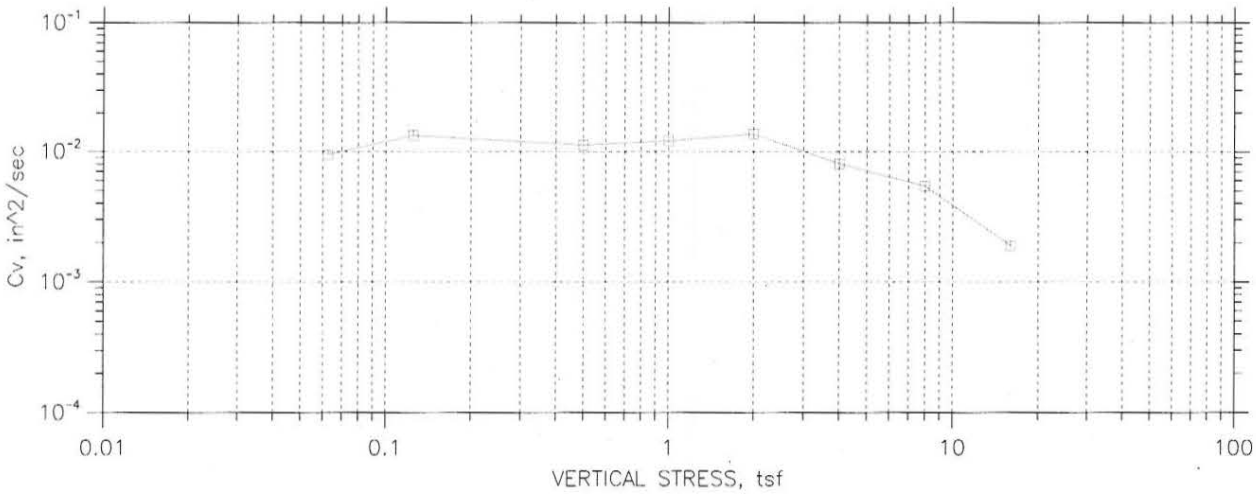
Soil Description: Moist, tan- brown, soft, silt w/clay
Remarks:

	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting Sq.Rt. min	T50 Fitting Log min	Coefficient of Consolidation Sq.Rt. in^2/sec	Coefficient of Consolidation Log in^2/sec	Coefficient of Consolidation Ave. in^2/sec
1	0.0625	0.003162	0.989	0.32	0.1	0.0	9.46e-003	0.00e+000	9.46e-003
2	0.125	0.005027	0.985	0.50	0.1	0.0	1.33e-002	0.00e+000	1.33e-002
3	0.5	0.01609	0.963	1.61	0.1	0.1	1.04e-002	1.22e-002	1.12e-002
4	1	0.04315	0.909	4.31	0.1	0.1	1.15e-002	1.28e-002	1.21e-002
5	2	0.05462	0.887	5.46	0.1	0.0	1.14e-002	1.70e-002	1.37e-002
6	4	0.0684	0.859	6.84	0.2	0.0	4.66e-003	2.93e-002	8.04e-003
7	8	0.08489	0.826	8.49	0.2	0.0	3.16e-003	1.87e-002	5.40e-003
8	16	0.1083	0.779	10.83	0.4	0.0	1.89e-003	0.00e+000	1.89e-003
9	4	0.1008	0.794	10.08	0.0	0.0	4.57e-002	4.00e-002	4.27e-002
10	0.25	0.0787	0.838	7.87	1.2	0.0	5.62e-004	0.00e+000	5.62e-004

CONSOLIDATION TEST DATA

SUMMARY REPORT



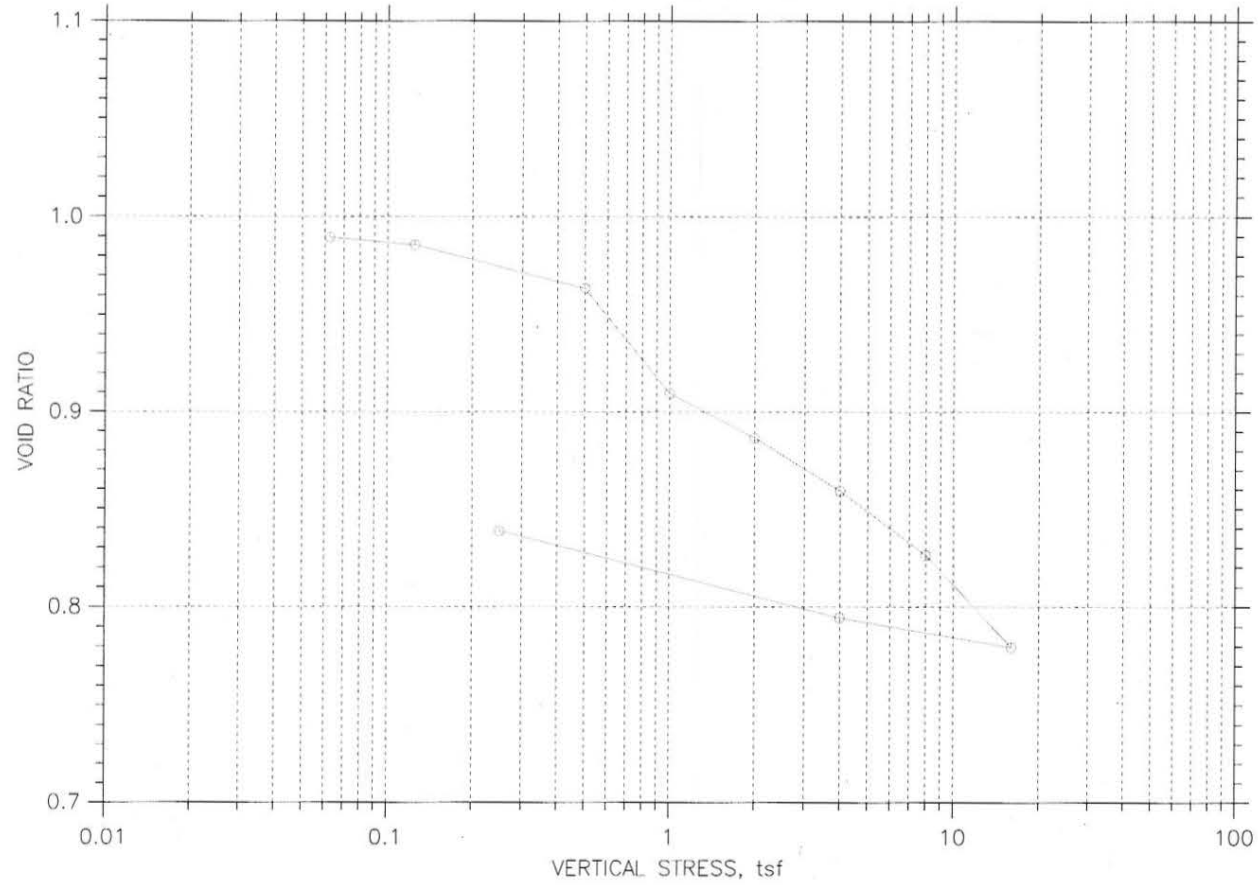


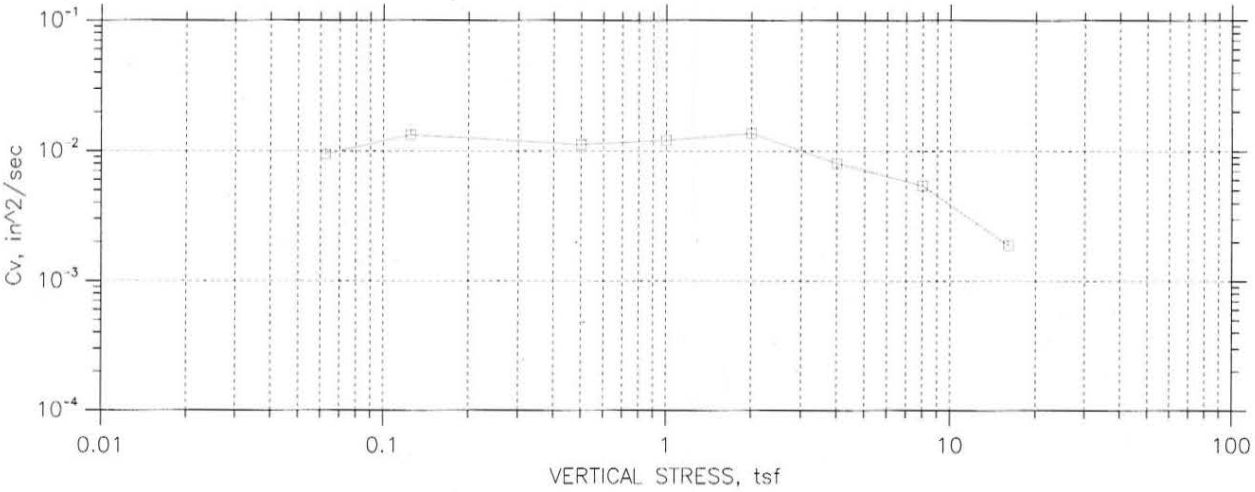
	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-238	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C05-2	Test Date: 7/27/10	Depth: 25
	Test No.: 10-044-G1	Sample Type: Tube	Elevation:
	Description: Moist, tan- brown, soft, silt w/clay		
	Remarks:		

Thu, 05-AUG-2010 14:53:20

CONSOLIDATION TEST DATA

SUMMARY REPORT



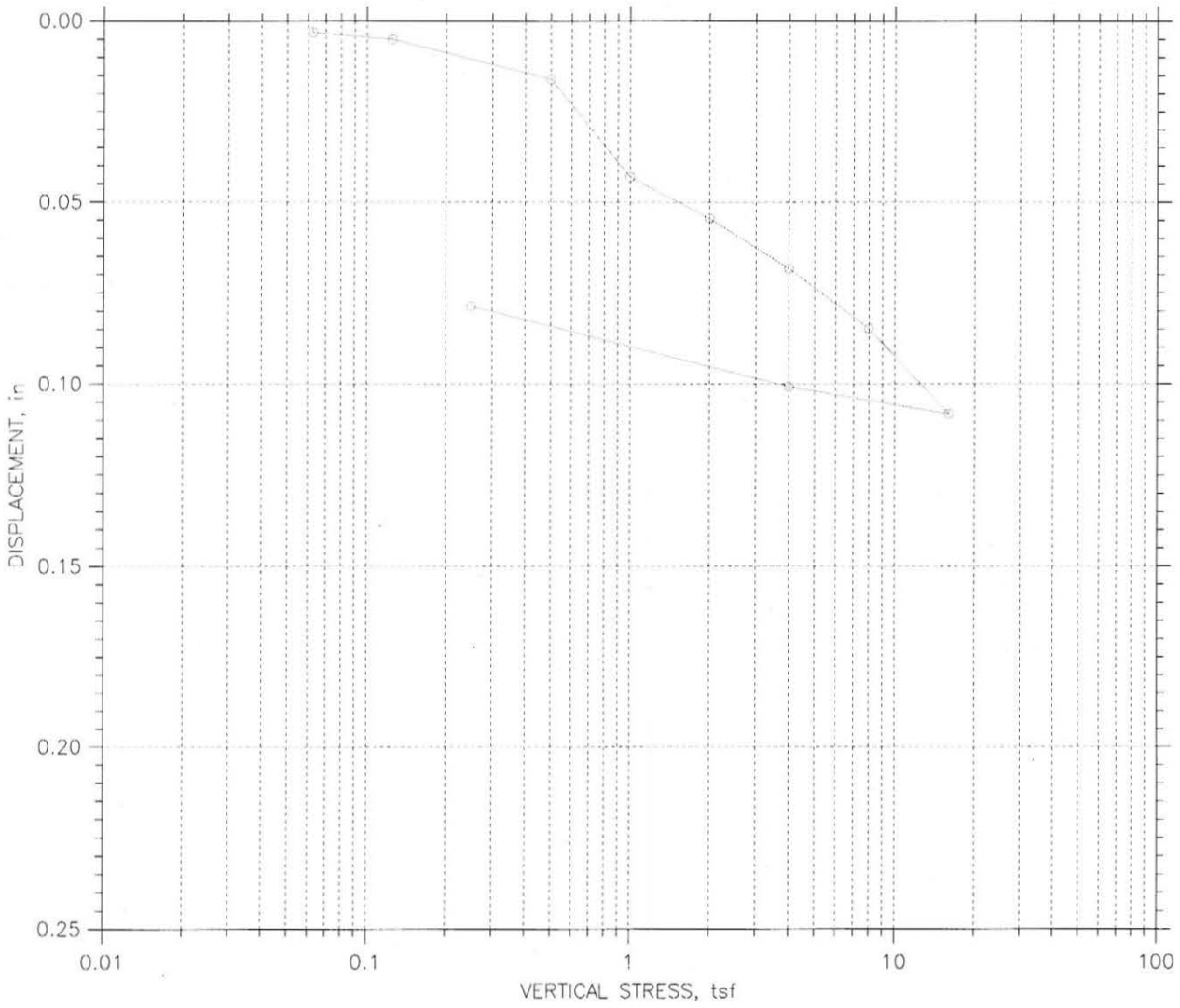


	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-238	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C05-2	Test Date: 7/27/10	Depth: 25
	Test No.: 10-044-G1	Sample Type: Tube	Elevation:
	Description: Moist, tan- brown, soft, silt w/clay		
	Remarks:		

Thu, 05-AUG-2010 14:53:40

CONSOLIDATION TEST DATA

SUMMARY REPORT



				Before Test	After Test
Overburden Pressure: 8.864e-312 tsf				Water Content, %	33.91	31.15
Preconsolidation Pressure: 3.612e-311 tsf				Dry Unit Weight, pcf	84.19	91.38
Compression Index: 2.75859e-313				Saturation, %	91.67	99.99
Diameter: 2.375 in		Height: 1 in		Void Ratio	1.00	0.84
LL: 0	PL: 0	PI: 0	GS: 2.69			

	Project: I-10-HOV	Location: 07-LA-10	Project No.: 07-119341
	Boring No.: R09-238	Tested By: AZM	Checked By: GL# 10-042
	Sample No.: C05-2	Test Date: 7/27/10	Depth: 25
	Test No.: 10-044-G1	Sample Type: Tube	Elevation:
	Description: Moist, tan- brown, soft, silt w/clay		
	Remarks:		

Thu, 05-AUG-2010 14:54:03

Appendix C. Photos

07-LA-010
0713000007
1193U1
(Formerly 119341)
I-10 HOV Seg 3
R-09-233 (6.5-30ft)
x-rite ColorChecker Color Rendition Chart

07-LA-010
0713000007
1193U1
(Formerly 119341)
I-10 HOV Seq 3
R-09-233 (30-45ft)
xrite ColorChecker Color Rendition Chart
R-09-233
30
35
45
54

07-LA-010
0713000007
119301
(Formerly 119341)
I-10 HOV Seg 3
R-09-235 (91-110ft)
xrite ColorChecker Color Rendition Chart
10.7.21 SOM
91
95
100
105
110
END

07-LA-010
0713000007
119301
(Formerly 119341)
I-10 HOV Seg 3
R-10-201 (25-45ft)
xrite ColorChecker Color Rendition Chart
25
28
30
32.5
35
40
43
45

07-LA-010
0713000007
119301
(Formerly 119341)
I-10 HOV Seg 3
R-10-201 (45-50ft)
45
47
50

REVISED GEOTECHNICAL DESIGN REPORT FOR INTERSTATE 10 SOUND WALLS

State of California **Business, Transportation and Housing Agency**

M e m o r a n d u m

To : Mr. Refugio Dominguez
Branch Chief
Design-B
District 7

Attn. : Mr. Anthony Hughes
Project Engineer

Date: March 20, 2015

File: 07-LA-10-PM 37.2/42.4
0713000007(EA 07-1193U1)
Sound Walls Nos. 1963, 1964, 2037, 2049, 2055, 2056, 2059, 2060, and 2063.

From : **DEPARTMENT OF TRANSPORTATION**
Division of Engineering Services
METS-Geotechnical Service
Office of Geotechnical Design South-1

Subject : Revised Geotechnical Design Report for Interstate 10 Sound Walls.

INTRODUCTION

As requested by your office, the following is the geotechnical recommendations for the sound wall foundations proposed on Interstate 10 (I-10) between post miles 37.2 and 42.4 as part of the I-10 High Occupancy Vehicle Lane project in the Cities of West Covina, San Dimas and Pomona in Los Angeles County. Recommendations for sound walls on the top of retaining walls are provided in the geotechnical design report for retaining walls.

PROJECT LOCATION

Sound wall locations along I-10 are summarized on Table 1.

SCOPE OF WORK

The revised geotechnical design report supersedes geotechnical design report on September 4, 2014. The district requested the updated geotechnical design report for sound walls since changes have been made. The geotechnical work performed for this project includes:

- Review of pertaining reports, as-built LOTBs.
- Subsurface exploration.
- Laboratory tests.
- Interpretation of subsurface soil and groundwater conditions at the site of the proposed walls.
- Engineering analyses and preparation of this report to present geotechnical recommendations for foundation design and construction of the proposed walls.

Table 1. Information of the Proposed Sound Wall Structures

Wall No.		Type	Begin Stationing (ft) LOL	End Stationing (ft) LOL	Length (ft)	Wall Height (ft)	Referred Boring
1963	A	736 SV (MOD 6) Barrier on CIDH Piles	63+00.00	63+96.00	96.00	12.33	A-09-034 R-09-101 A-10-211
		736 SV Barrier on CIDH Piles	63+96.00	72+48.13	852.13	12.33	
	B	736 SV (MOD 6) Barrier on CIDH Piles	77+27.20	77+51.20	24.00	16.33	
		736 SV Barrier on CIDH Piles	77+51.20	78+29.56	78.36	16.33	
	C	736 S (MOD 1) Barrier on CIDH Piles	78+29.56	80+25.72	196.16	16.33	
1964	A	736 SV (MOD 6) Barrier on CIDH Piles	63+00.00	72+40.34	940.32	14.33	A-09-035
	B	Masonry block on Pile Cap	72+40.21	74+33.36	193.15	14.00	
2037		736 SV (MOD 6) Masonry Block on Barrier	44+79.13	51+51.13	672.00	14.33	A-09-112 A-09-108
		736 SV Masonry Block on Barrier	51+51.13	58+11.13	660.00	14.33	
		736 SV (MOD 6) Masonry Block on Barrier	58+11.13	59+17.79	106.66	12.33	
2049		736 SV Barrier on CIDH Piles	50+60.00	54+59.12	399.12	14.33	RW-10-127
2055		736 SV Barrier on CIDH Piles	54+36.33	56+01.51	165.18	14.33	RW-10-127
2056		West Covina Monument Sign	56+00.00	56+35.00	35.00	14.33	RW-10-124
		736 SV Barrier on CIDH Piles	56+35.00	58+16.92	181.92	14.33	
2059		736 SV Barrier on CIDH Piles	58+65.51	64+85.86	620.35	14.33	RW-10-128
2060		736 SV Barrier on CIDH Piles	60+76.61	61+98.20	121.59	14.33	Holt Ave. UC As-Built LOTB B-1
2063		736 SV (MOD 6) Barrier on CIDH Piles	63+69.97	67+77.05	407.08	14.33	A-10-213 RW-09-115 CPT-09-146 CPT-09-151 RW-10-130
		736 SV Barrier on CIDH Piles	67+77.05	87+27.66	1950.61	14.33	

PROJECT DESCRIPTION

The structures included in the project that require geotechnical recommendations are nine new sound walls. The design information provided by the District about these structures is summarized in Table 1.

SUBSURFACE EXPLORATION

Subsurface exploration for this project was performed between March, 2009 and September, 2010. Subsurface exploration applicable for the subject sound walls includes seven boreholes using hollow-stem auger (8 inch outer diameter), five rotary wash borings (4.5 inch outer diameter), and two cone penetration test (CPT) soundings.
Standard Penetration Tests (SPT's) and relatively undisturbed sampling (with a split-barrel sampler 2 inch inner diameter) were performed during borings. SPT N-Values were recorded at 5 foot intervals during drilling. The SPTs were performed in accordance with ASTM Test Method D1586. Boring information is summarized in Table 2. Boring was logged based on visual observations of the soil cuttings and collected samples. The location and elevation of all borings are provided by the office of District 7 surveys.

Table 2. Summary of Borehole Information

Exploration No.	Northing, Easting	Centerline I-10 Station	Offset (ft)	Borehole Depth (ft)	Top of Borehole Elevation (ft)	GWT (ft)	Date Drilled
A-09-034	1848512.35, 6593278.27	1963+35.0	Rt. 98.21	35.0	481.3	N/A	03/17/09
A-09-035	1848711.76, 6594033.08	1970+87.5	Lt. 109.20	35.0	493.5	N/A	03/09/09
R-09-101	1848523.43, 6594476.55	1975+32.0	Rt. 74.46	34.0	492.3	N/A	07/20/09
A-10-211	1848288.23, 6594915.77	1979+10.0	Rt. 305.00	31.5	481.0	N/A	09/22/10
A-09-108	1848420.72, 6600650.19	2037+07.3	Rt. 111.89	36.5	564.8	N/A	05/05/09
A-09-112	1848313.91, 6601637.10	2047+29.6	Rt. 119.90	41.5	580.3	N/A	05/05/09
RW-10-127	1848146.38, 6602232.95	2053+67.0	Rt. 84.70	20.0	586.4	N/A	05/26/10
RW-10-124	1848158.28, 6602550.04	2056+46.2	Lt.68.00	30.0	593.4	N/A	05/26/10
RW-10-128	1847846.49, 6602761.39	2059+87.7	Rt. 90.00	20.0	590.8	N/A	05/26/10
A-10-213	1847391.50, 6603500.96	2068+50.0	Rt. 85.00	31.5	618.0	N/A	09/21/10
RW-09-115	1847136.80, 6604095.74	2074+69.8	Rt. 122.40	35.0	643.6	N/A	11/16/09
CPT09-146	1847068.65, 6604766.49	2081+20.0	Rt. 100.00	30.0	672.0	645	05/26/09
CPT09-151	1847110.92, 6605373.25	2087+21.0	Rt. 115.30	37.5	700.2	679	05/26/09
RW-10-130	1847142.87, 6605432.10	2087+75.4	Rt. 97.70	30.0	702.5	N/A	07/15/10

LABORATORY TEST

Samples obtained from subsurface exploration have been selected and assigned for test. Laboratory tests performed include moisture content, dry unit weight, wash sieve analysis, Atterberg limits and corrosion tests. Test results are retained in electronic format following the Geotechnical Service (GS) project archive requirements.

SITE GEOLOGY AND SUBSURFACE CONDITIONS

Site Geology

The proposed sound walls, listed in Table 1 as Wall No. 1963, 1964, and 2037, are located within the southeastern part of the San Gabriel Valley. From Citrus Avenue, at the west extent of the project, I-10 continues east to Grand Avenue, overlying a relatively flat to slightly sloping part of the San Gabriel Valley basin. The basin is filled with Tertiary or younger sediments, composed of loosely to moderately consolidated clay, silt, sand and gravel, and form alluvial fans and stream channels. The sedimentary deposits found in the San Gabriel Valley are derived from surrounding hills and mountains which form the boundaries of the valley. The northern extent of the valley is formed by the San Gabriel Mountains which rise to greater than 10,000 feet amsl. South of the San Gabriel Valley, the Repetto Hills, Merced Hills, Puente Hills and San Jose Hills rise about 500 feet or more from the valley floor to separate the valley from the coastal plains. These hills bound the valley on the west, south, and east. For this report, we reviewed the State of California, Department of Water Resources', Bulletin 104-2, Planned Utilization of Groundwater Basins, San Gabriel Valley, Appendix A: Geohydrology (Bulletin 104-2). Based on Plate 9A, Plate 10, and cross section Z of Bulletin 104-2, the Quaternary deposits within the San Gabriel Valley may be as deep as 1,500 feet thick through the center of the valley. The base of the Quaternary deposits becomes shallower toward the hills that bound the valley to the south and east.

Wall No. 2049 to Wall No. 2063, listed in Table 1, are located along the southeastern edge of the San Gabriel Valley, where the I-10 traverses a geologic transition from a sedimentary basin to tectonically uplifted hills. I-10 continues to the east from Holt Avenue, over Quaternary Older Alluvium that forms terrace deposits and low hills and ridges, composed of pale to dark reddish-brown weathered gravel, sand, silt, and clay. The eastern extent of this geologic transition is approximately two thirds of a mile east of Holt Avenue.

Subsurface Conditions

The subsurface conditions for sound walls are summarized in Table 3.

Groundwater

Ground water was encountered in CPT-09-146 and CPT-09-151 as shown in Table 4a. As-Built ground water information for bridge structures in the subject area is presented in Table 4b.

Table 3. Summary of Sound Wall Subsurfaces

Wall No.	Subsurface Conditions
1963	Subsurface profile indicates very loose to dense silty sand/sandy silt and sand with gravel from elev. 488 ft to 475 ft. The layer is underlain by loose to very dense silty sand/clayey sand, and very stiff sandy clay to approx. elev. 450 ft. Concrete was encountered three feet below ground level at boring R-10-101 and also near I-10 station 1968+00 "A" Line near existing CMS sign on eastbound right shoulder.
1964	The subsurface profile indicates medium dense sandy silt (fill) for the top five feet (elev. 493.5 ft to 488.5 ft). The top fill layer is underlain by med. to very dense silty sand with gravel and sand to elev. 458.5 ft drilled.
2037	Based on boring A-09-108 top four feet consist of medium dense sand with trace gravel from elev. 565 ft to 560 ft. Medium dense to dense silty sand/sandy silt and sand encountered to approx. elev. 530 ft drilled. At boring A-09-108 five feet layer of lean clay with lower elev. 574 ft, underlain by med. dense to dense sand with trace gravel and fines encountered.
2049	The top five feet (approx. elev. 582 ft to elev. 577 ft) consists of loose gravelly sand with silt (fill), underlain by medium dense to dense silty sand/sandy silt with traces gravel to elev. 562 ft drilled. Fragments of pale shale were encountered at approx. elev. 572 ft.
2055	Subsurface material consists from loose to medium dense gravelly sand with silt to elev. 572 ft .Very hard pale shale siltstone fragments were encountered at approx. elev. 572 ft. Underlying material consists of very dense silty sand.
2056	Subsurface material consists of loose silty sand from elev. 596 ft to 591 ft (fill). From elev. 591 ft to 581 ft subsurface material consists of stiff sandy clay. Underlain (below elev. 581 ft) consist of medium dense to dense clayey sand with siltstone fragments, and soft sandy clay.
2059	Subsurface material is fill and consists of loose silty sand from ground surface (elev. 591 ft) to elev. 586 ft. Medium dense to dense silty/clayey sand, and soft sandy silt with little gravel was encountered to elev. 571 ft drilled.
2060	Subsurface profile consists of stiff clayey silt with some gravel from elev. 589 ft to elev.575 ft. The layer below to elev. 572 ft consists of silty sand w/small organic fragments, underlain by very soft to soft clayey silt to elev. 560 ft.
2063	Subsurface material consists of clay with sand and gravel or silty sand or sandy silt. Silty sand to clayey sand with trace of fine gravel, or sand with some gravel, or claystone encountered below clay with sand and gravel or silty sand or sandy silt.

We reviewed the Los Angeles County Department of Public Works (LACDPW) Water Wells Website for this report. The closest well in proximity to the project was LACDPW well number 3112B, which is located near Citrus Street, approximately a half mile north of I-10. Groundwater in well 3112B was last measured on June 8, 2009 to be 221.2 feet below ground surface (water surface elevation of 281.90 feet AMSL).

Other observations that may provide information of groundwater or its possible occurrence along the project is the presence of a pond located approximately a tenth of a mile north of the intersection of I-10 and Grand Avenue. The pond is part of a housing development and may be related to the configuration of Walnut Creek before the area was developed. Walnut Creek is channelized by a concrete liner and runs from northeast to southwest adjacent to the pond. The pond itself contains standing water throughout the year.

It should be noted that ground water table levels can fluctuate with the change of season and other factors including local irrigation, seasonal rains, and local surface hydrology.

Table 4a. Groundwater Information

Exploration No.	Route 10 Station	Offset (ft)	Approx. Original Ground Elev. (ft)	Ground Water Surface Elev. (ft)	Date Measured
CPT-09-146	2081+20	Rt. 100.0	672.0	645.0	5/26/2009
CPT-09-151	2087+21	Rt. 115.3	700.2	679.2	5/26/2009

Table 4b. As-Built Ground Information

Bridge Structure/Exploration No.	Ground Surface Elev. (ft)	Depth Drilled Below Surface (ft)	GWT Surface Elev. (ft)	Date measured
Citrus St. UC Br. No. 53- 0670 As-Built LOTB (1969), B-1	488.5	55.5 (Elev. 433)	N/A	8/19/69
Grand Ave. UC, Br. No. 53-1528 As-Built LOTB (1960), B-1	548	57 (Elev. 491)	N/A	8/15/60
Holt Ave. UC Br. No. 53-0671 As-Built LOTB (1969), B-5	567.5	58.5 (Elev. 509)	N/A	6/23/69

CORROSIVITY

Corrosion tests are not required for sound walls 1963, 1964, 2037, 2049, 2055, 2056, 2059, 2060, and 2063 based on Caltrans Geotechnical manual for standard sound walls (July 2010). However, due to absence of corrosion test results, corrosion resistant concrete may be considered.

RECOMMENDATIONS

Based on sound wall layout plans, typical sections provide by District, and subsurface exploration, recommendations for the proposed sound walls are summarized in Table 5.

Table 5. Sound Wall Foundation Recommendations

Wall No.		Wall Location (SW LOL)	Wall Height	Foundation Type	Friction Angle (degree)
1963	A	Sta. 63+00.00 to Sta. 72+48.13	12 ft 4 inch	CIDH Piles	32
	B	Sta. 77+27.20 to Sta. 78+29.56	16 ft 4 inch	CIDH Piles	32
	C	Sta. 78+29.56 to Sta. 80+25.72	16 ft 4 inch	CIDH Piles	32
1964	A	Sta. 63+00.00 to Sta. 72+40.34	14 ft 4 inch	CIDH Piles	32
	B	Sta. 72+40.21 to Sta. 74+33.36	14 ft 0 inch	CIDH Piles	32
2037		Sta. 44+79.13 to Sta. 58+11.13	14 ft 4 inch	CIDH Piles	32
		Sta. 58+11.13 to Sta. 59+17.79	12 ft 4 inch	CIDH Piles	32

2049	Sta. 50+60.00 to Sta. 54+59.12	14 ft 4 inch	CIDH Piles	32
2055	Sta. 54+36.33 to Sta. 56+01.51	14 ft 4 inch	CIDH Piles	32
2056	*Sta. 56+00.00 to Sta. 56+35.00	14 ft 4 inch	CIDH Piles	32
	Sta. 56+35.00to Sta. 58+16.92	14 ft 4 inch	CIDH Piles	32
2059	Sta. 58+65.51 to Sta. 64+85.86	14 ft 4 inch	CIDH Piles	32
2060	Sta. 60+76.61 to Sta. 61+98.20	14 ft 4 inch	CIDH Piles	32
2063	Sta. 63+69.97 to Sta. 87+27.66	14 ft 4 inch	CIDH Piles	32

*: West Covina Monument Sign Foundation

CONSTRUCTION CONSIDERATIONS

1. Very loose to loose sandy material was encountered at the depth of 5 ft under the original ground around boring No. A-09-034 (SW 1963A). Geotech Design recommends at least 2 feet the bottom of the structure footing should be removed and recompacted.

2. Where footings are placed on existing soil (fill or native), if at any portion of the footing, rock-like material is encountered, 3 ft of existing material (soil and rock) below the entire footing elevation should be removed and replaced with granular material at 95% Relative Compaction to the bottom of the footing elevation.

3. Earthwork is expected to be carried out by conventional equipment. Fill placed on sloping ground shall be properly keyed and benched into existing ground and placed as specified in Section 19-6 of the Caltrans Standard Specifications (May 2010).

4. Caving is anticipated during drilling for CIDH pile holes. The bottom of CIDH pile excavation should be cleaned of loose debris before placing concrete. Concrete placement for construction of the CIDH piling shall be completed within the same day the excavation of the hole was completed.

5. There may be a dense layer that consists of sands, gravels, and cobbles. Driving difficulties are expected some areas of SWs 1963, 1964, 2037, 2049, 2055, and 2056.

The recommendations contained in this report are based on specific project information regarding wall location, type, height and bottom of the footing elevations that has been provided to our office. If any conceptual changes are made during final project design, this office should review those changes to determine if those foundation recommendations are still applicable.

If you have any questions or comments, please call Sungro Cho at (916) 227-5398, or Deh-Jeng Jang at (916) 227-5722.

Prepared by: Date: 3/20/2015

Sungro Cho, Ph.D., P.E.
Transportation Engineer
Branch A

BATTERY BACKUP SYSTEM CONNECTION DIAGRAM AND FOUNDATION DETAILS

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Theresa Gabriel 12-20-07
REGISTERED CIVIL ENGINEER DATE

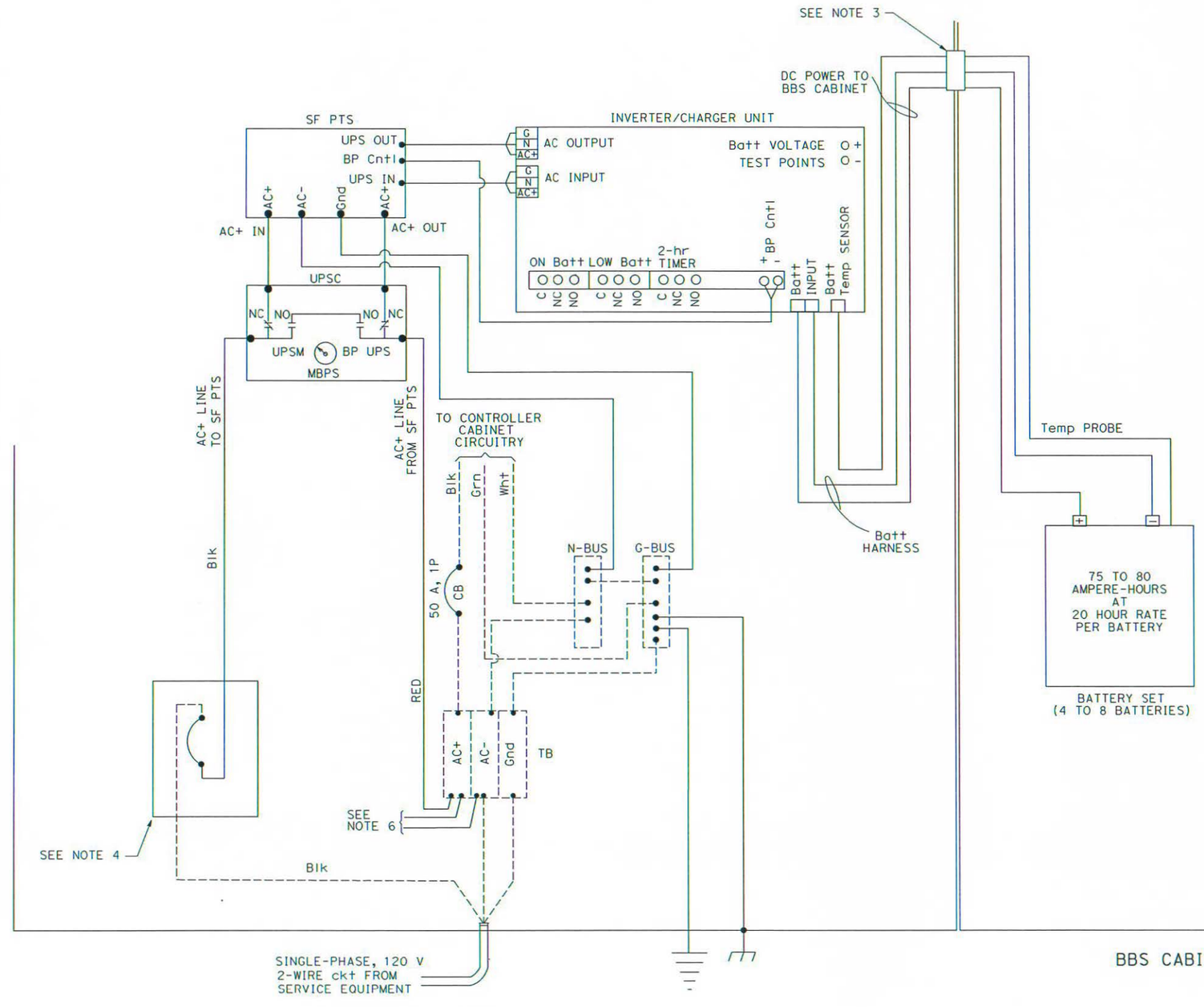
PLANS APPROVAL DATE

Theresa A. Gabriel No. E15129 Exp. 6-30-16 ELECT
REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REVISED BY	DATE REVISED
CALCULATED-DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans



ABBREVIATIONS: (THIS SHEET ONLY)

PTS = POWER TRANSFER SWITCH
UPS = UNINTERRUPTIBLE POWER SUPPLY
UPSC = UNINTERRUPTIBLE POWER SUPPLY CONTROLLER
UPSM = UPS MODE
BP = BYPASS
MBPS = MANUAL BYPASS SWITCH
AC+ = UNGROUNDED CONDUCTOR
AC- = GROUNDED CONDUCTOR
C = COMMON
Grn = GREEN
Blk = BLACK
Wht = WHITE
SF = DEPARTMENT-FURNISHED
Batt = BATTERY
Temp = TEMPERATURE
TB = TERMINAL BOARD
Cntl = CONTROL
Gnd = GROUND

NOTES: (THIS SHEET ONLY)

1. TYPE A REFERS TO THE BBS EQUIPMENT FROM MANUFACTURER A.
2. CASE-2 REFERS TO THE SITUATION WHEN ONLY THE BATTERIES ARE INSTALLED IN THE BBS CABINET. THE REMAINING EQUIPMENT IS PLACED IN THE CONTROLLER CABINET.
3. THE LOCATION OF THE 2"C NIPPLE WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
4. THE CONTRACTOR MUST FURNISH AND INSTALL A NEMA-1 ENCLOSURE WITH 30 A, 1P, 120/240 VOLTS RATED CIRCUIT BREAKER MANUFACTURED PER UL STANDARD 489.
5. A TEMPERATURE PROBE MUSTL BE ATTACHED TO THE BATTERY BY TAPE OR ATTACHED TO THE NEGATIVE TERMINAL OF THE BATTERY.
6. THE ELECTRICAL POWER FOR THE COOLING FAN FOR THE BBS CABINET MUST BE TAPPED FROM THE BOTTOM OF THE TB IN THE CONTROLLER CABINET.
7. THE CONTRACTOR MUST PROVIDE A 9-WIRE WIRING HARNESS OR BUNDLED 9 MULTICOLOR CONDUCTORS, #18 AWG WIRES FROM THE RELAY ON THE INVERTER/CHARGER UNIT TO THE CONTROLLER. THE ENDS OFTHE CONDUCTORS MUST BE INSULATED WITH TAPE AND A SIX-FOOT COIL ON EACH END.

ELECTRICAL SYSTEMS
(BBS POWER CONNECTION DIAGRAM, TYPE A, CASE-2)

NO SCALE

LAST REVISION 03-14-14 DATE PLOTTED => 05-NOV-2014 TIME PLOTTED => 10:37

BORDER LAST REVISED 4/11/2008 | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => s121093 DGN FILE => BBS 1250FSP.dgn | CU 00000 | EA 000000

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Theresa Gabriel — REGISTERED ~~CIVIL ENGINEER~~ — 12-20-07 DATE

Theresa A. Gabriel, No. E15129, Exp. 6-30-16, ELECT, REGISTERED PROFESSIONAL ENGINEER, STATE OF CALIFORNIA

PLANS APPROVAL DATE

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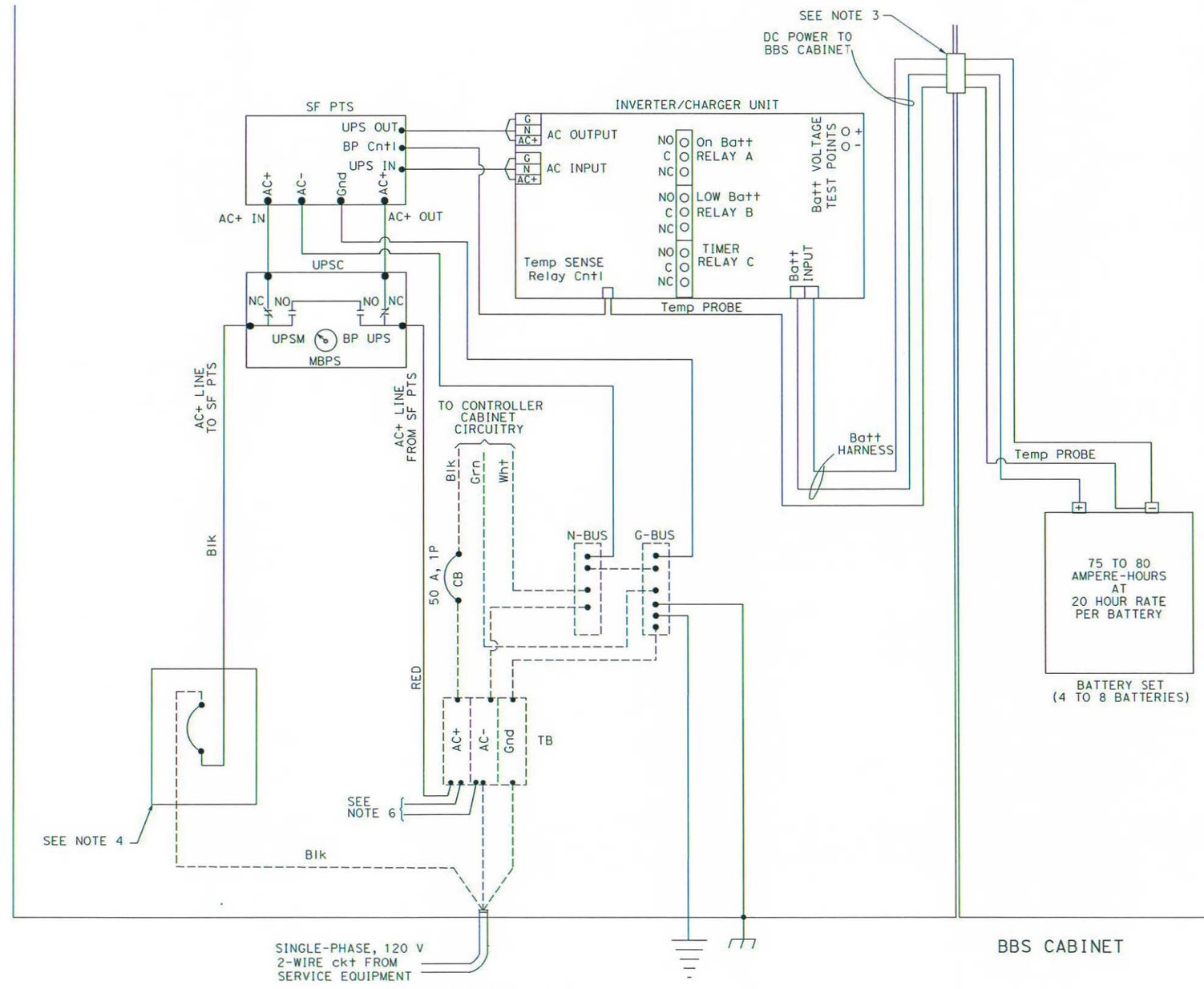

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Cntl = CONTROL
Gnd = GROUND

NOTES: (THIS SHEET ONLY)

1. TYPE B REFERS TO THE BBS EQUIPMENT FROM MANUFACTURER B.
2. CASE-2 REFERS TO THE SITUATION WHEN ONLY THE BATTERIES ARE INSTALLED IN THE BBS CABINET. THE REMAINING EQUIPMENT IS PLACED IN THE CONTROLLER CABINET.
3. THE LOCATION OF THE 2"C NIPPLE WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
4. THE CONTRACTOR MUST FURNISH AND INSTALL A NEMA-1 ENCLOSURE WITH 30 A, 1P, 120/240 VOLTS RATED CIRCUIT BREAKER MANUFACTURED PER UL STANDARD 489.
5. A TEMPERATURE PROBE MUST BE ATTACHED TO THE BATTERY BY TAPE OR ATTACHED TO THE NEGATIVE TERMINAL OF THE BATTERY.
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ELECTRICAL SYSTEM

(BBS POWER CONNECTION DIAGRAM, TYPE B, CASE-2)

REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 03-14-14 | DATE PLOTTED => 05-NOV-2014 | TIME PLOTTED => 10:39

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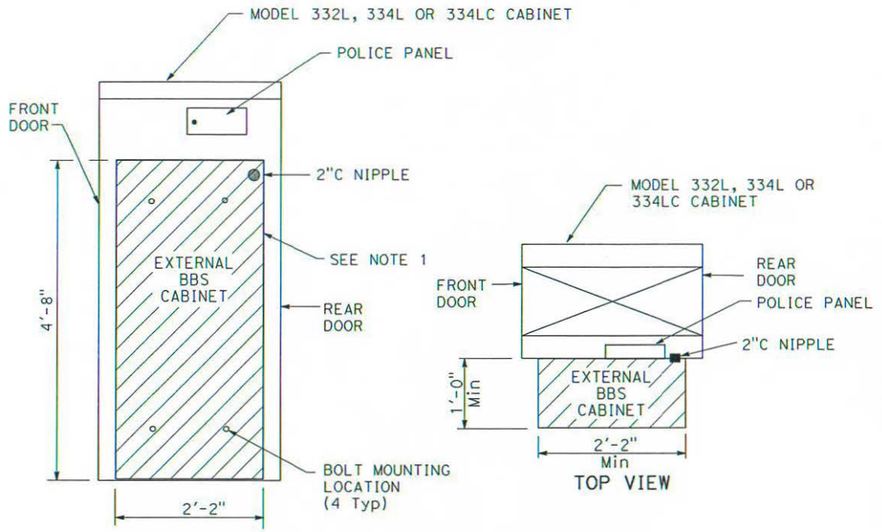
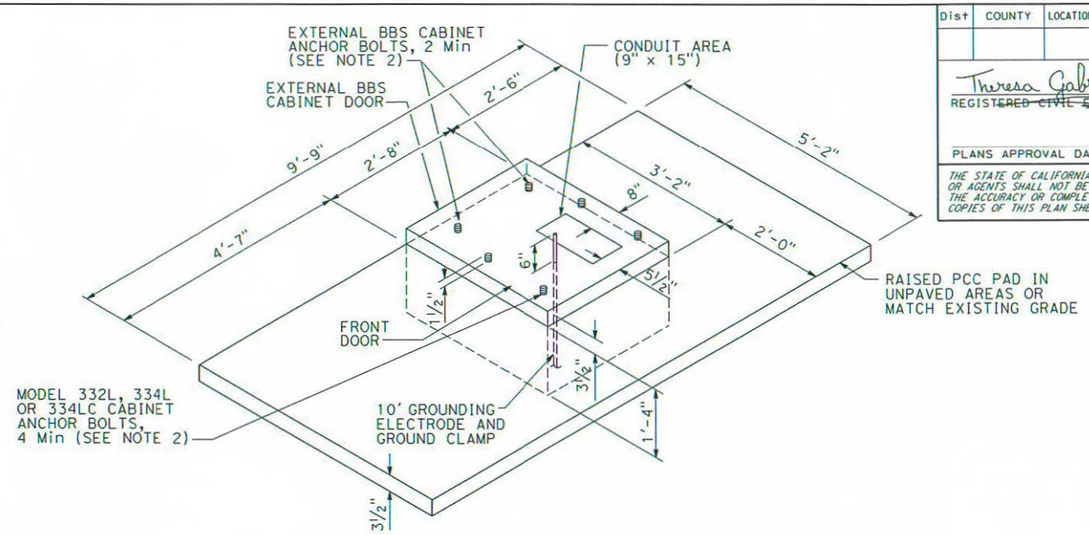
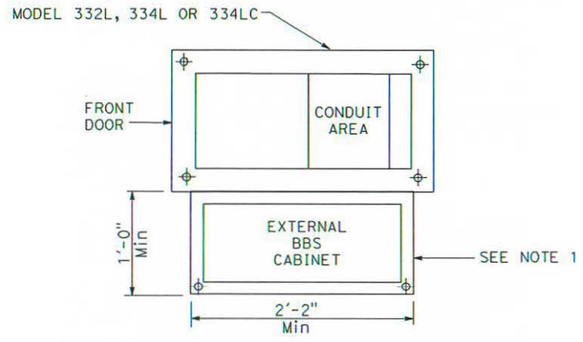


EXTERNAL BBS CABINET MOUNTED TO THE MODEL 332L, 334L OR 334LC CABINET

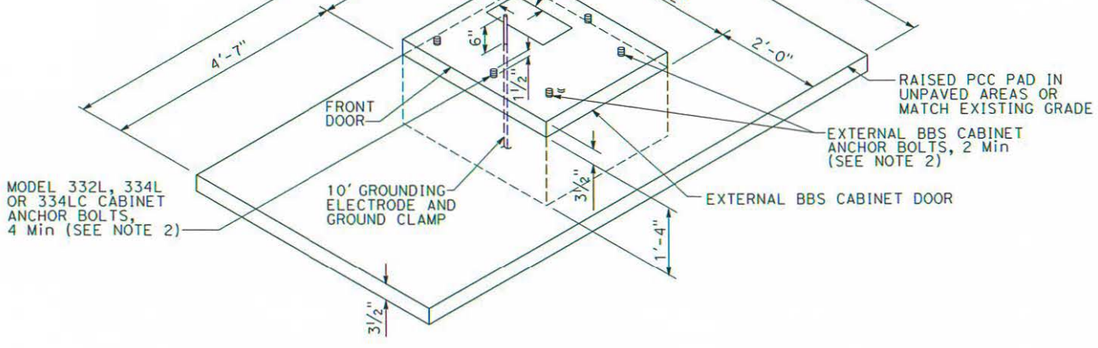


LEFT-HAND INSTALLATION DETAIL A



BASE PLAN FOR BBS MOUNTED TO THE MODEL 332L, 334L OR 334LC CABINET

(FOR DIMENSIONS AND DETAILS NOT SHOWN, SEE SHEET A6-1 TO A6-4, CABINET HOUSING DETAILS OF THE TRANSPORTATION ELECTRICAL EQUIPMENT SPECIFICATION (TEES))



RIGHT-HAND INSTALLATION DETAIL B

MODIFIED MODEL 332L, 334L OR 334LC CABINET FOUNDATION DETAIL FOR BATTERY BACKUP SYSTEM (BBS)

(FOR ADDITIONAL NOTES, SEE SHEET ES-3C OF THE STANDARD PLANS FOR MODEL 332L, 334L OR 334LC CABINETS)

NOTES: (THIS SHEET ONLY)

1. THE EXTERNAL BBS CABINET MUST BE MOUNTED TO THE MODEL 332L, 334L OR 334LC CABINET WITH FOUR 18-8 STAINLESS STEEL Hex HEAD, FULLY-THREADED, ⅜"-16 x 1" BOLTS; TWO WASHERS PER BOLT, DESIGNED FOR ⅜" BOLTS AND ARE 18-8 STAINLESS STEEL, 1" OUTSIDE DIAMETER, ROUND, AND FLAT; AND ONE K-LOCK NUT PER BOLT THAT IS 18-8 STAINLESS STEEL AND A Hex-NUT. THE ENGINEER WILL HAVE TO APPROVE THE BOLT MOUNTING LOCATION PRIOR TO INSTALLATION.
2. THE ANCHOR BOLTS MUST BE ¾" Dia x 15" WITH A 2"-90° BEND. THE CABINET MANUFACTURER'S SPECIFICATION MUST DETERMINE THE LOCATION OF THE ANCHOR BOLTS IN THE FOUNDATION. THE ENGINEER WILL HAVE TO APPROVE THE ANCHOR BOLTS AND ITS LOCATION IN THE FOUNDATION PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR MUST VERIFY THE DIMENSIONS OF THE BBS CABINET PRIOR TO CONSTRUCTING THE FOUNDATION OF THE Std MODEL 332L, 334L OR 334LC CABINET FOUNDATION. THE ENGINEER WILL HAVE TO APPROVE ANY NECESSARY DEVIATIONS PRIOR TO CONSTRUCTION.
4. ALL DIMENSIONS ARE NOMINAL.

Dist	COUNTY	LOCATION CODE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

Theresa Gabriel — REGISTERED CIVIL ENGINEER — 12-20-07 DATE

Theresa A. Gabriel, No. E15129, Exp. 6-30-16, ELECT — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

ELECTRICAL SYSTEMS
(BATTERY BACKUP SYSTEM FOUNDATION DETAILS)

NO SCALE

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 03-14-14 | DATE PLOTTED => 05-NOV-2014 | TIME PLOTTED => 10:41

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ASBESTOS CONTAINING MATERIALS SURVEY REPORT

ASBESTOS-CONTAINING MATERIALS SURVEY REPORT

BRIDGE DEMOLITION (6 BRIDGES) FOR I-10 HOV LANE CONSTRUCTION BETWEEN CITRUS AVENUE IN THE CITY OF WEST COVINA AND STATE ROUTE 57 IN THE CITY OF POMONA, LOS ANGELES COUNTY, CALIFORNIA

PN: 0713000007-1
EA: 07-1193U1
TASK ORDER #13
CONTRACT 07A3321

STANTEC PROJECT NO.: 185831013

SUBMITTED TO:
CALIFORNIA DEPARTMENT OF TRANSPORTATION, DISTRICT 7 SOUTH
100 SOUTH MAIN STREET
LOS ANGELES, CALIFORNIA 90012

SUBMITTED BY:
STANTEC CONSULTING SERVICES INC.
25864-F BUSINESS CENTER DRIVE
REDLANDS, CALIFORNIA

January 7, 2015

EXECUTIVE SUMMARY

This Asbestos-Containing Materials (ACM) Survey Report was prepared at the request of California Department of Transportation (Caltrans) District 7 and describes the results of an ACM survey performed on six (6) bridges on October 20, 2014, located along Interstate 10 (I-10), between Citrus Avenue in the City of West Covina and State Route 57 in the City of Pomona, Los Angeles County, California (Figure 1). The ACM surveys were performed to support Caltrans' proposed demolition of each existing bridge for future HOV lane construction and were conducted pursuant to the provisions of Contract 07A3321.

The bridges surveyed as part of this scope of work are identified in the table provided in Section 1.2.

The purpose of the ACM surveys was to assess the presence and quantities of ACMs prior to proposed bridge demolition activities. Caltrans will provide this information to the contractor for waste profiling and disposition, worker health and safety, and compliance with federal, state and local regulations.

Bulk samples of suspect ACM bridge materials were collected and analyzed by Polarized Light Microscopy (PLM). The United States Environmental Protection Agency (US EPA) and State of California, Division of Occupational Safety and Health (DOSH) define an ACM as any material containing more than one percent asbestos (>1%). The laboratory results are summarized in Table 1. Please note that the laboratory provides a unique description of the sampled material based on their observations under a microscope or interpretation of the chain of custody (COC). For an accurate description of the material sampled please refer to the field sample logs included in Appendix C.

In California, potential asbestos exposure in construction is regulated when construction, alteration, repair, maintenance, or renovation of structures, substrates, or portions thereof contain asbestos [8 CCR §1529 (a)(1)(C)]. Additionally, in California, materials containing greater than one-tenth of one percent (>0.1%) asbestos are regulated as Asbestos-Containing Construction Materials (ACCMs). For the purpose of this report, materials with any detectable concentration of asbestos are considered positive.

As summarized in Table 1 and Table 2, bridge deck seals at the deck joints were sampled from five of the six bridges and found to be non-detect for asbestos in all five instances. Bridge deck seals at the deck joints of bridge number 53-2008G (Kellogg Drive E10-S57 & N57 Connector OC) could not be sampled due to safety considerations.

Of the remaining materials submitted for analysis, the following materials were determined to be ACM:

- Bridge 53-0670 (Citrus Street UC): Handrail post leveling shims tested positive for asbestos.
- Bridge 53-0671 (Holt Avenue UC): Handrail post leveling shims tested positive for asbestos.
- Bridge 53-0870 (Via Verde UC): Handrail post leveling shims tested positive for asbestos.
- Bridge 53-1528 (Grand Avenue UC): Handrail post leveling shims, 6-inch diameter drain pipes associated with weep holes, and gray adhesive located beneath handrail bolts tested positive for asbestos.
- Bridge 53-2008 (Kellogg Drive UC): Handrail post leveling shims tested positive for asbestos.

Asbestos was not detected in any other materials analyzed from the six bridges.

Due to safety considerations, handrail posts on bridge number 53-2008G (Kellogg Drive E10-S57 & N57 Connector OC) could not be visually assessed for the presence of leveling shims, and if present, could not be sampled. However, based on Stantec's experience regarding the typical asbestos content of leveling shims and in the absence data, the shims associated with the handrail posts on the aforementioned bridge should be assumed to be ACM.

Please note that the asbestos survey was limited to accessible materials due to safety precautions (no lanes were closed) and height restrictions. For example, height restrictions limited the ability to perform a complete assessment of bridge abutment joints for the presence of sealant materials. However, at locations that were accessible, no sealant was observed on the exterior areas of the bridge abutments other than at the deck level. Any potential or suspect ACMs discovered during proposed demolition activities that were not previously sampled due to inaccessibility (see Table 2) are to be assumed positive for asbestos until additional sampling, analysis and/or assessment indicates otherwise. Inaccessible materials include, but are not limited to shims, concrete, asphalt, deck reflector adhesives, bridge reflective marker adhesives, deck joint seals, felt and/or pressboards at abutments and within traffic lanes, and weep holes at the undersides of bridge decks (see potential ACMs qualified as A, B, C, or G in Table 2). Asbestos abatement work should be performed in accordance with California Code of Regulations (CCR), Title 8, Section 1529 (Asbestos in Construction Standard). Submission of this report will be required for compliance with the NESHAP in accordance with SCAQMD Rule 1403.

General recommendations are provided below to address ACMs should these areas be disturbed during construction.

- Any generated ACM wastes should be disposed as hazardous asbestos waste.

- ACM abatement is required by a licensed ACM abatement contractor prior to renovation, refurbishing, or demolition activities. The abatement contractor's responsibilities include,
    - Removal and disturbance of ACMs in accordance with DOSH requirements. (e.g.; CCR Title 8, Section 341.9 and 1529).
    - Friable asbestos requires special packaging and transportation by a DTSC registered hazardous waste transporter.
    - Segregation and disposal at a landfill permitted to accept hazardous RACM waste.
    - Compliance with all other local, state and federal regulations and requirements associated with the disturbance, management, handling and disposal of ACM.
    - Notification to the SCAQMD is required for all demolitions regardless of the ACM square footage. The contractor is required to comply with all other SCAQMD and other agency notifications and requirements for demolition and construction.

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LIST OF ACRONYMS

ACM –	Asbestos-Containing Material
ACCM –	Asbestos-Containing Construction Material
AHERA –	Asbestos Hazard Emergency Response Act
Caltrans –	California Department of Transportation, District 7
CCR –	California Code of Regulations
CFR –	Code of Federal Regulations
DOSH –	California Division of Occupational Safety and Health Administration
DTSC –	Department of Toxic Substances Control
ELAP –	Environmental Laboratory Accreditation Program
EMC –	Environmental Management Consultant
ND –	None Detected
NESHAP –	National Emission Standard for Hazardous Air Pollutants
NVLAP –	National Voluntary Laboratory Accreditation Program
PLM –	Polarized Light Microcopy
QA/QC –	Quality Assurance/Quality Control
RACM –	Regulated Asbestos-Containing Material
SCAQMD –	South Coast Air Quality Management District
TSI –	Thermal System Insulation
US EPA –	United States Environmental Protection Agency

1.0 INTRODUCTION

This Asbestos-Containing Materials (ACM) Survey Report was prepared at the request of California Department of Transportation (Caltrans) District 7 and describes the results of an ACM survey performed on six (6) bridges on October 20, 2014, located along Interstate 10 (I-10) between Citrus Avenue in the City of West Covina and State Route 57 in the City of Pomona, Los Angeles County, California (Figure 1). The ACM surveys were performed to support Caltrans' proposed demolition of each existing bridge for future HOV lane construction and were conducted pursuant to the provisions of Contract 07A3321.

1.1 PROJECT DESCRIPTION

As part of proposed highway plans, Caltrans is planning to demolition portions of each existing bridge for future HOV lane construction. An ACM survey was conducted in support of the planned demolition efforts.

1.2 SITE DESCRIPTION

The bridges surveyed as part of this scope of work are identified in the table below, along with general construction information from the *Log of Bridges on State Highways, District 7* prepared by Caltrans, dated October 2014:

POST MILE	BRIDGE NUMBER	BRIDGE NAME	STRUCTURE TYPE	LENGTH (meters)	WIDTH (meters)	YEAR BUILT	YEAR WIDENED
37.48	53-0670	Citrus St UC	Prestressed Concrete Continuous, Multiple Box Beam or Girders	49.1	58.4	1971	1975
38.97	53-0671	Holt Ave UC	Prestressed Concrete Continuous, Multiple Box Beam or Girders	61.9	54.0	1975	NA
40.46	53-0870	Via Verde UC	Concrete, Slab	38.4	44.6	1956	1975
38.51	53-1528	Grand Ave UC	Concrete Continuous, Tee Beam	24.1	77.6	1961	1975
42.10	53-2008	Kellogg Dr UC	Prestressed Concrete, Multiple Box Beam or Girders	27.7	45.1	1972	NA
42.10	53-2008G	Kellogg Dr E10-S57 & N57 Connector OC	Prestressed Concrete, Multiple Box Beam or Girders	27.7	8.8	1972	NA

A photographic log of structural components and current Site conditions is provided in Appendix A.

1.3 OBJECTIVES

The objectives of the surveys were to identify, estimate quantities, and assess the condition/friability of asbestos in suspect structural components and to make general recommendations for handling and disposing of asbestos-containing materials. These objectives were met by completing the following tasks:

- Perform a visual inspection and destructive sampling for asbestos following criteria outlined in the Asbestos Hazard Emergency Response Act (AHERA) to identify sources of friable and non-friable ACMs.
- Collect bulk samples of suspect asbestos-containing materials.
- Submit bulk samples to a certified laboratory for analysis.
- Compile the findings into a report.
- Ensure the technical quality of all work by using AHERA-accredited Inspectors and Management Planners, Certified Consultants, and a proven Quality Assurance/Quality Control (QA/QC) Program.

1.4 FORMER REPORT REVIEW

No former ACM survey reports were provided for review.

2.0 ASBESTOS BACKGROUND

2.1 ASBESTOS

Asbestos is the name of a class of magnesium-silicate minerals that occur in fibrous form. Minerals that are included in this group are chrysotile, crocidolite, amosite, anthophyllite asbestos, tremolite asbestos, and actinolite asbestos. Although the chrysotile minerals are the most common type of asbestos found in the construction industry, all types of asbestos are regulated in the same manner. Asbestos has been used in thousands of different structural materials. Asbestos was added to structural materials to: increase fire-resistance, insulate against heat, cold and sound, resist corrosion, and increase tensile strength. Common structural materials that may contain asbestos include, but are not limited to the following: floor tile, floor sheeting, ceiling tile, mastics, roofing materials, fireproofing, acoustical treatments, gypsum board, pipe and boiler insulations. Adverse health effects have been associated with the inhalation of airborne asbestos. However, asbestos fibers that are tightly bound in structural materials, may not pose an exposure hazard, unless disturbed in such a way that releases airborne fibers (i.e., cutting, drilling, sanding, and other abrasive methods).

2.2 CURRENT REGULATIONS

The following sections summarize current state and federal regulations which contain requirements related to the performance of structural surveys for asbestos. These summaries are not intended to be all inclusive and do not contain every aspect of the regulations discussed. Regulations pertaining to the removal and disposal of ACMs are not included.

2.2.1 US EPA National Emission Standard for Hazardous Air Pollutants (NESHAPs), 40 CFR Part 61

Under the NESHAPs regulation, no visible emissions are allowed during facility demolition or renovation activities, which involve regulated asbestos-containing materials (RACMs). For this reason, all facilities must be surveyed for asbestos-containing materials prior to demolition or renovation. The EPA, and/or the local AQMD which has delegated authority from the EPA NESHAP, must be notified prior to any structural demolition, even if no asbestos-containing materials are present. Assessments are made by the inspector as to the condition of each material and whether or not the materials are "friable." The US EPA NESHAP regulation defines "friable" materials as:

> *Materials that, when dry, **can** be crumbled, pulverized or reduced to a powder using hand pressure.*

Conversely, a non-friable material **cannot**, when dry, be crumbled, pulverized or reduced to a powder. NESHAP classifies non friable ACMs in two categories:

- Category I – asbestos-containing packings, gaskets, asphalt roofing products and resilient floor coverings;
- Category II – All remaining types of non-friable ACM not included in Category I that when dry cannot be crumbled, pulverized, or reduced to powder by hand pressure.

RACM is classified as any manufactured material that contains greater than one percent asbestos by dry weight and is friable. Disturbed RACM must be disposed as hazardous waste. Category I and II non-friable ACM may be considered RACM under the following conditions:

- Category I material that has become friable;
- Category I material that has been subjected to sanding, grinding, cutting or abrading;
- Category II material that has a high probability of being crumbled, pulverized, or reduced to powder as part of demolition or renovation

RACMs must be removed prior to renovation or demolition.

2.2.2 South Coast Air Quality Management District

SCAQMD regulates sources of air pollution within the area of the six bridges. The District's regulating and enforcement authority comes from state law and, in certain cases, federal law. In response to the NESHAP requirements, SCAQMD implemented procedures (Rule 1403) that pertain to demolition/renovation activities including the removal and associated disturbance of ACMs. These requirements for demolition and renovation activities include notification, ACM removal procedures, time schedules, ACM handling and cleanup procedures, storage, disposal, and landfill requirements for asbestos-containing waste materials. These procedures are applicable to owners and operators of any demolition or renovation activity and associated disturbance of ACMs. Failure to comply could result in violations that carry daily penalties (penalties assessment is based upon the size of the project and severity of noncompliance).

2.2.3 California Division of Occupational Safety and Health (DOSH a.k.a. Cal/OSHA)

Pursuant to DOSH standard 1529, an asbestos-containing material is any material containing greater than one percent (>1%) asbestos. However, for worker classifications, DOSH follows the California Health and Safety Code definition of ACCMs which are defined as any materials with an asbestos content greater than one-tenth of one percent (>0.1%). The DOSH set forth licensing and work requirements for disturbance of ACMs and ACCMs. The requirements have been divided into four classes of work: Class I, Class II, Class III, and Class IV work. The materials are

distinguished by their potential to release fibers when damaged. The DOSH prescribes specific engineering controls and work practices for each Class of work.

- Class I – This Class refers to removal of ACMs identified as Thermal System Insulation (TSI) or surfacing (sprayed-on or troweled-on) materials. These materials are generally considered friable.
- Class II – This Class refers to removal of ACMs identified that are not TSI or surfacing materials. These materials are generally considered non-friable.
- Class III – This Class refers to repair and maintenance operations of all identified ACMs.
- Class IV – This Class refers to incidental contact with identified ACMs such as custodial staff.

2.2.4 California Assembly Bill AB3713, Health and Safety Code Div. 20, Ch. 10.4, Sec. 25915-25924

The state of California has enacted legislation that requires owners, employers, lessees, etc. to notify tenants, employees and contractors of the presence of asbestos in both friable and non-friable forms. In addition, preventive maintenance activities must be developed and communicated to these parties. Notification is required 15 days after the identification of ACM in the building, and annually thereafter.

2.3 HAZARDOUS WASTE

The California Department of Toxic Substances Control (DTSC), a department of Cal EPA, has the regulatory and enforcement authority for hazardous wastes deposited or transported in California. DTSC regulates as "hazardous wastes" generated wastes containing more than one percent (>1%) asbestos that have been determined to be "friable." DTSC uses the same methods for determining percentage of asbestos and friability, as does the U.S. EPA. However, local agencies and DOSH may regulate waste handling and packaging even if the material contains one percent or less or is determined to be non-friable.

3.0 ACM SURVEY SCOPE OF WORK AND METHODOLOGY

The project team and their corresponding roles for the ACM survey were comprised of the following Stantec staff:

- Mr. Jason Stagno (805-719-9392; Thousand Oaks, CA), State of California Division of Occupational Safety and Health (DOSH) Certified Asbestos Consultant (CAC #12-4949),
    - CAC in charge of the sampling; ACM sampler;
- Mr. Keith Posekian (805-719-9352; Thousand Oaks, CA),
    - Onsite project support

Visual inspection and field sampling activities were performed only by the staff certified to collect the ACM samples. Personnel certifications for Mr. Stagno are presented in Appendix B.

The ACM survey field activities consisted of a visual inspection and sampling of accessible representative bridge materials to identify potential ACMs. Reasonable efforts were made to locate, sample, and/or identify suspect ACMs associated with the bridges; however, during renovation/demolition activities, suspect ACMs may be uncovered or discovered in areas that are currently not readily accessible. If any suspect ACMs are uncovered or discovered, these suspect ACMs are assumed positive for asbestos until sampling and analysis indicates otherwise. In addition, these suspect materials should be analyzed for ACM content prior to disturbance and disposal.

3.1 VISUAL INSPECTION

On October 20, 2014, structural materials were visually inspected for asbestos using the methods presented in applicable sections of the Federal Asbestos Hazard Emergency Response Act (AHERA) regulations (40 CFR, Part 763). The principles presented under AHERA are generally accepted as the industry standard for ACM inspections. Suspect ACMs were also physically assessed for friability, condition, and disturbance factors.

Reasonable efforts were made to locate and sample materials representative of the entire Site. However, Stantec did not attempt to access concealed materials or materials that were inaccessible due to safety considerations (e.g., no lanes were closed) or height considerations (e.g., no lifts were used to access abutments or the underside of bridge decks). These include, but are not limited to leveling shims, concrete, asphalt, deck reflector adhesives, bridge reflective marker adhesives, deck joint seals, expansion joint felt and/or pressboards at abutments and within traffic lanes, and weep holes at the undersides of bridge decks. In cases where heavy traffic and insufficient shoulder space was present, bridge materials were not sampled. With regard to height restrictions, the ability to perform a complete assessment of bridge abutment joints for the presence of sealant materials was limited. However, at

locations that were accessible, no sealant was observed on the exterior areas of the bridge abutments other than at the deck level. For any structure, the existence of unique or concealed ACMs is a possibility. It is common practice to collect additional bulk samples during actual abatement or demolition activities when hidden suspect ACMs are discovered or accessible.

3.2 BULK SAMPLING FOR ASBESTOS

On October 20, 2014, bulk samples of visually identified homogeneous areas of suspect ACM were collected from areas than may be impacted by demolition activities. The EPA defines a homogeneous area as a surfacing material, thermal system insulation, or miscellaneous material that is uniform in color and texture. The use or application of the homogeneous area is also used to identify suspect ACMs.

At least one sample was collected from each accessible suspect ACM. The samples were collected by removing representative pieces of material using a hand tool and placing the samples into plastic bags. The sample bags were sealed and labeled with unique sample identification (ID) numbers, along with other pertinent information including the project ID, sample date, and material type. Tools used for collecting samples were cleaned between sampling each homogeneous material.

No attempt was made to replace or repair the sampled media. The removal of small pieces of building materials does not typically compromise structural integrity. All sampling equipment was decontaminated prior to sampling each suspect material by using wet-wipes to wipe down each tool.

The materials sampled for this investigation are listed in Section 4.0. Accessible sampling locations are shown on Figures 2 through 7.

3.3 ASBESTOS LABORATORY TESTING

Bulk samples were analyzed by EMC Analytical Laboratories located at 9830 S. 51st Street, Suite B109, Phoenix, Arizona (EMC phone: 800-362-3373). EMC is accredited under the National Institute of Standards and Technology's National Voluntary Laboratory Accreditation Program (NVLAP), and the State of Arizona and California Department of Health Services Environmental Laboratory Accreditation Program (ELAP) for the analysis of asbestos in bulk building material samples. Laboratory accreditations are provided in Appendix B.

All samples were analyzed by Polarized Light Microscopy (PLM) in accordance with the EPA "Method for the Determination of Asbestos in Bulk Building Materials" (EPA/600/R93/116, July 1993). Both the US EPA, under their asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations, and the SCAQMD define and regulate ACMs containing more than one percent (>1%) asbestos. In California, asbestos exposure during construction is regulated when construction, alteration, repair, maintenance, or renovation of structures, substrates, or portions thereof contain

asbestos [§1529 (a)(1)(C)]. Additionally, materials containing greater than one-tenth of one percent (> 0.1%) are regulated as Asbestos-Containing Construction Materials (ACCMs). For the purpose of this report, materials with any detectable concentration of asbestos are considered positive.

When "None Detected" (ND) appears in this report, it should be interpreted as meaning no asbestos was observed in the sample material above the reliable limit of detection for the PLM method which is material dependent and is less than one percent.

The laboratory results are summarized in Table 1. Please note that the laboratory provides a unique description of the sampled material based on their observations under a microscope or interpretation of the chain of custody (COC). For an accurate description of the material sampled please refer to the field sample logs included in Appendix C.

Copies of the laboratory reports are provided in Appendix C.

4.0 ACM SURVEY RESULTS

Bulk material samples were collected from representative homogeneous bridge materials and analyzed by PLM. Copies of the laboratory reports are provided in Appendix C and a summary of the analytical results is provided in Table 1 of the appendices. The sample locations are shown on the attached Figures and photographs of sampled media are provided in Appendix A.

The sampled materials included:

- Concrete,
- Asphalt,
- Expansion Joint Felt,
- Shims,
- Adhesives (handrail bolts, bridge reflective markers),
- Sealants (deck seal),
- Pressboards,
- Paint/Coating,
- Paper, and
- Weep Hole piping.

Materials that contain greater than one-percent asbestos are described below.

Citrus St UC (See Figure 2; Table 1)

- ***Leveling Shims***
  - Three samples representing approximately 7 leveling shims associated with handrail posts were found to contain 65 to 85 percent asbestos.
  - Leveling shims measured approximately 8 inches by 8 inches.
  - The leveling shims represent a total estimated area of approximately 5 square feet or less of asbestos-containing material.
  - In their current state the leveling shims are considered to be Category II non-friable ACM. However, during demolition the shims may become friable.

Holt Avenue UC (See Figure 3; Table 1)

- ***Leveling Shims***
  - Three samples representing approximately 24 leveling shims associated with handrail posts were found to contain 80 percent asbestos.
  - Leveling shims measured approximately 8 inches by 8 inches.

- The leveling shims represent a total estimated area of approximately 10 square feet of asbestos-containing material.
- In their current state the leveling shims are considered to be Category II non-friable ACM. However, during demolition the shims may become friable.

Via Verde UC (See Figure 4; Table 1)

- ***Leveling Shims***
  - Three samples representing approximately 25 leveling shims associated with handrail posts were found to contain 60 percent asbestos.
  - Leveling shims measured approximately 8 inches by 8 inches.
  - The leveling shims represent a total estimated area of approximately 10 square feet of asbestos-containing material.
  - In their current state the leveling shims are considered to be Category II non-friable ACM. However, during demolition the shims may become friable.

Grand Avenue UC (See Figure 5; Table 1)

- ***Leveling Shims***
  - One sample representing approximately 25 leveling shims associated with handrail posts were found to contain 85 percent asbestos.
  - Leveling shims measured approximately 8 inches by 8 inches.
  - The leveling shims represent a total estimated area of approximately 10 square feet of asbestos-containing material.
  - In their current state the leveling shims are considered to be Category II non-friable ACM. However, during demolition the shims may become friable.

- ***Gray 6-inch Diameter Piping in Weep Holes***
  - Three samples representing an unknown quantity of piping contain a total of 15 percent asbestos.
  - In their current state, considered to be Category I non-friable ACM. However, during renovation/demolition the piping may become friable.

- ***Adhesive – Handrail Post Bolts***
  - The gray adhesive found beneath handrail post bolts was found to contain 3 percent asbestos.
  - The adhesive represents a total estimated amount of less than two square feet of asbestos-containing material.

- In its current state the adhesive is considered to be Category I non-friable ACM. However, during demolition the adhesive may become friable.

Kellogg Drive UC (See Figure 6; Table 1)

- ***Leveling Shims***
  - One sample representing approximately 15 leveling shims associated with handrail posts were found to contain 65 percent asbestos.
  - Leveling shims measured approximately 8 inches by 8 inches.
  - The leveling shims represent a total estimated area of approximately ten square feet of asbestos-containing material.
  - In their current state the leveling shims are considered to be Category II non-friable ACM. However, during demolition the shims may become friable.

Kellogg Drive E10-S57 & N 57 Connector OC (See Figure 7; Table 1)

- ***Leveling Shims***
  - Samples of leveling shims associated with handrail posts could not be obtained due to safety considerations but should be assumed to be ACM. It is estimated that 60 percent of the handrail posts have associated leveling shims. There are approximately 32 handrails posts on the Kellogg Drive E10-S57 & N 57 Connector OC.
  - Leveling shims measured approximately 8 inches by 8 inches.
  - The leveling shims represent a total estimated area of approximately 10 square feet of asbestos-containing material.
  - In its current state the leveling shims are considered to be Category II non-friable ACM. However, during demolition the shims may become friable.

Table 1 provides a summary of the suspect materials identified and sampled during this survey. Figures 2 through 7 depict sample locations for the six bridges surveyed. Appendix D provides the project field notes.

4.1 ASBESTOS HAZARD ASSESSMENT

The hazard assessment is based upon the physical assessment of ACMs for condition of the material and potential disturbance. The physical assessment usually includes the following considerations:

- Location and amount of material.
- Condition of the material which includes damage; the severity of the damage; the extent of the damage over large areas.
- Whether the material is accessible.

- Potential for future disturbance or future damage (air erosion, vibration, water).

The following table includes identified ACMs at the Site and the hazard ranking for each identified material.

ACM SUMMARY TABLE

	REPORTED POSITIVE FOR ACMS							
	Material Description	*S/T/M**	*Material Location*	*F/NF***	*Condition Code****	*Accessibility*	*Potential for Disturbance*	*Quantity on Bridge*
CITRUS STREET UC 53-0670	Leveling Shims	M	Beneath Handrail Posts	NF	Good	Low (Located Beneath Handrails	HIGH (Removal, Demolition, Maintenance)	~5 Square Feet

	REPORTED POSITIVE FOR ACMS							
	Material Description	*S/T/M**	*Material Location*	*F/NF***	*Condition Code****	*Accessibility*	*Potential for Disturbance*	*Quantity on Bridge*
HOLT AVENUE UC 53-0671	Leveling Shims	M	Beneath Handrail Posts	NF	Good	Low (Located Beneath Handrails	HIGH (Removal, Demolition, Maintenance)	~10 Square Feet

	REPORTED POSITIVE FOR ACMS							
	Material Description	*S/T/M**	*Material Location*	*F/NF***	*Condition Code****	*Accessibility*	*Potential for Disturbance*	*Quantity on Bridge*
VIA VERDE UC 53-0870	Leveling Shims	M	Beneath Handrail Posts	NF	Good	Low (Located Beneath Handrails	HIGH (Removal, Demolition, Maintenance)	~10 Square Feet

	REPORTED POSITIVE FOR ACMS							
GRAND AVENUE UC 53-1528	Material Description	S/T/M*	Material Location	F/NF**	Condition Code***	Accessibility	Potential for Disturbance	Quantity on Bridge
	Leveling Shims	M	Beneath Handrail Posts	NF	Good	Low (Located Beneath Handrails	HIGH (Removal, Demolition, Maintenance)	~10 Square Feet
	Gray Piping at Weep Holes, 6-Inch Diameter	M	Vertical Abutment Walls Beneath Bridge	NF	Good	High	HIGH (Removal, Demolition, Maintenance)	Unknown
	Adhesive	M	Handrail Posts Beneath Bolts	NF	Good	Low (Located Beneath Handrails	HIGH (Removal, Demolition, Maintenance)	<2 Square Feet

	REPORTED POSITIVE FOR ACMS							
KELLOGG DRIVE UC 53-2008	Material Description	S/T/M*	Material Location	F/NF**	Condition Code***	Accessibility	Potential for Disturbance	Quantity on Bridge
	Leveling Shims	M	Beneath Handrail Posts	NF	Good	Low (Located Beneath Handrails	HIGH (Removal, Demolition, Maintenance)	~5 Square Feet

	ASSUMED POSITIVE FOR ACMS							
KELLOGG DRIVE E10-S57 & N57 Connector OC 53-2008G	Material Description	S/T/M*	Material Location	F/NF**	Condition Code***	Accessibility	Potential for Disturbance	Quantity on Bridge
	Leveling Shims	M	Beneath Handrail Posts	NF	Good	Low (Located Beneath Handrails)	HIGH (Removal, Demolition, Maintenance)	~10 Square Feet

NOTES:

* **S** = Surface Material; **T** = Thermal System Insulation; **M** = Miscellaneous Material

** **F** = Friable; **NF** = Non-Friable

***Good = < 5% Damage; **D**amaged = 5-25% local or 10% General Damage; **S**ignificantly **D**amaged = 25% local or >10% General Damage

Asbestos was not detected in any other materials analyzed from the six bridges.

UNCERTAINTY

As noted previously, access constraints precluded a complete inspection and sampling of suspect ACMs on the bridges. Table 2 summarizes typical ACMs encountered on

bridges and notes the number of samples collected of each material type, whether they tested positive for asbestos, and whether access constraints prevented the inspection and sampling of other suspect materials. The letter "A" in Table 2 is used to indicate partial or incomplete sampling of suspect materials due to access constraints. The letter "B" indicates suspect materials that were observed but could not be sampled due to access constraints. The letter "C" denotes suspect materials whose existence or absence could not be verified due to access constraints. The letter "D" denotes materials that were looked for, but were not observed to exist at the time of the survey. The letter "E" denotes foam-like joint seal was observed (05A). The letter "F" denoted the sample was observed to be homogeneous with the already sampled expansion joint felt material and that sufficient representative samples were collected. The letter "G" denotes the suspect materials were inaccessible but assumed to be ACM based on similar material sampled on accessible hand rails.

4.2 ASBESTOS RECOMMENDATIONS

The asbestos containing shims associate with handrail posts (Citrus Street UC, Holt Avenue UC, Via Verde UC, Grand Avenue UC, and Kellogg Drive UC, weep hole piping (Grand Avenue UC), and handrail bolt adhesive (Grand Avenue UC) appeared to be in good condition at the time of the survey. However, if the ACMs are disturbed during construction activities, they should be classified and handled as a RACM due to the high probability of becoming crumbled, pulverized, or reduced to a powder by the forces expected to act on the material in the course of proposed preservation or construction. No assessment could be performed regarding the condition of shims potentially associated with handrail posts on Kellogg Drive E10-S57 & N 57 Connector OC due to safety considerations.

Please note that the asbestos survey was limited to accessible materials due to safety precautions (no lanes were closed) and height restrictions. Any potential or suspect ACMs discovered during proposed preservation activities that were not previously sampled due to inaccessibility (see Table 2) are to be assumed positive for asbestos until additional sampling, analysis and/or assessment indicates otherwise. Inaccessible materials include, but are not limited to shims, concrete, asphalt, deck reflector adhesives, bridge reflective marker adhesives, deck joint seals, felt and/or pressboards at abutments and within traffic lanes, and weep holes at the undersides of bridge decks (materials indicated as A, B, C, or G in Table 2).

Asbestos abatement work should be performed in accordance with California Code of Regulations (CCR), Title 8, Section 1529 (Asbestos in Construction Standard). Submission of this report will be required for compliance with the NESHAP in accordance with SCAQMD Rule 1403.

General recommendations are provided below to address ACMs should these areas be disturbed during construction.

- Any generated ACM wastes should be disposed as hazardous asbestos waste if friable or damaged non-friable ACM as determined by the licensed ACM abatement contractor.

- ACM abatement is required by a licensed ACM abatement contractor prior to renovation, refurbishing, or demolition activities. The abatement contractor's responsibilities include,
    - Removal and disturbance of ACMs in accordance with DOSH requirements. (e.g.; CCR Title 8, Section 341.9 and 1529).
    - Friable asbestos requires special packaging and transportation by a DTSC registered hazardous waste transporter.
    - Segregation and disposal at a landfill permitted to accept hazardous RACM waste.
    - Compliance with all other local, state and federal regulations and requirements associated with the disturbance, management, handling and disposal of ACM.
    - Notification to the SCAQMD is required for all demolitions regardless of the ACM square footage. The contractor is required to comply with all other SCAQMD and other agency notifications and requirements for demolition and construction.

5.0 REPORT LIMITATIONS

Reasonable and safe efforts have been made to locate, sample, and/or identify suspect ACMs with the bridges included in this project. However, Stantec did not attempt to access concealed materials or materials that were inaccessible due to safety considerations or height restrictions. These include, but are not limited to shims, concrete, asphalt, deck reflector adhesives, bridge reflective marker adhesives, deck joint seals, felt and/or pressboards at abutments and within traffic lanes, and weep holes at the undersides of bridge decks. In cases where heavy traffic and insufficient shoulder space was present, bridge materials were not sampled. For any structure, the existence of unique or concealed materials and debris is a possibility. In addition, sampling and laboratory analysis constraints typically hinder the investigation. Stantec does not warrant, guarantee or profess to have the ability to locate or identify all hazardous materials in a structure. The survey did not include underground utilities. Historically, some underground utility piping (e.g., Transite pipe) have been known to contain asbestos. If renovation or demolition of the bridges includes removal of on-site portions of underground utilities, evaluation of the asbestos content of these components must be performed prior to the removal process. Suspect materials identified in these locations are assumed positive for asbestos until inspection, sampling and analysis indicates otherwise. This report is intended for use in planning and construction in accordance with the scope of the Task Order. If during the course of a renovation/demolition project suspect ACMs are discovered that are not included within this report, such materials should be treated accordingly until additional sampling, analysis and/or assessment can be performed.

Additionally, the passage of time may result in a change in the environmental characteristics at the bridges included in this project. This report does not warrant against future operations or conditions that could affect the recommendations made. The results, findings, conclusions and recommendations expressed in this report are based only on conditions that were observed during the survey bridges located along Interstate 10 (I-10) and test results provided by EMC. These observations are time dependent, are subject to changing Site conditions, and revisions to federal, state, and local regulations. Reliance on this report by Third Parties (i.e., other than Caltrans) shall be at the Third Party's sole risk.

6.0 REFERENCES

California Department of Transportation (Caltrans), 2014. *California Log of Bridges on State Highways, District 7,* dated April 2014.

South Coast Air Quality Management District (SCAQMD), Rule 1403.

National Emission Standard for Hazardous Air Pollutants (NESHAP), regulation 40 CFR Part 61.

The California Health and Safety Code 25915 (former Connelly Bill).

Asbestos Hazard Emergency Response Act (AHERA)

Division of Occupational Safety and Health (DOSH), 8 CCR Section 1529

7.0 PREPARERS

This asbestos-containing materials (ACM) survey report has been prepared under the direction of the following environmental professionals:

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If you have any questions or comments regarding the information enclosed herein, please contact the undersigned at your convenience.

Respectfully submitted,
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FIGURES

North

CALIFORNIA

LEGEND:

BRIDGE ID
Figure Number

0 1/2 1
APPROXIMATE SCALE (MILES)

2000 0 2000 4000 6000
APPROXIMATE SCALE (FEET)

REFERENCE: DELORME TOPO MAP, 10 FWY LOS ANGELES, CALIFORNIA

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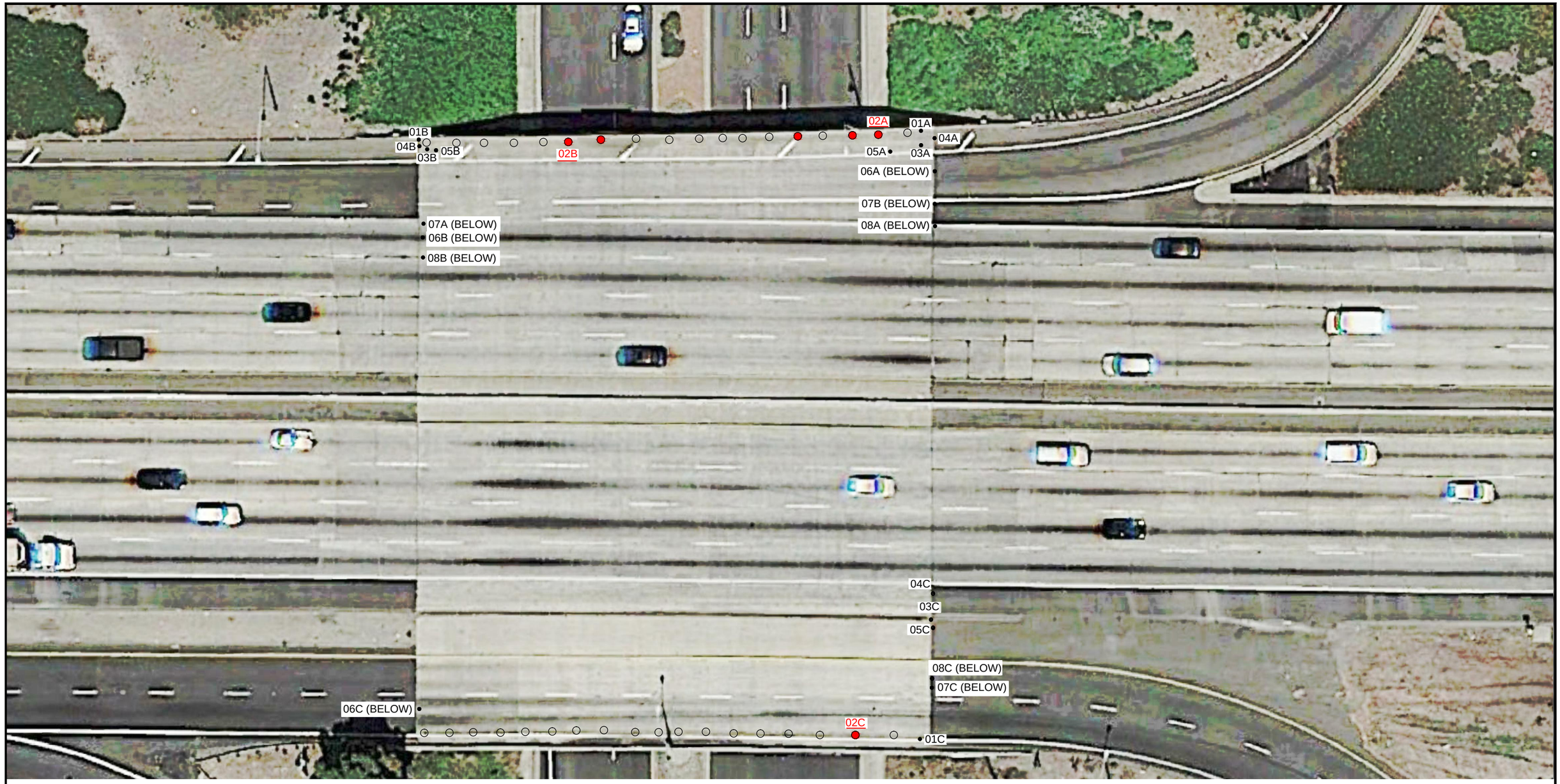
State of California Department of Transportation
Asbestos Survey
State Route 10 Bridge Demolition
07-LA-10
PM37.2/42.4
Project ID: 07A3321-13, EA 21193U1

SITE LOCATION MAP

FIGURE: **1**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185831010	STA	JS	AP	11/05/14



LEGEND:

- • SAMPLE LOCATION
- • SAMPLES IN RED AND UNDERLINED TESTED POSITIVE FOR ASBESTOS
- ○ HANDRAIL POST
- 01 CONCRETE - BRIDGE RAILING
- 02 SHIM - HANDRAIL POST
- 03 CONCRETE - DECK
- 04 ASPHALT - DECK
- 05 JOINT SEAL - DECK LEVEL
- 06 EXPANSION JOINT FELT - ABUTMENT SEAMS BELOW THE BRIDGE
- 07 DRAIN PIPE (WEEP HOLE)
- 08 CONCRETE - ABUTMENT WALLS BELOW BRIDGE

N

0 30 60

APPROXIMATE SCALE IN FEET

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Asbestos Survey
State Route 10 Bridge Demolition
07-LA-10
PM 37.2/42.4
Project ID: 07A3321-13, EA 21193U1

SAMPLE LOCATIONS
BR NO. 53-0670, RTE 10, PM
CITRUS STREET UC
WEST COVINA, CALIFORNIA

FIGURE: 2

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185831010	STA	JS	AP	10/28/14

FILEPATH:M:_00 OTHER OFFICES\04-REDLANDS\CAL-TRANS\ADL\TO-13A\FIG 3_VIA VERDE ACM SAMPLE LOCATIONS_10-30-2014.dwg|saguinaldo|Nov 06, 2014 at 10:20|Layout: 11X17 L (5)

LEGEND:

- • SAMPLE LOCATION
- • SAMPLES IN RED AND UNDERLINED TESTED POSITIVE FOR ASBESTOS
- ○ HANDRAIL POST
- 01 CONCRETE - BRIDGE RAILING
- 02 SHIM - HANDRAIL POST
- 03 CONCRETE - DECK
- 04 ASPHALT - DECK
- 05 JOINT SEAL - DECK LEVEL
- 06 CONCRETE - ABUTMENT WALLS
- 07 EXPANSION JOINT FELT - ABUTMENT SEAMS BELOW THE BRIDGE
- 08 DRAIN PIPE (WEEP HOLE)

N

0 40 80

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07-LA-10
PM 37.2/42.4
Project ID: 07A3321-13, EA 21193U1

ACM SAMPLE LOCATIONS
BR NO. 53-0671, RTE 10, PM
HOLT AVENUE UC
WEST COVINA, CALIFORNIA

FIGURE: 3

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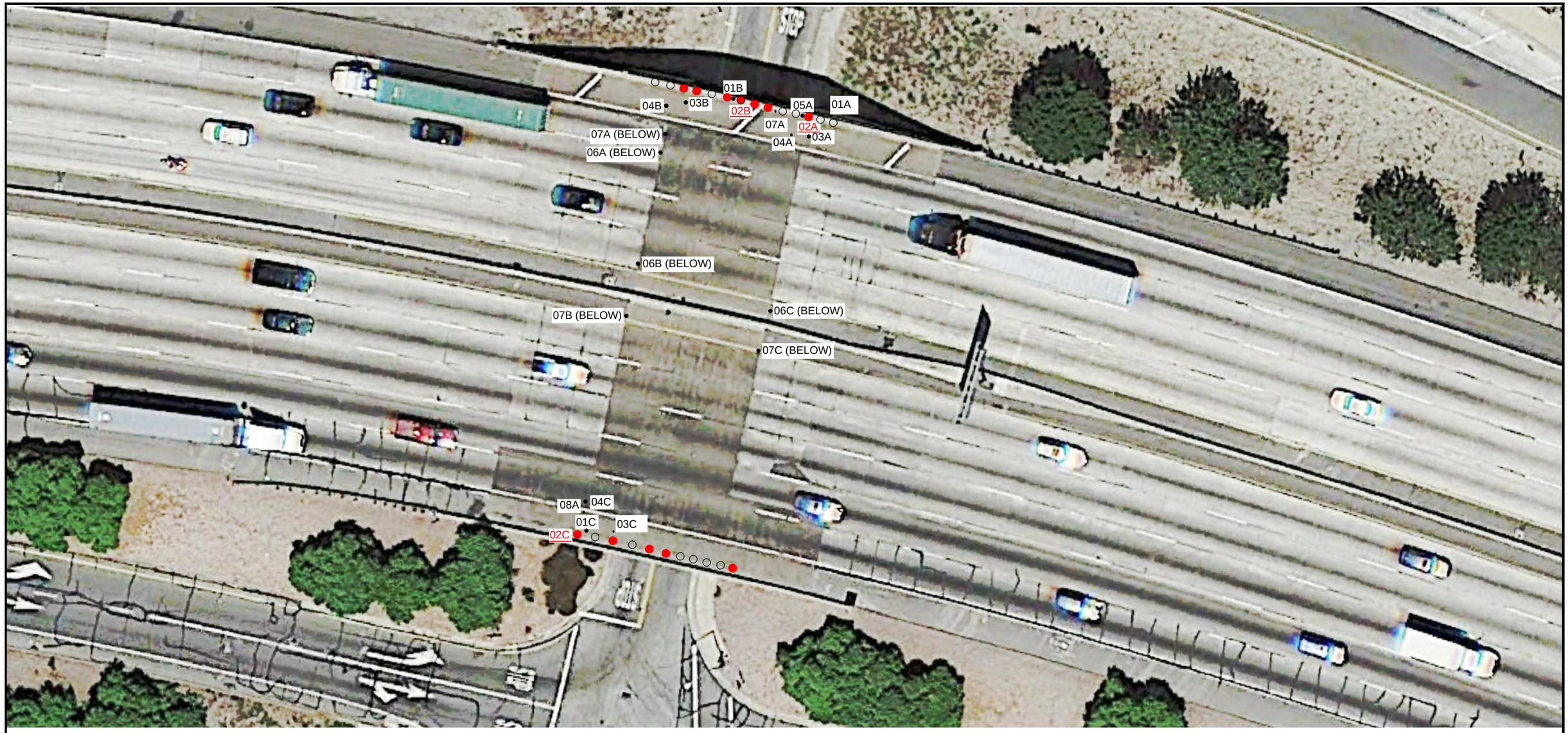
FILEPATH:M:_00 OTHER OFFICES\04-REDLANDS\CAL-TRANS\ADL\TO-13A\FIG 3_VIA VERDE ACM SAMPLE LOCATIONS_10-30-2014.dwg|saguinaldo|Nov 06, 2014 at 10:22|Layout: 11X17 L (3)



LEGEND:

- • SAMPLE LOCATION
- • SAMPLES IN RED AND UNDERLINED TESTED POSITIVE FOR ASBESTOS
- ○ HANDRAIL POST
- 01 CONCRETE - BRIDGE RAILING
- 02 SHIM - HANDRAIL POST
- 03 CONCRETE & PAINT/COATING - DECK
- 04 ASPHALT - DECK
- 05 EXPANSION JOINT FELT - BRIDGE RAILING SEAMS/JOINTS
- 06 EXPANSION JOINT FELT - ABUTMENT SEAMS BELOW THE BRIDGE
- 07 DRAIN PIPE (WEEP HOLE)
- 08 JOINT SEAL - DECK LEVEL

N

0 30 60

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PM 37.2/42.4
Project ID: 07A3321-13, EA 21193U1

SAMPLE LOCATIONS
BR NO. 53-0870, RTE 10, PM
VIA VERDE UC
COVINA, CALIFORNIA

FIGURE: 4

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
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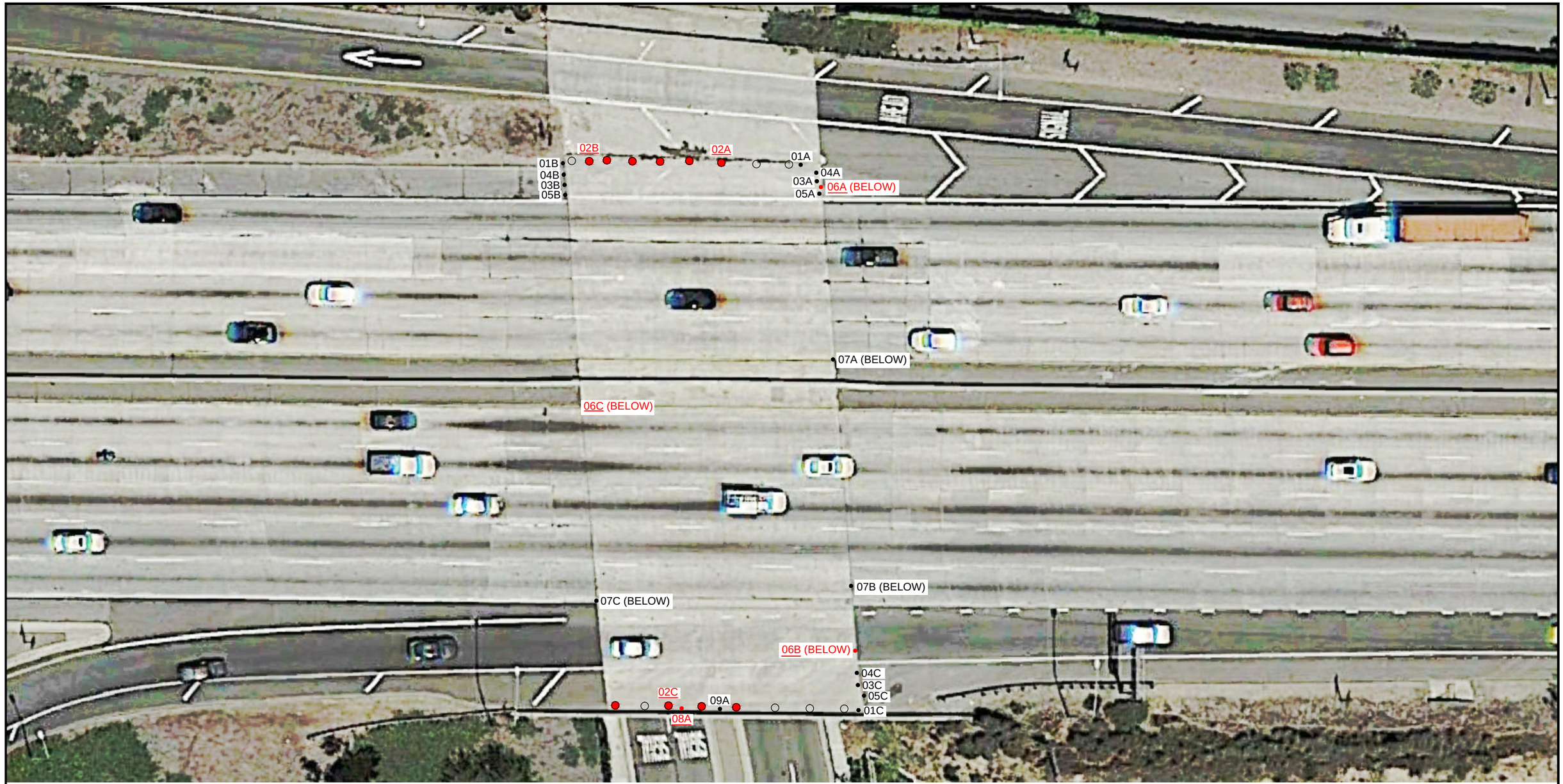
FILEPATH:M:_00 OTHER OFFICES\04-REDLANDS\CAL-TRANS\ADL\TO-13A\FIG 3_VIA VERDE ACM SAMPLE LOCATIONS_10-30-2014.dwg|saguinaldo|Nov 06, 2014 at 10:23|Layout: 11X17 L



LEGEND:

- • SAMPLE LOCATION
- • SAMPLES IN RED AND UNDERLINED TESTED POSITIVE FOR ASBESTOS
- ○ HANDRAIL POST
- 01 CONCRETE - BRIDGE RAILING
- 02 SHIM - HANDRAIL POST
- 03 CONCRETE - DECK
- 04 ASPHALT - DECK
- 05 JOINT SEAL - DECK LEVEL
- 06 DRAIN PIPE (WEEP HOLE)
- 07 EXPANSION JOINT FELT - BRIDGE RAILING SEAMS/JOINTS AND ABUTMENT SEAMS BELOW THE BRIDGE
- 08 ADHESIVE - HANDRAIL BOLT
- 09 ADHESIVE - BRIDGE REFLECTIVE MARKER

N

0 30 60

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07-LA-10
PM 37.2/42.4
Project ID: 07A3321-13, EA 21193U1

SAMPLE LOCATIONS
BR NO. 53-1528, RTE 10, PM
GRAND AVENUE UC
WEST COVINA, CALIFORNIA

FIGURE: 5

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
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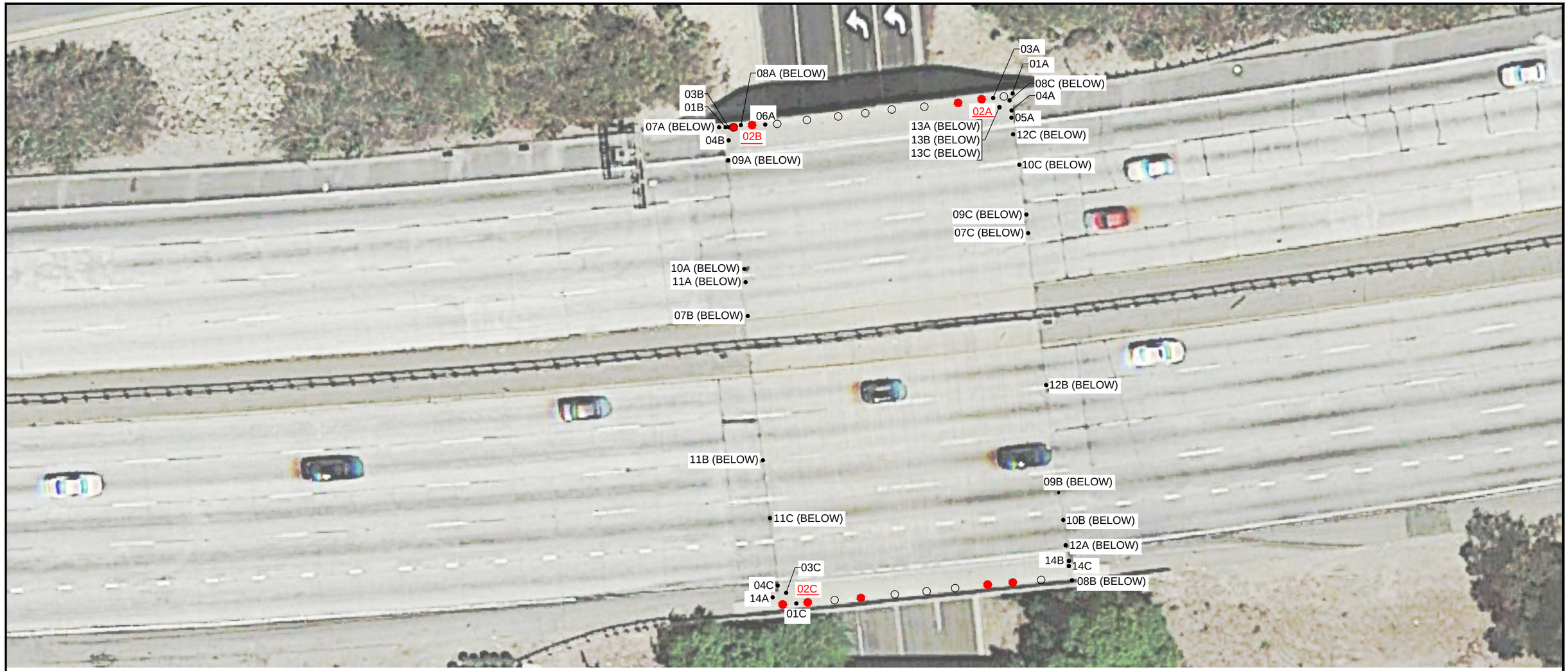
FILEPATH:M:_00 OTHER OFFICES\04-REDLANDS\CAL-TRANS\ADL\TO-13A\FIG 3_VIA VERDE ACM SAMPLE LOCATIONS_10-30-2014.dwg|saguinaldo|Nov 06, 2014 at 10:22|Layout: 11X17 L (4)



LEGEND:

- • SAMPLE LOCATION
- • SAMPLES IN RED AND UNDERLINED TESTED POSITIVE FOR ASBESTOS
- ○ HANDRAIL POST
- 01 CONCRETE - BRIDGE RAILING
- 02 SHIM - HANDRAIL POST
- 03 CONCRETE - DECK
- 04 ASPHALT - DECK
- 05 JOINT SEAL (FOAM-LIKE) - DECK LEVEL
- 06 ADHESIVE - BRIDGE REFLECTIVE MARKER
- 07 EXPANSION JOINT FELT - ABUTMENT SEAMS BELOW THE BRIDGE
- 08 EXPANSION JOINT FELT - ABUTMENT SEAMS BELOW THE BRIDGE
- 09 DRAIN PIPE (WEEP HOLE)
- 10 CONCRETE - ABUTMENT WALLS BELOW BRIDGE
- 11 CONCRETE - BELOW THE BRIDGE (WITH ROCK)
- 12 PRESSBOARD - ABUTMENT WALL JOINTS BELOW BRIDGE
- 13 PAPER - ABUTMENT WALL JOINTS BELOW BRIDGE
- 14 JOINT SEAL - DECK LEVEL

N

0 30 60

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State Route 10 Bridge Demolition
07-LA-10
PM 37.2/42.4
Project ID: 07A3321-13, EA 21193U1

SAMPLE LOCATIONS
BR NO. 53-2008, RTE 10, PM
KELLOGG DRIVE UC
POMONA, CALIFORNIA

FIGURE: 6

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
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FILEPATH:M:_00 OTHER OFFICES\04-REDLANDS\CAL-TRANS\ADL\TO-13A\FIG 2_KELLOGG ACM SAMPLE LOCATIONS_10-30-2014.dwg|saguinaldo|Nov 06, 2014 at 10:19|Layout: 11X17 L

LEGEND:

- • SAMPLE LOCATION

01 CONCRETE - ABUTMENT WALLS BELOW BRIDGE
02 PRESSBOARD - ABUTMENT WALL JOINTS BELOW BRIDGE
03 EXPANSION JOINT FELT - ABUTMENT SEAMS BELOW THE BRIDGE

N

0 10 20

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Asbestos Survey
State Route 10 Bridge Demolition
07-LA-10
PM37.2/42.4
Project ID: 07A3321-13, EA 21193U1

SAMPLE LOCATIONS
BR NO. 53-2008G, RTE 10, PM
E10-S57 & N57 CONNECTOR OC
POMONA, CALIFORNIA

FIGURE: 7

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185831010	STA	JS	AP	10/28/14

FILEPATH:M:_00 OTHER OFFICES\04-REDLANDS\CAL-TRANS\ADL\TO-13A\FIG 2_KELLOGG ACM SAMPLE LOCATIONS_10-30-2014.dwg|saguinaldo|Nov 06, 2014 at 10:19|Layout: 11X17 L (2)

TABLES

TABLE 1
ASBESTOS SAMPLE LOG AND ANALYSIS RESULTS
5 BRIDGES ALONG INTERSTATE 10/STATE ROUTE 57
LA-010-37.2 /42.4
LOS ANGELES COUNTY, CALIFORNIA
PN: 0713000007-1; EA#07-1193U1
TASK ORDER #13; CONTRACT 07A3321

FIELD SAMPLE ID	SAMPLE DATE	LABORATORY SAMPLE ID	SAMPLE LOCATION / MATERIAL LOCATION	MATERIAL DESCRIPTION	ANALYSIS RESULTS	CONDITION FRIABLE YES/NO	IF ACM, ESTIMATED SQUARE FOOTAGE
CITRUS ST UC - BRIDGE #53-0670							
01A	10/20/2014	0147822-001	BRIDGE RAILING / NE	CONCRETE, GRAY	ND	NO	--
01B	10/20/2014	0147822-002	BRIDGE RAILING / NW	CONCRETE, GRAY	ND	NO	--
01C	10/20/2014	0147822-003	BRIDGE RAILING / SE	CONCRETE, GRAY	ND	NO	--
02A	10/20/2014	0147822-004	HANDRAIL POSTS / NE	SHIM, GRAY/BEIGE	85% CHRYSOTILE	NO	5 sq. ft.
02B	10/20/2014	0147822-005	HANDRAIL POSTS / NW	SHIM, GRAY/BEIGE	85% CHRYSOTILE	NO	5 sq. ft.
02C	10/20/2014	0147822-006	HANDRAIL POSTS / SE	SHIM, BLACK/GRAY	65% CHRYSOTILE	NO	5 sq. ft.
03A	10/20/2014	0147822-007	DECK / NE	CONCRETE, GRAY	ND	NO	--
03B	10/20/2014	0147822-008	DECK / NW	CONCRETE, GRAY	ND	NO	--
03C	10/20/2014	0147822-009	DECK / E. CENTER	CONCRETE, GRAY	ND	NO	--
04A	10/20/2014	0147822-010	DECK / NE	ASPHALT, BLACK	ND	NO	--
04B	10/20/2014	0147822-011	DECK / NW	ASPHALT, BLACK	ND	NO	--
04C	10/20/2014	0147822-012	DECK / E. CENTER	ASPHALT, BLACK	ND	NO	--
05A	10/20/2014	0147822-013	DECK (JOINT SEAL AT DECK LEVEL) / NE	DECK SEALANT, BLACK	ND	NO	--
05B	10/20/2014	0147822-014	DECK (JOINT SEAL AT DECK LEVEL) / NW	DECK SEALANT, BLACK	ND	NO	--
05C	10/20/2014	0147822-015	DECK (JOINT SEAL AT DECK LEVEL) / E. CENTER	DECK SEALANT, BLACK	ND	NO	--
06A	10/20/2014	0147822-016	ABUTMENT SEAMS BELOW THE BRIDGE / NW	EXPANSION JOINT FELT, BROWN	ND	NO	--
06B	10/20/2014	0147822-017	ABUTMENT SEAMS BELOW THE BRIDGE / NE	EXPANSION JOINT FELT, BROWN	ND	NO	--
06C	10/20/2014	0147822-018	ABUTMENT SEAMS BELOW THE BRIDGE / SW	EXPANSION JOINT FELT, BEIGE/BLACK	ND	NO	--
07A	10/20/2014	0147822-019	WEEP HOLES ON ABUTMENT WALLS BELOW BRIDGE / NW CORNER	DRAIN PIPE (WEEP HOLE), BLACK/BROWN	ND	NO	--
07B	10/20/2014	0147822-020	WEEP HOLES ON ABUTMENT WALLS BELOW BRIDGE / NE CORNER	DRAIN PIPE (WEEP HOLE), BLACK/BROWN	ND	NO	--
07C	10/20/2014	0147822-021	WEEP HOLES ON ABUTMENT WALLS BELOW BRIDGE / SE CORNER	DRAIN PIPE (WEEP HOLE), BLACK/BROWN	ND	NO	--
08A	10/20/2014	0147822-022	WEEP HOLES ON ABUTMENT WALLS BELOW BRIDGE / NE	DRAIN PIPE (WEEP HOLE), CONCRETE, GRAY	ND	NO	--
08B	10/20/2014	0147822-023	WEEP HOLES ON ABUTMENT WALLS BELOW BRIDGE / NW	DRAIN PIPE (WEEP HOLE), CONCRETE, GRAY	ND	NO	--
08C	10/20/2014	0147822-024	WEEP HOLES ON ABUTMENT WALLS BELOW BRIDGE / SE	DRAIN PIPE (WEEP HOLE), CONCRETE, GRAY	ND	NO	--

TABLE 1
ASBESTOS SAMPLE LOG AND ANALYSIS RESULTS
5 BRIDGES ALONG INTERSTATE 10/STATE ROUTE 57
LA-010-37.2 /42.4
LOS ANGELES COUNTY, CALIFORNIA
PN: 0713000007-1; EA#07-1193U1
TASK ORDER #13; CONTRACT 07A3321

FIELD SAMPLE ID	SAMPLE DATE	LABORATORY SAMPLE ID	SAMPLE LOCATION / MATERIAL LOCATION	MATERIAL DESCRIPTION	ANALYSIS RESULTS	CONDITION FRIABLE YES/NO	IF ACM, ESTIMATED SQUARE FOOTAGE
HOLT AVENUE UC - BRIDGE #53-0671							
01A	10/20/2014	0147823-001	BRIDGE RAILING / NE	CONCRETE, GRAY/BEIGE	ND	NO	--
01B	10/20/2014	0147823-002	BRIDGE RAILING / NW	CONCRETE, GRAY/BEIGE	ND	NO	--
01C	10/20/2014	0147823-003	BRIDGE RAILING / SW	CONCRETE, GRAY/BEIGE	ND	NO	--
02A	10/20/2014	0147823-004	HANDRAIL POSTS / NE	SHIM, BEIGE/GRAY	80% CHRYSOTILE	NO	10 sq. ft.
02B	10/20/2014	0147823-005	HANDRAIL POSTS / NW	SHIM, BEIGE/GRAY	80% CHRYSOTILE	NO	10 sq. ft.
02C	10/20/2014	0147823-006	HANDRAIL POSTS / SE	SHIM, BLACK	80% CHRYSOTILE	NO	10 sq. ft.
03A	10/20/2014	0147823-007	DECK / NE	CONCRETE, GRAY/BEIGE	ND	NO	--
03B	10/20/2014	0147823-008	DECK / NW	CONCRETE, GRAY/BEIGE	ND	NO	--
03C	10/20/2014	0147823-009	DECK / SW	CONCRETE, GRAY/BEIGE	ND	NO	--
04A	10/20/2014	0147823-010	DECK / NE	ASPHALT, BLACK/GRAY	ND	NO	--
04B	10/20/2014	0147823-011	DECK / NW	ASPHALT, BLACK/GRAY	ND	NO	--
04C	10/20/2014	0147823-012	DECK / SW	ASPHALT, BLACK/GRAY	ND	NO	--
05A	10/20/2014	0147823-013	DECK (JOINT SEAL AT DECK LEVEL) / NE	DECK SEALANT, BLACK	ND	NO	--
05B	10/20/2014	0147823-014	DECK (JOINT SEAL AT DECK LEVEL) / NW	DECK SEALANT, BLACK	ND	NO	--
05C	10/20/2014	0147823-015	DECK (JOINT SEAL AT DECK LEVEL) / SW	DECK SEALANT, BLACK	ND	NO	--
06A	10/20/2014	0147823-016	ABUTMENT WALLS BELOW BRIDGE / NW	CONCRETE, GRAY/BEIGE	ND	NO	--
06B	10/20/2014	0147823-017	ABUTMENT WALLS BELOW BRIDGE / SW	CONCRETE, GRAY/BEIGE	ND	NO	--
06C	10/20/2014	0147823-018	ABUTMENT WALLS BELOW BRIDGE / NE	CONCRETE, GRAY/BEIGE	ND	NO	--
07A	10/20/2014	0147823-019	ABUTMENT SEAMS BELOW THE BRIDGE / NW	EXPANSION JOINT FELT, BROWN/BLACK	ND	NO	--
07B	10/20/2014	0147823-020	ABUTMENT SEAMS BELOW THE BRIDGE / SW	EXPANSION JOINT FELT, BROWN/BLACK	ND	NO	--
07C	10/20/2014	0147823-021	ABUTMENT SEAMS BELOW THE BRIDGE / NW	EXPANSION JOINT FELT, BROWN/BLACK	ND	NO	--
08A	10/20/2014	0147823-022	WEEP HOLES ON ABUTMENT WALLS BELOW BRIDGE / NW	DRAIN PIPE (WEEP HOLE), BLACK/BROWN	ND	NO	--
08B	10/20/2014	0147823-023	WEEP HOLES ON ABUTMENT WALLS BELOW BRIDGE / SW	DRAIN PIPE (WEEP HOLE), BLACK/BROWN	ND	NO	--
08C	10/20/2014	0147823-024	WEEP HOLES ON ABUTMENT WALLS BELOW BRIDGE / SE	DRAIN PIPE (WEEP HOLE), BLACK/BROWN	ND	NO	--

TABLE 1
ASBESTOS SAMPLE LOG AND ANALYSIS RESULTS
5 BRIDGES ALONG INTERSTATE 10/STATE ROUTE 57
LA-010-37.2 /42.4
LOS ANGELES COUNTY, CALIFORNIA
PN: 0713000007-1; EA#07-1193U1
TASK ORDER #13; CONTRACT 07A3321

FIELD SAMPLE ID	SAMPLE DATE	LABORATORY SAMPLE ID	SAMPLE LOCATION / MATERIAL LOCATION	MATERIAL DESCRIPTION	ANALYSIS RESULTS	CONDITION FRIABLE YES/NO	IF ACM, ESTIMATED SQUARE FOOTAGE
VIA VERDE UC - BRIDGE #53-0870							
01A	10/20/2014	0147824-001	BRIDGE RAILING / NE	CONCRETE, BEIGE/GRAY	ND	NO	--
01B	10/20/2014	0147824-002	BRIDGE RAILING / N. CENTER	CONCRETE, BEIGE/GRAY	ND	NO	--
01C	10/20/2014	0147824-003	BRIDGE RAILING / SW	CONCRETE, BEIGE/GRAY	ND	NO	--
02A	10/20/2014	0147824-004	HANDRAIL POSTS / NE	SHIM, BLACK/GRAY	60% CHRYSOTILE	NO	10 sq. ft.
02B	10/20/2014	0147824-005	HANDRAIL POSTS / N. CENTER	SHIM, BLACK/GRAY	60% CHRYSOTILE	NO	10 sq. ft.
02C	10/20/2014	0147824-006	HANDRAIL POSTS / SW	SHIM, BLACK/GRAY	60% CHRYSOTILE	NO	10 sq. ft.
03A	10/20/2014	0147824-007	DECK / NE	LAYER 1 CONCRETE, BEIGE/TAN	ND	NO	--
				LAYER 2 PAINT/COATING, BLACK	ND	NO	--
03B	10/20/2014	0147824-008	DECK / NW	LAYER 1 CONCRETE, BEIGE/TAN	ND	NO	--
				LAYER 2 PAINT/COATING, BLACK	ND	NO	--
03C	10/20/2014	0147824-009	DECK / SW	CONCRETE, BEIGE/TAN	ND	NO	--
04A	10/20/2014	0147824-010	DECK / NE	ASPHALT, BLACK	ND	NO	--
04B	10/20/2014	0147824-011	DECK / NW	ASPHALT, BLACK	ND	NO	--
04C	10/20/2014	0147824-012	DECK / SW	ASPHALT, BLACK	ND	NO	--
05A	10/20/2014	0147824-013	BRIDGE RAILING SEAMS/JOINTS / NE	EXPANSION JOINT FELT, BLACK	ND	NO	--
06A	10/20/2014	0147824-014	ABUTMENT SEAMS BELOW THE BRIDGE / NW	EXPANSION JOINT FELT, BLACK	ND	NO	--
06B	10/20/2014	0147824-015	ABUTMENT SEAMS BELOW THE BRIDGE / W. CENTER	EXPANSION JOINT FELT, BLACK	ND	NO	--
06C	10/20/2014	0147824-016	ABUTMENT SEAMS BELOW THE BRIDGE / E. CENTER	EXPANSION JOINT FELT, BLACK	ND	NO	--
07A	10/20/2014	0147824-017	WEEP HOLES ON ABUTMENT WALLS BELOW BRIDGE / NW	DRAIN PIPE (WEEP HOLE), BLACK/GRAY	ND	NO	--
07B	10/20/2014	0147824-018	WEEP HOLES ON ABUTMENT WALLS BELOW BRIDGE / W. CENTER	DRAIN PIPE (WEEP HOLE), BLACK/GRAY	ND	NO	--
07C	10/20/2014	0147824-019	WEEP HOLES ON ABUTMENT WALLS BELOW BRIDGE / E. CENTER	DRAIN PIPE (WEEP HOLE), BLACK/GRAY	ND	NO	--
08A	10/20/2014	0147824-020	DECK (JOINT SEAL AT DECK LEVEL) / SW	DECK SEALANT, BLACK	ND	NO	--

TABLE 1
ASBESTOS SAMPLE LOG AND ANALYSIS RESULTS
5 BRIDGES ALONG INTERSTATE 10/STATE ROUTE 57
LA-010-37.2 /42.4
LOS ANGELES COUNTY, CALIFORNIA
PN: 0713000007-1; EA#07-1193U1
TASK ORDER #13; CONTRACT 07A3321

FIELD SAMPLE ID	SAMPLE DATE	LABORATORY SAMPLE ID	SAMPLE LOCATION / MATERIAL LOCATION	MATERIAL DESCRIPTION	ANALYSIS RESULTS	CONDITION FRIABLE YES/NO	IF ACM, ESTIMATED SQUARE FOOTAGE
GRAND AVENUE UC - BRIDGE #53-1528							
01A	10/20/2014	0147825-001	BRIDGE RAILING / NE	CONCRETE, GRAY	ND	NO	--
01B	10/20/2014	0147825-002	BRIDGE RAILING / NW	CONCRETE, GRAY	ND	NO	--
01C	10/20/2014	0147825-003	BRIDGE RAILING / SE	CONCRETE, GRAY	ND	NO	--
02A	10/20/2014	0147825-004	HANDRAIL POSTS / NE	SHIM, GRAY/ORANGE	85% CHRYSOTILE	NO	10 sq. ft.
02B	10/20/2014	0147825-005	HANDRAIL POSTS / NW	SHIM, GRAY/ORANGE	85% CHRYSOTILE	NO	10 sq. ft.
02C	10/20/2014	0147825-006	HANDRAIL POSTS / S. CENTER	SHIM, GRAY	85% CHRYSOTILE	NO	10 sq. ft.
03A	10/20/2014	0147825-007	DECK / NE	CONCRETE, GRAY	ND	NO	--
03B	10/20/2014	0147825-008	DECK / NW	CONCRETE, GRAY	ND	NO	--
03C	10/20/2014	0147825-009	DECK / SE	CONCRETE, GRAY	ND	NO	--
04A	10/20/2014	0147825-010	DECK / NE	ASPHALT, BLACK	ND	NO	--
04B	10/20/2014	0147825-011	DECK / NW	ASPHALT, BLACK	ND	NO	--
04C	10/20/2014	0147825-012	DECK / SE	ASPHALT, BLACK	ND	NO	--
05A	10/20/2014	0147825-013	DECK (JOINT SEAL AT DECK LEVEL) / NE	DECK SEALANT, BLACK	ND	NO	--
05B	10/20/2014	0147825-014	DECK (JOINT SEAL AT DECK LEVEL) / NW	DECK SEALANT, BLACK	ND	NO	--
05C	10/20/2014	0147825-015	DECK (JOINT SEAL AT DECK LEVEL) / SE	DECK SEALANT, BLACK	ND	NO	--
06A	10/20/2014	0147825-016	WEEP HOLES ON ABUTMENT WALLS BELOW BRIDGE / NE	DRAIN PIPE (WEEP HOLE), GRAY	8% CHRYSOTILE 7% CROCIDOLITE	NO	UNKNOWN
06B	10/20/2014	0147825-017	WEEP HOLES ON ABUTMENT WALLS BELOW BRIDGE / SE	DRAIN PIPE (WEEP HOLE), GRAY	8% CHRYSOTILE 7% CROCIDOLITE	NO	UNKNOWN
06C	10/20/2014	0147825-018	WEEP HOLES ON ABUTMENT WALLS BELOW BRIDGE / W. CENTER	DRAIN PIPE (WEEP HOLE), GRAY	8% CHRYSOTILE 7% CROCIDOLITE	NO	UNKNOWN
07A	10/20/2014	0147825-019	BRIDGE RAILING SEAMS/JOINTS AND ABUTMENT SEAMS BELOW THE BRIDGE / E. CENTER (BELOW BRIDGE)	EXPANSION JOINT FELT, BROWN	ND	NO	--
07B	10/20/2014	0147825-020	BRIDGE RAILING SEAMS/JOINTS AND ABUTMENT SEAMS BELOW THE BRIDGE / SE (BELOW BRIDGE)	EXPANSION JOINT FELT, BROWN	ND	NO	--
07C	10/20/2014	0147825-021	BRIDGE RAILING SEAMS/JOINTS AND ABUTMENT SEAMS BELOW THE BRIDGE / SW (BELOW BRIDGE)	EXPANSION JOINT FELT, BROWN	ND	NO	--
08A	10/20/2014	0147825-022	HANDRAIL BOLTS / S. CENTER	HANDRAIL BOLT ADHESIVE, GRAY	3% CHRYSOTILE	NO	<2 sq. ft.
09A	10/20/2014	0147825-023	BRIDGE RAILING / S. CENTER	BRIDGE REFLECTIVE MARKER ADHESIVE, GRAY	ND	NO	--

TABLE 1
ASBESTOS SAMPLE LOG AND ANALYSIS RESULTS
5 BRIDGES ALONG INTERSTATE 10/STATE ROUTE 57
LA-010-37.2 /42.4
LOS ANGELES COUNTY, CALIFORNIA
PN: 0713000007-1; EA#07-1193U1
TASK ORDER #13; CONTRACT 07A3321

FIELD SAMPLE ID	SAMPLE DATE	LABORATORY SAMPLE ID	SAMPLE LOCATION / MATERIAL LOCATION	MATERIAL DESCRIPTION	ANALYSIS RESULTS	CONDITION FRIABLE YES/NO	IF ACM, ESTIMATED SQUARE FOOTAGE
KELLOGG DR UC - BRIDGE #53-2008							
01A	10/20/2014	0147826-001	BRIDGE RAILING / NE	CONCRETE, GRAY	ND	NO	--
01B	10/20/2014	0147826-002	BRIDGE RAILING / NW	CONCRETE, GRAY	ND	NO	--
01C	10/20/2014	0147826-003	BRIDGE RAILING / SW	CONCRETE, GRAY	ND	NO	--
02A	10/20/2014	0147826-004	HANDRAIL POSTS / NE	SHIM, BLACK	65% CHRYSOTILE	NO	10 sq. ft.
02B	10/20/2014	0147826-005	HANDRAIL POSTS / N. CENTER	SHIM, BLACK	65% CHRYSOTILE	NO	10 sq. ft.
02C	10/20/2014	0147826-006	HANDRAIL POSTS / SW	SHIM, BLACK	65% CHRYSOTILE	NO	10 sq. ft.
03A	10/20/2014	0147826-007	DECK / NE	CONCRETE, GRAY	ND	NO	--
03B	10/20/2014	0147826-008	DECK / NW	CONCRETE, GRAY	ND	NO	--
03C	10/20/2014	0147826-009	DECK / SW	CONCRETE, GRAY	ND	NO	--
04A	10/20/2014	0147826-010	DECK / NE	ASPHALT, BLACK	ND	NO	--
04B	10/20/2014	0147826-011	DECK / NW	ASPHALT, BLACK	ND	NO	--
04C	10/20/2014	0147826-012	DECK / SW	ASPHALT, BLACK	ND	NO	--
05A	10/20/2014	0147826-013	DECK (JOINT SEAL AT DECK LEVEL)/ NE	DECK SEALANT (FOAM-LIKE), GRAY	ND	NO	--
06A	10/20/2014	0147826-014	BRIDGE RAILING / NW	BRIDGE REFLECTIVE MARKER ADHESIVE, GRAY	ND	NO	--
07A	10/20/2014	0147826-015	ABUTMENT SEAMS BELOW THE BRIDGE / NW	LAYER 1 EXPANSION JOINT FELT, BLACK	ND	NO	--
				LAYER 2 EXPANSION JOINT FELT, GRAY	ND	NO	--
07B	10/20/2014	0147826-016	ABUTMENT SEAMS BELOW THE BRIDGE / W. CENTER	EXPANSION JOINT FELT, BLACK	ND	NO	--
07C	10/20/2014	0147826-017	ABUTMENT SEAMS BELOW THE BRIDGE / NE	EXPANSION JOINT FELT, BROWN/GRAY	ND	NO	--
08A	10/20/2014	0147826-018	ABUTMENT SEAMS BELOW THE BRIDGE / NW	EXPANSION JOINT FELT, BROWN/GRAY	ND	NO	--
08B	10/20/2014	0147826-019	ABUTMENT SEAMS BELOW THE BRIDGE / SE	EXPANSION JOINT FELT, BROWN/GRAY	ND	NO	--
08C	10/20/2014	0147826-020	ABUTMENT SEAMS BELOW THE BRIDGE / NE	EXPANSION JOINT FELT, BROWN/GRAY	ND	NO	--
09A	10/20/2014	0147826-021	SAMPLE NOT IN BAG				
09B	10/20/2014	0147826-022	WEEP HOLES ON ABUTMENT WALLS BELOW BRIDGE / SE	DRAIN PIPE (WEEP HOLE), GRAY	ND	NO	--
09C	10/20/2014	0147826-023	WEEP HOLES ON ABUTMENT WALLS BELOW BRIDGE / NE	DRAIN PIPE (WEEP HOLE), GRAY	ND	NO	--
10A	10/20/2014	0147826-024	ABUTMENT WALLS BELOW BRIDGE / NW	CONCRETE, GRAY	ND	NO	--
10B	10/20/2014	0147826-025	ABUTMENT WALLS BELOW BRIDGE / SE	CONCRETE, GRAY	ND	NO	--
10C	10/20/2014	0147826-026	ABUTMENT WALLS BELOW BRIDGE / NE	CONCRETE, GRAY	ND	NO	--
11A	10/20/2014	0147826-027	ABUTMENT WALLS BELOW BRIDGE / NW	CONCRETE, GRAY	ND	NO	--
11B	10/20/2014	0147826-028	ABUTMENT WALLS BELOW BRIDGE / SW	CONCRETE, GRAY	ND	NO	--
11C	10/20/2014	0147826-029	ABUTMENT WALLS BELOW BRIDGE / SW	CONCRETE, GRAY	ND	NO	--
12A	10/20/2014	0147826-030	ABUTMENT WALL JOINTS BELOW BRIDGE / SE	PRESSBOARD, BROWN	ND	NO	--
12B	10/20/2014	0147826-031	ABUTMENT WALL JOINTS BELOW BRIDGE / E. CENTER	PRESSBOARD, BROWN	ND	NO	--
12C	10/20/2014	0147826-032	ABUTMENT WALL JOINTS BELOW BRIDGE / NE	PRESSBOARD, BROWN	ND	NO	--
13A	10/20/2014	0147826-033	ABUTMENT WALL JOINTS BELOW BRIDGE / NE	LAYER 1 PAPER, WHITE	ND	NO	--
				LAYER 2 PAPER, WHITE/BLACK	ND	NO	--
13B	10/20/2014	0147826-034	ABUTMENT WALL JOINTS BELOW BRIDGE / NE	LAYER 1 PAPER, WHITE	ND	NO	--
				LAYER 2 PAPER, WHITE/BLACK	ND	NO	--
13C	10/20/2014	0147826-035	ABUTMENT WALL JOINTS BELOW BRIDGE / NE	LAYER 1 PAPER, WHITE	ND	NO	--
				LAYER 2 PAPER, WHITE/BLACK	ND	NO	--
14A	10/20/2014	0147826-036	DECK (JOINT SEAL AT DECK LEVEL) / SW	DECK SEALANT, BLACK	ND	NO	--
14B	10/20/2014	0147826-037	DECK (JOINT SEAL AT DECK LEVEL) / SE	DECK SEALANT, BLACK	ND	NO	--
14C	10/20/2014	0147826-038	DECK (JOINT SEAL AT DECK LEVEL) / SE	DECK SEALANT, BLACK	ND	NO	--

TABLE 1
ASBESTOS SAMPLE LOG AND ANALYSIS RESULTS
5 BRIDGES ALONG INTERSTATE 10/STATE ROUTE 57
LA-010-37.2 /42.4
LOS ANGELES COUNTY, CALIFORNIA
PN: 0713000007-1; EA#07-1193U1
TASK ORDER #13; CONTRACT 07A3321

FIELD SAMPLE ID	SAMPLE DATE	LABORATORY SAMPLE ID	SAMPLE LOCATION / MATERIAL LOCATION	MATERIAL DESCRIPTION	ANALYSIS RESULTS	CONDITION FRIABLE YES/NO	IF ACM, ESTIMATED SQUARE FOOTAGE
KELLOGG DR OFF RAMP E10-S57 & N57 CONNECTOR OC- BRIDGE #53-2008G							
01A	10/20/2014	0147827-001	ABUTMENT WALLS BELOW BRIDGE / W. CENTER	LAYER 1 CONCRETE, GRAY	ND	NO	--
				LAYER 2 PAINT/COATING, GRAY/WHITE	ND	NO	--
01B	10/20/2014	0147827-002	ABUTMENT WALLS BELOW BRIDGE / E. CENTER	CONCRETE, GRAY	ND	NO	--
01C	10/20/2014	0147827-003	ABUTMENT WALLS BELOW BRIDGE / NE	CONCRETE, GRAY	ND	NO	--
02A	10/20/2014	0147827-004	ABUTMENT WALL JOINTS BELOW BRIDGE / W. CENTER	LAYER 1 PRESSBOARD, TAN	ND	NO	--
				LAYER 2 PAINT/COATING, GRAY	ND	NO	--
02B	10/20/2014	0147827-005	ABUTMENT WALL JOINTS BELOW BRIDGE / E. CENTER	PRESSBOARD, TAN/GRAY	ND	NO	--
02C	10/20/2014	0147827-006	ABUTMENT WALL JOINTS BELOW BRIDGE / E. CENTER	PRESSBOARD, TAN/GRAY	ND	NO	--
03A	10/20/2014	0147827-007	ABUTMENT SEAMS BELOW THE BRIDGE / NW	EXPANSION JOINT FELT, DK. BROWN	ND	NO	--
03B	10/20/2014	0147827-008	ABUTMENT SEAMS BELOW THE BRIDGE / SW	EXPANSION JOINT FELT, DK. BROWN	ND	NO	--
03C	10/20/2014	0147827-009	ABUTMENT SEAMS BELOW THE BRIDGE / NE	EXPANSION JOINT FELT, DK. BROWN	ND	NO	--
--	--	--	BELOW HANDRAIL POSTS	SHIM, GRAY	ASSUMED ACM	NO	10 sq.ft.

NOTES:

ND = No asbestos detected.

Asbestos sample locations are depicted on attached Figures.

Bulk sample analyses completed by polarized light microscopy (PLM).

NA = Not applicable since no asbestos was detected

Analytical documentation is in Appendix C

The laboratory provides a unique description of the sampled material based upon their observations under a microscope or interpretation of the chain of custody.
For an accurate description of the materials sampled, please refer to the field sample logs included in Appendix C.

TABLE 2
ACM INSPECTION AND SAMPLING SUMMARY
5 BRIDGES ALONG INTERSTATE 10/STATE ROUTE 57
LA-010-37.2 /42.4
LOS ANGELES COUNTY, CALIFORNIA
PN: 0713000007-1; EA#07-1193U1
TASK ORDER #13; CONTRACT 07A3321

ACM INSPECTION AND SAMPLING SUMMARY - EA#07-1193U1														
BRIDGE ID		BRIDGE MATERIAL												
					Adhesives			Sealants		Expansion Joint Felt				
Bridge name	Bridge Number	Shims (Below Handrail Posts)	Concrete	Asphalt	Handrail Bolts	Deck Reflectors	Bridge Reflective Marker	Deck (Joint Seal at Deck Level)	Weep Hole/Drain Piping	Bridge Railing Seams/Joints	Abutment Seams (Below the Bridge)	Pressboard (Abutment Wall Joints Below Bridge)	Paper (Abutment Wall Joints Below Bridge)	Paint / Coating*
Citrus Street UC	53-0670	**3**	6	3	D	B	D	3[A]	6[A]	D	3	C	C	D
Holt Avenue UC	53-0671	**3**	9	3	D	B	D	3[A]	3[A]	D	3	C	C	D
Via Verde UC	53-0870	**3**	6	3	D	B	D	1[A]	3[A]	1	3	C	C	2
Grand Avenue UC	53-1528	**3**	6	3	1	B	1	3[A]	**3[A]**	F	3	C	C	D
Kellogg Drive UC	53-2008	**3**	12	3	D	B	1	4[E]	2[A]	D	7	3	6	D
Kellogg Drive E10-S57 & N57 Connector OC	53-2008G	C, G	3	C	C	B	C	C	C	C	3	3	C	2

NOTES:

Number indicates the number of samples of that material collected.

Gray shaded indicates at least one of the samples reported a positive ACM result.

A - In addition to the sampled materials, other similar materials were observed but could not be sampled due to access constraints. On bridges where weep hole/drain piping is located on the undersides of bridge decks, materials associated with the weep holes/drain piping were inaccessible due to height considerations and vehicle traffic.

B - Material was observed, but not sampled due to access constraints.

C - Due to access constraints the existence or absence of this material cannot be verified.

D - Looked for, but not observed to exist.

E - Joint seal sample #05A appeared to be foam-like.

F - Sample was observed to be homogeneous with the already sampled expansion joint felt material. Sufficient representative samples collected.

G - Inaccessible, but assumed to be ACM based on similar material sampled on accessible hand rails.

Access will need to be provided to sample and characterize suspect ACMs indicated with an A, B, or C.

* Laboratory noted layer - material indirectly sampled

APPENDIX A
PHOTOGRAPHIC RECORD

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: Calif. Department of Transportation, District 7	**Job Number:** 185831013
Site Name: Task Order #13 – Interstate 10 Bridges	**Location:** West Covina/Pomona, CA
Photographer: Jason Stagno	**Date:** October 20, 2014

Photograph No. 1

Citrus Street UC bridge no. 53-0670: View of bridge deck and sign.

Photograph No. 2

Citrus Street UC bridge no. 53-0670: View of bridge deck and guardrails with leveling shims (ACM – see red arrow)

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: Calif. Department of Transportation, District 7	**Job Number:** 185831013
Site Name: Task Order #13 – Interstate 10 Bridges	**Location:** Covina, CA
Photographer: Jason Stagno	**Date:** October 20, 2014

Photograph No. 3

Holt Avenue UC bridge no. 53-0671: View of bridge deck and sign. Guardrail leveling shims are ACM.

Photograph No. 4

Via Verde UC bridge no. 53-0870: View of bridge deck and guardrails. Guardrail leveling shims are ACM.

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: Calif. Department of Transportation, District 7	**Job Number:** 185831013
Site Name: Task Order #13 – Interstate 10 Bridges	**Location:** West Covina/Pomona, CA
Photographer: Jason Stagno	**Date:** October 20, 2014

Photograph No. 5

Grand Avenue UC bridge no. 53-1528: View of bridge deck and sign. Guardrail leveling shims are ACM.

Photograph No. 6

Kellogg Drive UC bridge no. 53-2008: View of bridge deck and sign.

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: Calif. Department of Transportation, District 7	**Job Number:** 185831013
Site Name: Task Order #13 – Interstate 10 Bridges	**Location:** West Covina/Pomona, CA
Photographer: Jason Stagno	**Date:** October 20, 2014

Photograph No. 7

Kellogg Drive UC bridge no. 53-2008: View of guardrails with leveling shims (ACM – see red arrow).

Photograph No. 8

Kellogg Drive UC bridge no. 53-2008: View from underside of the bridge at the abutment.

STANTEC CONSULTING SERVICES INC PHOTOGRAPHIC RECORD	
Client: Calif. Department of Transportation, District 7	**Job Number:** 185831013
Site Name: Task Order #13 – Interstate 10 Bridges	**Location:** Pomona, CA
Photographer: Jason Stagno	**Date:** October 20, 2014

Photograph No. 9

Kellogg Drive, E10 –S57 & N57 Connector OC bridge no. 53-2008G: View of bridge deck facing southeast.

Photograph No. 10

Kellogg Drive, E10 –S57 & N57 Connector OC bridge no. 53-2008G: View of underside of bridge.

APPENDIX B
QUALIFICATIONS

STATE OF CALIFORNIA
Edmund G. Brown, Jr. *Governor*

DEPARTMENT OF INDUSTRIAL RELATIONS
Division of Occupational Safety and Health
Asbestos Unit
2424 Arden Way, Suite 495
Sacramento, CA 95825-2417
(916) 574-2993 Office (916) 483-0572 Fax
http://www.dir.ca.gov/dirdatabases.html actu@dir.ca.gov

209214949C **368**

October 24, 2014

Jason J Stagno

Dear Certified Asbestos Consultant or Technician:

Enclosed is your certification card. **To maintain your certification, you must abide by the rules printed on the back of the certification card.**

Your certification is valid for a period of one year. If you wish to renew your certification, you must apply for renewal at least 60 days before the expiration date shown on your card. [8 CCR 341.15(h)(1)].

Please hold and do not send copies of your required AHERA refresher renewal certificates to our office until you apply for renewal of your certification.

Certificates must be kept current if you are actively working as a CAC or CSST. The grace period is only for those who are not actively working as an asbestos consultant or site surveillance technician.

Please contact our office at the above address, fax number or email; of any changes in your contact/mailing information within 15 days of the change.

Sincerely,

Jeff Ferrell
Senior Safety Engineer

Attachment: Certification Card

cc: File

Renewal – Card Attached (Revised 10/24/2012)

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101926-0

EMC Labs, Inc.

Phoenix, AZ

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

BULK ASBESTOS FIBER ANALYSIS

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2014-07-01 through 2015-06-30

Effective dates

DEPARTMENT OF COMMERCE ★ UNITED STATES OF AMERICA ★

For the National Institute of Standards and Technology

AIHA Laboratory Accreditation Programs, LLC

acknowledges that

EMC Labs, Inc.

9830 S. 51st Street, Suite B-109, Phoenix, AZ 85044-5671

Laboratory ID: 101586

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC accreditation to the ISO/IEC 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories in t*he following:

LABORATORY ACCREDITATION PROGRAMS

✓	**INDUSTRIAL HYGIENE**	Accreditation Expires: 09/01/2015
✓	**ENVIRONMENTAL LEAD**	Accreditation Expires: 09/01/2015
✓	**ENVIRONMENTAL MICROBIOLOGY**	Accreditation Expires: 09/01/2015
☐	**FOOD**	Accreditation Expires:
☐	**UNIQUE SCOPES**	Accreditation Expires:

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached **Scope of Accreditation**. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2005 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

Larry S. Pierce
Chairperson, Analytical Accreditation Board

Cheryl O. Morton
Managing Director, AIHA Laboratory Accreditation Programs, LLC

Revision 13: 03/12/2013

Date Issued: 10/31/2013

AIHA Laboratory Accreditation Programs, LLC
SCOPE OF ACCREDITATION

EMC Labs, Inc.
9830 S. 51st Street, Suite B-109, Phoenix, AZ 85044-5671

Laboratory ID: **101586**
Issue Date: 10/31/2013

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Industrial Hygiene Laboratory Accreditation Program (IHLAP)

Initial Accreditation Date: 06/01/1995

IHLAP Scope Category	Field of Testing (FoT)	Technology sub-type/ Detector	Published Reference Method/Title of In-house Method	Method Description or Analyte (*for internal methods only*)
Asbestos/Fiber Microscopy Core	**Phase Contrast Microscopy (PCM)**		NIOSH 7400	

A complete listing of currently accredited Industrial Hygiene laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org

AIHA Laboratory Accreditation Programs, LLC
SCOPE OF ACCREDITATION

EMC Labs, Inc.
9830 S. 51st Street, Suite B-109, Phoenix, AZ 85044-5671

Laboratory ID: **101586**
Issue Date: 10/31/2013

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

The EPA recognizes the AIHA-LAP, LLC ELLAP program as meeting the requirements of the National Lead Laboratory Accreditation Program (NLLAP) established under Title X of the Residential Lead-Based Paint Hazard Reduction Act of 1992 and includes paint, soil and dust wipe analysis. Air analysis is not included as part of the NLLAP.

Environmental Lead Laboratory Accreditation Program (ELLAP)

Initial Accreditation Date: 11/04/1996

Field of Testing (FoT)	Method	Method Description *(for internal methods only)*
Paint	EPA SW-846 3050B	
	EPA SW-846 7420	
Soil	EPA SW-846 3050B	
	EPA SW-846 7420	
Settled Dust by Wipe	EPA SW-846 3050B	
	EPA SW-846 7420	
Airborne Dust	NIOSH 7082	

A complete listing of currently accredited Environmental Lead laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org

AIHA Laboratory Accreditation Programs, LLC
SCOPE OF ACCREDITATION

EMC Labs, Inc.
9830 S. 51st Street, Suite B-109, Phoenix, AZ 85044-5671

Laboratory ID: **101586**
Issue Date: 10/31/2013

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Environmental Microbiology Laboratory Accreditation Program (EMLAP)

Initial Accreditation Date: 10/01/2006

EMLAP Category	Field of Testing (FoT)	Method	Method Description (*for internal methods only*)
Fungal	Air - Direct Examination	ASTM D7391	
		EMC Method #EM01/1: In-House Analysis of Spore Traps	
	Bulk - Direct Examination	ASTM D7391	
		EMC Method #EM01/2	
	Surface - Direct Examination	ASTM D7391	
		EMC Method #EM01/3	

A complete listing of currently accredited Environmental Microbiology laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org

NVLAP® National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

EMC Labs, Inc.
9830 S. 51st St. Suite B-109
Phoenix, AZ 85044-5677
Mr. Kurt A. Kettler
Phone: 480-940-5294 Fax: 480-893-1726
E-Mail: kkettler@earthlink.net
URL: http://www.emclabs.com

BULK ASBESTOS FIBER ANALYSIS (PLM) **NVLAP LAB CODE 101926-0**

NVLAP Code	*Designation / Description*
18/A01	EPA 600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

2014-07-01 through 2015-06-30
Effective dates

For the National Institute of Standards and Technology

CALIFORNIA DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Accredited Fields of Testing

EMC Labs, Inc.
Environmental Lead & Bulk Materials Laboratory
9830 South 51st Street - Suite B-109
Phoenix, AZ 85044
Phone: (480) 940-5294

Certificate No.: 2512
Renew Date: 8/31/2014

Field of Testing: 114 - Inorganic Chemistry of Hazardous Waste

114.130	001	Lead	EPA 7420

Field of Testing: 121 - Bulk Asbestos Analysis of Hazardous Waste

121.010	001	Bulk Asbestos	EPA 600/M4-82-020

As of 9/6/2012 , this list supersedes all previous lists for this certificate number.
Customers: Please verify the current accreditation standing with the State.

APPENDIX C
ANALYTICAL LABORATORY REPORTS AND CHAIN-OF-CUSTODY RECORDS

Stantec Consulting Services Inc.
25864-F Business Center Drive, Redlands CA 92374-4515

File: 07A3321_13 – Bridge Terminology

Reference: Bridge Material Location Terminology Correlations for 07A3321_13 EA: 07-1193U1

The bridge material descriptions presented in this report are consistent with California Department of Transportation terminology. The bridge material descriptions presented in Appendix C and Appendix D of this 07-1193U1 report follow a previous format and differ from the California Department of Transportation terminology. The correlation between the terms is as follows:

Caltrans Terminology (as shown in Table 2)	**Corresponding 07-1193U1 Appendix C and Appendix D Terminology**
Shims below Handrail Posts	Shims below Guardrail Posts
Bridge Railing	Guardrails
Bridge Reflective Marker	Guardrail Reflector
Bridge Railing Joints	Guardrail Joints
Joint Seal	Deck Sealant

EMC LABS, INC.

9830 S. 51st Street, Suite B109, Phoenix, AZ 85044
Phone: 800-362-3373 or 480-940-5294 - Fax: (480) 893-1726

Laboratory Report
0147822

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	STANTEC CONSULTING	Job# / P.O. #:	185831013. 200
Address:	290 CONEJO RIDGE AVE	Date Received:	10/22/2014
	THOUSAND OAKS CA 91361	Date Analyzed:	10/27/2014
Collected:	10/20/2014	Date Reported:	10/27/2014
Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#53-670 CITRUS ST, UC	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID / Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type	(%)	Non-Asbestos Constituents	
0147822-001 01A	ASSOC. W/GUARDRAIL-NE	Concrete, Gray	No	None Detected		Quartz Gypsum Mica Carbonates Binder/Filler	100%
0147822-002 01B	ASSOC. W/GUARDRAIL-NW	Concrete, Gray	No	None Detected		Cellulose Fiber Quartz Gypsum Mica Carbonates Binder/Filler	<1% 99%
0147822-003 01C	ASSOC. W/GUARDRAIL-SE	Concrete, Gray	No	None Detected		Quartz Carbonates Gypsum Mica Binder/Filler	100%
0147822-004 02A	ASSOC. W/GUARDRAIL-NE	Shim, Gray/ Beige	Yes	Chrysotile	85%	Carbonates Quartz Binder/Filler	15%
0147822-005 02B	ASSOC. W/GUARDRAIL-NW	Shim, Gray/ Beige	Yes	Chrysotile	85%	Carbonates Quartz Binder/Filler	15%
0147822-006 02C	ASSOC. W/GUARDRAIL-SE	Shim, Black/ Gray	Yes	Chrysotile	65%	Gypsum Quartz Binder/Filler	35%

EMC LABS, INC.

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Laboratory Report
0147822

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	STANTEC CONSULTING	Job# / P.O. #:	185831013. 200
Address:	290 CONEJO RIDGE AVE	Date Received:	10/22/2014
	THOUSAND OAKS CA 91361	Date Analyzed:	10/27/2014
Collected:	10/20/2014	Date Reported:	10/27/2014
Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#53-670 CITRUS ST, UC	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0147822-007 03A	ASSOC. W/DECK-NE	Concrete, Gray	No	None Detected		
					Quartz	
					Gypsum	
					Mica	
					Carbonates	
					Binder/Filler	100%
0147822-008 03B	ASSOC. W/DECK-NW	Concrete, Gray	No	None Detected		
					Quartz	
					Gypsum	
					Mica	
					Carbonates	
					Binder/Filler	100%
0147822-009 03C	ASSOC. W/DECK-E. CENTER.	Concrete, Gray	No	None Detected		
					Quartz	
					Gypsum	
					Mica	
					Carbonates	
					Binder/Filler	100%
0147822-010 04A	ASSOC. W/DECK-NE	Asphalt, Black	No	None Detected	Cellulose Fiber	<1%
					Quartz	
					Gypsum	
					Mica	
					Carbonates	
					Binder/Filler	99%
0147822-011 04B	ASSOC. W/DECK-NW	Asphalt, Black	No	None Detected	Cellulose Fiber	<1%
					Quartz	
					Gypsum	
					Mica	
					Carbonates	
					Binder/Filler	99%

EMC LABS, INC.

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Laboratory Report
0147822

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	STANTEC CONSULTING	Job# / P.O. #:	185831013. 200
Address:	290 CONEJO RIDGE AVE	Date Received:	10/22/2014
	THOUSAND OAKS CA 91361	Date Analyzed:	10/27/2014
Collected:	10/20/2014	Date Reported:	10/27/2014
Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#53-670 CITRUS ST, UC	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0147822-012 04C	ASSOC. W/DECK-E. CENTER	Asphalt, Black	No	None Detected	Quartz Gypsum Mica Carbonates Binder/Filler	100%
0147822-013 05A	ASSOC. W/DECK-NE	Sealant, Black	No	None Detected	Carbonates Gypsum Quartz Binder/Filler	100%
0147822-014 05B	ASSOC. W/DECK-NW	Sealant, Black	No	None Detected	Carbonates Gypsum Quartz Binder/Filler	100%
0147822-015 05C	ASSOC. W/DECK-E. CENTER	Sealant, Black	No	None Detected	Carbonates Gypsum Quartz Binder/Filler	100%
0147822-016 06A	ASSOC. W/ ABUTMENT WALL BELOW-NW-BELOW	Sealant, Black	No	None Detected	Cellulose Fiber Carbonates Gypsum Binder/Filler	80% 20%
0147822-017 06B	ASSOC. W/ ABUTMENT WALL BELOW-NE-BELOW	Felt, Brown	No	None Detected	Cellulose Fiber Carbonates Gypsum Binder/Filler	60% 40%

EMC LABS, INC.

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Laboratory Report
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Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	STANTEC CONSULTING	Job# / P.O. #:	185831013. 200
Address:	290 CONEJO RIDGE AVE	Date Received:	10/22/2014
	THOUSAND OAKS CA 91361	Date Analyzed:	10/27/2014
Collected:	10/20/2014	Date Reported:	10/27/2014
Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#53-670 CITRUS ST, UC	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID / Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0147822-018 06C	ASSOC. W/ ABUTMENT WALL BELOW-SW-BELOW	Felt, Beige/ Black	No	None Detected	Cellulose Fiber	60%
					Carbonates Gypsum Binder/Filler	40%
0147822-019 07A	ABUTMENT WALL WEAP HOLES BELOW-NW-BELOW	Drainpipe, Black/ Brown	No	None Detected	Cellulose Fiber	40%
					Carbonates Gypsum Binder/Filler	60%
0147822-020 07B	ABUTMENT WALL WEAP HOLES BELOW-NE-BELOW	Drainpipe, Black/ Brown	No	None Detected	Cellulose Fiber	40%
					Carbonates Gypsum Binder/Filler	60%
0147822-021 07C	ABUTMENT WALL WEAP HOLES BELOW-SE-BELOW	Drainpipe, Black/ Brown	No	None Detected	Cellulose Fiber	40%
					Carbonates Gypsum Binder/Filler	60%
0147822-022 08A	ABUTMENT WALL WEAP HOLES BELOW-NE-BELOW	Concrete, Gray	No	None Detected	Cellulose Fiber	<1%
					Quartz Carbonates Gypsum Mica Binder/Filler	99%

EMC LABS, INC.

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Laboratory Report
0147822

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	STANTEC CONSULTING	Job# / P.O. #:	185831013. 200
Address:	290 CONEJO RIDGE AVE	Date Received:	10/22/2014
	THOUSAND OAKS CA 91361	Date Analyzed:	10/27/2014
Collected:	10/20/2014	Date Reported:	10/27/2014
Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#53-670 CITRUS ST, UC	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0147822-023 08B	ABUTMENT WALL WEAP HOLES BELOW-NW-BELOW	Concrete, Gray	No	None Detected	Cellulose Fiber	<1%
					Quartz Carbonates Gypsum Mica Binder/Filler	99%
0147822-024 08C	ABUTMENT WALL WEAP HOLES BELOW-SE-BELOW	Concrete, Gray	No	None Detected	Cellulose Fiber	<1%
					Quartz Carbonates Gypsum Mica Binder/Filler	99%

Analyst - Octavio Gavarreteayestas

Signatory - Lab Director - Kurt Kettler

Distinctly stratified, easily separable layers of samples are analyzed as subsamples of the whole and are reported separately for each discernible layer. All analyses are derived from calibrated visual estimate and measured in area percent unless otherwise noted. The report applies to the standards or procedures identified and to the sample(s) tested. The test results are not necessarily indicated or representative of the qualities of the lot from which the sample was taken or of apparently identical or similar products, nor do they represent an ongoing quality assurance program unless so noted. These reports are for the exclusive use of the addressed client and that they will not be reproduced wholly or in part for advertising or other purposes over our signature or in connection with our name without special written permission. The report shall not be reproduced except in full, without written approval by our laboratory. The samples not destroyed in testing are retained a maximum of thirty days. The laboratory measurement of uncertainty for the test method is approximately less than 1 by area percent. Accredited by the National Institute of Standards and Technology, Voluntary Laboratory Accreditation Program for selected test method for asbestos. The accreditation or any reports generated by this laboratory in no way constitutes or implies product certification, approval, or endorsement by the National Institute of Standards and Technology. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government. Polarized Light Microscopy may not be consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials.

EMC LABS, INC.

9830 S. 51st Street, Suite B109, Phoenix, AZ 85044
Phone: 800-362-3373 or 480-940-5294 - Fax: (480) 893-1726

Laboratory Report
0147823

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	STANTEC CONSULTING	Job# / P.O. #:	185831013. 200
Address:	290 CONEJO RIDGE AVE	Date Received:	10/22/2014
	THOUSAND OAKS CA 91361	Date Analyzed:	10/27/2014
Collected:	10/20/2014	Date Reported:	10/27/2014
Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#53-671 HOLT AVE	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type	(%)	Non-Asbestos Constituents	
0147823-001 01A	ASSOC. W/GUARD RAIL-NE	Concrete, Gray/Beige	No	None Detected		Quartz Carbonates Gypsum Mica Binder/Filler	100%
0147823-002 01B	ASSOC. W/GUARD RAIL-NW	Concrete, Gray/Beige	No	None Detected		Cellulose Fiber Quartz Carbonates Gypsum Mica Binder/Filler	<1% 99%
0147823-003 01C	ASSOC. W/GUARD RAIL-SW	Concrete, Gray/Beige	No	None Detected		Quartz Carbonates Gypsum Mica Binder/Filler	100%
0147823-004 02A	ASSOC. W/GUARD RAIL POSTS-NE	Shim, Beige/Gray	Yes	Chrysotile	80%	Carbonates Quartz Binder/Filler	20%
0147823-005 02B	ASSOC. W/GUARD RAIL POSTS-NW	Shim, Beige/Gray	Yes	Chrysotile	80%	Carbonates Quartz Binder/Filler	20%
0147823-006 02C	ASSOC. W/GUARD RAIL POSTS-SW	Shim, Black	Yes	Chrysotile	80%	Carbonates Quartz Binder/Filler	20%

EMC LABS, INC.

9830 S. 51st Street, Suite B109, Phoenix, AZ 85044
Phone: 800-362-3373 or 480-940-5294 - Fax: (480) 893-1726

Laboratory Report
0147823

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	STANTEC CONSULTING	Job# / P.O. #:	185831013. 200
Address:	290 CONEJO RIDGE AVE	Date Received:	10/22/2014
	THOUSAND OAKS CA 91361	Date Analyzed:	10/27/2014
Collected:	10/20/2014	Date Reported:	10/27/2014
Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#53-671 HOLT AVE	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0147823-007 03A	ASSOC. W/DECK-NE	Concrete, Gray/Beige	No	None Detected	Quartz Gypsum Mica Carbonates Binder/Filler	100%
0147823-008 03B	ASSOC. W/DECK-NW	Concrete, Gray/Beige	No	None Detected	Quartz Gypsum Mica Carbonates Binder/Filler	100%
0147823-009 03C	ASSOC. W/DECK-SW	Concrete, Gray/Beige	No	None Detected	Quartz Gypsum Mica Carbonates Binder/Filler	100%
0147823-010 04A	ASSOC. W/DECK-NE	Asphalt, Black/Gray	No	None Detected	Cellulose Fiber Carbonates Gypsum Quartz Binder/Filler	<1% 99%
0147823-011 04B	ASSOC. W/DECK-NW	Asphalt, Black/Gray	No	None Detected	Cellulose Fiber Carbonates Gypsum Quartz Binder/Filler	<1% 99%

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Laboratory Report
0147823

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	STANTEC CONSULTING	Job# / P.O. #:	185831013. 200
Address:	290 CONEJO RIDGE AVE	Date Received:	10/22/2014
	THOUSAND OAKS CA 91361	Date Analyzed:	10/27/2014
Collected:	10/20/2014	Date Reported:	10/27/2014
Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#53-671 HOLT AVE	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0147823-012 04C	ASSOC. W/DECK-SW	Asphalt, Black/Gray	No	None Detected	Cellulose Fiber Carbonates Gypsum Quartz Binder/Filler	<1% 99%
0147823-013 05A	ASSOC. W/DECK-NE	Sealant, Black	No	None Detected	Cellulose Fiber Carbonates Gypsum Quartz Binder/Filler	<1% 99%
0147823-014 05B	ASSOC. W/DECK-NW	Sealant, Black	No	None Detected	Cellulose Fiber Carbonates Gypsum Quartz Binder/Filler	<1% 99%
0147823-015 05C	ASSOC. W/DECK-SW	Sealant, Black	No	None Detected	Cellulose Fiber Carbonates Gypsum Quartz Binder/Filler	<1% 99%
0147823-016 06A	ASSOC. W/ABUTMENT WALL BELOW-NW-BELOW	Concrete, Gray/Beige	No	None Detected	Quartz Carbonates Gypsum Mica Binder/Filler	 100%

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NVLAP#101926-0

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Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#53-671 HOLT AVE	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type	(%)	Non-Asbestos Constituents	
0147823-017 06B	ASSOC. W/ABUTMENT WALL BELOW-SW-BELOW	Concrete, Gray/Beige	No	None Detected			
						Quartz Carbonates Gypsum Mica Binder/Filler	100%
0147823-018 06C	ASSOC. W/ABUTMENT WALL BELOW-NE-BELOW	Concrete, Gray/Beige	No	None Detected			
						Quartz Carbonates Gypsum Mica Binder/Filler	100%
0147823-019 07A	ASSOC. W/ABUTMENT WALL BELOW-NW-BELOW	Felt, Brown/Black	No	None Detected		Cellulose Fiber	60%
						Carbonates Gypsum Binder/Filler	40%
0147823-020 07B	ASSOC. W/ABUTMENT WALL BELOW-SW-BELOW	Felt, Brown/Black	No	None Detected		Cellulose Fiber	60%
						Carbonates Gypsum Binder/Filler	40%
0147823-021 07C	ASSOC. W/ABUTMENT WALL BELOW-NW-BELOW	Felt, Brown/Black	No	None Detected		Cellulose Fiber	60%
						Carbonates Gypsum Binder/Filler	40%

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Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#53-671 HOLT AVE	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0147823-022 08A	ASSOC W/WEAP HOLES ON ABUTMENT WALLS BELOW-NW-BELOW	Drainpipe, Brown/Black	No	None Detected	Cellulose Fiber	40%
					Carbonates Gypsum Binder/Filler	60%
0147823-023 08B	ASSOC W/WEAP HOLES ON ABUTMENT WALLS BELOW-SW-BELOW	Drainpipe, Brown/Black	No	None Detected	Cellulose Fiber	40%
					Carbonates Gypsum Binder/Filler	60%
0147823-024 08C	ASSOC W/WEAP HOLES ON ABUTMENT WALLS BELOW-SE-BELOW	Drainpipe, Brown/Black	No	None Detected	Cellulose Fiber	40%
					Carbonates Gypsum Binder/Filler	60%

Analyst - Kurt Kettler

Signatory - Lab Manager - Ken Scheske

Distinctly stratified, easily separable layers of samples are analyzed as subsamples of the whole and are reported separately for each discernible layer. All analyses are derived from calibrated visual estimate and measured in area percent unless otherwise noted. The report applies to the standards or procedures identified and to the sample(s) tested. The test results are not necessarily indicated or representative of the qualities of the lot from which the sample was taken or of apparently identical or similar products, nor do they represent an ongoing quality assurance program unless so noted. These reports are for the exclusive use of the addressed client and that they will not be reproduced wholly or in part for advertising or other purposes over our signature or in connection with our name without special written permission. The report shall not be reproduced except in full, without written approval by our laboratory. The samples not destroyed in testing are retained a maximum of thirty days. The laboratory measurement of uncertainty for the test method is approximately less than 1 by area percent. Accredited by the National Institute of Standards and Technology, Voluntary Laboratory Accreditation Program for selected test method for asbestos. The accreditation or any reports generated by this laboratory in no way constitutes or implies product certification, approval, or endorsement by the National Institute of Standards and Technology. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government. Polarized Light Microscopy may not be consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials.

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Laboratory Report
0147824

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	STANTEC CONSULTING	Job# / P.O. #:	185831013. 200
Address:	290 CONEJO RIDGE AVE	Date Received:	10/22/2014
	THOUSAND OAKS CA 91361	Date Analyzed:	10/27/2014
Collected:	10/20/2014	Date Reported:	10/27/2014
Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#53-870 VIA VERDE UC	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type	(%)	Non-Asbestos Constituents	
0147824-001 01A	ASSOC. W/GUARD RAIL-NE	Concrete, Beige/ Gray	No	None Detected		Quartz Gypsum Mica Carbonates Binder/Filler	100%
0147824-002 01B	ASSOC. W/GUARD RAIL-N. CENTER	Concrete, Beige/ Gray	No	None Detected		Quartz Gypsum Mica Carbonates Binder/Filler	100%
0147824-003 01C	ASSOC. W/GUARD RAIL-SW	Concrete, Beige/ Gray	No	None Detected		Quartz Gypsum Mica Carbonates Binder/Filler	100%
0147824-004 02A	ASSOC. W/GUARD RAILPOSTS-NE-POST #3	Shim, Black/ Gray	Yes	Chrysotile	60%	Gypsum Quartz Binder/Filler	40%
0147824-005 02B	ASSOC. W/GUARD RAILPOSTS-N. CENTER-POST #8	Shim, Black/ Gray	Yes	Chrysotile	60%	Gypsum Quartz Binder/Filler	40%

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Address:	#53-870 VIA VERDE UC	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID / Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type	(%)	Non-Asbestos Constituents	
0147824-006 02C	ASSOC. W/GUARD RAILPOSTS-SW-POST #1 (EB SIDE)	Shim, Black/ Gray	Yes	Chrysotile	60%		
						Gypsum	
						Quartz	
						Binder/Filler	40%
0147824-007 03A	ASSOC W/DECK-NE	LAYER 1 Concrete, Beige/ Tan	No	None Detected			
						Quartz	
						Gypsum	
						Mica	
						Carbonates	
						Binder/Filler	100%
		LAYER 2 Coating, Black	No	None Detected		Cellulose Fiber	<1%
						Carbonates	
						Gypsum	
						Quartz	
						Binder/Filler	99%
0147824-008 03B	ASSOC W/DECK-NW	LAYER 1 Concrete, Beige/ Tan	No	None Detected			
						Quartz	
						Gypsum	
						Mica	
						Carbonates	
						Binder/Filler	100%
		LAYER 2 Coating, Black	No	None Detected			
						Carbonates	
						Gypsum	
						Quartz	
						Binder/Filler	100%
0147824-009 03C	ASSOC W/DECK-SW	Concrete, Beige/ Tan	No	None Detected			
						Quartz	
						Gypsum	
						Mica	
						Carbonates	
						Binder/Filler	100%

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Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#53-870 VIA VERDE UC	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0147824-010 04A	ASSOC W/DECK-NE	Asphalt, Black	No	None Detected	Wollastonite Quartz Gypsum Carbonates Binder/Filler	2% 98%
0147824-011 04B	ASSOC W/DECK-NW	Asphalt, Black	No	None Detected	Wollastonite Quartz Gypsum Carbonates Binder/Filler	2% 98%
0147824-012 04C	ASSOC W/DECK-SW	Asphalt, Black	No	None Detected	Wollastonite Quartz Gypsum Carbonates Binder/Filler	2% 98%
0147824-013 05A	ASSOC. W/JOINTS IN GUARD RAIL-NE	Felt, Black	No	None Detected	Cellulose Fiber Carbonates Gypsum Binder/Filler	60% 40%
0147824-014 06A	ASSOC. W/ABUTMENT WALL JOINTS BELOW-NW-BELOW	Felt, Black	No	None Detected	Cellulose Fiber Carbonates Gypsum Binder/Filler	60% 40%
0147824-015 06B	ASSOC. W/ABUTMENT WALL JOINTS BELOW-W. CENTER-BELOW	Felt, Black	No	None Detected	Cellulose Fiber Carbonates Gypsum Binder/Filler	45% 55%

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Address:	#53-870 VIA VERDE UC	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0147824-016 06C	ASSOC. W/ABUTMENT WALL JOINTS BELOW-E. CENTER-BELOW	Felt, Black	No	None Detected	Cellulose Fiber	45%
					Carbonates Gypsum Binder/Filler	55%
0147824-017 07A	ASSOC. W/WEAP HOLES BELOW-NW BELOW	Drain Pipe, Black/ Gray	No	None Detected	Cellulose Fiber	35%
					Gypsum Binder/Filler	65%
0147824-018 07B	ASSOC. W/WEAP HOLES BELOW-W. CENTER-BELOW	Drain Pipe, Black/ Gray	No	None Detected	Cellulose Fiber	35%
					Gypsum Binder/Filler	65%
0147824-019 07C	ASSOC. W/WEAP HOLES BELOW-E. CENTER-BELOW	Drain Pipe, Black/ Gray	No	None Detected	Cellulose Fiber	35%
					Gypsum Binder/Filler	65%
0147824-020 08A	ASSOC. W/DECK-SW	Sealant, Black	No	None Detected	Cellulose Fiber	<1%
					Carbonates Gypsum Quartz Binder/Filler	99%

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NVLAP#101926-0

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Address:	290 CONEJO RIDGE AVE	Date Received:	10/22/2014	
	THOUSAND OAKS CA 91361	Date Analyzed:	10/27/2014	
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Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116	
Address:	#53-870 VIA VERDE UC	Submitted By:	JASON STAGNO	
		Collected By:		

Lab ID / Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents

Analyst - Kurt Kettler

Signatory - Lab Manager - Ken Scheske

Distinctly stratified, easily separable layers of samples are analyzed as subsamples of the whole and are reported separately for each discernible layer. All analyses are derived from calibrated visual estimate and measured in area percent unless otherwise noted. The report applies to the standards or procedures identified and to the sample(s) tested. The test results are not necessarily indicated or representative of the qualities of the lot from which the sample was taken or of apparently identical or similar products, nor do they represent an ongoing quality assurance program unless so noted. These reports are for the exclusive use of the addressed client and that they will not be reproduced wholly or in part for advertising or other purposes over our signature or in connection with our name without special written permission. The report shall not be reproduced except in full, without written approval by our laboratory. The samples not destroyed in testing are retained a maximum of thirty days. The laboratory measurement of uncertainty for the test method is approximately less than 1 by area percent. Accredited by the National Institute of Standards and Technology, Voluntary Laboratory Accreditation Program for selected test method for asbestos. The accreditation or any reports generated by this laboratory in no way constitutes or implies product certification, approval, or endorsement by the National Institute of Standards and Technology. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government. Polarized Light Microscopy may not be consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials.

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Laboratory Report
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Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	STANTEC CONSULTING	Job# / P.O. #:	185831013. 200
Address:	290 CONEJO RIDGE AVE	Date Received:	10/22/2014
	THOUSAND OAKS CA 91361	Date Analyzed:	10/27/2014
Collected:	10/20/2014	Date Reported:	10/27/2014
Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#53-1528 GRAND AVE	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type	(%)	Non-Asbestos Constituents	
0147825-001 01A	ASSOC. W/GUARD RAIL-NE	Guardrail Concrete, Gray	No	None Detected		Carbonates Quartz Gypsum Mica Binder/Filler	100%
0147825-002 01B	ASSOC. W/GUARD RAIL-NW	Guardrail Concrete, Gray	No	None Detected		Carbonates Quartz Gypsum Mica Binder/Filler	100%
0147825-003 01C	ASSOC. W/GUARD RAIL-SE	Guardrail Concrete, Gray	No	None Detected		Carbonates Quartz Gypsum Mica Binder/Filler	100%
0147825-004 02A	ASSOC. W/GUARD RAIL POST-NE POST #3-WB	Guardrail Shim, Gray/ Orange	Yes	Chrysotile	85%	Quartz Carbonates Binder/Filler	15%
0147825-005 02B	ASSOC. W/GUARD RAIL POST-NW POST #8-WB	Guardrail Shim, Gray/ Orange	Yes	Chrysotile	85%	Quartz Carbonates Binder/Filler	15%

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Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#53-1528 GRAND AVE	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type	(%)	Non-Asbestos Constituents	
0147825-006 02C	ASSOC. W/GUARD RAIL POST-S.-CENTER-POST #3-EB	Guardrail Shim, Gray	Yes	Chrysotile	85%		
						Quartz Carbonates Binder/Filler	15%
0147825-007 03A	ASSOC. W/DECK-NE	Deck Concrete, Gray	No	None Detected			
						Quartz Carbonates Gypsum Mica Binder/Filler	100%
0147825-008 03B	ASSOC. W/DECK-NW	Deck Concrete, Gray	No	None Detected			
						Quartz Carbonates Gypsum Mica Binder/Filler	100%
0147825-009 03C	ASSOC. W/DECK-SE	Deck Concrete, Gray	No	None Detected			
						Quartz Carbonates Gypsum Mica Binder/Filler	100%
0147825-010 04A	ASSOC. W/DECK-NE	Deck Asphalt, Black	No	None Detected			
						Quartz Gypsum Mica Carbonates Binder/Filler	100%

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Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#53-1528 GRAND AVE	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0147825-011 04B	ASSOC. W/DECK-NW	Deck Asphalt, Black	No	None Detected	Quartz Gypsum Mica Carbonates Binder/Filler	100%
0147825-012 04C	ASSOC. W/DECK-SE	Deck Asphalt, Black	No	None Detected	Quartz Gypsum Mica Carbonates Binder/Filler	100%
0147825-013 05A	ASSOC. W/DECK-NE	Deck Sealant, Black	No	None Detected	Carbonates Gypsum Quartz Binder/Filler	100%
0147825-014 05B	ASSOC. W/DECK-NW	Deck Sealant, Black	No	None Detected	Carbonates Gypsum Quartz Binder/Filler	100%
0147825-015 05C	ASSOC. W/DECK-SE	Deck Sealant, Black	No	None Detected	Carbonates Gypsum Quartz Binder/Filler	100%

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Address:	#53-1528 GRAND AVE	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID / Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type	(%)	Non-Asbestos Constituents	
0147825-016 06A	WEAP HOLES IN VERTICAL ABUTMENT WALK-NE-BELOW	Drain Pipe, Gray	Yes	Chrysotile Crocidolite	8% 7%		
						Carbonates Gypsum Quartz Binder/Filler	85%
0147825-017 06B	WEAP HOLES IN VERTICAL ABUTMENT WALK-SE-BELOW	Drain Pipe, Gray	Yes	Chrysotile Crocidolite	8% 7%		
						Carbonates Gypsum Quartz Binder/Filler	85%
0147825-018 06C	WEAP HOLES IN VERTICAL ABUTMENT WALK-W-CENTER-BELOW	Drain Pipe, Gray	Yes	Crocidolite Chrysotile	8% 7%		
						Carbonates Gypsum Quartz Binder/Filler	85%
0147825-019 07A	ASSOC. W/ABUTMENT BELOW & GUARDRAILS ABOVE-E. CENTER-BELOW	Felt, Brown	No	None Detected		Cellulose Fiber	60%
						Carbonates Gypsum Binder/Filler	40%

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Address:	290 CONEJO RIDGE AVE	Date Received:	10/22/2014
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Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#53-1528 GRAND AVE	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type	(%)	Non-Asbestos Constituents	
0147825-020 07B	ASSOC. W/ABUTMENT BELOW & GUARDRAILS ABOVE-SE-BELOW	Felt, Brown	No	None Detected		Cellulose Fiber	60%
						Carbonates Gypsum Binder/Filler	40%
0147825-021 07C	ASSOC. W/ABUTMENT BELOW & GUARDRAILS ABOVE-SW-BELOW	Felt, Brown	No	None Detected		Cellulose Fiber	60%
						Carbonates Gypsum Binder/Filler	40%
0147825-022 08A	BOLTS ON GUARDRAIL-S. CENTER	Guardrail Bolt Adhesive, Gray	Yes	Chrysotile	3%		
						Carbonates Quartz Binder/Filler	97%
0147825-023 09A	ASSOC. W/GUARD RAIL REFLECTOR-S. CENTER	Guardrail Reflector Adhesive, Gray	No	None Detected		Cellulose Fiber	<1%
						Carbonates Quartz Binder/Filler	99%

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Laboratory Report
0147825

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	STANTEC CONSULTING	Job# / P.O. #:	185831013.	200
Address:	290 CONEJO RIDGE AVE	Date Received:	10/22/2014	
	THOUSAND OAKS CA 91361	Date Analyzed:	10/27/2014	
Collected:	10/20/2014	Date Reported:	10/27/2014	
Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116	
Address:	#53-1528 GRAND AVE	Submitted By:	JASON STAGNO	
		Collected By:		

Lab ID / Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents

Analyst - Kurt Kettler

Signatory - Lab Manager - Ken Scheske

Distinctly stratified, easily separable layers of samples are analyzed as subsamples of the whole and are reported separately for each discernible layer. All analyses are derived from calibrated visual estimate and measured in area percent unless otherwise noted. The report applies to the standards or procedures identified and to the sample(s) tested. The test results are not necessarily indicated or representative of the qualities of the lot from which the sample was taken or of apparently identical or similar products, nor do they represent an ongoing quality assurance program unless so noted. These reports are for the exclusive use of the addressed client and that they will not be reproduced wholly or in part for advertising or other purposes over our signature or in connection with our name without special written permission. The report shall not be reproduced except in full, without written approval by our laboratory. The samples not destroyed in testing are retained a maximum of thirty days. The laboratory measurement of uncertainty for the test method is approximately less than 1 by area percent. Accredited by the National Institute of Standards and Technology, Voluntary Laboratory Accreditation Program for selected test method for asbestos. The accreditation or any reports generated by this laboratory in no way constitutes or implies product certification, approval, or endorsement by the National Institute of Standards and Technology. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government. Polarized Light Microscopy may not be consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials.

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Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

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Address:	290 CONEJO RIDGE AVE	Date Received:	10/22/2014
	THOUSAND OAKS CA 91361	Date Analyzed:	10/27/2014
Collected:	10/20/2014	Date Reported:	10/27/2014
Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#53-2008 KELLOGG DR UC	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type	(%)	Non-Asbestos Constituents	
0147826-001 01A	ASSOC W/GUARD RAIL-NE	Concrete, Gray	No	None Detected		Cellulose Fiber	<1%
						Quartz Gypsum Mica Carbonates Binder/Filler	99%
0147826-002 01B	ASSOC W/GUARD RAIL-NW	Concrete, Gray	No	None Detected			
						Quartz Gypsum Mica Carbonates Binder/Filler	100%
0147826-003 01C	ASSOC W/GUARD RAIL-SW	Concrete, Gray	No	None Detected			
						Quartz Gypsum Mica Carbonates Binder/Filler	100%
0147826-004 02A	ASSOC W/GUARD RAIL POST-NE	Shim, Black	Yes	Chrysotile	65%		
						Carbonates Quartz Binder/Filler	35%
0147826-005 02B	ASSOC W/GUARD RAIL POST-N. CENTER	Shim, Black	Yes	Chrysotile	65%		
						Carbonates Quartz Binder/Filler	35%
0147826-006 02C	ASSOC W/GUARD RAIL POST-SW	Shim, Black	Yes	Chrysotile	65%		
						Carbonates Quartz Binder/Filler	35%

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Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#53-2008 KELLOGG DR UC	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0147826-007 03A	ASSOC. W/DECK-NE	Concrete, Gray	No	None Detected	Quartz Carbonates Gypsum Mica Binder/Filler	100%
0147826-008 03B	ASSOC. W/DECK-NW	Concrete, Gray	No	None Detected	Quartz Carbonates Gypsum Mica Binder/Filler	100%
0147826-009 03C	ASSOC. W/DECK-SW	Concrete, Gray	No	None Detected	Quartz Carbonates Gypsum Mica Binder/Filler	100%
0147826-010 04A	ASSOC. W/DECK-NE	Asphalt, Black	No	None Detected	Quartz Carbonates Gypsum Mica Binder/Filler	100%
0147826-011 04B	ASSOC. W/DECK-NW	Asphalt, Black	No	None Detected	Quartz Carbonates Gypsum Mica Binder/Filler	100%

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Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#53-2008 KELLOGG DR UC	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0147826-012 04C	ASSOC. W/DECK-SW	Asphalt, Black	No	None Detected		
					Quartz	
					Carbonates	
					Gypsum	
					Mica	
					Binder/Filler	100%
0147826-013 05A	ASSOC. W/DECK-NE	Sealant, Gray	No	None Detected		
					Foam	100%
0147826-014 06A	ASSOC. W/GUARD RAIL REFLECTOR MASTIC-NW	Adhesive, Gray	No	None Detected	Cellulose Fiber	<1%
					Carbonates	
					Gypsum	
					Quartz	
					Binder/Filler	99%
0147826-015 07A	ABUTMENT WALL JOINTS BELOW-NW-BELOW	LAYER 1 Felt, Black	No	None Detected	Cellulose Fiber	60%
					Carbonates	
					Gypsum	
					Binder/Filler	40%
		LAYER 2 Felt, Gray	No	None Detected	Cellulose Fiber	45%
					Carbonates	
					Gypsum	
					Binder/Filler	55%
0147826-016 07B	ABUTMENT WALL JOINTS BELOW-W-CENTER-BELOW	Felt, Black	No	None Detected	Cellulose Fiber	40%
					Carbonates	
					Gypsum	
					Quartz	
					Binder/Filler	60%

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Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#53-2008 KELLOGG DR UC	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0147826-017 07C	ABUTMENT WALL JOINTS BELOW-NE-BELOW	Felt, Brown/ Gray	No	None Detected	Cellulose Fiber	60%
					Carbonates Gypsum Binder/Filler	40%
0147826-018 08A	ABUTMENT WALL JOINTS BELOW-NW-BELOW	Felt, Brown/ Gray	No	None Detected	Cellulose Fiber	60%
					Carbonates Gypsum Binder/Filler	40%
0147826-019 08B	ABUTMENT WALL JOINTS BELOW-SE-BELOW	Felt, Brown/ Gray	No	None Detected	Cellulose Fiber	60%
					Carbonates Gypsum Binder/Filler	40%
0147826-020 08C	ABUTMENT WALL JOINTS BELOW-NE-BELOW	Felt, Brown/ Gray	No	None Detected	Cellulose Fiber	60%
					Carbonates Gypsum Binder/Filler	40%
0147826-021 09A	MISSING SAMPLE	Note: NO SAMPLE SUBMITTED				
0147826-022 09B	ON VERTICAL ABUTMENT WALLS WEAP HOLES BELOW-SE-BELOW	Drainpipe, Black/ Gray	No	None Detected	Cellulose Fiber	15%
					Carbonates Gypsum Binder/Filler	85%

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Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#53-2008 KELLOGG DR UC	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0147826-023 09C	ON VERTICAL ABUTMENT WALLS WEAP HOLES BELOW-NE-BELOW	Drainpipe, Black/ Gray	No	None Detected	Cellulose Fiber	25%
					Carbonates Gypsum Binder/Filler	75%
0147826-024 10A	ASSOC. W/ABUTMENT WALL BELOW-NW-BELOW	Concrete, Gray	No	None Detected	Cellulose Fiber	<1%
					Quartz Gypsum Mica Carbonates Binder/Filler	99%
0147826-025 10B	ASSOC. W/ABUTMENT WALL BELOW-SE-BELOW	Concrete, Gray	No	None Detected	Cellulose Fiber	<1%
					Quartz Gypsum Mica Carbonates Binder/Filler	99%
0147826-026 10C	ASSOC. W/ABUTMENT WALL BELOW-NE-BELOW	Concrete, Gray	No	None Detected	Cellulose Fiber	<1%
					Quartz Gypsum Mica Carbonates Binder/Filler	99%

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Address:	#53-2008 KELLOGG DR UC	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0147826-027 11A	ABUTMENT WALL BELOW BRIDGE-NW-BELOW	Concrete, Gray	No	None Detected	Cellulose Fiber	<1%
					Quartz Gypsum Mica Carbonates Binder/Filler	99%
0147826-028 11B	ABUTMENT WALL BELOW BRIDGE-SW-BELOW	Concrete, Gray	No	None Detected		
					Quartz Carbonates Gypsum Mica Binder/Filler	100%
0147826-029 11C	ABUTMENT WALL BELOW BRIDGE-SW-BELOW	Concrete, Gray	No	None Detected		
					Quartz Carbonates Gypsum Mica Binder/Filler	100%
0147826-030 12A	ABUTMENT WALLS BELOW-SE-BELOW	Pressboard, Brown	No	None Detected	Cellulose Fiber	95%
					Carbonates Gypsum Binder/Filler	5%
0147826-031 12B	ABUTMENT WALLS BELOW-E. CENTER-BELOW	Pressboard, Brown	No	None Detected	Cellulose Fiber	95%
					Carbonates Gypsum Binder/Filler	5%

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Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#53-2008 KELLOGG DR UC	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0147826-032 12C	ABUTMENT WALLS BELOW-NE-BELOW	Pressboard, Brown	No	None Detected	Cellulose Fiber	95%
					Carbonates Gypsum Binder/Filler	5%
0147826-033 13A	ASSOC. W/JOINTS ON ABUTMENT WALLS-NE-BELOW	LAYER 1 Paper, White	No	None Detected	Cellulose Fiber	97%
					Gypsum Binder/Filler	3%
		LAYER 2 Paper, White/ Black	No	None Detected	Cellulose Fiber	97%
					Carbonates Gypsum Binder/Filler	3%
0147826-034 13B	ASSOC. W/JOINTS ON ABUTMENT WALLS-NE-BELOW	LAYER 1 Paper, White	No	None Detected	Cellulose Fiber	97%
					Gypsum Binder/Filler	3%
		LAYER 2 Paper, White/ Black	No	None Detected	Cellulose Fiber	97%
					Carbonates Gypsum Binder/Filler	3%
0147826-035 13C	ASSOC. W/JOINTS ON ABUTMENT WALLS-NE-BELOW	LAYER 1 Paper, White	No	None Detected	Cellulose Fiber	97%
					Gypsum Binder/Filler	3%
		LAYER 2 Paper, White/ Black	No	None Detected	Cellulose Fiber	97%
					Carbonates Gypsum Binder/Filler	3%

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Address:	#53-2008 KELLOGG DR UC	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0147826-036 14A	ASSOC. W/DECK-SW	Sealant, Black	No	None Detected		
					Carbonates Quartz Binder/Filler	100%
0147826-037 14B	ASSOC. W/DECK-SE	Sealant, Black	No	None Detected		
					Carbonates Quartz Binder/Filler	100%
0147826-038 14C	ASSOC. W/DECK-SE	Sealant, Black	No	None Detected		
					Carbonates Quartz Binder/Filler	100%

Analyst - Octavio Gavarreteayestas

Signatory - Lab Director - Kurt Kettler

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Project Name:	ACM SURVEY FOR BRIDGE DEMO (T0-13)	EPA Method:	EPA 600/R-93/116
Address:	#52-2008G KELLOGG DR OFF RAMP E10/57 UC	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID / Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0147827-001 01A	ASSOC. W/ABUTMENT WALLS BELOW-W-CENTER-BELOW	LAYER 1 Concrete, Gray	No	None Detected	Cellulose Fiber	<1%
					Quartz	
					Gypsum	
					Mica	
					Carbonates	
					Binder/Filler	99%
		LAYER 2 Paint/ Coating, Gray/White	No	None Detected		
					Quartz	
					Carbonates	
					Gypsum	
					Binder/Filler	100%
0147827-002 01B	ASSOC. W/ABUTMENT WALLS BELOW-E-CENTER-BELOW	Concrete, Gray	No	None Detected		
					Quartz	
					Gypsum	
					Mica	
					Carbonates	
					Binder/Filler	100%
0147827-003 01C	ASSOC. W/ABUTMENT WALLS BELOW-NE-BELOW	Concrete, Gray	No	None Detected		
					Quartz	
					Gypsum	
					Mica	
					Carbonates	
					Binder/Filler	100%

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Address:	#52-2008G KELLOGG DR OFF RAMP E10/57 UC	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0147827-004 02A	ASSOC. W/VERTICLE ABUTMENT BELOW-W.-CENTER-BELOW	LAYER 1 Press Board, Tan	No	None Detected	Cellulose Fiber	97%
					Gypsum Binder/Filler	3%
		LAYER 2 Coating, Gray	No	None Detected	Cellulose Fiber	5%
					Carbonates Gypsum Quartz Binder/Filler	95%
0147827-005 02B	ASSOC. W/VERTICLE ABUTMENT BELOW-E.-CENTER-BELOW	Press Board, Tan/Gray	No	None Detected	Cellulose Fiber	95%
					Carbonates Gypsum Binder/Filler	5%
0147827-006 02C	ASSOC. W/VERTICLE ABUTMENT BELOW-E.-CENTER-BELOW	Press Board, Tan/Gray	No	None Detected	Cellulose Fiber	95%
					Carbonates Gypsum Binder/Filler	5%
0147827-007 03A	ASSOC. W/ABUTMENT BELOW-NW-BELOW	Felt, Dk. Brown	No	None Detected	Cellulose Fiber	45%
					Carbonates Gypsum Quartz Binder/Filler	55%

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Address:	#52-2008G KELLOGG DR OFF RAMP E10/57 UC	Submitted By:	JASON STAGNO
		Collected By:	

Lab ID / Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0147827-008 03B	ASSOC. W/ABUTMENT BELOW-SW-BELOW	Felt, Dk. Brown Note: Very small amount of sample	No	None Detected	Cellulose Fiber	45%
					Carbonates Gypsum Quartz Binder/Filler	55%
0147827-009 03C	ASSOC. W/ABUTMENT BELOW-NE-BELOW	Felt, Dk. Brown	No	None Detected	Cellulose Fiber	45%
					Carbonates Gypsum Quartz Binder/Filler	55%

Analyst - Kurt Kettler

Signatory - Lab Manager - Ken Scheske

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LAB#: 147822
TAT: 3day
Rec'd: OCT 22 P.M.
EMC USE ONLY

COMPANY NAME:	Stantec Consulting Services Inc.	**BILL TO:**	**(If Different Location)**
	290 Conejo Ridge Avenue	Same	
	Thousand Oaks, CA 91361		
CONTACT:	Jason Stagno		
Phone/Fax:	(805) 630-8648 / (805) 230-1277		
Email:	jason.stagno@stantec.com		

Now Accepting: VISA – MASTERCARD **Price Quoted:** $_____ / Sample $____ / Layers

COMPLETE ITEMS 1-4: (Failure to complete any items may cause a delay in processing or analyzing your samples)

1. TURNAROUND TIME: [4hr rush] [8hr rush] [1-Day] [2-Day] (3-Day) [5-Day] [6-10 Day]

****Prior confirmation of turnaround time is required**
****Additional charges for rush analysis (please call marketing department for pricing details)**
****Laboratory analysis may be subject to delay if credit terms are not met**

2. TYPE OF ANALYSIS: (Bulk-PLM) [Air-PCM] [Lead] [Point Count] [Fungi: AOC, W-C, Bulk, Swab, Tape]

3. DISPOSAL INSTRUCTIONS: (Dispose of samples at EMC) / [Return samples to me at my expense]

(If you do not indicate preference, EMC will dispose of samples 60 days from analysis.)

4. Project Name: ACM Survey for Bridge Demo (TO13) #53670 Citrus St. UC

P.O. Number: _____ **Project Number:** 185831013.200

EMC SAMPLE #	CLIENT SAMPLE #	DATE & TIME SAMPLED	LOCATION/MATERIAL TYPE	Samples Accepted Yes / No	AIR SAMPLE INFO / COMMENTS ON	OFF	FLOW RATE
1	01A	10/20	See attached sample logs	(Y) N			
				Y N			
				Y N			
				Y N			
24	08C			(Y) N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			

SPECIAL INSTRUCTIONS: _____

Sample Collector: (Print) Jason Stagno (Signature) _____

Relinquished by: _____ Date/Time: 10.21.14 / 1600 Received by: Diana Federico Date/Time: 10/22/14

Relinquished by: Diana Federico Date/Time: 10/22/14 Received by: _____ Date/Time: 10/22/14

Relinquished by: _____ Date/Time _____ Received by: _____ Date/Time: _____

Stantec

Asbestos Bulk Sample Log

147822

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Site Name: Citrus St UC#53-670
Date: 10/20/14
Project #: 185831013
Task #: 200
Site Address: LA-010-37.2/42.4
Inspector: JS
:
Los Angeles County

MATERIAL

HA#	01
Material Type:	Concrete
Color:	Gray
Description:	Assoc. w/ Guardrail
Estimated Total Qty.:	SF

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.	
	Assoc. w/ guardrail		G	1
				2
				3

SAMPLES

Sample #	Sample Location
01 A	NE
01 B	NW
01 C	SE
D	
E	
F	
G	

Notes:

HAZARD ASSESSMENT

Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

Relinquished By: _____ Date: 10/20/14
Received By: Diana Federico Date: 10/22/14

147822

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:
Site Name: Citrus St UC #53-670
Site Address: LA-010-37.2/42.4
Los Angeles County
Date: 10/20/14
Inspector: JS

MATERIAL

HA#	02
Material Type:	Shim
Color:	Gray
Description:	Assoc. w/ Guardrail
Estimated Total Qty.:	5 SF

HAZARD ASSESSMENT

Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.	
	Assoc. w/ Guardrail	5SF	G	4
				5
				6

SAMPLES

Sample #	Sample Location
02 A	NE
02 B	NW
02 C	SE
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:
Site Name: Citrus St UC #53-670
Site Address: LA-010-37.2/42.4
Los Angeles County
Date: 10/20/14
Inspector: JS

MATERIAL	
HA#	03
Material Type:	Concrete
Color:	Gray
Description:	Assoc. w/ Deck
Estimated Total Qty.:	SF

HAZARD ASSESSMENT			
Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS				
Floor #	Location	Quantity Estimate	Cond.	
	Assoc. w/ Deck		G	7
				8
				9

SAMPLES	
Sample #	Sample Location
03 A	NE
03 B	NW
03 C	E-Center
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14
Received By: Diana Federico Date: 10/22/14

Stantec

Asbestos Bulk Sample Log

147822

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:
Site Name: Citrus St UC #53-670
Site Address: LA-010-37.2/42.4
Los Angeles County
Date: 10/20/14
Inspector: JS

MATERIAL	
HA#	04
Material Type:	Asphalt
Color:	Black
Description:	Assoc. w/ Deck
Estimated Total Qty.:	SF

HAZARD ASSESSMENT			
Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.	
	Assoc. w/ Deck		G	10
				11
				12

SAMPLES

Sample #	Sample Location
04 A	NE
04 B	NW
04 C	E-Center
D	
E	
F	
G	

Notes:

Relinquished By: [signature] Date: 10/20/14
Received By: Diana Federico Date: 10/22/14

Stantec

Asbestos Bulk Sample Log

147822

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:

Site Name: Citrus St UC #53-670
Site Address: LA-010-37.2/42.4
Los Angeles County

Date: 10/20/14
Inspector: JS

MATERIAL

HA#	05
Material Type:	Sealant
Color:	Black
Description:	Assoc w/ Deck
Estimated Total Qty.:	5F

HAZARD ASSESSMENT

Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.	
	Assoc w/ Deck		G	13
				14
				15

SAMPLES

Sample #	Sample Location
05 A	NE
05 B	NW
05 C	E-Center
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

147822

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Site Name: Citrus St UC #53-670
Date: 10/20/14
Project #: 185831013
Task #: 200
Site Address: LA-010-37.2/42.4
Inspector: JS
:
Los Angeles County

MATERIAL	
HA#	06
Material Type:	Felt
Color:	Brown
Description:	Assoc. w/ abutment wall Below
Estimated Total Qty.:	

HAZARD ASSESSMENT			
Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS				
	Floor #	Location	Quantity Estimate	Cond.
16		Assoc. w/ Abutment		G
17		Wall Below		
18				

SAMPLES	
Sample #	Sample Location
06 A	NW-Below
06 B	NE-Below
06 C	SW-Below
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14
Received By: Diana Federico Date: 10/22/14

Stantec

Asbestos Bulk Sample Log

147822

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:
Site Name: Citrus St UC #53-670
Site Address: LA-010-37.2/42.4
Los Angeles County
Date: 10/20/14
Inspector: JS

MATERIAL

HA#	07
Material Type:	Drainpipe
Color:	Gray
Description:	Assoc. w/ abutment wall weep holes Below
Estimated Total Qty.:	Unknown

HAZARD ASSESSMENT

Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.	
	Abutment wall weep holes	Unk	G	19
	Below			20
				21

SAMPLES

Sample #	Sample Location
07 A	NW-Below
07 B	NE-Below
07 C	SE-Below
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

147822

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:

Site Name: Citrus St UC #53-670
Site Address: LA-010-37.2/42.4
Los Angeles County

Date: 10/20/14
Inspector: JS

MATERIAL

HA#	08
Material Type:	Concrete
Color:	Gray
Description:	Assoc. w/ Abutment Wall Below
Estimated Total Qty.:	SF

HAZARD ASSESSMENT

Friable:	Yes		No
Contact by Maintenance:	Low	Med	High
Vibration:	Low	Med	High
Air Movement:	Low	Med	High

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.	
	Assoc. w/ abutment wall		G	22
	Below			23
				24

SAMPLES

Sample #	Sample Location
08 A	NE-Below
08 B	NW-Below
08 C	SE-Below
D	
E	
F	
G	

Notes:

Relinquished By: [signature] Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

CHAIN OF CUSTODY

EMC Laboratories
9830 S. 51ST St., Ste B-109
Phoenix, AZ 85044
(800) 362-3373 Fax (480) 893-1726

LAB#: 147823
TAT: 3day
Rec'd: OCT 22 P.M.
EMC USE ONLY

COMPANY NAME:	Stantec Consulting Services Inc.	**BILL TO:**	**(If Different Location)**
	290 Conejo Ridge Avenue	Same	
	Thousand Oaks, CA 91361		
CONTACT:	Jason Stagno		
Phone/Fax:	(805) 630-8648 / (805) 230-1277		
Email:	jason.stagno@stantec.com		

Now Accepting: VISA – MASTERCARD **Price Quoted:** $_____ / Sample $____ / Layers

COMPLETE ITEMS 1-4: (Failure to complete any items may cause a delay in processing or analyzing your samples)

1. TURNAROUND TIME: [4hr rush] [8hr rush] [1-Day] [2-Day] (3-Day) [5-Day] [6-10 Day]

****Prior confirmation of turnaround time is required**
****Additional charges for rush analysis (please call marketing department for pricing details)**
****Laboratory analysis may be subject to delay if credit terms are not met**

2. TYPE OF ANALYSIS: (Bulk-PLM) [Air-PCM] [Lead] [Point Count] [Fungi: AOC, W-C, Bulk, Swab, Tape]

3. DISPOSAL INSTRUCTIONS: (Dispose of samples at EMC) / [Return samples to me at my expense]

(If you do not indicate preference, EMC will dispose of samples 60 days from analysis.)

4. Project Name: ACM Survey for Bridge Demo (TO13) #53-671 Holt Ave

P.O. Number: _____ **Project Number:** 185831013.200

EMC SAMPLE #	CLIENT SAMPLE #	DATE & TIME SAMPLED	LOCATION/MATERIAL TYPE	Samples Accepted Yes / No	AIR SAMPLE INFO / COMMENTS ON	OFF	FLOW RATE
1	01A	10/20	See attached sample logs	Y N			
				Y N			
				Y N			
				Y N			
24	08C			Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			

SPECIAL INSTRUCTIONS: _____

Sample Collector: (Print) Jason Stagno (Signature) _____

Relinquished by: _____ Date/Time: 10-21-14 1800 Received by: Diana Federico Date/Time: 10/22/14

Relinquished by: Diana Federico Date/Time: 10/22/14 Received by: _____ Date/Time: 10/22/14

Relinquished by: _____ Date/Time _____ Received by: _____ Date/Time: _____

Rev. 09/01/08

147873

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:

Site Name: Holt Ave UC #53-671
Site Address: LA-010-37.2/42.4
Los Angeles County

Date: 10/20/14
Inspector: JS

MATERIAL

HA#	01
Material Type:	Concrete
Color:	Gray
Description:	Assoc. w/ guardrail
Estimated Total Qty.:	SF

HAZARD ASSESSMENT

Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.	
	Assoc. w/ guard rail		G	1
				2
				3

SAMPLES

Sample #	Sample Location
01 A	~~NE~~ N
01 B	NW
01 C	~~SW~~ S
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

14 7823

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Site Name: Holt Ave UC #53-671
Date: 10/20/14
Project #: 185831013
Task #: 200
Site Address: LA-010-37.2/42.4
Inspector: JS
:
Los Angeles County

MATERIAL	
HA#	02
Material Type:	Shim
Color:	Gray
Description:	Assoc. w/ guardrail posts
Estimated Total Qty.:	10 SF

HAZARD ASSESSMENT			
Friable:	Yes	(No)	
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.	
	Assoc. w/ guardrail	10 SF	G	4
	posts			5
				6

SAMPLES

Sample #	Sample Location
02 A	NE
02 B	~~NW~~ @ N
02 C	~~SW~~ @ S
D	
E	
F	
G	

Notes:

Relinquished By: [signature] Date: 10/20/14
Received By: Diana Federico Date: 10/22/14

147823

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Site Name: Holt Ave UC #53-671
Date: 10/29/14
Project #: 185831013
Task #: 200
Site Address: LA-010-37.2/42.4
Inspector: JS
:
Los Angeles County

MATERIAL

HA#	03
Material Type:	Concrete
Color:	Gray
Description:	Assoc. w/ Deck
Estimated Total Qty.:	SF

HAZARD ASSESSMENT

Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.	
	Assoc. w/ Deck		G	7
				8
				9

SAMPLES

Sample #	Sample Location
03 A	NE E
03 B	NW N
03 C	SW S
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/26/14
Received By: Diana Federico Date: 10/22/14

Stantec

Asbestos Bulk Sample Log

147823

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:

Site Name: Holt Ave UC #53-671
Site Address: LA-010-37.2/42.4
Los Angeles County

Date: 10/20/14
Inspector: JS

MATERIAL

HA#	04
Material Type:	Asphalt
Color:	Black
Description:	Assoc. w/ Deck
Estimated Total Qty.:	SF

HAZARD ASSESSMENT

Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.
	Assoc. w/ Deck		G

SAMPLES

	Sample #	Sample Location
10	04 A	NE
11	04 B	NW N
12	04 C	SW S
	D	
	E	
	F	
	G	

Notes:

Relinquished By: _____ Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

147873

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Site Name: Holt Ave UC #53-671
Date: 10/20/14
Project #: 185831013
Task #: 200
Site Address: LA-010-37.2/42.4
Inspector: JS
:
Los Angeles County

MATERIAL	
HA#	05
Material Type:	Sealant
Color:	Black
Description:	Assoc. w/ Deck
Estimated Total Qty.:	SF

HAZARD ASSESSMENT			
Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS				
	Floor #	Location	Quantity Estimate	Cond.
13		Assoc. w/ Deck		G
14				
15				

SAMPLES		
Sample #		Sample Location
05	A	~~NE~~ E
05	B	~~NW~~ N
05	C	~~SW~~ S
	D	
	E	
	F	
	G	

Notes:

Relinquished By: _____ Date: 10/20/14
Received By: Diana Federico Date: 10/22/14

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Site Name: Holt Ave UC #53-671
Date: 10/20/14
Project #: 185831013
Task #: 200
Site Address: LA-010-37.2/42.4
Inspector: JS
:
Los Angeles County

MATERIAL	
HA#	06
Material Type:	Concrete
Color:	Gray
Description:	Assoc. w/ Abutment wall BELOW
Estimated Total Qty.:	SF

HAZARD ASSESSMENT			
Friable:	Yes		No
Contact by Maintenance:	Low	Med	High
Vibration:	Low	Med	High
Air Movement:	Low	Med	High

MATERIAL LOCATIONS				
Floor #	Location	Quantity Estimate	Cond.	
	Assoc. w/ abutment		G	16
	wall below			17
				18

SAMPLES	
Sample #	Sample Location
06 A	W NW-Below
06 B	S SW-Below
06 C	N NE-Below
D	
E	
F	
G	

Notes:

Relinquished By: [signature] Date: 10/20/14
Received By: Diana Federico Date: 10/21/14

Stantec

Asbestos Bulk Sample Log

147823

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Site Name: Holt Ave UC #53-671
Date: 10/20/14
Project #: 185831013
Task #: 200
Site Address: LA-010-37.2/42.4
Inspector: JS
:
Los Angeles County

MATERIAL	
HA#	07
Material Type:	Felt
Color:	Brown
Description:	Assoc. w/ joints in abutment wall Below
Estimated Total Qty.:	

HAZARD ASSESSMENT			
Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS				
Floor #	Location	Quantity Estimate	Cond.	
	Assoc. w/ abutment wall		G	19
	joints			20
				21

SAMPLES	
Sample #	Sample Location
07 A	NW-Below
07 B	W SW-Below
07 C	E NW-Below
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14
Received By: Diana Federico Date: 10/22/14

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Site Name: Holt Ave UC #53-671
Date: 10/2014
Project #: 185831013
Task #: 200
Site Address: LA-010-37.2/42.4
Inspector: JS
Los Angeles County

MATERIAL	
HA#	08
Material Type:	Drainpipe
Color:	Gray
Description:	Assoc. w/ weap holes on abutment BELOW
Estimated Total Qty.:	UnKnown

HAZARD ASSESSMENT			
Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS			
Floor #	Location	Quantity Estimate	Cond.
	Assoc. w/ weap holes	UnK	G
	on abutment walls		
	Below		

SAMPLES	
Sample #	Sample Location
08 A	NW-Below
08 B	SW-Below
08 C	SE-Below
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14
Received By: Diana Federico Date: 10/22/14

Page 1 of 1

CHAIN OF CUSTODY

EMC Laboratories
9830 S. 51ST St., Ste B-109
Phoenix, AZ 85044
(800) 362-3373 Fax (480) 893-1726

LAB#: 147824
TAT: 3 day
Rec'd: OCT 22 P.M.
EMC USE ONLY

COMPANY NAME:	Stantec Consulting Services Inc.	**BILL TO:**	**(If Different Location)**
	290 Conejo Ridge Avenue	Same	
	Thousand Oaks, CA 91361		
CONTACT:	Jason Stagno		
Phone/Fax:	(805) 630-8648 / (805) 230-1277		
Email:	jason.stagno@stantec.com		

Now Accepting: VISA – MASTERCARD **Price Quoted: $_____ / Sample $____ / Layers**

COMPLETE ITEMS 1-4: (Failure to complete any items may cause a delay in processing or analyzing your samples)

1. TURNAROUND TIME: [4hr rush} [8hr rush} [1-Day] [2-Day] (3-Day) [5-Day] [6-10 Day]

****Prior confirmation of turnaround time is required**
****Additional charges for rush analysis (please call marketing department for pricing details)**
****Laboratory analysis may be subject to delay if credit terms are not met**

2. TYPE OF ANALYSIS: (Bulk-PLM) [Air-PCM] [Lead] [Point Count] [Fungi: AOC, W-C, Bulk, Swab, Tape]

3. DISPOSAL INSTRUCTIONS: (Dispose of samples at EMC) / [Return samples to me at my expense]

(If you do not indicate preference, EMC will dispose of samples 60 days from analysis.)

4. Project Name: ACM Survey for Bridge Demo (TO13) #53-870 Via Verde UC

P.O. Number: _____ **Project Number:** 185831013.200

EMC SAMPLE #	CLIENT SAMPLE #	DATE & TIME SAMPLED	LOCATION/MATERIAL TYPE	Samples Accepted Yes / No	AIR SAMPLE INFO / COMMENTS ON	OFF	FLOW RATE
1	01A	10/20	See attached sample logs	(Y) N			
				Y N			
				Y N			
20	08A			(Y) N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			

SPECIAL INSTRUCTIONS: _____

Sample Collector: (Print) Jason Stagno (Signature) _____

Relinquished by: _____ Date/Time: 10.21.14 1600 Received by: Diana Federico Date/Time: 10/22/14

Relinquished by: Diana Federico Date/Time: 10/22/14 Received by: _____ Date/Time: 10/22/14

Relinquished by: _____ Date/Time _____ Received by: _____ Date/Time: _____

Rev. 09/01/08

147824

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:

Site Name: Via Verde UC #53-870
Site Address: LA-010-37.2/42.4
Los Angeles County

Date: 10/20/14
Inspector: JS

MATERIAL

HA#	01
Material Type:	Concrete
Color:	Gray
Description:	Assoc. w/ Guard Rail
Estimated Total Qty.:	SF

HAZARD ASSESSMENT

Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.	
	Assoc. w/ guard rail		G	1
				2
				3

SAMPLES

Sample #	Sample Location
01 A	NE
01 B	N-Center
01 C	SW
D	
E	
F	
G	

Notes:

Relinquished By: [signature] Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

Asbestos Bulk Sample Log

147824

Stantec
25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:
Site Name: Via Verde UC 53-870
Site Address: LA-010-37.2/42.4
Los Angeles County
Date: 10/20/14
Inspector: JS

MATERIAL	
HA#	02
Material Type:	Shim
Color:	Gray
Description:	Assoc. w/ guard rail posts
Estimated Total Qty.:	10 SF

HAZARD ASSESSMENT			
Friable:	Yes		No
Contact by Maintenance:	Low	Med	High
Vibration:	Low	Med	High
Air Movement:	Low	Med	High

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.	
	Assoc. w/ guard rail posts	10 SF	G	4
				5
				6

SAMPLES

Sample #	Sample Location
02 A	NE - Post #3
02 B	N - Center - Post #8
02 C	SW - Post #1 (EB side)
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14
Received By: Diana Federico Date: 10/22/14

147824

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:

Site Name: Via Verde UC 53-870
Site Address: LA-010-37.2/42.4
Los Angeles County

Date: 10/20/14
Inspector: JS

MATERIAL

HA#	03
Material Type:	Concrete
Color:	Gray
Description:	Assoc. w/ Deck
Estimated Total Qty.:	SF

HAZARD ASSESSMENT

Friable:	Yes		No
Contact by Maintenance:	Low	Med	~~High~~
Vibration:	Low	Med	~~High~~
Air Movement:	Low	Med	~~High~~

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.
	Assoc. w/ Deck		G

SAMPLES

	Sample #	Sample Location
7	03 A	NE
8	03 B	NW
9	03 C	SW
	D	
	E	
	F	
	G	

Notes:

Relinquished By: [signature] Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

147524

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:

Site Name: Via Verde UC - 53-870
Site Address: LA-010-37.2/42.4
Los Angeles County

Date: 10/20/14
Inspector: JS

MATERIAL

HA#	04
Material Type:	Asphalt
Color:	Black
Description:	Assoc. w/ Deck
Estimated Total Qty.:	SF

HAZARD ASSESSMENT

Friable:	Yes		No
Contact by Maintenance:	Low	Med	High
Vibration:	Low	Med	High
Air Movement:	Low	Med	High

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.
	Assoc. w/ Deck		G

SAMPLES

Sample #	Sample Location
10 04 A	NE
11 04 B	NW
12 04 C	SW
D	
E	
F	
G	

Notes:

Relinquished By: [signature] Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

14732

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:

Site Name: Via Verde UC 53-870
Site Address: LA-010-37.2/42.4
Los Angeles County

Date: 10/20/14
Inspector: JS

MATERIAL

HA#	05
Material Type:	Felt
Color:	Brown
Description:	Assoc. w/ joints in guard rail
Estimated Total Qty.:	

HAZARD ASSESSMENT

Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.
	Assoc. w/ joints in Guard Rail		G

13 HA 05

SAMPLES

Sample #	Sample Location
05 A	NE
B	
C	
D	
E	
F	
G	

Notes:

Relinquished By: [signature] Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

147824

Asbestos Bulk Sample Log

Stantec
25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:

Site Name: Via Verde UC 53-870
Site Address: LA-010-37.2/42.4
Los Angeles County

Date: 10/20/14
Inspector: JS

MATERIAL	
HA#	06
Material Type:	Felt
Color:	Brown
Description:	Assoc. w/ Abutment wall joints Below Bridge
Estimated Total Qty.:	

HAZARD ASSESSMENT			
Friable:	Yes		No
Contact by Maintenance:	Low	Med	High
Vibration:	Low	Med	High
Air Movement:	Low	Med	High

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.
	Assoc. w/ Abutment wall joints Below		G

SAMPLES

Sample #	Sample Location
06 A	NW-Below
06 B	W-Center-Below
06 C	E-Center-Below
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

147824

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:
Site Name: Via Verde UC 53-870
Site Address: LA-010-37.2/42.4
Los Angeles County
Date: 10/20/14
Inspector: JS

MATERIAL

HA#	07
Material Type:	Drainpipe
Color:	Gray
Description:	Assoc w/ weep holes BELOW
Estimated Total Qty.:	Unknown

HAZARD ASSESSMENT

Friable:	Yes		No
Contact by Maintenance:	Low	Med	High
Vibration:	Low	Med	High
Air Movement:	Low	Med	High

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.
	Assoc. w/ weep holes	Unk	G
	Below		

SAMPLES

Sample #		Sample Location
07	A	NW-Below
07	B	W-Center-Below
07	C	E-Center-Below
	D	
	E	
	F	
	G	

Notes:

Relinquished By: _____ Date: 10/20/14
Received By: Diana Federico Date: 10/22/14

Asbestos Bulk Sample Log

147824

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Site Name: Via Verde UC # 53-870
Date: 10/20/14
Project #: 185831013 Task #: 200
Site Address: LA-010-37.2/42.4
Inspector: JS
:
Los Angeles County

MATERIAL	
HA#	08
Material Type:	Sealant
Color:	Black
Description:	Assoc. w/ Deck
Estimated Total Qty.:	

HAZARD ASSESSMENT			
Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS			
Floor #	Location	Quantity Estimate	Cond.
	Assoc. w/ Deck		

SAMPLES	
Sample #	Sample Location
08 A	SW
B	
C	
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14 Received By: Diana Federico Date: 10/21/14

Page 1 of 1

CHAIN OF CUSTODY

EMC Laboratories
9830 S. 51ST St., Ste B-109
Phoenix, AZ 85044
(800) 362-3373 Fax (480) 893-1726

LAB#: 147825
TAT: 3day
Rec'd: OCT 22 P.M.
EMC USE ONLY

COMPANY NAME:	Stantec Consulting Services Inc.	**BILL TO:**	**(If Different Location)**
	290 Conejo Ridge Avenue	Same	
	Thousand Oaks, CA 91361		
CONTACT:	Jason Stagno		
Phone/Fax:	(805) 630-8648 / (805) 230-1277		
Email:	jason.stagno@stantec.com		

Now Accepting: VISA – MASTERCARD **Price Quoted: $_____ / Sample $____ / Layers**

COMPLETE ITEMS 1-4: (Failure to complete any items may cause a delay in processing **or analyzing your samples)**

1. TURNAROUND TIME: [4hr rush} [8hr rush} [1-Day] [2-Day] (3-Day) [5-Day] [6-10 Day]

****Prior confirmation of turnaround time is required**
****Additional charges for rush analysis (please call marketing department for pricing details)**
****Laboratory analysis may be subject to delay if credit terms are not met**

2. TYPE OF ANALYSIS: (Bulk-PLM) [Air-PCM] [Lead] [Point Count] [Fungi: AOC, W-C, Bulk, Swab, Tape]

3. DISPOSAL INSTRUCTIONS: (Dispose of samples at EMC) / [Return samples to me at my expense]

(If you do not indicate preference, EMC will dispose of samples 60 days from analysis.)

4. Project Name: ACM Survey for Bridge Demo (TO13) #53 – 1528 Grand Ave

P.O. Number: _____ **Project Number:** 185831013.200

EMC SAMPLE #	CLIENT SAMPLE #	DATE & TIME SAMPLED	LOCATION/MATERIAL TYPE	Samples Accepted Yes / No	AIR SAMPLE INFO / COMMENTS ON	OFF	FLOW RATE
1	1A	10/20	See attached sample logs	Y N			
⌇	⌇	⌇		Y N			
⌇	⌇	⌇		Y N			
23	09A	⌇		Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			

SPECIAL INSTRUCTIONS: _____

Sample Collector: (Print) Jason Stagno (Signature) _____

Relinquished by: _____ Date/Time: 10/21-14 1600 Received by: Diana Federico Date/Time: 10/22/14

Relinquished by: Diana Federico Date/Time: 10/22/14 Received by: _____ Date/Time: 10/22/14

Relinquished by: _____ Date/Time _____ Received by: _____ Date/Time: _____

Rev. 09/01/08

147835

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:

Site Name: Grand Ave UC # 53-1528
Site Address: LA-010-37.2/42.4
Los Angeles County

Date: 10/20/14
Inspector: JS

MATERIAL

HA#	01
Material Type:	Concrete
Color:	Gray
Description:	Assoc. w/ Guard Rail
Estimated Total Qty.:	SF

HAZARD ASSESSMENT

Friable:	Yes		No
Contact by Maintenance:	Low	Med	High
Vibration:	Low	Med	High
Air Movement:	Low	Med	High

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.	
	Assoc. w/ guard rail		G	1
				2
				3

SAMPLES

Sample #	Sample Location
01 A	NE
01 B	NW
01 C	SE
D	
E	
F	
G	

Notes:

Relinquished By: [signature] Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

Asbestos Bulk Sample Log

167825

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:

Site Name: Grand Ave UC #53-1528
Site Address: LA-010-37.2/42.4
Los Angeles County

Date: 10/20/14
Inspector: JS

MATERIAL

HA#	02
Material Type:	Shim
Color:	Gray
Description:	Assoc. w/ Guard Rail Posts
Estimated Total Qty.:	10 SF

HAZARD ASSESSMENT

Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.	
	Assoc. w/ guard rail	10 SF	G	4
	post			5
				6

SAMPLES

Sample #	Sample Location
02 A	NE - Post #8 3 (KP) (WB)
02 B	NW - Post #8 (WB)
02 C	S-Center - Post #3 (EB)
D	
E	
F	
G	

Notes:

Relinquished By: [signature] Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

147835

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:

Site Name: Grand Ave UC #53-1528
Site Address: LA-010-37.2/42.4
Los Angeles County

Date: 10/20/14
Inspector: JS

MATERIAL

HA#	03
Material Type:	Concrete
Color:	Gray
Description:	Assoc. w/ Deck
Estimated Total Qty.:	SF

HAZARD ASSESSMENT

Friable:	Yes		No
Contact by Maintenance:	Low	Med	High
Vibration:	Low	Med	High
Air Movement:	Low	Med	High

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.
	Assoc. w/ Deck		G

7 of 9

SAMPLES

Sample #	Sample Location
03 A	NE
03 B	NW
03 C	SE
D	
E	
F	
G	

Notes:

Relinquished By: [signature] Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

Asbestos Bulk Sample Log

167825

Stantec
25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:
Site Name: Grand Ave UC #53-1528
Site Address: LA-010-37.2/42.4
Los Angeles County
Date: 10/20/14
Inspector: JS

MATERIAL	
HA#	04
Material Type:	Asphalt
Color:	Black
Description:	Assoc. w/ Deck
Estimated Total Qty.:	SP

HAZARD ASSESSMENT			
Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS			
Floor #	Location	Quantity Estimate	Cond.
	Assoc. w/ Deck		G

10
11
12

SAMPLES	
Sample #	Sample Location
04 A	NE
04 B	NW
04 C	SE
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14
Received By: Diana Federico Date: 10/22/14

147825

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:

Site Name: Grand Ave UC #53-1528
Site Address: LA-010-37.2/42.4
Los Angeles County

Date: 10/20/14
Inspector: JS

MATERIAL

HA#	05
Material Type:	Sealant
Color:	Black
Description:	Assoc. w/ Deck
Estimated Total Qty.:	

HAZARD ASSESSMENT

Friable:	Yes		No
Contact by Maintenance:	Low	Med	High
Vibration:	Low	Med	High
Air Movement:	Low	Med	High

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.
	Assoc. w/ Deck		

13
14
15

SAMPLES

Sample #	Sample Location
05 A	NE
05 B	NW
05 C	SE
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14

Received By: Diana Federico Date: 10/22/14 KP

147825

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Site Name: Grand Ave UC #53-1528
Date: 10/20/14
Project #: 185831013
Task #: 200
Site Address: LA-010-37.2/42.4
Inspector: JS
:
Los Angeles County

MATERIAL

HA#	06
Material Type:	Drain pipe
Color:	Gray
Description:	Assoc. w/ weepsin vertical abutment walls
Estimated Total Qty.:	Unknown

HAZARD ASSESSMENT

Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.	
	weep holes in vertical	Unk	G	16
	abutment walls			17
				18

SAMPLES

Sample #	Sample Location
06 A	NE-Below
06 B	SE-Below
06 C	W-Center-Below
D	
E	
F	
G	

Notes:

Relinquished By: [signature] Date: 10/20/14
Received By: Diana Federico Date: 10/22/14

147825

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:
Site Name: Grand Ave UC #53-1528
Site Address: LA-010-37.2/42.4
Los Angeles County
Date: 10/20/14
Inspector: JS

MATERIAL

HA#	07
Material Type:	Felt
Color:	Brown
Description:	Assoc. w/ joints in abutment walls Below & Guardrails Above
Estimated Total Qty.:	

HAZARD ASSESSMENT

Friable:	Yes		No
Contact by Maintenance:	Low	Med	High
Vibration:	Low	Med	High
Air Movement:	Low	Med	High

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.
	Assoc. w/ abutment Below &		
	Guardrails above		

SAMPLES

Sample #	Sample Location
07 A	E-Center-Below
07 B	SE-Below
07 C	SW-Below
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

147825

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:

Site Name: Grand Ave UC #53-1528
Site Address: LA-010-37.2/42.4
Los Angeles County

Date: 10/20/14
Inspector: JS

MATERIAL

HA#	08
Material Type:	Adhesive
Color:	Gray
Description:	Assoc. w/ mastic on bolts on Guardrail
Estimated Total Qty.:	

HAZARD ASSESSMENT

Friable:	Yes		~~No~~
Contact by Maintenance:	Low	Med	~~High~~
Vibration:	Low	Med	~~High~~
Air Movement:	Low	Med	~~High~~

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.
	Bolts on Guardrail		

SAMPLES

Sample #	Sample Location
08 A	S-Center
B	
C	
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

Asbestos Bulk Sample Log

14785

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Site Name: Grand Ave UC #53-1528
Date: 10/20/14
Project #: 185831013 Task #: 200
Site Address: LA-010-37.2/42.4
Inspector: JS
: Los Angeles County

MATERIAL	
HA#	09
Material Type:	Adhesive
Color:	Gray
Description:	Assoc. w/ mastic on guardrail reflector
Estimated Total Qty.:	

HAZARD ASSESSMENT			
Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS			
Floor #	Location	Quantity Estimate	Cond.
	Assoc. w/ guardrail reflector		

SAMPLES	
Sample #	Sample Location
09 A	S-Center
B	
C	
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14
Received By: Diana Federico Date: 10/22/14

Page 1 of 1

CHAIN OF CUSTODY

EMC Laboratories
9830 S. 51ST St., Ste B-109
Phoenix, AZ 85044
(800) 362-3373 Fax (480) 893-1726

LAB#: 147826
TAT: 3 day
Rec'd: OCT 22 P.M.
EMC USE ONLY

COMPANY NAME:	Stantec Consulting Services Inc.	**BILL TO:**	**(If Different Location)**
	290 Conejo Ridge Avenue	Same	
	Thousand Oaks, CA 91361		
CONTACT:	Jason Stagno		
Phone/Fax:	(805) 630-8648 / (805) 230-1277		
Email:	jason.stagno@stantec.com		

Now Accepting: VISA – MASTERCARD **Price Quoted: $_____ / Sample $____ / Layers**

COMPLETE ITEMS 1-4: (Failure to complete any items may cause a delay in processing or analyzing your samples)

1. TURNAROUND TIME: [4hr rush} [8hr rush} [1-Day] [2-Day] (3-Day) [5-Day] [6-10 Day]

****Prior confirmation of turnaround time is required**
****Additional charges for rush analysis (please call marketing department for pricing details)**
****Laboratory analysis may be subject to delay if credit terms are not met**

2. TYPE OF ANALYSIS: (Bulk-PLM) [Air-PCM] [Lead] [Point Count] [Fungi: AOC, W-C, Bulk, Swab, Tape]

3. DISPOSAL INSTRUCTIONS: (Dispose of samples at EMC) / [Return samples to me at my expense]

(If you do not indicate preference, EMC will dispose of samples 60 days from analysis.)

4. Project Name: ACM Survey for Bridge Demo (TO13) #53-2008 Kellogg Dr UC

P.O. Number: _____ **Project Number:** 185831013.200

EMC SAMPLE #	CLIENT SAMPLE #	DATE & TIME SAMPLED	LOCATION/MATERIAL TYPE	Samples Accepted Yes / No	AIR SAMPLE INFO / COMMENTS ON	OFF	FLOW RATE
1	1A	10/20	See attached sample logs	(Y) N			
∫	∫	|		Y N			
∫	∫	|		Y N			
∫	∫	|		Y N			
∫	∫	|		Y N			
38	14C			(Y) N			
				Y N			
				Y N			
				Y N			
			Missing 09A	Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			

SPECIAL INSTRUCTIONS: _____

Sample Collector: (Print) Jason Stagno (Signature) _____

Relinquished by: _____ Date/Time: 10/21/14 1600 Received by: Diana Federico Date/Time: 10/22/14

Relinquished by: Diana Federico Date/Time: 10/22/14 Received by: _____ Date/Time: 10/22/14

Relinquished by: _____ Date/Time _____ Received by: _____ Date/Time: _____

Rev. 09/01/08

Asbestos Bulk Sample Log

147826

Stantec
25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:
Site Name: Kellogg Dr UC #53-2008
Site Address: LA-010-37.2/42.4
Los Angeles County
Date: 10/20/14
Inspector: JS

MATERIAL

HA#	01
Material Type:	Concrete
Color:	Gray
Description:	Assoc. w/ Guard Rail
Estimated Total Qty.:	SF

HAZARD ASSESSMENT

Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.	
-	Assoc. w/ Guard Rail	5F	G	1
				2
				3

SAMPLES

Sample #	Sample Location
01 A	NE
01 B	NW
01 C	SW
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14
Received By: Diana Federico Date: 10/22/14

Asbestos Bulk Sample Log

147826

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:

Site Name: Kellogg Dr UC # 53-2008
Site Address: LA-010-37.2/42.4
Los Angeles County

Date: 10/20/14
Inspector: JS

MATERIAL

HA#	02
Material Type:	Shim
Color:	Gray
Description:	Assoc. w/ guard rail post
Estimated Total Qty.:	Unknown

HAZARD ASSESSMENT

Friable:	Yes		No
Contact by Maintenance:	Low	Med	High
Vibration:	Low	Med	High
Air Movement:	Low	Med	High

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.
	Assoc. w/ Guard Rail post	Unk SF	

SAMPLES

Sample #	Sample Location
4 02 A	NE
5 02 B	N-center
6 02 C	SW
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14

Received By: Diana Federico Date: _____

Asbestos Bulk Sample Log

147826

Stantec
25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:
Site Name: Kellogg Dr UC #53-2008
Site Address: LA-010-37.2/42.4
Los Angeles County
Date: 10/20/14
Inspector: JS

MATERIAL

HA#	03
Material Type:	Concrete
Color:	Gray
Description:	Assoc. w/ Deck
Estimated Total Qty.:	SF

HAZARD ASSESSMENT

Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.	
	Assoc w/ Deck	SF .	G	7
				8
				9

SAMPLES

Sample #	Sample Location
03 A	NE
03 B	NW
03 C	SW
D	
E	
F	
G	

Notes:

Relinquished By: [signature] Date: 10/20/14
Received By: Diana Federico Date: 10/22/14

147826

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:

Site Name: Kellogg Dr UC #53-2008
Site Address: LA-010-37.2/42.4
Los Angeles County

Date: 10/20/14
Inspector: JS

MATERIAL

HA#	04
Material Type:	Asphalt
Color:	Black
Description:	Assoc. w/ Deck
Estimated Total Qty.:	SF

HAZARD ASSESSMENT

Friable:	Yes		No
Contact by Maintenance:	Low	Med	High
Vibration:	Low	Med	High
Air Movement:	Low	Med	High

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.	
	Assoc. w/ Deck	SF	G	10
				11
				12

SAMPLES

Sample #	Sample Location
04 A	NE
04 B	NW
04 C	SW
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

Asbestos Bulk Sample Log

1478216

Stantec
25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:
Site Name: Kellogg Dr UC #53-2008
Site Address: LA-010-37.2/42.4
Los Angeles County
Date: 10/20/14
Inspector: JS

MATERIAL	
HA#	OS
Material Type:	Sealant
Color:	Gray
Description:	Assoc. w/ Deck (Foam-like)
Estimated Total Qty.:	SF

HAZARD ASSESSMENT			
Friable:	Yes		No
Contact by Maintenance:	Low	Med	High
Vibration:	Low	Med	High
Air Movement:	Low	Med	High

MATERIAL LOCATIONS			
Floor #	Location	Quantity Estimate	Cond.
	Assoc. w/ Deck	SF	G

13

SAMPLES	
Sample #	Sample Location
OS A	NE
B	
C	
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14
Received By: Diana Federico Date: 10/22/14

147826

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Site Name: Kellogg Dr UC #53-2008
Date: 10/20/14
Project #: 185831013
Task #: 200
Site Address: LA-010-37.2/42.4
Inspector: JS
:
Los Angeles County

MATERIAL

HA#	06
Material Type:	Adhesive
Color:	Gray
Description:	Assoc. w/ guardrail reflector mastic
Estimated Total Qty.:	SF

HAZARD ASSESSMENT

Friable:	Yes		No
Contact by Maintenance:	Low	Med	High
Vibration:	Low	Med	High
Air Movement:	Low	Med	High

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.
	Assoc. w/ guardrail reflector mastic	SF	G

14

SAMPLES

Sample #	Sample Location
06 A	N/W
B	
C	
D	
E	
F	
G	

Notes:

Relinquished By:
Date: 10/20/14
Received By: Diana Federico
Date: 10/22/14

Asbestos Bulk Sample Log

147826

Stantec
25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:
Site Name: Kellogg Dr UC #53-2008
Site Address: LA-010-37.2/42.4
Los Angeles County
Date: 10/20/14
Inspector: JS

MATERIAL	
HA#	07
Material Type:	Felt
Color:	Tan
Description:	Assoc. w/ abutment wall joints BELOW
Estimated Total Qty.:	~~50~~

HAZARD ASSESSMENT			
Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.
	Abutment wall joints BELOW		G

SAMPLES

Sample #	Sample Location
15 07 A	NW-Below
16 07 B	W-Center-Below
17 07 C	NE-Below
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14
Received By: Diana Federico Date: 10/22/14

147826

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:

Site Name: Kellogg Dr UC # 53-2008
Site Address: LA-010-37.2/42.4
Los Angeles County

Date: 10/20/14
Inspector: JS

MATERIAL

HA#	08
Material Type:	Felt
Color:	Brown
Description:	Assoc. w/ abutment wall joints Below
Estimated Total Qty.:	SF

HAZARD ASSESSMENT

Friable:	Yes		No
Contact by Maintenance:	Low	Med	High
Vibration:	Low	Med	High
Air Movement:	Low	Med	High

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.	
	Abutment wall joints Below		G	18
				19
				20

SAMPLES

Sample #	Sample Location
08 A	NW - Below
08 B	SE - Below
08 C	NE - Below
D	
E	
F	
G	

Notes:

Relinquished By: [signature] Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

Asbestos Bulk Sample Log

147826

Stantec
25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:
Site Name: Kellogg Dr UC #53-2008
Site Address: LA-010-37.2/42.4
Los Angeles County
Date: 10/20/14
Inspector: JS

MATERIAL	
HA#	09
Material Type:	Drainpipe
Color:	Gray
Description:	Assoc. w/ Abutment wall weap holes BELOW - On vertical walls
Estimated Total Qty.:	Unknown

HAZARD ASSESSMENT			
Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS				
	Floor #	Location	Quantity Estimate	Cond.
21		On vertical ~~walls~~ Abutment	Unk	G
22		walls weap holes Below		
23				

SAMPLES		
Sample #		Sample Location
09	A	NW-Below M
09	B	SE-Below
09	C	NE-Below
	D	
	E	
	F	
	G	

Notes:

Relinquished By: _____ Date: 10/20/14
Received By: Diana Federico Date: 10/22/14

147826

Asbestos Bulk Sample Log

Stantec
25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:
Site Name: Kellogg Dr UC 53-2008
Site Address: LA-010-37.2/42.4
Los Angeles County
Date: 10/20/14
Inspector: JS

MATERIAL

HA#	10
Material Type:	Concrete
Color:	Gray
Description:	Assoc. w/ abatment walls below
Estimated Total Qty.:	SF

HAZARD ASSESSMENT

Friable:	Yes		No
Contact by Maintenance:	Low	Med	High
Vibration:	Low	Med	High
Air Movement:	Low	Med	High

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.
	Assoc. w/ abatment wall	G	SF
	BELOW		

SAMPLES

Sample #	Sample Location
10 A	NW-Below
10 B	SE-Below
10 C	NE-Below
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14
Received By: Diana Federico Date: 10/22/14

Asbestos Bulk Sample Log

147826

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:

Site Name: Kellogg Dr UC #53-2008
Site Address: LA-010-37.2/42.4
Los Angeles County

Date: 10/20/14
Inspector: JS

MATERIAL	
HA#	11
Material Type:	Concrete w/ Rock
Color:	Dark Gray
Description:	Assoc. w/ abutment wall Below
Estimated Total Qty.:	

HAZARD ASSESSMENT			
Friable:	Yes		No
Contact by Maintenance:	Low	Med	High
Vibration:	Low	Med	High
Air Movement:	Low	Med	High

MATERIAL LOCATIONS			
Floor #	Location	Quantity Estimate	Cond.
	Abutment wall below bridge		G

SAMPLES	
Sample #	Sample Location
11 A	NW-Below
11 B	SW-Below
11 C	SW-Below
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

147826

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Site Name: Kellogg Dr UC #53-2008
Date: 10/20/14
Project #: 185831013
Task #: 200
Site Address: LA-010-37.2/42.4
Inspector: JS
:
Los Angeles County

MATERIAL	
HA#	12
Material Type:	Pressboard
Color:	Tan
Description:	Assoc. w/ vertical abutment walls below
Estimated Total Qty.:	

HAZARD ASSESSMENT			
Friable:	Yes		No
Contact by Maintenance:	Low	Med	High
Vibration:	Low	Med	High
Air Movement:	Low	Med	High

MATERIAL LOCATIONS				
Floor #	Location	Quantity Estimate	Cond.	
	Abutment walls below			30
				31
				32

SAMPLES	
Sample #	Sample Location
12 A	SE-Below
12 B	E-Center-Below
12 C	NE-Below
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14
Received By: Diana Federico Date: 10/20/14

Asbestos Bulk Sample Log

14526

Stantec
25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Site Name: Kellogg Dr UC #53-2008
Date: 10/20/14
Project #: 185831013
Task #: 200
Site Address: LA-010-37.2/42.4
Inspector: JS
:
Los Angeles County

MATERIAL	
HA#	13
Material Type:	Paper
Color:	White
Description:	Assoc. w/ joints on abutment walls below
Estimated Total Qty.:	

HAZARD ASSESSMENT			
Friable:	Yes		No
Contact by Maintenance:	Low	Med	High
Vibration:	Low	Med	High
Air Movement:	Low	Med	High

MATERIAL LOCATIONS				
	Floor #	Location	Quantity Estimate	Cond.
33		Assoc. w/ joints on abutment		
34		walls		
35				

SAMPLES	
Sample #	Sample Location
13 A	NE-Below
13 B	NE-Below
13 C	NE-Below
D	
E	
F	
G	

Notes:

Relinquished By:
Date: 10/20/14
Received By: Diana Federico
Date: 10/22/14

14782

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:

Site Name: Kellogg Dr UC #53-2008
Site Address: LA-010-37.2/42.4
Los Angeles County

Date: 10/20/14
Inspector: JS

MATERIAL	
HA#	14
Material Type:	Sealant
Color:	Gray
Description:	Assoc. w/ Deck. (Rubbery)
Estimated Total Qty.:	

HAZARD ASSESSMENT			
Friable:	Yes		No
Contact by Maintenance:	Low	Med	High
Vibration:	Low	Med	High
Air Movement:	Low	Med	High

MATERIAL LOCATIONS				
	Floor #	Location	Quantity Estimate	Cond.
36		Assoc. w/ Deck		
37				
35				

SAMPLES	
Sample #	Sample Location
14 A	SW
14 B	SE
14 C	SE
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

CHAIN OF CUSTODY

EMC Laboratories
9830 S. 51ST St., Ste B-109
Phoenix, AZ 85044
(800) 362-3373 Fax (480) 893-1726

LAB#: 147827
TAT: 3day
Rec'd: OCT 22 P.M.
EMC USE ONLY

COMPANY NAME:	Stantec Consulting Services Inc.	**BILL TO:**	**(If Different Location)**
	290 Conejo Ridge Avenue	Same	
	Thousand Oaks, CA 91361		
CONTACT:	Jason Stagno		
Phone/Fax:	(805) 630-8648 / (805) 230-1277		
Email:	jason.stagno@stantec.com		

Now Accepting: VISA – MASTERCARD **Price Quoted: $_____ / Sample $____ / Layers**

COMPLETE ITEMS 1-4: (Failure to complete any items may cause a delay in processing or analyzing your samples)

1. TURNAROUND TIME: [4hr rush} [8hr rush] [1-Day] [2-Day] (3-Day) [5-Day] [6-10 Day]

****Prior confirmation of turnaround time is required**
****Additional charges for rush analysis (please call marketing department for pricing details)**
****Laboratory analysis may be subject to delay if credit terms are not met**

2. TYPE OF ANALYSIS: (Bulk-PLM) [Air-PCM] [Lead] [Point Count] [Fungi: AOC, W-C, Bulk, Swab, Tape]

3. DISPOSAL INSTRUCTIONS: (Dispose of samples at EMC) / [Return samples to me at my expense]

(If you do not indicate preference, EMC will dispose of samples 60 days from analysis.)

4. Project Name: ACM Survey for Bridge Demo (TO13) #53-2008 G Kellogg Dr offramp E10/57

P.O. Number: _____ **Project Number:** 185831013.200

EMC SAMPLE #	CLIENT SAMPLE #	DATE & TIME SAMPLED	LOCATION/MATERIAL TYPE	Samples Accepted Yes / No	AIR SAMPLE INFO / COMMENTS ON	OFF	FLOW RATE
1	01A	10/20	See attached sample logs	Y N			
				Y N			
				Y N			
				Y N			
9	03C			Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			
				Y N			

SPECIAL INSTRUCTIONS: _____

Sample Collector: (Print) Jason Stagno (Signature) _____

Relinquished by: _____ Date/Time: 10/21/14 16:00 Received by: Diana Federico Date/Time: 10/22/14

Relinquished by: Diana Federico Date/Time: 10/22/14 Received by: _____ Date/Time: 10/22/14

Relinquished by: _____ Date/Time _____ Received by: _____ Date/Time: _____

147837

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:

Site Name: Kellogg Dr Off ramp E10/57 UC #53-2008G
Site Address: LA-010-37.2/42.4
Los Angeles County

Date: 10/20/14
Inspector: JS

MATERIAL	
HA#	01
Material Type:	Concrete
Color:	Gray
Description:	Associated with Bridge Abutments Below
Estimated Total Qty.:	

HAZARD ASSESSMENT			
Friable:	Yes		No
Contact by Maintenance:	Low	Med	High
Vibration:	Low	Med	High
Air Movement:	Low	Med	High

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.	
	Assoc. w/ abutment walls		G	1
	Below			2
				3

SAMPLES

Sample #	Sample Location
01 A	W-Center-Below
01 B	E-Center-Below
01 C	NE-Below
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

147827

Asbestos Bulk Sample Log

Stantec
25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:

Site Name: Kellogg Dr Off ramp E10/57 UC #53-2008G
Site Address: LA-010-37.2/42.4 Los Angeles County

Date: 10/20/14
Inspector: JS

MATERIAL

HA#	02
Material Type:	Press Board
Color:	Tan
Description:	Associated with Abutments, Verticle
Estimated Total Qty.:	UNKnown

HAZARD ASSESSMENT

Friable:	Yes		No
Contact by Maintenance:	Low	Med	High
Vibration:	Low	Med	High
Air Movement:	Low	Med	High

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.	
	Assoc. w/ verticle abutments	UNK	G	4
	BELOW			5
				6

SAMPLES

Sample #	Sample Location
02 A	W-Center-Below
02 B	E-Center-Below
02 C	E-Center-Below
D	
E	
F	
G	

Notes:

Relinquished By: _____ Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

147827

Stantec

Asbestos Bulk Sample Log

25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 335-6116
Fax: (909) 335-6120

Project Name: ACM Survey for Bridge Demolishing
Project #: 185831013 Task #: 200
:

Site Name: Kellogg Dr Off ramp E10/57 UC #53-2008G
Site Address: LA-010-37.2/42.4
Los Angeles County

Date: 10/22/14
Inspector: JS

MATERIAL

HA#	03
Material Type:	Felt
Color:	Brown
Description:	Associated with Abutments
Estimated Total Qty.:	UnKnown

HAZARD ASSESSMENT

Friable:	Yes		(No)
Contact by Maintenance:	Low	Med	(High)
Vibration:	Low	Med	(High)
Air Movement:	Low	Med	(High)

MATERIAL LOCATIONS

Floor #	Location	Quantity Estimate	Cond.
	Assoc. w/ Abutments below	UnK	G

7
8
9

SAMPLES

Sample #	Sample Location
03A	NW-Below
03B	SW-Below
03C	NE-Below
D	
E	
F	
G	

Notes:

Relinquished By: [signature] Date: 10/20/14

Received By: Diana Federico Date: 10/22/14

APPENDIX D
DAILY FIELD NOTES

Stantec Consulting Services Inc.
25864-F Business Center Drive, Redlands CA 92374-4515

File: 07A3321_13 – Bridge Terminology

Reference: Bridge Material Location Terminology Correlations for 07A3321_13 EA: 07-1193U1

The bridge material descriptions presented in this report are consistent with California Department of Transportation terminology. The bridge material descriptions presented in Appendix C and Appendix D of this 07-1193U1 report follow a previous format and differ from the California Department of Transportation terminology. The correlation between the terms is as follows:

Caltrans Terminology (as shown in Table 2)	**Corresponding 07-1193U1 Appendix C and Appendix D Terminology**
Shims below Handrail Posts	Shims below Guardrail Posts
Bridge Railing	Guardrails
Bridge Reflective Marker	Guardrail Reflector
Bridge Railing Joints	Guardrail Joints
Joint Seal	Deck Sealant

Stantec

SITE OBSERVATION REPORT

Project: ACM Survey - T013 Date: 10/20/14 Project No: 185831013
Name: Rate Sch/Bill Code: -
Arrival Time: 0700 Departure Time: 1600 Did you call in? (Yes) No
Who did you call? DM
Weather Notations: (SUN) CLOUDY RAIN SNOW Temperature: ~ 70°F F

DESCRIPTION OF ACTIVITIES ON SITE AND NOTES

0700 - Arrived at park & Ride near Fairplex Drive in Pomona
0710 - Conducted H&S meeting.
0725 - Received a call from Sam Yang regarding HASP and ACM survey
0740 - Mobilized to Kellogg Drive UC
0750 - Began Sampling #53-2008, could not access deck reflectors & weep holes under br. deck
0850 - Began Sampling #53-2008G, could not access deck material or weep holes below bridge deck.
0930 - Mobilized to #53-870, could not access deck reflectors, some deck joint sealant, weep holes beneath bridge deck
1030 - Mobilized to #53-671, could not access deck reflectors, some deck joint sealant, and weep holes
1145 - Mobilized to #53-670, could not access deck reflectors, some deck joint sealant, and weep holes
1300 - Mobilized to #53-1528, could not access deck reflectors some deck joint sealant, and weep holes.
1400 - Lunch
1500 - Mobilized to EB sides of bridges to collect remaining samples
1600 - Completed sampling

Signature: Date: 10/20/14

APPENDIX E
SITE-SPECIFIC HEALTH AND SAFETY PLAN (HASP)

SITE-SPECIFIC HEALTH AND SAFETY PLAN (HASP)
TASK ORDER NO. 13 – ADL INVESTIGATION AND ASBESTOS SURVEY - LA-010

07A3321-13
Asbestos Containing Materials Survey for Bridge Demolishing; Aerially Deposited Lead Investigation for Pollution Control System Construction (5 bridges).
Location:LA-010-37.2/42.4
Los Angeles County, California
PN: 0713000007-1
EA: 1193U1

Prepared for:
The State of California, Department of Transportation
District 7 - North
Los Angeles, California
Contract # 07A3321

Submitted by:
Stantec Consulting Services Inc.
25864-F Business Center Dr.
Redlands, CA 92374

October 17, 2014

Stantec

Purpose and Approval

Our work can be hazardous, and it is imperative that we never forget that! It is the purpose of this Health and Safety Plan (HASP) to proactively aid Stantec employees in:

- Identifying and understanding the potential risks/hazards they may encounter at the site.
- Mitigating those potential risks/hazards.

Stantec's policy is to complete our work on this site without any type of incident (injury, illness, impact to the environment, impact to property and equipment). In order to achieve this goal, the project team will work together to perform an effective hazard assessment. The team will then establish appropriate precautions and communicate these daily among project staff. Staff will be responsible for communicating changing field conditions to the project management so these conditions and appropriate precautions may be re-evaluated as needed. Staff will implement **STOP WORK AUTHORITY** at any time they believe that conditions may be inherently unsafe or might cause damage to property or harm to the environment. Staff may refuse to participate in work they believe will be unsafe. If it is believed that such conditions exist, staff will communicate immediately with the Project Manager to resolve the situation. We expect all subcontractors and project personnel to share this goal.

Client: The State of California, Department of Transportation – 07A3321

Site Name: ACM Survey for Bridge Demolishing; ADL Investigation for Pollution Control System Construction (5 bridges), Location: LA-010-37.2/42.4

Project Name: TASK ORDER NO. 15 – ACM SURVEY

Project Number: 185831013

Start Date: October 17, 2014

End Date: November 30, 2014

Plan Review Date*: March 30, 2015

(*The Plan Review Date is the date the HASP would need to be re-reviewed to maintain current information is included should the Task Order be extended. The Plan Review date is *no longer than 6 months from the start of the Period of Performance – however, no reviews will be performed on the HASP outside of the Task Order Period of Performance.*).

Kevin Miskin Project Manager	Signature: Kevin Kay Miskin	Date: 10/20/2014
Dan Feldt, MPH, CIH Health and Safety Manager, Certified Industrial Hygienist (CIH) HASP review	Signature: D. G. Feldt	Date: 10/17/14
Monica L. Aragon Office Safety Environmental Coordinator (OSEC)	Signature:	Date: 10/17/2014
Jason Stagno Site Health and Safety Officer (SHSO)	Signature:	Date:
Anne Perez Peer Reviewer	Signature:	Date: 10/20/14
Monica L. Aragon HASP Originator	Signature:	Date: 10/17/14

THE AMERICAN BOARD OF INDUSTRIAL HYGIENE INCORPORATED
CERTIFICATION NUMBER 3741 CP
EXPIRES 6-1-2015
PENNSYLVANIA
DANIEL G. FELDT, CIH

The health and safety guidelines in this HASP were prepared exclusively for this site. This HASP will be amended (with changes recorded on the Health and Safety Plan Modification Log located

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Purpose and Approval

Our work can be hazardous, and it is imperative that we never forget that! It is the purpose of this Health and Safety Plan (HASP) to proactively aid Stantec employees in:

- Identifying and understanding the potential risks/hazards they may encounter at the site.
- Mitigating those potential risks/hazards.

Stantec's policy is to complete our work on this site without any type of incident (injury, illness, impact to the environment, impact to property and equipment). In order to achieve this goal, the project team will work together to perform an effective hazard assessment. The team will then establish appropriate precautions and communicate these daily among project staff. Staff will be responsible for communicating changing field conditions to the project management so these conditions and appropriate precautions may be re-evaluated as needed. Staff will implement **STOP WORK AUTHORITY** at any time they believe that conditions may be inherently unsafe or might cause damage to property or harm to the environment. Staff may refuse to participate in work they believe will be unsafe. If it is believed that such conditions exist, staff will communicate immediately with the Project Manager to resolve the situation. We expect all subcontractors and project personnel to share this goal.

Client: The State of California, Department of Transportation – 07A3321

Site Name: ACM Survey for Bridge Demolishing; ADL Investigation for Pollution Control System Construction (5 bridges), Location: LA-010-37.2/42.4

Project Name: TASK ORDER NO. 13 – ADL INVESTIGATION AND ACM SURVEY

Project Number: 185831013

Start Date: October 17, 2014

End Date: November 30, 2014

Plan Review Date*: March 30, 2015

(*The Plan Review Date is the date the HASP would need to be re-reviewed to maintain current information is included should the Task Order be extended. The Plan Review date is *no longer than 6 months from the start of the Period of Performance – however, no reviews will be performed on the HASP outside of the Task Order Period of Performance.*).

Kevin Miskin Project Manager	Signature:_____	Date:_____
Dan Feldt, MPH, CIH Health and Safety Manager, Certified Industrial Hygienist (CIH) HASP review	Signature:_____	Date:_____
Monica L. Aragon Office Safety Environmental Coordinator (OSEC)	Signature:	Date:10/17/2014
Jason Stagno Site Health and Safety Officer (SHSO)	Signature:	Date: 10.20.14
Anne Perez Peer Reviewer	Signature: for A. Perez	Date: 10.20.14
Monica L. Aragon HASP Originator	Signature:	Date:10/17/14

Stantec

Melissa Baernstein ADL Site Health and Safety Officer (SHSO)	Signature: Melissa Baernstein	Date: 10/20/2014
Joshua Sargent ADL Site Health and Safety Officer (SHSO)	Signature: Joshua Sargent	Date: 10.20.2014

The health and safety guidelines in this HASP were prepared exclusively for this site. This HASP will be amended (with changes recorded on the Health and Safety Plan Modification Log located in Attachment A) if site conditions, scope of work, training dates, personnel, or other critical items change before the scheduled HASP review date above. This HASP is intended to be available on site. Contents of this binder are listed in Attachment 1. Elements of the HASP shall be reviewed during daily tailgate meetings conducted by the Site Health & Safety Officer.

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Acknowledgement and Agreement Form

"Zero Tolerance for Incidents of ANY Kind.
Work Together to Ensure a SAFE and High Quality Project"

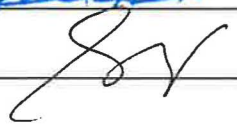
All parties conducting site activities are required to coordinate their activities and practices with the Stantec Site Health and Safety Officer (SHSO). Stantec has provided a copy of this HASP to site contractors in the interest of disclosure of potential risks/hazards of which Stantec may be aware. Similarly, contractors shall inform Stantec of any potential site risks/hazards of which they are aware including the contractor's work, equipment, procedures and chemicals.

This HASP has been developed for the purpose of proactively aiding Stantec employees in identifying, understanding, and mitigating the potential risks/hazards they are may encounter at the site. This HASP may also be used as a reference document by properly trained and experienced Stantec subcontractors and clients. However, sub-contractors and other contractors at the site must develop their own HASP to address the potential risks/hazards faced by their own employees.

This HASP should NOT be understood by contractors or anyone other than Stantec employees to provide information on all of the potential risks/hazards to which they may be exposed as a result of their work. Stantec claims no responsibility for use of this HASP by others.

Your signature below confirms the following: that you have read and understand the potential risks/hazards identified by Stantec and the associated mitigation measures discussed in this HASP; that there may be additional risks or hazards that are not identified in this HASP; that you have received training and medical surveillance according to this HASP and the OSHA Standard on Hazardous Waste Operations and Emergency Response (29 CFR 1910.120); and that you understand that you could be prohibited by the Stantec Site Health and Safety Officer or other authorized Stantec personnel from working on this project for not complying with any aspect of this or any other applicable HASP.

(All Stantec and subcontractor personnel must sign.)

Name	Signature	Company	Date
Jason Stagno		Stantec	10.20.14
Keith Poseklan		STANTEC	10/20/14
SAM YOUNG		ST.	10/20/14

Stantec

The health and safety guidelines in this HASP were prepared exclusively for this site. This HASP will be amended (with changes recorded on the Health and Safety Plan Modification Log located in Attachment A) if site conditions, scope of work, training dates, personnel, or other critical items change before the scheduled HASP review date above. This HASP is intended to be available on site. Contents of this binder are listed in Attachment 1. Elements of the HASP shall be reviewed during daily tailgate meetings conducted by the Site Health & Safety Officer.

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Acknowledgement and Agreement Form, cont.

Name	Signature	Company	Date

Stantec

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ATTACHMENTS

Attachment A General Safety Information (for all Sites)
Attachment B Training Certificates
Attachment 1 Stantec Field Binder Checklist and Project Applicable Forms
Attachment 2 Job Safety Analyses
Attachment 3 RMS-2 Fit for Duty
Attachment 4 Driver's Fatigue Checklist /Safe Driving Vehicle Pre-Use Checklist
Attachment 5 Journey Management Plan
Attachment 6 RMS-3 incident/Near Miss Investigation and Collision Kit

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1.0 Emergency Response

PHONE NUMBERS

The nearest telephone is: Jason Stagno (Stantec) (805) 630-8648 cell. There is no landline available for this project and cell phone and cell phone reception may be intermittent. Additional personnel, including the SHSO, who may be on-site are listed below:

1. Dion Monge (Field Staff) 909-556-6516 (cell phone)
2. Melissa Baernstein 909-362-3942 (cell phone)
3. Josh Sargent 909-289-7111 (cell phone)
4. Mike Clayton 760-995-6432 (cell phone)

Emergency Response			
Name		**Telephone**	**Verification**
Hospitals	East Valley Hospital Medical Center 150 W Rte 66, Glendora, CA	911 or Non-emergency 626-852-5000	10/17/2014
Ambulance	Cole Schaefer Ambulance Service 324 N Towne Ave, Pomona, CA	**911** or Non-emergency 800-966-4727	10/17/2014
Police		**911** or Non-emergency	10/17/2014
	Upland Police Department 1499 W 13th St, Upland, CA	909-946-7624	
	Ontario Police Department 2500 S Archibald Ave, Ontario, CA	909-395-2001	
	Montclair Police Department 4870 Arrow Hwy, Montclair, CA	909-448-3600	
	Pomona Police Chief 490 W Mission Blvd, Pomona, CA	909-620-2155	
	California Highway Patrol 14039 Francisquito Avenue, Baldwin Park, CA	626-338-1164	

Fire Department	San Bernardino County Fire Department 15380 San Bernardino Ave, Fontana, CA Ontario Fire Department 425 E B St, Ontario, CA Upland Fire Department 475 N 2nd Ave, Upland, CA Los Angeles County Fire Dept Station 182 1059 N White Ave, Pomona, CA	**911** or Non-emergency 909-829-4441 909-395-2002 909-931-4180 909-620-2202	10/17/2014
Spill Response	Belshire Environmental	(800)-995-8220	10/17/2014
Environmental Response	National Response Center (24-hour hotline)	(800) 424-8802	10/17/2014
Environmental Protection	US Environmental Protection Agency (24-hour hotline)	(800) 424-9346	10/17/2014
Emergency Services	Office of Emergency Services (24-hour hotline)	(800) 852-7550	10/17/2014
Poison Control	California/U.S. National Poison Control Center (24-hour hotline)	(800) 222-1222	10/17/2014
Agency / Line Locator			
National Line Locator	National 811 Call-Before-You-Dig Hotline (24-hour hotline)	811	10/17/2014
Public Utility Locator	DIG ALERT	811	10/17/2014

Local office and additional contacts in case of an emergency or field questions regarding the Site:

1. **Kevin Miskin (Contract Manager) at 909-224-3406**
2. **Anne Perez (TO Support) at 951-288-2444**

Flow charts for contacting additional departments in Stantec and official reporting protocol can be found in Section 1.4 of Attachment A.

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2.0 Project Team Information

Project Team Phone Numbers			
Project Role/Name		**Telephone**	**Verification**
Stantec Project/Contract Manager	Kevin Miskin	909-224-3406 (cell) 909-255-8210 (office)	10/17/2014
Field Staff #1:Stantec Site Health and Safety Officer (SHSO),Cal-Certified Asbestos Consultant	Jason Stagno	805-630-8648	10/17/2014
Field Staff #2:Stantec Project Staff, Cal-Certified Asbestos Consultant	Dion Monge	909-556-6516	10/17/2014
Field Staff #3: Stantec Project Staff	Melissa Baernstein	909-362-3942	10/17/2014
Field Staff #4: Stantec Project Staff	Josh Sargent	661-754-0863	10/17/2014
Field Staff #5: Stantec Project Staff	Mike Clayton	760-995-6432	10/17/2014
Stantec Business Unit Leader	Kyle Emerson	951-315-0534 (cell) 909-335-6116 (office)	10/17/2014
Senior Certified Industrial Hygienist (CIH)	Dan Feldt	414-305-1984	10/17/2014
Stantec West Region Health, Safety, Environment (HSE) Coordinator	Clint Reuter	818.395.8556 Cell 949.923.6258 Office	10/17/2014
Stantec Human Resources Representative	Peggy Ramos	949-923-6061	10/17/2014
OSEC (Stantec Office Safety & Environmental Coordinator)	Monica L. Aragon	714-471-5711	10/17/2014

(Note: The Field Staff will be on-Site. All others are Stantec employees supporting all Stantec staff and not necessarily charging time to the Task Order.)

TRAINING

Site personnel will be trained and certified in hazardous waste operations and emergency response as follows:

- 40-Hour HAZWOPER Training;
- OSHA Respiratory Protection (29 CFR 1910.134)
- Annual 8-Hour Refresher (29 CFR 1910.120€(8));
- First Aid/CPR Training;
- Physical examination consistent with 29 Code of Federal Regulations (CFR) 1910.120 (and 8 California Code of Regulations (CCR) 5192, if applicable);
- Supervisory 8-hour Training (29 CFR 1910.120€(4)) for the Site Manager/SHSO; and
- Additional training specific to the job being performed (e.g., Fall Protection, Lock Out/Tag Out, Hot Work, Confined Space, etc.).

In addition to the above-mentioned trainings, Stantec personnel are required to have training in a behavior-based safety program and defensive driving. Fit tests are also required for respirator use.

Client-Specific Safety Procedures:
Caltrans does not have any additional required safety programming or expectations, thus Stantec staff will comply with state, federal and local regulations, and Stantec policies, procedures and expectations.

Site specific staff safety training certification information is listed on the following page.

SITE SPECIFIC STAFF TRAINING
(Includes personnel that could potentially visit the Site)

Name	40Hr HAZWOPER	8Hr HAZWOPER Refresher	CPR / First Aid	Annual Physical	Defensive Driver Training	Respirator Fit Test
FIELD STAFF: Dion Monge	02/11/2005	05/28/2014	11/8/2013	11/8/2013	03/28/2013	03/28/13
FIELD STAFF: Melissa Baernstein	08/25/05	5/28/2014	11/8/2013	10/7/2013	10/07/13	3/1/2013
FIELD STAFF: Jason Stagno	07/07/2004	09/07/2014	6/14/2013	12/12/2013	09/06/2012	12/12/2013
FIELD STAFF: Josh Sargent	6/12/2012	9/19/2014	11/8/2013	8/20/2013	--	8/20/2013
Anne Perez	10/13/2002	05/01/2013	11/8/2013	03/05/13	12/16/2010	3/22/2013
Kevin Miskin	08/24/1991	06/01/2013	11/8/2013	03/21/13	12/23/2010	3/19/2013
List Staff Changes/Additions Below						
OSEC: Monica L. Aragon	08/28/00	08/09/2014	01/30/14	03/28/14	05/21/12	03/08/12
FIELD STAFF: Mike Clayton	1/26/2006	4/11/2014	2/24/2012	3/20/2014	5/6/2012	3/20/2014

Copies of the OSHA 8-Hour Refresher Certificates are included in Attachment B.

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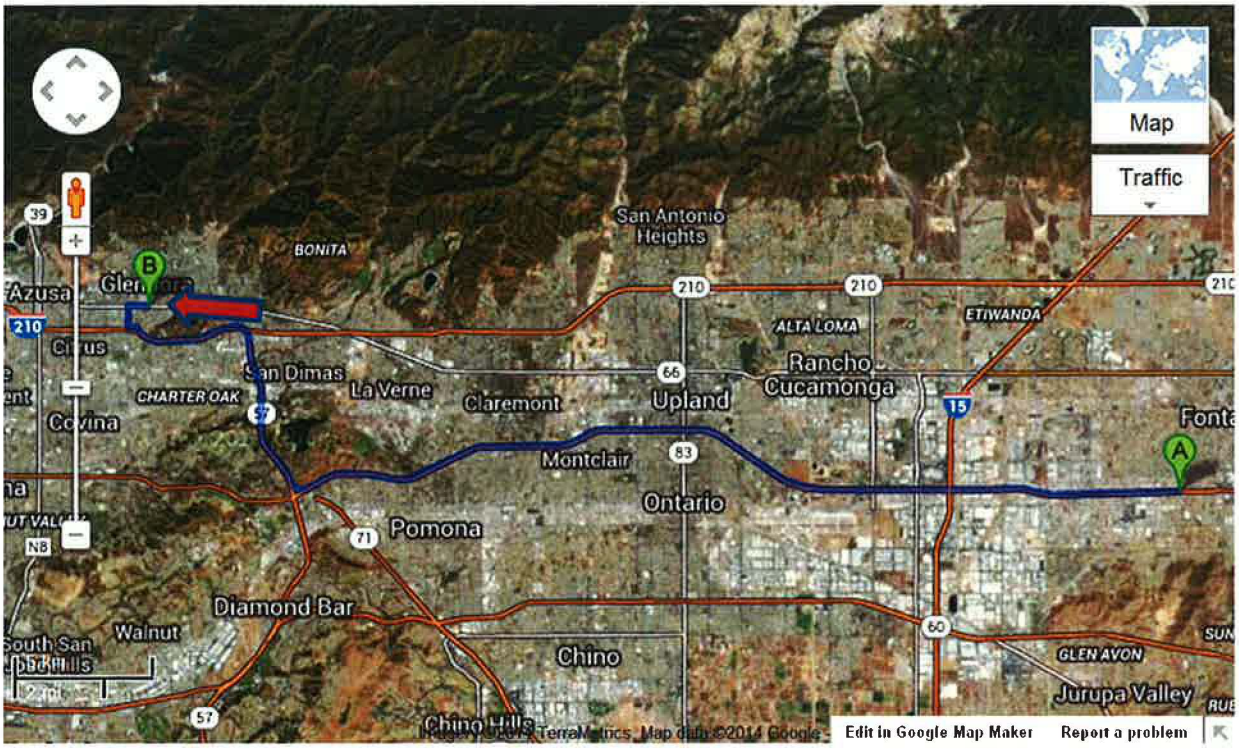
DIRECTIONS AND MAP TO THE HOSPITAL

The SHSO will verify and validate the route to the hospital by driving it before work begins.

SR-10 –



I-10 W

1.	Head **west** on **I-10 W** About 18 mins	go 20.4 mi total 20.4 mi
2.	Take the **CA-57 N/CA-57 S** exit toward **Santa Ana/Interstate 210 Fwy**	go 0.2 mi total 20.6 mi
3.	Keep right at the fork, follow signs for **CA-57 N/Interstate 210 Fwy** and merge onto **CA-57 N** About 4 mins	go 3.9 mi total 24.5 mi
4.	Take the exit on the left onto **I-210 W/Foothill Fwy** toward **Pasadena** About 3 mins	go 2.7 mi total 27.2 mi
5.	Take the exit toward **Grand Ave/Glendora**	go 0.3 mi total 27.5 mi
6.	Turn left onto **W Baseline Rd**	go 0.2 mi total 27.7 mi
7.	Take the 1st right onto **S Grand Ave** About 1 min	go 0.5 mi total 28.2 mi
8.	Turn right onto **W Rte 66** Destination will be on the right About 52 secs	go 0.4 mi total 28.6 mi

East Valley Hospital Medical Center
150 W Rte 66, Glendora, CA 91740, United States

3.0 Scope of Work

The scope of this project is described in the Aerially Deposited Lead Investigation and Asbestos Surveys Proposal, dated October 17, 2014. There are 5 bridges included in this project. The field activities are summarized below

ADL Survey

To support the ADL survey, soil samples will be collected from hand auger borings at depth discrete intervals not to exceed fifteen (15) feet below the ground surface (bgs) for laboratory analysis. According to the Task Order No. 13 request, there are three proposed drainage system areas that require deeper borings (to depths of 8, 11, and 15 feet bgs). The deeper borings will be attempted with a hand auger and will be advanced to the target depth or until refusal, whichever occurs first. Excess soil removed during this investigation will be placed back into the boring. This proposed scope of work is intended to evaluate whether excavated soil generated during the proposed construction activities will result in the need for special handling or disposal (as defined by Title 22 of the California Code of Regulations) with respect to ADL impacted soil.

Task No. 2 - Field Investigations

ADL

As directed in the Task Order No. 13 request, Stantec proposes to advance up to sixty four (64) borings, spread out across the thirteen (13) discontinuous areas outlined on the attached Table. The number of samples collected at each boring varies, as outlined on the attached Table, but falls between one (1) to five (5) samples collected from depths ranging from one (1) foot to 15 feet bgs.

- Approximately 142 samples will be collected and analyzed at a stationary laboratory. The data will be used to evaluate soil characteristics for handling and disposal. No borings will be advanced outside of the existing right of way or in existing paved areas.
- ADL samples will be collected directly from the hand auger bailer, discharged to a clean ziplock one (1) gallon bag, manually homogenized, then discharged to eight-ounce laboratory certified clean glass jars. All soil sampling equipment will be decontaminated before advancing at each boring location using the three bucket system. Each sample will be labeled with a unique sample identification along with the borehole ID, sample depth, sample date, and sample time. All samples will be annotated on chain-of-custody forms and delivered to a laboratory certified by the California Department of Health Services Environmental Laboratory Accreditation Program for the analyses indicated herein.
- Survey boring locations using a handheld Trimble GPS unit (during augering activities).
- All samples will be analyzed for:
    - Total Lead by EPA Test Method 6010.
- Select samples will be analyzed for
    - Soluble lead using the CalWET method using deionized water (DI) as the extractant - when the CalWET-citric concentration is greater than the Soluble Threshold Limit Concentration (STLC) of 5.0 mg/L.
    - Soluble lead using the Toxicity Characteristic Leaching Procedure (TCLP) by EPA Method 1311 – performed on all samples reporting total lead concentrations of 1,000 mg/kg or higher, or the 28 samples reporting the highest total lead concentrations.
    - Title 22 Metals – the ten (10) samples reporting the highest total lead concentrations will be analyzed for Title 22 metals.
    - pH using EPA Test Method 9045 - the ten (14) samples reporting the highest total lead concentrations will be analyzed for pH.
    - The following QA/QC samples will be collected:

- The following QA/QC samples will be collected:
  - Equipment Blanks: As directed in the task order request, equipment (decontamination) blank samples, one for every chain of custody (approximately 4 total), will be analyzed for Title 22 metals.
  - Trip Blanks: trip blank samples are not required for this investigation because no samples are being analyzed for volatile organic compounds.

ACM Survey

As part of the asbestos surveys, Stantec will conduct an inspection of the *accessible* portions of each bridge to evaluate whether suspect ACMs are present in accessible construction materials. Representative bulk material samples will be collected from homogeneous suspect ACM materials, which may include felt, asphalt, concrete, conduit, drainage piping, and shims, if present. A homogeneous area is defined as an area where the suspect material is uniform in texture and color and appears to be identical in every respect. Stantec will use the Asbestos Hazard Emergency Response Act (AHERA) sampling guidelines, as outlined in 40 CFR 763 to determine the number of asbestos containing material (ACM) samples required to be collected from each suspect homogeneous area as identified in the following table. A summary table of AHERA guidelines is presented below.

AHERA SAMPLE CRITERIA	
Type of Homogeneous Material	***EPA Required Number of Samples***
Surfacing: Less than 1,000 sq. ft. Surfacing: 1000 – 5000 sq. ft. Surfacing: Greater than 5000 sq. ft	3 5 7
Thermal System Insulation	3 samples per homogeneous material
Miscellaneous Materials	Discretion of the Building Inspector

Stantec's sampling is destructive in nature and small pieces of structural materials will be collected for laboratory analysis. Stantec will not replace or repair these materials. However, the removal of small pieces of structural materials does not typically compromise structural integrity.

Stantec assumes the following:

- Stantec will conduct all sampling from accessible locations on bridge deck shoulders and abutments.
- Lane closures, mechanical lifts and ladders will not be required to access potential ACMs.
- The highway bridge center divider will only be sampled if the sampling crew(s) can safely park their vehicle in the center median providing for safe access.
- Shim counts will be estimated, based on the number of guardrail posts, when located on inaccessible bridge railings.
- Recommendations for suspect ACMs that are not readily accessible will be based on the results of samples collected from similar accessible materials.
- No Global Positioning System (GPS) coordinates will be obtained for ACM sampling locations. Many times the locations are located in places on the bridges where satellite coverage is limited and readings cannot be obtained.
- Should lane closures be required to conduct the work safely, Stantec will provide adequate traffic control as needed. Lane closures and traffic control requirements shall comply with Contract

Agreement 07A3321 and Caltrans 2010 Revised Standard Plans. Stantec will also obtain approval and schedule from Caltrans traffic Management Center (TMC), for the lane closures prior to the start of work.

Stantec estimates that approximately 125 total ACM samples will be collected from each of the five (5) bridges.

The scope of work for the ADL investigation will be conducted by a three-person team and the ACM survey will be conducted by one two 2-person team. Both teams will conduct their respective sampling at different locations simultaneously. A buddy system will be implemented during the sampling activities as a secondary measure for protection against traffic, where the second person will be observing oncoming traffic while the other conducts the field tasks as described in the job safety analyses (Attachment 2).

The scope of work will be conducted in a manner consistent with the methods and assumptions outlined in **TASK ORDER NO. 13.**

All work plans referenced in this HASP will be available for Stantec personnel on site. The field staff may also call the Project Manager, Kevin Miskin (909-224-3406) or Task Manager, Anne Perez (951-255-8202), should they have any questions that are not specifically addressed in the HASP or the work plan.

4.0 Site Background, Potential Hazards and Mitigation Measures

PROJECT BACKGROUND INFORMATION

The Site background is described in the Task Order Request, dated September 1, 2014, and summarized below.

Project Background

The purpose of this task order is to perform asbestos containing materials (ACM) surveys on structural materials of five bridges located along State Route 10 (SR10) and to conduct an aerially deposited lead (ADL) site investigation along portions of SR10. According to the Caltrans Task Order No. 13 request, the project proposes to improve the flow of traffic by adding HOV lanes to alleviate traffic congestion in the area from Citrus Avenue to the SR10/SR57 interchange. The ACM portion of the project will include sampling all accessible potential ACM materials in the bridge structures where demolishing is necessary to widen the bridge. The ADL investigation will focus on areas where water pollution treatment systems are proposed for construction. The work will be conducted pursuant to the provisions in Stantec's Agreement 07A3321, and with the Task Order request emailed July 30, 2014.

POTENTIAL HAZARDS

Chemical:

The intent of the survey to be performed is to identify whether ACMs are present in accessible bridge materials. Therefore, the presence of asbestos is a potential inhalation hazard.

No historical reports were provided indicating that specific chemical hazards have been discovered at the Site during previous investigations. However, potential chemical hazards at this site may include:

- Aerially deposited lead (ADL) and other heavy metals in soil.

Physical:

The project area is located along the SR-10 through areas of Los Angeles, San Bernardino and Riverside Counties (within Caltrans Right-of-Way with the cities of Fontana and Diamond Bar from the intersections of Citrus Avenue and SR57 (PM LA-010-37.2/42.4). Other potential site specific hazards may include:

- Traffic
  - Set cones up in your immediate work area to provide visibility to the vehicles traveling in the area of the work zone. Don't face your back to traffic.
  - Use the work vehicle as an added buffer for your work area (DO NOT BLOCK TRAFFIC), and consider a closure of the immediately adjacent lane with proper signage.
- Wind/debris
  - Should weather conditions change and become a hindrance to performing the task safely, stop work and contact the project manager.

- Heat
  - Be sure to drink plenty of liquids, be sure your co-worker is drinking enough liquids. The site appears to have access to areas that do provide a lot of shade so be sure to take breaks to cool down.

- Trips/falls
  - To protect yourself, always look before you step. Work will be done around the highway and along the highway slopes under bridges. Take care walking and standing working in all areas of the site.

- Noise
  - The Site is adjacent to Highway lanes – wear the proper hearing protection if found to be necessary.

- PPE
  - Wear the proper PPE for the tasks involved – minimum: gloves, hard hat, safety glasses, steel toed boots, safety vest and possibly a dust respirator. Additional safety wear may need to be used if site conditions change.

HAZARD MITIGATION

Attachment A provides information for on avoiding, monitoring and mitigating chemical and physical hazards, including general hazards that can potentially be encountered on any project site (earthquakes, bees, etc). As described, proper hygiene and personal protective equipment (PPE) shall be required including,

- Washing hands before eating or smoking, and
- Donning hard hats, reflective high visibility vests, steel toed shoes, and disposable sampling gloves.

Project work will be near the lanes of a busy highway. Traffic control will be essential for safety. To improve worker safety, traffic warning signage, cones and truck flashers will be provided to alert drivers to workers along the shoulders. Traffic control will consist of the following elements:

- W21-5 "Shoulder Work" signs will be placed in the area ahead of each borehole. The signs will be moved as work progresses to assure that the signage follows the work. Signs will be placed appropriately to improve visibility to drivers.

- High visibility reflective cones will be placed along the pavement edge ahead of and next to the work area.

- Work trucks will have flashing yellow strobe lights and will be positioned, preferably at a slight diagonal to the pavement edge, as safety barriers between workers and oncoming traffic.

Protect yourself, always look before you step and wear proper PPE for the task being performed.

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5.0 Journey Management Plan

PURPOSE

The purpose of this Journey Management Procedure (JMP) is to prevent losses associated with motor vehicle related incidents including: injuries to drivers, passengers and pedestrians, damage to motor vehicles and damage to third party property. By communicating potential safety risks before mobilizing to a site, a motor vehicle operator will be able to prepare for and avoid potential hazards.

These JMPs apply to all vehicles assigned for the support of site operations, including company owned and personal use vehicles. This JMP does not apply to vendors (such as UPS, FedEx. etc.) not under contract with Stantec or their supplier. This JMP does not address hazards that are external to the site access/egress and on the onsite project operations.

Additional information regarding the JMP can be found in Attachment 5.

Site Specific JMP

General Vehicle Hazards

Highways approaching/near the project site are typically congested – allow extra time and space, slow down, and watch for vehicles.

Site Specific Potential Vehicle Hazards

Heat, traffic, winds. Watch for debris along the roadway. Highway adjacent – watch for traffic. If parking along the shoulder, watch for traffic before exiting vehicle. Use the vehicle to provide a buffer between you and the traffic, where possible. Watch for dips, debris, bushes. **LANE CLOSURE of immediately adjacent lane to work activity should be considered utilizing cones and signage**

Directions: Access to the Site

The Site is located along the bridges and off the right-of way of Highway 10 between Citrus Avenue, in the City of Fontana and The 57 Interchange, in the City of Diamond Bar. Access may be gained along the highway. Access to the areas along the on-off-ramps will be evaluated in order to take the safest exit into the shoulder which may be in a location off the ramps but the sampling area accessed by walking to it. Cones should be carried to the work area.

Directions: Leaving the Site

Site Specific Restrictions and Controls

None noted

This Journey Management Plan is approved for use:

From: 10/17/2014	Time: 0500	To: 11/30/14	Time: 1900

Journey Management Plan Maintained by

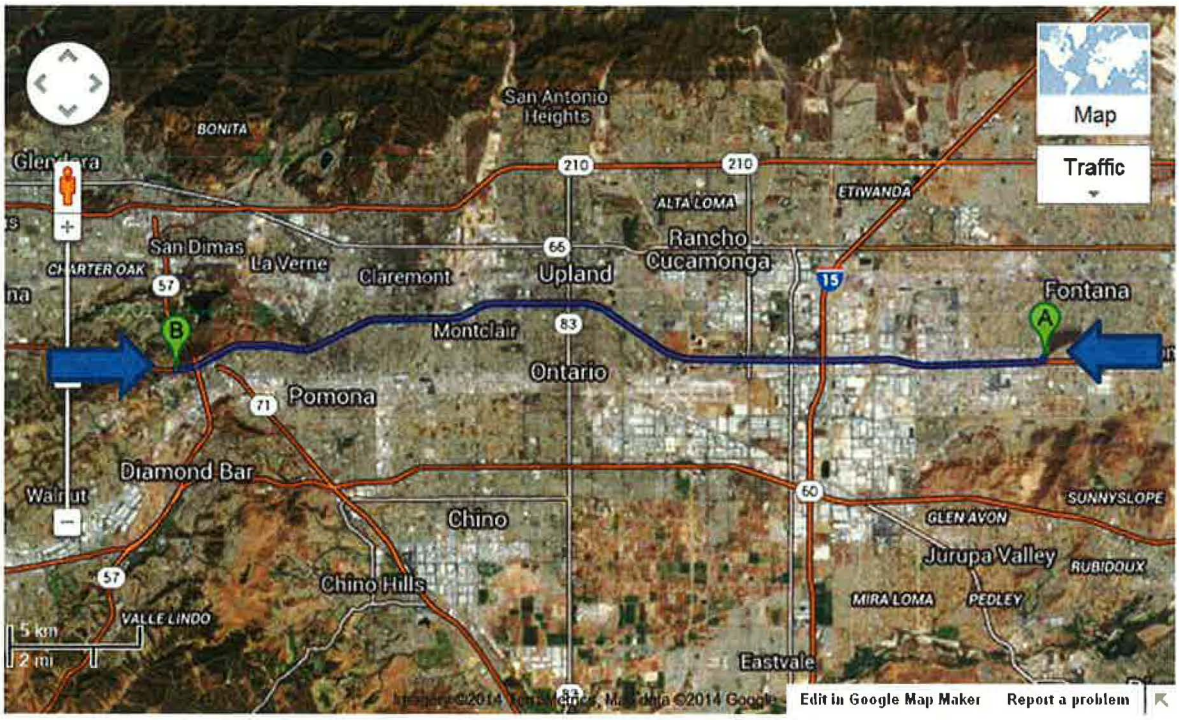
Field Manager : Jason Stagno	Cell: 805-630-8648
Contract Project Manager: Kevin Miskin	Cell: 909-224-3406

Should an incident occur, refer to Attachment 6 for Stantec's procedures of notifications and reporting.

SITE MAP/SKETCH

It can be helpful in clarifying access/egress routes, parking and positioning of equipment, traffic cones and other delineators.

Site Sketch



The area of the ADL Investigation and the ACM surveys is approximately located between the two blue arrows on the figure above.

Access entry locations will vary at each of the ADL investigation and ACM survey locations since they are not grouped together.

(Site view provided from Google Maps, 2014.)

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CHANGES TO THE JOURNEY MANAGEMENT PLAN

Date	Name	Change/Comment (be specific)

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Attachment A

General Safety Information for ALL SITES

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Health and Safety Plan Modification Log

HASP Section	Description of Revision	Revision Date	Approved By

1.0 General Safety Information

1.1 Emergency Response Procedures: Evacuation

In the event of an on-site or off-site emergency requiring site evacuation (e.g., fire, release, explosion, etc), the following procedures will be followed:

- Stop Work and notify the SHSO.
- Evacuate the site and go to the emergency meeting location if safe conditions exist. The evacuation point is shown in the sketch below or following this page. If safe conditions prevent evacuation to this location, move upwind, away from the source of the emergency. Maintain a safe distance from the source.
- Check in with the SHSO at the emergency meeting location. The SHSO will take attendance once all personnel have gathered.
- Dial the appropriate emergency response number(s). State the problem clearly and completely and remain on the line until dismissed by the operator.
- Only attempt extinguishing small fires with portable dry chemical (A-B-C) extinguishers on-hand. When in doubt, emergency response personnel shall be notified.
- Do not reenter the emergency site without specific approval from emergency response personnel.

Randomly scheduled evacuation drills may be conducted at any time during field activities.

1.2 Emergency Response Procedures: Injury or Illness

If an injury or illness occurs, take the following action:

- Stop Work, stabilize the situation, and secure the site.
- Administer First Aid for the person immediately using a first aid and blood-borne pathogens kit.
- Determine if emergency response (fire/ambulance) is necessary. If so, call appropriate emergency response numbers on closest available phone. Provide the location of the injured person and other details as requested. Drive the individual to the hospital only if it makes sense.
- If emergency decontamination is required:
    - Immediately remove any contaminated personal protective equipment (PPE) or clothing. (EXCEPTION: if the person has been burned, only emergency medical services (EMS) personnel should remove any clothing)
    - If possible, wash contaminated area with mild soap and water.
    - Use eyewash station if necessary.
    - Personnel assisting the contaminated individual will don the proper PPE to avoid exposure.
- For all injuries or illness, even minor cuts, scratches, and bruises, notify the SHSO immediately. The SHSO is responsible for initiating incident reporting procedures immediately after the victim(s)/site have been stabilized. The SHSO will assume responsibility during a medical emergency until more qualified EMS personnel arrive at the site as needed.
- As promptly as possible following an injury or illness, the Project Manager or designee shall ensure appropriate notification has been made to the family of the individual involved.
- Please see Section 1.6 for incident reporting procedures.

1.2.1 Injuries or Illnesses Requiring Hospital Service WITHOUT Ambulance Service

Injuries or illnesses requiring hospital service without ambulance services include minor lacerations, minor sprains, etc. The following procedures will be taken immediately:

- The SHSO will ensure prompt transportation of the injured person to a physician or hospital.
- A representative of Stantec will always drive the injured employee to the medical facility and remain at the facility until the employee is ready to be discharged.
- If the driver of the vehicle is not familiar with directions to the hospital, a second person shall accompany the driver and the injured employee and navigate the route to the hospital.
- If it is necessary for the SHSO to accompany the injured employee, provisions will be made to have another employee, properly trained and certified in First Aid, to act as the temporary SHSO.
- If the injured employee is able to return to the job site the same day, he/she will bring a statement from the doctor containing such information as:
  - Date
  - Employee's name
  - Diagnosis
  - Date he/she is able to return to work, regular or light duty
  - Date he/she is to return to doctor for follow-up appointment, if necessary
  - Signature and address of doctor
- As promptly as possible following an injury or illness, ensure appropriate notification has been made to the family of the individual involved.
- Please see Section 1.6 for incident reporting procedures.

If the injured employee is unable to return to the job site the same day, the employee who transported him will bring this information back to the job site and report it to the Project Manager, office OSEC, Clint Reuter, Stantec's Practice and Risk Management (PRM), and their regional Human Resources Specialist.

1.2.2 Injuries or Illnesses Requiring Hospital Service WITH Ambulance Service

Injuries or illnesses requiring transport by ambulance include life-threatening conditions such as severe head injuries, amputations, heart attacks, heat stroke, etc. The following procedures will be taken immediately:

- Call for ambulance service and notify the SHSO.
- Administer First Aid until ambulance service arrives or until relieved by EMS personnel.
- While the injured employee is being transported, the SHSO will contact the medical facility to be utilized.
- One designated representative will accompany the injured employee to the medical facility and remain at the facility until final diagnosis and other relevant information is obtained.
- As promptly as possible following an injury or illness, ensure appropriate notification has been made to the family of the individual involved.
- Please see Section 1.6 for incident reporting procedures.

1.2.3 Death of an Individual or Hospitalization of Three or More Employees

The emergency response procedures above will be followed. If the injured person dies, follow the incident reporting procedures. PRM will notify the Human Resources Department, local officials and coroner immediately. Human Resources will notify the local OSHA** office within 8 hours of a fatality or the hospitalization of three or more employees.

**From this point forward in this document, the terms OSHA (i.e. federal Occupational Safety and Health Administration or FedOSHA) will be used interchangeably and shall be considered equivalent to the State of California Division of Occupational Safety and Health or CalOSHA..

1.3 Emergency Response Procedures: Spills or Cut Lines

Prevent problems by documenting the location of underground lines (e.g., product, sewer, electrical, gas, telephone, fiber optic) before starting site work. If a line or tank is drilled through, or a leak occurs, document the event as soon as possible using the Incident Investigation Report.

In the event of a spill/release, follow this plan:

- Stop Work, stabilize the situation, and secure the site.
- Stay upwind of the spill/release.
- Wear appropriate PPE.
- Turn off equipment and other sources of ignition, but only from a safe distance.
- Turn off pumps and shut valves to stop the flow/leak, but only from a safe distance.
- Plug the leak or collect drippings, when possible, if you can do this safely and within your level of training.
- Use sorbent pads to collect product and impede its flow, if possible and only if you can do it safety and within your level of training.
- Call Fire Department immediately if fire or explosion risk is involved (i.e. natural gas involved).
- Notify the SHSO to begin the incident reporting procedures. All spills/releases will be reported to the Client Project Manager within 24 hours.
- Determine if the client wants Stantec to repair the damage or if the client will use an emergency repair contractor of their choice.
- Based on agreements, contact emergency spill contractor for containment of free product. The contacts for this project will be the local fire department.
- Advise the client of spill discharge notification requirements and determine who will complete and submit forms. *(Do not submit or report to agencies without the client's consent.)* Document each interaction with the client and regulators and note, in writing; name, title, authorizations, refusals, decisions, and commitments to any action.
- Do not transport or approve transportation of contaminated soils or product until proper manifests have been completed and approved. Be aware that soils/product may meet criteria for hazardous waste.
- Do not sign manifests as generator of wastes unless you have been given appropriate training and approval for signing on behalf of the generator; contact Project Manager or Waste Compliance Manager to discuss waste transportation.
- If the spill extends into waterways, the Coast Guard and the National Response Center shall be notified immediately by the client (or by the Stantec Project Manager with the client's permission).

The Project Manager will involve the client/generator in any Incident Investigation process. The client/generator is under obligation to report to the proper government agencies.

1.4 Incident Reporting Procedures

This section outlines the procedures that will be followed in the event of an incident. A flowchart and a table with necessary contact information (phone numbers, fax numbers, and email addresses) for incident reporting are also provided.

In the event of an incident:

1. Stop Work, stabilize the situation, and secure the site.

2. Report all incidents, injuries, spills, non-conformance events, permit exceedances and potential incidents (near losses) immediately to the SHSO, who will then notify the Stantec Project Manager. **If you are unsure whether or not something should be reported, Stop Work and proceed with notification anyway.**

3. The Stantec Project Manager will make internal notifications* to the following:
   - Office OSEC
   - At least one Stantec Senior HSE Team Member (Clint Reuter, Keith Robinson);
   - The Account Manager (Jack Hardin)
   - **If a team member does not answer, leave a detailed message with a number at which you can be reached, and follow-up with another call later.**

   *Internal notification is a Stantec requirement. Internal reporting requirements were established primarily to provide a pathway for employees to obtain the assistance of company health and safety experts during an incident or significant near loss. Secondary to obtaining expert assistance, internal notification is required to help Stantec track injuries and near losses that occur to our employees. The data captured during the reporting process is then used to identify trends that can be pro-actively addressed to improve overall health and safety within our company. This helps everyone go home safely.

4. The Stantec Project Manager will obtain concurrence from at least one of Stantec's HSE Team Members and the Account Manager regarding Caltran's reporting requirements.

5. A: If the incident is determined to not be reportable to Caltrans, the SHSO, office OSEC, and Stantec Project Manager will submit an initial copy of the Stantec Incident Investigation/Near Loss Investigation (IINLI) report to Stantec's PRM group in Edmonton (via phone and fax), and Clint Reuter within 24 hours of the event. The final report is due within 5 business days.

   B: If the incident is determined to be reportable to Caltrans, the Stantec Project Manager and Account Manager will:
   - Notify Caltrans and also provide a written report of the incident on a Stantec IINLI form to Stantec's PRM group (via fax and phone), and Clint Reuter within 24 hours and a final report within 5 business days.

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Stantec Energy & Resources Incident Reporting

Incident occurs:
Stop work, stabilize the situation, secure the site & provide immediate care. Stantec employee or contractor must immediately report the incident the Stantec Project Lead. Injured personnel requiring medical attention will transport the injured person to medical care and remain until released.

Site Lead or Contractor Supervisor notifies Project Manager & Stantec Area HS Lead Verbal notification and email an **INCIDENT QUICK REPORT** notification within **1 hour**. **Client Reporting Schedule Starts (next Page**

HSE TEAM:
Doug Schaefer (1-780-235-3557)
doug.schaefer@stantec.com
Tony Wong (1-805-234-6227)
tony.wong@stantec.com)
Terry Arseneau (1-403-702-6686)
terry.arseneau@stantec.com
Scott Purves (1-403-542-9751)
scott.purves@stantec.com
Adam Taylor (1-403-585-3238)
adam.taylor@stantec.com-
Marty Ringen (1-780-862-3470)
marty.ringen@stantec.com
Don Johnson (1-778-385-5846)
don.johnson@stantec.com

HIGH POTENTIAL INCIDENT

Conference Call Review YES or NO

YES

Senior Management Team
4-Hour HPI Flash Alert Notice Team
(Email-description, classification & path forward)
Rocco Meraglia (1-403-619-9863)
rocco.meraglia@stantec.com
Bob Seager (1-403-540-0259)
bob.seager@stantec.com
Don Belliveau (1-506-471-3238)
don.belliveau@stantec.com
Kirk Morrison (1-403-650-3402
kirk.morrison@stantec.com
Nick Poushinsky (1-250-413-7404)
nick.poushinsky@stantec.com
Tino Di Manno (403-716-8202)
tino.dimanno@stantec.com
Richard Weishaupt (1-306-220-3738)
richard.weishaupt@stantec.com
Peter Salusbury (1-778-837-0096)
peter.salusbury@stantec.com

NO

Stantec Site Lead, Project Manager or Contractor Supervisor issues RMS 3 Incident Report within 24- hours.

Finalized RMS 3 forwarded to Corporate HSE

Stantec Site Lead, Project Manager or Contractor Supervisor issues RMS 3 Incident Report within 24-hours.

Stantec Site Lead & Area HSE Lead conducts investigation following the corporate investigation process. A report is issued within 5 days to the Stantec Energy & Resources Sr. Mgt. Team identifying root causes and implementing barriers to prevent re-occurrence. Senior Management Team signs off on the Incident report.

Based on clients expectations a more formal Incident Cause and Analysis Method may <u>also</u> be used to support for the investigation.

HSE develops Lessons Learned Report for corporate-wide / client distribution

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Client Reporting Schedule
"No client requirements"

Notifications

Stantec Account and HSE Support Contacts - notify within 1 hour
See Project Team Phone Numbers for
National Account Manager (NAM)
Alternate NAM
Health and Safety Coordinator

Client - notify within 24 hours unless high potential (notify within 1 hour) :
See Project Team Phone Numbers for
Client

Incident Investigation Report within 5 days
See Project Team Phone Numbers for
Client

Incident Type	Definition (Current Stantec Corporate Definitions)
Report Only	An employee needs to document a happening which may be relevant in the future. Examples include: witnessing an accident or a non work-related injury, an incident on a worksite not involving Stantec personnel, physical signs and symptoms related to workstation ergonomics and/or materials handling
Incident	Any unplanned event that adversely affects our employees, our business, its physical assets, the clients we serve, or the environment.
Serious Incident	Any work-related incident where there is property damage greater than $5000, employee hospitalization, fatality, facility/site shutdown, or involves a third party (public). A near miss with the potential for any of the above consequences would also be considered a serious incident.
Near-Miss	Any event that could adversely affect our employees, our business, its physical assets, the customers we serve, or the environment, given any change in circumstances.
Hazard Identification	The identification of a condition or practice that has the potential for an incident or loss.
Property Damage (Vehicle)	Damage to any vehicle used for Stantec business, includes normal wear and tear (e.g. tire damage, minor scratches, stone chips to paint or windshield, mechanical wear), whether the vehicle is attended or not.
Property Damage (Other)	Damage to equipment, materials, etc., excluding vehicle damage.
Theft	Theft of any property under the care and control of Stantec.
Non-compliance	Where an employee or project is identified as operating outside the parameters of Stantec policy and/or legislative requirements.

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Incident Type	Definition (Current Stantec Corporate Definitions)
*Near Miss - Injury	An employee reports physical symptoms related to work activities which have not yet resulted in treatment of any type, nor have they impacted the employee's working ability.
First Aid	An injury or illness requires first aid treatment only
Medical Treatment	Medical treatment above and beyond first aid, without loss of work time beyond the day of injury or illness.
Restricted Work	Change in job duties and/or shortened work day resulting from a work-related injury or illness, affecting the employee's ability to engage in one or more routine work activities (i.e. an activity carried out at least once per week).
Lost Time	Health care professional recommends one or more days away from work due to a work-related injury or illness.
Fatality	Work related fatality.
Motor Vehicle Incident	An incident involving a vehicle driven by an employee, whether on or off the road, that has resulted in damage to assets, the environment or Stantec's reputation, irrespective of cost or responsibility for cause. This does not include damage as a result of normal wear and tear (see Property Damage – Vehicle).
Spill or Release	Discharge of material or substance which is reportable to a third party such as a regulatory agency or a client, or which may expose an employee to a health risk.
Contractor Recordable Injury	Definitions as above, including Medical Aid – No Lost Time, Restricted Work, Lost Time or Fatality) but applied to a Stantec subcontractor.
Fire / Explosion / Flood	A natural or man-made hazard including fire, explosion or flood that causes damage or injury.
Violence or Harassment	Any act in which a person is abused, threatened, intimidated or assaulted in the course of their employment.
3rd Party Incident	Incident involves someone who is not party to the work being completed, but may be impacted. Example: Member of the public.
Utility Strike	Compromising or disrupting of service to buried and/or overhead utility service lines, municipal or third party owned utility services, UST system components and other subsurface property service lines or systems
Work Refusal	An employee has enacted their legislated Right to Refuse dangerous work.
Stop Work Authority	An employee has enacted Stantec's Stop Work Authority provisions upon observing the presence of unsafe conditions associated with Stantec work activities. All employees have the right to stop or refuse work when they perceive an immediate danger to their health and safety or that of their colleagues.
	For Consideration
High Potential Incident	A Near Miss, First Aid injury, Medical Aid injury, Modified Work injury or Lost Time injury can often have the potential to be a fatality or a Significant Injury with disability if the circumstances would have been slightly different. For example, a Lost Time incident due to a back soft tissue injury would only be counted as a Lost Time with low potential for a serious injury, whereas a First Aid incident involving a remotely operated machine striking a worker and imparting a small cut would be counted as a First Aid incident with high potential for a Fatality or a Significant Injury. Any incident with energy exchange that had the potential to be a Fatality or a Significant Injury if the circumstances would have been slightly different should be counted as High Potential; all others should be counted as low potential and reported as normal incidents (see above). In terms of Risk Assessment language when the exposure, probability and consequence of the hazard(s) that created the injury calculate to a High or Extreme Risk Level, the incident should be counted as a High Potential; all others should be counted as low potential.

Incident Type	Definition (Current Stantec Corporate Definitions)
Critical Risk Control	**TBA** 1. Vehicles and Mobile Equipment 2. Hazardous Materials Management 3. Equipment Safeguarding 4. De-Energization, Isolation, Lock-Out, and Tagging 5. Working at Heights 6. Lifting Operations 7. Confined Space 8. Excavations and Trenching 9. Ergonmonic & Manual Handling 10. Working on Ice or water 11. Wildlife Interactions

2.0 Potential Airborne Concerns and Air Monitoring Action Levels

**NOTE: OSHA (federal) is used interchangeably and equally with California OSHA (CalOSHA) in this document.

An air purifying respirator using particulate high-efficiency particulate air (HEPA) filters shall be used while sampling suspect ACM materials. Given that the proposed work will take place adjacent to Highway SR10, the following is a list of chemicals that may be present in the work area but are not planned to be monitored on a continual basis given that no soil disturbance is planned.

The list below includes lead, asbestos, and carbon monoxide.

Potential Airborne Concerns						
Chemical (Or Class)	**OSHA PEL ACGIH TLV**	**Other Pertinent Limits**	**Warning Properties**	**Routes of Exposure or Irritation**	**Acute Health Effects**	**Chronic Health Effects/Target Organs**
Lead	OSHA PEL: 8 hr. TWA 0.050 mg/m3 ACGIH TLV: 8 hr. TWA 0.050 mg/m3	NIOSH REL, 0.05 mg/m3 8 hr. TWA	A heavy, ductile, soft, gray solid	Inhalation, ingestion, skin and/or eye contact.	Effects of overexposure to lead - (1) Short term (acute) overexposure. Lead is a potent, systemic poison that serves no known useful function once absorbed by your body. Taken in large enough doses, lead can be fatal in a matter of days. A condition affecting the brain called acute encephalopathy may arise which develops quickly to seizures, coma, and death from cardiorespiratory arrest. A short term dose of lead can lead to acute encephalopathy. Short term occupational exposures of this magnitude are highly unusual, but not impossible. Similar forms of encephalopathy may, however, arise from extended, chronic exposure to lower doses of lead. There is no sharp dividing line between rapidly developing acute effects of lead, and chronic effects which take longer to acquire. Lead can potentially adversely affect numerous body systems, and can cause forms of health impairment and disease which arise after periods of exposure as short as days or as long as several years.	See note below table
Asbestos	Cal/Fed OSHA/ACGIH PEL 0.1 fiber/cc 8 hr. TWA 1.0 f/cc (Fed/CalOSHA 30-min STEL)		Gray chalk-like or cloth	Inhalation ingestion,	Irritation to the eyes, skin, respiratory tract, gastro intestinal tract,	Lung, GI, carcinogen

Potential Airborne Concerns						
Chemical (Or Class)	**OSHA PEL ACGIH TLV**	**Other Pertinent Limits**	**Warning Properties**	**Routes of Exposure or Irritation**	**Acute Health Effects**	**Chronic Health Effects/Target Organs**
Carbon Monoxide	OSHA PEL 50 ppm 8 hr. TWA CalOSHA PEL 25 ppm 8 hr. TWA CalOSHA 200 ppm-ceiling ACGIH TLV 25 ppm 8 hr. TWA	NIOSH REL = 35 ppm 8 hr. TWA IDLH = 1200 ppm	Colorless, odorless gas	Inhalation	headache, drowsiness, lassitude (weakness, exhaustion), narcosis; dyspnea, heart palpitation, unconsciousness, death	None established

Abbreviation	Explanation
PEL	Permissible Exposure Limit set by OSHA (8 hour time-weighted average/TWA)
REL	Recommended Exposure Limit (set by National Institute of Occupational Safety & Health-NIOSH)
C	Ceiling Limit (airborne concentration not to be exceeded for any period of time)
STEL	15-minute Short Term Exposure Limit (unless other time period specifically identified)
IDLH	Immediately Dangerous to Life or Health
TWA	8 hour time-weighted average (PEL, TLV, REL)
TLV	Threshold Limit Value set by the American Conference of Governmental Industrial Hygienists (ACGIH) 8 hr. TWA
AIHA WEEL	Workplace Environmental Exposure Level (set by the AIHA-American Industrial Hygiene Association)
SKIN	Skin Absorption is significant contributor to total exposure
NIOSH	National Institute of Occupation Safety and Health
CNS	Central Nervous System
CVS	Cardiovascular System

3.0 Other Potential Site Hazards

3.1 Physical Hazards

Physical hazards may include traffic, uneven terrain, sharp debris, fencing, holes, noise, etc. Thusly, a constant awareness of one's location is paramount to your personal safety. However, knowing where you are, the level of noise produced by associated machinery and hearing protection may hinder your ability to hear vocal warnings. "Keep your head on a swivel" as the order of the day.

Be aware of the location of all of the equipment activities in your work area.

To protect yourself, always look before you step and wear proper PPE for the task being performed.

3.2 Weather and Natural Disasters

Hazards associated with weather and natural disasters may include, but are not limited to, effects of extreme heat (heat exhaustion, heat stroke), effects of extreme cold (hypothermia, frostbite), high winds, heavy rain, lightning, heavy snow, ice, earthquakes, landslides, flooding, etc.

The most likely hazards at the site are effects of extreme heat (heat exhaustion, heat stroke) and earthquakes.

To protect yourself from heat, perform the heaviest work during the coolest part of the day; drink plenty of cool water; wear light, loose-fitting, breathable clothing; and take frequent, short breaks in the shade. Certain medications, having a previous heat-related illness, and wearing PPE such as a respirator or protective suit can increase risk.

Heat Exhaustion

What are the symptoms?

HEADACHES; DIZZINESS OR LIGHTHEADEDNESS; WEAKNESS; MOOD CHANGES SUCH AS IRRITABILITY, CONFUSION, OR THE INABILITY TO THINK STRAIGHT; UPSET STOMACH; VOMITING; DECREASED OR DARK-COLORED URINE; FAINTING OR PASSING OUT; AND PALE, CLAMMY SKIN

What should you do?

- Act immediately. If not treated, heat exhaustion may advance to heat stroke or death.
- Move the victim to a cool, shaded area to rest. Don't leave the person alone. If symptoms include dizziness or lightheadedness, lay the victim on his or her back and raise the legs 6 to 8 inches. If symptoms include nausea or upset stomach, lay the victim on his or her side.
- Loosen and remove any heavy clothing.
- Have the person drink cool water (about a cup every 15 minutes) unless sick to the stomach.
- Cool the person's body by fanning and spraying with a cool mist of water or applying a wet cloth to the person's skin.
- Call 911 for emergency help if the person does not feel better in a few minutes.

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Heat Stroke–A Medical Emergency

What are the symptoms?

DRY, PALE SKIN WITH NO SWEATING; HOT, RED SKIN THAT LOOKS SUNBURNED; MOOD CHANGES SUCH AS IRRITABILITY, CONFUSION, OR THE INABILITY TO THINK STRAIGHT; SEIZURES OR FITS; AND UNCONCIOUSNESS WITH NO RESPONSE

What should you do?

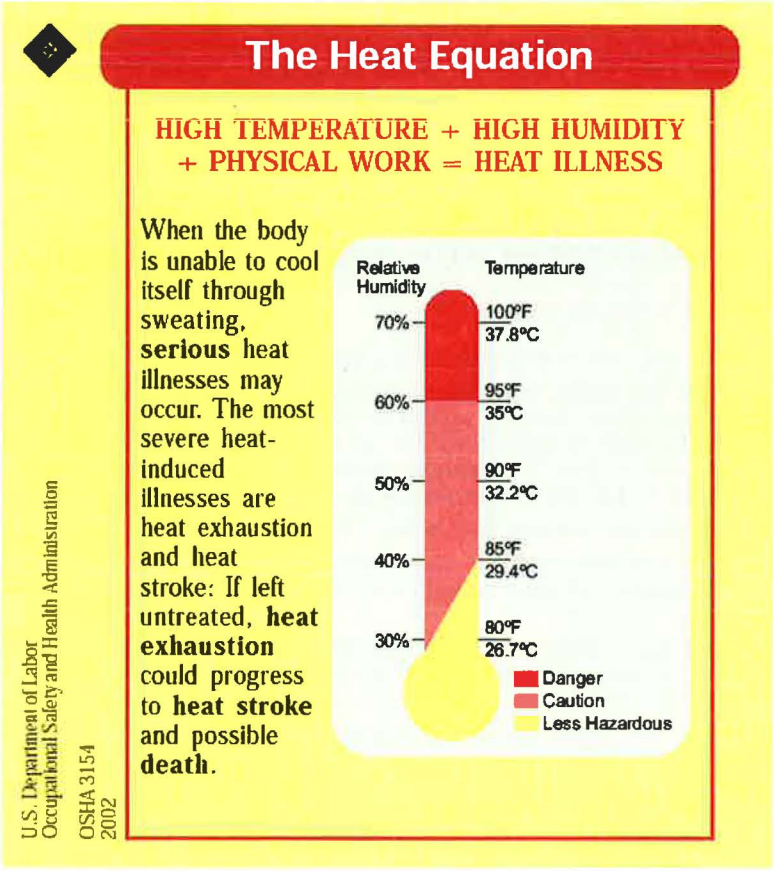
- Call 911 for emergency help immediately.
- Move the victim to a cool, shaded area. Don't leave the person alone. Lay the victim on his or her back. Move any nearby objects away from the person if symptoms include seizures or fits. If symptoms include nausea or upset stomach, lay the victim on his or her side.
- Loosen and remove any heavy clothing.
- Have the person drink cool water (about a cup every 15 minutes) if alert enough to drink something, unless sick to the stomach.
- Cool the person's body by fanning and spraying with a cool mist of water or wiping the victim with a wet cloth or covering him or her with a wet sheet.
- Place ice packs under the armpits and groin area.

How can you protect yourself and your coworkers?

- Learn the signs and symptoms of heat-induced illnesses and how to respond.
- Train your workforce about heat-induced illnesses.
- Perform the heaviest work during the coolest part of the day.
- Build up tolerance to the heat and the work activity slowly. This usually takes about 2 weeks.
- Use the buddy system, with people working in pairs.
- Drink plenty of cool water, about a cup every 15 to 20 minutes.
- Wear light, loose-fitting, breathable clothing, such as cotton.
- Take frequent, short breaks in cool, shaded areas to allow the body to cool down.
- Avoid eating large meals before working in hot environments.
- Avoid alcohol or beverages with caffeine. These make the body lose water and increase the risk for heat illnesses.

What factors put you at increased risk?

- Taking certain medications. Check with your health-care provider or pharmacist to see if any medicines you are taking affect you when working in hot environments.
- Having a previous heat-induced illness.
- Wearing personal protective equipment such as a respirator or protective suit.



HEAT STRESS

INTRODUCTION

Operations involving high air temperatures, radiant heat sources, high humidity, direct physical contact with hot objects, or strenuous physical activities have a high potential for inducing heat stress in employees engaged in such operations. Outdoor operations conducted in hot weather, such as construction, refining, asbestos removal, and hazardous waste site activities, especially those that require workers to wear semi-permeable or impermeable protective clothing, are also likely to cause heat stress among exposed workers.

CAUSAL FACTORS

Age, weight, degree of physical fitness, degree of acclimatization, metabolism, use of alcohol or drugs, and a variety of medical conditions such as hypertension all affect a person's sensitivity to heat. However, even the type of clothing worn must be considered. Prior heat injury predisposes an individual to additional injury. It is difficult to predict just who will be affected and when, because individual susceptibility varies. In addition, environmental factors include more than the ambient air temperature. Radiant heat, air movement, conduction, and relative humidity all affect an individual's response to heat.

DEFINITIONS

The American Conference of Governmental Industrial Hygienists (2002) states that workers should not be permitted to work when their deep body temperature exceeds 100.4°F (38 °C).

Heat is a measure of energy in terms of quantity.

A **calorie** is the amount of heat required to raise 1 gram of water 1°C (based on a standard temperature of 16.5 to 17.5°).

Conduction is the transfer of heat between materials that contact each other. Heat passes from the warmer material to the cooler material. For example, a worker's skin can transfer heat to a contacting surface if that surface is cooler, and vice versa.

Convection is the transfer of heat in a moving fluid. Air can be described as a fluid. Air flowing past the body can cool the body if the air temperature is cool. On the other hand, air that exceeds 35°C (95°F) can increase the heat load on the body.

Evaporative cooling takes place when sweat evaporates from the skin. High humidity reduces the rate of evaporation and thus reduces the effectiveness of the body's primary cooling mechanism.

Radiation is the transfer of heat energy through space. A worker whose body temperature is greater than the temperature of the surrounding surfaces radiates heat to these surfaces. Hot surfaces and infrared light sources radiate heat that can increase the body's heat load.

Globe temperature is the temperature inside a blackened, hollow, thin copper globe.

Metabolic heat is a by-product of the body's activity.

Natural wet bulb (NWB) temperature is measured by exposing a wet sensor, such as a wet cotton wick fitted over the bulb of a thermometer, to the effects of evaporation and convection. The term natural refers to the movement of air around the sensor.

Dry bulb (DB) temperature is measured by a thermal sensor, such as an ordinary mercury-in-glass thermometer, that is shielded from direct radiant energy sources.

HEAT DISORDERS AND HEALTH EFFECTS

HEAT STROKE

Heat Stroke occurs when the body's system of temperature regulation fails and body temperature rises to critical levels. This condition is caused by a combination of highly variable factors, and its occurrence is difficult to predict. **Heat stroke is a medical emergency.** The primary signs and symptoms of heat stroke are confusion; irrational behavior; loss of consciousness; convulsions; a lack of sweating (usually); hot, dry skin; and an abnormally high body temperature, e.g., a rectal temperature of 41°C (105.8°F). If body temperature is too high, it causes death. The elevated metabolic temperatures caused by a combination of workload and environmental heat load, both of which contribute to heat stroke, are also highly variable and difficult to predict. If a worker shows signs of possible heat stroke, professional medical treatment should be obtained immediately. The worker should be placed in a shady area and the outer clothing should be removed. The worker's skin should be wetted and air movement around the worker should be increased (as long as the temperature of the air is less than 95° F) to improve evaporative cooling until professional methods of cooling are initiated and the seriousness of the condition can be assessed. Fluids should be replaced as soon as possible.

The medical outcome of an episode of heat stroke depends on the victim's physical fitness and the timing and effectiveness of first aid treatment. Regardless of the worker's protests, no employee

suspected of being ill from heat stroke should be sent home or left unattended unless a physician has specifically approved such an order.

HEAT EXHAUSTION

The signs and symptoms of heat exhaustion are headache, nausea, vertigo, weakness, thirst, and giddiness. Fortunately, this condition responds readily to prompt treatment. Heat exhaustion should not be dismissed lightly, however, for several reasons. One is that the fainting associated with heat exhaustion can be dangerous because the victim may be operating machinery or controlling an operation that should not be left unattended; moreover, the victim may be injured when he or she faints. Also, the signs and symptoms seen in heat exhaustion are similar to those of heat stroke, a real potential medical emergency.

Workers suffering from heat exhaustion should be removed from the hot environment and given fluid replacement. They should also be encouraged to get adequate rest.

HEAT CRAMPS

Heat Cramps are usually caused by performing hard physical labor in a hot environment. These cramps have been attributed to an electrolyte imbalance caused by sweating. It is important to understand that cramps can be caused by both too much and too little salt. Cramps appear to be caused by the lack of water replenishment. Because sweat is a hypotonic solution (±0.3% sodium chloride), excess salt can build up in the body if the water lost through sweating is not replaced.

Thirst cannot be relied on as a guide to the need for water; instead, water must be taken every 15 to 20 minutes in hot environments. Under extreme conditions, such as working for 6 to 8 hours in heavy protective gear, a loss of sodium may occur. Studies have shown that drinking commercially available carbohydrate-electrolyte replacement liquids is effective in minimizing physiological disturbances during recovery.

HEAT COLLAPSE

Heat Collapse ("Fainting"). In heat collapse, the brain does not receive enough oxygen because blood pools in the extremities. As a result, the exposed individual may lose consciousness. This reaction is similar to that of heat exhaustion and does not affect the body's heat balance. However, the onset of heat collapse is rapid and unpredictable. To prevent heat collapse, the worker should gradually become acclimatized to the hot environment.

HEAT RASHES

Heat Rashes are the most common problem in hot work environments. "Prickly heat", as heat rashes are sometimes called, is manifested as red papules on the skin and usually appears in areas where the clothing is restrictive. As sweating increases, these papules give rise to a prickling sensation. Prickly heat occurs in skin that is persistently wetted by unevaporated sweat, and heat rash papules may become infected if they are not treated. In most cases, heat rashes will disappear when the affected individual returns to a cool environment.

HEAT FATIGUE

A factor that predisposes an individual to heat fatigue is lack of acclimatization. The use of a program of acclimatization and training for work in hot environments is advisable. Acclimatization can take several weeks depending on the individual involved and the difference in temperature between the location from which the person is coming and the temperature to which he/she is going. The signs and symptoms of heat fatigue include impaired performance of skilled sensorimotor, mental, or vigilance

jobs. There is no treatment for heat fatigue except to remove the heat stress before a more serious heat-related condition develops.

CONTROL MEASURES FOR HEAT STRESS

Ventilation, air-cooling, fans, shielding, and insulation are the five major types of engineering controls used to reduce heat stress in hot work environments. Heat reduction can also be achieved by using power assists and tools that reduce the physical demands placed on a worker.

However, for this approach to be successful, the metabolic effort required for the worker to use or operate these devices must be less than the effort required without them. Another method is to reduce the effort necessary to operate power assists. Workers should be allowed to take frequent rest breaks in a cooler environment.

ACCLIMATIZATION

The human body can adapt to heat exposure to some extent. This physiological adaptation is called acclimatization. After a period of acclimatization, the same activity will produce fewer cardiovascular demands. The worker will sweat more efficiently (causing better evaporative cooling), and thus will more easily be able to maintain normal body temperatures.

FLUID REPLACEMENT

Cool (50°-60°F) water or any cool liquid (except alcoholic beverages, tea and coffee) should be made available to workers to encourage them to drink small amounts frequently, e.g., one cup every 20 minutes. Ample supplies of liquids should be placed close to the work area. Although some commercial replacement drinks contain salt, this is not necessary for acclimatized individuals because most people add enough salt to their summer diets.

GENERAL VENTILATION

General ventilation is used to dilute hot air with cooler air (generally cooler air that is brought in from the outside). This technique clearly works better in cooler climates than in hot ones. A permanently installed ventilation system usually handles large areas or entire buildings. Portable or local exhaust systems may be more effective or practical in smaller areas.

AIR TREATMENT/AIR COOLING

Air treatment/air cooling differs from ventilation because it reduces the temperature of the air by removing heat (and sometimes humidity) from the air.

Air conditioning is a method of air-cooling, but it is expensive to install and operate. An alternative to air conditioning is the use of chillers to circulate cool water through heat exchangers over which air from the ventilation system is then passed; chillers are more efficient in cooler climates or in dry climates where evaporative cooling can be used.

Local air cooling can be effective in reducing air temperature in specific areas. Two methods have been used successfully in industrial settings. One type, cool rooms, can be used to enclose a specific workplace or to offer a recovery area near hot jobs. The second type is a portable blower with built-in air chiller. The main advantage of a blower, aside from portability, is minimal set-up time.

Another way to reduce heat stress is to increase the airflow or convection using fans, etc. in the work area (as long as the air temperature is less than the worker's skin temperature). Changes in air speed can help workers stay cooler by increasing both the convective heat exchange (the exchange between the skin surface and the surrounding air) and the rate of evaporation. Because this method does not actually cool the air, any increases in air speed must impact the worker directly to be effective.

If the outdoor air temperature (i.e. the dry bulb temperature) is higher than 95°F (35 °C) the hot air passing over the skin can actually make the worker hotter (i.e. add to the overall body heat load). When the temperature is >95°F and the air is dry, evaporative cooling may be improved by air movement, although this improvement will be offset by the convective heat. When the temperature exceeds 95°F and the relative humidity is 100%, air movement will make the worker hotter. Increases in air speed have no effect on the body temperature of workers wearing vapor-barrier clothing.

HEAT CONDUCTION

Heat conduction methods include insulating the hot surface that generates the heat and changing the surface itself.

Simple engineering controls, such as shields, can be used to reduce radiant heat i.e. heat coming from hot surfaces within the worker's line of sight. Surfaces that exceed 95°F, and this is very common on hot summer days, are sources of infrared radiation that can add to the worker's heat load. Flat black surfaces absorb heat more than smooth, polished ones. Having cooler surfaces surrounding the worker, assists in cooling because the worker's body radiates heat toward them.

With some sources of radiation, such as heating pipes, it is possible to use both insulation and surface modifications to achieve a substantial reduction in radiant heat. Instead of reducing radiation from the source, shielding can be used to interrupt the path between the source and the worker. Polished surfaces make the best barriers, although special glass or metal mesh surfaces can be used if visibility is a problem.

Shields should be located so that they do not interfere with airflow, unless they are also being used to reduce convective heating. The reflective surface of the shield should be kept clean to maintain its effectiveness.

ADMINISTRATIVE CONTROLS/SAFE WORK PRACTICES

Training is the key to good work practices. Unless all employees understand the reasons for using new, or changing old, work practices, the chances of such a program succeeding are greatly reduced. NIOSH (1986) states that a good heat stress training program should include least the following components:

- Knowledge of the hazards of heat stress;
- Recognition of predisposing factors, danger signs, and symptoms;
- Awareness of first-aid procedures for, and the potential health effects of, heat stroke and heat exhaustion;

- Employee responsibilities in avoiding heat stress;
- Dangers of using drugs, including therapeutic ones, and alcohol in hot work environments;
- Use of protective clothing and equipment; and
- Purpose and coverage of environmental and medical surveillance programs and the advantages of worker participation programs.

Hot jobs should be scheduled for the cooler part of the day when possible, and routine maintenance and repair work in hot areas should be scheduled for the cooler seasons of the year.

Measurement is often required of those environmental factors that most nearly correlate with deep body temperature and other physiological responses to heat. At the present time, the Wet Bulb Globe Temperature Index (WBGT) is the most used technique to measure these environmental factors. WBGT values are calculated by the following equations:

WET BULB GLOBE TEMPERATURE INDEXES (WBGI)

Indoor or outdoors with no solar load

$$WBGT = 0.7NWB + 0.3GT$$

Outdoors with solar load

$$WBGT = 0.7NWB + 0.2GT + 0.1DB$$

Where: WBGT = Wet Bulb Globe Temperature Index
NWB = Natural Wet Bulb Temperature
DB = Dry Bulb (air) Temperature
GT = Globe Thermometer Temperature

The determination of WBGT requires the use of a black globe thermometer, a natural (static) wet-bulb thermometer, and a dry-bulb thermometer. The measurement of environmental factors shall be performed as follows:

1. The range of the dry and the natural wet-bulb thermometers should be -5°C to +50°C, with an accuracy of ±0.5°C. The dry bulb thermometer must be shielded from the sun and the other radiant surfaces of the environment without restricting the airflow around the bulb. The wick of the natural wet bulb thermometer should be kept wet with distilled water for at least one-half hour before the temperature reading is made. It is not enough to immerse the other end of the wick into a reservoir of distilled water and wait until the whole wick becomes wet by capillarity. The wick must be wetted by direct application of water from a syringe one-half hour before each reading. The wick must cover the bulb of the thermometer and an equal length of additional wick must cover the stem above the bulb. The wick should always be clean, and new wicks should be washed before using.

2. A globe thermometer, consisting of a 15 cm (6-inch) in diameter hollow copper sphere painted on the outside with a matte black finish, or equivalent, must be used. The bulb or sensor of a thermometer (range -5°C to +100°C with an accuracy of ±0.5°C) must be fixed in the center of the sphere. The globe thermometer should be exposed at least 25 minutes before it is read.

3. A stand should be used to suspend the three thermometers so that they do not restrict free airflow around the bulbs and the wet-bulb and globe thermometer are not shaded.

4. It is permissible to use any other type of temperature sensor that gives a reading similar to that of a mercury thermometer under the same conditions.

5. The thermometers must be placed so that the readings are representative of the employee's work or rest areas, as appropriate.

Once the WBGT has been estimated, employers can estimate workers' metabolic heat load and use the ACGIH method to determine the appropriate work/rest regimen, clothing, and equipment to use to control the heat exposures of workers in their facilities.

REFLECTIVE CLOTHING

Reflective clothing, which can vary from aprons and jackets to suits that completely enclose the worker from neck to feet, can stop the skin from absorbing radiant heat. However, since most reflective clothing does not allow air exchange through the garment, the reduction of radiant heat must more than offset the corresponding loss in evaporative cooling. For this reason, reflective clothing should be worn as loosely as possible. In situations where radiant heat is high, auxiliary-cooling systems can be used under the reflective clothing.

AUXILIARY BODY COOLING

1. Commercially available **ice vests**, though heavy, may accommodate as many as 72 ice packets, which are usually filled with water. Carbon dioxide (dry ice) can also be used as a coolant. The cooling offered by ice packets lasts only 2 to 4 hours at moderate to heavy heat loads, and frequent replacement is necessary. However, ice vests do not encumber the worker and thus permit maximum mobility. Cooling with ice is also relatively inexpensive.

2. **Wetted clothing** is another simple and inexpensive personal cooling technique. It is effective when reflective or other impermeable protective clothing is worn. The clothing may be wetted terry cloth coveralls or wetted two-piece, whole-body cotton suits. This approach to auxiliary cooling can be quite effective under conditions of high temperature and low humidity, where evaporation from the wetted garment is not restricted.

3. **Water-cooled garments** range from a hood, which cools only the head, to vests and "long johns," which offer partial or complete body cooling. Use of this equipment requires a battery-driven circulating pump, liquid-ice coolant, and a container.

Although this system has the advantage of allowing wearer mobility, the weight of the components limits the amount of ice that can be carried and thus reduces the effective use time. The heat transfer rate in liquid cooling systems may limit their use to low-activity jobs; even in such jobs, their service time is only about 20 minutes per pound of cooling ice. To keep outside heat from melting the ice, an outer insulating jacket should be an integral part of these systems.

4. **Circulating air** is the most highly effective, as well as the most complicated, personal cooling system. By directing compressed air around the body from a supplied air system, both evaporative and convective cooling is improved. The greatest advantage occurs when circulating air is used with impermeable garments or double cotton overalls.

One type, used when respiratory protection is also necessary, forces exhaust air from a supplied-air hood ("bubble hood") around the neck and down inside an impermeable suit. The air then escapes through openings in the suit. Air can also be supplied directly to the suit without using a hood in three ways:

- by a single inlet;
- by a distribution tree; or
- by a perforated vest.

In addition, a vortex tube can be used to reduce the temperature of circulating air. The cooled air from this tube can be introduced either under the clothing or into a bubble hood. The use of a vortex tube separates the air stream into a hot and cold stream; these tubes also can be used to supply heat in cold climates. Circulating air, however, is noisy and requires a constant source of compressed air supplied through an attached air hose.

One problem with this system is the limited mobility of workers whose suits are attached to an air hose. Another is that of getting air to the work area itself. These systems should therefore be used in work areas where workers are not required to move around much or to climb. Another concern with these systems is that they can lead to dehydration. The cool, dry air feels comfortable and the worker may not realize that it is important to drink liquids frequently.

RESPIRATOR USAGE

The use of any kind of respiratory protection device increases stress on a worker, and this stress contributes to overall heat stress. Chemical protective clothing such as totally encapsulating chemical protection suits will also add to the heat stress problem.

SUMMARY

Heat stress offers significant challenges when work needs to be performed under hot ambient conditions. However, a well thought-out program can substantially reduce the chances of heat stress. A combination of engineering and administrative controls along with effective use of personal protective equipment can protect employees from suffering the effects of heat stress

EARTHQUAKES

Earthquakes can last just a few seconds or as long as several minutes. Safety precautions include (as amended from http://safety.lovetoknow.com/Earthquake_Safety_Precautions):

- Before an earthquake:
  - Store heavy items or glassware on low shelves so they do not become dangerous projectiles. Secure large equipment with straps, bolts, or other stabilizing methods.
  - Know the emergency meeting location at the site.

- During an earthquake:
  - Immediately seek a safe location such as in a doorway, beneath a table or desk, or along an interior wall away from windows or hazardous objects.
  - Cover the back of your head and your eyes to minimize injury from flying debris
  - Do not take elevators during an earthquake.
  - If outdoors, stay in open areas away from buildings, power lines, trees, and other potential hazards.
  - If driving, stop quickly but safely and stay in the vehicle. Do not stop near power lines, bridges, overpasses, or other potentially dangerous locations.
  - Stay calm and brace yourself to keep your balance. Sit if possible.

- After an earthquake:
  - Be prepared for aftershocks, which may be stronger than the initial jolt.
  - Administer First Aid and summon emergency assistance if necessary.
  - Wear PPE (boots, gloves) to avoid getting cut by broken glass.
  - Turn off gas, electricity, and water if damage is suspected or if advised to do so by authorities.
  - Be cautious opening cabinets, cupboards, and closets in case items are poised to fall.
  - Keep phone lines clear for emergency use.
  - Be patient: it may take hours or days to restore all services depending on the severity of the quake.

1.3 Biological Hazards

Biological hazards may include, but are not limited to, bees/wasps, spiders, snakes, stray dogs, rats and poisonous/allergenic plants.

Bee/Wasp Precautions

Purpose

Bees and similar organisms such as wasps, hornets and yellow jackets can cause significant injury, pain and/or discomfort during our work. This precaution has been developed to help avoid injury.

We can encounter these organisms during a number of our tasks such as:

- Opening well vault covers
- Opening core or sample boxes
- Performing O & M in system compounds
- Working in tall grass, weeds and brush
- Performing site assessments (indoors and outdoors)

Yellow Jackets

Yellow Jackets are found throughout the United States. Yellow Jackets feed on insects, spiders and a wide variety of other food items. They are medium-sized, stout-bodied, and black with bright yellow bands. Yellow-jackets construct globular paper nests, usually in underground cavities. Favorite nesting places include rodent burrows, compost piles and wall voids.

Yellow Jackets are scavengers and frequently are found foraging around compost piles and garbage receptacles. Their activity can be discouraged in the vicinity of patios, parks, picnic and other recreational areas by covering all food and disposing of waste in covered containers.

Paper Wasps

Paper wasps are about 1" in length, have a spindle-shaped body and are marked with a brown and yellow pattern. Paper wasps construct umbrella-shaped, single-layered nests with exposed cells. Nests may be built in trees and shrubs but frequently are found under building overhangs, in attics, barns, garages and sheds. These wasps are not considered overly aggressive and usually pose a threat only when their nests are disturbed. However, foraging wasps can cause considerable annoyance as they fly in and about entrances of buildings.

Honey Bees

Honey bees may become troublesome when they swarm or build colonies in or near residential areas. Honeybees occasionally invade homes and establish a colony, building combs of wax containing honey, pollen and brood in wall spaces. Once established, a colony is difficult to remove because it usually involves structural modification of the building. To be effective, the honey and wax should be removed along with the bees or the site will remain attractive to other swarms.

Bumble Bees

These bees most commonly become a problem when they establish nests close to a sidewalk or near building foundations. Bumble bees are large, robust bees covered with dense black and yellow hairs. They commonly reach one inch in length. Bumble bees usually are not overly aggressive, but will sting if molested. To avoid confrontations with bumble bees, stay clear of patches of flowers visited by adults. These bees can be controlled by spraying or dusting insecticides into their nests. Retreatment may be necessary.

What to do?

Naturally, there are many kinds of bees, and other insects for that matter, about which we should be concerned. The following are some good rules of thumb to keep in mind.

To mitigate hazards associated with bees/wasps:

- Avoid known locations of bees/wasps.
- Keep your eyes and ears open for swarms.
- Look for insects flying in and out of openings such as a crack in the wall, an open pipe end, or a well vault lid.
- Be cautious of tall grass as some bees build their hives at ground level.
- Be cautious of pointed structures, especially in barns, storage sheds, and outbuildings as bees often build hives in those structures.
- Avoid wearing citrus or floral aftershaves or perfumes as bees/wasps may be attracted to these odors.
- Wear light colored clothing as insects are generally attracted to dark colors.
- Fill in cracks or crevices and close open ends of pipes when bees/wasps are not around.
- Leave the area as quickly as possibly if a nest has been disturbed. Do not retrieve nearby belongings. Do not stand still. Do not try to fight them.

If stung by a bee or wasp, wash the area with soap and water. If you have been stung over 15 times or are having symptoms other than pain and swelling, seek emergency medical assistance immediately. Staff that are allergic will carry an EpiPen® as prescribed by a doctor. The SHSO, OSEC and Project Manager should be made aware of this prior to the start of the project.

Insect Sting Reactions

Insect sting reactions can be classified into three types - a normal reaction, a toxic reaction, and an allergic reaction. A normal reaction, lasts only a few hours, involves pain, redness, swelling, itching, and warmth at the site of the sting. A toxic reaction lasts for several days, results from multiple stings and causes muscle cramps, headache, fever, and drowsiness. An allergic reaction is similar to a toxic reaction but is triggered with only one sting.

An allergic reaction can involve one or more of the following: hives, itching, and swelling in areas other than the sting site; tightness in the chest and difficulty in breathing; a hoarse voice or swelling of the tongue; dizziness or a sharp drop in blood pressure; and unconsciousness or cardiac arrest.

4.0 Site Control and Safety Procedures

Procedures described in this section are intended to aid Stantec personnel in mitigating site risks/hazards.

Video Cameras

Prior to using a camera or other electronic recording devices on this site, all on-site personnel and/or visitors will obtain approval from the Project Manager.

Daily Production Health and Safety Briefings

A safety meeting will be conducted twice daily and as needed at the site to discuss the health and safety issues for the activities to be conducted that day. The topics of the meeting will include, at a minimum, general health and safety procedures, reviewing health and safety policies and reviewing the job hazard analyses for the tasks to be conducted. Additional safety meetings may be conducted if the scope of work changes during the day, or if other health and safety issues are identified. The Daily Production Health and Safety Briefing Log and example meeting topics are included in Attachment 3.

Driving

- Review the Stantec Safe Driving Procedures provided on-site.
- Utilize the Journey Hazard Assessment Card to identify potential driving/journey/traffic hazards before each trip. Copies of the Journey Hazard Assessment Card are included in this HASP as Attachment 5.
- Utilize the Daily Vehicle Checklist at least once a day for each vehicle driven for Stantec business to identify potential vehicle issues/hazards. Copies of the Daily Vehicle Inspection Checklist are included in this HASP as Attachment 4.
- Have each team member who will travel to/from the site review the site-specific Journey Management Plan (JMP) before traveling to identify routes of travel and potential driving/journey/traffic hazards. JMP(s) will be kept with each traveling employee throughout the entire course of travel.
- A Stantec Vehicle Collision Kit will be kept in every vehicle used for Stantec project work. A Stantec Vehicle Collision Kit is included in this HASP as Attachment 6.

Drug and Alcohol Testing

Following an incident, Stantec will follow the incident reporting procedures. If appropriate, Stantec will include drug and alcohol testing, consistent with Stantec's Policies and Procedures, as well as the client's contractual requirements for testing.

Exclusion Zone and Decontamination (as applicable)

No eating, drinking, or smoking or raw tobacco use is permitted within the exclusion zone. These activities will be conducted only in designated areas of the site. Use of PDAs, cell phones, pagers, or other electrical devices (with the exception of intrinsically safe devices) are prohibited in the exclusion zone. Personnel will properly decontaminate after leaving an exclusion zone. Decontamination procedures may involve disposing of Tyveks, latex gloves, etc. in a decontamination zone located immediately outside of the exclusion zone. At a minimum, personnel will wash any exposed skin before leaving a site using soap and water or pre-moistened cleansing towels. Stantec will evaluate the hazards and develop site-specific decontamination procedures to address the chemical hazards at each site. These procedures can be found in the job safety analyses.

HASP Inspections

The site-specific HASP should be inspected in the field by the SHSO or other Stantec personnel to determine the effectiveness of the plan. Any deficiencies should be corrected and changes will be recorded on the HASP Modification Log.

Jewelry

Jewelry can be dangerous and shall not be worn during field activities. Large earrings, long necklaces, loose-fitting bracelets, rings, watches, etc. can become entangled in machinery and cause traumatic amputation of limbs, as well as be conductive of electricity.

Job Safety Analysis

Job Safety Analyses (JSAs) will be prepared or revised prior to mobilizing to the field. Applicable JSAs will be reviewed in detail on a daily basis by all affected on-site workers and/or visitors. Any revisions to the JSAs will be hand written into the JSAs, forwarded to the project manager, and communicated to during Daily Production Health and Safety Briefings. **JSAs are located in Attachment 2.**

Material Safety Data Sheets (a.k.a. Safety Data Sheets/GHS)

Material Safety Data Sheets (MSDSs) will be available in the Stantec HASP &/or in the sub-contractor's HASP for chemicals on site (including chemicals brought on site by on-site personnel and/or visitors).

Permits

This HASP will serve as the general permit to work for this site.

Personal Protective Equipment

PPE is identified in JSAs. PPE listed in each JSA is specific to the task outlined in the JSA and is consistent with Appendix B of 29 CFR 1910.120. PPE is to be used in accordance with manufacturers' recommendations and employee training. Minimum PPE at the site includes steel toe/steel shank boots, high visibility work gloves, hi-viz safety vest, long sleeve shirt, pants, safety glasses with side shields, and a hard hat.

Pre-entry Briefing

All on-site workers and visitors will receive a pre-entry briefing prior to accessing work areas of the site. The briefing will include reviewing contents of the HASP, signing the Acknowledgement and Agreement Form. The briefing for visitors may be abbreviated to be fit-for-purpose based on the intent of the visit.

Public Questions and Press

Questions about the site posed by neighbors, the press, or other interested parties will be directed to the **Caltrans Project Manager Samuel Yang at (213) 897-4058**.

Shutoff Valves/Switches

(IF NEEDED) The SHSO will identify the location of shutoff valves and switches for utilities and products on the Site Plan and disseminate this information to all site personnel and visitors as appropriate.

Site Access and Layout

Before mobilizing to the site for an event, the property owner(s) will be notified.

Site Security

Security of our staff, subcontractors, equipment, and the public is of paramount importance to Stantec. Employees are trained in hazard recognition and will follow standard policies and procedures to report and mitigate site security issues/hazards if identified. Note that security consideration is different than traffic guidance and control, which also impacts security to some extent. Security refers to personal safety and freedom from theft or violence. The following items will be evaluated when considering security measures at the site:

- Recent criminal activity at the site and nearby areas (ask site owner/operator and the police);
- Work hours (security concerns may be different depending on the time of day); and
- Lighting at the site (thieves are generally dissuaded from stealing on well lighted sites).

Standard security measures will be implemented on site to minimize the potential for loss at the site. Standard security measures include properly maintained lighting, functioning locks for windows/doors/equipment storage areas, and maintaining control of tools and equipment when not in use. Security may be implemented in a variety of ways:

- Orange construction fence (minimal security);
- Chain link fencing;
- Extra lighting;
- Specialized locks; and/or
- Contract security.

Traffic Guidance and Control

Incidents on sites have shown the need for a site-specific Traffic Guidance and Control Plan. The SHSO and project staff will develop a Traffic Guidance and Control Plan and disseminate this information to all site personnel. This plan will consider the amount of traffic at a site and provide for the safety of all workers. Equipment and resources to be considered as part of traffic guidance and control include:

- Vehicle hazard lights (tail and headlights)
- Cones/Delineators
- Placement of vehicles as barriers between workers and traffic
- Rotating amber hazard lights that can be placed on top of vehicles
- Signage advising drivers of shoulder work.

Other considerations for the Traffic Guidance and Control Plan include:

- Lane closures with proper signing
- Requiring personal vehicles (that aren't being used as barriers) to park as far away from potential traffic as possible.
- Cordoning off as much space as is necessary to ensure our safety.
- Identifying traffic flow routes and parking areas for heavy equipment (e.g., vacuum trucks, drill rigs, etc.) and establishing site speed limits.
- Reviewing local regulations for: formally developed traffic guidance and control plans signed by licensed individuals, police details, flagmen, hours of activity, closure of streets, etc.

Work Hours

Work on this project will be conducted between the hours of 0700 to 1800.

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Waste Management

A. Waste Generation (Type(s)/Quantities Expected):

Anticipated (YES/NO): ***NO***

Types: __ Liquid _Solid __ Sludge ____ Other (describe) _____

Quantity (Expected Volume): Unknown

B. Characteristics (Expected):

Corrosive _____ Flammable/Combustible ____ Radioactive _____ Toxic ____

Reactive _____ Unknown _____

Other (specify) _____

C. Packaging Requirements for Waste Material (Expected):

- DOT-approved Drums _
- Baker Tanks (possibly tankers if trucked off-site) _____
- Lined Waste Bins ____
- Temporary Stockpile _____

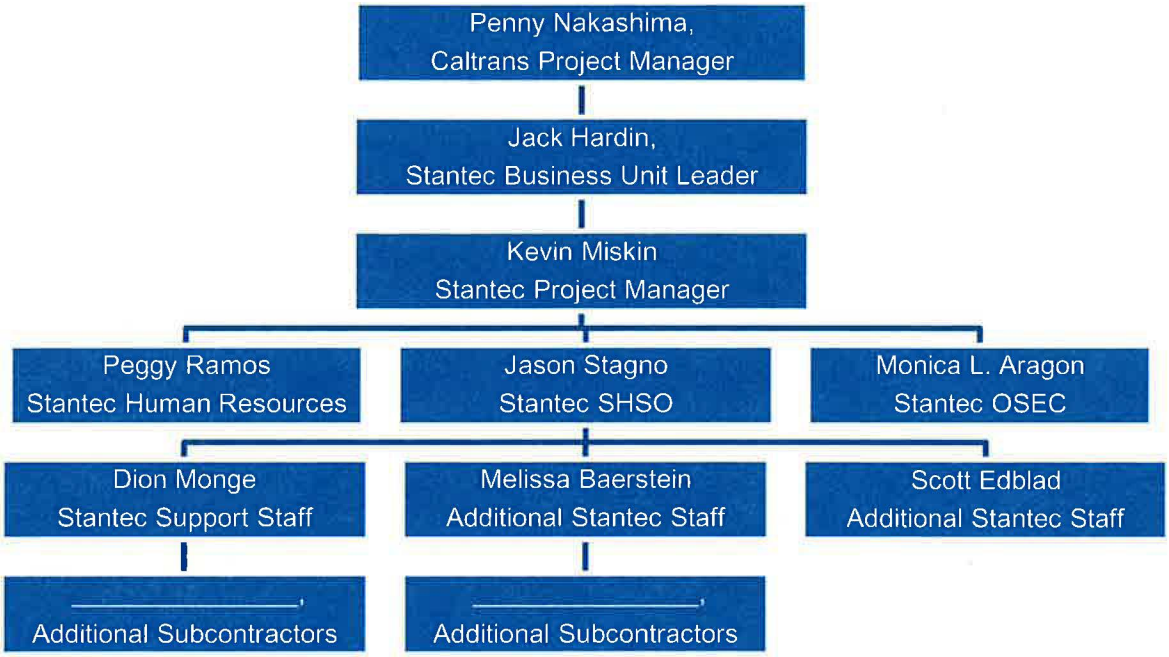
D. Disposal and/or Treatment Methods Proposed (Expected):

There are no waste materials expected to be generated during the ACM sampling work. .

Should any waste be generated during the ADL investigation, all wastes will be labeled, sampled, and analyzed for all applicable chemicals of potential concern and physical properties (e.g., pH, vapor pressure, etc.) to ensure proper waste characterization. Results of analysis will determine how and where impacted materials may be disposed. Belshire Environmental will be responsible for the categorization and transportation of all solid waste generated on this Site, if any. All materials will be disposed of or treated in accordance with federal, state and local regulations as selected and arranged by Stantec.

4.1 Organization and Responsibilities

An organization chart for project personnel is provided below.



A table summarizing responsibilities for project personnel is provided below.

Project Job Title	General Project Responsibilities
Stantec Project Manager	Overall financial and logistics. Contact client and subs to understand all hazards. Discuss with SHSO. Follow-up all incidents upon notice.
Stantec Site Health and Safety Officer	Conduct Site Safety Meeting (tailgate) and fieldwork in accordance with JSA and this HASP. Report all incidents and near misses immediately to Project Manager.
Stantec Support/Project Staff	Assist Stantec Site Health and Safety Officer in implementing site scope of work
Stantec Business Unit Leader	Provide immediate support at notice of all incidents
Stantec Sr. Certified Industrial Hygienist	Respond with corporate resources to all incidents as appropriate. Assist in HASP review. Assist in incident investigation.
Stantec Human Resources	Assist with incident review, recordkeeping.
Stantec Office Safety and Environment Coordinator	Manage Health and Safety responsibilities for personnel in Office. Assist employees with setting up training and attending/completing necessary courses.
Caltrans Project Manager	Provide all known analytical data gathered by others and notice of hazards. Provide access to site and available emergency response capabilities.

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Attachment B

Training Certificates

Certificate of Completion

Presented to

Jason Stagno

of

Stantec Consulting Services Inc.

for successful completion of

Stantec Hazwoper Refresher Course v3, PS4 eLesson

Dated: **09-07-2014**

Certificate of Completion

Presented to

Dion Monge

of

Stantec Consulting Services Inc.

for successful completion of

Stantec Hazwoper Refresher Course v3, PS4 eLesson

Dated: **5/28/2014**

Certificate of Completion

Presented to

Melissa Baernstein

of

Stantec Consulting Services Inc.

for successful completion of

Stantec Hazwoper Refresher Course v3, PS4 eLesson

Dated: **5/28/2014**

Certificate of Completion

Presented to

Monica Aragon-Guzman

of

Stantec Consulting Services Inc.

for successful completion of

Stantec Hazwoper Refresher Course v3, PS4 eLesson

Dated: **09-09-2014**

Principal Geologist

Certificate of Completion

Presented to

Joshua Sargent

of

Stantec Consulting Services Inc.

for successful completion of

Stantec Hazwoper Refresher Course v3, PS4 eLesson

Dated: **09-19-2014**

Certificate of Completion

Presented to

Michael Clayton

of

Stantec Consulting Services Inc.

for successful completion of

Stantec Hazwoper Refresher Course v3, PS4 eLesson

Dated: **4/11/2014**

Attachment 1

Stantec Field Binder Checklist and Project Applicable Forms

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Stantec Field Binder Checklist

INCLUDED YES	INCLUDED NO	INCLUDED N/A	FORMS	Qty.	COMMENTS
			PROJECT DOCUMENTS		
			Kick-off Meeting Materials	1	
X			Site-Specific Workplan / Written Scope	1	
			Project Management Checklist	1	
X			Field and Safety Supplies Checklist	5	
X			Sampling Procedures	1	
X			Permits	1	
X			Traffic Control Plans	1	
			STANTEC ENVIRONMENTAL SERVICES SECTOR		
			Field Notes and Logs		
X			Site Observation Report	20	
			Borehole/Well Construction Logs	10	
			Gauging Logs	5	
			Purge Groundwater Sampling Logs	10	
			Grab Groundwater Sample Log	10	
			Non-Aqueous Phase Liquid Bailing Sheets	5	
			O&M Field Data Log	20	
X			Waste Management Form	10	
			Oil & Gas Subsector		
			HSE Monitoring		
X			Equipment Calibration Sheet	5	
X			Air Monitoring Logs	10	
X			HSE Opportunity Card	5	
			SAFE Observation Remedial System	1	
			SAFE Observation Emergency Drill	1	
			SAFE Observation Groundwater	1	
			SAFE Observation Drilling	1	
			SAFE Observation Excavation	1	
			SAFE Observation Heavy Equipment	1	
			STANTEC CORPORATE HEALTH SAFETY AND ENVIRONMENT		
			Hazard Assessment		
X			RMS2– FIELD LEVEL Risk ASSESSMENT (FIT FOR DUTY), 1 day	20	
X			RMS2– FIELD LEVEL Risk ASSESSMENT (FIT FOR DUTY), 5 days	10	
X			RMS 7 - Quanitified Hazard Assessment		
X			SWP 102a - Workplace Violence	1	

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Stantec Field Binder Checklist

INCLUDED			FORMS	Qty.	COMMENTS
YES	NO	N/A			
			Inspection Form		
X			SWP 105a - Hazard Assessment for PPE Assessment Form	1	
HSE Monitoring and Incident Report					
X			RMS 5 - Worksite Inspection - Field	1	
X			RMS 3 - Incident Report	1	
Driving Safety and JMP					
X			SWP 124a - Vehicle Pre-Use Checklist	20	
			SWP 124b - Journey Management Plan	1	
Ground Disturbance					
X			SWP 213a - Pre-Ground Disturbance Worksheet Approval	3	
X			SWP 213c - Site Management and Post-Disturbance Checklist	3	
X			SWP 213d - Backfill Inspection Form	1	
Electrical Work					
			SWP 406a - Electrical Job Brief Hazard Assessment	1	
			SWP 406b - Energized Work Permit	1	
			SWP 408a - LTT Permit	1	
			SWP 408b - Emergency LTT Removal	1	
			SWP 408c - LTT Periodic Audit	1	
Confined Space					
			SWP 411a - Confined Space Entry Permit	1	
			SWP 411b - Alternate Entry Permit	1	
Lifting Operations					
			SWP 217a - Forklift Pre-Operational Checklist	1	
CLIENT-SPECIFIC DOCUMENTS					

Instructions: Review your Stantec Field Binder prior to starting work and ensure applicable contents are included. Sign and date the checklist. Your signature indicates your acknowledgement that you will maintain the field binder with forms required for your work.

Signature	Date:10/17/2014

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WORK SITE INSPECTION FIELD – RMS 5

Department: _____ Business Centre: _____

Location: _____ Date: _____

Purpose: To identify hazards in the field where Stantec personnel are working.

Responsibility: The Project Manager will determine how often work site inspections are required. OSEC will assist.

NOTE: for pre-use vehicle inspection, record inspection on SWP 124a – Vehicle Pre-Use Checklist.

	Status			Severity Ranking			Repeat Item (Y or blank)	Action Required (incl. champion's name)	Date Done
	Okay	Needs Work	N/A	A	B	C			
HSE Documentation									
Rms1 – hazard assessment	☐	☐	☐						
Health and Safety Plan (HASP)	☐	☐	☐						
Toolbox meeting	☐	☐	☐						
Permits (e.g. work, confined space, hot work, etc.)	☐	☐	☐						
Clearances	☐	☐	☐						
Training requirements met	☐	☐	☐						
Safe Work Practices	☐	☐	☐						
Inspection forms (e.g. ladder, chainsaw, client-specific excavation, etc.)	☐	☐	☐						
Other: Specify: _____	☐	☐	☐						
Emergency Preparedness									
Emergency Response Plan current & available	☐	☐	☐						
Muster point	☐	☐	☐						
First aid kit stocked/available	☐	☐	☐						
Emergency eyewash available	☐	☐	☐						
First aid providers on-site	☐	☐	☐						
Fire extinguisher	☐	☐	☐						
Communication available	☐	☐	☐						
Spill response kit	☐	☐	☐						
Other: Specify: _____	☐	☐	☐						
Protective Equipment									
Hard hats									
Safety glasses	☐	☐	☐						
Hearing protection	☐	☐	☐						
High visibility vests	☐	☐	☐						
Proper work gloves	☐	☐	☐						
Safety boots	☐	☐	☐						
18" PVC orange traffic cones	☐	☐	☐						
Road signs as required	☐	☐	☐						

A – Major – Includes potential for serious incident or illness, hospitalization, permanent disability, fatality or extensive property damage
B – Moderate – Includes potential for lost-time injury or illness, temporary disability or considerable property damage
C – Minor – Includes potential for first aid injury, minor illness, no lost time or limited property damage

	Status			Severity Ranking			Repeat Item (Y or blank)	Action Required (incl. champion's name)	Date Done
	Okay	Needs Work	N/A	A	B	C			
Fall arrest/restraint	☐	☐	☐						
Personal floatation device	☐	☐	☐						
Other: Specify: _____	☐	☐	☐						
Tools and Equipment									
Maintenance – tools in good condition	☐	☐	☐						
Used properly	☐	☐	☐						
Appropriate for job	☐	☐	☐						
Stored and/or secured safely	☐	☐	☐						
Lockout system established	☐	☐	☐						
Clearance from panels/overhead wires	☐	☐	☐						
Guards in place	☐	☐	☐						
Other: Specify: _____	☐	☐	☐						
Chemicals									
Controlled products labeled properly	☐	☐	☐						
Stored properly	☐	☐	☐						
MSDS available	☐	☐	☐						
TDG compliance	☐	☐	☐						
Other: Specify: _____	☐	☐	☐						
Site									
Parking	☐	☐	☐						
Accessibility	☐	☐	☐						
Work area demarcated	☐	☐	☐						
Visibility	☐	☐	☐						
Slipping and tripping hazards	☐	☐	☐						
Drainage	☐	☐	☐						
Overhead hazards identified	☐	☐	☐						
Buried utilities located/marked and exposed by hand	☐	☐	☐						
Pits/excavations barricaded	☐	☐	☐						
Excavation/Trench supports/slope	☐	☐	☐						
Traffic hazards controlled (including pedestrian walkways)	☐	☐	☐						
Other: Specify: _____	☐	☐	☐						
Environment									
Sensitive areas identified	☐	☐	☐						
Noise levels (</= 84dBA – 8hr shift; 82dBA – 12hr shift)	☐	☐	☐						

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B – Moderate – Includes potential for lost-time injury or illness, temporary disability or considerable property damage
C – Minor – Includes potential for first aid injury, minor illness, no lost time or limited property damage

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WORK SITE INSPECTION FIELD – RMS 5

	Status			Severity Ranking			Repeat Item (Y or blank)	Action Required (incl. champion's name)	Date Done
	Okay	Needs Work	N/A	A	B	C			
Chemical hazards identified	☐	☐	☐						
Working near water	☐	☐	☐						
Heat/Cold	☐	☐	☐						
Gas, fumes, dusts, vapors, asbestos	☐	☐	☐						
Ventilation	☐	☐	☐						
Confined space (including monitor and attendant(s))	☐	☐	☐						
Other: Specify: _____	☐	☐	☐						
General (including Buildings/Trailers)									
Exits marked and accessible	☐	☐	☐						
Stairs and walkways clean and dry	☐	☐	☐						
Handrails sturdy	☐	☐	☐						
Emergency lighting	☐	☐	☐						
General housekeeping	☐	☐	☐						
Body positioning, ergonomics (resources available on StanNet)	☐	☐	☐						
Other: Specify: _____	☐	☐	☐						

Prepared by: _____ (Signature) _____ (Date)

Approved by: _____ (Signature (Project Manager)) _____ (Date)

Original Copy: Project Files
Copies: OSEC & Field Files

A – Major – Includes potential for serious incident or illness, hospitalization, permanent disability, fatality or extensive property damage
B – Moderate – Includes potential for lost-time injury or illness, temporary disability or considerable property damage
C – Minor – Includes potential for first aid injury, minor illness, no lost time or limited property damage

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RMS7 – QUANTIFIED HAZARD ASSESSMENT

A proactive approach to safety requires systematic analysis of the tasks each occupation is required to perform regularly. The objectives of this hazard assessment process are to review and quantify the risk inherent in each task, to assess the effectiveness of existing controls and to develop new controls if necessary. Tasks with high levels of inherent risk are *critical tasks*, and require detailed and stringent controls. It is important that the people who perform the tasks are involved in this analysis, as their experience and knowledge are essential to the process. The controls identified and created should be used as tools for training and orienting new employees and contractors.

Using the attached risk matrix rate each task using severity and likelihood. Once this evaluation is complete, critical tasks will be identified and the existing controls evaluated.

Instructions:

1. List all the tasks that are completed as part of the job, even if they are not daily occurrences.

2. List the hazards associated with completing the task (consider hazard categories: chemical, physical, ergonomic, biological or environmental).

3. Using the attached Risk Matrix, use Tables 1 and 2 to determine the severity and likelihood rating for each task.

4. Determine the Risk Ranking according to the coloured Risk Matrix.

5. Using Table 3, tasks which are ranked A or B require immediate/prompt attention, and may be considered critical tasks. Critical tasks require further hazard analysis and assessment of controls.

6. As a baseline for the organization as a whole, a critical task inventory has been created for Stantec operations. Please contact your Regional Safety and Environment Coordinator (RSEC) for information and guidance.

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RMS7 – QUANTIFIED HAZARD ASSESSMENT - TASK INVENTORY

TASK INVENTORY		Date:		
Occupation:		**Name:**		
Task	**Hazards**	**Severity (1 to 4)**	**Likelihood (1 to 4)**	**Risk Level (A to D)**
Example: Vehicle Operation	*Other drivers, poor vehicle maintenance, loose objects in the cab, animals, fatigue, weather conditions, darkness, inexperience, distractions*	*4*	*3*	*A*

Controls Required to Mitigate Identified Risks to an Acceptable Level		
1.	**4.**	**7.**
2.	**5.**	**8.**
3.	**6.**	**9.**

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RMS7 – QUANTIFIED HAZARD ASSESSMENT – RISK MATRIX

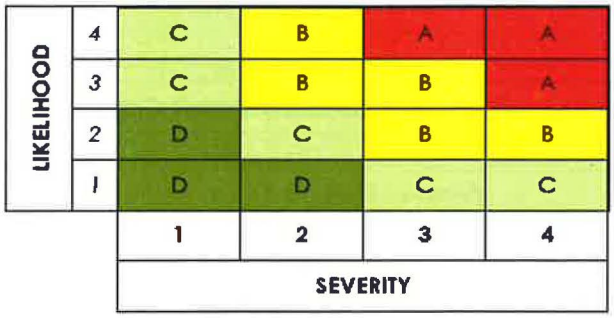

Table 1: Severity Result Criteria

Severity Level	People Impacts	Property Impacts	Liability/Cash Flow Impacts	Environmental Impacts
1	**Minor Injury** (first aid only – may have to see doctor)	**Minor** operational upset or damage to equipment. Total loss less than $10,000	**Minor** Third party damage claim. Total loss less than $10,000	**Incidental** Release with incidental or insignificant effects within facility.
2	**Medical Treatment Case** (had to see doctor AND get treatment)	**Moderate** operational upset and/or equipment damage. Total loss between $10,000 and $50,000	**Moderate** Third party damage claim/lawsuit. Total loss between $10,000 and $50,000	**Minor** Release within or outside fence with known consequences. Localized effect with mild environmental effects. Requires reporting to regulatory authorities.
3	**Serious Injury** (Modified Work, Away from Work and/or Long Term Disability)	**Major** operational upset and/or equipment damage. Total loss between $50,000 and $150,000	**Major** Civil charges laid against company or employees. Lawsuit anticipated. Total loss between $50,000 and $150,000	**Adverse** Release outside fence with known detrimental effects. Requires response from outside agencies (Hazmat units, police, and fire department)
4	**Death** (to 1 or more people)	**Critical** major damages or complete loss to essential equipment. Total loss more than $150,000	**Critical** Criminal charges laid against company or employees. Operation of site or operation halted by regulatory agency. Company-wide negative effects to operations. Lawsuit anticipated. Total loss more than $150,000.	**Serious** Release outside fence with known detrimental effects. Requires an ongoing cleanup requiring significant resources. Regulatory or other charges are possible.

Table 2: Probability Result Criteria	
Likelihood Level	***Result Criteria (where Likelihood = Frequency x Probability)***
4	**Constant.** Constant or continuous exposure to the risk. Task or activity is performed or may occur daily on a continuing basis. **High** probability of **RISK resulting in incident.** Incident is certain to occur, risk not fully controlled. Expected – occurs often as part of the process.
3	**Frequently.** Regular exposure to the risk. Task or activity is performed or may occur once per week or more. **Moderate** probability of **RISK resulting in incident.** Incidents happen, risk not fully eliminated. **POSSIBLE – KNOWN TO OCCUR DURING THE PROCESS.**
2	**Occasionally.** Low frequency of exposure to the risk. Task or activity is performed or may occur two or three times per month. **Low** probability of **RISK resulting in incident.** Occurrence is not likely but may have occurred in the past. Unusual – known to occur occasionally but not normally anticipated.
1	**Seldom.** Very low frequency of exposure to the risk. Task or activity performed or may occur once per month or less. **Extremely Low** probability of **RISK resulting in incident.** Occurrence very unlikely and may not have occurred in the past.

Table 3: Required Action For Each Risk Level		
Risk Level	**Category**	**Action Required**
A	Unacceptable	Must be mitigated with appropriate controls to a risk ranking of C or D immediately.
B	Undesirable	Must be mitigated with appropriate controls to a risk ranking of C or Das soon as possible.
C	Acceptable with Controls	Risk mitigation to risk ranking of Dis optional; procedures and controls must be verified.
D	Acceptable as is	No risk mitigation required.

HEALTH, SAFETY AND ENVIRONMENT

SAFE WORK PRACTICE
PRE-GROUND DISTURBANCE WORKSHEET & APPROVAL FORM
SWP-213a

Stantec

** Form to be completed by Project Manager or Designate*

Section One: Project Information

Project Number:	Project Name:
Project Manager:	
Client:	
Location:	
Planned Excavation Method: ☐ Mechanical ☐ Hand	Planned Excavation Depth: ☐ <30 cm / 1 ft and/or ☐ >30cm /1 ft
Work Description: (provide detail information as to what work is planned and how it will be executed):	
Information provided/completed by: ☐ Client ☐ Stantec	

Section Two: Utilities Location and Verification

1. Review location description provided by client.	Yes ☐ *(circle all that apply)* Green Field / Brown Field / White Zone / Other No ☐ N/A ☐ Justification:	
2. Identify and confirm land use.	Yes ☐ *(circle all that apply)* Ag Land / Urban / Municipal Urban / Native Forest / Industrial No ☐ N/A ☐ Justification:	
3a. Full-sweep line locate required	Yes ☐ No ☐ N/A ☐ Justification:	
3b. Point-specific line locates	Yes ☐ No ☐ N/A ☐ Justification:	
3c. Quote required and authorized (prior to location activities started)	Yes ☐ Provided by: Client Name: Date: No ☐ N/A ☐ Justification:	
4. Utility locates have been performed by public utility company(s) within required timeframe. Locates are clear/visible. *for multiple utility companies, please note dates and contact information using questions 5-15	Yes ☐ Contact Date: Ticket Number: Contact Person: Alternate Contact: Proposed Meet Date: Meet Time: No ☐ N/A ☐ Justification: Ticket Expiration Date:	
5. Private locate company has been contacted and is an approved utility locating contractor. *Markings are clear and visible*	Yes ☐ Contact Name: Contact Number: Meet Date: Meet Time: No ☐ N/A ☐ Justification:	

HEALTH, SAFETY AND ENVIRONMENT

SAFE WORK PRACTICE
PRE-GROUND DISTURBANCE WORKSHEET & APPROVAL FORM
SWP-213a

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6. Site access/permission has been secured *Land owner/tenant has been contacted*	Yes ☐	Land Owner Name: Contact Number: Permit/Authorization Number: Land Agent Name: Contact Number: * *Attach Access Agreement and Permit Authorization* No ☐ N/A ☐ Justification:
7. Work discussed with owner/tenant.	Yes ☐	Owner Name: Tenant Name: No ☐ N/A ☐ Justification:
8a. All crossing agreements for third party and owner facilities are in place and conditions have been met.	Yes ☐	Crossing or proximity agreements: 1. 2. 3. * *Attach crossing agreements with conditions* No ☐ N/A ☐ Justification:
8b. Have third party line owners been given 48 hours' notice to crossing or encroachment?	Yes ☐ No ☐	N/A ☐ Justification:
9. Is owner's representative required to be present when exposing or excavating near/across lines?	Yes ☐ No ☐	N/A ☐ Justification:
10a. Reviewed site information to identify subsurface structures relevant to planned site activities. *Review easements, right of ways, historical plot plans, previous site investigation, soil surveys, boring logs, etc*	*Check all that apply* ☐ 3rd party identified ☐ Recent low pressure plots reviewed? ☐ Land Standing Report reviewed? No ☐ N/A ☐ Justification:	☐ Recent high pressure plots reviewed? ☐ Land title search reviewed? ☐ Previous Site Investigations? ☐ Other
10b. Most recent as-built drawings and/or site plans surveys obtained. *Including UST, product and vent lines, building layout*	Yes ☐ No ☐	N/A ☐ Justification:
10c. Municipal utilities drawings.	Yes ☐ No ☐	N/A ☐ Justification:
11. All applicable local, provincial and federal permits have been obtained.	Yes ☐	Local/City Permit Number: Provincial/State Permit Number: Other: Other: * *Copy attached and on site* No ☐ N/A ☐ Justification:

Approval to Proceed with Field Activities

Client Approval:

Print Name: Signature: Date:

Project Manager/Designate Approval:

Print Name: Signature: Date:

HEALTH, SAFETY AND ENVIRONMENT

SAFE WORK PRACTICE
GROUND DISTURBANCE FORM
SWP-213b

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Ground Disturbance Form

Field Activity				
1. Copy of current locates and drawings on site.	Yes ☐ No ☐ N/A ☐ Justification:			
2. All site personnel involved in ground disturbance activities have been briefed on clearance protocols, line locations and signed off on work plan	Yes ☐ No ☐ N/A ☐ Justification:			
3a. Work area is secured.	Yes ☐ No ☐ N/A ☐ Justification:			
3b. Site work permits have been obtained.	Yes ☐ No ☐ N/A ☐ Justification:			
3c. Emergency shut-off switch is located for all impacted equipment.	Yes ☐ No ☐ N/A ☐ Justification:			
3d. Fire extinguishers/warning sign/ barriers are present.	Yes ☐ No ☐ N/A ☐ Justification:			
3e. Signage in place for overhead power lines.	Yes ☐ No ☐ N/A ☐ Justification:			
3f. Specify other safety equipment as needed.	☐ ☐		☐ ☐	
4. Location of area lights/signs and associated subsurface lines identified. Ticket/Confirmation No:	Yes ☐ No ☐ N/A ☐ Justification:	Located by: Company/Utility:	Phone:	Date:
5a. Location of all telecommunication and associated subsurface lines identified. Ticket/Confirmation No:	Yes ☐ No ☐ N/A ☐ Justification:	Located by: Company/Utility:	Phone:	Date:
5b. Fiber optic lines identified. Ticket/Confirmation No:	Yes ☐ No ☐ N/A ☐ Justification:	Located by: Company/Utility:	Phone:	Date:
6. Location of drains and associated Inter-connecting lines identified.	Yes ☐ No ☐ N/A ☐ Justification:	Located by: Company/Utility:	Phone:	Date:
7. Location of all electrical junction boxes and associated interconnecting lines identified.	Yes ☐ No ☐ N/A ☐ Justification:	Located by:	Phone:	Date:
	Status: Live ☐ Shut-off and locked out ☐ Removed from service ☐			
	Confirmation of status: Name:			Date:
	* Maintain minimum safe distance of > 7 m/23 ft.			

HEALTH, SAFETY AND ENVIRONMENT

SAFE WORK PRACTICE
GROUND DISTURBANCE FORM
SWP-213b

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8. Location of natural gas meters or connections and all interconnecting lines identified.	Yes ☐ Located by:	Phone:	Date:
	Company/Utility:		
	No ☐ N/A ☐ Justification:		
	Status: Live ☐ Shut-off and locked out ☐ Removed from service ☐		
	Confirmation of status: Name:		Date:
9. Location of Cable lines.	Yes ☐ Located by:	Phone:	Date:
	Company/Utility:		
	No ☐ N/A ☐ Justification:		
10. Location of Water lines.	Yes ☐ Located by:	Phone:	Date:
	Company/Utility:		
	No ☐ N/A ☐ Justification:		
11. Presence and tracing of process/storm sewers identified /understood *If other concrete, fiberglass, untraced PVC lines are potentially in the ground disturbance area, identify means of identification in comments section*	Yes ☐ Located by:	Phone:	Date:
	Company/Utility:		
	No ☐ N/A ☐ Justification:		
	Comments (need to comment on water sewer line):		
12. Presence of underground pipelines associated with pumps and pump galleries, manifolds, tank fields, compressors, production wells, loading racks and equipment identified.	Yes ☐ Located by:	Phone:	Date:
	Company/Utility:		
	No ☐ N/A ☐ Justification:		
13. Location of all aboveground indicators of subsurface utilities/services that may be leading to or from buildings within planned work area are Identified.	Yes ☐		
	No ☐ N/A ☐ Justification:		
14a. Orientation, arrangement, location, sizes of tanks, STP and extractor covers identified. .	Yes ☐		
	No ☐ N/A ☐ Justification:		
14b. Burial depth of tank determined if relevant	Yes ☐ Depth:		
	No ☐ N/A ☐ Justification:		
14c. Presence of underground lines for instrumentation, process analyzer, and motor-operated valves are inspected/identified.	Yes ☐		
	No ☐ N/A ☐ Justification:		
15. Location of other pertinent features surface or sub-surface that may be of relevance to work scope has been identified.	Yes ☐		
	No ☐ N/A ☐ Justification:		
16. Are all buried lines and utilities that are identified on all drawing sources staked or marked in the ground disturbance zone plus a 30 m /100 ft. buffer?	Yes ☐		
	No ☐ N/A ☐ Justification:		

HEALTH, SAFETY AND ENVIRONMENT

SAFE WORK PRACTICE
GROUND DISTURBANCE FORM
SWP-213b

Stantec

17. Critical zones have been identified. *5 m / 16.5 ft. of pipeline crossing area or the distance defined in the pipeline crossing agreement; 3 m / 10 ft. distance from edge of tank, pumps and pump galleries, manifolds, on/below grade transformers, compressors, production wells, flow lines, loading racks, other process equipment, operating dispenser islands and suspected hazardous/critical utilities, product lines, other subsurface structures, and entire area between tank field and dispensers at retail sites*	Yes ☐ Identify critical zones: No ☐ N/A ☐ Justification:
18. Has the owner/representative inspected the crossings or encroachment areas prior to beginning work?	Yes ☐ No ☐ N/A ☐ Justification:
19. Are all conditions of the Crossing Agreements being met?	Yes ☐ No ☐ N/A ☐ Justification:
20. Are all operators aware of the mechanical excavation zone as discussed in the tailgate meeting?	Yes ☐ No ☐ N/A ☐ Justification:
21. Location of surface features indicative of product lines or other subsurface structures identified.	*Check all that apply* ☐ Pipe marker signs present ☐ Surface scaring present ☐ Ground depressions present ☐ Water cc's identified ☐ Cut lines observed ☐ Vegetation distressed Other: No ☐ N/A ☐ Justification:
22. Road and pipeline crossing zones identified.	Yes ☐ No ☐ N/A ☐ Justification:
23. If subsurface structures exposed, extra precautions have been taken to ensure structural integrity.	Yes ☐ Describe: No ☐ N/A ☐ Justification:

Comments / Findings	Actions to Close Out Items	Person Completing	Date Completed

HEALTH, SAFETY AND ENVIRONMENT

SAFE WORK PRACTICE
GROUND DISTURBANCE FORM
SWP-213b

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Completed by: (print name)	Company:
Signature	Date:

HEALTH, SAFETY AND ENVIRONMENT

SAFE WORK PRACTICE
SITE MANAGEMENT AND POST-DISTURBANCE CHECKLIST
SWP-213c

Location:	Client:
	Project Number:
Land Use:	Project Manager:
Ground Disturbance Supervisor:	Work Period Date:
Contactor(s):	Ground Disturbance Activity:

Post Disturbance	**Yes**	**No**	**N/A**	**Initial**
Have all hand or daylighting exposure points been backfilled to the satisfaction of the owner?				
Has the owner inspected all exposed facilities in an excavation? If so, have owner initial here:_____				
Has a written backfill inspection been completed?				
Have photos been taken prior to backfill of an excavation?				
Has a written summary of all aspects of the work been completed?				
Have photos been taken after the excavation was backfilled?				

Comments:

Company	Signature	Print Name	Date (dd/mm/yy)

Requires Attachments:

1. Backfill Inspection report
2; Photographs
3. Written work summary

HEALTH, SAFETY AND ENVIRONMENT

SAFE WORK PRACTICE – BACKFILL INSPECTION FORM SWP-213d

Location:	Client:
	Project Number:
Land Use:	Project Manager:
Ground Disturbance Supervisor:	Work Period Date:
Contactor(s):	Ground Disturbance Activity:
Facility/Property Information	
Type:	
Name of Facility Owner:	
Number of Utilities in common ROW:	
Crossing agreement (Yes/No):	
Description of exposed Utility:	
Type of exposure:	
Dimensions of exposure (m):	
Depth of Utility below original ground (m):	
Position of Utility in exposure:	
Describe any visible damage:	
Backfill Description:	
Material type of backfill:	
Placement method:	
Contractor:	
Inspected by owner? (yes/no)	
Number of photographs:	

HEALTH, SAFETY AND ENVIRONMENT

SAFE WORK PRACTICE – BACKFILL INSPECTION FORM SWP-213d

Site Sketch of Backfill Site (plan and cross section)

NW	NE
SW	SE

Approval			
Company	Name	Signature	Date (text)

Key Contacts and Telephone Numbers:

Information Source	Telephone	Web Address
Stantec Key Safety Contacts		

Attachment 2

Job Safety Analyses

1. Driving to/from the job Site (with no trailer) Job Safety Analysis (JSA)

POC	Development Team	Position/Title	Date	Reviewed By	Position/Title
X	Michael Philipp	West Region Health and Safety Manager	10/04/2006		
			05/27/2008	Michael Philipp	West Region Health and Safety Manager
		Site specific edits to this JSA were made by	09/12/2014	Monica L. Aragon	OSEC
If most recent review date is more than six months old, then this JSA must be updated and reviewed again to remain current					
POC is the JSA development 'Point Of Contact'					

Field staff must review job-specific work plan and coordinate with project manager to verify that all up-front logistics are completed prior to starting work including, but not limited to, permitting, access agreements, and notification to required contacts (e.g. site managers, inspectors, clients, subcontractors, etc.). A tailgate safety meeting must be performed and documented at the beginning of each workday. Last-Minute Risk Assessment (LMRA) procedures must be used throughout the project. Weather conditions (heat, cold, rain, and lightening) must also be considered. Each employee is empowered, expected, and has the responsibility to stop the work performed by him/herself or another co-worker if the working conditions or behaviors are considered unsafe. All employees should act proactively to identify and mitigate hazards to the safest extent of their ability. Use Stop Work Authority as needed.

Job Steps	Personal Protective Equipment	Potential Hazard	Critical Actions
Perform LMRA procedures.	Wear reflective vest for traffic, steel toed shoes, long sleeve shirt, hardhat, safety glasses with side shields, and high visibility work gloves.	Slip/trip/falls, struck by traffic	• Assess the potential hazards. Analyze how to reduce the risk. – STANTEC_____. • Review JSA – STANTEC_____.
Verify Journey Management Plan is complete and current		Unexpected traffic detours	• Assure directions are available and understood prior to commencing travel – STANTEC_____. • Pull the vehicle into a safe location if additional directions must be confirmed – STANTEC_____. • Increase following distance to allow extra time to stop if you are in

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Job Steps	**Personal Protective Equipment**	**Potential Hazard**	**Critical Actions**
			unfamiliar territory - STANTEC_____.
Verify a Vehicle Collision Kit, a 3-lb type ABC fire extinguisher, and other as needed emergency equipment is in the vehicle.	Safety vest, high visibility work gloves, steel-toe/shank boots, safety glasses, long-sleeved shirt	Struck by another vehicle, pinch points, falling equipment	• Verify prepared field kit is in the vehicle. Inventory of the kit should include first aid kit, blood borne pathogen kit, fire extinguisher, collision kit, flashlight, etc. – STANTEC_____. • For cold weather areas the inventory should also include a bag of sand, a bag of salt, gloves, wool socks, wool caps, wool blankets, tire chains, small shovel and matches – STANTEC_____.
Perform perimeter walk around of vehicle for damage or unusual conditions, and complete the SWP-124a - Vehicle Pre-Use Checklist.	Safety vest, high visibility work gloves, steel-toe/shank boots, safety glasses, long-sleeved shirt	Getting hit by a car, pinch points, slip/trip/fall, chemical contacts (grease or oil from car), overheated engine or break-down due to lack of critical fluids.	• Complete the SWP-124a - Vehicle Pre-Use Checklist prior to travel – STANTEC_____ • Wear safety vest and watch for cars during walk around– STANTEC_____. • Address all questionable items prior to departure – STANTEC_____. • Assure tires are properly inflated – STANTEC_____. • Assure there are no cuts or bulges in the sidewalls – STANTEC_____. • Assure windshield and window glass is clean and not cracked or crazed – STANTEC_____. • Lift wiper arms and check wiper blades for damage or deterioration – STANTEC_____. • Check behind vehicle for obstructions – STANTEC_____. • Check under vehicle engine for evidence of fluid leaks – STANTEC_____. • Check fluid levels– STANTEC_____. • Wear Nitrile gloves when checking under hood – STANTEC_____. • Verify all traffic control equipment is removed/safely stowed away – STANTEC_____. • Look for and identify possible slip, trip, fall, and pinch point hazards –

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Job Steps	Personal Protective Equipment	Potential Hazard	Critical Actions
			STANTEC_____. • Do not touch metal with moist or wet skin – STANTEC_____. • Scrape windows, front and rear windshields – STANTEC_____.
Enter and prepare to start vehicle	**SEAT BELT**, sunglasses if needed	Back or body strain, slip/trip/fall, blind spots, inability to signal intentions, streaking windshield, impaired vision.	• Be aware of footing, handholds, and head room when entering vehicle – STANTEC_____. • Adjust seat so back is fully supported, upper arms close to body, and pedals within easy reach – STANTEC_____. • Lower steering wheel so hands are below shoulders and shoulders are relaxed – STANTEC_____. • Check mirror adjustments each time vehicle is re-started – STANTEC_____. • Locate and test operations of front and rear turn signals, headlamps, wipers, and washer fluid – STANTEC_____. • Verify proper operation of climate controls – STANTEC_____. • Fasten seat belt – STANTEC_____. • Lock doors – STANTEC_____. • Driver's cell phone shall be turned off – STANTEC_____. • Turn on headlights if vehicle is not equipped with day-time running lights – STANTEC_____.

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Job Steps	Personal Protective Equipment	Potential Hazard	Critical Actions
Start engine and let vehicle warm up.	**SEAT BELT**, sunglasses if needed	Unexpected movement.	• Assure that transmission is in Park, or in neutral if a manual transmission, and that parking brake is set – STANTEC_____. • Refer to Manufacturers vehicle manual for warm up times – STANTEC_____. • Assure there is sufficient gas, oil and other critical fluids – STANTEC_____. • Check for proper function of warning lights – STANTEC_____. • Make any other necessary adjustments prior to driving – STANTEC_____.
Pull out of parking space.	**SEAT BELT**, sunglasses if needed	Collision with other vehicles, pedestrians, or stationary objects.	• Check mirrors and over shoulder in all directions prior to pulling out of parking space – STANTEC_____. • Give two short blasts on the horn and while looking over your shoulder – STANTEC_____. • Slowly pull out of the parking space being prepared to apply the brakes if needed – STANTEC_____. • Signal if parallel parked along a street – STANTEC_____. • Avoid reversing when possible – STANTEC_____. • If reversing with 2 or more personnel in the vehicle, then at least 1 person must exit the vehicle and act as a spotter. If alone, before getting in the car, assess the area for approaching pedestrians and vehicles – STANTEC_____.
Drive a motor vehicle	**SEAT BELT**, sunglasses if needed	Collision, injury or death to occupants or other parties.	• Use the Stantec safe driving techniques – STANTEC_____. • **Scan** – Scan your horizon – STANTEC_____. • **Timing** – Do you have enough time to stop – STANTEC_____. • **Alert** – Don't drive when you are tired – STANTEC_____. • **Next** – Anticipate what could happen next – STANTEC_____. • **Team** – Passengers need to assist – STANTEC_____. • **Elevate** – Elevate your line of site – STANTEC_____.

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Job Steps	Personal Protective Equipment	Potential Hazard	Critical Actions
			• **Courteous** – Don't be the driver others dislike – STANTEC_____. • Driver's cell phone shall be turned off – STANTEC_____. • Scan major and minor intersections before entry (left-right-left) – STANTEC_____. • Scan mirrors frequently, at least one mirror every 5-8 seconds – STANTEC_____. • Avoid staring while evaluating road conditions – STANTEC_____. • Maintain adequate spacing between your vehicle and the vehicle in front of you (Rule of thumb is 1 second for every 10 miles per hour – STANTEC_____. • After stopping, allow vehicle in front to move for 3 seconds before accelerating – STANTEC_____. • Evaluate approaching merge before you reach them – STANTEC_____. • Avoid being boxed in by other vehicles – STANTEC_____. • Seek eye contact with other drivers – STANTEC_____. • Before changing lanes, signal well in advance, check mirrors and over shoulder, and allow adequate space before changing lanes – STANTEC_____. • Avoid blind spots – STANTEC_____. • Increase the distance between your vehicle and the vehicle in front of you at night and in inclement weather. – STANTEC_____
Pauses in travel	Safety vest, high visibility work gloves, steel-toe/shank boots, safety glasses, long-sleeved shirt, cell phone.	Struck by another vehicle, insecure connections	• If there is a pause in travel (i.e. rest stop, gas station) do another walk around the vehicle prior to resuming travel – STANTEC_____. • Be aware of nefarious characters – STANTEC_____.

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Job Steps	Personal Protective Equipment	Potential Hazard	Critical Actions
Reversing the vehicle	**SEAT BELT**, sunglasses if needed	Collision, injury or death to occupants or other parties.	• Make all backing maneuvers slowly and cautiously – STANTEC_____. • Check mirrors and over shoulders – STANTEC_____. • If reversing with 2 or more personnel in the vehicle, then at least 1 person must exit the vehicle and act as a spotter. If alone, before getting in the car, assess the area for approaching pedestrians and vehicles – STANTEC_____.
Parking	**SEAT BELT**, sunglasses if needed	Collision, injury or death to occupants or other parties.	• Park away from other cars when possible and when safe. – STANTEC_____ • Look for pull-through parking to avoid reversing – STANTEC_____. • Back into parking spot when possible and safe and legal – STANTEC_____. • If reversing with 2 or more personnel in the vehicle, then at least 1 person must exit the vehicle and act as a spotter. If alone, before getting in the car, assess the area for approaching pedestrians and vehicles – STANTEC_____. • Maintain cushion of safety from fixed objects – STANTEC_____. • Set parking brake – STANTEC_____.
POST-TRIP		Conditions worsen leading to mechanical failure possibly resulting in accident, injury, or death.	• Report vehicle problems immediately to company representative or rental car agency – STANTEC_____. • Schedule a tune-up or repair if necessary – STANTEC_____

ACM/PACM/LBP Sampling

POC	Development Team	Position/Title	Date	Reviewed By	Position/Title
√	Michael Allen Philipp	West Region H & S Manager	10/12/05		
	Scott Jordan	OE Coordinator	10/12/05		
	Dianne Burnia	National OE Coordinator	10/12/05		
			02/02/06	Michael A Philipp	West Region Health and Safety Manager
		Site specific edits to this JSA were made on and by	10/1/2014	Monica L. Aragon	OSEC
If most recent review date is more than six months old, then this JSA must be updated and reviewed again to remain current					
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❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
Mobilize with the proper equipment for Asbestos Containing Material/Presumed Asbestos Containing Material (ACM/PACM) and LBP Sampling.	Gather necessary PPE. Steel toed and shank boots, long sleeve shirt, hard hat, safety glasses with side shields, ear plugs/muffs, leather gloves for the non-chemical aspects of work as necessary; Wear an air purifying respirator with combination organic vapor/P-100 cartridges, and other PPE as needed. (*Use a North 7700 series half face respirator or its equivalent. Best brand nitrile gloves or their equivalent. Howard Leight Max foam earplugs with an NRR of 33 or their equivalent. Tyvek, poly coated chemical resistant suit or its equivalent).*	Vehicle accident. Lifting hazards. Delay or improper performance of work due to improper equipment onsite.	• Start project with Production Safety Meeting (**RMS -2 – Fit for Duty – Attachment 3**) - STANTEC/Contractor. Discuss: -ensure all STANTEC/Client permits are filled out appropriately and discussed - STANTEC. -potential hazards and ways to avoid them - STANTEC/Contractor. - motor vehicle safety topic - STANTEC/Contractor. - current days weather conditions - STANTEC/Contractor.. - PPE requirements - STANTEC/Contractor. - check contractors HASP, Certs, MSDS's, and equipment maintenance records - STANTEC. - using safe lifting procedures - STANTEC/Contractor. • Review ACM/PACM/LBP Sampling Procedures – STANTEC/Contractor. • Make sure contractors are aware of their responsibilities for labor, equipment and supplies - STANTEC/Contractor. • Review permit conditions as required - STANTEC/Contractor. • Conduct LMRA procedures - STANTEC/Contractor. • Take your time. Do not rush - STANTEC/Contractor. • Use the buddy system for carrying loads in excess of 50 lbs and to continuously observe oncoming traffic. - Stantec • Access the area, are there hazards present - STANTEC/Contractor. • Wear safety glasses and leather work gloves when loading, unloading, and

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❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
			whenever material handling - STANTEC/Contractor. ● Secure load in vehicle - STANTEC/Contractor ● Use lids to debris/garbage containers. Do not leave buckets open with out a lid! Material in the bucket can spill - STANTEC/Contractor ● Use bubble wrap or other insulating material to cushion the sample containers during transport – STANTEC
Set up work zones as necessary.	Steel toed and shank boots, long sleeve shirt, hardhat (if required by job site), safety glasses with side shields/goggles.	Slip, trip and falls.	● Employ safe lifting procedures – STANTEC/Contractor. ● Maintain good housekeeping – STANTEC/Contractor. ● Use the buddy system for carrying loads in excess of 50 lbs and to continuously observe oncoming traffic. - Stantec
Commence bulk sampling	Don required PPE as appropriate for this step: steel toed and shank boots, long sleeve shirt, hardhat, safety glasses with side shields, hearing protection, leather gloves for the non-chemical aspects of work as necessary. Wear a Tyvek suit. Wear chemical resistant gloves during sampling and handling of ACM/PACM/LBP. Wear a half-face air-purifying respirator with combination organic vapor/P-100 cartridges (**required**).	Slip, trips and falls, exposure to contaminants, falls from ladders, cross contamination of samples. Back strain.	● Inspect step-ladder before use. Do not use top step to stand on – STANTEC/Contractor. ● Request unnecessary personnel to leave the sampling area as appropriate – STANTEC/Contractor. ● Wear appropriate PPE during sampling evolution – STANTEC/Contractor. ● Wear a full-face air-purifying respirator with combination organic vapor/P-100 cartridges as necessary – STANTEC/Contractor. ● Use plenty of water if utilizing wet sampling method – STANTEC/Contractor. ● Use the buddy system for carrying loads in excess of 50 lbs and to continuously observe oncoming traffic. - Stantec ● Decontaminate sampling equipment between each sample. Decontamination will be accomplished with a fresh water rinse, (spray bottle), into an appropriate container. Decontamination can also be accomplished utilizing wet wipes – STANTEC/Contractor. ● Properly label and record sample information; date of sample, location of sample, type of material sampled, amount (square feet or lineal feet), of material and a unique ID number – STANTEC/Contractor. ● Properly mark location of each sample on site map – STANTEC/Contractor. ● Properly "patch" sample area as appropriate – STANTEC/Contractor.
Decontaminate all	Use a North 7700 series half-face	Chemical exposure, heat	● Use three stage decontamination for boots; use an Alconox wash,

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❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
equipment/personnel.	respirator or its equivalent. Use North Part #7583P100 cartridges or their equivalent. Use chemical resistant gloves. Use LaCrosse steel toe/shank rubber boots or their equivalent. Use Howard Leight Max foam earplugs with an NRR of 33 or their equivalent. Use Tyvek suit (with hood) or its equivalent	stress.	freshwater rinse followed by a second freshwater rinse. Dispose of all other used PPE in drums with plastic liners – STANTEC/Contractor. ● Use proper PPE doffing procedures, taking care not to come in contact with contaminated/potentially contaminated PPE – STANTEC/Contractor. ● Use a three stage decontamination process for respirator wash. *Mild dishwashing liquid & fresh water wash followed by a fresh water rinse followed by a second fresh water rinse*– STANTEC/Contractor. ● Use a three stage decontamination process for a tool wash. *Alconox wash followed by a fresh water rinse followed by a second fresh water rinse* – STANTEC/Contractor. ● Have proper storage containment and labeling available onsite. Place materials in isolated location away from traffic and other site functions. *(See next section for Waste Description)* – STANTEC/Contractor. ● Transfer decontamination water to DOT approved 55-gallon drums – STANTEC/Contractor. ● Use the buddy system for carrying loads in excess of 50 lbs and to continuously observe oncoming traffic. - Stantec
Supervisor/SHSO must confirm all sample locations are properly patched/repaired.	Don required PPE as appropriate for this step: steel toed and shank shoes, hardhat, safety glasses with side shields, hearing protection, leather gloves for the non-chemical aspects of work as necessary. Wear a Tyvek suit as necessary. Wear chemical resistant gloves during sampling and handling of ACM/PACM. Wear an air-purifying respirator with combination organic vapor/ P-100 cartridges as necessary.	Slip, trips and falls, exposure to contaminants, falls from ladders, cross contamination of samples. Back strain.	● Inspect step-ladder before use. Do not use top step to stand on – STANTEC/Contractor. ● Request unnecessary personnel to leave the sampling area as appropriate – STANTEC/Contractor. ● Wear appropriate PPE during sampling evolution – STANTEC/Contractor. ● Wear a full-face air-purifying respirator with combination organic vapor/P-100 cartridges as necessary – STANTEC/Contractor. ● Use plenty of water if utilizing wet sampling method – STANTEC/Contractor. ● Use the buddy system to continuously observe oncoming traffic. - Stantec ● Decontaminate sampling equipment between each sample. Decontamination will be accomplished with a fresh water rinse, (spray bottle), into an appropriate container. Decontamination can also be accomplished utilizing wet wipes – STANTEC/Contractor. ● Properly label and record sample information; date of sample, location of

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❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
			sample, type of material sampled, amount (square feet or lineal feet), of material and a unique ID number – STANTEC/Contractor. ● Properly mark location of each sample on site map – STANTEC/Contractor. ● Properly "patch" sample area as appropriate – STANTEC/Contractor.
Clean site/demobilize.	Steel toed and shank boots, long sleeve shirt, hardhat, safety glasses with side shields, hearing protection, and leather gloves for the non-chemical aspects of work as necessary.	Slip, trip and falls. Safety hazard left on site. Lifting hazard.	● Leave site clean of refuse and debris – STANTEC/Contractor. ● Use the buddy system for carrying loads in excess of 50 lbs and to continuously observe oncoming traffic. - Stantec ● Notify property management/personnel of departure – STANTEC/Contractor. ● Use proper lifting techniques or use mechanical assistance – STANTEC/Contractor.
Package and deliver samples to lab.		Exposure to contaminants	● Handle and pack sample bags carefully – STANTEC/Contractor. ● Use proper lifting techniques – STANTEC/Contractor.

Task. The following table addresses the concerns with hand augering for the collection of soil samples.

POC	Development Team	Position/Title	Date	Reviewed By	Position/Title
	Michael Allen Philipp	West Region Health and Safety Manager	09/23/05		
			02/02/06	Michael Allen Philipp	West Region Health and Safety Manager
		Site specific edits to this JSA were made on and by	09/12/2014	Monica L. Aragon	OSEC

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❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
Clear hand augering locations.	Wear reflective vest for traffic, steel toed and shank shoes, hardhat, safety glasses with side shields, and leather gloves as necessary.	Traffic hazards, overhead and underground installations, product releases, property damage, dealer inconvenience.	• Reference SWP-213a Pre-Ground Disturbance Worksheet and Approval Form and SWP-213b Ground Disturbance Form (**Attachment 1**). • Coordinate with Site Manger (or designee) to minimize potential conflicts. • Review proposed locations against available construction drawings and known utilities, tanks, product lines, etc. • Mark out the proposed borehole locations. • Call underground utility locating service for public line location clearance and get list of utilities being contacted. If necessary, coordinate private line locator for private property. • Develop a traffic guidance and control plan with the client and local agencies as applicable. Plan may include use of delineators, barrier tape, jersey barriers, construction fence, etc. *(Refer to* **Section 4.0***).* • **It is the responsibility of the SHSO to annotate the Site Plan with the Traffic Guidance and Control configuration if a formally developed Traffic Guidance and Control Plan is not available.**
Mobilize with proper equipment/supplies for hand augering/soil	Gather necessary PPE. Reflective vest for traffic, steel toed and shank shoes, hard hat, safety glasses with	Vehicle accident. Lifting hazards. Delay or improper performance of	• Start project with Production Safety Meeting (**Attachment 3 - RMS2 Fit for Duty**).

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❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
sampling.	side shields, ear plugs/muffs, leather gloves for the non-chemical aspects of work as necessary; Wear an air purifying respirator with combination organic vapor/P-100 cartridges, and other PPE as needed. (*Use a North 7700 series half-face respirator or its equivalent. Best brand nitrile gloves or their equivalent. Howard Leight Max foam earplugs with an NRR of 33 or their equivalent. Tyvek, poly-coated chemical resistant suit or its equivalent).*	work due to improper equipment onsite.	• Follow safe driving procedures. • Employ safe lifting procedures. • Review permit conditions (if applicable).
Visually clear proposed hand augering/soil sampling locations.	Wear reflective vest for traffic, steel toed and shank shoes, hardhat, safety glasses with side shields, and leather gloves as necessary.	Underground installations.	▪ Complete Pre-Mobilization section of SWP-213a Pre-Ground Disturbance Worksheet and Approval Form and SWP-213b Ground Disturbance Form (**Attachment 1**) and adjust hand-augering locations as necessary.
Set up necessary traffic guidance and control equipment. See **Section 4.0** for detailed plan.	Wear reflective vest for traffic, steel toed and shank shoes, hardhat, safety glasses with side shields, and leather gloves as necessary.	Struck by vehicle during placement. Vehicle accident as a result of improper traffic guidance and control equipment placement.	• Use buddy system for placing traffic guidance and control equipment. • Implement traffic guidance and control plan such as setting out delineators, construction fence and caution tape defining safety area. • Adhere to approved Traffic Guidance and Control Plans when working in roadways. • **It is the responsibility of the SHSO to annotate the Site Plan with the Traffic Guidance and Control configuration if a formally developed Traffic Guidance and Control Plan is not available.**
Set up exclusion zone(s) and workstations (hand augering and logging/sample collection).	Wear reflective vest for traffic, steel toed and shank shoes, hardhat, safety glasses with side shields, and leather gloves as necessary.	Struck by vehicle during set up. Slip, trip and fall hazards.	• Implement exclusion zone set-up. • **It is the responsibility of the SHSO to annotate the Site Plan with the Exclusion Zone set up.** • Set up workstations with clear walking paths to and from hand augering location. • Use delineators, construction fence, and/or safety tape as required.

Field staff must review job-specific work plan and coordinate with project manager to verify that all up-front logistics are completed prior to starting work including, but not limited to, permitting, access agreements, and notification to required contacts (e.g. site managers, inspectors, clients, subcontractors, etc.). A tailgate safety meeting must be performed and documented at the beginning of each workday. Last-Minute Risk Assessment (LMRA) procedures must be used throughout the project. Weather conditions (heat, cold, rain, lightning) must also be considered. Each employee is empowered, expected, and has the responsibility to stop the work performed by him/herself or another co-worker if the working conditions or behaviors are considered unsafe. All employees should act proactively to identify and mitigate hazards to the safest extent of their ability.

❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
			● If utilizing Visqueen, (sheet plastic), for sampling area, completely secure Visqueen to the pavement, dirt, etc. with duct tape, delineators, etc. Do not use objects that are hard to notice or could become a trip hazard themselves.
Commence hand augering .	Don required PPE as appropriate for this step: steel toed and shank shoes, hard hat, safety glasses with side shields, hearing protection, reflective safety vest, and leather gloves for the non-chemical aspects of work as necessary. Wear chemical resistant gloves during handling of soil. Wear an air-purifying respirator with combination organic vapor/P-100 cartridges if necessary or as directed. (*Use a North 7700 series half face respirator or its equivalent. Best brand nitrile gloves or their equivalent. Howard Leight Max foam earplugs with an NRR of 33 or their equivalent. Tyvek poly-coated suit or its equivalent).*	Back strain, exposure to chemical hazards, hitting an underground utility, repetitive motion.	▪ Initiate air quality monitoring as outlined in **Section 2.0 if required.** ▪ Have appropriate respirator with combination organic vapor/P-100 cartridges within 3-5 feet of work area, readily available. ▪ Stand upwind to avoid exposure whenever possible. ▪ Use the organic vapor monitor aggressively to track the airborne concentration of contaminants close to potential sources such as the core as it is being raised from the hole, the core is opened, etc. ▪ Evaluate any soil samples inside a Ziploc bag at arm's length. DO NOT EVALUATE THE SAMPLE WITH THE BAG OPEN. THIS WILL AVOID UNNECESSARY EXPOSURE. ▪ Use proper lifting techniques and tools. ▪ Complete the Pre-Drilling section of the Borehole Clearance Review form. ▪ Decontaminate sampling equipment after collecting a sample and decontaminate hand-augering equipment after each borehole. ▪ Avoid twisting back during the operation; Decontaminate equipment after use. Decontamination will be accomplished by an Alconox wash with tap water rinse followed by a de-ionized or distilled water rinse. Collect rinse water in 5 gallon buckets and transfer to 55-gallon drums and stage drums in a location agreed upon by the SHSO and the Property/Station Owner/Manager.
Collect samples in accordance with sampling plan.	Steel toed and shank shoes, hardhat, safety glasses with side shields, hearing protection, reflective safety vest, and leather gloves for the non-chemical aspects of work as necessary. Wear appropriate air purifying respirator with combination organic vapor/P-100 cartridges (see above) if needed or as directed.	Cross-contamination, improper labeling or storage, exposure to site contaminants.	▪ Evaluate any soil samples inside a Ziploc bag at arm's length. DO NOT EVALUATE THE SAMPLE WITH THE BAG OPEN. THIS WILL AVOID UNNECESSARY EXPOSURE. ▪ Decontaminate sampling equipment between each sampling run. Label samples in accordance with sampling plan. ▪ Keep samples stored in proper containers, at correct temperature, and away from work area. ▪ Conduct air monitoring as outlined in **Section 2.0**. ▪ Have appropriate respirator with combination organic vapor/P-100 cartridges within 3-5 feet of work area, readily available.
Proper clean up and disposal of broken	Safety glasses Long sleeved shirts	Exposure to broken glass and acid (from water	● Isolate area where broken glass is located - STANTEC/Contractor.

Field staff must review job-specific work plan and coordinate with project manager to verify that all up-front logistics are completed prior to starting work including, but not limited to, permitting, access agreements, and notification to required contacts (e.g. site managers, inspectors, clients, subcontractors, etc.). A tailgate safety meeting must be performed and documented at the beginning of each workday. Last-Minute Risk Assessment (LMRA) procedures must be used throughout the project. Weather conditions (heat, cold, rain, lightning) must also be considered. Each employee is empowered, expected, and has the responsibility to stop the work performed by him/herself or another co-worker if the working conditions or behaviors are considered unsafe. All employees should act proactively to identify and mitigate hazards to the safest extent of their ability.

❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
sample container.	Leather Work Gloves Hand Broom and Dust Pan A receptacle for the broken glass (something to contain the broken glass (double garbage bag, a box, or bucket).	preservation acids) Injury	• Determine if the sample container was preserved (did it have acid in it?) - STANTEC. • Determine what to contain the broken glass in, and where to dispose of the broken glass before beginning to pick up the glass - STANTEC. • Collect equipment needed to clean up and contain the broken glass - STANTEC/Contractor. • Minimize "picking up" broken glass pieces with your gloved hands. Use a dust pan if possible/practical - STANTEC/Contractor. • If broken glass is located inside a container (i.e. box), to the extent practical, leave glass inside box and put entire box into a garbage bag. Double bag if warranted. Place into dumpster - STANTEC/Contractor. • If broken glass is inside a cooler, remove all other sample containers and place in a safe location, then use hand broom and dust pan to sweep up glass in cooler - STANTEC. • After clean up is complete, contact your Project Manager to report this Loss/Incident - STANTEC.

2. Soil sampling via hand auger (Groundwater Sampling) and borehole abandonment JSA

Field staff must review job-specific work plan and coordinate with project manager to verify that all up-front logistics are completed prior to starting work including, but not limited to, permitting, access agreements, and notification to required contacts (e.g. site managers, inspectors, clients, subcontractors, etc.). A tailgate safety meeting must be performed and documented at the beginning of each workday. Last-Minute Risk Assessment (LMRA) procedures must be used throughout the project. Weather conditions (heat, cold, rain, lightning) must also be considered. Each employee is empowered, expected, and has the responsibility to stop the work performed by him/herself or another co-worker if the working conditions or behaviors are considered unsafe. All employees should act proactively to identify and mitigate hazards to the safest extent of their ability.

❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
Clear hand augering locations.	Wear reflective vest for traffic, steel toed and shank shoes, hardhat, safety glasses with side shields, and leather gloves as necessary.	Traffic hazards, overhead and underground installations, product releases, property damage, dealer inconvenience.	• Reference SWP-213a Pre-Ground Disturbance Worksheet and Approval Form and SWP-213b Ground Disturbance Form (**Attachment 1**). • Coordinate with Site Manger (or designee) to minimize potential conflicts. • Review proposed locations against available construction drawings and known utilities, tanks, product lines, etc. • Mark out the proposed borehole locations. • Call underground utility locating service for public line location clearance and get list of utilities being contacted. If necessary, coordinate private line locator for private property. • Develop a traffic guidance and control plan with the client and local agencies as applicable. Plan may include use of delineators, barrier tape, jersey barriers, construction fence, etc. *(Refer to* **Section 4.0***).* • **It is the responsibility of the SHSO to annotate the Site Plan with the Traffic Guidance and Control configuration if a formally developed Traffic Guidance and Control Plan is not available.**
Mobilize with proper equipment/supplies for hand augering/soil sampling.	Gather necessary PPE. Reflective vest for traffic, steel toed and shank shoes, hard hat, safety glasses with side shields, ear plugs/muffs, leather gloves for the non-chemical aspects of work as necessary; Wear an air purifying respirator with combination organic vapor/P-100 cartridges, and other PPE as needed. (*Use a North 7700 series half-face respirator or its equivalent. Best brand nitrile gloves or their equivalent. Howard Leight Max foam earplugs with an NRR of*	Vehicle accident. Lifting hazards. Delay or improper performance of work due to improper equipment onsite.	• Start project with Production Safety Meeting (**Attachment 3 - RMS2 Fit for Duty**). • Follow safe driving procedures. • Employ safe lifting procedures. • Review permit conditions (if applicable).

Field staff must review job-specific work plan and coordinate with project manager to verify that all up-front logistics are completed prior to starting work including, but not limited to, permitting, access agreements, and notification to required contacts (e.g. site managers, inspectors, clients, subcontractors, etc.). A tailgate safety meeting must be performed and documented at the beginning of each workday. Last-Minute Risk Assessment (LMRA) procedures must be used throughout the project. Weather conditions (heat, cold, rain, lightning) must also be considered. Each employee is empowered, expected, and has the responsibility to stop the work performed by him/herself or another co-worker if the working conditions or behaviors are considered unsafe. All employees should act proactively to identify and mitigate hazards to the safest extent of their ability.

❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
	33 or their equivalent. Tyvek, poly-coated chemical resistant suit or its equivalent).		
Visually clear proposed hand augering/soil sampling locations.	Wear reflective vest for traffic, steel toed and shank shoes, hardhat, safety glasses with side shields, and leather gloves as necessary.	Underground installations.	• Complete Pre-Mobilization section of SWP-213a Pre-Ground Disturbance Worksheet and Approval Form and SWP-213b Ground Disturbance Form (**Attachment 1**) and adjust hand augering locations as necessary.
Set up necessary traffic guidance and control equipment. See **Section 4.0** for detailed plan.	Wear reflective vest for traffic, steel toed and shank shoes, hardhat, safety glasses with side shields, and leather gloves as necessary.	Struck by vehicle during placement. Vehicle accident as a result of improper traffic guidance and control equipment placement.	• Use buddy system for placing traffic guidance and control equipment. • Implement traffic guidance and control plan such as setting out delineators, construction fence and caution tape defining safety area. • Adhere to approved Traffic Guidance and Control Plans when working in roadways. • **It is the responsibility of the SHSO to annotate the Site Plan with the Traffic Guidance and Control configuration if a formally developed Traffic Guidance and Control Plan is not available.**
Set up exclusion zone(s) and workstations (hand augering and logging/sample collection).	Wear reflective vest for traffic, steel toed and shank shoes, hardhat, safety glasses with side shields, and leather gloves as necessary.	Struck by vehicle during set up. Slip, trip and fall hazards.	• Implement exclusion zone set-up. • **It is the responsibility of the SHSO to annotate the Site Plan with the Exclusion Zone set up.** • Set up workstations with clear walking paths to and from hand augering location. • Use delineators, construction fence, and/or safety tape as required. • If utilizing Visqueen, (sheet plastic), for sampling area, completely secure Visqueen to the pavement, dirt, etc. with duct tape, delineators, etc. Do not use objects that are hard to notice or could become a trip hazard themselves.
Commence hand augering .	Don required PPE as appropriate for this step: steel toed and shank shoes, hard hat, safety glasses with side shields, hearing protection, reflective safety vest, and leather gloves for the non-chemical aspects	Back strain, exposure to chemical hazards, hitting an underground utility, repetitive motion.	• Initiate air quality monitoring as outlined in **Section 2.0 if required.** • Have appropriate respirator with combination organic vapor/P-100 cartridges within 3-5 feet of work area, readily available. • Stand upwind to avoid exposure whenever possible.

Field staff must review job-specific work plan and coordinate with project manager to verify that all up-front logistics are completed prior to starting work including, but not limited to, permitting, access agreements, and notification to required contacts (e.g. site managers, inspectors, clients, subcontractors, etc.). A tailgate safety meeting must be performed and documented at the beginning of each workday. Last-Minute Risk Assessment (LMRA) procedures must be used throughout the project. Weather conditions (heat, cold, rain, lightning) must also be considered. Each employee is empowered, expected, and has the responsibility to stop the work performed by him/herself or another co-worker if the working conditions or behaviors are considered unsafe. All employees should act proactively to identify and mitigate hazards to the safest extent of their ability.

❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
	of work as necessary. Wear chemical resistant gloves during handling of soil. Wear an air-purifying respirator with combination organic vapor/P-100 cartridges if necessary. *(Use a North 7700 series half-face respirator or its equivalent. Best brand nitrile gloves or their equivalent. Howard Leight Max foam earplugs with an NRR of 33 or their equivalent. Tyvek poly-coated suit or its equivalent).*		• Use the organic vapor monitor aggressively to track the airborne concentration of contaminants close to potential sources such as the core as it is being raised from the hole, the core is opened, etc. • Evaluate any soil samples inside a Ziploc bag at arm's length. DO NOT EVALUATE THE SAMPLE WITH THE BAG OPEN. THIS WILL AVOID UNNECESSARY EXPOSURE. • Use proper lifting techniques and tools. • Complete the Pre-Drilling section of the Borehole Clearance Review form. • Decontaminate sampling equipment after collecting a sample and decontaminate hand augering equipment after each borehole. • Avoid twisting back during the operation; Decontaminate equipment after use. Decontamination will be accomplished by an Alconox wash with tap water rinse followed by a de-ionized or distilled water rinse. Collect rinse water in 5 gallon buckets and transfer to 55-gallon drums and stage drums in a location agreed upon by the SHSO and the Property/Station Owner/Manager.
Collect samples in accordance with sampling plan.	Steel toed and shank shoes, hardhat, safety glasses with side shields, hearing protection, reflective safety vest, and leather gloves for the non-chemical aspects of work as necessary. Wear appropriate air purifying respirator with combination organic vapor/P-100 cartridges if needed.	Cross-contamination, improper labeling or storage, exposure to site contaminants.	• Evaluate any soil samples inside a Ziploc bag at arm's length. DO NOT EVALUATE THE SAMPLE WITH THE BAG OPEN. THIS WILL AVOID UNNECESSARY EXPOSURE. • Decontaminate sampling equipment between each sampling run. Label samples in accordance with sampling plan. • Keep samples stored in proper containers, at correct temperature, and away from work area. • Conduct air monitoring as outlined in **Section 2.0**. • Have appropriate respirator with combination organic vapor/P-100 cartridges within 3-5 feet of work area, readily available.
Proper clean up and disposal of broken sample container.	Safety glasses Long sleeved shirts Leather Work Gloves Hand Broom and Dust Pan A receptacle for the broken glass (something to contain the broken	Exposure to broken glass and acid (from water preservation acids) Injury	• Isolate area where broken glass is located - STANTEC/Contractor. • Determine if the sample container was preserved (did it have acid in it?) - STANTEC. • Determine what to contain the broken glass in, and where to

Field staff must review job-specific work plan and coordinate with project manager to verify that all up-front logistics are completed prior to starting work including, but not limited to, permitting, access agreements, and notification to required contacts (e.g. site managers, inspectors, clients, subcontractors, etc.). A tailgate safety meeting must be performed and documented at the beginning of each workday. Last-Minute Risk Assessment (LMRA) procedures must be used throughout the project. Weather conditions (heat, cold, rain, lightning) must also be considered. Each employee is empowered, expected, and has the responsibility to stop the work performed by him/herself or another co-worker if the working conditions or behaviors are considered unsafe. All employees should act proactively to identify and mitigate hazards to the safest extent of their ability.

❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
	glass (double garbage bag, a box, or bucket).		dispose of the broken glass before beginning to pick up the glass - STANTEC. • Collect equipment needed to clean up and contain the broken glass - STANTEC/Contractor. • Minimize "picking up" broken glass pieces with your gloved hands. Use a dust pan if possible/practical - STANTEC/Contractor. • If broken glass is located inside a container (i.e. box), to the extent practical, leave glass inside box and put entire box into a garbage bag. Double bag if warranted. Place into dumpster - STANTEC/Contractor. • If broken glass is inside a cooler, remove all other sample containers and place in a safe location, then use hand broom and dust pan to sweep up glass in cooler - STANTEC. • After cleanup is complete, contact your Project Manager to report this Loss/Incident - STANTEC.
Supervisor/SHSO must confirm all boreholes are closed, filled in and/or capped.		Possible injuries and damage to property due to stepping into or driving over the well.	• Visually inspect each and every borehole.
Perform personal decontamination procedures.	As worn in exclusion zone.	Slips/trips/falls. Splashes, chemical contamination. Contact with contaminated materials.	• Perform personal (dry) decontamination procedures – STANTEC/Contractor. ▪ Drop off tools and perform equipment decontamination procedures on the equipment - STANTEC/Contractor. ▪ Perform a "dry" decontamination on boots using a stiff bristle fiberglass long handled brush - STANTEC/Contractor. ▪ Remove inner/outer gloves and dispose of properly - STANTEC/Contractor. • Wash hands, face, arms and neck (any exposed skin) using sink or bottled water. If water isn't available, use baby wipes or a similar product - STANTEC/Contractor.
Clean site/demobilize.	Steel toed and shank shoes, hardhat, safety glasses with side shields, hearing protection,	Traffic. Safety hazard left on site. Lifting hazards.	• Use buddy system as necessary to remove traffic guidance and control equipment.

Field staff must review job-specific work plan and coordinate with project manager to verify that all up-front logistics are completed prior to starting work including, but not limited to, permitting, access agreements, and notification to required contacts (e.g. site managers, inspectors, clients, subcontractors, etc.). A tailgate safety meeting must be performed and documented at the beginning of each workday. Last-Minute Risk Assessment (LMRA) procedures must be used throughout the project. Weather conditions (heat, cold, rain, lightning) must also be considered. Each employee is empowered, expected, and has the responsibility to stop the work performed by him/herself or another co-worker if the working conditions or behaviors are considered unsafe. All employees should act proactively to identify and mitigate hazards to the safest extent of their ability.

❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
	reflective safety vest, and leather gloves for the non-chemical aspects of work as necessary.		• Leave site clean of refuse and debris. • Clearly mark/barricade any borings that need later topping off or curing. • Notify site personnel of departure, final well locations and any cuttings/purge water left onsite. • Use proper lifting techniques
Package and deliver samples to lab.		Bottle breakage, back strain.	• Handle and pack bottle carefully (bubble wrap bags are helpful). Use proper lifting techniques.

Attachment 3

RMS-2 Fit for Duty

HEALTH, SAFETY, AND ENVIRONMENT

RMS2– FIELD LEVEL Risk ASSESSMENT (FIT FOR DUTY), 1 day

Stantec

Project: ACM Survey For Bridge Demo Project No: 185831013

Client: Caltrans

Location: LA-010

Start Date: 10.20.14

Work Description **Provide A General Description Of The Work To Be Conducted.**

Sample bridge materials for asbestos

Documentation and Procedure Review

1. Risk Management Strategy (RMS1) form and/or Site Specific Health and Safety Plan signed and reviewed? ☑ Yes ☐ **No***
2. Emergency Response Plan reviewed? ☑ Yes ☐ **No*** ☐ N/A
3. Tested two-way communications (cell phone, satellite phone) and security measures? ☑ Yes ☐ **No***
4. Attended Client Site Health and Safety meeting? ☑ Yes ☐ **No*** ☐ N/A
5. Conducted Stantec site safety meeting with all workforces? ☑ Yes ☐ **No*** ☐ N/A
6. Are there any new or unexpected hazards not identified in the RMS1/HASP? ☐ Yes ☑ No
   If yes, include in the Job Safety Analysis (JSA).
7. Working alone or remote work? ☐ Yes ☑ No
   If yes, complete call in/out process – Safe Work form must be completed.

Notifications and Permits

8. Are work permits required for this site? ☐ Yes ☑ No
   If yes, have they been completed and submitted as required? ☐ Yes ☐ **No***
9. Are utility locates required for this site? ☐ Yes ☑ No
   If yes, have they been completed and reviewed? ☐ Yes ☐ **No***
10. Does the Client require any notification prior to starting the work? ☑ Yes ☐ No
    If yes, has the notification been provided? ☑ Yes ☐ **No***

***Contact your Project Manager immediately.**

Personal Protective Equipment List specific PPE as needed. Verify type and inspect condition.

☑ Head Protection Type:	ANSI Hard Hat	☐ Hearing Protection:		☑ Gloves Type:	As Necessary
☑ Foot Protection Type:	Steel Toe Boots	☐ Respiratory Protection:		☐ Water Safety Gear:	
☑ Eye Protection Type:	ANSI	☐ Fire Retardant Coveralls:		☐	
☑ High Visibility Vest:	Reflective	☐ Fall Protection:		☐	

Tools and Equipment List specific equipment to be used. Verify type and inspect condition.

☑ Hammer	☐	☐
☑ Chisel	☐	☐

HEALTH, SAFETY, AND ENVIRONMENT

RMS2– FIELD LEVEL Risk ASSESSMENT (FIT FOR DUTY), 1 day

Stantec

Daily Tailgate Discussions/Subcontractor Input

Start	Time:	Weather:
0700	over cast / cool	
Mid-Day	Time:	Weather:
Post-Day	Time:	Weather:

I know the hazards:

By signing here, you are stating the following:

1. I have been involved in the Job Safety Analysis and understand the hazards and risk control actions associated with each task I am about to perform.
2. I understand the permit to work requirements applicable to the work I am about to perform (if it includes permitted activities).
3. I am aware that no jobs or work (that is not risk-assessed) is to be performed.
4. I am aware of my obligation to "**Stop Work**" (*See Stop Work Section).*

I arrived and departed fit for duty:

5. I am physically and mentally fit for duty.
6. I am not under the influence of any type of medication, drugs or alcohol that could affect my ability to work safely.
7. I am aware of my responsibility to bring any illness, injury (regardless of where or when it occurred) or fatigue issue I may have to the attention of the Crew Lead.
8. I signed out uninjured unless I have otherwise informed the Crew Lead.

Insert fitness level under corresponding time column: Fit for Duty = F Alternate Plan = AP
Team Lead to contact Project Manager for any personnel identified as AP

Individual Name/Company Name/Signature	Time:	Time:	Time:
Jason Stagno / Stantec /	0700 F	1600 F	
Keith Perkins / Stantec /	0700 F	1600 F	

I will STOP the job any time anyone is concerned or uncertain about safety.

I will STOP the job if anyone identifies a hazard or additional mitigation not recorded.

I will be alert to any changes in personnel or their fitness level (AP), conditions at the work site or hazards.

If it is necessary to **STOP THE JOB**, I will reassess the task, hazards and mitigations; and then proceed only when safe to do so.

Are you ready to work safely?

Remember to
1. Stop and think
2. Look around
3. Assess risk
4. Control risks
5. Begin/resume work

Conclusion of day: I certify that the planned work activities are completed for the day and all injuries and first aids have been reported via RMS3.

Signature of Crew Lead: _____ **Date:** 10.20.14

Health, Safety and Environment

RMS2 – FIELD LEVEL Risk ASSESSMENT (FIT FOR DUTY)

Stantec

Job Safety Analysis (JSA) Must be completed for all field activities.

Basic Job Steps	Potential Hazards	Controls to Reduce or Eliminate Hazard	Person Responsible
Hammer & chisel materials	Impacts / cuts	wear proper gloves	JS
Driving	Collision	Proper Signaling & Flashers	JS

Review the hazard categories below and check the mitigation measures applicable to the identified scope of work.

Environmental Hazards

1. Work area clean ☑
2. Material storage identified ☐
3. Dust/Mist/Fume ☐
4. Noise in area ☐
5. Extreme temperatures ☐
6. Spill potential ☐
7. Waste containers needed ☐
8. Waste properly disposed ☐
9. Waste plan identified ☐
10. Excavation permit required ☐
11. Other workers in area ☐
12. Weather conditions ☐
13. MSDS reviewed ☐

Ergonomic Hazards

14. Awkward body position ☐
15. Over extension ☐
16. Prolonged twisting/bending motion ☐
17. Working in a tight area ☐
18. Lift too heavy/awkward to lift ☐
19. Parts of body in line of fire ☐
20. Repetitive motion ☐
21. Hands not in line of sight ☐
22. Working above your head ☐

Access/Egress Hazards

23. Aerial life/Man basket (inspected & tagged) NA
24. Scaffold (inspected & tagged) ☐
25. Ladders (tied off) ☐
26. Slips & trips ☐
27. Hoisting (tools, equipment) ☐
28. Evacuation (alarms, routes, ph. #) ☐
29. Confined space entry permit required ☐

Are you ready to work safely?

Remember to
1. Stop and think
2. Look around
3. Assess risk
4. Control risks
5. Begin/resume work

Overhead Hazards

30. Barricades & signs in place ☑
31. Hole coverings identified ☐
32. Harness/lanyard inspected ☐
33. 100% Tie-off with harness ☐
34. Tie off points identified ☐
35. Falling items ☐
36. Foreign bodies in eyes ☐
37. Hoisting or moving loads overhead ☐

Rigging & Hoisting Hazards

38. Lift study required ☐
39. Proper tools used ☐
40. Tools inspected ☐
41. Equipment inspected ☐
42. Slings inspected ☐
43. Others working overhead/below ☐
44. Critical lift permit ☐

Electrical Hazards

45. GFI test NA
46. Lighting levels too low ☐
47. Working on/near energized equipment ☐
48. Electrical cords condition ☐
49. Electrical tools condition ☐
50. Fire extinguisher ☐
51. Hot work or electrical permit required ☐

Personal Limitations/Hazards

52. Procedure not available for task ☐
53. Confusing instructions ☐
54. No training for task or tools to be used ☐
55. First time performing the task ☐
56. Micro break (stretching/flexing) ☐
57. Report **all injuries** to your supervisor ☑

It is important that all relevant hazards have plans in place to reduce risk.
Be sure that all associated permits are closed off at the end of the job.

Remember: Stop and Think

Reviewed by Name and Signature: Jason Stagno

HEALTH, SAFETY, AND ENVIRONMENT

RMS2 – FIELD LEVEL Risk ASSESSMENT (FIT FOR DUTY), 5 day

Fit for Duty

Safety is influenced by many factors, but the most important is the health and well-being of Stantec's employees and partners. Physical and mental health are just as important as good tools, good practices, and good job planning.

This card is designed to help you do a quick self-assessment of your physical and mental health. Any concerns resulting from your assessment regarding your ability to carry out your job responsibilities safely and in good health need to be discussed with your supervisor before starting work.

- Am I feeling good today and ready to work at my typical level of physical activity and responsibility?
- Do I have any sprains/strains, areas of weakness or soreness?
- Am I managing multiple sources of stress?
- Am I well hydrated?
- Any physically-demanding activities recently (chores, sports, hobbies)?
- Am I well-rested with a good energy level? When did I eat last?
- Am I taking any medications that can make me drowsy or adversely affect my safe performance?
- Any cuts/scrapes are clean and bandaged?
- Did I remember to bring with me my health maintenance medications (blood pressure, diabetes, cholesterol, heart, etc.)?

If your answers to any of the questions above indicate that you may not be ready to work, contact your supervisor immediately to discuss a plan of action.

LAST-MINUTE RISK ASSESSMENT (LMRA)

-

1. STOP and Think

2. Look around

Is the work area safe?
Will my work endanger others?
Will other people pose risk?

3. Assess risk

Do I clearly understand the task?
Will lifting or manual handling be required?
Potential for slips, trips, or falls?
Are there driving or vehicle concerns?
Have I considered all underground services?
Moving or pressurized equipment?
What could go wrong?

4. Control risk

What can I do to control hazards?
Do I have the right tools?
Is the SWP **(Safe Work Practice)** appropriate?
Do I have the appropriate PPE?
Are emergency plans in place?

5. Begin/Resume work

If you're unsure, talk to your supervisor.

Are you ready to work safely?

RMS2 – FIELD LEVEL Risk ASSESSMENT (FIT FOR DUTY), 5 day

Project: _____ Project No: _____

Client: _____

Location: _____

Start Date: _____

Documentation and Procedure Review

11.	Risk Management Strategy (RMS1) form and/or Site Specific Health and Safety Plan signed and reviewed?	☐ Yes ☐ **No***
12.	Emergency Response Plan reviewed?	☐ Yes ☐ **No*** ☐ N/A
13.	Tested two-way communications (cell phone, satellite phone) and security measures?	☐ Yes ☐ **No***
14.	Attended Client Site Health and Safety meeting?	☐ Yes ☐ **No*** ☐ N/A
15.	Conducted Stantec site safety meeting with all workforces?	☐ Yes ☐ **No*** ☐ N/A
16.	Are there any new or unexpected hazards not identified in the RMS1/HASP? *If yes, include in the Job Safety Analysis (JSA).*	☐ Yes ☐ No
17.	Working alone or remote work? *If yes, complete call in/out process – Safe Work form must be completed.*	☐ Yes ☐ No

Notifications and Permits

18.	Are work permits required for this site? *If yes, have they been completed and submitted as required?*	☐ Yes ☐ No ☐ Yes ☐ **No***
19.	Are utility locates required for this site? *If yes, have they been completed and reviewed?*	☐ Yes ☐ No ☐ Yes ☐ **No***
20.	Does the Client require any notification prior to starting the work? *If yes, has the notification been provided?*	☐ Yes ☐ No ☐ Yes ☐ **No***

***Contact your Project Manager immediately.**

Work Description **Provide a general description of the work to be conducted.**

Personal Protective Equipment — List specific PPE as needed. Verify type and inspect condition.

☐ Head Protection Type: _____	☐ Hearing Protection: _____	☐ Gloves Type: _____
☐ Foot Protection Type: _____	☐ Respiratory Protection: _____	☐ Water Safety Gear: _____
☐ Eye Protection Type: _____	☐ Fire Retardant Coveralls: _____	☐ _____
☐ High Visibility Vest: _____	☐ Fall Protection: _____	☐ _____

Tools and Equipment — List specific equipment to be used. Verify type and inspect condition.

☐	☐	☐
☒	☐	☐

RMS2 – FIELD LEVEL Risk ASSESSMENT (FIT FOR DUTY), 5 day

05.1 DAILY TAILGATE DISCUSSIONS/SUBCONTRACTOR INPUT

Date:	**Time:**	**Weather:**
Start		
Mid-Day		
Post-Day		
Date:	**Time:**	**Weather:**
Start		
Mid-Day		
Post-Day		
Date:	**Time:**	**Weather:**
Start		
Mid-Day		
Post-Day		
Date:	**Time:**	**Weather:**
Start		
Mid-Day		
Post-Day		
Date:	**Time:**	**Weather:**
Start		
Mid-Day		
Post-Day		

RMS2 – FIELD LEVEL Risk ASSESSMENT (FIT FOR DUTY), 5 day

I know the hazards:

By signing here, you are stating the following:

9. I have been involved in the Job Safety Analysis (JSA) and understand the hazards and risk control actions associated with each task I am about to perform.
10. I understand the permit to work requirements applicable to the work I am about to perform (if it includes permitted activities).
11. I am aware that work that has not been risk–assessed must not be performed.
12. I am aware of my ability and obligation to **Stop Work** (*See below).*

I arrived and departed fit for duty (see Fit for Duty card for further information):

13. I am physically and mentally fit for duty.
14. I am not under the influence of any type of medication, drugs or alcohol that could affect my ability to work safely.
15. I am aware of my responsibility to bring any illness, injury (regardless of where or when it occurred), symptoms of soreness or discomfort, or fatigue issue I may have to the attention of the Crew Lead or Supervisor.
16. I sign out uninjured unless I have otherwise informed the Crew Lead or Supervisor.

Insert fitness level under corresponding time column: Fit for Duty = F Alternate Plan = AP
Team Lead to contact Project Manager for any personnel identified as AP

Individual Name/Company Name/Signature	Date:			Date:			Date:			Date:			Date:		
	Time:	Time:	Time:	Time:	Time:	Time:	Time:	Time:	Time:	Time:	Time:	Time:	Time:	Time:	Time:

I will STOP WORK any time anyone is concerned or uncertain about safety. **I will STOP WORK** if anyone identifies a hazard or additional mitigation not recorded. **I will** be alert to any changes in personnel or their fitness level (AP), conditions at the work site or hazards. If it is necessary to **STOP WORK**, I will reassess the task, hazards and mitigations; and then proceed only when safe to do so.

Conclusion of day: I certify that the planned work activities are completed for the day and all injuries and first aids have been reported via RMS3.

Signature of Crew Lead: _____ **Date:** _____

Signature of Crew Lead: _____ **Date:** _____

Signature of Crew Lead: _____ **Date:** _____

Signature of Crew Lead: _____ **Date:** _____

Signature of Crew Lead: _____ **Date:** _____

Are you ready to work safely?

Remember to
1. Stop and think
2. Look around
3. Assess risk
4. Control risks
5. Begin/resume work

HEALTH, SAFETY, AND ENVIRONMENT

RMS2 – FIELD LEVEL Risk ASSESSMENT (FIT FOR DUTY), 5 day

Job Safety Analysis (JSA) Must be completed for all field activities.

Basic Job Steps	Potential Hazards	Controls to Reduce or Eliminate Hazard	Person Responsible

Review the hazard categories below and check the mitigation measures applicable to the identified scope of work.

Environmental Hazards

23. Work area clean
24. Material storage identified
25. Dust/Mist/Fume
26. Noise in area
27. Extreme temperatures
28. Spill potential
29. Waste containers needed
30. Waste properly disposed
31. Waste plan identified
32. Excavation permit required
33. Other workers in area
34. Weather conditions
35. MSDS reviewed

Ergonomic Hazards

36. Awkward body position
37. Over extension
38. Prolonged twisting/bending motion
39. Working in a tight area
40. Lift too heavy/awkward to lift
41. Parts of body in line of fire
42. Repetitive motion
43. Hands not in line of sight
44. Working above your head

Access/Egress Hazards

38. Aerial life/Man basket (inspected & tagged)
39. Scaffold (inspected & tagged)
40. Ladders (tied off)
41. Slips & trips
42. Hoisting (tools, equipment)
43. Evacuation (alarms, routes, ph. #)
44. Confined space entry permit required

Are you ready to work safely?

Remember to

1. Stop and think
2. Look around
3. Assess risk
4. Control risks
5. Begin/resume work

Overhead Hazards

45. Barricades & signs in place
46. Hole coverings identified
47. Harness/lanyard inspected
48. 100% Tie-off with harness
49. Tie off points identified
50. Falling items
51. Foreign bodies in eyes
52. Hoisting or moving loads overhead

Rigging & Hoisting Hazards

58. Lift study required
59. Proper tools used
60. Tools inspected
61. Equipment inspected
62. Slings inspected
63. Others working overhead/below
64. Critical lift permit

Electrical Hazards

65. GFI test
66. Lighting levels too low
67. Working on/near energized equipment
68. Electrical cords condition
69. Electrical tools condition
70. Fire extinguisher
71. Hot work or electrical permit required

Personal Limitations/Hazards

72. Procedure not available for task
73. Confusing instructions
74. No training for task or tools to be used
75. First time performing the task
76. Micro break (stretching/flexing)
77. Report **all injuries** to your supervisor

It is important that all relevant hazards have plans in place to reduce risk.
Be sure that all associated permits are closed off at the end of the job.

Remember: Stop and Think

Reviewed by Name and Signature: _____

Required Pre-Entry Discussion Topics / Requirements for All Workers and Visitors

Stantec

Safety rules apply to anyone entering a Stantec workplace or worksite, including employees, supervisors, management and visitors

COMPANY SAFETY RULES (REFERENCE: STANTEC'S *HSE MANUAL* SECTION 1.3)

- Take reasonable care to protect the health and safety of yourself and others, and the environments in which we all work.
- Consumption of alcohol is only approved during company-sponsored events. Consumption or possession of illegal drugs on company premises, or on any company jobsite, is prohibited.
- Horseplay, fighting or otherwise interfering with other employees is prohibited.
- Theft, vandalism or any other abuses or misuse of company property is prohibited.
- All unsafe acts and conditions, including "near miss" incidents, spills or releases of hazardous materials, property damage, and injuries are to be promptly reported to your supervisor in accordance with Section 12 of the HSE manual, and Section 1.8 of this health and safety plan (HASP).
- Clothing and personal protective equipment (PPE) shall be appropriate to tasks being performed, as determined by hazard assessment (refer to job safety analyses and/or standard operating procedures in Attachment 2 and the work risk assessment tool in Attachment 1 of this HASP).
- All work shall be conducted in accordance with applicable regulatory safety requirements, client safety requirements, and in accordance with Stantec's HSE manual.
- Only use tools, vehicles and equipment that are in good repair, with all guards and safety devices in place, and for which you have sufficient training and experience. Select tools, vehicles and equipment appropriate for the task intended, and use them in compliance with the manufacturer's written instructions.
- Every employee will keep the work area neat, clean and orderly. A floor or other surface used by any employee will be kept free of obstructions, hazards, and accumulations of refuse, snow or ice.
- As a Stantec employee, you are responsible and authorized to STOP work immediately if you become aware of an unsafe act or condition that could place anyone in danger, or if you are not confident in the work plan. Refer to the Stop Work Authority for guidance.

DISCUSSION IDEAS FOR THE DAILY PRODUCTION H&S MEETING

- Emergency response plan, emergency vehicle (full of fuel) and muster point
- Route to medical aid (hospital or other facility)
- Work hours, is night work planned?
- Hand signals around heavy equipment
- Traffic control
- Pertinent Legislation and Regulations
- Above and below ground utilities (energized or de-energized)
- Material Safety Data Sheets (MSDS)
- To who, what, why, and when to report an incident
- Fire extinguisher and First Aid kit locations
- Excavations, trenching sloping and shoring
- Personal protective equipment (PPE) and training

Required Pre-Entry Discussion Topics / Requirements for All Workers and Visitors

- Safety equipment and training
- Emergency telephone and telephone numbers (may not be 911)
- Eye wash stations and washroom locations
- Energy lock-out/tag-out procedures. Location of "kill Switches" etc.
- Weather restrictions
- Site security. Site hazards. Is special waste present?
- Traffic and people movements
- Working around machinery (both static and mobile)
- Sources of ignition, static electricity etc.
- Stings, bites, large animals and other naturally related injuries
- Working above grade
- Working at isolated sites
- Decontamination procedures (both personnel and equipment)
- Falls, trips, sprains and lifting injuries (how to prevent)
- Right to refuse unsafe work
- Adjacent property issues (residence, business, school, day care center)
- Hand & glove safety, pinch points, hand positioning

Attachment 4

Driver's Fatigue Checklist /Safe Driving Vehicle Pre-Use Checklist

Too tired to drive?

A road safety initiative of RACV, Rural Ambulance Victoria and Metropolitan Ambulance Service

Driver Fatigue Checklist

Before you drive, answer these questions to make sure you are not too tired to drive.

	Yes	No
Have you been getting full nights of restful sleep over the past week? *When you don't get enough sleep you acquire sleep debt. The only way to repay the debt is by sleeping.*	☑	☐
Are you setting off on a trip after a good night's sleep, rather than after a full day at work? *Being awake for 17 hours has the same effect on driving as having a BAC (Blood Alcohol Concentration) of .05, doubling your risk of crashing. After 24 hours the BAC equivalent is 0.1, equating to a 7 times greater risk of crashing than someone who is well rested.*	☑	☐
Are you planning to start your trip after 6am, rather than starting out earlier when you would normally be asleep? *Your body naturally wants to sleep between about 1am and 6am greatly increasing your risk of crashing, at those times.*	☐	☑
Have you allowed time in your trip to stop and rest if you feel tired? *Regular breaks every 2 hours will help maintain vigilance, however, the only way to combat fatigue is to sleep.*	☑	☐
Do you stop and have a Powernap if you feel tired while driving? *Stopping for a 15 to 30 minute sleep or Powernap when you are tired is effective in alleviating the short-term effects of fatigue, but ensure you allow time to recover from your sleep before commencing to drive.*	☑	☐
Are you sure that you do not suffer from a sleeping disorder, such as sleep apnoea? *2% of people suffer from the most common sleep disorder, sleep apnoea. Men over 50, particularly those overweight, are most at risk.*	☑	☐

If you have answered "no" to any of these questions you may be at risk of fatigue.

RACV

Too tired to drive?

What is fatigue?

Driver fatigue contributes to more than 25 per cent of all road crashes in Victoria.

Two main causes:

- lack of quality sleep
- driving at times when you would normally be asleep.

Protect yourself from having a fatigue-related crash by:

- making sure you regularly get enough sleep
- being aware of the fatigue high crash risk times when driving between 1am-6am
- not starting a long trip after a long day's work
- planning your trip so you can take regular breaks
- seeking medical advice if you often feel sleepy
- being aware of the effects of any medication taken.

Once you're on the road:

- regular rest breaks to help keep you alert, but if you feel tired, the only way to keep safe is to stop and sleep
- eat proper and well-balanced meals, preferably at your normal meal times.

If you feel tired when driving, take a Powernap (sleep for 15 to 30 minutes), but allow time to recover from your sleep before commencing to drive.

Don't be fooled by myths about fatigue! The following common beliefs about fatigue are untrue:

myth – Coffee is the best way to combat fatigue.
Coffee only provides short-term benefits; once its effects wear off, you suffer from sleep rebound, which is a major cause of crashes.

myth – Playing music will help keep me alert.
This is only a short-term benefit.

myth – Plenty of fresh air through the window will help keep me alert.
This is only a short-term benefit.

myth – Young people need less sleep.
In fact, drivers under 25 years of age are over-represented in fatigue crashes.

myth – I know when I am tired, or when I am having "sleep attacks".
The danger is that you only find out how tired you are when it's too late.

The only cure for fatigue is sleep

HEALTH, SAFETY AND ENVIRONMENT

SAFE DRIVING – VEHICLE PRE-USE CHECKLIST

SWP 124A

Employee Name: Jason Stagno **Region/Business Unit:** 1858

Date: 10/20/14 **Time:** 0500 **Vehicle Color:** White

Vehicle Make/Model: Dodge/Ram **Vehicle License Plate Number:**

Job: Bridge Surveys **Job #:** 185831013 **# of Km or Mi Driven**

Job: **Job #:** **# of Km or Mi Driven**

Odometer Start: **Odometer Stop:** **Total Km or Mi Driven:**

Stantec Vehicle ☐ **Rental** ☒ **Personal Vehicle** ☐

Perimeter Walk Around:	**Item is OK**	**Item is NOT OK**
Check for signs of vandalism, negligence, damage or unusual conditions	✓	
Check all tires for excessive and unusual wear and proper inflation – include the spare tire if accessible	✓	
Check under vehicle for signs of leaking fluids	✓	
Check wiper blades (Do they work? Do they need replacement?)	✓	
Check all light systems – brake, head, back-up, running, turn signals, emergency flashers	✓	
Check to make sure doors, truck/toolbox lids, tailgates all open and close properly	✓	
(Make sure you have keys to any toolboxes that you may need to access)	NA	

Check Gauges on Dashboard:

Fuel Level	5/8 level	
Oil light	No	
Engine Coolant Temperature Gauge	No	
Service Indicator Lights	No	
Battery Charge Indicator	No	

HEALTH, SAFETY AND ENVIRONMENT

SAFE DRIVING – VEHICLE PRE-USE CHECKLIST

SWP 124A

Inside Vehicle:

Make sure seatbelts are present for all who will be riding in the vehicle	✓	
Secure all cargo in the vehicle so that items will not become projectiles in the event of sudden stops or collisions	✓	
Adjust the seat position, rearview and side mirrors	✓	
Adjust temperature controls, vents, radio, etc.	✓	

If Pulling a Trailer:

Is trailer properly hitched to the vehicle (including safety chains)		
All lights are working properly		
Proper trailer for the load (check weight specifications) and load is balanced. If you anticipate the load is near the trailer weight limit, weigh the trailer at a weigh station		N/A
Are tires in good condition and properly inflated?		

Notify the vehicle manager or rental company if you feel that any deficiencies are unsafe and DO NOT drive the vehicle

Signature:

SAFE DRIVING – VEHICLE PRE-USE CHECKLIST

SWP 124A

1 REVISION HISTORY

Date	Change	Acknowledgments
2010/02/23	Changed HSE to SWP; reformatted header and footer; added revision history	GD
20121015	Updated and reviewed by PS	KDR

Attachment 5
Journey Management Plan(s)

JOURNEY MANAGEMENT PLAN(s)

PURPOSE

The purpose of this Journey Management Procedure (JMP) is to prevent losses associated with motor vehicle related incidents including: injuries to drivers, passengers and pedestrians, damage to motor vehicles and damage to third party property. By communicating potential safety risks before mobilizing to a site, a motor vehicle operator will be able to prepare for and avoid potential hazards.

SCOPE

This JMP applies to all vehicles assigned for the support of site operations, including company owned and personal use vehicles. This JMP does not apply to vendors (such as UPS, FedEx. etc.) not under contract with Stantec or their supplier. This JMP does not address hazards that are external to the site access/egress and on the onsite project operations.

SPECIAL NOTE

Because the site, weather and traffic conditions may change frequently the JMP shall be maintained and updated separate from the Site Health and Safety Plan.

Responsibilities

Contract Project Manager

The contract project manager is responsible to ensure that the site has a current Journey Management Plan.

Field Manager

The field manager is responsible to create and keep current a JMP that is appropriate for the site conditions. It is also the field manager's role to ensure each vehicle operator has a JMP that describes the conditions for his vehicle and equipment prior to mobilizing to the site. A common JMP may be used for several vehicles or as conditions dictate a separate JMP may be specific or unique to an individual vehicle.

Vehicle Operator

The assigned vehicle operator shall not mobilize to the site without first receiving the JMP. It is also the vehicle operator's responsibility to read and become familiar with the description and stipulations of the JMP prior to mobilizing to the site. DO NOT mobilize to the site to get clarification to the JMP. Because driving conditions may vary, vehicle operators shall also notify the field manager of any hazards not identified on the JMP so that the field manager can update the JMP. Because traffic conditions may change frequently on a project, the JMP shall be maintained and updated separate from the Site Health and Safety Plan.

Attachment 6
RMS-3 incident/Near Miss Investigation and Collision Kit

INCIDENT REPORT – RMS 3

Incidents involving injury, potential injury, or report of pain, soreness, or discomfort must be reported immediately (within one hour) to a supervisor. Supervisors will then immediately contact ***their HSE representative to develop a plan for assessment and care***. This form must be completed and **submitted within 24 hours** of any incident. Do not delay submission waiting for signatures. **Email to hse@stantec.com or fax unsigned report to (780) 969-2030** and file locally in compliance with the corporate records retention policy and practices once all signatures have been obtained.

This document contains privileged and confidential information prepared at the request of Stantec's Legal Counsel. The contents of this report are restricted to HR personnel, Risk Management Representatives, Project Manager and PC Leader, and Stantec's Insurer, Adjuster and Legal Counsel. Information collected will be used solely for the purpose of meeting the requirements of Stantec's HSE and insurance programs, complying with applicable legislation, and will be used in accordance with any governing privacy legislation. The information collected will be maintained electronically and may be included in required reports.

SECTION 1: GENERAL INFORMATION			
Office location:		BC number:	
Location of incident:			
Incident date and time:		Date and time reported:	
Project name:		Project number:	
Client Name:			
Person in charge:		Person in Charge Phone:	

SECTION 2: STANTEC EMPLOYEE INFORMATION (if more than one identify extras in incident details below)			
Name:		Phone:	
Job position:		Group name:	
Time employee began work:		Job Experience (in years)	
Type of employment:	Full Time ☐ ; Visitor ☐ ; Contract ☐ ; Volunteer ☐ ; Seasonal ☐		
Supervisor:		Supervisor Phone:	

SECTION 3: INCIDENT DETAILS

Type of Incident: *incident types marked with an asterisk, please complete pages 1 and 4 only

See StanNet for a list of Incident Type Definitions

☐ *Report Only	☐ *Hazard Identification	☐ *Near Miss
☐ First Aid	☐ Motor Vehicle Incident	☐ 3rd Party Incident (i.e., Public)
☐ Medical Aid – No Lost Time	☐ Property Damage - Vehicle	☐ Spill or Release
☐ Restricted Work	☐ Property Damage - Other	☐ Utility Strike
☐ Lost Time	☐ Theft	☐ Fire/Explosion/Flood
☐ Fatality	☐ Contractor Recordable Incident	☐ Stop Work Authority
☐ Violence or Harassment	☐ Non-compliance	☐ Other (specify details below)

Describe incident in detail: (include any issues related to people, equipment, materials, environment, and processes)

Immediate corrective actions taken:

Canada East (Atlantic) – Neil Clements (506-639-2961); Canada East (ON/QC) – Jim Elkins (613-404-8508); Canada Prairie & Mountain – Yvonne Beattie (780-616-8909); International – Kev Metcalfe (780-231-2185); US Northeast & South) – Fred Miller (610-235-7315); US Midwest & Mid-Atlantic - Keith Kuhlmann (740-816-6170); US West – Clint Reuter (818-395-8556)

SECTION 4: MEDICAL INFORMATION	
Name of first aid attendant:	Injury recorded in first aid log? Yes ☐ No ☐ N/A ☐
Description of first aid or medical treatment administered:	
Clinic/hospital sent to:	
Attending physician/paramedic (if known):	

Area of Injury – Please check all that apply:

☐ Head	☐ Teeth	☐ Upper back	Left / Right	Left / Right	Left / Right	Left / Right	
☐ Face	☐ Neck	☐ Lower back	☐ Shoulder ☐	☐ Wrist ☐	☐ Hip ☐	☐ Ankle ☐	
☐ Eye(s)	☐ Chest	☐ Abdomen	☐ Arm ☐	☐ Hand ☐	☐ Thigh ☐	☐ Foot ☐	
☐ Ear(s)		☐ Pelvis	☐ Elbow ☐	☐ Finger(s) ☐	☐ Knee ☐	☐ Toe(s) ☐	
☐ Other	Specify		☐ Forearm ☐		☐ Lower Leg ☐		

Has the injured employee had a previous similar injury or disability? Yes ☐ No ☐

SECTION 5: PROPERTY OR VEHICLE DAMAGE: STANTEC			
Ownership Details (choose one):	☐ Rented (attach rental agreement)	☐ Stantec Owned	☐ Personal (employee vehicle)
Year, Make, and Model of Vehicle:		Vehicle ID # (VIN)	
Nature of damage:		Estimated cost of damage:	$
Description of damaged property:			
Attending police officer (if known):		Badge #:	
Copy of police report received	Yes ☐ No ☐ If yes, file number:	(attach copy of police report)	

PROPERTY OR VEHICLE DAMAGE: 3RD PARTY			
Name of owner and contact number:			
Year, Make, and Model of Vehicle:		License Plate Number:	
Insurer and Policy Number:			
Injured parties? Yes ☐ No ☐	If yes, describe Injuries:		
Diagram or photographs attached?	Yes ☐ No ☐		

WITNESS INFORMATION - #1			
Name:		Phone Number:	
Witness statement provided?	Yes (attached) ☐	No ☐	

WITNESS INFORMATION - #2			
Name:		Phone Number:	
Witness statement provided?	Yes (attached) ☐	No ☐	

SECTION 6: SPILL OR RELEASE			
Substance:			
Quantity:		Employee(s) exposed via:	☐ Inhalation ☐ Contact ☐ Ingestion ☐ n/a
Off-site impacts observed or anticipated?		Yes ☐ No ☐ If yes, describe:	
Name of regulatory agencies contacted:			
Contact name, number, date and time of call:			

SECTION 7: ANALYSIS

IMMEDIATE/DIRECT CAUSES

A. UNSAFE ACTIONS (check off as many as necessary)

- ☐ Operating equipment without authority
- ☐ Failure to warn
- ☐ Failure to secure
- ☐ Operating at improper speed
- ☐ Making safety devices inoperative
- ☐ Removing safety devices
- ☐ Using defective/improper equipment
- ☐ Using equipment improperly
- ☐ Failing to use personal protective equipment properly
- ☐ Improper loading
- ☐ Improper placement
- ☐ Improper lifting or handling
- ☐ Improper position for a task
- ☐ Servicing equipment in operation
- ☐ Horseplay
- ☐ Failure to follow procedure, policy or practice
- ☐ Failure to identify hazard or risk
- ☐ Inattention
- ☐ Failure to communicate
- ☐ Other: Specify

B. UNSAFE CONDITIONS (check off as many as necessary)

- ☐ Inadequate guards/barriers
- ☐ Improper/inadequate PPE
- ☐ Defective tools or equipment
- ☐ Congested work area
- ☐ Inadequate warning system
- ☐ Fire and explosion hazards
- ☐ Poor housekeeping; disorder
- ☐ Noise exposure
- ☐ Radiation exposure
- ☐ High or low temperature exposures
- ☐ Inadequate or excess illumination
- ☐ Inadequate ventilation
- ☐ Presence of harmful materials
- ☐ Inadequate instructions/procedures
- ☐ Hazardous environmental conditions; gases, dusts, smokes, fumes, vapours
- ☐ Inadequate information/data
- ☐ Inadequate preparation/planning
- ☐ Inadequate support/assistance
- ☐ Road conditions
- ☐ Weather conditions
- ☐ Other: Specify

BASIC/ROOT CAUSES

C. PERSONAL FACTORS (check off as many as necessary)

- ☐ Inadequate physical capability
- ☐ Physical stress
- ☐ Mental stress
- ☐ Lack of skill
- ☐ Lack of knowledge
- ☐ Other: Specify

D. JOB FACTORS (check off as many as necessary)

- ☐ Inadequate leadership or supervision
- ☐ Inadequate engineering
- ☐ Inadequate purchasing
- ☐ Abuse or misuse
- ☐ Inadequate maintenance (scheduled or preventative)
- ☐ Inadequate tools or equipment
- ☐ Inadequate work standards
- ☐ Other: Specify
- ☐ Excessive wear and tear
- ☐ Inadequate communications
- ☐ Improper motivation

SECTION 8: FOLLOW-UP

Short-term:	Corrective Action	Assigned To	Target Date	Completion Date

Long-term:	Corrective Action	Assigned To	Target Date	Completion Date

REVIEW COMMENTS		
Involved Employee Comments:		
Signature: Job Title:	Print Name:	Date:
Lead Investigator Comments:		
Signature: Job Title:	Print Name:	Date:
Supervisor/Project Manager:		
Signature: Job Title:	Print Name:	Date:
HSE Representative (OSEC/JH&S Committee/RSEC/HSE Manager):		
Signature: Job Title:	Print Name:	Date:
Management Review:		
Signature: Job Title:	Print Name:	Date:
Client Review (if required):		
Signature: Job Title:	Print Name:	Date:
Additional Comments:		

Contact information.
Immediately Call Corporate HSE, and Practice & Risk Management, and (if injuries) Human Resources.

Health, Safety & Environment: Call:

Keith Robinson	Office (614) 545-3787	Cell (614) 545-3787
Clint Reuter	Office (949) 923-6258	Cell (818) 395-8556

Practice & Risk Management: Fax unsigned report to (780) 969-2030

Human Resources: **For Injuries Only** contact the Human Resources Rep. for your region:

US East: Jennie Moore
Jennie Moore: Phone: (585) 413-5241, Cell: (585) 613-8022, Fax: (585) 272-7442,
E-Mail: jennie.moore@stantec.com.

US West: Peggy Ramos
Peggy Ramos: Phone: (949) 923-6061, Fax: (949) 923-6015,
E-Mail: peggy.ramos@stantec.com

US Mtn Desert: (Arlington, Houston, Midland, Phoenix, Scottsdale, Ponca City SLC): Shannon Drake
Shannon Drake: Phone: (602) 707-4627, Fax (602) 532-7784,
E-Mail: Shannon.Drake@stantec.com

US Mtn Desert: (Dallas, Fort Worth, Denver, Fort Collins, Golden, Las Vegas, Reno, Oklahoma City, Tucson) Sheryl Appelt
Sheryl Appelt: Phone: (602) 707-9495, Fax (602) 926-2217,
E-Mail: Sheryl.Appelt@stantec.com

Fax and/or scan-email report to all three.

VEHICLE COLLISION KIT

Stantec Vehicle Collision Kit

The following items should be enclosed in an envelope in the glove box of all Stantec vehicles:

- Vehicle Registration Card
- Vehicle Insurance Card with name and phone number of agent
- Name of Preferred Body Shop or Maintenance Facility to take damaged vehicle (usually nearest Dealership)
- Owner's Manual
- Disposable Camera
- Note Pad and Pen

WHAT TO DO AFTER A COLLISION:

Auto collisions: Even the most careful drivers may be involved. Knowledge of what to do **after** the collision can make the experience a little less frightening and decrease the chance of unnecessary complications.

After a Collision

- Check for injuries. Life and health are more important than damage to vehicles.
- Make note of specific damages to all vehicles involved.
- Write down the names, addresses and license numbers of persons involved in the collision. Also, write a description of the other vehicles.
- Call the police, even if the collision is minor.
- Jot down names and addresses of anyone who may have witnessed the collision. This can prevent disagreement concerning how the collision actually happened.

Other Do's and Don'ts

- DO jot down details about the collision, the location, and circumstances such as weather conditions and visibility.
- DO notify your insurance agent about the collision immediately.
- DON'T sign any document unless it is for the police or your insurance agent.

Remember that a Stantec incident investigation form must also be completed following any collision. The collision must be reported to the Stantec Project Manager in addition to the following people:

Practice and Risk Management :
Fax: 780-969-2030

Keith Robinson	Office (614) 545-3787	Cell (614) 545-3787
Clint Reuter	Office (949) 923-6258	Cell (818) 395-8556

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DATE (MM/DD/YYYY): 11/01/2012

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PRODUCER	CONTACT NAME: ANDREA OTTO
AON REED STENHOUSE INC. AON RISK SERVICES CENTRAL, INC. 900 - 10025 - 102A AVENUE EDMONTON, AB T5J 0Y2	PHONE (A/C, No, Ext): 1-800-444-3017 FAX (A/C, No): 952-656-8834 E-MAIL ADDRESS: ANDREA.OTTO@AON.COM

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A	GENERAL LIABILITY			GLO6556026	05/01/12	05/01/13	EACH OCCURRENCE	$	2,000,000
	X COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence)	$	300,000
	CLAIMS-MADE X OCCUR			XCU COVER INCLUDED			MED EXP (Any one person)	$	10,000
	X CONTRACTUAL/CROSS LIABILITY						PERSONAL & ADV INJURY	$	2,000,000
	X OWNERS & CONTRACTORS PROTECTIVE						GENERAL AGGREGATE	$	4,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						PRODUCTS - COMP/OP AGG	$	2,000,000
	POLICY X PRO-JECT X LOC							$	
B	AUTOMOBILE LIABILITY			BAP5940882	11/01/12	11/01/13	COMBINED SINGLE LIMIT (Ea accident)	$	1,000,000
	X ANY AUTO						BODILY INJURY (Per person)	$	
	ALL OWNED AUTOS / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$	
	HIRED AUTOS / NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$	
								$	
C	X UMBRELLA LIAB X OCCUR			8831307	05/01/12	05/01/13	EACH OCCURRENCE	$	5,000,000
	X EXCESS LIAB CLAIMS-MADE			EXCESS GENERAL, AUTO AND EMPLOYERS LIABILITY (FOLLOW FORM)			AGGREGATE	$	5,000,000
	DED X RETENTION $10,000							$	
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N			WC5940881	11/01/12	11/01/13	X WC STATU-TORY LIMITS / OTH-ER		
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? N (Mandatory in NH)	N/A					E.L. EACH ACCIDENT	$	1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$	1,000,000
							E.L. DISEASE - POLICY LIMIT	$	1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

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Andrea R Otto

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AERIALLY DEPOSITED LEAD SITE INVESTIGATION REPORT

AERIALLY DEPOSITED LEAD SITE INVESTIGATION REPORT

ADL INVESTIGATION FOR POLLUTION CONTROL SYSTEM CONSTRUCT FOR I-10 HOV LANE – CONSTRUCTION PROJECT BETWEEN CITRUS AVENUE IN CITY OF WEST COVINA AND STATE ROUTE 57 IN CITY OF POMONA, LOS ANGELES COUNTY, CALIFORNIA
LOCATION: LA-010 PM 37.2/42.4

PROJECT NUMBER: 0713000007-1
EA NUMBER: 1193U1
CONTRACT NO. 07A3321
TASK ORDER NO. 13

STANTEC PROJECT NO.: 185831013

Submitted to:
California Department of Transportation,
District 7
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December 02, 2014

EXECUTIVE SUMMARY

At the request of the California Department of Transportation (Caltrans) District 7 Hazardous Waste South Branch, and pursuant to the provisions of Caltrans Agreement 07A3321 and the Task Order No. 13 request, an aerially deposited lead site investigation (ADL SI) was conducted at proposed Water Pollution Treatment System (WPTS) locations along State Route 10 (SR10) between PM 37.2 to 42.4, between Citrus Avenue in the city of West Covina and State Route 57 (SR57) in the city of Pomona, in Los Angeles County, California (Figure 1). This investigation was conducted to evaluate the potential presence of ADL and other heavy metals in shallow subsurface soils at locations where a WPTS is proposed. The project locations were provided by Caltrans in an Attachment A to the Task Order and are shown on Figures 2 through 8.

The objective of the ADL SI is to evaluate the presence and distribution of ADL and other heavy metals in subsurface soils within each proposed WPTS area to allow Caltrans to perform the statistical evaluation of the data and develop recommendations for handling and/or disposal of soil generated during construction activities.

Sixty-four borings were advanced at 13 separate locations. A total of 129 soil samples were collected at depths ranging from one to15 feet bgs. As described in this report, five borings (four at location 99 and one at location 108) reached refusal prior to reaching the intended target depth. A total of 129 soil samples were analyzed for total lead and 45 samples were analyzed for soluble lead by Cal WET-Citric and Cal WET-DI extraction. A total of 25 samples were analyzed for soluble lead using the TCLP extraction and 16 samples were analyzed for pH and Title 22 metals.

The following summarizes the results and findings of this investigation:

1. ADL is present at each of the 13 proposed WPTS construction locations.
2. Total lead concentrations were not reported above the California TTLC of 1,000 mg/kg in any sample.
3. Cal WET-Citric soluble lead concentrations exceeded the California STLC (5 mg/L) in 13 samples.
4. Cal WET-DI concentrations were not reported above the Caltrans Lead Variance threshold of 1.5 mg/L.
5. TCLP soluble lead did not exceed the federal toxicity characteristic threshold (5 mg/L) in any of the samples.
6. The reported pH values were within the limits of non-hazardous waste and were above the Caltrans Lead Variance thresholds.

Based on the findings and results of the investigation, soil in the investigation areas is impacted by ADL. Based on these findings, the following are recommended:

1. Stantec recommends statistical evaluation of the data to assess appropriate reuse or disposition of excavated soils in accordance with the Caltrans Lead Variance and with appropriate local, state, and federal regulations and requirements.

2. All work should be conducted under the guidance of a lead compliance plan (LCP) prepared in accordance with Section 14-11.03 Material Containing Hazardous Waste Concentrations of Aerially Deposited Lead of the 2010 Standard Specifications. The purpose of the LCP is to identify measures that will be implemented during construction to reduce potential exposure to workers and the general public.

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1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

At the request of the California Department of Transportation (Caltrans) District 7 Hazardous Waste South Branch, and pursuant to the provisions of Caltrans Agreement 07A3321 and the Task Order No. 13 request, an Aerially Deposited Lead Site Investigation (ADL SI) was conducted at proposed Water Pollution Treatment System (WPTS) locations along State Route 10 (SR10) between PM 37.2 to 42.4, between Citrus Avenue in the city of West Covina and State Route 57 in the city of Pomona, in Los Angeles County, California (Figure 1). This investigation was conducted to evaluate the potential presence of ADL and other heavy metals in shallow subsurface soils at locations where WPTSs are proposed. The project locations were provided by Caltrans in an Attachment A to the Task Order and are shown on Figures 2 through 8.

1.2 PURPOSE AND OBJECTIVES

The objective of the ADL SI is to evaluate the presence and distribution of ADL and other heavy metals in subsurface soils within each of the proposed WPTS locations. The data will be used by Caltrans to perform the statistical evaluation of the data to make recommendations for handling and/or disposal of soil generated during construction activities.

1.3 BACKGROUND

According to the Task Order No. 13 Request, Caltrans is proposing a High Occupancy Vehicle (HOV) Lane Construction Project on Interstate Route 10 (SR10) between Citrus Avenue in the city of Covina and SR57 in the city of Pomona. The proposed project area experiences serious congestion and substantial traffic volume. The proposed improvements will provide approximately 5 miles of HOV lanes, alleviating some of the traffic congestion. The project proposes excavation and construction of WPTS (biofiltration swales, infiltration basins, Austin vault sand filters (AVSF), and earthen Austin vault sand filters (EBASF)) at several proposed drainage system project locations along SR10. Excavation depths are dependent on the Drainage System proposed for each location. Caltrans requested an ADL SI to evaluate proper handling and disposition of soil excavated during construction of the proposed project.

2.0 PROJECT SETTING

This section describes the project setting including a description of the study area, the physiographic setting of the study area, the general geology and hydrogeology of the area, and a description of the site vicinity.

2.1 SITE DESCRIPTION

The study area is located along the westbound and eastbound shoulders, and within several on- and off-ramp areas, of SR10 within Caltrans Right-of-way (ROW) through portions of West Covina and Pomona, in Los Angeles County (Figure 1).

2.2 PHYSIOGRAPHIC SETTING

The Site topography along SR10 slopes southwesterly from the San Gabriel Mountains (north of the Site) towards West Covina. Elevations across the Site range from approximately 500 feet above mean sea level (amsl) near the west end of the Site to approximately 900 feet amsl near the eastern end of the Site in the San Jose Hills. (Geologic Map – Baldwin Park and San Dimas Quadrangles, 7.5 Minute Quadrangles, United States Geological Survey [USGS], 1966).

2.3 REGIONAL GEOLOGY AND HYDROGEOLOGY

The Site is located within the Transverse Ranges Geomorphic Province of California. According to the California Geological Society's (CGS), *California Geomorphic Provinces-Note 36* (CGS, 2002), the Transverse Ranges Geomorphic Province is characterized as mountain ranges and valleys trending in an east-west direction. The area of the Site is generally located at the inferred boundary between the Transverse Ranges and Peninsular Ranges Geomorphic Provinces (USGS, 2003). The geology across the western half of the Site consists of old and young alluvial fan deposits, of Pleistocene to Holocene age, respectively, with the older deposits found adjacent to the western side of the San Jose Hills. In the San Jose Hills area of the Site, the geology consists of Miocene age sandstone and siltstone rocks of the Puente Formation. A coarse-grained unit consisting of marine sandstone, siltstone and shale with a zone of gneissic quartz diorite conglomerates is found along the southeastern area of the Site within the San Jose Hills (USGS, 2003).

As is the case with most of southern California, the Site is located in a seismically active area. Faults in the Site vicinity include the San Jose Fault on the eastern end of the Site, the Walnut Creek Fault (inferred; USGS, 2012) in the center of the Site, on the west side of the San Jose Hills, and the Indian Hill Fault and Sierra Madre Fault Zone to the north of the Site, along the southern edge of the San Gabriel Mountains (USGS, 2014). The nearest active faults are those associated with the San Jose Fault, located along the eastern flank of the San Jose Hills, trending in a northeasterly/southwesterly direction, crossing the eastern area of the Site. The San Jose Fault is a left-lateral strike-slip fault with probable maximum magnitudes of 6.0 to 6.5. (SCEDC, 2013).

According to the State of California Water Resources Control Boards GeoTracker website (GeoTracker), the area of the Site is located within the Los Angeles-San Gabriel Valley Watershed in the Main San Gabriel Valley groundwater sub-basin (SCWRCB, 2014). According to a well abandonment report prepared for a facility located on Citrus Street in West Covina (near the western end of the Site), groundwater was reported between 128 and 212 feet below the ground surface (Delta, 2010). The groundwater was reported to be flowing in a general southwest direction, following regional topography.

2.4 SITE VICINITY

The area along the SR10 corridor is comprised of densely developed residential and commercial/industrial properties.

3.0 SCOPE OF WORK

The proposed scope of the ADL SI, as described in the Task Order Request, consisted of the following general elements:

- Pre-field Investigation activities:
  - Development of a project proposal to guide task order activities;
  - Development of a site specific health and safety plan;
  - Coordination of equipment and subcontractors.
  - Utility clearance

- Field Investigations:
  - Proposed advancement of sixty-four (64) borings at 13 separate proposed Drainage System locations (refer to 4.2.3 for the actual boring depths achieved and refer to Section 4.3 for an explanation of any deviations from the proposed depths noted below):
    - Forty (40) borings to a proposed depth of one (1) foot below the ground surface (bgs) (at 9 proposed construction locations);
    - Six (6) borings to a proposed depth of five (5) feet bgs (at 1 construction location);
    - Six (6) borings to a proposed depth of eight (8) feet bgs (at 1 construction location);
    - Six (6) borings to a proposed depth of eleven (11) feet bgs (at 1 construction location);
    - Six (6) borings to a proposed depth of fifteen (15) feet bgs (at 1 construction location);
  - Decontamination of sampling and drilling equipment
  - Collection and preservation of soil samples from each boring;
  - Boring location survey using global positioning system (GPS);
  - Boring abandonment.

- Laboratory analysis of soil samples pursuant to the requirements of Task Order No. 13 for,
  - Total lead;
  - Soluble lead by California Waste Extraction Test citric acid extract (Cal WET-Citric);
  - Soluble lead by modified Cal WET deionized water extract (Cal WET-DI);
  - Soluble lead by Toxicity Characteristic Leaching Procedure (TCLP);
  - pH; and
  - Title 22 metals.

- Data validation, database generation, and preparation of this report.

4.0 SOIL INVESTIGATION METHODOLOGY

The soil investigation was conducted in general accordance with the methods and requirements of Task Order 13. The following subsections summarize the methodology implemented in completing the required scope of work, along with any deviations from the scope of work described in the task order.

4.1 PRE-FIELD ACTIVITIES

District 7 Task Order Manager, Mr. Samuel Yang, provided construction plans illustrating the proposed sample locations. Site reconnaissance was conducted to mark the boring locations for Underground Service Alert (USA) notifications as well as to evaluate accessibility to the proposed borehole locations.

As required by Task Order 13, a site-specific Health and Safety Plan (HASP) was developed in accordance with California Occupational Safety and Health Administration (Cal OSHA) requirements to guide field sampling activities. The HASP describes health and safety procedures and was submitted to Caltrans for approval prior to initiating field activities.

4.2 FIELD INVESTIGATIONS

Sixty-four (64) borings (locations shown on Figures 2 through 8) were advanced at thirteen (13) discontinuous locations along SR10 between the SR10/SR57 interchange to roughly Citrus Avenue, in Los Angeles County, California (Figure 1). The field methods used for the ADL SI were consistent with those proposed in Stantec's October 17, 2014 *Aerially Deposited Lead Investigation and Asbestos Surveys Proposal*. There were no accessibility issues related to the proposed sampling locations.

The weather was warm and sunny throughout the day with no weather-related delays. The following subsections describe the methodology and procedures followed in conducting the field investigations.

4.2.1 *Health and Safety*

Prior to initiating daily field work, a tail gate health and safety meeting was conducted at the Site with field personnel. During the tail gate meeting, daily work activities and health and safety issues were discussed, including the following:

- Field tasks to be conducted throughout the day;
- Project schedule;
- Hazard awareness;
- General health and safety practices, procedures and issues;
- Specific health and safety issues related to the day's work;
- Health and Safety procedures, controls, etc.;

- Engineering controls; personal protective equipment and monitoring;
- Traffic control and safety; and
- Emergency procedures and contacts.

Field documentation of health and safety meetings and monitoring were maintained throughout the duration of field activities. A copy of the completed field forms are provided in Appendix A. An electronic copy of the full HASP is included in Appendix A.

4.2.2 *Traffic Control*

The following traffic control measures were implemented during field sampling activities:

- Traffic cones were placed along roadway shoulders at each separate work area, and
- Trucks with high visibility flashing yellow strobe lights were positioned between oncoming traffic and workers.

4.2.3 *Site Investigations - Soil Sampling Activities*

Sixty-four (64) borings were advanced at 13 proposed Drainage System project locations to total depths ranging from one to 15 feet below ground surface (bgs). Ten of the Drainage System project location borings (at 77 through 87, 100, 122, and 125) were advanced using a hand auger. The remaining three Drainage System project locations (99, 102, and 108) were advanced using a Direct Push Technology (DPT) drill rig, as described below.

Soil samples were collected at each of the proposed construction locations as follows:

- Borings at Drainage System Number 77 through 87, 122, and 125 (9 separate proposed biofiltration swale locations):
    - Four borings advanced at each location with one (1) sample collected from 0.5 to 1.0 foot bgs from each boring.
- Borings at Drainage System Number 99 (AVSF location):
    - Six borings advanced (refer to Section 4.3 for a description of deviations for this location):
        - 1255-101 advanced to 6.5 feet bgs.
            - Samples collected at 1, 3, and 6.5 feet bgs.
        - 1255-102 advanced to 15 feet bgs.
            - Samples collected at 1, 3, 9, 12, and 15 feet bgs.
        - 1255-103 advanced to 9 feet bgs.
            - Samples collected at 1, 3, and 9 feet bgs.
        - 1255-104 advanced to 15 feet bgs.
            - Samples collected at 1, 3, 9, 12, and 15 feet bgs.
        - 1255-105 advanced to 15 feet bgs.

            - Samples collected at 1, 3, 9, 12, and 15 feet bgs.
        - 1255-106 advanced to 9 feet bgs.
            - Samples collected at 1, 3, and 9 feet bgs.
- Borings at Drainage System Number 100 (proposed infiltration basin location):
    - Six borings advanced:
        - 1255-107 through 1255-112 advanced to 5 feet bgs.
            - Samples collected at 1, 3, and 5 feet bgs.
- Borings at Drainage System Number 102 (proposed partial EBASF location):
    - Six borings advanced:
        - 1255-159 through 1255-164 advanced to 8 feet bgs.
            - Samples collected at 1, 3, 5, and 8 feet bgs.
- Borings at Drainage System Number 108 (proposed AVSF location):
    - Six borings advanced (refer to Section 4.3 for a description of the deviation for this location):
        - 1255-113 advanced to 3 feet bgs.
            - Samples collected at 1 and 3 feet bgs.
        - 1255-114 through 1255-118 advanced to 11 feet bgs.
            - Samples collected at 1, 3, 5, 8, and 11 feet bgs.

Borings at Drainage System Number 77 through 87, 100, 122, and 125 were all advanced using a hand auger. Borings at Drainage System Number 99, 102, and 108 were first advanced to 5 feet bgs using a hand auger, then further advanced using a DPT rig.

4.2.4 *Sample Collection and Preservation*

For shallow depth hand auger borings, samples were collected directly from the hand auger bailer, discharged to a clean ziplock one (1) gallon bag, manually homogenized, then discharged to eight-ounce laboratory certified clean glass jars.

Samples from deeper borings advanced with the DPT drilling rig were collected in using a Geoprobe-type sampler lined with acetate sample liners. Once the sampler was retrieved, one sample liner was cut and packaged by capping each end with a Teflon sheet followed by a tight-fitting plastic cap and sealed with non-VOC tape. Each sample jar and sample tube was labeled with a specific sample identification (I.D.) number, boring I.D., project I.D., EA number, sample date, and sample time. Samples were also recorded on chain-of-custody (CoC) forms and delivered to an environmental laboratory for analysis.

4.2.5 *Boring Locations*

All boring locations were identified and plotted on a field map with a unique boring identification (I.D.) number to represent each borehole (Figures 2 through 8). In addition, the spatial coordinates (x and y) for each borehole were obtained using a

handheld field GPS Trimble unit. The spatial coordinates for the borings are provided in Appendix B. A photographic record of the boring locations is provided in Appendix C.

4.2.6 *Decontamination*

All sampling equipment and drill rods reused during field investigations was decontaminated prior to sampling at each sample interval using a non-phosphate detergent solution and triple rinsed with distilled water.

4.2.7 *Borehole Abandonment*

Excess soil cuttings were replaced in their respective borehole.

4.2.8 *Field Quality Assurance/Quality Control*

In accordance with Task Order 13, the equipment blank was collected to evaluate the adequacy of field decontamination efforts. One equipment blank was collected for each CoC. The equipment blank (also the field blank) was collected by pouring distilled water over the sampling equipment and collecting the water in appropriate sample containers. The QA/QC samples were analyzed for Title 22 Metals (Table 2).

4.3 DEVIATIONS FROM TASK ORDER SCOPE OF WORK

The following summarizes deviations or changes from the task order scope of work (as described above in Section 3.0):

1. Field sampling activities were performed on October 21 through October 23, 2014. Drilling of borings deeper than five feet bgs was initially attempted using hand augers beginning on October 21, 2014. With District 7 approval of a new DPT drilling subcontractor, StrongArm, Stantec mobilized a DPT drill rig to the Site to complete the deeper borings on October 22, 2014.

2. Drainage System location 108: Boring 1255-113 was proposed to 11 feet bgs; but was only drilled to three feet bgs. The proposed depth of 11 feet bgs was not achieved due to refusal at this boring location. The boring was relocated twice approximately five feet from the originally proposed location, but could not be advanced beyond the three-foot depth.

3. Drainage System location 99: Borings 1255-101, 1255-102, 1255-103 and 1255-06 reached refusal to advancement prior to reaching the target sampling depth of 15 feet bgs as described below:
    a. Boring 1255-101 was relocated twice approximately five (5) feet from the originally proposed location, but could not be advanced deeper than 6.5 feet bgs.

b. Borings 1255-102, 1255-103, and 1255-106 were relocated twice approximately five (5) feet from the originally proposed location but could not be advanced deeper than nine feet bgs.

5.0 LABORATORY ANALYSIS

One hundred twenty-nine (129) soil samples were submitted under CoC to Advanced Technology Laboratories (ATL). ATL is certified through the California Environmental Laboratory Accreditation Program (ELAP) to conduct the analyses required in this task order. The lab was directed to perform the following analyses based on Caltrans Task Order No. 13:

- *Total lead by EPA test method 6010B*—used to evaluate total lead concentrations against health screening limits, California hazardous waste total threshold limit concentration (TTLC), and the conditions of the Caltrans Lead Variance.

- *Soluble lead by CAL WET-Citric*—used to assess soluble lead concentrations with respect to California hazardous waste Soluble Threshold Limit Concentration (STLC) of 5 mg/L.

- *Soluble lead by Cal WET DI*—used to evaluate requirements for on-site soil management in accordance with the conditions of the Caltrans Lead Variance.

- *Soluble lead by TCLP (EPA test method 1311)*—used to evaluate waste characteristics and the requirements for disposal against Federal hazardous waste toxicity characteristic threshold limit of 5 mg/L.

- *pH (EPA test method 9045C)*— used to evaluate the requirements for on-site soil management and off-site disposal against the conditions of the Caltrans Lead Variance and hazardous waste thresholds, respectively.

- *Title 22 metals (EPA test method 6010B/7470)*—used to screen soil samples for other potentially elevated heavy metal analytes to further characterize excess soil for off-site disposal.

Copies of the laboratory CoCs and analytical reports are attached in Appendix D.

6.0 INVESTIGATIVE RESULTS

6.1 FIELD FINDINGS

The soils encountered during sampling were generally brown to dark brown in color and consisted primarily of silts and sands with fine gravels.

Groundwater was not encountered in any of the boreholes and not expected to be present in shallow soils.

6.2 ANALYTICAL RESULTS

A summary of the analytical results is presented in Tables 1 and 2. Copies of the laboratory reports and chain-of-custody forms are included in Appendix D.

6.2.1 *Total Lead*

One hundred twenty-nine (129) soil samples were analyzed for total lead by EPA test method 6010B. Total lead concentrations ranged from 1.3 to 520 mg/kg (see Table 1).

Total lead concentrations did not exceed the Total Threshold Limit Concentrations (TTLC) of 1,000 mg/kg in any of the samples submitted for analysis.

6.2.2 *Soluble Lead (Cal WET- Citric)*

Forty-five (45) soil samples were analyzed for soluble lead by Cal WET-Citric. Soluble lead concentrations ranged from <0.027 to 27 mg/L (see Table 1).

Soluble lead concentrations met or exceeded the Soluble Threshold Limit Concentration (STLC) of 5 mg/L in 11 of the samples analyzed.

6.2.3 *Soluble Lead (TCLP)*

Twenty-five (25) soil samples were analyzed for TCLP lead analysis. TCLP soluble lead concentrations ranged from 0.0042J[1] to 0.71 mg/L (see Table 1).

Soluble lead concentrations did not exceed the TCLP threshold of 5 mg/L in any of the samples submitted for analysis.

6.2.4 *Soluble Lead (Cal WET- DI)*

The Caltrans variance allows for reuse of materials exceeding the STLC if the Cal WET-DI soluble lead concentrations do not exceed 1.5 mg/L (Type Y-1 material) or 150 mg/L (Type Y-2 material) using a less rigorous extraction test that incorporates distilled water as the solvent rather than the Cal WET citric acid or TCLP acetic acid extractant. This method is often identified as the DHS modified Cal WET DI test.

[1] J-flag indicates that the analyte was positively identified, but the value is considered approximate.

Forty-five (45) soil samples were submitted for soluble lead analyses by the Cal WET DI extraction method. The Cal WET DI concentrations ranged from non-detect (less than the laboratory method reporting limit of 0.027 mg/L) to 0.14 J mg/L (Table 1).

Soluble lead concentrations did not exceed the Caltrans Lead Variance threshold of 1.5 mg/L in any of the analyzed samples.

6.2.5 *pH*

As directed by the Task Order Manager, the 16 samples reporting total lead concentrations in excess of 100 mg/kg were analyzed for pH. The pH values ranged from 5.9 to 8.7 (Table 1).

6.2.6 *Title 22 Metals*

As directed by the Task Order Manager, the 16 samples reporting total lead concentrations in excess of 100 mg/kg were analyzed for Title 22 metals to evaluate whether potentially elevated concentrations of heavy metals, in addition to lead, pose a concern in the construction area.

As indicated in Table 2, Title 22 metals other than lead, were reported at concentrations well below their respective hazardous waste thresholds. With the exception of cadmium, molybdenum, and zinc, Title 22 metals were reported at concentrations generally consistent with expected background (Marrett, 1991). The slightly elevated concentrations of cadmium, molybdenum and zinc, do not exceed U.S. Environmental Protection Agency (EPA) health-risk based screening levels for industrial commercial property use. Consequently, lead will drive waste classification and disposal.

6.3 DATA VALIDATION

Prior to submitting soil samples to the laboratory, the chain-of-custody documentation was reviewed for accuracy and completeness. The laboratory reports were cross-checked with the chain-of-custody forms to confirm accurate transposing of sample information. In addition, an initial comparison of total lead and CalWET-citric data was conducted. Total lead and soluble lead are bivariate variables. Typically, CalWET-citric soluble lead concentrations range from 2 to 10 percent of the total lead concentrations. Based on initial evaluation of the data, 15 samples were flagged as suspect and re-extracted and analyzed for total and CalWET-citric soluble lead. The results of the re-extracted samples were within expected ratios. In general, the re-analysis by CalWET-citric extraction reported higher soluble lead concentrations than the original analyses. The second set of data were validated and reported in place of the original results in the data tables. However, all data are appended to this report.

Laboratory quality assurance and quality control (QA/QC) data (method blanks,

laboratory control samples and duplicates, matrix spike samples and duplicates) were also reviewed for compliance with QA/QC objectives. Stantec reviewed the laboratory QA/QC (duplicates, laboratory control, matrix spike and matrix spike duplicates). Other than minor issues related to natural heterogeneity of metals in soil duplicate sample analyses, and very low detections of certain metals in blank samples (common contaminants in field blanks are poured over metal sampling equipment), QA/QC data are within expected control limits and considered valid for the intended use. The following summarizes identified data QA/QC issues and associated remedy.

1. Method Blanks: Several metals analytes (total barium, chromium, copper, nickel, selenium, silver, and zinc and CalWET-citric soluble lead and TCLP soluble lead) were reported in method blanks at very low concentrations. Associated sample results below the blank concentration are flagged "UJB" in the data tables with the detection limit reported as the method blank concentration. Sample results greater than the blank concentration are flagged "JB". Sample results greater than 10 times the blank concentration require no qualifying action. The data for these analytes may be slightly biased high.

2. Equipment Blanks: Several metals (barium, cadmium, chromium, molybdenum, silver and zinc) were reported in equipment blanks at very low levels, and may be reflective of one or more of the following sources: 1) laboratory method blank detections, 2) ambient artifact (e.g., dust), 3) incomplete decontamination, 4) contaminated decontamination rinse water, and/or 5) artifact from contact with metal sampling equipment. The reported detections are very low and do not appear to have adversely influenced sample results. Sample results greater than 10 times the blank concentration, no qualifying action required. However, the reported sample concentrations in the data tables are considered slightly biased high.

3. Laboratory Duplicate Samples: Laboratory duplicate samples were reported within the relative percent difference (RPD) control limit of 20 percent except for the following:

    a. Batch B4J0789 –Laboratory duplicate RPD above limits for total Lead. Sample site specific. Associated result flagged "J" for 1255-111-3 only.

    b. Batch B4K0158 – Laboratory duplicate RPD above limits for CalWET-citric lead. Samples site specific. Associated result flagged "J" for 1255-161-3 and 1255-115-1 only.

    c. Batch B4K0179 – total lead laboratory duplicate RPD above limits for chromium and cobalt. Sample site specific. Associated result flagged "J" for 1255-122-1 only.

d. Batch B4L0696 Total lead laboratory duplicate RPD above control limits for B4L0696-Dup1 due to sample heterogeneity. Associated result flagged "J" for 1255-163-1 only.

e. Batch B4L0730 CalWET-citric lead laboratory duplicate RPD above control limits for B4L0730-Dup2 due to sample heterogeneity. Associated result flagged "J" for 1255-118-3 only.

4. Matrix Spike and Spike Duplicates: Matrix spike and duplicate samples were analyzed to assess accuracy and to evaluate matrix effects on data analysis. The percent recoveries and RPDs were found to within laboratory-determined control limits except:

    a. Batch B4J0729 – Laboratory matrix duplicate RPD above control limits for total lead. Laboratory duplicate RPDs were within limits. Matrix sample site specific. Associated result flagged "J" for 1255-129-1 only.

Based on the validation process, the data contained herein are adequate for the purposes of this study. The validated data are summarized in attached tables with appropriate qualifiers. A copy of the data validation report is included as Appendix E.

7.0 SUMMARY

At the request of the Caltrans District 7 Hazardous Waste South Branch, and pursuant to the provisions of Caltrans Agreement 07A3321 and the Task Order No. 13 request, an ADL SI was conducted at proposed WPTS locations along SR10 between PM 37.2 to 42.4, between Citrus Avenue in the city of West Covina and SR57 in the city of Pomona, in Los Angeles County, California (Figure 1). This investigation was conducted to evaluate the potential presence of ADL and other heavy metals in shallow subsurface soils at locations where a WPTS is proposed. The project locations were provided by Caltrans in an Attachment A to the Task Order and are shown on Figures 2 through 8.

The objective of the ADL SI is to evaluate the presence and distribution of ADL and other heavy metals in subsurface soils within each proposed WPTS area to allow Caltrans to perform the statistical evaluation of the data and make recommendations for handling and/or disposal of soil generated during construction activities.

Sixty-four borings were advanced at 13 separate proposed WPTS locations. A total of 129 soil samples were collected at depths ranging from one to 15 feet bgs. As described in this report, five borings (four at location 99 and one at location 108) reached refusal prior to reaching the intended target depth. A total of 129 soil samples were analyzed for total lead and 45 samples were analyzed for soluble lead by Cal WET-Citric and Cal WET-DI extraction. A total of 25 samples were analyzed for soluble lead using the TCLP extraction and 16 samples were analyzed for pH and Title 22 metals.

The following summarizes findings from the investigation:

1. ADL is present at each of the 13 proposed construction locations.
2. Total lead concentrations were not reported above the California TTLC of 1,000 mg/kg in any sample.
3. Cal WET-Citric soluble lead concentrations exceeded the California STLC (5 mg/L) in 13 samples.
4. Cal WET-DI concentrations were not reported above the Caltrans Lead Variance threshold of 1.5 mg/L.
5. TCLP soluble lead did not exceed the federal toxicity characteristic threshold (5mg/L) in any of the samples.
6. The reported pH values were within the limits of non-hazardous waste and were above the Caltrans Lead Variance thresholds.

8.0 RECOMMENDATIONS

Based on the findings and results of the investigation, soil in the investigation areas is impacted by ADL. Based on these findings, the following are recommended:

1. Stantec recommends statistical evaluation of the data to assess appropriate reuse or disposition of excavated soils in accordance with the Caltrans Lead Variance and with appropriate local, state, and federal regulations and requirements.

2. All work should be conducted under the guidance of a lead compliance plan (LCP) prepared in accordance with Section 14-11.03 Material Containing Hazardous Waste Concentrations of Aerially Deposited Lead of the 2010 Standard Specifications. The purpose of the LCP is to identify measures that will be implemented during construction to reduce potential exposure to workers and the general public.

9.0 REFERENCES

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United States Geological Survey (USGS) Topographic Map, 1966 (photorevised 1981), 7.5-minute series, Baldwin Hills, California Quadrangle.

TABLES

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS - LEAD and pH
ADL SITE INVESTIGATION
LA-010-37.2 /42.4
LOS ANGELES COUNTY, CALIFORNIA
PN: 0713000007-1; EA#07-1193U1
TASK ORDER #13; CONTRACT 07A3321

Drainage System Location	Sample ID	Total Lead [1] (mg/kg)	Soluble Lead [1] Cal WET-Citric (mg/L)	Soluble Lead [1] Cal WET-DI (mg/L)	Soluble Lead [1] TCLP (mg/L)	pH [2]
99	1255-101-1	**21**	**--**	--	**--**	--
	1255-101-3	**11**	**--**	--	**--**	--
	1255-101-6.5	**32**	**1.4**	**0.033 NJ**	--	--
	1255-101-9	*REFUSAL*	--	--	--	--
	1255-101-12	*REFUSAL*	--	--	--	--
	1255-101-15	*REFUSAL*	--	--	--	--
	1255-102-1	**9.0**	--	--	--	--
	1255-102-3	**7.0**	--	--	--	--
	1255-102-9	**41**	**0.26NJ**	<0.027	--	--
	1255-102-12	**21**	--	--	--	--
	1255-102-15	**3.2 JB**	--	--	--	--
	1255-103-1	**61**	**4.4**	**0.034 NJ**	--	--
	1255-103-3	**44**	**2.0**	<0.027	--	--
	1255-103-9	**19**	--	--	--	--
	1255-103-12	*REFUSAL*	--	--	--	--
	1255-103-15	*REFUSAL*	--	--	--	--
	1255-104-1	**74**	**2.8**	**0.036 NJ**	**0.049 NJ**	--
	1255-104-3	**44**	**1.8**	**0.029 NJ**	--	--
	1255-104-9	**9.7**	--	--	--	--
	1255-104-12	**4.1 JB**	--	--	--	--
	1255-104-15	**2.6 JB**	--	--	--	--
	1255-105-1	**34**	**0.057 NJ**	<0.027	--	--
	1255-105-3	**10**	--	--	--	--
	1255-105-9	**12**	--	--	--	--
	1255-105-12	**3.6 JB**	--	--	--	--
	1255-105-15	**2.3 JB**	--	--	--	--
	1255-106-1*	**64**	**2.8**	<0.027	--	--
	1255-106-3	**24**	--	--	--	--
	1255-106-9	**16**	--	--	--	--
	1255-106-12	*REFUSAL*	--	--	--	--
	1255-106-15	*REFUSAL*	--	--	--	--
100	1255-107-1	**25**	--	--	--	--
	1255-107-3	**3.9**	--	--	--	--
	1255-107-5	**3.7**	--	--	--	--
	1255-108-1	**17**	--	--	--	--
	1255-108-3	**16**	--	--	--	--
	1255-108-5	**3.8 JB**	--	--	--	--
	1255-109-1	**29**	--	--	--	--
	1255-109-3	**6.0**	--	--	--	--
	1255-109-5	**5.6**	--	--	--	--
	1255-110-1	**15**	--	--	--	--
	1255-110-3	**22**	--	--	--	--
	1255-110-5*	**31**	**1.8**	<0.027	--	--
	1255-111-1	**27**	--	--	--	--
	1255-111-3	**27 J**	--	--	--	--
	1255-111-5	**42**	**0.039 NJ**	<0.027		--
	1255-112-1	**29**	--	--	--	--
	1255-112-3	**9.1**	--	--	--	--
	1255-112-5	**28**	--	--	--	--
108	1255-113-1*	**170**	**13**	<0.027	**0.11**	**8.1**
	1255-113-3*	**99**	**8.3**	<0.027	**0.27**	**8.7**
	1255-113-5	*REFUSAL*	--	--	--	--
	1255-113-8	*REFUSAL*	--	--	--	--
	1255-113-11	*REFUSAL*	--	--	--	--
	1255-114-1*	**310**	**23**	**0.038 NJ**	**0.71**	**8.2**
	1255-114-3	**2.9**	--	--	--	--
	1255-114-5	**3.6**	--	--	--	--
	1255-114-8	**3.6**	--	--	--	--
	1255-114-11	<0.07	--	--	--	--
	1255-115-1*	**71**	**4.3**	<0.027	**0.034 NJ**	--
	1255-115-3	**71**	**1.1**	**0.028 NJ**	**0.018 NJB**	--
	1255-115-5	**4.4**	--	--	--	--
	1255-115-8	**3.0**	--	--	--	--
	1255-115-11	**2.6**	--	--	--	--
	1255-116-1	**150**	**11**	<0.027	**0.059**	**8.0**
	1255-116-3	*REFUSAL*	--	--	--	--
	1255-116-5	*REFUSAL*	--	--	--	--
	1255-116-8	*REFUSAL*	--	--	--	--
	1255-116-11	*REFUSAL*	--	--	--	--
	1255-117-1*	**86**	**4.8**	<0.027	**0.028 NJ**	**7.9**
	1255-117-3	**140**	**2.6**	**0.028 NJ**	**0.0042 NJB**	**8.6**
	1255-117-5	**0.88 NJ**	--	--	--	--
	1255-117-8	**1.3**	--	--	--	--
	1255-117-11	**1.4**	--	--	--	--
	1255-118-1*	**85**	**4.7**	<0.027	**0.054**	--
	1255-118-3*	**81**	**1.1 J**	<0.027	**0.014 NJB**	--
	1255-118-5	**1.9**	--	--	--	--
	1255-118-8	**1.8**	--	--	--	--
	1255-118-11	**0.85 NJ**	--	--	--	--
125	1255-119-1	**17**	--	--	--	--
	1255-120-1	**53**	**1.6**	<0.027	--	--
	1255-121-1	**3.8 JB**	--	--	--	--
	1255-122-1	**110**	**8.0**	<0.027	**0.040 NJ**	**7.3**
	1255-123-1	**24**	--	--	--	--
	1255-124-1	**71**	**2.2**	<0.027	**0.011 NJB**	--

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS - LEAD and pH
ADL SITE INVESTIGATION
LA-010-37.2 /42.4
LOS ANGELES COUNTY, CALIFORNIA
PN: 0713000007-1; EA#07-1193U1
TASK ORDER #13; CONTRACT 07A3321

Drainage System Location	Sample ID	Total Lead [1] (mg/kg)	Soluble Lead [1] Cal WET-Citric (mg/L)	Soluble Lead [1] Cal WET-DI (mg/L)	Soluble Lead [1] TCLP (mg/L)	pH [2]
122	1255-125-1	**520**	**27**	**0.11 NJ**	**0.31**	**7.1**
	1255-126-1	**280**	**13**	**0.14 NJ**	**0.30**	**5.9**
	1255-127-1	**50**	**1.7**	<0.027	--	--
	1255-128-1	**170**	**9.6**	**0.074 NJ**	**0.080**	**6.6**
	1255-129-1	**220 J**	**12**	**0.067 NJ**	**0.34**	**8.0**
	1255-130-1	**100**	**5.2**	<0.027	**0.049 NJ**	**7.5**
79	1255-131-1	**23**	--	--	--	--
	1255-132-1	**150**	**13**	**0.045 NJ**	**0.041 NJ**	**7.3**
	1255-133-1	**24**	--	--	--	--
	1255-134-1	**28**	--	--	--	--
78	1255-135-1	**20**	--	--	--	--
	1255-136-1	**9.1**	--	--	--	--
	1255-137-1	**19**	--	--	--	--
	1255-138-1	**20**	--	--	--	--
77	1255-139-1	**78**	**2.9**	**0.036 NJ**	**0.040 NJ**	--
	1255-140-1	**82**	**3.6**	**0.029 NJ**	**0.032 NJ**	--
	1255-141-1*	**53**	**3.4**	**0.091 NJ**	--	--
	1255-142-1	**14**	--	--	--	--
80	1255-143-1	**26**	--	--	--	--
	1255-144-1	**31**	**1.1**	<0.027	--	--
	1255-145-1	**12**	--	--	--	--
	1255-146-1	**21**	--	--	--	--
81	1255-147-1	**18**	--	--	--	--
	1255-148-1	**12**	--	--	--	--
	1255-149-1	**8.9**	--	--	--	--
	1255-150-1	**25**	--	--	--	--
86	1255-151-1	**3.7 J**	--	--	--	--
	1255-152-1	**5.4**	--	--	--	--
	1255-153-1	**4.6**	--	--	--	--
	1255-154-1	**13**	--	--	--	--
87	1255-155-1	**150**	**5.1**	<0.027	**0.019 NJB**	**7.7**
	1255-156-1	**190**	**10 J**	**0.14 NJ**	**0.097**	**6.2**
	1255-157-1	**12**	--	--	--	--
	1255-158-1	**16**	--	--	--	--
102	1255-159-1	**26**	--	--	--	--
	1255-159-3	**14**	--	--	--	--
	1255-159-5	**23**	--	--	--	--
	1255-159-8	**2.6**	--	--	--	--
	1255-160-1*	**36**	**2.0**	<0.027	--	--
	1255-160-3	**31**	**0.031 NJ**	<0.027	--	--
	1255-160-5	**1.4**	--	--	--	--
	1255-160-8	**2.6**	--	--	--	--
	1255-161-1*	**72**	**2.3**	<0.027	--	--
	1255-161-3*	**68**	**3.6**	<0.027	**0.015 NJB**	**8.2**
	1255-161-5	**3.4**	--	--	--	--
	1255-161-8	**4.0**	--	--	--	--
	1255-162-1	**22**	--	--	--	--
	1255-162-3*	**44**	**3.0**	<0.027	**0.0085 NJB**	--
	1255-162-5	**36**	**0.031 NJ**	<0.027	--	--
	1255-162-8	**8.1**	--	--	--	--
	1255-163-1*	**48 J**	**3.3**	<0.027	--	--
	1255-163-3	**49**	**0.034 NJ**	<0.027	--	--
	1255-163-5	**2.2**	--	--	--	--
	1255-163-8	**3.6**	--	--	--	--
	1255-164-1	**42**	<0.027	<0.027	--	--
	1255-164-3	**20**	--	--	--	--
	1255-164-5	**11**	--	--	--	--
	1255-164-8	**4.3**	--	--	--	--
Minimum		<0.07	<0.027	<0.027	0.0042	5.9
Maximum		520	27	0.14	0.71	8.7
Mean		44.7	--	--	--	--
Standard Deviation		69.3	--	--	--	--

Notes:

*	The sample was reanalyzed due to data inconsistency. The reported result is from the second analysis. Both laboratory reports are appended to this report.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
B	The analyte was detected in the method, field and/or trip blank.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

(1) Total Lead, Soluble Threshold Limit Concentration (STLC or "Soluble Lead"), and Toxicity Characteristic Leaching Procedure (TCLP) analysis by EPA method 6010B. Extraction methods vary.

(2) pH determined with EPA method 9045B.

(3) California Human Health Screening Levels for Commercial/Industrial and Residential Land Use, Soil, California Environmental Protection Agency, January 2005; updated 2010 Office of Environmental Health Hazard Assessment Table 1.

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

-- = Not analyzed or not applicable

Grey Shade = exceeds 5 mg/L CA STLC

TABLE 2
SUMMARY OF SOIL ANALYTICAL RESULTS-TITLE 22 METALS
ADL SITE INVESTIGATION
LA-010-37.2 /42.4
LOS ANGELES COUNTY, CALIFORNIA
PN: 0713000007-1; EA#07-1193U1
TASK ORDER #13; CONTRACT 07A3321

CALTRANS UNIQUE SAMPLE ID[1]	SAMPLE DEPTH[2]	SAMPLE DATE	TITLE 22 METALS															
			ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CHROMIUM	COBALT	COPPER	MOLYBDENUM	NICKEL	SELENIUM	SILVER	THALLIUM	VANADIUM	ZINC	MERCURY
Southern California Background Levels [3]			*380 [2]*	*0.6-11.0*	*133-1400*	*0.25-2.70*	*0.05-1.70*	*23-1579*	*2.7-46.9*	*9.1-96.4*	*0.1-9.6*	*9-509*	*0.015-0.430*	*13.2-39.4*	*9.8-36.2*	*75-288*	*133-236*	*0.05-0.90*
USEPA RSLs - Industrial Use (4)			*410*	*2.4*	*190,000*	*2,000*	*800*	*1,500,000*	*300*	*41,000*	*5,100*	*20,000*	*5,100*	*5,100*	*10*	*5,100*	*310,000*	*43*
California TTLC (mg/kg)			*500*	*500*	*10,000*	*75*	*100*	*2,500*	*8,000*	*2,500*	*3,500*	*2,000*	*100*	*500*	*700*	*2,400*	*5,000*	*20*
10 x California STLC (mg/kg)			*150*	*50*	*1,000*	*7.5*	*10*	*50*	*800*	*250*	*3,500*	*200*	*10*	*50*	*70*	*240*	*2,500*	*2*
20 x RCRA Toxicity Charateristic (mg/kg)			*--*	*100*	*2,000*	*--*	*20*	*100*	*--*	*--*	*--*	*--*	*20*	*100*	*--*		*--*	*4*
1255-113-1	1	10/22/2014	<0.25	6.5	120	0.32 NJ	1.7	13	4.8	19	4.2	24	<0.15	<0.06	<0.20	37	62	0.03 NJ
1255-113-3	3	10/22/2014	<0.25	4.1	77	0.20 NJ	1.4	7.9	3.9	13	1.8	16	<0.15	<0.06	<0.20	27	37	0.06 NJ
1255-114-1	1	10/22/2014	<0.25	6.5	110	0.30 NJ	1.4	13	5.0	20	3.7	20	<0.15	<0.06	<0.20	34	72	0.03 NJ
1255-116-1	1	10/22/2014	<0.25	6.8	120	0.33 NJ	1.8	14	5.0	20	4.6	24	<0.15	<0.06	<0.20	39	72	0.04 NJ
1255-117-1	1	10/22/2014	<0.25	6.7	120	0.34 NJ	1.8	15	4.7	20	3.9	23	<0.15	<0.06	<0.20	39	100	0.04 NJ
1255-117-3	3	10/22/2014	<0.25	5.0	75	0.25 NJ	1.1	9.7	4.3	14	1.9	14	<0.15	<0.06	<0.20	30	47	0.02 NJ
1255-122-1	1	10/21/2014	<0.25 UJ	5.8	140	0.38 NJ	0.87 NJ	17 J	8.3 J	24	3.5	17	<0.15	<0.06	<0.20	19	100	0.03 NJ
1255-125-1	1	10/21/2014	0.96 NJ	7.0	120	0.25 NJ	0.87 NJ	15	10	89	5.2	23	<0.15	0.13 NJ	<0.20	22	250	0.06 NJ
1255-126-1	1	10/21/2014	0.59 NJ	8.1	120	0.17 NJ	0.39 NJ	12	6.3	51	7.2	17	<0.15	0.11 NJ	<0.20	18	180	0.01 NJ
1255-128-1	1	10/21/2014	0.31 NJ	8.1	250	0.38 NJ	0.44 NJ	7.9	6.2	22	6.6	9.4	<0.15	<0.06	<0.20	10	91	0.02 NJ
1255-129-1	1	10/21/2014	0.27 NJ	4.6	110	0.28 NJ	1.5	12	5.9	28	5.3	16	<0.15	<0.06	<0.20	24	85	0.04 NJ
1255-130-1	1	10/21/2014	0.35 NJ	8.0	340	0.74 NJ	4.1	30	4.3	42	13	25	<0.15	0.41 NJ	<0.20	36	120	0.09 NJ
1255-132-1	1	10/21/2014	<0.25	3.9	100	0.53 NJ	0.22 NJ	11	7.4	24	0.83 NJ	12	<0.15	0.14 NJ	<0.20	33	76	0.03 NJ
1255-155-1	1	10/23/2014	0.52 NJ	4.8	120	0.35 NJ	1.1	28	7.2	40	2.4	18	<0.15	<0.06	<0.20	31	140	0.05 NJ
1255-156-1	1	10/23/2014	0.29 NJ	2.1	120	0.31 NJ	0.30 NJ	12	5.1	21	1.7	15	<0.15	<0.06	<0.20	20	93	0.03 NJ
1255-161-3	3	10/22/2014	<0.25	4.7	100	0.28 NJ	0.89 NJ	12	4.3	13	2.0	15	<0.15	<0.06	<0.20	26	42	0.02 NJ
1255-EBQC-1	QA/QC*	10/21/2014	<0.0026	<0.0024	**0.0010 NJB**	<0.0002	**0.0002 UJB**	**0.0007 NJB**	<0.0004	<0.0009	<0.0005	**0.0006 UJB**	<0.0040	**0.0012 NJB**	<0.0026	<0.0013	**0.0053 NJB**	<0.11
1255-EBQC-2	QA/QC*	10/22/2014	<0.0026	<0.0024	**0.0008 UJB**	<0.0002	**0.0005 NJB**	**0.0007 NJB**	<0.0004	<0.0009	**0.0009 NJ**	**0.0006 UJB**	**0.0054 NJB**	**0.0013 NJB**	<0.0026	<0.0013	**0.015 NJB**	<0.11
1255-EBQC-3	QA/QC*	10/22/2014	<0.0026	<0.0024	**0.0008 UJB**	<0.0002	**0.0003 NJB**	**0.0005 NJB**	<0.0004	<0.0009	**0.0006 NJ**	**0.0006 UJB**	**0.0051 NJB**	**0.0008 UJB**	<0.0026	<0.0013	**0.0065 NJB**	<0.11
1255-EBQC-4	QA/QC*	10/23/2014	<0.0026	<0.0024	**0.0008 UJB**	<0.0002	**0.0002 UJB**	**0.0005 NJB**	<0.0004	<0.0009	<0.0005	**0.0006 UJB**	<0.0040	**0.0013 NJB**	<0.0026	<0.0013	**0.0076 NJB**	<0.11

NOTES:

All soil results in mg/Kg

(1) - Boring identification number

(2) - Sample depth reported in feet below the ground surface

(3) FOR SOIL: Marrett, D.J., A.L. Page, G.R. Bradford, D. Bakhtar, R.C. Graham, A.C. Chang, Background Levels of Soil Trace Elements in Southern California Soils, April, 1991

(4) United States Environmental Protection Agency (Region 9) Regional Screening Levels (RSLs; in mg/Kg) for VOCs for industrial soil (last updated May 2013) - - Traditional Table with a Target Cancer Risk Level of 1.0x10-6 and a Target Hazard Quotient of 1.0.

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

B The analyte was detected in the method, field and/or trip blank.

<0.5 - Analyte not reported at or above stated reporting limit

J - J-flagged results are reported detections between the MDL and the PQL.

* QA/QC samples consisted of liquid equipment blanks (mg/L)

FIGURES

North

CALIFORNIA

LEGEND:

BRIDGE ID
Figure Number

0 1/2 1
APPROXIMATE SCALE (MILES)

2000 0 2000 4000 6000
APPROXIMATE SCALE (FEET)

REFERENCE: DELORME TOPO MAP, 10 FWY LOS ANGELES, CALIFORNIA

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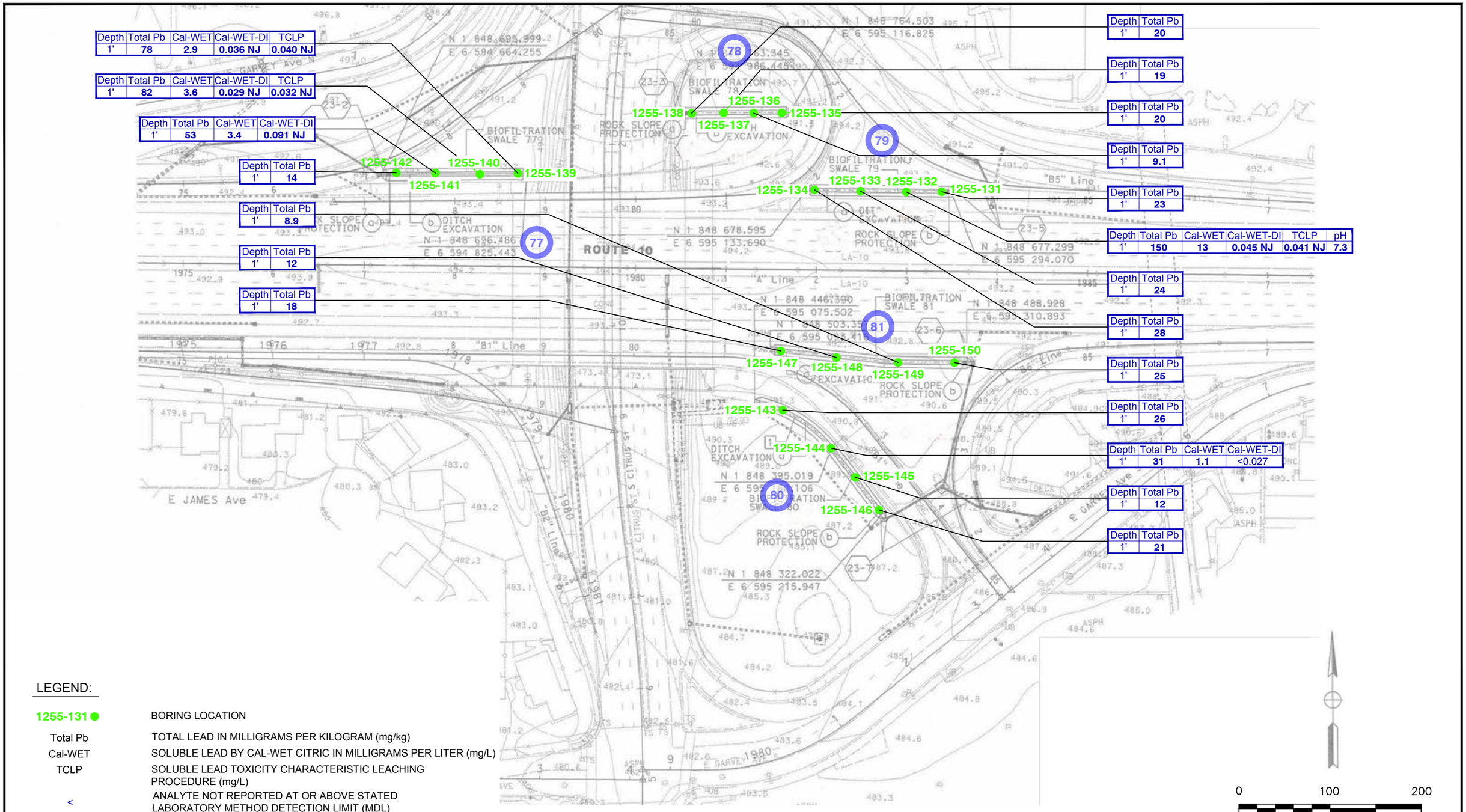
Stantec

State of California Department of Transportation
Asbestos Survey
State Route 10 Bridge Demolition
07-LA-10
PM37.2/42.4
Project ID: 07A3321-13, EA 21193U1

SITE LOCATION MAP

FIGURE: **1**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185831010	STA	JS	AP	11/05/14



LEGEND:

1255-131 ●	BORING LOCATION
Total Pb	TOTAL LEAD IN MILLIGRAMS PER KILOGRAM (mg/kg)
Cal-WET	SOLUBLE LEAD BY CAL-WET CITRIC IN MILLIGRAMS PER LITER (mg/L)
TCLP	SOLUBLE LEAD TOXICITY CHARACTERISTIC LEACHING PROCEDURE (mg/L)
<	ANALYTE NOT REPORTED AT OR ABOVE STATED LABORATORY METHOD DETECTION LIMIT (MDL)
J	CONCENTRATION IS REPORTED BETWEEN THE PRACTICAL QUANTITATION LIMIT AND THE MDL
NJ	THE ANALYSIS INDICATES THE PRESENCE OF AN ANALYTE THAT HAS BEEN "TENTATIVELY IDENTIFIED" AND THE ASSOCIATED NUMERICAL VALUE REPRESENTS ITS APPROXIMATE CONCENTRATION
77	DRAINAGE SYSTEM LOCATION

Stantec
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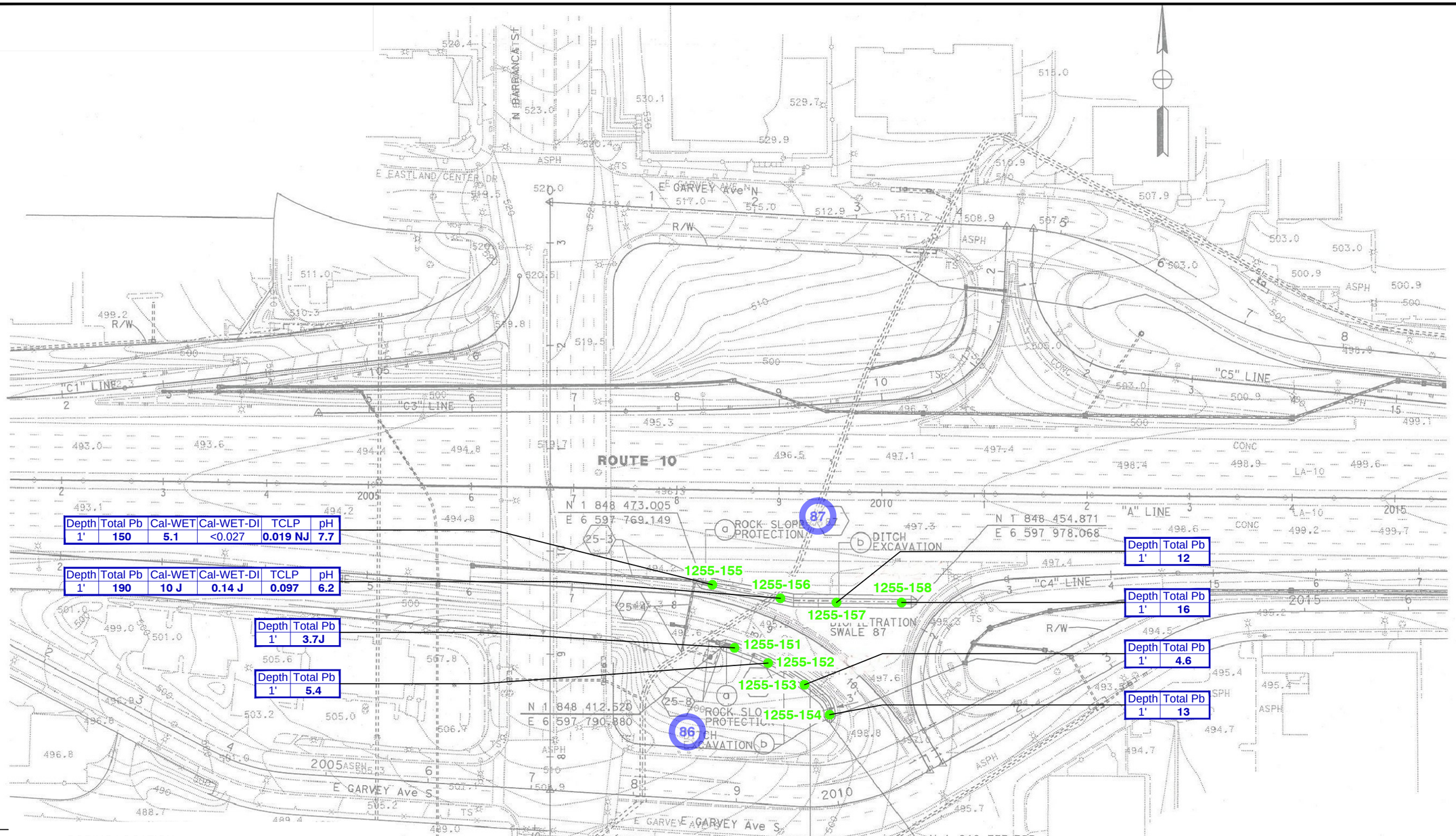
FOR: ADL SITE INVESTIGATION
Caltrans Contract #07A3321
Task Order No. 13
LA-010-37.2/ 42.4
Los Angeles County
PN: 0713000007-1; EA:1193U1

SAMPLE LOCATION MAP

FIGURE: 2

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185831013	STA	AP	KM	11/18/14

FILEPATH:M:_00 OTHER OFFICES\04-REDLANDS\CAL-TRANS\ADL\TO-13B\FIG 2_TO13_CITRUS ST.dwg|saguinaldo|Dec 03, 2014 at 19:39|Layout: CITRUS ST



LEGEND:

1255-151 ●	BORING LOCATION
Total Pb	TOTAL LEAD IN MILLIGRAMS PER KILOGRAM (mg/kg)
Cal-WET	SOLUBLE LEAD BY CAL-WET CITRIC IN MILLIGRAMS PER LITER (mg/L)
TCLP	SOLUBLE LEAD TOXICITY CHARACTERISTIC LEACHING PROCEDURE (mg/L)
<	ANALYTE NOT REPORTED AT OR ABOVE STATED LABORATORY METHOD DETECTION LIMIT (MDL)
J	CONCENTRATION IS REPORTED BETWEEN THE PRACTICAL QUANTITATION LIMIT AND THE MDL
NJ	THE ANALYSIS INDICATES THE PRESENCE OF AN ANALYTE THAT HAS BEEN "TENTATIVELY IDENTIFIED" AND THE ASSOCIATED NUMERICAL VALUE REPRESENTS ITS APPROXIMATE CONCENTRATION
86	DRAINAGE SYSTEM LOCATION

0 100 200

APPROXIMATE SCALE (FEET)

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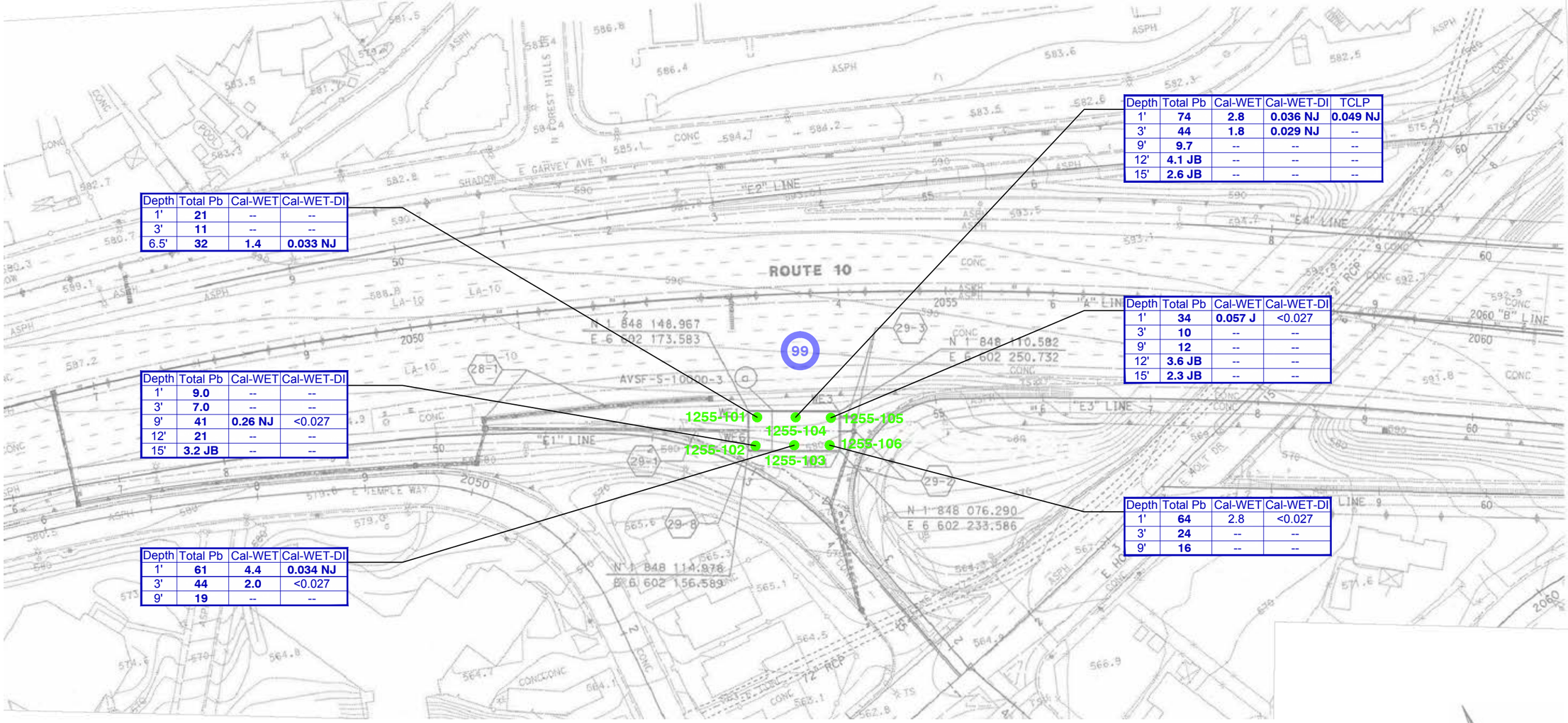
Task Order No. 13
LA-010-37.2/ 42.4
Los Angeles County
PN: 0713000007-1; EA:1193U1

SAMPLE LOCATION MAP

FIGURE: 3

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185831013	STA	AP	KM	11/18/14



Depth	Total Pb	Cal-WET	Cal-WET-DI
1'	**21**	--	--
3'	**11**	--	--
6.5'	**32**	**1.4**	**0.033 NJ**

Depth	Total Pb	Cal-WET	Cal-WET-DI	TCLP
1'	**74**	**2.8**	**0.036 NJ**	**0.049 NJ**
3'	**44**	**1.8**	**0.029 NJ**	--
9'	**9.7**	--	--	--
12'	**4.1 JB**	--	--	--
15'	**2.6 JB**	--	--	--

Depth	Total Pb	Cal-WET	Cal-WET-DI
1'	**9.0**	--	--
3'	**7.0**	--	--
9'	**41**	**0.26 NJ**	<0.027
12'	**21**	--	--
15'	**3.2 JB**	--	--

Depth	Total Pb	Cal-WET	Cal-WET-DI
1'	**34**	**0.057 J**	<0.027
3'	**10**	--	--
9'	**12**	--	--
12'	**3.6 JB**	--	--
15'	**2.3 JB**	--	--

Depth	Total Pb	Cal-WET	Cal-WET-DI
1'	**64**	2.8	<0.027
3'	**24**	--	--
9'	**16**	--	--

Depth	Total Pb	Cal-WET	Cal-WET-DI
1'	**61**	**4.4**	**0.034 NJ**
3'	**44**	**2.0**	<0.027
9'	**19**	--	--

LEGEND:

1255-101 ●	BORING LOCATION
Total Pb	TOTAL LEAD IN MILLIGRAMS PER KILOGRAM (mg/kg)
Cal-WET	SOLUBLE LEAD BY CAL-WET CITRIC IN MILLIGRAMS PER LITER (mg/L)
TCLP	SOLUBLE LEAD TOXICITY CHARACTERISTIC LEACHING PROCEDURE (mg/L)
<	ANALYTE NOT REPORTED AT OR ABOVE STATED LABORATORY METHOD DETECTION LIMIT (MDL)
--	NOT ANALYZED
J	CONCENTRATION IS REPORTED BETWEEN THE PRACTICAL QUANTITATION LIMIT AND THE MDL
B	THE ANALYTE WAS DETECTED IN THE METHOD, FIELD AND/OR TRIP BLANK
NJ	THE ANALYSIS INDICATES THE PRESENCE OF AN ANALYTE THAT HAS BEEN "TENTATIVELY IDENTIFIED" AND THE ASSOCIATED NUMERICAL VALUE REPRESENTS ITS APPROXIMATE CONCENTRATION
99	DRAINAGE SYSTEM LOCATION

0 100 200

APPROXIMATE SCALE (FEET)

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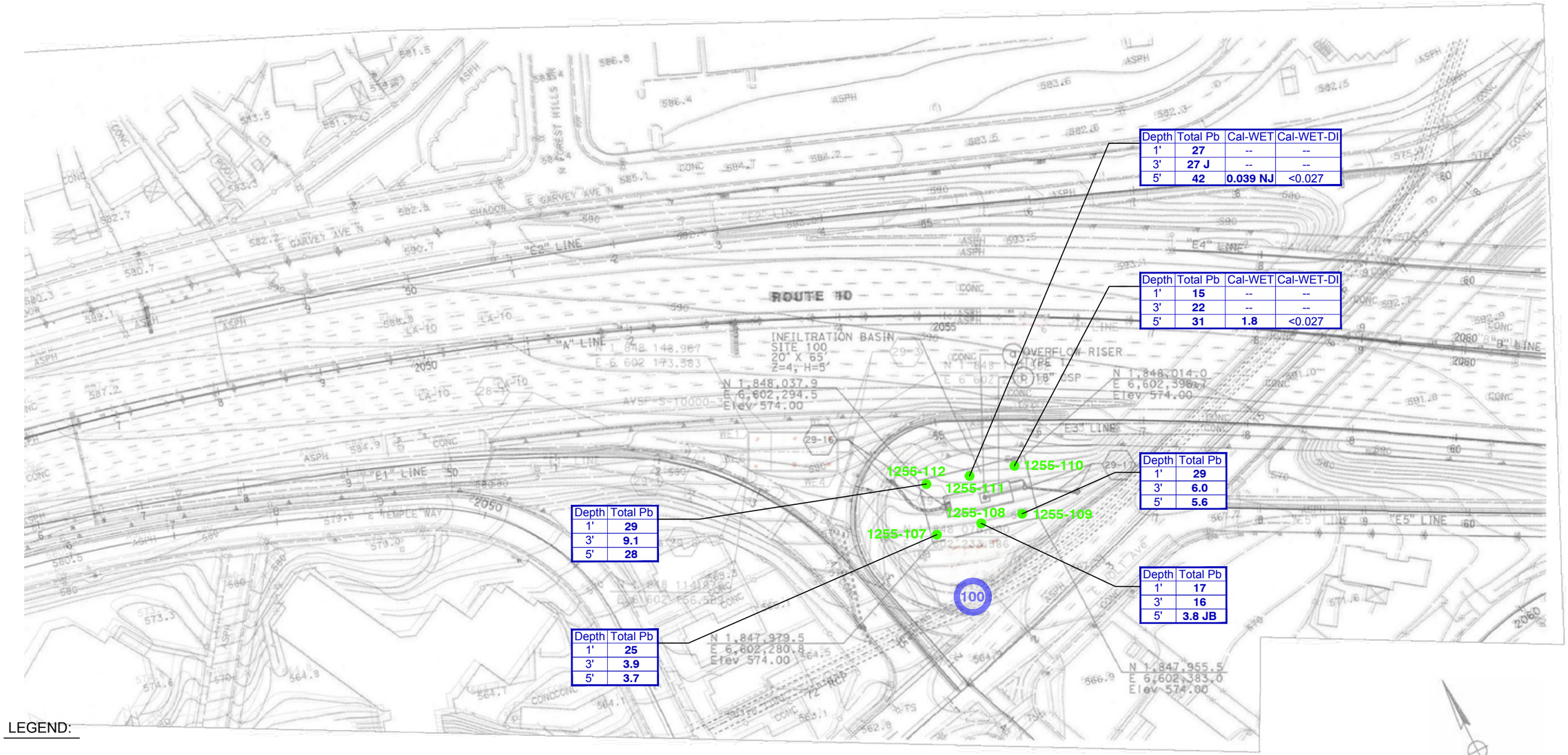
Caltrans Contract #07A3321
Task Order No. 13
LA-010-37.2/ 42.4
Los Angeles County
PN: 0713000007-1; EA:1193U1

SAMPLE LOCATION MAP

FIGURE: 4

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185831013	STA	AP	KM	11/18/14

FILEPATH:M:_00 OTHER OFFICES\04-REDLANDS\CAL-TRANS\ADL\TO-13B\FIG 2_TO13_CITRUS ST.dwg|saguinaldo|Dec 03, 2014 at 20:47|Layout: GRAND ST



Depth	Total Pb
1'	**29**
3'	**9.1**
5'	**28**

Depth	Total Pb
1'	**25**
3'	**3.9**
5'	**3.7**

Depth	Total Pb	Cal-WET	Cal-WET-DI
1'	**27**	--	--
3'	**27 J**	--	--
5'	**42**	**0.039 NJ**	<0.027

Depth	Total Pb	Cal-WET	Cal-WET-DI
1'	**15**	--	--
3'	**22**	--	--
5'	**31**	**1.8**	<0.027

Depth	Total Pb
1'	**29**
3'	**6.0**
5'	**5.6**

Depth	Total Pb
1'	**17**
3'	**16**
5'	**3.8 JB**

LEGEND:

1255-107 ●	BORING LOCATION
Total Pb	TOTAL LEAD IN MILLIGRAMS PER KILOGRAM (mg/kg)
Cal-WET	SOLUBLE LEAD BY CAL-WET CITRIC IN MILLIGRAMS PER LITER (mg/L)
TCLP	SOLUBLE LEAD TOXICITY CHARACTERISTIC LEACHING PROCEDURE (mg/L)
<	ANALYTE NOT REPORTED AT OR ABOVE STATED LABORATORY METHOD DETECTION LIMIT (MDL)
--	NOT ANALYZED
J	CONCENTRATION IS REPORTED BETWEEN THE PRACTICAL QUANTITATION LIMIT AND THE MDL
B	THE ANALYTE WAS DETECTED IN THE METHOD, FIELD AND/OR TRIP BLANK
NJ	THE ANALYSIS INDICATES THE PRESENCE OF AN ANALYTE THAT HAS BEEN "TENTATIVELY IDENTIFIED" AND THE ASSOCIATED NUMERICAL VALUE REPRESENTS ITS APPROXIMATE CONCENTRATION
99	DRAINAGE SYSTEM LOCATION

0 100 200

APPROXIMATE SCALE (FEET)

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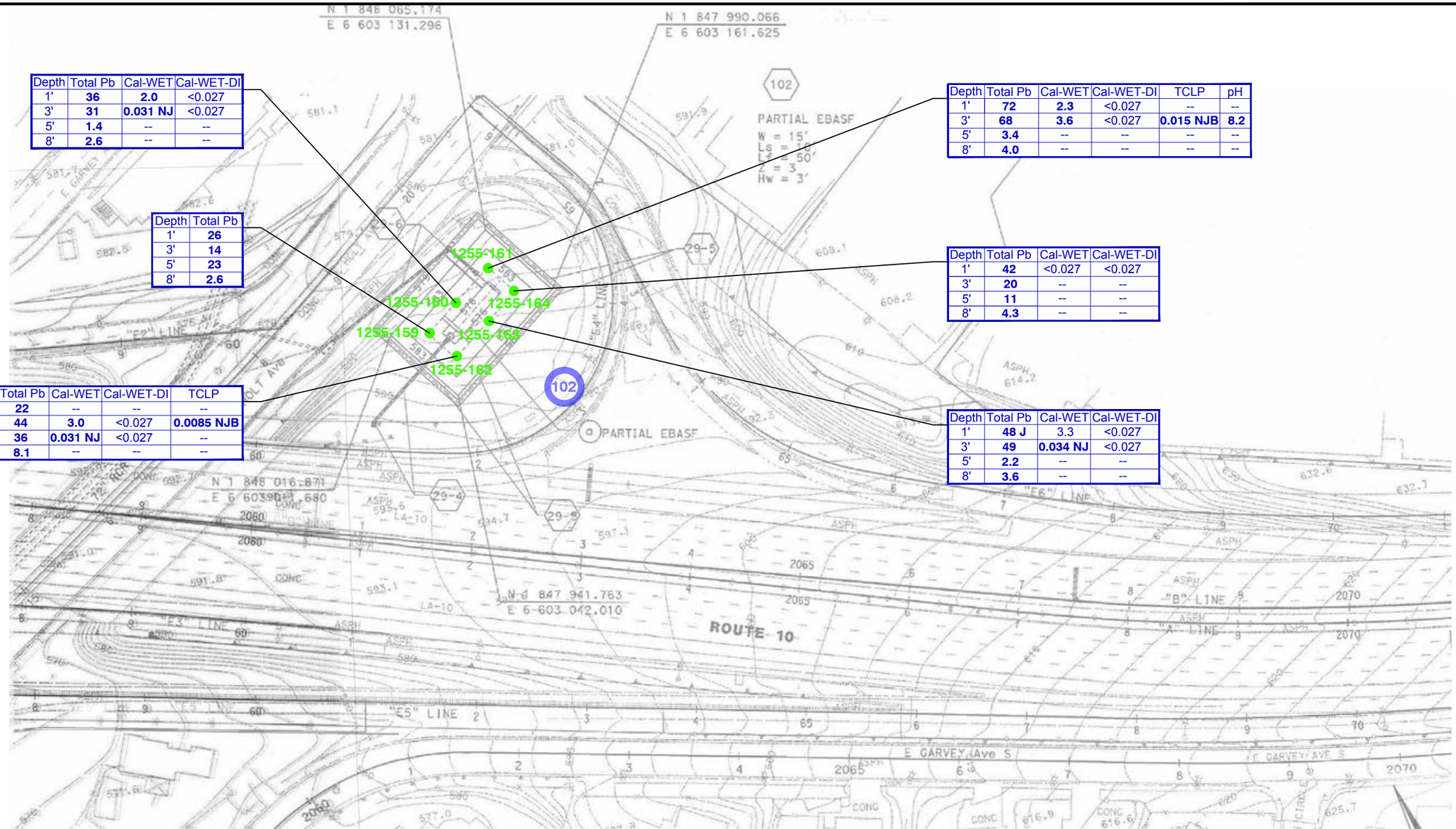
FOR: ADL SITE INVESTIGATION
Caltrans Contract #07A3321
Task Order No. 13
LA-010-37.2/ 42.4
Los Angeles County
PN: 0713000007-1; EA:1193U1

SAMPLE LOCATION MAP

FIGURE: 5

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185831013	STA	AP	KM	11/18/14

FILEPATH:M:_00 OTHER OFFICES\04-REDLANDS\CAL-TRANS\ADL\TO-13B\FIG 5_TO13_HOLT ST.dwg|saguinaldo|Dec 03, 2014 at 21:05|Layout: HOLT ST



Depth	Total Pb	Cal-WET	Cal-WET-DI
1'	**36**	**2.0**	<0.027
3'	**31**	**0.031 NJ**	<0.027
5'	**1.4**	--	--
8'	**2.6**	--	--

Depth	Total Pb
1'	**26**
3'	**14**
5'	**23**
8'	**2.6**

Depth	Total Pb	Cal-WET	Cal-WET-DI	TCLP
1'	**22**	--	--	--
3'	**44**	**3.0**	<0.027	**0.0085 NJB**
5'	**36**	**0.031 NJ**	<0.027	--
8'	**8.1**	--	--	--

Depth	Total Pb	Cal-WET	Cal-WET-DI	TCLP	pH
1'	**72**	**2.3**	<0.027	--	--
3'	**68**	**3.6**	<0.027	**0.015 NJB**	**8.2**
5'	**3.4**	--	--	--	--
8'	**4.0**	--	--	--	--

Depth	Total Pb	Cal-WET	Cal-WET-DI
1'	**42**	<0.027	<0.027
3'	**20**	--	--
5'	**11**	--	--
8'	**4.3**	--	--

Depth	Total Pb	Cal-WET	Cal-WET-DI
1'	**48 J**	3.3	<0.027
3'	**49**	**0.034 NJ**	<0.027
5'	**2.2**	--	--
8'	**3.6**	--	--

LEGEND:

1255-159 ●	BORING LOCATION
Total Pb	TOTAL LEAD IN MILLIGRAMS PER KILOGRAM (mg/kg)
Cal-WET	SOLUBLE LEAD BY CAL-WET CITRIC IN MILLIGRAMS PER LITER (mg/L)
TCLP	SOLUBLE LEAD TOXICITY CHARACTERISTIC LEACHING PROCEDURE (mg/L)
<	ANALYTE NOT REPORTED AT OR ABOVE STATED LABORATORY METHOD DETECTION LIMIT (MDL)
--	NOT ANALYZED
J	CONCENTRATION IS REPORTED BETWEEN THE PRACTICAL QUANTITATION LIMIT AND THE MDL
B	THE ANALYTE WAS DETECTED IN THE METHOD, FIELD AND/OR TRIP BLANK
NJ	THE ANALYSIS INDICATES THE PRESENCE OF AN ANALYTE THAT HAS BEEN "TENTATIVELY IDENTIFIED" AND THE ASSOCIATED NUMERICAL VALUE REPRESENTS ITS APPROXIMATE CONCENTRATION
99	DRAINAGE SYSTEM LOCATION

0 100 200

APPROXIMATE SCALE (FEET)

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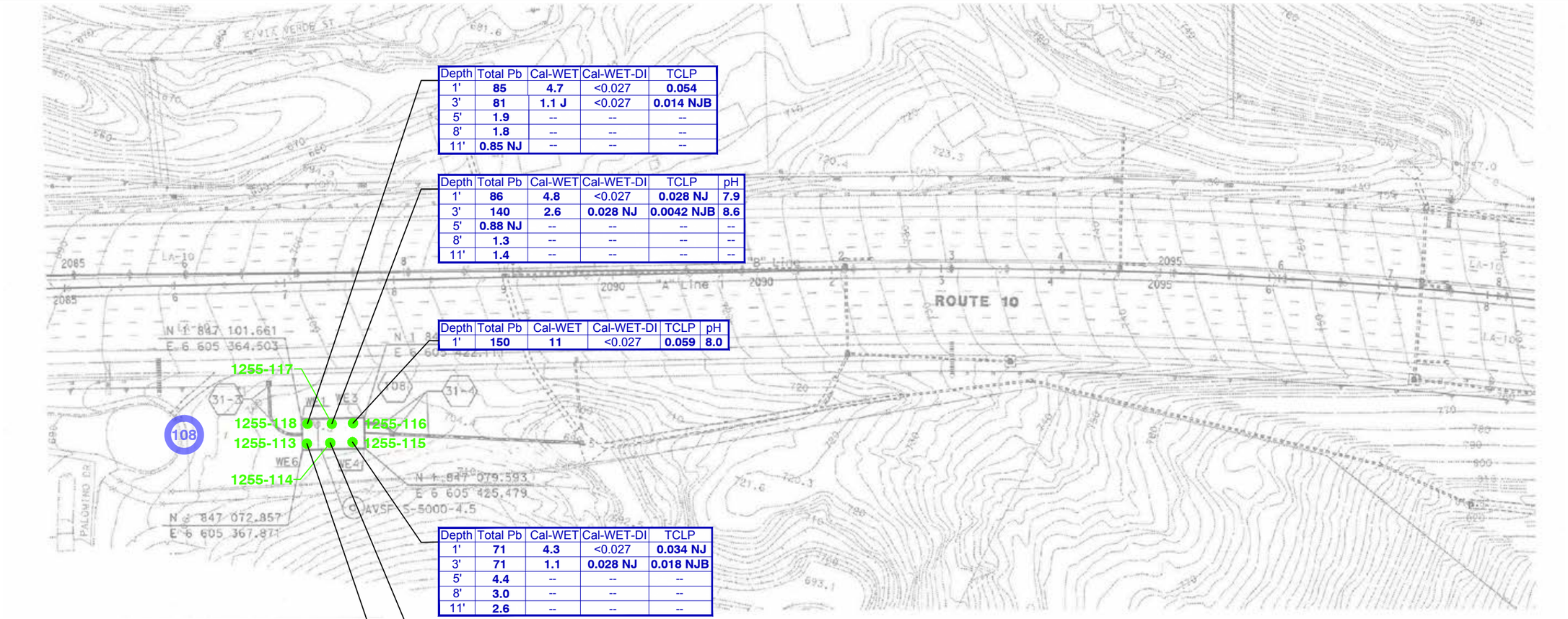
FOR: ADL SITE INVESTIGATION
Caltrans Contract #07A3321
Task Order No. 13
LA-010-37.2/ 42.4
Los Angeles County
PN: 0713000007-1; EA:1193U1

SAMPLE LOCATION MAP

FIGURE: 6

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185831013	STA	AP	KM	11/18/14

FILEPATH:M:_00 OTHER OFFICES\04-REDLANDS\CAL-TRANS\ADL\TO-13B\FIG 6_TO13_HOLT ST.dwg|saguinaldo|Dec 03, 2014 at 21:56|Layout: HOLT ST



Depth	Total Pb	Cal-WET	Cal-WET-DI	TCLP
1'	**85**	**4.7**	<0.027	**0.054**
3'	**81**	**1.1 J**	<0.027	**0.014 NJB**
5'	**1.9**	--	--	--
8'	**1.8**	--	--	--
11'	**0.85 NJ**	--	--	--

Depth	Total Pb	Cal-WET	Cal-WET-DI	TCLP	pH
1'	**86**	**4.8**	<0.027	**0.028 NJ**	**7.9**
3'	**140**	**2.6**	**0.028 NJ**	**0.0042 NJB**	**8.6**
5'	**0.88 NJ**	--	--	--	--
8'	**1.3**	--	--	--	--
11'	**1.4**	--	--	--	--

Depth	Total Pb	Cal-WET	Cal-WET-DI	TCLP	pH
1'	**150**	**11**	<0.027	**0.059**	**8.0**

Depth	Total Pb	Cal-WET	Cal-WET-DI	TCLP
1'	**71**	**4.3**	<0.027	**0.034 NJ**
3'	**71**	**1.1**	**0.028 NJ**	**0.018 NJB**
5'	**4.4**	--	--	--
8'	**3.0**	--	--	--
11'	**2.6**	--	--	--

Depth	Total Pb	Cal-WET	Cal-WET-DI	TCLP	pH
1'	**310**	**23**	**0.038 NJ**	**0.71**	**8.2**
3'	**2.9**	--	--	--	--
5'	**3.6**	--	--	--	--
8'	**3.6**	--	--	--	--
11'	<0.07	--	--	--	--

Depth	Total Pb	Cal-WET	Cal-WET-DI	TCLP	pH
1'	**170**	**13**	<0.027	**0.11**	**8.1**
3'	**99**	**8.3**	<0.027	--	**8.7**

LEGEND:

1255-113 ●	BORING LOCATION
Total Pb	TOTAL LEAD IN MILLIGRAMS PER KILOGRAM (mg/kg)
Cal-WET	SOLUBLE LEAD BY CAL-WET CITRIC IN MILLIGRAMS PER LITER (mg/L)
TCLP	SOLUBLE LEAD TOXICITY CHARACTERISTIC LEACHING PROCEDURE (mg/L)
<	ANALYTE NOT REPORTED AT OR ABOVE STATED LABORATORY METHOD DETECTION LIMIT (MDL)
--	NOT ANALYZED
J	CONCENTRATION IS REPORTED BETWEEN THE PRACTICAL QUANTITATION LIMIT AND THE MDL
B	THE ANALYTE WAS DETECTED IN THE METHOD, FIELD AND/OR TRIP BLANK
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99	DRAINAGE SYSTEM LOCATION

N

0 100 200

APPROXIMATE SCALE (FEET)

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REDLANDS, CALIFORNIA 92374
PHONE:(909) 335-6116 FAX:(909) 335-6120

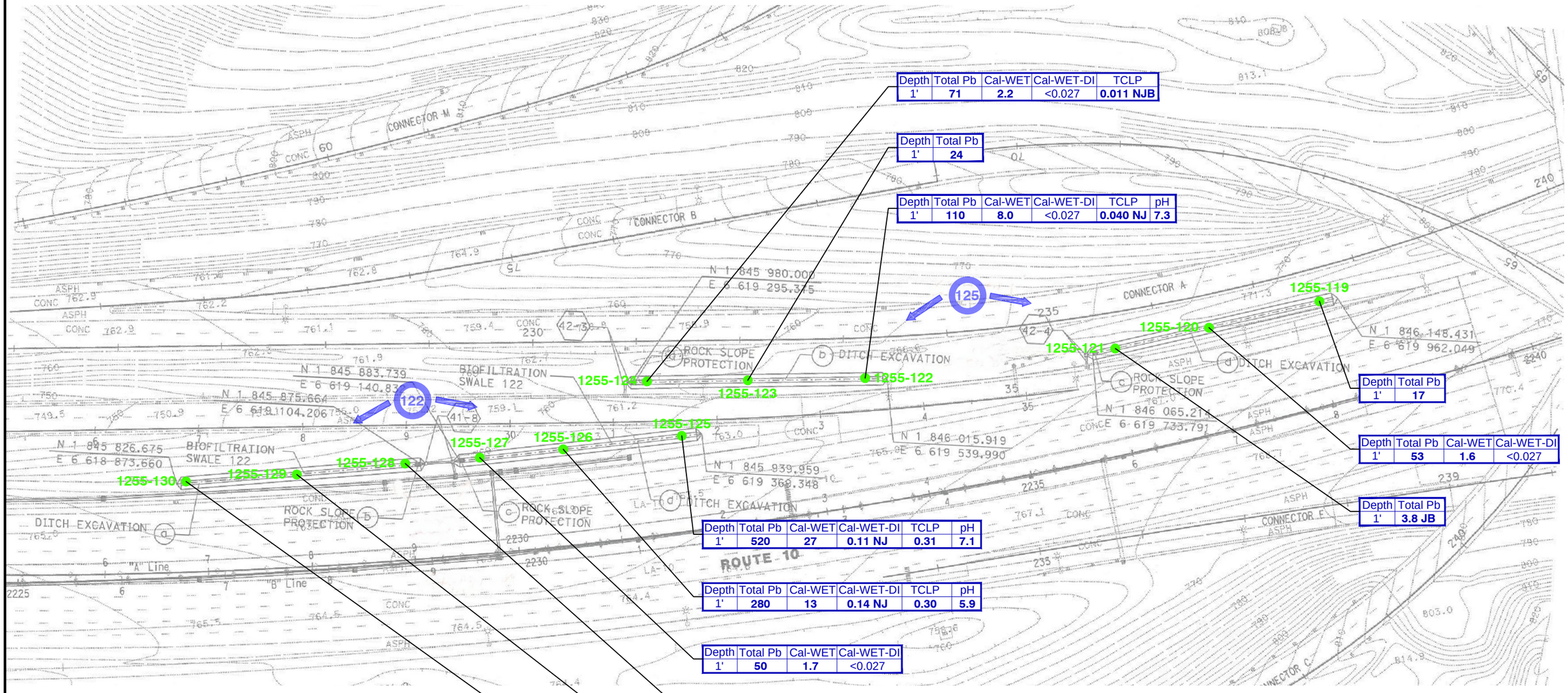
FOR: ADL SITE INVESTIGATION
Caltrans Contract #07A3321
Task Order No. 13
LA-010-37.2/ 42.4
Los Angeles County
PN: 0713000007-1; EA:1193U1

SAMPLE LOCATION MAP

FIGURE: 7

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185831013	STA	AP	KM	11/18/14

FILEPATH:M:_00 OTHER OFFICES\04-REDLANDS\CAL-TRANS\ADL\TO-13B\FIG 6_TO13_HOLT ST.dwg|saguinaldo|Jan 09, 2015 at 13:24|Layout: GARVEY ST



Depth	Total Pb	Cal-WET	Cal-WET-DI	TCLP
1'	**71**	**2.2**	<0.027	**0.011 NJB**

Depth	Total Pb
1'	**24**

Depth	Total Pb	Cal-WET	Cal-WET-DI	TCLP	pH
1'	**110**	**8.0**	<0.027	**0.040 NJ**	**7.3**

Depth	Total Pb
1'	**17**

Depth	Total Pb	Cal-WET	Cal-WET-DI
1'	**53**	**1.6**	<0.027

Depth	Total Pb
1'	**3.8 JB**

Depth	Total Pb	Cal-WET	Cal-WET-DI	TCLP	pH
1'	**520**	**27**	**0.11 NJ**	**0.31**	**7.1**

Depth	Total Pb	Cal-WET	Cal-WET-DI	TCLP	pH
1'	**280**	**13**	**0.14 NJ**	**0.30**	**5.9**

Depth	Total Pb	Cal-WET	Cal-WET-DI
1'	**50**	**1.7**	<0.027

Depth	Total Pb	Cal-WET	Cal-WET-DI	TCLP	pH
1'	**170**	**9.6**	**0.074 NJ**	**0.080**	**6.6**

Depth	Total Pb	Cal-WET	Cal-WET-DI	TCLP	pH
1'	**220 J**	**12**	**0.067 NJ**	**0.34**	**8.0**

Depth	Total Pb	Cal-WET	Cal-WET-DI	TCLP	pH
1'	**100**	**5.2**	<0.027	**0.049 NJ**	**7.5**

LEGEND:

1255-119 ●	BORING LOCATION
Total Pb	TOTAL LEAD IN MILLIGRAMS PER KILOGRAM (mg/kg)
Cal-WET	SOLUBLE LEAD BY CAL-WET CITRIC IN MILLIGRAMS PER LITER (mg/L)
TCLP	SOLUBLE LEAD TOXICITY CHARACTERISTIC LEACHING PROCEDURE (mg/L)
<	ANALYTE NOT REPORTED AT OR ABOVE STATED LABORATORY METHOD DETECTION LIMIT (MDL)
--	NOT ANALYZED
J	CONCENTRATION IS REPORTED BETWEEN THE PRACTICAL QUANTITATION LIMIT AND THE MDL
B	THE ANALYTE WAS DETECTED IN THE METHOD, FIELD AND/OR TRIP BLANK
NJ	THE ANALYSIS INDICATES THE PRESENCE OF AN ANALYTE THAT HAS BEEN "TENTATIVELY IDENTIFIED" AND THE ASSOCIATED NUMERICAL VALUE REPRESENTS ITS APPROXIMATE CONCENTRATION
99	DRAINAGE SYSTEM LOCATION

N

0 100 200

APPROXIMATE SCALE (FEET)

Stantec
25864-F BUSINESS CENTER DRIVE
REDLANDS, CALIFORNIA 92374
PHONE: (909) 335-6116 FAX: (909) 335-6120

FOR: ADL SITE INVESTIGATION
Caltrans Contract #07A3321
Task Order No. 13
LA-010-37.2/ 42.4
Los Angeles County
PN: 0713000007-1; EA:1193U1

SAMPLE LOCATION MAP

FIGURE: 8

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185831013	STA	AP	KM	11/18/14

FILEPATH:M:_00 OTHER OFFICES\04-REDLANDS\CAL-TRANS\ADL\TO-13B\FIG 6_TO13_HOLT ST.dwg|saguinaldo|Dec 03, 2014 at 22:49|Layout: KELLOGG ST

APPENDIX A
HASP AND FIELD FORMS

SITE-SPECIFIC HEALTH AND SAFETY PLAN (HASP)
TASK ORDER NO. 13 – ADL INVESTIGATION AND ASBESTOS SURVEY - LA-010

07A3321-13
Asbestos Containing Materials Survey for Bridge Demolishing; Aerially Deposited Lead Investigation for Pollution Control System Construction (5 bridges).
Location:LA-010-37.2/42.4
Los Angeles County, California
PN: 0713000007-1
EA: 1193U1

Prepared for:
The State of California, Department of Transportation
District 7 - North
Los Angeles, California
Contract # 07A3321

Submitted by:
Stantec Consulting Services Inc.
25864-F Business Center Dr.
Redlands, CA 92374

October 17, 2014

Stantec

Purpose and Approval

Our work can be hazardous, and it is imperative that we never forget that! It is the purpose of this Health and Safety Plan (HASP) to proactively aid Stantec employees in:

- Identifying and understanding the potential risks/hazards they may encounter at the site.
- Mitigating those potential risks/hazards.

Stantec's policy is to complete our work on this site without any type of incident (injury, illness, impact to the environment, impact to property and equipment). In order to achieve this goal, the project team will work together to perform an effective hazard assessment. The team will then establish appropriate precautions and communicate these daily among project staff. Staff will be responsible for communicating changing field conditions to the project management so these conditions and appropriate precautions may be re-evaluated as needed. Staff will implement **STOP WORK AUTHORITY** at any time they believe that conditions may be inherently unsafe or might cause damage to property or harm to the environment. Staff may refuse to participate in work they believe will be unsafe. If it is believed that such conditions exist, staff will communicate immediately with the Project Manager to resolve the situation. We expect all subcontractors and project personnel to share this goal.

Client: The State of California, Department of Transportation – 07A3321

Site Name: ACM Survey for Bridge Demolishing; ADL Investigation for Pollution Control System Construction (5 bridges), Location: LA-010-37.2/42.4

Project Name: TASK ORDER NO. 15 – ACM SURVEY

Project Number: 185831013

Start Date: October 17, 2014

End Date: November 30, 2014

Plan Review Date*: March 30, 2015

(*The Plan Review Date is the date the HASP would need to be re-reviewed to maintain current information is included should the Task Order be extended. The Plan Review date is *no longer than 6 months from the start of the Period of Performance – however, no reviews will be performed on the HASP outside of the Task Order Period of Performance.*).

Kevin Miskin Project Manager	Signature: Kevin Kay Miskin	Date: 10/20/2014
Dan Feldt, MPH, CIH Health and Safety Manager, Certified Industrial Hygienist (CIH) HASP review	Signature: D. G. Feldt	Date: 10/17/14
Monica L. Aragon Office Safety Environmental Coordinator (OSEC)	Signature:	Date: 10/17/2014
Jason Stagno Site Health and Safety Officer (SHSO)	Signature:	Date:
Anne Perez Peer Reviewer	Signature:	Date: 10/20/14
Monica L. Aragon HASP Originator	Signature:	Date: 10/17/14

THE AMERICAN BOARD OF INDUSTRIAL HYGIENE INCORPORATED
CERTIFICATION NUMBER 3741 CP
EXPIRES 6-1-2015
PENNSYLVANIA
DANIEL G. FELDT, CIH

The health and safety guidelines in this HASP were prepared exclusively for this site. This HASP will be amended (with changes recorded on the Health and Safety Plan Modification Log located

Stantec

Purpose and Approval

Our work can be hazardous, and it is imperative that we never forget that! It is the purpose of this Health and Safety Plan (HASP) to proactively aid Stantec employees in:

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Client: The State of California, Department of Transportation – 07A3321

Site Name: ACM Survey for Bridge Demolishing; ADL Investigation for Pollution Control System Construction (5 bridges), Location: LA-010-37.2/42.4

Project Name: TASK ORDER NO. 13 – ADL INVESTIGATION AND ACM SURVEY

Project Number: 185831013

Start Date: October 17, 2014

End Date: November 30, 2014

Plan Review Date*: March 30, 2015

(*The Plan Review Date is the date the HASP would need to be re-reviewed to maintain current information is included should the Task Order be extended. The Plan Review date is *no longer than 6 months from the start of the Period of Performance – however, no reviews will be performed on the HASP outside of the Task Order Period of Performance.*).

Kevin Miskin Project Manager	Signature:_____	Date:_____
Dan Feldt, MPH, CIH Health and Safety Manager, Certified Industrial Hygienist (CIH) HASP review	Signature:_____	Date:_____
Monica L. Aragon Office Safety Environmental Coordinator (OSEC)	Signature:	Date:10/17/2014
Jason Stagno Site Health and Safety Officer (SHSO)	Signature:	Date: 10.20.14
Anne Perez Peer Reviewer	Signature: for A. Perez	Date: 10.20.14
Monica L. Aragon HASP Originator	Signature:	Date:10/17/14

Stantec

Melissa Baernstein ADL Site Health and Safety Officer (SHSO)	Signature: Melissa Baernstein	Date: 10/20/2014
Joshua Sargent ADL Site Health and Safety Officer (SHSO)	Signature: Joshua Sargent	Date: 10.20.2014

The health and safety guidelines in this HASP were prepared exclusively for this site. This HASP will be amended (with changes recorded on the Health and Safety Plan Modification Log located in Attachment A) if site conditions, scope of work, training dates, personnel, or other critical items change before the scheduled HASP review date above. This HASP is intended to be available on site. Contents of this binder are listed in Attachment 1. Elements of the HASP shall be reviewed during daily tailgate meetings conducted by the Site Health & Safety Officer.

Stantec

Acknowledgement and Agreement Form

"Zero Tolerance for Incidents of ANY Kind.
Work Together to Ensure a SAFE and High Quality Project"

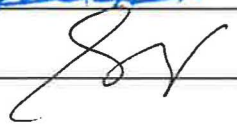
All parties conducting site activities are required to coordinate their activities and practices with the Stantec Site Health and Safety Officer (SHSO). Stantec has provided a copy of this HASP to site contractors in the interest of disclosure of potential risks/hazards of which Stantec may be aware. Similarly, contractors shall inform Stantec of any potential site risks/hazards of which they are aware including the contractor's work, equipment, procedures and chemicals.

This HASP has been developed for the purpose of proactively aiding Stantec employees in identifying, understanding, and mitigating the potential risks/hazards they are may encounter at the site. This HASP may also be used as a reference document by properly trained and experienced Stantec subcontractors and clients. However, sub-contractors and other contractors at the site must develop their own HASP to address the potential risks/hazards faced by their own employees.

This HASP should NOT be understood by contractors or anyone other than Stantec employees to provide information on all of the potential risks/hazards to which they may be exposed as a result of their work. Stantec claims no responsibility for use of this HASP by others.

Your signature below confirms the following: that you have read and understand the potential risks/hazards identified by Stantec and the associated mitigation measures discussed in this HASP; that there may be additional risks or hazards that are not identified in this HASP; that you have received training and medical surveillance according to this HASP and the OSHA Standard on Hazardous Waste Operations and Emergency Response (29 CFR 1910.120); and that you understand that you could be prohibited by the Stantec Site Health and Safety Officer or other authorized Stantec personnel from working on this project for not complying with any aspect of this or any other applicable HASP.

(All Stantec and subcontractor personnel must sign.)

Name	Signature	Company	Date
Jason Stagno		Stantec	10.20.14
Keith Poseklan		STANTEC	10/20/14
SAM YOUNG		ST.	10/20/14

Stantec

The health and safety guidelines in this HASP were prepared exclusively for this site. This HASP will be amended (with changes recorded on the Health and Safety Plan Modification Log located in Attachment A) if site conditions, scope of work, training dates, personnel, or other critical items change before the scheduled HASP review date above. This HASP is intended to be available on site. Contents of this binder are listed in Attachment 1. Elements of the HASP shall be reviewed during daily tailgate meetings conducted by the Site Health & Safety Officer.

Stantec

Acknowledgement and Agreement Form, cont.

Name	Signature	Company	Date

Stantec

TABLE OF CONTENTS

1.0 EMERGENCY RESPONSE 1.1

2.0 PROJECT TEAM INFORMATION 2.1

3.0 SCOPE OF WORK 3.2

4.0 SITE BACKGROUND AND POTENTIAL HAZARDS 4.1

5.0 JOURNEY MANAGEMENT PLAN 5.1

ATTACHMENTS

Attachment A General Safety Information (for all Sites)
Attachment B Training Certificates
Attachment 1 Stantec Field Binder Checklist and Project Applicable Forms
Attachment 2 Job Safety Analyses
Attachment 3 RMS-2 Fit for Duty
Attachment 4 Driver's Fatigue Checklist /Safe Driving Vehicle Pre-Use Checklist
Attachment 5 Journey Management Plan
Attachment 6 RMS-3 incident/Near Miss Investigation and Collision Kit

Stantec

1.0 Emergency Response

PHONE NUMBERS

The nearest telephone is: Jason Stagno (Stantec) (805) 630-8648 cell. There is no landline available for this project and cell phone and cell phone reception may be intermittent. Additional personnel, including the SHSO, who may be on-site are listed below:

1. Dion Monge (Field Staff) 909-556-6516 (cell phone)
2. Melissa Baernstein 909-362-3942 (cell phone)
3. Josh Sargent 909-289-7111 (cell phone)
4. Mike Clayton 760-995-6432 (cell phone)

Emergency Response			
Name		**Telephone**	**Verification**
Hospitals	East Valley Hospital Medical Center 150 W Rte 66, Glendora, CA	911 or Non-emergency 626-852-5000	10/17/2014
Ambulance	Cole Schaefer Ambulance Service 324 N Towne Ave, Pomona, CA	**911** or Non-emergency 800-966-4727	10/17/2014
Police		**911** or Non-emergency	10/17/2014
	Upland Police Department 1499 W 13th St, Upland, CA	909-946-7624	
	Ontario Police Department 2500 S Archibald Ave, Ontario, CA	909-395-2001	
	Montclair Police Department 4870 Arrow Hwy, Montclair, CA	909-448-3600	
	Pomona Police Chief 490 W Mission Blvd, Pomona, CA	909-620-2155	
	California Highway Patrol 14039 Francisquito Avenue, Baldwin Park, CA	626-338-1164	

Fire Department	San Bernardino County Fire Department 15380 San Bernardino Ave, Fontana, CA Ontario Fire Department 425 E B St, Ontario, CA Upland Fire Department 475 N 2nd Ave, Upland, CA Los Angeles County Fire Dept Station 182 1059 N White Ave, Pomona, CA	**911** or Non-emergency 909-829-4441 909-395-2002 909-931-4180 909-620-2202	10/17/2014
Spill Response	Belshire Environmental	(800)-995-8220	10/17/2014
Environmental Response	National Response Center (24-hour hotline)	(800) 424-8802	10/17/2014
Environmental Protection	US Environmental Protection Agency (24-hour hotline)	(800) 424-9346	10/17/2014
Emergency Services	Office of Emergency Services (24-hour hotline)	(800) 852-7550	10/17/2014
Poison Control	California/U.S. National Poison Control Center (24-hour hotline)	(800) 222-1222	10/17/2014
Agency / Line Locator			
National Line Locator	National 811 Call-Before-You-Dig Hotline (24-hour hotline)	811	10/17/2014
Public Utility Locator	DIG ALERT	811	10/17/2014

Local office and additional contacts in case of an emergency or field questions regarding the Site:

1. **Kevin Miskin (Contract Manager) at 909-224-3406**
2. **Anne Perez (TO Support) at 951-288-2444**

Flow charts for contacting additional departments in Stantec and official reporting protocol can be found in Section 1.4 of Attachment A.

Stantec

2.0 Project Team Information

Project Team Phone Numbers			
Project Role/Name		**Telephone**	**Verification**
Stantec Project/Contract Manager	Kevin Miskin	909-224-3406 (cell) 909-255-8210 (office)	10/17/2014
Field Staff #1:Stantec Site Health and Safety Officer (SHSO),Cal-Certified Asbestos Consultant	Jason Stagno	805-630-8648	10/17/2014
Field Staff #2:Stantec Project Staff, Cal-Certified Asbestos Consultant	Dion Monge	909-556-6516	10/17/2014
Field Staff #3: Stantec Project Staff	Melissa Baernstein	909-362-3942	10/17/2014
Field Staff #4: Stantec Project Staff	Josh Sargent	661-754-0863	10/17/2014
Field Staff #5: Stantec Project Staff	Mike Clayton	760-995-6432	10/17/2014
Stantec Business Unit Leader	Kyle Emerson	951-315-0534 (cell) 909-335-6116 (office)	10/17/2014
Senior Certified Industrial Hygienist (CIH)	Dan Feldt	414-305-1984	10/17/2014
Stantec West Region Health, Safety, Environment (HSE) Coordinator	Clint Reuter	818.395.8556 Cell 949.923.6258 Office	10/17/2014
Stantec Human Resources Representative	Peggy Ramos	949-923-6061	10/17/2014
OSEC (Stantec Office Safety & Environmental Coordinator)	Monica L. Aragon	714-471-5711	10/17/2014

(Note: The Field Staff will be on-Site. All others are Stantec employees supporting all Stantec staff and not necessarily charging time to the Task Order.)

TRAINING

Site personnel will be trained and certified in hazardous waste operations and emergency response as follows:

- 40-Hour HAZWOPER Training;
- OSHA Respiratory Protection (29 CFR 1910.134)
- Annual 8-Hour Refresher (29 CFR 1910.120€(8));
- First Aid/CPR Training;
- Physical examination consistent with 29 Code of Federal Regulations (CFR) 1910.120 (and 8 California Code of Regulations (CCR) 5192, if applicable);
- Supervisory 8-hour Training (29 CFR 1910.120€(4)) for the Site Manager/SHSO; and
- Additional training specific to the job being performed (e.g., Fall Protection, Lock Out/Tag Out, Hot Work, Confined Space, etc.).

In addition to the above-mentioned trainings, Stantec personnel are required to have training in a behavior-based safety program and defensive driving. Fit tests are also required for respirator use.

Client-Specific Safety Procedures:
Caltrans does not have any additional required safety programming or expectations, thus Stantec staff will comply with state, federal and local regulations, and Stantec policies, procedures and expectations.

Site specific staff safety training certification information is listed on the following page.

SITE SPECIFIC STAFF TRAINING
(Includes personnel that could potentially visit the Site)

Name	40Hr HAZWOPER	8Hr HAZWOPER Refresher	CPR / First Aid	Annual Physical	Defensive Driver Training	Respirator Fit Test
FIELD STAFF: Dion Monge	02/11/2005	05/28/2014	11/8/2013	11/8/2013	03/28/2013	03/28/13
FIELD STAFF: Melissa Baernstein	08/25/05	5/28/2014	11/8/2013	10/7/2013	10/07/13	3/1/2013
FIELD STAFF: Jason Stagno	07/07/2004	09/07/2014	6/14/2013	12/12/2013	09/06/2012	12/12/2013
FIELD STAFF: Josh Sargent	6/12/2012	9/19/2014	11/8/2013	8/20/2013	--	8/20/2013
Anne Perez	10/13/2002	05/01/2013	11/8/2013	03/05/13	12/16/2010	3/22/2013
Kevin Miskin	08/24/1991	06/01/2013	11/8/2013	03/21/13	12/23/2010	3/19/2013
List Staff Changes/Additions Below						
OSEC: Monica L. Aragon	08/28/00	08/09/2014	01/30/14	03/28/14	05/21/12	03/08/12
FIELD STAFF: Mike Clayton	1/26/2006	4/11/2014	2/24/2012	3/20/2014	5/6/2012	3/20/2014

Copies of the OSHA 8-Hour Refresher Certificates are included in Attachment B.

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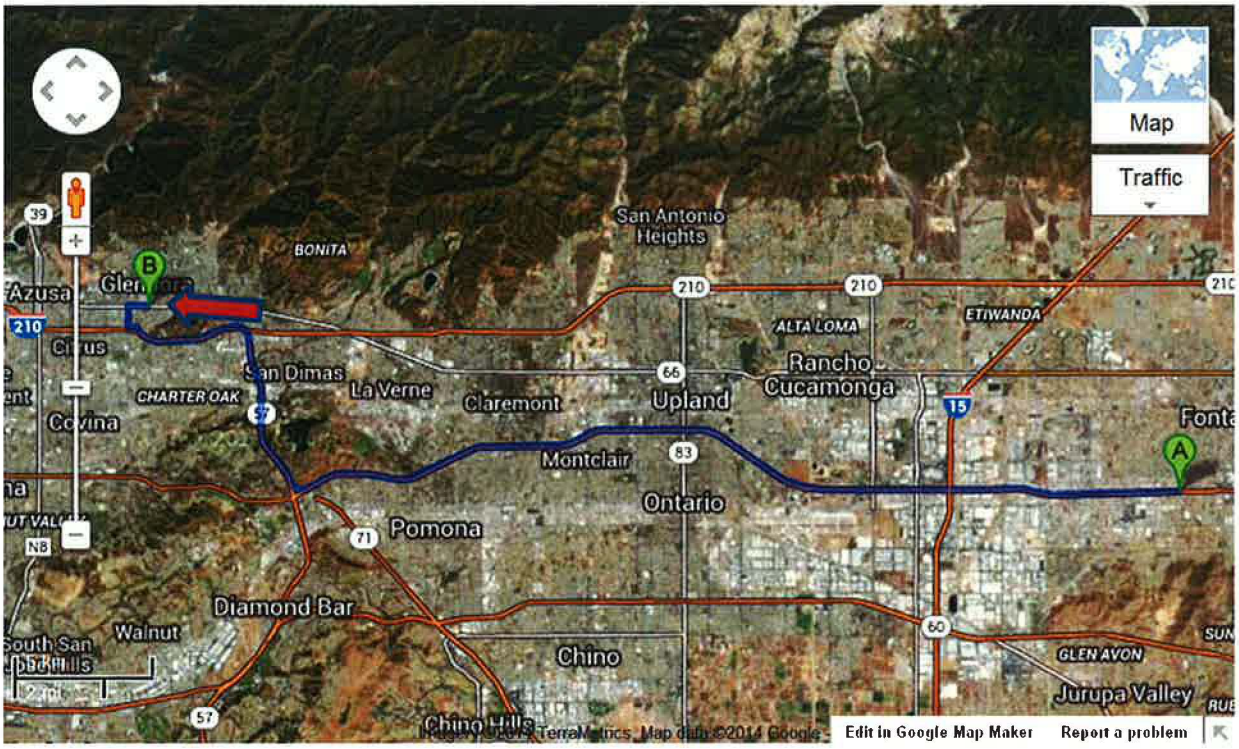
DIRECTIONS AND MAP TO THE HOSPITAL

The SHSO will verify and validate the route to the hospital by driving it before work begins.

SR-10 –



I-10 W

1.	Head **west** on **I-10 W** About 18 mins	go 20.4 mi total 20.4 mi
2.	Take the **CA-57 N/CA-57 S** exit toward **Santa Ana/Interstate 210 Fwy**	go 0.2 mi total 20.6 mi
3.	Keep right at the fork, follow signs for **CA-57 N/Interstate 210 Fwy** and merge onto **CA-57 N** About 4 mins	go 3.9 mi total 24.5 mi
4.	Take the exit on the left onto **I-210 W/Foothill Fwy** toward **Pasadena** About 3 mins	go 2.7 mi total 27.2 mi
5.	Take the exit toward **Grand Ave/Glendora**	go 0.3 mi total 27.5 mi
6.	Turn left onto **W Baseline Rd**	go 0.2 mi total 27.7 mi
7.	Take the 1st right onto **S Grand Ave** About 1 min	go 0.5 mi total 28.2 mi
8.	Turn right onto **W Rte 66** Destination will be on the right About 52 secs	go 0.4 mi total 28.6 mi

East Valley Hospital Medical Center
150 W Rte 66, Glendora, CA 91740, United States

3.0 Scope of Work

The scope of this project is described in the Aerially Deposited Lead Investigation and Asbestos Surveys Proposal, dated October 17, 2014. There are 5 bridges included in this project. The field activities are summarized below

ADL Survey

To support the ADL survey, soil samples will be collected from hand auger borings at depth discrete intervals not to exceed fifteen (15) feet below the ground surface (bgs) for laboratory analysis. According to the Task Order No. 13 request, there are three proposed drainage system areas that require deeper borings (to depths of 8, 11, and 15 feet bgs). The deeper borings will be attempted with a hand auger and will be advanced to the target depth or until refusal, whichever occurs first. Excess soil removed during this investigation will be placed back into the boring. This proposed scope of work is intended to evaluate whether excavated soil generated during the proposed construction activities will result in the need for special handling or disposal (as defined by Title 22 of the California Code of Regulations) with respect to ADL impacted soil.

Task No. 2 - Field Investigations

ADL

As directed in the Task Order No. 13 request, Stantec proposes to advance up to sixty four (64) borings, spread out across the thirteen (13) discontinuous areas outlined on the attached Table. The number of samples collected at each boring varies, as outlined on the attached Table, but falls between one (1) to five (5) samples collected from depths ranging from one (1) foot to 15 feet bgs.

- Approximately 142 samples will be collected and analyzed at a stationary laboratory. The data will be used to evaluate soil characteristics for handling and disposal. No borings will be advanced outside of the existing right of way or in existing paved areas.
- ADL samples will be collected directly from the hand auger bailer, discharged to a clean ziplock one (1) gallon bag, manually homogenized, then discharged to eight-ounce laboratory certified clean glass jars. All soil sampling equipment will be decontaminated before advancing at each boring location using the three bucket system. Each sample will be labeled with a unique sample identification along with the borehole ID, sample depth, sample date, and sample time. All samples will be annotated on chain-of-custody forms and delivered to a laboratory certified by the California Department of Health Services Environmental Laboratory Accreditation Program for the analyses indicated herein.
- Survey boring locations using a handheld Trimble GPS unit (during augering activities).
- All samples will be analyzed for:
    - Total Lead by EPA Test Method 6010.
- Select samples will be analyzed for
    - Soluble lead using the CalWET method using deionized water (DI) as the extractant - when the CalWET-citric concentration is greater than the Soluble Threshold Limit Concentration (STLC) of 5.0 mg/L.
    - Soluble lead using the Toxicity Characteristic Leaching Procedure (TCLP) by EPA Method 1311 – performed on all samples reporting total lead concentrations of 1,000 mg/kg or higher, or the 28 samples reporting the highest total lead concentrations.
    - Title 22 Metals – the ten (10) samples reporting the highest total lead concentrations will be analyzed for Title 22 metals.
    - pH using EPA Test Method 9045 - the ten (14) samples reporting the highest total lead concentrations will be analyzed for pH.
    - The following QA/QC samples will be collected:

- The following QA/QC samples will be collected:
  - Equipment Blanks: As directed in the task order request, equipment (decontamination) blank samples, one for every chain of custody (approximately 4 total), will be analyzed for Title 22 metals.
  - Trip Blanks: trip blank samples are not required for this investigation because no samples are being analyzed for volatile organic compounds.

ACM Survey

As part of the asbestos surveys, Stantec will conduct an inspection of the *accessible* portions of each bridge to evaluate whether suspect ACMs are present in accessible construction materials. Representative bulk material samples will be collected from homogeneous suspect ACM materials, which may include felt, asphalt, concrete, conduit, drainage piping, and shims, if present. A homogeneous area is defined as an area where the suspect material is uniform in texture and color and appears to be identical in every respect. Stantec will use the Asbestos Hazard Emergency Response Act (AHERA) sampling guidelines, as outlined in 40 CFR 763 to determine the number of asbestos containing material (ACM) samples required to be collected from each suspect homogeneous area as identified in the following table. A summary table of AHERA guidelines is presented below.

AHERA SAMPLE CRITERIA	
Type of Homogeneous Material	***EPA Required Number of Samples***
Surfacing: Less than 1,000 sq. ft. Surfacing: 1000 – 5000 sq. ft. Surfacing: Greater than 5000 sq. ft	3 5 7
Thermal System Insulation	3 samples per homogeneous material
Miscellaneous Materials	Discretion of the Building Inspector

Stantec's sampling is destructive in nature and small pieces of structural materials will be collected for laboratory analysis. Stantec will not replace or repair these materials. However, the removal of small pieces of structural materials does not typically compromise structural integrity.

Stantec assumes the following:

- Stantec will conduct all sampling from accessible locations on bridge deck shoulders and abutments.
- Lane closures, mechanical lifts and ladders will not be required to access potential ACMs.
- The highway bridge center divider will only be sampled if the sampling crew(s) can safely park their vehicle in the center median providing for safe access.
- Shim counts will be estimated, based on the number of guardrail posts, when located on inaccessible bridge railings.
- Recommendations for suspect ACMs that are not readily accessible will be based on the results of samples collected from similar accessible materials.
- No Global Positioning System (GPS) coordinates will be obtained for ACM sampling locations. Many times the locations are located in places on the bridges where satellite coverage is limited and readings cannot be obtained.
- Should lane closures be required to conduct the work safely, Stantec will provide adequate traffic control as needed. Lane closures and traffic control requirements shall comply with Contract

Agreement 07A3321 and Caltrans 2010 Revised Standard Plans. Stantec will also obtain approval and schedule from Caltrans traffic Management Center (TMC), for the lane closures prior to the start of work.

Stantec estimates that approximately 125 total ACM samples will be collected from each of the five (5) bridges.

The scope of work for the ADL investigation will be conducted by a three-person team and the ACM survey will be conducted by one two 2-person team. Both teams will conduct their respective sampling at different locations simultaneously. A buddy system will be implemented during the sampling activities as a secondary measure for protection against traffic, where the second person will be observing oncoming traffic while the other conducts the field tasks as described in the job safety analyses (Attachment 2).

The scope of work will be conducted in a manner consistent with the methods and assumptions outlined in **TASK ORDER NO. 13.**

All work plans referenced in this HASP will be available for Stantec personnel on site. The field staff may also call the Project Manager, Kevin Miskin (909-224-3406) or Task Manager, Anne Perez (951-255-8202), should they have any questions that are not specifically addressed in the HASP or the work plan.

4.0 Site Background, Potential Hazards and Mitigation Measures

PROJECT BACKGROUND INFORMATION

The Site background is described in the Task Order Request, dated September 1, 2014, and summarized below.

Project Background

The purpose of this task order is to perform asbestos containing materials (ACM) surveys on structural materials of five bridges located along State Route 10 (SR10) and to conduct an aerially deposited lead (ADL) site investigation along portions of SR10. According to the Caltrans Task Order No. 13 request, the project proposes to improve the flow of traffic by adding HOV lanes to alleviate traffic congestion in the area from Citrus Avenue to the SR10/SR57 interchange. The ACM portion of the project will include sampling all accessible potential ACM materials in the bridge structures where demolishing is necessary to widen the bridge. The ADL investigation will focus on areas where water pollution treatment systems are proposed for construction. The work will be conducted pursuant to the provisions in Stantec's Agreement 07A3321, and with the Task Order request emailed July 30, 2014.

POTENTIAL HAZARDS

Chemical:

The intent of the survey to be performed is to identify whether ACMs are present in accessible bridge materials. Therefore, the presence of asbestos is a potential inhalation hazard.

No historical reports were provided indicating that specific chemical hazards have been discovered at the Site during previous investigations. However, potential chemical hazards at this site may include:

- Aerially deposited lead (ADL) and other heavy metals in soil.

Physical:

The project area is located along the SR-10 through areas of Los Angeles, San Bernardino and Riverside Counties (within Caltrans Right-of-Way with the cities of Fontana and Diamond Bar from the intersections of Citrus Avenue and SR57 (PM LA-010-37.2/42.4). Other potential site specific hazards may include:

- Traffic
  - Set cones up in your immediate work area to provide visibility to the vehicles traveling in the area of the work zone. Don't face your back to traffic.
  - Use the work vehicle as an added buffer for your work area (DO NOT BLOCK TRAFFIC), and consider a closure of the immediately adjacent lane with proper signage.
- Wind/debris
  - Should weather conditions change and become a hindrance to performing the task safely, stop work and contact the project manager.

- Heat
  - Be sure to drink plenty of liquids, be sure your co-worker is drinking enough liquids. The site appears to have access to areas that do provide a lot of shade so be sure to take breaks to cool down.

- Trips/falls
  - To protect yourself, always look before you step. Work will be done around the highway and along the highway slopes under bridges. Take care walking and standing working in all areas of the site.

- Noise
  - The Site is adjacent to Highway lanes – wear the proper hearing protection if found to be necessary.

- PPE
  - Wear the proper PPE for the tasks involved – minimum: gloves, hard hat, safety glasses, steel toed boots, safety vest and possibly a dust respirator. Additional safety wear may need to be used if site conditions change.

HAZARD MITIGATION

Attachment A provides information for on avoiding, monitoring and mitigating chemical and physical hazards, including general hazards that can potentially be encountered on any project site (earthquakes, bees, etc). As described, proper hygiene and personal protective equipment (PPE) shall be required including,

- Washing hands before eating or smoking, and
- Donning hard hats, reflective high visibility vests, steel toed shoes, and disposable sampling gloves.

Project work will be near the lanes of a busy highway. Traffic control will be essential for safety. To improve worker safety, traffic warning signage, cones and truck flashers will be provided to alert drivers to workers along the shoulders. Traffic control will consist of the following elements:

- W21-5 "Shoulder Work" signs will be placed in the area ahead of each borehole. The signs will be moved as work progresses to assure that the signage follows the work. Signs will be placed appropriately to improve visibility to drivers.

- High visibility reflective cones will be placed along the pavement edge ahead of and next to the work area.

- Work trucks will have flashing yellow strobe lights and will be positioned, preferably at a slight diagonal to the pavement edge, as safety barriers between workers and oncoming traffic.

Protect yourself, always look before you step and wear proper PPE for the task being performed.

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5.0 Journey Management Plan

PURPOSE

The purpose of this Journey Management Procedure (JMP) is to prevent losses associated with motor vehicle related incidents including: injuries to drivers, passengers and pedestrians, damage to motor vehicles and damage to third party property. By communicating potential safety risks before mobilizing to a site, a motor vehicle operator will be able to prepare for and avoid potential hazards.

These JMPs apply to all vehicles assigned for the support of site operations, including company owned and personal use vehicles. This JMP does not apply to vendors (such as UPS, FedEx. etc.) not under contract with Stantec or their supplier. This JMP does not address hazards that are external to the site access/egress and on the onsite project operations.

Additional information regarding the JMP can be found in Attachment 5.

Site Specific JMP

General Vehicle Hazards

Highways approaching/near the project site are typically congested – allow extra time and space, slow down, and watch for vehicles.

Site Specific Potential Vehicle Hazards

Heat, traffic, winds. Watch for debris along the roadway. Highway adjacent – watch for traffic. If parking along the shoulder, watch for traffic before exiting vehicle. Use the vehicle to provide a buffer between you and the traffic, where possible. Watch for dips, debris, bushes. **LANE CLOSURE of immediately adjacent lane to work activity should be considered utilizing cones and signage**

Directions: Access to the Site

The Site is located along the bridges and off the right-of way of Highway 10 between Citrus Avenue, in the City of Fontana and The 57 Interchange, in the City of Diamond Bar. Access may be gained along the highway. Access to the areas along the on-off-ramps will be evaluated in order to take the safest exit into the shoulder which may be in a location off the ramps but the sampling area accessed by walking to it. Cones should be carried to the work area.

Directions: Leaving the Site

Site Specific Restrictions and Controls

None noted

This Journey Management Plan is approved for use:

From: 10/17/2014	Time: 0500	To: 11/30/14	Time: 1900

Journey Management Plan Maintained by

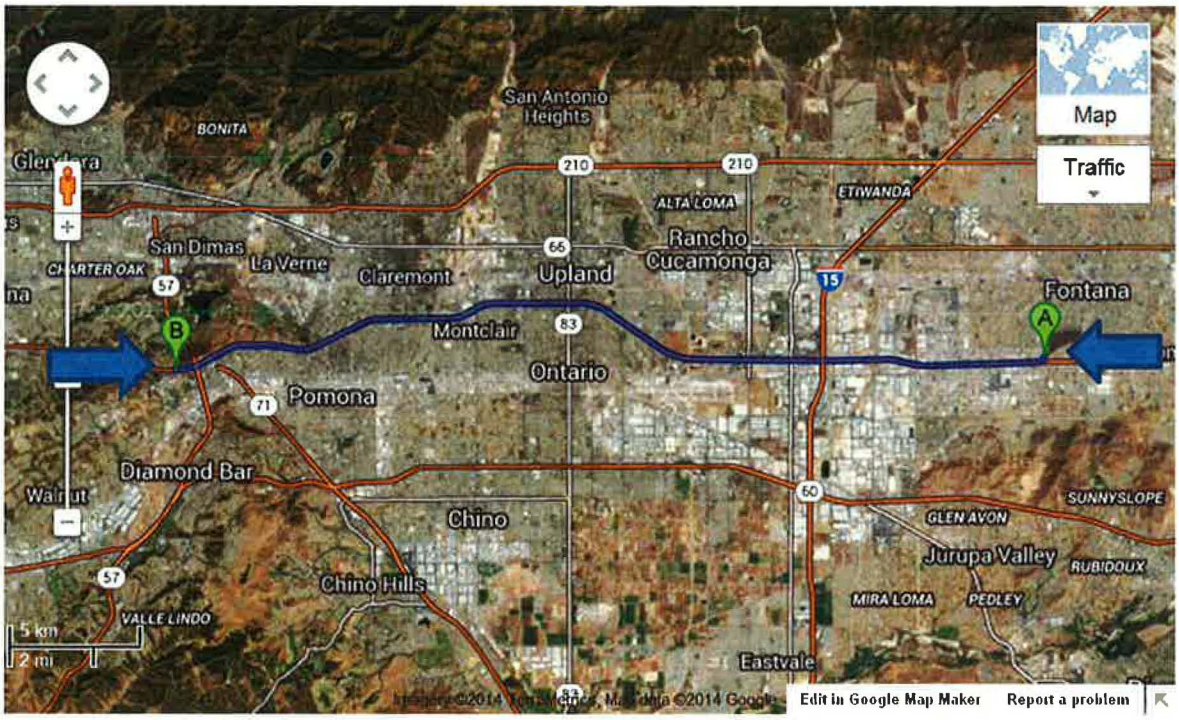
Field Manager : Jason Stagno	Cell: 805-630-8648
Contract Project Manager: Kevin Miskin	Cell: 909-224-3406

Should an incident occur, refer to Attachment 6 for Stantec's procedures of notifications and reporting.

SITE MAP/SKETCH

It can be helpful in clarifying access/egress routes, parking and positioning of equipment, traffic cones and other delineators.

Site Sketch



The area of the ADL Investigation and the ACM surveys is approximately located between the two blue arrows on the figure above.

Access entry locations will vary at each of the ADL investigation and ACM survey locations since they are not grouped together.

(Site view provided from Google Maps, 2014.)

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CHANGES TO THE JOURNEY MANAGEMENT PLAN

Date	Name	Change/Comment (be specific)

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Attachment A

General Safety Information for ALL SITES

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Health and Safety Plan Modification Log

HASP Section	Description of Revision	Revision Date	Approved By

1.0 General Safety Information

1.1 Emergency Response Procedures: Evacuation

In the event of an on-site or off-site emergency requiring site evacuation (e.g., fire, release, explosion, etc), the following procedures will be followed:

- Stop Work and notify the SHSO.
- Evacuate the site and go to the emergency meeting location if safe conditions exist. The evacuation point is shown in the sketch below or following this page. If safe conditions prevent evacuation to this location, move upwind, away from the source of the emergency. Maintain a safe distance from the source.
- Check in with the SHSO at the emergency meeting location. The SHSO will take attendance once all personnel have gathered.
- Dial the appropriate emergency response number(s). State the problem clearly and completely and remain on the line until dismissed by the operator.
- Only attempt extinguishing small fires with portable dry chemical (A-B-C) extinguishers on-hand. When in doubt, emergency response personnel shall be notified.
- Do not reenter the emergency site without specific approval from emergency response personnel.

Randomly scheduled evacuation drills may be conducted at any time during field activities.

1.2 Emergency Response Procedures: Injury or Illness

If an injury or illness occurs, take the following action:

- Stop Work, stabilize the situation, and secure the site.
- Administer First Aid for the person immediately using a first aid and blood-borne pathogens kit.
- Determine if emergency response (fire/ambulance) is necessary. If so, call appropriate emergency response numbers on closest available phone. Provide the location of the injured person and other details as requested. Drive the individual to the hospital only if it makes sense.
- If emergency decontamination is required:
    - Immediately remove any contaminated personal protective equipment (PPE) or clothing. (EXCEPTION: if the person has been burned, only emergency medical services (EMS) personnel should remove any clothing)
    - If possible, wash contaminated area with mild soap and water.
    - Use eyewash station if necessary.
    - Personnel assisting the contaminated individual will don the proper PPE to avoid exposure.
- For all injuries or illness, even minor cuts, scratches, and bruises, notify the SHSO immediately. The SHSO is responsible for initiating incident reporting procedures immediately after the victim(s)/site have been stabilized. The SHSO will assume responsibility during a medical emergency until more qualified EMS personnel arrive at the site as needed.
- As promptly as possible following an injury or illness, the Project Manager or designee shall ensure appropriate notification has been made to the family of the individual involved.
- Please see Section 1.6 for incident reporting procedures.

1.2.1 Injuries or Illnesses Requiring Hospital Service WITHOUT Ambulance Service

Injuries or illnesses requiring hospital service without ambulance services include minor lacerations, minor sprains, etc. The following procedures will be taken immediately:

- The SHSO will ensure prompt transportation of the injured person to a physician or hospital.
- A representative of Stantec will always drive the injured employee to the medical facility and remain at the facility until the employee is ready to be discharged.
- If the driver of the vehicle is not familiar with directions to the hospital, a second person shall accompany the driver and the injured employee and navigate the route to the hospital.
- If it is necessary for the SHSO to accompany the injured employee, provisions will be made to have another employee, properly trained and certified in First Aid, to act as the temporary SHSO.
- If the injured employee is able to return to the job site the same day, he/she will bring a statement from the doctor containing such information as:
  - Date
  - Employee's name
  - Diagnosis
  - Date he/she is able to return to work, regular or light duty
  - Date he/she is to return to doctor for follow-up appointment, if necessary
  - Signature and address of doctor
- As promptly as possible following an injury or illness, ensure appropriate notification has been made to the family of the individual involved.
- Please see Section 1.6 for incident reporting procedures.

If the injured employee is unable to return to the job site the same day, the employee who transported him will bring this information back to the job site and report it to the Project Manager, office OSEC, Clint Reuter, Stantec's Practice and Risk Management (PRM), and their regional Human Resources Specialist.

1.2.2 Injuries or Illnesses Requiring Hospital Service WITH Ambulance Service

Injuries or illnesses requiring transport by ambulance include life-threatening conditions such as severe head injuries, amputations, heart attacks, heat stroke, etc. The following procedures will be taken immediately:

- Call for ambulance service and notify the SHSO.
- Administer First Aid until ambulance service arrives or until relieved by EMS personnel.
- While the injured employee is being transported, the SHSO will contact the medical facility to be utilized.
- One designated representative will accompany the injured employee to the medical facility and remain at the facility until final diagnosis and other relevant information is obtained.
- As promptly as possible following an injury or illness, ensure appropriate notification has been made to the family of the individual involved.
- Please see Section 1.6 for incident reporting procedures.

1.2.3 Death of an Individual or Hospitalization of Three or More Employees

The emergency response procedures above will be followed. If the injured person dies, follow the incident reporting procedures. PRM will notify the Human Resources Department, local officials and coroner immediately. Human Resources will notify the local OSHA** office within 8 hours of a fatality or the hospitalization of three or more employees.

**From this point forward in this document, the terms OSHA (i.e. federal Occupational Safety and Health Administration or FedOSHA) will be used interchangeably and shall be considered equivalent to the State of California Division of Occupational Safety and Health or CalOSHA..

1.3 Emergency Response Procedures: Spills or Cut Lines

Prevent problems by documenting the location of underground lines (e.g., product, sewer, electrical, gas, telephone, fiber optic) before starting site work. If a line or tank is drilled through, or a leak occurs, document the event as soon as possible using the Incident Investigation Report.

In the event of a spill/release, follow this plan:

- Stop Work, stabilize the situation, and secure the site.
- Stay upwind of the spill/release.
- Wear appropriate PPE.
- Turn off equipment and other sources of ignition, but only from a safe distance.
- Turn off pumps and shut valves to stop the flow/leak, but only from a safe distance.
- Plug the leak or collect drippings, when possible, if you can do this safely and within your level of training.
- Use sorbent pads to collect product and impede its flow, if possible and only if you can do it safety and within your level of training.
- Call Fire Department immediately if fire or explosion risk is involved (i.e. natural gas involved).
- Notify the SHSO to begin the incident reporting procedures. All spills/releases will be reported to the Client Project Manager within 24 hours.
- Determine if the client wants Stantec to repair the damage or if the client will use an emergency repair contractor of their choice.
- Based on agreements, contact emergency spill contractor for containment of free product. The contacts for this project will be the local fire department.
- Advise the client of spill discharge notification requirements and determine who will complete and submit forms. *(Do not submit or report to agencies without the client's consent.)* Document each interaction with the client and regulators and note, in writing; name, title, authorizations, refusals, decisions, and commitments to any action.
- Do not transport or approve transportation of contaminated soils or product until proper manifests have been completed and approved. Be aware that soils/product may meet criteria for hazardous waste.
- Do not sign manifests as generator of wastes unless you have been given appropriate training and approval for signing on behalf of the generator; contact Project Manager or Waste Compliance Manager to discuss waste transportation.
- If the spill extends into waterways, the Coast Guard and the National Response Center shall be notified immediately by the client (or by the Stantec Project Manager with the client's permission).

The Project Manager will involve the client/generator in any Incident Investigation process. The client/generator is under obligation to report to the proper government agencies.

1.4 Incident Reporting Procedures

This section outlines the procedures that will be followed in the event of an incident. A flowchart and a table with necessary contact information (phone numbers, fax numbers, and email addresses) for incident reporting are also provided.

In the event of an incident:

1. Stop Work, stabilize the situation, and secure the site.

2. Report all incidents, injuries, spills, non-conformance events, permit exceedances and potential incidents (near losses) immediately to the SHSO, who will then notify the Stantec Project Manager. **If you are unsure whether or not something should be reported, Stop Work and proceed with notification anyway.**

3. The Stantec Project Manager will make internal notifications* to the following:
   - Office OSEC
   - At least one Stantec Senior HSE Team Member (Clint Reuter, Keith Robinson);
   - The Account Manager (Jack Hardin)
   - **If a team member does not answer, leave a detailed message with a number at which you can be reached, and follow-up with another call later.**

   *Internal notification is a Stantec requirement. Internal reporting requirements were established primarily to provide a pathway for employees to obtain the assistance of company health and safety experts during an incident or significant near loss. Secondary to obtaining expert assistance, internal notification is required to help Stantec track injuries and near losses that occur to our employees. The data captured during the reporting process is then used to identify trends that can be pro-actively addressed to improve overall health and safety within our company. This helps everyone go home safely.

4. The Stantec Project Manager will obtain concurrence from at least one of Stantec's HSE Team Members and the Account Manager regarding Caltran's reporting requirements.

5. A: If the incident is determined to not be reportable to Caltrans, the SHSO, office OSEC, and Stantec Project Manager will submit an initial copy of the Stantec Incident Investigation/Near Loss Investigation (IINLI) report to Stantec's PRM group in Edmonton (via phone and fax), and Clint Reuter within 24 hours of the event. The final report is due within 5 business days.

   B: If the incident is determined to be reportable to Caltrans, the Stantec Project Manager and Account Manager will:
   - Notify Caltrans and also provide a written report of the incident on a Stantec IINLI form to Stantec's PRM group (via fax and phone), and Clint Reuter within 24 hours and a final report within 5 business days.

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Stantec Energy & Resources Incident Reporting

Incident occurs:
Stop work, stabilize the situation, secure the site & provide immediate care. Stantec employee or contractor must immediately report the incident the Stantec Project Lead. Injured personnel requiring medical attention will transport the injured person to medical care and remain until released.

Site Lead or Contractor Supervisor notifies Project Manager & Stantec Area HS Lead Verbal notification and email an **INCIDENT QUICK REPORT** notification within **1 hour**. **Client Reporting Schedule Starts (next Page**

HSE TEAM:
Doug Schaefer (1-780-235-3557)
doug.schaefer@stantec.com
Tony Wong (1-805-234-6227)
tony.wong@stantec.com)
Terry Arseneau (1-403-702-6686)
terry.arseneau@stantec.com
Scott Purves (1-403-542-9751)
scott.purves@stantec.com
Adam Taylor (1-403-585-3238)
adam.taylor@stantec.com-
Marty Ringen (1-780-862-3470)
marty.ringen@stantec.com
Don Johnson (1-778-385-5846)
don.johnson@stantec.com

HIGH POTENTIAL INCIDENT

Conference Call Review YES or NO

YES

Senior Management Team
4-Hour HPI Flash Alert Notice Team
(Email-description, classification & path forward)
Rocco Meraglia (1-403-619-9863)
rocco.meraglia@stantec.com
Bob Seager (1-403-540-0259)
bob.seager@stantec.com
Don Belliveau (1-506-471-3238)
don.belliveau@stantec.com
Kirk Morrison (1-403-650-3402
kirk.morrison@stantec.com
Nick Poushinsky (1-250-413-7404)
nick.poushinsky@stantec.com
Tino Di Manno (403-716-8202)
tino.dimanno@stantec.com
Richard Weishaupt (1-306-220-3738)
richard.weishaupt@stantec.com
Peter Salusbury (1-778-837-0096)
peter.salusbury@stantec.com

NO

Stantec Site Lead, Project Manager or Contractor Supervisor issues RMS 3 Incident Report within 24- hours.

Finalized RMS 3 forwarded to Corporate HSE

Stantec Site Lead, Project Manager or Contractor Supervisor issues RMS 3 Incident Report within 24-hours.

Stantec Site Lead & Area HSE Lead conducts investigation following the corporate investigation process. A report is issued within 5 days to the Stantec Energy & Resources Sr. Mgt. Team identifying root causes and implementing barriers to prevent re-occurrence. Senior Management Team signs off on the Incident report.

Based on clients expectations a more formal Incident Cause and Analysis Method may <u>also</u> be used to support for the investigation.

HSE develops Lessons Learned Report for corporate-wide / client distribution

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Client Reporting Schedule
"No client requirements"

Notifications

Stantec Account and HSE Support Contacts - notify within 1 hour
See Project Team Phone Numbers for
National Account Manager (NAM)
Alternate NAM
Health and Safety Coordinator

Client - notify within 24 hours unless high potential (notify within 1 hour) :
See Project Team Phone Numbers for
Client

Incident Investigation Report within 5 days
See Project Team Phone Numbers for
Client

Incident Type	Definition (Current Stantec Corporate Definitions)
Report Only	An employee needs to document a happening which may be relevant in the future. Examples include: witnessing an accident or a non work-related injury, an incident on a worksite not involving Stantec personnel, physical signs and symptoms related to workstation ergonomics and/or materials handling
Incident	Any unplanned event that adversely affects our employees, our business, its physical assets, the clients we serve, or the environment.
Serious Incident	Any work-related incident where there is property damage greater than $5000, employee hospitalization, fatality, facility/site shutdown, or involves a third party (public). A near miss with the potential for any of the above consequences would also be considered a serious incident.
Near-Miss	Any event that could adversely affect our employees, our business, its physical assets, the customers we serve, or the environment, given any change in circumstances.
Hazard Identification	The identification of a condition or practice that has the potential for an incident or loss.
Property Damage (Vehicle)	Damage to any vehicle used for Stantec business, includes normal wear and tear (e.g. tire damage, minor scratches, stone chips to paint or windshield, mechanical wear), whether the vehicle is attended or not.
Property Damage (Other)	Damage to equipment, materials, etc., excluding vehicle damage.
Theft	Theft of any property under the care and control of Stantec.
Non-compliance	Where an employee or project is identified as operating outside the parameters of Stantec policy and/or legislative requirements.

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Incident Type	Definition (Current Stantec Corporate Definitions)
*Near Miss - Injury	An employee reports physical symptoms related to work activities which have not yet resulted in treatment of any type, nor have they impacted the employee's working ability.
First Aid	An injury or illness requires first aid treatment only
Medical Treatment	Medical treatment above and beyond first aid, without loss of work time beyond the day of injury or illness.
Restricted Work	Change in job duties and/or shortened work day resulting from a work-related injury or illness, affecting the employee's ability to engage in one or more routine work activities (i.e. an activity carried out at least once per week).
Lost Time	Health care professional recommends one or more days away from work due to a work-related injury or illness.
Fatality	Work related fatality.
Motor Vehicle Incident	An incident involving a vehicle driven by an employee, whether on or off the road, that has resulted in damage to assets, the environment or Stantec's reputation, irrespective of cost or responsibility for cause. This does not include damage as a result of normal wear and tear (see Property Damage – Vehicle).
Spill or Release	Discharge of material or substance which is reportable to a third party such as a regulatory agency or a client, or which may expose an employee to a health risk.
Contractor Recordable Injury	Definitions as above, including Medical Aid – No Lost Time, Restricted Work, Lost Time or Fatality) but applied to a Stantec subcontractor.
Fire / Explosion / Flood	A natural or man-made hazard including fire, explosion or flood that causes damage or injury.
Violence or Harassment	Any act in which a person is abused, threatened, intimidated or assaulted in the course of their employment.
3rd Party Incident	Incident involves someone who is not party to the work being completed, but may be impacted. Example: Member of the public.
Utility Strike	Compromising or disrupting of service to buried and/or overhead utility service lines, municipal or third party owned utility services, UST system components and other subsurface property service lines or systems
Work Refusal	An employee has enacted their legislated Right to Refuse dangerous work.
Stop Work Authority	An employee has enacted Stantec's Stop Work Authority provisions upon observing the presence of unsafe conditions associated with Stantec work activities. All employees have the right to stop or refuse work when they perceive an immediate danger to their health and safety or that of their colleagues.
	For Consideration
High Potential Incident	A Near Miss, First Aid injury, Medical Aid injury, Modified Work injury or Lost Time injury can often have the potential to be a fatality or a Significant Injury with disability if the circumstances would have been slightly different. For example, a Lost Time incident due to a back soft tissue injury would only be counted as a Lost Time with low potential for a serious injury, whereas a First Aid incident involving a remotely operated machine striking a worker and imparting a small cut would be counted as a First Aid incident with high potential for a Fatality or a Significant Injury. Any incident with energy exchange that had the potential to be a Fatality or a Significant Injury if the circumstances would have been slightly different should be counted as High Potential; all others should be counted as low potential and reported as normal incidents (see above). In terms of Risk Assessment language when the exposure, probability and consequence of the hazard(s) that created the injury calculate to a High or Extreme Risk Level, the incident should be counted as a High Potential; all others should be counted as low potential.

Incident Type	Definition (Current Stantec Corporate Definitions)
Critical Risk Control	**TBA** 1. Vehicles and Mobile Equipment 2. Hazardous Materials Management 3. Equipment Safeguarding 4. De-Energization, Isolation, Lock-Out, and Tagging 5. Working at Heights 6. Lifting Operations 7. Confined Space 8. Excavations and Trenching 9. Ergonmonic & Manual Handling 10. Working on Ice or water 11. Wildlife Interactions

2.0 Potential Airborne Concerns and Air Monitoring Action Levels

**NOTE: OSHA (federal) is used interchangeably and equally with California OSHA (CalOSHA) in this document.

An air purifying respirator using particulate high-efficiency particulate air (HEPA) filters shall be used while sampling suspect ACM materials. Given that the proposed work will take place adjacent to Highway SR10, the following is a list of chemicals that may be present in the work area but are not planned to be monitored on a continual basis given that no soil disturbance is planned.

The list below includes lead, asbestos, and carbon monoxide.

Potential Airborne Concerns						
Chemical (Or Class)	**OSHA PEL ACGIH TLV**	**Other Pertinent Limits**	**Warning Properties**	**Routes of Exposure or Irritation**	**Acute Health Effects**	**Chronic Health Effects/Target Organs**
Lead	OSHA PEL: 8 hr. TWA 0.050 mg/m3 ACGIH TLV: 8 hr. TWA 0.050 mg/m3	NIOSH REL, 0.05 mg/m3 8 hr. TWA	A heavy, ductile, soft, gray solid	Inhalation, ingestion, skin and/or eye contact.	Effects of overexposure to lead - (1) Short term (acute) overexposure. Lead is a potent, systemic poison that serves no known useful function once absorbed by your body. Taken in large enough doses, lead can be fatal in a matter of days. A condition affecting the brain called acute encephalopathy may arise which develops quickly to seizures, coma, and death from cardiorespiratory arrest. A short term dose of lead can lead to acute encephalopathy. Short term occupational exposures of this magnitude are highly unusual, but not impossible. Similar forms of encephalopathy may, however, arise from extended, chronic exposure to lower doses of lead. There is no sharp dividing line between rapidly developing acute effects of lead, and chronic effects which take longer to acquire. Lead can potentially adversely affect numerous body systems, and can cause forms of health impairment and disease which arise after periods of exposure as short as days or as long as several years.	See note below table
Asbestos	Cal/Fed OSHA/ACGIH PEL 0.1 fiber/cc 8 hr. TWA 1.0 f/cc (Fed/CalOSHA 30-min STEL)		Gray chalk-like or cloth	Inhalation ingestion,	Irritation to the eyes, skin, respiratory tract, gastro intestinal tract,	Lung, GI, carcinogen

Potential Airborne Concerns						
Chemical (Or Class)	**OSHA PEL ACGIH TLV**	**Other Pertinent Limits**	**Warning Properties**	**Routes of Exposure or Irritation**	**Acute Health Effects**	**Chronic Health Effects/Target Organs**
Carbon Monoxide	OSHA PEL 50 ppm 8 hr. TWA CalOSHA PEL 25 ppm 8 hr. TWA CalOSHA 200 ppm-ceiling ACGIH TLV 25 ppm 8 hr. TWA	NIOSH REL = 35 ppm 8 hr. TWA IDLH = 1200 ppm	Colorless, odorless gas	Inhalation	headache, drowsiness, lassitude (weakness, exhaustion), narcosis; dyspnea, heart palpitation, unconsciousness, death	None established

Abbreviation	Explanation
PEL	Permissible Exposure Limit set by OSHA (8 hour time-weighted average/TWA)
REL	Recommended Exposure Limit (set by National Institute of Occupational Safety & Health-NIOSH)
C	Ceiling Limit (airborne concentration not to be exceeded for any period of time)
STEL	15-minute Short Term Exposure Limit (unless other time period specifically identified)
IDLH	Immediately Dangerous to Life or Health
TWA	8 hour time-weighted average (PEL, TLV, REL)
TLV	Threshold Limit Value set by the American Conference of Governmental Industrial Hygienists (ACGIH) 8 hr. TWA
AIHA WEEL	Workplace Environmental Exposure Level (set by the AIHA-American Industrial Hygiene Association)
SKIN	Skin Absorption is significant contributor to total exposure
NIOSH	National Institute of Occupation Safety and Health
CNS	Central Nervous System
CVS	Cardiovascular System

3.0 Other Potential Site Hazards

3.1 Physical Hazards

Physical hazards may include traffic, uneven terrain, sharp debris, fencing, holes, noise, etc. Thusly, a constant awareness of one's location is paramount to your personal safety. However, knowing where you are, the level of noise produced by associated machinery and hearing protection may hinder your ability to hear vocal warnings. "Keep your head on a swivel" as the order of the day.

Be aware of the location of all of the equipment activities in your work area.

To protect yourself, always look before you step and wear proper PPE for the task being performed.

3.2 Weather and Natural Disasters

Hazards associated with weather and natural disasters may include, but are not limited to, effects of extreme heat (heat exhaustion, heat stroke), effects of extreme cold (hypothermia, frostbite), high winds, heavy rain, lightning, heavy snow, ice, earthquakes, landslides, flooding, etc.

The most likely hazards at the site are effects of extreme heat (heat exhaustion, heat stroke) and earthquakes.

To protect yourself from heat, perform the heaviest work during the coolest part of the day; drink plenty of cool water; wear light, loose-fitting, breathable clothing; and take frequent, short breaks in the shade. Certain medications, having a previous heat-related illness, and wearing PPE such as a respirator or protective suit can increase risk.

Heat Exhaustion

What are the symptoms?

HEADACHES; DIZZINESS OR LIGHTHEADEDNESS; WEAKNESS; MOOD CHANGES SUCH AS IRRITABILITY, CONFUSION, OR THE INABILITY TO THINK STRAIGHT; UPSET STOMACH; VOMITING; DECREASED OR DARK-COLORED URINE; FAINTING OR PASSING OUT; AND PALE, CLAMMY SKIN

What should you do?

- Act immediately. If not treated, heat exhaustion may advance to heat stroke or death.
- Move the victim to a cool, shaded area to rest. Don't leave the person alone. If symptoms include dizziness or lightheadedness, lay the victim on his or her back and raise the legs 6 to 8 inches. If symptoms include nausea or upset stomach, lay the victim on his or her side.
- Loosen and remove any heavy clothing.
- Have the person drink cool water (about a cup every 15 minutes) unless sick to the stomach.
- Cool the person's body by fanning and spraying with a cool mist of water or applying a wet cloth to the person's skin.
- Call 911 for emergency help if the person does not feel better in a few minutes.

Stantec

Heat Stroke–A Medical Emergency

What are the symptoms?

DRY, PALE SKIN WITH NO SWEATING; HOT, RED SKIN THAT LOOKS SUNBURNED; MOOD CHANGES SUCH AS IRRITABILITY, CONFUSION, OR THE INABILITY TO THINK STRAIGHT; SEIZURES OR FITS; AND UNCONCIOUSNESS WITH NO RESPONSE

What should you do?

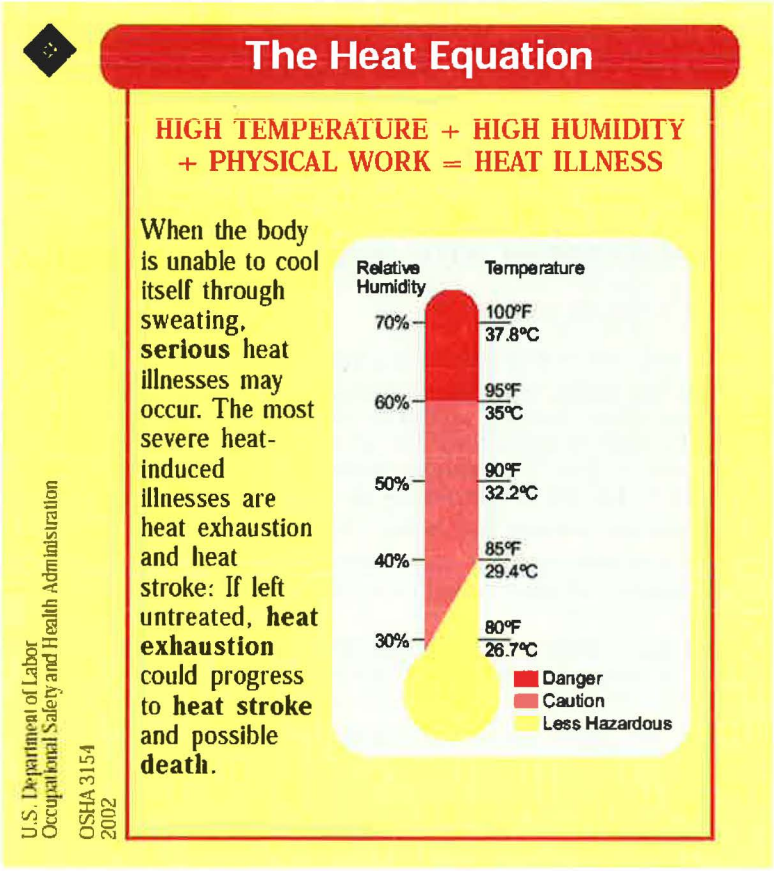
- Call 911 for emergency help immediately.
- Move the victim to a cool, shaded area. Don't leave the person alone. Lay the victim on his or her back. Move any nearby objects away from the person if symptoms include seizures or fits. If symptoms include nausea or upset stomach, lay the victim on his or her side.
- Loosen and remove any heavy clothing.
- Have the person drink cool water (about a cup every 15 minutes) if alert enough to drink something, unless sick to the stomach.
- Cool the person's body by fanning and spraying with a cool mist of water or wiping the victim with a wet cloth or covering him or her with a wet sheet.
- Place ice packs under the armpits and groin area.

How can you protect yourself and your coworkers?

- Learn the signs and symptoms of heat-induced illnesses and how to respond.
- Train your workforce about heat-induced illnesses.
- Perform the heaviest work during the coolest part of the day.
- Build up tolerance to the heat and the work activity slowly. This usually takes about 2 weeks.
- Use the buddy system, with people working in pairs.
- Drink plenty of cool water, about a cup every 15 to 20 minutes.
- Wear light, loose-fitting, breathable clothing, such as cotton.
- Take frequent, short breaks in cool, shaded areas to allow the body to cool down.
- Avoid eating large meals before working in hot environments.
- Avoid alcohol or beverages with caffeine. These make the body lose water and increase the risk for heat illnesses.

What factors put you at increased risk?

- Taking certain medications. Check with your health-care provider or pharmacist to see if any medicines you are taking affect you when working in hot environments.
- Having a previous heat-induced illness.
- Wearing personal protective equipment such as a respirator or protective suit.



HEAT STRESS

INTRODUCTION

Operations involving high air temperatures, radiant heat sources, high humidity, direct physical contact with hot objects, or strenuous physical activities have a high potential for inducing heat stress in employees engaged in such operations. Outdoor operations conducted in hot weather, such as construction, refining, asbestos removal, and hazardous waste site activities, especially those that require workers to wear semi-permeable or impermeable protective clothing, are also likely to cause heat stress among exposed workers.

CAUSAL FACTORS

Age, weight, degree of physical fitness, degree of acclimatization, metabolism, use of alcohol or drugs, and a variety of medical conditions such as hypertension all affect a person's sensitivity to heat. However, even the type of clothing worn must be considered. Prior heat injury predisposes an individual to additional injury. It is difficult to predict just who will be affected and when, because individual susceptibility varies. In addition, environmental factors include more than the ambient air temperature. Radiant heat, air movement, conduction, and relative humidity all affect an individual's response to heat.

DEFINITIONS

The American Conference of Governmental Industrial Hygienists (2002) states that workers should not be permitted to work when their deep body temperature exceeds 100.4°F (38 °C).

Heat is a measure of energy in terms of quantity.

A **calorie** is the amount of heat required to raise 1 gram of water 1°C (based on a standard temperature of 16.5 to 17.5°).

Conduction is the transfer of heat between materials that contact each other. Heat passes from the warmer material to the cooler material. For example, a worker's skin can transfer heat to a contacting surface if that surface is cooler, and vice versa.

Convection is the transfer of heat in a moving fluid. Air can be described as a fluid. Air flowing past the body can cool the body if the air temperature is cool. On the other hand, air that exceeds 35°C (95°F) can increase the heat load on the body.

Evaporative cooling takes place when sweat evaporates from the skin. High humidity reduces the rate of evaporation and thus reduces the effectiveness of the body's primary cooling mechanism.

Radiation is the transfer of heat energy through space. A worker whose body temperature is greater than the temperature of the surrounding surfaces radiates heat to these surfaces. Hot surfaces and infrared light sources radiate heat that can increase the body's heat load.

Globe temperature is the temperature inside a blackened, hollow, thin copper globe.

Metabolic heat is a by-product of the body's activity.

Natural wet bulb (NWB) temperature is measured by exposing a wet sensor, such as a wet cotton wick fitted over the bulb of a thermometer, to the effects of evaporation and convection. The term natural refers to the movement of air around the sensor.

Dry bulb (DB) temperature is measured by a thermal sensor, such as an ordinary mercury-in-glass thermometer, that is shielded from direct radiant energy sources.

HEAT DISORDERS AND HEALTH EFFECTS

HEAT STROKE

Heat Stroke occurs when the body's system of temperature regulation fails and body temperature rises to critical levels. This condition is caused by a combination of highly variable factors, and its occurrence is difficult to predict. **Heat stroke is a medical emergency.** The primary signs and symptoms of heat stroke are confusion; irrational behavior; loss of consciousness; convulsions; a lack of sweating (usually); hot, dry skin; and an abnormally high body temperature, e.g., a rectal temperature of 41°C (105.8°F). If body temperature is too high, it causes death. The elevated metabolic temperatures caused by a combination of workload and environmental heat load, both of which contribute to heat stroke, are also highly variable and difficult to predict. If a worker shows signs of possible heat stroke, professional medical treatment should be obtained immediately. The worker should be placed in a shady area and the outer clothing should be removed. The worker's skin should be wetted and air movement around the worker should be increased (as long as the temperature of the air is less than 95° F) to improve evaporative cooling until professional methods of cooling are initiated and the seriousness of the condition can be assessed. Fluids should be replaced as soon as possible.

The medical outcome of an episode of heat stroke depends on the victim's physical fitness and the timing and effectiveness of first aid treatment. Regardless of the worker's protests, no employee

suspected of being ill from heat stroke should be sent home or left unattended unless a physician has specifically approved such an order.

HEAT EXHAUSTION

The signs and symptoms of heat exhaustion are headache, nausea, vertigo, weakness, thirst, and giddiness. Fortunately, this condition responds readily to prompt treatment. Heat exhaustion should not be dismissed lightly, however, for several reasons. One is that the fainting associated with heat exhaustion can be dangerous because the victim may be operating machinery or controlling an operation that should not be left unattended; moreover, the victim may be injured when he or she faints. Also, the signs and symptoms seen in heat exhaustion are similar to those of heat stroke, a real potential medical emergency.

Workers suffering from heat exhaustion should be removed from the hot environment and given fluid replacement. They should also be encouraged to get adequate rest.

HEAT CRAMPS

Heat Cramps are usually caused by performing hard physical labor in a hot environment. These cramps have been attributed to an electrolyte imbalance caused by sweating. It is important to understand that cramps can be caused by both too much and too little salt. Cramps appear to be caused by the lack of water replenishment. Because sweat is a hypotonic solution (±0.3% sodium chloride), excess salt can build up in the body if the water lost through sweating is not replaced.

Thirst cannot be relied on as a guide to the need for water; instead, water must be taken every 15 to 20 minutes in hot environments. Under extreme conditions, such as working for 6 to 8 hours in heavy protective gear, a loss of sodium may occur. Studies have shown that drinking commercially available carbohydrate-electrolyte replacement liquids is effective in minimizing physiological disturbances during recovery.

HEAT COLLAPSE

Heat Collapse ("Fainting"). In heat collapse, the brain does not receive enough oxygen because blood pools in the extremities. As a result, the exposed individual may lose consciousness. This reaction is similar to that of heat exhaustion and does not affect the body's heat balance. However, the onset of heat collapse is rapid and unpredictable. To prevent heat collapse, the worker should gradually become acclimatized to the hot environment.

HEAT RASHES

Heat Rashes are the most common problem in hot work environments. "Prickly heat", as heat rashes are sometimes called, is manifested as red papules on the skin and usually appears in areas where the clothing is restrictive. As sweating increases, these papules give rise to a prickling sensation. Prickly heat occurs in skin that is persistently wetted by unevaporated sweat, and heat rash papules may become infected if they are not treated. In most cases, heat rashes will disappear when the affected individual returns to a cool environment.

HEAT FATIGUE

A factor that predisposes an individual to heat fatigue is lack of acclimatization. The use of a program of acclimatization and training for work in hot environments is advisable. Acclimatization can take several weeks depending on the individual involved and the difference in temperature between the location from which the person is coming and the temperature to which he/she is going. The signs and symptoms of heat fatigue include impaired performance of skilled sensorimotor, mental, or vigilance

jobs. There is no treatment for heat fatigue except to remove the heat stress before a more serious heat-related condition develops.

CONTROL MEASURES FOR HEAT STRESS

Ventilation, air-cooling, fans, shielding, and insulation are the five major types of engineering controls used to reduce heat stress in hot work environments. Heat reduction can also be achieved by using power assists and tools that reduce the physical demands placed on a worker.

However, for this approach to be successful, the metabolic effort required for the worker to use or operate these devices must be less than the effort required without them. Another method is to reduce the effort necessary to operate power assists. Workers should be allowed to take frequent rest breaks in a cooler environment.

ACCLIMATIZATION

The human body can adapt to heat exposure to some extent. This physiological adaptation is called acclimatization. After a period of acclimatization, the same activity will produce fewer cardiovascular demands. The worker will sweat more efficiently (causing better evaporative cooling), and thus will more easily be able to maintain normal body temperatures.

FLUID REPLACEMENT

Cool (50°-60°F) water or any cool liquid (except alcoholic beverages, tea and coffee) should be made available to workers to encourage them to drink small amounts frequently, e.g., one cup every 20 minutes. Ample supplies of liquids should be placed close to the work area. Although some commercial replacement drinks contain salt, this is not necessary for acclimatized individuals because most people add enough salt to their summer diets.

GENERAL VENTILATION

General ventilation is used to dilute hot air with cooler air (generally cooler air that is brought in from the outside). This technique clearly works better in cooler climates than in hot ones. A permanently installed ventilation system usually handles large areas or entire buildings. Portable or local exhaust systems may be more effective or practical in smaller areas.

AIR TREATMENT/AIR COOLING

Air treatment/air cooling differs from ventilation because it reduces the temperature of the air by removing heat (and sometimes humidity) from the air.

Air conditioning is a method of air-cooling, but it is expensive to install and operate. An alternative to air conditioning is the use of chillers to circulate cool water through heat exchangers over which air from the ventilation system is then passed; chillers are more efficient in cooler climates or in dry climates where evaporative cooling can be used.

Local air cooling can be effective in reducing air temperature in specific areas. Two methods have been used successfully in industrial settings. One type, cool rooms, can be used to enclose a specific workplace or to offer a recovery area near hot jobs. The second type is a portable blower with built-in air chiller. The main advantage of a blower, aside from portability, is minimal set-up time.

Another way to reduce heat stress is to increase the airflow or convection using fans, etc. in the work area (as long as the air temperature is less than the worker's skin temperature). Changes in air speed can help workers stay cooler by increasing both the convective heat exchange (the exchange between the skin surface and the surrounding air) and the rate of evaporation. Because this method does not actually cool the air, any increases in air speed must impact the worker directly to be effective.

If the outdoor air temperature (i.e. the dry bulb temperature) is higher than 95°F (35 °C) the hot air passing over the skin can actually make the worker hotter (i.e. add to the overall body heat load). When the temperature is >95°F and the air is dry, evaporative cooling may be improved by air movement, although this improvement will be offset by the convective heat. When the temperature exceeds 95°F and the relative humidity is 100%, air movement will make the worker hotter. Increases in air speed have no effect on the body temperature of workers wearing vapor-barrier clothing.

HEAT CONDUCTION

Heat conduction methods include insulating the hot surface that generates the heat and changing the surface itself.

Simple engineering controls, such as shields, can be used to reduce radiant heat i.e. heat coming from hot surfaces within the worker's line of sight. Surfaces that exceed 95°F, and this is very common on hot summer days, are sources of infrared radiation that can add to the worker's heat load. Flat black surfaces absorb heat more than smooth, polished ones. Having cooler surfaces surrounding the worker, assists in cooling because the worker's body radiates heat toward them.

With some sources of radiation, such as heating pipes, it is possible to use both insulation and surface modifications to achieve a substantial reduction in radiant heat. Instead of reducing radiation from the source, shielding can be used to interrupt the path between the source and the worker. Polished surfaces make the best barriers, although special glass or metal mesh surfaces can be used if visibility is a problem.

Shields should be located so that they do not interfere with airflow, unless they are also being used to reduce convective heating. The reflective surface of the shield should be kept clean to maintain its effectiveness.

ADMINISTRATIVE CONTROLS/SAFE WORK PRACTICES

Training is the key to good work practices. Unless all employees understand the reasons for using new, or changing old, work practices, the chances of such a program succeeding are greatly reduced. NIOSH (1986) states that a good heat stress training program should include least the following components:

- Knowledge of the hazards of heat stress;
- Recognition of predisposing factors, danger signs, and symptoms;
- Awareness of first-aid procedures for, and the potential health effects of, heat stroke and heat exhaustion;

- Employee responsibilities in avoiding heat stress;
- Dangers of using drugs, including therapeutic ones, and alcohol in hot work environments;
- Use of protective clothing and equipment; and
- Purpose and coverage of environmental and medical surveillance programs and the advantages of worker participation programs.

Hot jobs should be scheduled for the cooler part of the day when possible, and routine maintenance and repair work in hot areas should be scheduled for the cooler seasons of the year.

Measurement is often required of those environmental factors that most nearly correlate with deep body temperature and other physiological responses to heat. At the present time, the Wet Bulb Globe Temperature Index (WBGT) is the most used technique to measure these environmental factors. WBGT values are calculated by the following equations:

WET BULB GLOBE TEMPERATURE INDEXES (WBGI)

Indoor or outdoors with no solar load

$$WBGT = 0.7NWB + 0.3GT$$

Outdoors with solar load

$$WBGT = 0.7NWB + 0.2GT + 0.1DB$$

Where: WBGT = Wet Bulb Globe Temperature Index
NWB = Natural Wet Bulb Temperature
DB = Dry Bulb (air) Temperature
GT = Globe Thermometer Temperature

The determination of WBGT requires the use of a black globe thermometer, a natural (static) wet-bulb thermometer, and a dry-bulb thermometer. The measurement of environmental factors shall be performed as follows:

1. The range of the dry and the natural wet-bulb thermometers should be -5°C to +50°C, with an accuracy of ±0.5°C. The dry bulb thermometer must be shielded from the sun and the other radiant surfaces of the environment without restricting the airflow around the bulb. The wick of the natural wet bulb thermometer should be kept wet with distilled water for at least one-half hour before the temperature reading is made. It is not enough to immerse the other end of the wick into a reservoir of distilled water and wait until the whole wick becomes wet by capillarity. The wick must be wetted by direct application of water from a syringe one-half hour before each reading. The wick must cover the bulb of the thermometer and an equal length of additional wick must cover the stem above the bulb. The wick should always be clean, and new wicks should be washed before using.

2. A globe thermometer, consisting of a 15 cm (6-inch) in diameter hollow copper sphere painted on the outside with a matte black finish, or equivalent, must be used. The bulb or sensor of a thermometer (range -5°C to +100°C with an accuracy of ±0.5°C) must be fixed in the center of the sphere. The globe thermometer should be exposed at least 25 minutes before it is read.

3. A stand should be used to suspend the three thermometers so that they do not restrict free airflow around the bulbs and the wet-bulb and globe thermometer are not shaded.

4. It is permissible to use any other type of temperature sensor that gives a reading similar to that of a mercury thermometer under the same conditions.

5. The thermometers must be placed so that the readings are representative of the employee's work or rest areas, as appropriate.

Once the WBGT has been estimated, employers can estimate workers' metabolic heat load and use the ACGIH method to determine the appropriate work/rest regimen, clothing, and equipment to use to control the heat exposures of workers in their facilities.

REFLECTIVE CLOTHING

Reflective clothing, which can vary from aprons and jackets to suits that completely enclose the worker from neck to feet, can stop the skin from absorbing radiant heat. However, since most reflective clothing does not allow air exchange through the garment, the reduction of radiant heat must more than offset the corresponding loss in evaporative cooling. For this reason, reflective clothing should be worn as loosely as possible. In situations where radiant heat is high, auxiliary-cooling systems can be used under the reflective clothing.

AUXILIARY BODY COOLING

1. Commercially available **ice vests**, though heavy, may accommodate as many as 72 ice packets, which are usually filled with water. Carbon dioxide (dry ice) can also be used as a coolant. The cooling offered by ice packets lasts only 2 to 4 hours at moderate to heavy heat loads, and frequent replacement is necessary. However, ice vests do not encumber the worker and thus permit maximum mobility. Cooling with ice is also relatively inexpensive.

2. **Wetted clothing** is another simple and inexpensive personal cooling technique. It is effective when reflective or other impermeable protective clothing is worn. The clothing may be wetted terry cloth coveralls or wetted two-piece, whole-body cotton suits. This approach to auxiliary cooling can be quite effective under conditions of high temperature and low humidity, where evaporation from the wetted garment is not restricted.

3. **Water-cooled garments** range from a hood, which cools only the head, to vests and "long johns," which offer partial or complete body cooling. Use of this equipment requires a battery-driven circulating pump, liquid-ice coolant, and a container.

Although this system has the advantage of allowing wearer mobility, the weight of the components limits the amount of ice that can be carried and thus reduces the effective use time. The heat transfer rate in liquid cooling systems may limit their use to low-activity jobs; even in such jobs, their service time is only about 20 minutes per pound of cooling ice. To keep outside heat from melting the ice, an outer insulating jacket should be an integral part of these systems.

4. **Circulating air** is the most highly effective, as well as the most complicated, personal cooling system. By directing compressed air around the body from a supplied air system, both evaporative and convective cooling is improved. The greatest advantage occurs when circulating air is used with impermeable garments or double cotton overalls.

One type, used when respiratory protection is also necessary, forces exhaust air from a supplied-air hood ("bubble hood") around the neck and down inside an impermeable suit. The air then escapes through openings in the suit. Air can also be supplied directly to the suit without using a hood in three ways:

- by a single inlet;
- by a distribution tree; or
- by a perforated vest.

In addition, a vortex tube can be used to reduce the temperature of circulating air. The cooled air from this tube can be introduced either under the clothing or into a bubble hood. The use of a vortex tube separates the air stream into a hot and cold stream; these tubes also can be used to supply heat in cold climates. Circulating air, however, is noisy and requires a constant source of compressed air supplied through an attached air hose.

One problem with this system is the limited mobility of workers whose suits are attached to an air hose. Another is that of getting air to the work area itself. These systems should therefore be used in work areas where workers are not required to move around much or to climb. Another concern with these systems is that they can lead to dehydration. The cool, dry air feels comfortable and the worker may not realize that it is important to drink liquids frequently.

RESPIRATOR USAGE

The use of any kind of respiratory protection device increases stress on a worker, and this stress contributes to overall heat stress. Chemical protective clothing such as totally encapsulating chemical protection suits will also add to the heat stress problem.

SUMMARY

Heat stress offers significant challenges when work needs to be performed under hot ambient conditions. However, a well thought-out program can substantially reduce the chances of heat stress. A combination of engineering and administrative controls along with effective use of personal protective equipment can protect employees from suffering the effects of heat stress

EARTHQUAKES

Earthquakes can last just a few seconds or as long as several minutes. Safety precautions include (as amended from http://safety.lovetoknow.com/Earthquake_Safety_Precautions):

- Before an earthquake:
  - Store heavy items or glassware on low shelves so they do not become dangerous projectiles. Secure large equipment with straps, bolts, or other stabilizing methods.
  - Know the emergency meeting location at the site.

- During an earthquake:
  - Immediately seek a safe location such as in a doorway, beneath a table or desk, or along an interior wall away from windows or hazardous objects.
  - Cover the back of your head and your eyes to minimize injury from flying debris
  - Do not take elevators during an earthquake.
  - If outdoors, stay in open areas away from buildings, power lines, trees, and other potential hazards.
  - If driving, stop quickly but safely and stay in the vehicle. Do not stop near power lines, bridges, overpasses, or other potentially dangerous locations.
  - Stay calm and brace yourself to keep your balance. Sit if possible.

- After an earthquake:
  - Be prepared for aftershocks, which may be stronger than the initial jolt.
  - Administer First Aid and summon emergency assistance if necessary.
  - Wear PPE (boots, gloves) to avoid getting cut by broken glass.
  - Turn off gas, electricity, and water if damage is suspected or if advised to do so by authorities.
  - Be cautious opening cabinets, cupboards, and closets in case items are poised to fall.
  - Keep phone lines clear for emergency use.
  - Be patient: it may take hours or days to restore all services depending on the severity of the quake.

1.3 Biological Hazards

Biological hazards may include, but are not limited to, bees/wasps, spiders, snakes, stray dogs, rats and poisonous/allergenic plants.

Bee/Wasp Precautions

Purpose

Bees and similar organisms such as wasps, hornets and yellow jackets can cause significant injury, pain and/or discomfort during our work. This precaution has been developed to help avoid injury.

We can encounter these organisms during a number of our tasks such as:

- Opening well vault covers
- Opening core or sample boxes
- Performing O & M in system compounds
- Working in tall grass, weeds and brush
- Performing site assessments (indoors and outdoors)

Yellow Jackets

Yellow Jackets are found throughout the United States. Yellow Jackets feed on insects, spiders and a wide variety of other food items. They are medium-sized, stout-bodied, and black with bright yellow bands. Yellow-jackets construct globular paper nests, usually in underground cavities. Favorite nesting places include rodent burrows, compost piles and wall voids.

Yellow Jackets are scavengers and frequently are found foraging around compost piles and garbage receptacles. Their activity can be discouraged in the vicinity of patios, parks, picnic and other recreational areas by covering all food and disposing of waste in covered containers.

Paper Wasps

Paper wasps are about 1" in length, have a spindle-shaped body and are marked with a brown and yellow pattern. Paper wasps construct umbrella-shaped, single-layered nests with exposed cells. Nests may be built in trees and shrubs but frequently are found under building overhangs, in attics, barns, garages and sheds. These wasps are not considered overly aggressive and usually pose a threat only when their nests are disturbed. However, foraging wasps can cause considerable annoyance as they fly in and about entrances of buildings.

Honey Bees

Honey bees may become troublesome when they swarm or build colonies in or near residential areas. Honeybees occasionally invade homes and establish a colony, building combs of wax containing honey, pollen and brood in wall spaces. Once established, a colony is difficult to remove because it usually involves structural modification of the building. To be effective, the honey and wax should be removed along with the bees or the site will remain attractive to other swarms.

Bumble Bees

These bees most commonly become a problem when they establish nests close to a sidewalk or near building foundations. Bumble bees are large, robust bees covered with dense black and yellow hairs. They commonly reach one inch in length. Bumble bees usually are not overly aggressive, but will sting if molested. To avoid confrontations with bumble bees, stay clear of patches of flowers visited by adults. These bees can be controlled by spraying or dusting insecticides into their nests. Retreatment may be necessary.

What to do?

Naturally, there are many kinds of bees, and other insects for that matter, about which we should be concerned. The following are some good rules of thumb to keep in mind.

To mitigate hazards associated with bees/wasps:

- Avoid known locations of bees/wasps.
- Keep your eyes and ears open for swarms.
- Look for insects flying in and out of openings such as a crack in the wall, an open pipe end, or a well vault lid.
- Be cautious of tall grass as some bees build their hives at ground level.
- Be cautious of pointed structures, especially in barns, storage sheds, and outbuildings as bees often build hives in those structures.
- Avoid wearing citrus or floral aftershaves or perfumes as bees/wasps may be attracted to these odors.
- Wear light colored clothing as insects are generally attracted to dark colors.
- Fill in cracks or crevices and close open ends of pipes when bees/wasps are not around.
- Leave the area as quickly as possibly if a nest has been disturbed. Do not retrieve nearby belongings. Do not stand still. Do not try to fight them.

If stung by a bee or wasp, wash the area with soap and water. If you have been stung over 15 times or are having symptoms other than pain and swelling, seek emergency medical assistance immediately. Staff that are allergic will carry an EpiPen® as prescribed by a doctor. The SHSO, OSEC and Project Manager should be made aware of this prior to the start of the project.

Insect Sting Reactions

Insect sting reactions can be classified into three types - a normal reaction, a toxic reaction, and an allergic reaction. A normal reaction, lasts only a few hours, involves pain, redness, swelling, itching, and warmth at the site of the sting. A toxic reaction lasts for several days, results from multiple stings and causes muscle cramps, headache, fever, and drowsiness. An allergic reaction is similar to a toxic reaction but is triggered with only one sting.

An allergic reaction can involve one or more of the following: hives, itching, and swelling in areas other than the sting site; tightness in the chest and difficulty in breathing; a hoarse voice or swelling of the tongue; dizziness or a sharp drop in blood pressure; and unconsciousness or cardiac arrest.

4.0 Site Control and Safety Procedures

Procedures described in this section are intended to aid Stantec personnel in mitigating site risks/hazards.

Video Cameras

Prior to using a camera or other electronic recording devices on this site, all on-site personnel and/or visitors will obtain approval from the Project Manager.

Daily Production Health and Safety Briefings

A safety meeting will be conducted twice daily and as needed at the site to discuss the health and safety issues for the activities to be conducted that day. The topics of the meeting will include, at a minimum, general health and safety procedures, reviewing health and safety policies and reviewing the job hazard analyses for the tasks to be conducted. Additional safety meetings may be conducted if the scope of work changes during the day, or if other health and safety issues are identified. The Daily Production Health and Safety Briefing Log and example meeting topics are included in Attachment 3.

Driving

- Review the Stantec Safe Driving Procedures provided on-site.
- Utilize the Journey Hazard Assessment Card to identify potential driving/journey/traffic hazards before each trip. Copies of the Journey Hazard Assessment Card are included in this HASP as Attachment 5.
- Utilize the Daily Vehicle Checklist at least once a day for each vehicle driven for Stantec business to identify potential vehicle issues/hazards. Copies of the Daily Vehicle Inspection Checklist are included in this HASP as Attachment 4.
- Have each team member who will travel to/from the site review the site-specific Journey Management Plan (JMP) before traveling to identify routes of travel and potential driving/journey/traffic hazards. JMP(s) will be kept with each traveling employee throughout the entire course of travel.
- A Stantec Vehicle Collision Kit will be kept in every vehicle used for Stantec project work. A Stantec Vehicle Collision Kit is included in this HASP as Attachment 6.

Drug and Alcohol Testing

Following an incident, Stantec will follow the incident reporting procedures. If appropriate, Stantec will include drug and alcohol testing, consistent with Stantec's Policies and Procedures, as well as the client's contractual requirements for testing.

Exclusion Zone and Decontamination (as applicable)

No eating, drinking, or smoking or raw tobacco use is permitted within the exclusion zone. These activities will be conducted only in designated areas of the site. Use of PDAs, cell phones, pagers, or other electrical devices (with the exception of intrinsically safe devices) are prohibited in the exclusion zone. Personnel will properly decontaminate after leaving an exclusion zone. Decontamination procedures may involve disposing of Tyveks, latex gloves, etc. in a decontamination zone located immediately outside of the exclusion zone. At a minimum, personnel will wash any exposed skin before leaving a site using soap and water or pre-moistened cleansing towels. Stantec will evaluate the hazards and develop site-specific decontamination procedures to address the chemical hazards at each site. These procedures can be found in the job safety analyses.

HASP Inspections

The site-specific HASP should be inspected in the field by the SHSO or other Stantec personnel to determine the effectiveness of the plan. Any deficiencies should be corrected and changes will be recorded on the HASP Modification Log.

Jewelry

Jewelry can be dangerous and shall not be worn during field activities. Large earrings, long necklaces, loose-fitting bracelets, rings, watches, etc. can become entangled in machinery and cause traumatic amputation of limbs, as well as be conductive of electricity.

Job Safety Analysis

Job Safety Analyses (JSAs) will be prepared or revised prior to mobilizing to the field. Applicable JSAs will be reviewed in detail on a daily basis by all affected on-site workers and/or visitors. Any revisions to the JSAs will be hand written into the JSAs, forwarded to the project manager, and communicated to during Daily Production Health and Safety Briefings. **JSAs are located in Attachment 2.**

Material Safety Data Sheets (a.k.a. Safety Data Sheets/GHS)

Material Safety Data Sheets (MSDSs) will be available in the Stantec HASP &/or in the sub-contractor's HASP for chemicals on site (including chemicals brought on site by on-site personnel and/or visitors).

Permits

This HASP will serve as the general permit to work for this site.

Personal Protective Equipment

PPE is identified in JSAs. PPE listed in each JSA is specific to the task outlined in the JSA and is consistent with Appendix B of 29 CFR 1910.120. PPE is to be used in accordance with manufacturers' recommendations and employee training. Minimum PPE at the site includes steel toe/steel shank boots, high visibility work gloves, hi-viz safety vest, long sleeve shirt, pants, safety glasses with side shields, and a hard hat.

Pre-entry Briefing

All on-site workers and visitors will receive a pre-entry briefing prior to accessing work areas of the site. The briefing will include reviewing contents of the HASP, signing the Acknowledgement and Agreement Form. The briefing for visitors may be abbreviated to be fit-for-purpose based on the intent of the visit.

Public Questions and Press

Questions about the site posed by neighbors, the press, or other interested parties will be directed to the **Caltrans Project Manager Samuel Yang at (213) 897-4058**.

Shutoff Valves/Switches

(IF NEEDED) The SHSO will identify the location of shutoff valves and switches for utilities and products on the Site Plan and disseminate this information to all site personnel and visitors as appropriate.

Site Access and Layout

Before mobilizing to the site for an event, the property owner(s) will be notified.

Site Security

Security of our staff, subcontractors, equipment, and the public is of paramount importance to Stantec. Employees are trained in hazard recognition and will follow standard policies and procedures to report and mitigate site security issues/hazards if identified. Note that security consideration is different than traffic guidance and control, which also impacts security to some extent. Security refers to personal safety and freedom from theft or violence. The following items will be evaluated when considering security measures at the site:

- Recent criminal activity at the site and nearby areas (ask site owner/operator and the police);
- Work hours (security concerns may be different depending on the time of day); and
- Lighting at the site (thieves are generally dissuaded from stealing on well lighted sites).

Standard security measures will be implemented on site to minimize the potential for loss at the site. Standard security measures include properly maintained lighting, functioning locks for windows/doors/equipment storage areas, and maintaining control of tools and equipment when not in use. Security may be implemented in a variety of ways:

- Orange construction fence (minimal security);
- Chain link fencing;
- Extra lighting;
- Specialized locks; and/or
- Contract security.

Traffic Guidance and Control

Incidents on sites have shown the need for a site-specific Traffic Guidance and Control Plan. The SHSO and project staff will develop a Traffic Guidance and Control Plan and disseminate this information to all site personnel. This plan will consider the amount of traffic at a site and provide for the safety of all workers. Equipment and resources to be considered as part of traffic guidance and control include:

- Vehicle hazard lights (tail and headlights)
- Cones/Delineators
- Placement of vehicles as barriers between workers and traffic
- Rotating amber hazard lights that can be placed on top of vehicles
- Signage advising drivers of shoulder work.

Other considerations for the Traffic Guidance and Control Plan include:

- Lane closures with proper signing
- Requiring personal vehicles (that aren't being used as barriers) to park as far away from potential traffic as possible.
- Cordoning off as much space as is necessary to ensure our safety.
- Identifying traffic flow routes and parking areas for heavy equipment (e.g., vacuum trucks, drill rigs, etc.) and establishing site speed limits.
- Reviewing local regulations for: formally developed traffic guidance and control plans signed by licensed individuals, police details, flagmen, hours of activity, closure of streets, etc.

Work Hours

Work on this project will be conducted between the hours of 0700 to 1800.

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Waste Management

A. Waste Generation (Type(s)/Quantities Expected):

Anticipated (YES/NO): ***NO***

Types: __ Liquid _Solid __ Sludge ____ Other (describe) _____

Quantity (Expected Volume): Unknown

B. Characteristics (Expected):

Corrosive _____ Flammable/Combustible ____ Radioactive _____ Toxic ____

Reactive _____ Unknown _____

Other (specify) _____

C. Packaging Requirements for Waste Material (Expected):

- DOT-approved Drums _
- Baker Tanks (possibly tankers if trucked off-site) _____
- Lined Waste Bins ____
- Temporary Stockpile _____

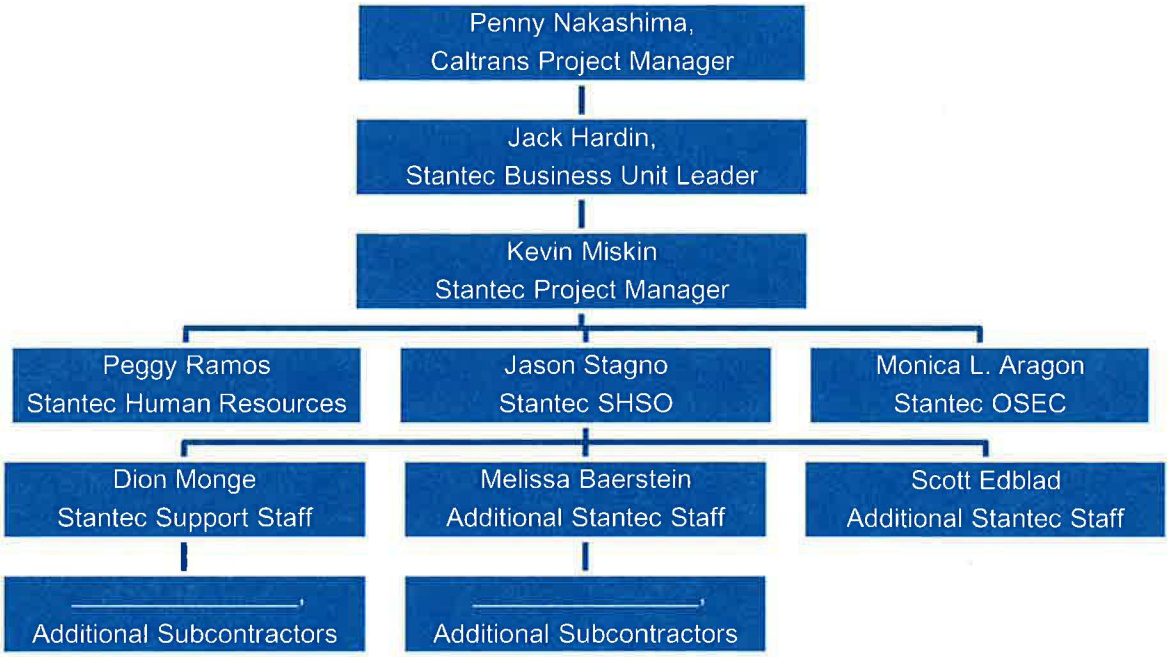
D. Disposal and/or Treatment Methods Proposed (Expected):

There are no waste materials expected to be generated during the ACM sampling work. .

Should any waste be generated during the ADL investigation, all wastes will be labeled, sampled, and analyzed for all applicable chemicals of potential concern and physical properties (e.g., pH, vapor pressure, etc.) to ensure proper waste characterization. Results of analysis will determine how and where impacted materials may be disposed. Belshire Environmental will be responsible for the categorization and transportation of all solid waste generated on this Site, if any. All materials will be disposed of or treated in accordance with federal, state and local regulations as selected and arranged by Stantec.

4.1 Organization and Responsibilities

An organization chart for project personnel is provided below.



A table summarizing responsibilities for project personnel is provided below.

Project Job Title	General Project Responsibilities
Stantec Project Manager	Overall financial and logistics. Contact client and subs to understand all hazards. Discuss with SHSO. Follow-up all incidents upon notice.
Stantec Site Health and Safety Officer	Conduct Site Safety Meeting (tailgate) and fieldwork in accordance with JSA and this HASP. Report all incidents and near misses immediately to Project Manager.
Stantec Support/Project Staff	Assist Stantec Site Health and Safety Officer in implementing site scope of work
Stantec Business Unit Leader	Provide immediate support at notice of all incidents
Stantec Sr. Certified Industrial Hygienist	Respond with corporate resources to all incidents as appropriate. Assist in HASP review. Assist in incident investigation.
Stantec Human Resources	Assist with incident review, recordkeeping.
Stantec Office Safety and Environment Coordinator	Manage Health and Safety responsibilities for personnel in Office. Assist employees with setting up training and attending/completing necessary courses.
Caltrans Project Manager	Provide all known analytical data gathered by others and notice of hazards. Provide access to site and available emergency response capabilities.

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Attachment B

Training Certificates

Certificate of Completion

Presented to

Jason Stagno

of

Stantec Consulting Services Inc.

for successful completion of

Stantec Hazwoper Refresher Course v3, PS4 eLesson

Dated: **09-07-2014**

Certificate of Completion

Presented to

Dion Monge

of

Stantec Consulting Services Inc.

for successful completion of

Stantec Hazwoper Refresher Course v3, PS4 eLesson

Dated: **5/28/2014**

Certificate of Completion

Presented to

Melissa Baernstein

of

Stantec Consulting Services Inc.

for successful completion of

Stantec Hazwoper Refresher Course v3, PS4 eLesson

Dated: **5/28/2014**

Certificate of Completion

Presented to

Monica Aragon-Guzman

of

Stantec Consulting Services Inc.

for successful completion of

Stantec Hazwoper Refresher Course v3, PS4 eLesson

Dated: **09-09-2014**

Principal Geologist

Certificate of Completion

Presented to

Joshua Sargent

of

Stantec Consulting Services Inc.

for successful completion of

Stantec Hazwoper Refresher Course v3, PS4 eLesson

Dated: **09-19-2014**

Certificate of Completion

Presented to

Michael Clayton

of

Stantec Consulting Services Inc.

for successful completion of

Stantec Hazwoper Refresher Course v3, PS4 eLesson

Dated: **4/11/2014**

Attachment 1

Stantec Field Binder Checklist and Project Applicable Forms

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Stantec Field Binder Checklist

INCLUDED YES	INCLUDED NO	INCLUDED N/A	FORMS	Qty.	COMMENTS
			PROJECT DOCUMENTS		
			Kick-off Meeting Materials	1	
X			Site-Specific Workplan / Written Scope	1	
			Project Management Checklist	1	
X			Field and Safety Supplies Checklist	5	
X			Sampling Procedures	1	
X			Permits	1	
X			Traffic Control Plans	1	
			STANTEC ENVIRONMENTAL SERVICES SECTOR		
			Field Notes and Logs		
X			Site Observation Report	20	
			Borehole/Well Construction Logs	10	
			Gauging Logs	5	
			Purge Groundwater Sampling Logs	10	
			Grab Groundwater Sample Log	10	
			Non-Aqueous Phase Liquid Bailing Sheets	5	
			O&M Field Data Log	20	
X			Waste Management Form	10	
			Oil & Gas Subsector		
			HSE Monitoring		
X			Equipment Calibration Sheet	5	
X			Air Monitoring Logs	10	
X			HSE Opportunity Card	5	
			SAFE Observation Remedial System	1	
			SAFE Observation Emergency Drill	1	
			SAFE Observation Groundwater	1	
			SAFE Observation Drilling	1	
			SAFE Observation Excavation	1	
			SAFE Observation Heavy Equipment	1	
			STANTEC CORPORATE HEALTH SAFETY AND ENVIRONMENT		
			Hazard Assessment		
X			RMS2– FIELD LEVEL Risk ASSESSMENT (FIT FOR DUTY), 1 day	20	
X			RMS2– FIELD LEVEL Risk ASSESSMENT (FIT FOR DUTY), 5 days	10	
X			RMS 7 - Quanitified Hazard Assessment		
X			SWP 102a - Workplace Violence	1	

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Stantec Field Binder Checklist

INCLUDED			FORMS	Qty.	COMMENTS
YES	NO	N/A			
			Inspection Form		
X			SWP 105a - Hazard Assessment for PPE Assessment Form	1	
HSE Monitoring and Incident Report					
X			RMS 5 - Worksite Inspection - Field	1	
X			RMS 3 - Incident Report	1	
Driving Safety and JMP					
X			SWP 124a - Vehicle Pre-Use Checklist	20	
			SWP 124b - Journey Management Plan	1	
Ground Disturbance					
X			SWP 213a - Pre-Ground Disturbance Worksheet Approval	3	
X			SWP 213c - Site Management and Post-Disturbance Checklist	3	
X			SWP 213d - Backfill Inspection Form	1	
Electrical Work					
			SWP 406a - Electrical Job Brief Hazard Assessment	1	
			SWP 406b - Energized Work Permit	1	
			SWP 408a - LTT Permit	1	
			SWP 408b - Emergency LTT Removal	1	
			SWP 408c - LTT Periodic Audit	1	
Confined Space					
			SWP 411a - Confined Space Entry Permit	1	
			SWP 411b - Alternate Entry Permit	1	
Lifting Operations					
			SWP 217a - Forklift Pre-Operational Checklist	1	
CLIENT-SPECIFIC DOCUMENTS					

Instructions: Review your Stantec Field Binder prior to starting work and ensure applicable contents are included. Sign and date the checklist. Your signature indicates your acknowledgement that you will maintain the field binder with forms required for your work.

Signature	Date:10/17/2014

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WORK SITE INSPECTION FIELD – RMS 5

Department: _____ Business Centre: _____

Location: _____ Date: _____

Purpose: To identify hazards in the field where Stantec personnel are working.

Responsibility: The Project Manager will determine how often work site inspections are required. OSEC will assist.

NOTE: for pre-use vehicle inspection, record inspection on SWP 124a – Vehicle Pre-Use Checklist.

	Status			Severity Ranking			Repeat Item (Y or blank)	Action Required (incl. champion's name)	Date Done
	Okay	Needs Work	N/A	A	B	C			
HSE Documentation									
Rms1 – hazard assessment	☐	☐	☐						
Health and Safety Plan (HASP)	☐	☐	☐						
Toolbox meeting	☐	☐	☐						
Permits (e.g. work, confined space, hot work, etc.)	☐	☐	☐						
Clearances	☐	☐	☐						
Training requirements met	☐	☐	☐						
Safe Work Practices	☐	☐	☐						
Inspection forms (e.g. ladder, chainsaw, client-specific excavation, etc.)	☐	☐	☐						
Other: Specify: _____	☐	☐	☐						
Emergency Preparedness									
Emergency Response Plan current & available	☐	☐	☐						
Muster point	☐	☐	☐						
First aid kit stocked/available	☐	☐	☐						
Emergency eyewash available	☐	☐	☐						
First aid providers on-site	☐	☐	☐						
Fire extinguisher	☐	☐	☐						
Communication available	☐	☐	☐						
Spill response kit	☐	☐	☐						
Other: Specify: _____	☐	☐	☐						
Protective Equipment									
Hard hats									
Safety glasses	☐	☐	☐						
Hearing protection	☐	☐	☐						
High visibility vests	☐	☐	☐						
Proper work gloves	☐	☐	☐						
Safety boots	☐	☐	☐						
18" PVC orange traffic cones	☐	☐	☐						
Road signs as required	☐	☐	☐						

A – Major – Includes potential for serious incident or illness, hospitalization, permanent disability, fatality or extensive property damage
B – Moderate – Includes potential for lost-time injury or illness, temporary disability or considerable property damage
C – Minor – Includes potential for first aid injury, minor illness, no lost time or limited property damage

	Status			Severity Ranking			Repeat Item (Y or blank)	Action Required (incl. champion's name)	Date Done
	Okay	Needs Work	N/A	A	B	C			
Fall arrest/restraint	☐	☐	☐						
Personal floatation device	☐	☐	☐						
Other: Specify: _____	☐	☐	☐						
Tools and Equipment									
Maintenance – tools in good condition	☐	☐	☐						
Used properly	☐	☐	☐						
Appropriate for job	☐	☐	☐						
Stored and/or secured safely	☐	☐	☐						
Lockout system established	☐	☐	☐						
Clearance from panels/overhead wires	☐	☐	☐						
Guards in place	☐	☐	☐						
Other: Specify: _____	☐	☐	☐						
Chemicals									
Controlled products labeled properly	☐	☐	☐						
Stored properly	☐	☐	☐						
MSDS available	☐	☐	☐						
TDG compliance	☐	☐	☐						
Other: Specify: _____	☐	☐	☐						
Site									
Parking	☐	☐	☐						
Accessibility	☐	☐	☐						
Work area demarcated	☐	☐	☐						
Visibility	☐	☐	☐						
Slipping and tripping hazards	☐	☐	☐						
Drainage	☐	☐	☐						
Overhead hazards identified	☐	☐	☐						
Buried utilities located/marked and exposed by hand	☐	☐	☐						
Pits/excavations barricaded	☐	☐	☐						
Excavation/Trench supports/slope	☐	☐	☐						
Traffic hazards controlled (including pedestrian walkways)	☐	☐	☐						
Other: Specify: _____	☐	☐	☐						
Environment									
Sensitive areas identified	☐	☐	☐						
Noise levels (</= 84dBA – 8hr shift; 82dBA – 12hr shift)	☐	☐	☐						

A – Major – Includes potential for serious incident or illness, hospitalization, permanent disability, fatality or extensive property damage
B – Moderate – Includes potential for lost-time injury or illness, temporary disability or considerable property damage
C – Minor – Includes potential for first aid injury, minor illness, no lost time or limited property damage

Stantec

WORK SITE INSPECTION FIELD – RMS 5

	Status			Severity Ranking			Repeat Item (Y or blank)	Action Required (incl. champion's name)	Date Done
	Okay	Needs Work	N/A	A	B	C			
Chemical hazards identified	☐	☐	☐						
Working near water	☐	☐	☐						
Heat/Cold	☐	☐	☐						
Gas, fumes, dusts, vapors, asbestos	☐	☐	☐						
Ventilation	☐	☐	☐						
Confined space (including monitor and attendant(s))	☐	☐	☐						
Other: Specify: _____	☐	☐	☐						
General (including Buildings/Trailers)									
Exits marked and accessible	☐	☐	☐						
Stairs and walkways clean and dry	☐	☐	☐						
Handrails sturdy	☐	☐	☐						
Emergency lighting	☐	☐	☐						
General housekeeping	☐	☐	☐						
Body positioning, ergonomics (resources available on StanNet)	☐	☐	☐						
Other: Specify: _____	☐	☐	☐						

Prepared by: _____ (Signature) _____ (Date)

Approved by: _____ (Signature (Project Manager)) _____ (Date)

Original Copy: Project Files
Copies: OSEC & Field Files

A – Major – Includes potential for serious incident or illness, hospitalization, permanent disability, fatality or extensive property damage
B – Moderate – Includes potential for lost-time injury or illness, temporary disability or considerable property damage
C – Minor – Includes potential for first aid injury, minor illness, no lost time or limited property damage

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RMS7 – QUANTIFIED HAZARD ASSESSMENT

A proactive approach to safety requires systematic analysis of the tasks each occupation is required to perform regularly. The objectives of this hazard assessment process are to review and quantify the risk inherent in each task, to assess the effectiveness of existing controls and to develop new controls if necessary. Tasks with high levels of inherent risk are *critical tasks*, and require detailed and stringent controls. It is important that the people who perform the tasks are involved in this analysis, as their experience and knowledge are essential to the process. The controls identified and created should be used as tools for training and orienting new employees and contractors.

Using the attached risk matrix rate each task using severity and likelihood. Once this evaluation is complete, critical tasks will be identified and the existing controls evaluated.

Instructions:

1. List all the tasks that are completed as part of the job, even if they are not daily occurrences.

2. List the hazards associated with completing the task (consider hazard categories: chemical, physical, ergonomic, biological or environmental).

3. Using the attached Risk Matrix, use Tables 1 and 2 to determine the severity and likelihood rating for each task.

4. Determine the Risk Ranking according to the coloured Risk Matrix.

5. Using Table 3, tasks which are ranked A or B require immediate/prompt attention, and may be considered critical tasks. Critical tasks require further hazard analysis and assessment of controls.

6. As a baseline for the organization as a whole, a critical task inventory has been created for Stantec operations. Please contact your Regional Safety and Environment Coordinator (RSEC) for information and guidance.

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RMS7 – QUANTIFIED HAZARD ASSESSMENT - TASK INVENTORY

TASK INVENTORY		Date:		
Occupation:		**Name:**		
Task	**Hazards**	**Severity (1 to 4)**	**Likelihood (1 to 4)**	**Risk Level (A to D)**
Example: Vehicle Operation	*Other drivers, poor vehicle maintenance, loose objects in the cab, animals, fatigue, weather conditions, darkness, inexperience, distractions*	*4*	*3*	*A*

Controls Required to Mitigate Identified Risks to an Acceptable Level		
1.	**4.**	**7.**
2.	**5.**	**8.**
3.	**6.**	**9.**

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RMS7 – QUANTIFIED HAZARD ASSESSMENT – RISK MATRIX

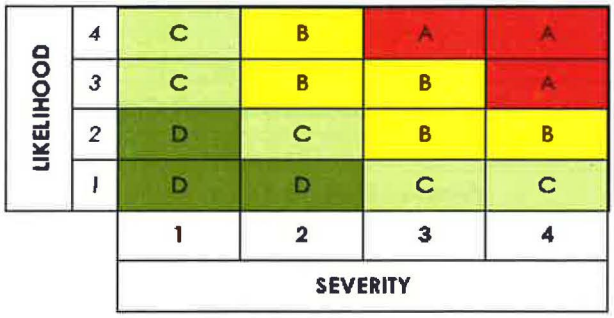

Table 1: Severity Result Criteria

Severity Level	People Impacts	Property Impacts	Liability/Cash Flow Impacts	Environmental Impacts
1	**Minor Injury** (first aid only – may have to see doctor)	**Minor** operational upset or damage to equipment. Total loss less than $10,000	**Minor** Third party damage claim. Total loss less than $10,000	**Incidental** Release with incidental or insignificant effects within facility.
2	**Medical Treatment Case** (had to see doctor AND get treatment)	**Moderate** operational upset and/or equipment damage. Total loss between $10,000 and $50,000	**Moderate** Third party damage claim/lawsuit. Total loss between $10,000 and $50,000	**Minor** Release within or outside fence with known consequences. Localized effect with mild environmental effects. Requires reporting to regulatory authorities.
3	**Serious Injury** (Modified Work, Away from Work and/or Long Term Disability)	**Major** operational upset and/or equipment damage. Total loss between $50,000 and $150,000	**Major** Civil charges laid against company or employees. Lawsuit anticipated. Total loss between $50,000 and $150,000	**Adverse** Release outside fence with known detrimental effects. Requires response from outside agencies (Hazmat units, police, and fire department)
4	**Death** (to 1 or more people)	**Critical** major damages or complete loss to essential equipment. Total loss more than $150,000	**Critical** Criminal charges laid against company or employees. Operation of site or operation halted by regulatory agency. Company-wide negative effects to operations. Lawsuit anticipated. Total loss more than $150,000.	**Serious** Release outside fence with known detrimental effects. Requires an ongoing cleanup requiring significant resources. Regulatory or other charges are possible.

Table 2: Probability Result Criteria	
Likelihood Level	***Result Criteria (where Likelihood = Frequency x Probability)***
4	**Constant.** Constant or continuous exposure to the risk. Task or activity is performed or may occur daily on a continuing basis. **High** probability of **RISK resulting in incident.** Incident is certain to occur, risk not fully controlled. Expected – occurs often as part of the process.
3	**Frequently.** Regular exposure to the risk. Task or activity is performed or may occur once per week or more. **Moderate** probability of **RISK resulting in incident.** Incidents happen, risk not fully eliminated. **POSSIBLE – KNOWN TO OCCUR DURING THE PROCESS.**
2	**Occasionally.** Low frequency of exposure to the risk. Task or activity is performed or may occur two or three times per month. **Low** probability of **RISK resulting in incident.** Occurrence is not likely but may have occurred in the past. Unusual – known to occur occasionally but not normally anticipated.
1	**Seldom.** Very low frequency of exposure to the risk. Task or activity performed or may occur once per month or less. **Extremely Low** probability of **RISK resulting in incident.** Occurrence very unlikely and may not have occurred in the past.

Table 3: Required Action For Each Risk Level		
Risk Level	**Category**	**Action Required**
A	Unacceptable	Must be mitigated with appropriate controls to a risk ranking of C or D immediately.
B	Undesirable	Must be mitigated with appropriate controls to a risk ranking of C or Das soon as possible.
C	Acceptable with Controls	Risk mitigation to risk ranking of Dis optional; procedures and controls must be verified.
D	Acceptable as is	No risk mitigation required.

HEALTH, SAFETY AND ENVIRONMENT

SAFE WORK PRACTICE
PRE-GROUND DISTURBANCE WORKSHEET & APPROVAL FORM
SWP-213a

Stantec

** Form to be completed by Project Manager or Designate*

Section One: Project Information

Project Number:	Project Name:
Project Manager:	
Client:	
Location:	
Planned Excavation Method: ☐ Mechanical ☐ Hand	Planned Excavation Depth: ☐ <30 cm / 1 ft and/or ☐ >30cm /1 ft
Work Description: (provide detail information as to what work is planned and how it will be executed):	
Information provided/completed by: ☐ Client ☐ Stantec	

Section Two: Utilities Location and Verification

1. Review location description provided by client.	Yes ☐ *(circle all that apply)* Green Field / Brown Field / White Zone / Other No ☐ N/A ☐ Justification:	
2. Identify and confirm land use.	Yes ☐ *(circle all that apply)* Ag Land / Urban / Municipal Urban / Native Forest / Industrial No ☐ N/A ☐ Justification:	
3a. Full-sweep line locate required	Yes ☐ No ☐ N/A ☐ Justification:	
3b. Point-specific line locates	Yes ☐ No ☐ N/A ☐ Justification:	
3c. Quote required and authorized (prior to location activities started)	Yes ☐ Provided by: Client Name: Date: No ☐ N/A ☐ Justification:	
4. Utility locates have been performed by public utility company(s) within required timeframe. Locates are clear/visible. *for multiple utility companies, please note dates and contact information using questions 5-15	Yes ☐ Contact Date: Ticket Number: Contact Person: Alternate Contact: Proposed Meet Date: Meet Time: No ☐ N/A ☐ Justification: Ticket Expiration Date:	
5. Private locate company has been contacted and is an approved utility locating contractor. *Markings are clear and visible*	Yes ☐ Contact Name: Contact Number: Meet Date: Meet Time: No ☐ N/A ☐ Justification:	

HEALTH, SAFETY AND ENVIRONMENT

SAFE WORK PRACTICE
PRE-GROUND DISTURBANCE WORKSHEET & APPROVAL FORM
SWP-213a

Stantec

6. Site access/permission has been secured *Land owner/tenant has been contacted*	Yes ☐	Land Owner Name: Contact Number: Permit/Authorization Number: Land Agent Name: Contact Number: * *Attach Access Agreement and Permit Authorization* No ☐ N/A ☐ Justification:
7. Work discussed with owner/tenant.	Yes ☐	Owner Name: Tenant Name: No ☐ N/A ☐ Justification:
8a. All crossing agreements for third party and owner facilities are in place and conditions have been met.	Yes ☐	Crossing or proximity agreements: 1. 2. 3. * *Attach crossing agreements with conditions* No ☐ N/A ☐ Justification:
8b. Have third party line owners been given 48 hours' notice to crossing or encroachment?	Yes ☐ No ☐	N/A ☐ Justification:
9. Is owner's representative required to be present when exposing or excavating near/across lines?	Yes ☐ No ☐	N/A ☐ Justification:
10a. Reviewed site information to identify subsurface structures relevant to planned site activities. *Review easements, right of ways, historical plot plans, previous site investigation, soil surveys, boring logs, etc*	*Check all that apply* ☐ 3rd party identified ☐ Recent low pressure plots reviewed? ☐ Land Standing Report reviewed? No ☐ N/A ☐ Justification:	☐ Recent high pressure plots reviewed? ☐ Land title search reviewed? ☐ Previous Site Investigations? ☐ Other
10b. Most recent as-built drawings and/or site plans surveys obtained. *Including UST, product and vent lines, building layout*	Yes ☐ No ☐	N/A ☐ Justification:
10c. Municipal utilities drawings.	Yes ☐ No ☐	N/A ☐ Justification:
11. All applicable local, provincial and federal permits have been obtained.	Yes ☐	Local/City Permit Number: Provincial/State Permit Number: Other: Other: * *Copy attached and on site* No ☐ N/A ☐ Justification:

Approval to Proceed with Field Activities

Client Approval:

Print Name: Signature: Date:

Project Manager/Designate Approval:

Print Name: Signature: Date:

HEALTH, SAFETY AND ENVIRONMENT

SAFE WORK PRACTICE
GROUND DISTURBANCE FORM
SWP-213b

Stantec

Ground Disturbance Form

Field Activity				
1. Copy of current locates and drawings on site.	Yes ☐ No ☐ N/A ☐ Justification:			
2. All site personnel involved in ground disturbance activities have been briefed on clearance protocols, line locations and signed off on work plan	Yes ☐ No ☐ N/A ☐ Justification:			
3a. Work area is secured.	Yes ☐ No ☐ N/A ☐ Justification:			
3b. Site work permits have been obtained.	Yes ☐ No ☐ N/A ☐ Justification:			
3c. Emergency shut-off switch is located for all impacted equipment.	Yes ☐ No ☐ N/A ☐ Justification:			
3d. Fire extinguishers/warning sign/ barriers are present.	Yes ☐ No ☐ N/A ☐ Justification:			
3e. Signage in place for overhead power lines.	Yes ☐ No ☐ N/A ☐ Justification:			
3f. Specify other safety equipment as needed.	☐ ☐		☐ ☐	
4. Location of area lights/signs and associated subsurface lines identified. Ticket/Confirmation No:	Yes ☐ No ☐ N/A ☐ Justification:	Located by: Company/Utility:	Phone:	Date:
5a. Location of all telecommunication and associated subsurface lines identified. Ticket/Confirmation No:	Yes ☐ No ☐ N/A ☐ Justification:	Located by: Company/Utility:	Phone:	Date:
5b. Fiber optic lines identified. Ticket/Confirmation No:	Yes ☐ No ☐ N/A ☐ Justification:	Located by: Company/Utility:	Phone:	Date:
6. Location of drains and associated Inter-connecting lines identified.	Yes ☐ No ☐ N/A ☐ Justification:	Located by: Company/Utility:	Phone:	Date:
7. Location of all electrical junction boxes and associated interconnecting lines identified.	Yes ☐ No ☐ N/A ☐ Justification:	Located by:	Phone:	Date:
	Status: Live ☐ Shut-off and locked out ☐ Removed from service ☐			
	Confirmation of status: Name:			Date:
	* Maintain minimum safe distance of > 7 m/23 ft.			

HEALTH, SAFETY AND ENVIRONMENT

SAFE WORK PRACTICE
GROUND DISTURBANCE FORM
SWP-213b

Stantec

8. Location of natural gas meters or connections and all interconnecting lines identified.	Yes ☐ Located by:	Phone:	Date:
	Company/Utility:		
	No ☐ N/A ☐ Justification:		
	Status: Live ☐ Shut-off and locked out ☐ Removed from service ☐		
	Confirmation of status: Name:		Date:
9. Location of Cable lines.	Yes ☐ Located by:	Phone:	Date:
	Company/Utility:		
	No ☐ N/A ☐ Justification:		
10. Location of Water lines.	Yes ☐ Located by:	Phone:	Date:
	Company/Utility:		
	No ☐ N/A ☐ Justification:		
11. Presence and tracing of process/storm sewers identified /understood *If other concrete, fiberglass, untraced PVC lines are potentially in the ground disturbance area, identify means of identification in comments section*	Yes ☐ Located by:	Phone:	Date:
	Company/Utility:		
	No ☐ N/A ☐ Justification:		
	Comments (need to comment on water sewer line):		
12. Presence of underground pipelines associated with pumps and pump galleries, manifolds, tank fields, compressors, production wells, loading racks and equipment identified.	Yes ☐ Located by:	Phone:	Date:
	Company/Utility:		
	No ☐ N/A ☐ Justification:		
13. Location of all aboveground indicators of subsurface utilities/services that may be leading to or from buildings within planned work area are Identified.	Yes ☐		
	No ☐ N/A ☐ Justification:		
14a. Orientation, arrangement, location, sizes of tanks, STP and extractor covers identified. .	Yes ☐		
	No ☐ N/A ☐ Justification:		
14b. Burial depth of tank determined if relevant	Yes ☐ Depth:		
	No ☐ N/A ☐ Justification:		
14c. Presence of underground lines for instrumentation, process analyzer, and motor-operated valves are inspected/identified.	Yes ☐		
	No ☐ N/A ☐ Justification:		
15. Location of other pertinent features surface or sub-surface that may be of relevance to work scope has been identified.	Yes ☐		
	No ☐ N/A ☐ Justification:		
16. Are all buried lines and utilities that are identified on all drawing sources staked or marked in the ground disturbance zone plus a 30 m /100 ft. buffer?	Yes ☐		
	No ☐ N/A ☐ Justification:		

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17. Critical zones have been identified. *5 m / 16.5 ft. of pipeline crossing area or the distance defined in the pipeline crossing agreement; 3 m / 10 ft. distance from edge of tank, pumps and pump galleries, manifolds, on/below grade transformers, compressors, production wells, flow lines, loading racks, other process equipment, operating dispenser islands and suspected hazardous/critical utilities, product lines, other subsurface structures, and entire area between tank field and dispensers at retail sites*	Yes ☐ Identify critical zones: No ☐ N/A ☐ Justification:
18. Has the owner/representative inspected the crossings or encroachment areas prior to beginning work?	Yes ☐ No ☐ N/A ☐ Justification:
19. Are all conditions of the Crossing Agreements being met?	Yes ☐ No ☐ N/A ☐ Justification:
20. Are all operators aware of the mechanical excavation zone as discussed in the tailgate meeting?	Yes ☐ No ☐ N/A ☐ Justification:
21. Location of surface features indicative of product lines or other subsurface structures identified.	*Check all that apply* ☐ Pipe marker signs present ☐ Surface scaring present ☐ Ground depressions present ☐ Water cc's identified ☐ Cut lines observed ☐ Vegetation distressed Other: No ☐ N/A ☐ Justification:
22. Road and pipeline crossing zones identified.	Yes ☐ No ☐ N/A ☐ Justification:
23. If subsurface structures exposed, extra precautions have been taken to ensure structural integrity.	Yes ☐ Describe: No ☐ N/A ☐ Justification:

Comments / Findings	Actions to Close Out Items	Person Completing	Date Completed

HEALTH, SAFETY AND ENVIRONMENT

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Completed by: (print name)	Company:
Signature	Date:

HEALTH, SAFETY AND ENVIRONMENT

SAFE WORK PRACTICE
SITE MANAGEMENT AND POST-DISTURBANCE CHECKLIST
SWP-213c

Location:	Client:
	Project Number:
Land Use:	Project Manager:
Ground Disturbance Supervisor:	Work Period Date:
Contactor(s):	Ground Disturbance Activity:

Post Disturbance	**Yes**	**No**	**N/A**	**Initial**
Have all hand or daylighting exposure points been backfilled to the satisfaction of the owner?				
Has the owner inspected all exposed facilities in an excavation? If so, have owner initial here:_____				
Has a written backfill inspection been completed?				
Have photos been taken prior to backfill of an excavation?				
Has a written summary of all aspects of the work been completed?				
Have photos been taken after the excavation was backfilled?				

Comments:

Company	Signature	Print Name	Date (dd/mm/yy)

Requires Attachments:

1. Backfill Inspection report
2; Photographs
3. Written work summary

HEALTH, SAFETY AND ENVIRONMENT

SAFE WORK PRACTICE – BACKFILL INSPECTION FORM SWP-213d

Location:	Client:
	Project Number:
Land Use:	Project Manager:
Ground Disturbance Supervisor:	Work Period Date:
Contactor(s):	Ground Disturbance Activity:
Facility/Property Information	
Type:	
Name of Facility Owner:	
Number of Utilities in common ROW:	
Crossing agreement (Yes/No):	
Description of exposed Utility:	
Type of exposure:	
Dimensions of exposure (m):	
Depth of Utility below original ground (m):	
Position of Utility in exposure:	
Describe any visible damage:	
Backfill Description:	
Material type of backfill:	
Placement method:	
Contractor:	
Inspected by owner? (yes/no)	
Number of photographs:	

HEALTH, SAFETY AND ENVIRONMENT

SAFE WORK PRACTICE – BACKFILL INSPECTION FORM SWP-213d

Site Sketch of Backfill Site (plan and cross section)

NW	NE
SW	SE

Approval			
Company	Name	Signature	Date (text)

Key Contacts and Telephone Numbers:

Information Source	Telephone	Web Address
Stantec Key Safety Contacts		

Attachment 2

Job Safety Analyses

1. Driving to/from the job Site (with no trailer) Job Safety Analysis (JSA)

POC	Development Team	Position/Title	Date	Reviewed By	Position/Title
X	Michael Philipp	West Region Health and Safety Manager	10/04/2006		
			05/27/2008	Michael Philipp	West Region Health and Safety Manager
		Site specific edits to this JSA were made by	09/12/2014	Monica L. Aragon	OSEC
If most recent review date is more than six months old, then this JSA must be updated and reviewed again to remain current					
POC is the JSA development 'Point Of Contact'					

Field staff must review job-specific work plan and coordinate with project manager to verify that all up-front logistics are completed prior to starting work including, but not limited to, permitting, access agreements, and notification to required contacts (e.g. site managers, inspectors, clients, subcontractors, etc.). A tailgate safety meeting must be performed and documented at the beginning of each workday. Last-Minute Risk Assessment (LMRA) procedures must be used throughout the project. Weather conditions (heat, cold, rain, and lightening) must also be considered. Each employee is empowered, expected, and has the responsibility to stop the work performed by him/herself or another co-worker if the working conditions or behaviors are considered unsafe. All employees should act proactively to identify and mitigate hazards to the safest extent of their ability. Use Stop Work Authority as needed.

Job Steps	Personal Protective Equipment	Potential Hazard	Critical Actions
Perform LMRA procedures.	Wear reflective vest for traffic, steel toed shoes, long sleeve shirt, hardhat, safety glasses with side shields, and high visibility work gloves.	Slip/trip/falls, struck by traffic	• Assess the potential hazards. Analyze how to reduce the risk. – STANTEC_____. • Review JSA – STANTEC_____.
Verify Journey Management Plan is complete and current		Unexpected traffic detours	• Assure directions are available and understood prior to commencing travel – STANTEC_____. • Pull the vehicle into a safe location if additional directions must be confirmed – STANTEC_____. • Increase following distance to allow extra time to stop if you are in

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Job Steps	**Personal Protective Equipment**	**Potential Hazard**	**Critical Actions**
			unfamiliar territory - STANTEC_____.
Verify a Vehicle Collision Kit, a 3-lb type ABC fire extinguisher, and other as needed emergency equipment is in the vehicle.	Safety vest, high visibility work gloves, steel-toe/shank boots, safety glasses, long-sleeved shirt	Struck by another vehicle, pinch points, falling equipment	• Verify prepared field kit is in the vehicle. Inventory of the kit should include first aid kit, blood borne pathogen kit, fire extinguisher, collision kit, flashlight, etc. – STANTEC_____. • For cold weather areas the inventory should also include a bag of sand, a bag of salt, gloves, wool socks, wool caps, wool blankets, tire chains, small shovel and matches – STANTEC_____.
Perform perimeter walk around of vehicle for damage or unusual conditions, and complete the SWP-124a - Vehicle Pre-Use Checklist.	Safety vest, high visibility work gloves, steel-toe/shank boots, safety glasses, long-sleeved shirt	Getting hit by a car, pinch points, slip/trip/fall, chemical contacts (grease or oil from car), overheated engine or break-down due to lack of critical fluids.	• Complete the SWP-124a - Vehicle Pre-Use Checklist prior to travel – STANTEC_____ • Wear safety vest and watch for cars during walk around– STANTEC_____. • Address all questionable items prior to departure – STANTEC_____. • Assure tires are properly inflated – STANTEC_____. • Assure there are no cuts or bulges in the sidewalls – STANTEC_____. • Assure windshield and window glass is clean and not cracked or crazed – STANTEC_____. • Lift wiper arms and check wiper blades for damage or deterioration – STANTEC_____. • Check behind vehicle for obstructions – STANTEC_____. • Check under vehicle engine for evidence of fluid leaks – STANTEC_____. • Check fluid levels– STANTEC_____. • Wear Nitrile gloves when checking under hood – STANTEC_____. • Verify all traffic control equipment is removed/safely stowed away – STANTEC_____. • Look for and identify possible slip, trip, fall, and pinch point hazards –

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Job Steps	Personal Protective Equipment	Potential Hazard	Critical Actions
			STANTEC_____. • Do not touch metal with moist or wet skin – STANTEC_____. • Scrape windows, front and rear windshields – STANTEC_____.
Enter and prepare to start vehicle	**SEAT BELT**, sunglasses if needed	Back or body strain, slip/trip/fall, blind spots, inability to signal intentions, streaking windshield, impaired vision.	• Be aware of footing, handholds, and head room when entering vehicle – STANTEC_____. • Adjust seat so back is fully supported, upper arms close to body, and pedals within easy reach – STANTEC_____. • Lower steering wheel so hands are below shoulders and shoulders are relaxed – STANTEC_____. • Check mirror adjustments each time vehicle is re-started – STANTEC_____. • Locate and test operations of front and rear turn signals, headlamps, wipers, and washer fluid – STANTEC_____. • Verify proper operation of climate controls – STANTEC_____. • Fasten seat belt – STANTEC_____. • Lock doors – STANTEC_____. • Driver's cell phone shall be turned off – STANTEC_____. • Turn on headlights if vehicle is not equipped with day-time running lights – STANTEC_____.

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Job Steps	Personal Protective Equipment	Potential Hazard	Critical Actions
Start engine and let vehicle warm up.	**SEAT BELT**, sunglasses if needed	Unexpected movement.	• Assure that transmission is in Park, or in neutral if a manual transmission, and that parking brake is set – STANTEC_____. • Refer to Manufacturers vehicle manual for warm up times – STANTEC_____. • Assure there is sufficient gas, oil and other critical fluids – STANTEC_____. • Check for proper function of warning lights – STANTEC_____. • Make any other necessary adjustments prior to driving – STANTEC_____.
Pull out of parking space.	**SEAT BELT**, sunglasses if needed	Collision with other vehicles, pedestrians, or stationary objects.	• Check mirrors and over shoulder in all directions prior to pulling out of parking space – STANTEC_____. • Give two short blasts on the horn and while looking over your shoulder – STANTEC_____. • Slowly pull out of the parking space being prepared to apply the brakes if needed – STANTEC_____. • Signal if parallel parked along a street – STANTEC_____. • Avoid reversing when possible – STANTEC_____. • If reversing with 2 or more personnel in the vehicle, then at least 1 person must exit the vehicle and act as a spotter. If alone, before getting in the car, assess the area for approaching pedestrians and vehicles – STANTEC_____.
Drive a motor vehicle	**SEAT BELT**, sunglasses if needed	Collision, injury or death to occupants or other parties.	• Use the Stantec safe driving techniques – STANTEC_____. • **Scan** – Scan your horizon – STANTEC_____. • **Timing** – Do you have enough time to stop – STANTEC_____. • **Alert** – Don't drive when you are tired – STANTEC_____. • **Next** – Anticipate what could happen next – STANTEC_____. • **Team** – Passengers need to assist – STANTEC_____. • **Elevate** – Elevate your line of site – STANTEC_____.

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Job Steps	Personal Protective Equipment	Potential Hazard	Critical Actions
			• **Courteous** – Don't be the driver others dislike – STANTEC_____. • Driver's cell phone shall be turned off – STANTEC_____. • Scan major and minor intersections before entry (left-right-left) – STANTEC_____. • Scan mirrors frequently, at least one mirror every 5-8 seconds – STANTEC_____. • Avoid staring while evaluating road conditions – STANTEC_____. • Maintain adequate spacing between your vehicle and the vehicle in front of you (Rule of thumb is 1 second for every 10 miles per hour – STANTEC_____. • After stopping, allow vehicle in front to move for 3 seconds before accelerating – STANTEC_____. • Evaluate approaching merge before you reach them – STANTEC_____. • Avoid being boxed in by other vehicles – STANTEC_____. • Seek eye contact with other drivers – STANTEC_____. • Before changing lanes, signal well in advance, check mirrors and over shoulder, and allow adequate space before changing lanes – STANTEC_____. • Avoid blind spots – STANTEC_____. • Increase the distance between your vehicle and the vehicle in front of you at night and in inclement weather. – STANTEC_____
Pauses in travel	Safety vest, high visibility work gloves, steel-toe/shank boots, safety glasses, long-sleeved shirt, cell phone.	Struck by another vehicle, insecure connections	• If there is a pause in travel (i.e. rest stop, gas station) do another walk around the vehicle prior to resuming travel – STANTEC_____. • Be aware of nefarious characters – STANTEC_____.

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Job Steps	Personal Protective Equipment	Potential Hazard	Critical Actions
Reversing the vehicle	**SEAT BELT**, sunglasses if needed	Collision, injury or death to occupants or other parties.	• Make all backing maneuvers slowly and cautiously – STANTEC_____. • Check mirrors and over shoulders – STANTEC_____. • If reversing with 2 or more personnel in the vehicle, then at least 1 person must exit the vehicle and act as a spotter. If alone, before getting in the car, assess the area for approaching pedestrians and vehicles – STANTEC_____.
Parking	**SEAT BELT**, sunglasses if needed	Collision, injury or death to occupants or other parties.	• Park away from other cars when possible and when safe. – STANTEC_____ • Look for pull-through parking to avoid reversing – STANTEC_____. • Back into parking spot when possible and safe and legal – STANTEC_____. • If reversing with 2 or more personnel in the vehicle, then at least 1 person must exit the vehicle and act as a spotter. If alone, before getting in the car, assess the area for approaching pedestrians and vehicles – STANTEC_____. • Maintain cushion of safety from fixed objects – STANTEC_____. • Set parking brake – STANTEC_____.
POST-TRIP		Conditions worsen leading to mechanical failure possibly resulting in accident, injury, or death.	• Report vehicle problems immediately to company representative or rental car agency – STANTEC_____. • Schedule a tune-up or repair if necessary – STANTEC_____

ACM/PACM/LBP Sampling

POC	Development Team	Position/Title	Date	Reviewed By	Position/Title
√	Michael Allen Philipp	West Region H & S Manager	10/12/05		
	Scott Jordan	OE Coordinator	10/12/05		
	Dianne Burnia	National OE Coordinator	10/12/05		
			02/02/06	Michael A Philipp	West Region Health and Safety Manager
		Site specific edits to this JSA were made on and by	10/1/2014	Monica L. Aragon	OSEC
If most recent review date is more than six months old, then this JSA must be updated and reviewed again to remain current					
POC is the JSA development 'Point Of Contact'					

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❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
Mobilize with the proper equipment for Asbestos Containing Material/Presumed Asbestos Containing Material (ACM/PACM) and LBP Sampling.	Gather necessary PPE. Steel toed and shank boots, long sleeve shirt, hard hat, safety glasses with side shields, ear plugs/muffs, leather gloves for the non-chemical aspects of work as necessary; Wear an air purifying respirator with combination organic vapor/P-100 cartridges, and other PPE as needed. (*Use a North 7700 series half face respirator or its equivalent. Best brand nitrile gloves or their equivalent. Howard Leight Max foam earplugs with an NRR of 33 or their equivalent. Tyvek, poly coated chemical resistant suit or its equivalent).*	Vehicle accident. Lifting hazards. Delay or improper performance of work due to improper equipment onsite.	• Start project with Production Safety Meeting (**RMS -2 – Fit for Duty – Attachment 3**) - STANTEC/Contractor. Discuss: -ensure all STANTEC/Client permits are filled out appropriately and discussed - STANTEC. -potential hazards and ways to avoid them - STANTEC/Contractor. - motor vehicle safety topic - STANTEC/Contractor. - current days weather conditions - STANTEC/Contractor.. - PPE requirements - STANTEC/Contractor. - check contractors HASP, Certs, MSDS's, and equipment maintenance records - STANTEC. - using safe lifting procedures - STANTEC/Contractor. • Review ACM/PACM/LBP Sampling Procedures – STANTEC/Contractor. • Make sure contractors are aware of their responsibilities for labor, equipment and supplies - STANTEC/Contractor. • Review permit conditions as required - STANTEC/Contractor. • Conduct LMRA procedures - STANTEC/Contractor. • Take your time. Do not rush - STANTEC/Contractor. • Use the buddy system for carrying loads in excess of 50 lbs and to continuously observe oncoming traffic. - Stantec • Access the area, are there hazards present - STANTEC/Contractor. • Wear safety glasses and leather work gloves when loading, unloading, and

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❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
			whenever material handling - STANTEC/Contractor. ● Secure load in vehicle - STANTEC/Contractor ● Use lids to debris/garbage containers. Do not leave buckets open with out a lid! Material in the bucket can spill - STANTEC/Contractor ● Use bubble wrap or other insulating material to cushion the sample containers during transport – STANTEC
Set up work zones as necessary.	Steel toed and shank boots, long sleeve shirt, hardhat (if required by job site), safety glasses with side shields/goggles.	Slip, trip and falls.	● Employ safe lifting procedures – STANTEC/Contractor. ● Maintain good housekeeping – STANTEC/Contractor. ● Use the buddy system for carrying loads in excess of 50 lbs and to continuously observe oncoming traffic. - Stantec
Commence bulk sampling	Don required PPE as appropriate for this step: steel toed and shank boots, long sleeve shirt, hardhat, safety glasses with side shields, hearing protection, leather gloves for the non-chemical aspects of work as necessary. Wear a Tyvek suit. Wear chemical resistant gloves during sampling and handling of ACM/PACM/LBP. Wear a half-face air-purifying respirator with combination organic vapor/P-100 cartridges (**required**).	Slip, trips and falls, exposure to contaminants, falls from ladders, cross contamination of samples. Back strain.	● Inspect step-ladder before use. Do not use top step to stand on – STANTEC/Contractor. ● Request unnecessary personnel to leave the sampling area as appropriate – STANTEC/Contractor. ● Wear appropriate PPE during sampling evolution – STANTEC/Contractor. ● Wear a full-face air-purifying respirator with combination organic vapor/P-100 cartridges as necessary – STANTEC/Contractor. ● Use plenty of water if utilizing wet sampling method – STANTEC/Contractor. ● Use the buddy system for carrying loads in excess of 50 lbs and to continuously observe oncoming traffic. - Stantec ● Decontaminate sampling equipment between each sample. Decontamination will be accomplished with a fresh water rinse, (spray bottle), into an appropriate container. Decontamination can also be accomplished utilizing wet wipes – STANTEC/Contractor. ● Properly label and record sample information; date of sample, location of sample, type of material sampled, amount (square feet or lineal feet), of material and a unique ID number – STANTEC/Contractor. ● Properly mark location of each sample on site map – STANTEC/Contractor. ● Properly "patch" sample area as appropriate – STANTEC/Contractor.
Decontaminate all	Use a North 7700 series half-face	Chemical exposure, heat	● Use three stage decontamination for boots; use an Alconox wash,

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❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
equipment/personnel.	respirator or its equivalent. Use North Part #7583P100 cartridges or their equivalent. Use chemical resistant gloves. Use LaCrosse steel toe/shank rubber boots or their equivalent. Use Howard Leight Max foam earplugs with an NRR of 33 or their equivalent. Use Tyvek suit (with hood) or its equivalent	stress.	freshwater rinse followed by a second freshwater rinse. Dispose of all other used PPE in drums with plastic liners – STANTEC/Contractor. ● Use proper PPE doffing procedures, taking care not to come in contact with contaminated/potentially contaminated PPE – STANTEC/Contractor. ● Use a three stage decontamination process for respirator wash. *Mild dishwashing liquid & fresh water wash followed by a fresh water rinse followed by a second fresh water rinse*– STANTEC/Contractor. ● Use a three stage decontamination process for a tool wash. *Alconox wash followed by a fresh water rinse followed by a second fresh water rinse* – STANTEC/Contractor. ● Have proper storage containment and labeling available onsite. Place materials in isolated location away from traffic and other site functions. *(See next section for Waste Description)* – STANTEC/Contractor. ● Transfer decontamination water to DOT approved 55-gallon drums – STANTEC/Contractor. ● Use the buddy system for carrying loads in excess of 50 lbs and to continuously observe oncoming traffic. - Stantec
Supervisor/SHSO must confirm all sample locations are properly patched/repaired.	Don required PPE as appropriate for this step: steel toed and shank shoes, hardhat, safety glasses with side shields, hearing protection, leather gloves for the non-chemical aspects of work as necessary. Wear a Tyvek suit as necessary. Wear chemical resistant gloves during sampling and handling of ACM/PACM. Wear an air-purifying respirator with combination organic vapor/ P-100 cartridges as necessary.	Slip, trips and falls, exposure to contaminants, falls from ladders, cross contamination of samples. Back strain.	● Inspect step-ladder before use. Do not use top step to stand on – STANTEC/Contractor. ● Request unnecessary personnel to leave the sampling area as appropriate – STANTEC/Contractor. ● Wear appropriate PPE during sampling evolution – STANTEC/Contractor. ● Wear a full-face air-purifying respirator with combination organic vapor/P-100 cartridges as necessary – STANTEC/Contractor. ● Use plenty of water if utilizing wet sampling method – STANTEC/Contractor. ● Use the buddy system to continuously observe oncoming traffic. - Stantec ● Decontaminate sampling equipment between each sample. Decontamination will be accomplished with a fresh water rinse, (spray bottle), into an appropriate container. Decontamination can also be accomplished utilizing wet wipes – STANTEC/Contractor. ● Properly label and record sample information; date of sample, location of

Field staff must review job-specific work plan and coordinate with project manager to verify that all up-front logistics are completed prior to starting work including, but not limited to, permitting, access agreements, and notification to required contacts (e.g. site managers, inspectors, clients, subcontractors, etc.). A tailgate safety meeting must be performed and documented at the beginning of each workday. Last-Minute Risk Assessment (LMRA) procedures must be used throughout the project. Weather conditions (heat, cold, rain, lightning) must also be considered. Each employee is empowered, expected, and has the responsibility to stop the work performed by him/herself or another co-worker if the working conditions or behaviors are considered unsafe. All employees should act proactively to identify and mitigate hazards to the safest extent of their ability.

❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
			sample, type of material sampled, amount (square feet or lineal feet), of material and a unique ID number – STANTEC/Contractor. ● Properly mark location of each sample on site map – STANTEC/Contractor. ● Properly "patch" sample area as appropriate – STANTEC/Contractor.
Clean site/demobilize.	Steel toed and shank boots, long sleeve shirt, hardhat, safety glasses with side shields, hearing protection, and leather gloves for the non-chemical aspects of work as necessary.	Slip, trip and falls. Safety hazard left on site. Lifting hazard.	● Leave site clean of refuse and debris – STANTEC/Contractor. ● Use the buddy system for carrying loads in excess of 50 lbs and to continuously observe oncoming traffic. - Stantec ● Notify property management/personnel of departure – STANTEC/Contractor. ● Use proper lifting techniques or use mechanical assistance – STANTEC/Contractor.
Package and deliver samples to lab.		Exposure to contaminants	● Handle and pack sample bags carefully – STANTEC/Contractor. ● Use proper lifting techniques – STANTEC/Contractor.

Task. The following table addresses the concerns with hand augering for the collection of soil samples.

POC	Development Team	Position/Title	Date	Reviewed By	Position/Title
	Michael Allen Philipp	West Region Health and Safety Manager	09/23/05		
			02/02/06	Michael Allen Philipp	West Region Health and Safety Manager
		Site specific edits to this JSA were made on and by	09/12/2014	Monica L. Aragon	OSEC

If most recent review date is more than six months old, then this JSA must be updated and reviewed again to remain current

POC is the JSA development 'Point Of Contact'

Field staff must review job-specific work plan and coordinate with project manager to verify that all up-front logistics are completed prior to starting work including, but not limited to, permitting, access agreements, and notification to required contacts (e.g. site managers, inspectors, clients, subcontractors, etc.). A tailgate safety meeting must be performed and documented at the beginning of each workday. Last-Minute Risk Assessment (LMRA) procedures must be used throughout the project. Weather conditions (heat, cold, rain, lightning) must also be considered. Each employee is empowered, expected, and has the responsibility to stop the work performed by him/herself or another co-worker if the working conditions or behaviors are considered unsafe. All employees should act proactively to identify and mitigate hazards to the safest extent of their ability.

❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
Clear hand augering locations.	Wear reflective vest for traffic, steel toed and shank shoes, hardhat, safety glasses with side shields, and leather gloves as necessary.	Traffic hazards, overhead and underground installations, product releases, property damage, dealer inconvenience.	• Reference SWP-213a Pre-Ground Disturbance Worksheet and Approval Form and SWP-213b Ground Disturbance Form (**Attachment 1**). • Coordinate with Site Manger (or designee) to minimize potential conflicts. • Review proposed locations against available construction drawings and known utilities, tanks, product lines, etc. • Mark out the proposed borehole locations. • Call underground utility locating service for public line location clearance and get list of utilities being contacted. If necessary, coordinate private line locator for private property. • Develop a traffic guidance and control plan with the client and local agencies as applicable. Plan may include use of delineators, barrier tape, jersey barriers, construction fence, etc. *(Refer to* **Section 4.0***).* • **It is the responsibility of the SHSO to annotate the Site Plan with the Traffic Guidance and Control configuration if a formally developed Traffic Guidance and Control Plan is not available.**
Mobilize with proper equipment/supplies for hand augering/soil	Gather necessary PPE. Reflective vest for traffic, steel toed and shank shoes, hard hat, safety glasses with	Vehicle accident. Lifting hazards. Delay or improper performance of	• Start project with Production Safety Meeting (**Attachment 3 - RMS2 Fit for Duty**).

Field staff must review job-specific work plan and coordinate with project manager to verify that all up-front logistics are completed prior to starting work including, but not limited to, permitting, access agreements, and notification to required contacts (e.g. site managers, inspectors, clients, subcontractors, etc.). A tailgate safety meeting must be performed and documented at the beginning of each workday. Last-Minute Risk Assessment (LMRA) procedures must be used throughout the project. Weather conditions (heat, cold, rain, lightning) must also be considered. Each employee is empowered, expected, and has the responsibility to stop the work performed by him/herself or another co-worker if the working conditions or behaviors are considered unsafe. All employees should act proactively to identify and mitigate hazards to the safest extent of their ability.

❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
sampling.	side shields, ear plugs/muffs, leather gloves for the non-chemical aspects of work as necessary; Wear an air purifying respirator with combination organic vapor/P-100 cartridges, and other PPE as needed. (*Use a North 7700 series half-face respirator or its equivalent. Best brand nitrile gloves or their equivalent. Howard Leight Max foam earplugs with an NRR of 33 or their equivalent. Tyvek, poly-coated chemical resistant suit or its equivalent).*	work due to improper equipment onsite.	• Follow safe driving procedures. • Employ safe lifting procedures. • Review permit conditions (if applicable).
Visually clear proposed hand augering/soil sampling locations.	Wear reflective vest for traffic, steel toed and shank shoes, hardhat, safety glasses with side shields, and leather gloves as necessary.	Underground installations.	▪ Complete Pre-Mobilization section of SWP-213a Pre-Ground Disturbance Worksheet and Approval Form and SWP-213b Ground Disturbance Form (**Attachment 1**) and adjust hand-augering locations as necessary.
Set up necessary traffic guidance and control equipment. See **Section 4.0** for detailed plan.	Wear reflective vest for traffic, steel toed and shank shoes, hardhat, safety glasses with side shields, and leather gloves as necessary.	Struck by vehicle during placement. Vehicle accident as a result of improper traffic guidance and control equipment placement.	• Use buddy system for placing traffic guidance and control equipment. • Implement traffic guidance and control plan such as setting out delineators, construction fence and caution tape defining safety area. • Adhere to approved Traffic Guidance and Control Plans when working in roadways. • **It is the responsibility of the SHSO to annotate the Site Plan with the Traffic Guidance and Control configuration if a formally developed Traffic Guidance and Control Plan is not available.**
Set up exclusion zone(s) and workstations (hand augering and logging/sample collection).	Wear reflective vest for traffic, steel toed and shank shoes, hardhat, safety glasses with side shields, and leather gloves as necessary.	Struck by vehicle during set up. Slip, trip and fall hazards.	• Implement exclusion zone set-up. • **It is the responsibility of the SHSO to annotate the Site Plan with the Exclusion Zone set up.** • Set up workstations with clear walking paths to and from hand augering location. • Use delineators, construction fence, and/or safety tape as required.

Field staff must review job-specific work plan and coordinate with project manager to verify that all up-front logistics are completed prior to starting work including, but not limited to, permitting, access agreements, and notification to required contacts (e.g. site managers, inspectors, clients, subcontractors, etc.). A tailgate safety meeting must be performed and documented at the beginning of each workday. Last-Minute Risk Assessment (LMRA) procedures must be used throughout the project. Weather conditions (heat, cold, rain, lightning) must also be considered. Each employee is empowered, expected, and has the responsibility to stop the work performed by him/herself or another co-worker if the working conditions or behaviors are considered unsafe. All employees should act proactively to identify and mitigate hazards to the safest extent of their ability.

❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
			● If utilizing Visqueen, (sheet plastic), for sampling area, completely secure Visqueen to the pavement, dirt, etc. with duct tape, delineators, etc. Do not use objects that are hard to notice or could become a trip hazard themselves.
Commence hand augering .	Don required PPE as appropriate for this step: steel toed and shank shoes, hard hat, safety glasses with side shields, hearing protection, reflective safety vest, and leather gloves for the non-chemical aspects of work as necessary. Wear chemical resistant gloves during handling of soil. Wear an air-purifying respirator with combination organic vapor/P-100 cartridges if necessary or as directed. (*Use a North 7700 series half face respirator or its equivalent. Best brand nitrile gloves or their equivalent. Howard Leight Max foam earplugs with an NRR of 33 or their equivalent. Tyvek poly-coated suit or its equivalent).*	Back strain, exposure to chemical hazards, hitting an underground utility, repetitive motion.	▪ Initiate air quality monitoring as outlined in **Section 2.0 if required.** ▪ Have appropriate respirator with combination organic vapor/P-100 cartridges within 3-5 feet of work area, readily available. ▪ Stand upwind to avoid exposure whenever possible. ▪ Use the organic vapor monitor aggressively to track the airborne concentration of contaminants close to potential sources such as the core as it is being raised from the hole, the core is opened, etc. ▪ Evaluate any soil samples inside a Ziploc bag at arm's length. DO NOT EVALUATE THE SAMPLE WITH THE BAG OPEN. THIS WILL AVOID UNNECESSARY EXPOSURE. ▪ Use proper lifting techniques and tools. ▪ Complete the Pre-Drilling section of the Borehole Clearance Review form. ▪ Decontaminate sampling equipment after collecting a sample and decontaminate hand-augering equipment after each borehole. ▪ Avoid twisting back during the operation; Decontaminate equipment after use. Decontamination will be accomplished by an Alconox wash with tap water rinse followed by a de-ionized or distilled water rinse. Collect rinse water in 5 gallon buckets and transfer to 55-gallon drums and stage drums in a location agreed upon by the SHSO and the Property/Station Owner/Manager.
Collect samples in accordance with sampling plan.	Steel toed and shank shoes, hardhat, safety glasses with side shields, hearing protection, reflective safety vest, and leather gloves for the non-chemical aspects of work as necessary. Wear appropriate air purifying respirator with combination organic vapor/P-100 cartridges (see above) if needed or as directed.	Cross-contamination, improper labeling or storage, exposure to site contaminants.	▪ Evaluate any soil samples inside a Ziploc bag at arm's length. DO NOT EVALUATE THE SAMPLE WITH THE BAG OPEN. THIS WILL AVOID UNNECESSARY EXPOSURE. ▪ Decontaminate sampling equipment between each sampling run. Label samples in accordance with sampling plan. ▪ Keep samples stored in proper containers, at correct temperature, and away from work area. ▪ Conduct air monitoring as outlined in **Section 2.0**. ▪ Have appropriate respirator with combination organic vapor/P-100 cartridges within 3-5 feet of work area, readily available.
Proper clean up and disposal of broken	Safety glasses Long sleeved shirts	Exposure to broken glass and acid (from water	● Isolate area where broken glass is located - STANTEC/Contractor.

Field staff must review job-specific work plan and coordinate with project manager to verify that all up-front logistics are completed prior to starting work including, but not limited to, permitting, access agreements, and notification to required contacts (e.g. site managers, inspectors, clients, subcontractors, etc.). A tailgate safety meeting must be performed and documented at the beginning of each workday. Last-Minute Risk Assessment (LMRA) procedures must be used throughout the project. Weather conditions (heat, cold, rain, lightning) must also be considered. Each employee is empowered, expected, and has the responsibility to stop the work performed by him/herself or another co-worker if the working conditions or behaviors are considered unsafe. All employees should act proactively to identify and mitigate hazards to the safest extent of their ability.

❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
sample container.	Leather Work Gloves Hand Broom and Dust Pan A receptacle for the broken glass (something to contain the broken glass (double garbage bag, a box, or bucket).	preservation acids) Injury	• Determine if the sample container was preserved (did it have acid in it?) - STANTEC. • Determine what to contain the broken glass in, and where to dispose of the broken glass before beginning to pick up the glass - STANTEC. • Collect equipment needed to clean up and contain the broken glass - STANTEC/Contractor. • Minimize "picking up" broken glass pieces with your gloved hands. Use a dust pan if possible/practical - STANTEC/Contractor. • If broken glass is located inside a container (i.e. box), to the extent practical, leave glass inside box and put entire box into a garbage bag. Double bag if warranted. Place into dumpster - STANTEC/Contractor. • If broken glass is inside a cooler, remove all other sample containers and place in a safe location, then use hand broom and dust pan to sweep up glass in cooler - STANTEC. • After clean up is complete, contact your Project Manager to report this Loss/Incident - STANTEC.

2. Soil sampling via hand auger (Groundwater Sampling) and borehole abandonment JSA

Field staff must review job-specific work plan and coordinate with project manager to verify that all up-front logistics are completed prior to starting work including, but not limited to, permitting, access agreements, and notification to required contacts (e.g. site managers, inspectors, clients, subcontractors, etc.). A tailgate safety meeting must be performed and documented at the beginning of each workday. Last-Minute Risk Assessment (LMRA) procedures must be used throughout the project. Weather conditions (heat, cold, rain, lightning) must also be considered. Each employee is empowered, expected, and has the responsibility to stop the work performed by him/herself or another co-worker if the working conditions or behaviors are considered unsafe. All employees should act proactively to identify and mitigate hazards to the safest extent of their ability.

❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
Clear hand augering locations.	Wear reflective vest for traffic, steel toed and shank shoes, hardhat, safety glasses with side shields, and leather gloves as necessary.	Traffic hazards, overhead and underground installations, product releases, property damage, dealer inconvenience.	• Reference SWP-213a Pre-Ground Disturbance Worksheet and Approval Form and SWP-213b Ground Disturbance Form (**Attachment 1**). • Coordinate with Site Manger (or designee) to minimize potential conflicts. • Review proposed locations against available construction drawings and known utilities, tanks, product lines, etc. • Mark out the proposed borehole locations. • Call underground utility locating service for public line location clearance and get list of utilities being contacted. If necessary, coordinate private line locator for private property. • Develop a traffic guidance and control plan with the client and local agencies as applicable. Plan may include use of delineators, barrier tape, jersey barriers, construction fence, etc. *(Refer to* **Section 4.0***).* • **It is the responsibility of the SHSO to annotate the Site Plan with the Traffic Guidance and Control configuration if a formally developed Traffic Guidance and Control Plan is not available.**
Mobilize with proper equipment/supplies for hand augering/soil sampling.	Gather necessary PPE. Reflective vest for traffic, steel toed and shank shoes, hard hat, safety glasses with side shields, ear plugs/muffs, leather gloves for the non-chemical aspects of work as necessary; Wear an air purifying respirator with combination organic vapor/P-100 cartridges, and other PPE as needed. (*Use a North 7700 series half-face respirator or its equivalent. Best brand nitrile gloves or their equivalent. Howard Leight Max foam earplugs with an NRR of*	Vehicle accident. Lifting hazards. Delay or improper performance of work due to improper equipment onsite.	• Start project with Production Safety Meeting (**Attachment 3 - RMS2 Fit for Duty**). • Follow safe driving procedures. • Employ safe lifting procedures. • Review permit conditions (if applicable).

Field staff must review job-specific work plan and coordinate with project manager to verify that all up-front logistics are completed prior to starting work including, but not limited to, permitting, access agreements, and notification to required contacts (e.g. site managers, inspectors, clients, subcontractors, etc.). A tailgate safety meeting must be performed and documented at the beginning of each workday. Last-Minute Risk Assessment (LMRA) procedures must be used throughout the project. Weather conditions (heat, cold, rain, lightning) must also be considered. Each employee is empowered, expected, and has the responsibility to stop the work performed by him/herself or another co-worker if the working conditions or behaviors are considered unsafe. All employees should act proactively to identify and mitigate hazards to the safest extent of their ability.

❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
	33 or their equivalent. Tyvek, poly-coated chemical resistant suit or its equivalent).		
Visually clear proposed hand augering/soil sampling locations.	Wear reflective vest for traffic, steel toed and shank shoes, hardhat, safety glasses with side shields, and leather gloves as necessary.	Underground installations.	• Complete Pre-Mobilization section of SWP-213a Pre-Ground Disturbance Worksheet and Approval Form and SWP-213b Ground Disturbance Form (**Attachment 1**) and adjust hand augering locations as necessary.
Set up necessary traffic guidance and control equipment. See **Section 4.0** for detailed plan.	Wear reflective vest for traffic, steel toed and shank shoes, hardhat, safety glasses with side shields, and leather gloves as necessary.	Struck by vehicle during placement. Vehicle accident as a result of improper traffic guidance and control equipment placement.	• Use buddy system for placing traffic guidance and control equipment. • Implement traffic guidance and control plan such as setting out delineators, construction fence and caution tape defining safety area. • Adhere to approved Traffic Guidance and Control Plans when working in roadways. • **It is the responsibility of the SHSO to annotate the Site Plan with the Traffic Guidance and Control configuration if a formally developed Traffic Guidance and Control Plan is not available.**
Set up exclusion zone(s) and workstations (hand augering and logging/sample collection).	Wear reflective vest for traffic, steel toed and shank shoes, hardhat, safety glasses with side shields, and leather gloves as necessary.	Struck by vehicle during set up. Slip, trip and fall hazards.	• Implement exclusion zone set-up. • **It is the responsibility of the SHSO to annotate the Site Plan with the Exclusion Zone set up.** • Set up workstations with clear walking paths to and from hand augering location. • Use delineators, construction fence, and/or safety tape as required. • If utilizing Visqueen, (sheet plastic), for sampling area, completely secure Visqueen to the pavement, dirt, etc. with duct tape, delineators, etc. Do not use objects that are hard to notice or could become a trip hazard themselves.
Commence hand augering .	Don required PPE as appropriate for this step: steel toed and shank shoes, hard hat, safety glasses with side shields, hearing protection, reflective safety vest, and leather gloves for the non-chemical aspects	Back strain, exposure to chemical hazards, hitting an underground utility, repetitive motion.	• Initiate air quality monitoring as outlined in **Section 2.0 if required.** • Have appropriate respirator with combination organic vapor/P-100 cartridges within 3-5 feet of work area, readily available. • Stand upwind to avoid exposure whenever possible.

Field staff must review job-specific work plan and coordinate with project manager to verify that all up-front logistics are completed prior to starting work including, but not limited to, permitting, access agreements, and notification to required contacts (e.g. site managers, inspectors, clients, subcontractors, etc.). A tailgate safety meeting must be performed and documented at the beginning of each workday. Last-Minute Risk Assessment (LMRA) procedures must be used throughout the project. Weather conditions (heat, cold, rain, lightning) must also be considered. Each employee is empowered, expected, and has the responsibility to stop the work performed by him/herself or another co-worker if the working conditions or behaviors are considered unsafe. All employees should act proactively to identify and mitigate hazards to the safest extent of their ability.

❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
	of work as necessary. Wear chemical resistant gloves during handling of soil. Wear an air-purifying respirator with combination organic vapor/P-100 cartridges if necessary. *(Use a North 7700 series half-face respirator or its equivalent. Best brand nitrile gloves or their equivalent. Howard Leight Max foam earplugs with an NRR of 33 or their equivalent. Tyvek poly-coated suit or its equivalent).*		• Use the organic vapor monitor aggressively to track the airborne concentration of contaminants close to potential sources such as the core as it is being raised from the hole, the core is opened, etc. • Evaluate any soil samples inside a Ziploc bag at arm's length. DO NOT EVALUATE THE SAMPLE WITH THE BAG OPEN. THIS WILL AVOID UNNECESSARY EXPOSURE. • Use proper lifting techniques and tools. • Complete the Pre-Drilling section of the Borehole Clearance Review form. • Decontaminate sampling equipment after collecting a sample and decontaminate hand augering equipment after each borehole. • Avoid twisting back during the operation; Decontaminate equipment after use. Decontamination will be accomplished by an Alconox wash with tap water rinse followed by a de-ionized or distilled water rinse. Collect rinse water in 5 gallon buckets and transfer to 55-gallon drums and stage drums in a location agreed upon by the SHSO and the Property/Station Owner/Manager.
Collect samples in accordance with sampling plan.	Steel toed and shank shoes, hardhat, safety glasses with side shields, hearing protection, reflective safety vest, and leather gloves for the non-chemical aspects of work as necessary. Wear appropriate air purifying respirator with combination organic vapor/P-100 cartridges if needed.	Cross-contamination, improper labeling or storage, exposure to site contaminants.	• Evaluate any soil samples inside a Ziploc bag at arm's length. DO NOT EVALUATE THE SAMPLE WITH THE BAG OPEN. THIS WILL AVOID UNNECESSARY EXPOSURE. • Decontaminate sampling equipment between each sampling run. Label samples in accordance with sampling plan. • Keep samples stored in proper containers, at correct temperature, and away from work area. • Conduct air monitoring as outlined in **Section 2.0**. • Have appropriate respirator with combination organic vapor/P-100 cartridges within 3-5 feet of work area, readily available.
Proper clean up and disposal of broken sample container.	Safety glasses Long sleeved shirts Leather Work Gloves Hand Broom and Dust Pan A receptacle for the broken glass (something to contain the broken	Exposure to broken glass and acid (from water preservation acids) Injury	• Isolate area where broken glass is located - STANTEC/Contractor. • Determine if the sample container was preserved (did it have acid in it?) - STANTEC. • Determine what to contain the broken glass in, and where to

Field staff must review job-specific work plan and coordinate with project manager to verify that all up-front logistics are completed prior to starting work including, but not limited to, permitting, access agreements, and notification to required contacts (e.g. site managers, inspectors, clients, subcontractors, etc.). A tailgate safety meeting must be performed and documented at the beginning of each workday. Last-Minute Risk Assessment (LMRA) procedures must be used throughout the project. Weather conditions (heat, cold, rain, lightning) must also be considered. Each employee is empowered, expected, and has the responsibility to stop the work performed by him/herself or another co-worker if the working conditions or behaviors are considered unsafe. All employees should act proactively to identify and mitigate hazards to the safest extent of their ability.

❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
	glass (double garbage bag, a box, or bucket).		dispose of the broken glass before beginning to pick up the glass - STANTEC. • Collect equipment needed to clean up and contain the broken glass - STANTEC/Contractor. • Minimize "picking up" broken glass pieces with your gloved hands. Use a dust pan if possible/practical - STANTEC/Contractor. • If broken glass is located inside a container (i.e. box), to the extent practical, leave glass inside box and put entire box into a garbage bag. Double bag if warranted. Place into dumpster - STANTEC/Contractor. • If broken glass is inside a cooler, remove all other sample containers and place in a safe location, then use hand broom and dust pan to sweep up glass in cooler - STANTEC. • After cleanup is complete, contact your Project Manager to report this Loss/Incident - STANTEC.
Supervisor/SHSO must confirm all boreholes are closed, filled in and/or capped.		Possible injuries and damage to property due to stepping into or driving over the well.	• Visually inspect each and every borehole.
Perform personal decontamination procedures.	As worn in exclusion zone.	Slips/trips/falls. Splashes, chemical contamination. Contact with contaminated materials.	• Perform personal (dry) decontamination procedures – STANTEC/Contractor. ▪ Drop off tools and perform equipment decontamination procedures on the equipment - STANTEC/Contractor. ▪ Perform a "dry" decontamination on boots using a stiff bristle fiberglass long handled brush - STANTEC/Contractor. ▪ Remove inner/outer gloves and dispose of properly - STANTEC/Contractor. • Wash hands, face, arms and neck (any exposed skin) using sink or bottled water. If water isn't available, use baby wipes or a similar product - STANTEC/Contractor.
Clean site/demobilize.	Steel toed and shank shoes, hardhat, safety glasses with side shields, hearing protection,	Traffic. Safety hazard left on site. Lifting hazards.	• Use buddy system as necessary to remove traffic guidance and control equipment.

Field staff must review job-specific work plan and coordinate with project manager to verify that all up-front logistics are completed prior to starting work including, but not limited to, permitting, access agreements, and notification to required contacts (e.g. site managers, inspectors, clients, subcontractors, etc.). A tailgate safety meeting must be performed and documented at the beginning of each workday. Last-Minute Risk Assessment (LMRA) procedures must be used throughout the project. Weather conditions (heat, cold, rain, lightning) must also be considered. Each employee is empowered, expected, and has the responsibility to stop the work performed by him/herself or another co-worker if the working conditions or behaviors are considered unsafe. All employees should act proactively to identify and mitigate hazards to the safest extent of their ability.

❶ Job Steps	❷ Personal Protective Equipment	❸ Potential Hazard	❹ Critical Actions
	reflective safety vest, and leather gloves for the non-chemical aspects of work as necessary.		• Leave site clean of refuse and debris. • Clearly mark/barricade any borings that need later topping off or curing. • Notify site personnel of departure, final well locations and any cuttings/purge water left onsite. • Use proper lifting techniques
Package and deliver samples to lab.		Bottle breakage, back strain.	• Handle and pack bottle carefully (bubble wrap bags are helpful). Use proper lifting techniques.

Attachment 3

RMS-2 Fit for Duty

HEALTH, SAFETY, AND ENVIRONMENT

RMS2– FIELD LEVEL Risk ASSESSMENT (FIT FOR DUTY), 1 day

Stantec

Project: ACM Survey For Bridge Demo Project No: 185831013

Client: Caltrans

Location: LA-010

Start Date: 10.20.14

Work Description **Provide A General Description Of The Work To Be Conducted.**

Sample bridge materials for asbestos

Documentation and Procedure Review

1. Risk Management Strategy (RMS1) form and/or Site Specific Health and Safety Plan signed and reviewed? ☑ Yes ☐ **No***
2. Emergency Response Plan reviewed? ☑ Yes ☐ **No*** ☐ N/A
3. Tested two-way communications (cell phone, satellite phone) and security measures? ☑ Yes ☐ **No***
4. Attended Client Site Health and Safety meeting? ☑ Yes ☐ **No*** ☐ N/A
5. Conducted Stantec site safety meeting with all workforces? ☑ Yes ☐ **No*** ☐ N/A
6. Are there any new or unexpected hazards not identified in the RMS1/HASP? ☐ Yes ☑ No
   If yes, include in the Job Safety Analysis (JSA).
7. Working alone or remote work? ☐ Yes ☑ No
   If yes, complete call in/out process – Safe Work form must be completed.

Notifications and Permits

8. Are work permits required for this site? ☐ Yes ☑ No
   If yes, have they been completed and submitted as required? ☐ Yes ☐ **No***
9. Are utility locates required for this site? ☐ Yes ☑ No
   If yes, have they been completed and reviewed? ☐ Yes ☐ **No***
10. Does the Client require any notification prior to starting the work? ☑ Yes ☐ No
    If yes, has the notification been provided? ☑ Yes ☐ **No***

***Contact your Project Manager immediately.**

Personal Protective Equipment List specific PPE as needed. Verify type and inspect condition.

☑ Head Protection Type:	ANSI Hard Hat	☐ Hearing Protection:		☑ Gloves Type:	As Necessary
☑ Foot Protection Type:	Steel Toe Boots	☐ Respiratory Protection:		☐ Water Safety Gear:	
☑ Eye Protection Type:	ANSI	☐ Fire Retardant Coveralls:		☐	
☑ High Visibility Vest:	Reflective	☐ Fall Protection:		☐	

Tools and Equipment List specific equipment to be used. Verify type and inspect condition.

☑ Hammer	☐	☐
☑ Chisel	☐	☐

HEALTH, SAFETY, AND ENVIRONMENT

RMS2– FIELD LEVEL Risk ASSESSMENT (FIT FOR DUTY), 1 day

Stantec

Daily Tailgate Discussions/Subcontractor Input

Start	Time:	Weather:
0700	over cast / cool	
Mid-Day	Time:	Weather:
Post-Day	Time:	Weather:

I know the hazards:

By signing here, you are stating the following:

1. I have been involved in the Job Safety Analysis and understand the hazards and risk control actions associated with each task I am about to perform.
2. I understand the permit to work requirements applicable to the work I am about to perform (if it includes permitted activities).
3. I am aware that no jobs or work (that is not risk-assessed) is to be performed.
4. I am aware of my obligation to "**Stop Work**" (*See Stop Work Section).*

I arrived and departed fit for duty:

5. I am physically and mentally fit for duty.
6. I am not under the influence of any type of medication, drugs or alcohol that could affect my ability to work safely.
7. I am aware of my responsibility to bring any illness, injury (regardless of where or when it occurred) or fatigue issue I may have to the attention of the Crew Lead.
8. I signed out uninjured unless I have otherwise informed the Crew Lead.

Insert fitness level under corresponding time column: Fit for Duty = F Alternate Plan = AP
Team Lead to contact Project Manager for any personnel identified as AP

Individual Name/Company Name/Signature	Time:	Time:	Time:
Jason Stagno / Stantec /	0700 F	1600 F	
Keith Perkins / Stantec /	0700 F	1600 F	

I will STOP the job any time anyone is concerned or uncertain about safety.

I will STOP the job if anyone identifies a hazard or additional mitigation not recorded.

I will be alert to any changes in personnel or their fitness level (AP), conditions at the work site or hazards.

If it is necessary to **STOP THE JOB**, I will reassess the task, hazards and mitigations; and then proceed only when safe to do so.

Are you ready to work safely?

Remember to
1. Stop and think
2. Look around
3. Assess risk
4. Control risks
5. Begin/resume work

Conclusion of day: I certify that the planned work activities are completed for the day and all injuries and first aids have been reported via RMS3.

Signature of Crew Lead: _____ **Date:** 10.20.14

Health, Safety and Environment

RMS2 – FIELD LEVEL Risk ASSESSMENT (FIT FOR DUTY)

Stantec

Job Safety Analysis (JSA) Must be completed for all field activities.

Basic Job Steps	Potential Hazards	Controls to Reduce or Eliminate Hazard	Person Responsible
Hammer & chisel materials	Impacts / cuts	wear proper gloves	JS
Driving	Collision	Proper Signaling & Flashers	JS

Review the hazard categories below and check the mitigation measures applicable to the identified scope of work.

Environmental Hazards

1. Work area clean ☑
2. Material storage identified ☐
3. Dust/Mist/Fume ☐
4. Noise in area ☐
5. Extreme temperatures ☐
6. Spill potential ☐
7. Waste containers needed ☐
8. Waste properly disposed ☐
9. Waste plan identified ☐
10. Excavation permit required ☐
11. Other workers in area ☐
12. Weather conditions ☐
13. MSDS reviewed ☐

Ergonomic Hazards

14. Awkward body position ☐
15. Over extension ☐
16. Prolonged twisting/bending motion ☐
17. Working in a tight area ☐
18. Lift too heavy/awkward to lift ☐
19. Parts of body in line of fire ☐
20. Repetitive motion ☐
21. Hands not in line of sight ☐
22. Working above your head ☐

Access/Egress Hazards

23. Aerial life/Man basket (inspected & tagged) NA
24. Scaffold (inspected & tagged) ☐
25. Ladders (tied off) ☐
26. Slips & trips ☐
27. Hoisting (tools, equipment) ☐
28. Evacuation (alarms, routes, ph. #) ☐
29. Confined space entry permit required ☐

Are you ready to work safely?

Remember to
1. Stop and think
2. Look around
3. Assess risk
4. Control risks
5. Begin/resume work

Overhead Hazards

30. Barricades & signs in place ☑
31. Hole coverings identified ☐
32. Harness/lanyard inspected ☐
33. 100% Tie-off with harness ☐
34. Tie off points identified ☐
35. Falling items ☐
36. Foreign bodies in eyes ☐
37. Hoisting or moving loads overhead ☐

Rigging & Hoisting Hazards

38. Lift study required ☐
39. Proper tools used ☐
40. Tools inspected ☐
41. Equipment inspected ☐
42. Slings inspected ☐
43. Others working overhead/below ☐
44. Critical lift permit ☐

Electrical Hazards

45. GFI test NA
46. Lighting levels too low ☐
47. Working on/near energized equipment ☐
48. Electrical cords condition ☐
49. Electrical tools condition ☐
50. Fire extinguisher ☐
51. Hot work or electrical permit required ☐

Personal Limitations/Hazards

52. Procedure not available for task ☐
53. Confusing instructions ☐
54. No training for task or tools to be used ☐
55. First time performing the task ☐
56. Micro break (stretching/flexing) ☐
57. Report **all injuries** to your supervisor ☑

It is important that all relevant hazards have plans in place to reduce risk.
Be sure that all associated permits are closed off at the end of the job.

Remember: Stop and Think

Reviewed by Name and Signature: Jason Stagno

HEALTH, SAFETY, AND ENVIRONMENT

RMS2 – FIELD LEVEL Risk ASSESSMENT (FIT FOR DUTY), 5 day

Fit for Duty

Safety is influenced by many factors, but the most important is the health and well-being of Stantec's employees and partners. Physical and mental health are just as important as good tools, good practices, and good job planning.

This card is designed to help you do a quick self-assessment of your physical and mental health. Any concerns resulting from your assessment regarding your ability to carry out your job responsibilities safely and in good health need to be discussed with your supervisor before starting work.

- Am I feeling good today and ready to work at my typical level of physical activity and responsibility?
- Do I have any sprains/strains, areas of weakness or soreness?
- Am I managing multiple sources of stress?
- Am I well hydrated?
- Any physically-demanding activities recently (chores, sports, hobbies)?
- Am I well-rested with a good energy level? When did I eat last?
- Am I taking any medications that can make me drowsy or adversely affect my safe performance?
- Any cuts/scrapes are clean and bandaged?
- Did I remember to bring with me my health maintenance medications (blood pressure, diabetes, cholesterol, heart, etc.)?

If your answers to any of the questions above indicate that you may not be ready to work, contact your supervisor immediately to discuss a plan of action.

LAST-MINUTE RISK ASSESSMENT (LMRA)

-

1. STOP and Think

2. Look around

Is the work area safe?
Will my work endanger others?
Will other people pose risk?

3. Assess risk

Do I clearly understand the task?
Will lifting or manual handling be required?
Potential for slips, trips, or falls?
Are there driving or vehicle concerns?
Have I considered all underground services?
Moving or pressurized equipment?
What could go wrong?

4. Control risk

What can I do to control hazards?
Do I have the right tools?
Is the SWP **(Safe Work Practice)** appropriate?
Do I have the appropriate PPE?
Are emergency plans in place?

5. Begin/Resume work

If you're unsure, talk to your supervisor.

Are you ready to work safely?

RMS2 – FIELD LEVEL Risk ASSESSMENT (FIT FOR DUTY), 5 day

Project: _____ Project No: _____

Client: _____

Location: _____

Start Date: _____

Documentation and Procedure Review

11.	Risk Management Strategy (RMS1) form and/or Site Specific Health and Safety Plan signed and reviewed?	☐ Yes ☐ **No***
12.	Emergency Response Plan reviewed?	☐ Yes ☐ **No*** ☐ N/A
13.	Tested two-way communications (cell phone, satellite phone) and security measures?	☐ Yes ☐ **No***
14.	Attended Client Site Health and Safety meeting?	☐ Yes ☐ **No*** ☐ N/A
15.	Conducted Stantec site safety meeting with all workforces?	☐ Yes ☐ **No*** ☐ N/A
16.	Are there any new or unexpected hazards not identified in the RMS1/HASP? *If yes, include in the Job Safety Analysis (JSA).*	☐ Yes ☐ No
17.	Working alone or remote work? *If yes, complete call in/out process – Safe Work form must be completed.*	☐ Yes ☐ No

Notifications and Permits

18.	Are work permits required for this site? *If yes, have they been completed and submitted as required?*	☐ Yes ☐ No ☐ Yes ☐ **No***
19.	Are utility locates required for this site? *If yes, have they been completed and reviewed?*	☐ Yes ☐ No ☐ Yes ☐ **No***
20.	Does the Client require any notification prior to starting the work? *If yes, has the notification been provided?*	☐ Yes ☐ No ☐ Yes ☐ **No***

***Contact your Project Manager immediately.**

Work Description **Provide a general description of the work to be conducted.**

Personal Protective Equipment — List specific PPE as needed. Verify type and inspect condition.

☐ Head Protection Type: _____	☐ Hearing Protection: _____	☐ Gloves Type: _____
☐ Foot Protection Type: _____	☐ Respiratory Protection: _____	☐ Water Safety Gear: _____
☐ Eye Protection Type: _____	☐ Fire Retardant Coveralls: _____	☐ _____
☐ High Visibility Vest: _____	☐ Fall Protection: _____	☐ _____

Tools and Equipment — List specific equipment to be used. Verify type and inspect condition.

☐	☐	☐
☒	☐	☐

RMS2 – FIELD LEVEL Risk ASSESSMENT (FIT FOR DUTY), 5 day

05.1 DAILY TAILGATE DISCUSSIONS/SUBCONTRACTOR INPUT

Date:	**Time:**	**Weather:**
Start		
Mid-Day		
Post-Day		
Date:	**Time:**	**Weather:**
Start		
Mid-Day		
Post-Day		
Date:	**Time:**	**Weather:**
Start		
Mid-Day		
Post-Day		
Date:	**Time:**	**Weather:**
Start		
Mid-Day		
Post-Day		
Date:	**Time:**	**Weather:**
Start		
Mid-Day		
Post-Day		

RMS2 – FIELD LEVEL Risk ASSESSMENT (FIT FOR DUTY), 5 day

I know the hazards:

By signing here, you are stating the following:

9. I have been involved in the Job Safety Analysis (JSA) and understand the hazards and risk control actions associated with each task I am about to perform.
10. I understand the permit to work requirements applicable to the work I am about to perform (if it includes permitted activities).
11. I am aware that work that has not been risk–assessed must not be performed.
12. I am aware of my ability and obligation to **Stop Work** (*See below).*

I arrived and departed fit for duty (see Fit for Duty card for further information):

13. I am physically and mentally fit for duty.
14. I am not under the influence of any type of medication, drugs or alcohol that could affect my ability to work safely.
15. I am aware of my responsibility to bring any illness, injury (regardless of where or when it occurred), symptoms of soreness or discomfort, or fatigue issue I may have to the attention of the Crew Lead or Supervisor.
16. I sign out uninjured unless I have otherwise informed the Crew Lead or Supervisor.

Insert fitness level under corresponding time column: Fit for Duty = F Alternate Plan = AP
Team Lead to contact Project Manager for any personnel identified as AP

Individual Name/Company Name/Signature	Date:			Date:			Date:			Date:			Date:		
	Time:	Time:	Time:	Time:	Time:	Time:	Time:	Time:	Time:	Time:	Time:	Time:	Time:	Time:	Time:

I will STOP WORK any time anyone is concerned or uncertain about safety. **I will STOP WORK** if anyone identifies a hazard or additional mitigation not recorded. **I will** be alert to any changes in personnel or their fitness level (AP), conditions at the work site or hazards. If it is necessary to **STOP WORK**, I will reassess the task, hazards and mitigations; and then proceed only when safe to do so.

Conclusion of day: I certify that the planned work activities are completed for the day and all injuries and first aids have been reported via RMS3.

Signature of Crew Lead: _____ **Date:** _____

Signature of Crew Lead: _____ **Date:** _____

Signature of Crew Lead: _____ **Date:** _____

Signature of Crew Lead: _____ **Date:** _____

Signature of Crew Lead: _____ **Date:** _____

Are you ready to work safely?

Remember to
1. Stop and think
2. Look around
3. Assess risk
4. Control risks
5. Begin/resume work

HEALTH, SAFETY, AND ENVIRONMENT

RMS2 – FIELD LEVEL Risk ASSESSMENT (FIT FOR DUTY), 5 day

Job Safety Analysis (JSA) Must be completed for all field activities.

Basic Job Steps	Potential Hazards	Controls to Reduce or Eliminate Hazard	Person Responsible

Review the hazard categories below and check the mitigation measures applicable to the identified scope of work.

Environmental Hazards

23. Work area clean
24. Material storage identified
25. Dust/Mist/Fume
26. Noise in area
27. Extreme temperatures
28. Spill potential
29. Waste containers needed
30. Waste properly disposed
31. Waste plan identified
32. Excavation permit required
33. Other workers in area
34. Weather conditions
35. MSDS reviewed

Ergonomic Hazards

36. Awkward body position
37. Over extension
38. Prolonged twisting/bending motion
39. Working in a tight area
40. Lift too heavy/awkward to lift
41. Parts of body in line of fire
42. Repetitive motion
43. Hands not in line of sight
44. Working above your head

Access/Egress Hazards

38. Aerial life/Man basket (inspected & tagged)
39. Scaffold (inspected & tagged)
40. Ladders (tied off)
41. Slips & trips
42. Hoisting (tools, equipment)
43. Evacuation (alarms, routes, ph. #)
44. Confined space entry permit required

Are you ready to work safely?

Remember to

1. Stop and think
2. Look around
3. Assess risk
4. Control risks
5. Begin/resume work

Overhead Hazards

45. Barricades & signs in place
46. Hole coverings identified
47. Harness/lanyard inspected
48. 100% Tie-off with harness
49. Tie off points identified
50. Falling items
51. Foreign bodies in eyes
52. Hoisting or moving loads overhead

Rigging & Hoisting Hazards

58. Lift study required
59. Proper tools used
60. Tools inspected
61. Equipment inspected
62. Slings inspected
63. Others working overhead/below
64. Critical lift permit

Electrical Hazards

65. GFI test
66. Lighting levels too low
67. Working on/near energized equipment
68. Electrical cords condition
69. Electrical tools condition
70. Fire extinguisher
71. Hot work or electrical permit required

Personal Limitations/Hazards

72. Procedure not available for task
73. Confusing instructions
74. No training for task or tools to be used
75. First time performing the task
76. Micro break (stretching/flexing)
77. Report **all injuries** to your supervisor

It is important that all relevant hazards have plans in place to reduce risk.
Be sure that all associated permits are closed off at the end of the job.

Remember: Stop and Think

Reviewed by Name and Signature: _____

Required Pre-Entry Discussion Topics / Requirements for All Workers and Visitors

Stantec

Safety rules apply to anyone entering a Stantec workplace or worksite, including employees, supervisors, management and visitors

COMPANY SAFETY RULES (REFERENCE: STANTEC'S *HSE MANUAL* SECTION 1.3)

- Take reasonable care to protect the health and safety of yourself and others, and the environments in which we all work.
- Consumption of alcohol is only approved during company-sponsored events. Consumption or possession of illegal drugs on company premises, or on any company jobsite, is prohibited.
- Horseplay, fighting or otherwise interfering with other employees is prohibited.
- Theft, vandalism or any other abuses or misuse of company property is prohibited.
- All unsafe acts and conditions, including "near miss" incidents, spills or releases of hazardous materials, property damage, and injuries are to be promptly reported to your supervisor in accordance with Section 12 of the HSE manual, and Section 1.8 of this health and safety plan (HASP).
- Clothing and personal protective equipment (PPE) shall be appropriate to tasks being performed, as determined by hazard assessment (refer to job safety analyses and/or standard operating procedures in Attachment 2 and the work risk assessment tool in Attachment 1 of this HASP).
- All work shall be conducted in accordance with applicable regulatory safety requirements, client safety requirements, and in accordance with Stantec's HSE manual.
- Only use tools, vehicles and equipment that are in good repair, with all guards and safety devices in place, and for which you have sufficient training and experience. Select tools, vehicles and equipment appropriate for the task intended, and use them in compliance with the manufacturer's written instructions.
- Every employee will keep the work area neat, clean and orderly. A floor or other surface used by any employee will be kept free of obstructions, hazards, and accumulations of refuse, snow or ice.
- As a Stantec employee, you are responsible and authorized to STOP work immediately if you become aware of an unsafe act or condition that could place anyone in danger, or if you are not confident in the work plan. Refer to the Stop Work Authority for guidance.

DISCUSSION IDEAS FOR THE DAILY PRODUCTION H&S MEETING

- Emergency response plan, emergency vehicle (full of fuel) and muster point
- Route to medical aid (hospital or other facility)
- Work hours, is night work planned?
- Hand signals around heavy equipment
- Traffic control
- Pertinent Legislation and Regulations
- Above and below ground utilities (energized or de-energized)
- Material Safety Data Sheets (MSDS)
- To who, what, why, and when to report an incident
- Fire extinguisher and First Aid kit locations
- Excavations, trenching sloping and shoring
- Personal protective equipment (PPE) and training

Required Pre-Entry Discussion Topics / Requirements for All Workers and Visitors

- Safety equipment and training
- Emergency telephone and telephone numbers (may not be 911)
- Eye wash stations and washroom locations
- Energy lock-out/tag-out procedures. Location of "kill Switches" etc.
- Weather restrictions
- Site security. Site hazards. Is special waste present?
- Traffic and people movements
- Working around machinery (both static and mobile)
- Sources of ignition, static electricity etc.
- Stings, bites, large animals and other naturally related injuries
- Working above grade
- Working at isolated sites
- Decontamination procedures (both personnel and equipment)
- Falls, trips, sprains and lifting injuries (how to prevent)
- Right to refuse unsafe work
- Adjacent property issues (residence, business, school, day care center)
- Hand & glove safety, pinch points, hand positioning

Attachment 4

Driver's Fatigue Checklist /Safe Driving Vehicle Pre-Use Checklist

Too tired to drive?

A road safety initiative of RACV, Rural Ambulance Victoria and Metropolitan Ambulance Service

Driver Fatigue Checklist

Before you drive, answer these questions to make sure you are not too tired to drive.

	Yes	No
Have you been getting full nights of restful sleep over the past week? *When you don't get enough sleep you acquire sleep debt. The only way to repay the debt is by sleeping.*	☑	☐
Are you setting off on a trip after a good night's sleep, rather than after a full day at work? *Being awake for 17 hours has the same effect on driving as having a BAC (Blood Alcohol Concentration) of .05, doubling your risk of crashing. After 24 hours the BAC equivalent is 0.1, equating to a 7 times greater risk of crashing than someone who is well rested.*	☑	☐
Are you planning to start your trip after 6am, rather than starting out earlier when you would normally be asleep? *Your body naturally wants to sleep between about 1am and 6am greatly increasing your risk of crashing, at those times.*	☐	☑
Have you allowed time in your trip to stop and rest if you feel tired? *Regular breaks every 2 hours will help maintain vigilance, however, the only way to combat fatigue is to sleep.*	☑	☐
Do you stop and have a Powernap if you feel tired while driving? *Stopping for a 15 to 30 minute sleep or Powernap when you are tired is effective in alleviating the short-term effects of fatigue, but ensure you allow time to recover from your sleep before commencing to drive.*	☑	☐
Are you sure that you do not suffer from a sleeping disorder, such as sleep apnoea? *2% of people suffer from the most common sleep disorder, sleep apnoea. Men over 50, particularly those overweight, are most at risk.*	☑	☐

If you have answered "no" to any of these questions you may be at risk of fatigue.

RACV

Too tired to drive?

What is fatigue?

Driver fatigue contributes to more than 25 per cent of all road crashes in Victoria.

Two main causes:

- lack of quality sleep
- driving at times when you would normally be asleep.

Protect yourself from having a fatigue-related crash by:

- making sure you regularly get enough sleep
- being aware of the fatigue high crash risk times when driving between 1am-6am
- not starting a long trip after a long day's work
- planning your trip so you can take regular breaks
- seeking medical advice if you often feel sleepy
- being aware of the effects of any medication taken.

Once you're on the road:

- regular rest breaks to help keep you alert, but if you feel tired, the only way to keep safe is to stop and sleep
- eat proper and well-balanced meals, preferably at your normal meal times.

If you feel tired when driving, take a Powernap (sleep for 15 to 30 minutes), but allow time to recover from your sleep before commencing to drive.

Don't be fooled by myths about fatigue! The following common beliefs about fatigue are untrue:

myth – Coffee is the best way to combat fatigue.
Coffee only provides short-term benefits; once its effects wear off, you suffer from sleep rebound, which is a major cause of crashes.

myth – Playing music will help keep me alert.
This is only a short-term benefit.

myth – Plenty of fresh air through the window will help keep me alert.
This is only a short-term benefit.

myth – Young people need less sleep.
In fact, drivers under 25 years of age are over-represented in fatigue crashes.

myth – I know when I am tired, or when I am having "sleep attacks".
The danger is that you only find out how tired you are when it's too late.

The only cure for fatigue is sleep

HEALTH, SAFETY AND ENVIRONMENT

SAFE DRIVING – VEHICLE PRE-USE CHECKLIST

SWP 124A

Employee Name: Jason Stagno **Region/Business Unit:** 1858

Date: 10/20/14 **Time:** 0500 **Vehicle Color:** White

Vehicle Make/Model: Dodge/Ram **Vehicle License Plate Number:**

Job: Bridge Surveys **Job #:** 185831013 **# of Km or Mi Driven**

Job: **Job #:** **# of Km or Mi Driven**

Odometer Start: **Odometer Stop:** **Total Km or Mi Driven:**

Stantec Vehicle ☐ **Rental** ☒ **Personal Vehicle** ☐

Perimeter Walk Around:	**Item is OK**	**Item is NOT OK**
Check for signs of vandalism, negligence, damage or unusual conditions	✓	
Check all tires for excessive and unusual wear and proper inflation – include the spare tire if accessible	✓	
Check under vehicle for signs of leaking fluids	✓	
Check wiper blades (Do they work? Do they need replacement?)	✓	
Check all light systems – brake, head, back-up, running, turn signals, emergency flashers	✓	
Check to make sure doors, truck/toolbox lids, tailgates all open and close properly	✓	
(Make sure you have keys to any toolboxes that you may need to access)	NA	

Check Gauges on Dashboard:

Fuel Level	5/8 level	
Oil light	No	
Engine Coolant Temperature Gauge	No	
Service Indicator Lights	No	
Battery Charge Indicator	No	

HEALTH, SAFETY AND ENVIRONMENT

SAFE DRIVING – VEHICLE PRE-USE CHECKLIST

SWP 124A

Inside Vehicle:

Make sure seatbelts are present for all who will be riding in the vehicle	✓	
Secure all cargo in the vehicle so that items will not become projectiles in the event of sudden stops or collisions	✓	
Adjust the seat position, rearview and side mirrors	✓	
Adjust temperature controls, vents, radio, etc.	✓	

If Pulling a Trailer:

Is trailer properly hitched to the vehicle (including safety chains)		
All lights are working properly		
Proper trailer for the load (check weight specifications) and load is balanced. If you anticipate the load is near the trailer weight limit, weigh the trailer at a weigh station		N/A
Are tires in good condition and properly inflated?		

Notify the vehicle manager or rental company if you feel that any deficiencies are unsafe and DO NOT drive the vehicle

Signature:

SAFE DRIVING – VEHICLE PRE-USE CHECKLIST

SWP 124A

1 REVISION HISTORY

Date	Change	Acknowledgments
2010/02/23	Changed HSE to SWP; reformatted header and footer; added revision history	GD
20121015	Updated and reviewed by PS	KDR

Attachment 5
Journey Management Plan(s)

JOURNEY MANAGEMENT PLAN(s)

PURPOSE

The purpose of this Journey Management Procedure (JMP) is to prevent losses associated with motor vehicle related incidents including: injuries to drivers, passengers and pedestrians, damage to motor vehicles and damage to third party property. By communicating potential safety risks before mobilizing to a site, a motor vehicle operator will be able to prepare for and avoid potential hazards.

SCOPE

This JMP applies to all vehicles assigned for the support of site operations, including company owned and personal use vehicles. This JMP does not apply to vendors (such as UPS, FedEx. etc.) not under contract with Stantec or their supplier. This JMP does not address hazards that are external to the site access/egress and on the onsite project operations.

SPECIAL NOTE

Because the site, weather and traffic conditions may change frequently the JMP shall be maintained and updated separate from the Site Health and Safety Plan.

Responsibilities

Contract Project Manager

The contract project manager is responsible to ensure that the site has a current Journey Management Plan.

Field Manager

The field manager is responsible to create and keep current a JMP that is appropriate for the site conditions. It is also the field manager's role to ensure each vehicle operator has a JMP that describes the conditions for his vehicle and equipment prior to mobilizing to the site. A common JMP may be used for several vehicles or as conditions dictate a separate JMP may be specific or unique to an individual vehicle.

Vehicle Operator

The assigned vehicle operator shall not mobilize to the site without first receiving the JMP. It is also the vehicle operator's responsibility to read and become familiar with the description and stipulations of the JMP prior to mobilizing to the site. DO NOT mobilize to the site to get clarification to the JMP. Because driving conditions may vary, vehicle operators shall also notify the field manager of any hazards not identified on the JMP so that the field manager can update the JMP. Because traffic conditions may change frequently on a project, the JMP shall be maintained and updated separate from the Site Health and Safety Plan.

Attachment 6
RMS-3 incident/Near Miss Investigation and Collision Kit

INCIDENT REPORT – RMS 3

Incidents involving injury, potential injury, or report of pain, soreness, or discomfort must be reported immediately (within one hour) to a supervisor. Supervisors will then immediately contact ***their HSE representative to develop a plan for assessment and care***. This form must be completed and **submitted within 24 hours** of any incident. Do not delay submission waiting for signatures. **Email to hse@stantec.com or fax unsigned report to (780) 969-2030** and file locally in compliance with the corporate records retention policy and practices once all signatures have been obtained.

This document contains privileged and confidential information prepared at the request of Stantec's Legal Counsel. The contents of this report are restricted to HR personnel, Risk Management Representatives, Project Manager and PC Leader, and Stantec's Insurer, Adjuster and Legal Counsel. Information collected will be used solely for the purpose of meeting the requirements of Stantec's HSE and insurance programs, complying with applicable legislation, and will be used in accordance with any governing privacy legislation. The information collected will be maintained electronically and may be included in required reports.

SECTION 1: GENERAL INFORMATION			
Office location:		BC number:	
Location of incident:			
Incident date and time:		Date and time reported:	
Project name:		Project number:	
Client Name:			
Person in charge:		Person in Charge Phone:	

SECTION 2: STANTEC EMPLOYEE INFORMATION (if more than one identify extras in incident details below)			
Name:		Phone:	
Job position:		Group name:	
Time employee began work:		Job Experience (in years)	
Type of employment:	Full Time ☐ ; Visitor ☐ ; Contract ☐ ; Volunteer ☐ ; Seasonal ☐		
Supervisor:		Supervisor Phone:	

SECTION 3: INCIDENT DETAILS

Type of Incident: *incident types marked with an asterisk, please complete pages 1 and 4 only

See StanNet for a list of Incident Type Definitions

☐ *Report Only	☐ *Hazard Identification	☐ *Near Miss
☐ First Aid	☐ Motor Vehicle Incident	☐ 3rd Party Incident (i.e., Public)
☐ Medical Aid – No Lost Time	☐ Property Damage - Vehicle	☐ Spill or Release
☐ Restricted Work	☐ Property Damage - Other	☐ Utility Strike
☐ Lost Time	☐ Theft	☐ Fire/Explosion/Flood
☐ Fatality	☐ Contractor Recordable Incident	☐ Stop Work Authority
☐ Violence or Harassment	☐ Non-compliance	☐ Other (specify details below)

Describe incident in detail: (include any issues related to people, equipment, materials, environment, and processes)

Immediate corrective actions taken:

Canada East (Atlantic) – Neil Clements (506-639-2961); Canada East (ON/QC) – Jim Elkins (613-404-8508); Canada Prairie & Mountain – Yvonne Beattie (780-616-8909); International – Kev Metcalfe (780-231-2185); US Northeast & South) – Fred Miller (610-235-7315); US Midwest & Mid-Atlantic - Keith Kuhlmann (740-816-6170); US West – Clint Reuter (818-395-8556)

SECTION 4: MEDICAL INFORMATION	
Name of first aid attendant:	Injury recorded in first aid log? Yes ☐ No ☐ N/A ☐
Description of first aid or medical treatment administered:	
Clinic/hospital sent to:	
Attending physician/paramedic (if known):	

Area of Injury – Please check all that apply:

☐ Head	☐ Teeth	☐ Upper back	Left / Right	Left / Right	Left / Right	Left / Right	
☐ Face	☐ Neck	☐ Lower back	☐ Shoulder ☐	☐ Wrist ☐	☐ Hip ☐	☐ Ankle ☐	
☐ Eye(s)	☐ Chest	☐ Abdomen	☐ Arm ☐	☐ Hand ☐	☐ Thigh ☐	☐ Foot ☐	
☐ Ear(s)		☐ Pelvis	☐ Elbow ☐	☐ Finger(s) ☐	☐ Knee ☐	☐ Toe(s) ☐	
☐ Other	Specify		☐ Forearm ☐		☐ Lower Leg ☐		

Has the injured employee had a previous similar injury or disability? Yes ☐ No ☐

SECTION 5: PROPERTY OR VEHICLE DAMAGE: STANTEC			
Ownership Details (choose one):	☐ Rented (attach rental agreement)	☐ Stantec Owned	☐ Personal (employee vehicle)
Year, Make, and Model of Vehicle:		Vehicle ID # (VIN)	
Nature of damage:		Estimated cost of damage:	$
Description of damaged property:			
Attending police officer (if known):		Badge #:	
Copy of police report received	Yes ☐ No ☐ If yes, file number:	(attach copy of police report)	

PROPERTY OR VEHICLE DAMAGE: 3RD PARTY			
Name of owner and contact number:			
Year, Make, and Model of Vehicle:		License Plate Number:	
Insurer and Policy Number:			
Injured parties? Yes ☐ No ☐	If yes, describe Injuries:		
Diagram or photographs attached?	Yes ☐ No ☐		

WITNESS INFORMATION - #1			
Name:		Phone Number:	
Witness statement provided?	Yes (attached) ☐	No ☐	

WITNESS INFORMATION - #2			
Name:		Phone Number:	
Witness statement provided?	Yes (attached) ☐	No ☐	

SECTION 6: SPILL OR RELEASE			
Substance:			
Quantity:		Employee(s) exposed via:	☐ Inhalation ☐ Contact ☐ Ingestion ☐ n/a
Off-site impacts observed or anticipated?		Yes ☐ No ☐ If yes, describe:	
Name of regulatory agencies contacted:			
Contact name, number, date and time of call:			

SECTION 7: ANALYSIS

IMMEDIATE/DIRECT CAUSES

A. UNSAFE ACTIONS (check off as many as necessary)

- ☐ Operating equipment without authority
- ☐ Failure to warn
- ☐ Failure to secure
- ☐ Operating at improper speed
- ☐ Making safety devices inoperative
- ☐ Removing safety devices
- ☐ Using defective/improper equipment
- ☐ Using equipment improperly
- ☐ Failing to use personal protective equipment properly
- ☐ Improper loading
- ☐ Improper placement
- ☐ Improper lifting or handling
- ☐ Improper position for a task
- ☐ Servicing equipment in operation
- ☐ Horseplay
- ☐ Failure to follow procedure, policy or practice
- ☐ Failure to identify hazard or risk
- ☐ Inattention
- ☐ Failure to communicate
- ☐ Other: Specify

B. UNSAFE CONDITIONS (check off as many as necessary)

- ☐ Inadequate guards/barriers
- ☐ Improper/inadequate PPE
- ☐ Defective tools or equipment
- ☐ Congested work area
- ☐ Inadequate warning system
- ☐ Fire and explosion hazards
- ☐ Poor housekeeping; disorder
- ☐ Noise exposure
- ☐ Radiation exposure
- ☐ High or low temperature exposures
- ☐ Inadequate or excess illumination
- ☐ Inadequate ventilation
- ☐ Presence of harmful materials
- ☐ Inadequate instructions/procedures
- ☐ Hazardous environmental conditions; gases, dusts, smokes, fumes, vapours
- ☐ Inadequate information/data
- ☐ Inadequate preparation/planning
- ☐ Inadequate support/assistance
- ☐ Road conditions
- ☐ Weather conditions
- ☐ Other: Specify

BASIC/ROOT CAUSES

C. PERSONAL FACTORS (check off as many as necessary)

- ☐ Inadequate physical capability
- ☐ Physical stress
- ☐ Mental stress
- ☐ Lack of skill
- ☐ Lack of knowledge
- ☐ Other: Specify

D. JOB FACTORS (check off as many as necessary)

- ☐ Inadequate leadership or supervision
- ☐ Inadequate engineering
- ☐ Inadequate purchasing
- ☐ Abuse or misuse
- ☐ Inadequate maintenance (scheduled or preventative)
- ☐ Inadequate tools or equipment
- ☐ Inadequate work standards
- ☐ Other: Specify
- ☐ Excessive wear and tear
- ☐ Inadequate communications
- ☐ Improper motivation

SECTION 8: FOLLOW-UP

Short-term:	Corrective Action	Assigned To	Target Date	Completion Date

Long-term:	Corrective Action	Assigned To	Target Date	Completion Date

REVIEW COMMENTS		
Involved Employee Comments:		
Signature: Job Title:	Print Name:	Date:
Lead Investigator Comments:		
Signature: Job Title:	Print Name:	Date:
Supervisor/Project Manager:		
Signature: Job Title:	Print Name:	Date:
HSE Representative (OSEC/JH&S Committee/RSEC/HSE Manager):		
Signature: Job Title:	Print Name:	Date:
Management Review:		
Signature: Job Title:	Print Name:	Date:
Client Review (if required):		
Signature: Job Title:	Print Name:	Date:
Additional Comments:		

Contact information.
Immediately Call Corporate HSE, and Practice & Risk Management, and (if injuries) Human Resources.

Health, Safety & Environment: Call:

Keith Robinson	Office (614) 545-3787	Cell (614) 545-3787
Clint Reuter	Office (949) 923-6258	Cell (818) 395-8556

Practice & Risk Management: Fax unsigned report to (780) 969-2030

Human Resources: **For Injuries Only** contact the Human Resources Rep. for your region:

US East: Jennie Moore
Jennie Moore: Phone: (585) 413-5241, Cell: (585) 613-8022, Fax: (585) 272-7442,
E-Mail: jennie.moore@stantec.com.

US West: Peggy Ramos
Peggy Ramos: Phone: (949) 923-6061, Fax: (949) 923-6015,
E-Mail: peggy.ramos@stantec.com

US Mtn Desert: (Arlington, Houston, Midland, Phoenix, Scottsdale, Ponca City SLC): Shannon Drake
Shannon Drake: Phone: (602) 707-4627, Fax (602) 532-7784,
E-Mail: Shannon.Drake@stantec.com

US Mtn Desert: (Dallas, Fort Worth, Denver, Fort Collins, Golden, Las Vegas, Reno, Oklahoma City, Tucson) Sheryl Appelt
Sheryl Appelt: Phone: (602) 707-9495, Fax (602) 926-2217,
E-Mail: Sheryl.Appelt@stantec.com

Fax and/or scan-email report to all three.

VEHICLE COLLISION KIT

Stantec Vehicle Collision Kit

The following items should be enclosed in an envelope in the glove box of all Stantec vehicles:

- Vehicle Registration Card
- Vehicle Insurance Card with name and phone number of agent
- Name of Preferred Body Shop or Maintenance Facility to take damaged vehicle (usually nearest Dealership)
- Owner's Manual
- Disposable Camera
- Note Pad and Pen

WHAT TO DO AFTER A COLLISION:

Auto collisions: Even the most careful drivers may be involved. Knowledge of what to do **after** the collision can make the experience a little less frightening and decrease the chance of unnecessary complications.

After a Collision

- Check for injuries. Life and health are more important than damage to vehicles.
- Make note of specific damages to all vehicles involved.
- Write down the names, addresses and license numbers of persons involved in the collision. Also, write a description of the other vehicles.
- Call the police, even if the collision is minor.
- Jot down names and addresses of anyone who may have witnessed the collision. This can prevent disagreement concerning how the collision actually happened.

Other Do's and Don'ts

- DO jot down details about the collision, the location, and circumstances such as weather conditions and visibility.
- DO notify your insurance agent about the collision immediately.
- DON'T sign any document unless it is for the police or your insurance agent.

Remember that a Stantec incident investigation form must also be completed following any collision. The collision must be reported to the Stantec Project Manager in addition to the following people:

Practice and Risk Management :
Fax: 780-969-2030

Keith Robinson	Office (614) 545-3787	Cell (614) 545-3787
Clint Reuter	Office (949) 923-6258	Cell (818) 395-8556

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 11/01/2012

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: ANDREA OTTO
AON REED STENHOUSE INC. AON RISK SERVICES CENTRAL, INC. 900 - 10025 - 102A AVENUE EDMONTON, AB T5J 0Y2	PHONE (A/C, No, Ext): 1-800-444-3017 FAX (A/C, No): 952-656-8834 E-MAIL ADDRESS: ANDREA.OTTO@AON.COM

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A: ZURICH AMERICAN INSURANCE COMPANY	16535
INSURER B: ZURICH AMERICAN INSURANCE COMPANY	16535
INSURER C: ZURICH INSURANCE COMPANY	
INSURER D: ZURICH AMERICAN INSURANCE COMPANY	16535
INSURER E:	
INSURER F:	

INSURED: STANTEC CONSULTING SERVICES INC., 25864-F BUSINESS CENTER DRIVE, REDLANDS, CA 92374

COVERAGES **CERTIFICATE NUMBER:** 325 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS		
A	GENERAL LIABILITY			GLO6556026	05/01/12	05/01/13	EACH OCCURRENCE	$	2,000,000
	X COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence)	$	300,000
	CLAIMS-MADE X OCCUR			XCU COVER INCLUDED			MED EXP (Any one person)	$	10,000
	X CONTRACTUAL/CROSS LIABILITY						PERSONAL & ADV INJURY	$	2,000,000
	X OWNERS & CONTRACTORS PROTECTIVE						GENERAL AGGREGATE	$	4,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						PRODUCTS - COMP/OP AGG	$	2,000,000
	POLICY X PRO-JECT X LOC							$	
B	AUTOMOBILE LIABILITY			BAP5940882	11/01/12	11/01/13	COMBINED SINGLE LIMIT (Ea accident)	$	1,000,000
	X ANY AUTO						BODILY INJURY (Per person)	$	
	ALL OWNED AUTOS / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$	
	HIRED AUTOS / NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$	
								$	
C	X UMBRELLA LIAB X OCCUR			8831307	05/01/12	05/01/13	EACH OCCURRENCE	$	5,000,000
	X EXCESS LIAB CLAIMS-MADE			EXCESS GENERAL, AUTO AND EMPLOYERS LIABILITY (FOLLOW FORM)			AGGREGATE	$	5,000,000
	DED X RETENTION $10,000							$	
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N			WC5940881	11/01/12	11/01/13	X WC STATU-TORY LIMITS / OTH-ER		
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? N (Mandatory in NH)	N/A					E.L. EACH ACCIDENT	$	1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$	1,000,000
							E.L. DISEASE - POLICY LIMIT	$	1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

REDLANDS, CA.

CERTIFICATE HOLDER

TO WHOM IT MAY CONCERN

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Andrea R Otto

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APPENDIX B
BORING GPS COORDINATES

APPENDIX B
BORING GPS COORDINATES
ADL SITE INVESTIGATION
LA-010-37.2 /42.4
LOS ANGELES COUNTY, CALIFORNIA
PN: 0713000007-1; EA#07-1193U1
TASK ORDER #13; CONTRACT 07A3321

Boring ID	Latitude [1] (degrees north)	Longitude [1] (degrees west)	Northing [2] (UTM)	Easting [2] (UTM)
1255-101	34.070726	-117.866297	3770336.74	420064.57
1255-102	34.070693	-117.866308	3770333.09	420063.52
1255-103	34.070624	-117.866226	3770325.38	420071.03
1255-104	34.070689	-117.866192	3770332.56	420074.22
1255-105	34.070645	-117.866067	3770327.58	420085.72
1255-106	34.070561	-117.866085	3770318.28	420083.98
1255-107	34.070225	-117.865839	3770280.83	420106.36
1255-108	34.070252	-117.865684	3770283.71	420120.69
1255-109	34.070261	-117.865562	3770284.61	420131.96
1255-110	34.070377	-117.865584	3770297.49	420130.03
1255-111	34.070396	-117.865727	3770299.71	420116.86
1255-112	34.070384	-117.865849	3770298.47	420105.59
1255-113	34.067776	-117.855785	3770001.47	421031.83
1255-114	34.067771	-117.855725	3770000.87	421037.36
1255-115	34.067778	-117.855588	3770001.54	421050.01
1255-116	34.067836	-117.855598	3770007.98	421049.14
1255-117	34.067848	-117.855704	3770009.39	421039.37
1255-118	34.067847	-117.855773	3770009.33	421033.00
1255-119	34.065137	-117.807609	3769672.68	425475.11
1255-120	34.065023	-117.807959	3769660.29	425442.71
1255-121	34.064917	-117.808341	3769648.82	425407.36
1255-122	34.064789	-117.809016	3769635.12	425344.96
1255-123	34.064736	-117.809401	3769629.52	425309.39
1255-124	34.064689	-117.809763	3769624.58	425275.94
1255-125	34.064557	-117.809523	3769609.76	425297.97
1255-126	34.064470	-117.809954	3769600.43	425258.12
1255-127	34.064410	-117.810289	3769594.02	425227.16
1255-128	34.064410	-117.810423	3769594.12	425214.79
1255-129	34.064328	-117.810759	3769585.28	425183.71
1255-130	34.064260	-117.811156	3769578.03	425147.02
1255-131	34.072208	-117.888971	3770519.04	417973.75
1255-132	34.072194	-117.889093	3770517.58	417962.48
1255-133	34.072192	-117.889251	3770517.49	417947.90
1255-134	34.072190	-117.889389	3770517.38	417935.16
1255-135	34.072477	-117.889610	3770549.38	417915.05
1255-136	34.072472	-117.889694	3770548.89	417907.29
1255-137	34.072454	-117.889814	3770546.99	417896.20
1255-138	34.072452	-117.889910	3770546.85	417887.34
1255-139	34.072266	-117.890556	3770526.74	417827.55
1255-140	34.072266	-117.890617	3770526.79	417821.92
1255-141	34.072266	-117.890690	3770526.85	417815.19
1255-142	34.072269	-117.890765	3770527.24	417808.27
1255-143	34.071567	-117.889613	3770448.48	417913.89
1255-144	34.071473	-117.889469	3770437.94	417927.09

APPENDIX B
BORING GPS COORDINATES
ADL SITE INVESTIGATION
LA-010-37.2 /42.4
LOS ANGELES COUNTY, CALIFORNIA
PN: 0713000007-1; EA#07-1193U1
TASK ORDER #13; CONTRACT 07A3321

Boring ID	Latitude [1] (degrees north)	Longitude [1] (degrees west)	Northing [2] (UTM)	Easting [2] (UTM)
1255-145	34.071338	-117.889326	3770422.85	417940.15
1255-146	34.071226	-117.889211	3770410.34	417950.66
1255-147	34.071761	-117.889500	3770469.90	417924.50
1255-148	34.071739	-117.889316	3770467.31	417941.46
1255-149	34.071749	-117.889164	3770468.30	417955.50
1255-150	34.071747	-117.888921	3781556.40	418074.43
1255-151	34.071454	-117.880721	3770428.84	418734.29
1255-152	34.071447	-117.880589	3770427.96	418746.46
1255-153	34.071375	-117.880472	3770419.88	418757.19
1255-154	34.071308	-117.880367	3770412.37	418766.81
1255-155	34.071671	-117.880659	3770452.85	418740.22
1255-156	34.071685	-117.880517	3770454.29	418753.33
1255-157	34.071621	-117.880419	3770447.12	418762.31
1255-158	34.071641	-117.880286	3770449.23	418774.60
1255-159	34.070239	-117.863316	3770280.42	420339.19
1255-160	34.070296	-117.863255	3770286.69	420344.87
1255-161	34.070337	-117.863163	3770291.16	420353.40
1255-162	34.070143	-117.863286	3770269.75	420341.86
1255-163	34.070222	-117.863178	3770278.42	420351.90
1255-164	34.070250	-117.863102	3770281.47	420358.94

Notes:

[1] North American Datum 83 (WPS 84)

[2] Zone 11

APPENDIX C
PHOTOGRAPHIC RECORD

STANTEC CONSULTING SERVICES
PHOTOGRAPHIC RECORD

Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 1

Boring 1255-101 to east toward Holt Ave. – South of I-10

Photograph No. 2

Boring 1255-102 to east I-10 Holt Ave. Exit – South of I-10

STANTEC CONSULTING SERVICES
PHOTOGRAPHIC RECORD

Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 3

Boring 1255-102 to east toward Holt Ave. – South of I-10

Photograph No. 4

Boring 1255-102 to east I-10 Holt Ave. Exit – South of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 5

Boring 1255-103 to southeast – South of I-10

Photograph No. 6

Boring 1255-103 to Holt Ave. – South of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 7

1255-104 - Southeast to Holt Ave. – South of I-10

Photograph No. 8

1255-104 - To west – South of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 9

1255-105 – 10/22/14 – prior to drill rig boring – South of I-10

Photograph No. 10

1255-106 – 10/22/14 – prior to drill rig boring – South of I-10

STANTEC CONSULTING SERVICES
PHOTOGRAPHIC RECORD

Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 11

1255-107 – Toward west – South of I-10

Photograph No. 12

1255-107 – Toward Holt Ave. Note the multiple step-outs. – South of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 13

1255-108 – To I-10 east onramp – South of I-10

Photograph No. 14

1255-108 – Toward Holt Ave. and I-10 east onramp – South of I-10

STANTEC CONSULTING SERVICES
PHOTOGRAPHIC RECORD

Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 15

1255-109 – East toward Holt Ave. and I-10 east onramp – South of I-10

Photograph No. 16

1255-109 – West toward Holt Ave. and I-10 east onramp – South of I-10

STANTEC CONSULTING SERVICES
PHOTOGRAPHIC RECORD

Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 17

1255-110 – Toward I-10, Holt Ave. onramp merge – South of I-10

Photograph No. 18

1255-101 – To the west – South of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 19

1255-111 – To west – South of I-10

Photograph No. 20

1255-111 – Toward I-10, Holt Ave. onramp merge – South of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 21

1255-112 – Post rig drilling toward Holt Ave. I-10 onramp – South of I-10

Photograph No. 22

1255-112 – Toward west – South of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 23

1255-133 – To west – South of I-10

Photograph No. 24

1255-113 – To northeast – South of I-10

STANTEC CONSULTING SERVICES
PHOTOGRAPHIC RECORD

Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 25

1255-114 – To northeast – South of I-10

Photograph No. 26

1255-114 – To west – South of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 27

1255-115 – To northeast – South of I-10

Photograph No. 28

1255-115 – To west – South of I-10

STANTEC CONSULTING SERVICES
PHOTOGRAPHIC RECORD

Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 29

1255-116 – To east northeast – South of I-10

Photograph No. 30

1255-116 – To west – South of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 31

1255-119 – To east – North of I-10

Photograph No. 32

1255-119 – To south – North of I-10

STANTEC CONSULTING SERVICES
PHOTOGRAPHIC RECORD

Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 33

1255-120 – To west toward Kellogg Dr. exit – North of I-10

Photograph No. 34

1255-120 – To south – North of I-10

STANTEC CONSULTING SERVICES
PHOTOGRAPHIC RECORD

Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 35

1255-121 – To west toward Kellogg Dr. exit – North of I-10

Photograph No. 36

1255-121 – To south – North of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 37

1255-122 – To north – North of I-10

Photograph No. 38

1255-122 – To west – North of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 39

1255-123 – To west – North of Kellogg Dr. exit

Photograph No. 40

1255-123 – To north

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 41

1255-124 – To west – North of Kellogg Dr. Exit

Photograph No. 42

1255-124 – To south

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 43

1255-125 – To north – North of I-10

Photograph No. 44

1255-125 – To east – North of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 45

1255-126 – To north – North of I-10

Photograph No. 46

1255-126 – To east – North of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 47

1255-127 – To north – North of I-10

Photograph No. 48

1255-127 – To east – North of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 49

1255-128 – To north – North of I-10

Photograph No. 50

1255-128 – To east – North of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 51

1255-129 – To north – North of I-10

Photograph No. 52

1255-129 – To east – North of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 53

1255-130 – To west – North of I-10

Photograph No. 54

1255-130 – To north – North of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 55

1255-131 – To east – North of I-10

Photograph No. 56

1255-131 – To northwest – North of I-10

STANTEC CONSULTING SERVICES
PHOTOGRAPHIC RECORD

Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 57

1255-132 – To northwest – North of I-10

Photograph No. 58

1255-132 – To west – North of I-10

STANTEC CONSULTING SERVICES
PHOTOGRAPHIC RECORD

Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 59

1255-133 – To West – North of I-10

Photograph No. 60

1255-133 – To east – North of I-10

STANTEC CONSULTING SERVICES
PHOTOGRAPHIC RECORD

Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 61

1255-134 –To east – North of I-10

Photograph No. 62

1255-134 – To west – North of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 63

1255-135 – To north – North of I-10

Photograph No. 64

1255-136 – To northwest – North of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 65

1255-137 – to northwest – North of I-10

Photograph No. 66

1255-137 – To north – North of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 67

1255-138 – To west – North of I-10

Photograph No. 68

1255-138 – To north – North of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 69

1255-139 – 10/21/14

Photograph No. 70

1255-140 – 10/21/14

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 71

1255-141 – 10/21/14

Photograph No. 72

1255-142 – 10/21/14

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 73

1255-143 – To west – South of I-10

Photograph No. 74

1255-143 – To east – South of I-10

STANTEC CONSULTING SERVICES
PHOTOGRAPHIC RECORD

Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 75

1255-144 – To southeast – South of I-10

Photograph No. 76

1255-144 – to south – South of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 77

1255-145 – To south – South of I-10

Photograph No. 78

1255-145 – To east – South of I-10

STANTEC CONSULTING SERVICES
PHOTOGRAPHIC RECORD

Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 79

1255-146 – To east – South of I-10

Photograph No. 80

1255-146 – To south – South of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 81

1255-147 – To west – South of I-10

Photograph No. 82

1255-147 – To south – South of I-10

STANTEC CONSULTING SERVICES
PHOTOGRAPHIC RECORD

Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 83

1255-148 – To south – South of I-10

Photograph No. 84

1255-148 – To north – South of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 85

1255-149 – To east – South of I-10

Photograph No. 86

1255-149 – To northwest – South of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 87

1255-150 – To east – South of I-10

Photograph No. 88

1255-150 – to southwest – South of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 89

1255-151 – To east – South of I-10

Photograph No. 90

1255-151 – To northwest – South of I-10

STANTEC CONSULTING SERVICES
PHOTOGRAPHIC RECORD

Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 91

1255-152 – To east – South of I-10

Photograph No. 92

1255-152 – To west – South of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 93

1255-153 – To southeast – South of I-10

Photograph No. 94

1255-153 – To west – South of I-10

STANTEC CONSULTING SERVICES
PHOTOGRAPHIC RECORD

Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 95

1255-154 – To east – South of I-10

Photograph No. 96

1255-154 – To northwest – South of I-10

STANTEC CONSULTING SERVICES
PHOTOGRAPHIC RECORD

Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 99

1255-155 – To southwest – South of I-10

Photograph No. 100

1255-155 – To north – South of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 101

1255-156 – To south – South of I-10

Photograph No. 102

1255-156 – To east – South of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 103

1255-157 – To south – South of I-10

Photograph No. 104

1255-157 – To north – South of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 105

1255-158 – To south – South of I-10

Photograph No. 106

1255-158 – To south – South of I-10

STANTEC CONSULTING SERVICES
PHOTOGRAPHIC RECORD

Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 107

1255-159 – To south – North of I-10

Photograph No. 108

1255-159 – To southwest – North of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 109

1255-160 – To east – North of I-10

Photograph No. 110

1255-160 – To northwest – North of I-10

STANTEC CONSULTING SERVICES
PHOTOGRAPHIC RECORD

Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 111

1255-161 – To northwest – North of I-10

Photograph No. 112

1255-161 – To north – North of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 113

1255-162 – To southeast – North of I-10

Photograph No. 114

1255-162 – North of I-10

STANTEC CONSULTING SERVICES
PHOTOGRAPHIC RECORD

Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 115

1255-163 – North of I-10

Photograph No. 116

1255-164 – To east – North of I-10

STANTEC CONSULTING SERVICES PHOTOGRAPHIC RECORD	
Client: CalTrans District 7 – 07A3321	**Job Number:** 185831013
Site Name: Task Order 13 – I-10 ADL	**Location:** I-10 Freeway – Pomona/West Covina
Photographer: JS/MAB/MFB	**Date:** September 21, 22, 23, 2014

Photograph No. 117

1255-164 – To north – North of I-10

APPENDIX D
ANALYTICAL LABORATORY REPORTS and CHAIN-OF-CUSTODY RECORDS

October 30, 2014

Anne Perez
Stantec
25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 255-8202
Fax:(909) 335-6120

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1403204

Client Reference : CalTrans TO13 07A3321, 185831013

Enclosed are the results for sample(s) received on October 22, 2014 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
1255-102-1	1403204-01	Soil	10/21/14 8:05	10/22/14 13:55
1255-101-1	1403204-02	Soil	10/21/14 8:07	10/22/14 13:55
1255-102-3	1403204-03	Soil	10/21/14 8:15	10/22/14 13:55
1255-EBQC-1	1403204-04	Water	10/21/14 7:49	10/22/14 13:55
1255-101-3	1403204-05	Soil	10/21/14 8:30	10/22/14 13:55
1255-102-9	1403204-06	Soil	10/21/14 9:10	10/22/14 13:55
1255-103-1	1403204-07	Soil	10/21/14 9:31	10/22/14 13:55
1255-103-3	1403204-08	Soil	10/21/14 9:54	10/22/14 13:55
1255-104-1	1403204-09	Soil	10/21/14 9:59	10/22/14 13:55
1255-104-3	1403204-10	Soil	10/21/14 10:18	10/22/14 13:55
1255-119-1	1403204-11	Soil	10/21/14 11:17	10/22/14 13:55
1255-120-1	1403204-12	Soil	10/21/14 11:19	10/22/14 13:55
1255-121-1	1403204-13	Soil	10/21/14 11:29	10/22/14 13:55
1255-122-1	1403204-14	Soil	10/21/14 11:34	10/22/14 13:55
1255-123-1	1403204-15	Soil	10/21/14 11:38	10/22/14 13:55
1255-124-1	1403204-16	Soil	10/21/14 11:43	10/22/14 13:55
1255-125-1	1403204-17	Soil	10/21/14 12:08	10/22/14 13:55
1255-126-1	1403204-18	Soil	10/21/14 12:14	10/22/14 13:55
1255-127-1	1403204-19	Soil	10/21/14 12:17	10/22/14 13:55
1255-128-1	1403204-20	Soil	10/21/14 12:23	10/22/14 13:55
1255-129-1	1403204-21	Soil	10/21/14 12:32	10/22/14 13:55
1255-130-1	1403204-22	Soil	10/21/14 12:30	10/22/14 13:55
1255-131-1	1403204-23	Soil	10/21/14 13:15	10/22/14 13:55
1255-132-1	1403204-24	Soil	10/21/14 13:18	10/22/14 13:55
1255-133-1	1403204-25	Soil	10/21/14 13:25	10/22/14 13:55
1255-134-1	1403204-26	Soil	10/21/14 13:32	10/22/14 13:55
1255-135-1	1403204-27	Soil	10/21/14 13:53	10/22/14 13:55
1255-136-1	1403204-28	Soil	10/21/14 13:45	10/22/14 13:55
1255-137-1	1403204-29	Soil	10/21/14 13:55	10/22/14 13:55
1255-138-1	1403204-30	Soil	10/21/14 13:59	10/22/14 13:55
1255-139-1	1403204-31	Soil	10/21/14 14:29	10/22/14 13:55
1255-140-1	1403204-32	Soil	10/21/14 14:35	10/22/14 13:55
1255-141-1	1403204-33	Soil	10/21/14 14:38	10/22/14 13:55
1255-142-1	1403204-34	Soil	10/21/14 14:43	10/22/14 13:55
1255-101-6.5	1403204-35	Soil	10/21/14 9:41	10/22/14 13:55

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/30/2014

CASE NARRATIVE

Sample Receiving/General Comments:

Documentation pertaining to additional analyses/change order available upon request.

Results were J-flagged. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/30/2014

Client Sample ID 1255-102-1

Lab ID: 1403204-01

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**9.0**	1.0	0.07	1	B4J0729	10/28/2014	10/29/14 11:24	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-101-1

Lab ID: 1403204-02

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**21**	0.99	0.07	1	B4J0729	10/28/2014	10/29/14 11:25	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/30/2014

Client Sample ID 1255-102-3

Lab ID: 1403204-03

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**7.0**	1.0	0.07	1	B4J0729	10/28/2014	10/29/14 11:26	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-EBQC-1
Lab ID: 1403204-04

Title 22 Metals by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	0.010	0.0026	1	B4J0760	10/29/2014	10/30/14 11:27	
Arsenic	ND	0.010	0.0024	1	B4J0760	10/29/2014	10/30/14 11:27	
Barium	**0.0010**	0.0030	0.0004	1	B4J0760	10/29/2014	10/30/14 11:27	J
Beryllium	ND	0.0030	0.0002	1	B4J0760	10/29/2014	10/30/14 11:26	
Cadmium	**0.0002**	0.0030	0.0001	1	B4J0760	10/29/2014	10/30/14 11:27	J
Chromium	**0.0007**	0.0030	0.0003	1	B4J0760	10/29/2014	10/30/14 11:27	J
Cobalt	ND	0.0030	0.0004	1	B4J0760	10/29/2014	10/30/14 11:27	
Copper	ND	0.0050	0.0009	1	B4J0760	10/29/2014	10/30/14 11:27	
Lead	ND	0.0050	0.0014	1	B4J0760	10/29/2014	10/30/14 11:27	
Molybdenum	ND	0.0050	0.0005	1	B4J0760	10/29/2014	10/30/14 11:27	
Nickel	**0.0005**	0.0050	0.0004	1	B4J0760	10/29/2014	10/30/14 11:27	J
Selenium	ND	0.010	0.0040	1	B4J0760	10/29/2014	10/30/14 11:27	
Silver	**0.0012**	0.0030	0.0006	1	B4J0760	10/29/2014	10/30/14 11:27	J
Thallium	ND	0.015	0.0026	1	B4J0760	10/29/2014	10/30/14 11:27	
Vanadium	ND	0.0030	0.0013	1	B4J0760	10/29/2014	10/30/14 11:27	
Zinc	**0.0053**	0.010	0.0017	1	B4J0760	10/29/2014	10/30/14 11:27	J

Mercury by AA (Cold Vapor) EPA 7470A

Analyst: SB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.20	0.11	1	B4J0761	10/29/2014	10/29/14 16:52	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-101-3

Lab ID: 1403204-05

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**11**	1.0	0.07	1	B4J0729	10/28/2014	10/29/14 11:26	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-102-9

Lab ID: 1403204-06

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**41**	1.0	0.07	1	B4J0729	10/28/2014	10/29/14 11:27	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-103-1

Lab ID: 1403204-07

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**61**	1.0	0.07	1	B4J0729	10/28/2014	10/29/14 11:28	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-103-3

Lab ID: 1403204-08

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**44**	1.0	0.07	1	B4J0729	10/28/2014	10/29/14 11:29	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-104-1

Lab ID: 1403204-09

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**74**	1.0	0.07	1	B4J0729	10/28/2014	10/29/14 11:31	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-104-3

Lab ID: 1403204-10

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**44**	1.0	0.07	1	B4J0729	10/28/2014	10/29/14 11:32	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-119-1

Lab ID: 1403204-11

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**17**	1.0	0.07	1	B4J0729	10/28/2014	10/29/14 11:33	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-120-1

Lab ID: 1403204-12

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**53**	1.0	0.07	1	B4J0729	10/28/2014	10/29/14 11:35	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-121-1

Lab ID: 1403204-13

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**3.8**	1.0	0.07	1	B4J0729	10/28/2014	10/29/14 11:36	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-122-1

Lab ID: 1403204-14

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**110**	1.0	0.07	1	B4J0729	10/28/2014	10/29/14 11:37	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-123-1

Lab ID: 1403204-15

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**24**	1.0	0.07	1	B4J0729	10/28/2014	10/29/14 11:37	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-124-1

Lab ID: 1403204-16

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**71**	1.0	0.07	1	B4J0729	10/28/2014	10/29/14 11:38	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/30/2014

Client Sample ID 1255-125-1

Lab ID: 1403204-17

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**520**	1.0	0.07	1	B4J0729	10/28/2014	10/29/14 11:48	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/30/2014

Client Sample ID 1255-126-1

Lab ID: 1403204-18

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**280**	1.0	0.07	1	B4J0729	10/28/2014	10/29/14 11:49	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-127-1

Lab ID: 1403204-19

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**50**	0.99	0.07	1	B4J0729	10/28/2014	10/29/14 11:50	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/30/2014

Client Sample ID 1255-128-1

Lab ID: 1403204-20

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**170**	0.99	0.07	1	B4J0729	10/28/2014	10/29/14 11:50	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-129-1

Lab ID: 1403204-21

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**220**	1.0	0.07	1	B4J0729	10/28/2014	10/29/14 11:51	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/30/2014

Client Sample ID 1255-130-1

Lab ID: 1403204-22

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**100**	1.0	0.07	1	B4J0730	10/28/2014	10/29/14 12:28	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-131-1

Lab ID: 1403204-23

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**23**	1.0	0.07	1	B4J0730	10/28/2014	10/29/14 12:29	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-132-1

Lab ID: 1403204-24

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**150**	0.99	0.07	1	B4J0730	10/28/2014	10/29/14 12:30	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-133-1

Lab ID: 1403204-25

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**24**	1.0	0.07	1	B4J0730	10/28/2014	10/29/14 12:31	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-134-1

Lab ID: 1403204-26

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**28**	0.99	0.07	1	B4J0730	10/28/2014	10/29/14 12:31	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-135-1

Lab ID: 1403204-27

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**20**	1.0	0.07	1	B4J0730	10/28/2014	10/29/14 12:32	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/30/2014

Client Sample ID 1255-136-1

Lab ID: 1403204-28

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**9.1**	0.99	0.07	1	B4J0730	10/28/2014	10/29/14 12:33	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-137-1

Lab ID: 1403204-29

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**19**	1.0	0.07	1	B4J0730	10/28/2014	10/29/14 12:34	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-138-1

Lab ID: 1403204-30

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**20**	1.0	0.07	1	B4J0730	10/28/2014	10/29/14 12:34	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-139-1

Lab ID: 1403204-31

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**78**	1.0	0.07	1	B4J0730	10/28/2014	10/29/14 12:37	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-140-1

Lab ID: 1403204-32

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**82**	1.0	0.07	1	B4J0730	10/28/2014	10/29/14 12:40	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-141-1

Lab ID: 1403204-33

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**54**	1.0	0.07	1	B4J0730	10/28/2014	10/29/14 12:40	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-142-1

Lab ID: 1403204-34

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**14**	1.0	0.07	1	B4J0730	10/28/2014	10/29/14 12:41	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Client Sample ID 1255-101-6.5

Lab ID: 1403204-35

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**32**	1.0	0.07	1	B4J0730	10/28/2014	10/29/14 12:42	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

QUALITY CONTROL SECTION

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0760 - EPA 3010A									
Blank (B4J0760-BLK1)				Prepared: 10/29/2014 Analyzed: 10/30/2014					
Antimony	ND	0.010			NR				
Arsenic	ND	0.010			NR				
Barium	0.000803	0.0030			NR				J
Beryllium	ND	0.0030			NR				
Cadmium	1.666E-4	0.0030			NR				J
Chromium	0.000337	0.0030			NR				J
Cobalt	ND	0.0030			NR				
Copper	ND	0.0050			NR				
Lead	ND	0.0050			NR				
Molybdenum	ND	0.0050			NR				
Nickel	0.000561	0.0050			NR				J
Selenium	0.004462	0.010			NR				J
Silver	0.000840	0.0030			NR				J
Thallium	ND	0.015			NR				
Vanadium	ND	0.0030			NR				
Zinc	0.003944	0.010			NR				J
LCS (B4J0760-BS1)				Prepared: 10/29/2014 Analyzed: 10/30/2014					
Antimony	0.988381	0.010	1.00000		98.8	80 - 120			
Arsenic	0.969234	0.010	1.00000		96.9	80 - 120			
Barium	1.02271	0.0030	1.00000		102	80 - 120			
Beryllium	1.03054	0.0030	1.00000		103	80 - 120			
Cadmium	0.962591	0.0030	1.00000		96.3	80 - 120			
Chromium	1.00714	0.0030	1.00000		101	80 - 120			
Cobalt	1.00146	0.0030	1.00000		100	80 - 120			
Copper	1.03248	0.0050	1.00000		103	80 - 120			
Lead	0.997492	0.0050	1.00000		99.7	80 - 120			
Molybdenum	0.970175	0.0050	1.00000		97.0	80 - 120			
Nickel	0.985497	0.0050	1.00000		98.5	80 - 120			
Selenium	0.943283	0.010	1.00000		94.3	80 - 120			
Silver	0.989894	0.0030	1.00000		99.0	80 - 120			
Thallium	1.02530	0.015	1.00000		103	80 - 120			
Vanadium	1.01770	0.0030	1.00000		102	80 - 120			
Zinc	0.937435	0.010	1.00000		93.7	80 - 120			
Duplicate (B4J0760-DUP1)			**Source: 1403204-04**	Prepared: 10/29/2014 Analyzed: 10/30/2014					
Antimony	ND	0.010		ND	NR			20	
Arsenic	ND	0.010		ND	NR			20	
Barium	0.000973	0.0030		0.001048	NR		7.41	20	J
Beryllium	ND	0.0030		ND	NR			20	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0760 - EPA 3010A (continued)									
Duplicate (B4J0760-DUP1) - Continued		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/30/2014					
Cadmium	0.000172	0.0030		0.000192	NR		11.0	20	J
Chromium	7.052E-4	0.0030		0.000657	NR		7.04	20	J
Cobalt	ND	0.0030		ND	NR			20	
Copper	ND	0.0050		ND	NR			20	
Lead	ND	0.0050		ND	NR			20	
Molybdenum	0.000478	0.0050		ND	NR			20	J
Nickel	ND	0.0050		0.000519	NR			20	
Selenium	ND	0.010		ND	NR			20	
Silver	0.001075	0.0030		0.001238	NR		14.1	20	J
Thallium	ND	0.015		ND	NR			20	
Vanadium	ND	0.0030		ND	NR			20	
Zinc	0.006447	0.010		5.3041E-3	NR		19.5	20	J
Matrix Spike (B4J0760-MS1)		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/30/2014					
Antimony	2.48840	0.010	2.50000	ND	99.5	78 - 121			
Arsenic	2.44634	0.010	2.50000	ND	97.9	78 - 124			
Barium	2.55146	0.0030	2.50000	0.001048	102	81 - 118			
Beryllium	2.63363	0.0030	2.50000	ND	105	87 - 119			
Cadmium	2.41461	0.0030	2.50000	0.000192	96.6	80 - 113			
Chromium	2.53199	0.0030	2.50000	0.000657	101	85 - 115			
Cobalt	2.49664	0.0030	2.50000	ND	99.9	83 - 113			
Copper	2.59389	0.0050	2.50000	ND	104	72 - 132			
Lead	2.44775	0.0050	2.50000	ND	97.9	77 - 121			
Molybdenum	2.48186	0.0050	2.50000	ND	99.3	82 - 111			
Nickel	2.48813	0.0050	2.50000	0.000519	99.5	80 - 114			
Selenium	2.40664	0.010	2.50000	ND	96.3	75 - 121			
Silver	2.57767	0.0030	2.50000	0.001238	103	84 - 116			
Thallium	2.55056	0.015	2.50000	ND	102	70 - 122			
Vanadium	2.57176	0.0030	2.50000	ND	103	85 - 114			
Zinc	2.37234	0.010	2.50000	5.3041E-3	94.7	70 - 123			
Matrix Spike Dup (B4J0760-MSD1)		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/30/2014					
Antimony	2.49123	0.010	2.50000	ND	99.6	78 - 121	0.114	20	
Arsenic	2.44795	0.010	2.50000	ND	97.9	78 - 124	0.0658	20	
Barium	2.54008	0.0030	2.50000	0.001048	102	81 - 118	0.447	20	
Beryllium	2.62516	0.0030	2.50000	ND	105	87 - 119	0.322	20	
Cadmium	2.40341	0.0030	2.50000	0.000192	96.1	80 - 113	0.465	20	
Chromium	2.51974	0.0030	2.50000	0.000657	101	85 - 115	0.485	20	
Cobalt	2.48480	0.0030	2.50000	ND	99.4	83 - 113	0.475	20	
Copper	2.58270	0.0050	2.50000	ND	103	72 - 132	0.432	20	
Lead	2.43254	0.0050	2.50000	ND	97.3	77 - 121	0.623	20	
Molybdenum	2.46917	0.0050	2.50000	ND	98.8	82 - 111	0.513	20	

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0760 - EPA 3010A (continued)									
Matrix Spike Dup (B4J0760-MSD1) - Continued		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/30/2014					
Nickel	2.47746	0.0050	2.50000	0.000519	99.1	80 - 114	0.430	20	
Selenium	2.41824	0.010	2.50000	ND	96.7	75 - 121	0.481	20	
Silver	2.56630	0.0030	2.50000	0.001238	103	84 - 116	0.442	20	
Thallium	2.55074	0.015	2.50000	ND	102	70 - 122	0.00706	20	
Vanadium	2.56168	0.0030	2.50000	ND	102	85 - 114	0.393	20	
Zinc	2.36027	0.010	2.50000	5.3041E-3	94.2	70 - 123	0.510	20	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Lead by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0729 - EPA 3050 Modified									
Blank (B4J0729-BLK1)				Prepared: 10/28/2014 Analyzed: 10/29/2014					
Lead	0.388381	1.0			NR				J
Blank (B4J0729-BLK2)				Prepared: 10/28/2014 Analyzed: 10/29/2014					
Lead	0.078580	1.0			NR				J
LCS (B4J0729-BS1)				Prepared: 10/28/2014 Analyzed: 10/29/2014					
Lead	50.3743	1.0	50.0000		101	80 - 120			
Duplicate (B4J0729-DUP1)		**Source: 1403204-21**		Prepared: 10/28/2014 Analyzed: 10/29/2014					
Lead	177.939	0.99		216.919	NR		19.7	20	
Duplicate (B4J0729-DUP2)		**Source: 1403204-11**		Prepared: 10/28/2014 Analyzed: 10/29/2014					
Lead	14.7777	1.0		17.3948	NR		16.3	20	
Matrix Spike (B4J0729-MS1)		**Source: 1403204-21**		Prepared: 10/28/2014 Analyzed: 10/29/2014					
Lead	582.955	1.0	250.000	216.919	146	33 - 134			M1
Matrix Spike (B4J0729-MS2)		**Source: 1403204-11**		Prepared: 10/28/2014 Analyzed: 10/29/2014					
Lead	235.780	1.0	252.525	17.3948	86.5	33 - 134			
Matrix Spike Dup (B4J0729-MSD1)		**Source: 1403204-21**		Prepared: 10/28/2014 Analyzed: 10/29/2014					
Lead	416.012	1.0	250.000	216.919	79.6	33 - 134	33.4	20	R
Batch B4J0730 - EPA 3050 Modified									
Blank (B4J0730-BLK1)				Prepared: 10/28/2014 Analyzed: 10/29/2014					
Lead	0.361800	1.0			NR				J
Blank (B4J0730-BLK2)				Prepared: 10/28/2014 Analyzed: 10/29/2014					
Lead	0.172010	1.0			NR				J
LCS (B4J0730-BS1)				Prepared: 10/28/2014 Analyzed: 10/29/2014					
Lead	50.9356	1.0	50.0000		102	80 - 120			
Duplicate (B4J0730-DUP1)		**Source: 1403212-06**		Prepared: 10/28/2014 Analyzed: 10/29/2014					
Lead	7.78818	1.0		7.52322	NR		3.46	20	
Duplicate (B4J0730-DUP2)		**Source: 1403204-31**		Prepared: 10/28/2014 Analyzed: 10/29/2014					
Lead	86.6800	1.0		77.7705	NR		10.8	20	
Matrix Spike (B4J0730-MS1)		**Source: 1403212-06**		Prepared: 10/28/2014 Analyzed: 10/29/2014					
Lead	214.137	1.0	250.000	7.52322	82.6	33 - 134			

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
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Redlands , CA 92374	Reported : 10/30/2014

Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0730 - EPA 3050 Modified (continued)									
Matrix Spike (B4J0730-MS2)		**Source: 1403204-31**		Prepared: 10/28/2014 Analyzed: 10/29/2014					
Lead	305.545	1.0	252.525	77.7705	90.2	33 - 134			
Matrix Spike Dup (B4J0730-MSD1)		**Source: 1403212-06**		Prepared: 10/28/2014 Analyzed: 10/29/2014					
Lead	219.644	1.0	250.000	7.52322	84.8	33 - 134	2.54	20	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/30/2014

Mercury by AA (Cold Vapor) EPA 7470A - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0761 - EPA 245.1/7470									
Blank (B4J0761-BLK1)				Prepared: 10/29/2014 Analyzed: 10/29/2014					
Mercury	ND	0.20			NR				
LCS (B4J0761-BS1)				Prepared: 10/29/2014 Analyzed: 10/29/2014					
Mercury	10.3311	0.20	10.0000		103	80 - 120			
Duplicate (B4J0761-DUP1)		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/29/2014					
Mercury	ND	0.20		ND	NR			20	
Matrix Spike (B4J0761-MS1)		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/29/2014					
Mercury	10.4476	0.20	10.0000	ND	104	70 - 130			
Matrix Spike Dup (B4J0761-MSD1)		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/29/2014					
Mercury	10.4336	0.20	10.0000	ND	104	70 - 130	0.134	20	
Post Spike (B4J0761-PS1)		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/29/2014					
Mercury	5.12810		5.00000	-0.015628	103	85 - 115			

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/30/2014

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
J	Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address: **Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374**	Project Manager: **ANNE PEREZ**
	E-Mail Address: **anne.perez@stantec.com**
	Sampler Name: **MFB/MAB/JGS/MC**
Laboratory: **ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388**	Project Number: **185831013**
	Project: **CalTrans TO13 07A3321**

Turn Around Time:
Normal TAT: X
72 Hour:
48 Hour:
24 Hour:
Same Day:
Other:

Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS	Special Instructions
1403204													
1255-102-1	soil	1	1	10/21/14	0805		X						
1255-101-1	soil				0807								
1255-102-3	soil				0815								
1255-EBQC-1	water				0749							X	lab filter + preserve
1255-101-3	soil				0830								
1255-102-9					0910								
1255-103-1					0931								
1255-103-3					0954								
1255-104-1					0959								
1255-104-3					1018								
1255-119-1					1117								
1255-120-1					1119								
1255-121-1					1129								
1255-122-1					1134								
1255-123-1					1138								

Sample Preservative: **1**=ICE - **2**=HCl - **3**=H_2SO_4 - **4**=HNO_3 - **5**=NaOH - **6**=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "*EBQC*" samples are to be laboratory filtered and preserved, then analyzed.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/21/14	1600	ATL	10/22/14	13:55
Relinquished By + Company Name: ATL	10/22/14	1525	Received By + Company Name: FEDEX ATL	10/22/14	1525
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services **25864-F Business Center Drive** **Redlands, CA 92374**	**ANNE PEREZ**
	E-Mail Address: **anne.perez@stantec.com**
	Sampler Name: **MFB/MAB/JGS/MC**
Laboratory: **ATL** **3275 Walnut Ave.** **Signal Hill, CA 90755** **800-499-4388**	Project Number: **185831013**
	Project: **CalTrans TO13** 07A3321

Analysis Required

Turn Around Time:
- Normal TAT: X
- 72 Hour:
- 48 Hour:
- 24 Hour:
- Same Day:
- Other:

Sample Temp °C:

	Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS				Special Instructions
-16	1255- 124 - 1	soil	1	1	10/21/14	1143		X									
-17	1255- 125 - 1					1208											
-18	1255- 126 - 1					1214											
-19	1255- 127 - 1					1217											
-20	1255- 128 - 1					1223											
-21	1255- 129 - 1					1232											
-22	1255- 130 - 1					1230											
-23	1255- 131 - 1					1315											
-24	1255- 132 - 1					1318											
-25	1255- 133 - 1					1325											
-26	1255- 134 - 1					1332											
-27	1255- 135 - 1					1353											
-28	1255- 136 - 1					1345											
-29	1255- 137 - 1					1355											
-30	1255- 138 - 1	↓	↓	↓	↓	1359		↓									

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "*EBQC*" samples are to be laboratory filtered and preserved, then analyzed.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/21/14	1600	ATL	10/22/14	13:55
Relinquished By + Company Name: ATL	10/22/14	1525	Received By + Company Name: FEDEX ATL	10/22/14	1525
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	ANNE PEREZ
	E-Mail Address: anne.perez@stantec.com
	Sampler Name: MFB/MAB/JGS/MC
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	Project Number: 185831013
	Project: CalTrans TO13 07A3321

Turn Around Time: Normal TAT: X; 72 Hour: ; 48 Hour: ; 24 Hour: ; Same Day: ; Other:

Sample Temp °C:

	Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS					Special Instructions
-31	1255- 139 - 1	Soil	—	1	10.21.14	1429		X										
-32	1255- 140 - 1	"	"	"	"	1435		"										
-33	1255- 141 - 1	"	"	"	"	1438		"										
-34	1255- 142 - 1	"	"	"	"	1443		"										
	~~1255-~~ -																	
	1255- -																	
	1255- -																	
	1255- -																	
	1255- -																	
	1255- -																	
	1255- -																	
	1255- -																	
	1255- -																	
	1255- -																	

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions: **All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "*EBQC*" samples are to be laboratory filtered and preserved then analyzed.**

Relinquished By	Date	Time	Received By + Company Name:	Date	Time
[signature]	10/21/14	1600	[signature] ATL	10/22/14	13:55
Relinquished By + Company Name: [signature] ATL	10/22/14	1525	Received By + Company Name: [signature] ATL	10/22/14	1525
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

November 11, 2014

Anne Perez
Stantec
25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 255-8202
Fax:(909) 335-6120

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1403204
Client Reference : CalTrans TO13 07A3321, 185831013

Enclosed are the results for sample(s) received on October 22, 2014 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	11/11/2014

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
1255-102-9	1403204-06	Soil	10/21/14 9:10	10/22/14 13:55
1255-103-1	1403204-07	Soil	10/21/14 9:31	10/22/14 13:55
1255-103-3	1403204-08	Soil	10/21/14 9:54	10/22/14 13:55
1255-104-1	1403204-09	Soil	10/21/14 9:59	10/22/14 13:55
1255-104-3	1403204-10	Soil	10/21/14 10:18	10/22/14 13:55
1255-120-1	1403204-12	Soil	10/21/14 11:19	10/22/14 13:55
1255-122-1	1403204-14	Soil	10/21/14 11:34	10/22/14 13:55
1255-124-1	1403204-16	Soil	10/21/14 11:43	10/22/14 13:55
1255-125-1	1403204-17	Soil	10/21/14 12:08	10/22/14 13:55
1255-126-1	1403204-18	Soil	10/21/14 12:14	10/22/14 13:55
1255-127-1	1403204-19	Soil	10/21/14 12:17	10/22/14 13:55
1255-128-1	1403204-20	Soil	10/21/14 12:23	10/22/14 13:55
1255-129-1	1403204-21	Soil	10/21/14 12:32	10/22/14 13:55
1255-130-1	1403204-22	Soil	10/21/14 12:30	10/22/14 13:55
1255-132-1	1403204-24	Soil	10/21/14 13:18	10/22/14 13:55
1255-139-1	1403204-31	Soil	10/21/14 14:29	10/22/14 13:55
1255-140-1	1403204-32	Soil	10/21/14 14:35	10/22/14 13:55
1255-141-1	1403204-33	Soil	10/21/14 14:38	10/22/14 13:55
1255-101-6.5	1403204-35	Soil	10/21/14 9:41	10/22/14 13:55

CASE NARRATIVE

Sample Receiving/General Comments:

Documentation pertaining to additional analyses/change order available upon request.

Results were J-flagged. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 11/11/2014

TCLP Metals by ICP-AES EPA 6010B

Analyte: Lead **Analyst: CB**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403204-09	1255-104-1	**0.049**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 16:04	J
1403204-14	1255-122-1	**0.040**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 16:06	J
1403204-16	1255-124-1	**0.011**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 16:09	J
1403204-17	1255-125-1	**0.31**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 16:11	
1403204-18	1255-126-1	**0.30**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 16:13	
1403204-20	1255-128-1	**0.080**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 16:16	
1403204-21	1255-129-1	**0.34**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 16:18	
1403204-22	1255-130-1	**0.049**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 16:21	J
1403204-24	1255-132-1	**0.041**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 14:41	J
1403204-31	1255-139-1	**0.040**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 16:27	J
1403204-32	1255-140-1	**0.032**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 16:29	J

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
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Redlands , CA 92374	Reported : 11/11/2014

STLC Metals by ICP-AES by EPA 6010B

Analyte: Lead **Analyst: SB**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403204-06	1255-102-9	**0.26**	mg/L	1.0	0.027	20	B4K0157	11/07/2014	11/10/14 10:26	J
1403204-07	1255-103-1	**4.4**	mg/L	1.0	0.027	20	B4K0157	11/07/2014	11/10/14 10:28	
1403204-08	1255-103-3	**2.0**	mg/L	1.0	0.027	20	B4K0157	11/07/2014	11/10/14 10:30	
1403204-09	1255-104-1	**2.8**	mg/L	1.0	0.027	20	B4K0157	11/07/2014	11/10/14 10:32	
1403204-10	1255-104-3	**1.8**	mg/L	1.0	0.027	20	B4K0157	11/07/2014	11/10/14 10:35	
1403204-12	1255-120-1	**1.6**	mg/L	1.0	0.027	20	B4K0157	11/07/2014	11/10/14 10:37	
1403204-14	1255-122-1	**8.0**	mg/L	1.0	0.027	20	B4K0157	11/07/2014	11/10/14 10:43	
1403204-16	1255-124-1	**2.2**	mg/L	1.0	0.027	20	B4K0157	11/07/2014	11/10/14 10:45	
1403204-17	1255-125-1	**27**	mg/L	1.0	0.027	20	B4K0157	11/07/2014	11/10/14 10:47	
1403204-18	1255-126-1	**13**	mg/L	1.0	0.027	20	B4K0157	11/07/2014	11/10/14 10:56	
1403204-19	1255-127-1	**1.7**	mg/L	1.0	0.027	20	B4K0157	11/07/2014	11/10/14 10:58	
1403204-20	1255-128-1	**9.6**	mg/L	1.0	0.027	20	B4K0157	11/07/2014	11/10/14 11:00	
1403204-21	1255-129-1	**12**	mg/L	1.0	0.027	20	B4K0157	11/07/2014	11/10/14 11:03	
1403204-22	1255-130-1	**5.2**	mg/L	1.0	0.027	20	B4K0157	11/07/2014	11/10/14 11:09	
1403204-24	1255-132-1	**13**	mg/L	1.0	0.027	20	B4K0157	11/07/2014	11/10/14 11:11	
1403204-31	1255-139-1	**2.9**	mg/L	1.0	0.027	20	B4K0157	11/07/2014	11/10/14 11:13	
1403204-32	1255-140-1	**3.6**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:13	
1403204-33	1255-141-1	**9.0**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 16:01	
1403204-35	1255-101-6.5	**1.4**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:18	

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Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 11/11/2014

STLC DI Metals by ICP-AES by EPA 6010B

Analyte: Lead **Analyst: CB**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403204-06	1255-102-9	**ND**	mg/L	1.0	0.027	20	B4K0160	11/07/2014	11/10/14 12:12	
1403204-07	1255-103-1	**0.034**	mg/L	1.0	0.027	20	B4K0160	11/07/2014	11/10/14 12:15	J
1403204-08	1255-103-3	**ND**	mg/L	1.0	0.027	20	B4K0160	11/07/2014	11/10/14 12:17	
1403204-09	1255-104-1	**0.036**	mg/L	1.0	0.027	20	B4K0160	11/07/2014	11/10/14 12:23	J
1403204-10	1255-104-3	**0.029**	mg/L	1.0	0.027	20	B4K0160	11/07/2014	11/10/14 12:25	J
1403204-12	1255-120-1	**ND**	mg/L	1.0	0.027	20	B4K0160	11/07/2014	11/10/14 12:27	
1403204-14	1255-122-1	**ND**	mg/L	1.0	0.027	20	B4K0160	11/07/2014	11/10/14 12:29	
1403204-16	1255-124-1	**ND**	mg/L	1.0	0.027	20	B4K0160	11/07/2014	11/10/14 12:31	
1403204-17	1255-125-1	**0.11**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:09	J
1403204-18	1255-126-1	**0.14**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:11	J
1403204-19	1255-127-1	**ND**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:13	
1403204-20	1255-128-1	**0.074**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:15	J
1403204-21	1255-129-1	**0.067**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:21	J
1403204-22	1255-130-1	**ND**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:23	
1403204-24	1255-132-1	**0.045**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:25	J
1403204-31	1255-139-1	**0.036**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:28	J
1403204-32	1255-140-1	**0.029**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:30	J
1403204-33	1255-141-1	**0.091**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:32	J
1403204-35	1255-101-6.5	**0.033**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:38	J

Certificate of Analysis

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Redlands , CA 92374	Reported : 11/11/2014

Mercury by AA (Cold Vapor) EPA 7471A

Analyte: Mercury **Analyst: SB**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403204-14	1255-122-1	**0.03**	mg/kg	0.10	0.009	1	B4K0181	11/10/2014	11/10/14 17:49	J
1403204-17	1255-125-1	**0.06**	mg/kg	0.10	0.009	1	B4K0181	11/10/2014	11/10/14 17:59	J
1403204-18	1255-126-1	**0.01**	mg/kg	0.10	0.009	1	B4K0181	11/10/2014	11/10/14 18:01	J
1403204-20	1255-128-1	**0.02**	mg/kg	0.10	0.009	1	B4K0181	11/10/2014	11/10/14 18:03	J
1403204-21	1255-129-1	**0.04**	mg/kg	0.10	0.009	1	B4K0181	11/10/2014	11/10/14 18:09	J
1403204-22	1255-130-1	**0.09**	mg/kg	0.10	0.009	1	B4K0181	11/10/2014	11/10/14 18:11	J
1403204-24	1255-132-1	**0.03**	mg/kg	0.10	0.009	1	B4K0181	11/10/2014	11/10/14 18:13	J

pH by EPA 9045C

Analyte: pH **Analyst: LA**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403204-14	1255-122-1	**7.3**	pH Units	0.10	0.10	1	B4K0100	11/10/2014	11/10/14 13:28	
1403204-17	1255-125-1	**7.1**	pH Units	0.10	0.10	1	B4K0100	11/10/2014	11/10/14 13:28	
1403204-18	1255-126-1	**5.9**	pH Units	0.10	0.10	1	B4K0100	11/10/2014	11/10/14 13:28	
1403204-20	1255-128-1	**6.6**	pH Units	0.10	0.10	1	B4K0100	11/10/2014	11/10/14 13:28	
1403204-21	1255-129-1	**8.0**	pH Units	0.10	0.10	1	B4K0100	11/10/2014	11/10/14 13:28	
1403204-22	1255-130-1	**7.5**	pH Units	0.10	0.10	1	B4K0101	11/10/2014	11/10/14 15:45	
1403204-24	1255-132-1	**7.3**	pH Units	0.10	0.10	1	B4K0101	11/10/2014	11/10/14 15:45	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
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Redlands , CA 92374	Reported : 11/11/2014

Client Sample ID 1255-122-1
Lab ID: 1403204-14

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.25	1	B4K0179	11/10/2014	11/10/14 19:27	
Arsenic	**5.8**	1.0	0.19	1	B4K0179	11/10/2014	11/10/14 19:27	
Barium	**140**	1.0	0.14	1	B4K0179	11/10/2014	11/10/14 19:27	
Beryllium	**0.38**	1.0	0.04	1	B4K0179	11/10/2014	11/10/14 19:27	J
Cadmium	**0.87**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:27	J
Chromium	**17**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:27	
Cobalt	**8.3**	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:27	
Copper	**24**	2.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:27	
Molybdenum	**3.5**	1.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:27	
Nickel	**17**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:27	
Selenium	ND	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:27	
Silver	ND	1.0	0.06	1	B4K0179	11/10/2014	11/10/14 19:27	
Thallium	ND	1.0	0.20	1	B4K0179	11/10/2014	11/10/14 19:27	
Vanadium	**19**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:27	
Zinc	**100**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:27	

Client Sample ID 1255-125-1
Lab ID: 1403204-17

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**0.96**	2.0	0.25	1	B4K0179	11/10/2014	11/10/14 19:33	J
Arsenic	**7.0**	1.0	0.19	1	B4K0179	11/10/2014	11/10/14 19:33	
Barium	**120**	1.0	0.14	1	B4K0179	11/10/2014	11/10/14 19:33	
Beryllium	**0.25**	1.0	0.04	1	B4K0179	11/10/2014	11/10/14 19:33	J
Cadmium	**0.87**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:33	J
Chromium	**15**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:33	
Cobalt	**10**	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:33	
Copper	**89**	2.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:33	
Molybdenum	**5.2**	1.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:33	
Nickel	**23**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:33	
Selenium	ND	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:33	
Silver	**0.13**	1.0	0.06	1	B4K0179	11/10/2014	11/10/14 19:33	J
Thallium	ND	1.0	0.20	1	B4K0179	11/10/2014	11/10/14 19:33	
Vanadium	**22**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:33	
Zinc	**250**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:33	

Certificate of Analysis

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Redlands , CA 92374	Reported : 11/11/2014

Client Sample ID 1255-126-1
Lab ID: 1403204-18

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**0.59**	2.0	0.25	1	B4K0179	11/10/2014	11/10/14 19:35	J
Arsenic	**8.1**	1.0	0.19	1	B4K0179	11/10/2014	11/10/14 19:35	
Barium	**120**	1.0	0.14	1	B4K0179	11/10/2014	11/10/14 19:35	
Beryllium	**0.17**	1.0	0.04	1	B4K0179	11/10/2014	11/10/14 19:35	J
Cadmium	**0.39**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:35	J
Chromium	**12**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:35	
Cobalt	**6.3**	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:35	
Copper	**51**	2.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:35	
Molybdenum	**7.2**	1.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:35	
Nickel	**17**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:35	
Selenium	ND	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:35	
Silver	**0.11**	1.0	0.06	1	B4K0179	11/10/2014	11/10/14 19:35	J
Thallium	ND	1.0	0.20	1	B4K0179	11/10/2014	11/10/14 19:35	
Vanadium	**18**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:35	
Zinc	**180**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:35	

Client Sample ID 1255-128-1
Lab ID: 1403204-20

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**0.31**	2.0	0.25	1	B4K0179	11/10/2014	11/10/14 19:36	J
Arsenic	**8.1**	1.0	0.19	1	B4K0179	11/10/2014	11/10/14 19:36	
Barium	**250**	1.0	0.14	1	B4K0179	11/10/2014	11/10/14 19:36	
Beryllium	**0.38**	1.0	0.04	1	B4K0179	11/10/2014	11/10/14 19:36	J
Cadmium	**0.44**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:36	J
Chromium	**7.9**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:36	
Cobalt	**6.2**	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:36	
Copper	**22**	2.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:36	
Molybdenum	**6.6**	1.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:36	
Nickel	**9.4**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:36	
Selenium	ND	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:36	
Silver	ND	1.0	0.06	1	B4K0179	11/10/2014	11/10/14 19:36	
Thallium	ND	1.0	0.20	1	B4K0179	11/10/2014	11/10/14 19:36	
Vanadium	**10**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:36	
Zinc	**91**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:36	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
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Client Sample ID 1255-129-1
Lab ID: 1403204-21

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**0.27**	2.0	0.25	1	B4K0179	11/10/2014	11/10/14 19:38	J
Arsenic	**4.6**	1.0	0.19	1	B4K0179	11/10/2014	11/10/14 19:38	
Barium	**110**	1.0	0.14	1	B4K0179	11/10/2014	11/10/14 19:38	
Beryllium	**0.28**	1.0	0.04	1	B4K0179	11/10/2014	11/10/14 19:38	J
Cadmium	**1.5**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:38	
Chromium	**12**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:38	
Cobalt	**5.9**	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:38	
Copper	**28**	2.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:38	
Molybdenum	**5.3**	1.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:38	
Nickel	**16**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:38	
Selenium	ND	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:38	
Silver	ND	1.0	0.06	1	B4K0179	11/10/2014	11/10/14 19:38	
Thallium	ND	1.0	0.20	1	B4K0179	11/10/2014	11/10/14 19:38	
Vanadium	**24**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:38	
Zinc	**85**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:38	

Client Sample ID 1255-130-1
Lab ID: 1403204-22

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**0.35**	2.0	0.25	1	B4K0179	11/10/2014	11/10/14 19:40	J
Arsenic	**8.0**	1.0	0.19	1	B4K0179	11/10/2014	11/10/14 19:40	
Barium	**340**	1.0	0.14	1	B4K0179	11/10/2014	11/10/14 19:40	
Beryllium	**0.74**	1.0	0.04	1	B4K0179	11/10/2014	11/10/14 19:40	J
Cadmium	**4.1**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:40	
Chromium	**30**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:40	
Cobalt	**4.3**	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:40	
Copper	**42**	2.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:40	
Molybdenum	**13**	1.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:40	
Nickel	**25**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:40	
Selenium	ND	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:40	
Silver	**0.41**	1.0	0.06	1	B4K0179	11/10/2014	11/10/14 19:40	J
Thallium	ND	1.0	0.20	1	B4K0179	11/10/2014	11/10/14 19:40	
Vanadium	**36**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:40	
Zinc	**120**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:40	

Certificate of Analysis

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Redlands , CA 92374	Reported : 11/11/2014

Client Sample ID 1255-132-1
Lab ID: 1403204-24

Title 22 Metals by ICP-AES EPA 6010B **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.25	1	B4K0179	11/10/2014	11/10/14 19:41	
Arsenic	**3.9**	1.0	0.19	1	B4K0179	11/10/2014	11/10/14 19:41	
Barium	**100**	1.0	0.14	1	B4K0179	11/10/2014	11/10/14 19:41	
Beryllium	**0.53**	1.0	0.04	1	B4K0179	11/10/2014	11/10/14 19:41	J
Cadmium	**0.22**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:41	J
Chromium	**11**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:41	
Cobalt	**7.4**	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:41	
Copper	**24**	2.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:41	
Molybdenum	**0.83**	1.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:41	J
Nickel	**12**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:41	
Selenium	ND	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:41	
Silver	**0.14**	1.0	0.06	1	B4K0179	11/10/2014	11/10/14 19:41	J
Thallium	ND	1.0	0.20	1	B4K0179	11/10/2014	11/10/14 19:41	
Vanadium	**33**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:41	
Zinc	**76**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:41	

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QUALITY CONTROL SECTION

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0179 - EPA 3050B									
Blank (B4K0179-BLK1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	ND	2.0			NR				
Arsenic	ND	1.0			NR				
Barium	ND	1.0			NR				
Beryllium	ND	1.0			NR				
Cadmium	ND	1.0			NR				
Chromium	0.086722	1.0			NR				J
Cobalt	ND	1.0			NR				
Copper	0.249244	2.0			NR				J
Molybdenum	ND	1.0			NR				
Nickel	0.130813	1.0			NR				J
Selenium	ND	1.0			NR				
Silver	ND	1.0			NR				
Thallium	ND	1.0			NR				
Vanadium	ND	1.0			NR				
Zinc	0.267302	1.0			NR				J
LCS (B4K0179-BS1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	47.2277	2.0	50.0000		94.5	80 - 120			
Arsenic	46.8197	1.0	50.0000		93.6	80 - 120			
Barium	50.3442	1.0	50.0000		101	80 - 120			
Beryllium	48.8360	1.0	50.0000		97.7	80 - 120			
Cadmium	49.0587	1.0	50.0000		98.1	80 - 120			
Chromium	51.3148	1.0	50.0000		103	80 - 120			
Cobalt	48.9290	1.0	50.0000		97.9	80 - 120			
Copper	49.4120	2.0	50.0000		98.8	80 - 120			
Molybdenum	47.3084	1.0	50.0000		94.6	80 - 120			
Nickel	48.2930	1.0	50.0000		96.6	80 - 120			
Selenium	43.8747	1.0	50.0000		87.7	80 - 120			
Silver	49.7394	1.0	50.0000		99.5	80 - 120			
Thallium	48.8963	1.0	50.0000		97.8	80 - 120			
Vanadium	49.9001	1.0	50.0000		99.8	80 - 120			
Zinc	47.9737	1.0	50.0000		95.9	80 - 120			
Duplicate (B4K0179-DUP1)		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	0.266450	2.0		ND	NR			20	J
Arsenic	6.19337	1.0		5.75239	NR		7.38	20	
Barium	149.477	1.0		144.050	NR		3.70	20	
Beryllium	0.401384	1.0		0.377578	NR		6.11	20	J
Cadmium	0.936814	1.0		0.866288	NR		7.82	20	J
Chromium	9.45186	1.0		16.7146	NR		55.5	20	R
Cobalt	11.5357	1.0		8.25998	NR		33.1	20	R
Copper	24.2046	2.0		23.5547	NR		2.72	20	
Molybdenum	4.17540	1.0		3.49311	NR		17.8	20	

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Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0179 - EPA 3050B (continued)									
Duplicate (B4K0179-DUP1) - Continued		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Nickel	16.2185	1.0		16.9554	NR		4.44	20	
Selenium	ND	1.0		ND	NR			20	
Silver	ND	1.0		ND	NR			20	
Thallium	ND	1.0		ND	NR			20	
Vanadium	17.7024	1.0		19.4906	NR		9.62	20	
Zinc	98.9758	1.0		100.968	NR		1.99	20	
Matrix Spike (B4K0179-MS1)		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	66.5320	2.0	125.000	ND	53.2	21 - 126			
Arsenic	93.5626	1.0	125.000	5.75239	70.2	57 - 113			
Barium	251.836	1.0	125.000	144.050	86.2	29 - 146			
Beryllium	89.3440	1.0	125.000	0.377578	71.2	65 - 110			
Cadmium	81.5475	1.0	125.000	0.866288	64.5	56 - 107			
Chromium	98.1594	1.0	125.000	16.7146	65.2	49 - 127			
Cobalt	90.4014	1.0	125.000	8.25998	65.7	57 - 112			
Copper	120.778	2.0	125.000	23.5547	77.8	56 - 127			
Molybdenum	91.0726	1.0	125.000	3.49311	70.1	62 - 108			
Nickel	93.7200	1.0	125.000	16.9554	61.4	42 - 127			
Selenium	81.4094	1.0	125.000	ND	65.1	58 - 105			
Silver	92.5754	1.0	125.000	ND	74.1	63 - 113			
Thallium	80.0591	1.0	125.000	ND	64.0	53 - 110			
Vanadium	104.328	1.0	125.000	19.4906	67.9	66 - 112			
Zinc	175.960	1.0	125.000	100.968	60.0	28 - 137			
Matrix Spike Dup (B4K0179-MSD1)		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	69.4552	2.0	125.000	ND	55.6	21 - 126	4.30	20	
Arsenic	97.1568	1.0	125.000	5.75239	73.1	57 - 113	3.77	20	
Barium	252.585	1.0	125.000	144.050	86.8	29 - 146	0.297	20	
Beryllium	94.4083	1.0	125.000	0.377578	75.2	65 - 110	5.51	20	
Cadmium	86.6056	1.0	125.000	0.866288	68.6	56 - 107	6.02	20	
Chromium	108.683	1.0	125.000	16.7146	73.6	49 - 127	10.2	20	
Cobalt	93.4582	1.0	125.000	8.25998	68.2	57 - 112	3.33	20	
Copper	128.515	2.0	125.000	23.5547	84.0	56 - 127	6.21	20	
Molybdenum	94.3695	1.0	125.000	3.49311	72.7	62 - 108	3.56	20	
Nickel	98.5982	1.0	125.000	16.9554	65.3	42 - 127	5.07	20	
Selenium	84.4614	1.0	125.000	ND	67.6	58 - 105	3.68	20	
Silver	97.9776	1.0	125.000	ND	78.4	63 - 113	5.67	20	
Thallium	83.9373	1.0	125.000	ND	67.1	53 - 110	4.73	20	
Vanadium	111.044	1.0	125.000	19.4906	73.2	66 - 112	6.24	20	
Zinc	188.209	1.0	125.000	100.968	69.8	28 - 137	6.73	20	

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TCLP Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0191 - EPA 3010A_SOIL									
Blank (B4K0191-BLK1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.002150	0.050			NR				J
Blank (B4K0191-BLK2)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.001891	0.050			NR				J
LCS (B4K0191-BS1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.971492	0.050	1.00000		97.1	80 - 120			
Duplicate (B4K0191-DUP1)		**Source: 1403213-46**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.004299	0.050		0.004178	NR		2.85	20	J
Duplicate (B4K0191-DUP2)		**Source: 1403204-24**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.039859	0.050		0.040517	NR		1.64	20	J
Matrix Spike (B4K0191-MS1)		**Source: 1403213-46**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	2.26938	0.050	2.50000	0.004178	90.6	77 - 121			
Matrix Spike (B4K0191-MS2)		**Source: 1403204-24**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	2.52449	0.050	2.50000	0.040517	99.4	77 - 121			
Matrix Spike Dup (B4K0191-MSD1)		**Source: 1403213-46**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	2.33335	0.050	2.50000	0.004178	93.2	77 - 121	2.78	20	

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STLC Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0157 - STLC Extraction									
Blank (B4K0157-BLK1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
Blank (B4K0157-BLK2)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
LCS (B4K0157-BS1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.05914	1.0	2.00000		103	80 - 120			
Duplicate (B4K0157-DUP1)		**Source: 1403342-01**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	7.73538	1.0		5.49241	NR		33.9	20	R
Duplicate (B4K0157-DUP2)		**Source: 1403204-17**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	26.0032	1.0		26.8968	NR		3.38	20	
Matrix Spike (B4K0157-MS1)		**Source: 1403342-01**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	7.76786	1.0	2.50000	5.49241	91.0	44 - 130			
Matrix Spike (B4K0157-MS2)		**Source: 1403204-17**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	29.4227	1.0	2.50000	26.8968	101	44 - 130			
Matrix Spike Dup (B4K0157-MSD1)		**Source: 1403342-01**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	7.78609	1.0	2.50000	5.49241	91.7	44 - 130	0.234	20	
Matrix Spike Dup (B4K0157-MSD2)		**Source: 1403204-17**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	28.4679	1.0	2.50000	26.8968	62.8	44 - 130	3.30	20	
Batch B4K0158 - STLC Extraction									
Blank (B4K0158-BLK1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
Blank (B4K0158-BLK2)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
LCS (B4K0158-BS1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	1.99810	1.0	2.00000		99.9	80 - 120			
Duplicate (B4K0158-DUP1)		**Source: 1403213-64**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	1.11241	1.0		0.490783	NR		77.5	20	R
Duplicate (B4K0158-DUP2)		**Source: 1403213-39**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	0.054906	1.0		0.042893	NR		24.6	20	R, J
Matrix Spike (B4K0158-MS1)		**Source: 1403213-64**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.87268	1.0	2.50000	0.490783	95.3	44 - 130			
Matrix Spike (B4K0158-MS2)		**Source: 1403213-39**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.41554	1.0	2.50000	0.042893	94.9	44 - 130			
Matrix Spike Dup (B4K0158-MSD1)		**Source: 1403213-64**			Prepared: 11/7/2014 Analyzed: 11/10/2014				

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STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0158 - STLC Extraction (continued)									
Matrix Spike Dup (B4K0158-MSD1) - Continued			**Source: 1403213-64**		Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.84423	1.0	2.50000	0.490783	94.1	44 - 130	0.995	20	

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STLC DI Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0160 - STLC DI Extraction									
Blank (B4K0160-BLK1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
Blank (B4K0160-BLK2)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
LCS (B4K0160-BS1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.15616	1.0	2.00000		108	80 - 120			
Duplicate (B4K0160-DUP1)		**Source: 1403204-16**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0		ND	NR			20	
Duplicate (B4K0160-DUP2)		**Source: 1402859-AM**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	0.438631	1.0		0.362928	NR		18.9	20	J
Matrix Spike (B4K0160-MS1)		**Source: 1403204-16**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.50050	1.0	2.50000	ND	100	70 - 130			
Matrix Spike (B4K0160-MS2)		**Source: 1402859-AM**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.87499	1.0	2.50000	0.362928	100	70 - 130			
Matrix Spike Dup (B4K0160-MSD1)		**Source: 1403204-16**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.48844	1.0	2.50000	ND	99.5	70 - 130	0.483	20	
Batch B4K0161 - STLC DI Extraction									
Blank (B4K0161-BLK1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
Blank (B4K0161-BLK2)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
LCS (B4K0161-BS1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.17536	1.0	2.00000		109	80 - 120			
Duplicate (B4K0161-DUP1)		**Source: 1403213-44**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	0.027512	1.0		ND	NR			20	J
Duplicate (B4K0161-DUP2)		**Source: 1403204-33**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	0.083385	1.0		0.090924	NR		8.65	20	J
Matrix Spike (B4K0161-MS1)		**Source: 1403213-44**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.64543	1.0	2.50000	ND	106	70 - 130			
Matrix Spike (B4K0161-MS2)		**Source: 1403204-33**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.66180	1.0	2.50000	0.090924	103	70 - 130			
Matrix Spike Dup (B4K0161-MSD1)		**Source: 1403213-44**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.59980	1.0	2.50000	ND	104	70 - 130	1.74	20	

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Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0181 - EPA 7471									
Blank (B4K0181-BLK1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	ND	0.10			NR				
LCS (B4K0181-BS1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.777395	0.10	0.833333		93.3	80 - 120			
Duplicate (B4K0181-DUP1)		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.035887	0.10		0.032430	NR		10.1	20	J
Matrix Spike (B4K0181-MS1)		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.815269	0.10	0.833333	0.032430	93.9	70 - 130			
Matrix Spike Dup (B4K0181-MSD1)		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.801367	0.10	0.819672	0.032430	93.8	70 - 130	1.72	20	
Post Spike (B4K0181-PS1)		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.005622		5.00000E-3	0.000389	105	85 - 115			
Batch S4K0102 - B4K0181									
Instrument Blank (S4K0102-IBL1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	ND	0.10			NR				

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pH by EPA 9045C - Quality Control

Analyte	Result (pH Units)	PQL (pH Units)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0100 - Prep_WC_1_S									
Duplicate (B4K0100-DUP1)		**Source: 1403204-21**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
pH	9.52000	0.10		8.04000	NR		16.9	20	
Batch B4K0101 - Prep_WC_1_S									
Duplicate (B4K0101-DUP1)		**Source: 1403233-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
pH	7.60000	0.10		7.67000	NR		0.917	20	

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Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
J	Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address: Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	**Project Manager:** ANNE PEREZ **E-Mail Address:** anne.perez@stantec.com **Sampler Name:** MFB/MAB/JGS/MC **Project Number:** 185831013 **Project:** CalTrans TO13 07A3321
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	

Turn Around Time: Normal TAT: X; 72 Hour: ; 48 Hour: ; 24 Hour: ; Same Day: ; Other:

Sample Temp °C:

	Sample Description/Identification (1403204)	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS				Special Instructions
-1	1255- 102 - 1	Soil	1	1	10/21/14	0805		X									
-1	1255- 101 - 1	Soil				0807											
-3	1255- 102 - 3	Soil				0815											
-4	1255- EBQC - 1	Water				0749							X				lab filter + preserve
-5	1255- 101 - 3	Soil				0830											
-6	1255- 102 - 9					0910			✓	✓							
-7	1255- 103 - 1					0931			✓	✓							
-8	1255- 103 - 3					0951			✓	✓							
-9	1255- 104 - 1					0959			✓	✓	✓						
-10	1255- 104 - 3					1018			✓	✓							
-11	1255- 119 - 1					1117											
-12	1255- 120 - 1					1119			✓	✓							
-10	1255- 121 - 1					1129											
-13	1255- 122 - 1					1134			✓	✓	✓	✓	✓				
-15	1255- 123 - 1					1138											

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "*EBQC*" samples are to be laboratory filtered and preserved, then analyzed.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/21/14	1600	ATL	10/22/14	13:55
Relinquished By + Company Name: ATL	10/22/14	1525	Received By + Company Name: ATL	10/22/14	1525
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	ANNE PEREZ
	E-Mail Address: anne.perez@stantec.com
	Sampler Name: MFB/MAB/JGS/MC
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	Project Number: 185831013
	Project: CalTrans TO13 07A3321

Analysis Required

Turn Around Time:
Normal TAT: X
72 Hour:
48 Hour:
24 Hour:
Same Day:
Other:

Sample Temp °C:

	Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (CAM-WET-Citric) 6010	STLC Lead (CAM-WET-DI) 6010	TCLP Lead 1311	pH 9045C	TTLC 22 METALS	Special Instructions
-16	1255- 124 - 1	soil		1	10/21/14	1143		X	X	X	X			
-17	1255- 125 - 1					1208			X	X	X	X	X	
-18	1255- 126 - 1					1214			X	X	X	X	X	
-19	1255- 127 - 1					1217			X	X				
-20	1255- 128 - 1					1223			X	X	X	X	X	
-21	1255- 129 - 1					1232			X	X	X	X	X	
-22	1255- 130 - 1					1230			X	X	X	X	X	
-23	1255- 131 - 1					1315								
-24	1255- 132 - 1					1318			X	X	X	X	X	
-25	1255- 133 - 1					1325								
-26	1255- 134 - 1					1332								
-27	1255- 135 - 1					1353								
-28	1255- 136 - 1					1345								
-29	1255- 137 - 1					1355								
-30	1255- 138 - 1	↓	↓	↓	↓	1359		↓						

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:
All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved, then analyzed.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/21/14	1600	ATL	10/22/14	13:55
Relinquished By + Company Name: ATL	10/22/14	1525	Received By + Company Name: AT	10/22/14	1525
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address: Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	**Project Manager:** ANNE PEREZ **E-Mail Address:** anne.perez@stantec.com **Sampler Name:** MFB/MAB/IGS/MC **Project Number:** 185831015 **Project:** CalTrans TO13 07A3321
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	

Turn Around Time: Normal TAT: X; 72 Hour: ; 48 Hour: ; 24 Hour: ; Same Day: ; Other:

Sample Temp °C:

	Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	Analysis Required: TTLC Lead 60108	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS	Special Instructions
-31	1255- 139 - 1	Soil	—	1	10.21.14	1429		X	X	X	X			
-32	1255- 140 - 1					1435			X	X	X			
-33	1255- 141 - 1					1438			X	X				
-34	1255- 142 - 1					1443								
	1255- -													
	1255- -													
	1255- -													
	1255- -													
	1255- -													
	1255- -													
	1255- -													
	1255- -													
	1255- -													
	1255- -													
	1255- -													

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions: All soil samples to be run for TTLC Lead by EPA method 60108. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved then analyzed.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/21/14	1600	ATL	10/22/14	13:55
Relinquished By + Company Name: ATL	10/22/14	1525	Received By + Company Name: ATL	10/22/14	1525
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	ANNE PEREZ
	E-Mail Address: anne.perez@stantec.com
	Sampler Name: MFB/MAB/JGS/MC
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	Project Number: 185831013
	Project: CalTrans TO13

Analysis Required

Turn Around Time:
Normal TAT: X
72 Hour:
48 Hour:
24 Hour:
Same Day:
Other:

Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS					Special Instructions
1255-164 - 3	Soil	1	1	10/22/14	1515		X										
1255-164 - 5	"	"	"	"	1518		"										
1255-164 - 8	"	"	"	"	1552		"										
1255-101 - 6.5								X	X								
1255-111 - 5								X	X								
1255- -																	
1255- -																	
1255- -																	
1255- -																	
1255- -																	
1255- -																	
1255- -																	
1255- -																	
1255- -																	
1255- -																	

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:
All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved, prior to analysis.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645		10/23/14	1045
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1850	ATL	10/23/14	1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

ADVANCED TECHNOLOGY LABORATORIES

October 31, 2014

Anne Perez
Stantec
25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 255-8202
Fax:(909) 335-6120

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1403213
Client Reference : CalTrans TO13, 185831013

Enclosed are the results for sample(s) received on October 23, 2014 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
1255-EBQC-2	1403213-01	Water	10/22/14 7:10	10/23/14 16:45
1255-EBQC-3	1403213-02	Water	10/22/14 7:12	10/23/14 16:45
1255-105-1	1403213-03	Soil	10/22/14 7:30	10/23/14 16:45
1255-105-3	1403213-04	Soil	10/22/14 7:41	10/23/14 16:45
1255-106-1	1403213-05	Soil	10/22/14 7:32	10/23/14 16:45
1255-106-3	1403213-06	Soil	10/22/14 7:44	10/23/14 16:45
1255-102-12	1403213-07	Soil	10/22/14 8:18	10/23/14 16:45
1255-102-15	1403213-08	Soil	10/22/14 8:28	10/23/14 16:45
1255-103-9	1403213-09	Soil	10/22/14 8:56	10/23/14 16:45
1255-104-9	1403213-10	Soil	10/22/14 9:44	10/23/14 16:45
1255-104-12	1403213-11	Soil	10/22/14 9:47	10/23/14 16:45
1255-104-15	1403213-12	Soil	10/22/14 9:52	10/23/14 16:45
1255-105-9	1403213-13	Soil	10/22/14 10:12	10/23/14 16:45
1255-105-12	1403213-14	Soil	10/22/14 10:14	10/23/14 16:45
1255-105-15	1403213-15	Soil	10/22/14 10:17	10/23/14 16:45
1255-107-1	1403213-16	Soil	10/22/14 8:34	10/23/14 16:45
1255-108-1	1403213-17	Soil	10/22/14 8:32	10/23/14 16:45
1255-108-3	1403213-18	Soil	10/22/14 9:03	10/23/14 16:45
1255-108-5	1403213-19	Soil	10/22/14 9:16	10/23/14 16:45
1255-109-1	1403213-20	Soil	10/22/14 9:35	10/23/14 16:45
1255-109-3	1403213-21	Soil	10/22/14 9:55	10/23/14 16:45
1255-109-5	1403213-22	Soil	10/22/14 10:16	10/23/14 16:45
1255-106-9	1403213-23	Soil	10/22/14 11:03	10/23/14 16:45
1255-112-1	1403213-24	Soil	10/22/14 11:14	10/23/14 16:45
1255-112-3	1403213-25	Soil	10/22/14 11:16	10/23/14 16:45
1255-112-5	1403213-26	Soil	10/22/14 11:19	10/23/14 16:45
1255-110-1	1403213-27	Soil	10/22/14 9:53	10/23/14 16:45
1255-110-3	1403213-28	Soil	10/22/14 11:20	10/23/14 16:45
1255-110-5	1403213-29	Soil	10/22/14 11:32	10/23/14 16:45
1255-107-3	1403213-30	Soil	10/22/14 11:40	10/23/14 16:45
1255-107-5	1403213-31	Soil	10/22/14 11:42	10/23/14 16:45
1255-113-1	1403213-32	Soil	10/22/14 12:28	10/23/14 16:45
1255-113-3	1403213-33	Soil	10/22/14 12:34	10/23/14 16:45
1255-114-1	1403213-34	Soil	10/22/14 12:15	10/23/14 16:45
1255-114-3	1403213-35	Soil	10/22/14 12:50	10/23/14 16:45
1255-114-5	1403213-36	Soil	10/22/14 12:52	10/23/14 16:45
1255-114-8	1403213-37	Soil	10/22/14 12:55	10/23/14 16:45

Stantec	Project Number :	CalTrans TO13, 185831013	
25864-F Business Center Drive	Report To :	Anne Perez	
Redlands , CA 92374	Reported :	10/31/2014	

1255-114-11	1403213-38	Soil	10/22/14 12:56	10/23/14 16:45
1255-115-1	1403213-39	Soil	10/22/14 12:18	10/23/14 16:45
1255-115-3	1403213-40	Soil	10/22/14 12:30	10/23/14 16:45
1255-115-5	1403213-41	Soil	10/22/14 13:14	10/23/14 16:45
1255-115-8	1403213-42	Soil	10/22/14 13:15	10/23/14 16:45
1255-115-11	1403213-43	Soil	10/22/14 13:18	10/23/14 16:45
1255-116-1	1403213-44	Soil	10/22/14 12:55	10/23/14 16:45
1255-117-1	1403213-45	Soil	10/22/14 13:20	10/23/14 16:45
1255-117-3	1403213-46	Soil	10/22/14 13:45	10/23/14 16:45
1255-117-5	1403213-47	Soil	10/22/14 13:46	10/23/14 16:45
1255-117-8	1403213-48	Soil	10/22/14 13:47	10/23/14 16:45
1255-117-11	1403213-49	Soil	10/22/14 13:50	10/23/14 16:45
1255-118-1	1403213-50	Soil	10/22/14 12:20	10/23/14 16:45
1255-118-3	1403213-51	Soil	10/22/14 14:02	10/23/14 16:45
1255-118-5	1403213-52	Soil	10/22/14 14:05	10/23/14 16:45
1255-118-8	1403213-53	Soil	10/22/14 14:07	10/23/14 16:45
1255-118-11	1403213-54	Soil	10/22/14 14:10	10/23/14 16:45
1255-159-1	1403213-55	Soil	10/22/14 14:34	10/23/14 16:45
1255-159-3	1403213-56	Soil	10/22/14 15:04	10/23/14 16:45
1255-159-5	1403213-57	Soil	10/22/14 15:08	10/23/14 16:45
1255-159-8	1403213-58	Soil	10/22/14 15:10	10/23/14 16:45
1255-160-1	1403213-59	Soil	10/22/14 14:11	10/23/14 16:45
1255-160-3	1403213-60	Soil	10/22/14 14:24	10/23/14 16:45
1255-160-5	1403213-61	Soil	10/22/14 14:55	10/23/14 16:45
1255-160-8	1403213-62	Soil	10/22/14 14:50	10/23/14 16:45
1255-161-1	1403213-63	Soil	10/22/14 14:10	10/23/14 16:45
1255-161-3	1403213-64	Soil	10/22/14 14:30	10/23/14 16:45
1255-161-5	1403213-65	Soil	10/22/14 14:35	10/23/14 16:45
1255-161-8	1403213-66	Soil	10/22/14 14:40	10/23/14 16:45
1255-162-1	1403213-67	Soil	10/22/14 15:11	10/23/14 16:45
1255-162-3	1403213-68	Soil	10/22/14 15:48	10/23/14 16:45
1255-162-5	1403213-69	Soil	10/22/14 15:52	10/23/14 16:45
1255-162-8	1403213-70	Soil	10/22/14 15:56	10/23/14 16:45
1255-163-1	1403213-71	Soil	10/22/14 15:01	10/23/14 16:45
1255-163-3	1403213-72	Soil	10/22/14 15:30	10/23/14 16:45
1255-163-5	1403213-73	Soil	10/22/14 15:35	10/23/14 16:45
1255-163-8	1403213-74	Soil	10/22/14 15:40	10/23/14 16:45
1255-164-1	1403213-75	Soil	10/22/14 14:40	10/23/14 16:45
1255-164-3	1403213-76	Soil	10/22/14 15:15	10/23/14 16:45
1255-164-5	1403213-77	Soil	10/22/14 15:18	10/23/14 16:45
1255-164-8	1403213-78	Soil	10/22/14 15:52	10/23/14 16:45

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

1255-111-1	1403213-79	Soil	10/22/14 10:40	10/23/14 16:45
1255-111-3	1403213-80	Soil	10/22/14 11:12	10/23/14 16:45
1255-111-5	1403213-81	Soil	10/22/14 11:27	10/23/14 16:45

CASE NARRATIVE

Sample Receiving/General Comments:

Documentation pertaining to additional analyses/change order available upon request.

Results were J-flagged. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-EBQC-2
Lab ID: 1403213-01

Title 22 Metals by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	0.010	0.0026	1	B4J0760	10/29/2014	10/30/14 11:43	
Arsenic	ND	0.010	0.0024	1	B4J0760	10/29/2014	10/30/14 11:43	
Barium	**0.0008**	0.0030	0.0004	1	B4J0760	10/29/2014	10/30/14 11:43	J
Beryllium	ND	0.0030	0.0002	1	B4J0760	10/29/2014	10/30/14 11:42	
Cadmium	**0.0005**	0.0030	0.0001	1	B4J0760	10/29/2014	10/30/14 11:43	J
Chromium	**0.0007**	0.0030	0.0003	1	B4J0760	10/29/2014	10/30/14 11:43	J
Cobalt	ND	0.0030	0.0004	1	B4J0760	10/29/2014	10/30/14 11:43	
Copper	ND	0.0050	0.0009	1	B4J0760	10/29/2014	10/30/14 11:42	
Lead	ND	0.0050	0.0014	1	B4J0760	10/29/2014	10/30/14 11:43	
Molybdenum	**0.0009**	0.0050	0.0005	1	B4J0760	10/29/2014	10/30/14 11:43	J
Nickel	**0.0004**	0.0050	0.0004	1	B4J0760	10/29/2014	10/30/14 11:43	J
Selenium	**0.0054**	0.010	0.0040	1	B4J0760	10/29/2014	10/30/14 11:43	J
Silver	**0.0013**	0.0030	0.0006	1	B4J0760	10/29/2014	10/30/14 11:42	J
Thallium	ND	0.015	0.0026	1	B4J0760	10/29/2014	10/30/14 11:43	
Vanadium	ND	0.0030	0.0013	1	B4J0760	10/29/2014	10/30/14 11:42	
Zinc	**0.015**	0.010	0.0017	1	B4J0760	10/29/2014	10/30/14 11:43	

Mercury by AA (Cold Vapor) EPA 7470A

Analyst: SB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.20	0.11	1	B4J0761	10/29/2014	10/29/14 17:07	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-EBQC-3
Lab ID: 1403213-02

Title 22 Metals by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	0.010	0.0026	1	B4J0760	10/29/2014	10/30/14 11:46	
Arsenic	ND	0.010	0.0024	1	B4J0760	10/29/2014	10/30/14 11:46	
Barium	**0.0008**	0.0030	0.0004	1	B4J0760	10/29/2014	10/30/14 11:46	J
Beryllium	ND	0.0030	0.0002	1	B4J0760	10/29/2014	10/30/14 11:45	
Cadmium	**0.0003**	0.0030	0.0001	1	B4J0760	10/29/2014	10/30/14 11:46	J
Chromium	**0.0005**	0.0030	0.0003	1	B4J0760	10/29/2014	10/30/14 11:46	J
Cobalt	ND	0.0030	0.0004	1	B4J0760	10/29/2014	10/30/14 11:46	
Copper	ND	0.0050	0.0009	1	B4J0760	10/29/2014	10/30/14 11:46	
Lead	ND	0.0050	0.0014	1	B4J0760	10/29/2014	10/30/14 11:46	
Molybdenum	**0.0006**	0.0050	0.0005	1	B4J0760	10/29/2014	10/30/14 11:46	J
Nickel	**0.0006**	0.0050	0.0004	1	B4J0760	10/29/2014	10/30/14 11:46	J
Selenium	**0.0051**	0.010	0.0040	1	B4J0760	10/29/2014	10/30/14 11:46	J
Silver	**0.0008**	0.0030	0.0006	1	B4J0760	10/29/2014	10/30/14 11:46	J
Thallium	ND	0.015	0.0026	1	B4J0760	10/29/2014	10/30/14 11:46	
Vanadium	ND	0.0030	0.0013	1	B4J0760	10/29/2014	10/30/14 11:46	
Zinc	**0.0065**	0.010	0.0017	1	B4J0760	10/29/2014	10/30/14 11:46	J

Mercury by AA (Cold Vapor) EPA 7470A

Analyst: SB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.20	0.11	1	B4J0761	10/29/2014	10/29/14 17:10	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-105-1

Lab ID: 1403213-03

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**34**	1.0	0.07	1	B4J0786	10/29/2014	10/31/14 09:28	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-105-3

Lab ID: 1403213-04

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**10**	1.0	0.07	1	B4J0786	10/29/2014	10/31/14 09:29	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-106-1

Lab ID: 1403213-05

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**56**	1.0	0.07	1	B4J0786	10/29/2014	10/31/14 09:29	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-106-3

Lab ID: 1403213-06

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**24**	1.0	0.07	1	B4J0786	10/29/2014	10/31/14 09:30	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-102-12

Lab ID: 1403213-07

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**21**	1.0	0.07	1	B4J0786	10/29/2014	10/31/14 09:31	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-102-15

Lab ID: 1403213-08

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**3.2**	1.0	0.07	1	B4J0786	10/29/2014	10/31/14 09:32	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-103-9

Lab ID: 1403213-09

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**19**	1.0	0.07	1	B4J0786	10/29/2014	10/31/14 09:32	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-104-9

Lab ID: 1403213-10

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**9.7**	1.0	0.07	1	B4J0786	10/29/2014	10/31/14 09:35	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-104-12

Lab ID: 1403213-11

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**4.1**	1.0	0.07	1	B4J0786	10/29/2014	10/31/14 09:37	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-104-15

Lab ID: 1403213-12

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**2.6**	1.0	0.07	1	B4J0786	10/29/2014	10/31/14 09:38	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-105-9

Lab ID: 1403213-13

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**12**	1.0	0.07	1	B4J0786	10/29/2014	10/31/14 09:39	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-105-12

Lab ID: 1403213-14

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**3.6**	1.0	0.07	1	B4J0786	10/29/2014	10/31/14 09:40	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-105-15

Lab ID: 1403213-15

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**2.3**	1.0	0.07	1	B4J0786	10/29/2014	10/31/14 09:40	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-107-1

Lab ID: 1403213-16

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**25**	1.0	0.07	1	B4J0786	10/29/2014	10/31/14 09:41	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-108-1

Lab ID: 1403213-17

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**17**	1.0	0.07	1	B4J0786	10/29/2014	10/31/14 09:42	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-108-3

Lab ID: 1403213-18

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**16**	1.0	0.07	1	B4J0786	10/29/2014	10/31/14 09:45	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-108-5

Lab ID: 1403213-19

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**3.8**	1.0	0.07	1	B4J0786	10/29/2014	10/31/14 09:46	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-109-1

Lab ID: 1403213-20

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**29**	1.0	0.07	1	B4J0786	10/29/2014	10/31/14 09:46	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-109-3

Lab ID: 1403213-21

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**6.0**	1.0	0.07	1	B4J0787	10/29/2014	10/31/14 09:53	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-109-5

Lab ID: 1403213-22

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**5.6**	1.0	0.07	1	B4J0787	10/29/2014	10/31/14 10:18	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-106-9

Lab ID: 1403213-23

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**16**	1.0	0.07	1	B4J0787	10/29/2014	10/31/14 10:19	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-112-1

Lab ID: 1403213-24

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**29**	1.0	0.07	1	B4J0787	10/29/2014	10/31/14 10:20	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-112-3

Lab ID: 1403213-25

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**9.1**	1.0	0.07	1	B4J0787	10/29/2014	10/31/14 10:21	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-112-5

Lab ID: 1403213-26

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**28**	1.0	0.07	1	B4J0787	10/29/2014	10/31/14 10:21	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-110-1

Lab ID: 1403213-27

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**15**	1.0	0.07	1	B4J0787	10/29/2014	10/31/14 10:22	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-110-3

Lab ID: 1403213-28

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**22**	1.0	0.07	1	B4J0787	10/29/2014	10/31/14 10:23	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-110-5

Lab ID: 1403213-29

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**62**	1.0	0.07	1	B4J0787	10/29/2014	10/31/14 10:24	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-107-3

Lab ID: 1403213-30

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**3.9**	1.0	0.07	1	B4J0787	10/29/2014	10/31/14 10:24	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-107-5

Lab ID: 1403213-31

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**3.7**	1.0	0.07	1	B4J0787	10/29/2014	10/31/14 10:29	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-113-1

Lab ID: 1403213-32

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**180**	1.0	0.07	1	B4J0787	10/29/2014	10/31/14 10:29	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-113-3

Lab ID: 1403213-33

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**120**	1.0	0.07	1	B4J0787	10/29/2014	10/31/14 10:30	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-114-1

Lab ID: 1403213-34

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**350**	1.0	0.07	1	B4J0787	10/29/2014	10/31/14 10:31	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-114-3

Lab ID: 1403213-35

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**2.9**	1.0	0.07	1	B4J0787	10/29/2014	10/31/14 10:32	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-114-5

Lab ID: 1403213-36

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**3.6**	1.0	0.07	1	B4J0787	10/29/2014	10/31/14 10:32	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-114-8

Lab ID: 1403213-37

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**3.6**	1.0	0.07	1	B4J0787	10/29/2014	10/31/14 10:33	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-114-11

Lab ID: 1403213-38

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	0.07	1	B4J0787	10/29/2014	10/31/14 10:34	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-115-1

Lab ID: 1403213-39

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**76**	1.0	0.07	1	B4J0787	10/29/2014	10/31/14 10:35	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-115-3

Lab ID: 1403213-40

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**71**	1.0	0.07	1	B4J0787	10/29/2014	10/31/14 10:38	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-115-5

Lab ID: 1403213-41

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**4.4**	1.0	0.07	1	B4J0788	10/29/2014	10/31/14 10:44	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-115-8

Lab ID: 1403213-42

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**3.0**	1.0	0.07	1	B4J0788	10/29/2014	10/31/14 10:45	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-115-11

Lab ID: 1403213-43

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**2.6**	1.0	0.07	1	B4J0788	10/29/2014	10/31/14 10:45	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-116-1

Lab ID: 1403213-44

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**150**	1.0	0.07	1	B4J0788	10/29/2014	10/31/14 10:48	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-117-1

Lab ID: 1403213-45

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**160**	1.0	0.07	1	B4J0788	10/29/2014	10/31/14 10:49	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-117-3

Lab ID: 1403213-46

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**140**	1.0	0.07	1	B4J0788	10/29/2014	10/31/14 10:50	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-117-5

Lab ID: 1403213-47

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.88**	1.0	0.07	1	B4J0788	10/29/2014	10/31/14 10:50	J

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-117-8

Lab ID: 1403213-48

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**1.3**	1.0	0.07	1	B4J0788	10/29/2014	10/31/14 10:51	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-117-11

Lab ID: 1403213-49

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**1.4**	1.0	0.07	1	B4J0788	10/29/2014	10/31/14 10:52	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-118-1

Lab ID: 1403213-50

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**85**	1.0	0.07	1	B4J0788	10/29/2014	10/31/14 10:53	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-118-3

Lab ID: 1403213-51

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**87**	1.0	0.07	1	B4J0788	10/29/2014	10/31/14 10:55	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-118-5

Lab ID: 1403213-52

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**1.9**	1.0	0.07	1	B4J0788	10/29/2014	10/31/14 10:58	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-118-8

Lab ID: 1403213-53

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**1.8**	1.0	0.07	1	B4J0788	10/29/2014	10/31/14 10:58	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-118-11

Lab ID: 1403213-54

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**0.85**	1.0	0.07	1	B4J0788	10/29/2014	10/31/14 10:59	J

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-159-1

Lab ID: 1403213-55

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**26**	1.0	0.07	1	B4J0788	10/29/2014	10/31/14 11:00	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-159-3

Lab ID: 1403213-56

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**14**	1.0	0.07	1	B4J0788	10/29/2014	10/31/14 11:01	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-159-5

Lab ID: 1403213-57

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**23**	1.0	0.07	1	B4J0788	10/29/2014	10/31/14 11:01	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-159-8

Lab ID: 1403213-58

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**2.6**	1.0	0.07	1	B4J0788	10/29/2014	10/31/14 11:02	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-160-1

Lab ID: 1403213-59

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**41**	1.0	0.07	1	B4J0788	10/29/2014	10/31/14 11:03	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-160-3

Lab ID: 1403213-60

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**31**	1.0	0.07	1	B4J0788	10/29/2014	10/31/14 11:04	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-160-5

Lab ID: 1403213-61

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**1.4**	1.0	0.07	1	B4J0789	10/29/2014	10/31/14 11:12	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-160-8

Lab ID: 1403213-62

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**2.6**	1.0	0.07	1	B4J0789	10/29/2014	10/31/14 11:13	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-161-1

Lab ID: 1403213-63

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**45**	1.0	0.07	1	B4J0789	10/29/2014	10/31/14 11:14	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-161-3

Lab ID: 1403213-64

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**120**	1.0	0.07	1	B4J0789	10/29/2014	10/31/14 11:14	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-161-5

Lab ID: 1403213-65

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**3.4**	1.0	0.07	1	B4J0789	10/29/2014	10/31/14 11:15	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-161-8

Lab ID: 1403213-66

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**4.0**	1.0	0.07	1	B4J0789	10/29/2014	10/31/14 11:18	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-162-1

Lab ID: 1403213-67

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**22**	1.0	0.07	1	B4J0789	10/29/2014	10/31/14 11:19	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-162-3

Lab ID: 1403213-68

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**70**	1.0	0.07	1	B4J0789	10/29/2014	10/31/14 11:19	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-162-5

Lab ID: 1403213-69

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**36**	1.0	0.07	1	B4J0789	10/29/2014	10/31/14 11:20	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-162-8

Lab ID: 1403213-70

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**8.1**	1.0	0.07	1	B4J0789	10/29/2014	10/31/14 11:21	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-163-1

Lab ID: 1403213-71

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**50**	0.99	0.07	1	B4J0789	10/29/2014	10/31/14 11:23	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-163-3

Lab ID: 1403213-72

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**49**	1.0	0.07	1	B4J0789	10/29/2014	10/31/14 11:24	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-163-5

Lab ID: 1403213-73

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**2.2**	1.0	0.07	1	B4J0789	10/29/2014	10/31/14 11:25	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-163-8

Lab ID: 1403213-74

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**3.6**	1.0	0.07	1	B4J0789	10/29/2014	10/31/14 11:27	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-164-1

Lab ID: 1403213-75

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**42**	1.0	0.07	1	B4J0789	10/29/2014	10/31/14 11:28	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-164-3

Lab ID: 1403213-76

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**20**	1.0	0.07	1	B4J0789	10/29/2014	10/31/14 11:29	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-164-5

Lab ID: 1403213-77

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**11**	1.0	0.07	1	B4J0789	10/29/2014	10/31/14 11:30	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-164-8

Lab ID: 1403213-78

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**4.3**	1.0	0.07	1	B4J0789	10/29/2014	10/31/14 11:30	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-111-1

Lab ID: 1403213-79

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**27**	1.0	0.07	1	B4J0789	10/29/2014	10/31/14 11:31	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-111-3

Lab ID: 1403213-80

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**27**	1.0	0.07	1	B4J0789	10/29/2014	10/31/14 11:32	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-111-5

Lab ID: 1403213-81

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**42**	0.99	0.07	1	B4J0790	10/29/2014	10/31/14 11:40	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

QUALITY CONTROL SECTION

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0760 - EPA 3010A									
Blank (B4J0760-BLK1)				Prepared: 10/29/2014 Analyzed: 10/30/2014					
Antimony	ND	0.010			NR				
Arsenic	ND	0.010			NR				
Barium	0.000803	0.0030			NR				J
Beryllium	ND	0.0030			NR				
Cadmium	1.666E-4	0.0030			NR				J
Chromium	0.000337	0.0030			NR				J
Cobalt	ND	0.0030			NR				
Copper	ND	0.0050			NR				
Lead	ND	0.0050			NR				
Molybdenum	ND	0.0050			NR				
Nickel	0.000561	0.0050			NR				J
Selenium	0.004462	0.010			NR				J
Silver	0.000840	0.0030			NR				J
Thallium	ND	0.015			NR				
Vanadium	ND	0.0030			NR				
Zinc	0.003944	0.010			NR				J
LCS (B4J0760-BS1)				Prepared: 10/29/2014 Analyzed: 10/30/2014					
Antimony	0.988381	0.010	1.00000		98.8	80 - 120			
Arsenic	0.969234	0.010	1.00000		96.9	80 - 120			
Barium	1.02271	0.0030	1.00000		102	80 - 120			
Beryllium	1.03054	0.0030	1.00000		103	80 - 120			
Cadmium	0.962591	0.0030	1.00000		96.3	80 - 120			
Chromium	1.00714	0.0030	1.00000		101	80 - 120			
Cobalt	1.00146	0.0030	1.00000		100	80 - 120			
Copper	1.03248	0.0050	1.00000		103	80 - 120			
Lead	0.997492	0.0050	1.00000		99.7	80 - 120			
Molybdenum	0.970175	0.0050	1.00000		97.0	80 - 120			
Nickel	0.985497	0.0050	1.00000		98.5	80 - 120			
Selenium	0.943283	0.010	1.00000		94.3	80 - 120			
Silver	0.989894	0.0030	1.00000		99.0	80 - 120			
Thallium	1.02530	0.015	1.00000		103	80 - 120			
Vanadium	1.01770	0.0030	1.00000		102	80 - 120			
Zinc	0.937435	0.010	1.00000		93.7	80 - 120			
Duplicate (B4J0760-DUP1)		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/30/2014					
Antimony	ND	0.010		ND	NR			20	
Arsenic	ND	0.010		ND	NR			20	
Barium	0.000973	0.0030		0.001048	NR		7.41	20	J
Beryllium	ND	0.0030		ND	NR			20	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0760 - EPA 3010A (continued)									
Duplicate (B4J0760-DUP1) - Continued		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/30/2014					
Cadmium	0.000172	0.0030		0.000192	NR		11.0	20	J
Chromium	7.052E-4	0.0030		0.000657	NR		7.04	20	J
Cobalt	ND	0.0030		ND	NR			20	
Copper	ND	0.0050		ND	NR			20	
Lead	ND	0.0050		ND	NR			20	
Molybdenum	0.000478	0.0050		ND	NR			20	J
Nickel	ND	0.0050		0.000519	NR			20	
Selenium	ND	0.010		ND	NR			20	
Silver	0.001075	0.0030		0.001238	NR		14.1	20	J
Thallium	ND	0.015		ND	NR			20	
Vanadium	ND	0.0030		ND	NR			20	
Zinc	0.006447	0.010		5.3041E-3	NR		19.5	20	J
Matrix Spike (B4J0760-MS1)		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/30/2014					
Antimony	2.48840	0.010	2.50000	ND	99.5	78 - 121			
Arsenic	2.44634	0.010	2.50000	ND	97.9	78 - 124			
Barium	2.55146	0.0030	2.50000	0.001048	102	81 - 118			
Beryllium	2.63363	0.0030	2.50000	ND	105	87 - 119			
Cadmium	2.41461	0.0030	2.50000	0.000192	96.6	80 - 113			
Chromium	2.53199	0.0030	2.50000	0.000657	101	85 - 115			
Cobalt	2.49664	0.0030	2.50000	ND	99.9	83 - 113			
Copper	2.59389	0.0050	2.50000	ND	104	72 - 132			
Lead	2.44775	0.0050	2.50000	ND	97.9	77 - 121			
Molybdenum	2.48186	0.0050	2.50000	ND	99.3	82 - 111			
Nickel	2.48813	0.0050	2.50000	0.000519	99.5	80 - 114			
Selenium	2.40664	0.010	2.50000	ND	96.3	75 - 121			
Silver	2.57767	0.0030	2.50000	0.001238	103	84 - 116			
Thallium	2.55056	0.015	2.50000	ND	102	70 - 122			
Vanadium	2.57176	0.0030	2.50000	ND	103	85 - 114			
Zinc	2.37234	0.010	2.50000	5.3041E-3	94.7	70 - 123			
Matrix Spike Dup (B4J0760-MSD1)		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/30/2014					
Antimony	2.49123	0.010	2.50000	ND	99.6	78 - 121	0.114	20	
Arsenic	2.44795	0.010	2.50000	ND	97.9	78 - 124	0.0658	20	
Barium	2.54008	0.0030	2.50000	0.001048	102	81 - 118	0.447	20	
Beryllium	2.62516	0.0030	2.50000	ND	105	87 - 119	0.322	20	
Cadmium	2.40341	0.0030	2.50000	0.000192	96.1	80 - 113	0.465	20	
Chromium	2.51974	0.0030	2.50000	0.000657	101	85 - 115	0.485	20	
Cobalt	2.48480	0.0030	2.50000	ND	99.4	83 - 113	0.475	20	
Copper	2.58270	0.0050	2.50000	ND	103	72 - 132	0.432	20	
Lead	2.43254	0.0050	2.50000	ND	97.3	77 - 121	0.623	20	
Molybdenum	2.46917	0.0050	2.50000	ND	98.8	82 - 111	0.513	20	

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Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0760 - EPA 3010A (continued)									
Matrix Spike Dup (B4J0760-MSD1) - Continued		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/30/2014					
Nickel	2.47746	0.0050	2.50000	0.000519	99.1	80 - 114	0.430	20	
Selenium	2.41824	0.010	2.50000	ND	96.7	75 - 121	0.481	20	
Silver	2.56630	0.0030	2.50000	0.001238	103	84 - 116	0.442	20	
Thallium	2.55074	0.015	2.50000	ND	102	70 - 122	0.00706	20	
Vanadium	2.56168	0.0030	2.50000	ND	102	85 - 114	0.393	20	
Zinc	2.36027	0.010	2.50000	5.3041E-3	94.2	70 - 123	0.510	20	

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Lead by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0786 - EPA 3050 Modified									
Blank (B4J0786-BLK1)				Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	0.493747	1.0			NR				J
Blank (B4J0786-BLK2)				Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	0.288261	1.0			NR				J
LCS (B4J0786-BS1)				Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	50.3640	1.0	50.0000		101	80 - 120			
Duplicate (B4J0786-DUP1)		**Source: 1403213-20**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	33.5679	1.0		29.2661	NR		13.7	20	
Duplicate (B4J0786-DUP2)		**Source: 1403213-10**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	9.93471	1.0		9.66479	NR		2.75	20	
Matrix Spike (B4J0786-MS1)		**Source: 1403213-20**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	251.119	1.0	250.000	29.2661	88.7	33 - 134			
Matrix Spike (B4J0786-MS2)		**Source: 1403213-10**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	228.275	1.0	250.000	9.66479	87.4	33 - 134			
Matrix Spike Dup (B4J0786-MSD1)		**Source: 1403213-20**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	251.082	1.0	250.000	29.2661	88.7	33 - 134	0.0147	20	
Batch B4J0787 - EPA 3050 Modified									
Blank (B4J0787-BLK1)				Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	0.252963	1.0			NR				J
Blank (B4J0787-BLK2)				Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	0.301619	1.0			NR				J
LCS (B4J0787-BS1)				Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	52.3858	1.0	50.0000		105	80 - 120			
Duplicate (B4J0787-DUP1)		**Source: 1403213-40**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	68.4265	0.99		70.5688	NR		3.08	20	
Duplicate (B4J0787-DUP2)		**Source: 1403213-30**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	3.87654	1.0		3.90108	NR		0.631	20	
Matrix Spike (B4J0787-MS1)		**Source: 1403213-40**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	262.081	1.0	250.000	70.5688	76.6	33 - 134			

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Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0787 - EPA 3050 Modified (continued)									
Matrix Spike (B4J0787-MS2)		**Source: 1403213-30**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	234.866	1.0	250.000	3.90108	92.4	33 - 134			
Matrix Spike Dup (B4J0787-MSD1)		**Source: 1403213-40**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	257.990	1.0	250.000	70.5688	75.0	33 - 134	1.57	20	
Batch B4J0788 - EPA 3050 Modified									
Blank (B4J0788-BLK1)				Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	ND	1.0			NR				
Blank (B4J0788-BLK2)				Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	0.069008	1.0			NR				J
LCS (B4J0788-BS1)				Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	50.0802	1.0	50.0000		100	80 - 120			
Duplicate (B4J0788-DUP1)		**Source: 1403213-60**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	26.0812	1.0		31.1088	NR		17.6	20	
Duplicate (B4J0788-DUP2)		**Source: 1403213-50**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	73.3209	1.0		85.1519	NR		14.9	20	
Matrix Spike (B4J0788-MS1)		**Source: 1403213-60**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	233.206	1.0	250.000	31.1088	80.8	33 - 134			
Matrix Spike (B4J0788-MS2)		**Source: 1403213-50**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	296.723	1.0	250.000	85.1519	84.6	33 - 134			

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Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0788 - EPA 3050 Modified (continued)									
Matrix Spike Dup (B4J0788-MSD1)		**Source: 1403213-60**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	230.941	1.0	250.000	31.1088	79.9	33 - 134	0.976	20	

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Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0789 - EPA 3050 Modified									
Blank (B4J0789-BLK1)					Prepared: 10/29/2014 Analyzed: 10/31/2014				
Lead	ND	1.0			NR				

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Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0789 - EPA 3050 Modified (continued)									
Blank (B4J0789-BLK2)					Prepared: 10/29/2014 Analyzed: 10/31/2014				
Lead	ND	1.0			NR				

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Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0789 - EPA 3050 Modified (continued)									
LCS (B4J0789-BS1)				Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	50.8307	1.0	50.0000		102	80 - 120			

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Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0789 - EPA 3050 Modified (continued)									
Duplicate (B4J0789-DUP1)		**Source: 1403213-80**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	19.9996	1.0		26.5853	NR		28.3	20	R

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Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0789 - EPA 3050 Modified (continued)									
Duplicate (B4J0789-DUP2)		**Source: 1403213-70**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	7.29222	1.0		8.10862	NR		10.6	20	

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Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0789 - EPA 3050 Modified (continued)									
Matrix Spike (B4J0789-MS1)		**Source: 1403213-80**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	238.771	1.0	250.000	26.5853	84.9	33 - 134			

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Stantec	Project Number : CalTrans TO13, 185831013
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Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0789 - EPA 3050 Modified (continued)									
Matrix Spike (B4J0789-MS2)		**Source: 1403213-70**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	213.081	1.0	250.000	8.10862	82.0	33 - 134			

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Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0789 - EPA 3050 Modified (continued)									
Matrix Spike Dup (B4J0789-MSD1)		**Source: 1403213-80**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	234.965	1.0	250.000	26.5853	83.4	33 - 134	1.61	20	

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Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0790 - EPA 3050 Modified									
Blank (B4J0790-BLK1)					Prepared: 10/29/2014 Analyzed: 10/31/2014				
Lead	ND	1.0			NR				

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Stantec	Project Number : CalTrans TO13, 185831013
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Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0790 - EPA 3050 Modified (continued)									
Blank (B4J0790-BLK2)					Prepared: 10/29/2014 Analyzed: 10/31/2014				
Lead	0.207773	1.0			NR				J

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Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0790 - EPA 3050 Modified (continued)									
LCS (B4J0790-BS1)					Prepared: 10/29/2014 Analyzed: 10/31/2014				
Lead	48.8724	1.0	50.0000		97.7	80 - 120			

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Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0790 - EPA 3050 Modified (continued)									
Duplicate (B4J0790-DUP1)		**Source: 1403233-17**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	18.8641	1.0		16.4843	NR		13.5	20	

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Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0790 - EPA 3050 Modified (continued)									
Duplicate (B4J0790-DUP2)		**Source: 1403233-10**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	4.64493	1.0		3.67701	NR		23.3	20	R

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Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0790 - EPA 3050 Modified (continued)									
Matrix Spike (B4J0790-MS1)		**Source: 1403233-17**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	220.997	1.0	250.000	16.4843	81.8	33 - 134			

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Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0790 - EPA 3050 Modified (continued)									
Matrix Spike (B4J0790-MS2)		**Source: 1403233-10**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	221.660	1.0	250.000	3.67701	87.2	33 - 134			

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Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0790 - EPA 3050 Modified (continued)									
Matrix Spike Dup (B4J0790-MSD1)		**Source: 1403233-17**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	235.615	1.0	250.000	16.4843	87.7	33 - 134	6.40	20	

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Stantec	Project Number : CalTrans TO13, 185831013
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Mercury by AA (Cold Vapor) EPA 7470A - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0761 - EPA 245.1/7470									
Blank (B4J0761-BLK1)					Prepared: 10/29/2014 Analyzed: 10/29/2014				
Mercury	ND	0.20			NR				

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
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Mercury by AA (Cold Vapor) EPA 7470A - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0761 - EPA 245.1/7470 (continued)									
LCS (B4J0761-BS1)				Prepared: 10/29/2014 Analyzed: 10/29/2014					
Mercury	10.3311	0.20	10.0000		103	80 - 120			

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
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Mercury by AA (Cold Vapor) EPA 7470A - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0761 - EPA 245.1/7470 (continued)									
Duplicate (B4J0761-DUP1)		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/29/2014					
Mercury	ND	0.20		ND	NR			20	

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Stantec	Project Number : CalTrans TO13, 185831013
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Mercury by AA (Cold Vapor) EPA 7470A - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0761 - EPA 245.1/7470 (continued)									
Matrix Spike (B4J0761-MS1)		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/29/2014					
Mercury	10.4476	0.20	10.0000	ND	104	70 - 130			

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Stantec	Project Number : CalTrans TO13, 185831013
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Mercury by AA (Cold Vapor) EPA 7470A - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0761 - EPA 245.1/7470 (continued)									
Matrix Spike Dup (B4J0761-MSD1)		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/29/2014					
Mercury	10.4336	0.20	10.0000	ND	104	70 - 130	0.134	20	

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Mercury by AA (Cold Vapor) EPA 7470A - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0761 - EPA 245.1/7470 (continued)									
Post Spike (B4J0761-PS1)			**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/29/2014				
Mercury	5.12810		5.00000	-0.015628	103	85 - 115			

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13, 185831013
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Redlands , CA 92374		Reported :	10/31/2014

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
J	Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services **25864-F Business Center Drive** **Redlands, CA 92374**	**ANNE PEREZ**
	E-Mail Address: **anne.perez@stantec.com**
	Sampler Name: **MFB/MAB/JGS/MC**
Laboratory: **ATL** **3275 Walnut Ave.** **Signal Hill, CA 90755** **800-499-4388**	Project Number: **185831013**
	Project: **CalTrans TO13**

Analysis Required

Turn Around Time: Normal TAT: X; 72 Hour: ; 48 Hour: ; 24 Hour: ; Same Day: ; Other:

Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS					Special Instructions
1255- EBQC - 2	water	—	1	10.22.14	0710							X					Lab filter & preserve
1255- EBQC - 3	water	—	1		0712							X					Lab filter & preserve
1255- 105 - 1	Soil				0730		X										
1255- 105 - 3					0741												
1255- 106 - 1					0732												
1255- 106 - 3					0744												
1255- 102 - 12					0818												
1255- 102 - 15					0828												
1255- 103 - 9					0856												
1255- 104 - 9					0944												
1255- 104 - 12					0947												
1255- 104 - 15					0952												
1255- 105 - 9					1012												
1255- 105 - 12					1014												
1255- 105 - 15					1017												

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "*EBQC*" samples are to be laboratory filtered and preserved prior to analysis.

Relinquished By	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645		10/23/14	1645
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1850	ATL	10/23/14	1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services **25864-F Business Center Drive** **Redlands, CA 92374**	**ANNE PEREZ**
	E-Mail Address: **anne.perez@stantec.com**
	Sampler Name: **MFB/MAB/JGS/MC**
Laboratory: **ATL** **3275 Walnut Ave.** **Signal Hill, CA 90755** **800-499-4388**	Project Number: **185831013** Project: **CalTrans TO13**

Analysis Required

Turn Around Time:
Normal TAT: X
72 Hour:
48 Hour:
24 Hour:
Same Day:
Other:

Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS				Special Instructions
1255- 107 - 1	Soil	1	1	10.22.14	0834		X									
1255- 108 - 1					0832											
1255- 108 - 3					0903											
1255- 108 - 5					0916											
1255- 109 - 1					0935											
1255- 109 - 3					0955											
1255- 109 - 5					1016											
1255- 106 - 9					1103											
1255- 112 - 1					1114											
1255- 112 - 3					1116											
1255- 112 - 5					1119											
1255- 110 - 1					0953											
1255- 110 - 3					1120											
1255- 110 - 5					1132											
1255- 107 - 3					1140											

Sample Preservative: **1**=ICE - **2**=HCl - **3**=H_2SO_4 - **4**=HNO_3 - **5**=NaOH - **6**=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "*EBQC*" samples are to be laboratory filtered and preserved prior to analysis.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645		10/23/14	1645
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1850		10/23/14	1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec
25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	ANNE PEREZ
	E-Mail Address: anne.perez@stantec.com
	Sampler Name: MFB/MAB/JGS/MC
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	Project Number: 185831013
	Project: CalTrans TO13

Turn Around Time: Normal TAT: X; 72 Hour: ; 48 Hour: ; 24 Hour: ; Same Day: ; Other:

Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS				Special Instructions
1255- 107 - 5	Soil	1	4	10/22/14	1142		X									
1255- 113 - 1					1228											
1255- 113 - 3					1234											
1255- 114 - 1					1215											
1255- 114 - 3					1250											
1255- 114 - 5					1252											
1255- 114 - 8					1255											
1255- 114 - 11					1256											
1255- 115 - 1					1218											
1255- 115 - 3					1230											
1255- 115 - 5					1314											
1255- 115 - 8					1315											
1255- 115 - 11					1318											
1255- 116 - 1					1255											
1255- 117 - 1	✓	✓	✓	✓	1320		✓									

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions: **All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved** prior to analysis.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645	STLC	10/23/14	1645
Relinquished By + Company Name: STLC	Date 10/23/14	Time 1850	Received By + Company Name:	Date 10/23/14	Time 1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services **25864-F Business Center Drive** **Redlands, CA 92374**	**ANNE PEREZ**
	E-Mail Address: **anne.perez@stantec.com**
	Sampler Name: **MFB/MAB/JGS/MC**
Laboratory: **ATL** **3275 Walnut Ave.** **Signal Hill, CA 90755** **800-499-4388**	Project Number: **185831013**
	Project: **CalTrans TO13**

Turn Around Time: Normal TAT: X; 72 Hour: ; 48 Hour: ; 24 Hour: ; Same Day: ; Other:

Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	Analysis Required: TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS					Special Instructions
1255- 160 - 5	Soil	1	1	10/22/14	1455		X										
1255- 160 - 8					1450												
1255- 161 - 1					1410												
1255- 161 - 3					1430												
1255- 161 - 5					1435												
1255- 161 - 8					1440												
1255- 162 - 1					1511												
1255- 162 - 3					1548												
1255- 162 - 5					1552												
1255- 162 - 8					1556												
1255- 163 - 1					1501												
1255- 163 - 3					1530												
1255- 163 - 5					1535												
1255- 163 - 8					1540												
1255- 164 - 1					1440												

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "*EBQC*" samples are to be laboratory filtered and preserved prior to analysis.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645		10/23/14	1645
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1850		10/23/14	1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services **25864-F Business Center Drive** **Redlands, CA 92374**	**ANNE PEREZ**
	E-Mail Address: **anne.perez@stantec.com**
	Sampler Name: **MFB/MAB/JGS/MC**
Laboratory: **ATL** **3275 Walnut Ave.** **Signal Hill, CA 90755** **800-499-4388**	Project Number: **185831013** Project: **CalTrans TO13**

Turn Around Time: Normal TAT: X; 72 Hour: ; 48 Hour: ; 24 Hour: ; Same Day: ; Other:

Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS					Special Instructions
1255- 117 - 3	Soil	1	1	10/22/14	1345		X										
1255- 117 - 5					1346												
1255- 117 - 8					1347												
1255- 117 - 11					1350												
1255- 118 - 1					1220												
1255- 118 - 3					1402												
1255- 118 - 5					1405												
1255- 118 - 8					1407												
1255- 118 - 11					1410												
1255- 159 - 1					1434												
1255- 159 - 3					1504												
1255- 159 - 5					1508												
1255- 159 - 8					1510												
1255- 160 - 1					1411												
1255- 160 - 3					1424												

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions: **All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved** prior to analysis.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645	JDC/STLC	10/23/14	1645
Relinquished By + Company Name: JDC/STLC	10/23/14	1850	OTC	10/23/14	1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services **25864-F Business Center Drive** **Redlands, CA 92374**	**ANNE PEREZ**
	E-Mail Address: **anne.perez@stantec.com**
	Sampler Name: **MFB/MAB/JGS/MC**
Laboratory: **ATL** **3275 Walnut Ave.** **Signal Hill, CA 90755** **800-499-4388**	Project Number: **185831013**
	Project: **CalTrans TO13**

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Chrie) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS					Special Instructions
1255- 164 - 3	Soil	1	1	10/22/14	1515		X										
1255- 164 - 5	"	"	"	"	1518		"										
1255- 164 - 8	"	"	"	"	1552		"										
1255- -																	
1255- -																	
1255- -																	
1255- -																	
1255- -																	
1255- -																	
1255- -																	
1255- -																	
1255- -																	
1255- -																	
1255- -																	
1255- -																	

Analysis Required

Turn Around Time:
- Normal TAT: X
- 72 Hour:
- 48 Hour:
- 24 Hour:
- Same Day:
- Other:

Sample Temp °C:

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "*EBQC*" samples are to be laboratory filtered and preserved, prior to analysis.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645	STANTEC	10/23/14	~~1645~~ 1645
Relinquished By + Company Name: STANTEC	Date 10/23/14	Time 1850	Received By + Company Name: ATL	Date 10/23/14	Time 1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 11/11/2014

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
1255-105-1	1403213-03	Soil	10/22/14 7:30	10/23/14 16:45
1255-106-1	1403213-05	Soil	10/22/14 7:32	10/23/14 16:45
1255-110-5	1403213-29	Soil	10/22/14 11:32	10/23/14 16:45
1255-113-1	1403213-32	Soil	10/22/14 12:28	10/23/14 16:45
1255-113-3	1403213-33	Soil	10/22/14 12:34	10/23/14 16:45
1255-114-1	1403213-34	Soil	10/22/14 12:15	10/23/14 16:45
1255-115-1	1403213-39	Soil	10/22/14 12:18	10/23/14 16:45
1255-115-3	1403213-40	Soil	10/22/14 12:30	10/23/14 16:45
1255-116-1	1403213-44	Soil	10/22/14 12:55	10/23/14 16:45
1255-117-1	1403213-45	Soil	10/22/14 13:20	10/23/14 16:45
1255-117-3	1403213-46	Soil	10/22/14 13:45	10/23/14 16:45
1255-118-1	1403213-50	Soil	10/22/14 12:20	10/23/14 16:45
1255-118-3	1403213-51	Soil	10/22/14 14:02	10/23/14 16:45
1255-160-1	1403213-59	Soil	10/22/14 14:11	10/23/14 16:45
1255-160-3	1403213-60	Soil	10/22/14 14:24	10/23/14 16:45
1255-161-1	1403213-63	Soil	10/22/14 14:10	10/23/14 16:45
1255-161-3	1403213-64	Soil	10/22/14 14:30	10/23/14 16:45
1255-162-3	1403213-68	Soil	10/22/14 15:48	10/23/14 16:45
1255-162-5	1403213-69	Soil	10/22/14 15:52	10/23/14 16:45
1255-163-1	1403213-71	Soil	10/22/14 15:01	10/23/14 16:45
1255-163-3	1403213-72	Soil	10/22/14 15:30	10/23/14 16:45
1255-164-1	1403213-75	Soil	10/22/14 14:40	10/23/14 16:45
1255-111-5	1403213-81	Soil	10/22/14 11:27	10/23/14 16:45

DRAFT REPORT

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 11/11/2014

CASE NARRATIVE

Sample Receiving/General Comments:

Documentation pertaining to additional analyses/change order available upon request.

Results were J-flagged. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

DRAFT REPORT

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 11/11/2014

TCLP Metals by ICP-AES EPA 6010B

Analyte: Lead **Analyst: CB**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403213-32	1255-113-1	**0.11**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 16:32	
1403213-34	1255-114-1	**0.71**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 16:34	
1403213-39	1255-115-1	**0.034**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 16:36	J
1403213-40	1255-115-3	**0.018**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 16:39	J
1403213-44	1255-116-1	**0.059**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 16:41	
1403213-45	1255-117-1	**0.028**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 16:44	J
1403213-46	1255-117-3	**0.0042**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 14:57	J
1403213-50	1255-118-1	**0.054**	mg/L	0.050	0.0014	1	B4K0192	11/10/2014	11/10/14 16:46	
1403213-51	1255-118-3	**0.014**	mg/L	0.050	0.0014	1	B4K0192	11/10/2014	11/10/14 16:49	J
1403213-64	1255-161-3	**0.015**	mg/L	0.050	0.0014	1	B4K0192	11/10/2014	11/10/14 16:55	J
1403213-68	1255-162-3	**0.0085**	mg/L	0.050	0.0014	1	B4K0192	11/10/2014	11/10/14 16:58	J

DRAFT REPORT

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 11/11/2014

STLC Metals by ICP-AES by EPA 6010B

Analyte: Lead **Analyst: CB**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403213-03	1255-105-1	**0.057**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:20	J
1403213-05	1255-106-1	**ND**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:22	
1403213-29	1255-110-5	**0.037**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:24	J
1403213-32	1255-113-1	**0.038**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:27	J
1403213-33	1255-113-3	**0.035**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:33	J
1403213-34	1255-114-1	**0.66**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:35	J
1403213-39	1255-115-1	**0.043**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:37	J
1403213-40	1255-115-3	**1.1**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:44	
1403213-45	1255-117-1	**0.45**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:49	J
1403213-46	1255-117-3	**2.6**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:51	
1403213-50	1255-118-1	**0.045**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:54	J
1403213-51	1255-118-3	**0.055**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 15:40	J
1403213-59	1255-160-1	**0.035**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 15:42	J
1403213-60	1255-160-3	**0.031**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 15:44	J
1403213-63	1255-161-1	**0.088**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 15:47	J
1403213-64	1255-161-3	**0.49**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 15:49	J
1403213-68	1255-162-3	**0.051**	mg/L	1.0	0.027	20	B4K0159	11/07/2014	11/10/14 16:22	J
1403213-69	1255-162-5	**0.031**	mg/L	1.0	0.027	20	B4K0159	11/07/2014	11/10/14 16:26	J
1403213-71	1255-163-1	**ND**	mg/L	1.0	0.027	20	B4K0159	11/07/2014	11/10/14 16:30	
1403213-72	1255-163-3	**0.034**	mg/L	1.0	0.027	20	B4K0159	11/07/2014	11/10/14 16:33	J
1403213-75	1255-164-1	**ND**	mg/L	1.0	0.027	20	B4K0159	11/07/2014	11/10/14 16:37	
1403213-81	1255-111-5	**0.039**	mg/L	1.0	0.027	20	B4K0159	11/07/2014	11/10/14 16:41	J

DRAFT REPORT

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 11/11/2014

STLC DI Metals by ICP-AES by EPA 6010B

Analyte: Lead **Analyst: CB**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403213-03	1255-105-1	**ND**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:40	
1403213-05	1255-106-1	**ND**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:46	
1403213-29	1255-110-5	**ND**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:48	
1403213-32	1255-113-1	**ND**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:50	
1403213-33	1255-113-3	**ND**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:52	
1403213-34	1255-114-1	**0.038**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:55	J
1403213-39	1255-115-1	**ND**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 18:14	
1403213-40	1255-115-3	**0.028**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:59	J
1403213-44	1255-116-1	**ND**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 18:01	
1403213-45	1255-117-1	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:25	
1403213-46	1255-117-3	**0.028**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:27	J
1403213-50	1255-118-1	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:29	
1403213-51	1255-118-3	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:31	
1403213-59	1255-160-1	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:33	
1403213-60	1255-160-3	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/11/14 10:25	
1403213-63	1255-161-1	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:42	
1403213-64	1255-161-3	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:44	
1403213-68	1255-162-3	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:46	
1403213-69	1255-162-5	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:48	
1403213-71	1255-163-1	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:55	
1403213-72	1255-163-3	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:57	
1403213-75	1255-164-1	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:59	
1403213-81	1255-111-5	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 19:05	

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Mercury by AA (Cold Vapor) EPA 7471A

Analyte: Mercury **Analyst: SB**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403213-32	1255-113-1	**0.03**	mg/kg	0.10	0.009	1	B4K0181	11/10/2014	11/10/14 18:15	J
1403213-33	1255-113-3	**0.06**	mg/kg	0.10	0.009	1	B4K0181	11/10/2014	11/10/14 18:17	J
1403213-34	1255-114-1	**0.03**	mg/kg	0.10	0.009	1	B4K0181	11/10/2014	11/10/14 18:19	J
1403213-44	1255-116-1	**0.04**	mg/kg	0.10	0.009	1	B4K0182	11/10/2014	11/10/14 18:25	J
1403213-45	1255-117-1	**0.04**	mg/kg	0.10	0.009	1	B4K0182	11/10/2014	11/10/14 18:39	J
1403213-46	1255-117-3	**0.02**	mg/kg	0.10	0.009	1	B4K0182	11/10/2014	11/10/14 18:41	J
1403213-64	1255-161-3	**0.02**	mg/kg	0.10	0.009	1	B4K0182	11/10/2014	11/10/14 18:43	J

DRAFT REPORT

pH by EPA 9045C

Analyte: pH **Analyst: LA**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403213-32	1255-113-1	**8.1**	pH Units	0.10	0.10	1	B4K0101	11/10/2014	11/10/14 15:45	
1403213-33	1255-113-3	**8.7**	pH Units	0.10	0.10	1	B4K0101	11/10/2014	11/10/14 15:45	
1403213-34	1255-114-1	**8.2**	pH Units	0.10	0.10	1	B4K0101	11/10/2014	11/10/14 15:45	
1403213-44	1255-116-1	**8.0**	pH Units	0.10	0.10	1	B4K0101	11/10/2014	11/10/14 15:45	
1403213-45	1255-117-1	**7.9**	pH Units	0.10	0.10	1	B4K0101	11/10/2014	11/10/14 15:45	
1403213-46	1255-117-3	**8.6**	pH Units	0.10	0.10	1	B4K0101	11/10/2014	11/10/14 15:45	
1403213-64	1255-161-3	**8.2**	pH Units	0.10	0.10	1	B4K0101	11/10/2014	11/10/14 15:45	

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Client Sample ID 1255-113-1
Lab ID: 1403213-32

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.25	1	B4K0179	11/10/2014	11/10/14 19:47	
Arsenic	**6.5**	1.0	0.19	1	B4K0179	11/10/2014	11/10/14 19:47	
Barium	**120**	1.0	0.14	1	B4K0179	11/10/2014	11/10/14 19:47	
Beryllium	**0.32**	1.0	0.04	1	B4K0179	11/10/2014	11/10/14 19:47	J
Cadmium	**1.7**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:47	
Chromium	**13**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:47	
Cobalt	**4.8**	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:47	
Copper	**19**	2.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:47	
Molybdenum	**4.2**	1.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:47	
Nickel	**24**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:47	
Selenium	ND	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:47	
Silver	ND	1.0	0.06	1	B4K0179	11/10/2014	11/10/14 19:47	
Thallium	ND	1.0	0.20	1	B4K0179	11/10/2014	11/10/14 19:47	
Vanadium	**37**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:47	
Zinc	**62**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:47	

DRAFT REPORT

Client Sample ID 1255-113-3
Lab ID: 1403213-33

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.25	1	B4K0179	11/10/2014	11/10/14 19:48	
Arsenic	**4.1**	1.0	0.19	1	B4K0179	11/10/2014	11/10/14 19:48	
Barium	**77**	1.0	0.14	1	B4K0179	11/10/2014	11/10/14 19:48	
Beryllium	**0.20**	1.0	0.04	1	B4K0179	11/10/2014	11/10/14 19:48	J
Cadmium	**1.4**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:48	
Chromium	**7.9**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:48	
Cobalt	**3.9**	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:48	
Copper	**13**	2.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:48	
Molybdenum	**1.8**	1.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:48	
Nickel	**16**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:48	
Selenium	ND	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:48	
Silver	ND	1.0	0.06	1	B4K0179	11/10/2014	11/10/14 19:48	
Thallium	ND	1.0	0.20	1	B4K0179	11/10/2014	11/10/14 19:48	
Vanadium	**27**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:48	
Zinc	**37**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:48	

Certificate of Analysis

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Client Sample ID 1255-114-1
Lab ID: 1403213-34

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.25	1	B4K0179	11/10/2014	11/10/14 19:50	
Arsenic	**6.5**	1.0	0.19	1	B4K0179	11/10/2014	11/10/14 19:50	
Barium	**110**	1.0	0.14	1	B4K0179	11/10/2014	11/10/14 19:50	
Beryllium	**0.30**	1.0	0.04	1	B4K0179	11/10/2014	11/10/14 19:50	J
Cadmium	**1.4**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:50	
Chromium	**13**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:50	
Cobalt	**5.0**	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:50	
Copper	**20**	2.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:50	
Molybdenum	**3.7**	1.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:50	
Nickel	**20**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:50	
Selenium	ND	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:50	
Silver	ND	1.0	0.06	1	B4K0179	11/10/2014	11/10/14 19:50	
Thallium	ND	1.0	0.20	1	B4K0179	11/10/2014	11/10/14 19:50	
Vanadium	**34**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:50	
Zinc	**72**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:50	

DRAFT REPORT

Client Sample ID 1255-116-1
Lab ID: 1403213-44

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.25	1	B4K0180	11/10/2014	11/10/14 19:55	
Arsenic	**6.8**	1.0	0.19	1	B4K0180	11/10/2014	11/10/14 19:55	
Barium	**120**	1.0	0.14	1	B4K0180	11/10/2014	11/10/14 19:55	
Beryllium	**0.33**	1.0	0.04	1	B4K0180	11/10/2014	11/10/14 19:55	J
Cadmium	**1.8**	1.0	0.11	1	B4K0180	11/10/2014	11/10/14 19:55	
Chromium	**14**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 19:55	
Cobalt	**5.0**	1.0	0.15	1	B4K0180	11/10/2014	11/10/14 19:55	
Copper	**20**	2.0	0.05	1	B4K0180	11/10/2014	11/10/14 19:55	
Molybdenum	**4.6**	1.0	0.05	1	B4K0180	11/10/2014	11/10/14 19:55	
Nickel	**24**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 19:55	
Selenium	ND	1.0	0.15	1	B4K0180	11/10/2014	11/10/14 19:55	
Silver	ND	1.0	0.06	1	B4K0180	11/10/2014	11/10/14 19:55	
Thallium	ND	1.0	0.20	1	B4K0180	11/10/2014	11/10/14 19:55	
Vanadium	**39**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 19:55	
Zinc	**72**	1.0	0.11	1	B4K0180	11/10/2014	11/10/14 19:55	

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Client Sample ID 1255-117-1
Lab ID: 1403213-45

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.25	1	B4K0180	11/10/2014	11/10/14 20:01	
Arsenic	**6.7**	1.0	0.19	1	B4K0180	11/10/2014	11/10/14 20:01	
Barium	**120**	1.0	0.14	1	B4K0180	11/10/2014	11/10/14 20:01	
Beryllium	**0.34**	1.0	0.04	1	B4K0180	11/10/2014	11/10/14 20:01	J
Cadmium	**1.8**	1.0	0.11	1	B4K0180	11/10/2014	11/10/14 20:01	
Chromium	**15**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:01	
Cobalt	**4.7**	1.0	0.15	1	B4K0180	11/10/2014	11/10/14 20:01	
Copper	**20**	2.0	0.05	1	B4K0180	11/10/2014	11/10/14 20:01	
Molybdenum	**3.9**	1.0	0.05	1	B4K0180	11/10/2014	11/10/14 20:01	
Nickel	**23**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:01	
Selenium	ND	1.0	0.15	1	B4K0180	11/10/2014	11/10/14 20:01	
Silver	ND	1.0	0.06	1	B4K0180	11/10/2014	11/10/14 20:01	
Thallium	ND	1.0	0.20	1	B4K0180	11/10/2014	11/10/14 20:01	
Vanadium	**39**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:01	
Zinc	**100**	1.0	0.11	1	B4K0180	11/10/2014	11/10/14 20:01	

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Client Sample ID 1255-117-3
Lab ID: 1403213-46

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.25	1	B4K0180	11/10/2014	11/10/14 20:06	
Arsenic	**5.0**	1.0	0.19	1	B4K0180	11/10/2014	11/10/14 20:06	
Barium	**75**	1.0	0.14	1	B4K0180	11/10/2014	11/10/14 20:06	
Beryllium	**0.25**	1.0	0.04	1	B4K0180	11/10/2014	11/10/14 20:06	J
Cadmium	**1.1**	1.0	0.11	1	B4K0180	11/10/2014	11/10/14 20:06	
Chromium	**9.7**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:06	
Cobalt	**4.3**	1.0	0.15	1	B4K0180	11/10/2014	11/10/14 20:06	
Copper	**14**	2.0	0.05	1	B4K0180	11/10/2014	11/10/14 20:06	
Molybdenum	**1.9**	1.0	0.05	1	B4K0180	11/10/2014	11/10/14 20:06	
Nickel	**14**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:06	
Selenium	ND	1.0	0.15	1	B4K0180	11/10/2014	11/10/14 20:06	
Silver	ND	1.0	0.06	1	B4K0180	11/10/2014	11/10/14 20:06	
Thallium	ND	1.0	0.20	1	B4K0180	11/10/2014	11/10/14 20:06	
Vanadium	**30**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:06	
Zinc	**47**	1.0	0.11	1	B4K0180	11/10/2014	11/10/14 20:06	

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Client Sample ID 1255-161-3
Lab ID: 1403213-64

Title 22 Metals by ICP-AES EPA 6010B **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.25	1	B4K0180	11/10/2014	11/10/14 20:08	
Arsenic	**4.7**	1.0	0.19	1	B4K0180	11/10/2014	11/10/14 20:08	
Barium	**100**	1.0	0.14	1	B4K0180	11/10/2014	11/10/14 20:08	
Beryllium	**0.28**	1.0	0.04	1	B4K0180	11/10/2014	11/10/14 20:08	J
Cadmium	**0.89**	1.0	0.11	1	B4K0180	11/10/2014	11/10/14 20:08	J
Chromium	**12**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:08	
Cobalt	**4.3**	1.0	0.15	1	B4K0180	11/10/2014	11/10/14 20:08	
Copper	**13**	2.0	0.05	1	B4K0180	11/10/2014	11/10/14 20:08	
Molybdenum	**2.0**	1.0	0.05	1	B4K0180	11/10/2014	11/10/14 20:08	
Nickel	**15**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:08	
Selenium	ND	1.0	0.15	1	B4K0180	11/10/2014	11/10/14 20:08	
Silver	ND	1.0	0.06	1	B4K0180	11/10/2014	11/10/14 20:08	
Thallium	ND	1.0	0.20	1	B4K0180	11/10/2014	11/10/14 20:08	
Vanadium	**26**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:08	
Zinc	**42**	1.0	0.11	1	B4K0180	11/10/2014	11/10/14 20:08	

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QUALITY CONTROL SECTION

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0179 - EPA 3050B									
Blank (B4K0179-BLK1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	ND	2.0			NR				
Arsenic	ND	1.0			NR				
Barium	ND	1.0			NR				
Beryllium	ND	1.0			NR				
Cadmium	ND	1.0			NR				
Chromium	0.086722	1.0			NR				J
Cobalt	ND	1.0			NR				
Copper	0.249244	2.0			NR				J
Molybdenum	ND	1.0			NR				
Nickel	0.130813	1.0			NR				J
Selenium	ND	1.0			NR				
Silver	ND	1.0			NR				
Thallium	ND	1.0			NR				
Vanadium	ND	1.0			NR				
Zinc	0.267302	1.0			NR				J
LCS (B4K0179-BS1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	47.2277	2.0	50.0000		94.5	80 - 120			
Arsenic	46.8197	1.0	50.0000		93.6	80 - 120			
Barium	50.3442	1.0	50.0000		101	80 - 120			
Beryllium	48.8360	1.0	50.0000		97.7	80 - 120			
Cadmium	49.0587	1.0	50.0000		98.1	80 - 120			
Chromium	51.3148	1.0	50.0000		103	80 - 120			
Cobalt	48.9290	1.0	50.0000		97.9	80 - 120			
Copper	49.4120	2.0	50.0000		98.8	80 - 120			
Molybdenum	47.3084	1.0	50.0000		94.6	80 - 120			
Nickel	48.2930	1.0	50.0000		96.6	80 - 120			
Selenium	43.8747	1.0	50.0000		87.7	80 - 120			
Silver	49.7394	1.0	50.0000		99.5	80 - 120			
Thallium	48.8963	1.0	50.0000		97.8	80 - 120			
Vanadium	49.9001	1.0	50.0000		99.8	80 - 120			
Zinc	47.9737	1.0	50.0000		95.9	80 - 120			
Duplicate (B4K0179-DUP1)		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	0.266450	2.0		ND	NR			20	J
Arsenic	6.19337	1.0		5.75239	NR		7.38	20	
Barium	149.477	1.0		144.050	NR		3.70	20	
Beryllium	0.401384	1.0		0.377578	NR		6.11	20	J
Cadmium	0.936814	1.0		0.866288	NR		7.82	20	J
Chromium	9.45186	1.0		16.7146	NR		55.5	20	R
Cobalt	11.5357	1.0		8.25998	NR		33.1	20	R
Copper	24.2046	2.0		23.5547	NR		2.72	20	
Molybdenum	4.17540	1.0		3.49311	NR		17.8	20	

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Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0179 - EPA 3050B (continued)									
Duplicate (B4K0179-DUP1) - Continued		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Nickel	16.2185	1.0		16.9554	NR		4.44	20	
Selenium	ND	1.0		ND	NR			20	
Silver	ND	1.0		ND	NR			20	
Thallium	ND	1.0		ND	NR			20	
Vanadium	17.7024	1.0		19.4906	NR		9.62	20	
Zinc	98.9758	1.0		100.968	NR		1.99	20	
Matrix Spike (B4K0179-MS1)		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	66.5320	2.0	125.000	ND	53.2	21 - 126			
Arsenic	93.5626	1.0	125.000	5.75239	70.2	57 - 113			
Barium	251.836	1.0	125.000	144.050	86.2	29 - 146			
Beryllium	89.3440	1.0	125.000	0.377578	71.2	65 - 110			
Cadmium	81.5475	1.0	125.000	0.866288	64.5	56 - 107			
Chromium	98.1594	1.0	125.000	16.7146	65.2	49 - 127			
Cobalt	90.4014	1.0	125.000	8.25998	65.7	57 - 112			
Copper	120.778	2.0	125.000	23.5547	77.8	56 - 127			
Molybdenum	91.0726	1.0	125.000	3.49311	70.1	62 - 108			
Nickel	93.7200	1.0	125.000	16.9554	61.4	42 - 127			
Selenium	81.4094	1.0	125.000	ND	65.1	58 - 105			
Silver	92.5754	1.0	125.000	ND	74.1	63 - 113			
Thallium	80.0591	1.0	125.000	ND	64.0	53 - 110			
Vanadium	104.328	1.0	125.000	19.4906	67.9	66 - 112			
Zinc	175.960	1.0	125.000	100.968	60.0	28 - 137			
Matrix Spike Dup (B4K0179-MSD1)		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	69.4552	2.0	125.000	ND	55.6	21 - 126	4.30	20	
Arsenic	97.1568	1.0	125.000	5.75239	73.1	57 - 113	3.77	20	
Barium	252.585	1.0	125.000	144.050	86.8	29 - 146	0.297	20	
Beryllium	94.4083	1.0	125.000	0.377578	75.2	65 - 110	5.51	20	
Cadmium	86.6056	1.0	125.000	0.866288	68.6	56 - 107	6.02	20	
Chromium	108.683	1.0	125.000	16.7146	73.6	49 - 127	10.2	20	
Cobalt	93.4582	1.0	125.000	8.25998	68.2	57 - 112	3.33	20	
Copper	128.515	2.0	125.000	23.5547	84.0	56 - 127	6.21	20	
Molybdenum	94.3695	1.0	125.000	3.49311	72.7	62 - 108	3.56	20	
Nickel	98.5982	1.0	125.000	16.9554	65.3	42 - 127	5.07	20	
Selenium	84.4614	1.0	125.000	ND	67.6	58 - 105	3.68	20	
Silver	97.9776	1.0	125.000	ND	78.4	63 - 113	5.67	20	
Thallium	83.9373	1.0	125.000	ND	67.1	53 - 110	4.73	20	
Vanadium	111.044	1.0	125.000	19.4906	73.2	66 - 112	6.24	20	
Zinc	188.209	1.0	125.000	100.968	69.8	28 - 137	6.73	20	
Batch B4K0180 - EPA 3050B									
Blank (B4K0180-BLK1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	ND	2.0			NR				
Arsenic	ND	1.0			NR				
Barium	0.287807	1.0			NR				J

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Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0180 - EPA 3050B (continued)									
Blank (B4K0180-BLK1) - Continued					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Beryllium	ND	1.0			NR				
Cadmium	ND	1.0			NR				
Chromium	0.117599	1.0			NR				J
Cobalt	ND	1.0			NR				
Copper	0.199394	2.0			NR				J
Molybdenum	ND	1.0			NR				
Nickel	0.152939	1.0			NR				J
Selenium	ND	1.0			NR				
Silver	ND	1.0			NR				
Thallium	ND	1.0			NR				
Vanadium	ND	1.0			NR				
Zinc	0.526518	1.0			NR				J
LCS (B4K0180-BS1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	45.8914	2.0	50.0000		91.8	80 - 120			
Arsenic	46.0757	1.0	50.0000		92.2	80 - 120			
Barium	49.3567	1.0	50.0000		98.7	80 - 120			
Beryllium	48.2840	1.0	50.0000		96.6	80 - 120			
Cadmium	48.6576	1.0	50.0000		97.3	80 - 120			
Chromium	50.3401	1.0	50.0000		101	80 - 120			
Cobalt	49.0086	1.0	50.0000		98.0	80 - 120			
Copper	49.1256	2.0	50.0000		98.3	80 - 120			
Molybdenum	49.4052	1.0	50.0000		98.8	80 - 120			
Nickel	48.0679	1.0	50.0000		96.1	80 - 120			
Selenium	42.8154	1.0	50.0000		85.6	80 - 120			
Silver	46.4504	1.0	50.0000		92.9	80 - 120			
Thallium	48.1233	1.0	50.0000		96.2	80 - 120			
Vanadium	47.2240	1.0	50.0000		94.4	80 - 120			
Zinc	48.6853	1.0	50.0000		97.4	80 - 120			
Duplicate (B4K0180-DUP1)			**Source: 1403213-44**		Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	ND	2.0		ND	NR			20	
Arsenic	7.97916	1.0		6.77860	NR		16.3	20	
Barium	133.478	1.0		124.656	NR		6.84	20	
Beryllium	0.380794	1.0		0.332469	NR		13.6	20	J
Cadmium	2.02094	1.0		1.83359	NR		9.72	20	
Chromium	14.9744	1.0		14.3760	NR		4.08	20	
Cobalt	5.02512	1.0		5.00530	NR		0.395	20	
Copper	21.7848	2.0		20.3431	NR		6.84	20	
Molybdenum	5.41556	1.0		4.55665	NR		17.2	20	
Nickel	24.6595	1.0		24.4458	NR		0.871	20	
Selenium	ND	1.0		ND	NR			20	
Silver	ND	1.0		ND	NR			20	
Thallium	ND	1.0		ND	NR			20	
Vanadium	42.2295	1.0		38.9387	NR		8.11	20	
Zinc	76.5907	1.0		72.4699	NR		5.53	20	

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Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0180 - EPA 3050B (continued)									
Matrix Spike (B4K0180-MS1)		**Source: 1403213-44**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	78.6982	2.0	125.000	ND	63.0	21 - 126			
Arsenic	105.006	1.0	125.000	6.77860	78.6	57 - 113			
Barium	227.991	1.0	125.000	124.656	82.7	29 - 146			
Beryllium	102.668	1.0	125.000	0.332469	81.9	65 - 110			
Cadmium	95.4996	1.0	125.000	1.83359	74.9	56 - 107			
Chromium	116.519	1.0	125.000	14.3760	81.7	49 - 127			
Cobalt	98.6000	1.0	125.000	5.00530	74.9	57 - 112			
Copper	131.362	2.0	125.000	20.3431	88.8	56 - 127			
Molybdenum	105.295	1.0	125.000	4.55665	80.6	62 - 108			
Nickel	116.101	1.0	125.000	24.4458	73.3	42 - 127			
Selenium	93.1926	1.0	125.000	ND	74.6	58 - 105			
Silver	106.176	1.0	125.000	ND	84.9	63 - 113			
Thallium	91.3720	1.0	125.000	ND	73.1	53 - 110			
Vanadium	143.630	1.0	125.000	38.9387	83.8	66 - 112			
Zinc	167.000	1.0	125.000	72.4699	75.6	28 - 137			
Matrix Spike Dup (B4K0180-MSD1)		**Source: 1403213-44**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	78.8827	2.0	125.000	ND	63.1	21 - 126	0.234	20	
Arsenic	108.002	1.0	125.000	6.77860	81.0	57 - 113	2.81	20	
Barium	225.924	1.0	125.000	124.656	81.0	29 - 146	0.911	20	
Beryllium	104.446	1.0	125.000	0.332469	83.3	65 - 110	1.72	20	
Cadmium	97.3466	1.0	125.000	1.83359	76.4	56 - 107	1.92	20	
Chromium	118.309	1.0	125.000	14.3760	83.1	49 - 127	1.52	20	
Cobalt	100.080	1.0	125.000	5.00530	76.1	57 - 112	1.49	20	
Copper	131.653	2.0	125.000	20.3431	89.0	56 - 127	0.221	20	
Molybdenum	108.368	1.0	125.000	4.55665	83.0	62 - 108	2.88	20	
Nickel	118.166	1.0	125.000	24.4458	75.0	42 - 127	1.76	20	
Selenium	97.2011	1.0	125.000	ND	77.8	58 - 105	4.21	20	
Silver	106.365	1.0	125.000	ND	85.1	63 - 113	0.177	20	
Thallium	94.4164	1.0	125.000	ND	75.5	53 - 110	3.28	20	
Vanadium	142.959	1.0	125.000	38.9387	83.2	66 - 112	0.468	20	
Zinc	169.607	1.0	125.000	72.4699	77.7	28 - 137	1.55	20	

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TCLP Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0191 - EPA 3010A_SOIL									
Blank (B4K0191-BLK1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.002150	0.050			NR				J
Blank (B4K0191-BLK2)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.001891	0.050			NR				J
LCS (B4K0191-BS1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.971492	0.050	1.00000		97.1	80 - 120			
Duplicate (B4K0191-DUP1)		**Source: 1403213-46**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.004299	0.050		0.004178	NR		2.85	20	J
Duplicate (B4K0191-DUP2)		**Source: 1403204-24**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.039859	0.050		0.040517	NR		1.64	20	J
Matrix Spike (B4K0191-MS1)		**Source: 1403213-46**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	2.26938	0.050	2.50000	0.004178	90.6	77 - 121			
Matrix Spike (B4K0191-MS2)		**Source: 1403204-24**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	2.52449	0.050	2.50000	0.040517	99.4	77 - 121			
Matrix Spike Dup (B4K0191-MSD1)		**Source: 1403213-46**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	2.33335	0.050	2.50000	0.004178	93.2	77 - 121	2.78	20	
Batch B4K0192 - EPA 3010A_SOIL									
Blank (B4K0192-BLK1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.001975	0.050			NR				J
Blank (B4K0192-BLK2)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.001806	0.050			NR				J
LCS (B4K0192-BS1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.966050	0.050	1.00000		96.6	80 - 120			
Duplicate (B4K0192-DUP1)		**Source: 1403233-15**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.110313	0.050		0.097296	NR		12.5	20	
Matrix Spike (B4K0192-MS1)		**Source: 1403233-15**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	2.44703	0.050	2.50000	0.097296	94.0	77 - 121			
Matrix Spike Dup (B4K0192-MSD1)		**Source: 1403233-15**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	2.46309	0.050	2.50000	0.097296	94.6	77 - 121	0.654	20	

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STLC Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0158 - STLC Extraction									
Blank (B4K0158-BLK1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
Blank (B4K0158-BLK2)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
LCS (B4K0158-BS1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	1.99810	1.0	2.00000		99.9	80 - 120			
Duplicate (B4K0158-DUP1)		**Source: 1403213-64**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	1.11241	1.0		0.490783	NR		77.5	20	R
Duplicate (B4K0158-DUP2)		**Source: 1403213-39**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	0.054906	1.0		0.042893	NR		24.6	20	R, J
Matrix Spike (B4K0158-MS1)		**Source: 1403213-64**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.87268	1.0	2.50000	0.490783	95.3	44 - 130			
Matrix Spike (B4K0158-MS2)		**Source: 1403213-39**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.41554	1.0	2.50000	0.042893	94.9	44 - 130			
Matrix Spike Dup (B4K0158-MSD1)		**Source: 1403213-64**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.84423	1.0	2.50000	0.490783	94.1	44 - 130	0.995	20	
Batch B4K0159 - STLC Extraction									
Blank (B4K0159-BLK1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
LCS (B4K0159-BS1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.13666	1.0	2.00000		107	80 - 120			
Duplicate (B4K0159-DUP1)		**Source: 1403233-15**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	7.78466	1.0		10.2021	NR		26.9	20	R
Matrix Spike (B4K0159-MS1)		**Source: 1403233-15**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	12.0743	1.0	2.50000	10.2021	74.9	44 - 130			
Matrix Spike Dup (B4K0159-MSD1)		**Source: 1403233-15**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	12.4475	1.0	2.50000	10.2021	89.8	44 - 130	3.04	20	
Batch S4K0094 - B4K0125									
Instrument Blank (S4K0094-IBL1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	ND	0.050			NR				

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STLC DI Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0161 - STLC DI Extraction									
Blank (B4K0161-BLK1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
Blank (B4K0161-BLK2)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
LCS (B4K0161-BS1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.17536	1.0	2.00000		109	80 - 120			
Duplicate (B4K0161-DUP1)		**Source: 1403213-44**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	0.027512	1.0		ND	NR			20	J
Duplicate (B4K0161-DUP2)		**Source: 1403204-33**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	0.083385	1.0		0.090924	NR		8.65	20	J
Matrix Spike (B4K0161-MS1)		**Source: 1403213-44**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.64543	1.0	2.50000	ND	106	70 - 130			
Matrix Spike (B4K0161-MS2)		**Source: 1403204-33**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.66180	1.0	2.50000	0.090924	103	70 - 130			
Matrix Spike Dup (B4K0161-MSD1)		**Source: 1403213-44**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.59980	1.0	2.50000	ND	104	70 - 130	1.74	20	
Batch B4K0162 - STLC DI Extraction									
Blank (B4K0162-BLK1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
Blank (B4K0162-BLK2)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
LCS (B4K0162-BS1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.14357	1.0	2.00000		107	80 - 120			
Duplicate (B4K0162-DUP1)		**Source: 1403233-15**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	0.134307	1.0		0.141701	NR		5.36	20	J
Duplicate (B4K0162-DUP2)		**Source: 1403213-69**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0		ND	NR			20	
Matrix Spike (B4K0162-MS1)		**Source: 1403233-15**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.65383	1.0	2.50000	0.141701	100	70 - 130			
Matrix Spike (B4K0162-MS2)		**Source: 1403213-69**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.51758	1.0	2.50000	ND	101	70 - 130			
Matrix Spike Dup (B4K0162-MSD1)		**Source: 1403233-15**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.61454	1.0	2.50000	0.141701	98.9	70 - 130	1.49	20	

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Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0181 - EPA 7471									
Blank (B4K0181-BLK1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	ND	0.10			NR				
LCS (B4K0181-BS1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.777395	0.10	0.833333		93.3	80 - 120			
Duplicate (B4K0181-DUP1)		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.035887	0.10		0.032430	NR		10.1	20	J
Matrix Spike (B4K0181-MS1)		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.815269	0.10	0.833333	0.032430	93.9	70 - 130			
Matrix Spike Dup (B4K0181-MSD1)		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.801367	0.10	0.819672	0.032430	93.8	70 - 130	1.72	20	
Post Spike (B4K0181-PS1)		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.005622		5.00000E-3	0.000389	105	85 - 115			
Batch B4K0182 - EPA 7471									
Blank (B4K0182-BLK1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	ND	0.10			NR				
LCS (B4K0182-BS1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.729391	0.10	0.833333		87.5	80 - 120			
Duplicate (B4K0182-DUP1)		**Source: 1403213-44**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.041579	0.10		0.040681	NR		2.18	20	J
Matrix Spike (B4K0182-MS1)		**Source: 1403213-44**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.776329	0.10	0.833333	0.040681	88.3	70 - 130			
Matrix Spike Dup (B4K0182-MSD1)		**Source: 1403213-44**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.812067	0.10	0.833333	0.040681	92.6	70 - 130	4.50	20	
Post Spike (B4K0182-PS1)		**Source: 1403213-44**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.005749		5.00000E-3	0.000488	105	85 - 115			
Batch S4K0102 - B4K0181									
Instrument Blank (S4K0102-IBL1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	ND	0.10			NR				

DRAFT REPORT

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 11/11/2014

pH by EPA 9045C - Quality Control

Analyte	Result (pH Units)	PQL (pH Units)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0101 - Prep_WC_1_S									
Duplicate (B4K0101-DUP1)		**Source: 1403233-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
pH	7.60000	0.10		7.67000	NR		0.917	20	

DRAFT REPORT

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	11/11/2014

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
J	Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

DRAFT REPORT

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

CHAIN OF CUSTODY

Stantec
25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address: Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	**Project Manager:** ANNE PEREZ **E-Mail Address:** anne.perez@stantec.com **Sampler Name:** MFB/MAB/JGS/MC **Project Number:** 185831013 **Project:** CalTrans TO13
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	

Turn Around Time: Normal TAT: X; 72 Hour: ; 48 Hour: ; 24 Hour: ; Same Day: ; Other:

Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3020	STLC Lead (Cal-WET-DI) 3020	TCLP Lead 1311	pH 9045C	TITLE 22 METALS					Special Instructions
1255- EBQC - 2	Water	—	1	10.22.14	0710							X					Lab filter + preserve
1255- EBQC - 3	Water	—	1		0712							X					Lab filter & preserve
1255- 105 - 1	Soil	1	1		0730		X	X	X								
1255- 105 - 3					0741												
1255- 106 - 1					0732			X	X								
1255- 106 - 3					0744												
1255- 102 - 12					0818												
1255- 102 - 15					0828												
1255- 103 - 9					0856												
1255- 104 - 9					0944												
1255- 104 - 12					0947												
1255- 104 - 15					0952												
1255- 105 - 9					1012												
1255- 105 - 12					1014												
1255- 105 - 15	↓	↓	↓	↓	1017		↓										

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved prior to analysis.

Relinquished By	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645		10/23/14	1645
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1850	ATL	10/23/14	1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec
25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address: Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	**Project Manager:** ANNE PEREZ **E-Mail Address:** anne.perez@stantec.com **Sampler Name:** MFB/MAB/IGS/MC **Project Number:** 185831013 **Project:** CalTrans TO13
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	

Turn Around Time: Normal TAT: X; 72 Hour: ; 48 Hour: ; 24 Hour: ; Same Day: ; Other:

Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS					Special Instructions
1255- 107 - 1	Soil	1	1	10.22.14	0834		X										
1255- 108 - 1					0832												
1255- 108 - 3					0903												
1255- 108 - 5					0916												
1255- 109 - 1					0935												
1255- 109 - 3					0955												
1255- 109 - 5					1016												
1255- 106 - 9					1103												
1255- 112 - 1					1114												
1255- 112 - 3					1116												
1255- 112 - 5					1119												
1255- 110 - 1					0953												
1255- 110 - 3					1120												
1255- 110 - 5					1132			X	X								
1255- 107 - 3					1140												

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved prior to analysis.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645		10/23/14	1645
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1850	AR	10/23/14	1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	ANNE PEREZ
	E-Mail Address: anne.perez@stantec.com
	Sampler Name: MFB/MAB/JGS/MC
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	Project Number: 185831013
	Project: CalTrans TO13

Analysis Required

Turn Around Time:
- Normal TAT: X
- 72 Hour:
- 48 Hour:
- 24 Hour:
- Same Day:
- Other:

Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS	Special Instructions
1255- 107 - 5	Soil	1	1	10/22/14	1142		X						
1255- 113 - 1					1228			X	X	X	X	X	
1255- 113 - 3					1234			X	X	X	X	X	
1255- 114 - 1					1215			X	X	X	X	X	
1255- 114 - 3					1250								
1255- 114 - 5					1252								
1255- 114 - 8					1255								
1255- 114 - 11					1256								
1255- 115 - 1					1218			X	X	X			
1255- 115 - 3					1230			X	X	X			
1255- 115 - 5					1314								
1255- 115 - 8					1315								
1255- 115 - 11					1318								
1255- 116 - 1					1255			X	X	X	[redacted]		
1255- 117 - 1	V	V	V	V	1320		V	X	X	X	X	X	

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved prior to analysis.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645	[illegible]	10/23/14	1645
Relinquished By + Company Name: [illegible]	Date 10/23/14	Time 1850	Received By + Company Name: [illegible] ATL	Date 10/23/14	Time 1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address: Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	**Project Manager:** ANNE PEREZ **E-Mail Address:** anne.perez@stantec.com **Sampler Name:** MFB/MAB/JGS/MC **Project Number:** 185831013 **Project:** CalTrans TO13
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	

Turn Around Time: Normal TAT: X; 72 Hour: ; 48 Hour: ; 24 Hour: ; Same Day: ; Other:

Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	Analysis Required: TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS	Special Instructions
1255- 117 - 3	Soil		1	10/22/14	1345		X	X	X	X	X	X	
1255- 117 - 5					1346								
1255- 117 - 8					1347								
1255- 117 - 11					1350								
1255- 118 - 1					1220			X	X	X			
1255- 118 - 3					1402			X	X	X			
1255- 118 - 5					1405								
1255- 118 - 8					1407								
1255- 118 - 11					1410								
1255- 159 - 1					1434								
1255- 159 - 3					1504								
1255- 159 - 5					1508								
1255- 159 - 8					1510								
1255- 160 - 1					1411			X	X				
1255- 160 - 3					1424			X	X				

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved prior to analysis.

	Date	Time		Date	Time
Relinquished By:	10/22/14	1645	Received By + Company Name: Stantec/ATL	10/23/14	1645
Relinquished By + Company Name: Stantec/ATL	10/23/14	1850	Received By + Company Name: ATL	10/23/14	1850
Relinquished By + Company Name:			Received By + Company Name:		

CHAIN OF CUSTODY

Stantec
25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	ANNE PEREZ
	E-Mail Address: anne.perez@stantec.com
	Sampler Name: MFB/MAB/JGS/MC
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	Project Number: 185831013
	Project: CalTrans TO13

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Col-WET-Citric) 3010	STLC Lead (Col-WET-DI) 3010	TCLP Lead 3311	pH 9045C	Title 22 METALS					Special Instructions
1255-160-5	Soil	1	1	10/22/14	1455		X										
1255-160-8					1450												
1255-161-1					1410			X	X								
1255-161-3					1430			X	X	X	X	X					
1255-161-5					1435												
1255-161-8					1440												
1255-162-1					1511												
1255-162-3					1548			X	X	X							
1255-162-5					1552			X	X								
1255-162-8					1556												
1255-163-1					1501			X	X								
1255-163-3					1530			X	X								
1255-163-5					1535												
1255-163-8					1540												
1255-164-1					1440			X	X								

Turn Around Time:
Normal TAT: X
72 Hour:
48 Hour:
24 Hour:
Same Day:
Other:
Sample Temp °C:

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:
All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved prior to analysis.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645		10/23/14	1645
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1850		10/23/14	1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address: Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	**Project Manager:** ANNE PEREZ **E-Mail Address:** anne.perez@stantec.com **Sampler Name:** MFB/MAB/JGS/MC **Project Number:** 185831013 **Project:** CalTrans TO13
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	

Turn Around Time: Normal TAT: X; 72 Hour: ; 48 Hour: ; 24 Hour: ; Same Day: ; Other:

Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	Analysis Required: TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 6010	STLC Lead (Cal-WET-DI) 6010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS	Special Instructions
1255-164 - 3	Soil	1	1	10/22/14	1515		X						
1255-164 - 5	"	"	"	"	1518		"						
1255-164 - 8	"	"	"	"	1552		"						
1255-101 - 6.5								X	X				
1255-111 - 5								X	X				
1255- -													
1255- -													
1255- -													
1255- -													
1255- -													
1255- -													
1255- -													
1255- -													
1255- -													
1255- -													

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions: **All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved, prior to analysis.**

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645		10/23/14	10/23/14 1685
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
STANTEC	10/23/14	1850	ATL	10/23/14	1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

October 31, 2014

Anne Perez
Stantec
25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 255-8202
Fax:(909) 335-6120

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1403233

Client Reference : CalTrans TO13 07A3321, 185831013

Enclosed are the results for sample(s) received on October 23, 2014 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
1255-EBQC-4	1403233-01	Water	10/23/14 7:00	10/23/14 16:45
1255-143-1	1403233-02	Soil	10/23/14 8:00	10/23/14 16:45
1255-144-1	1403233-03	Soil	10/23/14 7:51	10/23/14 16:45
1255-145-1	1403233-04	Soil	10/23/14 7:45	10/23/14 16:45
1255-146-1	1403233-05	Soil	10/23/14 7:40	10/23/14 16:45
1255-147-1	1403233-06	Soil	10/23/14 7:07	10/23/14 16:45
1255-148-1	1403233-07	Soil	10/23/14 7:13	10/23/14 16:45
1255-149-1	1403233-08	Soil	10/23/14 7:21	10/23/14 16:45
1255-150-1	1403233-09	Soil	10/23/14 7:25	10/23/14 16:45
1255-151-1	1403233-10	Soil	10/23/14 9:36	10/23/14 16:45
1255-152-1	1403233-11	Soil	10/23/14 9:38	10/23/14 16:45
1255-153-1	1403233-12	Soil	10/23/14 9:43	10/23/14 16:45
1255-154-1	1403233-13	Soil	10/23/14 9:52	10/23/14 16:45
1255-155-1	1403233-14	Soil	10/23/14 9:14	10/23/14 16:45
1255-156-1	1403233-15	Soil	10/23/14 9:00	10/23/14 16:45
1255-157-1	1403233-16	Soil	10/23/14 8:53	10/23/14 16:45
1255-158-1	1403233-17	Soil	10/23/14 8:48	10/23/14 16:45

CASE NARRATIVE

Results were J-flagged. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-EBQC-4
Lab ID: 1403233-01

Title 22 Metals by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	0.010	0.0026	1	B4J0760	10/29/2014	10/30/14 11:50	
Arsenic	ND	0.010	0.0024	1	B4J0760	10/29/2014	10/30/14 11:50	
Barium	**0.0007**	0.0030	0.0004	1	B4J0760	10/29/2014	10/30/14 11:50	J
Beryllium	ND	0.0030	0.0002	1	B4J0760	10/29/2014	10/30/14 11:49	
Cadmium	**0.0002**	0.0030	0.0001	1	B4J0760	10/29/2014	10/30/14 11:50	J
Chromium	**0.0005**	0.0030	0.0003	1	B4J0760	10/29/2014	10/30/14 11:50	J
Cobalt	ND	0.0030	0.0004	1	B4J0760	10/29/2014	10/30/14 11:50	
Copper	ND	0.0050	0.0009	1	B4J0760	10/29/2014	10/30/14 11:50	
Lead	ND	0.0050	0.0014	1	B4J0760	10/29/2014	10/30/14 11:50	
Molybdenum	ND	0.0050	0.0005	1	B4J0760	10/29/2014	10/30/14 11:50	
Nickel	**0.0005**	0.0050	0.0004	1	B4J0760	10/29/2014	10/30/14 11:50	J
Selenium	ND	0.010	0.0040	1	B4J0760	10/29/2014	10/30/14 11:50	
Silver	**0.0013**	0.0030	0.0006	1	B4J0760	10/29/2014	10/30/14 11:50	J
Thallium	ND	0.015	0.0026	1	B4J0760	10/29/2014	10/30/14 11:50	
Vanadium	ND	0.0030	0.0013	1	B4J0760	10/29/2014	10/30/14 11:50	
Zinc	**0.0076**	0.010	0.0017	1	B4J0760	10/29/2014	10/30/14 11:50	J

Mercury by AA (Cold Vapor) EPA 7470A

Analyst: SB

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.20	0.11	1	B4J0761	10/29/2014	10/29/14 17:12	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-143-1

Lab ID: 1403233-02

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**26**	1.0	0.07	1	B4J0790	10/29/2014	10/31/14 11:41	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-144-1

Lab ID: 1403233-03

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**31**	1.0	0.07	1	B4J0790	10/29/2014	10/31/14 11:42	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-145-1

Lab ID: 1403233-04

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**12**	1.0	0.07	1	B4J0790	10/29/2014	10/31/14 11:42	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-146-1

Lab ID: 1403233-05

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**21**	1.0	0.07	1	B4J0790	10/29/2014	10/31/14 11:43	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-147-1

Lab ID: 1403233-06

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**18**	1.0	0.07	1	B4J0790	10/29/2014	10/31/14 11:44	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-148-1

Lab ID: 1403233-07

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**12**	1.0	0.07	1	B4J0790	10/29/2014	10/31/14 11:45	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-149-1

Lab ID: 1403233-08

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**8.9**	1.0	0.07	1	B4J0790	10/29/2014	10/31/14 11:48	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-150-1

Lab ID: 1403233-09

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**25**	1.0	0.07	1	B4J0790	10/29/2014	10/31/14 11:48	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-151-1

Lab ID: 1403233-10

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**3.7**	1.0	0.07	1	B4J0790	10/29/2014	10/31/14 11:49	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-152-1

Lab ID: 1403233-11

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**5.4**	1.0	0.07	1	B4J0790	10/29/2014	10/31/14 11:51	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-153-1

Lab ID: 1403233-12

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**4.6**	1.0	0.07	1	B4J0790	10/29/2014	10/31/14 11:52	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-154-1

Lab ID: 1403233-13

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**13**	1.0	0.07	1	B4J0790	10/29/2014	10/31/14 11:53	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-155-1

Lab ID: 1403233-14

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**150**	1.0	0.07	1	B4J0790	10/29/2014	10/31/14 11:54	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Client Sample ID 1255-156-1

Lab ID: 1403233-15

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**190**	1.0	0.07	1	B4J0790	10/29/2014	10/31/14 11:54	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-157-1

Lab ID: 1403233-16

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**12**	1.0	0.07	1	B4J0790	10/29/2014	10/31/14 11:57	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Client Sample ID 1255-158-1

Lab ID: 1403233-17

Lead by ICP-AES EPA 6010B **Analyst: SB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	**16**	1.0	0.07	1	B4J0790	10/29/2014	10/31/14 11:58	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

QUALITY CONTROL SECTION

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0760 - EPA 3010A									
Blank (B4J0760-BLK1)				Prepared: 10/29/2014 Analyzed: 10/30/2014					
Antimony	ND	0.010			NR				
Arsenic	ND	0.010			NR				
Barium	0.000803	0.0030			NR				J
Beryllium	ND	0.0030			NR				
Cadmium	1.666E-4	0.0030			NR				J
Chromium	0.000337	0.0030			NR				J
Cobalt	ND	0.0030			NR				
Copper	ND	0.0050			NR				
Lead	ND	0.0050			NR				
Molybdenum	ND	0.0050			NR				
Nickel	0.000561	0.0050			NR				J
Selenium	0.004462	0.010			NR				J
Silver	0.000840	0.0030			NR				J
Thallium	ND	0.015			NR				
Vanadium	ND	0.0030			NR				
Zinc	0.003944	0.010			NR				J
LCS (B4J0760-BS1)				Prepared: 10/29/2014 Analyzed: 10/30/2014					
Antimony	0.988381	0.010	1.00000		98.8	80 - 120			
Arsenic	0.969234	0.010	1.00000		96.9	80 - 120			
Barium	1.02271	0.0030	1.00000		102	80 - 120			
Beryllium	1.03054	0.0030	1.00000		103	80 - 120			
Cadmium	0.962591	0.0030	1.00000		96.3	80 - 120			
Chromium	1.00714	0.0030	1.00000		101	80 - 120			
Cobalt	1.00146	0.0030	1.00000		100	80 - 120			
Copper	1.03248	0.0050	1.00000		103	80 - 120			
Lead	0.997492	0.0050	1.00000		99.7	80 - 120			
Molybdenum	0.970175	0.0050	1.00000		97.0	80 - 120			
Nickel	0.985497	0.0050	1.00000		98.5	80 - 120			
Selenium	0.943283	0.010	1.00000		94.3	80 - 120			
Silver	0.989894	0.0030	1.00000		99.0	80 - 120			
Thallium	1.02530	0.015	1.00000		103	80 - 120			
Vanadium	1.01770	0.0030	1.00000		102	80 - 120			
Zinc	0.937435	0.010	1.00000		93.7	80 - 120			
Duplicate (B4J0760-DUP1)		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/30/2014					
Antimony	ND	0.010		ND	NR			20	
Arsenic	ND	0.010		ND	NR			20	
Barium	0.000973	0.0030		0.001048	NR		7.41	20	J
Beryllium	ND	0.0030		ND	NR			20	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0760 - EPA 3010A (continued)									
Duplicate (B4J0760-DUP1) - Continued		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/30/2014					
Cadmium	0.000172	0.0030		0.000192	NR		11.0	20	J
Chromium	7.052E-4	0.0030		0.000657	NR		7.04	20	J
Cobalt	ND	0.0030		ND	NR			20	
Copper	ND	0.0050		ND	NR			20	
Lead	ND	0.0050		ND	NR			20	
Molybdenum	0.000478	0.0050		ND	NR			20	J
Nickel	ND	0.0050		0.000519	NR			20	
Selenium	ND	0.010		ND	NR			20	
Silver	0.001075	0.0030		0.001238	NR		14.1	20	J
Thallium	ND	0.015		ND	NR			20	
Vanadium	ND	0.0030		ND	NR			20	
Zinc	0.006447	0.010		5.3041E-3	NR		19.5	20	J
Matrix Spike (B4J0760-MS1)		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/30/2014					
Antimony	2.48840	0.010	2.50000	ND	99.5	78 - 121			
Arsenic	2.44634	0.010	2.50000	ND	97.9	78 - 124			
Barium	2.55146	0.0030	2.50000	0.001048	102	81 - 118			
Beryllium	2.63363	0.0030	2.50000	ND	105	87 - 119			
Cadmium	2.41461	0.0030	2.50000	0.000192	96.6	80 - 113			
Chromium	2.53199	0.0030	2.50000	0.000657	101	85 - 115			
Cobalt	2.49664	0.0030	2.50000	ND	99.9	83 - 113			
Copper	2.59389	0.0050	2.50000	ND	104	72 - 132			
Lead	2.44775	0.0050	2.50000	ND	97.9	77 - 121			
Molybdenum	2.48186	0.0050	2.50000	ND	99.3	82 - 111			
Nickel	2.48813	0.0050	2.50000	0.000519	99.5	80 - 114			
Selenium	2.40664	0.010	2.50000	ND	96.3	75 - 121			
Silver	2.57767	0.0030	2.50000	0.001238	103	84 - 116			
Thallium	2.55056	0.015	2.50000	ND	102	70 - 122			
Vanadium	2.57176	0.0030	2.50000	ND	103	85 - 114			
Zinc	2.37234	0.010	2.50000	5.3041E-3	94.7	70 - 123			
Matrix Spike Dup (B4J0760-MSD1)		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/30/2014					
Antimony	2.49123	0.010	2.50000	ND	99.6	78 - 121	0.114	20	
Arsenic	2.44795	0.010	2.50000	ND	97.9	78 - 124	0.0658	20	
Barium	2.54008	0.0030	2.50000	0.001048	102	81 - 118	0.447	20	
Beryllium	2.62516	0.0030	2.50000	ND	105	87 - 119	0.322	20	
Cadmium	2.40341	0.0030	2.50000	0.000192	96.1	80 - 113	0.465	20	
Chromium	2.51974	0.0030	2.50000	0.000657	101	85 - 115	0.485	20	
Cobalt	2.48480	0.0030	2.50000	ND	99.4	83 - 113	0.475	20	
Copper	2.58270	0.0050	2.50000	ND	103	72 - 132	0.432	20	
Lead	2.43254	0.0050	2.50000	ND	97.3	77 - 121	0.623	20	
Molybdenum	2.46917	0.0050	2.50000	ND	98.8	82 - 111	0.513	20	

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0760 - EPA 3010A (continued)									
Matrix Spike Dup (B4J0760-MSD1) - Continued		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/30/2014					
Nickel	2.47746	0.0050	2.50000	0.000519	99.1	80 - 114	0.430	20	
Selenium	2.41824	0.010	2.50000	ND	96.7	75 - 121	0.481	20	
Silver	2.56630	0.0030	2.50000	0.001238	103	84 - 116	0.442	20	
Thallium	2.55074	0.015	2.50000	ND	102	70 - 122	0.00706	20	
Vanadium	2.56168	0.0030	2.50000	ND	102	85 - 114	0.393	20	
Zinc	2.36027	0.010	2.50000	5.3041E-3	94.2	70 - 123	0.510	20	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Lead by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0790 - EPA 3050 Modified									
Blank (B4J0790-BLK1)				Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	ND	1.0			NR				
Blank (B4J0790-BLK2)				Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	0.207773	1.0			NR				J
LCS (B4J0790-BS1)				Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	48.8724	1.0	50.0000		97.7	80 - 120			
Duplicate (B4J0790-DUP1)		**Source: 1403233-17**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	18.8641	1.0		16.4843	NR		13.5	20	
Duplicate (B4J0790-DUP2)		**Source: 1403233-10**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	4.64493	1.0		3.67701	NR		23.3	20	R
Matrix Spike (B4J0790-MS1)		**Source: 1403233-17**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	220.997	1.0	250.000	16.4843	81.8	33 - 134			
Matrix Spike (B4J0790-MS2)		**Source: 1403233-10**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	221.660	1.0	250.000	3.67701	87.2	33 - 134			
Matrix Spike Dup (B4J0790-MSD1)		**Source: 1403233-17**		Prepared: 10/29/2014 Analyzed: 10/31/2014					
Lead	235.615	1.0	250.000	16.4843	87.7	33 - 134	6.40	20	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 10/31/2014

Mercury by AA (Cold Vapor) EPA 7470A - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4J0761 - EPA 245.1/7470									
Blank (B4J0761-BLK1)				Prepared: 10/29/2014 Analyzed: 10/29/2014					
Mercury	ND	0.20			NR				
LCS (B4J0761-BS1)				Prepared: 10/29/2014 Analyzed: 10/29/2014					
Mercury	10.3311	0.20	10.0000		103	80 - 120			
Duplicate (B4J0761-DUP1)		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/29/2014					
Mercury	ND	0.20		ND	NR			20	
Matrix Spike (B4J0761-MS1)		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/29/2014					
Mercury	10.4476	0.20	10.0000	ND	104	70 - 130			
Matrix Spike Dup (B4J0761-MSD1)		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/29/2014					
Mercury	10.4336	0.20	10.0000	ND	104	70 - 130	0.134	20	
Post Spike (B4J0761-PS1)		**Source: 1403204-04**		Prepared: 10/29/2014 Analyzed: 10/29/2014					
Mercury	5.12810		5.00000	-0.015628	103	85 - 115			

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	10/31/2014

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
J	Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	ANNE PEREZ
	E-Mail Address: anne.perez@stantec.com
	Sampler Name: MFB/MAB/JGS/MC
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	Project Number: 185831013
	Project: CalTrans TO13

Analysis Required

Turn Around Time: Normal TAT: X; 72 Hour: ; 48 Hour: ; 24 Hour: ; Same Day: ; Other:

Sample Temp °C:

	Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS					Special Instructions
1	1255- EBQC - 4	Water	1	1	10.23.14	0700							X					Lab filter & preserve
2	1255- 143 - 1	Soil				0800		X										
3	1255- 144 - 1					0751												
4	1255- 145 - 1					0745												
5	1255- 146 - 1					0740												
6	1255- 147 - 1					0707												
7	1255- 148 - 1					0713												
8	1255- 149 - 1					0721												
9	1255- 150 - 1					0725												
10	1255- 151 - 1					0936												
11	1255- 152 - 1					0938												
12	1255- 153 - 1					0943												
13	1255- 154 - 1					0952												
14	1255- 155 - 1					0914												
15	1255- 156 - 1					0900												

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved, prior to analysis.

Relinquished By	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1250		10/23/14	1250
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1645	ATL	10/23/14	1645
Relinquished By + Company Name: ATL	Date 10/23/14	Time 1850	Received By + Company Name: FedEx	Date 10/23/14	Time 1850

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CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	ANNE PEREZ
	E-Mail Address: anne.perez@stantec.com
	Sampler Name: MFB/MAB/JGS/MC
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	Project Number: 185831013
	Project: CalTrans TO13

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS				Special Instructions
1255- 157 - 1	Soil	1	1	10/23/14	0855		X									Lab filter & preserve
1255- 158 - 1	Soil	1	1	10/23/14	0848		X									
1255- -																
1255- -																
1255- -																
1255- -																
1255- -																
1255- -																
1255- -																
1255- -																
1255- -																
1255- -																
1255- -																
1255- -																
1255- -																

Analysis Required

Turn Around Time:
Normal TAT: X
72 Hour:
48 Hour:
24 Hour:
Same Day:
Other:

Sample Temp °C:

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:
All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "*EBQC*" samples are to be laboratory filtered and preserved, prior to analysis.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1250		10/23/14	1250
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1645	JGS/AP LPO	10/23/14	1645
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
			AP	10/23/14	1850

ADVANCED TECHNOLOGY LABORATORIES

November 11, 2014

Anne Perez
Stantec
25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 255-8202
Fax:(909) 335-6120

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1403233
Client Reference : CalTrans TO13 07A3321, 185831013

Enclosed are the results for sample(s) received on October 23, 2014 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 11/11/2014

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
1255-144-1	1403233-03	Soil	10/23/14 7:51	10/23/14 16:45
1255-155-1	1403233-14	Soil	10/23/14 9:14	10/23/14 16:45
1255-156-1	1403233-15	Soil	10/23/14 9:00	10/23/14 16:45

CASE NARRATIVE

Results were J-flagged. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
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Redlands , CA 92374	Reported : 11/11/2014

TCLP Metals by ICP-AES EPA 6010B

Analyte: Lead **Analyst: CB**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403233-14	1255-155-1	**0.019**	mg/L	0.050	0.0014	1	B4K0192	11/10/2014	11/10/14 17:00	J
1403233-15	1255-156-1	**0.097**	mg/L	0.050	0.0014	1	B4K0192	11/10/2014	11/10/14 15:22	

STLC Metals by ICP-AES by EPA 6010B

Analyte: Lead **Analyst: ICP**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403233-03	1255-144-1	**1.1**	mg/L	1.0	0.027	20	B4K0159	11/07/2014	11/10/14 16:44	
1403233-14	1255-155-1	**5.1**	mg/L	1.0	0.027	20	B4K0159	11/07/2014	11/10/14 16:48	
1403233-15	1255-156-1	**10**	mg/L	1.0	0.027	20	B4K0159	11/07/2014	11/10/14 16:59	

STLC DI Metals by ICP-AES by EPA 6010B

Analyte: Lead **Analyst: CB**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403233-03	1255-144-1	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 19:07	
1403233-14	1255-155-1	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 19:09	
1403233-15	1255-156-1	**0.14**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 19:11	J

Mercury by AA (Cold Vapor) EPA 7471A

Analyte: Mercury **Analyst: SB**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403233-14	1255-155-1	**0.05**	mg/kg	0.10	0.009	1	B4K0182	11/10/2014	11/10/14 18:45	J
1403233-15	1255-156-1	**0.03**	mg/kg	0.10	0.009	1	B4K0182	11/10/2014	11/10/14 18:47	J

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
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Redlands , CA 92374	Reported : 11/11/2014

pH by EPA 9045C

Analyte: pH **Analyst: LA**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403233-14	1255-155-1	**7.7**	pH Units	0.10	0.10	1	B4K0101	11/10/2014	11/10/14 15:45	
1403233-15	1255-156-1	**6.2**	pH Units	0.10	0.10	1	B4K0189	11/10/2014	11/10/14 15:49	

Client Sample ID 1255-155-1
Lab ID: 1403233-14

Title 22 Metals by ICP-AES EPA 6010B **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**0.52**	2.0	0.25	1	B4K0180	11/10/2014	11/10/14 20:10	J
Arsenic	**4.8**	1.0	0.19	1	B4K0180	11/10/2014	11/10/14 20:10	
Barium	**120**	1.0	0.14	1	B4K0180	11/10/2014	11/10/14 20:10	
Beryllium	**0.35**	1.0	0.04	1	B4K0180	11/10/2014	11/10/14 20:10	J
Cadmium	**1.1**	1.0	0.11	1	B4K0180	11/10/2014	11/10/14 20:10	
Chromium	**28**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:10	
Cobalt	**7.2**	1.0	0.15	1	B4K0180	11/10/2014	11/10/14 20:10	
Copper	**40**	2.0	0.05	1	B4K0180	11/10/2014	11/10/14 20:10	
Molybdenum	**2.4**	1.0	0.05	1	B4K0180	11/10/2014	11/10/14 20:10	
Nickel	**18**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:10	
Selenium	ND	1.0	0.15	1	B4K0180	11/10/2014	11/10/14 20:10	
Silver	ND	1.0	0.06	1	B4K0180	11/10/2014	11/10/14 20:10	
Thallium	ND	1.0	0.20	1	B4K0180	11/10/2014	11/10/14 20:10	
Vanadium	**31**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:10	
Zinc	**140**	1.0	0.11	1	B4K0180	11/10/2014	11/10/14 20:10	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
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Redlands , CA 92374	Reported : 11/11/2014

Client Sample ID 1255-156-1
Lab ID: 1403233-15

Title 22 Metals by ICP-AES EPA 6010B **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	**0.29**	2.0	0.25	1	B4K0180	11/10/2014	11/10/14 20:11	J
Arsenic	**2.1**	1.0	0.19	1	B4K0180	11/10/2014	11/10/14 20:11	
Barium	**120**	1.0	0.14	1	B4K0180	11/10/2014	11/10/14 20:11	
Beryllium	**0.31**	1.0	0.04	1	B4K0180	11/10/2014	11/10/14 20:11	J
Cadmium	**0.30**	1.0	0.11	1	B4K0180	11/10/2014	11/10/14 20:11	J
Chromium	**12**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:11	
Cobalt	**5.1**	1.0	0.15	1	B4K0180	11/10/2014	11/10/14 20:11	
Copper	**21**	2.0	0.05	1	B4K0180	11/10/2014	11/10/14 20:11	
Molybdenum	**1.7**	1.0	0.05	1	B4K0180	11/10/2014	11/10/14 20:11	
Nickel	**15**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:11	
Selenium	ND	1.0	0.15	1	B4K0180	11/10/2014	11/10/14 20:11	
Silver	ND	1.0	0.06	1	B4K0180	11/10/2014	11/10/14 20:11	
Thallium	ND	1.0	0.20	1	B4K0180	11/10/2014	11/10/14 20:11	
Vanadium	**20**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:11	
Zinc	**93**	1.0	0.11	1	B4K0180	11/10/2014	11/10/14 20:11	

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Stantec	Project Number : CalTrans TO13 07A3321, 185831013
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Redlands , CA 92374	Reported : 11/11/2014

QUALITY CONTROL SECTION

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0180 - EPA 3050B									
Blank (B4K0180-BLK1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	ND	2.0			NR				
Arsenic	ND	1.0			NR				
Barium	0.287807	1.0			NR				J
Beryllium	ND	1.0			NR				
Cadmium	ND	1.0			NR				
Chromium	0.117599	1.0			NR				J
Cobalt	ND	1.0			NR				
Copper	0.199394	2.0			NR				J
Molybdenum	ND	1.0			NR				
Nickel	0.152939	1.0			NR				J
Selenium	ND	1.0			NR				
Silver	ND	1.0			NR				
Thallium	ND	1.0			NR				
Vanadium	ND	1.0			NR				
Zinc	0.526518	1.0			NR				J
LCS (B4K0180-BS1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	45.8914	2.0	50.0000		91.8	80 - 120			
Arsenic	46.0757	1.0	50.0000		92.2	80 - 120			
Barium	49.3567	1.0	50.0000		98.7	80 - 120			
Beryllium	48.2840	1.0	50.0000		96.6	80 - 120			
Cadmium	48.6576	1.0	50.0000		97.3	80 - 120			
Chromium	50.3401	1.0	50.0000		101	80 - 120			
Cobalt	49.0086	1.0	50.0000		98.0	80 - 120			
Copper	49.1256	2.0	50.0000		98.3	80 - 120			
Molybdenum	49.4052	1.0	50.0000		98.8	80 - 120			
Nickel	48.0679	1.0	50.0000		96.1	80 - 120			
Selenium	42.8154	1.0	50.0000		85.6	80 - 120			
Silver	46.4504	1.0	50.0000		92.9	80 - 120			
Thallium	48.1233	1.0	50.0000		96.2	80 - 120			
Vanadium	47.2240	1.0	50.0000		94.4	80 - 120			
Zinc	48.6853	1.0	50.0000		97.4	80 - 120			
Duplicate (B4K0180-DUP1)		**Source: 1403213-44**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	ND	2.0		ND	NR			20	
Arsenic	7.97916	1.0		6.77860	NR		16.3	20	
Barium	133.478	1.0		124.656	NR		6.84	20	
Beryllium	0.380794	1.0		0.332469	NR		13.6	20	J
Cadmium	2.02094	1.0		1.83359	NR		9.72	20	
Chromium	14.9744	1.0		14.3760	NR		4.08	20	
Cobalt	5.02512	1.0		5.00530	NR		0.395	20	
Copper	21.7848	2.0		20.3431	NR		6.84	20	
Molybdenum	5.41556	1.0		4.55665	NR		17.2	20	

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Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0180 - EPA 3050B (continued)									
Duplicate (B4K0180-DUP1) - Continued		**Source: 1403213-44**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Nickel	24.6595	1.0		24.4458	NR		0.871	20	
Selenium	ND	1.0		ND	NR			20	
Silver	ND	1.0		ND	NR			20	
Thallium	ND	1.0		ND	NR			20	
Vanadium	42.2295	1.0		38.9387	NR		8.11	20	
Zinc	76.5907	1.0		72.4699	NR		5.53	20	
Matrix Spike (B4K0180-MS1)		**Source: 1403213-44**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	78.6982	2.0	125.000	ND	63.0	21 - 126			
Arsenic	105.006	1.0	125.000	6.77860	78.6	57 - 113			
Barium	227.991	1.0	125.000	124.656	82.7	29 - 146			
Beryllium	102.668	1.0	125.000	0.332469	81.9	65 - 110			
Cadmium	95.4996	1.0	125.000	1.83359	74.9	56 - 107			
Chromium	116.519	1.0	125.000	14.3760	81.7	49 - 127			
Cobalt	98.6000	1.0	125.000	5.00530	74.9	57 - 112			
Copper	131.362	2.0	125.000	20.3431	88.8	56 - 127			
Molybdenum	105.295	1.0	125.000	4.55665	80.6	62 - 108			
Nickel	116.101	1.0	125.000	24.4458	73.3	42 - 127			
Selenium	93.1926	1.0	125.000	ND	74.6	58 - 105			
Silver	106.176	1.0	125.000	ND	84.9	63 - 113			
Thallium	91.3720	1.0	125.000	ND	73.1	53 - 110			
Vanadium	143.630	1.0	125.000	38.9387	83.8	66 - 112			
Zinc	167.000	1.0	125.000	72.4699	75.6	28 - 137			
Matrix Spike Dup (B4K0180-MSD1)		**Source: 1403213-44**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	78.8827	2.0	125.000	ND	63.1	21 - 126	0.234	20	
Arsenic	108.002	1.0	125.000	6.77860	81.0	57 - 113	2.81	20	
Barium	225.924	1.0	125.000	124.656	81.0	29 - 146	0.911	20	
Beryllium	104.446	1.0	125.000	0.332469	83.3	65 - 110	1.72	20	
Cadmium	97.3466	1.0	125.000	1.83359	76.4	56 - 107	1.92	20	
Chromium	118.309	1.0	125.000	14.3760	83.1	49 - 127	1.52	20	
Cobalt	100.080	1.0	125.000	5.00530	76.1	57 - 112	1.49	20	
Copper	131.653	2.0	125.000	20.3431	89.0	56 - 127	0.221	20	
Molybdenum	108.368	1.0	125.000	4.55665	83.0	62 - 108	2.88	20	
Nickel	118.166	1.0	125.000	24.4458	75.0	42 - 127	1.76	20	
Selenium	97.2011	1.0	125.000	ND	77.8	58 - 105	4.21	20	
Silver	106.365	1.0	125.000	ND	85.1	63 - 113	0.177	20	
Thallium	94.4164	1.0	125.000	ND	75.5	53 - 110	3.28	20	
Vanadium	142.959	1.0	125.000	38.9387	83.2	66 - 112	0.468	20	
Zinc	169.607	1.0	125.000	72.4699	77.7	28 - 137	1.55	20	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
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Redlands , CA 92374	Reported : 11/11/2014

TCLP Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0192 - EPA 3010A_SOIL									
Blank (B4K0192-BLK1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.001975	0.050			NR				J
Blank (B4K0192-BLK2)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.001806	0.050			NR				J
LCS (B4K0192-BS1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.966050	0.050	1.00000		96.6	80 - 120			
Duplicate (B4K0192-DUP1)		**Source: 1403233-15**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.110313	0.050		0.097296	NR		12.5	20	
Matrix Spike (B4K0192-MS1)		**Source: 1403233-15**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	2.44703	0.050	2.50000	0.097296	94.0	77 - 121			
Matrix Spike Dup (B4K0192-MSD1)		**Source: 1403233-15**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	2.46309	0.050	2.50000	0.097296	94.6	77 - 121	0.654	20	

Certificate of Analysis

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Redlands , CA 92374	Reported : 11/11/2014

STLC Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0159 - STLC Extraction									
Blank (B4K0159-BLK1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
LCS (B4K0159-BS1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.13666	1.0	2.00000		107	80 - 120			
Duplicate (B4K0159-DUP1)		**Source: 1403233-15**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	7.78466	1.0		10.2021	NR		26.9	20	R
Matrix Spike (B4K0159-MS1)		**Source: 1403233-15**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	12.0743	1.0	2.50000	10.2021	74.9	44 - 130			
Matrix Spike Dup (B4K0159-MSD1)		**Source: 1403233-15**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	12.4475	1.0	2.50000	10.2021	89.8	44 - 130	3.04	20	
Batch S4K0094 - B4K0125									
Instrument Blank (S4K0094-IBL1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	ND	0.050			NR				

Certificate of Analysis

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Redlands , CA 92374	Reported : 11/11/2014

STLC DI Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0162 - STLC DI Extraction									
Blank (B4K0162-BLK1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
Blank (B4K0162-BLK2)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
LCS (B4K0162-BS1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.14357	1.0	2.00000		107	80 - 120			
Duplicate (B4K0162-DUP1)		**Source: 1403233-15**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	0.134307	1.0		0.141701	NR		5.36	20	J
Duplicate (B4K0162-DUP2)		**Source: 1403213-69**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0		ND	NR			20	
Matrix Spike (B4K0162-MS1)		**Source: 1403233-15**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.65383	1.0	2.50000	0.141701	100	70 - 130			
Matrix Spike (B4K0162-MS2)		**Source: 1403213-69**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.51758	1.0	2.50000	ND	101	70 - 130			
Matrix Spike Dup (B4K0162-MSD1)		**Source: 1403233-15**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.61454	1.0	2.50000	0.141701	98.9	70 - 130	1.49	20	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
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Redlands , CA 92374	Reported : 11/11/2014

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0182 - EPA 7471									
Blank (B4K0182-BLK1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	ND	0.10			NR				
LCS (B4K0182-BS1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.729391	0.10	0.833333		87.5	80 - 120			
Duplicate (B4K0182-DUP1)		**Source: 1403213-44**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.041579	0.10		0.040681	NR		2.18	20	J
Matrix Spike (B4K0182-MS1)		**Source: 1403213-44**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.776329	0.10	0.833333	0.040681	88.3	70 - 130			
Matrix Spike Dup (B4K0182-MSD1)		**Source: 1403213-44**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.812067	0.10	0.833333	0.040681	92.6	70 - 130	4.50	20	
Post Spike (B4K0182-PS1)		**Source: 1403213-44**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.005749		5.00000E-3	0.000488	105	85 - 115			
Batch S4K0102 - B4K0181									
Instrument Blank (S4K0102-IBL1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	ND	0.10			NR				

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 11/11/2014

pH by EPA 9045C - Quality Control

Analyte	Result (pH Units)	PQL (pH Units)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0101 - Prep_WC_1_S									
Duplicate (B4K0101-DUP1)		**Source: 1403233-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
pH	7.60000	0.10		7.67000	NR		0.917	20	
Batch B4K0189 - Prep_WC_1_S									
Duplicate (B4K0189-DUP1)		**Source: 1403233-15**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
pH	6.34000	0.10		6.17000	NR		2.72	20	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	11/11/2014

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
J	Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Page 1 of 2

Client Name/Address: Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	**Project Manager:** ANNE PEREZ **E-Mail Address:** anne.perez@stantec.com **Sampler Name:** MFB/MAB/JGS/MC **Project Number:** 185831013 **Project:** CalTrans TO13
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	

Turn Around Time: Normal TAT: X; 72 Hour: ; 48 Hour: ; 24 Hour: ; Same Day: ; Other:

Sample Temp °C:

NO	Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-SMM) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS	Special Instructions
1	1255- EBQC - 4	Water	1	1	10.23.14	0700							X	Lab filter + preserve
2	1255- 143 - 1	Soil				0800		X						
3	1255- 144 - 1					0757			X	X				
4	1255- 145 - 1					0745								
5	1255- 146 - 1					0740								
6	1255- 147 - 1					0707								
7	1255- 148 - 1					0713								
8	1255- 149 - 1					0721								
9	1255- 150 - 1					0725								
10	1255- 151 - 1					0936								
11	1255- 152 - 1					0938								
12	1255- 153 - 1					0943								
13	1255- 154 - 1					0952								
14	1255- 155 - 1					0914			X	X	X	X	X	
15	1255- 156 - 1		↓	↓	↓	0900		↓	X	X	X	X	X	

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions: All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved, prior to analysis.

Relinquished By	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1250		10/23/14	1250
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1645	ATL/ARCO	10/23/14	1645
Relinquished By + Company Name: ATL/ARCO	Date 10/23/14	Time 1850	Received By + Company Name: Fedex	Date 10/23/14	Time 1850

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Page 14 of 15

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	ANNE PEREZ
	E-Mail Address: anne.perez@stantec.com
	Sampler Name: MFB/MAB/JGS/MC
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	Project Number: 185831013
	Project: CalTrans TO13

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS				
1255- 157 - 1	Soil	1	1	10/23/14	0853		X									
1255- 158 - 1	Soil	1	1	10/23/14	0848		X									
1255- -																
1255- -																
1255- -																
1255- -																
1255- -																
1255- -																
1255- -																
1255- -																
1255- -																
1255- -																
1255- -																
1255- -																
1255- -																

Analysis Required

Turn Around Time:
Normal TAT: X
72 Hour:
48 Hour:
24 Hour:
Same Day:
Other:

Sample Temp °C:

Special Instructions: Lab filter & preserve

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:
All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved, prior to analysis.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1250		10/23/14	1250
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1645		10/23/14	1645
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
				10/23/14	1850

ADVANCED TECHNOLOGY LABORATORIES

December 29, 2014

Anne Perez
Stantec
25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 255-8202
Fax:(909) 335-6120

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1403204
Client Reference : CalTrans TO13 07A3321, 185831013

Enclosed are the results for sample(s) received on October 22, 2014 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	12/29/2014

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
1255-141-1	1403204-33	Soil	10/21/14 14:38	10/22/14 13:55

CASE NARRATIVE

Sample Receiving/General Comments:

Documentation pertaining to additional analyses/change order available upon request.

Results were J-flagged. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	12/29/2014

Lead by ICP-AES EPA 6010B

Analyte: Lead **Analyst: RR**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403204-33	1255-141-1	**53**	mg/kg	1.0	0.07	1	B4L0696	12/26/2014	12/26/14 11:55	

STLC Metals by ICP-AES by EPA 6010B

Analyte: Lead **Analyst: SB**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403204-33	1255-141-1	**3.4**	mg/L	1.0	0.027	20	B4L0730	12/26/2014	12/29/14 10:16	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 12/29/2014

QUALITY CONTROL SECTION

Lead by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4L0696 - EPA 3050 Modified_S									
Blank (B4L0696-BLK1)					Prepared: 12/26/2014 Analyzed: 12/26/2014				
Lead	0.199617	1.0			NR				J
Blank (B4L0696-BLK2)					Prepared: 12/26/2014 Analyzed: 12/26/2014				
Lead	ND	1.0			NR				
LCS (B4L0696-BS1)					Prepared: 12/26/2014 Analyzed: 12/26/2014				
Lead	49.0074	1.0	50.0000		98.0	80 - 120			
Duplicate (B4L0696-DUP1)		**Source: 1403213-71RE1**			Prepared: 12/26/2014 Analyzed: 12/26/2014				
Lead	81.0724	1.0		48.0288	NR		51.2	20	R
Duplicate (B4L0696-DUP2)		**Source: 1403213-51RE1**			Prepared: 12/26/2014 Analyzed: 12/26/2014				
Lead	83.9868	1.0		80.6852	NR		4.01	20	
Matrix Spike (B4L0696-MS1)		**Source: 1403213-71RE1**			Prepared: 12/26/2014 Analyzed: 12/26/2014				
Lead	241.040	1.0	250.000	48.0288	77.2	33 - 134			
Matrix Spike (B4L0696-MS2)		**Source: 1403213-51RE1**			Prepared: 12/26/2014 Analyzed: 12/26/2014				
Lead	267.678	1.0	250.000	80.6852	74.8	33 - 134			
Matrix Spike Dup (B4L0696-MSD1)		**Source: 1403213-71RE1**			Prepared: 12/26/2014 Analyzed: 12/26/2014				
Lead	250.941	1.0	250.000	48.0288	81.2	33 - 134	4.02	20	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 12/29/2014

STLC Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4L0730 - STLC_S Extraction									
Blank (B4L0730-BLK1)					Prepared: 12/26/2014 Analyzed: 12/29/2014				
Lead	ND	1.0			NR				
Blank (B4L0730-BLK2)					Prepared: 12/26/2014 Analyzed: 12/29/2014				
Lead	ND	1.0			NR				
LCS (B4L0730-BS1)					Prepared: 12/26/2014 Analyzed: 12/29/2014				
Lead	2.02939		2.00000		101	80 - 120			
Duplicate (B4L0730-DUP1)		**Source: 1403887-13**			Prepared: 12/26/2014 Analyzed: 12/29/2014				
Lead	12.6021	1.0		11.9852	NR		5.02	20	
Duplicate (B4L0730-DUP2)		**Source: 1403213-51RE1**			Prepared: 12/26/2014 Analyzed: 12/29/2014				
Lead	1.72509	1.0		1.08083	NR		45.9	20	R
Matrix Spike (B4L0730-MS1)		**Source: 1403887-13**			Prepared: 12/26/2014 Analyzed: 12/29/2014				
Lead	13.9149		2.50000	11.9852	77.2	44 - 130			
Matrix Spike (B4L0730-MS2)		**Source: 1403213-51RE1**			Prepared: 12/26/2014 Analyzed: 12/29/2014				
Lead	3.43108		2.50000	1.08083	94.0	44 - 130			
Matrix Spike Dup (B4L0730-MSD1)		**Source: 1403887-13**			Prepared: 12/26/2014 Analyzed: 12/29/2014				
Lead	13.9950		2.50000	11.9852	80.4	44 - 130	0.574	20	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13 07A3321, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	12/29/2014

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
J	Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address: Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	**Project Manager:** ANNE PEREZ **E-Mail Address:** anne.perez@stantec.com **Sampler Name:** MFB/MAB/JGS/MC **Project Number:** 185831013 **Project:** CalTrans TO13 07A3321
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	

Turn Around Time: Normal TAT: X; 72 Hour: ; 48 Hour: ; 24 Hour: ; Same Day: ; Other:

Sample Temp °C:

	Sample Description/Identification (1403204)	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TTLC 22 METALS	Special Instructions
-1	1255- 102 - 1	Soil	1	1	10/21/14	0805		X						
-1	1255- 101 - 1	Soil				0807								
-3	1255- 102 - 3	Soil				0815								
-4	1255- EBQC - 1	Water				0749							X	lab filter + preserve
-5	1255- 101 - 3	Soil				0830								
-6	1255- 102 - 9					0910			✓	✓				
-7	1255- 103 - 1					0931			✓	✓				
-8	1255- 103 - 3					0951			✓	✓				
-9	1255- 104 - 1					0959			✓	✓	✓			
-10	1255- 104 - 3					1018			✓	✓				
-11	1255- 119 - 1					1117								
-12	1255- 120 - 1					1119			✓	✓				
-10	1255- 121 - 1					1129								
-13	1255- 122 - 1					1134			✓	✓	✓	✓	✓	
-15	1255- 123 - 1					1138								

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "*EBQC*" samples are to be laboratory filtered and preserved, then analyzed.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/21/14	1600	ATL	10/22/14	13:55
Relinquished By + Company Name: ATL	10/22/14	1525	Received By + Company Name: ATL	10/22/14	1525
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	ANNE PEREZ
	E-Mail Address: anne.perez@stantec.com
	Sampler Name: MFB/MAB/JGS/MC
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	Project Number: 185831013
	Project: CalTrans TO13 07A3321

Analysis Required

Turn Around Time:
Normal TAT: X
72 Hour:
48 Hour:
24 Hour:
Same Day:
Other:

Sample Temp °C:

	Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (CAM-WET-Citric) 6010	STLC Lead (CAM-WET-DI) 6010	TCLP Lead 1311	pH 9045C	TTLC 22 METALS	Special Instructions
-16	1255- 124 - 1	soil		1	10/21/14	1143		X	X	X	X			
-17	1255- 125 - 1					1208			X	X	X	X	X	
-18	1255- 126 - 1					1214			X	X	X	X	X	
-19	1255- 127 - 1					1217			X	X				
-20	1255- 128 - 1					1223			X	X	X	X	X	
-21	1255- 129 - 1					1232			X	X	X	X	X	
-22	1255- 130 - 1					1230			X	X	X	X	X	
-23	1255- 131 - 1					1315								
-24	1255- 132 - 1					1318			X	X	X	X	X	
-25	1255- 133 - 1					1325								
-26	1255- 134 - 1					1332								
-27	1255- 135 - 1					1353								
-28	1255- 136 - 1					1345								
-29	1255- 137 - 1					1355								
-30	1255- 138 - 1	↓	↓	↓	↓	1359		↓						

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:
All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved, then analyzed.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/21/14	1600	ATL	10/22/14	13:55
Relinquished By + Company Name: ATL	10/22/14	1525	Received By + Company Name:	10/22/14	1525
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address: Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	**Project Manager:** ANNE PEREZ **E-Mail Address:** anne.perez@stantec.com **Sampler Name:** MFB/MAB/IGS/MC **Project Number:** 185831015 **Project:** CalTrans TO13 07A3321
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	

Turn Around Time: Normal TAT: X; 72 Hour: ; 48 Hour: ; 24 Hour: ; Same Day: ; Other:

Sample Temp °C:

	Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	Analysis Required: TTLC Lead 60108	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS				Special Instructions
-31	1255- 139 - 1	Soil	—	1	10.21.14	1429		X	X	X	X						
-32	1255- 140 - 1					1435			X	X	X						
-33	1255- 141 - 1					1438			X	X							
-34	1255- 142 - 1					1443											
	1255- -																
	1255- -																
	1255- -																
	1255- -																
	1255- -																
	1255- -																
	1255- -																
	1255- -																
	1255- -																
	1255- -																

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions: All soil samples to be run for TTLC Lead by EPA method 60108. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved then analyzed.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/21/14	1600	ATL	10/22/14	13:55
Relinquished By + Company Name: ATL	10/22/14	1525	Received By + Company Name: ATL	10/22/14	1525
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	ANNE PEREZ
	E-Mail Address: anne.perez@stantec.com
	Sampler Name: MFB/MAB/JGS/MC
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	Project Number: 185831013
	Project: CalTrans TO13

Analysis Required

Turn Around Time:
Normal TAT: X
72 Hour:
48 Hour:
24 Hour:
Same Day:
Other:

Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS					Special Instructions
1255-164 - 3	Soil	1	1	10/22/14	1515		X										
1255-164 - 5	"	"	"	"	1518		"										
1255-164 - 8	"	"	"	"	1552		"										
1255-101 - 6.5								X	X								
1255-111 - 5								X	X								
1255- -																	
1255- -																	
1255- -																	
1255- -																	
1255- -																	
1255- -																	
1255- -																	
1255- -																	
1255- -																	
1255- -																	

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved, prior to analysis.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645		10/23/14	1045
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1850	ATL	10/23/14	1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

November 14, 2014

Anne Perez
Stantec
25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 255-8202
Fax:(909) 335-6120

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1403213

Client Reference : CalTrans TO13, 185831013

Enclosed are the results for sample(s) received on October 23, 2014 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 11/14/2014

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
1255-105-1	1403213-03	Soil	10/22/14 7:30	10/23/14 16:45
1255-106-1	1403213-05	Soil	10/22/14 7:32	10/23/14 16:45
1255-110-5	1403213-29	Soil	10/22/14 11:32	10/23/14 16:45
1255-113-1	1403213-32	Soil	10/22/14 12:28	10/23/14 16:45
1255-113-3	1403213-33	Soil	10/22/14 12:34	10/23/14 16:45
1255-114-1	1403213-34	Soil	10/22/14 12:15	10/23/14 16:45
1255-115-1	1403213-39	Soil	10/22/14 12:18	10/23/14 16:45
1255-115-3	1403213-40	Soil	10/22/14 12:30	10/23/14 16:45
1255-116-1	1403213-44	Soil	10/22/14 12:55	10/23/14 16:45
1255-117-1	1403213-45	Soil	10/22/14 13:20	10/23/14 16:45
1255-117-3	1403213-46	Soil	10/22/14 13:45	10/23/14 16:45
1255-118-1	1403213-50	Soil	10/22/14 12:20	10/23/14 16:45
1255-118-3	1403213-51	Soil	10/22/14 14:02	10/23/14 16:45
1255-160-1	1403213-59	Soil	10/22/14 14:11	10/23/14 16:45
1255-160-3	1403213-60	Soil	10/22/14 14:24	10/23/14 16:45
1255-161-1	1403213-63	Soil	10/22/14 14:10	10/23/14 16:45
1255-161-3	1403213-64	Soil	10/22/14 14:30	10/23/14 16:45
1255-162-3	1403213-68	Soil	10/22/14 15:48	10/23/14 16:45
1255-162-5	1403213-69	Soil	10/22/14 15:52	10/23/14 16:45
1255-163-1	1403213-71	Soil	10/22/14 15:01	10/23/14 16:45
1255-163-3	1403213-72	Soil	10/22/14 15:30	10/23/14 16:45
1255-164-1	1403213-75	Soil	10/22/14 14:40	10/23/14 16:45
1255-111-5	1403213-81	Soil	10/22/14 11:27	10/23/14 16:45

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	11/14/2014

CASE NARRATIVE

Sample Receiving/General Comments:

Documentation pertaining to additional analyses/change order available upon request.

Results were J-flagged. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 11/14/2014

TCLP Metals by ICP-AES EPA 6010B

Analyte: Lead **Analyst: CB**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403213-32	1255-113-1	**0.11**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 16:32	
1403213-33	1255-113-3	**0.27**	mg/L	0.050	0.0014	1	B4K0225	11/11/2014	11/11/14 16:16	
1403213-34	1255-114-1	**0.71**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 16:34	
1403213-39	1255-115-1	**0.034**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 16:36	J
1403213-40	1255-115-3	**0.018**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 16:39	J
1403213-44	1255-116-1	**0.059**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 16:41	
1403213-45	1255-117-1	**0.028**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 16:44	J
1403213-46	1255-117-3	**0.0042**	mg/L	0.050	0.0014	1	B4K0191	11/10/2014	11/10/14 14:57	J
1403213-50	1255-118-1	**0.054**	mg/L	0.050	0.0014	1	B4K0192	11/10/2014	11/10/14 16:46	
1403213-51	1255-118-3	**0.014**	mg/L	0.050	0.0014	1	B4K0192	11/10/2014	11/10/14 16:49	J
1403213-64	1255-161-3	**0.015**	mg/L	0.050	0.0014	1	B4K0192	11/10/2014	11/10/14 16:55	J
1403213-68	1255-162-3	**0.0085**	mg/L	0.050	0.0014	1	B4K0192	11/10/2014	11/10/14 16:58	J

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 11/14/2014

STLC Metals by ICP-AES by EPA 6010B

Analyte: Lead **Analyst: CB**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403213-03	1255-105-1	**0.057**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:20	J
1403213-05	1255-106-1	**ND**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:22	
1403213-29	1255-110-5	**0.037**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:24	J
1403213-32	1255-113-1	**0.038**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:27	J
1403213-33	1255-113-3	**0.035**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:33	J
1403213-34	1255-114-1	**0.66**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:35	J
1403213-39	1255-115-1	**0.043**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:37	J
1403213-40	1255-115-3	**1.1**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:44	
1403213-44	1255-116-1	**11**	mg/L	1.0	0.027	20	B4K0315	11/13/2014	11/13/14 16:24	
1403213-45	1255-117-1	**0.45**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:49	J
1403213-46	1255-117-3	**2.6**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:51	
1403213-50	1255-118-1	**0.045**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 13:54	J
1403213-51	1255-118-3	**0.055**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 15:40	J
1403213-59	1255-160-1	**0.035**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 15:42	J
1403213-60	1255-160-3	**0.031**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 15:44	J
1403213-63	1255-161-1	**0.088**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 15:47	J
1403213-64	1255-161-3	**0.49**	mg/L	1.0	0.027	20	B4K0158	11/07/2014	11/10/14 15:49	J
1403213-68	1255-162-3	**0.051**	mg/L	1.0	0.027	20	B4K0159	11/07/2014	11/10/14 16:22	J
1403213-69	1255-162-5	**0.031**	mg/L	1.0	0.027	20	B4K0159	11/07/2014	11/10/14 16:26	J
1403213-71	1255-163-1	**ND**	mg/L	1.0	0.027	20	B4K0159	11/07/2014	11/10/14 16:30	
1403213-72	1255-163-3	**0.034**	mg/L	1.0	0.027	20	B4K0159	11/07/2014	11/10/14 16:33	J
1403213-75	1255-164-1	**ND**	mg/L	1.0	0.027	20	B4K0159	11/07/2014	11/10/14 16:37	
1403213-81	1255-111-5	**0.039**	mg/L	1.0	0.027	20	B4K0159	11/07/2014	11/10/14 16:41	J

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 11/14/2014

STLC DI Metals by ICP-AES by EPA 6010B

Analyte: Lead **Analyst: CB**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403213-03	1255-105-1	**ND**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:40	
1403213-05	1255-106-1	**ND**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:46	
1403213-29	1255-110-5	**ND**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:48	
1403213-32	1255-113-1	**ND**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:50	
1403213-33	1255-113-3	**ND**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:52	
1403213-34	1255-114-1	**0.038**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:55	J
1403213-39	1255-115-1	**ND**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 18:14	
1403213-40	1255-115-3	**0.028**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 17:59	J
1403213-44	1255-116-1	**ND**	mg/L	1.0	0.027	20	B4K0161	11/07/2014	11/10/14 18:01	
1403213-45	1255-117-1	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:25	
1403213-46	1255-117-3	**0.028**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:27	J
1403213-50	1255-118-1	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:29	
1403213-51	1255-118-3	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:31	
1403213-59	1255-160-1	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:33	
1403213-60	1255-160-3	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/11/14 10:25	
1403213-63	1255-161-1	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:42	
1403213-64	1255-161-3	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:44	
1403213-68	1255-162-3	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:46	
1403213-69	1255-162-5	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:48	
1403213-71	1255-163-1	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:55	
1403213-72	1255-163-3	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:57	
1403213-75	1255-164-1	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 18:59	
1403213-81	1255-111-5	**ND**	mg/L	1.0	0.027	20	B4K0162	11/07/2014	11/10/14 19:05	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 11/14/2014

Mercury by AA (Cold Vapor) EPA 7471A

Analyte: Mercury **Analyst: SB**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403213-32	1255-113-1	**0.03**	mg/kg	0.10	0.009	1	B4K0181	11/10/2014	11/10/14 18:15	J
1403213-33	1255-113-3	**0.06**	mg/kg	0.10	0.009	1	B4K0181	11/10/2014	11/10/14 18:17	J
1403213-34	1255-114-1	**0.03**	mg/kg	0.10	0.009	1	B4K0181	11/10/2014	11/10/14 18:19	J
1403213-44	1255-116-1	**0.04**	mg/kg	0.10	0.009	1	B4K0182	11/10/2014	11/10/14 18:25	J
1403213-45	1255-117-1	**0.04**	mg/kg	0.10	0.009	1	B4K0182	11/10/2014	11/10/14 18:39	J
1403213-46	1255-117-3	**0.02**	mg/kg	0.10	0.009	1	B4K0182	11/10/2014	11/10/14 18:41	J
1403213-64	1255-161-3	**0.02**	mg/kg	0.10	0.009	1	B4K0182	11/10/2014	11/10/14 18:43	J

pH by EPA 9045C

Analyte: pH **Analyst: LA**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403213-32	1255-113-1	**8.1**	pH Units	0.10	0.10	1	B4K0101	11/10/2014	11/10/14 15:45	
1403213-33	1255-113-3	**8.7**	pH Units	0.10	0.10	1	B4K0101	11/10/2014	11/10/14 15:45	
1403213-34	1255-114-1	**8.2**	pH Units	0.10	0.10	1	B4K0101	11/10/2014	11/10/14 15:45	
1403213-44	1255-116-1	**8.0**	pH Units	0.10	0.10	1	B4K0101	11/10/2014	11/10/14 15:45	
1403213-45	1255-117-1	**7.9**	pH Units	0.10	0.10	1	B4K0101	11/10/2014	11/10/14 15:45	
1403213-46	1255-117-3	**8.6**	pH Units	0.10	0.10	1	B4K0101	11/10/2014	11/10/14 15:45	
1403213-64	1255-161-3	**8.2**	pH Units	0.10	0.10	1	B4K0101	11/10/2014	11/10/14 15:45	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 11/14/2014

Client Sample ID 1255-113-1
Lab ID: 1403213-32

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.25	1	B4K0179	11/10/2014	11/10/14 19:47	
Arsenic	**6.5**	1.0	0.19	1	B4K0179	11/10/2014	11/10/14 19:47	
Barium	**120**	1.0	0.14	1	B4K0179	11/10/2014	11/10/14 19:47	
Beryllium	**0.32**	1.0	0.04	1	B4K0179	11/10/2014	11/10/14 19:47	J
Cadmium	**1.7**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:47	
Chromium	**13**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:47	
Cobalt	**4.8**	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:47	
Copper	**19**	2.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:47	
Molybdenum	**4.2**	1.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:47	
Nickel	**24**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:47	
Selenium	ND	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:47	
Silver	ND	1.0	0.06	1	B4K0179	11/10/2014	11/10/14 19:47	
Thallium	ND	1.0	0.20	1	B4K0179	11/10/2014	11/10/14 19:47	
Vanadium	**37**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:47	
Zinc	**62**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:47	

Client Sample ID 1255-113-3
Lab ID: 1403213-33

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.25	1	B4K0179	11/10/2014	11/10/14 19:48	
Arsenic	**4.1**	1.0	0.19	1	B4K0179	11/10/2014	11/10/14 19:48	
Barium	**77**	1.0	0.14	1	B4K0179	11/10/2014	11/10/14 19:48	
Beryllium	**0.20**	1.0	0.04	1	B4K0179	11/10/2014	11/10/14 19:48	J
Cadmium	**1.4**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:48	
Chromium	**7.9**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:48	
Cobalt	**3.9**	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:48	
Copper	**13**	2.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:48	
Molybdenum	**1.8**	1.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:48	
Nickel	**16**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:48	
Selenium	ND	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:48	
Silver	ND	1.0	0.06	1	B4K0179	11/10/2014	11/10/14 19:48	
Thallium	ND	1.0	0.20	1	B4K0179	11/10/2014	11/10/14 19:48	
Vanadium	**27**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:48	
Zinc	**37**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:48	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 11/14/2014

Client Sample ID 1255-114-1
Lab ID: 1403213-34

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.25	1	B4K0179	11/10/2014	11/10/14 19:50	
Arsenic	**6.5**	1.0	0.19	1	B4K0179	11/10/2014	11/10/14 19:50	
Barium	**110**	1.0	0.14	1	B4K0179	11/10/2014	11/10/14 19:50	
Beryllium	**0.30**	1.0	0.04	1	B4K0179	11/10/2014	11/10/14 19:50	J
Cadmium	**1.4**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:50	
Chromium	**13**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:50	
Cobalt	**5.0**	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:50	
Copper	**20**	2.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:50	
Molybdenum	**3.7**	1.0	0.05	1	B4K0179	11/10/2014	11/10/14 19:50	
Nickel	**20**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:50	
Selenium	ND	1.0	0.15	1	B4K0179	11/10/2014	11/10/14 19:50	
Silver	ND	1.0	0.06	1	B4K0179	11/10/2014	11/10/14 19:50	
Thallium	ND	1.0	0.20	1	B4K0179	11/10/2014	11/10/14 19:50	
Vanadium	**34**	1.0	0.07	1	B4K0179	11/10/2014	11/10/14 19:50	
Zinc	**72**	1.0	0.11	1	B4K0179	11/10/2014	11/10/14 19:50	

Client Sample ID 1255-116-1
Lab ID: 1403213-44

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.25	1	B4K0180	11/10/2014	11/10/14 19:55	
Arsenic	**6.8**	1.0	0.19	1	B4K0180	11/10/2014	11/10/14 19:55	
Barium	**120**	1.0	0.14	1	B4K0180	11/10/2014	11/10/14 19:55	
Beryllium	**0.33**	1.0	0.04	1	B4K0180	11/10/2014	11/10/14 19:55	J
Cadmium	**1.8**	1.0	0.11	1	B4K0180	11/10/2014	11/10/14 19:55	
Chromium	**14**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 19:55	
Cobalt	**5.0**	1.0	0.15	1	B4K0180	11/10/2014	11/10/14 19:55	
Copper	**20**	2.0	0.05	1	B4K0180	11/10/2014	11/10/14 19:55	
Molybdenum	**4.6**	1.0	0.05	1	B4K0180	11/10/2014	11/10/14 19:55	
Nickel	**24**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 19:55	
Selenium	ND	1.0	0.15	1	B4K0180	11/10/2014	11/10/14 19:55	
Silver	ND	1.0	0.06	1	B4K0180	11/10/2014	11/10/14 19:55	
Thallium	ND	1.0	0.20	1	B4K0180	11/10/2014	11/10/14 19:55	
Vanadium	**39**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 19:55	
Zinc	**72**	1.0	0.11	1	B4K0180	11/10/2014	11/10/14 19:55	

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Client Sample ID 1255-117-1
Lab ID: 1403213-45

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.25	1	B4K0180	11/10/2014	11/10/14 20:01	
Arsenic	**6.7**	1.0	0.19	1	B4K0180	11/10/2014	11/10/14 20:01	
Barium	**120**	1.0	0.14	1	B4K0180	11/10/2014	11/10/14 20:01	
Beryllium	**0.34**	1.0	0.04	1	B4K0180	11/10/2014	11/10/14 20:01	J
Cadmium	**1.8**	1.0	0.11	1	B4K0180	11/10/2014	11/10/14 20:01	
Chromium	**15**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:01	
Cobalt	**4.7**	1.0	0.15	1	B4K0180	11/10/2014	11/10/14 20:01	
Copper	**20**	2.0	0.05	1	B4K0180	11/10/2014	11/10/14 20:01	
Molybdenum	**3.9**	1.0	0.05	1	B4K0180	11/10/2014	11/10/14 20:01	
Nickel	**23**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:01	
Selenium	ND	1.0	0.15	1	B4K0180	11/10/2014	11/10/14 20:01	
Silver	ND	1.0	0.06	1	B4K0180	11/10/2014	11/10/14 20:01	
Thallium	ND	1.0	0.20	1	B4K0180	11/10/2014	11/10/14 20:01	
Vanadium	**39**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:01	
Zinc	**100**	1.0	0.11	1	B4K0180	11/10/2014	11/10/14 20:01	

Client Sample ID 1255-117-3
Lab ID: 1403213-46

Title 22 Metals by ICP-AES EPA 6010B — **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.25	1	B4K0180	11/10/2014	11/10/14 20:06	
Arsenic	**5.0**	1.0	0.19	1	B4K0180	11/10/2014	11/10/14 20:06	
Barium	**75**	1.0	0.14	1	B4K0180	11/10/2014	11/10/14 20:06	
Beryllium	**0.25**	1.0	0.04	1	B4K0180	11/10/2014	11/10/14 20:06	J
Cadmium	**1.1**	1.0	0.11	1	B4K0180	11/10/2014	11/10/14 20:06	
Chromium	**9.7**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:06	
Cobalt	**4.3**	1.0	0.15	1	B4K0180	11/10/2014	11/10/14 20:06	
Copper	**14**	2.0	0.05	1	B4K0180	11/10/2014	11/10/14 20:06	
Molybdenum	**1.9**	1.0	0.05	1	B4K0180	11/10/2014	11/10/14 20:06	
Nickel	**14**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:06	
Selenium	ND	1.0	0.15	1	B4K0180	11/10/2014	11/10/14 20:06	
Silver	ND	1.0	0.06	1	B4K0180	11/10/2014	11/10/14 20:06	
Thallium	ND	1.0	0.20	1	B4K0180	11/10/2014	11/10/14 20:06	
Vanadium	**30**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:06	
Zinc	**47**	1.0	0.11	1	B4K0180	11/10/2014	11/10/14 20:06	

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Client Sample ID 1255-161-3
Lab ID: 1403213-64

Title 22 Metals by ICP-AES EPA 6010B **Analyst: CB**

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	0.25	1	B4K0180	11/10/2014	11/10/14 20:08	
Arsenic	**4.7**	1.0	0.19	1	B4K0180	11/10/2014	11/10/14 20:08	
Barium	**100**	1.0	0.14	1	B4K0180	11/10/2014	11/10/14 20:08	
Beryllium	**0.28**	1.0	0.04	1	B4K0180	11/10/2014	11/10/14 20:08	J
Cadmium	**0.89**	1.0	0.11	1	B4K0180	11/10/2014	11/10/14 20:08	J
Chromium	**12**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:08	
Cobalt	**4.3**	1.0	0.15	1	B4K0180	11/10/2014	11/10/14 20:08	
Copper	**13**	2.0	0.05	1	B4K0180	11/10/2014	11/10/14 20:08	
Molybdenum	**2.0**	1.0	0.05	1	B4K0180	11/10/2014	11/10/14 20:08	
Nickel	**15**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:08	
Selenium	ND	1.0	0.15	1	B4K0180	11/10/2014	11/10/14 20:08	
Silver	ND	1.0	0.06	1	B4K0180	11/10/2014	11/10/14 20:08	
Thallium	ND	1.0	0.20	1	B4K0180	11/10/2014	11/10/14 20:08	
Vanadium	**26**	1.0	0.07	1	B4K0180	11/10/2014	11/10/14 20:08	
Zinc	**42**	1.0	0.11	1	B4K0180	11/10/2014	11/10/14 20:08	

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QUALITY CONTROL SECTION

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0179 - EPA 3050B_S									
Blank (B4K0179-BLK1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	ND	2.0			NR				
Arsenic	ND	1.0			NR				
Barium	ND	1.0			NR				
Beryllium	ND	1.0			NR				
Cadmium	ND	1.0			NR				
Chromium	0.086722	1.0			NR				J
Cobalt	ND	1.0			NR				
Copper	0.249244	2.0			NR				J
Molybdenum	ND	1.0			NR				
Nickel	0.130813	1.0			NR				J
Selenium	ND	1.0			NR				
Silver	ND	1.0			NR				
Thallium	ND	1.0			NR				
Vanadium	ND	1.0			NR				
Zinc	0.267302	1.0			NR				J
LCS (B4K0179-BS1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	47.2277	2.0	50.0000		94.5	80 - 120			
Arsenic	46.8197	1.0	50.0000		93.6	80 - 120			
Barium	50.3442	1.0	50.0000		101	80 - 120			
Beryllium	48.8360	1.0	50.0000		97.7	80 - 120			
Cadmium	49.0587	1.0	50.0000		98.1	80 - 120			
Chromium	51.3148	1.0	50.0000		103	80 - 120			
Cobalt	48.9290	1.0	50.0000		97.9	80 - 120			
Copper	49.4120	2.0	50.0000		98.8	80 - 120			
Molybdenum	47.3084	1.0	50.0000		94.6	80 - 120			
Nickel	48.2930	1.0	50.0000		96.6	80 - 120			
Selenium	43.8747	1.0	50.0000		87.7	80 - 120			
Silver	49.7394	1.0	50.0000		99.5	80 - 120			
Thallium	48.8963	1.0	50.0000		97.8	80 - 120			
Vanadium	49.9001	1.0	50.0000		99.8	80 - 120			
Zinc	47.9737	1.0	50.0000		95.9	80 - 120			
Duplicate (B4K0179-DUP1)		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	0.266450	2.0		ND	NR			20	J
Arsenic	6.19337	1.0		5.75239	NR		7.38	20	
Barium	149.477	1.0		144.050	NR		3.70	20	
Beryllium	0.401384	1.0		0.377578	NR		6.11	20	J
Cadmium	0.936814	1.0		0.866288	NR		7.82	20	J
Chromium	9.45186	1.0		16.7146	NR		55.5	20	R
Cobalt	11.5357	1.0		8.25998	NR		33.1	20	R
Copper	24.2046	2.0		23.5547	NR		2.72	20	
Molybdenum	4.17540	1.0		3.49311	NR		17.8	20	

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Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0179 - EPA 3050B_S (continued)									
Duplicate (B4K0179-DUP1) - Continued		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Nickel	16.2185	1.0		16.9554	NR		4.44	20	
Selenium	ND	1.0		ND	NR			20	
Silver	ND	1.0		ND	NR			20	
Thallium	ND	1.0		ND	NR			20	
Vanadium	17.7024	1.0		19.4906	NR		9.62	20	
Zinc	98.9758	1.0		100.968	NR		1.99	20	
Matrix Spike (B4K0179-MS1)		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	66.5320	2.0	125.000	ND	53.2	21 - 126			
Arsenic	93.5626	1.0	125.000	5.75239	70.2	57 - 113			
Barium	251.836	1.0	125.000	144.050	86.2	29 - 146			
Beryllium	89.3440	1.0	125.000	0.377578	71.2	65 - 110			
Cadmium	81.5475	1.0	125.000	0.866288	64.5	56 - 107			
Chromium	98.1594	1.0	125.000	16.7146	65.2	49 - 127			
Cobalt	90.4014	1.0	125.000	8.25998	65.7	57 - 112			
Copper	120.778	2.0	125.000	23.5547	77.8	56 - 127			
Molybdenum	91.0726	1.0	125.000	3.49311	70.1	62 - 108			
Nickel	93.7200	1.0	125.000	16.9554	61.4	42 - 127			
Selenium	81.4094	1.0	125.000	ND	65.1	58 - 105			
Silver	92.5754	1.0	125.000	ND	74.1	63 - 113			
Thallium	80.0591	1.0	125.000	ND	64.0	53 - 110			
Vanadium	104.328	1.0	125.000	19.4906	67.9	66 - 112			
Zinc	175.960	1.0	125.000	100.968	60.0	28 - 137			
Matrix Spike Dup (B4K0179-MSD1)		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	69.4552	2.0	125.000	ND	55.6	21 - 126	4.30	20	
Arsenic	97.1568	1.0	125.000	5.75239	73.1	57 - 113	3.77	20	
Barium	252.585	1.0	125.000	144.050	86.8	29 - 146	0.297	20	
Beryllium	94.4083	1.0	125.000	0.377578	75.2	65 - 110	5.51	20	
Cadmium	86.6056	1.0	125.000	0.866288	68.6	56 - 107	6.02	20	
Chromium	108.683	1.0	125.000	16.7146	73.6	49 - 127	10.2	20	
Cobalt	93.4582	1.0	125.000	8.25998	68.2	57 - 112	3.33	20	
Copper	128.515	2.0	125.000	23.5547	84.0	56 - 127	6.21	20	
Molybdenum	94.3695	1.0	125.000	3.49311	72.7	62 - 108	3.56	20	
Nickel	98.5982	1.0	125.000	16.9554	65.3	42 - 127	5.07	20	
Selenium	84.4614	1.0	125.000	ND	67.6	58 - 105	3.68	20	
Silver	97.9776	1.0	125.000	ND	78.4	63 - 113	5.67	20	
Thallium	83.9373	1.0	125.000	ND	67.1	53 - 110	4.73	20	
Vanadium	111.044	1.0	125.000	19.4906	73.2	66 - 112	6.24	20	
Zinc	188.209	1.0	125.000	100.968	69.8	28 - 137	6.73	20	
Batch B4K0180 - EPA 3050B_S									
Blank (B4K0180-BLK1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	ND	2.0			NR				
Arsenic	ND	1.0			NR				
Barium	0.287807	1.0			NR				J

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Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0180 - EPA 3050B_S (continued)									
Blank (B4K0180-BLK1) - Continued					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Beryllium	ND	1.0			NR				
Cadmium	ND	1.0			NR				
Chromium	0.117599	1.0			NR				J
Cobalt	ND	1.0			NR				
Copper	0.199394	2.0			NR				J
Molybdenum	ND	1.0			NR				
Nickel	0.152939	1.0			NR				J
Selenium	ND	1.0			NR				
Silver	ND	1.0			NR				
Thallium	ND	1.0			NR				
Vanadium	ND	1.0			NR				
Zinc	0.526518	1.0			NR				J
LCS (B4K0180-BS1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	45.8914	2.0	50.0000		91.8	80 - 120			
Arsenic	46.0757	1.0	50.0000		92.2	80 - 120			
Barium	49.3567	1.0	50.0000		98.7	80 - 120			
Beryllium	48.2840	1.0	50.0000		96.6	80 - 120			
Cadmium	48.6576	1.0	50.0000		97.3	80 - 120			
Chromium	50.3401	1.0	50.0000		101	80 - 120			
Cobalt	49.0086	1.0	50.0000		98.0	80 - 120			
Copper	49.1256	2.0	50.0000		98.3	80 - 120			
Molybdenum	49.4052	1.0	50.0000		98.8	80 - 120			
Nickel	48.0679	1.0	50.0000		96.1	80 - 120			
Selenium	42.8154	1.0	50.0000		85.6	80 - 120			
Silver	46.4504	1.0	50.0000		92.9	80 - 120			
Thallium	48.1233	1.0	50.0000		96.2	80 - 120			
Vanadium	47.2240	1.0	50.0000		94.4	80 - 120			
Zinc	48.6853	1.0	50.0000		97.4	80 - 120			
Duplicate (B4K0180-DUP1)			**Source: 1403213-44**		Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	ND	2.0		ND	NR			20	
Arsenic	7.97916	1.0		6.77860	NR		16.3	20	
Barium	133.478	1.0		124.656	NR		6.84	20	
Beryllium	0.380794	1.0		0.332469	NR		13.6	20	J
Cadmium	2.02094	1.0		1.83359	NR		9.72	20	
Chromium	14.9744	1.0		14.3760	NR		4.08	20	
Cobalt	5.02512	1.0		5.00530	NR		0.395	20	
Copper	21.7848	2.0		20.3431	NR		6.84	20	
Molybdenum	5.41556	1.0		4.55665	NR		17.2	20	
Nickel	24.6595	1.0		24.4458	NR		0.871	20	
Selenium	ND	1.0		ND	NR			20	
Silver	ND	1.0		ND	NR			20	
Thallium	ND	1.0		ND	NR			20	
Vanadium	42.2295	1.0		38.9387	NR		8.11	20	
Zinc	76.5907	1.0		72.4699	NR		5.53	20	

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Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0180 - EPA 3050B_S (continued)									
Matrix Spike (B4K0180-MS1)		**Source: 1403213-44**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	78.6982	2.0	125.000	ND	63.0	21 - 126			
Arsenic	105.006	1.0	125.000	6.77860	78.6	57 - 113			
Barium	227.991	1.0	125.000	124.656	82.7	29 - 146			
Beryllium	102.668	1.0	125.000	0.332469	81.9	65 - 110			
Cadmium	95.4996	1.0	125.000	1.83359	74.9	56 - 107			
Chromium	116.519	1.0	125.000	14.3760	81.7	49 - 127			
Cobalt	98.6000	1.0	125.000	5.00530	74.9	57 - 112			
Copper	131.362	2.0	125.000	20.3431	88.8	56 - 127			
Molybdenum	105.295	1.0	125.000	4.55665	80.6	62 - 108			
Nickel	116.101	1.0	125.000	24.4458	73.3	42 - 127			
Selenium	93.1926	1.0	125.000	ND	74.6	58 - 105			
Silver	106.176	1.0	125.000	ND	84.9	63 - 113			
Thallium	91.3720	1.0	125.000	ND	73.1	53 - 110			
Vanadium	143.630	1.0	125.000	38.9387	83.8	66 - 112			
Zinc	167.000	1.0	125.000	72.4699	75.6	28 - 137			
Matrix Spike Dup (B4K0180-MSD1)		**Source: 1403213-44**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Antimony	78.8827	2.0	125.000	ND	63.1	21 - 126	0.234	20	
Arsenic	108.002	1.0	125.000	6.77860	81.0	57 - 113	2.81	20	
Barium	225.924	1.0	125.000	124.656	81.0	29 - 146	0.911	20	
Beryllium	104.446	1.0	125.000	0.332469	83.3	65 - 110	1.72	20	
Cadmium	97.3466	1.0	125.000	1.83359	76.4	56 - 107	1.92	20	
Chromium	118.309	1.0	125.000	14.3760	83.1	49 - 127	1.52	20	
Cobalt	100.080	1.0	125.000	5.00530	76.1	57 - 112	1.49	20	
Copper	131.653	2.0	125.000	20.3431	89.0	56 - 127	0.221	20	
Molybdenum	108.368	1.0	125.000	4.55665	83.0	62 - 108	2.88	20	
Nickel	118.166	1.0	125.000	24.4458	75.0	42 - 127	1.76	20	
Selenium	97.2011	1.0	125.000	ND	77.8	58 - 105	4.21	20	
Silver	106.365	1.0	125.000	ND	85.1	63 - 113	0.177	20	
Thallium	94.4164	1.0	125.000	ND	75.5	53 - 110	3.28	20	
Vanadium	142.959	1.0	125.000	38.9387	83.2	66 - 112	0.468	20	
Zinc	169.607	1.0	125.000	72.4699	77.7	28 - 137	1.55	20	

Certificate of Analysis

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TCLP Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0191 - EPA 3010A_S									
Blank (B4K0191-BLK1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.002150	0.050			NR				J
Blank (B4K0191-BLK2)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.001891	0.050			NR				J
LCS (B4K0191-BS1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.971492	0.050	1.00000		97.1	80 - 120			
Duplicate (B4K0191-DUP1)		**Source: 1403213-46**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.004299	0.050		0.004178	NR		2.85	20	J
Duplicate (B4K0191-DUP2)		**Source: 1403204-24**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.039859	0.050		0.040517	NR		1.64	20	J
Matrix Spike (B4K0191-MS1)		**Source: 1403213-46**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	2.26938	0.050	2.50000	0.004178	90.6	77 - 121			
Matrix Spike (B4K0191-MS2)		**Source: 1403204-24**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	2.52449	0.050	2.50000	0.040517	99.4	77 - 121			
Matrix Spike Dup (B4K0191-MSD1)		**Source: 1403213-46**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	2.33335	0.050	2.50000	0.004178	93.2	77 - 121	2.78	20	
Batch B4K0192 - EPA 3010A_S									
Blank (B4K0192-BLK1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.001975	0.050			NR				J
Blank (B4K0192-BLK2)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.001806	0.050			NR				J
LCS (B4K0192-BS1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.966050	0.050	1.00000		96.6	80 - 120			
Duplicate (B4K0192-DUP1)		**Source: 1403233-15**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	0.110313	0.050		0.097296	NR		12.5	20	
Matrix Spike (B4K0192-MS1)		**Source: 1403233-15**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	2.44703	0.050	2.50000	0.097296	94.0	77 - 121			
Matrix Spike Dup (B4K0192-MSD1)		**Source: 1403233-15**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	2.46309	0.050	2.50000	0.097296	94.6	77 - 121	0.654	20	
Batch B4K0225 - EPA 3010A_S									
Blank (B4K0225-BLK1)					Prepared: 11/11/2014 Analyzed: 11/11/2014				
Lead	1.5392E-3	0.050			NR				J
LCS (B4K0225-BS1)					Prepared: 11/11/2014 Analyzed: 11/11/2014				
Lead	0.966024	0.050	1.00000		96.6	80 - 120			

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Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 11/14/2014

TCLP Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0225 - EPA 3010A_S (continued)									
LCS (B4K0225-BS1) - Continued					Prepared: 11/11/2014 Analyzed: 11/11/2014				
Duplicate (B4K0225-DUP1)		**Source: 1403213-33**			Prepared: 11/11/2014 Analyzed: 11/11/2014				
Lead	0.283776	0.050		0.270894	NR		4.65	20	
Matrix Spike (B4K0225-MS1)		**Source: 1403213-33**			Prepared: 11/11/2014 Analyzed: 11/11/2014				
Lead	2.63636	0.050	2.50000	0.270894	94.6	77 - 121			
Matrix Spike Dup (B4K0225-MSD1)		**Source: 1403213-33**			Prepared: 11/11/2014 Analyzed: 11/11/2014				
Lead	2.60282	0.050	2.50000	0.270894	93.3	77 - 121	1.28	20	
Batch S4K0114 - B4K0162									
Instrument Blank (S4K0114-IBL1)					Prepared: 11/11/2014 Analyzed: 11/11/2014				
Lead	ND	0.050			NR				

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Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 11/14/2014

STLC Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0158 - STLC_S Extraction									
Blank (B4K0158-BLK1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
Blank (B4K0158-BLK2)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
LCS (B4K0158-BS1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	1.99810	1.0	2.00000		99.9	80 - 120			
Duplicate (B4K0158-DUP1)		**Source: 1403213-64**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	1.11241	1.0		0.490783	NR		77.5	20	R
Duplicate (B4K0158-DUP2)		**Source: 1403213-39**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	0.054906	1.0		0.042893	NR		24.6	20	R, J
Matrix Spike (B4K0158-MS1)		**Source: 1403213-64**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.87268	1.0	2.50000	0.490783	95.3	44 - 130			
Matrix Spike (B4K0158-MS2)		**Source: 1403213-39**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.41554	1.0	2.50000	0.042893	94.9	44 - 130			
Matrix Spike Dup (B4K0158-MSD1)		**Source: 1403213-64**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.84423	1.0	2.50000	0.490783	94.1	44 - 130	0.995	20	
Batch B4K0159 - STLC_S Extraction									
Blank (B4K0159-BLK1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
LCS (B4K0159-BS1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.13666	1.0	2.00000		107	80 - 120			
Duplicate (B4K0159-DUP1)		**Source: 1403233-15**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	7.78466	1.0		10.2021	NR		26.9	20	R
Matrix Spike (B4K0159-MS1)		**Source: 1403233-15**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	12.0743	1.0	2.50000	10.2021	74.9	44 - 130			
Matrix Spike Dup (B4K0159-MSD1)		**Source: 1403233-15**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	12.4475	1.0	2.50000	10.2021	89.8	44 - 130	3.04	20	
Batch B4K0315 - STLC_S Extraction									
Blank (B4K0315-BLK1)					Prepared: 11/13/2014 Analyzed: 11/13/2014				
Lead	ND	1.0			NR				
LCS (B4K0315-BS1)					Prepared: 11/13/2014 Analyzed: 11/13/2014				
Lead	2.06393	1.0	2.00000		103	80 - 120			
Duplicate (B4K0315-DUP1)		**Source: 1403213-44RE1**			Prepared: 11/13/2014 Analyzed: 11/13/2014				
Lead	9.09149	1.0		11.2201	NR		21.0	20	R

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STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0315 - STLC_S Extraction (continued)									
Duplicate (B4K0315-DUP1) - Continued		**Source: 1403213-44RE1**			Prepared: 11/13/2014 Analyzed: 11/13/2014				
Matrix Spike (B4K0315-MS1)		**Source: 1403213-44RE1**			Prepared: 11/13/2014 Analyzed: 11/13/2014				
Lead	13.0211	1.0	2.50000	11.2201	72.0	44 - 130			
Matrix Spike Dup (B4K0315-MSD1)		**Source: 1403213-44RE1**			Prepared: 11/13/2014 Analyzed: 11/13/2014				
Lead	12.9901	1.0	2.50000	11.2201	70.8	44 - 130	0.238	20	
Batch S4K0094 - B4K0125									
Instrument Blank (S4K0094-IBL1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Lead	ND	0.050			NR				
Batch S4K0162 - B4K0271									
Instrument Blank (S4K0162-IBL1)					Prepared: 11/13/2014 Analyzed: 11/13/2014				
Lead	ND	0.050			NR				

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Stantec	Project Number : CalTrans TO13, 185831013
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Redlands , CA 92374	Reported : 11/14/2014

STLC DI Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0161 - STLC DI_S Extraction									
Blank (B4K0161-BLK1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
Blank (B4K0161-BLK2)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
LCS (B4K0161-BS1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.17536	1.0	2.00000		109	80 - 120			
Duplicate (B4K0161-DUP1)		**Source: 1403213-44**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	0.027512	1.0		ND	NR			20	J
Duplicate (B4K0161-DUP2)		**Source: 1403204-33**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	0.083385	1.0		0.090924	NR		8.65	20	J
Matrix Spike (B4K0161-MS1)		**Source: 1403213-44**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.64543	1.0	2.50000	ND	106	70 - 130			
Matrix Spike (B4K0161-MS2)		**Source: 1403204-33**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.66180	1.0	2.50000	0.090924	103	70 - 130			
Matrix Spike Dup (B4K0161-MSD1)		**Source: 1403213-44**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.59980	1.0	2.50000	ND	104	70 - 130	1.74	20	
Batch B4K0162 - STLC DI_S Extraction									
Blank (B4K0162-BLK1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
Blank (B4K0162-BLK2)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0			NR				
LCS (B4K0162-BS1)					Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.14357	1.0	2.00000		107	80 - 120			
Duplicate (B4K0162-DUP1)		**Source: 1403233-15**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	0.134307	1.0		0.141701	NR		5.36	20	J
Duplicate (B4K0162-DUP2)		**Source: 1403213-69**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	ND	1.0		ND	NR			20	
Matrix Spike (B4K0162-MS1)		**Source: 1403233-15**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.65383	1.0	2.50000	0.141701	100	70 - 130			
Matrix Spike (B4K0162-MS2)		**Source: 1403213-69**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.51758	1.0	2.50000	ND	101	70 - 130			
Matrix Spike Dup (B4K0162-MSD1)		**Source: 1403233-15**			Prepared: 11/7/2014 Analyzed: 11/10/2014				
Lead	2.61454	1.0	2.50000	0.141701	98.9	70 - 130	1.49	20	
Batch S4K0114 - B4K0162									

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Stantec	Project Number : CalTrans TO13, 185831013
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Redlands , CA 92374	Reported : 11/14/2014

STLC DI Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Instrument Blank (S4K0114-IBL1)					Prepared: 11/11/2014 Analyzed: 11/11/2014				
Lead	ND	0.050			NR				

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Stantec	Project Number : CalTrans TO13, 185831013
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Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0181 - EPA 7471_S									
Blank (B4K0181-BLK1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	ND	0.10			NR				
LCS (B4K0181-BS1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.777395	0.10	0.833333		93.3	80 - 120			
Duplicate (B4K0181-DUP1)		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.035887	0.10		0.032430	NR		10.1	20	J
Matrix Spike (B4K0181-MS1)		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.815269	0.10	0.833333	0.032430	93.9	70 - 130			
Matrix Spike Dup (B4K0181-MSD1)		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.801367	0.10	0.819672	0.032430	93.8	70 - 130	1.72	20	
Post Spike (B4K0181-PS1)		**Source: 1403204-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.005622		5.00000E-3	0.000389	105	85 - 115			
Batch B4K0182 - EPA 7471_S									
Blank (B4K0182-BLK1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	ND	0.10			NR				
LCS (B4K0182-BS1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.729391	0.10	0.833333		87.5	80 - 120			
Duplicate (B4K0182-DUP1)		**Source: 1403213-44**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.041579	0.10		0.040681	NR		2.18	20	J
Matrix Spike (B4K0182-MS1)		**Source: 1403213-44**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.776329	0.10	0.833333	0.040681	88.3	70 - 130			
Matrix Spike Dup (B4K0182-MSD1)		**Source: 1403213-44**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.812067	0.10	0.833333	0.040681	92.6	70 - 130	4.50	20	
Post Spike (B4K0182-PS1)		**Source: 1403213-44**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	0.005749		5.00000E-3	0.000488	105	85 - 115			
Batch S4K0102 - B4K0181									
Instrument Blank (S4K0102-IBL1)					Prepared: 11/10/2014 Analyzed: 11/10/2014				
Mercury	ND	0.10			NR				

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 11/14/2014

pH by EPA 9045C - Quality Control

Analyte	Result (pH Units)	PQL (pH Units)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4K0101 - z_Prep_WC_1_S									
Duplicate (B4K0101-DUP1)		**Source: 1403233-14**			Prepared: 11/10/2014 Analyzed: 11/10/2014				
pH	7.60000	0.10		7.67000	NR		0.917	20	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	11/14/2014

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
J	Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

CHAIN OF CUSTODY

Stantec
25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address: Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	**Project Manager:** ANNE PEREZ **E-Mail Address:** anne.perez@stantec.com **Sampler Name:** MFB/MAB/JGS/MC **Project Number:** 185831013 **Project:** CalTrans TO13
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	

Turn Around Time: Normal TAT: X; 72 Hour: ; 48 Hour: ; 24 Hour: ; Same Day: ; Other:

Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3020	STLC Lead (Cal-WET-DI) 3020	TCLP Lead 1311	pH 9045C	TITLE 22 METALS					Special Instructions
1255- EBQC - 2	Water	—	1	10.22.14	0710							X					Lab filter + preserve
1255- EBQC - 3	Water	—	1		0712							X					Lab filter + preserve
1255- 105 - 1	Soil	1	1		0730		X	X	X								
1255- 105 - 3					0741												
1255- 106 - 1					0732			X	X								
1255- 106 - 3					0744												
1255- 102 - 12					0818												
1255- 102 - 15					0828												
1255- 103 - 9					0856												
1255- 104 - 9					0944												
1255- 104 - 12					0947												
1255- 104 - 15					0952												
1255- 105 - 9					1012												
1255- 105 - 12					1014												
1255- 105 - 15					1017												

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved prior to analysis.

Relinquished By	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645		10/23/14	1645
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1850	ATL	10/23/14	1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	ANNE PEREZ
	E-Mail Address: anne.perez@stantec.com
	Sampler Name: MFB/MAB/IGS/MC
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	Project Number: 185831013
	Project: CalTrans TO13

Analysis Required

Turn Around Time:
Normal TAT: X
72 Hour:
48 Hour:
24 Hour:
Same Day:
Other:

Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS					Special Instructions
1255- 107 - 1	Soil	1	1	10.22.14	0834		X										
1255- 108 - 1					0832												
1255- 108 - 3					0903												
1255- 108 - 5					0916												
1255- 109 - 1					0935												
1255- 109 - 3					0955												
1255- 109 - 5					1016												
1255- 106 - 9					1103												
1255- 112 - 1					1114												
1255- 112 - 3					1116												
1255- 112 - 5					1119												
1255- 110 - 1					0953												
1255- 110 - 3					1120												
1255- 110 - 5					1132			X	X								
1255- 107 - 3					1140												

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved prior to analysis.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645		10/23/14	1645
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1850	AR	10/23/14	1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	ANNE PEREZ
	E-Mail Address: anne.perez@stantec.com
	Sampler Name: MFB/MAB/JGS/MC
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	Project Number: 185831013
	Project: CalTrans TO13

Analysis Required

Turn Around Time:
- Normal TAT: X
- 72 Hour:
- 48 Hour:
- 24 Hour:
- Same Day:
- Other:

Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (CoWET-Citric) 3010	STLC Lead (CoWET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS	Special Instructions
1255- 107 - 5	Soil	1	1	10/22/14	1142		X						
1255- 113 - 1					1228			X	X	X	X	X	
1255- 113 - 3					1234			X	X	X	X	X	
1255- 114 - 1					1215			X	X	X	X	X	
1255- 114 - 3					1250								
1255- 114 - 5					1252								
1255- 114 - 8					1255								
1255- 114 - 11					1256								
1255- 115 - 1					1218			X	X	X			
1255- 115 - 3					1230			X	X	X			
1255- 115 - 5					1314								
1255- 115 - 8					1315								
1255- 115 - 11					1318								
1255- 116 - 1					1255			X	X	X	[redacted]		
1255- 117 - 1	V	V	V	V	1320		V	X	X	X	X	X	

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved prior to analysis.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645		10/23/14	1645
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1850	ATL	10/23/14	1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	ANNE PEREZ
	E-Mail Address: anne.perez@stantec.com
	Sampler Name: MFB/MAB/JGS/MC
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	Project Number: 185831013
	Project: CalTrans TO13

Analysis Required

Turn Around Time:
Normal TAT: X
72 Hour:
48 Hour:
24 Hour:
Same Day:
Other:
Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS	Special Instructions
1255-117-3	Soil		1	10/22/14	1345		X	X	X	X	X	X	
1255-117-5					1346								
1255-117-8					1347								
1255-117-11					1350								
1255-118-1					1220			X	X	X			
1255-118-3					1402			X	X	X			
1255-118-5					1405								
1255-118-8					1407								
1255-118-11					1410								
1255-159-1					1434								
1255-159-3					1504								
1255-159-5					1508								
1255-159-8					1510								
1255-160-1					1411			X	X				
1255-160-3					1424			X	X				

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved prior to analysis.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645	STL/ATL	10/23/14	1645
Relinquished By + Company Name: STL/ATL	Date 10/23/14	Time 1850	Received By + Company Name: STL	Date 10/23/14	Time 1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	ANNE PEREZ
	E-Mail Address: anne.perez@stantec.com
	Sampler Name: MFB/MAB/JGS/MC
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	Project Number: 185831013
	Project: CalTrans TO13

Analysis Required

Turn Around Time:
Normal TAT: X
72 Hour:
48 Hour:
24 Hour:
Same Day:
Other:

Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 3211	pH 9045C	TITLE 22 METALS				Special Instructions
1255- 160 - 5	Soil	1	1	10/22/14	1455		X									
1255- 160 - 8					1450											
1255- 161 - 1					1410			X	X							
1255- 161 - 3					1430			X	X	X	X	X				
1255- 161 - 5					1435											
1255- 161 - 8					1440											
1255- 162 - 1					1511											
1255- 162 - 3					1548			X	X	X						
1255- 162 - 5					1552			X	X							
1255- 162 - 8					1556											
1255- 163 - 1					1501			X	X							
1255- 163 - 3					1530			X	X							
1255- 163 - 5					1535											
1255- 163 - 8					1540											
1255- 164 - 1					1440			X	X							

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved prior to analysis.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645		10/23/14	1645
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1850		10/23/14	1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address: Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	**Project Manager:** ANNE PEREZ **E-Mail Address:** anne.perez@stantec.com **Sampler Name:** MFB/MAB/JGS/MC **Project Number:** 185831013 **Project:** CalTrans TO13
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	

Turn Around Time: Normal TAT: X; 72 Hour: ; 48 Hour: ; 24 Hour: ; Same Day: ; Other:

Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	Analysis Required: TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 6010	STLC Lead (Cal-WET-DI) 6010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS	Special Instructions
1255-164 - 3	Soil	1	1	10/22/14	1515		X						
1255-164 - 5	"	"	"	"	1518		"						
1255-164 - 8	"	"	"	"	1552		"						
1255-101 - 6.5								X	X				
1255-111 - 5								X	X				
1255- -													
1255- -													
1255- -													
1255- -													
1255- -													
1255- -													
1255- -													
1255- -													
1255- -													
1255- -													

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved, prior to analysis.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645		10/23/14	10/23/14 1685
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1850	ATL	10/23/14	1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

ADVANCED TECHNOLOGY LABORATORIES

December 29, 2014

Anne Perez
Stantec
25864-F Business Center Drive
Redlands, CA 92374
Tel: (909) 255-8202
Fax:(909) 335-6120

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1403213
Client Reference : CalTrans TO13, 185831013

Enclosed are the results for sample(s) received on October 23, 2014 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 12/29/2014

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
1255-106-1	1403213-05	Soil	10/22/14 7:32	10/23/14 16:45
1255-110-5	1403213-29	Soil	10/22/14 11:32	10/23/14 16:45
1255-113-1	1403213-32	Soil	10/22/14 12:28	10/23/14 16:45
1255-113-3	1403213-33	Soil	10/22/14 12:34	10/23/14 16:45
1255-114-1	1403213-34	Soil	10/22/14 12:15	10/23/14 16:45
1255-115-1	1403213-39	Soil	10/22/14 12:18	10/23/14 16:45
1255-117-1	1403213-45	Soil	10/22/14 13:20	10/23/14 16:45
1255-118-1	1403213-50	Soil	10/22/14 12:20	10/23/14 16:45
1255-118-3	1403213-51	Soil	10/22/14 14:02	10/23/14 16:45
1255-160-1	1403213-59	Soil	10/22/14 14:11	10/23/14 16:45
1255-161-1	1403213-63	Soil	10/22/14 14:10	10/23/14 16:45
1255-161-3	1403213-64	Soil	10/22/14 14:30	10/23/14 16:45
1255-162-3	1403213-68	Soil	10/22/14 15:48	10/23/14 16:45
1255-163-1	1403213-71	Soil	10/22/14 15:01	10/23/14 16:45

CASE NARRATIVE

Sample Receiving/General Comments:

Documentation pertaining to additional analyses/change order available upon request.

Results were J-flagged. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 12/29/2014

Lead by ICP-AES EPA 6010B

Analyte: Lead **Analyst: RR**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403213-05	1255-106-1	**64**	mg/kg	1.0	0.07	1	B4L0696	12/26/2014	12/26/14 11:56	
1403213-29	1255-110-5	**31**	mg/kg	1.0	0.07	1	B4L0696	12/26/2014	12/26/14 11:57	
1403213-32	1255-113-1	**170**	mg/kg	1.0	0.07	1	B4L0696	12/26/2014	12/26/14 11:58	
1403213-33	1255-113-3	**99**	mg/kg	1.0	0.07	1	B4L0696	12/26/2014	12/26/14 11:58	
1403213-34	1255-114-1	**310**	mg/kg	1.0	0.07	1	B4L0696	12/26/2014	12/26/14 11:59	
1403213-39	1255-115-1	**71**	mg/kg	1.0	0.07	1	B4L0696	12/26/2014	12/26/14 12:00	
1403213-45	1255-117-1	**86**	mg/kg	1.0	0.07	1	B4L0696	12/26/2014	12/26/14 12:03	
1403213-50	1255-118-1	**85**	mg/kg	1.0	0.07	1	B4L0696	12/26/2014	12/26/14 12:03	
1403213-51	1255-118-3	**81**	mg/kg	1.0	0.07	1	B4L0696	12/26/2014	12/26/14 12:04	
1403213-59	1255-160-1	**36**	mg/kg	1.0	0.07	1	B4L0696	12/26/2014	12/26/14 12:06	
1403213-63	1255-161-1	**72**	mg/kg	1.0	0.07	1	B4L0696	12/26/2014	12/26/14 12:07	
1403213-64	1255-161-3	**68**	mg/kg	1.0	0.07	1	B4L0696	12/26/2014	12/26/14 12:08	
1403213-68	1255-162-3	**44**	mg/kg	1.0	0.07	1	B4L0696	12/26/2014	12/26/14 12:09	
1403213-71	1255-163-1	**48**	mg/kg	1.0	0.07	1	B4L0696	12/26/2014	12/26/14 12:09	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 12/29/2014

STLC Metals by ICP-AES by EPA 6010B

Analyte: Lead **Analyst: SB**

Laboratory ID	Client Sample ID	Result	Units	PQL	MDL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1403213-05	1255-106-1	**2.8**	mg/L	1.0	0.027	20	B4L0730	12/26/2014	12/29/14 10:18	
1403213-29	1255-110-5	**1.8**	mg/L	1.0	0.027	20	B4L0730	12/26/2014	12/29/14 10:21	
1403213-32	1255-113-1	**13**	mg/L	1.0	0.027	20	B4L0730	12/26/2014	12/29/14 10:23	
1403213-33	1255-113-3	**8.3**	mg/L	1.0	0.027	20	B4L0730	12/26/2014	12/29/14 10:25	
1403213-34	1255-114-1	**23**	mg/L	1.0	0.027	20	B4L0730	12/26/2014	12/29/14 10:27	
1403213-39	1255-115-1	**4.3**	mg/L	1.0	0.027	20	B4L0730	12/26/2014	12/29/14 10:29	
1403213-45	1255-117-1	**4.8**	mg/L	1.0	0.027	20	B4L0730	12/26/2014	12/29/14 10:35	
1403213-50	1255-118-1	**4.7**	mg/L	1.0	0.027	20	B4L0730	12/26/2014	12/29/14 10:38	
1403213-51	1255-118-3	**1.1**	mg/L	1.0	0.027	20	B4L0730	12/26/2014	12/29/14 10:40	
1403213-59	1255-160-1	**2.0**	mg/L	1.0	0.027	20	B4L0730	12/26/2014	12/29/14 10:46	
1403213-63	1255-161-1	**2.3**	mg/L	1.0	0.027	20	B4L0730	12/26/2014	12/29/14 10:49	
1403213-64	1255-161-3	**3.6**	mg/L	1.0	0.027	20	B4L0730	12/26/2014	12/29/14 10:51	
1403213-68	1255-162-3	**3.0**	mg/L	1.0	0.027	20	B4L0730	12/26/2014	12/29/14 10:53	
1403213-71	1255-163-1	**3.3**	mg/L	1.0	0.027	20	B4L0730	12/26/2014	12/29/14 10:55	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 12/29/2014

QUALITY CONTROL SECTION

Lead by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4L0696 - EPA 3050 Modified_S									
Blank (B4L0696-BLK1)					Prepared: 12/26/2014 Analyzed: 12/26/2014				
Lead	0.199617	1.0			NR				J
Blank (B4L0696-BLK2)					Prepared: 12/26/2014 Analyzed: 12/26/2014				
Lead	ND	1.0			NR				
LCS (B4L0696-BS1)					Prepared: 12/26/2014 Analyzed: 12/26/2014				
Lead	49.0074	1.0	50.0000		98.0	80 - 120			
Duplicate (B4L0696-DUP1)		**Source: 1403213-71RE1**			Prepared: 12/26/2014 Analyzed: 12/26/2014				
Lead	81.0724	1.0		48.0288	NR		51.2	20	R
Duplicate (B4L0696-DUP2)		**Source: 1403213-51RE1**			Prepared: 12/26/2014 Analyzed: 12/26/2014				
Lead	83.9868	1.0		80.6852	NR		4.01	20	
Matrix Spike (B4L0696-MS1)		**Source: 1403213-71RE1**			Prepared: 12/26/2014 Analyzed: 12/26/2014				
Lead	241.040	1.0	250.000	48.0288	77.2	33 - 134			
Matrix Spike (B4L0696-MS2)		**Source: 1403213-51RE1**			Prepared: 12/26/2014 Analyzed: 12/26/2014				
Lead	267.678	1.0	250.000	80.6852	74.8	33 - 134			
Matrix Spike Dup (B4L0696-MSD1)		**Source: 1403213-71RE1**			Prepared: 12/26/2014 Analyzed: 12/26/2014				
Lead	250.941	1.0	250.000	48.0288	81.2	33 - 134	4.02	20	

Certificate of Analysis

Stantec	Project Number : CalTrans TO13, 185831013
25864-F Business Center Drive	Report To : Anne Perez
Redlands , CA 92374	Reported : 12/29/2014

STLC Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4L0730 - STLC_S Extraction									
Blank (B4L0730-BLK1)					Prepared: 12/26/2014 Analyzed: 12/29/2014				
Lead	ND	1.0			NR				
Blank (B4L0730-BLK2)					Prepared: 12/26/2014 Analyzed: 12/29/2014				
Lead	ND	1.0			NR				
LCS (B4L0730-BS1)					Prepared: 12/26/2014 Analyzed: 12/29/2014				
Lead	2.02939		2.00000		101	80 - 120			
Duplicate (B4L0730-DUP1)		**Source: 1403887-13**			Prepared: 12/26/2014 Analyzed: 12/29/2014				
Lead	12.6021	1.0		11.9852	NR		5.02	20	
Duplicate (B4L0730-DUP2)		**Source: 1403213-51RE1**			Prepared: 12/26/2014 Analyzed: 12/29/2014				
Lead	1.72509	1.0		1.08083	NR		45.9	20	R
Matrix Spike (B4L0730-MS1)		**Source: 1403887-13**			Prepared: 12/26/2014 Analyzed: 12/29/2014				
Lead	13.9149		2.50000	11.9852	77.2	44 - 130			
Matrix Spike (B4L0730-MS2)		**Source: 1403213-51RE1**			Prepared: 12/26/2014 Analyzed: 12/29/2014				
Lead	3.43108		2.50000	1.08083	94.0	44 - 130			
Matrix Spike Dup (B4L0730-MSD1)		**Source: 1403887-13**			Prepared: 12/26/2014 Analyzed: 12/29/2014				
Lead	13.9950		2.50000	11.9852	80.4	44 - 130	0.574	20	

Certificate of Analysis

Stantec		Project Number :	CalTrans TO13, 185831013
25864-F Business Center Drive		Report To :	Anne Perez
Redlands , CA 92374		Reported :	12/29/2014

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
J	Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

CHAIN OF CUSTODY

Stantec
25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address: Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	**Project Manager:** ANNE PEREZ **E-Mail Address:** anne.perez@stantec.com **Sampler Name:** MFB/MAB/JGS/MC **Project Number:** 185831013 **Project:** CalTrans TO13
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	

Turn Around Time: Normal TAT: X; 72 Hour: ; 48 Hour: ; 24 Hour: ; Same Day: ; Other:

Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3020	STLC Lead (Cal-WET-DI) 3020	TCLP Lead 1311	pH 9045C	TITLE 22 METALS					Special Instructions
1255- EBQC - 2	Water	—	1	10.22.14	0710							X					Lab filter + preserve
1255- EBQC - 3	Water	—	1		0712							X					Lab filter & preserve
1255- 105 - 1	Soil	1	1		0730		X	X	X								
1255- 105 - 3					0741												
1255- 106 - 1					0732			X	X								
1255- 106 - 3					0744												
1255- 102 - 12					0818												
1255- 102 - 15					0828												
1255- 103 - 9					0856												
1255- 104 - 9					0944												
1255- 104 - 12					0947												
1255- 104 - 15					0952												
1255- 105 - 9					1012												
1255- 105 - 12					1014												
1255- 105 - 15	↓	↓	↓	↓	1017		↓										

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved prior to analysis.

Relinquished By	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645		10/23/14	1645
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1850	ATL	10/23/14	1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	ANNE PEREZ
	E-Mail Address: anne.perez@stantec.com
	Sampler Name: MFB/MAB/IGS/MC
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	Project Number: 185831013
	Project: CalTrans TO13

Turn Around Time:
Normal TAT: X
72 Hour:
48 Hour:
24 Hour:
Same Day:
Other:
Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS					Special Instructions
1255- 107 - 1	Soil	1	1	10.22.14	0834		X										
1255- 108 - 1					0832												
1255- 108 - 3					0903												
1255- 108 - 5					0916												
1255- 109 - 1					0935												
1255- 109 - 3					0955												
1255- 109 - 5					1016												
1255- 106 - 9					1103												
1255- 112 - 1					1114												
1255- 112 - 3					1116												
1255- 112 - 5					1119												
1255- 110 - 1					0953												
1255- 110 - 3					1120												
1255- 110 - 5					1132			X	X								
1255- 107 - 3					1140												

Analysis Required

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved prior to analysis.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645		10/23/14	1645
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1850	AR	10/23/14	1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	ANNE PEREZ
	E-Mail Address: anne.perez@stantec.com
	Sampler Name: MFB/MAB/JGS/MC
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	Project Number: 185831013
	Project: CalTrans TO13

Analysis Required

Turn Around Time:
- Normal TAT: X
- 72 Hour:
- 48 Hour:
- 24 Hour:
- Same Day:
- Other:

Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS	Special Instructions
1255- 107 - 5	Soil	1	4	10/22/14	1142		X						
1255- 113 - 1					1228			X	X	X	X	X	
1255- 113 - 3					1234			X	X	X	X	X	
1255- 114 - 1					1215			X	X	X	X	X	
1255- 114 - 3					1250								
1255- 114 - 5					1252								
1255- 114 - 8					1255								
1255- 114 - 11					1256								
1255- 115 - 1					1218			X	X	X			
1255- 115 - 3					1230			X	X	X			
1255- 115 - 5					1314								
1255- 115 - 8					1315								
1255- 115 - 11					1318								
1255- 116 - 1					1255			X	X	X	[redacted]		
1255- 117 - 1	V	V	V	V	1320	V		X	X	X	X	X	

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved prior to analysis.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645		10/23/14	1645
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1850	ATL	10/23/14	1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	ANNE PEREZ
	E-Mail Address: anne.perez@stantec.com
	Sampler Name: MFB/MAB/JGS/MC
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	Project Number: 185831013
	Project: CalTrans TO13

Analysis Required

Turn Around Time:
Normal TAT: X
72 Hour:
48 Hour:
24 Hour:
Same Day:
Other:
Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Col-WET-Chrid) 3010	STLC Lead (Col-WET-DI) 3010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS					Special Instructions
1255-117-3	Soil		1	10/22/14	1345		X	X	X	X	X	X					
1255-117-5					1346												
1255-117-8					1347												
1255-117-11					1350												
1255-118-1					1220			X	X	X							
1255-118-3					1402			X	X	X							
1255-118-5					1405												
1255-118-8					1407												
1255-118-11					1410												
1255-159-1					1434												
1255-159-3					1504												
1255-159-5					1508												
1255-159-8					1510												
1255-160-1					1411			X	X								
1255-160-3					1424			X	X								

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved prior to analysis.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645	STL/ATL	10/23/14	1645
Relinquished By + Company Name: STL/ATL	Date 10/23/14	Time 1850	Received By + Company Name: STL	Date 10/23/14	Time 1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address:	Project Manager:
Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	ANNE PEREZ
	E-Mail Address: anne.perez@stantec.com
	Sampler Name: MFB/MAB/JGS/MC
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	Project Number: 185831013
	Project: CalTrans TO13

Turn Around Time: Normal TAT: X; 72 Hour: ; 48 Hour: ; 24 Hour: ; Same Day: ; Other:

Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 3010	STLC Lead (Cal-WET-DI) 3010	TCLP Lead 3211	pH 9045C	Title 22 METALS					Special Instructions
1255- 160 - 5	Soil	1	1	10/22/14	1455		X										
1255- 160 - 8					1450												
1255- 161 - 1					1410			X	X								
1255- 161 - 3					1430			X	X	X	X	X					
1255- 161 - 5					1435												
1255- 161 - 8					1440												
1255- 162 - 1					1511												
1255- 162 - 3					1548			X	X	X							
1255- 162 - 5					1552			X	X								
1255- 162 - 8					1556												
1255- 163 - 1					1501			X	X								
1255- 163 - 3					1530			X	X								
1255- 163 - 5					1535												
1255- 163 - 8					1540												
1255- 164 - 1					1440			X	X								

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions:

All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved prior to analysis.

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645		10/23/14	1645
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
	10/23/14	1850		10/23/14	1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

CHAIN OF CUSTODY

Stantec

25864-F Business Center Dr. Redlands, CA 92374
Office: (909) 335-6116 Fax: (909) 335-6120

Client Name/Address: Stantec Consulting Services 25864-F Business Center Drive Redlands, CA 92374	**Project Manager:** ANNE PEREZ **E-Mail Address:** anne.perez@stantec.com **Sampler Name:** MFB/MAB/JGS/MC **Project Number:** 185831013 **Project:** CalTrans TO13
Laboratory: ATL 3275 Walnut Ave. Signal Hill, CA 90755 800-499-4388	

Turn Around Time: Normal TAT: X; 72 Hour: ; 48 Hour: ; 24 Hour: ; Same Day: ; Other:

Sample Temp °C:

Sample Description/Identification	Sample Matrix	Preservative (see below)	# of Cont.	Sample Date	Sample Time	Filtered Sample	Analysis Required: TTLC Lead 6010B	STLC Lead (Cal-WET-Citric) 6010	STLC Lead (Cal-WET-DI) 6010	TCLP Lead 1311	pH 9045C	TITLE 22 METALS	Special Instructions
1255-164 - 3	Soil	1	1	10/22/14	1515		X						
1255-164 - 5	"	"	"	"	1518		"						
1255-164 - 8	"	"	"	"	1552		"						
1255-101 - 6.5								X	X				
1255-111 - 5								X	X				
1255- -													
1255- -													
1255- -													
1255- -													
1255- -													
1255- -													
1255- -													
1255- -													
1255- -													
1255- -													

Sample Preservative: 1=ICE - 2=HCl - 3=H_2SO_4 - 4=HNO_3 - 5=NaOH - 6=Other:

Special Instructions: **All soil samples to be run for TTLC Lead by EPA method 6010B. Additional analysis (if required) of soil samples will be determined by Stantec (Anne Perez) after TTLC results have been reported. All "EBQC" samples are to be laboratory filtered and preserved prior to analysis.**

Relinquished By:	Date	Time	Received By + Company Name:	Date	Time
	10/22/14	1645		10/23/14	10/23/14 1685
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time
STANTEC	10/23/14	1850	ATL	10/23/14	1850
Relinquished By + Company Name:	Date	Time	Received By + Company Name:	Date	Time

APPENDIX E
DATA VALIDATION RECORDS

APPENDIX E

DATA VALIDATION REPORT
AERIALLY DEPOSITED LEAD (ADL) SITE INVESTIGATION FOR POLLUTION CONTROL SYSTEM CONSTRUCT FOR I-10 HOV LANE BETWEEN CITRUS AVENUE IN CITY OF WEST COVINA AND STATE ROUTE 57 IN CITY OF POMONA, LOS ANGELES COUNTY, CALIFORNIA
LOCATION: LA-010 PM 37.2/42.4
PROJECT NUMBER: 0713000007-1
EA NUMBER: 1193U1
CONTRACT NO. 07A3321
TASK ORDER NO. 13

Data validation was performed to ensure the quality of project data and to provide confidence that project decisions are based on quality data. The data validation procedure was conducted based on the principles of the *U.S. EPA National Functional Guidelines* and U.S. EPA Region 9 requirements and is designed to ensure completeness and adequacy of the data set. Samples were collected and submitted for analysis to Advanced Technology Laboratories (ATL) in Signal Hill, California. Samples were analyzed for

- Title 22 metals and total lead by EPA method 6010B,
- Mercury by 7471A/7470A,
- Soluble lead by the California Waste Extraction Test (CaWET-Citric) and EPA method 6010B,
- Soluble lead by CalWET modified using deionized water (CalWET-DI) EPA method 6010B,
- Soluble lead by EPA test method 1311 (Toxicity Characteristic Leaching Procedure [TCLP]) EPA method 6010B, and
- pH by 9045C.

The Data Validation Reports/Checklists summarize compounds that were qualified and are attached to this summary. Data validation was performed in accordance with the Scope of Work and validated data with appropriate flags are provided in the report data tables. Three analytical reports and associated addenda were validated:

- 1403204,
- 1403213 and
- 1403233.

The data were validated and reviewed for the following:

- Completeness of data deliverables (chain of custody records, laboratory data, laboratory quality assurance and quality control (QA/QC) data);
- Sample holding time;
- Sample preservation;
- Blank data (method, trip, and equipment);
- Laboratory control sample (LCS) recovery;

- Laboratory duplicate sample precision;
- Matrix spike/matrix spike duplicate (MS/MSD) recovery; and
- Overall data assessment.

The following summarizes the results of the validation:

1. Data Completeness: Data were validated for 129 samples and four equipment blanks collected between October 21 to October 23, 2014. Samples specified for analysis on the chain of custodies were analyzed as specified. Due to data inconsistencies 15 samples were re-extracted and analyzed for total lead and CalWET-citric. The project goal of 90 percent completeness was achieved.

2. Sample Hold Times: All samples were analyzed within sample hold times.

3. Sample Preservation: All samples were preserved in appropriate containers and preservative.

4. Method Blanks: Several metals analytes (total barium, chromium, copper, nickel, selenium, silver, and zinc and CalWET-citric soluble lead and TCLP soluble lead) were reported in method blanks at very low concentrations. Associated sample results below the blank concentration are flagged "UJB" in the data tables with the detection limit reported as the method blank concentration. Sample results greater than the blank concentration are flagged "JB". Sample results greater than 10 times the blank concentration require no qualifying action. The data for these analytes may be slightly biased high.

5. Equipment Blanks: Several metals (barium, cadmium, chromium, molybdenum, silver and zinc) were reported in equipment blanks at very low levels, and may be reflective of one or more of the following sources: 1) laboratory method blank detections, 2) ambient artifact (e.g., dust), 3) incomplete decontamination, 4) contaminated decontamination rinse water, and/or 5) artifact from contact with metal sampling equipment. The reported detections are very low and do not appear to have adversely influenced sample results. Sample results greater than 10 times the blank concentration, no qualifying action required. However, the reported sample concentrations in the data tables are considered slightly biased high.

6. Laboratory Control Samples: No LCS samples reported percent recoveries outside of method and/or laboratory limits.

7. Laboratory Duplicate Samples: Laboratory duplicate samples were reported within the relative percent difference (RPD) control limit of 20 percent except for the following:

    a. Batch B4J0789 –Laboratory duplicate RPD above limits for total Lead. Sample site specific. Associated result flagged "J" for 1255-111-3 only.

b. Batch B4K0158 – Laboratory duplicate RPD above limits for CalWET-citric lead. Samples site specific. Associated result flagged "J" for 1255-161-3 and 1255-115-1 only.

c. Batch B4K0179 – total lead laboratory duplicate RPD above limits for Chromium, Cobalt. Sample site specific. Associated result flagged "J" for 1255-122-1 only.

d. Batch B4L0696 Total lead laboratory duplicate RPD above control limits for B4L0696-Dup1 due to sample heterogeneity. Associated result flagged "J" for 1255-163-1 only.

e. Batch B4L0730 CalWET-citric lead laboratory duplicate RPD above control limits for B4L0730-Dup2 due to sample heterogeneity. Associated result flagged "J" for 1255-118-3 only.

8. Matrix Spike and Spike Duplicates: Matrix spike and duplicate samples were analyzed to assess accuracy and to evaluate matrix effects on data analysis. The percent recoveries and RPDs were found to within laboratory-determined control limits except:

   a. Batch B4J0729 – Laboratory matrix duplicate RPD above control limits for total lead. Laboratory duplicate RPDs were within limits. Matrix sample site specific. Associated result flagged "J" for 1255-129-1 only.

9. Data were considered "useable" and marked as such in the tables provided and that it was validated according to the EPA and scope of work. No data was qualified as "rejected". The Data Validation Reports/Checklists summarize compounds that were qualified and are attached to this summary.

Stantec Analytical Validation Report/Checklist **Report No. 120214-EC-04**

Project Name: Caltrans 07A	Project Number: 185831013
Stantec Validator: Elizabeth Crowley	Laboratory: ATL, Signal Hill, CA
Date Validated: 11/26/14	Laboratory Project Number: 1403204 and 1403204add
Sample Start-End Date: 10/21/14	Laboratory Report Date: 10/30/14 and 11/11/14
Parameters Validated: Total Metals, TCLP Lead, CalWET-citric Lead and CalWET-DI Lead by EPA SW-846 6010B, Mercury by 7471A and pH by 9045C.	
Samples Validated: 34 solid field samples and 1 Equipment Blank	

VALIDATION CRITERIA CHECK

Validation Flags Applicable to this Review:

U The analyte was analyzed for, but not detected above the reported sample quantitation limit.

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".

NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

B The analyte was detected in the method, field and/or trip blank.

	Yes	No
1. Were all the analyses requested for the samples submitted with each COC completed by the lab?	X	
Comments: Initial analyses completed. Additional analyses are dependent on initial analyses results.		
2. Did the laboratory identify any non-conformances related to the analytical result?	X	
Comments: Refer to laboratory report for dilution and minor issues.		
3. Were sample Chain-of-Custody forms complete?	X	
Comments: All signatures and required items present.		
4. Were samples received in good condition and at the appropriate temperature?	X	
Comments:		
5. Were sample holding times met?	X	
Comments: All holding times met for all analyses.		
6. Were correct concentration units reported?	X	
Comments: Results reported in both mg/Kg and mg/L depending on the analytical method.		
7. Were detections found in laboratory blank samples?	X	

Comments: 6010B batch B4K0179 – Chromium = 0.087 mg/Kg, Copper = 0.250 mg/Kg, Nickel = 0.130 mg/L and Zinc = 0.270 mg/Kg. Batch B4J0730 – Lead = 0.36 mg/Kg. Batch B4J0760 – Barium = 0.0008 mg/L, Cadmium = 0.0002 mg/L, Chromium = 0.0003 mg/L, Nickel = 0.0006 mg/L, Selenium = 0.0045 mg/L, Silver = 0.0008 mg/L and Zinc = 0.0039 mg/L. Batch B4J0729 – Lead = 0.39 mg/Kg. Batch B4K0191 – TCLP Lead = 0.0021 mg/L. Batch B4L0696 – Lead = 0.20 mg/kg Sample results below the blank concentration are validated to non-detect and flagged "UJB". Sample results greater than the blank concentration are flagged "JB". The detection limit changed to the blank concentration. Sample results greater than 10 times the blank concentration require no qualifying action. Reason Code – MB		
8. Were detections found in field blank, equipment rinse blank, and/or trip blank samples?	Yes X	No
Comments: EBQC1 – Barium = 0.0010 mg/L, Cadmium = 0.0002 mg/L, Chromium = 0.0007 mg/L, Silver = 0.0012 mg/L and Zinc = 0.0053 mg/L. Sample results greater than 10 times the blank concentration, no qualifying action required.		
9. Were instrument calibrations within method criteria?	Yes NA	No
Comments: Level II data package and validation, no data provided.		
10. Were surrogate recoveries within control limits?	Yes NA	No
Comments: No organic analyses requested.		
11. Were laboratory control (LC/LD) sample recoveries within control limits?	Yes X	No
Comments:		
12. Were site specific matrix spike (MS/MD) recoveries within control limits?	Yes	No X
Comments: 6010B batch B4J0729 - %R for Lead below limits. Associated result flagged "J" for 1255-129-1 only. Batch B4K0179 - Rs below limits for Antimony. Associated result flagged "UJ" for 1255-122-1 only. Reason Code – MS		
13. Were RPDs within control limits?	Yes	No X

Comments: Batch B4K0179 – total lead laboratory duplicate RPD above limits for Chromium, Cobalt. Sample site specific. Associated result flagged "J" for 1255-122-1 only. Batch B4L0696 Total lead laboratory duplicate RPD above control limits for B4L0696-Dup1 due to sample heterogeneity. Associated result flagged "J" for 1255-163-1 only. Batch B4L0730 CalWET-citric lead laboratory duplicate RPD above control limits for B4L0730-Dup2 due to sample heterogeneity. Associated result flagged "J" for 1255-118-3 only. Reason Code – LDUP Batch B4J0729 – Laboratory matrix spike/matrix spike duplicate RPD above limits for Lead. Laboratory duplicate RPDs within limits. Matrix sample site specific. Associated result flagged "J" for 1255-129-1 only. Reason Code – RPD			
14. Were dilutions required on any samples?		Yes X	No
Comments: No action required.			
15. Were Tentatively Identified Compounds (TIC) present?		Yes X	No
Comments: Sample results below the reporting limit do not possess the degree of qualitative or quantitative confidence required. The value may be a false positive and is an estimated value and is flagged "NJ". Reason Code – SQL			
16. Were organic system performance criteria met?	NA	Yes	No
Comments: No organic analyses requested.			
17. Were GC/MS internal standards within method criteria?	NA	Yes	No
Comments: No organic analyses requested.			
18. Were inorganic system performance criteria met?		Yes X	No
Comments: All serial dilutions within limits.			
19. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results. Duplicate Sample Nos.		Yes	No X
Comments:			
20. Were at least 10 percent of the hard copy results compared to the Electronic Data Deliverable Results?	Yes X	No	Initials EAC
Comments:			
21. Other:		Yes	No X
Comments:			

PRECISION, ACCURACY, METHOD COMPLIANCE AND COMPLETENESS ASSESSMENT			
Precision:	Acceptable X	Unacceptable	Initials EAC
Comments: Data usable as qualified.			
Sensitivity:	Acceptable X	Unacceptable	Initials EAC
Comments: Samples analyzed at lowest levels possible to achieve required screening limits.			
Accuracy:	Acceptable X	Unacceptable	Initials EAC
Comments: No data qualified for laboratory control issues.			
Representativeness:	Acceptable X	Unacceptable	Initials EAC
Comments:			
Method Compliance:	Acceptable X	Unacceptable	Initials EAC
Comments:			
Completeness:	Acceptable X	Unacceptable	Initials EAC
Comments: No data are rejected.			

Stantec Analytical Validation Report/Checklist — Report No. 120214-EC-05

Project Name: Caltrans 07A	Project Number: 185831013
Stantec Validator: Elizabeth Crowley	Laboratory: ATL, Signal Hill, CA
Date Validated: 11/26/14	Laboratory Project Number: 1403213 and 1403213add
Sample Start-End Date: 10/22/14	Laboratory Report Date: 10/31/14 and 11/11/14

Parameters Validated: Total Metals, TCLP Lead, SPLC Lead and STLC DI Lead by EPA SW-846 6010B, Mercury by 7471A and pH by 9045C.

Samples Validated: 79 solid field samples and 2 Equipment Blanks

VALIDATION CRITERIA CHECK

Validation Flags Applicable to this Review:

U The analyte was analyzed for, but not detected above the reported sample quantitation limit.

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".

NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

B The analyte was detected in the method, field and/or trip blank.

	Yes	No
1. Were all the analyses requested for the samples submitted with each COC completed by the lab?	X	
Comments: Initial analyses completed. Additional analyses are dependent on initial analyses results.		
2. Did the laboratory identify any non-conformances related to the analytical result?	X	
Comments: Refer to laboratory report for dilution and minor issues.		
3. Were sample Chain-of-Custody forms complete?	X	
Comments: All signatures and required items present.		
4. Were samples received in good condition and at the appropriate temperature?	X	
Comments:		
5. Were sample holding times met?	X	
Comments: All holding times met for all analyses.		
6. Were correct concentration units reported?	X	
Comments: Results reported in both mg/Kg and mg/L depending on the analytical method.		
7. Were detections found in laboratory blank samples?	X	

Comments: 6010B batch B4K0180 – Chromium = 0.120 mg/Kg, Copper = 0.200 mg/Kg, Nickel = 0.150 mg/L and Zinc = 0.530 mg/Kg. Batch B4J0787 – Lead = 0.30 mg/Kg. Batch B4J0788 – Lead = 0.07 mg/Kg. Batch B4J0790 – Lead = 0.21 mg/Kg. Sample results greater than 10 times the blank concentration, no qualifying action required. 6010B batch B4J0760 – Barium = 0.0008 mg/L, Cadmium = 0.0002 mg/L, Chromium = 0.0003 mg/L, Nickel = 0.0006 mg/L, Selenium = 0.0045 mg/L, Silver = 0.0008 mg/L and Zinc = 0.0039 mg/L. Batch B4J0786 – Lead = 0.39 mg/Kg. Batch B4K0191 – TCLP Lead = 0.0021 mg/L. Batch B4K0192 – TCLP Lead = 0.0020 mg/L. Sample results below the blank concentration are validated to non-detect and flagged “UJB”. Sample results greater than the blank concentration are flagged “JB”. The detection limit changed to the blank concentration. Sample results greater than 10 times the blank concentration require no qualifying action. Reason Code – MB		
8. Were detections found in field blank, equipment rinse blank, and/or trip blank samples?	Yes X	No
Comments: EBQC2 – Cadmium = 0.0005 mg/L, Chromium = 0.0007 mg/L, Molybdenum = 0.0009 mg/L, Selenium = 0.0054 mg/L, Silver = 0.0013 mg/L and Zinc = 0.015 mg/L. EBQC3 - Cadmium = 0.0003 mg/L, Chromium = 0.0005 mg/L, Molybdenum = 0.0006 mg/L, Selenium = 0.0051 mg/L and Zinc = 0.065 mg/L. Sample results greater than 10 times the blank concentration, no qualifying action required.		
9. Were instrument calibrations within method criteria?	Yes	No
NA		
Comments: Level II data package and validation, no data provided.		
10. Were surrogate recoveries within control limits?	Yes	No
NA		
Comments: No organic analyses requested.		
11. Were laboratory control (LC/LD) sample recoveries within control limits?	Yes X	No
Comments: All laboratory control sample recoveries are within limits.		
12. Were site specific matrix spike (MS/MD) recoveries within control limits?	Yes X	No
Comments:		
13. Were RPDs within control limits?	Yes	No X

Comments: 6010B batch B4J0789 – Laboratory duplicate RPD above limits for Lead. Sample site specific. Associated result flagged "J" for 1255-111-3 only. Batch B4K0158 – Laboratory duplicate RPD above limits for STLC Lead. Samples site specific. Associated result flagged "J" for 1255-161-3 and 1255-115-1 only. Reason Code – LDUP			
14. Were dilutions required on any samples?		Yes X	No
Comments: No action required.			
15. Were Tentatively Identified Compounds (TIC) present?		Yes X	No
Comments: Sample results below the reporting limit do not possess the degree of qualitative or quantitative confidence required. The value may be a false positive and is an estimated value and is flagged "NJ". Reason Code – SQL			
16. Were organic system performance criteria met?	NA	Yes	No
Comments: No organic analyses requested.			
17. Were GC/MS internal standards within method criteria?	NA	Yes	No
Comments: No organic analyses requested.			
18. Were inorganic system performance criteria met?		Yes X	No
Comments: All serial dilutions within limits.			
19. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results. Duplicate Sample Nos.		Yes	No X
Comments:			
20. Were at least 10 percent of the hard copy results compared to the Electronic Data Deliverable Results?	Yes X	No	Initials EAC
Comments:			
21. Other:		Yes	No X
Comments:			

PRECISION, ACCURACY, METHOD COMPLIANCE AND COMPLETENESS ASSESSMENT

Precision:	Acceptable X	Unacceptable	Initials EAC
Comments: Data usable as qualified.			

Sensitivity:	Acceptable X	Unacceptable	Initials EAC
Comments: Samples analyzed at lowest levels possible to achieve required screening limits.			
Accuracy:	Acceptable X	Unacceptable	Initials EAC
Comments: No data qualified for laboratory control issues.			
Representativeness:	Acceptable X	Unacceptable	Initials EAC
Comments:			
Method Compliance:	Acceptable X	Unacceptable	Initials EAC
Comments:			
Completeness:	Acceptable X	Unacceptable	Initials EAC
Comments: No data are rejected.			

Stantec Analytical Validation Report/Checklist **Report No. 120214-EC-06**

Project Name: Caltrans 07A	Project Number: 185831013
Stantec Validator: Elizabeth Crowley	Laboratory: ATL, Signal Hill, CA
Date Validated: 11/29/14	Laboratory Project Number: 1403233 and 1403233add
Sample Start-End Date: 10/23/14	Laboratory Report Date: 10/30/14 and 11/11/14

Parameters Validated: Parameters Validated: Parameters Validated: Total Metals, TCLP Lead, CalWET-citric Lead and CalWET-DI Lead by EPA SW-846 6010B, Mercury by 7471A and pH by 9045C.

Samples Validated: 16 solid field samples and 1 Equipment Blank

VALIDATION CRITERIA CHECK

Validation Flags Applicable to this Review:

U The analyte was analyzed for, but not detected above the reported sample quantitation limit.

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".

NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

B The analyte was detected in the method, field and/or trip blank.

	Yes	No
1. Were all the analyses requested for the samples submitted with each COC completed by the lab?	X	
Comments: Initial analyses completed. Additional analyses are dependent on initial analyses results.		
2. Did the laboratory identify any non-conformances related to the analytical result?	X	
Comments: Refer to laboratory report for dilution and minor issues.		
3. Were sample Chain-of-Custody forms complete?	X	
Comments: All signatures and required items present.		
4. Were samples received in good condition and at the appropriate temperature?	X	
Comments:		
5. Were sample holding times met?	X	
Comments: All holding times met for all analyses.		
6. Were correct concentration units reported?	X	
Comments: Results reported in both mg/Kg and mg/L depending on the analytical method.		
7. Were detections found in laboratory blank samples?	X	

Comments: 6010B batch B4K0180 – Chromium = 0.120 mg/Kg, Copper = 0.200 mg/Kg, Nickel = 0.150 mg/L and Zinc = 0.530 mg/Kg. Batch B4J0790 – Lead = 0.21 mg/Kg. Sample results greater than 10 times the blank concentration, no qualifying action required. 6010B batch B4J0760 – Barium = 0.0008 mg/L, Cadmium = 0.0002 mg/L, Chromium = 0.0003 mg/L, Nickel = 0.0006 mg/L, Selenium = 0.0045 mg/L, Silver = 0.0008 mg/L and Zinc = 0.0039 mg/L. Batch B4K0192 – TCLP Lead = 0.0020 mg/L. Sample results below the blank concentration are validated to non-detect and flagged "UJB". Sample results greater than the blank concentration are flagged "JB". The detection limit changed to the blank concentration. Sample results greater than 10 times the blank concentration require no qualifying action. Reason Code – MB		
8. Were detections found in field blank, equipment rinse blank, and/or trip blank samples?	Yes X	No
Comments: EBQC4 – Chromium = 0.0005 mg/L, Silver = 0.0013 mg/L and Zinc = 0.0076 mg/L. Sample results greater than 10 times the blank concentration, no qualifying action required.		
9. Were instrument calibrations within method criteria?	Yes NA	No
Comments: Level II data package and validation, no data provided.		
10. Were surrogate recoveries within control limits?	Yes NA	No
Comments: No organic analyses requested.		
11. Were laboratory control (LC/LD) sample recoveries within control limits?	Yes X	No
Comments: All laboratory control sample recoveries are within limits.		
12. Were site specific matrix spike (MS/MD) recoveries within control limits?	Yes X	No
Comments:		
13. Were RPDs within control limits?	Yes	No X
Comments: 6010B batch B4J0790 – Laboratory duplicate RPD above limits for Lead. Sample site specific. Associated result flagged "J" for 1255-151-1 only. Batch B4K0159 – Laboratory duplicate RPD above limits for STLC Lead. Samples site specific. Associated result flagged "J" for 1255-156-1 only. Reason Code – LDUP		
14. Were dilutions required on any samples?	Yes X	No
Comments: No action required.		
15. Were Tentatively Identified Compounds (TIC) present?	Yes X	No
Comments: Sample results below the reporting limit do not possess the degree of qualitative or quantitative confidence required. The value may be a false positive and is an estimated value and is flagged "NJ". Reason Code – SQL		

16. Were organic system performance criteria met?	Yes	No
	NA	
Comments: No organic analyses requested.		
17. Were GC/MS internal standards within method criteria?	Yes	No
	NA	
Comments: No organic analyses requested.		
18. Were inorganic system performance criteria met?	Yes	No
	X	
Comments: All serial dilutions within limits.		
19. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results. Duplicate Sample Nos.	Yes	No X
Comments:		

20. Were at least 10 percent of the hard copy results compared to the Electronic Data Deliverable Results?	Yes X	No	Initials EAC
Comments:			
21. Other:	Yes		No X
Comments:			

PRECISION, ACCURACY, METHOD COMPLIANCE AND COMPLETENESS ASSESSMENT

Precision:	Acceptable X	Unacceptable	Initials EAC
Comments: Data usable as qualified.			
Sensitivity:	Acceptable X	Unacceptable	Initials EAC
Comments: Samples analyzed at lowest levels possible to achieve required screening limits.			
Accuracy:	Acceptable X	Unacceptable	Initials EAC
Comments: No data qualified for laboratory control issues.			
Representativeness:	Acceptable X	Unacceptable	Initials EAC
Comments:			
Method Compliance:	Acceptable X	Unacceptable	Initials EAC
Comments:			
Completeness:	Acceptable X	Unacceptable	Initials EAC

Comments: No data are rejected.

Stantec Analytical Validation Report/Checklist **Report No. 010815-EC-02**

Project Name: Caltrans 07A	Project Number: 185832011
Stantec Validator: Elizabeth Crowley	Laboratory: ATL, Signal Hill, CA
Date Validated: 11/26/14	Laboratory Project Number: 1403213, 1403213add and 1403213add2
Sample Start-End Date: 10/22/14	Laboratory Report Date: 10/31/14, 11/11/14 and 12/29/14
Parameters Validated: Total Metals, TCLP Lead, SPLC Lead and STLC DI Lead by EPA SW-846 6010B, Mercury by 7471A and pH by 9045C.	
Samples Validated: 79 solid field samples and 2 Equipment Blanks	

VALIDATION CRITERIA CHECK

Validation Flags Applicable to this Review:

U The analyte was analyzed for, but not detected above the reported sample quantitation limit.

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".

NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

B The analyte was detected in the method, field and/or trip blank.

	Yes	No
1. Were all the analyses requested for the samples submitted with each COC completed by the lab?	X	
Comments: Initial analyses completed. Additional analyses are dependent on initial analyses results.		
2. Did the laboratory identify any non-conformances related to the analytical result?	X	
Comments: Refer to laboratory report for dilution and minor issues.		
3. Were sample Chain-of-Custody forms complete?	X	
Comments: All signatures and required items present.		
4. Were samples received in good condition and at the appropriate temperature?	X	
Comments:		
5. Were sample holding times met?	X	
Comments: All holding times met for all analyses.		
6. Were correct concentration units reported?	X	
Comments: Results reported in both mg/Kg and mg/L depending on the analytical method.		
7. Were detections found in laboratory blank samples?	X	

Comments: 6010B batch B4K0180 – Chromium = 0.120 mg/Kg, Copper = 0.200 mg/Kg, Nickel = 0.150 mg/L and Zinc = 0.530 mg/Kg. Batch B4J0787 – Lead = 0.30 mg/Kg. Batch B4J0788 – Lead = 0.07 mg/Kg. Batch B4J0790 – Lead = 0.21 mg/Kg. Batch B4L0696 – Lead = 0.20 mg/Kg. Sample results greater than 10 times the blank concentration, no qualifying action required. 6010B batch B4J0760 – Barium = 0.0008 mg/L, Cadmium = 0.0002 mg/L, Chromium = 0.0003 mg/L, Nickel = 0.0006 mg/L, Selenium = 0.0045 mg/L, Silver = 0.0008 mg/L and Zinc = 0.0039 mg/L. Batch B4J0786 – Lead = 0.39 mg/Kg. Batch B4K0191 – TCLP Lead = 0.0021 mg/L. Batch B4K0192 – TCLP Lead = 0.0020 mg/L. Sample results below the blank concentration are validated to non-detect and flagged “UJB”. Sample results greater than the blank concentration are flagged “JB”. The detection limit changed to the blank concentration. Sample results greater than 10 times the blank concentration require no qualifying action. Reason Code – MB		
8. Were detections found in field blank, equipment rinse blank, and/or trip blank samples?	Yes X	No
Comments: EBQC2 – Cadmium = 0.0005 mg/L, Chromium = 0.0007 mg/L, Molybdenum = 0.0009 mg/L, Selenium = 0.0054 mg/L, Silver = 0.0013 mg/L and Zinc = 0.015 mg/L. EBQC3 - Cadmium = 0.0003 mg/L, Chromium = 0.0005 mg/L, Molybdenum = 0.0006 mg/L, Selenium = 0.0051 mg/L and Zinc = 0.065 mg/L. Sample results greater than 10 times the blank concentration, no qualifying action required.		
9. Were instrument calibrations within method criteria?	Yes NA	No
Comments: Level II data package and validation, no data provided.		
10. Were surrogate recoveries within control limits?	Yes NA	No
Comments: No organic analyses requested.		
11. Were laboratory control (LC/LD) sample recoveries within control limits?	Yes X	No
Comments: All laboratory control sample recoveries are within limits.		
12. Were site specific matrix spike (MS/MD) recoveries within control limits?	Yes X	No
Comments:		
13. Were RPDs within control limits?	Yes	No X

Comments: 6010B batch B4J0789 – Laboratory duplicate RPD above limits for Lead. Sample site specific. Associated result flagged "J" for 1255-111-3 only. Batch B4K0158 – Laboratory duplicate RPD above limits for STLC Lead. Samples site specific. Associated result flagged "J" for 1255-161-3 and 1255-115-1 only. Batch B4L0696 - Laboratory duplicate RPD above limits for Lead. Samples site specific. Associated result flagged "J" for 1255-163-1 only. Batch B4L0730 - Laboratory duplicate RPD above limits for STLC Lead. Samples site specific. Associated result flagged "J" for 1255-118-3 only. Reason Code – LDUP			
14. Were dilutions required on any samples?		Yes X	No
Comments: No action required.			
15. Were Tentatively Identified Compounds (TIC) present?		Yes X	No
Comments: Sample results below the reporting limit do not possess the degree of qualitative or quantitative confidence required. The value may be a false positive and is an estimated value and is flagged "NJ". Reason Code – SQL			
16. Were organic system performance criteria met?	NA	Yes	No
Comments: No organic analyses requested.			
17. Were GC/MS internal standards within method criteria?	NA	Yes	No
Comments: No organic analyses requested.			
18. Were inorganic system performance criteria met?		Yes X	No
Comments: All serial dilutions within limits.			
19. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results. Duplicate Sample Nos.		Yes	No X
Comments:			
20. Were at least 10 percent of the hard copy results compared to the Electronic Data Deliverable Results?	Yes X	No	Initials EAC
Comments:			
21. Other:		Yes	No X
Comments:			

PRECISION, ACCURACY, METHOD COMPLIANCE AND COMPLETENESS ASSESSMENT			
Precision:	Acceptable X	Unacceptable	Initials EAC
Comments: Data usable as qualified.			
Sensitivity:	Acceptable X	Unacceptable	Initials EAC
Comments: Samples analyzed at lowest levels possible to achieve required screening limits.			
Accuracy:	Acceptable X	Unacceptable	Initials EAC
Comments: No data qualified for laboratory control issues.			
Representativeness:	Acceptable X	Unacceptable	Initials EAC
Comments:			
Method Compliance:	Acceptable X	Unacceptable	Initials EAC
Comments:			
Completeness:	Acceptable X	Unacceptable	Initials EAC
Comments: No data are rejected.			

Stantec Analytical Validation Report/Checklist Report No. 010815-EC-02

Project Name: Caltrans 07A	Project Number: 185832011
Stantec Validator: Elizabeth Crowley	Laboratory: ATL, Signal Hill, CA
Date Validated: 11/26/14	Laboratory Project Number: 1403213, 1403213add and 1403213add2
Sample Start-End Date: 10/22/14	Laboratory Report Date: 10/31/14, 11/14/14 and 12/29/14

Parameters Validated: Total Metals, TCLP Lead, SPLC Lead and STLC DI Lead by EPA SW-846 6010B, Mercury by 7471A and pH by 9045C.

Samples Validated: 79 solid field samples and 2 Equipment Blanks

VALIDATION CRITERIA CHECK

Validation Flags Applicable to this Review:

U The analyte was analyzed for, but not detected above the reported sample quantitation limit.

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification".

NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

B The analyte was detected in the method, field and/or trip blank.

	Yes	No
1. Were all the analyses requested for the samples submitted with each COC completed by the lab?	X	
Comments: Initial analyses completed. Additional analyses are dependent on initial analyses results.		
2. Did the laboratory identify any non-conformances related to the analytical result?	X	
Comments: Refer to laboratory report for dilution and minor issues.		
3. Were sample Chain-of-Custody forms complete?	X	
Comments: All signatures and required items present.		
4. Were samples received in good condition and at the appropriate temperature?	X	
Comments:		
5. Were sample holding times met?	X	
Comments: All holding times met for all analyses.		
6. Were correct concentration units reported?	X	
Comments: Results reported in both mg/Kg and mg/L depending on the analytical method.		
7. Were detections found in laboratory blank samples?	X	

Comments: 6010B batch B4K0180 – Chromium = 0.120 mg/Kg, Copper = 0.200 mg/Kg, Nickel = 0.150 mg/L and Zinc = 0.530 mg/Kg. Batch B4J0787 – Lead = 0.30 mg/Kg. Batch B4J0788 – Lead = 0.07 mg/Kg. Batch B4J0790 – Lead = 0.21 mg/Kg. Batch B4L0696 – Lead = 0.20 mg/Kg. Sample results greater than 10 times the blank concentration, no qualifying action required. 6010B batch B4J0760 – Barium = 0.0008 mg/L, Cadmium = 0.0002 mg/L, Chromium = 0.0003 mg/L, Nickel = 0.0006 mg/L, Selenium = 0.0045 mg/L, Silver = 0.0008 mg/L and Zinc = 0.0039 mg/L. Batch B4J0786 – Lead = 0.39 mg/Kg. Batch B4K0191 – TCLP Lead = 0.0021 mg/L. Batch B4K0192 – TCLP Lead = 0.0020 mg/L. Sample results below the blank concentration are validated to non-detect and flagged “UJB”. Sample results greater than the blank concentration are flagged “JB”. The detection limit changed to the blank concentration. Sample results greater than 10 times the blank concentration require no qualifying action. Reason Code – MB		
8. Were detections found in field blank, equipment rinse blank, and/or trip blank samples?	Yes X	No
Comments: EBQC2 – Cadmium = 0.0005 mg/L, Chromium = 0.0007 mg/L, Molybdenum = 0.0009 mg/L, Selenium = 0.0054 mg/L, Silver = 0.0013 mg/L and Zinc = 0.015 mg/L. EBQC3 - Cadmium = 0.0003 mg/L, Chromium = 0.0005 mg/L, Molybdenum = 0.0006 mg/L, Selenium = 0.0051 mg/L and Zinc = 0.065 mg/L. Sample results greater than 10 times the blank concentration, no qualifying action required.		
9. Were instrument calibrations within method criteria?	Yes NA	No
Comments: Level II data package and validation, no data provided.		
10. Were surrogate recoveries within control limits?	Yes NA	No
Comments: No organic analyses requested.		
11. Were laboratory control (LC/LD) sample recoveries within control limits?	Yes X	No
Comments: All laboratory control sample recoveries are within limits.		
12. Were site specific matrix spike (MS/MD) recoveries within control limits?	Yes X	No
Comments:		
13. Were RPDs within control limits?	Yes	No X

Comments: 6010B batch B4J0789 – Laboratory duplicate RPD above limits for Lead. Sample site specific. Associated result flagged "J" for 1255-111-3 only. Batch B4K0158 – Laboratory duplicate RPD above limits for STLC Lead. Samples site specific. Associated result flagged "J" for 1255-161-3 and 1255-115-1 only. Batch B4L0696 - Laboratory duplicate RPD above limits for Lead. Samples site specific. Associated result flagged "J" for 1255-163-1 only. Batch B4L0730 - Laboratory duplicate RPD above limits for STLC Lead. Samples site specific. Associated result flagged "J" for 1255-118-3 only. Reason Code – LDUP			
14. Were dilutions required on any samples?		Yes X	No
Comments: No action required.			
15. Were Tentatively Identified Compounds (TIC) present?		Yes X	No
Comments: Sample results below the reporting limit do not possess the degree of qualitative or quantitative confidence required. The value may be a false positive and is an estimated value and is flagged "NJ". Reason Code – SQL			
16. Were organic system performance criteria met?	NA	Yes	No
Comments: No organic analyses requested.			
17. Were GC/MS internal standards within method criteria?	NA	Yes	No
Comments: No organic analyses requested.			
18. Were inorganic system performance criteria met?		Yes X	No
Comments: All serial dilutions within limits.			
19. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results. Duplicate Sample Nos.		Yes	No X
Comments:			
20. Were at least 10 percent of the hard copy results compared to the Electronic Data Deliverable Results?	Yes X	No	Initials EAC
Comments:			
21. Other:		Yes	No X
Comments:			

PRECISION, ACCURACY, METHOD COMPLIANCE AND COMPLETENESS ASSESSMENT			
Precision:	Acceptable X	Unacceptable	Initials EAC
Comments: Data usable as qualified.			
Sensitivity:	Acceptable X	Unacceptable	Initials EAC
Comments: Samples analyzed at lowest levels possible to achieve required screening limits.			
Accuracy:	Acceptable X	Unacceptable	Initials EAC
Comments: No data qualified for laboratory control issues.			
Representativeness:	Acceptable X	Unacceptable	Initials EAC
Comments:			
Method Compliance:	Acceptable X	Unacceptable	Initials EAC
Comments:			
Completeness:	Acceptable X	Unacceptable	Initials EAC
Comments: No data are rejected.			

LEAD SITE INVESTIGATION REPORT
INTERSTATE 10 HOV WIDENING PROJECT

LEAD SITE INVESTIGATION REPORT
INTERSTATE 10 HOV WIDENING PROJECT
EXPENDITURE AUTHORIZATION NO. 07-119340
LOS ANGELES COUNTY, CALIFORNIA
TASK ORDER NO. 07-117070-PX
STATEWIDE CONTRACT NO. 43A0078

PREPARED FOR:
State of California
Department of Transportation
District 7, Division of Planning
Office of Environmental Engineering
120 South Spring Street, Mail Stop 16
Los Angeles, California 90012

PREPARED BY:
Ninyo & Moore Geotechnical and Environmental Sciences Consultants
475 Goddard, Suite 200
Irvine, California 92618

October 24, 2002
Project No. 203939001

October 24, 2002
Project No. 203939001

Mr. Samuel K. Yang, Project Manager
State of California
Department of Transportation
District 7, Division of Planning
Office of Environmental Engineering
120 South Spring Street, Mail Stop 16
Los Angeles, California 90012

Subject: Draft Lead Site Investigation Report
Interstate 10 HOV Widening Project
Expenditure Authorization No. 07-119340
Los Angeles County, California
Task Order No. 07-117070-PX
Statewide Contract No. 43A0078

Dear Mr. Yang:

In accordance with Caltrans Contract No. 43A0078, Task Order (TO) No. 07-117070-PX, Ninyo & Moore has conducted a Lead Site Investigation at the above-referenced site. The following report documents our methodologies, findings, and conclusions.

We appreciate the opportunity to be of service to you on this project. Should you have any questions, please contact the undersigned at your convenience.

Sincerely,
NINYO & MOORE

Stephen S. Reese
Senior Staff Environmental Scientist

Nancy J. Anglin, R.E.A.
Senior Project Environmental Engineer

David I. Shaler, R.G., R.E.A.
Senior Project Environmental Geologist

REGISTERED GEOLOGIST
DAVID IVAN SHALER
No. 6370
Exp. 07/04
STATE OF CALIFORNIA

SSR/NA/DIS/kl

Distribution: (6) Addressee (5 hardcopy, 1 CD)

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Attached Tables

Table 1 – Soil Sample Results – Lead and pH
Table 2 – Analytical Results for Metals

Illustrations

Figure 1 – Site Location Map – Segment 3
Boring Location Maps: Layouts L-1 of L-24 – Segment 3 (EA 119340)

Appendices

Appendix A – Laboratory Reports
Appendix B – Caltrans Haz GIS Database Excel Spreadsheet Deliverables
Appendix C – Statistical Analyses
Appendix D – Normal Distribution Histograms
Appendix E – Correlation of Total Lead to Soluble Lead

1. INTRODUCTION

The State of California Department of Transportation (Caltrans) has authorized Ninyo & Moore to conduct a Lead Site Investigation (LSI) of areas along the Interstate 10 Freeway (I-10) from the State Route 605 Freeway (SR-605) Interchange to the State Route 57/71/210 Interchange in the cities of Baldwin Park, West Covina, and San Dimas in the county of Los Angeles, California (site). Work was conducted in accordance with the Caltrans Contract No. 43A0078, Task Order (TO) No. 07-117070-PX, and the agreement between Ninyo & Moore and Caltrans.

The LSI is part of preparation work for the high-occupancy-vehicle (HOV) lanes widening project along the I-10, including both westbound and eastbound locations, involving approximately 18 kilometers (Kilometer Post [KP] 50.3 to 68.2). In addition to the LSI, a Parcel Acquisition Site Investigation (ASI) is being prepared by Ninyo & Moore (separately from the LSI) for approximately 20 right-of-way (ROW) parcels associated with the I-10 HOV widening project. The ASI will be submitted as a separate report. The entire site has been divided into three segments for reporting purposes by Expenditure Authorization (EA) Nos.: EA No. 07-117070 (Segment 1), EA No. 07-117080 (Segment 2), and EA No. 07-119340 (Segment 3). This report describes the work conducted in EA No. 07-119340 (Segment 3), located along the I-10 from Citrus Avenue to the Route 57/71/210 Interchange (KP 60.3 to 68.2; Mile Post [MP] 37.5 to 42.4). The soil samples described in this report for Segment 3 have the following three-digit prefix: 571. The site location map for this segment is presented on Figure 1. Reports for Segments 1 and 2 have been prepared as separate reports.

The purpose of the LSI was to evaluate surface and subsurface soil at the areas of pavement widening along the existing Caltrans ROW, travel way and ramps, areas where new sound walls/retaining walls are proposed, and areas where bridge structure abutment are to be widened and new bent locations are proposed to be constructed. These locations are investigated for concentrations of aerially deposited lead (ADL) that may exceed acceptable regulatory limits on the Caltrans ROW. The soil adjacent to the freeway is suspected of being contaminated with ADL believed to be from automobile emissions from the use of leaded gasoline prior to 1970. The information obtained from the limited soil sampling and laboratory testing was used to determine

the method of re-use or disposal of soil excavated during the proposed construction at the site. The data was also used to inform Caltrans of potential health and safety issues for workers at the site during construction activities. A prework TO meeting between Caltrans and Ninyo & Moore took place on July 1, 2002. A Work Plan meeting between Caltrans and Ninyo & Moore took pace on July 11, 2002. Ninyo & Moore prepared a detailed Work Plan (for the entire site including all three segments), dated July 12, 2002, which was approved by the Caltrans Project Manager. As part of the detailed Work Plan, Ninyo & Moore prepared a Health and Safety Plan, dated July 2002, that was delivered to the Caltrans Project Manager.

2. INVESTIGATIVE SUMMARY

Ninyo & Moore collected soil samples within the Caltrans ROW at the various proposed shoulder widening locations, proposed retaining wall/sound wall locations, and bridge abutment locations in Segment 3 along the I-10 from Citrus Avenue to the Route 57/71/210 Interchange (KP 60.3 to 68.2; MP 37.5 to 42.4). Segment 3 was divided into eight sections (four westbound and four eastbound sections). The four westbound sections were designated 100s, 300s, 500s, and 700s. The four eastbound sections were designated 200s, 400s, 600s, and 800s. For the purpose of boring location identification (ID), the boring ID 571-101, for example, contains the prefix of the segment number (571 in this case for Segment 3) and the suffix for the first boring location in the Section 100 series. For a soil sample ID, the depth in meters (m) below surface grade (bsg) was added to the end of the boring location. Therefore, a soil sample collected at a depth of 0.3 m bsg from boring 571-101 would be designated 571-101-0.3. Soil samples were collected at the surface to 6 inches (0), 0.3, 0.6, 0.9, and 1.5 m bsg, unless refusal was encountered during drilling. A total of 832 soil samples were collected (831 samples analyzed) at 205 boring locations. The boring locations are presented on Layouts L-1 through L-24 of Segment 3.

Thirty-two (32) of the 831 soil samples analyzed contained concentrations of lead, which equaled or exceeded the California Total Threshold Limit Concentration (TTLC) for lead (1,000 milligrams per kilogram [mg/kg]). Seventeen (17) samples exceeded the 1,496-mg/kg

limit provided in the September 22, 2000 California Environmental Protection Agency (Cal-EPA) Department of Toxic Substances Control (DTSC) variance to Caltrans District 7 (variance) as amended by Assembly Bill 414. Three hundred fifty-three (353) soil samples contained concentrations of lead less than the TTLC of 1,000 mg/kg but more than or equal to 50 mg/kg, which is 10 times the California Soluble Threshold Limit Concentration (STLC) for lead (5 milligrams per liter [mg/l]). These 353 soil samples were analyzed for soluble lead (STLC) by the Waste Extraction Test (WET). Two hundred fifty-one (251) of the 353 samples contained 5 mg/l or more of soluble lead (STLC). One sample that contained more than 1,000 mg/kg of lead (TTLC) was inadvertently analyzed for soluble lead (STLC). Two hundred fifty-two (252) samples were subsequently analyzed for soluble lead using the deionized water (DI-WET) extraction. Twenty (20) of the 252 samples contained 0.5 mg/l or more of lead using the DI-WET method.

In accordance with the TO, a total of 173 samples were analyzed by Toxicity Characteristic Leaching Procedure (TCLP). These 173 samples included all of the samples (32) with total lead by TTLC greater than or equal to 1,000 mg/kg and 141 samples with 5 mg/l or more of soluble lead by STLC. Twenty (20) of the 173 samples contained 5 mg/l or more of lead by TCLP. In accordance with the TO, this number (173), combined with totals of TCLP analyses from Segments 1 and 2, constitutes approximately 25 percent of all of the samples collected.

In accordance with the TO, samples were analyzed for pH to meet the requirement of analyzing a minimum of 10 percent of the total samples. Eighty-five (85) randomly selected samples were analyzed for pH. pH values ranged from 5.0 to 9.2.

Fifty-six (56) samples were analyzed for Title 22 metals (excluding lead). No metals concentrations exceeded their respective TTLCs. Twenty-three (23) samples contained concentrations of one or more metals that equaled or exceeded 10 times the STLC for those metals.

All of the soil samples collected in Segment 3 were recorded on a total of 17 chain-of-custody (COC) records. In accordance with the TO, one equipment rinsate sample was collected per COC

record. Seventeen (17) equipment rinsate samples were collected and analyzed for total lead. The highest concentration of lead detected in any of the samples was 0.0098 mg/l.

3. PROJECT DESCRIPTION

The following sections describe the site description, purpose, and limitations.

3.1. Site Description

The site (EA No. 07-119340, Segment 3) included various locations along the I-10 in both a westbound and an eastbound direction, from Citrus Avenue to the Route 57/71/210 Interchange (KP 60.3 to 68.2; MP 37.5 to 42.4). Segment 3 was divided into eight sections (four westbound and four eastbound sections), as presented on Table T1 below.

Table T1 – Boring Distribution

Section	Direction	Number of Borings Completed	Approximate Length of Section (meters)	Section Limits (Approximate Stationing Nos.)
100s	Westbound	24	1,350	East of Mockingbird Lane to Barranca Avenue (598+00 to 611+50)
200s	Eastbound	20	1,350	
300s	Westbound	28	1,570	Barranca Avenue to Holt Avenue (611+50 to 627+50)
400s	Eastbound	25	1,570	
500s	Westbound	30	2,380	Holt Avenue to Via Verde (627+50 to 651+00)
600s	Eastbound	29	2,380	
700s	Westbound	13	3,070	Via Verde to East of 210/57 Interchange (651+00 to 662+00)
800s	Eastbound	36	3,070	Via Verde to East of 210/57 Interchange (651+00 to 682+00)

Soil samples were collected from unpaved shoulders, freeway ramps, gore areas, and abutment slope areas. Samples were taken at positions specified by the Caltrans-approved detailed Work Plan prepared by Ninyo & Moore dated July 12, 2002. The site location map for this segment is presented on Figure 1. The boring locations are presented on Layouts L-1 through L-24 of Segment 3.

3.2. Purpose

The purpose of the TO was to evaluate concentrations of ADL in soil to determine if they exceed acceptable regulatory concentrations along the above-mentioned locations and to provide recommendations regarding the handling of the soil for re-use, or methods in disposal.

3.3. Limitations

The LSI was conducted in accordance with TO No. 07-117070-PX, Statewide Contract No. 43A0078, and with the detailed Work Plan dated July 12, 2002.

The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard-of-care exercised by environmental consultants performing similar work in the project area. No warranty, expressed or implied, is made regarding the professional opinions presented in this report. Please note that this study did not include an evaluation of geotechnical conditions or potential geologic hazards.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires any additional information or has questions regarding the content, interpretations presented, or completeness of this document.

Our conclusions, recommendations, and opinions are based on an analysis of the observed site conditions and the referenced literature. It should be understood that the conditions of a site can change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

4. INVESTIGATION METHODS

The field work for Segment 3 was conducted from July 16, 17, 18, 19, and 22, 2002. Traffic control consisted of shoulder closures provided each day by American Barricade, Inc. of Anaheim, California. The following sections describe soil sampling completed by hand-auger and direct-push methods, investigative derived wastes, laboratory analyses, and Geographical Information System (GIS) data.

4.1. Hand-Auger Sampling

Of the 832 soil samples collected from 205 boring locations in Segment 3, 423 samples were collected from 118 boring locations using hand-augered drilling methods. Soil samples were collected at the surface to 6 inches (0), 0.3, 0.6, 0.9, and 1.5 m bsg, except for the proposed sample depths not collected due to refusal encountered during drilling, proposed boring locations not attempted due to unsafe working conditions, and proposed boring locations not attempted due to paved shoulders. A summary of total work completed in Segment 3 including the work completed by hand-auger drilling is presented on Table T2. The proposed boring locations and samples not attempted are presented on Table T3.

Ninyo & Moore collected samples using hand-augered drilling methods as described in the detailed Work Plan prepared by Ninyo & Moore dated July 12, 2002. Borings were drilled using augers in which soil samples were placed into new, 2-inch-diameter by 3-inch-long brass sleeves, and capped with plastic end caps and labeled. The sampling equipment was decontaminated between each boring and equipment rinsate samples were collected and analyzed. Equipment rinsate samples were collected by pouring deionized water over/through decontaminated equipment and allowing the water to drain into laboratory-supplied sample containers. Soil samples and equipment rinsate samples were transferred under COC protocol to the State-certified laboratory within 24 hours of collection. In accordance with the TO and presented in the detailed Work Plan, soil sample homogenization was performed in the laboratory.

4.2. Direct-Push Sampling

Of the 832 soil samples collected from 205 boring locations in Segment 3, 409 samples were collected (408 samples analyzed) from 87 boring locations using direct-push drilling methods. Soil samples were collected at the surface to 6 inches (0), 0.3, 0.6, 0.9, and 1.5 m bsg, except for the proposed sample depths not collected due to refusal encountered during drilling, proposed boring locations not attempted due to unsafe working conditions, and proposed boring locations not attempted due to paved shoulders. A summary of total work completed in Segment 3 including the work completed by direct-push drilling is presented on Table T2. The proposed boring locations and samples not attempted are presented on Table T3.

Borings were drilled and sampled using direct-push drilling methods by Interphase Environmental, Inc. (Interphase) of Los Angeles, California as described in the detailed Work Plan prepared by Ninyo & Moore dated July 12, 2002. Soil samples were collected into new acetate sleeves and capped with plastic end caps and labeled. The sample equipment was decontaminated between each boring and equipment rinsate samples were collected and analyzed. Equipment rinsate samples were collected by pouring deionized water over/through decontaminated equipment and allowing the water to drain into laboratory-supplied sample containers. Soil samples and equipment blank samples were transferred under COC protocol to the State-certified laboratory within 24 hours of collection. In accordance with the TO and presented in the detailed Work Plan, soil sample homogenization was performed in the laboratory.

4.3. Investigative Derived Wastes

Soil cuttings were not generated from the borings drilled by direct push methods during this project. During hand-auger drilling, soil cuttings were returned to the borehole upon collection of soil samples. During direct-push drilling, boreholes were backfilled with granular bentonite upon completion of soil sampling. Disposable equipment (e.g., acetate sleeves, gloves, etc.) was not considered hazardous, and was bagged and disposed as municipal waste. Decontamination water was disposed of on site in accordance with the TO and the

detailed Work Plan. As required by the TO, no decontamination water entered storm drains or escaped the Caltrans ROW. Characterization of the decontaminated water was not required by the TO. In prior years, Caltrans did require characterization and off-site disposal of decontaminated water. On each of these past ADL surveys, lead was not detected or was detected at very low (non-hazardous) concentrations in decontaminated water.

4.4. Laboratory Analyses

Soil samples were transferred under COC to Advanced Technology Laboratories (ATL) of Signal Hill, California. Once the samples were received by ATL, the analysis of the samples was performed within five days, the turnaround time specified in the TO. The holding time for metals analyses is 180 days. Prior to analysis, soil sample homogenization was performed by ATL. The laboratory analyses are presented in the laboratory results included in Appendix A.

In accordance with the TO, soil samples were analyzed for total lead (TTLC) by United States Environmental Protection Agency (EPA) Test Method No. 6010B. Of the 831 samples analyzed, 353 samples contained total lead (TTLC) at concentrations greater than or equal to 50 mg/kg and less than 1,000 mg/kg, and were further analyzed for soluble lead (STLC) using the WET Method by EPA Test Method No. 7420. Two hundred fifty-one (251) samples contained soluble lead (STLC) at concentrations greater than or equal to 5 mg/l, and 252 samples (one sample with more than 1,000 mg/kg of TTLC lead inadvertently analyzed) were further analyzed for soluble lead using the DI-WET Method by EPA Test Method No. 7420.

In accordance with the TO, selected samples were analyzed for lead by TCLP using EPA Test Method Nos. 1311/7420. As specified in the TO, the samples (32) containing 1,000 mg/kg or more of total lead by TTLC were analyzed for lead by TCLP. After consulting with the Caltrans Project Manager, an additional 141 samples were selected for TCLP analyses from among the samples with the greatest concentrations of soluble lead (all greater than 5 mg/l). Waste soil containing these concentrations of TTLC or STLC lead would be

treated as hazardous waste by California regulations. Analysis for TCLP is used to evaluate whether soils should be classified as hazardous for disposal purposes under Federal Law. A total of 173 samples were analyzed for lead by TCLP from Segment 3. In accordance with the TO, this number (173), combined with the totals of TCLP analyses from Segments 1 and 2, constitutes approximately 25 percent of all the samples collected.

In accordance with the TO, samples were analyzed for pH using EPA Test Method No. 9045. Eighty-five (85) randomly selected samples were analyzed for pH.

Fifty-six (56) samples were analyzed for Title 22 metals (excluding lead) using EPA Test Method Nos. 6010B/7471A. In accordance with the TO, the two samples with the highest total lead (TTLC) in each section (16 of the 32 samples) were analyzed for Title 22 metals. The remaining 16 samples were selected to provide an even distribution with regard to depth and location.

In accordance with Contract No. 43A0078, one equipment rinsate sample was collected per COC. Seventeen (17) equipment rinsate samples were collected and analyzed for total lead by EPA Test Method No. 6010B.

4.5. Geographical Information System (GIS)

Latitude and longitude (NAD 83) of sampling locations were recorded with a handheld Global Positioning System (GPS) unit (Geoexplorer 3, Trimble). Laboratory data and coordinates were entered into two Excel tables provided by Caltrans. Sample IDs intended for use by Caltrans for sampling and for GIS tables were provided to Ninyo & Moore. The GIS tables are presented in Appendix B. The sample IDs presented in Appendix B are identical to the sample IDs used throughout this report and shown on the attached Table 1. The sample IDs in Appendix B and Table 1 are in the following format: three-digit prefix – three-digit boring number – depth in meters. The three-digit prefix for Segment 3 (this report) is 571. The three-digit boring numbers are based on sections as defined in Table T1 and the depth is in meters. For example, sample 571-703-1.5 is the sample collected from a depth of 1.5 m in boring 703 (Section 7) of Segment 3 (571).

5. INVESTIGATIVE RESULTS

The results of the completed work, field quality assurance/quality control (QA/QC), laboratory results and laboratory QA/QC is presented below.

5.1. Summary of Completed Work

The proposed work was based on the Caltrans-approved detailed Work Plan LSI prepared by Ninyo & Moore dated July 12, 2002. Tables T2 and T3 summarize the number of borings completed and samples collected from Segment 3 relative to the number of borings and samples proposed in the detailed Work Plan. As indicated in the tables below, some borings were not attempted due to unsafe working conditions and paved shoulders. Some borings were completed with less than five samples collected per boring due to sampling equipment refusal. If refusal was encountered in a boring after collection of the third sample, the boring was terminated at that depth. If refusal was encountered prior to collection of the third sample, the boring was relocated and one additional attempt was made to collect the deeper sample. Each sample interval, at which samples were not collected due to refusal, is indicated on the attached Table 1.

Table T2 – Summary of Work

No. of Borings (Samples) Proposed in Work Plan	[1] No. of Borings (Samples) Not Completed	No. of Samples Attempted but not collected due to Refusal	No. of Borings Completed (Samples Collected and Analyzed)	Boring Drilling Method of Completed Borings	
				Direct-Push Borings (Samples)	Hand-Auger Borings (Samples)
214 (1,070)	9 (45)	193	205 (831)[2]	87 (408)	118 (423)

Notes:
[1] Borings were not attempted as proposed in the detailed Work Plan, with the concurrence of the Caltrans Project Manager, due to unsafe working conditions and paved shoulders. Please refer to Table T3 for additional details.
[2] 832 samples collected

Table T3 – Summary of Borings/Samples Not Completed

Section/ Direction	Approximate Stationing No(s).	Boring Nos. Not Completed	Borings (Samples)	Map Page (Layout)	Reason
300s WB	613+00	571-303	1 (5)	L-5	Paved Shoulder
300s WB	620+00 to 620+50	571-318	1(5)	L-7	Unsafe Working Conditions
700s WB	653+00	571-705	1 (5)	L-16	Paved Shoulder
800s EB	653+00	571-806	1 (5)	L-16	Paved Shoulder
800s EB	668+00 to 672+00	571-822 through -826	5 (25)	L-20/L-21	Unsafe Working Conditions
Notes: WB – westbound EB – eastbound					

5.1.1. Field Quality Assurance/Quality Control (QA/QC)

In order to reduce the likelihood of cross-contamination, sampling equipment was decontaminated between borings. Equipment was washed in a solution of non-phosphate detergent, rinsed in clear water, rinsed with distilled water, and dried. To evaluate the effectiveness of the decontamination procedures, one equipment rinsate blank was collected for each COC (17 samples total). The samples were collected by pouring deionized water through/over decontaminated equipment and collecting the water in laboratory-supplied containers. The samples were analyzed for total lead. The highest detectable concentration of lead was 0.0098 mg/l. The results of the analysis of the equipment rinsate blanks are indicative of thorough decontamination.

5.2. Laboratory Results

Table T4 summarizes the laboratory results (TTLC, STLC, DI-WET, and TCLP) for Segment 3. The attached Tables 1 and 2 contain all of the soil sample results as well as equipment rinsate sample results. The laboratory reports are included as Appendix A.

Table T4 – Summary of Laboratory Results (Entire Segment 3)

	TTLC (mg/kg)			STLC (mg/l)		DI-WET (mg/l)		TCLP (mg/l)	
Maximum Concentration (Sample ID)	3,600 (571-407-0)			230 (571-521-0)		23 (571-617-0.3)		17 (571-611-0.6)	
Concentration	< 50	50 to 999	≥ 1,000	< 5	≥ 5	< 0.5	≥ 0.5	< 5	≥ 5
Number of Samples	446	353	32	102	252	230	22	141	32

Notes:
TTLC – Total Threshold Limit Concentration
STLC – Soluble Threshold Limit Concentration
DI-WET – deionized water extraction
TCLP – Toxicity Characteristic Leaching Procedure
mg/kg – milligrams per kilogram
mg/l – milligrams per liter

Per the variance and Assembly Bill 414, Caltrans may reuse fill soil containing less than 1,496 mg/kg of total lead (TTLC). In Segment 3, eight samples contained 1,496 mg/kg or more of total lead (TTLC). If the soil contains less than 0.5 mg/l of soluble lead (DI-WET), the soil must be placed a minimum of 1.5 m above the maximum water table elevation and covered with at least 0.3 m of non-hazardous soil. If the soil contains 0.5 mg/l or more of soluble lead (DI-WET), the cover must be a pavement structure maintained by Caltrans. The pH values ranged between 5.0 (571-319-0) and 9.2 (571-624-0.3) for Segment 3. Since the range of pH values is greater than 5.0 (the lower limit provided in the variance), no additional limitations are applicable.

Evaluation of TCLP concentrations is not referred to in the variance. Federal regulations indicate that waste soil containing 5 mg/l or more of lead by TCLP analyses be classified as a Resource, Conservation, and Recovery Act (RCRA)-regulated hazardous waste for disposal purposes. If a layer is found to contain samples with TCLP results of 5 mg/l or more, additional in-ground and/or stockpile soil sampling could be performed near these sample locations during construction activities.

As presented below, Table T5 summarizes the laboratory results (TTLC, STLC, DI-WET, and TCLP) for Segment 3 (Westbound Sections).

Table T5 – Summary of Laboratory Results for Segment 3 (Westbound Sections)

	TTLC (mg/kg)			STLC (mg/l)		DI-WET (mg/l)		TCLP (mg/l)	
Maximum Concentration (Sample ID)	2,800 (571-712-0)			230 (571-521-0)		10 (571-712-0.9)		13 (571-711-0)	
Concentration	< 50	50 to 999	≥ 1,000	< 5	≥ 5	< 0.5	≥ 0.5	< 5	≥ 5
Number of Samples	200	179	17	54	126	110	16	81	14

Notes:
TTLC – Total Threshold Limit Concentration
STLC – Soluble Threshold Limit Concentration
DI-WET – deionized water extraction
TCLP – Toxicity Characteristic Leaching Procedure
mg/kg – milligrams per kilogram
mg/l – milligrams per liter

As presented below, Table T6 summarizes the laboratory results (TTLC, STLC, DI-WET, and TCLP) for Segment 3 (Eastbound Sections).

Table T6 – Summary of Laboratory Results for Segment 3 (Eastbound Sections)

	TTLC (mg/kg)			STLC (mg/l)		DI-WET (mg/l)		TCLP (mg/l)	
Maximum Concentration (Sample ID)	3,600 (571-407-0)			110 (571-818-0)		23 (571-617-0.3)		17 (571-611-0.6)	
Concentration	< 50	50 to 999	≥ 1,000	< 5	≥ 5	< 0.5	≥ 0.5	< 5	≥ 5
Number of Samples	246	174	15	48	126	120	6	60	18

Notes:
TTLC – Total Threshold Limit Concentration
STLC – Soluble Threshold Limit Concentration
DI-WET – deionized water extraction
TCLP – Toxicity Characteristic Leaching Procedure
mg/kg – milligrams per kilogram
mg/l – milligrams per liter

Fifty-six (56) samples were analyzed for Title 22 metals (excluding lead). No metals concentrations exceeded their respective TTLCs. Twenty-three (23) samples contained concentrations of one or more metals that equaled or exceeded 10 times the STLC for those metals as summarized in Table T7. The results for all samples analyzed for Title 22 metals are presented in the attached Table 2.

Table T7 – Summary of Laboratory Results for Elevated Metals

Sample ID	Metal (Symbol) Detected	Concentration (mg/kg)	10xSTLC (mg/kg)	TTLC (mg/kg)
571-115-0.9	Selenium (Se)	14	10	100
571-214-0.3	Selenium (Se)	13	10	100
571-317-0	Selenium (Se)	14	10	100
571-421-0	Selenium (Se)	11	10	100
571-507-0	Selenium (Se)	11	10	100
571-510-0.6	Selenium (Se)	12	10	100
571-517-0.9	Selenium (Se)	16	10	100
571-520-0	Selenium (Se)	15	10	100
571-524-0	Total Chromium (Cr)	54	50	2,500
	Selenium (Se)	12	10	100
571-529-0.3	Total Chromium (Cr)	52	50	2,500
571-621-0.3	Total Chromium (Cr)	57	50	2,500
571-624-0.9	Selenium (Se)	12	10	100
571-707-0	Selenium (Se)	19	10	100
571-711-0	Selenium (Se)	10	10	100
571-712-0	Selenium (Se)	16	10	100
571-804-0.6	Selenium (Se)	12	10	100
571-809-0.3	Total Chromium (Cr)	50	50	2,500
	Selenium (Se)	13	10	100
571-814-0.3	Selenium (Se)	21	10	100
571-818-0.6	Selenium (Se)	12	10	100
571-819-0	Selenium (Se)	17	10	100
571-832-0.9	Cadmium (Cd)	11	10	100
	Total Chromium (Cr)	57	50	2,500
	Selenium (Se)	15	10	100
571-837-0.3	Selenium (Se)	12	10	100
571-842-0	Selenium (Se)	14	10	100

Notes:
mg/kg – milligrams per kilogram
STLC – Soluble Threshold Limit Concentration
TTLC – Total Threshold Limit Concentration

5.2.1. Laboratory QA/QC

ATL conducted laboratory QA/QC in accordance with Statewide Contract No. 43A0078. QA/QC procedures included analyses of method blanks, duplicate samples, and spiked samples. These procedures are included in the analytical reports presented in Appendix A of this report.

6. STATISTICAL EVALUATION

A statistical evaluation on the laboratory results was completed in with the procedures outlined in Chapter 9 of the EPA's SW-846 for each area. For samples having lead concentrations below the method detection limit, the laboratory supplied an estimated lead concentration which ranged from zero to the detection limit for their respective analyte. This laboratory-supplied value was used for the purpose of statistical evaluation. This method is less arbitrary than using one-half of the detection limit.

A histogram of each dataset was developed to determine normality of the data (Appendix D). Datasets for each area are not normally distributed but skewed generally to the left.

As required by the TO, these analyses were done for the 90 percent and 95 percent upper confidence limits (UCLs). The 90 percent UCL was used to determine whether the DTSC variance could be invoked; the 95 percent UCL was used to evaluate off-site handling and disposal options for soil to be relinquished to a contractor or disposed outside the Caltrans ROW as per the Health and Safety Code disposal criteria. When evaluating whether the DTSC Variance (90 percent UCL) applies, a maximum total lead concentration of 1,496 mg/kg and a soluble lead concentration of 5 mg/l were used; for evaluation of off-site soil handling and disposal (95 percent UCL), a maximum total lead concentration of 350 mg/kg and a soluble lead concentration of 5 mg/l were used.

A correlation function for the eastbound samples of Segment 3 and for the westbound samples of Segment 3 between the total and soluble lead concentrations was established (Appendix E) by calculating the correlation coefficient for each data set. As described in Gilbert's "Statistical

Methods for Environmental Pollution Monitoring," dated 1997, a visual inspection of the plots of STLC values versus TTLC values for the westbound and eastbound portion of this segment were made. One data point (571-619-0.6) was observed to be far removed from the main cloud of point. This data point was considered an outlier and was removed from the data set used to generate the regression line for Segment 3 eastbound. The purpose of calculating the correlation coefficient for each TTLC/STLC data set is to evaluate the strength of the association between TTLC and STLC. Once the association has been evaluated, the 90 percent and 95 percent UCL TTLC value can be used to predict the 90 percent and 95 percent UCL, respectively, STLC value through a linear relationship.

For a set of variable pairs, the correlation coefficient gives the strength of the association. The square of the size of the correlation coefficient is the fraction of the variance of the one variable that can be explained from the variance of the other variable. The relation between the variables is called the regression line. The regression line is defined as the best fitting straight line through all value pairs, i.e., the one explaining the largest part of the variance.

It is important to note that this type of correlation is able to show whether two variables are connected. However, it is not able to show whether the variables are not connected. If one variable depends on another, i.e., there is a causal relation, then it is always possible to find some kind of correlation between the two variables. However, if both variables depend on a third (i.e., soil pH), they can show a sizable correlation without any causal dependency between them. All TTLC/STLC data pairs were used to establish each correlation function. Correlation functions are shown on Figures E-1 and E-2.

The procedure used to predict the soluble lead concentration was to calculate the correlation coefficient *R* of the pairs (TTLC, STLC) for each area using the following equation:

$$R = \frac{\{\text{Sum(TTLC*STLC)-Sum(TTLC)*Sum(STLC)}/N\}}{\text{sqrt}(\{\text{Sum(TTLC**2)-Sum(TTLC)**2}/N\}*\{\text{Sum(STLC**2)-Sum(STLC)**2}/N\})}$$

The regression line STLC=a*TTLC+b is calculated as:

a = {Sum(TTLC*STLC)-Sum(TTLC)*Sum(STLC)/N}/{Sum(TTLC**2)-Sum(TTLC)**2/N}
b = Sum(STLC)/N-a*Sum(TTLC)/N

The resulting correlation coefficients for the two directions are:

Segment 3 Westbound R = 0.8681
Segment 3 Eastbound R = 0.8035

The resulting regression lines for the two directions are:

Segment 3 Westbound y = 0.0895x - 3.6943
Segment 3 Eastbound y = 0.0716x - 0.5673

It appears that the relationship between the TTLC/STLC data sets is different in each area. Those differences are likely related to environmental conditions such as soil type, moisture content, biological activity, as well as physical conditions like traffic patterns over time.

The data analysis tables are presented in Appendix C. In accordance with the TO, statistical analyses were performed on each area independently. Each area was evaluated as described in Section C of the TO. The statistical datasets can be found in Tables C-1 through C-70 (Appendix C).

In general, first the mean and variance of the total lead for each data set were calculated. These values are shown in Tables C-1 through C-70. In each case, the mean was less than the variance. For total lead concentrations, the difference between the mean and variance was one to several orders of magnitude. In accordance with SW-846, the data were transformed with an arcsine transformation, and the subsequent calculations were done with the transformed data. To transform the data, the data were first converted to percentages of the maximum value in accordance with SW-846 (see Tables C-1 through C-70).

The arcsine-transformed data are listed in the bottom portion of each table (C-1 through C-70). Statistical "t" values were established for 90 percent and 95 percent UCLs based on the degrees of freedom of each data set, and 90 percent and 95 percent UCLs were calculated for each data set. The calculated values were "back transformed" to convert them to concentration values (see line Reverse Transformation for 90 / 95 % on Tables C-1 through C-70). These are listed at the bottom of each of the tables.

As shown on Table T8, there are some instances when deeper layers or combinations of deeper layers contain higher lead concentrations than some shallower layers or combinations of layers. This trend was noted in some instances during completion by Ninyo & Moore of another TO situated within the boundaries of this TO. TO 07-023141-SN was for sampling at locations of potential soundwalls on the I-10 in West Covina. Our report on this TO was dated May 31, 2002. One possible explanation for this trend is that in some areas shallower soils may be fill material emplaced over the original shoulder surface. The original shoulder surface could have been exposed to ADL when leaded gas was common and then covered with imported soil which was exposed to ADL for fewer years, including years after the removal of lead from gasoline.

The results of the statistical analyses are summarized in Table T8 below.

Table T8 – Summary of Statistical Analyses

Section/ Direction	Depth (meters bsg)	Total Lead		Soluble Lead	
		90% UCL (mg/kg)	95% UCL (mg/kg)	90% UCL (mg/l)	95% UCL (mg/l)
100s WB	Layers Combined	164.21	175.43	11.00	12.01
100s WB	Surface	460.35	506.56	37.51	41.64
100s WB	0.3, 0.6, 0.9, 1.5	106.92	114.03	5.88	6.51
100s WB	Surface, 0.3	261.19	284.87	19.68	21.80
100s WB	0.6, 0.9, 1.5	126.37	136.01	7.62	8.48
100s WB	Surface, 0.3, 0.6	225.05	241.79	16.45	17.95
100s WB	0.9, 1.5	99.86	111.33	5.24	6.27
100s WB	Surface, 0.3, 0.6, 0.9	192.07	205.37	13.50	14.69
100s WB	1.5	47.74	54.08	0.58	1.15
300s WB	Layers Combined	189.93	201.70	13.30	14.36
300s WB	Surface	394.43	425.94	31.61	34.43
300s WB	0.3, 0.6, 0.9, 1.5	160.27	173.39	10.65	11.82
300s WB	Surface, 0.3	225.84	243.17	16.52	18.07
300s WB	0.6, 0.9, 1.5	212.05	230.74	15.28	16.96
300s WB	Surface, 0.3, 0.6	217.08	232.50	15.73	17.11
300s WB	0.9, 1.5	210.37	232.59	15.13	17.12
300s WB	Surface, 0.3, 0.6, 0.9	213.46	226.85	15.41	16.61
300s WB	1.5	46.65	51.14	0.48	0.88

Table T8 – Summary of Statistical Analyses

Section/ Direction	Depth (meters bsg)	Total Lead		Soluble Lead	
		90% UCL (mg/kg)	95% UCL (mg/kg)	90% UCL (mg/l)	95% UCL (mg/l)
500s WB	Layers Combined	308.46	323.22	23.91	25.23
500s WB	Surface	796.84	846.63	67.62	72.08
500s WB	0.3, 0.6, 0.9, 1.5	180.69	189.59	12.48	13.27
500s WB	Surface, 0.3	509.14	537.79	41.87	44.44
500s WB	0.6, 0.9, 1.5	158.35	167.84	10.48	11.33
500s WB	Surface, 0.3, 0.6	389.24	409.76	31.14	32.88
500s WB	0.9, 1.5	179.89	194.82	12.41	13.74
500s WB	Surface, 0.3, 0.6, 0.9	328.43	345.12	25.70	27.19
500s WB	1.5	306.36	341.35	23.72	26.86
700s WB	Layers Combined	628.65	670.61	52.57	56.33
700s WB	Surface	1274.05	1395.97	110.33	121.25
700s WB	0.3, 0.6, 0.9, 1.5	516.90	554.51	42.57	45.93
700s WB	Surface, 0.3	904.53	970.57	77.26	83.17
700s WB	0.6, 0.9, 1.5	332.31	361.47	26.05	28.66
700s WB	Surface, 0.3, 0.6	680.82	728.64	57.24	61.52
700s WB	0.9, 1.5	598.68	663.54	49.89	55.69
700s WB	Surface, 0.3, 0.6, 0.9	642.24	684.96	53.79	57.61
700s WB	1.5	NA	NA	NA	NA
200s EB	Layers Combined	179.62	192.25	12.29	13.20
200s EB	Surface	342.85	372.83	23.98	26.13
200s EB	0.3, 0.6, 0.9, 1.5	152.64	167.38	10.36	11.42
200s EB	Surface, 0.3	248.60	268.41	17.23	18.65
200s EB	0.6, 0.9, 1.5	164.77	184.58	11.23	12.65
200s EB	Surface, 0.3, 0.6	207.63	223.04	14.30	15.40
200s EB	0.9, 1.5	113.97	126.69	7.59	8.50
200s EB	Surface, 0.3, 0.6, 0.9	187.98	201.48	12.89	13.86
200s EB	1.5	177.34	203.45	12.13	14.00
400s EB	Layers Combined	322.57	347.99	22.53	24.35
400s EB	Surface	896.00	986.17	63.59	70.04
400s EB	0.3, 0.6, 0.9, 1.5	146.62	156.39	9.93	10.63
400s EB	Surface, 0.3	535.66	583.94	37.79	41.24
400s EB	0.6, 0.9, 1.5	136.23	146.48	9.19	9.92

Table T8 – Summary of Statistical Analyses

Section/ Direction	Depth (meters bsg)	Total Lead		Soluble Lead	
		90% UCL (mg/kg)	95% UCL (mg/kg)	90% UCL (mg/l)	95% UCL (mg/l)
400s EB	Surface, 0.3, 0.6	427.51	461.77	30.04	32.50
400s EB	0.9, 1.5	63.36	70.33	3.97	4.47
600s EB	Layers Combined	245.50	260.03	17.01	18.05
600s EB	Surface	622.41	676.22	44.00	47.85
600s EB	0.3, 0.6, 0.9, 1.5	170.49	181.52	11.64	12.43
600s EB	Surface, 0.3	354.27	382.94	24.80	26.85
600s EB	0.6, 0.9, 1.5	209.73	224.69	14.45	15.52
600s EB	Surface, 0.3, 0.6	295.78	316.43	20.61	22.09
600s EB	0.9, 1.5	232.05	253.71	16.05	17.60
600s EB	Surface, 0.3, 0.6, 0.9	257.64	274.46	17.88	19.08
600s EB	1.5	325.10	362.83	22.71	25.41
800s EB	Layers Combined	213.51	227.12	14.72	15.69
800s EB	Surface	357.40	386.01	25.02	27.07
800s EB	0.3, 0.6, 0.9, 1.5	202.16	219.25	13.91	15.13
800s EB	Surface, 0.3	314.23	340.72	21.93	23.83
800s EB	0.6, 0.9, 1.5	160.10	171.47	10.90	11.71
800s EB	Surface, 0.3, 0.6	267.57	286.25	18.59	19.93
800s EB	0.9, 1.5	125.54	138.65	8.42	9.36
800s EB	Surface, 0.3, 0.6, 0.9	231.95	247.27	16.04	17.14
800s EB	1.5	198.60	227.17	13.65	15.70

Notes:
meters bsg – meters below surface grade
UCL – upper confidence limit
mg/kg – milligrams per kilogram
mg/l – milligrams per liter
NA – insufficient data to perform statistical analysis

The pH concentrations of the samples analyzed from Segment 3 were above 5.0 and, therefore, have no bearing on soil disposition in accordance with the DTSC variance.

The results for the TCLP analyses are summarized in Table T9 below.

Table T9 – Summary of TCLP Analyses

Section/Direction	Depth (meters bsg)	TCLP (mg/l)	
		Minimum Result	Maximum Result
100s WB	Surface	0.31	1
100s WB	0.3	0.51	0.51
100s WB	0.6	0.31	2.2
100s WB	0.9	0.1	0.1
100s WB	1.5	1.7	1.7
300s WB	Surface	0.42	6.5
300s WB	0.3	0.49	0.49
300s WB	0.6	0.36	3
300s WB	0.9	0.23	10
300s WB	1.5	NA	NA
500s WB	Surface	ND	8.7
500s WB	0.3	0.31	3.7
500s WB	0.6	0.49	2.8
500s WB	0.9	0.55	2.4
500s WB	1.5	0.33	7.3
700s WB	Surface	0.48	13
700s WB	0.3	0.58	9.4
700s WB	0.6	0.36	6.8
700s WB	0.9	4.4	4.4
700s WB	1.5	NA	NA
200s EB	Surface	0.1	1.6
200s EB	0.3	0.95	0.95
200s EB	0.6	0.41	0.41
200s EB	0.9	0.35	0.35
200s EB	1.5	0.32	0.32
400s EB	Surface	0.1	2.6
400s EB	0.3	0.79	2.6
400s EB	0.6	0.58	5.3
400s EB	0.9	NA	NA
400s EB	1.5	NA	NA

Table T9 – Summary of TCLP Analyses

Section/Direction	Depth (meters bsg)	TCLP (mg/l)	
		Minimum Result	Maximum Result
600s EB	Surface	0.22	16
600s EB	0.3	0.26	15
600s EB	0.6	0.25	17
600s EB	0.9	0.34	15
600s EB	1.5	0.22	3.9
800s EB	Surface	0.33	13
800s EB	0.3	0.2	14
800s EB	0.6	0.23	7.5
800s EB	0.9	0.52	0.52
800s EB	1.5	5.5	8.4

Notes:
TCLP – Toxicity Characteristic Leaching Procedure
meters bsg – meters below surface grade
mg/l – milligrams per liter
WB – westbound
EB – eastbound
ND – not detected above laboratory detection limits
NA – not analyzed

7. DATA EVALUATION

Based upon the analytical results and subsequent statistical analysis, we have concluded the following as summarized in Tables T10 and T11:

Table T10 – Data Evaluation for 90% UCL Evaluation As It Applies to the Variance

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
100s WB	Layers Combined	<1,496	≥5	571-101-0.3 571-101-0.6 571-101-1.5 571-102-0.6 571-103-0.6 571-105-0.6 571-107-0.6 571-112-0 571-114-0 571-114-0.3 571-118-0 571-121-0 571-123-0	571-112-0.3 571-115-0 571-115-0.3 571-115-0.6	NA
100s WB	Surface	<1,496	≥5	571-112-0 571-114-0 571-118-0 571-121-0 571-123-0	571-115-0	NA
100s WB	0.3, 0.6, 0.9, 1.5	<1,496	≥5	571-101-0.3 571-101-0.6 571-101-1.5 571-102-0.6 571-103-0.6 571-105-0.6 571-107-0.6 571-114-0.3	571-112-0.3 571-115-0.3 571-115-0.6	NA
100s WB	Surface, 0.3	<1,496	≥5	571-101.03 571-112-0 571-114-0 571-114-0.3 571-118-0 571-121-0 571-123-0	571-112-0.3 571-115-0 571-115-0.3	NA

Table T10 – Data Evaluation for 90% UCL Evaluation As It Applies to the Variance

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
100s WB	0.6, 0.9, 1.5	<1,496	≥5	571-101-0.6 571-101-1.5 571-102-0.6 571-103-0.6 571-105-0.6 571-107-0.6	571-115-0.6	NA
100s WB	Surface, 0.3, 0.6	<1,496	≥5	571-101-0.3 571-101-0.6 571-102-0.6 571-103-0.6 571-105-0.6 571-107-0.6 571-112-0 571-114-0 571-114-0.3 571-118-0 571-121-0 571-123-0	571-112-0.3 571-115-0 571-115-0.3 571-115-0.6	NA
100s WB	0.9, 1.5	<1,496	≥5	571-101-1.5	NA	NA
100s WB	Surface, 0.3, 0.6, 0.9	<1,496	≥5	571-101-0.3 571-101-0.6 571-102-0.6 571-103-0.6 571-105-0.6 571-107-0.6 571-112-0 571-114-0 571-114-0.3 571-118-0 571-121-0 571-123-0	571-112-0.3 571-115-0 571-115-0.3 571-115-0.6	NA
100s WB	1.5	<1,496	<5	571-101-1.5	NA	NA
300s WB	Layers Combined	<1,496	≥5	571-301-0 571-302-0 571-311-0 571-312-0 571-315-0 571-316-0 571-319-0.3 571-324-0.9 571-327-0.6 571-330-0	571-317-0.6	571-310-0.9 571-317-0

Table T10 – Data Evaluation for 90% UCL Evaluation As It Applies to the Variance

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
300s WB	Surface	<1,496	≥5	571-301-0 571-302-0 571-311-0 571-312-0 571-315-0 571-316-0 571-330-0	NA	571-317-0
300s WB	0.3, 0.6, 0.9, 1.5	<1,496	≥5	571-319-0.3 571-324-0.9 571-327-0.6	571-317-0.6	571-310-0.9
300s WB	Surface, 0.3	<1,496	≥5	571-301-0 571-302-0 571-311-0 571-312-0 571-315-0 571-316-0 571-319-0.3 571-330-0	NA	571-317-0
300s WB	0.6, 0.9, 1.5	<1,496	≥5	571-324-0.9 571-327-0.6	571-317-0.6	571-310-0.9
300s WB	Surface, 0.3, 0.6	<1,496	≥5	571-301-0 571-302-0 571-311-0 571-312-0 571-315-0 571-316-0 571-319-0.3 571-327-0.6 571-330-0	571-317-0.6	571-317-0
300s WB	0.9, 1.5	<1,496	≥5	571-324-0.9	NA	571-310-0.9
300s WB	Surface, 0.3, 0.6, 0.9	<1,496	≥5	571-101-0.3 571-101-0.6 571-101-1.5 571-102-0.6 571-103-0.6 571-105-0.6 571-107-0.6 571-112-0 571-114-0 571-114-0.3 571-118-0 571-121-0 571-123-0	571-317-0.6	571-310-0.9 571-317-0

Table T10 – Data Evaluation for 90% UCL Evaluation As It Applies to the Variance

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
300s WB	1.5	<1,496	<5	NA	NA	NA
500s WB	Layers Combined	<1,496	≥5	571-501-0 571-502-0.6 571-505-1.5 571-506-0 571-508-0 571-510-0 571-512-0 571-513-0.6 571-513-0.9 571-514-0.3 571-514-0.6 571-515-0 571-516-0 571-516-0.3 571-516-0.9 571-517-0 571-517-0.3 571-517-0.6 571-517-0.9 571-517-1.5 571-518-0.6 571-518-0.9 571-519-0.3 571-519-0.6 571-520-0 571-520-0.3 571-521-0 571-522-0.6 571-524-0.9 571-525-0 571-525-0.3 571-526-0.3 571-528-0 571-528-1.5	571-518-0.3 571-528-0.3 571-528-0.9 571-527-0.3	571-514-0 571-515-0 571-516-0 571-517-0 571-528-0 571-528-1.5

Table T10 – Data Evaluation for 90% UCL Evaluation As It Applies to the Variance

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
500s WB	Surface	<1,496	≥5	571-501-0 571-506-0 571-508-0 571-510-0 571-512-0 571-515-0 571-516-0 571-517-0 571-520-0 571-521-0 571-525-0 571-528-0	NA	571-514-0 571-515-0 571-516-0 571-517-0 571-528-0
500s WB	0.3, 0.6, 0.9, 1.5	<1,496	≥5	571-502-0.6 571-505-1.5 571-513-0.6 571-513-0.9 571-514-0.3 571-514-0.6 571-516-0.3 571-516-0.9 571-517-0.3 571-517-0.6 571-517-0.9 571-517-1.5 571-518-0.6 571-518-0.9 571-519-0.3 571-519-0.6 571-520-0.3 571-522-0.6 571-524-0.9 571-525-0.3 571-526-0.3 571-528-1.5	571-518-0.3 571-528-0.3 571-528-0.9 571-527-0.3	571-528-1.5

Table T10 – Data Evaluation for 90% UCL Evaluation As It Applies to the Variance

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
500s WB	Surface, 0.3	<1,496	≥5	571-501-0 571-506-0 571-508-0 571-510-0 571-512-0 571-514-0.3 571-515-0 571-516-0 571-516-0.3 571-517-0 571-517-0.3 571-519-0.3 571-520-0 571-520-0.3 571-521-0 571-525-0 571-525-0.3 571-526-0.3 571-528-0	571-518-0.3 571-528-0.3 571-527-0.3	571-514-0 571-515-0 571-516-0 571-517-0 571-528-0
500s WB	0.6, 0.9, 1.5	<1,496	≥5	571-502-0.6 571-505-1.5 571-513-0.6 571-513-0.9 571-514-0.6 571-516-0.9 571-517-0.6 571-517-0.9 571-517-1.5 571-518-0.6 571-518-0.9 571-519-0.6 571-522-0.6 571-524-0.9 571-528-1.5	571-528-0.9	571-528-1.5

Table T10 – Data Evaluation for 90% UCL Evaluation As It Applies to the Variance

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
500s WB	Surface, 0.3, 0.6	<1,496	≥5	571-501-0 571-502-0.6 571-506-0 571-508-0 571-510-0 571-512-0 571-513-0.6 571-514-0.3 571-514-0.6 571-515-0 571-516-0 571-516-0.3 571-517-0 571-517-0.3 571-517-0.6 571-518-0.6 571-519-0.3 571-519-0.6 571-520-0 571-520-0.3 571-521-0 571-522-0.6 571-525-0 571-525-0.3 571-526-0.3 571-528-0	571-518-0.3 571-528-0.3 571-527-0.3	571-514-0 571-515-0 571-516-0 571-517-0 571-528-0
500s WB	0.9, 1.5	<1,496	≥5	571-505-1.5 571-513-0.9 571-516-0.9 571-517-0.9 571-517-1.5 571-518-0.9 571-524-0.9 571-528-1.5	571-528-0.9	571-528-1.5

Table T10 – Data Evaluation for 90% UCL Evaluation As It Applies to the Variance

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
500s WB	Surface, 0.3, 0.6, 0.9	<1,496	≥5	571-501-0 571-502-0.6 571-506-0 571-508-0 571-510-0 571-512-0 571-513-0.6 571-513-0.9 571-514-0.3 571-514-0.6 571-515-0 571-516-0 571-516-0.3 571-516-0.9 571-517-0 571-517-0.3 571-517-0.6 571-517-0.9 571-518-0.6 571-518-0.9 571-519-0.3 571-519-0.6 571-520-0 571-520-0.3 571-521-0 571-522-0.6 571-524-0.9 571-525-0 571-525-0.3 571-526-0.3 571-528-0	571-518-0.3 571-528-0.3 571-528-0.9 571-527-0.3	571-514-0 571-515-0 571-516-0 571-517-0 571-528-0
500s WB	1.5	<1,496	≥5	571-505-1.5 571-517-1.5 571-528-1.5	NA	571-528-1.5
700s WB	Layers Combined	<1,496	≥5	571-701-0 571-701-0.3 571-706-0 571-708-0	571-703-0 571-704-0 571-704-0.3 571-706-0.3 571-710-0.6 571-712-0.6 571-712-0.9	571-710-0 571-710-0.3 571-710-0.6 571-711-0 571-711-0.3 571-712-0

Table T10 – Data Evaluation for 90% UCL Evaluation As It Applies to the Variance

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
700s WB	Surface	<1,496	≥5	571-701-0 571-706-0 571-708-0	571-703-0 571-704-0	571-710-0 571-711-0 571-712-0
700s WB	0.3, 0.6, 0.9, 1.5	<1,496	≥5	571-701-0.3	571-704-0.3 571-706-0.3 571-710-0.6 571-712-0.6 571-712-0.9	571-710-0.3 571-710-0.6 571-711-0.3
700s WB	Surface, 0.3	<1,496	≥5	571-701-0 571-701-0.3 571-706-0 571-708-0	571-703-0 571-704-0 571-704-0.3 571-706-0.3	571-710-0 571-710-0.3 571-711-0 571-711-0.3 571-712-0
700s WB	0.6, 0.9, 1.5	<1,496	≥5	NA	571-710-0.6 571-712-0.6 571-712-0.9	571-710-0.6
700s WB	Surface, 0.3, 0.6	<1,496	≥5	571-701-0 571-701-0.3 571-706-0 571-708-0	571-703-0 571-704-0 571-704-0.3 571-706-0.3 571-710-0.6 571-712-0.6	571-710-0 571-710-0.3 571-710-0.6 571-711-0 571-711-0.3 571-712-0
700s WB	0.9, 1.5	<1,496	≥5	NA	571-712-0.9	NA
700s WB	Surface, 0.3, 0.6, 0.9	<1,496	≥5	571-701-0 571-701-0.3 571-706-0 571-708-0	571-703-0 571-704-0 571-704-0.3 571-706-0.3 571-710-0.6 571-712-0.6 571-712-0.9	571-710-0 571-710-0.3 571-710-0.6 571-711-0 571-711-0.3 571-712-0
700s WB	1.5	NA	NA	NA	NA	NA
200s EB	Layers Combined	<1,496	≥5	571-201-0.3 571-202-0.9 571-203-0.3 571-206-0.3 571-207-1.5 571-208-0 571-212-0 571-213-0 571-214-0 571-217-0	NA	NA

Table T10 – Data Evaluation for 90% UCL Evaluation As It Applies to the Variance

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
200s EB	Surface	<1,496	≥5	571-208-0 571-212-0 571-213-0 571-214-0 571-217-0	NA	NA
200s EB	0.3, 0.6, 0.9, 1.5	<1,496	≥5	571-201-0.3 571-202-0.9 571-203-0.3 571-206-0.3 571-207-1.5	NA	NA
200s EB	Surface, 0.3	<1,496	≥5	571-201-0.3 571-203-0.3 571-206-0.3 571-208-0 571-212-0 571-213-0 571-214-0 571-217-0	NA	NA
200s EB	0.6, 0.9, 1.5	<1,496	≥5	571-202-0.9 571-207-1.5	NA	NA
200s EB	Surface, 0.3, 0.6	<1,496	≥5	571-201-0.3 571-203-0.3 571-206-0.3 571-208-0 571-212-0 571-213-0 571-214-0 571-217-0	NA	NA
200s EB	0.9, 1.5	<1,496	≥5	571-202-0.9 571-207-1.5	NA	NA
200s EB	Surface, 0.3, 0.6, 0.9	<1,496	≥5	571-201-0.3 571-202-0.9 571-203-0.3 571-206-0.3 571-208-0 571-212-0 571-213-0 571-214-0 571-217-0	NA	NA
200s EB	1.5	<1,496	≥5	571-207-1.5	NA	NA

Table T10 – Data Evaluation for 90% UCL Evaluation As It Applies to the Variance

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
400s EB	Layers Combined	<1,496	≥5	571-406-0.6 571-410-0 571-412-0.3 571-413-0 571-413-0.3 571-420-0	571-411-0	571-425-0.6
400s EB	Surface	<1,496	≥5	571-410-0 571-413-0 571-420-0	571-411-0	NA
400s EB	0.3, 0.6, 0.9, 1.5	<1,496	≥5	571-406-0.6 571-412-0.3 571-413-0.3	NA	571-425-0.6
400s EB	Surface, 0.3	<1,496	≥5	571-410-0 571-412-0.3 571-413-0 571-413-0.3 571-420-0	571-411-0	NA
400s EB	0.6, 0.9, 1.5	<1,496	≥5	571-406-0.6	NA	571-425-0.6
400s EB	Surface, 0.3, 0.6	<1,496	≥5	571-406-0.6 571-410-0 571-412-0.3 571-413-0 571-413-0.3 571-420-0	571-411-0	571-425-0.6
400s EB	0.9, 1.5	<1,496	<5	NA	NA	NA

Table T10 – Data Evaluation for 90% UCL Evaluation As It Applies to the Variance

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
600s EB	Layers Combined	<1,496	≥5	571-602-0 571-604-0 571-604-0.3 571-605-0 571-606-0 571-606-0.3 571-607-0.6 571-608-0 571-608-0.6 571-609-0.6 571-610-0 571-610-0.6 571-611-0.6 571-613-0 571-614-0 571-616-1.5 571-619-0.3 571-621-0.9 571-621-1.5 571-622-0 571-622-1.5 571-623-0.6 571-624-0 571-624-1.5 571-629-0	571-617-0.3	571-609-0 571-609-0.6 571-610-0 571-611-0 571-611-0.6 571-616-0 571-617-0.3 571-618-0.9
600s EB	Surface	<1,496	≥5	571-602-0 571-604-0 571-605-0 571-606-0 571-608-0 571-610-0 571-613-0 571-614-0 571-622-0 571-624-0 571-629-0	NA	571-609-0 571-610-0 571-611-0 571-616-0

Table T10 – Data Evaluation for 90% UCL Evaluation As It Applies to the Variance

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
600s EB	0.3, 0.6, 0.9, 1.5	<1,496	≥5	571-604-0.3 571-606-0.3 571-607-0.6 571-608-0.6 571-609-0.6 571-610-0.6 571-611-0.6 571-616-1.5 571-619-0.3 571-621-0.9 571-621-1.5 571-622-1.5 571-623-0.6 571-624-1.5	571-617-0.3	571-609-0.6 571-611-0.6 571-617-0.3 571-618-0.9
600s EB	Surface, 0.3	<1,496	≥5	571-602-0 571-604-0 571-604-0.3 571-605-0 571-606-0 571-606-0.3 571-608-0 571-610-0 571-613-0 571-614-0 571-619-0.3 571-622-0 571-624-0 571-629-0	571-617-0.3	571-609-0 571-610-0 571-611-0 571-616-0 571-617-0.3
600s EB	0.6, 0.9, 1.5	<1,496	≥5	571-607-0.6 571-608-0.6 571-609-0.6 571-610-0.6 571-611-0.6 571-616-1.5 571-621-0.9 571-621-1.5 571-622-1.5 571-623-0.6 571-624-1.5	NA	571-609-0.6 571-611-0.6 571-618-0.9

Table T10 – Data Evaluation for 90% UCL Evaluation As It Applies to the Variance

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
600s EB	Surface, 0.3, 0.6	<1,496	≥5	571-602-0 571-604-0 571-604-0.3 571-605-0 571-606-0 571-606-0.3 571-607-0.6 571-608-0 571-608-0.6 571-609-0.6 571-610-0 571-610-0.6 571-611-0.6 571-613-0 571-614-0 571-619-0.3 571-622-0 571-623-0.6 571-624-0 571-629-0	571-617-0.3	571-609-0 571-609-0.6 571-610-0 571-611-0 571-611-0.6 571-616-0 571-617-0.3
600s EB	0.9, 1.5	<1,496	≥5	571-616-1.5 571-621-0.9 571-621-1.5 571-622-1.5 571-624-1.5	NA	571-618-0.9

Table T10 – Data Evaluation for 90% UCL Evaluation As It Applies to the Variance

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
600s EB	Surface, 0.3, 0.6, 0.9	<1,496	≥5	571-602-0 571-604-0 571-604-0.3 571-605-0 571-606-0 571-606-0.3 571-607-0.6 571-608-0 571-608-0.6 571-609-0.6 571-610-0 571-610-0.6 571-611-0.6 571-613-0 571-614-0 571-619-0.3 571-621-0.9 571-622-0 571-623-0.6 571-624-0 571-629-0	571-617-0.3	571-609-0 571-609-0.6 571-610-0 571-611-0 571-611-0.6 571-616-0 571-617-0.3 571-618-0.9
600s EB	1.5	<1,496	≥5	571-616-1.5 571-621-1.5 571-622-1.5 571-624-1.5	NA	NA
800s EB	Layers Combined	<1,496	≥5	571-801-0.3 571-814-0.6 571-814-0.9 571-818-0 571-827-0.6 571-828-0.3 571-828-0.6 571-829-0 571-831-0.6 571-835-0 571-837-0.3 571-838-0 571-839-0.6 571-842-0.6	571-815-0 571-819-0.6 571-819-1.5	571-815-0 571-818-0 571-818-0.6 571-818-1.5 571-819-0 571-819-0.6 571-819-1.5 571-837-0.3
800s EB	Surface	<1,496	≥5	571-818-0 571-829-0 571-835-0 571-838-0	571-815-0	571-815-0 571-818-0 571-819-0

Table T10 – Data Evaluation for 90% UCL Evaluation As It Applies to the Variance

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
800s EB	0.3, 0.6, 0.9, 1.5	<1,496	≥5	571-801-0.3 571-814-0.6 571-814-0.9 571-827-0.6 571-828-0.3 571-828-0.6 571-831-0.6 571-837-0.3 571-839-0.6 571-842-0.6	571-819-0.6 571-819-1.5	571-818-0.6 571-818-1.5 571-819-0.6 571-819-1.5 571-837-0.3
800s EB	Surface, 0.3	<1,496	≥5	571-801-0.3 571-818-0 571-828-0.3 571-829-0 571-835-0 571-837-0.3 571-838-0	571-815-0	571-815-0 571-818-0 571-819-0 571-837-0.3
800s EB	0.6, 0.9, 1.5	<1,496	≥5	571-814-0.6 571-814-0.9 571-827-0.6 571-828-0.6 571-831-0.6 571-839-0.6 571-842-0.6	571-819-0.6 571-819-1.5	571-818-0.6 571-818-1.5 571-819-0.6 571-819-1.5
800s EB	Surface, 0.3, 0.6	<1,496	≥5	571-801-0.3 571-814-0.6 571-818-0 571-827-0.6 571-828-0.3 571-828-0.6 571-829-0 571-831-0.6 571-835-0 571-837-0.3 571-838-0 571-839-0.6 571-842-0.6	571-815-0 571-819-0.6	571-815-0 571-818-0 571-818-0.6 571-819-0 571-819-0.6 571-837-0.3
800s EB	0.9, 1.5	<1,496	≥5	571-814-0.9	571-819-1.5	571-818-1.5 571-819-1.5

Table T10 – Data Evaluation for 90% UCL Evaluation As It Applies to the Variance

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
800s EB	Surface, 0.3, 0.6, 0.9	<1,496	≥5	571-801-0.3 571-814-0.6 571-814-0.9 571-818-0 571-827-0.6 571-828-0.3 571-828-0.6 571-829-0 571-831-0.6 571-835-0 571-837-0.3 571-838-0 571-839-0.6 571-842-0.6	571-815-0 571-819-0.6	571-815-0 571-818-0 571-818-0.6 571-819-0 571-819-0.6 571-837-0.3
800s EB	1.5	<1,496	≥5	NA	571-819-1.5	571-818-1.5 571-819-1.5

Notes:
UCL – upper confidence limit
meters bsg – meters below surface grade
TTLC – Total Threshold Limit Concentration
STLC – Soluble Threshold Limit Concentration
DI-WET – deionized water extraction
TCLP – Toxicity Characteristic Leaching Procedure
mg/kg – milligrams per kilogram
mg/l – milligrams per liter
WB – westbound
EB – eastbound
NA – not applicable

Table T11 – Data Evaluation for 95% UCL Evaluation As It Applies to Off-Site Disposal

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
100s WB	Layers Combined	<350	≥5	571-101-0.3 571-101-0.6 571-101-1.5 571-102-0.6 571-103-0.6 571-105-0.6 571-107-0.6 571-112-0 571-114-0 571-114-0.3 571-118-0 571-121-0 571-123-0	571-112-0.3 571-115-0 571-115-0.3 571-115-0.6	NA
100s WB	Surface	≥350	≥5	571-112-0 571-114-0 571-118-0 571-121-0 571-123-0	571-115-0	NA
100s WB	0.3, 0.6, 0.9, 1.5	<350	≥5	571-101-0.3 571-101-0.6 571-101-1.5 571-102-0.6 571-103-0.6 571-105-0.6 571-107-0.6 571-114-0.3	571-112-0.3 571-115-0.3 571-115-0.6	NA
100s WB	Surface, 0.3	<350	≥5	571-101-0.3 571-112-0 571-114-0 571-114-0.3 571-118-0 571-121-0 571-123-0	571-112-0.3 571-115-0 571-115-0.3	NA
100s WB	0.6, 0.9, 1.5	<350	≥5	571-101-0.6 571-101-1.5 571-102-0.6 571-103-0.6 571-105-0.6 571-107-0.6	571-115-0.6	NA

Table T11 – Data Evaluation for 95% UCL Evaluation As It Applies to Off-Site Disposal

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
100s WB	Surface, 0.3, 0.6	<350	≥5	571-101-0.3 571-101-0.6 571-102-0.6 571-103-0.6 571-105-0.6 571-107-0.6 571-112-0 571-114-0 571-114-0.3 571-118-0 571-121-0 571-123-0	571-112-0.3 571-115-0 571-115-0.3 571-115-0.6	NA
100s WB	0.9, 1.5	<350	≥5	571-101-1.5	NA	NA
100s WB	Surface, 0.3, 0.6, 0.9	<350	≥5	571-101-0.3 571-101-0.6 571-102-0.6 571-103-0.6 571-105-0.6 571-107-0.6 571-112-0 571-114-0 571-114-0.3 571-118-0 571-121-0 571-123-0	571-112-0.3 571-115-0 571-115-0.3 571-115-0.6	NA
100s WB	1.5	<350	<5	571-101-1.5	NA	NA
300s WB	Layers Combined	<350	≥5	571-301-0 571-302-0 571-311-0 571-312-0 571-315-0 571-316-0 571-319-0.3 571-324-0.9 571-327-0.6 571-330-0	571-317-0.6	571-310-0.9 571-317-0
300s WB	Surface	≥350	≥5	571-301-0 571-302-0 571-311-0 571-312-0 571-315-0 571-316-0 571-330-0	NA	571-317-0

Table T11 – Data Evaluation for 95% UCL Evaluation As It Applies to Off-Site Disposal

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
300s WB	0.3, 0.6, 0.9, 1.5	<350	≥5	571-319-0.3 571-324-0.9 571-327-0.6	571-317-0.6	571-310-0.9
300s WB	Surface, 0.3	<350	≥5	571-301-0 571-302-0 571-311-0 571-312-0 571-315-0 571-316-0 571-319-0.3 571-330-0	NA	571-317-0
300s WB	0.6, 0.9, 1.5	<350	≥5	571-324-0.9 571-327-0.6	571-317-0.6	571-310-0.9
300s WB	Surface, 0.3, 0.6	<350	≥5	571-301-0 571-302-0 571-311-0 571-312-0 571-315-0 571-316-0 571-319-0.3 571-327-0.6 571-330-0	571-317-0.6	571-317-0
300s WB	0.9, 1.5	<350	≥5	571-324-0.9	NA	571-310-0.9
300s WB	Surface, 0.3, 0.6, 0.9	<350	≥5	571-101-0.3 571-101-0.6 571-101-1.5 571-102-0.6 571-103-0.6 571-105-0.6 571-107-0.6 571-112-0 571-114-0 571-114-0.3 571-118-0 571-121-0 571-123-0	571-317-0.6	571-310-0.9 571-317-0
300s WB	1.5	<350	<5	NA	NA	NA

Table T11 – Data Evaluation for 95% UCL Evaluation As It Applies to Off-Site Disposal

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
500s WB	Layers Combined	<350	≥5	571-501-0 571-502-0.6 571-505-1.5 571-506-0 571-508-0 571-510-0 571-512-0 571-513-0.6 571-513-0.9 571-514-0.3 571-514-0.6 571-515-0 571-516-0 571-516-0.3 571-516-0.9 571-517-0 571-517-0.3 571-517-0.6 571-517-0.9 571-517-1.5 571-518-0.6 571-518-0.9 571-519-0.3 571-519-0.6 571-520-0 571-520-0.3 571-521-0 571-522-0.6 571-524-0.9 571-525-0 571-525-0.3 571-526-0.3 571-528-0 571-528-1.5	571-518-0.3 571-527-0.3 571-528-0.3 571-528-0.9	571-514-0 571-515-0 571-516-0 571-517-0 571-528-0 571-528-1.5

Table T11 – Data Evaluation for 95% UCL Evaluation As It Applies to Off-Site Disposal

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
500s WB	Surface	≥350	≥5	571-501-0 571-506-0 571-508-0 571-510-0 571-512-0 571-515-0 571-516-0 571-517-0 571-520-0 571-521-0 571-525-0 571-528-0	NA	571-514-0 571-515-0 571-516-0 571-517-0 571-528-0
500s WB	0.3, 0.6, 0.9, 1.5	<350	≥5	571-502-0.6 571-505-1.5 571-513-0.6 571-513-0.9 571-514-0.3 571-514-0.6 571-516-0.3 571-516-0.9 571-517-0.3 571-517-0.6 571-517-0.9 571-517-1.5 571-518-0.6 571-518-0.9 571-519-0.3 571-519-0.6 571-520-0.3 571-522-0.6 571-524-0.9 571-525-0.3 571-526-0.3 571-528-1.5	571-518-0.3 571-527-0.3 571-528-0.3 571-528-0.9	571-528-1.5

Table T11 – Data Evaluation for 95% UCL Evaluation As It Applies to Off-Site Disposal

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
500s WB	Surface, 0.3	≥350	≥5	571-501-0 571-506-0 571-508-0 571-510-0 571-512-0 571-514-0.3 571-515-0 571-516-0 571-516-0.3 571-517-0 571-517-0.3 571-519-0.3 571-520-0 571-520-0.3 571-521-0 571-525-0 571-525-0.3 571-526-0.3 571-528-0	571-518-0.3 571-527-0.3 571-528-0.3	571-514-0 571-515-0 571-516-0 571-517-0 571-528-0
500s WB	0.6, 0.9, 1.5	<350	≥5	571-502-0.6 571-505-1.5 571-513-0.6 571-513-0.9 571-514-0.6 571-516-0.9 571-517-0.6 571-517-0.9 571-517-1.5 571-518-0.6 571-518-0.9 571-519-0.6 571-522-0.6 571-524-0.9 571-528-1.5	571-528-0.9	571-528-1.5

Table T11 – Data Evaluation for 95% UCL Evaluation As It Applies to Off-Site Disposal

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
500s WB	Surface, 0.3, 0.6	≥350	≥5	571-501-0 571-502-0.6 571-506-0 571-508-0 571-510-0 571-512-0 571-513-0.6 571-514-0.3 571-514-0.6 571-515-0 571-516-0 571-516-0.3 571-517-0 571-517-0.3 571-517-0.6 571-518-0.6 571-519-0.3 571-519-0.6 571-520-0 571-520-0.3 571-521-0 571-522-0.6 571-525-0 571-525-0.3 571-526-0.3 571-528-0	571-518-0.3 571-527-0.3 571-528-0.3	571-514-0 571-515-0 571-516-0 571-517-0 571-528-0
500s WB	0.9, 1.5	<350	≥5	571-505-1.5 571-513-0.9 571-516-0.9 571-517-0.9 571-517-1.5 571-518-0.9 571-524-0.9 571-528-1.5	571-528-0.9	571-528-1.5

Table T11 – Data Evaluation for 95% UCL Evaluation As It Applies to Off-Site Disposal

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
500s WB	Surface, 0.3, 0.6, 0.9	<350	≥5	571-501-0 571-502-0.6 571-506-0 571-508-0 571-510-0 571-512-0 571-513-0.6 571-513-0.9 571-514-0.3 571-514-0.6 571-515-0 571-516-0 571-516-0.3 571-516-0.9 571-517-0 571-517-0.3 571-517-0.6 571-517-0.9 571-518-0.6 571-518-0.9 571-519-0.3 571-519-0.6 571-520-0 571-520-0.3 571-521-0 571-522-0.6 571-524-0.9 571-525-0 571-525-0.3 571-526-0.3 571-528-0	571-518-0.3 571-527-0.3 571-528-0.3 571-528-0.9	571-514-0 571-515-0 571-516-0 571-517-0 571-528-0
500s WB	1.5	<350	≥5	571-505-1.5 571-517-1.5 571-528-1.5	NA	571-528-1.5
700s WB	Layers Combined	≥350	≥5	571-701-0 571-701-0.3 571-706-0 571-708-0	571-703-0 571-704-0 571-704-0.3 571-706-0.3 571-710-0.6 571-712-0.6 571-712-0.9	571-710-0 571-710-0.3 571-710-0.6 571-711-0 571-711-0.3 571-712-0

Table T11 – Data Evaluation for 95% UCL Evaluation As It Applies to Off-Site Disposal

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
700s WB	Surface	≥350	≥5	571-701-0 571-706-0 571-708-0	571-703-0 571-704-0	571-710-0 571-711-0 571-712-0
700s WB	0.3, 0.6, 0.9, 1.5	≥350	≥5	571-701-0.3	571-704-0.3 571-706-0.3 571-710-0.6 571-712-0.6 571-712-0.9	571-710-0.3 571-710-0.6 571-711-0.3
700s WB	Surface, 0.3	≥350	≥5	571-701-0 571-701-0.3 571-706-0 571-708-0	571-703-0 571-704-0 571-704-0.3 571-706-0.3	571-710-0 571-710-0.3 571-711-0 571-711-0.3 571-712-0
700s WB	0.6, 0.9, 1.5	≥350	≥5	NA	571-710-0.6 571-712-0.6 571-712-0.9	571-710-0.6
700s WB	Surface, 0.3, 0.6	≥350	≥5	571-701-0 571-701-0.3 571-706-0 571-708-0	571-703-0 571-704-0 571-704-0.3 571-706-0.3 571-710-0.6 571-712-0.6	571-710-0 571-710-0.3 571-710-0.6 571-711-0 571-711-0.3 571-712-0
700s WB	0.9, 1.5	≥350	≥5	NA	571-712-0.9	NA
700s WB	Surface, 0.3, 0.6, 0.9	≥350	≥5	571-701-0 571-701-0.3 571-706-0 571-708-0	571-703-0 571-704-0 571-704-0.3 571-706-0.3 571-710-0.6 571-712-0.6 571-712-0.9	571-710-0 571-710-0.3 571-710-0.6 571-711-0 571-711-0.3 571-712-0
700s WB	1.5	NA	NA	NA	NA	NA
200s EB	Layers Combined	<350	≥5	571-201-0.3 571-202-0.9 571-203-0.3 571-206-0.3 571-207-1.5 571-208-0 571-212-0 571-213-0 571-214-0 571-217-0	NA	NA

Table T11 – Data Evaluation for 95% UCL Evaluation As It Applies to Off-Site Disposal

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
200s EB	Surface	≥350	≥5	571-208-0 571-212-0 571-213-0 571-214-0 571-217-0	NA	NA
200s EB	0.3, 0.6, 0.9, 1.5	<350	≥5	571-201-0.3 571-202-0.9 571-203-0.3 571-206-0.3 571-207-1.5	NA	NA
200s EB	Surface, 0.3	<350	≥5	571-201-0.3 571-203-0.3 571-206-0.3 571-208-0 571-212-0 571-213-0 571-214-0 571-217-0	NA	NA
200s EB	0.6, 0.9, 1.5	<350	≥5	571-202-0.9 571-207-1.5	NA	NA
200s EB	Surface, 0.3, 0.6	<350	≥5	571-201-0.3 571-203-0.3 571-206-0.3 571-208-0 571-212-0 571-213-0 571-214-0 571-217-0	NA	NA
200s EB	0.9, 1.5	<350	≥5	571-202-0.9 571-207-1.5	NA	NA
200s EB	Surface, 0.3, 0.6, 0.9	<350	≥5	571-201-0.3 571-202-0.9 571-203-0.3 571-206-0.3 571-208-0 571-212-0 571-213-0 571-214-0 571-217-0	NA	NA
200s EB	1.5	<350	≥5	571-207-1.5	NA	NA

Table T11 – Data Evaluation for 95% UCL Evaluation As It Applies to Off-Site Disposal

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
400s EB	Layers Combined	<350	≥5	571-406-0.6 571-410-0 571-412-0.3 571-413-0 571-413-0.3 571-420-0	571-411-0	571-425-0.6
400s EB	Surface	≥350	≥5	571-410-0 571-413-0 571-420-0	571-411-0	NA
400s EB	0.3, 0.6, 0.9, 1.5	<350	≥5	571-406-0.6 571-412-0.3 571-413-0.3	NA	571-425-0.6
400s EB	Surface, 0.3	≥350	≥5	571-410-0 571-412-0.3 571-413-0 571-413-0.3 571-420-0	571-411-0	NA
400s EB	0.6, 0.9, 1.5	<350	≥5	571-406-0.6	NA	571-425-0.6
400s EB	Surface, 0.3, 0.6	≥350	≥5	571-406-0.6 571-410-0 571-412-0.3 571-413-0 571-413-0.3 571-420-0	571-411-0	571-425-0.6
400s EB	0.9, 1.5	<350	<5	NA	NA	NA

Table T11 – Data Evaluation for 95% UCL Evaluation As It Applies to Off-Site Disposal

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
600s EB	Layers Combined	<350	≥5	571-602-0 571-604-0 571-604-0.3 571-605-0 571-606-0 571-606-0.3 571-607-0.6 571-608-0 571-608-0.6 571-609-0.6 571-610-0 571-610-0.6 571-611-0.6 571-613-0 571-614-0 571-616-1.5 571-619-0.3 571-621-0.9 571-621-1.5 571-622-0 571-622-1.5 571-623-0.6 571-624-0 571-624-1.5 571-629-0	571-617-0.3	571-609-0 571-609-0.6 571-610-0 571-611-0 571-611-0.6 571-616-0 571-617-0.3 571-618-0.9
600s EB	Surface	≥350	≥5	571-602-0 571-604-0 571-605-0 571-606-0 571-608-0 571-610-0 571-613-0 571-614-0 571-622-0 571-624-0 571-629-0	NA	571-609-0 571-610-0 571-611-0 571-616-0

Table T11 – Data Evaluation for 95% UCL Evaluation As It Applies to Off-Site Disposal

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
600s EB	0.3, 0.6, 0.9, 1.5	<350	≥5	571-604-0.3 571-606-0.3 571-607-0.6 571-608-0.6 571-609-0.6 571-610-0.6 571-611-0.6 571-616-1.5 571-619-0.3 571-621-0.9 571-621-1.5 571-622-1.5 571-623-0.6 571-624-1.5	571-617-0.3	571-609-0.6 571-611-0.6 571-617-0.3 571-618-0.9
600s EB	Surface, 0.3	≥350	≥5	571-602-0 571-604-0 571-604-0.3 571-605-0 571-606-0 571-606-0.3 571-608-0 571-610-0 571-613-0 571-614-0 571-619-0.3 571-622-0 571-624-0 571-629-0	571-617-0.3	571-609-0 571-610-0 571-611-0 571-616-0 571-617-0.3
600s EB	0.6, 0.9, 1.5	<350	≥5	571-607-0.6 571-608-0.6 571-609-0.6 571-610-0.6 571-611-0.6 571-616-1.5 571-621-0.9 571-621-1.5 571-622-1.5 571-623-0.6 571-624-1.5	NA	571-609-0.6 571-611-0.6 571-618-0.9

Table T11 – Data Evaluation for 95% UCL Evaluation As It Applies to Off-Site Disposal

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
600s EB	Surface, 0.3, 0.6	<350	≥5	571-602-0 571-604-0 571-604-0.3 571-605-0 571-606-0 571-606-0.3 571-607-0.6 571-608-0 571-608-0.6 571-609-0.6 571-610-0 571-610-0.6 571-611-0.6 571-613-0 571-614-0 571-619-0.3 571-622-0 571-623-0.6 571-624-0 571-629-0	571-617-0.3	571-609-0 571-609-0.6 571-610-0 571-611-0 571-611-0.6 571-616-0 571-617-0.3
600s EB	0.9, 1.5	<350	≥5	571-616-1.5 571-621-0.9 571-621-1.5 571-622-1.5 571-624-1.5	NA	571-618-0.9

Table T11 – Data Evaluation for 95% UCL Evaluation As It Applies to Off-Site Disposal

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
600s EB	Surface, 0.3, 0.6, 0.9	<350	≥5	571-602-0 571-604-0 571-604-0.3 571-605-0 571-606-0 571-606-0.3 571-607-0.6 571-608-0 571-608-0.6 571-609-0.6 571-610-0 571-610-0.6 571-611-0.6 571-613-0 571-614-0 571-619-0.3 571-621-0.9 571-622-0 571-623-0.6 571-624-0 571-629-0	571-617-0.3	571-609-0 571-609-0.6 571-610-0 571-611-0 571-611-0.6 571-616-0 571-617-0.3 571-618-0.9
600s EB	1.5	≥350	≥5	571-616-1.5 571-621-1.5 571-622-1.5 571-624-1.5	NA	NA
800s EB	Layers Combined	<350	≥5	571-801-0.3 571-814-0.6 571-814-0.9 571-818-0 571-827-0.6 571-828-0.3 571-828-0.6 571-829-0 571-831-0.6 571-835-0 571-837-0.3 571-838-0 571-839-0.6 571-842-0.6	571-815-0 571-819-0.6 571-819-1.5	571-815-0 571-818-0 571-818-0.6 571-818-1.5 571-819-0 571-819-0.6 571-819-1.5 571-837-0.3
800s EB	Surface	≥350	≥5	571-818-0 571-829-0 571-835-0 571-838-0	571-815-0	571-815-0 571-818-0 571-819-0

Table T11 – Data Evaluation for 95% UCL Evaluation As It Applies to Off-Site Disposal

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
800s EB	0.3, 0.6, 0.9, 1.5	<350	≥5	571-801-0.3 571-814-0.6 571-814-0.9 571-827-0.6 571-828-0.3 571-828-0.6 571-831-0.6 571-837-0.3 571-839-0.6 571-842-0.6	571-819-0.6 571-819-1.5	571-818-0.6 571-818-1.5 571-819-0.6 571-819-1.5 571-837-0.3
800s EB	Surface, 0.3	<350	≥5	571-801-0.3 571-818-0 571-828-0.3 571-829-0 571-835-0 571-837-0.3 571-838-0	571-815-0	571-815-0 571-818-0 571-819-0 571-837-0.3
800s EB	0.6, 0.9, 1.5	<350	≥5	571-814-0.6 571-814-0.9 571-827-0.6 571-828-0.6 571-831-0.6 571-839-0.6 571-842-0.6	571-819-0.6 571-819-1.5	571-818-0.6 571-818-1.5 571-819-0.6 571-819-1.5
800s EB	Surface, 0.3, 0.6	<350	≥5	571-801-0.3 571-814-0.6 571-818-0 571-827-0.6 571-828-0.3 571-828-0.6 571-829-0 571-831-0.6 571-835-0 571-839-0.6 571-837-0.3 571-838-0 571-842-0.6	571-815-0 571-819-0.6	571-815-0 571-818-0 571-818-0.6 571-819-0 571-819-0.6 571-837-0.3
800s EB	0.9, 1.5	<350	≥5	571-814-0.9	571-819-1.5	571-818-1.5 571-819-1.5

Table T11 – Data Evaluation for 95% UCL Evaluation As It Applies to Off-Site Disposal

Section/ Direction	Layer (meters bsg)	Mean Lead Concentration by TTLC (mg/kg)	Mean Lead Concentration by STLC (mg/l)	Samples with Soluble Lead between 0 and <0.5 mg/l by DI-WET	Samples with Soluble Lead ≥0.5 mg/l by DI-WET	Samples with Soluble Lead ≥5 mg/l by TCLP
800s EB	Surface, 0.3, 0.6, 0.9	<350	≥5	571-801-0.3 571-814-0.6 571-814-0.9 571-818-0 571-827-0.6 571-828-0.3 571-828-0.6 571-829-0 571-831-0.6 571-835-0 571-837-0.3 571-838-0 571-839-0.6 571-842-0.6	571-815-0 571-819-0.6	571-815-0 571-818-0 571-818-0.6 571-819-0 571-819-0.6 571-837-0.3
800s EB	1.5	<350	≥5	NA	571-819-1.5	571-818-1.5 571-819-1.5

Notes:
UCL – upper confidence limit
meters bsg – meters below surface grade
TTLC – Total Threshold Limit Concentration
STLC – Soluble Threshold Limit Concentration
DI-WET – deionized water extraction
TCLP – Toxicity Characteristic Leaching Procedure
mg/kg – milligrams per kilogram
mg/l – milligrams per liter
WB – westbound
EB – eastbound
NA – not applicable

8. RECOMMENDATIONS

Based on the findings of this study, we present the following recommendations for each project location and depth layer as summarized in Tables T12 and 13:

Table T12 – Recommendations for 90% UCL Evaluation As It Applies Under the Variance

Section/ Direction	Layer (meters bsg)	Representative Depth (meters bsg)	Soil Type	Recommended Handling
100s WB	Layers Combined	Surface to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
100s WB	Surface	Surface to 0.15	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
100s WB	0.3, 0.6, 0.9, 1.5	0.15 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
100s WB	Surface, 0.3	Surface to 0.45	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
100s WB	0.6, 0.9 ,1.5	0.45 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
100s WB	Surface, 0.3, 0.6	Surface to 0.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
100s WB	0.9, 1.5	0.75 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and covered with at least 1 foot non-hazardous soil.
100s WB	Surface, 0.3, 0.6, 0.9	Surface to 1.20	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
100s WB	1.5	1.20 to 1.75	X	Non-hazardous, no restrictions.
300s WB	Layers Combined	Surface to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.

**Table T12 – Recommendations for 90% UCL Evaluation
As It Applies Under the Variance**

Section/ Direction	Layer (meters bsg)	Representative Depth (meters bsg)	Soil Type	Recommended Handling
300s WB	Surface	Surface to 0.15	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and covered with at least 1 foot non-hazardous soil.
300s WB	0.3, 0.6, 0.9, 1.5	0.15 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
300s WB	Surface, 0.3	Surface to 0.45	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and covered with at least 1 foot non-hazardous soil.
300s WB	0.6, 0.9, 1.5	0.45 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
300s WB	Surface, 0.3, 0.6	Surface to 0.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
300s WB	0.9, 1.5	0.75 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and covered with at least 1 foot non-hazardous soil.
300s WB	Surface, 0.3, 0.6, 0.9	Surface to 1.20	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
300s WB	1.5	1.20 to 1.75	X	Non-hazardous, no restrictions.
500s WB	Layers Combined	Surface to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
500s WB	Surface	Surface to 0.15	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and covered with at least 1 foot non-hazardous soil.
500s WB	0.3, 0.6, 0.9, 1.5	0.15 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.

**Table T12 – Recommendations for 90% UCL Evaluation
As It Applies Under the Variance**

Section/ Direction	Layer (meters bsg)	Representative Depth (meters bsg)	Soil Type	Recommended Handling
500s WB	Surface, 0.3	Surface to 0.45	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
500s WB	0.6, 0.9, 1.5	0.45 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
500s WB	Surface, 0.3, 0.6	Surface to 0.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
500s WB	0.9, 1.5	0.75 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
500s WB	Surface, 0.3, 0.6, 0.9	Surface to 1.20	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
500s WB	1.5	1.20 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and covered with at least 1 foot non-hazardous soil.
700s WB	Layers Combined	Surface to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
700s WB	Surface	Surface to 0.15	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
700s WB	0.3, 0.6, 0.9, 1.5	0.15 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
700s WB	Surface, 0.3	Surface to 0.45	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.

**Table T12 – Recommendations for 90% UCL Evaluation
As It Applies Under the Variance**

Section/ Direction	Layer (meters bsg)	Representative Depth (meters bsg)	Soil Type	Recommended Handling
700s WB	0.6, 0.9, 1.5	0.45 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
700s WB	Surface, 0.3, 0.6	Surface to 0.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
700s WB	0.9, 1.5	0.75 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
700s WB	Surface, 0.3, 0.6, 0.9	Surface to 1.20	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
700s WB	1.5	1.20 to 1.5	X	Insufficient data to perform statistics. Available data suggests layer is: Non-hazardous, no restrictions. Additional in-ground and/or stockpile sampling should be performed at the time of construction.
200s EB	Layers Combined	Surface to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and covered with at least 1 foot non-hazardous soil.
200s EB	Surface	Surface to 0.15	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and covered with at least 1 foot non-hazardous soil.
200s EB	0.3, 0.6, 0.9, 1.5	0.15 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and covered with at least 1 foot non-hazardous soil.
200s EB	Surface, 0.3	Surface to 0.45	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and covered with at least 1 foot non-hazardous soil.
200s EB	0.6, 0.9, 1.5	0.45 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and covered with at least 1 foot non-hazardous soil.

**Table T12 – Recommendations for 90% UCL Evaluation
As It Applies Under the Variance**

Section/ Direction	Layer (meters bsg)	Representative Depth (meters bsg)	Soil Type	Recommended Handling
200s EB	Surface, 0.3, 0.6	Surface to 0.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and covered with at least 1 foot non-hazardous soil.
200s EB	0.9, 1.5	0.75 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and covered with at least 1 foot non-hazardous soil.
200s EB	Surface, 0.3, 0.6, 0.9	Surface to 1.20	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and covered with at least 1 foot non-hazardous soil.
200s EB	1.5	1.20 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and covered with at least 1 foot non-hazardous soil.
400s EB	Layers Combined	Surface to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
400s EB	Surface	Surface to 0.15	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
400s EB	0.3, 0.6, 0.9, 1.5	0.15 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and covered with at least 1 foot non-hazardous soil.
400s EB	Surface, 0.3	Surface to 0.45	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
400s EB	0.6, 0.9, 1.5	0.45 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and covered with at least 1 foot non-hazardous soil.
400s EB	Surface, 0.3, 0.6	Surface to 0.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
400s EB	0.9, 1.5	0.75 to 1.75	X	Non-hazardous, no restrictions.

**Table T12 – Recommendations for 90% UCL Evaluation
As It Applies Under the Variance**

Section/ Direction	Layer (meters bsg)	Representative Depth (meters bsg)	Soil Type	Recommended Handling
600s EB	Layers Combined	Surface to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
600s EB	Surface	Surface to 0.15	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and covered with at least 1 foot non-hazardous soil.
600s EB	0.3, 0.6, 0.9, 1.5	0.15 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
600s EB	Surface, 0.3	Surface to 0.45	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
600s EB	0.6, 0.9, 1.5	0.45 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and covered with at least 1 foot non-hazardous soil.
600s EB	Surface, 0.3, 0.6	Surface to 0.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
600s EB	0.9, 1.5	0.75 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and covered with at least 1 foot non-hazardous soil.
600s EB	Surface, 0.3, 0.6, 0.9	Surface to 1.20	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
600s EB	1.5	1.20 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and covered with at least 1 foot non-hazardous soil.
800s EB	Layers Combined	Surface to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.

Table T12 – Recommendations for 90% UCL Evaluation As It Applies Under the Variance

Section/ Direction	Layer (meters bsg)	Representative Depth (meters bsg)	Soil Type	Recommended Handling
800s EB	Surface	Surface to 0.15	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
800s EB	0.3, 0.6, 0.9, 1.5	0.15 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
800s EB	Surface, 0.3	Surface to 0.45	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
800s EB	0.6, 0.9, 1.5	0.45 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
800s EB	Surface, 0.3, 0.6	Surface to 0.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
800s EB	0.9, 1.5	0.75 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
800s EB	Surface, 0.3, 0.6, 0.9	Surface to 1.20	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.
800s EB	1.5	1.20 to 1.75	Y	Hazardous, variance applies. Use material on job-site. Place at minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure which will be maintained by Caltrans.

Notes:
UCL – upper confidence limit
meters bsg – meters below surface grade
DTSC – United States Environmental Protection Agency, Department of Toxic Substances Control
CCR – California Code of Regulations
RCRA – Resource, Conservation and Recovery Act
WB – westbound
EB – eastbound
NA – not applicable

**Table T13 – Recommendations for 95% UCL Evaluation
As It Applies to Off-Site Disposal**

Section/ Direction	Layer (meters bsg)	Representative Depth (meters bsg)	Soil Type	Recommended Handling
100s WB	Layers Combined	Surface to 1.75	Z-2	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply.
100s WB	Surface	Surface to 0.15	Z-2	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply.
100s WB	0.3, 0.6, 0.9, 1.5	0.15 to 1.75	Z-2	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply.
100s WB	Surface, 0.3	Surface to 0.45	Z-2	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply.
100s WB	0.6, 0.9, 1.5	0.45 to 1.75	Z-2	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply.
100s WB	Surface, 0.3, 0.6	Surface to 0.75	Z-2	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply.
100s WB	0.9, 1.5	0.75 to 1.75	Z-2	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply.
100s WB	Surface, 0.3, 0.6, 0.9	Surface to 1.20	Z-2	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply.
100s WB	1.5	1.20 to 1.75	X	Non-hazardous, no restrictions.
300s WB	Layers Combined	Surface to 1.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
300s WB	Surface	Surface to 0.15	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
300s WB	0.3, 0.6, 0.9, 1.5	0.15 to 1.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
300s WB	Surface, 0.3	Surface to 0.45	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
300s WB	0.6, 0.9, 1.5	0.45 to 1.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
300s WB	Surface, 0.3, 0.6	Surface to 0.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
300s WB	0.9, 1.5	0.75 to 1.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
300s WB	Surface, 0.3, 0.6, 0.9	Surface to 1.20	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
300s WB	1.5	1.20 to 1.75	X	Non-hazardous, no restrictions.
500s WB	Layers Combined	Surface to 1.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
500s WB	Surface	Surface to 0.15	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***

**Table T13 – Recommendations for 95% UCL Evaluation
As It Applies to Off-Site Disposal**

Section/ Direction	Layer (meters bsg)	Representative Depth (meters bsg)	Soil Type	Recommended Handling
500s WB	0.3, 0.6, 0.9, 1.5	0.15 to 1.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
500s WB	Surface, 0.3	Surface to 0.45	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
500s WB	0.6, 0.9, 1.5	0.45 to 1.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
500s WB	Surface, 0.3, 0.6	Surface to 0.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
500s WB	0.9, 1.5	0.75 to 1.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
500s WB	Surface, 0.3, 0.6, 0.9	Surface to 1.20	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
500s WB	1.5	1.20 to 1.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
700s WB	Layers Combined	Surface to 1.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
700s WB	Surface	Surface to 0.15	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
700s WB	0.3, 0.6, 0.9, 1.5	0.15 to 1.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
700s WB	Surface, 0.3	Surface to 0.45	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
700s WB	0.6, 0.9, 1.5	0.45 to 1.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
700s WB	Surface, 0.3, 0.6	Surface to 0.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
700s WB	0.9, 1.5	0.75 to 1.75	Z-2	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply.
700s WB	Surface, 0.3, 0.6, 0.9	Surface to 1.20	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
700s WB	1.5	1.20 to 1.75	X	Insufficient data to perform statistics. Available data suggests layer is: Non-hazardous, no restrictions. Additional in-ground and/or stockpile sampling should be performed at the time of construction.
200s EB	Layers Combined	Surface to 1.75	Z-2	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply.
200s EB	Surface	Surface to 0.15	Z-2	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply.
200s EB	0.3, 0.6, 0.9, 1.5	0.15 to 1.75	Z-2	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply.

**Table T13 – Recommendations for 95% UCL Evaluation
As It Applies to Off-Site Disposal**

Section/ Direction	Layer (meters bsg)	Representative Depth (meters bsg)	Soil Type	Recommended Handling
200s EB	Surface, 0.3	Surface to 0.45	Z-2	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply.
200s EB	0.6, 0.9, 1.5	0.45 to 1.75	Z-2	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply.
200s EB	Surface, 0.3, 0.6	Surface to 0.75	Z-2	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply.
200s EB	0.9, 1.5	0.75 to 1.75	Z-2	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply.
200s EB	Surface, 0.3, 0.6, 0.9	Surface to 1.20	Z-2	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply.
200s EB	1.5	1.20 to 1.75	Z-2	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply.
400s EB	Layers Combined	Surface to 1.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
400s EB	Surface	Surface to 0.15	Z-2	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply.
400s EB	0.3, 0.6, 0.9, 1.5	0.15 to 1.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
400s EB	Surface, 0.3	Surface to 0.45	Z-2	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply.
400s EB	0.6, 0.9, 1.5	0.45 to 1.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
400s EB	Surface, 0.3, 0.6	Surface to 0.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
400s EB	0.9, 1.5	0.75 to 1.75	X	Non-hazardous, no restrictions.
600s EB	Layers Combined	Surface to 1.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
600s EB	Surface	Surface to 0.15	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
600s EB	0.3, 0.6, 0.9, 1.5	0.15 to 1.75	**Z-3***	Non-hazardous. If disposed, Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
600s EB	Surface, 0.3	Surface to 0.45	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
600s EB	0.6, 0.9, 1.5	0.45 to 1.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
600s EB	Surface, 0.3, 0.6	Surface to 0.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***

**Table T13 – Recommendations for 95% UCL Evaluation
As It Applies to Off-Site Disposal**

Section/ Direction	Layer (meters bsg)	Representative Depth (meters bsg)	Soil Type	Recommended Handling
600s EB	0.9, 1.5	0.75 to 1.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
600s EB	Surface, 0.3, 0.6, 0.9	Surface to 1.20	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
600s EB	1.5	1.20 to 1.75	Z-2	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply.
800s EB	Layers Combined	Surface to 1.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
800s EB	Surface	Surface to 0.15	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
800s EB	0.3, 0.6, 0.9, 1.5	0.15 to 1.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
800s EB	Surface, 0.3	Surface to 0.45	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
800s EB	0.6, 0.9, 1.5	0.45 to 1.75	**Z-3***	Non-hazardous. If disposed, Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
800s EB	Surface, 0.3, 0.6	Surface to 0.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
800s EB	0.9, 1.5	0.75 to 1.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
800s EB	Surface, 0.3, 0.6, 0.9	Surface to 1.20	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***
800s EB	1.5	1.20 to 1.75	**Z-3***	Hazardous. Class 1 Disposal Site, all other Title 22 CCR requirements apply. **RCRA.***

Notes:
UCL – upper confidence limit
meters bsg – meters below surface grade
DTSC – United States Environmental Protection Agency, Department of Toxic Substances Control
CCR – California Code of Regulations
RCRA – Resource, Conservation and Recovery Act
WB – westbound
EB – eastbound
NA – not applicable
*The majority of soil in sections classified as Z-3 may fall under the Z-2 criteria. Soil type classification and recommended handling as RCRA material is based on the failure of one or more Toxicity Characteristic Leaching Procedure (TCLP) analyses at this depth across entire sections. The actual locations of the samples failing the TCLP analyses (which may represent isolated zones) are listed in Tables T10 and T11. The volume of soil requiring handling as a RCRA material may be reduced if additional in-ground and/or stockpile sampling is performed near these sample locations during construction activities.

Concentrations of several metals other than lead, including total chromium, cadmium, and selenium, in several samples collected from the site exceeded 10 times the respective STLCs for those metals. During construction activities, when soil from these areas is stockpiled for disposal, analyses for profiling purposes should include Title 22 metals (TTLC), and STLC analyses if indicated by the results of the TTLC analyses.

9. HEALTH EFFECTS OF LEAD

Concentrations of lead in soil at the site represent a potential threat to the health of site workers performing earthwork activities.

Lead in its element form is a heavy, ductile, soft gray metal. The permissible exposure limit (PEL) for lead is 0.05 milligrams per meters cubed (mg/m^3) in air based on an eight-hour time-weighted average (TWA); Immediately Dangerous to Life and Health (IDLH) exposure limit is 100 mg/m^3 has been established by the National Institute of Occupational Safety and Health (NIOSH). Exposure may produce several symptoms including weakness, eye irritation, facial pallor, pale eyes, lassitude, insomnia, anemia, tremors, malnutrition, constipation, paralysis of the wrists and ankles, abdominal pain, colic, nephropathy, encephalopathy, gingival lead line, hypertension, anorexia, and weight loss. Target organs are the central nervous system, kidneys, eyes, blood, gingival tissue, and the gastrointestinal tract.

Because of the potential hazard from exposure to lead-contaminated soil, a lead Health and Safety Plan should be prepared by a Certified Industrial Hygienist (CIH). In addition, all site workers (earthwork) should have completed a training program meeting the requirements of 29 CFR 1910.120 and 8 CCR 1532.1 The plan developed by the CIH should include a hazard analysis, describe dust control measures, air monitoring, signage, work practices, emergency response plans, personal protective equipment, decontamination, and documentation.

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
Section 100s WB (Borings 571-101 to 571-124)					
571-101-0	80	2.5			
571-101-0.3	330	14	<0.2		
571-101-0.6	360	28	<0.2	0.31	
571-101-0.9	13				
571-101-1.5	190	21	<0.2	1.7	
571-102-0	9.9				
571-102-0.3	13				
571-102-0.6	480	26	<0.2	2	7.9
571-102-0.9	16				
571-102-1.5	6.7				
571-103-0	560	52	<0.2	1	
571-103-0.3	12				
571-103-0.6	610	110	<0.2	0.39	
571-103-0.9	6.8				
571-103-1.5	10				
571-104-0	1,100			0.81	
571-104-0.3	<5				
571-104-0.6	<5				
571-104-0.9	14				
571-104-1.5	5.2				
571-105-0	45				
571-105-0.3	59	3.2			
571-105-0.6	560	81	<0.2	2.2	
571-105-0.9	11				7.9
571-105-1.5	33				
571-106-0	150	9	<0.2		
571-106-0.3	19				
571-106-0.6	9.6				
571-106-0.9	6.7				
571-106-1.5	refusal				
571-107-0	90	4.6			
571-107-0.3	85	4.6			
571-107-0.6	240	9.9	<0.2		
571-107-0.9	91	4.1			7.8
571-107-1.5	refusal				
571-108-0	22				
571-108-0.3	33				
571-108-0.6	30				
571-108-0.9	6.6				
571-108-1.5	8.2				
571-109-0	180	17	<0.2	0.78	
571-109-0.3	45				

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-109-0.6	refusal				
571-109-0.9	refusal				
571-109-1.5	refusal				
571-110-0	64	3.4			
571-110-0.3	42				
571-110-0.6	41				
571-110-0.9	refusal				
571-110-1.5	refusal				
571-111-0	45				
571-111-0.3	82	<0.2			
571-111-0.6	59	2.1			
571-111-0.9	7.6				
571-111-1.5	16				
571-112-0	500	28	<0.2	0.69	7.4
571-112-0.3	55	25	1.2	0.51	
571-112-0.6	110	24	<0.2	0.4	
571-112-0.9	710	56	<0.2	<0.2	
571-112-1.5	4				
571-113-0	59	2.9			
571-113-0.3	17				
571-113-0.6	81	6.1	<0.2		
571-113-0.9	5.3				
571-113-1.5	<5				
571-114-0	120	7.1	<0.2		
571-114-0.3	120	6.8	0.32		
571-114-0.6	170	3.8			
571-114-0.9	420	5.1	<0.2		
571-114-1.5	12				8.1
571-115-0	150	10	1.6		7.2
571-115-0.3	170	9.2	1.1		
571-115-0.6	170	14	2	0.6	
571-115-0.9	15				
571-115-1.5	<5				
571-116-0	46				7.6
571-116-0.3	30				
571-116-0.6	<5				
571-116-0.9	78	<0.2			
571-116-1.5	<5				
571-117-0	24				
571-117-0.3	<5				
571-117-0.6	<5				
571-117-0.9	85	<0.2			
571-117-1.5	<5				

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-118-0	270	22	<0.2	0.31	6.5
571-118-0.3	15				
571-118-0.6	57	<0.2			
571-118-0.9	5.9				
571-118-1.5	12				
571-119-0	11				
571-119-0.3	<5				
571-119-0.6	<5				
571-119-0.9	7.7				
571-119-1.5	<5				
571-120-0	1,800			0.57	
571-120-0.3	98	6.7	<0.2		
571-120-0.6	25				
571-120-0.9	13				7.8
571-120-1.5	38				
571-121-0	230	13	<0.2		
571-121-0.3	12				
571-121-0.6	13				
571-121-0.9	6.2				
571-121-1.5	8.1				
571-122-0	320	21	<0.2	0.68	
571-122-0.3	9.5				
571-122-0.6	6.9				
571-122-0.9	9.5				
571-122-1.5	12				
571-123-0	190	10	<0.2		
571-123-0.3	13				
571-123-0.6	refusal				
571-123-0.9	refusal				
571-123-1.5	refusal				
571-124-0	130	9.2	<0.2		
571-124-0.3	34				
571-124-0.6	5.9				9
571-124-0.9	24				
571-124-1.5	refusal				
Section 300s WB (Borings 571-301 to 571-330)					
571-301-0	150	14	<0.2		
571-301-0.3	40				
571-301-0.6	69	4.1			
571-301-0.9	15				
571-301-1.5	49				
571-302-0	310	12	<0.2		
571-302-0.3	56	1.6			

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-302-0.6	67	2.6			
571-302-0.9	refusal				
571-302-1.5	refusal				
571-304-0	9.6				
571-304-0.3	36				7.6
571-304-0.6	18				
571-304-0.9	7.9				
571-304-1.5	refusal				
571-305-0	320	40	<0.2	1.2	6.2
571-305-0.3	6.4				
571-305-0.6	28				
571-305-0.9	670	39	<0.2	1.2	
571-305-1.5	6.6				
571-306-0	30				
571-306-0.3	<5				
571-306-0.6	6.7				
571-306-0.9	140	0.46			
571-306-1.5	6.7				
571-307-0	15				
571-307-0.3	6.4				7.6
571-307-0.6	<5				
571-307-0.9	5.7				
571-307-1.5	54	2.6			
571-308-0	35				
571-308-0.3	5.4				
571-308-0.6	<5				
571-308-0.9	580	61	<0.2	1.3	
571-308-1.5	17				
571-309-0	6.6				
571-309-0.3	<5				
571-309-0.6	<5				7.6
571-309-0.9	36				
571-309-1.5	8.8				
571-310-0	59	1.6			
571-310-0.3	6.7				
571-310-0.6	7.5				
571-310-0.9	1,200			10	
571-310-1.5	110	7.4	<0.2		
571-311-0	140	11	<0.2		
571-311-0.3	36				
571-311-0.6	250	17	<0.2	0.36	
571-311-0.9	refusal				
571-311-1.5	refusal				

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-312-0	760	51	<0.2	1.1	7.4
571-312-0.3	83	1.7			
571-312-0.6	100	9.7	<0.2		
571-312-0.9	refusal				
571-312-1.5	refusal				
571-313-0	610	79	<0.2	1.1	8.1
571-313-0.3	45				
571-313-0.6	75	3.5			
571-313-0.9	69	4.7			
571-313-1.5	83	5.2	<0.2		
571-314-0	79	3.1			
571-314-0.3	40				
571-314-0.6	refusal				
571-314-0.9	refusal				
571-314-1.5	refusal				
571-315-0	380	27	<0.2	0.42	
571-315-0.3	9.3				
571-315-0.6	16				
571-315-0.9	6.6				
571-315-1.5	18				
571-316-0	120	7.2	<0.2		7.5
571-316-0.3	99	5.2	<0.2		
571-316-0.6	57	3.2			
571-316-0.9	39				
571-316-1.5	refusal				
571-317-0	1,200			6.5	
571-317-0.3	220	16	<0.2	0.49	
571-317-0.6	120	6.5	0.71		
571-317-0.9	18				
571-317-1.5	refusal				
571-319-0	16				5
571-319-0.3	110	9.2	0.4		
571-319-0.6	refusal				
571-319-0.9	refusal				
571-319-1.5	refusal				
571-320-0	1100			3.1	
571-320-0.3	refusal				
571-320-0.6	refusal				
571-320-0.9	refusal				
571-320-1.5	refusal				
571-321-0	6.5				
571-321-0.3	100	1.8			
571-321-0.6	90	3.8			7.8

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-321-0.9	8.1				
571-321-1.5	<5				
571-322-0	18				
571-322-0.3	60	3.9			
571-322-0.6	180	10	<0.2		
571-322-0.9	<5				
571-322-1.5	refusal				
571-323-0	88	2.7			8.1
571-323-0.3	14				
571-323-0.6	280	1.9			
571-323-0.9	<5				
571-323-1.5	<5				
571-324-0	35				
571-324-0.3	<5				
571-324-0.6	6.5				
571-324-0.9	820	110	<0.2	0.23	
571-324-1.5	11				
571-325-0	27				
571-325-0.3	5.0				
571-325-0.6	1,700			3	
571-325-0.9	5.8				
571-325-1.5	refusal				
571-326-0	440	31	<0.2	2.4	
571-326-0.3	14				
571-326-0.6	170	24	<0.2	2.3	
571-326-0.9	19				
571-326-1.5	18				
571-327-0	54	2.2			
571-327-0.3	21				
571-327-0.6	310	23	<0.2	0.84	
571-327-0.9	62	4.6			
571-327-1.5	refusal				
571-328-0	120	2.5			
571-328-0.3	9.6				
571-328-0.6	64	0.43			
571-328-0.9	<5				
571-328-1.5	8.2				
571-329-0	8.7				8.5
571-329-0.3	6.7				
571-329-0.6	63	2.9			
571-329-0.9	<5				
571-329-1.5	<5				
571-330-0	780	31	<0.2	1.1	

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-330-0.3	22				
571-330-0.6	140	6	<0.2		
571-330-0.9	22				
571-330-1.5	refusal				
Section 500s WB (Borings 571-501 to 571-530)					
571-501-0	300	20	<0.2	0.83	
571-501-0.3	26				
571-501-0.6	19				
571-501-0.9	50	4.1			
571-501-1.5	refusal				
571-502-0	110	3.1			
571-502-0.3	9.1				
571-502-0.6	230	31	0.25	1.7	
571-502-0.9	5.5				
571-502-1.5	7.8				
571-503-0	50	1.9			
571-503-0.3	19				
571-503-0.6	28				
571-503-0.9	refusal				
571-503-1.5	refusal				
571-504-0	38				6.6
571-504-0.3	<5				
571-504-0.6	6.5				
571-504-0.9	<5				
571-504-1.5	<5				
571-505-0	<5				
571-505-0.3	56	<0.2			
571-505-0.6	140	0.33			
571-505-0.9	<5				
571-505-1.5	280	44	0.23	1.1	
571-506-0	160	11	<0.2		
571-506-0.3	16				
571-506-0.6	17				
571-506-0.9	17				
571-506-1.5	refusal				
571-507-0	1,500			<0.2	
571-507-0.3	5.9				
571-507-0.6	8.7				
571-507-0.9	6.8				
571-507-1.5	10				8.4
571-508-0	830	73	0.23	0.7	
571-508-0.3	11				
571-508-0.6	5.8				

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-508-0.9	15				
571-508-1.5	5.1				
571-509-0	52	1.4			
571-509-0.3	<5				6.8
571-509-0.6	<5				
571-509-0.9	<5				
571-509-1.5	refusal				
571-510-0	650	39	<0.2	1.4	
571-510-0.3	260	19	<0.2	0.79	
571-510-0.6	92	2.2			
571-510-0.9	refusal				
571-510-1.5	refusal				
571-511-0	1,100			3.7	
571-511-0.3	24				
571-511-0.6	7.9				
571-511-0.9	6.4				
571-511-1.5	48				7.7
571-512-0	830	64	<0.2	1.5	
571-512-0.3	360	30	<0.2	1	
571-512-0.6	58	4.5			
571-512-0.9	120	7.5	<0.2		
571-512-1.5	29				
571-513-0	19				8.2
571-513-0.3	57	5.4	<0.2		
571-513-0.6	210	25	<0.2	1.1	
571-513-0.9	150	7.8	<0.2		
571-513-1.5	6.6				
571-514-0	1,500			6.5	
571-514-0.3	740	59	<0.2	3.5	
571-514-0.6	370	33	<0.2	2.8	
571-514-0.9	490	44	<0.2	2.4	
571-514-1.5	refusal				
571-515-0	860	50	<0.2	5.4	
571-515-0.3	21				
571-515-0.6	29				
571-515-0.9	12				8.6
571-515-1.5	refusal				
571-516-0	980	66	<0.2	8.7	
571-516-0.3	210	26	<0.2	3.6	
571-516-0.6	7.8				
571-516-0.9	130	11	<0.2		
571-516-1.5	refusal				
571-517-0	540	56	0.22	5.6	

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-517-0.3	500	46	<0.2	3.7	
571-517-0.6	300	20	<0.2	0.7	
571-517-0.9	250	5.1	<0.2		
571-517-1.5	350	25	<0.2	0.33	
571-518-0	5.4				
571-518-0.3	880	73	0.51	2.6	
571-518-0.6	110	6.3	<0.2		
571-518-0.9	300	19	<0.2	0.55	8.2
571-518-1.5	refusal				
571-519-0	94	3.2			
571-519-0.3	140	10	<0.2		
571-519-0.6	220	12	<0.2		7.8
571-519-0.9	refusal				
571-519-1.5	refusal				
571-520-0	510	26	<0.2	2	
571-520-0.3	490	36	<0.2	1.5	
571-520-0.6	refusal				
571-520-0.9	refusal				
571-520-1.5	refusal				
571-521-0	[2]2,000 ([1]370)	230	<0.2	1.1	8.2
571-521-0.3	42				
571-521-0.6	420	29	<0.2	1.4	
571-521-0.9	refusal				
571-521-1.5	refusal				
571-522-0	40				
571-522-0.3	<5				
571-522-0.6	330	19	<0.2	0.49	
571-522-0.9	<5				
571-522-1.5	<5				
571-523-0	190	31	<0.2	2	
571-523-0.3	700	39	<0.2	0.59	
571-523-0.6	refusal				
571-523-0.9	refusal				
571-523-1.5	refusal				
571-524-0	1,900			2.8	7.4
571-524-0.3	37				
571-524-0.6	19				
571-524-0.9	230	9.2	<0.2		
571-524-1.5	17				
571-525-0	220	9.2	<0.2		
571-525-0.3	230	10	<0.2		
571-525-0.6	42				
571-525-0.9	5.9				

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-525-1.5	780	<0.2			
571-526-0	870	51	<0.2	0.73	
571-526-0.3	170	15	0.28	0.31	
571-526-0.6	15				8.1
571-526-0.9	18				
571-526-1.5	38				
571-527-0	75	4.2			
571-527-0.3	82	5	1.1		
571-527-0.6	71	2.6			
571-527-0.9	62	3			
571-527-1.5	refusal				
571-528-0	510	44	<0.2	7.7	
571-528-0.3	86	24	1.5	0.77	9
571-528-0.6	16				
571-528-0.9	64	7.2	2.4		
571-528-1.5	660	33	<0.2	7.3	
571-529-0	49				7.2
571-529-0.3	62	2.5			
571-529-0.6	57	2.5			
571-529-0.9	44				
571-529-1.5	28				
571-530-0	660	55	<0.2	2	
571-530-0.3	370	21	<0.2	1.2	7.5
571-530-0.6	470	41	<0.2	0.95	
571-530-0.9	refusal				
571-530-1.5	refusal				
Section 700s WB (Borings 571-701 to 571-714)					
571-701-0	370	61	<0.2	2.3	
571-701-0.3	610	66	<0.2	2.1	
571-701-0.6	190	19	<0.2	0.72	
571-701-0.9	refusal				
571-701-1.5	refusal				
571-702-0	40				
571-702-0.3	20				
571-702-0.6	23				
571-702-0.9	14				
571-702-1.5	5.9				8.4
571-703-0	310	38	5	4.3	
571-703-0.3	100	10	<0.2		
571-703-0.6	50	2.6			
571-703-0.9	refusal				
571-703-1.5	refusal				
571-704-0	200	19	1.3	0.48	

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-704-0.3	210	17	1.2	0.58	
571-704-0.6	refusal				
571-704-0.9	refusal				
571-704-1.5	refusal				
571-706-0	370	41	<0.2	1.8	
571-706-0.3	390	29	0.5	2.8	
571-706-0.6	230	24	<0.2	1.1	
571-706-0.9	refusal				
571-706-1.5	refusal				
571-707-0	98	5.2	<0.2		
571-707-0.3	180	11	<0.2		8.1
571-707-0.6	150	11	<0.2		
571-707-0.9	39				
571-707-1.5	refusal				
571-708-0	890	110	0.22	3.4	
571-708-0.3	470	34	<0.2	2.1	
571-708-0.6	25				
571-708-0.9	refusal				
571-708-1.5	refusal				
571-709-0	650	53	<0.2	2.1	
571-709-0.3	190	18	<0.2	0.77	
571-709-0.6	54	2.2			
571-709-0.9	refusal				
571-709-1.5	refusal				
571-710-0	1,300			9.5	
571-710-0.3	1,300			9.4	
571-710-0.6	620	65	6.5	6.8	
571-710-0.9	140	10	<0.2		
571-710-1.5	refusal				
571-711-0	1,700			13	
571-711-0.3	1,300			6.6	
571-711-0.6	300	19	<0.2	0.36	8.5
571-711-0.9	refusal				
571-711-1.5	refusal				
571-712-0	2,800			7	
571-712-0.3	1,300			4.9	
571-712-0.6	250	11	2.7		
571-712-0.9	770	81	10	4.4	
571-712-1.5	refusal				
571-713-0	350	13	<0.2		
571-713-0.3	86	0.41			
571-713-0.6	<5				
571-713-0.9	refusal				

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-713-1.5	refusal				
571-714-0	570	11	<0.2		
571-714-0.3	54	1.9			
571-714-0.6	<5				
571-714-0.9	680	0.84			
571-714-1.5	refusal				
Section 200s EB (Borings 571-201 to 571-220)					
571-201-0	15				
571-201-0.3	76	5	0.49		
571-201-0.6	1,100			0.41	
571-201-0.9	22				
571-201-1.5	refusal				
571-202-0	13				
571-202-0.3	13				
571-202-0.6	22				
571-202-0.9	270	11	<0.2	0.35	
571-202-1.5	8.2				
571-203-0	500	16	<0.2	0.7	
571-203-0.3	250	10	<0.2		
571-203-0.6	55	4.4			
571-203-0.9	refusal				
571-203-1.5	refusal				
571-204-0	41				
571-204-0.3	21				
571-204-0.6	refusal				
571-204-0.9	refusal				
571-204-1.5	refusal				
571-205-0	110	3.7			
571-205-0.3	43				
571-205-0.6	63	2.7			6.1
571-205-0.9	refusal				
571-205-1.5	refusal				
571-206-0	84	8.2	<0.2		
571-206-0.3	93	5.1	<0.2		
571-206-0.6	43				
571-206-0.9	refusal				
571-206-1.5	refusal				
571-207-0	73	3.6			7.4
571-207-0.3	31				
571-207-0.6	45				
571-207-0.9	44				
571-207-1.5	240	16	<0.2	0.32	
571-208-0	220	9.3	<0.2		

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-208-0.3	55	2.6			
571-208-0.6	37				
571-208-0.9	refusal				
571-208-1.5	refusal				
571-209-0	49				
571-209-0.3	<5				7.8
571-209-0.6	10				
571-209-0.9	refusal				
571-209-1.5	refusal				
571-210-0	63	2.7			
571-210-0.3	34				
571-210-0.6	6.6				
571-210-0.9	5.3				
571-210-1.5	<5				
571-211-0	110	3.1			
571-211-0.3	25				
571-211-0.6	21				
571-211-0.9	refusal				
571-211-1.5	refusal				
571-212-0	200	18	<0.2	<0.2	
571-212-0.3	49				
571-212-0.6	32				
571-212-0.9	15				
571-212-1.5	refusal				
571-213-0	360	41	<0.2	0.66	
571-213-0.3	20				
571-213-0.6	14				8.5
571-213-0.9	11				
571-213-1.5	refusal				
571-214-0	640	55	<0.2	0.96	5.9
571-214-0.3	1,000			0.95	
571-214-0.6	87	3.8			
571-214-0.9	refusal				
571-214-1.5	refusal				
571-215-0	170	11	<0.2		
571-215-0.3	23				
571-215-0.6	13				
571-215-0.9	86	2.3			
571-215-1.5	refusal				
571-216-0	360	34	<0.2	1.3	
571-216-0.3	28				
571-216-0.6	76	2.5			
571-216-0.9	refusal				

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-216-1.5	refusal				
571-217-0	990	68	<0.2	1.6	6.7
571-217-0.3	83	4.1			
571-217-0.6	91	4.9			
571-217-0.9	refusal				
571-217-1.5	refusal				
571-218-0	110	4.3			
571-218-0.3	8.5				
571-218-0.6	25				
571-218-0.9	refusal				
571-218-1.5	refusal				
571-219-0	31				
571-219-0.3	51	1.7			
571-219-0.6	21				
571-219-0.9	10				
571-219-1.5	30				
571-220-0	66	2.8			7.9
571-220-0.3	21				
571-220-0.6	20				
571-220-0.9	27				
571-220-1.5	25				
Section 400s (571-401 to 571-425)					
571-401-0	23				7.6
571-401-0.3	16				
571-401-0.6	refusal				
571-401-0.9	refusal				
571-401-1.5	refusal				
571-402-0	100	7.6	<0.2		
571-402-0.3	34				
571-402-0.6	15				
571-402-0.9	refusal				
571-402-1.5	refusal				
571-403-0	100	4.8			
571-403-0.3	99	4			
571-403-0.6	220	5.3	<0.2		
571-403-0.9	refusal				
571-403-1.5	refusal				
571-404-0	110	11	<0.2		
571-404-0.3	210	8.3	<0.2		
571-404-0.6	refusal				
571-404-0.9	refusal				
571-404-1.5	refusal				
571-405-0	1,800			<0.2	

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-405-0.3	9.5				
571-405-0.6	230	55	<0.2	1.1	
571-405-0.9	18				
571-405-1.5	32				6.8
571-406-0	1,500			0.68	
571-406-0.3	<5				
571-406-0.6	440	20	<0.2	0.58	
571-406-0.9	<5				
571-406-1.5	42				
571-407-0	3,600			1.3	
571-407-0.3	420	13	<0.2		
571-407-0.6	450	13	<0.2		
571-407-0.9	240	13	<0.2		
571-407-1.5	6				7.7
571-408-0	180	2.1			
571-408-0.3	<5				
571-408-0.6	190	6.2	<0.2		
571-408-0.9	<5				
571-408-1.5	<5				
571-409-0	9.5				
571-409-0.3	6				
571-409-0.6	16				
571-409-0.9	6.5				
571-409-1.5	20				6.2
571-410-0	140	8.2	<0.2		6.5
571-410-0.3	9.8				
571-410-0.6	7.1				
571-410-0.9	7.1				
571-410-1.5	refusal				
571-411-0	340	5	0.83		
571-411-0.3	14				
571-411-0.6	300	7.9	<0.2		
571-411-0.9	<5				
571-411-1.5	7				
571-412-0	79	4.7			
571-412-0.3	100	6.8	<0.2		
571-412-0.6	48				
571-412-0.9	45				
571-412-1.5	8.1				
571-413-0	660	46	<0.2	0.59	
571-413-0.3	110	12	<0.2		7.4
571-413-0.6	8.2				
571-413-0.9	15				

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-413-1.5	refusal				
571-414-0	1,700			1.8	
571-414-0.3	570	33	<0.2	0.79	
571-414-0.6	15				
571-414-0.9	refusal				
571-414-1.5	refusal				
571-415-0	790	58	<0.2	2.4	
571-415-0.3	880	55	<0.2	2.6	7.6
571-415-0.6	210	13	<0.2		
571-415-0.9	refusal				
571-415-1.5	refusal				
571-416-0	110	15	<0.2	2.6	
571-416-0.3	67	5.2	<0.2		
571-416-0.6	6.5				
571-416-0.9	5.5				
571-416-1.5	refusal				
571-417-0	46				
571-417-0.3	48				
571-417-0.6	refusal				
571-417-0.9	refusal				
571-417-1.5	refusal				
571-418-0	240	9.8	<0.2		
571-418-0.3	refusal				
571-418-0.6	refusal				
571-418-0.9	refusal				
571-418-1.5	refusal				
571-419-0	280	15	<0.2	0.36	
571-419-0.3	49				
571-419-0.6	21				8.2
571-419-0.9	8.4				
571-419-1.5	8.1				
571-420-0	380	26	0.24	0.65	
571-420-0.3	240	8.9	<0.2		
571-420-0.6	360	12	<0.2		
571-420-0.9	refusal				
571-420-1.5	refusal				
571-421-0	130	6.3	<0.2		
571-421-0.3	refusal				
571-421-0.6	refusal				
571-421-0.9	refusal				
571-421-1.5	refusal				
571-422-0	17				
571-422-0.3	12				

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-422-0.6	82	3.4			
571-422-0.9	<5				
571-422-1.5	230	<0.2			7.8
571-423-0	130	2.2			
571-423-0.3	6.5				
571-423-0.6	17				
571-423-0.9	29				
571-423-1.5	<5				
571-424-0	18				
571-424-0.3	25				
571-424-0.6	6.2				
571-424-0.9	refusal				
571-424-1.5	refusal				
571-425-0	53	2.8			
571-425-0.3	<5				
571-425-0.6	610	22	<0.2	5.3	
571-425-0.9	<5				
571-425-1.5	26				7.3
Section 600s EB (Borings 571-601 to 571-629)					
571-601-0	120	9.3	<0.2		7.6
571-601-0.3	64	5.1	<0.2		
571-601-0.6	refusal				
571-601-0.9	refusal				
571-601-1.5	refusal				
571-602-0	97	7.4	<0.2		
571-602-0.3	10				
571-602-0.6	250	0.48			
571-602-0.9	19				
571-602-1.5	refusal				
571-603-0	25				
571-603-0.3	47				
571-603-0.6	refusal				
571-603-0.9	refusal				
571-603-1.5	refusal				
571-604-0	820	42	0.21	1.8	7.7
571-604-0.3	82	5.9	<0.2		
571-604-0.6	87	9.3	<0.2		
571-604-0.9	refusal				
571-604-1.5	refusal				
571-605-0	110	11	<0.2		
571-605-0.3	60	4.6			
571-605-0.6	21				
571-605-0.9	refusal				

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-605-1.5	refusal				
571-606-0	180	15	<0.2	0.34	
571-606-0.3	78	8.7	<0.2		
571-606-0.6	refusal				
571-606-0.9	refusal				
571-606-1.5	refusal				
571-607-0	80	0.91			7.9
571-607-0.3	7.4				
571-607-0.6	290	27	<0.2	0.25	
571-607-0.9	5.9				
571-607-1.5	10				
571-608-0	240	7.6	<0.2		
571-608-0.3	22				
571-608-0.6	130	9	<0.2		
571-608-0.9	7.3				
571-608-1.5	100	6.3	<0.2		7.4
571-609-0	1,800			5.8	
571-609-0.3	6.2				
571-609-0.6	130	27	<0.2	6.2	
571-609-0.9	13				
571-609-1.5	refusal				
571-610-0	580	46	0.27	12	
571-610-0.3	6.6				
571-610-0.6	140	43	<0.2	2.9	
571-610-0.9	18				
571-610-1.5	610	18	<0.2	0.49	
571-611-0	2,200			16	8.4
571-611-0.3	14				
571-611-0.6	840	92	<0.2	17	
571-611-0.9	13				
571-611-1.5	12				
571-612-0	110	9.2	<0.2		
571-612-0.3	<5				
571-612-0.6	38				
571-612-0.9	12				
571-612-1.5	13				
571-613-0	90	8.3	<0.2		8.5
571-613-0.3	170	1			
571-613-0.6	48				
571-613-0.9	<5				
571-613-1.5	31				
571-614-0	59	7.9	<0.2		
571-614-0.3	5.8				

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-614-0.6	NA				
571-614-0.9	36				
571-614-1.5	89	2.7			8.2
571-615-0	<5				
571-615-0.3	<5				
571-615-0.6	49				
571-615-0.9	<5				
571-615-1.5	refusal				
571-616-0	1,500			11	
571-616-0.3	95	16	<0.2	3.9	
571-616-0.6	580	57	<0.2	3.6	
571-616-0.9	22				
571-616-1.5	280	28	<0.2	0.22	
571-617-0	1,300			2.4	
571-617-0.3	800	100	23	15	
571-617-0.6	100	13	2.2		
571-617-0.9	81	2.3			
571-617-1.5	refusal				
571-618-0	31				
571-618-0.3	10				
571-618-0.6	<5				
571-618-0.9	1,000			15	
571-618-1.5	<5				
571-619-0	76	15	<0.2	0.38	
571-619-0.3	200	24	<0.2	3.7	
571-619-0.6	710	<0.2			8.3
571-619-0.9	960	24	<0.2	0.34	
571-619-1.5	1,100			3.9	
571-620-0	250	17	<0.2	0.22	
571-620-0.3	7.4				
571-620-0.6	6.5				
571-620-0.9	<5				
571-620-1.5	<5				
571-621-0	130	1.7			
571-621-0.3	<5				
571-621-0.6	<5				7.9
571-621-0.9	110	9.6	<0.2		
571-621-1.5	220	5.8	<0.2		
571-622-0	370	27	<0.2	1.4	
571-622-0.3	<5				
571-622-0.6	<5				
571-622-0.9	<5				
571-622-1.5	260	19	<0.2	0.47	

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-623-0	23				
571-623-0.3	<5				
571-623-0.6	190	25	<0.2	2.2	
571-623-0.9	<5				
571-623-1.5	29				
571-624-0	160	11	<0.2		
571-624-0.3	76	3.9			9.2
571-624-0.6	<5				
571-624-0.9	17				
571-624-1.5	90	31	0.37	1.2	
571-625-0	<5				
571-625-0.3	<5				8.4
571-625-0.6	<5				
571-625-0.9	7				
571-625-1.5	12				
571-626-0	83	4.5			7.5
571-626-0.3	<5				
571-626-0.6	10				
571-626-0.9	13				
571-626-1.5	refusal				
571-627-0	14				
571-627-0.3	17				
571-627-0.6	10				
571-627-0.9	14				
571-627-1.5	<5				
571-628-0	12				
571-628-0.3	9.8				
571-628-0.6	11				
571-628-0.9	refusal				
571-628-1.5	refusal				
571-629-0	470	43	<0.2	0.61	
571-629-0.3	220	16	<0.2	0.26	
571-629-0.6	110	9.4	<0.2		
571-629-0.9	46				8.8
571-629-1.5	61	4.8			
Section 800s EB (Borings 571-801 to 571-842)					
571-801-0	76	11	<0.2		6.7
571-801-0.3	62	6.2	<0.2		
571-801-0.6	44				
571-801-0.9	27				
571-801-1.5	35				
571-802-0	50	3.7			
571-802-0.3	37				

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-802-0.6	12				
571-802-0.9	refusal				
571-802-1.5	refusal				
571-803-0	460	33	<0.2	0.43	
571-803-0.3	39				
571-803-0.6	12				8.6
571-803-0.9	refusal				
571-803-1.5	refusal				
571-804-0	24				
571-804-0.3	22				
571-804-0.6	22				
571-804-0.9	refusal				
571-804-1.5	refusal				
571-805-0	34				
571-805-0.3	5.0				
571-805-0.6	<5				
571-805-0.9	<5				
571-805-1.5	5.0				
571-807-0	20				
571-807-0.3	20				8.1
571-807-0.6	8.5				
571-807-0.9	5.0				
571-807-1.5	<5				
571-808-0	22				
571-808-0.3	10				
571-808-0.6	<5				
571-808-0.9	5.1				
571-808-1.5	5.5				
571-809-0	29				
571-809-0.3	58	4.5			
571-809-0.6	refusal				
571-809-0.9	refusal				
571-809-1.5	refusal				
571-810-0	36				
571-810-0.3	20				
571-810-0.6	<5				
571-810-0.9	<5				
571-810-1.5	9.1				
571-811-0	97	7.4	<0.2		7.8
571-811-0.3	690	28	<0.2	<0.2	
571-811-0.6	76	3.3			
571-811-0.9	<5				
571-811-1.5	19				

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-812-0	310	41	<0.2	1.3	8
571-812-0.3	6.1				
571-812-0.6	220	19	<0.2	1.2	
571-812-0.9	<5				
571-812-1.5	<5				
571-813-0	320	3			
571-813-0.3	640	32	<0.2	7.5	
571-813-0.6	130	6.2	<0.2		
571-813-0.9	320	14	<0.2		
571-813-1.5	refusal				
571-814-0	61	4.5			
571-814-0.3	3,000			0.48	
571-814-0.6	500	28	<0.2	1.2	7.8
571-814-0.9	370	19	0.32	0.52	
571-814-1.5	<5				
571-815-0	360	45	5.4	6.4	
571-815-0.3	<5				
571-815-0.6	570	47	<0.2	1.6	
571-815-0.9	86	6.9	<0.2		
571-815-1.5	6.9				
571-816-0	44				
571-816-0.3	8.3				
571-816-0.6	80	1.8			7.8
571-816-0.9	<5				
571-816-1.5	<5				
571-817-0	76	23	<0.2	1	
571-817-0.3	<5				
571-817-0.6	240	9.2	<0.2		
571-817-0.9	12				
571-817-1.5	refusal				
571-818-0	950	110	<0.2	13	
571-818-0.3	16				
571-818-0.6	1,100			5.2	
571-818-0.9	5.7				8.5
571-818-1.5	300	39	<0.2	8.4	
571-819-0	1,600			6.6	
571-819-0.3	16				
571-819-0.6	770	110	1.6	7.5	
571-819-0.9	140	<0.2			
571-819-1.5	830	51	7.9	5.5	
571-820-0	29				
571-820-0.3	18				
571-820-0.6	18				

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-820-0.9	24				8.5
571-820-1.5	refusal				
571-821-0	45				
571-821-0.3	9.9				
571-821-0.6	68	0.91			
571-821-0.9	64	0.93			
571-821-1.5	73	0.95			
571-827-0	640	34	<0.2	1.8	
571-827-0.3	200	11	<0.2		
571-827-0.6	110	7.2	<0.2		
571-827-0.9	refusal				
571-827-1.5	refusal				
571-828-0	250	22	<0.2	0.6	
571-828-0.3	170	8.1	<0.2		
571-828-0.6	220	12	<0.2		
571-828-0.9	refusal				
571-828-1.5	refusal				
571-829-0	330	22	0.24	0.57	
571-829-0.3	13				9
571-829-0.6	refusal				
571-829-0.9	refusal				
571-829-1.5	refusal				
571-830-0	83	3.8			
571-830-0.3	38				7.2
571-830-0.6	20				
571-830-0.9	refusal				
571-830-1.5	refusal				
571-831-0	720	53	<0.2	0.94	
571-831-0.3	75	2.5			
571-831-0.6	120	5.3	<0.2		
571-831-0.9	refusal				
571-831-1.5	refusal				
571-832-0	23				8.2
571-832-0.3	5.3				
571-832-0.6	<5				
571-832-0.9	<5				
571-832-1.5	7.2				
571-833-0	480	49	<0.2	0.62	
571-833-0.3	120	13	<0.2		
571-833-0.6	80	8	<0.2		
571-833-0.9	refusal				
571-833-1.5	refusal				
571-834-0	56	0.37			

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
571-834-0.3	<5				
571-834-0.6	6.2				
571-834-0.9	refusal				
571-834-1.5	refusal				
571-835-0	620	28	<0.2	0.33	
571-835-0.3	240	20	<0.2	1.7	7.8
571-835-0.6	29				
571-835-0.9	230	12	<0.2		
571-835-1.5	refusal				
571-836-0	240	10	<0.2		
571-836-0.3	<5				7.8
571-836-0.6	<5				
571-836-0.9	refusal				
571-836-1.5	refusal				
571-837-0	110	6.3	<0.2		
571-837-0.3	250	27	<0.2	14	
571-837-0.6	refusal				
571-837-0.9	refusal				
571-837-1.5	refusal				
571-838-0	52	5.8	<0.2		8.5
571-838-0.3	33				
571-838-0.6	270	12	<0.2		
571-838-0.9	<5				
571-838-1.5	<5				
571-839-0	37				
571-839-0.3	18				
571-839-0.6	140	18	<0.2	0.23	
571-839-0.9	12				
571-839-1.5	<5				8.4
571-840-0	8.5				
571-840-0.3	5.2				
571-840-0.6	6.6				
571-840-0.9	refusal				
571-840-1.5	refusal				
571-841-0	<5				
571-841-0.3	<5				
571-841-0.6	44				
571-841-0.9	8.6				
571-841-1.5	<5				
571-842-0	11				
571-842-0.3	5.0				
571-842-0.6	260	10	<0.2		
571-842-0.9	<5				
571-842-1.5	77	1.7			8.4

TABLE 1 - SOIL SAMPLE RESULTS - LEAD AND PH

Sample ID	TTLC (mg/kg)	STLC (mg/l)	DI-WET (mg/l)	TCLP (mg/l)	pH
Equipment Rinsate Samples (mg/l)					
EB-6	<0.0050				
EB-10	<0.0050				
EB-11	<0.0050				
EB-13	<0.0050				
EB-16	<0.0050				
EB-17	<0.0050				
EB-18	<0.0050				
EB-20	<0.0050				
EB-21	<0.0050				
EB-23	<0.0050				
EB-24	<0.0050				
EB-25	<0.0050				
EB-26	<0.0050				
EB-27	0.0094				
EB-28	0.0098				
EB-30	<0.0050				
EB-32	<0.0050				

Notes:

TTLC - Total Threshold Limit Concentrations for Lead using the United State Environmental Protection Agency (EPA) Test Method No. 6010B.

STLC - Soluble Threshold Limit Concentrations for Lead using EPA Test Method No. 7420.

DI-WET - Soluble Threshold Limit Concentrations for Lead using De-Ionized Water Extraction using EPA Test Method No. 7420.

TCLP - Toxic Characteristic Leaching Procedure for Lead using EPA Test Method Nos. 1311/7420.

mg/kg - milligrams per kilogram

mg/l - milligrams per liter

ND - non detected above laboratory limits

WB - westbound

EB - eastbound

Blank indicates not analyzed.

[1]Initial analytical result.

[2]Analytical result used in statistical evaluation and calculations.

Refusal indicates a proposed sample was not collected due to refusal of soil conditions encountered during drilling at that depth.

NA - Sample 571-614-0.6 was collected but not analyzed.

All of the boring locations in a section may not have been drilled, as described in the text.

TABLE 2 - ANALYTICAL RESULTS FOR METALS

Sample ID	Sample Date	Sb (mg/kg)	As (mg/kg)	Ba (mg/kg)	Be (mg/kg)	Cd (mg/kg)	Total Cr (mg/kg)	Co (mg/kg)	Cu (mg/kg)	Hg (mg/kg)	Mo (mg/kg)	Ni (mg/kg)	Se (mg/kg)	Ag (mg/kg)	Tl (mg/kg)	V (mg/kg)	Zn (mg/kg)
571-101-0.9	7/17/02	2	2	130	ND	0.4	20	13	20	0.04	ND	16	4	ND	ND	48	82
571-104-0.0	7/17/02	4.9	7.2	110	ND	1	22	12	27	0.04	1	19	2	ND	ND	50	120
571-108-1.5	7/22/02	1	15	140	ND	ND	20	10	15	0.03	0.2	15	ND	0.3	2	50	60
571-111-0.3	7/22/02	2	15	140	ND	ND	25	15	25	0.03	ND	20	ND	0.1	ND	60	60
571-115-0.9	7/22/02	2	0.7	130	ND	0.6	19	14	23	0.17	0.2	16	14	ND	ND	50	230
571-120-0	7/18/02	ND	9.8	150	ND	1	28	14	39	0.1	2	22	9.5	ND	ND	53	330
571-201-0.6	7/17/02	1	10	140	ND	ND	20	10	55	0.06	2	20	ND	0.1	2	45	360
571-207-0	7/16/02	1	15	100	ND	ND	10	10	25	ND	0.3	5	ND	0.4	ND	50	95
571-210-0.6	7/16/02	2	15	190	ND	ND	20	15	35	0.05	0.1	15	ND	0.05	ND	65	80
571-214-0.3	7/17/02	2	0.7	130	ND	1	31	13	55	0.09	1	24	13	ND	ND	49	250
571-217-0.6	7/17/02	1	2	91	ND	0.2	13	9.4	24	0.04	0.5	11	2	ND	ND	38	59
571-220-0.6	7/17/02	1	2	120	ND	1	22	11	22	0.03	1	17	3.5	ND	ND	54	92
571-301-0.3	7/17/02	2	10	100	ND	ND	5	5	15	0.04	ND	5	ND	ND	1	40	65
571-306-0.9	7/18/02	1	4.1	130	ND	1	23	8.3	32	0.04	3.5	19	7.7	ND	ND	37	380
571-310-0.9	7/18/02	2	2	120	ND	0.3	16	14	26	0.06	0.7	14	9.3	ND	ND	54	79
571-315-0.3	7/18/02	2	0.9	140	ND	0.3	21	15	25	0.06	0.1	17	9.9	ND	ND	56	68
571-317-0	7/19/02	ND	5.1	260	ND	3.5	36	11	120	0.14	6.9	34	14	ND	ND	43	650
571-320-0	7/22/02	2	10	140	ND	ND	25	10	50	0.08	1	30	ND	0.2	ND	35	330
571-325-0.3	7/18/02	2.8	2	120	ND	0.3	20	15	21	0.06	0.09	17	5	ND	ND	60	62
571-405-0	7/18/02	0.9	3.7	170	ND	2	35	13	52	0.11	2.6	26	7.1	ND	ND	48	550
571-407-0	7/18/02	1	4.8	150	ND	2.6	33	9.6	49	0.04	3.4	37	7.6	ND	ND	47	530
571-412-1.5	7/17/02	1	15	140	ND	ND	15	10	20	0.04	2	15	ND	ND	2.5	55	65
571-416-0.9	7/17/02	0.8	0.5	66	ND	0.3	16	11	14	0.05	ND	11	4.4	ND	ND	44	42
571-421-0	7/17/02	0.8	3.2	130	ND	1	23	12	24	0.04	2	20	11	ND	ND	55	130
571-425-0	7/18/02	2	ND	130	ND	0.1	13	9.3	16	ND	0.3	8.4	3.5	ND	ND	32	56
571-501-0.6	7/17/02	0.9	5	110	ND	ND	5	5	10	ND	0.7	5	ND	0.4	0.4	30	55

TABLE 2 - ANALYTICAL RESULTS FOR METALS

Sample ID	Sample Date	Sb (mg/kg)	As (mg/kg)	Ba (mg/kg)	Be (mg/kg)	Cd (mg/kg)	Total Cr (mg/kg)	Co (mg/kg)	Cu (mg/kg)	Hg (mg/kg)	Mo (mg/kg)	Ni (mg/kg)	Se (mg/kg)	Ag (mg/kg)	Tl (mg/kg)	V (mg/kg)	Zn (mg/kg)
571-503-0.6	7/17/02	0.3	10	160	ND	0.5	20	5	30	0.05	3.6	20	ND	ND	ND	65	85
571-507-0	7/22/02	0.6	7.4	260	ND	2	37	9.1	190	0.04	6.3	26	11	ND	ND	42	500
571-510-0.6	7/18/02	2.8	2	210	ND	2.5	33	15	26	0.03	2	35	12	ND	ND	65	75
571-514-0	7/18/02	2	5.5	230	ND	1	23	9.5	72	0.1	3	20	9.2	ND	ND	33	390
571-517-0.9	7/18/02	ND	6.1	210	ND	4.1	46	13	69	0.15	7.4	47	16	ND	ND	99	100
571-520-0	7/18/02	ND	5.3	180	ND	2.6	26	9.5	40	0.05	7.1	24	15	ND	ND	67	200
571-524-0	7/18/02	2	11	290	ND	4.2	54	11	79	0.12	8.6	52	12	ND	ND	89	360
571-529-0.3	7/18/02	2	8.4	330	ND	1.8	52	13	37	0.13	6.5	47	7.8	ND	ND	130	160
571-603-0.3	7/17/02	2	10	120	ND	ND	10	5	10	ND	1	10	ND	0.3	ND	35	60
571-609-0	7/19/02	0.3	5.3	250	ND	4.7	42	9.3	93	0.06	9.7	43	9.2	ND	ND	60	850
571-611-0	7/19/02	7.5	5.5	100	ND	1	20	9	27	0.05	2	23	5.6	ND	ND	41	210
571-614-0.3	7/19/02	ND	6.6	120	ND	1	19	8.7	16	0.08	4.5	17	7.9	ND	ND	57	54
571-617-0.6	7/22/02	1	5	35	ND	ND	5	5	10	0.05	0.6	5	ND	0.2	ND	15	70
571-621-0.3	7/19/02	3	3.5	210	ND	1.9	57	13	27	0.09	13	37	7.5	ND	ND	99	79
571-624-0.9	7/19/02	ND	7.3	180	ND	3.5	37	8.7	27	0.11	8.5	30	12	ND	ND	70	160
571-628-0.6	7/22/02	1	10	120	ND	0.5	35	10	20	0.06	5	30	ND	0.2	3.3	75	90
571-703-0.6	7/19/02	2.7	2	150	ND	1.7	28	8.3	16	0.04	2	29	9.5	ND	ND	58	66
571-707-0	7/19/02	ND	7.4	190	ND	3.6	39	14	30	0.07	9.6	44	19	ND	ND	77	160
571-711-0	7/19/02	2	7.3	150	ND	1.8	28	10	58	0.09	4.3	23	10	ND	ND	39	550
571-712-0	7/19/02	0.6	11	190	ND	3.1	49	20	65	0.14	13	44	16	ND	ND	74	460
571-804-0.6	7/19/02	ND	3.9	150	ND	3.3	38	12	22	0.06	9.1	32	12	ND	ND	76	130
571-809-0.3	7/19/02	1	6.3	160	ND	3.8	50	14	38	0.07	7.8	51	13	ND	ND	100	160
571-814-0.3	7/19/02	0.9	5.5	160	ND	2.7	40	9.1	150	0.11	14	69	21	ND	ND	38	770
571-818-0.6	7/19/02	ND	12	190	ND	2.4	37	9.7	49	0.19	5.9	26	12	ND	ND	45	510
571-819-0	7/19/02	2	8.7	160	ND	0.7	15	13	26	0.1	5.9	19	17	ND	ND	39	200
571-827-0.3	7/19/02	0.5	2.7	170	ND	0.9	21	8.5	25	0.03	2	17	7.1	ND	ND	43	270

TABLE 2 - ANALYTICAL RESULTS FOR METALS

Sample ID	Sample Date	Sb (mg/kg)	As (mg/kg)	Ba (mg/kg)	Be (mg/kg)	Cd (mg/kg)	Total Cr (mg/kg)	Co (mg/kg)	Cu (mg/kg)	Hg (mg/kg)	Mo (mg/kg)	Ni (mg/kg)	Se (mg/kg)	Ag (mg/kg)	Tl (mg/kg)	V (mg/kg)	Zn (mg/kg)
571-832-0.9	7/22/02	ND	11	320	ND	11	57	13	25	0.04	14	43	15	ND	ND	140	120
571-836-0.3	7/22/02	2	0.5	110	ND	1	19	8.4	11	0.07	2	15	9.7	ND	ND	43	52
571-837-0.3	7/19/02	ND	7.4	130	ND	1.9	24	11	34	0.04	6.3	25	12	ND	ND	51	140
571-842-0	7/22/02	2.6	7.6	270	ND	1	17	19	25	0.03	4.2	26	14	ND	ND	45	58

Notes:

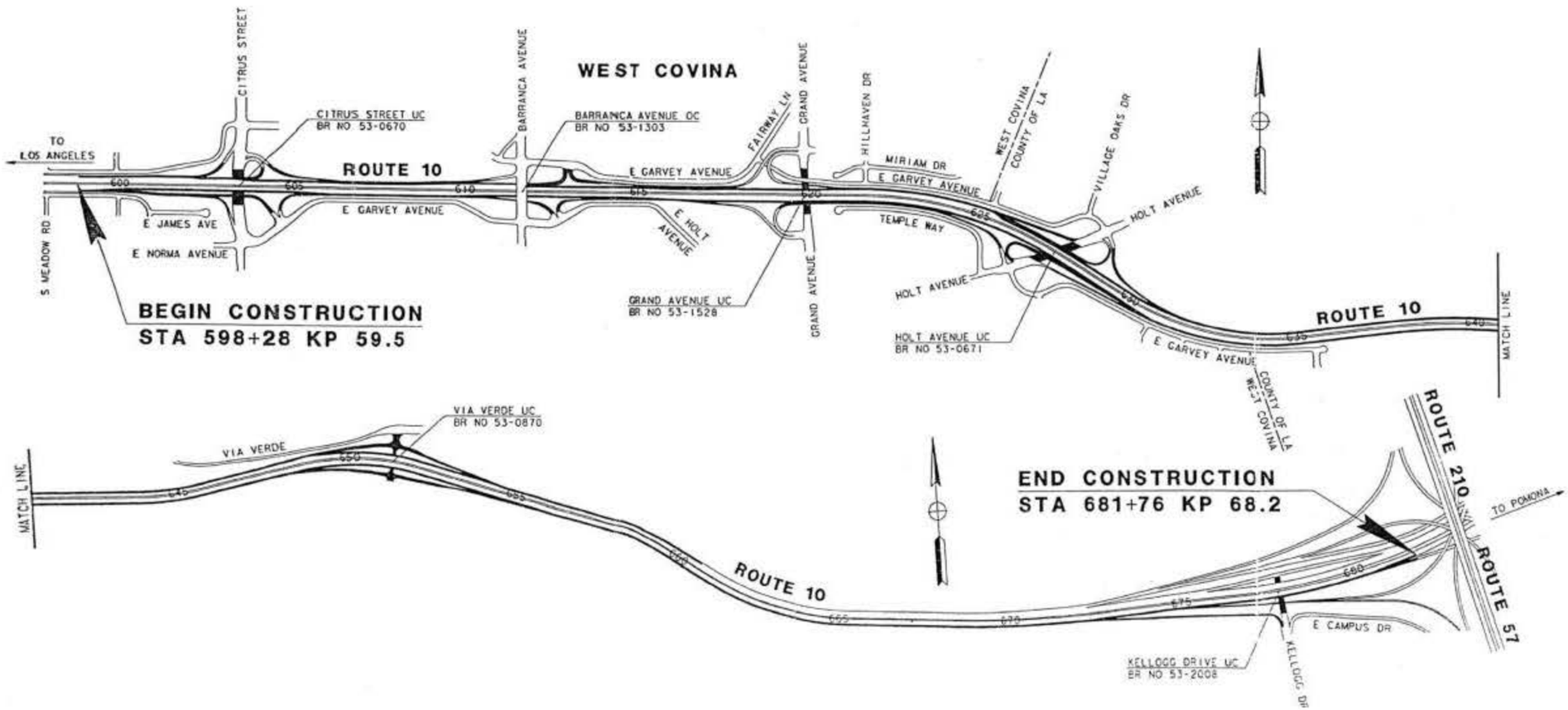
Sb = antimony
As = arsenic
Ba = barium
Be = beryllium
Cd = cadmium
Total Cr = total chromium
Co = cobalt
Cu = copper
mg/kg = milligrams per kilogram
ND = not detected
Hg = mercury analyzed using EPA Method 7471.
Mo = molybdenum
Ni = nickel
Se = selenium
Ag = silver
Tl = thallium
V = vanadium
Zn = zinc

Samples were analyzed using United States Environmental Protection Agency (EPA) Test Method Nos. 6010B/7471A.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN LOS ANGELES COUNTY
IN WEST COVINA AND POMONA
FROM 0.5 KM WEST OF CITRUS STREET UNDERCROSSING
TO 0.1 KM WEST OF I-10/SR-57/I-210 INTERCHANGE

To be supplemented by Standard Plans dated July, 1999



NOT TO SCALE

REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.
NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

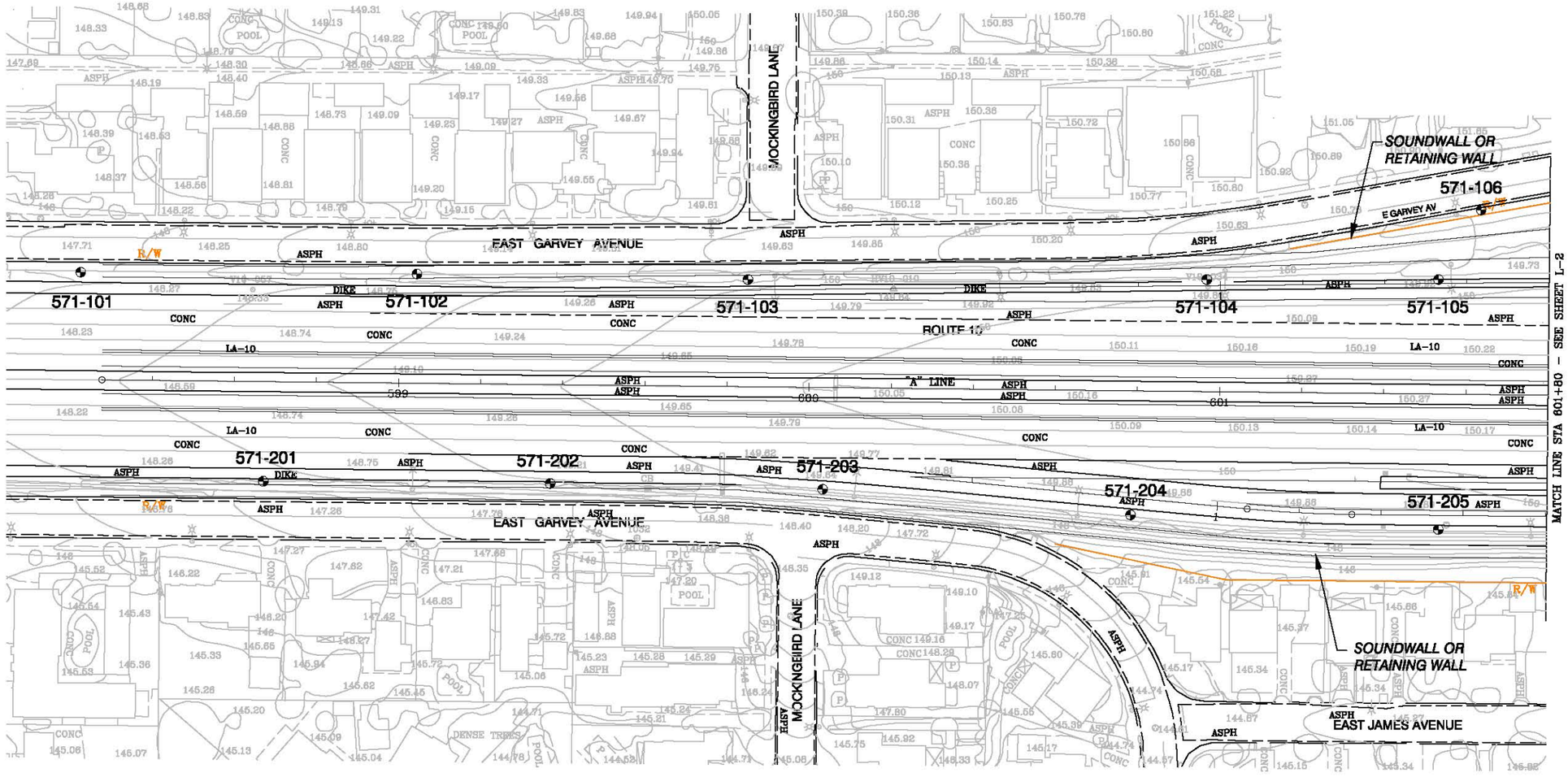
Ninyo & Moore

SITE LOCATION MAP - SEGMENT 3

I-10 HOV WIDENING
EA 11834 (KP 50.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	FIGURE
203938001	9/2002	1

203938001-861.DWG



LEGEND

▨	PROPOSED BRIDGE WIDENING OR REPLACEMENT
——	PROPOSED RETAINING WALL
——	PROPOSED SOUNDWALL
571-205	APPROXIMATE LOCATION OF BORING

0 10 20 30 40

APPROXIMATE SCALE IN METERS

REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

BORING LOCATION MAP - LAYOUT L-1

I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-1 OF L-24

203939-B32.DWG

SOUNDWALL AND RETAINING WALL						
WALL TYPE	BEG STATION	END STATION	LENGTH (m)	AVE RET WALL HEIGHT (m)	SOUNDWALL HEIGHT (m)	SOUNDWALL No.
SOUND	601+40 (LT)	602+40 (LT)	101	--	4.3	NB-21
RET / SOUND	598+28 (RT)	602+80 (RT)	453	2.2	4.3	NB-20
RC RETAIN	604+65 (LT)	605+00 (LT)	36	1.7	--	--

LEGEND

- PROPOSED BRIDGE WIDENING OR REPLACEMENT
- PROPOSED RETAINING WALL
- PROPOSED SOUNDWALL
- 571-211 APPROXIMATE LOCATION OF BORING

MATCH LINE STA 601+80 – SEE SHEET L-1

MATCH LINE STA 605+40 – SEE SHEET L-3

"B3" 3+66.780

"B3" 3+26.461 EC

"B3" LINE

"B2" 3+29.755

"B5" 3+73.074 BC

"B5" 3+94.903 EC

"B5" LINE

"A" 602+42.000 21.490 LT

"B4" 2+42.090

"B3" 2+29.123 BC

"B4" 5+18.037 EC

"B5" 4+25.385 BC JOIN EXISTING

"B4" 4+31.822 PCC JOIN EXISTING

"B5" 4+86.456 EC

"B4" 3+42.020 BC

"B5" 3+92.391 PCC

"B4" LINE

ETW

"A" LINE

"B1" 1+84.000 7.200 RT

"B2" 11+84.000

"B2" 12+76.159 BC

"B2" 13+31.569 EC JOIN EXISTING

"B1" 3+91.831 BC

"B1" 4+34.772 EC JOIN EXISTING

"B1" LINE

"B2" LINE

"B2" 13+90.342

"B6" 4+96.460 PCC

"B6" 4+45.990 PCC JOIN EXISTING

"B6" 3+03.761 BC

"B6" 3+89.984

EAST GARVEY AVENUE

ROUTE 10

CITRUS STREET

571-106 571-107 571-108 571-109 571-110 571-111 571-112 571-113 571-206 571-207 571-208 571-209 571-210 571-211

CURVE AND TANGENT DATA									
NO.	R	Δ / BEARING	L	T	NO.	R	Δ / BEARING	L	T
1	--	S89°23'47"E	2329.144	--	13	26.000	86°53'36"	39.431	24.627
2	--	S89°23'47"E	248.785	--	14	30.480	162°03'57"	86.215	--
3	60.000	50°44'46"	53.141	28.456	15	--	S84°32'08"E	43.318	--
4	--	S38°39'01"E	74.532	--	16	34.747	35°59'42"	21.829	11.288
5	--	S89°23'47"E	92.159	--	17	--	S48°32'28"E	30.462	--
6	45.000	70°33'00"	55.410	31.832	18	100.000	35°56'36"	62.791	32.469
7	--	S18°50'47"E	58.773	--	19	--	S84°31'02"E	148.844	--
8	--	N89°27'27"E	187.123	--	20	--	N38°39'01"W	13.777	--
9	100.000	55°46'15"	97.338	52.915	21	45.720	52°55'12"	42.228	22.755
10	--	N33°41'13"E	42.319	--	22	40.000	72°17'36"	50.470	29.218
11	--	N89°27'28"E	100.020	--	23	1000.000	2°53'40"	50.520	25.265
12	1000.000	2°53'10"	50.371	25.191					

N

0 10 20 30 40

APPROXIMATE SCALE IN METERS

REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

BORING LOCATION MAP - LAYOUT L-2

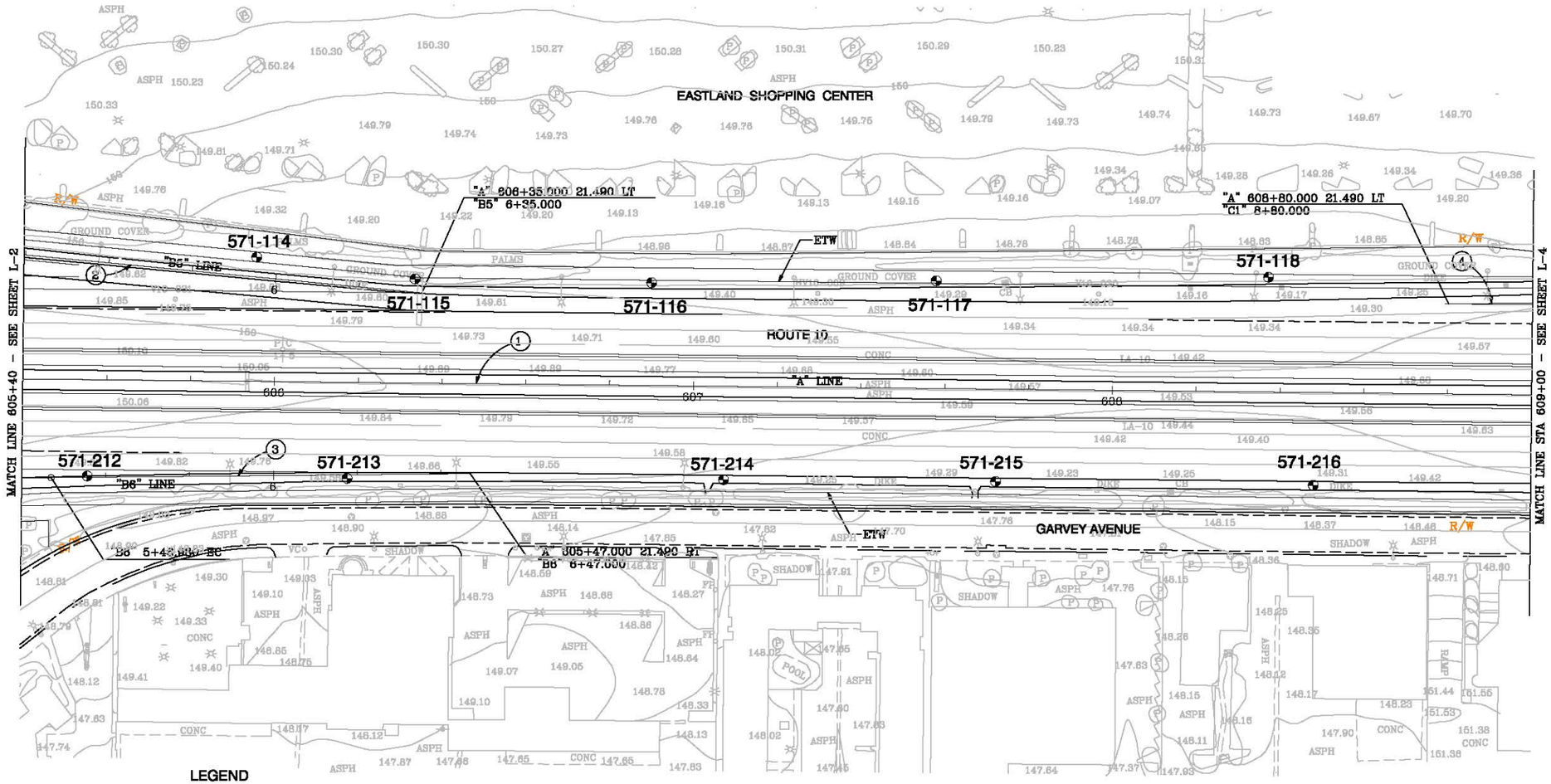
I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-2 OF L-24

203939-B33.DWG

SOUNDWALL AND RETAINING WALL						
WALL TYPE	BEG STATION	END STATION	LENGTH (m)	AVE RET WALL HEIGHT (m)	SOUNDWALL HEIGHT (m)	SOUNDWALL No.
RC RETAIN	605+65 (RT)	606+60 (RT)	95	1.3	--	--
RET / SOUND	606+60 (RT)	608+40 (RT)	180	1.0	4.3	NB-22
RC RETAIN	608+40 (RT)	609+65 (RT)	145	1.3	--	--

CURVE AND TANGENT DATA				
NO.	R	Δ / BEARING	L	T
1	--	S89°23'47"E	2329.144	--
2	--	S84°31'02"E	146.844	--
3	--	N89°27'28"E	100.020	--
4	--	N89°27'28"E	100.020	--



LEGEND

- PROPOSED BRIDGE WIDENING OR REPLACEMENT
- PROPOSED RETAINING WALL
- PROPOSED SOUNDWALL
- 571-216 APPROXIMATE LOCATION OF BORING

0 10 20 30 40
APPROXIMATE SCALE IN METERS

REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

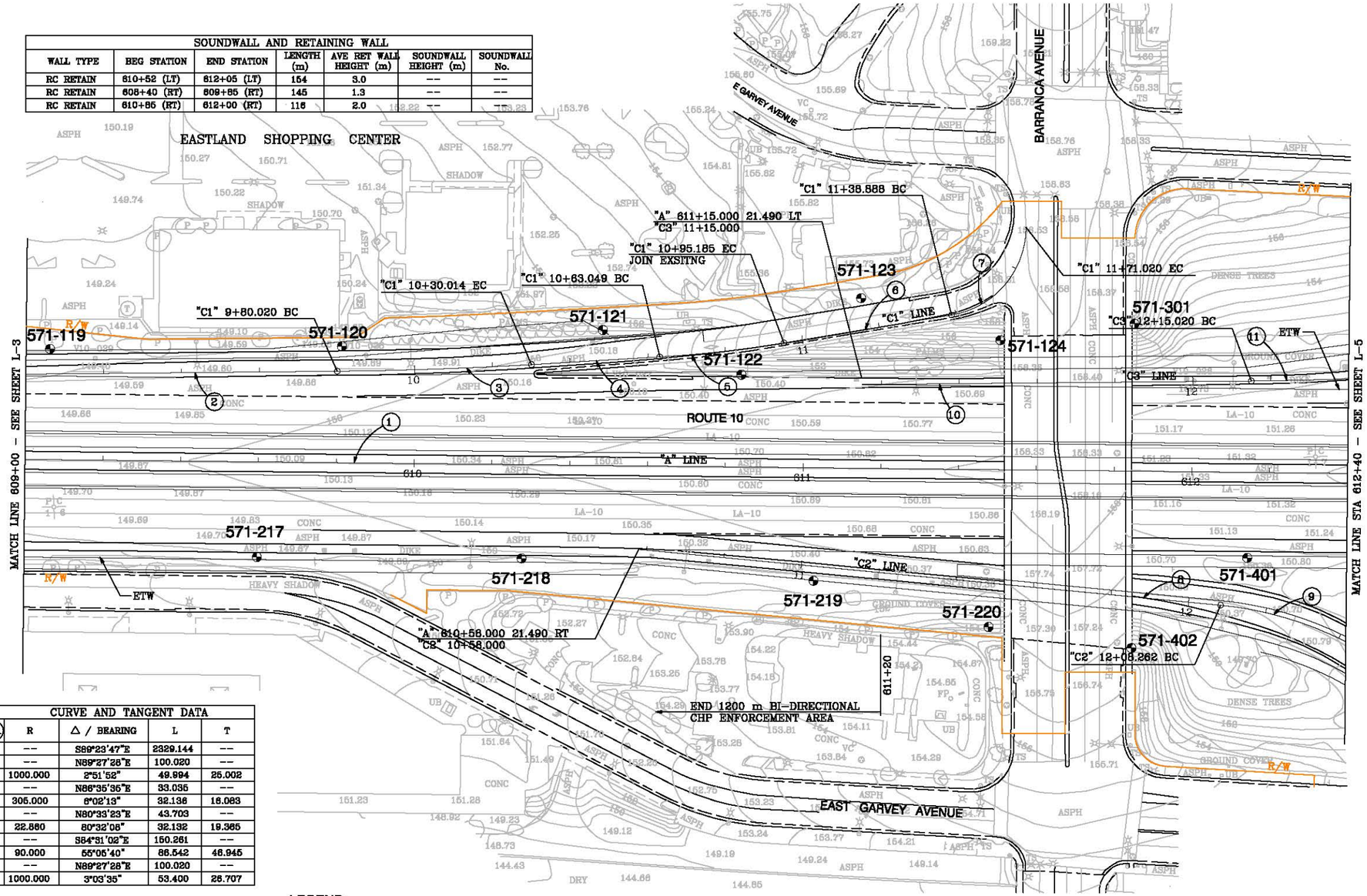
BORING LOCATION MAP - LAYOUT L-3

I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-3 OF L-24

203939-B34.DWG

SOUNDWALL AND RETAINING WALL						
WALL TYPE	BEG STATION	END STATION	LENGTH (m)	AVE RET WALL HEIGHT (m)	SOUNDWALL HEIGHT (m)	SOUNDWALL No.
RC RETAIN	610+52 (LT)	612+05 (LT)	154	3.0	--	--
RC RETAIN	608+40 (RT)	609+85 (RT)	145	1.3	--	--
RC RETAIN	610+86 (RT)	612+00 (RT)	116	2.0	--	--



CURVE AND TANGENT DATA				
NO.	R	Δ / BEARING	L	T
1	--	S89°23'47"E	2329.144	--
2	--	N89°27'28"E	100.020	--
3	1000.000	2°51'52"	49.994	25.002
4	--	N86°35'36"E	33.035	--
5	305.000	6°02'13"	32.136	16.083
6	--	N80°33'23"E	43.703	--
7	22.560	80°32'06"	32.132	19.365
8	--	S84°31'02"E	150.261	--
9	90.000	55°05'40"	86.542	46.945
10	--	N89°27'28"E	100.020	--
11	1000.000	3°03'35"	53.400	26.707

LEGEND

- PROPOSED BRIDGE WIDENING OR REPLACEMENT
- PROPOSED RETAINING WALL
- PROPOSED SOUNDWALL
- 571-402 APPROXIMATE LOCATION OF BORING

0 10 20 30 40
APPROXIMATE SCALE IN METERS

REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

BORING LOCATION MAP - LAYOUT L-4

I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-4 OF L-24

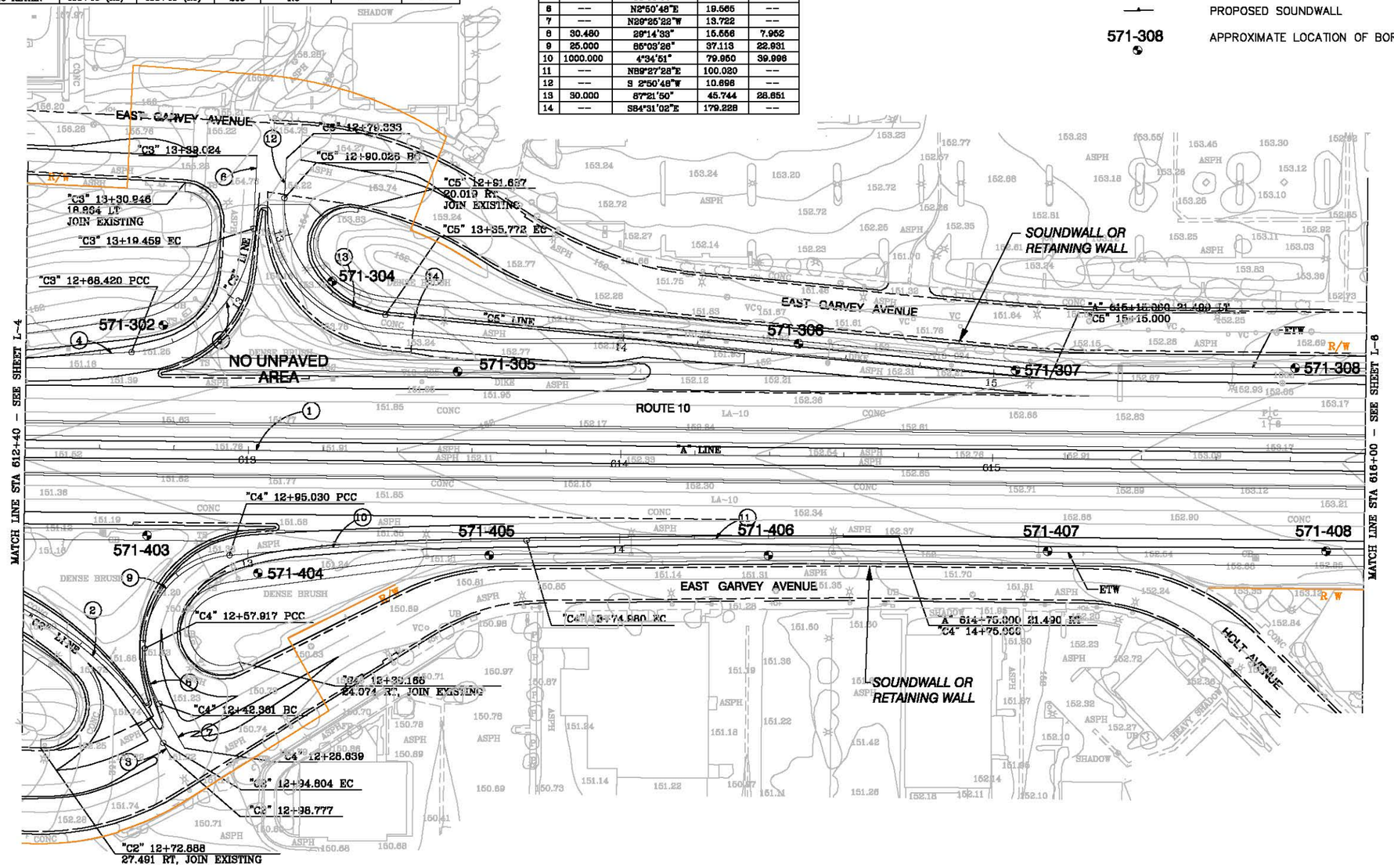
203939--B35.DWG

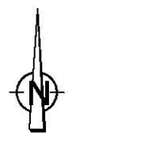
SOUNDWALL AND RETAINING WALL						
WALL TYPE	BEG STATION	END STATION	LENGTH (m)	AVE RET WALL HEIGHT (m)	SOUNDWALL HEIGHT (m)	SOUNDWALL No.
RC RETAIN	613+80 (LT)	615+12 (LT)	133	0.9	--	--
RET / SOUND	615+12 (LT)	617+70 (LT)	258	0.6	4.3	NB-24
SOUND	612+31 (RT)	613+22 (RT)	101	--	--	NB-23
RC RETAIN	613+40 (RT)	615+45 (RT)	205	1.0	--	--

CURVE AND TANGENT DATA				
NO.	R	Δ / BEARING	L	T
1	--	S89°23'47"E	2329.144	--
2	90.000	55°05'40"	86.542	46.945
3	--	S29°26'22"E	3.973	--
4	1000.000	3°03'35"	53.400	26.707
5	35.000	63°33'05"	51.039	31.267
6	--	N2°50'48"E	19.565	--
7	--	N29°26'22"W	13.722	--
8	30.480	29°14'33"	15.556	7.952
9	25.000	85°03'26"	37.113	22.931
10	1000.000	4°34'51"	79.950	39.998
11	--	N89°27'28"E	100.030	--
12	--	S 2°50'48"W	10.698	--
13	30.000	87°21'50"	45.744	28.651
14	--	S84°31'02"E	179.228	--

LEGEND

- PROPOSED BRIDGE WIDENING OR REPLACEMENT
- PROPOSED RETAINING WALL
- PROPOSED SOUNDWALL
- 571-308 APPROXIMATE LOCATION OF BORING





REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

BORING LOCATION MAP - LAYOUT L-5

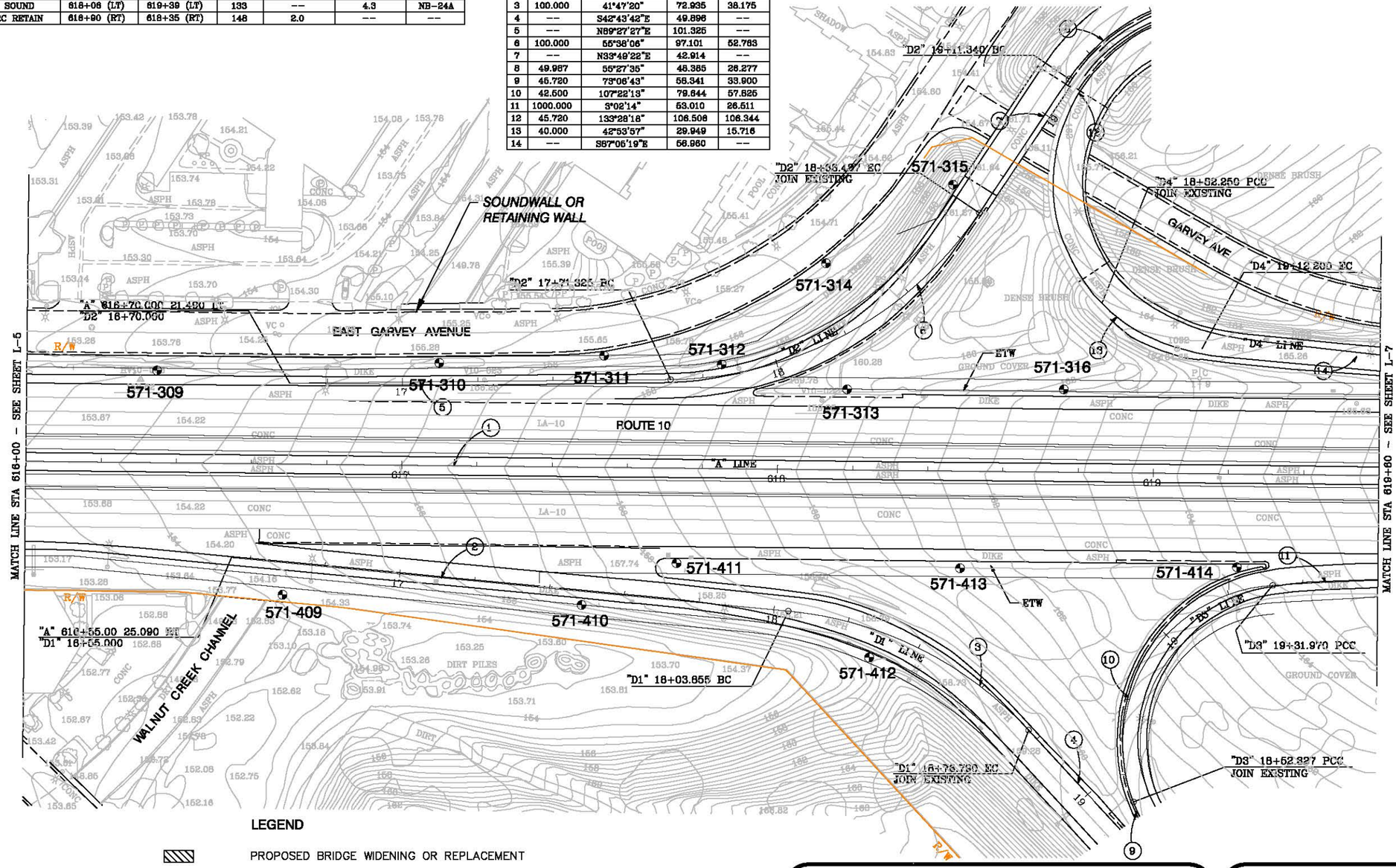
I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-5 OF L-24

203939-B36.DWG

SOUNDWALL AND RETAINING WALL						
WALL TYPE	BEG STATION	END STATION	LENGTH (m)	AVE RET WALL HEIGHT (m)	SOUNDWALL HEIGHT (m)	SOUNDWALL No.
RET / SOUND	615+12 (LT)	617+70 (LT)	258	0.6	4.3	NB-24
SOUND	617+70 (LT)	618+10 (LT)	43	--	4.3	NB-24
SOUND	618+06 (LT)	619+39 (LT)	133	--	4.3	NB-24A
RC RETAIN	618+90 (RT)	618+35 (RT)	148	2.0	--	--

CURVE AND TANGENT DATA				
NO.	R	Δ / BEARING	L	T
1	--	S69°23'47"E	2329.144	--
2	--	S84°31'02"E	148.854	--
3	100.000	41°47'20"	72.935	38.175
4	--	S42°43'42"E	49.896	--
5	--	N89°27'27"E	101.325	--
6	100.000	55°36'06"	97.101	52.783
7	--	N33°49'22"E	42.914	--
8	49.987	55°27'35"	48.385	26.277
9	45.720	73°06'43"	58.341	33.900
10	42.500	107°22'13"	79.644	57.825
11	1000.000	3°02'14"	53.010	26.511
12	45.720	133°28'16"	106.508	106.344
13	40.000	42°53'57"	29.949	15.716
14	--	S87°06'19"E	56.960	--



LEGEND

- PROPOSED BRIDGE WIDENING OR REPLACEMENT
- PROPOSED RETAINING WALL
- PROPOSED SOUNDWALL
- 571-316 APPROXIMATE LOCATION OF BORING

0 10 20 30 40
APPROXIMATE SCALE IN METERS

REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

BORING LOCATION MAP - LAYOUT L-6

I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-6 OF L-24

203939-B37.DWG

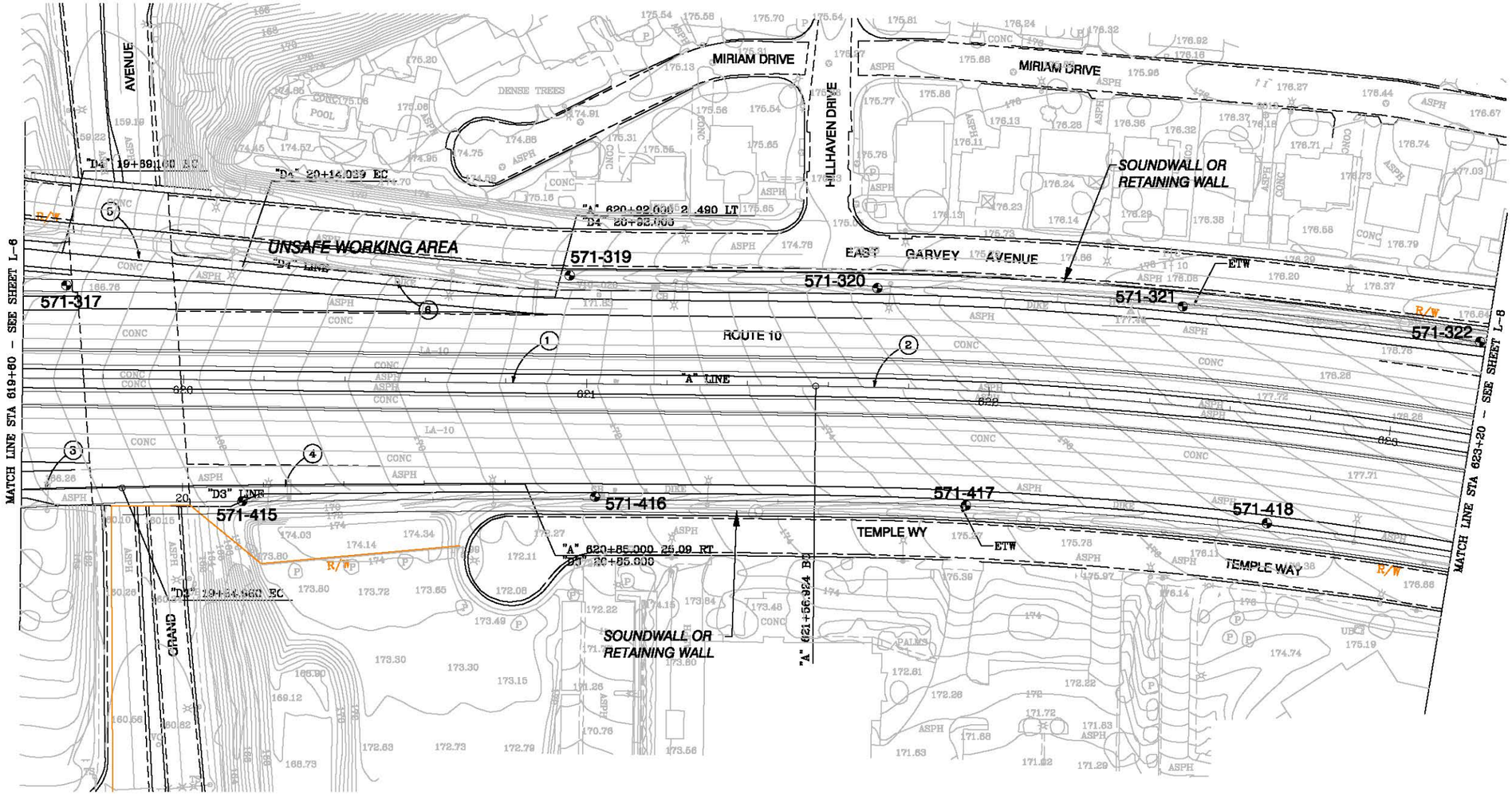
SOUNDWALL AND RETAINING WALL						
WALL TYPE	BEG STATION	END STATION	LENGTH (m)	AVE RET WALL HEIGHT (m)	SOUNDWALL HEIGHT (m)	SOUNDWALL No.
RET / SOUND*	620+00 (LT)	625+20 (LT)	530	1.6	4.3	NB-25
RC RETAIN	620+20 (RT)	623+70 (RT)	344	1.7	--	--

* NOTE: NOT PART OF THIS PROJECT.

CURVE AND TANGENT DATA				
NO.	R	Δ / BEARING	L	T
1	--	S89°23'47"E	2329.144	--
2	1066.802	31°46'41"	591.685	303.667
3	1000.000	3°02'14"	53.010	26.511
4	--	N89°27'28"E	100.020	--
5	1000.000	2°34'17"	44.879	22.443
6	--	S84°31'02"E	77.961	--

LEGEND

- PROPOSED BRIDGE WIDENING OR REPLACEMENT
- PROPOSED RETAINING WALL
- PROPOSED SOUNDWALL
- 571-418 APPROXIMATE LOCATION OF BORING



REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

0 10 20 30 40
APPROXIMATE SCALE IN METERS

Ninyo & Moore

BORING LOCATION MAP - LAYOUT L-7

I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

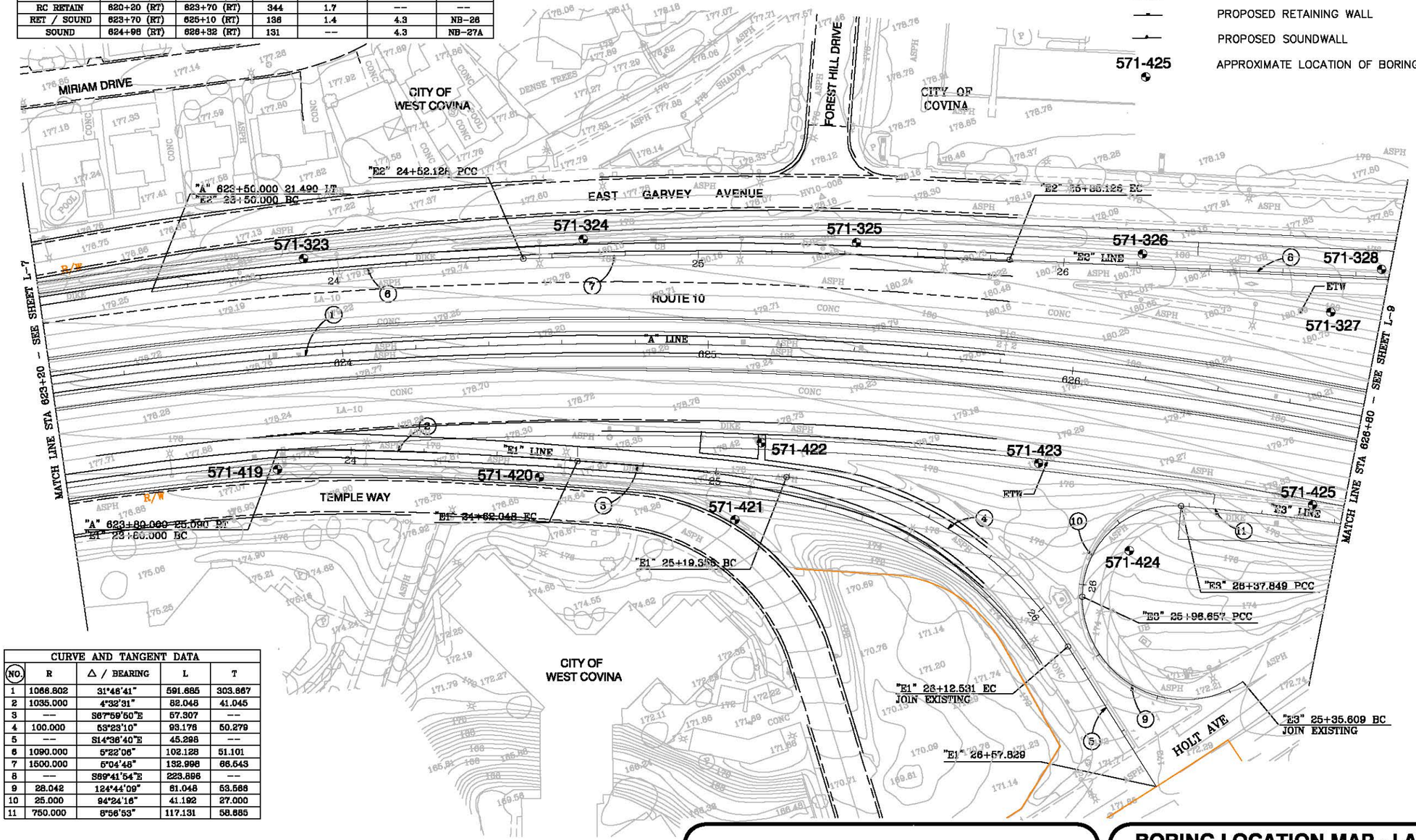
PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-7 OF L-24

203939-B38.DWG

SOUNDWALL AND RETAINING WALL						
WALL TYPE	BEG STATION	END STATION	LENGTH (m)	AVE RET WALL HEIGHT (m)	SOUNDWALL HEIGHT (m)	SOUNDWALL No.
RET / SOUND	620+00 (LT)	626+20 (LT)	530	1.6	4.3	NB-25
RC RETAIN	625+20 (LT)	627+05 (LT)	194	1.9	--	--
RC RETAIN	620+20 (RT)	623+70 (RT)	344	1.7	--	--
RET / SOUND	623+70 (RT)	625+10 (RT)	136	1.4	4.3	NB-26
SOUND	624+98 (RT)	626+32 (RT)	131	--	4.3	NB-27A

LEGEND

- PROPOSED BRIDGE WIDENING OR REPLACEMENT
- PROPOSED RETAINING WALL
- PROPOSED SOUNDWALL
- 571-425 APPROXIMATE LOCATION OF BORING



CURVE AND TANGENT DATA				
NO.	R	Δ / BEARING	L	T
1	1066.602	31°46'41"	591.665	303.667
2	1035.000	4°32'31"	82.045	41.045
3	---	S67°59'50"E	57.307	--
4	100.000	53°23'10"	93.176	50.279
5	--	S14°36'40"E	45.298	--
6	1090.000	5°22'06"	102.128	51.101
7	1500.000	5°04'48"	132.998	66.543
8	---	S89°41'54"E	223.596	---
9	28.042	124°44'09"	61.048	53.566
10	25.000	94°24'16"	41.192	27.000
11	750.000	8°56'53"	117.131	58.685

0 10 20 30 40
APPROXIMATE SCALE IN METERS

REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

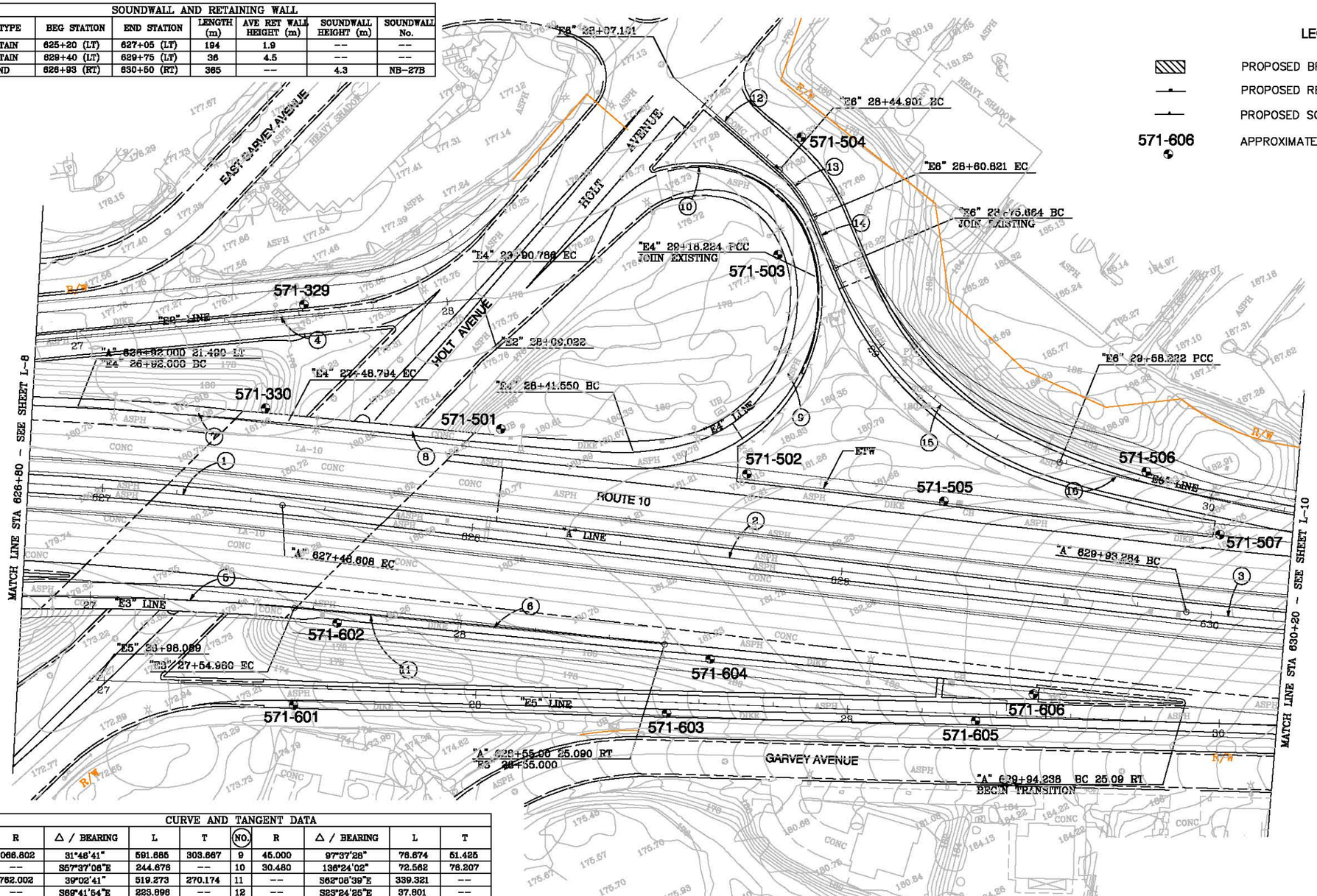
BORING LOCATION MAP - LAYOUT L-8

I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-8 OF L-24

203939-B39.DWG

SOUNDWALL AND RETAINING WALL						
WALL TYPE	BEG STATION	END STATION	LENGTH (m)	AVE RET WALL HEIGHT (m)	SOUNDWALL HEIGHT (m)	SOUNDWALL No.
RC RETAIN	625+20 (LT)	627+05 (LT)	194	1.9	--	--
RC RETAIN	629+40 (LT)	629+75 (LT)	36	4.5	--	--
SOUND	626+93 (RT)	630+50 (RT)	365	--	4.3	NB-27B



CURVE AND TANGENT DATA									
NO.	R	Δ / BEARING	L	T	NO.	R	Δ / BEARING	L	T
1	1066.802	31°48'41"	591.685	303.667	9	45.000	97°37'28"	76.674	51.425
2	--	S57°37'08"E	244.676	--	10	30.480	136°24'02"	72.562	76.207
3	762.002	39°02'41"	519.273	270.174	11	--	S62°08'39"E	339.321	--
4	--	S69°41'54"E	223.896	--	12	--	S23°24'25"E	37.601	--
5	750.000	8°58'53"	117.131	58.665	13	34.747	26°14'60"	15.919	8.102
6	--	S58°45'51"E	100.020	--	14	--	S 2°50'35"W	14.843	--
7	1500.000	2°10'10"	56.794	28.400	15	90.000	52°33'29"	82.558	44.440
8	--	S59°22'56"E	92.756	--	16	750.000	11°49'27"	154.776	77.665

LEGEND

- PROPOSED BRIDGE WIDENING OR REPLACEMENT
- PROPOSED RETAINING WALL
- PROPOSED SOUNDWALL
- 571-606 APPROXIMATE LOCATION OF BORING

0 10 20 30 40
APPROXIMATE SCALE IN METERS

REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

BORING LOCATION MAP - LAYOUT L-9

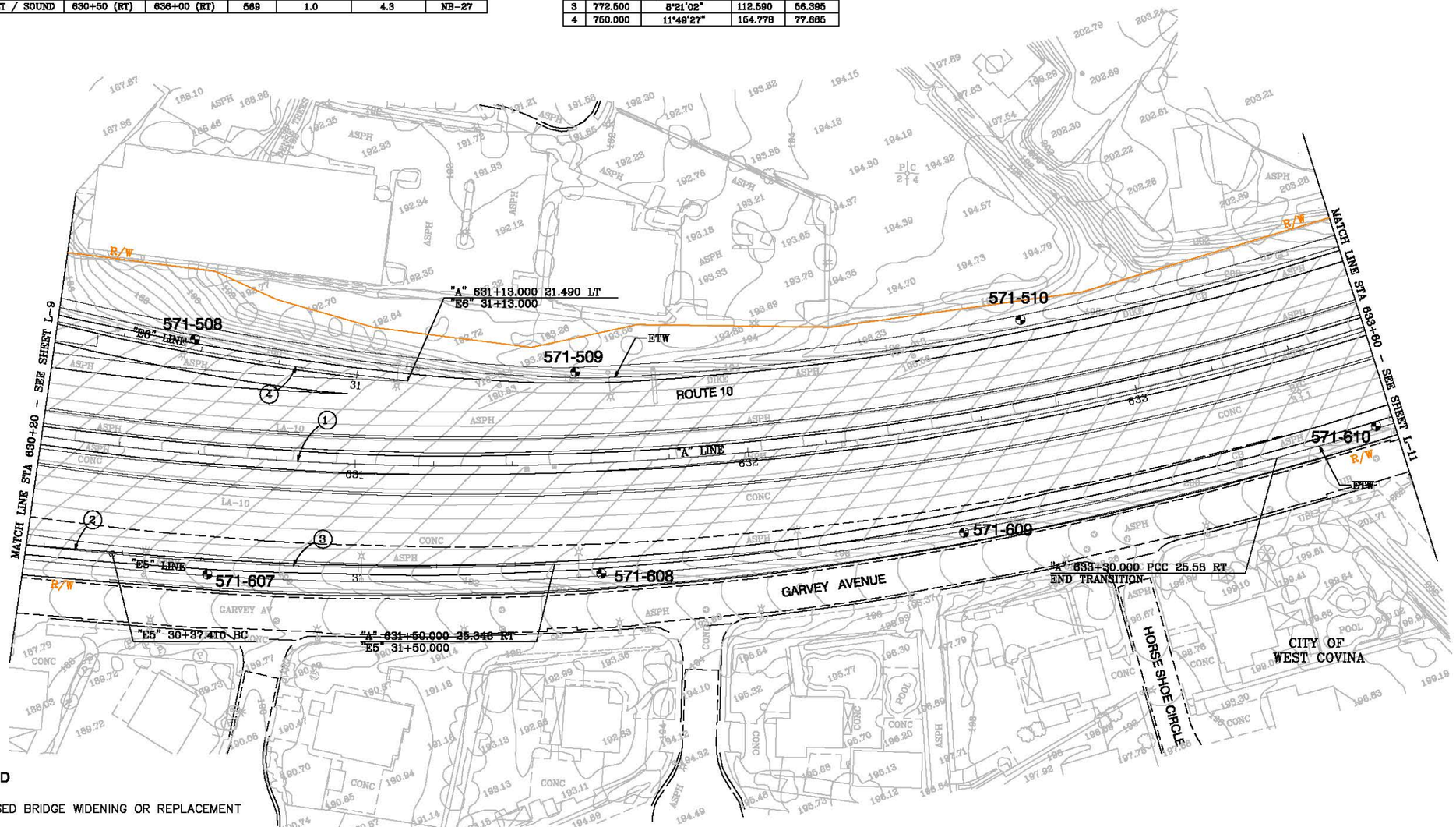
I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-9 OF L-24

203939-B40.DWG

SOUNDWALL AND RETAINING WALL						
WALL TYPE	BEG STATION	END STATION	LENGTH (m)	AVE RET WALL HEIGHT (m)	SOUNDWALL HEIGHT (m)	SOUNDWALL No.
RET / SOUND	632+60 (LT)	636+90 (LT)	624	1.2	4.9	NB-26
SOUND	626+93 (RT)	630+50 (RT)	385	--	4.3	NB-27B
RET / SOUND	630+50 (RT)	636+00 (RT)	569	1.0	4.3	NB-27

CURVE AND TANGENT DATA				
NO.	R	△ / BEARING	L	T
1	762.002	39°02'41"	519.273	270.174
2	--	S62°06'39"E	339.321	--
3	772.500	8°21'02"	112.590	56.395
4	750.000	11°49'27"	154.778	77.665



LEGEND

- PROPOSED BRIDGE WIDENING OR REPLACEMENT
- PROPOSED RETAINING WALL
- PROPOSED SOUNDWALL
- 571-610 APPROXIMATE LOCATION OF BORING

0 10 20 30 40
APPROXIMATE SCALE IN METERS

REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

BORING LOCATION MAP - LAYOUT L-10

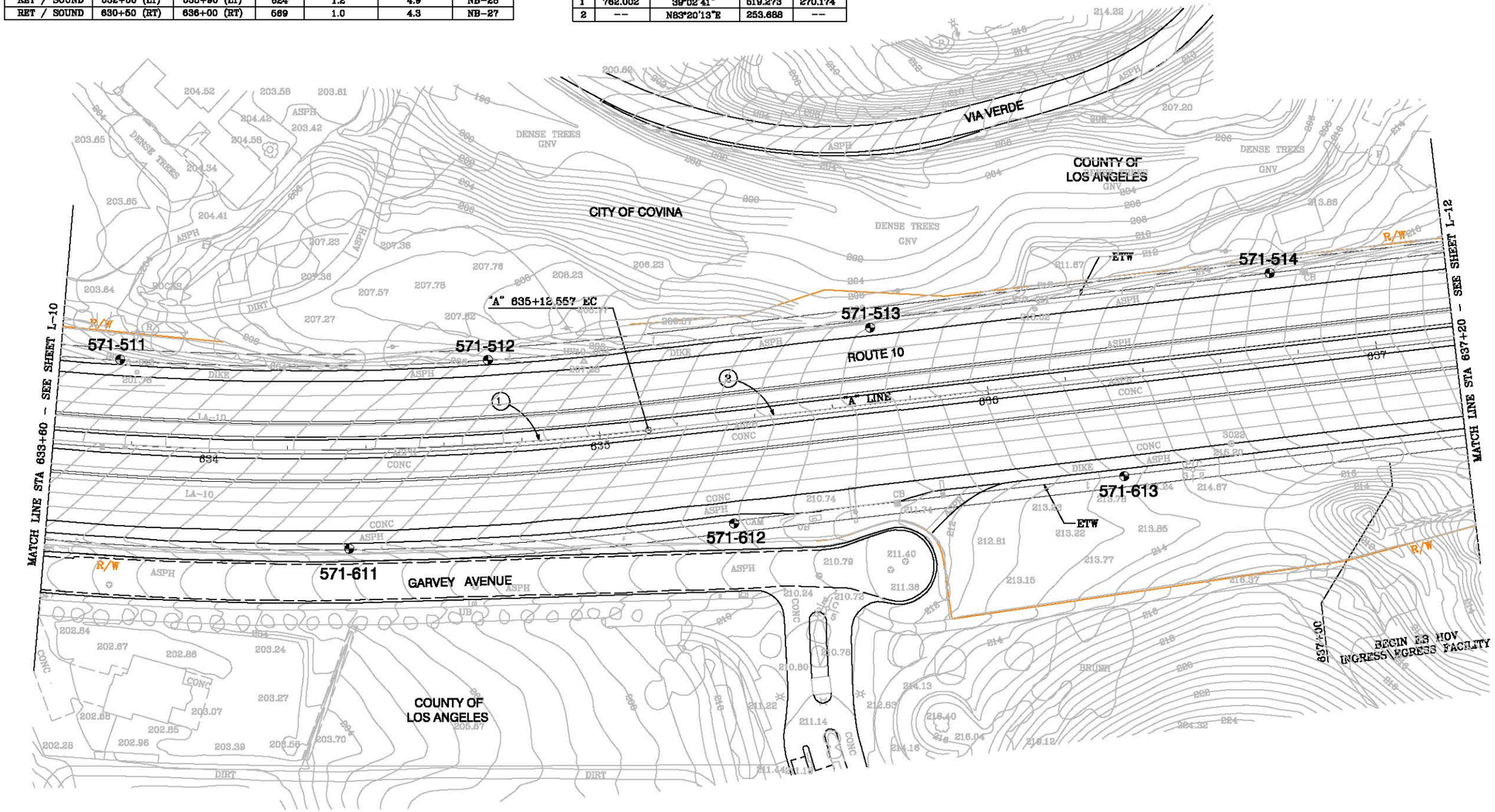
I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-10 OF L-24

203939-B41.DWG

SOUNDWALL AND RETAINING WALL						
WALL TYPE	BEG STATION	END STATION	LENGTH (m)	AVE RET WALL HEIGHT (m)	SOUNDWALL HEIGHT (m)	SOUNDWALL No.
RET / SOUND	632+80 (LT)	638+90 (LT)	624	1.2	4.9	NB-26
RET / SOUND	630+50 (RT)	636+00 (RT)	569	1.0	4.3	NB-27

CURVE AND TANGENT DATA				
NO.	R	Δ / BEARING	L	T
1	762.002	39°02'41"	519.273	270.174
2	--	N83°20'13"E	253.888	--



LEGEND

- PROPOSED BRIDGE WIDENING OR REPLACEMENT
- PROPOSED RETAINING WALL
- PROPOSED SOUNDWALL
- 571-613 — APPROXIMATE LOCATION OF BORING

0 10 20 30 40
APPROXIMATE SCALE IN METERS

REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.
NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

BORING LOCATION MAP - LAYOUT L-11

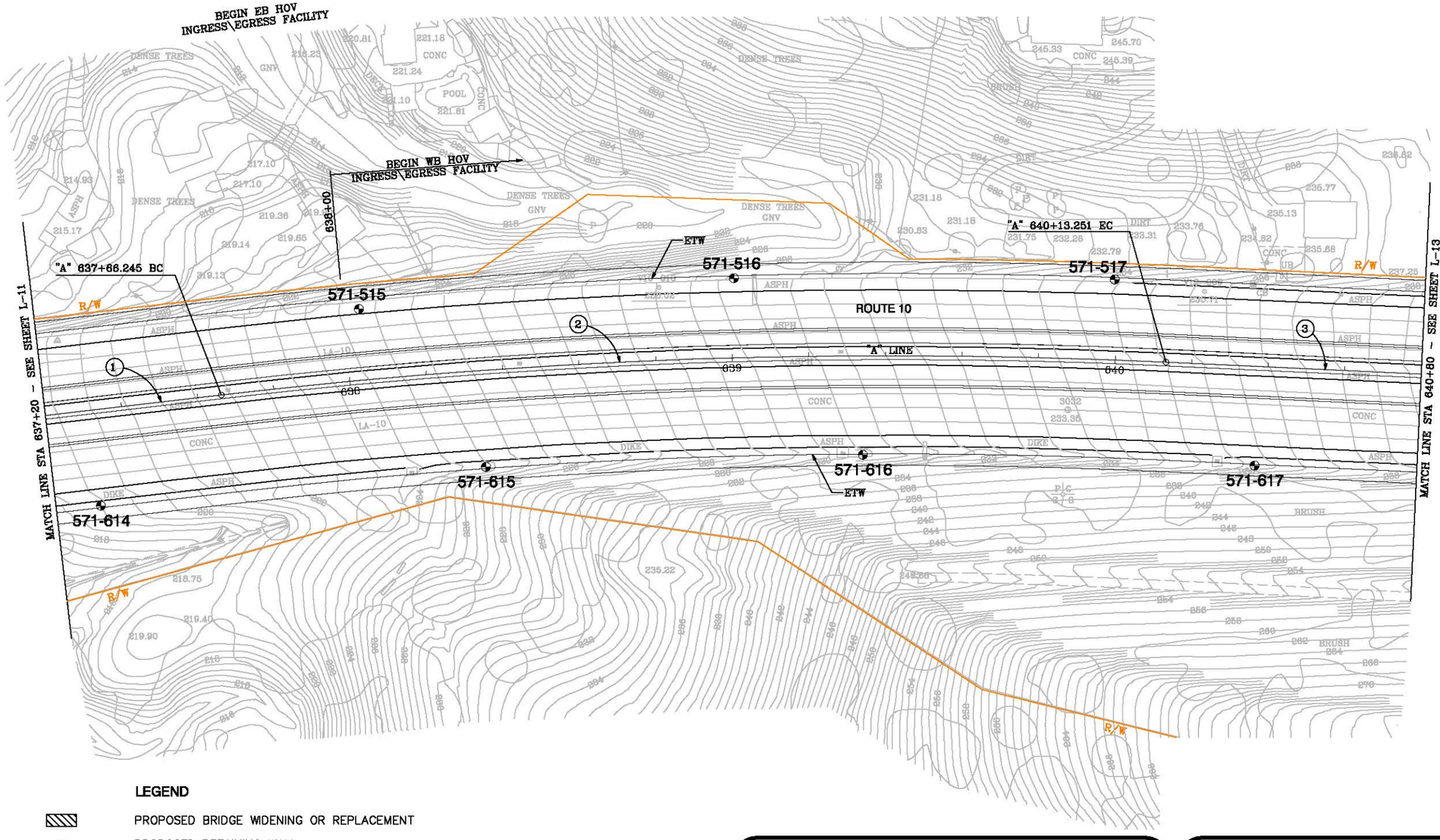
I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-11 OF L-24

203939-B42.DWG

SOUNDWALL AND RETAINING WALL						
WALL TYPE	BEG STATION	END STATION	LENGTH (m)	AVE RET WALL HEIGHT (m)	SOUNDWALL HEIGHT (m)	SOUNDWALL No.
RET / SOUND	632+60 (LT)	638+90 (LT)	624	1.2	4.9	NB-26
RC RETAIN	638+90 (LT)	644+25 (LT)	536	1.5	--	--
RC RETAIN	638+10 (RT)	650+20 (RT)	1204	2.1	--	--

CURVE AND TANGENT DATA				
NO.	R	Δ / BEARING	L	T
1	--	N83°20'13"E	253.888	--
2	1513.945	9°20'53"	247.007	123.778
3	--	S87°18'54"E	375.756	--



LEGEND

- PROPOSED BRIDGE WIDENING OR REPLACEMENT
- PROPOSED RETAINING WALL
- PROPOSED SOUNDWALL
- 571-617 APPROXIMATE LOCATION OF BORING

REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

0 10 20 30 40

APPROXIMATE SCALE IN METERS

Ninyo & Moore

BORING LOCATION MAP - LAYOUT L-12

I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-12 OF L-24

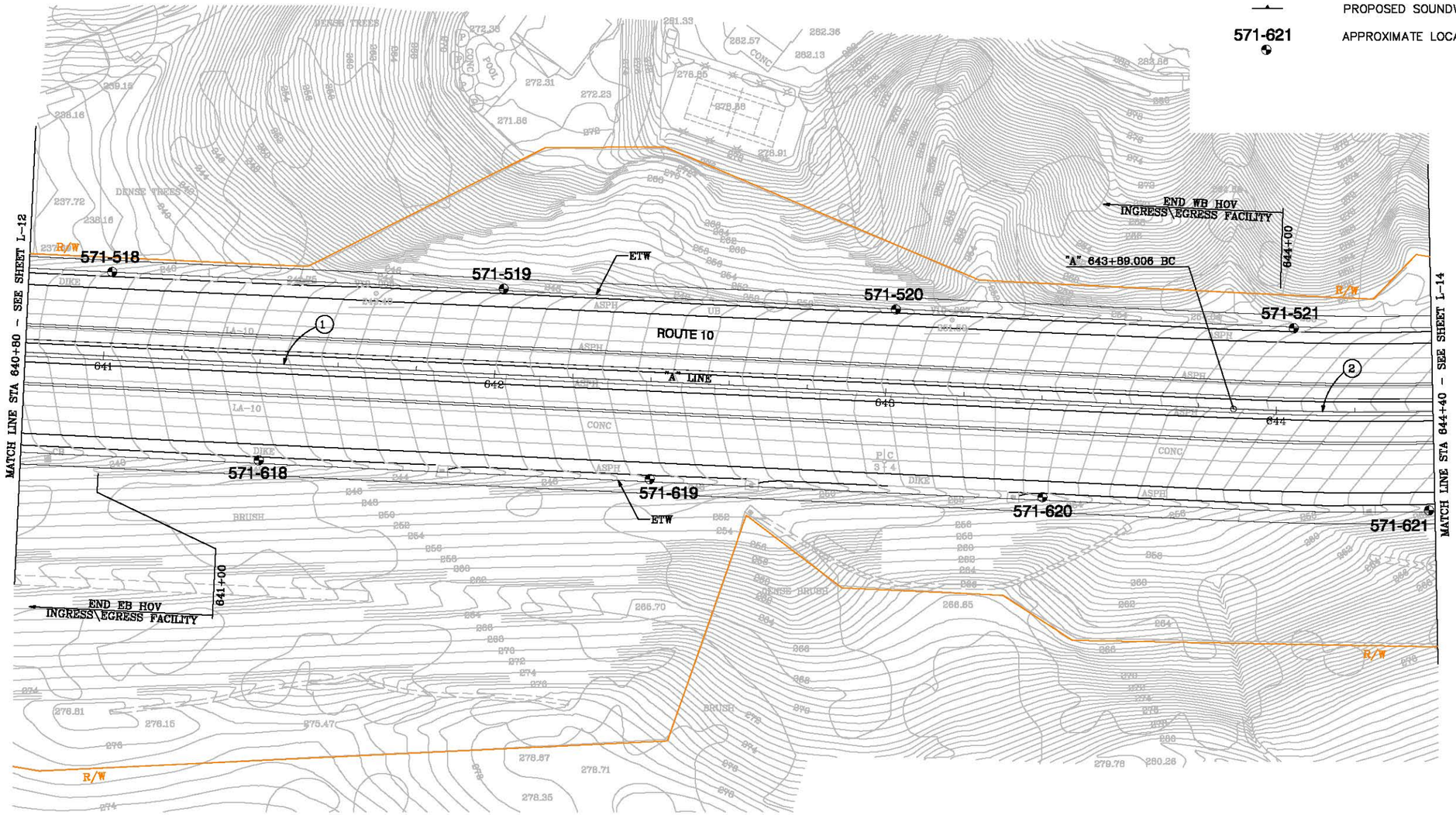
203939--B43.DWG

SOUNDWALL AND RETAINING WALL						
WALL TYPE	BEG STATION	END STATION	LENGTH (m)	AVE RET WALL HEIGHT (m)	SOUNDWALL HEIGHT (m)	SOUNDWALL No.
RC RETAIN	638+90 (LT)	644+25 (LT)	636	1.5	--	--
RC RETAIN	638+10 (RT)	650+20 (RT)	1204	2.1	--	--

CURVE AND TANGENT DATA				
NO.	R	Δ / BEARING	L	T
1	--	S87°18'54"E	375.755	--
2	762.002	13°43'37"	182.561	91.719

LEGEND

- PROPOSED BRIDGE WIDENING OR REPLACEMENT
- PROPOSED RETAINING WALL
- PROPOSED SOUNDWALL
- 571-621 APPROXIMATE LOCATION OF BORING



REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

0 10 20 30 40

APPROXIMATE SCALE IN METERS

Ninyo & Moore

BORING LOCATION MAP - LAYOUT L-13

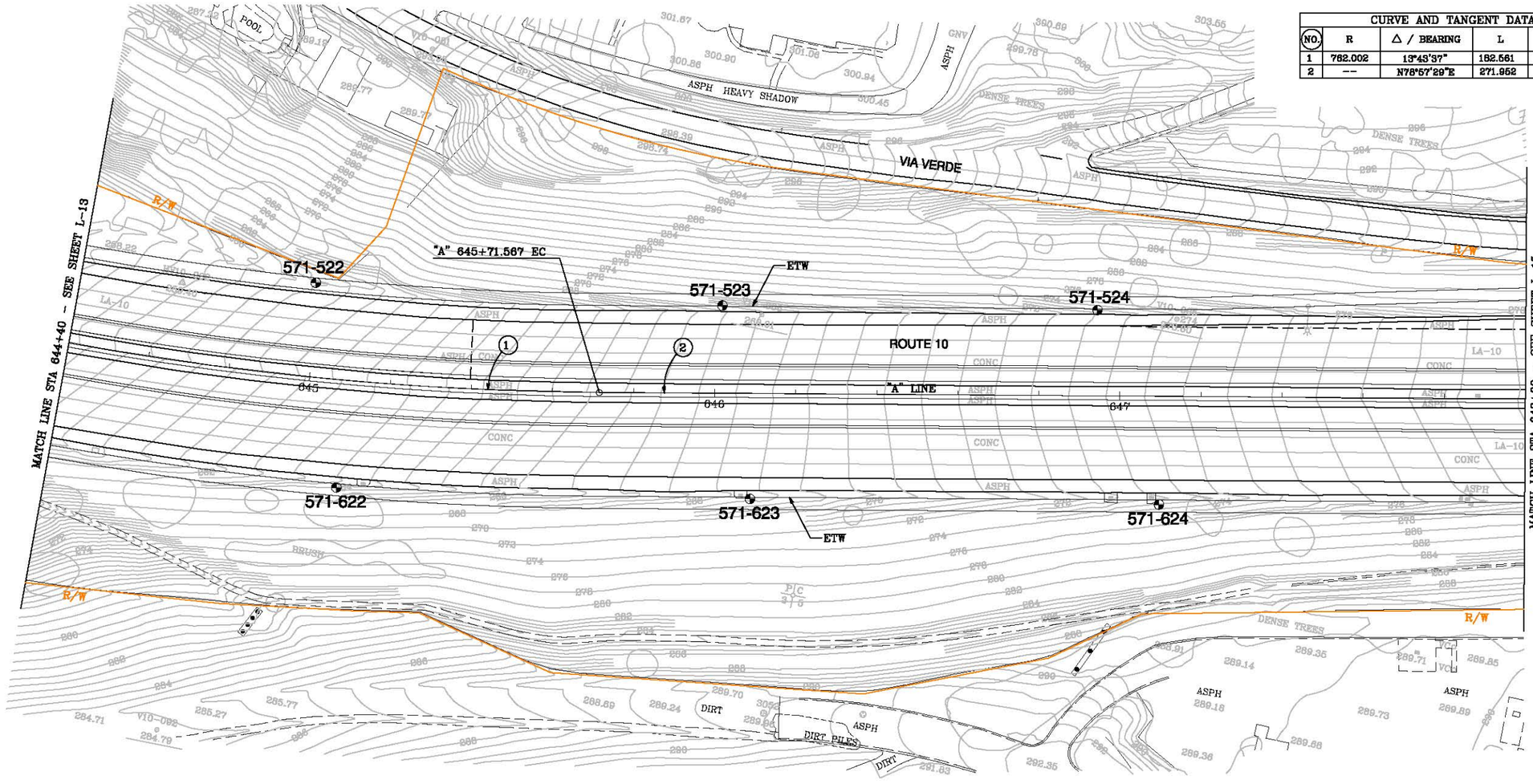
I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-13 OF L-24

203939-B44.DWG

SOUNDWALL AND RETAINING WALL						
WALL TYPE	BEG STATION	END STATION	LENGTH (m)	AVE RET WALL HEIGHT (m)	SOUNDWALL HEIGHT (m)	SOUNDWALL No.
SOUND	645+31 (LT)	648+63 (LT)	342	--	3.7	NB-29
RC RETAIN	645+05 (LT)	648+63 (LT)	357	3.4	--	--
RC RETAIN	638+10 (RT)	650+20 (RT)	1204	2.1	--	--

CURVE AND TANGENT DATA				
NO.	R	Δ / BEARING	L	T
1	762.002	13°43'37"	182.561	91.719
2	--	N78°57'29"E	271.952	--



LEGEND

- PROPOSED BRIDGE WIDENING OR REPLACEMENT
- PROPOSED RETAINING WALL
- PROPOSED SOUNDWALL
- 571-624 APPROXIMATE LOCATION OF BORING

0 10 20 30 40
APPROXIMATE SCALE IN METERS

REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.
NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

BORING LOCATION MAP - LAYOUT L-14

I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-14 OF L-24

203939--B45.DWG

SOUNDWALL AND RETAINING WALL						
WALL TYPE	BEG STATION	END STATION	LENGTH (m)	AVE RET WALL HEIGHT (m)	SOUNDWALL HEIGHT (m)	SOUNDWALL No.
SOUND	645+31 (LT)	645+63 (LT)	342	---	3.7	NB-29
RC RETAIN	645+05 (LT)	648+63 (LT)	357	3.4	---	---
RET / SOUND	648+63 (LT)	650+52 (LT)	201	3.1	3.7	NB-29
SOUND	650+52 (LT)	651+05 (LT)	57	---	3.7	NB-29
RC RETAIN	638+10 (RT)	650+20 (RT)	1204	2.1	---	---

CURVE AND TANGENT DATA				
NO.	R	Δ / BEARING	L	T
1	---	N76°57'29"E	271.952	---
2	685.801	30°33'53"	365.844	187.387
3	750.000	15°37'14"	204.471	102.874
4	---	S77°25'03"E	30.120	---
5	---	N77°48'46"E	29.108	---
6	700.000	8°34'38"	104.794	52.495
7	---	N86°23'25"E	108.905	---
8	250.000	16°11'33"	70.653	35.584

LEGEND

- PROPOSED BRIDGE WIDENING OR REPLACEMENT
- PROPOSED RETAINING WALL
- PROPOSED SOUNDWALL
- 571-628 — APPROXIMATE LOCATION OF BORING

REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

0 10 20 30 40

APPROXIMATE SCALE IN METERS

Ninyo & Moore

BORING LOCATION MAP - LAYOUT L-15

I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-15 OF L-24

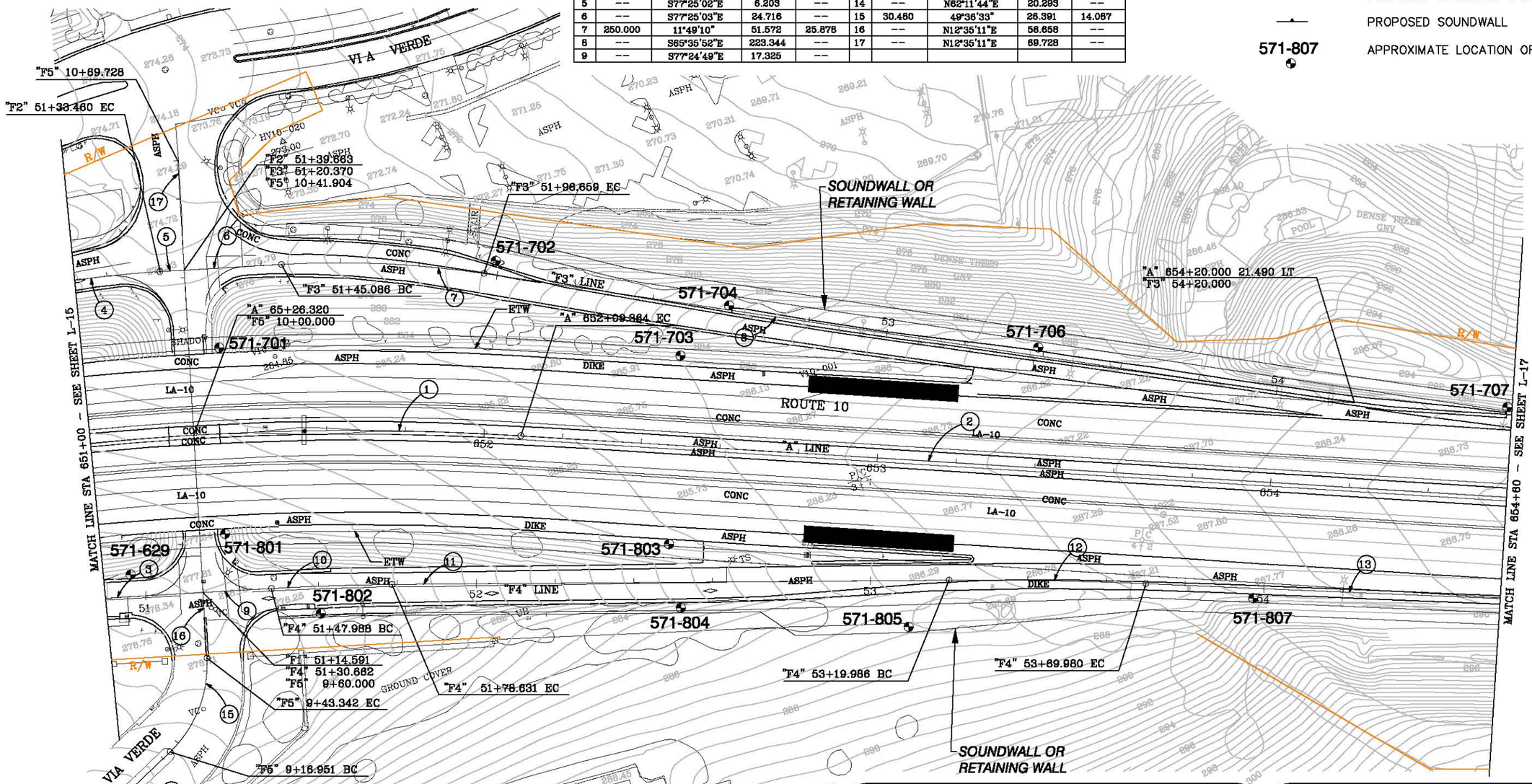
203939-B46.DWG

SOUNDWALL AND RETAINING WALL						
WALL TYPE	BEG STATION	END STATION	LENGTH (m)	AVE RET WALL HEIGHT (m)	SOUNDWALL HEIGHT (m)	SOUNDWALL No.
SOUND	650+52 (LT)	651+05 (LT)	57	--	3.7	NB-29
RC RETAIN	651+45 (LT)	653+20 (LT)	162	3.1	--	--
RET / SOUND	653+20 (LT)	654+82 (LT)	163	2.8	4.3	NB-30
RC RETAIN	652+72 (RT)	661+90 (RT)	915	2.5	--	--

CURVE AND TANGENT DATA									
NO.	R	Δ / BEARING	L	T	NO.	R	Δ / BEARING	L	T
1	685.801	30°33'53"	365.844	187.387	10	600.000	2°56'34"	30.843	15.425
2	--	S70°28'38"E	564.389	--	11	--	S74°29'15"E	141.355	--
3	--	S77°25'03"E	30.120	--	12	1000.000	2°51'52"	49.994	25.002
4	250.000	16°11'33"	70.653	35.564	13	--	S71°37'23"E	100.020	--
5	--	S77°25'02"E	6.203	--	14	--	N62°11'44"E	20.293	--
6	--	S77°25'03"E	24.716	--	15	30.480	49°36'33"	26.391	14.057
7	250.000	11°49'10"	51.572	25.878	16	--	N12°35'11"E	56.658	--
8	--	S65°35'52"E	223.344	--	17	--	N12°35'11"E	69.728	--
9	--	S77°24'49"E	17.325	--					

LEGEND

- PROPOSED BRIDGE WIDENING OR REPLACEMENT
- PROPOSED RETAINING WALL
- PROPOSED SOUNDWALL
- 571-807 APPROXIMATE LOCATION OF BORING



REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

0 10 20 30 40
APPROXIMATE SCALE IN METERS

Ninyo & Moore

BORING LOCATION MAP - LAYOUT L-16

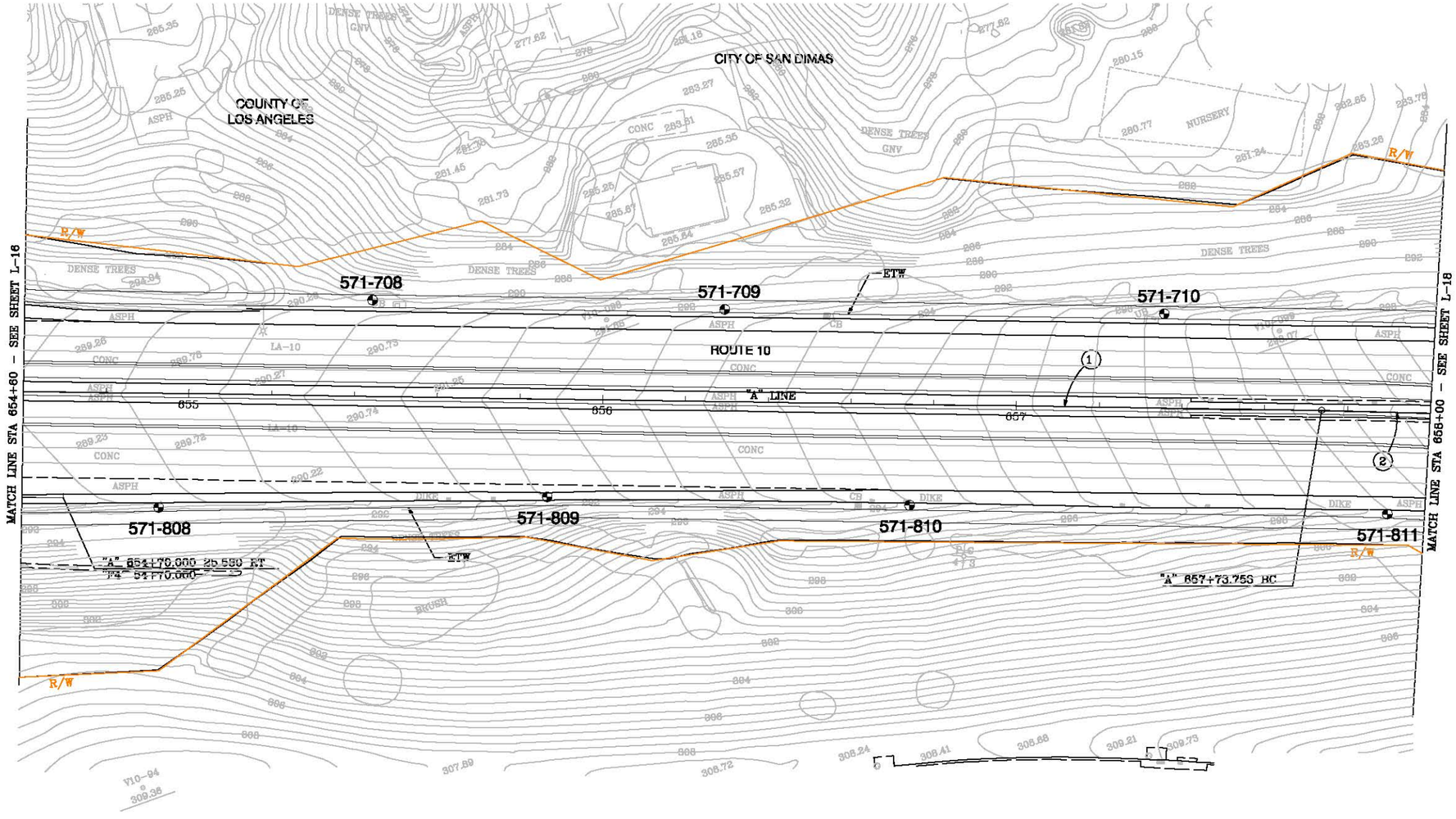
I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-16 OF L-24

203939-B47.DWG

SOUNDWALL AND RETAINING WALL						
WALL TYPE	BEG STATION	END STATION	LENGTH (m)	AVE RET WALL HEIGHT (m)	SOUNDWALL HEIGHT (m)	SOUNDWALL No.
RET / SOUND	653+20 (LT)	654+82 (LT)	163	2.8	4.3	NB-30
SOUND	654+82 (LT)	656+73 (LT)	191	--	4.3	NB-30
RET / SOUND	656+73 (LT)	657+65 (LT)	92	1.7	4.3	NB-30
RC RETAIN	657+65 (LT)	659+60 (LT)	203	2.0	--	--
RC RETAIN	652+72 (RT)	661+90 (RT)	915	2.5	--	--

CURVE AND TANGENT DATA				
NO.	R	Δ / BEARING	L	T
1	--	S70°28'35"E	564.389	--
2	609.601	16°52'20"	179.513	90.411



LEGEND

- PROPOSED BRIDGE WIDENING OR REPLACEMENT
- PROPOSED RETAINING WALL
- PROPOSED SOUNDWALL
- 571-811 APPROXIMATE LOCATION OF BORING

REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

0 10 20 30 40
APPROXIMATE SCALE IN METERS

Ninyo & Moore

BORING LOCATION MAP - LAYOUT L17

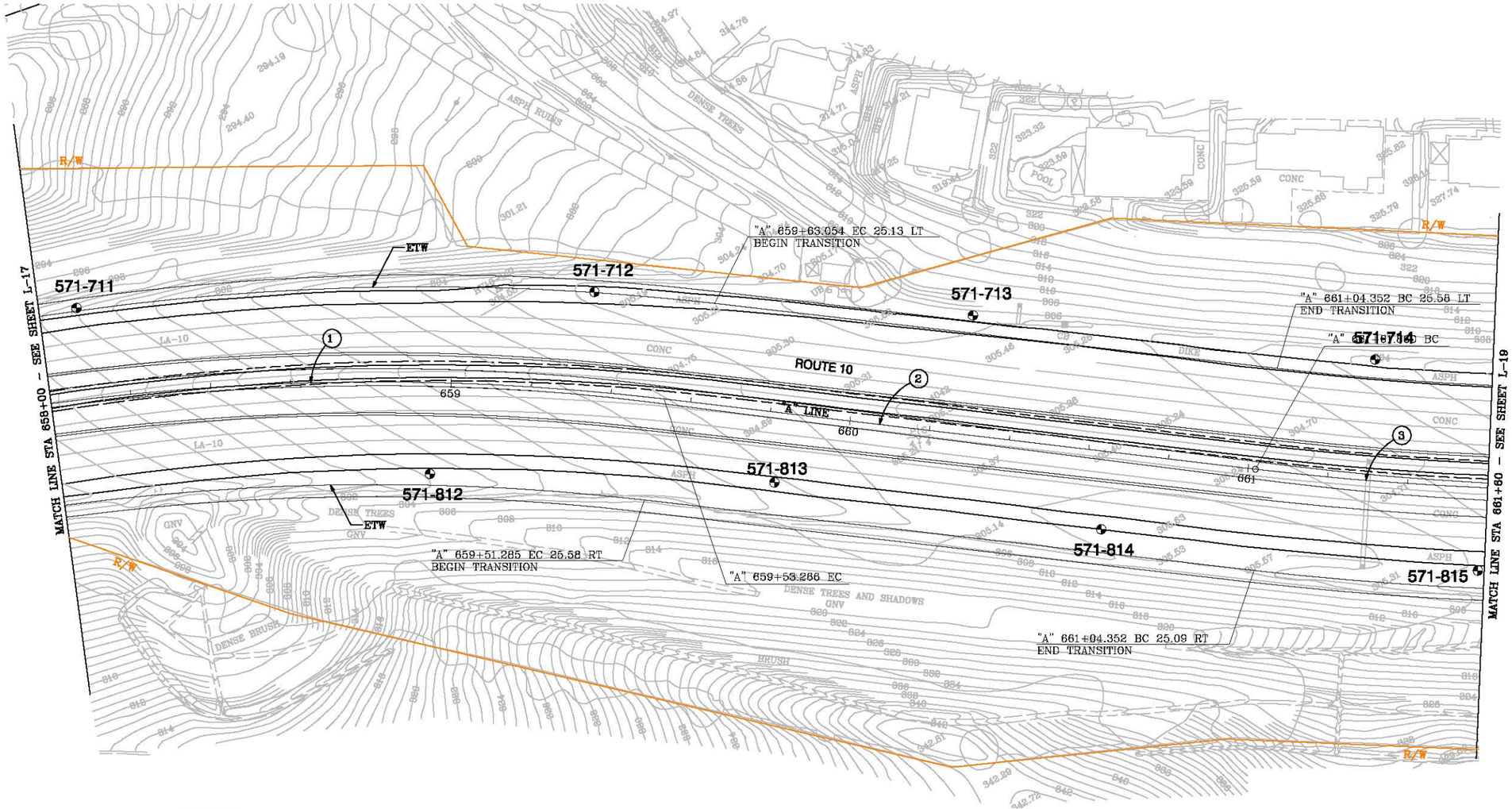
I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-17 OF L-24

203939-B48.DWG

SOUNDWALL AND RETAINING WALL						
WALL TYPE	BEG STATION	END STATION	LENGTH (m)	AVE RET WALL HEIGHT (m)	SOUNDWALL HEIGHT (m)	SOUNDWALL No.
RC RETAIN	657+65 (LT)	659+60 (LT)	203	2.0	--	--
SOUND	660+59 (LT)	662+12 (LT)	145	--	4.9	NB-31
RC RETAIN	652+72 (RT)	661+90 (RT)	915	2.5	--	--

CURVE AND TANGENT DATA				
NO.	R	△ / BEARING	L	T
1	609.601	16°52'20"	179.513	90.411
2	--	S53°36'18"E	148.594	--
3	786.574	31°20'14"	419.268	215.021



LEGEND

- PROPOSED BRIDGE WIDENING OR REPLACEMENT
- PROPOSED RETAINING WALL
- PROPOSED SOUNDWALL
- 571-815 — APPROXIMATE LOCATION OF BORING

0 10 20 30 40
APPROXIMATE SCALE IN METERS

REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.
NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

BORING LOCATION MAP - LAYOUT L-18

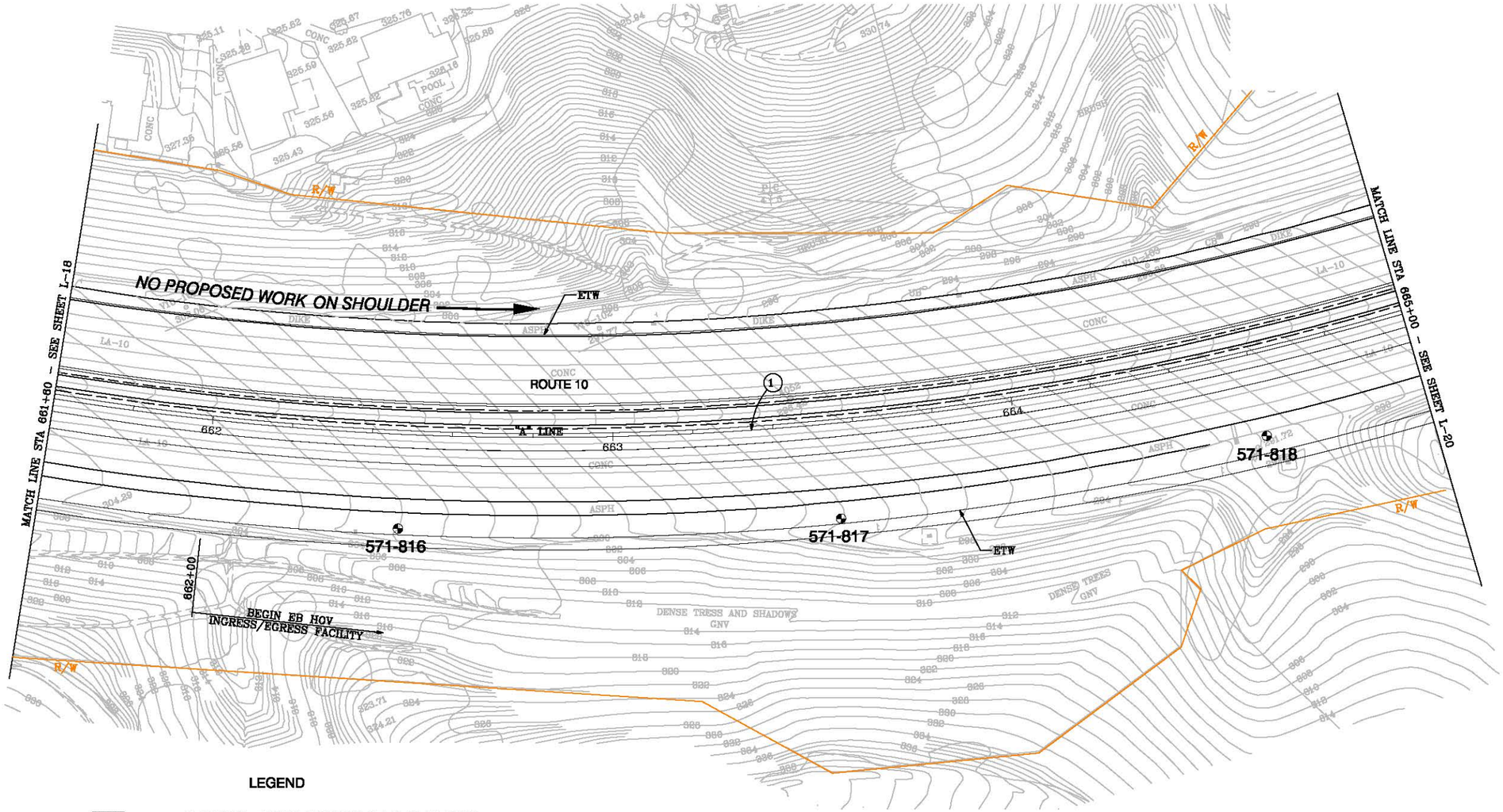
I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-18 OF L-24

203939-B49.DWG

SOUNDWALL AND RETAINING WALL						
WALL TYPE	BEG STATION	END STATION	LENGTH (m)	AVE RET WALL HEIGHT (m)	SOUNDWALL HEIGHT (m)	SOUNDWALL No.
SOUND	660+59 (LT)	662+12 (LT)	145	--	4.9	NB-31
RC RETAIN	652+72 (RT)	661+90 (RT)	915	2.5	--	--
RC RETAIN	662+35 (RT)	663+50 (RT)	119	2.2	--	--
MSE WALL	664+80 (RT)	673+20 (RT)	846	6.2	--	--

CURVE AND TANGENT DATA				
NO.	R	Δ / BEARING	L	T
1	766.574	31°20'14"	419.288	215.021



LEGEND

- PROPOSED BRIDGE WIDENING OR REPLACEMENT
- PROPOSED RETAINING WALL
- PROPOSED SOUNDWALL
- 571-818 APPROXIMATE LOCATION OF BORING

0 10 20 30 40
APPROXIMATE SCALE IN METERS

REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

BORING LOCATION MAP - LAYOUT L-19

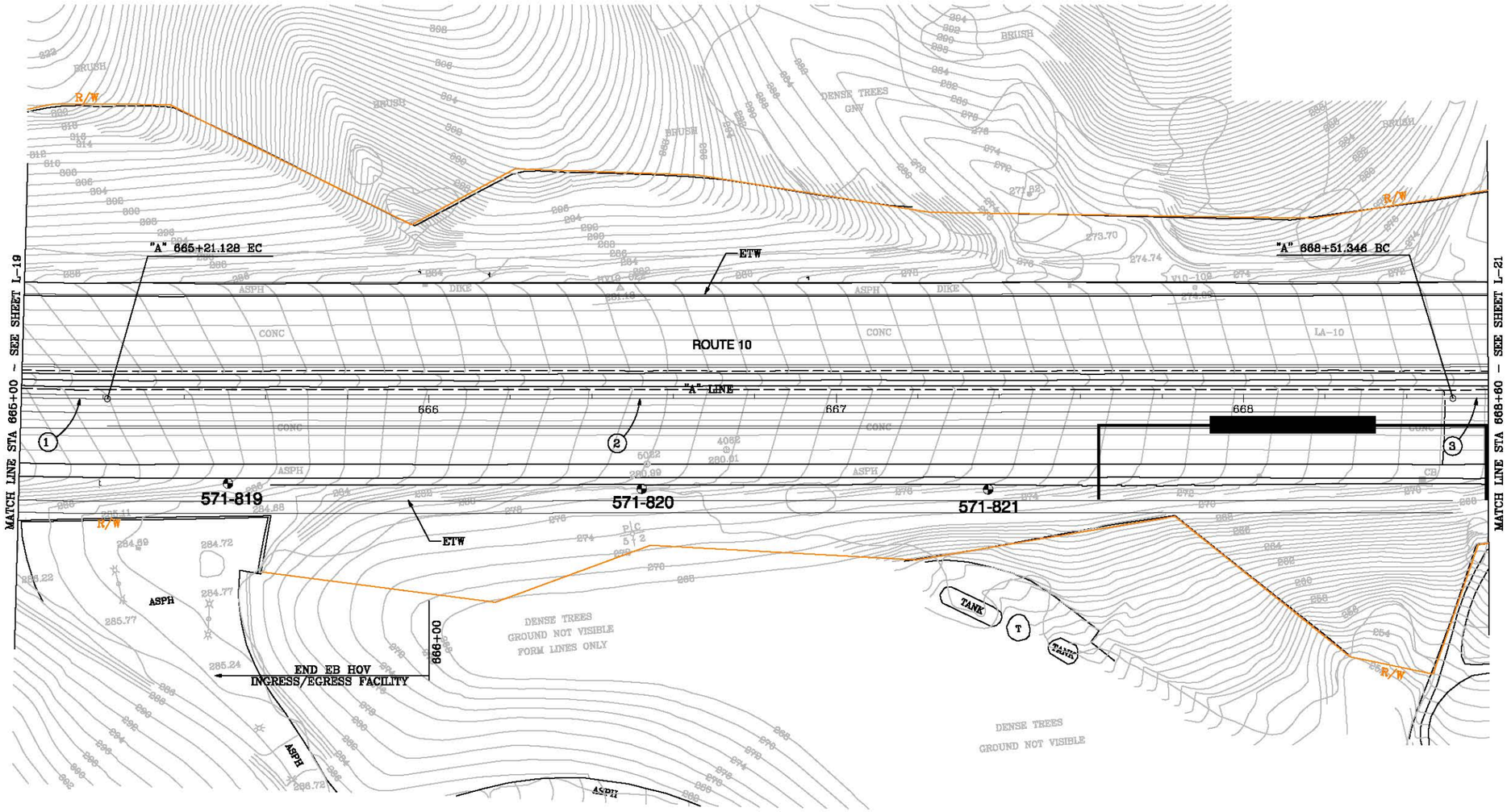
I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-19 OF L-24

203939-B50.DWG

SOUNDWALL AND RETAINING WALL						
WALL TYPE	BEG STATION	END STATION	LENGTH (m)	AVE RET WALL HEIGHT (m)	SOUNDWALL HEIGHT (m)	SOUNDWALL No.
MSE WALL	664+80 (RT)	673+20 (RT)	846	6.2	--	--

CURVE AND TANGENT DATA					
NO.	R	△ / BEARING	L	T
1	766.574	31°20'14"	419.268	215.021
2	--	S84°56'32"E	330.218	--
3	3052.578	8°10'44"	435.751	218.248



LEGEND

- PROPOSED BRIDGE WIDENING OR REPLACEMENT
- PROPOSED RETAINING WALL
- PROPOSED SOUNDWALL
- 571-820 APPROXIMATE LOCATION OF BORING

REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

0 10 20 30 40
APPROXIMATE SCALE IN METERS

Ninyo & Moore

BORING LOCATION MAP - LAYOUT L-20

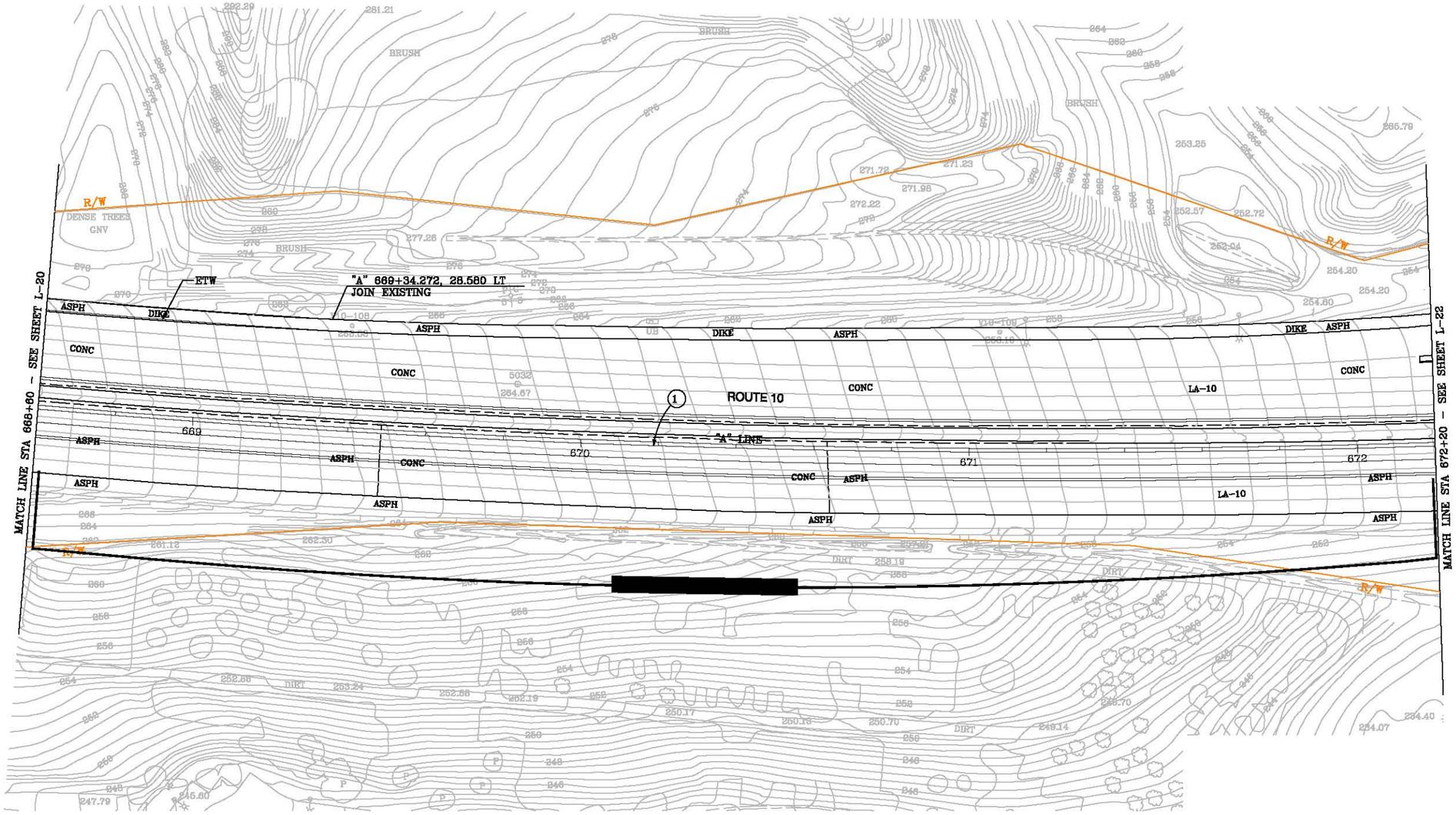
I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-20 OF L-24

203939-B51.DWG

SOUNDWALL AND RETAINING WALL						
WALL TYPE	BEG STATION	END STATION	LENGTH (m)	AVE RET WALL HEIGHT (m)	SOUNDWALL HEIGHT (m)	SOUNDWALL No.
MSE WALL	664+80 (RT)	673+20 (RT)	846	6.2	--	--

CURVE AND TANGENT DATA				
NO.	R	Δ / BEARING	L	T
1	3052.578	8°10'44"	435.751	218.246



LEGEND

- PROPOSED BRIDGE WIDENING OR REPLACEMENT
- PROPOSED RETAINING WALL
- PROPOSED SOUNDWALL

0 10 20 30 40
APPROXIMATE SCALE IN METERS

REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

BORING LOCATION MAP - LAYOUT L-21

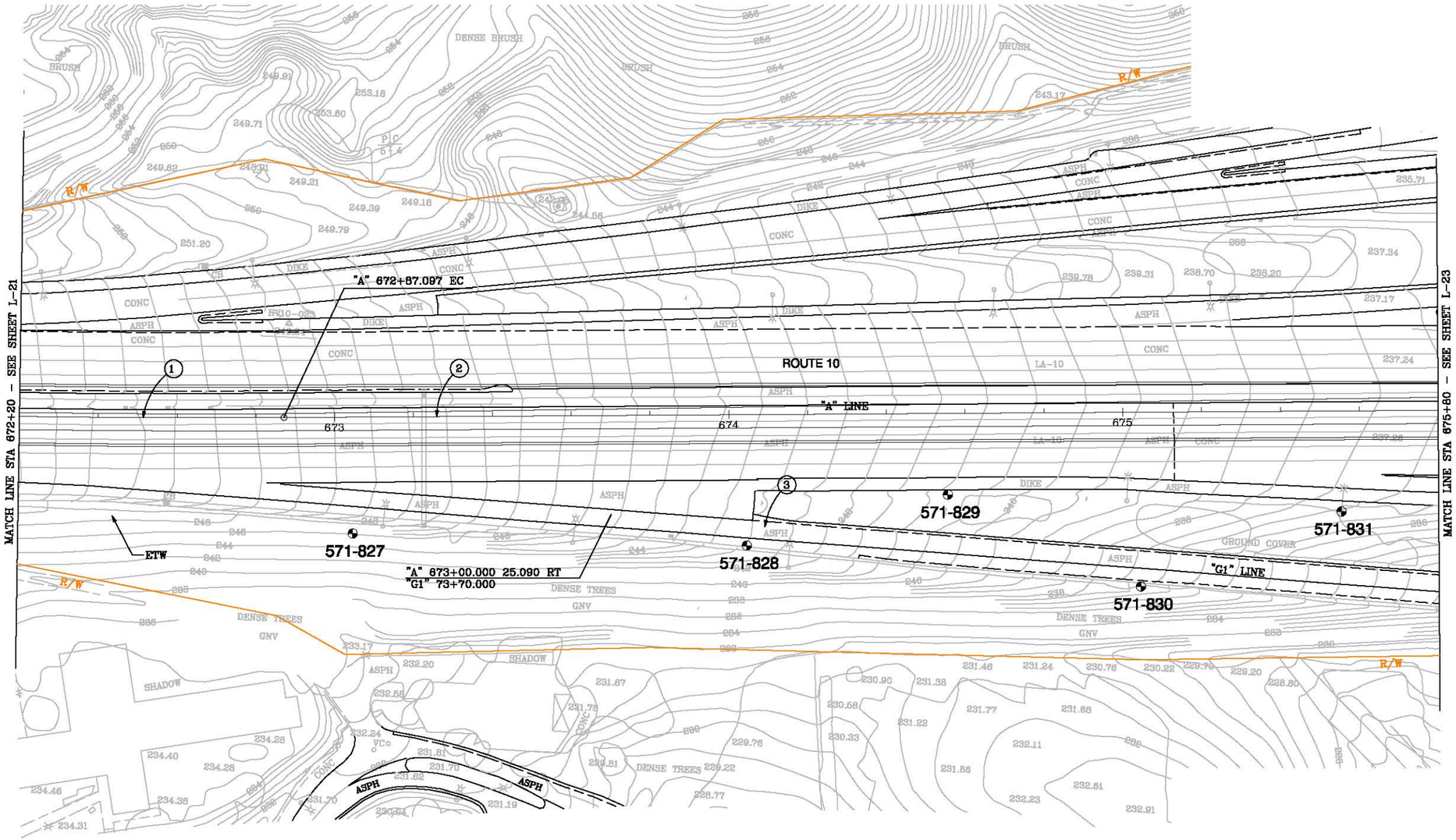
I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-21 OF L-24

203939-B52.DWG

SOUNDWALL AND RETAINING WALL						
WALL TYPE	BEG STATION	END STATION	LENGTH (m)	AVE RET WALL HEIGHT (m)	SOUNDWALL HEIGHT (m)	SOUNDWALL No.
MSE WALL	664+80 (RT)	673+20 (RT)	846	6.2	--	--

CURVE AND TANGENT DATA				
NO.	R	Δ / BEARING	L	T
1	3052.578	8°10'44"	435.751	218.246
2	--	N86°52'44"E	393.531	--
3	--	S88°14'31"E	380.318	--



LEGEND

- PROPOSED BRIDGE WIDENING OR REPLACEMENT
- PROPOSED RETAINING WALL
- PROPOSED SOUNDWALL
- 571-831 APPROXIMATE LOCATION OF BORING

REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

0 10 20 30 40

APPROXIMATE SCALE IN METERS

Ninyo & Moore

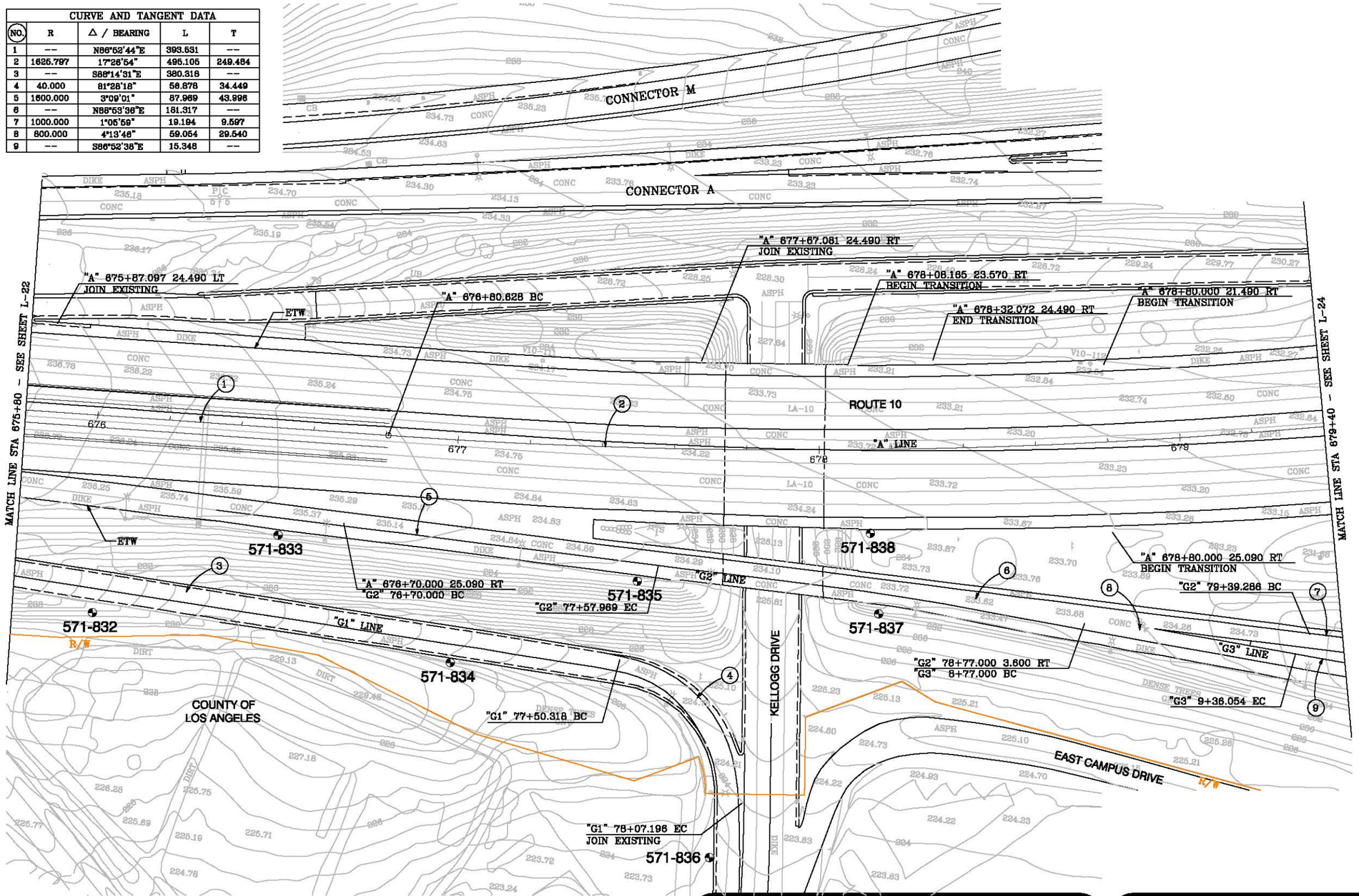
BORING LOCATION MAP - LAYOUT L-22

I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-22 OF L-24

203939-B53.DWG

CURVE AND TANGENT DATA				
NO.	R	△ / BEARING	L	T
1	--	N86°52'44"E	393.531	--
2	1625.797	17°26'54"	495.105	249.484
3	--	S88°14'31"E	380.318	--
4	40.000	81°28'18"	56.878	34.449
5	1600.000	3°09'01"	87.969	43.998
6	--	N88°53'36"E	181.317	--
7	1000.000	1°06'59"	19.194	9.597
8	800.000	4°13'46"	59.054	29.540
9	--	S86°52'38"E	15.348	--



LEGEND

- PROPOSED BRIDGE WIDENING OR REPLACEMENT
- PROPOSED RETAINING WALL
- PROPOSED SOUNDWALL
- 571-838 APPROXIMATE LOCATION OF BORING

0 10 20 30 40
APPROXIMATE SCALE IN METERS

REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

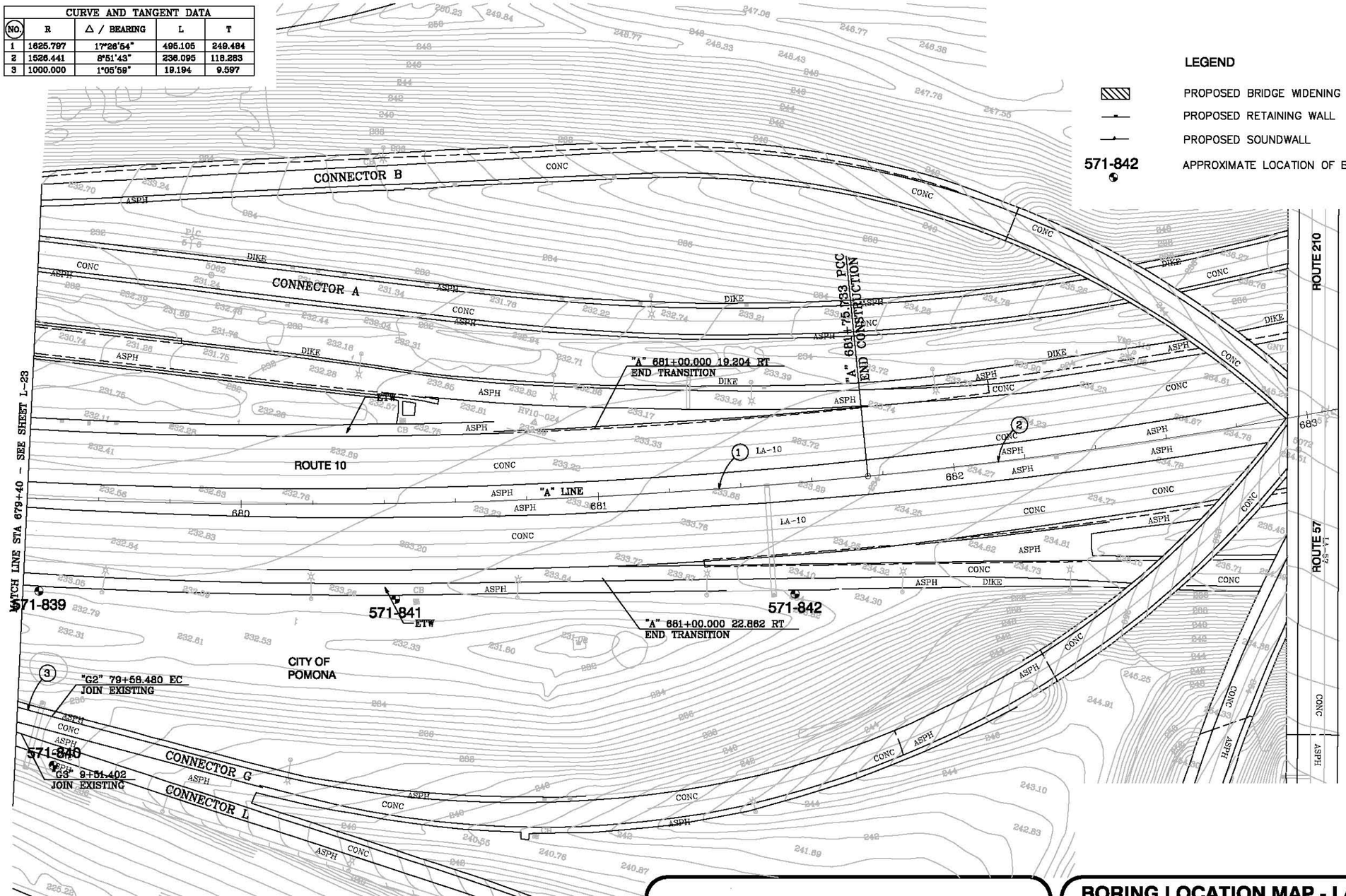
BORING LOCATION MAP - LAYOUT L-23

I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-23 OF L-24

203939-B54.DWG

CURVE AND TANGENT DATA				
NO.	R	Δ / BEARING	L	T
1	1625.797	17°26'54"	495.105	249.484
2	1526.441	8°51'43"	236.095	118.283
3	1000.000	1°05'59"	19.194	9.597



0 10 20 30 40
APPROXIMATE SCALE IN METERS

REFERENCE: LAYOUT PLAN PROVIDED BY CALIFORNIA DEPARTMENT OF TRANSPORTATION, 4/23/02.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

BORING LOCATION MAP - LAYOUT L-24

I-10 HOV WIDENING
EA 11934 (KP 60.3 TO 68.2)
CITRUS AVENUE TO ROUTE 57/71/210 INTERCHANGE
LOS ANGELES COUNTY, CALIFORNIA

PROJECT NO.	DATE	SEGMENT 3
203939001	9/2002	L-24 OF L-24

203939—B55.DWG

APPENDIX A

LABORATORY REPORTS

Laboratory	Site	Consultant
Advanced Technology Laboratories 3275 Walnut Avenue, Signal Hill, CA 90807 Tel. (562) 989-4045 Fax (562) 989-6348	Caltrans/I-10 (605-57)/Lead Survey TO 07-117070-PX Project # 203939001	Ninyo & Moore - David Shaler/Steve Reese 475 Goddard, Suite 200, Irvine, CA 92618 Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) [signature] 7-16-02	Received by: (name/date/time) [signature] 7-16-02 4:10p
Relinquished by: (name/date/time) [signature] 7-16-02 8:00	Received by: (name/date/time) [signature] 8:00pm 7/16/02

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB- 6	7/16/02	3:30	P	X	
	571- 207-0		1:17	B	X	X
	571- 207-0.3		1:19		X	
	571- 207-0.6		1:23		X	
	571- 207-0.9		1:26		X	
	571- 207-1.5		1:31		X	
	571- 208-0		1:43		X	
	571- 208-0.3		1:47		X	
	571- 208-0.6		1:52		X	
	571- 210-0		13:16		X	
	571- 210-0.3		13:20		X	
	571- 210-0.6		13:27		X	
	571- 210-0.9		13:31		X	X
	571- 210-1.5		13:35		X	
	571- 211-0		13:46		X	
	571- 211-0.3		13:50		X	
	571- 211-0.6		13:59		X	
	571- 212-0		2:45		X	
	571- 212-0.3		2:47		X	
	571- 212-0.6		2:49		X	
	571- 212-0.9		2:51		X	
	571- 213-0		14:43		X	
	571- 213-0.3		14:49		X	
	571- 213-0.6		14:54		X	X
	571- 213-0.9		14:57		X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
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	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	

Total # of samples: 25

PLEASE See Tab I

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) 7/18/02 16:10 — Received by: (name/date/time) 7-18-02 4:00p

Relinquished by: (name/date/time) 7-18-02 7:05 — Received by: (name/date/time) 7-18-02 7:14pm

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB- 21	7/18/02	15:50	P	X	
	571- 116 - 0	7/18/02	3:20		X	X
	571- 116 - 0.3		3:20		X	
	571- 116 - 0.6		3:20		X	
	571- 116 - 0.9		3:20		X	
	571- 116 - 1.5		3:25		X	
	571- 117 - 0		3:10		X	
	571- 117 - 0.3		3:10		X	
	571- 117 - 0.6		3:10		X	
	571- 117 - 0.9		3:10		X	
	571- 117 - 1.5		3:15		X	
	571- 118 - 0		2:55		X	X
	571- 118 - 0.3		2:55		X	
	571- 118 - 0.6		2:55		X	
	571- 118 - 0.9		3:00		X	
	571- 118 - 1.5		3:05		X	
	571- 119 - 0		2:45		X	
	571- 119 - 0.3		2:45		X	
	571- 119 - 0.6		2:45		X	
	571- 119 - 0.9		2:45		X	
	571- 119 - 1.5		2:50		X	
	571- 305 - 0		2:00		X	X
	571- 305 - 0.3		2:00		X	
	571- 305 - 0.6		2:00		X	
	571- 305 - 0.9		2:05		X	
	571- 305 - 1.5		2:10		X	
	571- 306 - 0		1:40		X	
	571- 306 - 0.3		1:40		X	
	571- 306 - 0.6		1:40		X	
	571- 306 - 0.9		1:40		X	
	571- 306 - 1.5		1:45		X	
	571- 307 - 0		1:30		X	
	571- 307 - 0.3		1:30		X	X
	571- 307 - 0.6		1:30		X	
	571- 307 - 0.9		1:30		X	
	571- 307 - 1.5		1:35		X	
	571- 308 - 0		1:15		X	
	571- 308 - 0.3		1:15		X	
	571- 308 - 0.6		1:15		X	
	571- 308 - 0.9		1:20		X	
	571- 308 - 1.5		1:20		X	
	571- 309 - 0		12:40		X	
	571- 309 - 0.3		12:40		X	
	571- 309 - 0.6		12:40		X	X
	571- 309 - 0.9		1:05		X	
	571- 309 - 1.5		1:10		X	
	571- 310-0		12:20		X	
	571- 310 - 0.3		12:20		X	
	571- 310 - 0.6		12:20		X	
	571- 310 - 0.9		12:25		X	
	571- 310 - 1.5		12:30		X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	

Total # of samples: 51

Please See Tab 2

Laboratory	Site	Consultant
Advanced Technology Laboratories 3275 Walnut Avenue, Signal Hill, CA 90807 Tel. (562) 989-4045 Fax (562) 989-6348	Caltrans/I-10 (605-57)/Lead Survey TO 07-117070-PX Project # 203939001	Ninyo & Moore - David Shaler/Steve Reese 475 Goddard, Suite 200, Irvine, CA 92618 Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) [signature] 7-18-02 — Received by: (name/date/time) [signature] 4:00 p

Relinquished by: (name/date/time) [signature] 7-18-02 7:05 p — Received by: (name/date/time) [signature] 7.18.02 7:16 pm

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB- 17	7/18/02	15:32	P	X	
	571- 325-0	↓	14:23	↓	X	
	571- 325-0.3		14:24		X	
	571- 325-0.6		14:26		X	
	571- 325-0.9		14:27		X	
	571- 324-0		14:33		X	
	571- 324-0.3		14:34		X	
	571- 324-0.6		14:38		X	
	571- 324-0.9		14:39		X	
	571- 324-1.5		14:41		X	
	571- 323-0		14:46		X	X
	571- 323-0.3		14:47		X	
	571- 323-0.6		14:49		X	
	571- 323-0.9		14:50		X	
	571- 323-1.5		14:53		X	
	571- 322-0		14:55		X	
	571- 322-0.3		14:56		X	
	571- 322-0.6		14:58		X	
	571- 322-0.9		15:00		X	
	571- 321-0		15:04		X	
	571- 321-0.3		15:05		X	
	571- 321-0.6		15:07		X	X
	571- 321-0.9		15:10		X	
	571- 321-1.5		15:12		X	
	571- 121-0		2:28	B	X	
	571- 121-0.3		2:30	↓	X	
	571- 121-0.6		2:32		X	
	571- 121-0.9		2:40		X	
	571- 121-1.5		2:44		X	
	571- 120-0		14:28		X	
	571- 120-0.3		14:33		X	
	571- 120-0.6		14:39		X	
	571- 120-0.9		14:42		X	X
	571- 120-1.5	↓	14:45	↓	X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	

Total # of samples: 34

Please See Tab 3

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shafer/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) Steve Reese 7-18-02
Received by: (name/date/time) 7-18-02 4:00p
Relinquished by: (name/date/time) 7-18-02 7:05p
Received by: (name/date/time) 7.18.02 7:15pm

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB- 18	7/18/02	3:34	P	X	
	571- 524-0	7/19/02	9:21	B	X	X
	571- 524-0.3		9:23		X	
	571- 524-0.6		9:23		X	
	571- 524-0.9		9:28		X	
	571- 524-1.5		9:30		X	
	571- 523-0		9:35		X	
	571- 523-0.3		9:38		X	
	571- 519-0		10:01		X	
	571- 519-0.3		10:05		X	
	571- 519-0.6		10:07		X	X
	571- 520-0		10:00		X	
	571- 520-0.3		10:03		X	
	571- 516-0		10:25		X	
	571- 516-0.3		10:27		X	
	571- 516-0.6		10:30		X	
	571- 516-0.9		10:32		X	
	571- 515-0		10:41		X	
	571- 515-0.3		10:44		X	
	571- 515-0.6		10:48		X	
	571- 515-0.9		10:52		X	X
	571- 512-0		11:00		X	
	571- 512-0.3		11:02		X	
	571- 512-0.6		11:05		X	
	571- 512-0.9		11:07		X	
	571- 512-1.5		11:11		X	
	571- 511-0		11:16		X	
	571- 511-0.3		11:05		X	
	571- 511-0.6		11:11		X	
	571- 511-0.9		11:25		X	
	571- 511-1.5		11:31		X	X
	571- 508-0		12:55		X	
	571- 508-0.3		12:57		X	
	571- 508-0.6		1:00		X	
	571- 508-0.9		1:03		X	
	571- 508-1.5		1:07		X	
	571- 506-0		12:55		X	
	571- 506-0.3		12:58		X	
	571- 506-0.6		1:01		X	
	571- 506-0.9		1:05		X	
	571- 504-0		1:14		X	X
	571- 504-0.3		1:18		X	
	571- 504-0.6		1:20		X	
	571- 504-0.9		1:25		X	
	571- 504-1.5		1:27		X	
	571- 314-0		3:00		X	
	571- 314-0.3		3:07		X	
	571- 311-0		2:08		X	
	571- 311-0.3		2:11		X	
	571- 311-0.6		2:13		X	
	571- 312-0		2:21		X	X
	571- 312-0.3		2:24		X	
	571- 312-0.6		2:27		X	
	571- 315-0		2:38		X	
	571- 315-0.3		2:43		X	
	571- 315-0.6		2:51		X	
	571- 315-0.9		2:54		X	
	571- 315-1.5		3:06		X	
	~~571~~				~~X~~	
	~~571~~				~~X~~	

Total # of samples: 58

Please see Tab 4

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) 7-18-02

Received by: (name/date/time) 4:00p

Relinquished by: (name/date/time) 7-18-02 7:05

Received by: (name/date/time) 7.18.02 7:16pm

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
058000 - 001	EB- 20	7/18/02	8:40	P	X	
2	571- 529-0		8:55	B	X	X
3	571- 529-0.3		8:57		X	
4	571- 529-0.6		9:00		X	
5	571- 529-0.9		9:04		X	
6	571- 529-1.5		9:07		X	
7	571- 527-0		8:53		X	
8	571- 527-0.3		8:55		X	
9	571- 527-0.6		8:58		X	
10	571- 527-0.9		9:03		X	
11	571- 526-0		9:18		X	
12	571- 526-0.3		9:20		X	
13	571- 526-0.6		9:28		X	X
14	571- 526-0.9		9:33		X	
15	571- 526-1.5		9:38		X	
16	571- 525-0		9:25		X	
17	571- 525-0.3		9:27		X	
18	571- 525-0.6		9:30		X	
19	571- 525-0.9		9:33		X	
20	571- 525-1.5		9:37		X	
21	571- 518-0		10:05		X	
22	571- 518-0.3		10:09		X	
23	571- 518-0.6		10:15		X	
24	571- 518-0.9		10:16		X	X
25	571- 517-0		10:05		X	
26	571- 517-0.3		10:07		X	
27	571- 517-0.6		10:10		X	
28	571- 517-0.9		10:13		X	
29	571- 517-1.5		10:18		X	
30	571- 514-0		10:37		X	
31	571- 514-0.3		10:41		X	
32	571- 514-0.6		10:46		X	
33	571- 514-0.9		10:49		X	
34	571- 513-0		10:40		X	X
35	571- 513-0.3		10:41		X	
36	571- 513-0.6		10:43		X	
37	571- 513-0.9		10:47		X	
38	571- 513-1.5		10:51		X	
39	571- 510-0		11:05		X	
40	571- 510-0.3		11:07		X	
41	571- 510-0.6		11:10		X	
42	571- 509-0		11:05		X	
43	571- 509-0.3		11:20		X	X
44	571- 509-0.6		11:23		X	
45	571- 509-0.9		11:21		X	
46	571- 203-0		13:08		X	
47	571- 203-0.3		13:11		X	
48	571- 203-0.6		13:19		X	
49	571- 204-0		1:08		X	
50	571- 204-0.3		1:12		X	
51	571- 205-0		1:17		X	
52	571- 205-0.3		1:21		X	
53	571- 205-0.6		1:24		X	X
54	571- 123-0		13:49		X	
55	571- 123-0.3		13:58		X	
56	571- 122-0		1:50		X	
57	571- 122-0.3		1:54		X	
58	571- 122-0.6		1:58		X	
59	571- 122-0.9		2:01		X	
60	571- 122-1.5		2:05		X	

Total # of Samples: 60

Please see Tab 5

Laboratory	Site	Consultant
Advanced Technology Laboratories 3275 Walnut Avenue, Signal Hill, CA 90807 Tel. (562) 989-4045 Fax (562) 989-6348	Caltrans/I-10 (605-57)/Lead Survey TO 07-117070-PX Project # 203939001	Ninyo & Moore - David Shaler/Steve Reese 475 Goddard, Suite 200, Irvine, CA 92618 Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) [illegible signature] 7-17-02 — Received by: (name/date/time) [illegible signature] 7/17/02

Relinquished by: (name/date/time) [illegible signature] 7/17/02 1725 — Received by: (name/date/time) [illegible signature] 7/17/02 17:25

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB-13	7/17/02	15:45	B	X	
	570-201-0.0		13:05	P	X	X
	570-201-0.3		13:10		X	
	570-201-0.6		13:14		X	
	570-201-0.9		13:17		X	
	570-202-0.0		13:25		X	
	570-202-0.3		13:29		X	
	570-202-0.6		13:35		X	
	570-202-0.9		13:40		X	
	570-202-1.5		13:45		X	
	570-209-0.0		14:00		X	
	570-209-0.3		14:03		X	X
	570-209-0.6		14:08		X	
	570-104-0.0		14:35		X	
	570-104-0.3		14:40		X	
	570-104-0.6		14:46		X	
	570-104-0.9		14:48		X	
	570-104-1.5		14:52		X	
	570-105-0.0		15:00		X	
	570-105-0.3		15:03		X	
	570-105-0.6		15:05		X	
	570-105-0.9		16:08		X	X
	570-105-1.5		15:12		X	
	570-103-0		14:55		X	
	570-103-0.3		14:56		X	
	570-103-0.6		14:57		X	
	570-103-0.9		14:58		X	
	570-103-1.5		15:00		X	
	570-102-0		15:07		X	
	570-102-0.3		15:09		X	
	570-102-0.6		15:10		X	X
	570-102-0.9		15:11		X	
	570-102-1.5		15:13		X	
	570-101-0		15:25		X	
	570-101-0.3		15:27		X	
	570-101-0.6		15:28		X	
	570-101-0.9		15:30		X	
	570-101-1.5		15:35		X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	

Total # of samples: 38

Please See Table 6

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) 7-18-02 — Received by: (name/date/time) 7-18-02 4pm

Relinquished by: (name/date/time) 7-18-02 7:05p — Received by: (name/date/time) 7-18-02 7:16pm

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB-16	7/18/02	15:30	P	X	
	571-401-0		11:15		X	X
	571-401-0.3		11:17		X	
	571-403-0		11:25		X	
	571-403-0.3		11:26		X	
	571-403-0.6		11:28		X	
	571-405-0		11:35		X	
	571-405-0.3		11:36		X	
	571-405-0.6		11:37		X	
	571-405-0.9		11:38		X	
	571-405-1.5		11:39		X	X
	571-406-0		11:43		X	
	571-406-0.3		11:44		X	
	571-406-0.6		11:45		X	
	571-406-0.9		11:46		X	
	571-406-1.5		11:48		X	
	571-407-0		11:53		X	
	571-407-0.3		11:54		X	
	571-407-0.6		11:55		X	
	571-407-0.9		11:56		X	
	571-407-1.5		11:58		X	X
	571-408-0		12:10		X	
	571-408-0.3		12:11		X	
	571-408-0.6		12:12		X	
	571-408-0.9		12:13		X	
	571-408-1.5		12:15		X	
	571-409-0		12:20		X	
	571-409-0.3		12:21		X	
	571-409-0.6		12:22		X	
	571-409-0.9		12:24		X	
	571-409-1.5		12:26		X	X
	571-411-0		12:34		X	
	571-411-0.3		12:36		X	
	571-411-0.6		12:38		X	
	571-411-0.9		12:39		X	
	571-411-1.5		12:41		X	
	571-422-0		12:56		X	
	571-422-0.3		12:58		X	
	571-422-0.6		13:00		X	
	571-422-0.9		13:02		X	
	571-422-1.5		13:05		X	X
	571-423-0		13:10		X	
	571-423-0.3		13:12		X	
	571-423-0.6		13:13		X	
	571-423-0.9		13:15		X	
	571-423-1.5		13:17		X	
	571-425-0		13:21		X	
	571-425-0.3		13:22		X	
	571-425-0.6		13:24		X	
	571-425-0.9		13:26		X	
	571-425-1.5		13:28		X	X
	571-326-0		14:00		X	
	571-326-0.3		14:01		X	
	571-326-0.6		14:02		X	
	571-326-0.9		14:03		X	
	571-326-1.5		14:05		X	
	571-327-0		14:14		X	
	571-327-0.3		14:16		X	
	571-327-0.6		14:17		X	
	571-327-0.9		14:18		X	

Total # of samples: 60

Page 3 of 3

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) [illegible] 7-17-02 — Received by: (name/date/time) [illegible] 7/17/02

Relinquished by: (name/date/time) [illegible] 7/17/02 1725 — Received by: (name/date/time) [illegible] 7/17/02 17:25pm

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB-11	7/17/02	15:35	P	X	
	571-214-0		8:40	B	X	X
	571-214-0.3		8:43		X	
	571-214-0.6		8:47		X	
	571-215-0		8:50		X	
	571-215-0.3		8:42		X	
	571-215-0.6		8:47		X	
	571-215-0.9		8:50		X	
	571-216-0		9:00		X	
	571-216-0.3		9:02		X	
	571-216-0.6		9:04		X	
	571-217-0		9:01		X	X
	571-217-0.3		9:09		X	
	571-217-0.6		9:13		X	
	571-218-0		9:15		X	
	571-218-0.6		9:17		X	
	571-218-0.9		9:19		X	
	571-219-0		9:32		X	
	571-219-0.3		9:35		X	
	571-219-0.6		9:37		X	
	571-219-0.9		9:40		X	
	571-219-1.5		9:44		X	
	571-220-0		9:30		X	X
	571-220-0.3		9:56		X	
	571-220-0.6		9:41		X	
	571-220-0.9		9:49		X	
	571-220-1.5		9:54		X	
	571-402-0		10:07		X	
	571-402-0.3		10:13		X	
	571-402-0.6		10:19		X	
	571-404-0		10:13		X	
	571-404-0.3		10:17		X	
	571-415-0		10:43		X	
	571-415-0.3		10:47		X	X
	571-415-0.6		10:53		X	
	571-416-0		10:47		X	
	571-416-0.3		10:51		X	
	571-416-0.6		10:54		X	
	571-416-0.9		10:57		X	
	571-417-0		11:11		X	
	571-417-0.3		11:15		X	
	571-418-0		11:10		X	
	571-419-0		12:48		X	
	571-419-0.3		12:52		X	
	571-419-0.6		12:55		X	X
	571-419-0.9		1:00		X	
	571-419-1.5		1:06		X	
	571-420-0		13:05		X	
	571-420-0.3		13:07		X	
	571-420-0.6		13:16		X	
	571-421-0		12:50		X	
	571-424-0		1:20		X	
	571-424-0.3		1:23		X	
	571-424-0.6		1:27		X	
	571-304-0		1:50		X	
	571-304-0.3		1:52		X	X
	571-304-0.6		1:57		X	
	571-304-0.9		2:00		X	
	571-302-0		13:49		X	
	571-302-0.3		13:54		X	

Total # of samples: 60

Please See Tab 8

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) 7-17-02 — Received by: (name/date/time) 7/17/02

Relinquished by: (name/date/time) 7/17/02 1725 — Received by: (name/date/time) 7/17/02 17:25

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB- 10	7/17/02	3:30	P	X	
	571- 410 - 0	7/17/02	10:40	B	X	X
	571- 410 - 0.3		16:42		X	
	571- 410 - 0.6		10:45		X	
	571- 410 - 0.9		10:47		X	
	571- 412 - 0		10:56		X	
	571- 412 - 0.3		10:59		X	
	571- 412 - 0.6		11:02		X	
	571- 412 - 0.9		11:05		X	
	571- 412 - 1.5		11:10		X	
	571- 413 - 0		10:54		X	
	571- 413 - 0.3		10:58		X	X
	571- 413 - 0.6		11:02		X	
	571- 413 - 0.9		11:11		X	
	571- 414 - 0		11:23		X	
	571- 414 - 0.3		11:25		X	
	571- 414 - 0.6		11:32		X	
	571- 602 - 0		12:47		X	
	571- 602 - 0.3		12:50		X	
	571- 602 - 0.6		12:53		X	
	571- 602 - 0.9		12:56		X	
	571- 604 - 0		12:58		X	X
	571- 604 - 0.3		1:07		X	
	571- 604 - 0.6		1:12		X	
	571- 606 - 0		1:08		X	
	571- 606 - 0.3		1:10		X	
	571- 605 - 0		1:19		X	
	571- 605 - 0.3		1:22		X	
	571- 605 - 0.6		1:26		X	
	571- 603 - 0		1:34		X	
	571- 603 - 0.3		1:40		X	
	571- 601 - 0		1:37		X	X
	571- 601 - 0.3		1:44		X	
	571- 501 - 0		2:45		X	
	571- 501 - 0.3		2:48		X	
	571- 501 - 0.6		2:54		X	
	571- 501 - 0.9		3:03		X	
	571- 503 - 0		2:16		X	
	571- 503 - 0.3		2:29		X	
	571- 503 - 0.6		2:33		X	
	571- 530 - 0		2:41		X	
	571- 530 - 0.3		2:45		X	X
	571- 530 - 0.6		2:50		X	
43	571- 530 - 0.9		2:54		X	
	571- 302 - 0.6		14:04		X	
	571- 301 - 0		14:18		X	
	571- 301 - 0.3		14:28		X	
	571- 301 - 0.6		14:33		X	
	571- 301 - 0.9		14:34		X	
	571- 301 - 1.5		14:39		X	
	571- 124 - 0		2:19		X	
	571- 124 - 0.3		2:21		X	
	571- 124 - 0.6		2:23		X	X
	571- 124 - 0.9		2:28		X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	

Total # of samples: 54

Please see Table 2

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) Steve Reese 7-22-02
Relinquished by: (name/date/time) 7/22/02 6:00P
Received by: (name/date/time) Eddie Rodriguez 7/22/02 6:00P
Received by: (name/date/time) 7/22/02 6:00P

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB-32	7/22/02	3:20	P	X	
	571-114-1.5		12:51		X	X
	571-113-0		13:00		X	
	571-113-0.3		13:01		X	
	571-113-0.6		13:02		X	
	571-113-0.9		13:03		X	
	571-113-1.5		13:05		X	
	571-111-0		13:15		X	
	571-111-0.3		13:16		X	
	571-111-0.6		13:17		X	
	571-111-0.9		13:18		X	
	571-111-1.5		13:20		X	
	571-112-0		13:25		X	X
	571-112-0.3		13:26		X	
	571-112-0.6		13:27		X	
	571-112-0.9		13:29		X	
	571-112-1.5		13:30		X	
	571-108-0		13:35		X	
	571-108-0.3		13:36		X	
	571-108-0.6		13:38		X	
	571-108-0.9		13:40		X	
	571-108-1.5		13:45		X	
	571-319-0		9:51	B	X	X
	571-319-0.3		9:54		X	
	571-320-0		8:54		X	
	571-530-0		10:17		X	
	571-530-0.3		10:19		X	
	571-530-0.6		10:26		X	
	571-617-0		9:17		X	
	571-617-0.3		9:23		X	
	571-617-0.6		9:26		X	
	571-617-0.9		9:28		X	
	571-626-0		9:43		X	X
	571-626-0.3		9:46		X	
	571-626-0.6		~~9:46~~ 9:50		X	
	571-626-0.9		~~9:50~~ 9:52		X	
	571-628-0		~~9:52~~ 9:43		X	
	571-628-0.3		~~9:43~~ 9:46		X	
	571-628-0.6		~~9:46~~ 9:50		X	
	571-629-0		10:11		X	
	571-629-0.3		10:14		X	
	571-629-0.6		10:15		X	
	571-629-0.9		10:18		X	X
	571-629-1.5		10:21		X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	

Total # of samples: 44

Please see Lab ID

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57) Lead Survey	Ninyo & Moore - David Shafer/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT

Relinquished by: (name/date/time) 7/19/02
Received by: (name/date/time) 7-19-02 3:45p
Relinquished by: (name/date/time) 7-19-02 6:40p
Received by: (name/date/time) 7-19-02 6:40p

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB-	7/19/02	15:30	P	X	
	571- 521 - 0	7/19/02	3:10		X	X
	571- 521 - 0.3		3:10		X	
	571- 521 - 0.6		3:10		X	
	571- 618 - 0		10:20		X	
	571- 618 - 0.3		10:20		X	
	571- 618 - 0.6		10:20		X	
	571- 618 - 0.9		10:25		X	
	571- 618 - 1.5		10:25		X	
	571- 619 - 0		10:40		X	
	571- 619 - 0.3		10:40		X	
	571- 619 - 0.6		10:40		X	
	571- 619 - 0.9		10:40		X	X
	571- 619 - 1.5		10:45		X	
	571- 620 - 0		11:00		X	
	571- 620 - 0.3		11:00		X	
	571- 620 - 0.6		11:00		X	
	571- 620 - 0.9		11:05		X	
	571- 620 - 1.5		11:10		X	
	571- 621 - 0		11:15		X	
	571- 621 - 0.3		11:15		X	
	571- 621 - 0.6		11:15		X	X
	571- 621 - 0.9		11:20		X	
	571- 621 - 1.5		11:25		X	
	571- 622 - 0		11:35		X	
	571- 622 - 0.3		11:35		X	
	571- 622 - 0.6		11:40		X	
	571- 622 - 0.9		11:45		X	
	571- 622 - 1.5		11:55		X	
	571- 625 - 0		12:45		X	
	571- 625 - 0.3		12:45		X	X
	571- 625 - 0.6		12:45		X	
	571- 625 - 0.9		12:50		X	
	571- 625 - 1.5		12:55		X	
	571- 623 - 0		11:55		X	
	571- 623 - 0.3		11:55		X	
	571- 623 - 0.6		11:55		X	
	571- 623 - 0.9		12:00		X	
	571- 623 - 1.5		12:05		X	
	571- 624 - 0		12:15		X	
	571- 624 - 0.3		12:15		X	X
	571- 624 - 0.6		12:15		X	
	571- 624 - 0.9		12:20		X	
	571- 624 - 1.5		12:25		X	
	571- 627 - 0		1:15		X	
	571- 627 - 0.3		1:15		X	
	571- 627 - 0.6		1:15		X	
	571- 627 - 0.9		1:20		X	
	571- 627 - 1.5		1:25		X	
	571- 528 - 0		2:45		X	
	571- 528 - 0.3		2:45		X	X
	571- 528 - 0.6		2:45		X	
	571- 528 - 0.9		2:45		X	
	571- 528 - 1.5		2:50		X	
	571- 714 - 0		1:55		X	
	571- 714 - 0.3		1:55		X	
	571- 714 - 0.6		1:55		X	
	571- 714 - 0.9		2:00		X	
	~~571-~~				~~X~~	
	~~571-~~				~~X~~	

Total # of samples: 59

Please see Lab 11

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) 7-19-02

Received by: (name/date/time) 7-19-02 3:12p

Relinquished by: (name/date/time) 7-19-02 6:40p

Received by: (name/date/time) 7-19-02 6:40p

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB- 24	7/19/02	3:30	P	X	
	571- 313-0	7/19/02	9:03	B	X	X
	571- 313-0.3		9:08		X	
	571- 313-0.6		9:12		X	
	571- 313-0.9		9:17		X	
	571- 313-1.5		9:25		X	
	571- 317-0		9:00		X	
	571- 317-0.3		9:03		X	
	571- 317-0.6		9:06		X	
	571- 317-0.9		9:09		X	
	571- 316-0		9:20		X	X
	571- 316-0.3		9:23		X	
	571- 316-0.6		9:26		X	
	571- 316-0.9		9:30		X	
	571- 805-0		10:03		X	
	571- 805-0.3		10:05		X	
	571- 805-0.6		10:07		X	
	571- 805-0.9		10:10		X	
	571- 805-1.5		10:13		X	
	571- 807-0		10:11		X	
	571- 807-0.3		10:15		X	X
	571- 807-0.6		10:22		X	
	571- 807-0.9		10:27		X	
	571- 807-1.5		10:36		X	
	571- 808-0		10:29		X	
	571- 808-0.3		10:31		X	
	571- 808-0.6		10:33		X	
	571- 808-0.9		10:34		X	
	571- 808-1.5		10:37		X	
	571- 829-0		11:00		X	
	571- 829-0.3		11:06		X	X
	571- 831-0		11:20		X	
	571- 831-0.3		11:24		X	
	571- 831-0.6		11:27		X	
	571- 833-0		11:50		X	
	571- 833-0.3		11:53		X	
	571- 833-0.6		11:57		X	
	571- 837-0		1:15		X	
	571- 837-0.3		1:18		X	
	571- 835-0		1:11		X	
	571- 835-0.3		1:15		X	X
	571- 835-0.6		1:19		X	
	571- 835-0.9		1:24		X	
	571- 840-0		1:30		X	
	571- 840-0.3		1:33		X	
	571- 840-0.6		1:36		X	
	571- 828-0		1:58		X	
	571- 828-0.3		2:05		X	
	571- 828-0.6		2:01		X	
	571- 830-0		2:10		X	
	571- 830-0.3		2:13		X	X
	571- 830-0.6		2:18		X	
	571- 827-0		2:15		X	
	571- 827-0.3		2:19		X	
	571- 827-0.6		2:24		X	
	571- 712-0		12:07		X	
	571- 712-0.3		12:11		X	
	571- 712-0.6		12:16		X	
	571- 712-0.9		12:20		X	
	571-				X	

Total # of samples: 59

Please see Tab 12

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) [illegible] 7-22-02
Received by: (name/date/time) Eddie Rodriguez 7/22/02

Relinquished by: (name/date/time) [illegible] 7/22/02 6 OOP
Received by: (name/date/time) [illegible] 7/22/02 6 OOP

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB-28	7/22/02		P	X	
	571-329-0		8:45		X	X
	571-329-0.3		8:46		X	
	571-329-0.6		8:47		X	
	571-329-0.9		8:49		X	
	571-329-1.5		8:51		X	
	571-328-0		8:65		X	
	571-328-0.3		8:56		X	
	571-328-0.6		8:58		X	
	571-328-0.9		8:59		X	
	571-328-1.5		9:01		X	
	571-838-0		9:32		X	X
	571-838-0.3		9:33		X	
	571-838-0.6		9:35		X	
	571-838-0.9		9:36		X	
	571-838-1.5		9:38		X	
	571-839-0		9:41		X	
	571-839-0.3		9:42		X	
	571-839-0.6		9:44		X	
	571-839-0.9		9:45		X	
	571-839-1.5		9:47		X	X
	571-841-0		9:52		X	
	571-841-0.3		9:53		X	
	571-841-0.6		9:55		X	
	571-841-0.9		9:56		X	
	571-841-1.5		9:57		X	
	571-842-0		10:05		X	
	571-842-0.3		10:06		X	
	571-842-0.6		10:08		X	
	571-842-0.9		10:09		X	
	571-842-1.5		10:11		X	X
	571-522-0		11:10		X	
	571-522-0.3		11:11		X	
	571-522-0.6		11:13		X	
	571-522-0.9		11:14		X	
	571-522-1.5		11:15		X	
	571-507-0		11:28		X	
	571-507-0.3		11:29		X	
	571-507-0.6		11:31		X	
	571-507-0.9		11:32		X	
	571-507-1.5		11:34		X	X
	571-~~511~~-505-0		11:40		X	
	571-505-0.3		11:41		X	
	571-505-0.6		11:43		X	
	571-505-0.9		11:45		X	
	571-505-1.5		11:55		X	
	571-502-0		12:00		X	
	571-502-0.3		12:02		X	
	571-502-0.6		12:04		X	
	571-502-0.9		12:05		X	
	571-502-1.5		12:06		X	
	571-115-0		12:35		X	X
	571-115-0.3		12:36		X	
	571-115-0.6		12:37		X	
	571-115-0.9		12:38		X	
	571-115-1.5		12:40		X	
	571-114-0		12:45		X	
	571-114-0.3		12:47		X	
	571-114-0.6		12:48		X	
	571-114-0.9		12:49		X	

Total # of samples: 60

Please see lab 12

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shafer/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions

See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) 7-19-02

Received by: (name/date/time) 7-19-02 3:30p

Relinquished by: (name/date/time) 7-19-02 6:40p

Received by: (name/date/time) 7-19-02 6:40p

Lab No	Sample I.D	Date	Time	Sample Container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB-25	7/19/02	15:25	P	X	
	571- 607-0		9:10		X	X
	571- 607-0.3		9:11		X	
	571- 607-0.6		9:12		X	
	571- 607-0.9		913		X	
	571- 607-1.5		9:15		X	
	571- 608-0		9:20		X	
	571- 608-0.3		9:21		X	
	571- 608-0.6		9:23		X	
	571- 608-0.9		9:24		X	
	571- 608-1.5		9:27		X	X
	571- 609-0		9:32		X	
	571- 609-0.3		9:33		X	
	571- 609-0.6		9:34		X	
	571- 609-0.9		9:36		X	
	571- ~~609-1.5~~ 610-0		9:39		X	
	571- 610-0.3		9:41		X	
	571- 610-0.6		9:42		X	
	571- 610-0.9		9:43		X	
	571- 610-1.5		9:45		X	
	571- 611-0		9:53		X	X
	571- 611-0.3		9:54		X	
	571- 611-0.6		9:57		X	
	571- 611-0.9		9:58		X	
	571- 611-1.5		9:59		X	
	571- 612-0		10:02		X	
	571- 612-0.3		10:04		X	
	571- 612-0.6		10:05		X	
	571- 612-0.9		10:08		X	
	571- 612-1.5		10:10		X	
	571- 613-0		10:14		X	X
	571- 613-0.3		10:15		X	
	571- 613-0.6		10:16		X	
	571- 613-0.9		10:17		X	
	571- 613-1.5		10:18		X	
	571- 614-0		10:22		X	
	571- 614-0.3		10:23		X	
	571- 614-0.6		10:25		X	
	571- 614-0.9		10:26		X	
	571- 614-1.5		10:28		X	X
	571- 615-0		10:35		X	
	571- 615-0.3		10:36		X	
	571- 615-0.6		10:38		X	
	571- 615-0.9		10:39		X	
	571- 616-0		10:53		X	
	571- 616-0.3		10:55		X	
	571- 616-0.6		10:56		X	
	571- 616-0.9		10:58		X	
	571- 616-1.5		11:00		X	
	571- 812-0		11:25		X	X
	571- 812-0.3		11:26		X	
	571- 812-0.6		11:27		X	
	571- 812-0.9		11:28		X	
	571- 812-1.5		11:31		X	
	571- 813-0		11:35		X	
	571- 813-0.3		11:36		X	
	571- 813-0.6		11:37		X	
	571- 813-0.9		11:38		X	
	571- 814-0		11:41		X	
	571- 814-0.3		11:42		X	

Total # of samples: 60

Please see Tab 14

Laboratory	Site	Consultant
Advanced Technology Laboratories 3275 Walnut Avenue, Signal Hill, CA 90807 Tel. (562) 989-4045 Fax (562) 989-6348	Caltrans/I-10 (605-57)/Lead Survey TO 07-117070-PX Project # 203939001	Ninyo & Moore - David Shaler/Steve Reese 475 Goddard, Suite 200, Irvine, CA 92618 Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions

See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time)	Steve Reese 7-22-02	Received by: (name/date/time)	Eddie Rodriguez 7/22/02 450p
Relinquished by: (name/date/time)	[signature] 7/22/02 600p	Received by: (name/date/time)	[signature] 7/22/02 600p

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB- 30	7/22/02	3:30	P	X	
	571- 832-0	7/22/02	9:00	B	X	X
	571- 832-0.3	↓	9:03	↓	X	
	571- 832-0.6		9:06		X	
	571- 832-0.9		9:09		X	
	571- 832-1.5		9:13		X	
	571- 834-0		9:05		X	
	571- 834-0.3		9:08		X	
	571- 834-0.6		9:13		X	
	571- 836-0		9:27		X	
	571- 836-0.3		9:30		X	X
	571- 836-0.6		9:35		X	
	571- 109-0		10:08		X	
	571- 109-0.3		10:10		X	
	571- ~~9-5~~ 110-0		9:53		X	
	571- 110-0.3		9:57		X	
	571- 110-0.6		10:02		X	
	571- 107-0		10:27		X	
	571- 107-0.3		10:30		X	
	571- 107-0.6		10:33		X	
	571- 107-0.9		10:36		X	X
	571- 106-0		10:32		X	
	571- 106-0.3		10:36		X	
	571- 106-0.6		10:40		X	
	571- 106-0.9		10:47		X	
	571- 206-0		11:21		X	
	571- 206-0.3		11:25		X	
	571- 206-0.6	↓	11:28	↓	X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	

Total # of samples: 28

Please See Tab 15

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) 7-19-02

Received by: (name/date/time) 7-19-02 3:20p

Relinquished by: (name/date/time) 7-19-02 6:40p

Received by: (name/date/time) 7-19-02 6:40pm

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB-23	7/19/02	3:07	P	X	
	571-801-0		10:08	B	X	X
	571-801-0.3		10:10		X	
	571-801-0.6		10:12		X	
	571-801-0.9		10:15		X	
	571-801-1.5		10:20		X	
	571-802-0		10:05		X	
	571-802-0.3		10:15		X	
	571-802-0.6		10:20		X	
	571-803-0		10:33		X	
	571-803-0.3		10:35		X	
	571-803-0.6		10:40		X	X
	571-804-0		10:27		X	
	571-804-0.3		10:31		X	
	571-804-0.6		10:35		X	
	571-809-0		11:04		X	
	571-809-0.3		11:09		X	
	571-810-0		11:07		X	
	571-810-0.3		11:10		X	
	571-810-0.6		11:12		X	
	571-810-0.9		11:15		X	
	571-810-1.5		11:20		X	
	571-811-0		11:26		X	X
	571-811-0.3		11:28		X	
	571-811-0.6		11:32		X	
	571-811-0.9		11:35		X	
	571-811-1.5		11:37		X	
	571-701-0		1:54		X	
	571-701-0.3		1:56		X	
	571-701-0.6		1:59		X	
	571-702-0		2:24		X	
	571-702-0.3		2:28		X	
	571-702-0.6		2:30		X	
	571-702-0.9		2:33		X	
	571-702-1.5		2:37		X	X
	571-703-0		2:05		X	
	571-703-0.3		2:07		X	
	571-703-0.6		2:10		X	
	571-704-0		14:20		X	
	571-704-0.3		14:22		X	
	571-705-0		14:04		X	
	571-706-0.3		14:06		X	
	571-706-0.6		14:09		X	
	571-707-0		13:41		X	
	571-707-0.3		13:43		X	X
	571-707-0.6		13:46		X	
	571-707-0.9		13:47		X	
	571-708-0		1:30		X	
	571-708-0.3		1:32		X	
	571-708-0.6		1:39		X	
	571-709-0		1:11		X	
	571-709-0.3		1:14		X	
	571-709-0.6		1:22		X	
	571-710-0		13:11		X	
	571-710-0.3		13:14		X	
	571-710-0.6		13:22		X	
	571-710-0.9		13:26		X	
	571-711-0		1:30		X	
	571-711-0.3		1:32		X	
	571-711-0.6		1:39		X	X

Total # of samples: (40)

Please see Tab 10

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) [signature] 7-19-02	Received by: (name/date/time) [signature] 7-19-02 3:45 P
Relinquished by: (name/date/time) [signature] 7-19-02 6:40p	Received by: (name/date/time) [signature] 7-19-02 6:40p

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB- 26	7/19/02	15:26	P	X	
	571- 814-0.6	↓	11:43	↓	X	X
	571- 814-0.9		11:45		X	
	571- 814-1.5		11:46		X	
	571- 815-0		12:00		X	
	571- 815-0.3		12:01		X	
	571- 815-0.6		12:02		X	
	571- 815-0.9		12:03		X	
	571- 815-1.5		12:04		X	
	571- 816-0		12:15		X	
	571- 816-0.3		12:16		X	
	571- 816-0.6		12:17		X	
	571- 816-0.9		12:18		X	X
	571- 816-1.5		12:19		X	
	571- 817-0		12:28		X	
	571- 817-0.3		12:29		X	
	571- 817-0.6		12:31		X	
	571- 817-0.9		12:33		X	
	571- 818-0		13:50		X	
	571- 818-0.3		13:51		X	
	571- 818-0.6		13:52		X	
	571- 818-0.9		13:53		X	X
	571- 818-1.5		13:55		X	
	571- 819-0		14:05		X	
	571- 819-0.3		14:06		X	
	571- 819-0.6		14:08		X	
	571- 819-0.9		14:10		X	
	571- 819-1.5		14:15		X	
	571- 820-0		14:30		X	
	571- 820-0.3		14:31		X	
	571- 820-0.6		14:32		X	
	571- 820-0.9		14:33		X	X
	571- 821-0		14:48		X	
	571- 821-0.3		14:50		X	
	571- 821-0.6		14:52		X	
	571- 821-0.9		14:54		X	
	571- 821-1.5		14:55		X	
	571- 713-0		2:15		X	
	571- 713-0.3		2:15		X	
	571- 713-0.6	↓	2:15	↓	X	
	~~571-~~				~~X~~	
	~~571-~~				~~X~~	
	~~571-~~				~~X~~	
	~~571-~~				~~X~~	
	~~571-~~				~~X~~	
	~~571-~~				~~X~~	
	~~571-~~				~~X~~	
	~~571-~~				~~X~~	
	~~571-~~				~~X~~	
	~~571-~~				~~X~~	
	~~571-~~				~~X~~	
	~~571-~~				~~X~~	
	~~571-~~				~~X~~	
	~~571-~~				~~X~~	
	~~571-~~				~~X~~	
	~~571-~~				~~X~~	
	~~571-~~				~~X~~	
	~~571-~~				~~X~~	
	~~571-~~				~~X~~	
	~~571-~~				~~X~~	

Total # of samples: 40

Please See Tab 17

August 15, 2002

RECEIVED

AUG 2 6 2002

NINYO & MOORE
ORANGE COUNTY OFFICE

David Shaler
Ninyo & Moore
475 Goddard Suite 200
Irvine, CA 92618
TEL: (949) 753-7070
FAX: (949) 753-7071

ELAP No.: 1838
NELAP No.: 02107CA
Workorder No.: 057949

RE: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

Attention: David Shaler

Enclosed are the results for sample(s) received on July 16, 2002 by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

J Kelley for

Eddie F. Rodriguez
Laboratory Director

This cover letter is an integral part of this analytical report.

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) [illegible] 7-16-02 | Received by: (name/date/time) [illegible] 7-16-02 4:10p

Relinquished by: (name/date/time) [illegible] 7-16-02 8:00 | Received by: (name/date/time) [illegible] 8:00pm 7/16/02

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB- 6	7/16/02	3:30	P	X	
	571- 207-0		1:17	B	X	X
	571- 207-0.3		1:19		X	
	571- 207-0.6		1:23		X	
	571- 207-0.9		1:26		X	
	571- 207-1.5		1:31		X	
	571- 208-0		1:43		X	
	571- 208-0.3		1:47		X	
	571- 208-0.6		1:52		X	
	571- 210-0		13:16		X	
	571- 210-0.3		13:20		X	
	571- 210-0.6		13:27		X	
	571- 210-0.9		13:31		X	X
	571- 210-1.5		13:35		X	
	571- 211-0		13:46		X	
	571- 211-0.3		13:50		X	
	571- 211-0.6		13:59		X	
	571- 212-0		2:45		X	
	571- 212-0.3		2:47		X	
	571- 212-0.6		2:49		X	
	571- 212-0.9		2:51		X	
	571- 213-0		14:43		X	
	571- 213-0.3		14:49		X	
	571- 213-0.6		14:54		X	X
	571- 213-0.9		14:57		X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	

Total # of samples: 25

Advanced Technology Laboratories

Date: *22-Jul-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	EB-6
Lab Order:	057949		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/16/2002 3:30:00 PM
Lab ID:	057949-001A	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	(EPA 3010A)			**EPA 6010B**		
RunID: ICP2_020718D	QC Batch: 9624					Analyst: **RQ**
Lead	ND	0.0050		mg/L	1	7/18/2002

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 7/22/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057949
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/16/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057949-002A	571-207-0	73	mg/Kg	9628	5	1	7/16/2002	7/19/2002
057949-003A	571-207-0.3	31	mg/Kg	9628	5	1	7/16/2002	7/19/2002
057949-004A	571-207-0.6	45	mg/Kg	9628	5	1	7/16/2002	7/19/2002
057949-005A	571-207-0.9	44	mg/Kg	9628	5	1	7/16/2002	7/19/2002
057949-006A	571-207-1.5	240	mg/Kg	9628	5	1	7/16/2002	7/19/2002
057949-007A	571-208-0.0	220	mg/Kg	9628	5	1	7/16/2002	7/19/2002
057949-008A	571-208-0.3	55	mg/Kg	9628	5	1	7/16/2002	7/19/2002
057949-009A	571-208-0.6	37	mg/Kg	9628	5	1	7/16/2002	7/19/2002
057949-010A	571-210-0.0	63	mg/Kg	9628	5	1	7/16/2002	7/19/2002
057949-011A	571-210-0.3	34	mg/Kg	9628	5	1	7/16/2002	7/19/2002
057949-012A	571-210-0.6	6.6	mg/Kg	9628	5	1	7/16/2002	7/19/2002

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

Advanced Technology Laboratories 3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 7/22/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057949
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/16/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057949-013A	571-210-0.9	5.3	mg/Kg	9628	5	1	7/16/2002	7/19/2002
057949-014A	571-210-1.5	ND	mg/Kg	9628	5	1	7/16/2002	7/19/2002
057949-015A	571-211-0	110	mg/Kg	9628	5	1	7/16/2002	7/19/2002
057949-016A	571-211-0.3	25	mg/Kg	9628	5	1	7/16/2002	7/19/2002
057949-017A	571-211-0.6	21	mg/Kg	9629	5	1	7/16/2002	7/22/2002
057949-018A	571-212-0	200	mg/Kg	9629	5	1	7/16/2002	7/22/2002
057949-019A	571-212-0.3	49	mg/Kg	9629	5	1	7/16/2002	7/22/2002
057949-020A	571-212-0.6	32	mg/Kg	9629	5	1	7/16/2002	7/22/2002
057949-021A	571-212-0.9	15	mg/Kg	9629	5	1	7/16/2002	7/22/2002
057949-022A	571-213-0	360	mg/Kg	9629	5	1	7/16/2002	7/22/2002
057949-023A	571-213-0.3	20	mg/Kg	9629	5	1	7/16/2002	7/22/2002

Qualifiers:

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- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/22/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057949
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/16/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057949-024A	571-213-0.6	14	mg/Kg	9629	5	1	7/16/2002	7/22/2002
057949-025A	571-213-0.9	11	mg/Kg	9629	5	1	7/16/2002	7/22/2002

Qualifiers:

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- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
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Advanced Technology Laboratories

Date: 7/22/2002

pH
EPA 9045C

CLIENT:	Ninyo & Moore	**Lab Order:**	057949
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/16/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057949-002A	571-207-0	7.36	pH Units	R19606	0.1	1	7/16/2002	7/21/2002
057949-013A	571-210-0.9	7.19	pH Units	R19606	0.1	1	7/16/2002	7/21/2002
057949-024A	571-213-0.6	8.52	pH Units	R19606	0.1	1	7/16/2002	7/21/2002

Qualifiers:

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DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interferen
H - Sample exceeded analytical holding time
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Advanced Technology Laboratories

Date: 7/29/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057949
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/16/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057949-002A	571-207-0	3.6	mg/L	9793	0.2	1	7/16/2002	7/26/2002
057949-006A	571-207-1.5	16	mg/L	9793	0.4	2	7/16/2002	7/26/2002
057949-007A	571-208-0.0	9.3	mg/L	9793	0.2	1	7/16/2002	7/26/2002
057949-008A	571-208-0.3	2.6	mg/L	9793	0.2	1	7/16/2002	7/26/2002
057949-010A	571-210-0.0	2.7	mg/L	9793	0.2	1	7/16/2002	7/26/2002
057949-015A	571-211-0	3.1	mg/L	9793	0.2	1	7/16/2002	7/26/2002
057949-018A	571-212-0	18	mg/L	9793	0.4	2	7/16/2002	7/26/2002
057949-022A	571-213-0	41	mg/L	9793	0.8	4	7/16/2002	7/26/2002

Qualifiers:

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- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 8/5/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057949
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/16/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057949-006A	571-207-1.5	ND	mg/L	9955	0.2	1	7/16/2002	8/2/2002
057949-007A	571-208-0.0	ND	mg/L	9955	0.2	1	7/16/2002	8/2/2002
057949-018A	571-212-0	ND	mg/L	9955	0.2	1	7/16/2002	8/2/2002
057949-022A	571-213-0	ND	mg/L	9955	0.2	1	7/16/2002	8/2/2002

Qualifiers:

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Advanced Technology Laboratories

Date: *13-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-207-0
Lab Order:	057949		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/16/2002 1:17:00 PM
Lab ID:	057949-002A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP2_020810C	QC Batch: 10210					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	15	2.5		mg/Kg	10	8/10/2002
Barium	100	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	10	1.5		mg/Kg	10	8/10/2002
Cobalt	10	1.5		mg/Kg	10	8/10/2002
Copper	25	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	5.0	1.5		mg/Kg	10	8/10/2002
Selenium	ND	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	50	1.5		mg/Kg	10	8/10/2002
Zinc	95	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020809B	QC Batch: 10165					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/9/2002

Qualifiers:

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H - Sample exceeded analytical holding time
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Results are wet unless otherwise specified

Advanced Technology Laboratories
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Advanced Technology Laboratories

Date: *13-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-210-0.6
Lab Order:	057949		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/16/2002 1:27:00 PM
Lab ID:	057949-012A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP2_020810C	QC Batch: 10210					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	15	2.5		mg/Kg	10	8/10/2002
Barium	190	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	20	1.5		mg/Kg	10	8/10/2002
Cobalt	15	1.5		mg/Kg	10	8/10/2002
Copper	35	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	15	1.5		mg/Kg	10	8/10/2002
Selenium	ND	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	65	1.5		mg/Kg	10	8/10/2002
Zinc	80	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020809B	QC Batch: 10165					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/9/2002

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interferen
H - Sample exceeded analytical holding time
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Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 8/15/2002

LEAD BY ATOMIC ABSORPTION
EPA 1311/ 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057949
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/16/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057949-006A	571-207-1.5	0.32	mg/L	10364	0.2	1	7/16/2002	8/15/2002
057949-018A	571-212-0	ND	mg/L	10364	0.2	1	7/16/2002	8/15/2002
057949-022A	571-213-0	0.66	mg/L	10365	0.2	1	7/16/2002	8/15/2002

Qualifiers:

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Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: *15-Aug-02*

CLIENT: Ninyo & Moore
Work Order: 057949
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10165

Sample ID: **MB-10165**	SampType: **mblk**	TestCode: **7471_S**	Units: **mg/Kg**	Prep Date: **8/7/2002**	Run ID: **AA1_020809B**
Client ID: **ZZZZZ**	Batch ID: **10165**	TestNo: **EPA 7471A**	**(EPA 7471)**	Analysis Date: **8/9/2002**	SeqNo: **316099**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: **LCS-10165**	SampType: **lcs**	TestCode: **7471_S**	Units: **mg/Kg**	Prep Date: **8/7/2002**	Run ID: **AA1_020809B**
Client ID: **ZZZZZ**	Batch ID: **10165**	TestNo: **EPA 7471A**	**(EPA 7471)**	Analysis Date: **8/9/2002**	SeqNo: **316098**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.113	0.10	2.08	0	102	80	120	0	0		

Sample ID: **057950-046AMS**	SampType: **MS**	TestCode: **7471_S**	Units: **mg/Kg**	Prep Date: **8/7/2002**	Run ID: **AA1_020809B**
Client ID: **ZZZZZ**	Batch ID: **10165**	TestNo: **EPA 7471A**	**(EPA 7471)**	Analysis Date: **8/9/2002**	SeqNo: **316096**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.995	0.10	0.83	0.03709	115	62	146	0	0		

Sample ID: **057950-046AMSD**	SampType: **MSD**	TestCode: **7471_S**	Units: **mg/Kg**	Prep Date: **8/7/2002**	Run ID: **AA1_020809B**
Client ID: **ZZZZZ**	Batch ID: **10165**	TestNo: **EPA 7471A**	**(EPA 7471)**	Analysis Date: **8/9/2002**	SeqNo: **316097**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9358	0.10	0.83	0.03709	108	62	146	0.995	6.13	33	

Sample ID: **057950-046ADUP**	SampType: **DUP**	TestCode: **7471_S**	Units: **mg/Kg**	Prep Date: **8/7/2002**	Run ID: **AA1_020809B**
Client ID: **ZZZZZ**	Batch ID: **10165**	TestNo: **EPA 7471A**	**(EPA 7471)**	Analysis Date: **8/9/2002**	SeqNo: **316095**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.04672	0.10	0	0	0	0	0	0.03709	0	30	J

Qualifiers:
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057949
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10210

Sample ID: MB-10210	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810C
Client ID: ZZZZZ	Batch ID: 10210	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316575

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.0035	0.25									J
Arsenic	0.132	0.25									J
Barium	ND	0.15									
Beryllium	0.011	0.15									J
Cadmium	0.024	0.15									J
Chromium	ND	0.15									
Cobalt	0.002	0.15									J
Copper	ND	0.15									
Molybdenum	0.0075	0.25									J
Nickel	ND	0.15									
Selenium	ND	0.25									
Silver	0.0495	0.15									J
Thallium	0.075	0.25									J
Vanadium	ND	0.15									
Zinc	0.106	0.50									J

Sample ID: LCS-10210	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810C
Client ID: ZZZZZ	Batch ID: 10210	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316576

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	46.5	0.25	50	0	93	80	120	0	0		
Arsenic	47	0.25	50	0	94	80	120	0	0		
Barium	51.5	0.15	50	0	103	80	120	0	0		
Beryllium	47.5	0.15	50	0	95	80	120	0	0		
Cadmium	46	0.15	50	0	92	80	120	0	0		
Chromium	49	0.15	50	0	98	80	120	0	0		
Cobalt	48	0.15	50	0	96	80	120	0	0		
Copper	49.5	0.15	50	0	99	80	120	0	0		
Molybdenum	48.5	0.25	50	0	97	80	120	0	0		
Nickel	46	0.15	50	0	92	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057949
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10210

Sample ID: LCS-10210	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810C
Client ID: ZZZZZ	Batch ID: 10210	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316576

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	43	0.25	50	0	86	80	120	0	0		
Silver	48.5	0.15	50	0	97	80	120	0	0		
Thallium	49	0.25	50	0	98	80	120	0	0		
Vanadium	48.5	0.15	50	0	97	80	120	0	0		
Zinc	48	0.50	50	0	96	80	120	0	0		

Sample ID: 057950-046AMS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810C
Client ID: ZZZZZ	Batch ID: 10210	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316588

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	95	2.5	125	1.245	75	32	115	0	0		
Arsenic	125	2.5	125	10	92	59	111	0	0		
Barium	215	1.5	125	100	92	34	151	0	0		
Beryllium	120	1.5	125	0	96	56	112	0	0		
Cadmium	115	1.5	125	0	92	52	120	0	0		
Chromium	130	1.5	125	5	100	56	118	0	0		
Cobalt	130	1.5	125	5	100	58	117	0	0		
Copper	135	1.5	125	15	96	58	134	0	0		
Molybdenum	115	2.5	125	0.715	91.4	56	115	0	0		
Nickel	125	1.5	125	5	96	52	120	0	0		
Selenium	115	2.5	125	0	92	46	108	0	0		
Silver	120	1.5	125	0.24	95.8	74	117	0	0		
Thallium	125	2.5	125	0.745	99.4	62	117	0	0		
Vanadium	150	1.5	125	35	92	55	122	0	0		
Zinc	160	5.0	125	45	92	43	134	0	0		

Sample ID: 057950-046AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810C
Client ID: ZZZZZ	Batch ID: 10210	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316589

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike/Surrogate outside limits due to matrix interference; DO - Surrogate diluted out; J - Analyte detected below quantitation limits; B - Analyte detected in the associated Method Blank; H - Sample exceeded holding time; R - RPD outside accepted recovery limits; **Calculations are based on raw values**

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CLIENT: Ninyo & Moore
Work Order: 057949
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10210

Sample ID: 057950-046AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810C
Client ID: ZZZZZ	Batch ID: 10210	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316589

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	100	2.5	125	1.245	79	32	115	95	5.13	20	
Arsenic	135	2.5	125	10	100	59	111	125	7.69	20	
Barium	240	1.5	125	100	112	34	151	215	11.0	20	
Beryllium	130	1.5	125	0	104	56	112	120	8.00	20	
Cadmium	125	1.5	125	0	100	52	120	115	8.33	20	
Chromium	140	1.5	125	5	108	56	118	130	7.41	20	
Cobalt	135	1.5	125	5	104	58	117	130	3.77	20	
Copper	150	1.5	125	15	108	58	134	135	10.5	20	
Molybdenum	125	2.5	125	0.715	99.4	56	115	115	8.33	20	
Nickel	135	1.5	125	5	104	52	120	125	7.69	20	
Selenium	125	2.5	125	0	100	46	108	115	8.33	20	
Silver	130	1.5	125	0.24	104	74	117	120	8.00	20	
Thallium	135	2.5	125	0.745	107	62	117	125	7.69	20	
Vanadium	165	1.5	125	35	104	55	122	150	9.52	20	
Zinc	180	5.0	125	45	108	43	134	160	11.8	20	

Sample ID: 057950-046ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810C
Client ID: ZZZZZ	Batch ID: 10210	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316587

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.56	2.5	0	0	0	0	0	1.245	0	30	J
Arsenic	5	2.5	0	0	0	0	0	10	66.7	30	R
Barium	95	1.5	0	0	0	0	0	100	5.13	30	
Beryllium	ND	1.5	0	0	0	0	0	0	0	30	
Cadmium	ND	1.5	0	0	0	0	0	0	0	30	
Chromium	5	1.5	0	0	0	0	0	5	0	30	
Cobalt	5	1.5	0	0	0	0	0	5	0	30	
Copper	10	1.5	0	0	0	0	0	15	40.0	30	R
Molybdenum	0.095	2.5	0	0	0	0	0	0.715	0	30	J
Nickel	5	1.5	0	0	0	0	0	5	0	30	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike/Surrogate outside limits due to matrix interference; DO - Surrogate diluted out
J - Analyte detected below quantitation limits; B - Analyte detected in the associated Method Blank; H - Sample exceeded holding time
R - RPD outside accepted recovery limits

Calculations are based on raw values

Advanced Technology Laboratories
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CLIENT: Ninyo & Moore
Work Order: 057949
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10210

Sample ID: **057950-046ADUP** SampType: **DUP** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **8/8/2002** Run ID: **ICP2_020810C**
Client ID: **ZZZZZ** Batch ID: **10210** TestNo: **EPA 6010B** **(EPA 3050A)** Analysis Date: **8/10/2002** SeqNo: **316587**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	ND	2.5	0	0	0	0	0	0	0	30	
Silver	0.275	1.5	0	0	0	0	0	0.24	0	30	J
Thallium	1.28	2.5	0	0	0	0	0	0.745	0	30	J
Vanadium	30	1.5	0	0	0	0	0	35	15.4	30	
Zinc	40	5.0	0	0	0	0	0	45	11.8	30	

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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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Work Order: 057949
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10364

Sample ID: MB-10364	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814X
Client ID: ZZZZZ	Batch ID: 10364	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319048

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10273-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814X
Client ID: ZZZZZ	Batch ID: 10364	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319049

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10364	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814X
Client ID: ZZZZZ	Batch ID: 10364	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319062

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.006	0.20	1	0	101	80	120	0	0		

Sample ID: 057949-018AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814X
Client ID: 571-212-0	Batch ID: 10364	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319060

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.015	0.20	2.841	0.1438	101	80	120	0	0		

Sample ID: 057949-018ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814X
Client ID: 571-212-0	Batch ID: 10364	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319059

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.2938	0.20	0	0	0	0	0	0.1438	68.5	30	R

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CLIENT: Ninyo & Moore
Work Order: 057949
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10365

Sample ID: MB-10365	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814Y
Client ID: ZZZZZ	Batch ID: 10365	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319063

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10274-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814Y
Client ID: ZZZZZ	Batch ID: 10365	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319064

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10365	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814Y
Client ID: ZZZZZ	Batch ID: 10365	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319078

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.189	0.20	1	0	119	80	120	0	0		

Sample ID: 057976-009AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814Y
Client ID: ZZZZZ	Batch ID: 10365	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319076

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.274	0.20	2.5	1.259	121	80	120	0	0		S

Sample ID: 057976-009ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814Y
Client ID: ZZZZZ	Batch ID: 10365	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319075

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.193	0.20	0	0	0	0	0	1.259	5.35	30	

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Calculations are based on raw values
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CLIENT: Ninyo & Moore
Work Order: 057949
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9624

Sample ID: MB-9624	SampType: MBLK	TestCode: 6010_W	Units: mg/L	Prep Date: 7/17/2002	Run ID: ICP2_020718F
Client ID: ZZZZZ	Batch ID: 9624	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/18/2002	SeqNo: 301310

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0	0.0050									
Arsenic	0	0.0050									
Barium	0	0.0030									
Beryllium	0	0.0030									
Cadmium	0	0.0030									
Chromium	0	0.0030									
Cobalt	0	0.0030									
Copper	0	0.0030									
Lead	0	0.0050									
Molybdenum	0	0.0050									
Nickel	0	0.0030									
Selenium	0	0.0050									
Silver	0	0.0030									
Thallium	0	0.0050									
Vanadium	0	0.0030									
Zinc	0	0.010									

Sample ID: LCS-9624	SampType: LCS	TestCode: 6010_W	Units: mg/L	Prep Date: 7/17/2002	Run ID: ICP2_020718F
Client ID: ZZZZZ	Batch ID: 9624	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/18/2002	SeqNo: 301311

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	1.07	0.0050	1	0	107	80	120	0	0		
Arsenic	1.1	0.0050	1	0	110	80	120	0	0		
Barium	1.07	0.0030	1	0	107	80	120	0	0		
Beryllium	1.08	0.0030	1	0	108	80	120	0	0		
Cadmium	1.03	0.0030	1	0	103	80	120	0	0		
Chromium	1.06	0.0030	1	0	106	80	120	0	0		
Cobalt	1.03	0.0030	1	0	103	80	120	0	0		
Copper	1.04	0.0030	1	0	104	80	120	0	0		
Lead	1.03	0.0050	1	0	103	80	120	0	0		

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DO - Surrogate diluted out
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Calculations are based on raw values

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CLIENT: Ninyo & Moore
Work Order: 057949
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9624

Sample ID: LCS-9624	SampType: LCS	TestCode: 6010_W	Units: mg/L	Prep Date: 7/17/2002	Run ID: ICP2_020718F
Client ID: ZZZZZ	Batch ID: 9624	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/18/2002	SeqNo: 301311

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	1.08	0.0050	1	0	108	80	120	0	0		
Nickel	1.01	0.0030	1	0	101	80	120	0	0		
Selenium	1.06	0.0050	1	0	106	80	120	0	0		
Silver	1.05	0.0030	1	0	105	80	120	0	0		
Thallium	1.07	0.0050	1	0	107	80	120	0	0		
Vanadium	1.1	0.0030	1	0	110	80	120	0	0		
Zinc	1.03	0.010	1	0	103	80	120	0	0		

Sample ID: 057952-059AMS	SampType: MS	TestCode: 6010_W	Units: mg/L	Prep Date: 7/17/2002	Run ID: ICP2_020718F
Client ID: ZZZZZ	Batch ID: 9624	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/18/2002	SeqNo: 301314

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.57	0.0050	2.5	0	103	69	116	0	0		
Arsenic	2.55	0.0050	2.5	0	102	67	114	0	0		
Barium	2.58	0.0030	2.5	0.00284	103	63	125	0	0		
Beryllium	2.6	0.0030	2.5	0	104	60	117	0	0		
Cadmium	2.47	0.0030	2.5	0	98.8	63	123	0	0		
Chromium	2.58	0.0030	2.5	0	103	68	118	0	0		
Cobalt	2.5	0.0030	2.5	0	100	68	118	0	0		
Copper	2.63	0.0030	2.5	0	105	72	123	0	0		
Lead	2.43	0.0050	2.5	0	97.2	66	118	0	0		
Molybdenum	2.59	0.0050	2.5	0	104	65	111	0	0		
Nickel	2.5	0.0030	2.5	0	100	64	121	0	0		
Selenium	2.56	0.0050	2.5	0	102	62	109	0	0		
Silver	2.55	0.0030	2.5	0	102	71	137	0	0		
Thallium	2.53	0.0050	2.5	0	101	67	122	0	0		
Vanadium	2.61	0.0030	2.5	0.00103	104	69	118	0	0		
Zinc	2.48	0.010	2.5	0.00746	98.9	65	112	0	0		

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Calculations are based on raw values
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Work Order: 057949
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9624

Sample ID: 057952-059AMSD	SampType: MSD	TestCode: 6010_W	Units: mg/L	Prep Date: 7/17/2002	Run ID: ICP2_020718F
Client ID: ZZZZZ	Batch ID: 9624	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/18/2002	SeqNo: 301315

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.36	0.0050	2.5	0	94.4	69	116	2.57	8.52	20	
Arsenic	2.35	0.0050	2.5	0	94	67	114	2.55	8.16	20	
Barium	2.36	0.0030	2.5	0.00284	94.3	63	125	2.58	8.91	20	
Beryllium	2.38	0.0030	2.5	0	95.2	60	117	2.6	8.84	20	
Cadmium	2.26	0.0030	2.5	0	90.4	63	123	2.47	8.88	20	
Chromium	2.35	0.0030	2.5	0	94	68	118	2.58	9.33	20	
Cobalt	2.29	0.0030	2.5	0	91.6	68	118	2.5	8.77	20	
Copper	2.4	0.0030	2.5	0	96	72	123	2.63	9.15	20	
Lead	2.22	0.0050	2.5	0	88.8	66	118	2.43	9.03	20	
Molybdenum	2.37	0.0050	2.5	0	94.8	65	111	2.59	8.87	20	
Nickel	2.27	0.0030	2.5	0	90.8	64	121	2.5	9.64	20	
Selenium	2.36	0.0050	2.5	0	94.4	62	109	2.56	8.13	20	
Silver	2.33	0.0030	2.5	0	93.2	71	137	2.55	9.02	20	
Thallium	2.34	0.0050	2.5	0	93.6	67	122	2.53	7.80	20	
Vanadium	2.39	0.0030	2.5	0.00103	95.6	69	118	2.61	8.80	20	
Zinc	2.27	0.010	2.5	0.00746	90.5	65	112	2.48	8.84	20	

Sample ID: MB-9624	SampType: MBLK	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/17/2002	Run ID: ICP2_020718D
Client ID: ZZZZZ	Batch ID: 9624	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/18/2002	SeqNo: 301266

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050									

Sample ID: LCS-9624	SampType: LCS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/17/2002	Run ID: ICP2_020718D
Client ID: ZZZZZ	Batch ID: 9624	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/18/2002	SeqNo: 301267

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.03	0.0050	1	0	103	80	120	0	0		

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 057949
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9624

Sample ID: 057952-059AMS	SampType: MS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/17/2002	Run ID: ICP2_020718D
Client ID: ZZZZZ	Batch ID: 9624	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/18/2002	SeqNo: 301275

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.43	0.0050	2.5	0	97.2	66	118	0	0		

Sample ID: 057952-059ADUP	SampType: DUP	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/17/2002	Run ID: ICP2_020718D
Client ID: ZZZZZ	Batch ID: 9624	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/18/2002	SeqNo: 301274

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050	0	0	0	0	0	0	0	30	

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Calculations are based on raw values
DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 057949
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9628

Sample ID: MB-9628A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/18/2002	Run ID: ICP5_020719I
Client ID: ZZZZZ	Batch ID: 9628	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/19/2002	SeqNo: 302237

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9628B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/18/2002	Run ID: ICP5_020719I
Client ID: ZZZZZ	Batch ID: 9628	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/19/2002	SeqNo: 302238

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9628	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/18/2002	Run ID: ICP5_020719I
Client ID: ZZZZZ	Batch ID: 9628	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/19/2002	SeqNo: 302236

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	239.5	5.0	250	0	95.8	80	120	0	0		

Sample ID: 057949-006AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/18/2002	Run ID: ICP5_020719I
Client ID: 571-207-1.5	Batch ID: 9628	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/19/2002	SeqNo: 302221

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	493.5	5.0	250	237.8	102	47	128	0	0		

Sample ID: 057949-016AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/18/2002	Run ID: ICP5_020719I
Client ID: 571-211-0.3	Batch ID: 9628	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/19/2002	SeqNo: 302233

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	174.5	5.0	250	25.48	59.6	47	128	0	0		

Qualifiers:
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DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 057949
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9628

Sample ID: 057949-006ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/18/2002	Run ID: ICP5_020719I
Client ID: 571-207-1.5	Batch ID: 9628	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/19/2002	SeqNo: 302220

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	246.4	5.0	0	0	0	0	0	237.8	3.52	30	

Sample ID: 057949-016ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/18/2002	Run ID: ICP5_020719I
Client ID: 571-211-0.3	Batch ID: 9628	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/19/2002	SeqNo: 302232

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	19.58	5.0	0	0	0	0	0	25.48	26.2	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057949
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9629

Sample ID: MB-9629A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/18/2002	Run ID: ICP5_020722B
Client ID: ZZZZZ	Batch ID: 9629	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 302915

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9629B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/18/2002	Run ID: ICP5_020722B
Client ID: ZZZZZ	Batch ID: 9629	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 302916

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9629	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/18/2002	Run ID: ICP5_020722B
Client ID: ZZZZZ	Batch ID: 9629	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 302914

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	209.7	5.0	250	0	83.9	80	120	0	0		

Sample ID: 057950-002AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/18/2002	Run ID: ICP5_020722B
Client ID: ZZZZZ	Batch ID: 9629	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 302899

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	356.8	5.0	250	161.7	78	47	128	0	0		

Sample ID: 057950-012AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/18/2002	Run ID: ICP5_020722B
Client ID: ZZZZZ	Batch ID: 9629	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 302911

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	148.6	5.0	250	9.291	55.7	47	128	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057949
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9629

Sample ID: 057950-002ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/18/2002	Run ID: ICP5_020722B
Client ID: ZZZZZ	Batch ID: 9629	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 302898

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	159.2	5.0	0	0	0	0	0	161.7	1.59	30	

Sample ID: 057950-012ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/18/2002	Run ID: ICP5_020722B
Client ID: ZZZZZ	Batch ID: 9629	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 302910

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	12.21	5.0	0	0	0	0	0	9.291	27.2	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
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Calculations are based on raw values
DO - Surrogate diluted out
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Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057949
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9793

Sample ID: MB-9793	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020726G
Client ID: ZZZZZ	Batch ID: 9793	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/26/2002	SeqNo: 307077

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9793A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/23/2002	Run ID: AA2_020726G
Client ID: ZZZZZ	Batch ID: 9793	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/26/2002	SeqNo: 307078

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.09485	0.20									

Sample ID: MB-9793B	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/23/2002	Run ID: AA2_020726G
Client ID: ZZZZZ	Batch ID: 9793	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/26/2002	SeqNo: 307089

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9793	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020726G
Client ID: ZZZZZ	Batch ID: 9793	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/26/2002	SeqNo: 307105

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.434	0.20	7.5	0	99.1	80	120	0	0		

Sample ID: 057949-022AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020726G
Client ID: 571-213-0	Batch ID: 9793	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/26/2002	SeqNo: 307088

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	82.09	1.6	40	40.73	103	80	120	0	0		

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057949
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9793

Sample ID: 057950-036AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020726G
Client ID: ZZZZZ	Batch ID: 9793	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/26/2002	SeqNo: 307103

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.423	0.20	5	3.156	85.3	80	120	0	0		

Sample ID: 057949-022ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/23/2002	Run ID: AA2_020726G
Client ID: 571-213-0	Batch ID: 9793	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/26/2002	SeqNo: 307087

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	49.38	1.6	0	0	0	0	0	40.73	19.2	30	

Sample ID: 057950-036ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/23/2002	Run ID: AA2_020726G
Client ID: ZZZZZ	Batch ID: 9793	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/26/2002	SeqNo: 307102

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.444	0.20	0	0	0	0	0	3.156	74.4	30	R

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057949
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9955

Sample ID: MB-9955	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802J
Client ID: ZZZZZ	Batch ID: 9955	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312424

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.08662	0.20									

Sample ID: MB-9955A	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020802J
Client ID: ZZZZZ	Batch ID: 9955	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312425

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.09847	0.20									

Sample ID: MB-9955B	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020802J
Client ID: ZZZZZ	Batch ID: 9955	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312438

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9955	SampType: LCS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802J
Client ID: ZZZZZ	Batch ID: 9955	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312452

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.203	0.20	7.5	0	96	80	120	0	0		

Sample ID: 057949-022AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802J
Client ID: 571-213-0	Batch ID: 9955	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312437

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.286	0.20	5	0.1897	102	80	120	0	0		

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057949
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9955

Sample ID: 057950-038AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802J
Client ID: ZZZZZ	Batch ID: 9955	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312450

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.064	0.20	5	0	101	80	120	0	0		

Sample ID: 057949-022ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020802J
Client ID: 571-213-0	Batch ID: 9955	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312436

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.2015	0.20	0	0	0	0	0	0.1897	6.02	30	

Sample ID: 057950-038ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020802J
Client ID: ZZZZZ	Batch ID: 9955	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312449

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0	30	

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057949
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: R19606

Sample ID: 057950-044A-DUP	SampType: DUP	TestCode: 9045_S	Units: pH Units	Prep Date: 7/21/2002	Run ID: WETCHEM_020721B
Client ID: ZZZZZ	Batch ID: R19606	TestNo: EPA 9045C		Analysis Date: 7/21/2002	SeqNo: 302547

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	8.102	0.10	0	0	0	0	0	8.005	1.20	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Tuesday, August 06, 2002 3:46 PM
To: 'Rachelle'; 'David Shaler (E-mail)'
Subject: Title 22 Metals

Title 22 Metals.xls

Rachelle,
Please run the following samples for Title 22 Metals. Please do not list
Pb in your emailed results. There should be a total of 120 samples to be
run.
Thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

569-102-0.9	570-101-0	571-101-0.9
569-112-0	570-101-0.6	571-104-0
569-201-0	570-201-0	571-201-0.6
569-206-0.6	570-205-0.9	571-108-1.5
569-106-1.5	570-106-0.3	571-111-0.3
569-212-0	570-208-1.5	571-207-0
569-401-0.6	570-111-0.6	571-210-0.6
569-301-0	570-214-0	571-115-0.9
569-303-0.9	570-115-0.3	571-214-0.3
569-404-0.6	570-119-0.9	571-120-0
569-408-0.9	570-224-0.6	571-217-1.5
569-314-0	570-401-0	571-220-0.6
569-313-0.3	570-401-0.3	571-301-0.3
569-502-0.6	570-304-1.5	571-405-0
569-602-1.5	570-307-0.9	571-306-0.9
569-607-0.3	570-311-0.6	571-407-0
569-607-0	570-312-0.6	571-310-0.9
569-508-0.9	570-316-0.3	571-315-0.3
569-511-0.6	570-601-0	571-412-1.5
569-612-1.5	570-505-1.5	571-317-0
569-516-0	570-508-0	571-320-0.6
569-801-0.3	570-610-0.6	571-416-0.9
569-519-0.6	570-511-0.9	571-325-0.3
569-803-0.9	570-615-0	571-421-1.5
569-705-0	570-514-0.3	571-425-0
569-806-1.5	570-517-0	571-501-0.6
569-708-0.3	570-618-0.6	571-503-0.9
569-711-0	570-621-1.5	571-603-0.3
569-811-0	570-703-0.9	571-507-0
	570-804-0	571-609-0
	570-706-0	571-510-1.5
	570-709-0	571-611-0
	570-808-0.6	571-514-0
	570-711-1.5	571-614-0.3
	570-812-0.3	571-517-0.9
		571-617-0.6
		571-520-1.5
		571-621-0.3
		571-524-0
		571-624-0.9
		571-529-0.3
		571-628-0.6
		571-703-1.5
		571-707-0
		571-804-0.9
		571-809-0.3
		571-711-0
		571-712-0
		571-814-0.3
		571-818-0.6
		571-819-0
		571-827-1.5

571-832-0.9
571-836-0.3
571-837-0.6
571-842-0

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Thursday, August 08, 2002 9:14 AM
To: 'Rachelle'
Subject: TCLP Analysis

TCLP-3.xls

In addition to the 90 TCLP already run please run the following samples for
TCLP. There should be a list of 350 samples.
Thanks for a the hard work and timely results.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

-----Original Message-----
From: Rachelle [SMTP:Rachelle@ATLGlobal.com]
Sent: Wednesday, August 07, 2002 5:02 PM
To: 'David Shaler (E-mail)'
Cc: 'Ruth Cheung (E-mail)'
Subject: TCLP Results

<<57931TCLP.xls>> <<58001TCLP.xls>> <<58021TCLP.xls>> <<58022TCLP.xls>>
<<58023TCLP.xls>> <<58024TCLP.xls>> <<58049TCLP.xls>> <<58050TCLP.xls>>
<<58052TCLP.xls>> <<58053TCLP.xls>> <<58065TCLP.xls>> <<58066TCLP.xls>>
<<58067TCLP.xls>> <<58068TCLP.xls>> <<58069TCLP.xls>>

Rachelle Arada
Project Coordinator
www.atlglobal.com
voice: 562.989.4045 ext 237
fax : 562.989.4040

<< File: 57931TCLP.xls >> << File: 58001TCLP.xls >> << File: 58021TCLP.xls >> << File: 58022TCLP.xls >> << File: 58023TCLP.xls >> << File: 58024TCLP.xls >> << File: 58049TCLP.xls >> << File: 58050TCLP.xls >> << File: 58052TCLP.xls >> << File: 58053TCLP.xls >> << File: 58065TCLP.xls >> << File: 58066TCLP.xls >> << File: 58067TCLP.xls >> << File: 58068TCLP.xls >> << File: 58069TCLP.xls >>

569-404-0	2. STLC	170	570-515-0.3	2. STLC	120	571-521-0	2. STLC	230
569-402-0	2. STLC	130	570-811-0	2. STLC	110	571-324-0.9	2. STLC	110
569-406-0	2. STLC	120	570-114-0.0	2. STLC	110	571-818-0	2. STLC	110
569-515-0	2. STLC	110	570-504-0.6	2. STLC	100	571-819-0.6	2. STLC	110
569-611-0	2. STLC	100	570-811-1.5	2. STLC	90	571-708-0	2. STLC	110
569-409-0	2. STLC	94	570-615-0.6	2. STLC	84	571-103-0.6	2. STLC	110
569-603-0	2. STLC	93	570-305-0	2. STLC	79	571-617-0.3	2. STLC	100
569-104-0.6	2. STLC	91	570-314-0.6	2. STLC	76	571-611-0.6	2. STLC	92
569-807-0	2. STLC	86	570-505-0.6	2. STLC	75	571-712-0.9	2. STLC	81
569-608-0	2. STLC	86	570-208-0.6	2. STLC	74	571-105-0.6	2. STLC	81
569-501-0	2. STLC	84	570-116-0.0	2. STLC	73	571-313-0	2. STLC	79
569-710-0.3	2. STLC	83	570-102-0	2. STLC	65	571-508-0	2. STLC	73
569-808-0	2. STLC	83	570-804-0.6	2. STLC	64	571-518-0.3	2. STLC	73
569-609-0.6	2. STLC	80	570-704-0	2. STLC	63	571-217-0	2. STLC	68
569-803-0	2. STLC	79	570-508-0.6	2. STLC	60	571-516-0	2. STLC	66
569-105-0	2. STLC	78	570-706-0.3	2. STLC	60	571-701-0.3	2. STLC	66
569-512-0	2. STLC	77	570-303-0	2. STLC	58	571-710-0.6	2. STLC	65
569-513-0	2. STLC	77	570-311-1.5	2. STLC	58	571-512-0	2. STLC	64
569-302-0	2. STLC	74	570-117-0.0	2. STLC	58	571-308-0.9	2. STLC	61
569-805-0	2. STLC	73	570-208-0.3	2. STLC	58	571-701-0	2. STLC	61
569-517-0	2. STLC	71	570-709-0.6	2. STLC	57	571-514-0.3	2. STLC	59
569-704-0.3	2. STLC	71	570-703-0	2. STLC	55	571-415-0	2. STLC	58
569-703-0.6	2. STLC	70	570-206-0	2. STLC	54	571-616-0.6	2. STLC	57
569-514-0.3	2. STLC	70	570-301-0	2. STLC	53	571-517-0	2. STLC	56
569-803-0.3	2. STLC	69	570-603-0.3	2. STLC	46	571-112-0.9	2. STLC	56
569-409-0.6	2. STLC	69	570-711-0.6	2. STLC	46	571-214-0	2. STLC	55
569-411-0	2. STLC	68	570-206-0.3	2. STLC	45	571-415-0.3	2. STLC	55
569-102-0.6	2. STLC	68	570-103-0	2. STLC	44	571-405-0.6	2. STLC	55
569-809-0	2. STLC	65	570-602-0	2. STLC	41	571-530-0	2. STLC	55
569-605-0	2. STLC	65	570-209-0	2. STLC	40	571-831-0	2. STLC	53
569-711-0.6	2. STLC	62	570-210-0	2. STLC	40	571-709-0	2. STLC	53
569-806-0	2. STLC	60	570-117-0.3	2. STLC	39	571-103-0.0	2. STLC	52
569-802-0.3	2. STLC	60	570-103-0.6	2. STLC	37	571-312-0	2. STLC	51
569-410-0	2. STLC	59	570-110-0.6	2. STLC	37	571-526-0	2. STLC	51
569-501-0.6	2. STLC	59	570-805-0.9	2. STLC	36	571-819-1.5	2. STLC	51
569-808-0.3	2. STLC	58	570-112-1.5	2. STLC	35	571-515-0	2. STLC	50
569-104-0	2. STLC	56	570-614-0	2. STLC	34	571-833-0	2. STLC	49
569-804-0	2. STLC	54	570-713-0.3	2. STLC	33	571-815-0.6	2. STLC	47
569-610-0	2. STLC	54	570-513-0	2. STLC	32	571-517-0.3	2. STLC	46
569-608-0.3	2. STLC	53	570-312-0.3	2. STLC	31	571-610-0	2. STLC	46
569-213-0	2. STLC	49	570-503-0.6	2. STLC	31	571-413-0	2. STLC	46
569-701-0	2. STLC	47	570-510-0.6	2. STLC	31	571-815-0	2. STLC	45
569-311-0	2. STLC	47	570-202-0	2. STLC	31	571-514-0.9	2. STLC	44
569-609-0.9	2. STLC	46	570-207-0	2. STLC	31	571-505-1.5	2. STLC	44
569-513-0.3	2. STLC	45	570-209-0.3	2. STLC	31	571-528-0	2. STLC	44
569-801-0.6	2. STLC	44	570-703-0.3	2. STLC	30	571-610-0.6	2. STLC	43
569-514-0	2. STLC	42	570-401-0	2. STLC	30	571-629-0	2. STLC	43
569-805-0.6	2. STLC	42	570-610-0.9	2. STLC	29	571-604-0	2. STLC	42
569-408-1.5	2. STLC	42	570-809-0.6	2. STLC	29	571-213-0	2. STLC	41
569-807-0.3	2. STLC	40	570-509-0.9	2. STLC	29	571-812-0	2. STLC	41
569-204-0	2. STLC	40	570-210-0.6	2. STLC	29	571-706-0	2. STLC	41
569-517-0.3	2. STLC	36	570-211-0	2. STLC	29	571-530-0.6	2. STLC	41
569-518-0	2. STLC	36	570-603-0	2. STLC	28	571-305-0	2. STLC	40
569-806-0.3	2. STLC	36	570-119-0	2. STLC	28	571-523-0.3	2. STLC	39
569-705-1.5	2. STLC	35	570-713-0.6	2. STLC	28	571-510-0	2. STLC	39
569-303-0.6	2. STLC	34	570-108-0	2. STLC	27	571-305-0.9	2. STLC	39
569-516-0.3	2. STLC	33	570-708-0.6	2. STLC	27	571-818-1.5	2. STLC	39
569-705-0.6	2. STLC	33	570-224-0	2. STLC	26	571-703-0	2. STLC	38
569-802-0	2. STLC	33	570-601-0	2. STLC	26	571-520-0.3	2. STLC	36
569-515-0.6	2. STLC	32	570-710-0.6	2. STLC	26	571-216-0	2. STLC	34
569-704-0	2. STLC	32	570-614-0.6	2. STLC	26	571-827-0	2. STLC	34
569-401-0.3	2. STLC	32	570-118-0.3	2. STLC	26	571-708-0.3	2. STLC	34
569-207-0	2. STLC	32	570-304-0	2. STLC	25	571-514-0.6	2. STLC	33
569-608-0.6	2. STLC	31	570-707-0.6	2. STLC	25	571-528-1.5	2. STLC	33
569-104-0.3	2. STLC	31	570-510-0	2. STLC	25	571-803-0	2. STLC	33
569-201-0.6	2. STLC	30	570-110-0	2. STLC	24	571-414-0.3	2. STLC	33
569-515-0.3	2. STLC	28	570-223-0	2. STLC	24	571-813-0.3	2. STLC	32
569-212-0.6	2. STLC	28	570-117-0.6	2. STLC	24	571-523-0	2. STLC	31
569-103-0	2. STLC	28	570-616-0	2. STLC	23	571-326-0	2. STLC	31
569-313-0	2. STLC	27	570-704-0.3	2. STLC	22	571-502-0.6	2. STLC	31
569-103-0.3	2. STLC	26	570-513-0.6	2. STLC	22	571-624-1.5	2. STLC	31
569-705-0.9	2. STLC	25	570-221-0.0	2. STLC	22	571-330-0	2. STLC	31
569-707-0.3	2. STLC	25	570-617-0	2. STLC	21	571-512-0.3	2. STLC	30
569-515-1.5	2. STLC	24	570-214-0.3	2. STLC	21	571-521-0.6	2. STLC	29
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569-801-0	2. STLC	24	570-313-0.6	2. STLC	19	571-814-0.6	2. STLC	28
569-402-0.6	2. STLC	24	570-207-0.6	2. STLC	19	571-616-1.5	2. STLC	28
569-516-0.6	2. STLC	22	570-120-0.9	2. STLC	18	571-835-0	2. STLC	28
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569-106-0	2. STLC	22	570-102-0.9	2. STLC	17	571-101-0.6	2. STLC	28
569-106-0.3	2. STLC	22	570-216-0	2. STLC	17	571-112-0	2. STLC	28
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569-805-1.5	2. STLC	21	570-304-0.3	2. STLC	17	571-622-0	2. STLC	27
569-205-0	2. STLC	20	570-409-0	2. STLC	17	571-607-0.6	2. STLC	27
569-707-0	2. STLC	19	570-713-0	2. STLC	17	571-609-0.6	2. STLC	27

569-709-0	2. STLC	19
569-202-0.3	2. STLC	19
569-602-0	2. STLC	19
569-207-0.3	2. STLC	19
569-706-0.3	2. STLC	17
569-807-0.9	2. STLC	17
569-104-0.9	2. STLC	17
569-505-0.6	2. STLC	17
569-704-0.6	2. STLC	16
569-808-0.6	2. STLC	16
569-212-0.3	2. STLC	16
569-612-0	2. STLC	16
569-704-1.5	2. STLC	15
569-411-0.3	2. STLC	15
569-113-0	2. STLC	15
569-807-0.6	2. STLC	14
569-311-0.3	2. STLC	12
569-312-0	2. STLC	10
569-311-0.9	2. STLC	8.3

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570-401-0.3	2. STLC	17
570-616-0.6	2. STLC	17
570-308-0	2. STLC	16
570-807-0.9	2. STLC	16
570-701-0.6	2. STLC	16
570-617-0.3	2. STLC	16
570-107-0.6	2. STLC	15
570-811-0.6	2. STLC	15
570-707-0	2. STLC	15
570-518-0	2. STLC	15
570-111-0.0	2. STLC	15
570-109-0.6	2. STLC	14
570-401-0.9	2. STLC	4.1
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570-409-0.3	2. STLC	3
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570-401-1.5		0
570-408-0.6		0
570-408-1.5		0

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571-837-0.3	2. STLC	27
571-520-0	2. STLC	26
571-516-0.3	2. STLC	26
571-420-0	2. STLC	26
571-102-0.6	2. STLC	26
571-517-1.5	2. STLC	25
571-513-0.6	2. STLC	25
571-623-0.6	2. STLC	25
571-112-0.3	2. STLC	25
571-326-0.6	2. STLC	24
571-619-0.3	2. STLC	24
571-619-0.9	2. STLC	24
571-528-0.3	2. STLC	24
571-706-0.6	2. STLC	24
571-112-0.6	2. STLC	24
571-327-0.6	2. STLC	23
571-817-0	2. STLC	23
571-425-0.6	2. STLC	22
571-118-0	2. STLC	22
571-829-0	2. STLC	22
571-828-0	2. STLC	22
571-122-0	2. STLC	21
571-101-1.5	2. STLC	21
571-530-0.3	2. STLC	21
571-406-0.6	2. STLC	20
571-517-0.6	2. STLC	20
571-835-0.3	2. STLC	20
571-501-0	2. STLC	20
571-518-0.9	2. STLC	19
571-510-0.3	2. STLC	19
571-814-0.9	2. STLC	19
571-522-0.6	2. STLC	19
571-622-1.5	2. STLC	19
571-812-0.6	2. STLC	19
571-701-0.6	2. STLC	19
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571-212-0	2. STLC	18
571-839-0.6	2. STLC	18
571-610-1.5	2. STLC	18
571-709-0.3	2. STLC	18
571-311-0.6	2. STLC	17
571-620-0	2. STLC	17
571-109-0	2. STLC	17
571-704-0.3	2. STLC	17
571-207-1.5	2. STLC	16
571-203-0	2. STLC	16
571-616-0.3	2. STLC	16
571-317-0.3	2. STLC	16
571-629-0.3	2. STLC	16
571-416-0	2. STLC	15
571-419-0	2. STLC	15
571-526-0.3	2. STLC	15
571-619-0	2. STLC	15
571-606-0	2. STLC	15
571-115-0.6	2. STLC	14
571-202-0.9	2. STLC	11

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tblTEMP

WorkOrder	ClientSampID	TestNo	Analyte	PQL	DF	CollectionDate	AnalDate	PrepDate
057949	571-207-0	EPA 6010B	Antimony	2.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-207-0	EPA 6010B	Arsenic	2.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-207-0	EPA 6010B	Barium	1.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-207-0	EPA 6010B	Beryllium	1.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-207-0	EPA 6010B	Cadmium	1.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-207-0	EPA 6010B	Chromium	1.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-207-0	EPA 6010B	Cobalt	1.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-207-0	EPA 6010B	Copper	1.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-207-0	EPA 6010B	Lead	5	1	7/16/2002	7/19/2002	7/18/2002
057949	571-207-0	EPA 6010B	Molybdenum	2.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-207-0	EPA 6010B	Nickel	1.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-207-0	EPA 6010B	Selenium	2.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-207-0	EPA 6010B	Silver	1.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-207-0	EPA 6010B	Thallium	2.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-207-0	EPA 6010B	Vanadium	1.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-207-0	EPA 6010B	Zinc	5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-207-0	EPA 7471A	Mercury	0.1	1	7/16/2002	8/9/2002	8/7/2002
057949	571-207-0	EPA 9045C	pH	0.1	1	7/16/2002	7/21/2002	7/21/2002
057949	571-207-0	WET/ EPA 7420	Lead	0.2	1	7/16/2002	7/26/2002	7/23/2002
057949	571-207-0.3	EPA 6010B	Lead	5	1	7/16/2002	7/19/2002	7/18/2002
057949	571-207-0.6	EPA 6010B	Lead	5	1	7/16/2002	7/19/2002	7/18/2002
057949	571-207-0.9	EPA 6010B	Lead	5	1	7/16/2002	7/19/2002	7/18/2002
057949	571-207-1.5	EPA 1311/ 7420	Lead	0.2	1	7/16/2002	8/15/2002	8/14/2002
057949	571-207-1.5	EPA 6010B	Lead	5	1	7/16/2002	7/19/2002	7/18/2002
057949	571-207-1.5	WET DI/ EPA 7420	Lead	0.2	1	7/16/2002	8/2/2002	7/30/2002
057949	571-207-1.5	WET/ EPA 7420	Lead	0.4	2	7/16/2002	7/26/2002	7/23/2002
057949	571-208-0.0	EPA 6010B	Lead	5	1	7/16/2002	7/19/2002	7/18/2002
057949	571-208-0.0	WET DI/ EPA 7420	Lead	0.2	1	7/16/2002	8/2/2002	7/30/2002
057949	571-208-0.0	WET/ EPA 7420	Lead	0.2	1	7/16/2002	7/26/2002	7/23/2002
057949	571-208-0.3	EPA 6010B	Lead	5	1	7/16/2002	7/19/2002	7/18/2002
057949	571-208-0.3	WET/ EPA 7420	Lead	0.2	1	7/16/2002	7/26/2002	7/23/2002
057949	571-208-0.6	EPA 6010B	Lead	5	1	7/16/2002	7/19/2002	7/18/2002
057949	571-210-0.0	EPA 6010B	Lead	5	1	7/16/2002	7/19/2002	7/18/2002
057949	571-210-0.0	WET/ EPA 7420	Lead	0.2	1	7/16/2002	7/26/2002	7/23/2002
057949	571-210-0.3	EPA 6010B	Lead	5	1	7/16/2002	7/19/2002	7/18/2002

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057949	571-210-0.6	EPA 6010B	Antimony	2.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-210-0.6	EPA 6010B	Arsenic	2.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-210-0.6	EPA 6010B	Barium	1.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-210-0.6	EPA 6010B	Beryllium	1.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-210-0.6	EPA 6010B	Cadmium	1.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-210-0.6	EPA 6010B	Chromium	1.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-210-0.6	EPA 6010B	Cobalt	1.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-210-0.6	EPA 6010B	Copper	1.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-210-0.6	EPA 6010B	Lead	5	1	7/16/2002	7/19/2002	7/18/2002
057949	571-210-0.6	EPA 6010B	Molybdenum	2.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-210-0.6	EPA 6010B	Nickel	1.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-210-0.6	EPA 6010B	Selenium	2.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-210-0.6	EPA 6010B	Silver	1.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-210-0.6	EPA 6010B	Thallium	2.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-210-0.6	EPA 6010B	Vanadium	1.5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-210-0.6	EPA 6010B	Zinc	5	10	7/16/2002	8/10/2002	8/8/2002
057949	571-210-0.6	EPA 7471A	Mercury	0.1	1	7/16/2002	8/9/2002	8/7/2002
057949	571-210-0.9	EPA 6010B	Lead	5	1	7/16/2002	7/19/2002	7/18/2002
057949	571-210-0.9	EPA 9045C	pH	0.1	1	7/16/2002	7/21/2002	7/21/2002
057949	571-210-1.5	EPA 6010B	Lead	5	1	7/16/2002	7/19/2002	7/18/2002
057949	571-211-0	EPA 6010B	Lead	5	1	7/16/2002	7/19/2002	7/18/2002
057949	571-211-0	WET/ EPA 7420	Lead	0.2	1	7/16/2002	7/26/2002	7/23/2002
057949	571-211-0.3	EPA 6010B	Lead	5	1	7/16/2002	7/19/2002	7/18/2002
057949	571-211-0.6	EPA 6010B	Lead	5	1	7/16/2002	7/22/2002	7/18/2002
057949	571-212-0	EPA 1311/ 7420	Lead	0.2	1	7/16/2002	8/15/2002	8/14/2002
057949	571-212-0	EPA 6010B	Lead	5	1	7/16/2002	7/22/2002	7/18/2002
057949	571-212-0	WET DI/ EPA 7420	Lead	0.2	1	7/16/2002	8/2/2002	7/30/2002
057949	571-212-0	WET/ EPA 7420	Lead	0.4	2	7/16/2002	7/26/2002	7/23/2002
057949	571-212-0.3	EPA 6010B	Lead	5	1	7/16/2002	7/22/2002	7/18/2002
057949	571-212-0.6	EPA 6010B	Lead	5	1	7/16/2002	7/22/2002	7/18/2002
057949	571-212-0.9	EPA 6010B	Lead	5	1	7/16/2002	7/22/2002	7/18/2002
057949	571-213-0	EPA 1311/ 7420	Lead	0.2	1	7/16/2002	8/15/2002	8/14/2002
057949	571-213-0	EPA 6010B	Lead	5	1	7/16/2002	7/22/2002	7/18/2002
057949	571-213-0	WET DI/ EPA 7420	Lead	0.2	1	7/16/2002	8/2/2002	7/30/2002
057949	571-213-0	WET/ EPA 7420	Lead	0.8	4	7/16/2002	7/26/2002	7/23/2002
057949	571-213-0.3	EPA 6010B	Lead	5	1	7/16/2002	7/22/2002	7/18/2002

057949	571-213-0.6	EPA 6010B	Lead	5	1	7/16/2002	7/22/2002	7/18/2002
057949	571-213-0.6	EPA 9045C	pH	0.1	1	7/16/2002	7/21/2002	7/21/2002
057949	571-213-0.9	EPA 6010B	Lead	5	1	7/16/2002	7/22/2002	7/18/2002
057949	EB-6	EPA 6010B	Lead	0.005	1	7/16/2002	7/18/2002	7/17/2002

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RE: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

Attention: David Shaler

ELAP No.: 1838
NELAP No.: 02107CA
Workorder No.: 058001

Enclosed are the results for sample(s) received on July 18, 2002 by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

for

Eddie F. Rodriguez
Laboratory Director

This cover letter is an integral part of this analytical report.

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) 7/18/02 16:10 — Received by: (name/date/time) 7-18-02 4:00p

Relinquished by: (name/date/time) 7-18-02 7:05p — Received by: (name/date/time) 7-18-02 7:16pm

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB- 21	7/18/02	15:50	P	X	
	571- 116 - 0	7/18/02	3:20		X	X
	571- 116 - 0.3		3:20		X	
	571- 116 - 0.6		3:20		X	
	571- 116 - 0.9		3:20		X	
	571- 116 - 1.5		3:25		X	
	571- 117 - 0		3:10		X	
	571- 117 - 0.3		3:10		X	
	571- 117 - 0.6		3:10		X	
	571- 117 - 0.9		3:10		X	
	571- 117 - 1.5		3:15		X	
	571- 118 - 0		2:55		X	X
	571- 118 - 0.3		2:55		X	
	571- 118 - 0.6		2:55		X	
	571- 118 - 0.9		3:00		X	
	571- 118 - 1.5		3:05		X	
	571- 119 - 0		2:45		X	
	571- 119 - 0.3		2:45		X	
	571- 119 - 0.6		2:45		X	
	571- 119 - 0.9		2:45		X	
	571- 119 - 1.5		2:50		X	
	571- 305 - 0		2:00		X	X
	571- 305 - 0.3		2:00		X	
	571- 305 - 0.6		2:00		X	
	571- 305 - 0.9		2:05		X	
	571- 305 - 1.5		2:10		X	
	571- 306 - 0		1:40		X	
	571- 306 - 0.3		1:40		X	
	571- 306 - 0.6		1:40		X	
	571- 306 - 0.9		1:40		X	
	571- 306 - 1.5		1:45		X	
	571- 307 - 0		1:30		X	
	571- 307 - 0.3		1:30		X	X
	571- 307 - 0.6		1:30		X	
	571- 307 - 0.9		1:30		X	
	571- 307 - 1.5		1:35		X	
	571- 308 - 0		1:15		X	
	571- 308 - 0.3		1:15		X	
	571- 308 - 0.6		1:15		X	
	571- 308 - 0.9		1:20		X	
	571- 308 - 1.5		1:20		X	
	571- 309 - 0		12:40		X	
	571- 309 - 0.3		12:40		X	
	571- 309 - 0.6		12:40		X	X
	571- 309 - 0.9		1:05		X	
	571- 309 - 1.5		1:10		X	
	571- 310 - 0		12:20		X	
	571- 310 - 0.3		12:20		X	
	571- 310 - 0.6		12:20		X	
	571- 310 - 0.9		12:25		X	
	571- 310 - 1.5		12:30		X	
	[illegible]					

Total # of samples: 51

Advanced Technology Laboratories

Date: *25-Jul-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	EB-21
Lab Order:	058001		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/18/2002 3:50:00 PM
Lab ID:	058001-001A	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	(EPA 3010A)			**EPA 6010B**		
RunID: ICP2_020725D	QC Batch: 9860					Analyst: **RQ**
Lead	ND	0.0050		mg/L	1	7/25/2002

Qualifiers:

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- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

Advanced Technology Laboratories *3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040*

Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058001
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058001-002A	571-116-0	46	mg/Kg	9803	5	1	7/18/2002	7/24/2002
058001-003A	571-116-0.3	30	mg/Kg	9803	5	1	7/18/2002	7/24/2002
058001-004A	571-116-0.6	ND	mg/Kg	9803	5	1	7/18/2002	7/24/2002
058001-005A	571-116-0.9	78	mg/Kg	9804	5	1	7/18/2002	7/25/2002
058001-006A	571-116-1.5	ND	mg/Kg	9804	5	1	7/18/2002	7/25/2002
058001-007A	571-117-0	24	mg/Kg	9804	5	1	7/18/2002	7/25/2002
058001-008A	571-117-0.3	ND	mg/Kg	9804	5	1	7/18/2002	7/25/2002
058001-009A	571-117-0.6	ND	mg/Kg	9804	5	1	7/18/2002	7/25/2002
058001-010A	571-117-0.9	85	mg/Kg	9804	5	1	7/18/2002	7/25/2002
058001-011A	571-117-1.5	ND	mg/Kg	9804	5	1	7/18/2002	7/25/2002
058001-012A	571-118-0	270	mg/Kg	9804	5	1	7/18/2002	7/25/2002

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Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058001
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058001-013A	571-118-0.3	15	mg/Kg	9804	5	1	7/18/2002	7/25/2002
058001-014A	571-118-0.6	57	mg/Kg	9804	5	1	7/18/2002	7/25/2002
058001-015A	571-118-0.9	5.9	mg/Kg	9804	5	1	7/18/2002	7/25/2002
058001-016A	571-118-1.5	12	mg/Kg	9804	5	1	7/18/2002	7/25/2002
058001-017A	571-119-0	11	mg/Kg	9804	5	1	7/18/2002	7/25/2002
058001-018A	571-119-0.3	ND	mg/Kg	9804	5	1	7/18/2002	7/25/2002
058001-019A	571-119-0.6	ND	mg/Kg	9804	5	1	7/18/2002	7/25/2002
058001-020A	571-119-0.9	7.7	mg/Kg	9804	5	1	7/18/2002	7/25/2002
058001-021A	571-119-1.5	ND	mg/Kg	9804	5	1	7/18/2002	7/25/2002
058001-022A	571-305-0	320	mg/Kg	9804	5	1	7/18/2002	7/25/2002
058001-023A	571-305-0.3	6.4	mg/Kg	9804	5	1	7/18/2002	7/25/2002

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Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058001
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058001-024A	571-305-0.6	28	mg/Kg	9804	5	1	7/18/2002	7/25/2002
058001-025A	571-305-0.9	670	mg/Kg	9805	5	1	7/18/2002	7/25/2002
058001-026A	571-305-1.5	6.6	mg/Kg	9805	5	1	7/18/2002	7/25/2002
058001-027A	571-306-0	30	mg/Kg	9805	5	1	7/18/2002	7/25/2002
058001-028A	571-306-0.3	ND	mg/Kg	9805	5	1	7/18/2002	7/25/2002
058001-029A	571-306-0.6	6.7	mg/Kg	9805	5	1	7/18/2002	7/25/2002
058001-030A	571-306-0.9	140	mg/Kg	9805	5	1	7/18/2002	7/25/2002
058001-031A	571-306-1.5	6.7	mg/Kg	9805	5	1	7/18/2002	7/25/2002
058001-032A	571-307-0	15	mg/Kg	9805	5	1	7/18/2002	7/25/2002
058001-033A	571-307-0.3	6.4	mg/Kg	9805	5	1	7/18/2002	7/25/2002
058001-034A	571-307-0.6	ND	mg/Kg	9805	5	1	7/18/2002	7/25/2002

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Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058001
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058001-035A	571-307-0.9	5.7	mg/Kg	9805	5	1	7/18/2002	7/25/2002
058001-036A	571-307-1.5	54	mg/Kg	9805	5	1	7/18/2002	7/25/2002
058001-037A	571-308-0	35	mg/Kg	9805	5	1	7/18/2002	7/25/2002
058001-038A	571-308-0.3	5.4	mg/Kg	9805	5	1	7/18/2002	7/25/2002
058001-039A	571-308-0.6	ND	mg/Kg	9805	5	1	7/18/2002	7/25/2002
058001-040A	571-308-0.9	580	mg/Kg	9805	5	1	7/18/2002	7/25/2002
058001-041A	571-308-1.5	17	mg/Kg	9805	5	1	7/18/2002	7/25/2002
058001-042A	571-309-0	6.6	mg/Kg	9805	5	1	7/18/2002	7/25/2002
058001-043A	571-309-0.3	ND	mg/Kg	9805	5	1	7/18/2002	7/25/2002
058001-044A	571-309-0.6	ND	mg/Kg	9805	5	1	7/18/2002	7/25/2002
058001-045A	571-309-0.9	36	mg/Kg	9806	5	1	7/18/2002	7/25/2002

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Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058001
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058001-046A	571-309-1.5	8.8	mg/Kg	9806	5	1	7/18/2002	7/25/2002
058001-047A	571-310-0	59	mg/Kg	9806	5	1	7/18/2002	7/25/2002
058001-048A	571-310-0.3	6.7	mg/Kg	9806	5	1	7/18/2002	7/25/2002
058001-049A	571-310-0.6	7.5	mg/Kg	9806	5	1	7/18/2002	7/25/2002
058001-050A	571-310-0.9	1200	mg/Kg	9806	5	1	7/18/2002	7/25/2002
058001-051A	571-310-1.5	110	mg/Kg	9806	5	1	7/18/2002	7/25/2002

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Results are wet unless otherwise specified

Advanced Technology Laboratories
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Advanced Technology Laboratories

Date: 7/25/2002

pH
EPA 9045C

CLIENT:	Ninyo & Moore	**Lab Order:**	058001
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058001-002A	571-116-0	7.57	pH Units	R19743	0.1	1	7/18/2002	7/23/2002
058001-012A	571-118-0	6.52	pH Units	R19743	0.1	1	7/18/2002	7/23/2002
058001-022A	571-305-0	6.17	pH Units	R19743	0.1	1	7/18/2002	7/23/2002
058001-033A	571-307-0.3	7.62	pH Units	R19743	0.1	1	7/18/2002	7/23/2002
058001-044A	571-309-0.6	7.59	pH Units	R19743	0.1	1	7/18/2002	7/23/2002

Qualifiers:

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Results are wet unless otherwise specified

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 8/1/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058001
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058001-005A	571-116-0.9	ND	mg/L	9907	0.2	1	7/18/2002	8/1/2002
058001-010A	571-117-0.9	ND	mg/L	9907	0.2	1	7/18/2002	8/1/2002
058001-012A	571-118-0	22	mg/L	9907	0.8	4	7/18/2002	8/1/2002
058001-014A	571-118-0.6	ND	mg/L	9907	0.2	1	7/18/2002	8/1/2002
058001-022A	571-305-0	40	mg/L	9907	2	10	7/18/2002	8/1/2002
058001-025A	571-305-0.9	39	mg/L	9907	2	10	7/18/2002	8/1/2002
058001-030A	571-306-0.9	0.46	mg/L	9907	0.2	1	7/18/2002	8/1/2002
058001-036A	571-307-1.5	2.6	mg/L	9907	0.2	1	7/18/2002	8/1/2002
058001-040A	571-308-0.9	61	mg/L	9935	2	10	7/18/2002	8/1/2002
058001-047A	571-310-0	1.6	mg/L	9935	0.2	1	7/18/2002	8/1/2002
058001-051A	571-310-1.5	7.4	mg/L	9935	0.2	1	7/18/2002	8/1/2002

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Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 8/7/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058001
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058001-012A	571-118-0	ND	mg/L	10036	0.2	1	7/18/2002	8/7/2002
058001-022A	571-305-0	ND	mg/L	10036	0.2	1	7/18/2002	8/7/2002
058001-025A	571-305-0.9	ND	mg/L	10036	0.2	1	7/18/2002	8/7/2002
058001-040A	571-308-0.9	ND	mg/L	10036	0.2	1	7/18/2002	8/7/2002
058001-051A	571-310-1.5	ND	mg/L	10036	0.2	1	7/18/2002	8/7/2002

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Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: *13-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-306-0.9
Lab Order:	058001		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/18/2002 1:40:00 PM
Lab ID:	058001-030A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810D	QC Batch: 10215					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	4.1	2.5		mg/Kg	10	8/10/2002
Barium	130	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	23	1.5		mg/Kg	10	8/10/2002
Cobalt	8.3	1.5		mg/Kg	10	8/10/2002
Copper	32	1.5		mg/Kg	10	8/10/2002
Molybdenum	3.5	2.5		mg/Kg	10	8/10/2002
Nickel	19	1.5		mg/Kg	10	8/10/2002
Selenium	7.7	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	37	1.5		mg/Kg	10	8/10/2002
Zinc	380	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020812D	QC Batch: 10169					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/12/2002

Qualifiers:

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Results are wet unless otherwise specified

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: *13-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-310-0.9
Lab Order:	058001		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/18/2002 12:25:00 PM
Lab ID:	058001-050A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810D	QC Batch: 10215					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	ND	2.5		mg/Kg	10	8/10/2002
Barium	120	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	16	1.5		mg/Kg	10	8/10/2002
Cobalt	14	1.5		mg/Kg	10	8/10/2002
Copper	26	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	14	1.5		mg/Kg	10	8/10/2002
Selenium	9.3	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	54	1.5		mg/Kg	10	8/10/2002
Zinc	79	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020812D	QC Batch: 10169					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/12/2002

Qualifiers:

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S - Spike/Surrogate outside of limits due to matrix interferen
H - Sample exceeded analytical holding time
E - Value above quantitation range
Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 8/15/2002

LEAD BY ATOMIC ABSORPTION
EPA 1311/ 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058001
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058001-012A	571-118-0	0.31	mg/L	10336	0.2	1	7/18/2002	8/14/2002
058001-022A	571-305-0	1.2	mg/L	10336	0.2	1	7/18/2002	8/14/2002
058001-025A	571-305-0.9	1.2	mg/L	10336	0.2	1	7/18/2002	8/14/2002
058001-040A	571-308-0.9	1.3	mg/L	10336	0.2	1	7/18/2002	8/14/2002
058001-050A	571-310-0.9	10	mg/L	10128	0.2	1	7/18/2002	8/7/2002

Qualifiers:

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CLIENT: Ninyo & Moore
Work Order: 058001
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10036

Sample ID: **MB-10036**	SampType: **mblk**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/7/2002**	Run ID: **AA2_020807E**
Client ID: **ZZZZZ**	Batch ID: **10036**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314906**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-10036A**	SampType: **mblk**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/1/2002**	Run ID: **AA2_020807E**
Client ID: **ZZZZZ**	Batch ID: **10036**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314908**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-10036B**	SampType: **mblk**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/1/2002**	Run ID: **AA2_020807E**
Client ID: **ZZZZZ**	Batch ID: **10036**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314921**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **LCS-10036**	SampType: **lcs**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/7/2002**	Run ID: **AA2_020807E**
Client ID: **ZZZZZ**	Batch ID: **10036**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314933**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.269	0.20	7.5	0	96.9	80	120	0	0		

Sample ID: **058000-047AMS**	SampType: **MS**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/7/2002**	Run ID: **AA2_020807E**
Client ID: **ZZZZZ**	Batch ID: **10036**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314920**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.937	0.20	5	0.05554	97.6	80	120	0	0		

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CLIENT: Ninyo & Moore
Work Order: 058001
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10036

Sample ID: 058001-051AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807E
Client ID: 571-310-1.5	Batch ID: 10036	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314931

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.856	0.20	5	0	97.1	80	120	0	0		

Sample ID: 058000-047ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807E
Client ID: ZZZZZ	Batch ID: 10036	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314919

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0.05554	0	30	

Sample ID: 058001-051ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807E
Client ID: 571-310-1.5	Batch ID: 10036	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314930

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0	30	

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10128

Sample ID: MB-10128	SampType: mblk	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020807L
Client ID: ZZZZZ	Batch ID: 10128	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/7/2002	SeqNo: 315058

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.09013	0.20									

Sample ID: MB-10110TCLP	SampType: mblk	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020807L
Client ID: ZZZZZ	Batch ID: 10128	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/7/2002	SeqNo: 315059

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.09848	0.20	0	0	0	0	0	0	0		

Sample ID: LCS-10128	SampType: lcs	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020807L
Client ID: ZZZZZ	Batch ID: 10128	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/7/2002	SeqNo: 315068

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.146	0.20	1	0	115	80	120	0	0		

Sample ID: 058010-001AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020807L
Client ID: ZZZZZ	Batch ID: 10128	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/7/2002	SeqNo: 315066

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.005	0.20	2.5	0.1984	112	80	120	0	0		

Sample ID: 058010-001ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020807L
Client ID: ZZZZZ	Batch ID: 10128	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/7/2002	SeqNo: 315065

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.1701	0.20	0	0	0	0	0	0.1984	0	30	J

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CLIENT: Ninyo & Moore
Work Order: 058001
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10169

Sample ID: MB-10169	SampType: mblk	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812D
Client ID: ZZZZZ	Batch ID: 10169	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317160

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-10169	SampType: lcs	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812D
Client ID: ZZZZZ	Batch ID: 10169	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317159

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.833	0.10	2.08	0	88.1	80	120	0	0		

Sample ID: 058020-058AMS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812D
Client ID: ZZZZZ	Batch ID: 10169	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317157

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9644	0.10	0.83	0.09029	105	62	146	0	0		

Sample ID: 058020-058AMSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812D
Client ID: ZZZZZ	Batch ID: 10169	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317158

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9574	0.10	0.83	0.09029	104	62	146	0.9644	0.726	33	

Sample ID: 058020-058ADUP	SampType: DUP	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812D
Client ID: ZZZZZ	Batch ID: 10169	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317156

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.08648	0.10	0	0	0	0	0	0.09029	0	30	J

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CLIENT: Ninyo & Moore
Work Order: 058001
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10215

Sample ID: MB-10215	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: ZZZZZ	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316664

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.08521	0.25									
Arsenic	ND	0.25									
Barium	0.005349	0.15									
Beryllium	ND	0.15									
Cadmium	ND	0.15									
Chromium	ND	0.15									
Cobalt	0.001667	0.15									
Copper	ND	0.15									
Molybdenum	0.07279	0.25									
Nickel	ND	0.15									
Selenium	0.25	0.25									
Silver	0.01038	0.15									
Thallium	ND	0.25									
Vanadium	ND	0.15									
Zinc	0.06014	0.50									

Sample ID: LCS-10215	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: ZZZZZ	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316663

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	47.71	0.25	50	0	95.4	80	120	0	0		
Arsenic	49.61	0.25	50	0	99.2	80	120	0	0		
Barium	51.01	0.15	50	0	102	80	120	0	0		
Beryllium	49.87	0.15	50	0	99.7	80	120	0	0		
Cadmium	49.8	0.15	50	0	99.6	80	120	0	0		
Chromium	51.15	0.15	50	0	102	80	120	0	0		
Cobalt	49.91	0.15	50	0	99.8	80	120	0	0		
Copper	49.14	0.15	50	0	98.3	80	120	0	0		
Molybdenum	49.23	0.25	50	0	98.5	80	120	0	0		
Nickel	48.85	0.15	50	0	97.7	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike/Surrogate outside limits due to matrix interference; DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 058001
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10215

Sample ID: LCS-10215	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: ZZZZZ	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316663

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	50.06	0.25	50	0	100	80	120	0	0		
Silver	49.57	0.15	50	0	99.1	80	120	0	0		
Thallium	47.49	0.25	50	0	95	80	120	0	0		
Vanadium	52.2	0.15	50	0	104	80	120	0	0		
Zinc	49.29	0.50	50	0	98.6	80	120	0	0		

Sample ID: 058021-007AMS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: ZZZZZ	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316660

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	83.37	2.5	125	0	66.7	32	115	0	0		
Arsenic	123	2.5	125	5.058	94.3	59	111	0	0		
Barium	504.1	1.5	125	259.3	196	34	151	0	0		S
Beryllium	117.6	1.5	125	0	94.1	56	112	0	0		
Cadmium	124.8	1.5	125	3.507	97.1	52	120	0	0		
Chromium	168.1	1.5	125	36.03	106	56	118	0	0		
Cobalt	134.3	1.5	125	10.69	98.9	58	117	0	0		
Copper	284.3	1.5	125	116.6	134	58	134	0	0		S
Molybdenum	124.9	2.5	125	6.943	94.4	56	115	0	0		
Nickel	157.5	1.5	125	34.07	98.8	52	120	0	0		
Selenium	130	2.5	125	13.73	93	46	108	0	0		
Silver	119.4	1.5	125	0	95.5	74	117	0	0		
Thallium	105.8	2.5	125	0	84.7	62	117	0	0		
Vanadium	169.1	1.5	125	42.6	101	55	122	0	0		
Zinc	809.5	5.0	125	652	126	43	134	0	0		

Sample ID: 058021-007AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: ZZZZZ	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316661

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

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Calculations are based on raw values

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CLIENT: Ninyo & Moore
Work Order: 058001
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10215

Sample ID: 058021-007AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: ZZZZZ	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316661

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	78.16	2.5	125	0	62.5	32	115	83.37	6.45	20	
Arsenic	120.2	2.5	125	5.058	92.1	59	111	123	2.32	20	
Barium	389.5	1.5	125	259.3	104	34	151	504.1	25.7	20	R
Beryllium	114.7	1.5	125	0	91.8	56	112	117.6	2.49	20	
Cadmium	123	1.5	125	3.507	95.6	52	120	124.8	1.46	20	
Chromium	164	1.5	125	36.03	102	56	118	168.1	2.44	20	
Cobalt	132.6	1.5	125	10.69	97.5	58	117	134.3	1.27	20	
Copper	235.9	1.5	125	116.6	95.4	58	134	284.3	18.6	20	
Molybdenum	122.9	2.5	125	6.943	92.7	56	115	124.9	1.66	20	
Nickel	165.2	1.5	125	34.07	105	52	120	157.5	4.75	20	
Selenium	132.4	2.5	125	13.73	94.9	46	108	130	1.81	20	
Silver	117	1.5	125	0	93.6	74	117	119.4	2.08	20	
Thallium	105.3	2.5	125	0	84.2	62	117	105.8	0.485	20	
Vanadium	169.3	1.5	125	42.6	101	55	122	169.1	0.117	20	
Zinc	828	5.0	125	652	141	43	134	809.5	2.26	20	S

Sample ID: 058021-007ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: ZZZZZ	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316659

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	1.159	2.5	0	0	0	0	0	0	0	30	J
Arsenic	4.62	2.5	0	0	0	0	0	5.058	9.05	30	
Barium	267	1.5	0	0	0	0	0	259.3	2.92	30	
Beryllium	ND	1.5	0	0	0	0	0	0	0	30	
Cadmium	3.474	1.5	0	0	0	0	0	3.507	0.956	30	
Chromium	37.32	1.5	0	0	0	0	0	36.03	3.51	30	
Cobalt	12.16	1.5	0	0	0	0	0	10.69	12.8	30	
Copper	119.2	1.5	0	0	0	0	0	116.6	2.18	30	
Molybdenum	8.809	2.5	0	0	0	0	0	6.943	23.7	30	
Nickel	34.96	1.5	0	0	0	0	0	34.07	2.60	30	

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CLIENT: Ninyo & Moore
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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10215

Sample ID: 058021-007ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: ZZZZZ	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316659

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	15.19	2.5	0	0	0	0	0	13.73	10.1	30	
Silver	ND	1.5	0	0	0	0	0	0	0	30	
Thallium	ND	2.5	0	0	0	0	0	0	0	30	
Vanadium	44.45	1.5	0	0	0	0	0	42.6	4.24	30	
Zinc	679.5	5.0	0	0	0	0	0	652	4.14	30	

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Calculations are based on raw values
DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 058001
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10336

Sample ID: MB-10336	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814L
Client ID: ZZZZZ	Batch ID: 10336	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318833

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10261-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814L
Client ID: ZZZZZ	Batch ID: 10336	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318834

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10336	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814L
Client ID: ZZZZZ	Batch ID: 10336	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318848

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.098	0.20	1	0	110	80	120	0	0		

Sample ID: 058001-040AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814L
Client ID: 571-308-0.9	Batch ID: 10336	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318846

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.591	0.20	2.5	1.279	92.5	80	120	0	0		

Sample ID: 058001-040ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814L
Client ID: 571-308-0.9	Batch ID: 10336	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318845

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.384	0.20	0	0	0	0	0	1.279	7.89	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9803

Sample ID: MB-9803A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724K
Client ID: ZZZZZ	Batch ID: 9803	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305688

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9803B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724K
Client ID: ZZZZZ	Batch ID: 9803	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305689

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9803	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724K
Client ID: ZZZZZ	Batch ID: 9803	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305687

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	251.3	5.0	250	0	101	80	120	0	0		

Sample ID: 058000-053AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724K
Client ID: ZZZZZ	Batch ID: 9803	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305672

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	265	5.0	250	63.3	80.7	47	128	0	0		

Sample ID: 058001-004AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724K
Client ID: 571-116-0.6	Batch ID: 9803	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305684

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	150.6	5.0	250	2.847	59.1	47	128	0	0		

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9803

Sample ID: 058000-053ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724K
Client ID: ZZZZZ	Batch ID: 9803	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305671

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	66.43	5.0	0	0	0	0	0	63.3	4.81	30	

Sample ID: 058001-004ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724K
Client ID: 571-116-0.6	Batch ID: 9803	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305683

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.907	5.0	0	0	0	0	0	2.847	0	30	J

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9804

Sample ID: MB-9804A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725A
Client ID: ZZZZZ	Batch ID: 9804	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 305777

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9804B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725A
Client ID: ZZZZZ	Batch ID: 9804	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 305778

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9804	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725A
Client ID: ZZZZZ	Batch ID: 9804	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 305776

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	238.3	5.0	250	0	95.3	80	120	0	0		

Sample ID: 058001-014AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725A
Client ID: 571-118-0.6	Batch ID: 9804	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 305762

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	226.3	5.0	250	57.5	67.5	47	128	0	0		

Sample ID: 058001-024AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725A
Client ID: 571-305-0.6	Batch ID: 9804	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 305774

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	182.8	5.0	250	27.84	62	47	128	0	0		

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9804

Sample ID: 058001-014ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725A
Client ID: 571-118-0.6	Batch ID: 9804	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 305761

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	54.59	5.0	0	0	0	0	0	57.5	5.18	30	

Sample ID: 058001-024ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725A
Client ID: 571-305-0.6	Batch ID: 9804	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 305773

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	31.06	5.0	0	0	0	0	0	27.84	10.9	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9805

Sample ID: MB-9805A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725B
Client ID: ZZZZZ	Batch ID: 9805	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 305805

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9805B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725B
Client ID: ZZZZZ	Batch ID: 9805	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 305806

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9805	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725B
Client ID: ZZZZZ	Batch ID: 9805	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 305804

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	223	5.0	250	0	89.2	80	120	0	0		

Sample ID: 058001-034AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725B
Client ID: 571-307-0.6	Batch ID: 9805	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 305790

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	160.3	5.0	250	4.235	62.4	47	128	0	0		

Sample ID: 058001-044AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725B
Client ID: 571-309-0.6	Batch ID: 9805	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 305802

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	153.8	5.0	250	2.345	60.6	47	128	0	0		

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9805

Sample ID: 058001-034ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725B
Client ID: 571-307-0.6	Batch ID: 9805	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 305789

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.145	5.0	0	0	0	0	0	4.235	0	30	J

Sample ID: 058001-044ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725B
Client ID: 571-309-0.6	Batch ID: 9805	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 305801

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.411	5.0	0	0	0	0	0	2.345	79.1	30	R

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9806

Sample ID: MB-9806A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725C
Client ID: ZZZZZ	Batch ID: 9806	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 305833

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9806B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725C
Client ID: ZZZZZ	Batch ID: 9806	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 305834

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9806	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725C
Client ID: ZZZZZ	Batch ID: 9806	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 305832

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	222.4	5.0	250	0	89	80	120	0	0		

Sample ID: 058019-004AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725C
Client ID: ZZZZZ	Batch ID: 9806	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 305818

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	167.6	5.0	250	9.509	63.2	47	128	0	0		

Sample ID: 058020-011AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725C
Client ID: ZZZZZ	Batch ID: 9806	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 305830

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	190.4	5.0	250	38.92	60.6	47	128	0	0		

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9806

Sample ID: 058019-004ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725C
Client ID: ZZZZZ	Batch ID: 9806	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 305817

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.355	5.0	0	0	0	0	0	9.509	12.9	30	

Sample ID: 058020-011ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725C
Client ID: ZZZZZ	Batch ID: 9806	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 305829

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	32.31	5.0	0	0	0	0	0	38.92	18.6	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9860

Sample ID: MB-9860	SampType: MBLK	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/25/2002	Run ID: ICP2_020725D
Client ID: ZZZZZ	Batch ID: 9860	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/25/2002	SeqNo: 306194

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050									

Sample ID: LCS-9860	SampType: LCS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/25/2002	Run ID: ICP2_020725D
Client ID: ZZZZZ	Batch ID: 9860	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/25/2002	SeqNo: 306195

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.99	0.0050	1	0	99	80	120	0	0		

Sample ID: 058024-001AMS	SampType: MS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/25/2002	Run ID: ICP2_020725D
Client ID: ZZZZZ	Batch ID: 9860	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/25/2002	SeqNo: 306203

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.21	0.0050	2.5	0.00942	88	66	118	0	0		

Sample ID: 058024-001ADUP	SampType: DUP	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/25/2002	Run ID: ICP2_020725D
Client ID: ZZZZZ	Batch ID: 9860	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/25/2002	SeqNo: 306202

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.01	0.0050	0	0	0	0	0	0.00942	5.97	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058001
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9907

Sample ID: MB-9907	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020801B
Client ID: ZZZZZ	Batch ID: 9907	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310857

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.06295	0.20									

Sample ID: MB-9907A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020801B
Client ID: ZZZZZ	Batch ID: 9907	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310859

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9907B	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020801B
Client ID: ZZZZZ	Batch ID: 9907	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310897

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9907	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020801B
Client ID: ZZZZZ	Batch ID: 9907	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310922

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.761	0.20	7.5	0	103	80	120	0	0		

Sample ID: 058000-053AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020801B
Client ID: ZZZZZ	Batch ID: 9907	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310895

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.649	0.20	5	2.672	99.5	80	120	0	0		

Qualifiers:
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S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058001
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9907

Sample ID: 058001-036AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020801B
Client ID: 571-307-1.5	Batch ID: 9907	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310924

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.779	0.20	5	2.579	104	80	120	0	0		

Sample ID: 058000-053ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020801B
Client ID: ZZZZZ	Batch ID: 9907	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310893

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.571	0.20	0	0	0	0	0	2.672	3.88	30	

Sample ID: 058001-036ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020801B
Client ID: 571-307-1.5	Batch ID: 9907	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310917

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.966	0.20	0	0	0	0	0	2.579	42.4	30	R

Qualifiers:
ND - Not Detected at the Reporting Limit
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S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058001
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9935

Sample ID: MB-9935	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020801C
Client ID: ZZZZZ	Batch ID: 9935	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310871

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9935A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020801C
Client ID: ZZZZZ	Batch ID: 9935	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310872

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9935B	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020801C
Client ID: ZZZZZ	Batch ID: 9935	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310889

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9935	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020801C
Client ID: ZZZZZ	Batch ID: 9935	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310920

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.764	0.20	7.5	0	104	80	120	0	0		

Sample ID: 058020-024AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020801C
Client ID: ZZZZZ	Batch ID: 9935	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310887

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	68.79	1.6	40	27.86	102	80	120	0	0		

Qualifiers:
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058001
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9935

Sample ID: 058020-041AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020801C
Client ID: ZZZZZ	Batch ID: 9935	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310916

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	92.27	2.0	50	40.95	103	80	120	0	0		

Sample ID: 058020-024ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020801C
Client ID: ZZZZZ	Batch ID: 9935	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310885

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	23.71	0.80	0	0	0	0	0	27.86	16.1	30	

Sample ID: 058020-041ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020801C
Client ID: ZZZZZ	Batch ID: 9935	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310914

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	38.29	2.0	0	0	0	0	0	40.95	6.70	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058001
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: R19743

Sample ID: **058001-044ADUP**	SampType: **DUP**	TestCode: **9045_S**	Units: **pH Units**	Prep Date: **7/23/2002**	Run ID: **WETCHEM_020723H**
Client ID: **571-309-0.6**	Batch ID: **R19743**	TestNo: **EPA 9045C**		Analysis Date: **7/23/2002**	SeqNo: **305455**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.55	0.10	0	0	0	0	0	7.59	0.528	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Rachelle

From: Steve Reese [sreese@ninyoandmoore.com]
Sent: Wednesday, July 31, 2002 9:27 AM
To: 'rachelle@atlglobal.com'
Cc: David Shaler (E-mail); Ruth Cheung (E-mail)
Subject: TCLP Analysis

TCLP.xls

Rachelle,
Attached please find a list of samples to be run for the TCLP analysis. Currently, we selected all of the samples that are greater than 1,000 mg/kg
of TTLC results. However, they will be ran by instruction only. There may
be more samples chosen for TCLP analysis in the future, but please run these 82 samples for now. Please call with any questions.
Thank you, Steve

Stephen S. Reese
Senior Staff Environmental Scientist
Ninyo & Moore Geotechnical & Environmental Sciences Consultants
475 Goddard, Suite 200
Irvine, California 92618
Tel: (949) 753-7070
Fax: (949) 753-7071
Email: sreese@ninyoandmoore.com
www.ninyoandmoore.com

RUN FOR TCLP ANALYSIS			
33	**20**	**29**	**82**
569-101-0	570-101-0	571-104-0	
569-102-0	570-101-0.6	571-120-0	
569-102-0.3	570-102-0.6	571-310-0.9	
569-102-0.9	570-103-1.5	571-317-0	
569-111-0	570-114-0.6	571-320-0	
569-112-0	570-115-0	571-325-0.6	
569-112-0.6	570-119-0.3	571-507-0	
569-201-0	570-201-0	571-511-0	
569-212-0	570-214-0	571-514-0	
569-301-0	570-311-0.6	571-524-0	
569-303-0.9	570-312-0.6	571-710-0	
569-314-0	570-504-0	571-710-0.3	
569-401-0	570-508-0	571-711-0	
569-404-0.6	570-517-0	571-711-0.3	
569-405-0.6	570-517-0.3	571-712-0	
569-408-0.9	570-610-0.6	571-712-0.3	
569-502-0.6	570-615-0	571-201-0.6	
569-516-0	570-706-0	571-405-0	
569-603-0.3	570-709-0	571-406-0	
569-607-0	570-808-0.6	571-407-0	
569-607-0.3		571-414-0	
569-609-0		571-609-0	
569-609-0.3		571-611-0	
569-703-0		571-616-0	
569-703-0.9		571-617-0	
569-705-0		571-619-1.5	
569-705-0.3		571-814-0.3	
569-706-0		571-818-0.6	
569-708-0		571-819-0	
569-710-0			
569-711-0			
569-711-0.3			
569-801-0.3			

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Tuesday, August 06, 2002 3:46 PM
To: 'Rachelle'; 'David Shaler (E-mail)'
Subject: Title 22 Metals

Title 22 Metals.xls

Rachelle,
Please run the following samples for Title 22 Metals. Please do not list
Pb in your emailed results. There should be a total of 120 samples to be
run.
Thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

569-102-0.9	570-101-0	571-101-0.9
569-112-0	570-101-0.6	571-104-0
569-201-0	570-201-0	571-201-0.6
569-206-0.6	570-205-0.9	571-108-1.5
569-106-1.5	570-106-0.3	571-111-0.3
569-212-0	570-208-1.5	571-207-0
569-401-0.6	570-111-0.6	571-210-0.6
569-301-0	570-214-0	571-115-0.9
569-303-0.9	570-115-0.3	571-214-0.3
569-404-0.6	570-119-0.9	571-120-0
569-408-0.9	570-224-0.6	571-217-1.5
569-314-0	570-401-0	571-220-0.6
569-313-0.3	570-401-0.3	571-301-0.3
569-502-0.6	570-304-1.5	571-405-0
569-602-1.5	570-307-0.9	571-306-0.9
569-607-0.3	570-311-0.6	571-407-0
569-607-0	570-312-0.6	571-310-0.9
569-508-0.9	570-316-0.3	571-315-0.3
569-511-0.6	570-601-0	571-412-1.5
569-612-1.5	570-505-1.5	571-317-0
569-516-0	570-508-0	571-320-0.6
569-801-0.3	570-610-0.6	571-416-0.9
569-519-0.6	570-511-0.9	571-325-0.3
569-803-0.9	570-615-0	571-421-1.5
569-705-0	570-514-0.3	571-425-0
569-806-1.5	570-517-0	571-501-0.6
569-708-0.3	570-618-0.6	571-503-0.9
569-711-0	570-621-1.5	571-603-0.3
569-811-0	570-703-0.9	571-507-0
	570-804-0	571-609-0
	570-706-0	571-510-1.5
	570-709-0	571-611-0
	570-808-0.6	571-514-0
	570-711-1.5	571-614-0.3
	570-812-0.3	571-517-0.9
		571-617-0.6
		571-520-1.5
		571-621-0.3
		571-524-0
		571-624-0.9
		571-529-0.3
		571-628-0.6
		571-703-1.5
		571-707-0
		571-804-0.9
		571-809-0.3
		571-711-0
		571-712-0
		571-814-0.3
		571-818-0.6
		571-819-0
		571-827-1.5

571-832-0.9
571-836-0.3
571-837-0.6
571-842-0

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Thursday, August 08, 2002 9:14 AM
To: 'Rachelle'
Subject: TCLP Analysis

TCLP-3.xls

In addition to the 90 TCLP already run please run the following samples for
TCLP. There should be a list of 350 samples.
Thanks for a the hard work and timely results.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

-----Original Message-----
From: Rachelle [SMTP:Rachelle@ATLGlobal.com]
Sent: Wednesday, August 07, 2002 5:02 PM
To: 'David Shaler (E-mail)'
Cc: 'Ruth Cheung (E-mail)'
Subject: TCLP Results

<<57931TCLP.xls>> <<58001TCLP.xls>> <<58021TCLP.xls>> <<58022TCLP.xls>>
<<58023TCLP.xls>> <<58024TCLP.xls>> <<58049TCLP.xls>> <<58050TCLP.xls>>
<<58052TCLP.xls>> <<58053TCLP.xls>> <<58065TCLP.xls>> <<58066TCLP.xls>>
<<58067TCLP.xls>> <<58068TCLP.xls>> <<58069TCLP.xls>>

Rachelle Arada
Project Coordinator
www.atlglobal.com
voice: 562.989.4045 ext 237
fax : 562.989.4040

<< File: 57931TCLP.xls >> << File: 58001TCLP.xls >> << File: 58021TCLP.xls >> << File: 58022TCLP.xls >> << File: 58023TCLP.xls >> <<
File: 58024TCLP.xls >> << File: 58049TCLP.xls >> << File: 58050TCLP.xls
>> << File: 58052TCLP.xls >> << File: 58053TCLP.xls >> << File: 58065TCLP.xls >> << File: 58066TCLP.xls >> << File: 58067TCLP.xls >> <<
File: 58068TCLP.xls >> << File: 58069TCLP.xls >>

569-404-0	2. STLC	170	570-515-0.3	2. STLC	120	571-521-0	2. STLC	230
569-402-0	2. STLC	130	570-811-0	2. STLC	110	571-324-0.9	2. STLC	110
569-406-0	2. STLC	120	570-114-0.0	2. STLC	110	571-818-0	2. STLC	110
569-515-0	2. STLC	110	570-504-0.6	2. STLC	100	571-819-0.6	2. STLC	110
569-611-0	2. STLC	100	570-811-1.5	2. STLC	90	571-708-0	2. STLC	110
569-409-0	2. STLC	94	570-615-0.6	2. STLC	84	571-103-0.6	2. STLC	110
569-603-0	2. STLC	93	570-305-0	2. STLC	79	571-617-0.3	2. STLC	100
569-104-0.6	2. STLC	91	570-314-0.6	2. STLC	76	571-611-0.6	2. STLC	92
569-807-0	2. STLC	86	570-505-0.6	2. STLC	75	571-712-0.9	2. STLC	81
569-608-0	2. STLC	86	570-208-0.6	2. STLC	74	571-105-0.6	2. STLC	81
569-501-0	2. STLC	84	570-116-0.0	2. STLC	73	571-313-0	2. STLC	79
569-710-0.3	2. STLC	83	570-102-0	2. STLC	65	571-508-0	2. STLC	73
569-808-0	2. STLC	83	570-804-0.6	2. STLC	64	571-518-0.3	2. STLC	73
569-609-0.6	2. STLC	80	570-704-0	2. STLC	63	571-217-0	2. STLC	68
569-803-0	2. STLC	79	570-508-0.6	2. STLC	60	571-516-0	2. STLC	66
569-105-0	2. STLC	78	570-706-0.3	2. STLC	60	571-701-0.3	2. STLC	66
569-512-0	2. STLC	77	570-303-0	2. STLC	58	571-710-0.6	2. STLC	65
569-513-0	2. STLC	77	570-311-1.5	2. STLC	58	571-512-0	2. STLC	64
569-302-0	2. STLC	74	570-117-0.0	2. STLC	58	571-308-0.9	2. STLC	61
569-805-0	2. STLC	73	570-208-0.3	2. STLC	58	571-701-0	2. STLC	61
569-517-0	2. STLC	71	570-709-0.6	2. STLC	57	571-514-0.3	2. STLC	59
569-704-0.3	2. STLC	71	570-703-0	2. STLC	55	571-415-0	2. STLC	58
569-703-0.6	2. STLC	70	570-206-0	2. STLC	54	571-616-0.6	2. STLC	57
569-514-0.3	2. STLC	70	570-301-0	2. STLC	53	571-517-0	2. STLC	56
569-803-0.3	2. STLC	69	570-603-0.3	2. STLC	46	571-112-0.9	2. STLC	56
569-409-0.6	2. STLC	69	570-711-0.6	2. STLC	46	571-214-0	2. STLC	55
569-411-0	2. STLC	68	570-206-0.3	2. STLC	45	571-415-0.3	2. STLC	55
569-102-0.6	2. STLC	68	570-103-0	2. STLC	44	571-405-0.6	2. STLC	55
569-809-0	2. STLC	65	570-602-0	2. STLC	41	571-530-0	2. STLC	55
569-605-0	2. STLC	65	570-209-0	2. STLC	40	571-831-0	2. STLC	53
569-711-0.6	2. STLC	62	570-210-0	2. STLC	40	571-709-0	2. STLC	53
569-806-0	2. STLC	60	570-117-0.3	2. STLC	39	571-103-0.0	2. STLC	52
569-802-0.3	2. STLC	60	570-103-0.6	2. STLC	37	571-312-0	2. STLC	51
569-410-0	2. STLC	59	570-110-0.6	2. STLC	37	571-526-0	2. STLC	51
569-501-0.6	2. STLC	59	570-805-0.9	2. STLC	36	571-819-1.5	2. STLC	51
569-808-0.3	2. STLC	58	570-112-1.5	2. STLC	35	571-515-0	2. STLC	50
569-104-0	2. STLC	56	570-614-0	2. STLC	34	571-833-0	2. STLC	49
569-804-0	2. STLC	54	570-713-0.3	2. STLC	33	571-815-0.6	2. STLC	47
569-610-0	2. STLC	54	570-513-0	2. STLC	32	571-517-0.3	2. STLC	46
569-608-0.3	2. STLC	53	570-312-0.3	2. STLC	31	571-610-0	2. STLC	46
569-213-0	2. STLC	49	570-503-0.6	2. STLC	31	571-413-0	2. STLC	46
569-701-0	2. STLC	47	570-510-0.6	2. STLC	31	571-815-0	2. STLC	45
569-311-0	2. STLC	47	570-202-0	2. STLC	31	571-514-0.9	2. STLC	44
569-609-0.9	2. STLC	46	570-207-0	2. STLC	31	571-505-1.5	2. STLC	44
569-513-0.3	2. STLC	45	570-209-0.3	2. STLC	31	571-528-0	2. STLC	44
569-801-0.6	2. STLC	44	570-703-0.3	2. STLC	30	571-610-0.6	2. STLC	43
569-514-0	2. STLC	42	570-401-0	2. STLC	30	571-629-0	2. STLC	43
569-805-0.6	2. STLC	42	570-610-0.9	2. STLC	29	571-604-0	2. STLC	42
569-408-1.5	2. STLC	42	570-809-0.6	2. STLC	29	571-213-0	2. STLC	41
569-807-0.3	2. STLC	40	570-509-0.9	2. STLC	29	571-812-0	2. STLC	41
569-204-0	2. STLC	40	570-210-0.6	2. STLC	29	571-706-0	2. STLC	41
569-517-0.3	2. STLC	36	570-211-0	2. STLC	29	571-530-0.6	2. STLC	41
569-518-0	2. STLC	36	570-603-0	2. STLC	28	571-305-0	2. STLC	40
569-806-0.3	2. STLC	36	570-119-0	2. STLC	28	571-523-0.3	2. STLC	39
569-705-1.5	2. STLC	35	570-713-0.6	2. STLC	28	571-510-0	2. STLC	39
569-303-0.6	2. STLC	34	570-108-0	2. STLC	27	571-305-0.9	2. STLC	39
569-516-0.3	2. STLC	33	570-708-0.6	2. STLC	27	571-818-1.5	2. STLC	39
569-705-0.6	2. STLC	33	570-224-0	2. STLC	26	571-703-0	2. STLC	38
569-802-0	2. STLC	33	570-601-0	2. STLC	26	571-520-0.3	2. STLC	36
569-515-0.6	2. STLC	32	570-710-0.6	2. STLC	26	571-216-0	2. STLC	34
569-704-0	2. STLC	32	570-614-0.6	2. STLC	26	571-827-0	2. STLC	34
569-401-0.3	2. STLC	32	570-118-0.3	2. STLC	26	571-708-0.3	2. STLC	34
569-207-0	2. STLC	32	570-304-0	2. STLC	25	571-514-0.6	2. STLC	33
569-608-0.6	2. STLC	31	570-707-0.6	2. STLC	25	571-528-1.5	2. STLC	33
569-104-0.3	2. STLC	31	570-510-0	2. STLC	25	571-803-0	2. STLC	33
569-201-0.6	2. STLC	30	570-110-0	2. STLC	24	571-414-0.3	2. STLC	33
569-515-0.3	2. STLC	28	570-223-0	2. STLC	24	571-813-0.3	2. STLC	32
569-212-0.6	2. STLC	28	570-117-0.6	2. STLC	24	571-523-0	2. STLC	31
569-103-0	2. STLC	28	570-616-0	2. STLC	23	571-326-0	2. STLC	31
569-313-0	2. STLC	27	570-704-0.3	2. STLC	22	571-502-0.6	2. STLC	31
569-103-0.3	2. STLC	26	570-513-0.6	2. STLC	22	571-624-1.5	2. STLC	31
569-705-0.9	2. STLC	25	570-221-0.0	2. STLC	22	571-330-0	2. STLC	31
569-707-0.3	2. STLC	25	570-617-0	2. STLC	21	571-512-0.3	2. STLC	30
569-515-1.5	2. STLC	24	570-214-0.3	2. STLC	21	571-521-0.6	2. STLC	29
569-508-0	2. STLC	24	570-122-0.9	2. STLC	20	571-706-0.3	2. STLC	29
569-801-0	2. STLC	24	570-313-0.6	2. STLC	19	571-814-0.6	2. STLC	28
569-402-0.6	2. STLC	24	570-207-0.6	2. STLC	19	571-616-1.5	2. STLC	28
569-516-0.6	2. STLC	22	570-120-0.9	2. STLC	18	571-835-0	2. STLC	28
569-509-0.3	2. STLC	22	570-506-0	2. STLC	18	571-811-0.3	2. STLC	28
569-106-0	2. STLC	22	570-102-0.9	2. STLC	17	571-101-0.6	2. STLC	28
569-106-0.3	2. STLC	22	570-216-0	2. STLC	17	571-112-0	2. STLC	28
569-202-0	2. STLC	21	570-225-0	2. STLC	17	571-315-0	2. STLC	27
569-805-1.5	2. STLC	21	570-304-0.3	2. STLC	17	571-622-0	2. STLC	27
569-205-0	2. STLC	20	570-409-0	2. STLC	17	571-607-0.6	2. STLC	27
569-707-0	2. STLC	19	570-713-0	2. STLC	17	571-609-0.6	2. STLC	27

569-709-0	2. STLC	19
569-202-0.3	2. STLC	19
569-602-0	2. STLC	19
569-207-0.3	2. STLC	19
569-706-0.3	2. STLC	17
569-807-0.9	2. STLC	17
569-104-0.9	2. STLC	17
569-505-0.6	2. STLC	17
569-704-0.6	2. STLC	16
569-808-0.6	2. STLC	16
569-212-0.3	2. STLC	16
569-612-0	2. STLC	16
569-704-1.5	2. STLC	15
569-411-0.3	2. STLC	15
569-113-0	2. STLC	15
569-807-0.6	2. STLC	14
569-311-0.3	2. STLC	12
569-312-0	2. STLC	10
569-311-0.9	2. STLC	8.3

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570-401-0.3	2. STLC	17
570-616-0.6	2. STLC	17
570-308-0	2. STLC	16
570-807-0.9	2. STLC	16
570-701-0.6	2. STLC	16
570-617-0.3	2. STLC	16
570-107-0.6	2. STLC	15
570-811-0.6	2. STLC	15
570-707-0	2. STLC	15
570-518-0	2. STLC	15
570-111-0.0	2. STLC	15
570-109-0.6	2. STLC	14
570-401-0.9	2. STLC	4.1
570-408-0	2. STLC	4
570-409-0.3	2. STLC	3
570-401-0.6		0
570-401-1.5		0
570-408-0.6		0
570-408-1.5		0

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571-837-0.3	2. STLC	27
571-520-0	2. STLC	26
571-516-0.3	2. STLC	26
571-420-0	2. STLC	26
571-102-0.6	2. STLC	26
571-517-1.5	2. STLC	25
571-513-0.6	2. STLC	25
571-623-0.6	2. STLC	25
571-112-0.3	2. STLC	25
571-326-0.6	2. STLC	24
571-619-0.3	2. STLC	24
571-619-0.9	2. STLC	24
571-528-0.3	2. STLC	24
571-706-0.6	2. STLC	24
571-112-0.6	2. STLC	24
571-327-0.6	2. STLC	23
571-817-0	2. STLC	23
571-425-0.6	2. STLC	22
571-118-0	2. STLC	22
571-829-0	2. STLC	22
571-828-0	2. STLC	22
571-122-0	2. STLC	21
571-101-1.5	2. STLC	21
571-530-0.3	2. STLC	21
571-406-0.6	2. STLC	20
571-517-0.6	2. STLC	20
571-835-0.3	2. STLC	20
571-501-0	2. STLC	20
571-518-0.9	2. STLC	19
571-510-0.3	2. STLC	19
571-814-0.9	2. STLC	19
571-522-0.6	2. STLC	19
571-622-1.5	2. STLC	19
571-812-0.6	2. STLC	19
571-701-0.6	2. STLC	19
571-704-0	2. STLC	19
571-711-0.6	2. STLC	19
571-212-0	2. STLC	18
571-839-0.6	2. STLC	18
571-610-1.5	2. STLC	18
571-709-0.3	2. STLC	18
571-311-0.6	2. STLC	17
571-620-0	2. STLC	17
571-109-0	2. STLC	17
571-704-0.3	2. STLC	17
571-207-1.5	2. STLC	16
571-203-0	2. STLC	16
571-616-0.3	2. STLC	16
571-317-0.3	2. STLC	16
571-629-0.3	2. STLC	16
571-416-0	2. STLC	15
571-419-0	2. STLC	15
571-526-0.3	2. STLC	15
571-619-0	2. STLC	15
571-606-0	2. STLC	15
571-115-0.6	2. STLC	14
571-202-0.9	2. STLC	11

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tblTEMP

WorkOrder	ClientSampID	TestNo	Analyte	PQL	DF	CollectionDate	AnalDate	PrepDate
058001	571-116-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058001	571-116-0	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
058001	571-116-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058001	571-116-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058001	571-116-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-116-0.9	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058001	571-116-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-117-0	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-117-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-117-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-117-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-117-0.9	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058001	571-117-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-118-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/14/2002	8/13/2002
058001	571-118-0	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-118-0	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
058001	571-118-0	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058001	571-118-0	WET/ EPA 7420	Lead	0.8	4	7/18/2002	8/1/2002	7/29/2002
058001	571-118-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-118-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-118-0.6	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058001	571-118-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-118-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-119-0	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-119-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-119-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-119-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-119-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-305-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/14/2002	8/13/2002
058001	571-305-0	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-305-0	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
058001	571-305-0	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058001	571-305-0	WET/ EPA 7420	Lead	2	10	7/18/2002	8/1/2002	7/29/2002
058001	571-305-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-305-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002

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058001	571-305-0.9	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/14/2002	8/13/2002
058001	571-305-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-305-0.9	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058001	571-305-0.9	WET/ EPA 7420	Lead	2	10	7/18/2002	8/1/2002	7/29/2002
058001	571-305-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-306-0	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-306-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-306-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-306-0.9	EPA 6010B	Antimony	2.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-306-0.9	EPA 6010B	Arsenic	2.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-306-0.9	EPA 6010B	Barium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-306-0.9	EPA 6010B	Beryllium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-306-0.9	EPA 6010B	Cadmium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-306-0.9	EPA 6010B	Chromium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-306-0.9	EPA 6010B	Cobalt	1.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-306-0.9	EPA 6010B	Copper	1.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-306-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-306-0.9	EPA 6010B	Molybdenum	2.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-306-0.9	EPA 6010B	Nickel	1.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-306-0.9	EPA 6010B	Selenium	2.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-306-0.9	EPA 6010B	Silver	1.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-306-0.9	EPA 6010B	Thallium	2.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-306-0.9	EPA 6010B	Vanadium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-306-0.9	EPA 6010B	Zinc	5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-306-0.9	EPA 7471A	Mercury	0.1	1	7/18/2002	8/12/2002	8/7/2002
058001	571-306-0.9	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058001	571-306-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-307-0	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-307-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-307-0.3	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
058001	571-307-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-307-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-307-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-307-1.5	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058001	571-308-0	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-308-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002

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058001	571-308-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-308-0.9	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/14/2002	8/13/2002
058001	571-308-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-308-0.9	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058001	571-308-0.9	WET/ EPA 7420	Lead	2	10	7/18/2002	8/1/2002	7/29/2002
058001	571-308-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-309-0	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-309-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-309-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-309-0.6	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
058001	571-309-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-309-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-310-0	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-310-0	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058001	571-310-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-310-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-310-0.9	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/6/2002
058001	571-310-0.9	EPA 6010B	Antimony	2.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-310-0.9	EPA 6010B	Arsenic	2.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-310-0.9	EPA 6010B	Barium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-310-0.9	EPA 6010B	Beryllium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-310-0.9	EPA 6010B	Cadmium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-310-0.9	EPA 6010B	Chromium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-310-0.9	EPA 6010B	Cobalt	1.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-310-0.9	EPA 6010B	Copper	1.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-310-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-310-0.9	EPA 6010B	Molybdenum	2.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-310-0.9	EPA 6010B	Nickel	1.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-310-0.9	EPA 6010B	Selenium	2.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-310-0.9	EPA 6010B	Silver	1.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-310-0.9	EPA 6010B	Thallium	2.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-310-0.9	EPA 6010B	Vanadium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-310-0.9	EPA 6010B	Zinc	5	10	7/18/2002	8/10/2002	8/9/2002
058001	571-310-0.9	EPA 7471A	Mercury	0.1	1	7/18/2002	8/12/2002	8/7/2002
058001	571-310-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/25/2002	7/23/2002
058001	571-310-1.5	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002

058001	571-310-1.5	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058001	EB-21	EPA 6010B	Lead	0.005	1	7/18/2002	7/25/2002	7/25/2002

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

August 15, 2002

David Shaler
Ninyo & Moore
475 Goddard Suite 200
Irvine, CA 92618
TEL: (949) 753-7070
FAX: (949) 753-7071

RE: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

Attention: David Shaler

ELAP No.: 1838
NELAP No.: 02107CA
Workorder No.: 057997

Enclosed are the results for sample(s) received on July 18, 2002 by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

for

Eddie F. Rodriguez
Laboratory Director

RECEIVED
AUG 2 6 2002
NINYO & MOORE
ORANGE COUNTY OFFICE

This cover letter is an integral part of this analytical report.

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) [illegible signature] 7-18-02	Received by: (name/date/time) [illegible signature] 4:10 p
Relinquished by: (name/date/time) [illegible signature] 7-18-02 7:05 p	Received by: (name/date/time) [illegible signature] 7.18.02 7:16 pm

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB- 17	7/18/02	15:32	P	X	
	571- 325-0	↓	14:23	↓	X	
	571- 325-0.3		14:24		X	
	571- 325-0.6		14:26		X	
	571- 325-0.9		14:27		X	
	571- 324-0		14:33		X	
	571- 324-0.3		14:31		X	
	571- 324-0.6		14:38		X	
	571- 324-0.9		14:39		X	
	571- 324-1.5		14:41		X	
	571- 323-0		14:46		X	X
	571- 323-0.3		14:47		X	
	571- 323-0.6		14:49		X	
	571- 323-0.9		14:50		X	
	571- 323-1.5		14:53		X	
	571- 322-0		14:55		X	
	571- 322-0.3		14:56		X	
	571- 322-0.6		14:58		X	
	571- 322-0.9		15:00		X	
	571- 321-0		15:04		X	
	571- 321-0.3		15:05		X	
	571- 321-0.6		15:07		X	X
	571- 321-0.9		15:10		X	
	571- 321-1.5		15:12	↓	X	
	571- 121-0		2:28	B	X	
	571- 121-0.3		2:30	↓	X	
	571- 121-0.6		2:32		X	
	571- 121-0.9		2:40		X	
	571- 121-1.5		2:44		X	
	571- 120-0		14:28		X	
	571- 120-0.3		14:33		X	
	571- 120-0.6		14:39		X	
	571- 120-0.9		14:42		X	X
	571- 120-1.5	↓	14:45	↓	X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	

Total # of samples: 34

Advanced Technology Laboratories

Date: *25-Jul-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	EB-17
Lab Order:	057997		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/18/2002 3:32:00 PM
Lab ID:	057997-001A	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	(EPA 3010A)			**EPA 6010B**		
RunID: ICP2_020723B	QC Batch: 9745					Analyst: **RQ**
Lead	ND	0.0050		mg/L	1	7/23/2002

Qualifiers:

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- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

Advanced Technology Laboratories
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Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057997
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057997-002A	571-325-0	27	mg/Kg	9716	5	1	7/18/2002	7/24/2002
057997-003A	571-325-0.3	5.0	mg/Kg	9716	5	1	7/18/2002	7/24/2002
057997-004A	571-325-0.6	1700	mg/Kg	9716	5	1	7/18/2002	7/24/2002
057997-005A	571-325-0.9	5.8	mg/Kg	9716	5	1	7/18/2002	7/24/2002
057997-006A	571-324-0	35	mg/Kg	9716	5	1	7/18/2002	7/24/2002
057997-007A	571-324-0.3	ND	mg/Kg	9716	5	1	7/18/2002	7/24/2002
057997-008A	571-324-0.6	6.5	mg/Kg	9716	5	1	7/18/2002	7/24/2002
057997-009A	571-324-0.9	820	mg/Kg	9716	5	1	7/18/2002	7/24/2002
057997-010A	571-324-1.5	11	mg/Kg	9716	5	1	7/18/2002	7/24/2002
057997-011A	571-323-0	88	mg/Kg	9716	5	1	7/18/2002	7/24/2002
057997-012A	571-323-0.3	14	mg/Kg	9716	5	1	7/18/2002	7/24/2002

Qualifiers:

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Results are wet unless otherwise specified

Advanced Technology Laboratories *3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040*

Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057997
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057997-013A	571-323-0.6	280	mg/Kg	9716	5	1	7/18/2002	7/24/2002
057997-014A	571-323-0.9	ND	mg/Kg	9716	5	1	7/18/2002	7/24/2002
057997-015A	571-323-1.5	ND	mg/Kg	9716	5	1	7/18/2002	7/24/2002
057997-016A	571-322-0	18	mg/Kg	9716	5	1	7/18/2002	7/24/2002
057997-017A	571-322-0.3	60	mg/Kg	9716	5	1	7/18/2002	7/24/2002
057997-018A	571-322-0.6	180	mg/Kg	9716	5	1	7/18/2002	7/24/2002
057997-019A	571-322-0.9	ND	mg/Kg	9716	5	1	7/18/2002	7/24/2002
057997-020A	571-321-0	6.5	mg/Kg	9716	5	1	7/18/2002	7/24/2002
057997-021A	571-321-0.3	100	mg/Kg	9716	5	1	7/18/2002	7/24/2002
057997-022A	571-321-0.6	90	mg/Kg	9719	5	1	7/18/2002	7/24/2002
057997-023A	571-321-0.9	8.1	mg/Kg	9719	5	1	7/18/2002	7/24/2002

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Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057997
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057997-024A	571-321-1.5	ND	mg/Kg	9719	5	1	7/18/2002	7/24/2002
057997-025A	571-121-0	230	mg/Kg	9719	5	1	7/18/2002	7/24/2002
057997-026A	571-121-0.3	12	mg/Kg	9719	5	1	7/18/2002	7/24/2002
057997-027A	571-121-0.6	13	mg/Kg	9719	5	1	7/18/2002	7/24/2002
057997-028A	571-121-0.9	6.2	mg/Kg	9719	5	1	7/18/2002	7/24/2002
057997-029A	571-121-1.5	8.1	mg/Kg	9719	5	1	7/18/2002	7/24/2002
057997-030A	571-120-0	1800	mg/Kg	9719	5	1	7/18/2002	7/24/2002
057997-031A	571-120-0.3	98	mg/Kg	9719	5	1	7/18/2002	7/24/2002
057997-032A	571-120-0.6	25	mg/Kg	9719	5	1	7/18/2002	7/24/2002
057997-033A	571-120-0.9	13	mg/Kg	9719	5	1	7/18/2002	7/24/2002
057997-034A	571-120.1.5	38	mg/Kg	9719	5	1	7/18/2002	7/24/2002

Qualifiers:

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- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

Advanced Technology Laboratories *3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040*

Advanced Technology Laboratories

Date: 7/25/2002

pH
EPA 9045C

CLIENT:	Ninyo & Moore	**Lab Order:**	057997
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057997-011A	571-323-0	8.14	pH Units	R19676	0.1	1	7/18/2002	7/23/2002
057997-022A	571-321-0.6	7.82	pH Units	R19676	0.1	1	7/18/2002	7/23/2002
057997-033A	571-120-0.9	7.83	pH Units	R19676	0.1	1	7/18/2002	7/23/2002

Qualifiers:

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- Results are wet unless otherwise specified

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 7/31/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057997
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057997-009A	571-324-0.9	110	mg/L	9901	3.2	16	7/18/2002	7/30/2002
057997-011A	571-323-0	2.7	mg/L	9903	0.2	1	7/18/2002	7/30/2002
057997-013A	571-323-0.6	1.9	mg/L	9903	0.2	1	7/18/2002	7/30/2002
057997-017A	571-322-0.3	3.9	mg/L	9903	0.2	1	7/18/2002	7/30/2002
057997-018A	571-322-0.6	10	mg/L	9903	0.4	2	7/18/2002	7/30/2002
057997-021A	571-321-0.3	1.8	mg/L	9903	0.2	1	7/18/2002	7/30/2002
057997-022A	571-321-0.6	3.8	mg/L	9903	0.2	1	7/18/2002	7/30/2002
057997-025A	571-121-0	13	mg/L	9903	0.4	2	7/18/2002	7/30/2002
057997-031A	571-120-0.3	6.7	mg/L	9903	0.2	1	7/18/2002	7/30/2002

Qualifiers:

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- Results are wet unless otherwise specified

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 8/7/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057997
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057997-009A	571-324-0.9	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057997-018A	571-322-0.6	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057997-025A	571-121-0	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057997-031A	571-120-0.3	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002

Qualifiers:

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- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: *13-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-325-0.3
Lab Order:	057997		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/18/2002 2:24:00 PM
Lab ID:	057997-003A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810B	QC Batch: 10213					Analyst: **RQ**
Antimony	2.8	2.5		mg/Kg	10	8/10/2002
Arsenic	ND	2.5		mg/Kg	10	8/10/2002
Barium	120	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	20	1.5		mg/Kg	10	8/10/2002
Cobalt	15	1.5		mg/Kg	10	8/10/2002
Copper	21	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	17	1.5		mg/Kg	10	8/10/2002
Selenium	5.0	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	60	1.5		mg/Kg	10	8/10/2002
Zinc	62	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020812C	QC Batch: 10168					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/12/2002

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E - Value above quantitation range
Results are wet unless otherwise specified

Advanced Technology Laboratories *3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040*

Advanced Technology Laboratories

Date: *13-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-120-0
Lab Order:	057997		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/18/2002 2:28:00 PM
Lab ID:	057997-030A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810C	QC Batch: 10214					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	9.8	2.5		mg/Kg	10	8/10/2002
Barium	150	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	28	1.5		mg/Kg	10	8/10/2002
Cobalt	14	1.5		mg/Kg	10	8/10/2002
Copper	39	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	22	1.5		mg/Kg	10	8/10/2002
Selenium	9.5	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	53	1.5		mg/Kg	10	8/10/2002
Zinc	330	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020812C	QC Batch: 10168					Analyst: **NS**
Mercury	0.10	0.10		mg/Kg	1	8/12/2002

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Results are wet unless otherwise specified

Advanced Technology Laboratories *3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040*

Advanced Technology Laboratories

Date: 8/15/2002

LEAD BY ATOMIC ABSORPTION
EPA 1311/ 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057997
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057997-004A	571-325-0.6	3.0	mg/L	10088	0.2	1	7/18/2002	8/6/2002
057997-009A	571-324-0.9	0.23	mg/L	10367	0.2	1	7/18/2002	8/15/2002
057997-030A	571-120-0	0.57	mg/L	10088	0.2	1	7/18/2002	8/6/2002

Qualifiers:

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S - Spike/Surrogate outside of limits due to matrix interferen
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E - Value above quantitation range
Results are wet unless otherwise specified

Advanced Technology Laboratories
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Advanced Technology Laboratories
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Advanced Technology Laboratories

Date: *15-Aug-02*

CLIENT: Ninyo & Moore
Work Order: 057997
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10033

Sample ID: MB-10033	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020806F
Client ID: ZZZZZ	Batch ID: 10033	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/6/2002	SeqNo: 314551

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05628	0.20									

Sample ID: MB-10033A	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020806F
Client ID: ZZZZZ	Batch ID: 10033	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/6/2002	SeqNo: 314552

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.0534	0.20									

Sample ID: MB-10033B	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020806F
Client ID: ZZZZZ	Batch ID: 10033	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/6/2002	SeqNo: 314565

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05983	0.20									

Sample ID: LCS-10033	SampType: LCS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020806F
Client ID: ZZZZZ	Batch ID: 10033	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/6/2002	SeqNo: 314579

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.432	0.20	7.5	0	99.1	80	120	0	0		

Sample ID: 057998-005AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020806F
Client ID: ZZZZZ	Batch ID: 10033	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/6/2002	SeqNo: 314564

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.233	0.20	5	0.06025	103	80	120	0	0		

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CLIENT: Ninyo & Moore
Work Order: 057997
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10033

Sample ID: 057998-018AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020806F
Client ID: ZZZZZ	Batch ID: 10033	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/6/2002	SeqNo: 314577

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.261	0.20	5	0.07802	104	80	120	0	0		

Sample ID: 057998-005ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020806F
Client ID: ZZZZZ	Batch ID: 10033	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/6/2002	SeqNo: 314563

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0.06025	0	30	

Sample ID: 057998-018ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020806F
Client ID: ZZZZZ	Batch ID: 10033	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/6/2002	SeqNo: 314576

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.1009	0.20	0	0	0	0	0	0.07802	0	30	J

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Work Order: 057997
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10088

Sample ID: MB-10088	SampType: mblk	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806I
Client ID: ZZZZZ	Batch ID: 10088	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314618

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10079-TCLP	SampType: mblk	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806I
Client ID: ZZZZZ	Batch ID: 10088	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314619

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10088	SampType: lcs	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806I
Client ID: ZZZZZ	Batch ID: 10088	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314633

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.169	0.20	1	0	117	80	120	0	0		

Sample ID: 057998-027AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806I
Client ID: ZZZZZ	Batch ID: 10088	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314631

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.157	0.20	2.5	3.691	98.7	80	120	0	0		

Sample ID: 057998-027ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806I
Client ID: ZZZZZ	Batch ID: 10088	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314630

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.031	0.20	0	0	0	0	0	3.691	19.6	30	

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CLIENT: Ninyo & Moore
Work Order: 057997
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10168

Sample ID: MB-10168	SampType: MBLK	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812C
Client ID: ZZZZZ	Batch ID: 10168	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 316983

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-10168	SampType: LCS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812C
Client ID: ZZZZZ	Batch ID: 10168	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 316982

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.032	0.10	2.08	0	97.7	80	120	0	0		

Sample ID: 057999-016AMS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812C
Client ID: ZZZZZ	Batch ID: 10168	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 316980

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9936	0.10	0.83	0.05175	113	62	146	0	0		

Sample ID: 057999-016AMSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812C
Client ID: ZZZZZ	Batch ID: 10168	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 316981

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9878	0.10	0.83	0.05175	113	62	146	0.9936	0.582	33	

Sample ID: 057999-016ADUP	SampType: DUP	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812C
Client ID: ZZZZZ	Batch ID: 10168	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 316979

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0746	0.10	0	0	0	0	0	0.05175	0	30	J

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CLIENT: Ninyo & Moore
Work Order: 057997
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10213

Sample ID: MB-10213	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: ZZZZZ	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316634

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.1049	0.25									J
Arsenic	0.01134	0.25									J
Barium	ND	0.15									
Beryllium	0.001497	0.15									J
Cadmium	ND	0.15									
Chromium	ND	0.15									
Cobalt	0.008285	0.15									J
Copper	ND	0.15									
Molybdenum	0.03155	0.25									J
Nickel	0.02092	0.15									J
Selenium	ND	0.25									
Silver	0.04761	0.15									J
Thallium	0.1615	0.25									J
Vanadium	ND	0.15									
Zinc	0.2176	0.50									J

Sample ID: LCS-10213	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: ZZZZZ	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316633

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	47.62	0.25	50	0	95.2	80	120	0	0		
Arsenic	51.84	0.25	50	0	104	80	120	0	0		
Barium	48.27	0.15	50	0	96.5	80	120	0	0		
Beryllium	47.2	0.15	50	0	94.4	80	120	0	0		
Cadmium	48.14	0.15	50	0	96.3	80	120	0	0		
Chromium	47.49	0.15	50	0	95	80	120	0	0		
Cobalt	47.79	0.15	50	0	95.6	80	120	0	0		
Copper	46.09	0.15	50	0	92.2	80	120	0	0		
Molybdenum	49.16	0.25	50	0	98.3	80	120	0	0		
Nickel	46.3	0.15	50	0	92.6	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; S - Spike/Surrogate outside limits due to matrix interference; B - Analyte detected in the associated Method Blank; **Calculations are based on raw values**; DO - Surrogate diluted out; H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057997
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10213

Sample ID: LCS-10213	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: ZZZZZ	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316633

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	51.76	0.25	50	0	104	80	120	0	0		
Silver	46.17	0.15	50	0	92.3	80	120	0	0		
Thallium	49.01	0.25	50	0	98	80	120	0	0		
Vanadium	48.51	0.15	50	0	97	80	120	0	0		
Zinc	52.5	0.50	50	0	105	80	120	0	0		

Sample ID: 057997-003AMS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: 571-325-0.3	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316630

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	79.9	2.5	125	2.788	61.7	32	115	0	0		
Arsenic	127.7	2.5	125	1.548	101	59	111	0	0		
Barium	257.1	1.5	125	117.9	111	34	151	0	0		
Beryllium	121.5	1.5	125	0	97.2	56	112	0	0		
Cadmium	127.6	1.5	125	0.3295	102	52	120	0	0		
Chromium	148.3	1.5	125	20.21	102	56	118	0	0		
Cobalt	143	1.5	125	15.43	102	58	117	0	0		
Copper	147.5	1.5	125	20.79	101	58	134	0	0		
Molybdenum	120.5	2.5	125	0.08681	96.4	56	115	0	0		
Nickel	142.3	1.5	125	16.95	100	52	120	0	0		
Selenium	140.4	2.5	125	5.02	108	46	108	0	0		S
Silver	114.4	1.5	125	0	91.5	74	117	0	0		
Thallium	114.6	2.5	125	0	91.7	62	117	0	0		
Vanadium	193.1	1.5	125	60.22	106	55	122	0	0		
Zinc	197.5	5.0	125	61.86	109	43	134	0	0		

Sample ID: 057997-003AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: 571-325-0.3	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316631

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

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Calculations are based on raw values

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CLIENT: Ninyo & Moore
Work Order: 057997
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10213

Sample ID: 057997-003AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: 571-325-0.3	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316631

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	80.18	2.5	125	2.788	61.9	32	115	79.9	0.348	20	
Arsenic	125.9	2.5	125	1.548	99.5	59	111	127.7	1.42	20	
Barium	244.9	1.5	125	117.9	102	34	151	257.1	4.87	20	
Beryllium	118.2	1.5	125	0	94.5	56	112	121.5	2.79	20	
Cadmium	127.4	1.5	125	0.3295	102	52	120	127.6	0.121	20	
Chromium	143.8	1.5	125	20.21	98.9	56	118	148.3	3.04	20	
Cobalt	142.2	1.5	125	15.43	101	58	117	143	0.570	20	
Copper	142.8	1.5	125	20.79	97.6	58	134	147.5	3.23	20	
Molybdenum	121.1	2.5	125	0.08681	96.8	56	115	120.5	0.434	20	
Nickel	140.8	1.5	125	16.95	99.1	52	120	142.3	1.04	20	
Selenium	134.4	2.5	125	5.02	104	46	108	140.4	4.35	20	
Silver	103.4	1.5	125	0	82.7	74	117	114.4	10.1	20	
Thallium	113.3	2.5	125	0	90.6	62	117	114.6	1.17	20	
Vanadium	184.2	1.5	125	60.22	99.2	55	122	193.1	4.72	20	
Zinc	192.3	5.0	125	61.86	104	43	134	197.5	2.66	20	

Sample ID: 057997-003ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: 571-325-0.3	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316629

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.811	2.5	0	0	0	0	0	2.788	0.832	30	
Arsenic	0.1834	2.5	0	0	0	0	0	1.548	0	30	J
Barium	126.8	1.5	0	0	0	0	0	117.9	7.31	30	
Beryllium	ND	1.5	0	0	0	0	0	0	0	30	
Cadmium	0.3828	1.5	0	0	0	0	0	0.3295	0	30	J
Chromium	21.21	1.5	0	0	0	0	0	20.21	4.85	30	
Cobalt	16.27	1.5	0	0	0	0	0	15.43	5.30	30	
Copper	22	1.5	0	0	0	0	0	20.79	5.65	30	
Molybdenum	ND	2.5	0	0	0	0	0	0.08681	0	30	
Nickel	18.08	1.5	0	0	0	0	0	16.95	6.49	30	

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Calculations are based on raw values

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CLIENT: Ninyo & Moore
Work Order: 057997
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10213

Sample ID: 057997-003ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: 571-325-0.3	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316629

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	0.8151	2.5	0	0	0	0	0	5.02	0	30	J
Silver	ND	1.5	0	0	0	0	0	0	0	30	
Thallium	ND	2.5	0	0	0	0	0	0	0	30	
Vanadium	62.37	1.5	0	0	0	0	0	60.22	3.51	30	
Zinc	66.48	5.0	0	0	0	0	0	61.86	7.21	30	

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CLIENT: Ninyo & Moore
Work Order: 057997
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10214

Sample ID: MB-10214	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: ZZZZZ	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316649

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.1718	0.25									
Arsenic	0.04361	0.25									
Barium	ND	0.15									
Beryllium	ND	0.15									
Cadmium	ND	0.15									
Chromium	ND	0.15									
Cobalt	0.01124	0.15									
Copper	ND	0.15									
Molybdenum	0.07668	0.25									
Nickel	0.00859	0.15									
Selenium	0.08038	0.25									
Silver	ND	0.15									
Thallium	ND	0.25									
Vanadium	ND	0.15									
Zinc	0.01372	0.50									

Sample ID: LCS-10214	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: ZZZZZ	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316648

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	47.37	0.25	50	0	94.7	80	120	0	0		
Arsenic	49.23	0.25	50	0	98.5	80	120	0	0		
Barium	50.87	0.15	50	0	102	80	120	0	0		
Beryllium	50.48	0.15	50	0	101	80	120	0	0		
Cadmium	50.45	0.15	50	0	101	80	120	0	0		
Chromium	51.14	0.15	50	0	102	80	120	0	0		
Cobalt	50.06	0.15	50	0	100	80	120	0	0		
Copper	49	0.15	50	0	98	80	120	0	0		
Molybdenum	48.81	0.25	50	0	97.6	80	120	0	0		
Nickel	48.87	0.15	50	0	97.7	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; S - Spike/Surrogate outside limits due to matrix interference; B - Analyte detected in the associated Method Blank; **Calculations are based on raw values**; DO - Surrogate diluted out; H - Sample exceeded holding time

Advanced Technology Laboratories
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CLIENT: Ninyo & Moore
Work Order: 057997
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10214

Sample ID: LCS-10214	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: ZZZZZ	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316648

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	49.08	0.25	50	0	98.2	80	120	0	0		
Silver	49.37	0.15	50	0	98.7	80	120	0	0		
Thallium	47.17	0.25	50	0	94.3	80	120	0	0		
Vanadium	52	0.15	50	0	104	80	120	0	0		
Zinc	48.86	0.50	50	0	97.7	80	120	0	0		

Sample ID: 058000-028AMS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: ZZZZZ	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316645

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	74.17	2.5	125	0	59.3	32	115	0	0		
Arsenic	126.9	2.5	125	6.085	96.6	59	111	0	0		
Barium	321.8	1.5	125	208.7	90.5	34	151	0	0		
Beryllium	120.4	1.5	125	0	96.3	56	112	0	0		
Cadmium	128.5	1.5	125	4.104	99.5	52	120	0	0		
Chromium	174.2	1.5	125	46.43	102	56	118	0	0		
Cobalt	136.2	1.5	125	12.97	98.6	58	117	0	0		
Copper	157.2	1.5	125	68.99	70.6	58	134	0	0		
Molybdenum	126.6	2.5	125	7.406	95.3	56	115	0	0		
Nickel	166.3	1.5	125	46.76	95.7	52	120	0	0		
Selenium	134.7	2.5	125	16.42	94.6	46	108	0	0		
Silver	122.4	1.5	125	0	97.9	74	117	0	0		
Thallium	104.8	2.5	125	0	83.8	62	117	0	0		
Vanadium	232.5	1.5	125	98.92	107	55	122	0	0		
Zinc	225.8	5.0	125	102.5	98.6	43	134	0	0		

Sample ID: 058000-028AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: ZZZZZ	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316646

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike/Surrogate outside limits due to matrix interference; DO - Surrogate diluted out
J - Analyte detected below quantitation limits; B - Analyte detected in the associated Method Blank; H - Sample exceeded holding time
R - RPD outside accepted recovery limits; **Calculations are based on raw values**

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10214

Sample ID: 058000-028AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: ZZZZZ	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316646

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	66.7	2.5	125	0	53.4	32	115	74.17	10.6	20	
Arsenic	123.5	2.5	125	6.085	94	59	111	126.9	2.66	20	
Barium	339.6	1.5	125	208.7	105	34	151	321.8	5.40	20	
Beryllium	117.6	1.5	125	0	94.1	56	112	120.4	2.37	20	
Cadmium	125.6	1.5	125	4.104	97.2	52	120	128.5	2.34	20	
Chromium	174.5	1.5	125	46.43	102	56	118	174.2	0.137	20	
Cobalt	133.9	1.5	125	12.97	96.8	58	117	136.2	1.68	20	
Copper	152	1.5	125	68.99	66.4	58	134	157.2	3.39	20	
Molybdenum	122.9	2.5	125	7.406	92.4	56	115	126.6	2.95	20	
Nickel	170.9	1.5	125	46.76	99.3	52	120	166.3	2.73	20	
Selenium	137.6	2.5	125	16.42	97	46	108	134.7	2.16	20	
Silver	119.9	1.5	125	0	95.9	74	117	122.4	2.01	20	
Thallium	104.6	2.5	125	0	83.7	62	117	104.8	0.104	20	
Vanadium	235.9	1.5	125	98.92	110	55	122	232.5	1.49	20	
Zinc	224.7	5.0	125	102.5	97.8	43	134	225.8	0.455	20	

Sample ID: 058000-028ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: ZZZZZ	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316644

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.1277	2.5	0	0	0	0	0	0	0	30	J
Arsenic	7.906	2.5	0	0	0	0	0	6.085	26.0	30	
Barium	260	1.5	0	0	0	0	0	208.7	21.9	30	
Beryllium	ND	1.5	0	0	0	0	0	0	0	30	
Cadmium	4.654	1.5	0	0	0	0	0	4.104	12.6	30	
Chromium	48.65	1.5	0	0	0	0	0	46.43	4.67	30	
Cobalt	11.26	1.5	0	0	0	0	0	12.97	14.1	30	
Copper	37.08	1.5	0	0	0	0	0	68.99	60.2	30	R
Molybdenum	9.152	2.5	0	0	0	0	0	7.406	21.1	30	
Nickel	50.81	1.5	0	0	0	0	0	46.76	8.31	30	

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CLIENT: Ninyo & Moore
Work Order: 057997
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10214

Sample ID: 058000-028ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: ZZZZZ	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316644

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	15.47	2.5	0	0	0	0	0	16.42	5.96	30	
Silver	ND	1.5	0	0	0	0	0	0	0	30	
Thallium	ND	2.5	0	0	0	0	0	0	0	30	
Vanadium	105.5	1.5	0	0	0	0	0	98.92	6.47	30	
Zinc	114.5	5.0	0	0	0	0	0	102.5	11.0	30	

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CLIENT: Ninyo & Moore
Work Order: 057997
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10367

Sample ID: MB-10367	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814[
Client ID: ZZZZZ	Batch ID: 10367	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319095

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.07683	0.20									

Sample ID: MB-10276-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814[
Client ID: ZZZZZ	Batch ID: 10367	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319096

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10367	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814[
Client ID: ZZZZZ	Batch ID: 10367	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319110

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.193	0.20	1	0	119	80	120	0	0		

Sample ID: 057998-015AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814[
Client ID: ZZZZZ	Batch ID: 10367	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319108

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.624	0.20	3.125	3.625	95.9	80	120	0	0		

Sample ID: 057998-015ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814[
Client ID: ZZZZZ	Batch ID: 10367	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319107

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.587	0.20	0	0	0	0	0	3.625	1.07	30	

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Work Order: 057997
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9716

Sample ID: MB-9716A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724A
Client ID: ZZZZZ	Batch ID: 9716	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305078

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9716B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724A
Client ID: ZZZZZ	Batch ID: 9716	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305079

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9716	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724A
Client ID: ZZZZZ	Batch ID: 9716	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305077

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	237.1	5.0	250	0	94.8	80	120	0	0		

Sample ID: 057997-011AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724A
Client ID: 571-323-0	Batch ID: 9716	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305063

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	281.1	5.0	250	88.44	77	47	128	0	0		

Sample ID: 057997-021AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724A
Client ID: 571-321-0.3	Batch ID: 9716	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305075

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	166.7	5.0	250	102.8	25.6	47	128	0	0		S

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DO - Surrogate diluted out
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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9716

Sample ID: 057997-011ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724A
Client ID: 571-323-0	Batch ID: 9716	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305062

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	52.05	5.0	0	0	0	0	0	88.44	51.8	30	R

Sample ID: 057997-021ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724A
Client ID: 571-321-0.3	Batch ID: 9716	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305074

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	60.01	5.0	0	0	0	0	0	102.8	52.5	30	R

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9719

Sample ID: MB-9719A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724B
Client ID: ZZZZZ	Batch ID: 9719	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305106

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9719B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724B
Client ID: ZZZZZ	Batch ID: 9719	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305107

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9719	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724B
Client ID: ZZZZZ	Batch ID: 9719	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305105

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	232.2	5.0	250	0	92.9	80	120	0	0		

Sample ID: 057997-031AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724B
Client ID: 571-120-0.3	Batch ID: 9719	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305091

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	164	5.0	250	97.87	26.5	47	128	0	0		S

Sample ID: 057998-008AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724B
Client ID: ZZZZZ	Batch ID: 9719	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305103

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	349.9	5.0	250	695.8	-138	47	128	0	0		S

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CLIENT: Ninyo & Moore
Work Order: 057997
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9719

Sample ID: 057997-031ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724B
Client ID: 571-120-0.3	Batch ID: 9719	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305090

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	132.8	5.0	0	0	0	0	0	97.87	30.3	30	R

Sample ID: 057998-008ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724B
Client ID: ZZZZZ	Batch ID: 9719	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305102

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	651.9	5.0	0	0	0	0	0	695.8	6.51	30	

Qualifiers:
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ANALYTICAL QC SUMMARY REPORT

BatchID: 9745

Sample ID: MB-9745	SampType: MBLK	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303590

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050									

Sample ID: LCS-9745	SampType: LCS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303591

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.96	0.0050	1	0	96	80	120	0	0		

Sample ID: 057999-001AMS	SampType: MS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303603

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.54	0.0050	2.5	0	102	66	118	0	0		

Sample ID: 057999-001ADUP	SampType: DUP	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303602

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050	0	0	0	0	0	0	0	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057997
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9901

Sample ID: MB-9901	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020730C
Client ID: ZZZZZ	Batch ID: 9901	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310035

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.07992	0.20									

Sample ID: MB-9901A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020730C
Client ID: ZZZZZ	Batch ID: 9901	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310036

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05799	0.20									

Sample ID: MB-9901B	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020730C
Client ID: ZZZZZ	Batch ID: 9901	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310049

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9901	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020730C
Client ID: ZZZZZ	Batch ID: 9901	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310063

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.789	0.20	7.5	0	104	80	120	0	0		

Sample ID: 057996-039AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020730C
Client ID: ZZZZZ	Batch ID: 9901	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310048

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.026	0.20	5	3.4	92.5	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057997
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9901

Sample ID: 057997-009AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020730C
Client ID: 571-324-0.9	Batch ID: 9901	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310061

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	264.5	6.4	160	112.2	95.2	80	120	0	0		

Sample ID: 057996-039ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020730C
Client ID: ZZZZZ	Batch ID: 9901	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310047

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.97	0.20	0	0	0	0	0	3.4	15.5	30	

Sample ID: 057997-009ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020730C
Client ID: 571-324-0.9	Batch ID: 9901	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310060

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	112	3.2	0	0	0	0	0	112.2	0.115	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057997
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9903

Sample ID: MB-9903	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020730D
Client ID: ZZZZZ	Batch ID: 9903	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310064

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9903A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020730D
Client ID: ZZZZZ	Batch ID: 9903	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310065

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9903B	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020730D
Client ID: ZZZZZ	Batch ID: 9903	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310078

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9903	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020730D
Client ID: ZZZZZ	Batch ID: 9903	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310092

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.427	0.20	7.5	0	99	80	120	0	0		

Sample ID: 057998-007AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020730D
Client ID: ZZZZZ	Batch ID: 9903	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310077

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	64.38	1.6	40	30.78	84	80	120	0	0		

Qualifiers:
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057997
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9903

Sample ID: 057998-018AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020730D
Client ID: ZZZZZ	Batch ID: 9903	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310090

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	128.7	3.2	80	50.12	98.2	80	120	0	0		

Sample ID: 057998-007ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020730D
Client ID: ZZZZZ	Batch ID: 9903	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310076

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	30.62	0.80	0	0	0	0	0	30.78	0.521	30	

Sample ID: 057998-018ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020730D
Client ID: ZZZZZ	Batch ID: 9903	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310089

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	50.18	1.6	0	0	0	0	0	50.12	0.123	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057997
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: R19676

Sample ID: 057997-033ADUP	SampType: DUP	TestCode: 9045_S	Units: pH Units	Prep Date: 7/23/2002	Run ID: WETCHEM_020723E
Client ID: 571-120-0.9	Batch ID: R19676	TestNo: EPA 9045C		Analysis Date: 7/23/2002	SeqNo: 303820

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.85	0.10	0	0	0	0	0	7.834	0.204	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
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S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Rachelle

From: Steve Reese [sreese@ninyoandmoore.com]
Sent: Wednesday, July 31, 2002 9:27 AM
To: 'rachelle@atlglobal.com'
Cc: David Shaler (E-mail); Ruth Cheung (E-mail)
Subject: TCLP Analysis

TCLP.xls

Rachelle,
Attached please find a list of samples to be run for the TCLP analysis. Currently, we selected all of the samples that are greater than 1,000 mg/kg
of TTLC results. However, they will be ran by instruction only. There may
be more samples chosen for TCLP analysis in the future, but please run these 82 samples for now. Please call with any questions.
Thank you, Steve

Stephen S. Reese
Senior Staff Environmental Scientist
Ninyo & Moore Geotechnical & Environmental Sciences Consultants
475 Goddard, Suite 200
Irvine, California 92618
Tel: (949) 753-7070
Fax: (949) 753-7071
Email: sreese@ninyoandmoore.com
www.ninyoandmoore.com

RUN FOR TCLP ANALYSIS

33	20	29
569-101-0	570-101-0	571-104-0
569-102-0	570-101-0.6	571-120-0
569-102-0.3	570-102-0.6	571-310-0.9
569-102-0.9	570-103-1.5	571-317-0
569-111-0	570-114-0.6	571-320-0
569-112-0	570-115-0	571-325-0.6
569-112-0.6	570-119-0.3	571-507-0
569-201-0	570-201-0	571-511-0
569-212-0	570-214-0	571-514-0
569-301-0	570-311-0.6	571-524-0
569-303-0.9	570-312-0.6	571-710-0
569-314-0	570-504-0	571-710-0.3
569-401-0	570-508-0	571-711-0
569-404-0.6	570-517-0	571-711-0.3
569-405-0.6	570-517-0.3	571-712-0
569-408-0.9	570-610-0.6	571-712-0.3
569-502-0.6	570-615-0	571-201-0.6
569-516-0	570-706-0	571-405-0
569-603-0.3	570-709-0	571-406-0
569-607-0	570-808-0.6	571-407-0
569-607-0.3		571-414-0
569-609-0		571-609-0
569-609-0.3		571-611-0
569-703-0		571-616-0
569-703-0.9		571-617-0
569-705-0		571-619-1.5
569-705-0.3		571-814-0.3
569-706-0		571-818-0.6
569-708-0		571-819-0
569-710-0		
569-711-0		
569-711-0.3		
569-801-0.3		

82

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Tuesday, August 06, 2002 3:46 PM
To: 'Rachelle'; 'David Shaler (E-mail)'
Subject: Title 22 Metals

Title 22 Metals.xls

Rachelle,
Please run the following samples for Title 22 Metals. Please do not list
Pb in your emailed results. There should be a total of 120 samples to be
run.
Thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

569-102-0.9	570-101-0	571-101-0.9
569-112-0	570-101-0.6	571-104-0
569-201-0	570-201-0	571-201-0.6
569-206-0.6	570-205-0.9	571-108-1.5
569-106-1.5	570-106-0.3	571-111-0.3
569-212-0	570-208-1.5	571-207-0
569-401-0.6	570-111-0.6	571-210-0.6
569-301-0	570-214-0	571-115-0.9
569-303-0.9	570-115-0.3	571-214-0.3
569-404-0.6	570-119-0.9	571-120-0
569-408-0.9	570-224-0.6	571-217-1.5
569-314-0	570-401-0	571-220-0.6
569-313-0.3	570-401-0.3	571-301-0.3
569-502-0.6	570-304-1.5	571-405-0
569-602-1.5	570-307-0.9	571-306-0.9
569-607-0.3	570-311-0.6	571-407-0
569-607-0	570-312-0.6	571-310-0.9
569-508-0.9	570-316-0.3	571-315-0.3
569-511-0.6	570-601-0	571-412-1.5
569-612-1.5	570-505-1.5	571-317-0
569-516-0	570-508-0	571-320-0.6
569-801-0.3	570-610-0.6	571-416-0.9
569-519-0.6	570-511-0.9	571-325-0.3
569-803-0.9	570-615-0	571-421-1.5
569-705-0	570-514-0.3	571-425-0
569-806-1.5	570-517-0	571-501-0.6
569-708-0.3	570-618-0.6	571-503-0.9
569-711-0	570-621-1.5	571-603-0.3
569-811-0	570-703-0.9	571-507-0
	570-804-0	571-609-0
	570-706-0	571-510-1.5
	570-709-0	571-611-0
	570-808-0.6	571-514-0
	570-711-1.5	571-614-0.3
	570-812-0.3	571-517-0.9
		571-617-0.6
		571-520-1.5
		571-621-0.3
		571-524-0
		571-624-0.9
		571-529-0.3
		571-628-0.6
		571-703-1.5
		571-707-0
		571-804-0.9
		571-809-0.3
		571-711-0
		571-712-0
		571-814-0.3
		571-818-0.6
		571-819-0
		571-827-1.5

571-832-0.9
571-836-0.3
571-837-0.6
571-842-0

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Thursday, August 08, 2002 9:14 AM
To: 'Rachelle'
Subject: TCLP Analysis

TCLP-3.xls

In addition to the 90 TCLP already run please run the following samples for
TCLP. There should be a list of 350 samples.
Thanks for a the hard work and timely results.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

-----Original Message-----
From: Rachelle [SMTP:Rachelle@ATLGlobal.com]
Sent: Wednesday, August 07, 2002 5:02 PM
To: 'David Shaler (E-mail)'
Cc: 'Ruth Cheung (E-mail)'
Subject: TCLP Results

<<57931TCLP.xls>> <<58001TCLP.xls>> <<58021TCLP.xls>> <<58022TCLP.xls>>
<<58023TCLP.xls>> <<58024TCLP.xls>> <<58049TCLP.xls>> <<58050TCLP.xls>>
<<58052TCLP.xls>> <<58053TCLP.xls>> <<58065TCLP.xls>> <<58066TCLP.xls>>
<<58067TCLP.xls>> <<58068TCLP.xls>> <<58069TCLP.xls>>

Rachelle Arada
Project Coordinator
www.atlglobal.com
voice: 562.989.4045 ext 237
fax : 562.989.4040

<< File: 57931TCLP.xls >> << File: 58001TCLP.xls >> << File: 58021TCLP.xls >> << File: 58022TCLP.xls >> << File: 58023TCLP.xls >> << File: 58024TCLP.xls >> << File: 58049TCLP.xls >> << File: 58050TCLP.xls >> << File: 58052TCLP.xls >> << File: 58053TCLP.xls >> << File: 58065TCLP.xls >> << File: 58066TCLP.xls >> << File: 58067TCLP.xls >> << File: 58068TCLP.xls >> << File: 58069TCLP.xls >>

569-404-0	2. STLC	170	570-515-0.3	2. STLC	120	571-521-0	2. STLC	230
569-402-0	2. STLC	130	570-811-0	2. STLC	110	571-324-0.9	2. STLC	110
569-406-0	2. STLC	120	570-114-0.0	2. STLC	110	571-818-0	2. STLC	110
569-515-0	2. STLC	110	570-504-0.6	2. STLC	100	571-819-0.6	2. STLC	110
569-611-0	2. STLC	100	570-811-1.5	2. STLC	90	571-708-0	2. STLC	110
569-409-0	2. STLC	94	570-615-0.6	2. STLC	84	571-103-0.6	2. STLC	110
569-603-0	2. STLC	93	570-305-0	2. STLC	79	571-617-0.3	2. STLC	100
569-104-0.6	2. STLC	91	570-314-0.6	2. STLC	76	571-611-0.6	2. STLC	92
569-807-0	2. STLC	86	570-505-0.6	2. STLC	75	571-712-0.9	2. STLC	81
569-608-0	2. STLC	86	570-208-0.6	2. STLC	74	571-105-0.6	2. STLC	81
569-501-0	2. STLC	84	570-116-0.0	2. STLC	73	571-313-0	2. STLC	79
569-710-0.3	2. STLC	83	570-102-0	2. STLC	65	571-508-0	2. STLC	73
569-808-0	2. STLC	83	570-804-0.6	2. STLC	64	571-518-0.3	2. STLC	73
569-609-0.6	2. STLC	80	570-704-0	2. STLC	63	571-217-0	2. STLC	68
569-803-0	2. STLC	79	570-508-0.6	2. STLC	60	571-516-0	2. STLC	66
569-105-0	2. STLC	78	570-706-0.3	2. STLC	60	571-701-0.3	2. STLC	66
569-512-0	2. STLC	77	570-303-0	2. STLC	58	571-710-0.6	2. STLC	65
569-513-0	2. STLC	77	570-311-1.5	2. STLC	58	571-512-0	2. STLC	64
569-302-0	2. STLC	74	570-117-0.0	2. STLC	58	571-308-0.9	2. STLC	61
569-805-0	2. STLC	73	570-208-0.3	2. STLC	58	571-701-0	2. STLC	61
569-517-0	2. STLC	71	570-709-0.6	2. STLC	57	571-514-0.3	2. STLC	59
569-704-0.3	2. STLC	71	570-703-0	2. STLC	55	571-415-0	2. STLC	58
569-703-0.6	2. STLC	70	570-206-0	2. STLC	54	571-616-0.6	2. STLC	57
569-514-0.3	2. STLC	70	570-301-0	2. STLC	53	571-517-0	2. STLC	56
569-803-0.3	2. STLC	69	570-603-0.3	2. STLC	46	571-112-0.9	2. STLC	56
569-409-0.6	2. STLC	69	570-711-0.6	2. STLC	46	571-214-0	2. STLC	55
569-411-0	2. STLC	68	570-206-0.3	2. STLC	45	571-415-0.3	2. STLC	55
569-102-0.6	2. STLC	68	570-103-0	2. STLC	44	571-405-0.6	2. STLC	55
569-809-0	2. STLC	65	570-602-0	2. STLC	41	571-530-0	2. STLC	55
569-605-0	2. STLC	65	570-209-0	2. STLC	40	571-831-0	2. STLC	53
569-711-0.6	2. STLC	62	570-210-0	2. STLC	40	571-709-0	2. STLC	53
569-806-0	2. STLC	60	570-117-0.3	2. STLC	39	571-103-0.0	2. STLC	52
569-802-0.3	2. STLC	60	570-103-0.6	2. STLC	37	571-312-0	2. STLC	51
569-410-0	2. STLC	59	570-110-0.6	2. STLC	37	571-526-0	2. STLC	51
569-501-0.6	2. STLC	59	570-805-0.9	2. STLC	36	571-819-1.5	2. STLC	51
569-808-0.3	2. STLC	58	570-112-1.5	2. STLC	35	571-515-0	2. STLC	50
569-104-0	2. STLC	56	570-614-0	2. STLC	34	571-833-0	2. STLC	49
569-804-0	2. STLC	54	570-713-0.3	2. STLC	33	571-815-0.6	2. STLC	47
569-610-0	2. STLC	54	570-513-0	2. STLC	32	571-517-0.3	2. STLC	46
569-608-0.3	2. STLC	53	570-312-0.3	2. STLC	31	571-610-0	2. STLC	46
569-213-0	2. STLC	49	570-503-0.6	2. STLC	31	571-413-0	2. STLC	46
569-701-0	2. STLC	47	570-510-0.6	2. STLC	31	571-815-0	2. STLC	45
569-311-0	2. STLC	47	570-202-0	2. STLC	31	571-514-0.9	2. STLC	44
569-609-0.9	2. STLC	46	570-207-0	2. STLC	31	571-505-1.5	2. STLC	44
569-513-0.3	2. STLC	45	570-209-0.3	2. STLC	31	571-528-0	2. STLC	44
569-801-0.6	2. STLC	44	570-703-0.3	2. STLC	30	571-610-0.6	2. STLC	43
569-514-0	2. STLC	42	570-401-0	2. STLC	30	571-629-0	2. STLC	43
569-805-0.6	2. STLC	42	570-610-0.9	2. STLC	29	571-604-0	2. STLC	42
569-408-1.5	2. STLC	42	570-809-0.6	2. STLC	29	571-213-0	2. STLC	41
569-807-0.3	2. STLC	40	570-509-0.9	2. STLC	29	571-812-0	2. STLC	41
569-204-0	2. STLC	40	570-210-0.6	2. STLC	29	571-706-0	2. STLC	41
569-517-0.3	2. STLC	36	570-211-0	2. STLC	29	571-530-0.6	2. STLC	41
569-518-0	2. STLC	36	570-603-0	2. STLC	28	571-305-0	2. STLC	40
569-806-0.3	2. STLC	36	570-119-0	2. STLC	28	571-523-0.3	2. STLC	39
569-705-1.5	2. STLC	35	570-713-0.6	2. STLC	28	571-510-0	2. STLC	39
569-303-0.6	2. STLC	34	570-108-0	2. STLC	27	571-305-0.9	2. STLC	39
569-516-0.3	2. STLC	33	570-708-0.6	2. STLC	27	571-818-1.5	2. STLC	39
569-705-0.6	2. STLC	33	570-224-0	2. STLC	26	571-703-0	2. STLC	38
569-802-0	2. STLC	33	570-601-0	2. STLC	26	571-520-0.3	2. STLC	36
569-515-0.6	2. STLC	32	570-710-0.6	2. STLC	26	571-216-0	2. STLC	34
569-704-0	2. STLC	32	570-614-0.6	2. STLC	26	571-827-0	2. STLC	34
569-401-0.3	2. STLC	32	570-118-0.3	2. STLC	26	571-708-0.3	2. STLC	34
569-207-0	2. STLC	32	570-304-0	2. STLC	25	571-514-0.6	2. STLC	33
569-608-0.6	2. STLC	31	570-707-0.6	2. STLC	25	571-528-1.5	2. STLC	33
569-104-0.3	2. STLC	31	570-510-0	2. STLC	25	571-803-0	2. STLC	33
569-201-0.6	2. STLC	30	570-110-0	2. STLC	24	571-414-0.3	2. STLC	33
569-515-0.3	2. STLC	28	570-223-0	2. STLC	24	571-813-0.3	2. STLC	32
569-212-0.6	2. STLC	28	570-117-0.6	2. STLC	24	571-523-0	2. STLC	31
569-103-0	2. STLC	28	570-616-0	2. STLC	23	571-326-0	2. STLC	31
569-313-0	2. STLC	27	570-704-0.3	2. STLC	22	571-502-0.6	2. STLC	31
569-103-0.3	2. STLC	26	570-513-0.6	2. STLC	22	571-624-1.5	2. STLC	31
569-705-0.9	2. STLC	25	570-221-0.0	2. STLC	22	571-330-0	2. STLC	31
569-707-0.3	2. STLC	25	570-617-0	2. STLC	21	571-512-0.3	2. STLC	30
569-515-1.5	2. STLC	24	570-214-0.3	2. STLC	21	571-521-0.6	2. STLC	29
569-508-0	2. STLC	24	570-122-0.9	2. STLC	20	571-706-0.3	2. STLC	29
569-801-0	2. STLC	24	570-313-0.6	2. STLC	19	571-814-0.6	2. STLC	28
569-402-0.6	2. STLC	24	570-207-0.6	2. STLC	19	571-616-1.5	2. STLC	28
569-516-0.6	2. STLC	22	570-120-0.9	2. STLC	18	571-835-0	2. STLC	28
569-509-0.3	2. STLC	22	570-506-0	2. STLC	18	571-811-0.3	2. STLC	28
569-106-0	2. STLC	22	570-102-0.9	2. STLC	17	571-101-0.6	2. STLC	28
569-106-0.3	2. STLC	22	570-216-0	2. STLC	17	571-112-0	2. STLC	28
569-202-0	2. STLC	21	570-225-0	2. STLC	17	571-315-0	2. STLC	27
569-805-1.5	2. STLC	21	570-304-0.3	2. STLC	17	571-622-0	2. STLC	27
569-205-0	2. STLC	20	570-409-0	2. STLC	17	571-607-0.6	2. STLC	27
569-707-0	2. STLC	19	570-713-0	2. STLC	17	571-609-0.6	2. STLC	27

569-709-0	2. STLC	19
569-202-0.3	2. STLC	19
569-602-0	2. STLC	19
569-207-0.3	2. STLC	19
569-706-0.3	2. STLC	17
569-807-0.9	2. STLC	17
569-104-0.9	2. STLC	17
569-505-0.6	2. STLC	17
569-704-0.6	2. STLC	16
569-808-0.6	2. STLC	16
569-212-0.3	2. STLC	16
569-612-0	2. STLC	16
569-704-1.5	2. STLC	15
569-411-0.3	2. STLC	15
569-113-0	2. STLC	15
569-807-0.6	2. STLC	14
569-311-0.3	2. STLC	12
569-312-0	2. STLC	10
569-311-0.9	2. STLC	8.3

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570-401-0.3	2. STLC	17
570-616-0.6	2. STLC	17
570-308-0	2. STLC	16
570-807-0.9	2. STLC	16
570-701-0.6	2. STLC	16
570-617-0.3	2. STLC	16
570-107-0.6	2. STLC	15
570-811-0.6	2. STLC	15
570-707-0	2. STLC	15
570-518-0	2. STLC	15
570-111-0.0	2. STLC	15
570-109-0.6	2. STLC	14
570-401-0.9	2. STLC	4.1
570-408-0	2. STLC	4
570-409-0.3	2. STLC	3
570-401-0.6		0
570-401-1.5		0
570-408-0.6		0
570-408-1.5		0

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571-837-0.3	2. STLC	27
571-520-0	2. STLC	26
571-516-0.3	2. STLC	26
571-420-0	2. STLC	26
571-102-0.6	2. STLC	26
571-517-1.5	2. STLC	25
571-513-0.6	2. STLC	25
571-623-0.6	2. STLC	25
571-112-0.3	2. STLC	25
571-326-0.6	2. STLC	24
571-619-0.3	2. STLC	24
571-619-0.9	2. STLC	24
571-528-0.3	2. STLC	24
571-706-0.6	2. STLC	24
571-112-0.6	2. STLC	24
571-327-0.6	2. STLC	23
571-817-0	2. STLC	23
571-425-0.6	2. STLC	22
571-118-0	2. STLC	22
571-829-0	2. STLC	22
571-828-0	2. STLC	22
571-122-0	2. STLC	21
571-101-1.5	2. STLC	21
571-530-0.3	2. STLC	21
571-406-0.6	2. STLC	20
571-517-0.6	2. STLC	20
571-835-0.3	2. STLC	20
571-501-0	2. STLC	20
571-518-0.9	2. STLC	19
571-510-0.3	2. STLC	19
571-814-0.9	2. STLC	19
571-522-0.6	2. STLC	19
571-622-1.5	2. STLC	19
571-812-0.6	2. STLC	19
571-701-0.6	2. STLC	19
571-704-0	2. STLC	19
571-711-0.6	2. STLC	19
571-212-0	2. STLC	18
571-839-0.6	2. STLC	18
571-610-1.5	2. STLC	18
571-709-0.3	2. STLC	18
571-311-0.6	2. STLC	17
571-520-0	2. STLC	17
571-109-0	2. STLC	17
571-704-0.3	2. STLC	17
571-207-1.5	2. STLC	16
571-203-0	2. STLC	16
571-616-0.3	2. STLC	16
571-317-0.3	2. STLC	16
571-629-0.3	2. STLC	16
571-416-0	2. STLC	15
571-419-0	2. STLC	15
571-526-0.3	2. STLC	15
571-619-0	2. STLC	15
571-606-0	2. STLC	15
571-115-0.6	2. STLC	14
571-202-0.9	2. STLC	11

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tblTEMP

WorkOrder	ClientSampID	TestNo	Analyte	PQL	DF	CollectionDate	AnalDate	PrepDate
057997	571-120-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/5/2002
057997	571-120-0	EPA 6010B	Antimony	2.5	10	7/18/2002	8/10/2002	8/9/2002
057997	571-120-0	EPA 6010B	Arsenic	2.5	10	7/18/2002	8/10/2002	8/9/2002
057997	571-120-0	EPA 6010B	Barium	1.5	10	7/18/2002	8/10/2002	8/9/2002
057997	571-120-0	EPA 6010B	Beryllium	1.5	10	7/18/2002	8/10/2002	8/9/2002
057997	571-120-0	EPA 6010B	Cadmium	1.5	10	7/18/2002	8/10/2002	8/9/2002
057997	571-120-0	EPA 6010B	Chromium	1.5	10	7/18/2002	8/10/2002	8/9/2002
057997	571-120-0	EPA 6010B	Cobalt	1.5	10	7/18/2002	8/10/2002	8/9/2002
057997	571-120-0	EPA 6010B	Copper	1.5	10	7/18/2002	8/10/2002	8/9/2002
057997	571-120-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-120-0	EPA 6010B	Molybdenum	2.5	10	7/18/2002	8/10/2002	8/9/2002
057997	571-120-0	EPA 6010B	Nickel	1.5	10	7/18/2002	8/10/2002	8/9/2002
057997	571-120-0	EPA 6010B	Selenium	2.5	10	7/18/2002	8/10/2002	8/9/2002
057997	571-120-0	EPA 6010B	Silver	1.5	10	7/18/2002	8/10/2002	8/9/2002
057997	571-120-0	EPA 6010B	Thallium	2.5	10	7/18/2002	8/10/2002	8/9/2002
057997	571-120-0	EPA 6010B	Vanadium	1.5	10	7/18/2002	8/10/2002	8/9/2002
057997	571-120-0	EPA 6010B	Zinc	5	10	7/18/2002	8/10/2002	8/9/2002
057997	571-120-0	EPA 7471A	Mercury	0.1	1	7/18/2002	8/12/2002	8/7/2002
057997	571-120-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-120-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/1/2002
057997	571-120-0.3	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/30/2002	7/28/2002
057997	571-120-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-120-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-120-0.9	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
057997	571-120.1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-121-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-121-0	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/1/2002
057997	571-121-0	WET/ EPA 7420	Lead	0.4	2	7/18/2002	7/30/2002	7/28/2002
057997	571-121-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-121-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-121-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-121-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-321-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-321-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-321-0.3	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/30/2002	7/28/2002

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057997	571-321-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-321-0.6	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
057997	571-321-0.6	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/30/2002	7/28/2002
057997	571-321-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-321-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-322-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-322-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-322-0.3	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/30/2002	7/28/2002
057997	571-322-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-322-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/1/2002
057997	571-322-0.6	WET/ EPA 7420	Lead	0.4	2	7/18/2002	7/30/2002	7/28/2002
057997	571-322-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-323-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-323-0	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
057997	571-323-0	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/30/2002	7/28/2002
057997	571-323-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-323-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-323-0.6	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/30/2002	7/28/2002
057997	571-323-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-323-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-324-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-324-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-324-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-324-0.9	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/15/2002	8/14/2002
057997	571-324-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-324-0.9	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/1/2002
057997	571-324-0.9	WET/ EPA 7420	Lead	3.2	16	7/18/2002	7/30/2002	7/28/2002
057997	571-324-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-325-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-325-0.3	EPA 6010B	Antimony	2.5	10	7/18/2002	8/10/2002	8/8/2002
057997	571-325-0.3	EPA 6010B	Arsenic	2.5	10	7/18/2002	8/10/2002	8/8/2002
057997	571-325-0.3	EPA 6010B	Barium	1.5	10	7/18/2002	8/10/2002	8/8/2002
057997	571-325-0.3	EPA 6010B	Beryllium	1.5	10	7/18/2002	8/10/2002	8/8/2002
057997	571-325-0.3	EPA 6010B	Cadmium	1.5	10	7/18/2002	8/10/2002	8/8/2002
057997	571-325-0.3	EPA 6010B	Chromium	1.5	10	7/18/2002	8/10/2002	8/8/2002
057997	571-325-0.3	EPA 6010B	Cobalt	1.5	10	7/18/2002	8/10/2002	8/8/2002

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057997	571-325-0.3	EPA 6010B	Copper	1.5	10	7/18/2002	8/10/2002	8/8/2002
057997	571-325-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-325-0.3	EPA 6010B	Molybdenum	2.5	10	7/18/2002	8/10/2002	8/8/2002
057997	571-325-0.3	EPA 6010B	Nickel	1.5	10	7/18/2002	8/10/2002	8/8/2002
057997	571-325-0.3	EPA 6010B	Selenium	2.5	10	7/18/2002	8/10/2002	8/8/2002
057997	571-325-0.3	EPA 6010B	Silver	1.5	10	7/18/2002	8/10/2002	8/8/2002
057997	571-325-0.3	EPA 6010B	Thallium	2.5	10	7/18/2002	8/10/2002	8/8/2002
057997	571-325-0.3	EPA 6010B	Vanadium	1.5	10	7/18/2002	8/10/2002	8/8/2002
057997	571-325-0.3	EPA 6010B	Zinc	5	10	7/18/2002	8/10/2002	8/8/2002
057997	571-325-0.3	EPA 7471A	Mercury	0.1	1	7/18/2002	8/12/2002	8/7/2002
057997	571-325-0.6	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/5/2002
057997	571-325-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	571-325-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057997	EB-17	EPA 6010B	Lead	0.005	1	7/18/2002	7/23/2002	7/22/2002

August 19, 2002

David Shaler
Ninyo & Moore
475 Goddard Suite 200
Irvine, CA 92618
TEL: (949) 753-7070
FAX: (949) 753-7071

RE: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

Attention: David Shaler

ELAP No.: 1838
NELAP No.: 02107CA
Workorder No.: 057998

Enclosed are the results for sample(s) received on July 18, 2002 by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

for

Eddie F. Rodriguez
Laboratory Director

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AUG 2 6 2002
NINYO & MOORE
ORANGE COUNTY OFFICE

This cover letter is an integral part of this analytical report.

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) 7-18-02
Relinquished by: (name/date/time) 7-18-02 7:05
Received by: (name/date/time) 7-18-02 4:30pm
Received by: (name/date/time) 7.18.02 7:15pm

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB- 18	7/18/02	3:34	P	X	
	571- 524-0	7/18/02	9:21	B	X	X
	571- 524-0.3		9:23		X	
	571- 524-0.6		9:23		X	
	571- 524-0.9		9:28		X	
	571- 524-1.5		9:30		X	
	571- 523-0		9:35		X	
	571- 523-0.3		9:38		X	
	571- 519-0		10:01		X	
	571- 519-0.3		10:05		X	
	571- 519-0.6		10:07		X	X
	571- 520-0		10:00		X	
	571- 520-0.3		10:03		X	
	571- 516-0		10:25		X	
	571- 516-0.3		10:27		X	
	571- 516-0.6		10:30		X	
	571- 516-0.9		10:32		X	
	571- 515-0		10:41		X	
	571- 515-0.3		10:44		X	
	571- 515-0.6		10:48		X	
	571- 515-0.9		10:52		X	X
	571- 512-0		11:00		X	
	571- 512-0.3		11:02		X	
	571- 512-0.6		11:05		X	
	571- 512-0.9		11:07		X	
	571- 512-1.5		11:11		X	
	571- 511-0		11:16		X	
	571- 511-0.3		11:05		X	
	571- 511-0.6		11:11		X	
	571- 511-0.9		11:25		X	
	571- 511-1.5		11:31		X	X
	571- 508-0		12:55		X	
	571- 508-0.3		12:57		X	
	571- 508-0.6		1:00		X	
	571- 508-0.9		1:03		X	
	571- 508-1.5		1:07		X	
	571- 506-0		12:55		X	
	571- 506-0.3		12:58		X	
	571- 506-0.6		1:01		X	
	571- 506-0.9		1:05		X	
	571- 504-0		1:14		X	X
	571- 504-0.3		1:18		X	
	571- 504-0.6		1:20		X	
	571- 504-0.9		1:25		X	
	571- 504-1.5		1:27		X	
	571- 314-0		3:00		X	
	571- 314-0.3		3:07		X	
	571- 311-0		2:08		X	
	571- 311-0.3		2:11		X	
	571- 311-0.6		2:13		X	
	571- 312-0		2:21		X	X
	571- 312-0.3		2:24		X	
	571- 312-0.6		2:27		X	
	571- 315-0		2:38		X	
	571- 315-0.3		2:43		X	
	571- 315-0.6		2:51		X	
	571- 315-0.9		2:54		X	
	571- 315-1.5		3:06		X	
	~~571-~~				~~X~~	
	~~571-~~				~~X~~	

Total # of samples: 58

Advanced Technology Laboratories

Date: *25-Jul-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	EB-18
Lab Order:	057998		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/18/2002 3:34:00 PM
Lab ID:	057998-001A	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	(EPA 3010A)			**EPA 6010B**		
RunID: ICP2_020723B	QC Batch: 9745					Analyst: **RQ**
Lead	ND	0.0050		mg/L	1	7/23/2002

Qualifiers:

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- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

Advanced Technology Laboratories

3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057998
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057998-002A	571-524-0	1900	mg/Kg	9719	5	1	7/18/2002	7/24/2002
057998-003A	571-524-0.3	37	mg/Kg	9719	5	1	7/18/2002	7/24/2002
057998-004A	571-524-0.6	19	mg/Kg	9719	5	1	7/18/2002	7/24/2002
057998-005A	571-524-0.9	230	mg/Kg	9719	5	1	7/18/2002	7/24/2002
057998-006A	571-524-1.5	17	mg/Kg	9719	5	1	7/18/2002	7/24/2002
057998-007A	571-523-0	190	mg/Kg	9719	5	1	7/18/2002	7/24/2002
057998-008A	571-523-0.3	700	mg/Kg	9719	5	1	7/18/2002	7/24/2002
057998-009A	571-519-0	94	mg/Kg	9720	5	1	7/18/2002	7/24/2002
057998-010A	571-519-0.3	140	mg/Kg	9720	5	1	7/18/2002	7/24/2002
057998-011A	571-519-0.6	220	mg/Kg	9720	5	1	7/18/2002	7/24/2002
057998-012A	571-520-0	510	mg/Kg	9720	5	1	7/18/2002	7/24/2002

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Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057998
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057998-013A	571-520-0.3	490	mg/Kg	9720	5	1	7/18/2002	7/24/2002
057998-014A	571-516-0	980	mg/Kg	9720	5	1	7/18/2002	7/24/2002
057998-015A	571-516-0.3	210	mg/Kg	9720	5	1	7/18/2002	7/24/2002
057998-016A	571-516-0.6	7.8	mg/Kg	9720	5	1	7/18/2002	7/24/2002
057998-017A	571-516-0.9	130	mg/Kg	9720	5	1	7/18/2002	7/24/2002
057998-018A	571-515-0	860	mg/Kg	9720	5	1	7/18/2002	7/24/2002
057998-019A	571-515-0.3	21	mg/Kg	9720	5	1	7/18/2002	7/24/2002
057998-020A	571-515-0.6	29	mg/Kg	9720	5	1	7/18/2002	7/24/2002
057998-021A	571-515-0.9	12	mg/Kg	9720	5	1	7/18/2002	7/24/2002
057998-022A	571-512-0	830	mg/Kg	9720	5	1	7/18/2002	7/24/2002
057998-023A	571-512-0.3	360	mg/Kg	9720	5	1	7/18/2002	7/24/2002

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Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057998
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057998-024A	571-512-0.6	58	mg/Kg	9720	5	1	7/18/2002	7/24/2002
057998-025A	571-512-0.9	120	mg/Kg	9720	5	1	7/18/2002	7/24/2002
057998-026A	571-512-1.5	29	mg/Kg	9720	5	1	7/18/2002	7/24/2002
057998-027A	571-511-0	1100	mg/Kg	9720	5	1	7/18/2002	7/24/2002
057998-028A	571-511-0.3	24	mg/Kg	9720	5	1	7/18/2002	7/24/2002
057998-029A	571-511-0.6	7.9	mg/Kg	9722	5	1	7/18/2002	7/24/2002
057998-030A	571-511-0.9	6.4	mg/Kg	9722	5	1	7/18/2002	7/24/2002
057998-031A	571-511-1.5	48	mg/Kg	9722	5	1	7/18/2002	7/24/2002
057998-032A	571-508-0	830	mg/Kg	9722	5	1	7/18/2002	7/24/2002
057998-033A	571-508-0.3	11	mg/Kg	9722	5	1	7/18/2002	7/24/2002
057998-034A	571-508-0.6	5.8	mg/Kg	9722	5	1	7/18/2002	7/24/2002

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Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057998
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057998-035A	571-508-0.9	15	mg/Kg	9722	5	1	7/18/2002	7/24/2002
057998-036A	571-508-1.5	5.1	mg/Kg	9722	5	1	7/18/2002	7/24/2002
057998-037A	571-506-0	160	mg/Kg	9722	5	1	7/18/2002	7/24/2002
057998-038A	571-506-0.3	16	mg/Kg	9722	5	1	7/18/2002	7/24/2002
057998-039A	571-506-0.6	17	mg/Kg	9722	5	1	7/18/2002	7/24/2002
057998-040A	571-506-0.9	17	mg/Kg	9722	5	1	7/18/2002	7/24/2002
057998-041A	571-504-0	38	mg/Kg	9722	5	1	7/18/2002	7/24/2002
057998-042A	571-504-0.3	ND	mg/Kg	9722	5	1	7/18/2002	7/24/2002
057998-043A	571-504-0.6	6.5	mg/Kg	9722	5	1	7/18/2002	7/24/2002
057998-044A	571-504-0.9	ND	mg/Kg	9722	5	1	7/18/2002	7/24/2002
057998-045A	571-504-1.5	ND	mg/Kg	9722	5	1	7/18/2002	7/24/2002

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Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057998
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057998-046A	571-314-0	79	mg/Kg	9722	5	1	7/18/2002	7/24/2002
057998-047A	571-314-0.3	40	mg/Kg	9722	5	1	7/18/2002	7/24/2002
057998-048A	571-311-0	140	mg/Kg	9722	5	1	7/18/2002	7/24/2002
057998-049A	571-311-0.3	36	mg/Kg	9723	5	1	7/18/2002	7/24/2002
057998-050A	571-311-0.6	250	mg/Kg	9723	5	1	7/18/2002	7/24/2002
057998-051A	571-312-0	760	mg/Kg	9723	5	1	7/18/2002	7/24/2002
057998-052A	571-312-0.3	83	mg/Kg	9723	5	1	7/18/2002	7/24/2002
057998-053A	571-312-0.6	100	mg/Kg	9723	5	1	7/18/2002	7/24/2002
057998-054A	571-315-0	380	mg/Kg	9723	5	1	7/18/2002	7/24/2002
057998-055A	571-315-0.3	9.3	mg/Kg	9723	5	1	7/18/2002	7/24/2002
057998-056A	571-315-0.6	16	mg/Kg	9723	5	1	7/18/2002	7/24/2002

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Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057998
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057998-057A	571-315-0.9	6.6	mg/Kg	9723	5	1	7/18/2002	7/24/2002
057998-058A	571-315-1.5	18	mg/Kg	9723	5	1	7/18/2002	7/24/2002

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- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 7/25/2002

pH
EPA 9045C

CLIENT:	Ninyo & Moore	**Lab Order:**	057998
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057998-002A	571-524-0	7.39	pH Units	R19677	0.1	1	7/18/2002	7/23/2002
057998-011A	571-519-0.6	7.78	pH Units	R19677	0.1	1	7/18/2002	7/23/2002
057998-021A	571-515-0.9	8.57	pH Units	R19677	0.1	1	7/18/2002	7/23/2002
057998-031A	571-511-1.5	7.73	pH Units	R19677	0.1	1	7/18/2002	7/23/2002
057998-041A	571-504-0	6.58	pH Units	R19677	0.1	1	7/18/2002	7/23/2002
057998-051A	571-312-0	7.35	pH Units	R19677	0.1	1	7/18/2002	7/23/2002

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Advanced Technology Laboratories
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Advanced Technology Laboratories

Date: 8/1/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057998
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057998-005A	571-524-0.9	9.2	mg/L	9903	0.2	1	7/18/2002	7/30/2002
057998-007A	571-523-0	31	mg/L	9903	0.8	4	7/18/2002	7/30/2002
057998-008A	571-523-0.3	39	mg/L	9903	1.2	6	7/18/2002	7/30/2002
057998-009A	571-519-0	3.2	mg/L	9903	0.2	1	7/18/2002	7/30/2002
057998-010A	571-519-0.3	10	mg/L	9903	0.4	2	7/18/2002	7/30/2002
057998-011A	571-519-0.6	12	mg/L	9903	0.4	2	7/18/2002	7/30/2002
057998-012A	571-520-0	26	mg/L	9903	0.8	4	7/18/2002	7/30/2002
057998-013A	571-520-0.3	36	mg/L	9903	0.8	4	7/18/2002	7/30/2002
057998-014A	571-516-0	66	mg/L	9903	1.6	8	7/18/2002	7/30/2002
057998-015A	571-516-0.3	26	mg/L	9903	0.8	4	7/18/2002	7/30/2002
057998-017A	571-516-0.9	11	mg/L	9903	0.4	2	7/18/2002	7/30/2002

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Advanced Technology Laboratories

Date: 8/1/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057998
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057998-018A	571-515-0	50	mg/L	9903	1.6	8	7/18/2002	7/30/2002
057998-022A	571-512-0	64	mg/L	9904	2	10	7/18/2002	7/31/2002
057998-023A	571-512-0.3	30	mg/L	9904	0.8	4	7/18/2002	7/31/2002
057998-024A	571-512-0.6	4.5	mg/L	9904	0.2	1	7/18/2002	7/31/2002
057998-025A	571-512-0.9	7.5	mg/L	9904	0.2	1	7/18/2002	7/31/2002
057998-032A	571-508-0	73	mg/L	9904	2	10	7/18/2002	7/31/2002
057998-037A	571-506-0	11	mg/L	9904	0.4	2	7/18/2002	7/31/2002
057998-046A	571-314-0	3.1	mg/L	9904	0.2	1	7/18/2002	7/31/2002
057998-048A	571-311-0	11	mg/L	9904	0.4	2	7/18/2002	7/31/2002
057998-050A	571-311-0.6	17	mg/L	9904	0.4	2	7/18/2002	7/31/2002
057998-051A	571-312-0	51	mg/L	9904	2	10	7/18/2002	7/31/2002

Qualifiers:

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Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 8/1/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057998
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057998-052A	571-312-0.3	1.7	mg/L	9904	0.2	1	7/18/2002	7/31/2002
057998-053A	571-312-0.6	9.7	mg/L	9904	0.2	1	7/18/2002	7/31/2002
057998-054A	571-315-0	27	mg/L	9904	0.8	4	7/18/2002	7/31/2002

Qualifiers:

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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
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Advanced Technology Laboratories

Date: 8/7/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057998
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057998-005A	571-524-0.9	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057998-007A	571-523-0	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057998-008A	571-523-0.3	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057998-010A	571-519-0.3	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057998-011A	571-519-0.6	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057998-012A	571-520-0	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057998-013A	571-520-0.3	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057998-014A	571-516-0	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057998-015A	571-516-0.3	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057998-017A	571-516-0.9	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057998-018A	571-515-0	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002

Qualifiers:

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J - Analyte detected below quantitation limits
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DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interferen
H - Sample exceeded analytical holding time
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3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 8/7/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057998
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057998-022A	571-512-0	ND	mg/L	10034	0.2	1	7/18/2002	8/7/2002
057998-023A	571-512-0.3	ND	mg/L	10034	0.2	1	7/18/2002	8/7/2002
057998-025A	571-512-0.9	ND	mg/L	10034	0.2	1	7/18/2002	8/7/2002
057998-032A	571-508-0	0.23	mg/L	10034	0.2	1	7/18/2002	8/7/2002
057998-037A	571-506-0	ND	mg/L	10034	0.2	1	7/18/2002	8/7/2002
057998-048A	571-311-0	ND	mg/L	10034	0.2	1	7/18/2002	8/7/2002
057998-050A	571-311-0.6	ND	mg/L	10034	0.2	1	7/18/2002	8/7/2002
057998-051A	571-312-0	ND	mg/L	10034	0.2	1	7/18/2002	8/7/2002
057998-053A	571-312-0.6	ND	mg/L	10034	0.2	1	7/18/2002	8/7/2002
057998-054A	571-315-0	ND	mg/L	10034	0.2	1	7/18/2002	8/7/2002

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Date: 8/7/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057998
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057998-005A	571-524-0.9	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057998-007A	571-523-0	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057998-008A	571-523-0.3	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057998-010A	571-519-0.3	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057998-011A	571-519-0.6	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057998-012A	571-520-0	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057998-013A	571-520-0.3	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057998-014A	571-516-0	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057998-015A	571-516-0.3	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057998-017A	571-516-0.9	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057998-018A	571-515-0	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002

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Advanced Technology Laboratories

Date: 8/7/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057998
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057998-022A	571-512-0	ND	mg/L	10034	0.2	1	7/18/2002	8/7/2002
057998-023A	571-512-0.3	ND	mg/L	10034	0.2	1	7/18/2002	8/7/2002
057998-025A	571-512-0.9	ND	mg/L	10034	0.2	1	7/18/2002	8/7/2002
057998-032A	571-508-0	0.23	mg/L	10034	0.2	1	7/18/2002	8/7/2002
057998-037A	571-506-0	ND	mg/L	10034	0.2	1	7/18/2002	8/7/2002
057998-048A	571-311-0	ND	mg/L	10034	0.2	1	7/18/2002	8/7/2002
057998-050A	571-311-0.6	ND	mg/L	10034	0.2	1	7/18/2002	8/7/2002
057998-051A	571-312-0	ND	mg/L	10034	0.2	1	7/18/2002	8/7/2002
057998-053A	571-312-0.6	ND	mg/L	10034	0.2	1	7/18/2002	8/7/2002
057998-054A	571-315-0	ND	mg/L	10034	0.2	1	7/18/2002	8/7/2002

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Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-524-0
Lab Order:	057998		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/18/2002 9:21:00 AM
Lab ID:	057998-002A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810C	QC Batch: 10214					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	11	2.5		mg/Kg	10	8/10/2002
Barium	290	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	4.2	1.5		mg/Kg	10	8/10/2002
Chromium	54	1.5		mg/Kg	10	8/10/2002
Cobalt	11	1.5		mg/Kg	10	8/10/2002
Copper	79	1.5		mg/Kg	10	8/10/2002
Molybdenum	8.6	2.5		mg/Kg	10	8/10/2002
Nickel	52	1.5		mg/Kg	10	8/10/2002
Selenium	12	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	89	1.5		mg/Kg	10	8/10/2002
Zinc	360	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020812C	QC Batch: 10168					Analyst: **NS**
Mercury	0.12	0.10		mg/Kg	1	8/12/2002

Qualifiers:

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E - Value above quantitation range
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Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-520-0
Lab Order:	057998		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/18/2002 10:00:00 AM
Lab ID:	057998-012A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810C	QC Batch: 10214					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	5.3	2.5		mg/Kg	10	8/10/2002
Barium	180	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	2.6	1.5		mg/Kg	10	8/10/2002
Chromium	26	1.5		mg/Kg	10	8/10/2002
Cobalt	9.5	1.5		mg/Kg	10	8/10/2002
Copper	40	1.5		mg/Kg	10	8/10/2002
Molybdenum	7.1	2.5		mg/Kg	10	8/10/2002
Nickel	24	1.5		mg/Kg	10	8/10/2002
Selenium	15	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	67	1.5		mg/Kg	10	8/10/2002
Zinc	200	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020813F	QC Batch: 10207					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/13/2002

Qualifiers:

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E - Value above quantitation range
Results are wet unless otherwise specified

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-315-0.3
Lab Order:	057998		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/18/2002 2:43:00 PM
Lab ID:	057998-055A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810C	QC Batch: 10214					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	ND	2.5		mg/Kg	10	8/10/2002
Barium	140	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	21	1.5		mg/Kg	10	8/10/2002
Cobalt	15	1.5		mg/Kg	10	8/10/2002
Copper	25	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	17	1.5		mg/Kg	10	8/10/2002
Selenium	9.9	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	56	1.5		mg/Kg	10	8/10/2002
Zinc	68	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020812C	QC Batch: 10168					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/12/2002

Qualifiers:

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Advanced Technology Laboratories

Date: 8/19/2002

LEAD BY ATOMIC ABSORPTION
EPA 1311/ 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057998
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057998-002A	571-524-0	2.8	mg/L	10088	0.2	1	7/18/2002	8/6/2002
057998-007A	571-523-0	2.0	mg/L	10367	0.2	1	7/18/2002	8/15/2002
057998-008A	571-523-0.3	0.59	mg/L	10367	0.2	1	7/18/2002	8/15/2002
057998-012A	571-520-0	2.0	mg/L	10400	0.2	1	7/18/2002	8/16/2002
057998-013A	571-520-0.3	1.5	mg/L	10367	0.2	1	7/18/2002	8/15/2002
057998-014A	571-516-0	8.7	mg/L	10367	0.2	1	7/18/2002	8/15/2002
057998-015A	571-516-0.3	3.6	mg/L	10367	0.2	1	7/18/2002	8/15/2002
057998-018A	571-515-0	5.4	mg/L	10368	0.2	1	7/18/2002	8/15/2002
057998-022A	571-512-0	1.5	mg/L	10368	0.2	1	7/18/2002	8/15/2002
057998-023A	571-512-0.3	1.0	mg/L	10368	0.2	1	7/18/2002	8/15/2002
057998-027A	571-511-0	3.7	mg/L	10088	0.2	1	7/18/2002	8/6/2002

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Advanced Technology Laboratories

Date: 8/19/2002

LEAD BY ATOMIC ABSORPTION
EPA 1311/ 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057998
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057998-032A	571-508-0	0.70	mg/L	10368	0.2	1	7/18/2002	8/15/2002
057998-050A	571-311-0.6	0.36	mg/L	10368	0.2	1	7/18/2002	8/15/2002
057998-051A	571-312-0	1.1	mg/L	10368	0.2	1	7/18/2002	8/15/2002
057998-054A	571-315-0	0.42	mg/L	10368	0.2	1	7/18/2002	8/15/2002

Qualifiers:

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CLIENT: Ninyo & Moore
Work Order: 057998
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10033

Sample ID: **MB-10033**	SampType: **MBLK**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020806F**
Client ID: **ZZZZZ**	Batch ID: **10033**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/6/2002**	SeqNo: **314551**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05628	0.20									

Sample ID: **MB-10033A**	SampType: **MBLK**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/1/2002**	Run ID: **AA2_020806F**
Client ID: **ZZZZZ**	Batch ID: **10033**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/6/2002**	SeqNo: **314552**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.0534	0.20									

Sample ID: **MB-10033B**	SampType: **MBLK**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/1/2002**	Run ID: **AA2_020806F**
Client ID: **ZZZZZ**	Batch ID: **10033**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/6/2002**	SeqNo: **314565**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05983	0.20									

Sample ID: **LCS-10033**	SampType: **LCS**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020806F**
Client ID: **ZZZZZ**	Batch ID: **10033**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/6/2002**	SeqNo: **314579**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.432	0.20	7.5	0	99.1	80	120	0	0		

Sample ID: **057998-005AMS**	SampType: **MS**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020806F**
Client ID: **571-524-0.9**	Batch ID: **10033**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/6/2002**	SeqNo: **314564**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.233	0.20	5	0.06025	103	80	120	0	0		

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R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057998
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10033

Sample ID: 057998-018AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020806F
Client ID: 571-515-0	Batch ID: 10033	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/6/2002	SeqNo: 314577

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.261	0.20	5	0.07802	104	80	120	0	0		

Sample ID: 057998-005ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020806F
Client ID: 571-524-0.9	Batch ID: 10033	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/6/2002	SeqNo: 314563

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0.06025	0	30	

Sample ID: 057998-018ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020806F
Client ID: 571-515-0	Batch ID: 10033	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/6/2002	SeqNo: 314576

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.1009	0.20	0	0	0	0	0	0.07802	0	30	J

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Calculations are based on raw values
DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 057998
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10034

Sample ID: MB-10034	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807C
Client ID: ZZZZZ	Batch ID: 10034	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314845

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10034A	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807C
Client ID: ZZZZZ	Batch ID: 10034	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314846

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10034B	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807C
Client ID: ZZZZZ	Batch ID: 10034	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314859

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10034	SampType: lcs	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807C
Client ID: ZZZZZ	Batch ID: 10034	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314873

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.349	0.20	7.5	0	98	80	120	0	0		

Sample ID: 057998-054AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807C
Client ID: 571-315-0	Batch ID: 10034	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314858

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.961	0.20	5	0.1424	96.4	80	120	0	0		

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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057998
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10034

Sample ID: 057999-033AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807C
Client ID: ZZZZZ	Batch ID: 10034	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314871

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.909	0.20	5	0	98.2	80	120	0	0		

Sample ID: 057998-054ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807C
Client ID: 571-315-0	Batch ID: 10034	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314857

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.07963	0.20	0	0	0	0	0	0.1424	0	30	J

Sample ID: 057999-033ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807C
Client ID: ZZZZZ	Batch ID: 10034	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314870

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0	30	

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10088

Sample ID: MB-10088	SampType: mblk	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806I
Client ID: ZZZZZ	Batch ID: 10088	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314618

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10079-TCLP	SampType: mblk	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806I
Client ID: ZZZZZ	Batch ID: 10088	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314619

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10088	SampType: lcs	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806I
Client ID: ZZZZZ	Batch ID: 10088	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314633

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.169	0.20	1	0	117	80	120	0	0		

Sample ID: 057998-027AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806I
Client ID: 571-511-0	Batch ID: 10088	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314631

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.157	0.20	2.5	3.691	98.7	80	120	0	0		

Sample ID: 057998-027ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806I
Client ID: 571-511-0	Batch ID: 10088	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314630

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.031	0.20	0	0	0	0	0	3.691	19.6	30	

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10168

Sample ID: MB-10168	SampType: MBLK	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812C
Client ID: ZZZZZ	Batch ID: 10168	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 316983

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-10168	SampType: LCS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812C
Client ID: ZZZZZ	Batch ID: 10168	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 316982

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.032	0.10	2.08	0	97.7	80	120	0	0		

Sample ID: 057999-016AMS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812C
Client ID: ZZZZZ	Batch ID: 10168	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 316980

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9936	0.10	0.83	0.05175	113	62	146	0	0		

Sample ID: 057999-016AMSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812C
Client ID: ZZZZZ	Batch ID: 10168	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 316981

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9878	0.10	0.83	0.05175	113	62	146	0.9936	0.582	33	

Sample ID: 057999-016ADUP	SampType: DUP	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812C
Client ID: ZZZZZ	Batch ID: 10168	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 316979

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0746	0.10	0	0	0	0	0	0.05175	0	30	J

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10207

Sample ID: MB-10207	SampType: mblk	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813F
Client ID: ZZZZZ	Batch ID: 10207	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318517

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-10207	SampType: lcs	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813F
Client ID: ZZZZZ	Batch ID: 10207	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318516

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.081	0.10	2.08	0	100	80	120	0	0		

Sample ID: 058021-054AMS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813F
Client ID: ZZZZZ	Batch ID: 10207	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318514

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9716	0.10	0.83	0.0326	113	62	146	0	0		

Sample ID: 058021-054AMSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813F
Client ID: ZZZZZ	Batch ID: 10207	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318515

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.935	0.10	0.83	0.0326	109	62	146	0.9716	3.84	33	

Sample ID: 058021-054ADUP	SampType: DUP	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813F
Client ID: ZZZZZ	Batch ID: 10207	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318513

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10	0	0	0	0	0	0.0326	0	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10214

Sample ID: MB-10214	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: ZZZZZ	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316649

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.1718	0.25									
Arsenic	0.04361	0.25									
Barium	ND	0.15									
Beryllium	ND	0.15									
Cadmium	ND	0.15									
Chromium	ND	0.15									
Cobalt	0.01124	0.15									
Copper	ND	0.15									
Molybdenum	0.07668	0.25									
Nickel	0.00859	0.15									
Selenium	0.08038	0.25									
Silver	ND	0.15									
Thallium	ND	0.25									
Vanadium	ND	0.15									
Zinc	0.01372	0.50									

Sample ID: LCS-10214	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: ZZZZZ	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316648

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	47.37	0.25	50	0	94.7	80	120	0	0		
Arsenic	49.23	0.25	50	0	98.5	80	120	0	0		
Barium	50.87	0.15	50	0	102	80	120	0	0		
Beryllium	50.48	0.15	50	0	101	80	120	0	0		
Cadmium	50.45	0.15	50	0	101	80	120	0	0		
Chromium	51.14	0.15	50	0	102	80	120	0	0		
Cobalt	50.06	0.15	50	0	100	80	120	0	0		
Copper	49	0.15	50	0	98	80	120	0	0		
Molybdenum	48.81	0.25	50	0	97.6	80	120	0	0		
Nickel	48.87	0.15	50	0	97.7	80	120	0	0		

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10214

Sample ID: LCS-10214	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: ZZZZZ	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316648

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	49.08	0.25	50	0	98.2	80	120	0	0		
Silver	49.37	0.15	50	0	98.7	80	120	0	0		
Thallium	47.17	0.25	50	0	94.3	80	120	0	0		
Vanadium	52	0.15	50	0	104	80	120	0	0		
Zinc	48.86	0.50	50	0	97.7	80	120	0	0		

Sample ID: 058000-028AMS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: ZZZZZ	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316645

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	74.17	2.5	125	0	59.3	32	115	0	0		
Arsenic	126.9	2.5	125	6.085	96.6	59	111	0	0		
Barium	321.8	1.5	125	208.7	90.5	34	151	0	0		
Beryllium	120.4	1.5	125	0	96.3	56	112	0	0		
Cadmium	128.5	1.5	125	4.104	99.5	52	120	0	0		
Chromium	174.2	1.5	125	46.43	102	56	118	0	0		
Cobalt	136.2	1.5	125	12.97	98.6	58	117	0	0		
Copper	157.2	1.5	125	68.99	70.6	58	134	0	0		
Molybdenum	126.6	2.5	125	7.406	95.3	56	115	0	0		
Nickel	166.3	1.5	125	46.76	95.7	52	120	0	0		
Selenium	134.7	2.5	125	16.42	94.6	46	108	0	0		
Silver	122.4	1.5	125	0	97.9	74	117	0	0		
Thallium	104.8	2.5	125	0	83.8	62	117	0	0		
Vanadium	232.5	1.5	125	98.92	107	55	122	0	0		
Zinc	225.8	5.0	125	102.5	98.6	43	134	0	0		

Sample ID: 058000-028AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: ZZZZZ	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316646

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

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Work Order: 057998
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10214

Sample ID: 058000-028AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: ZZZZZ	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316646

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	66.7	2.5	125	0	53.4	32	115	74.17	10.6	20	
Arsenic	123.5	2.5	125	6.085	94	59	111	126.9	2.66	20	
Barium	339.6	1.5	125	208.7	105	34	151	321.8	5.40	20	
Beryllium	117.6	1.5	125	0	94.1	56	112	120.4	2.37	20	
Cadmium	125.6	1.5	125	4.104	97.2	52	120	128.5	2.34	20	
Chromium	174.5	1.5	125	46.43	102	56	118	174.2	0.137	20	
Cobalt	133.9	1.5	125	12.97	96.8	58	117	136.2	1.68	20	
Copper	152	1.5	125	68.99	66.4	58	134	157.2	3.39	20	
Molybdenum	122.9	2.5	125	7.406	92.4	56	115	126.6	2.95	20	
Nickel	170.9	1.5	125	46.76	99.3	52	120	166.3	2.73	20	
Selenium	137.6	2.5	125	16.42	97	46	108	134.7	2.16	20	
Silver	119.9	1.5	125	0	95.9	74	117	122.4	2.01	20	
Thallium	104.6	2.5	125	0	83.7	62	117	104.8	0.104	20	
Vanadium	235.9	1.5	125	98.92	110	55	122	232.5	1.49	20	
Zinc	224.7	5.0	125	102.5	97.8	43	134	225.8	0.455	20	

Sample ID: 058000-028ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: ZZZZZ	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316644

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.1277	2.5	0	0	0	0	0	0	0	30	J
Arsenic	7.906	2.5	0	0	0	0	0	6.085	26.0	30	
Barium	260	1.5	0	0	0	0	0	208.7	21.9	30	
Beryllium	ND	1.5	0	0	0	0	0	0	0	30	
Cadmium	4.654	1.5	0	0	0	0	0	4.104	12.6	30	
Chromium	48.65	1.5	0	0	0	0	0	46.43	4.67	30	
Cobalt	11.26	1.5	0	0	0	0	0	12.97	14.1	30	
Copper	37.08	1.5	0	0	0	0	0	68.99	60.2	30	R
Molybdenum	9.152	2.5	0	0	0	0	0	7.406	21.1	30	
Nickel	50.81	1.5	0	0	0	0	0	46.76	8.31	30	

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CLIENT: Ninyo & Moore
Work Order: 057998
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10214

Sample ID: 058000-028ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: ZZZZZ	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316644

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	15.47	2.5	0	0	0	0	0	16.42	5.96	30	
Silver	ND	1.5	0	0	0	0	0	0	0	30	
Thallium	ND	2.5	0	0	0	0	0	0	0	30	
Vanadium	105.5	1.5	0	0	0	0	0	98.92	6.47	30	
Zinc	114.5	5.0	0	0	0	0	0	102.5	11.0	30	

Qualifiers:
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10367

Sample ID: MB-10367	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814[
Client ID: ZZZZZ	Batch ID: 10367	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319095

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.07683	0.20									

Sample ID: MB-10276-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814[
Client ID: ZZZZZ	Batch ID: 10367	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319096

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10367	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814[
Client ID: ZZZZZ	Batch ID: 10367	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319110

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.193	0.20	1	0	119	80	120	0	0		

Sample ID: 057998-015AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814[
Client ID: 571-516-0.3	Batch ID: 10367	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319108

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.624	0.20	3.125	3.625	95.9	80	120	0	0		

Sample ID: 057998-015ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814[
Client ID: 571-516-0.3	Batch ID: 10367	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319107

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.587	0.20	0	0	0	0	0	3.625	1.07	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10368

Sample ID: MB-10368	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814\
Client ID: ZZZZZ	Batch ID: 10368	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319111

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10277-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814\
Client ID: ZZZZZ	Batch ID: 10368	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319112

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05056	0.20									

Sample ID: LCS-10368	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814\
Client ID: ZZZZZ	Batch ID: 10368	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319126

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.103	0.20	1	0	110	80	120	0	0		

Sample ID: 057999-029AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814\
Client ID: ZZZZZ	Batch ID: 10368	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319124

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.975	0.20	2.5	0.5022	98.9	80	120	0	0		

Sample ID: 057999-029ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814\
Client ID: ZZZZZ	Batch ID: 10368	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319123

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.4492	0.20	0	0	0	0	0	0.5022	11.2	30	

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; S - Spike/Surrogate outside limits due to matrix interference; B - Analyte detected in the associated Method Blank; DO - Surrogate diluted out; H - Sample exceeded holding time

Calculations are based on raw values

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10400

Sample ID: MB-10400	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816C
Client ID: ZZZZZ	Batch ID: 10400	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319824

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10379-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816C
Client ID: ZZZZZ	Batch ID: 10400	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319825

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0		

Sample ID: LCS-10400	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816C
Client ID: ZZZZZ	Batch ID: 10400	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319839

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.169	0.20	1	0	117	80	120	0	0		

Sample ID: 058024-004AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816C
Client ID: ZZZZZ	Batch ID: 10400	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319837

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.633	0.20	2.5	1.42	129	80	120	0	0		S

Sample ID: 058024-004ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816C
Client ID: ZZZZZ	Batch ID: 10400	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319836

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.47	0.20	0	0	0	0	0	1.42	3.45	30	

Qualifiers:
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ANALYTICAL QC SUMMARY REPORT

BatchID: 9719

Sample ID: MB-9719A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724B
Client ID: ZZZZZ	Batch ID: 9719	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305106

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9719B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724B
Client ID: ZZZZZ	Batch ID: 9719	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305107

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9719	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724B
Client ID: ZZZZZ	Batch ID: 9719	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305105

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	232.2	5.0	250	0	92.9	80	120	0	0		

Sample ID: 057997-031AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724B
Client ID: ZZZZZ	Batch ID: 9719	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305091

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	164	5.0	250	97.87	26.5	47	128	0	0		S

Sample ID: 057998-008AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724B
Client ID: 571-523-0.3	Batch ID: 9719	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305103

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	349.9	5.0	250	695.8	-138	47	128	0	0		S

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9719

Sample ID: 057997-031ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724B
Client ID: ZZZZZ	Batch ID: 9719	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305090

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	132.8	5.0	0	0	0	0	0	97.87	30.3	30	R

Sample ID: 057998-008ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724B
Client ID: 571-523-0.3	Batch ID: 9719	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305102

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	651.9	5.0	0	0	0	0	0	695.8	6.51	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9720

Sample ID: MB-9720A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724C
Client ID: ZZZZZ	Batch ID: 9720	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305134

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9720B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724C
Client ID: ZZZZZ	Batch ID: 9720	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305135

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9720	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724C
Client ID: ZZZZZ	Batch ID: 9720	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305133

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	232.8	5.0	250	0	93.1	80	120	0	0		

Sample ID: 057998-018AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724C
Client ID: 571-515-0	Batch ID: 9720	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305119

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	557.8	5.0	250	861.6	-122	47	128	0	0		S

Sample ID: 057998-028AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724C
Client ID: 571-511-0.3	Batch ID: 9720	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305131

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	250.6	5.0	250	24.12	90.6	47	128	0	0		

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9720

Sample ID: 057998-018ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724C
Client ID: 571-515-0	Batch ID: 9720	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305118

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	775.4	5.0	0	0	0	0	0	861.6	10.5	30	

Sample ID: 057998-028ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724C
Client ID: 571-511-0.3	Batch ID: 9720	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305130

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	19.79	5.0	0	0	0	0	0	24.12	19.7	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9722

Sample ID: MB-9722A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724D
Client ID: ZZZZZ	Batch ID: 9722	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305162

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9722B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724D
Client ID: ZZZZZ	Batch ID: 9722	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305163

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9722	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724D
Client ID: ZZZZZ	Batch ID: 9722	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305161

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	229.7	5.0	250	0	91.9	80	120	0	0		

Sample ID: 057998-038AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724D
Client ID: 571-506-0.3	Batch ID: 9722	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305147

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	194	5.0	250	16	71.2	47	128	0	0		

Sample ID: 057998-048AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724D
Client ID: 571-311-0	Batch ID: 9722	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305159

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	186.3	5.0	250	143	17.3	47	128	0	0		S

Qualifiers:
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ANALYTICAL QC SUMMARY REPORT

BatchID: 9722

Sample ID: 057998-038ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724D
Client ID: 571-506-0.3	Batch ID: 9722	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305146

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.295	5.0	0	0	0	0	0	16	63.4	30	R

Sample ID: 057998-048ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724D
Client ID: 571-311-0	Batch ID: 9722	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305158

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	160.6	5.0	0	0	0	0	0	143	11.6	30	

Qualifiers:
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Work Order: 057998
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9723

Sample ID: MB-9723A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724E
Client ID: ZZZZZ	Batch ID: 9723	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305178

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9723	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724E
Client ID: ZZZZZ	Batch ID: 9723	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305177

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	231.4	5.0	250	0	92.6	80	120	0	0		

Sample ID: 057998-058AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724E
Client ID: 571-315-1.5	Batch ID: 9723	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305175

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	221.2	5.0	250	17.71	81.4	47	128	0	0		

Sample ID: 057998-058ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020724E
Client ID: 571-315-1.5	Batch ID: 9723	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305174

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	22.57	5.0	0	0	0	0	0	17.71	24.1	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057998
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9745

Sample ID: MB-9745	SampType: MBLK	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303590

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050									

Sample ID: LCS-9745	SampType: LCS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303591

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.96	0.0050	1	0	96	80	120	0	0		

Sample ID: 057999-001AMS	SampType: MS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303603

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.54	0.0050	2.5	0	102	66	118	0	0		

Sample ID: 057999-001ADUP	SampType: DUP	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303602

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050	0	0	0	0	0	0	0	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057998
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9903

Sample ID: MB-9903	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020730D
Client ID: ZZZZZ	Batch ID: 9903	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310064

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9903A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020730D
Client ID: ZZZZZ	Batch ID: 9903	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310065

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9903B	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020730D
Client ID: ZZZZZ	Batch ID: 9903	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310078

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9903	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020730D
Client ID: ZZZZZ	Batch ID: 9903	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310092

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.427	0.20	7.5	0	99	80	120	0	0		

Sample ID: 057998-007AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020730D
Client ID: 571-523-0	Batch ID: 9903	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310077

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	64.38	1.6	40	30.78	84	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057998
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9903

Sample ID: 057998-018AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020730D
Client ID: 571-515-0	Batch ID: 9903	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310090

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	128.7	3.2	80	50.12	98.2	80	120	0	0		

Sample ID: 057998-007ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020730D
Client ID: 571-523-0	Batch ID: 9903	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310076

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	30.62	0.80	0	0	0	0	0	30.78	0.521	30	

Sample ID: 057998-018ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020730D
Client ID: 571-515-0	Batch ID: 9903	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310089

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	50.18	1.6	0	0	0	0	0	50.12	0.123	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057998
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9904

Sample ID: MB-9904	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020731D
Client ID: ZZZZZ	Batch ID: 9904	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310459

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9904B	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020731D
Client ID: ZZZZZ	Batch ID: 9904	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310485

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9904A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020731D
Client ID: ZZZZZ	Batch ID: 9904	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310502

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9904	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020731D
Client ID: ZZZZZ	Batch ID: 9904	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310500

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.675	0.20	7.5	0	102	80	120	0	0		

Sample ID: 057998-051AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020731D
Client ID: 571-312-0	Batch ID: 9904	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310483

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	153.5	4.0	100	51.07	102	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; S - Spike/Surrogate outside limits due to matrix interference; B - Analyte detected in the associated Method Blank; **Calculations are based on raw values**; DO - Surrogate diluted out; H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057998
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9904

Sample ID: 057999-024AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020731D
Client ID: ZZZZZ	Batch ID: 9904	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310498

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	158	4.0	100	57.32	101	80	120	0	0		

Sample ID: 057998-051ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020731D
Client ID: 571-312-0	Batch ID: 9904	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310481

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	42.79	2.0	0	0	0	0	0	51.07	17.6	30	

Sample ID: 057999-024ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020731D
Client ID: ZZZZZ	Batch ID: 9904	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310497

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	59.39	2.0	0	0	0	0	0	57.32	3.54	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057998
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: R19677

Sample ID: 057998-051ADUP	SampType: DUP	TestCode: 9045_S	Units: pH Units	Prep Date: 7/23/2002	Run ID: WETCHEM_020723F
Client ID: 571-312-0	Batch ID: R19677	TestNo: EPA 9045C		Analysis Date: 7/23/2002	SeqNo: 303829

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.24	0.10	0	0	0	0	0	7.35	1.51	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Rachelle

From: Steve Reese [sreese@ninyoandmoore.com]
Sent: Wednesday, July 31, 2002 9:27 AM
To: 'rachelle@atlglobal.com'
Cc: David Shaler (E-mail); Ruth Cheung (E-mail)
Subject: TCLP Analysis

TCLP.xls

Rachelle,
Attached please find a list of samples to be run for the TCLP analysis. Currently, we selected all of the samples that are greater than 1,000 mg/kg
of TTLC results. However, they will be ran by instruction only. There may
be more samples chosen for TCLP analysis in the future, but please run these 82 samples for now. Please call with any questions.
Thank you, Steve

Stephen S. Reese
Senior Staff Environmental Scientist
Ninyo & Moore Geotechnical & Environmental Sciences Consultants
475 Goddard, Suite 200
Irvine, California 92618
Tel: (949) 753-7070
Fax: (949) 753-7071
Email: sreese@ninyoandmoore.com
www.ninyoandmoore.com

RUN FOR TCLP ANALYSIS			
33	20	29	82
569-101-0	570-101-0	571-104-0	
569-102-0	570-101-0.6	571-120-0	
569-102-0.3	570-102-0.6	571-310-0.9	
569-102-0.9	570-103-1.5	571-317-0	
569-111-0	570-114-0.6	571-320-0	
569-112-0	570-115-0	571-325-0.6	
569-112-0.6	570-119-0.3	571-507-0	
569-201-0	570-201-0	571-511-0	
569-212-0	570-214-0	571-514-0	
569-301-0	570-311-0.6	571-524-0	
569-303-0.9	570-312-0.6	571-710-0	
569-314-0	570-504-0	571-710-0.3	
569-401-0	570-508-0	571-711-0	
569-404-0.6	570-517-0	571-711-0.3	
569-405-0.6	570-517-0.3	571-712-0	
569-408-0.9	570-610-0.6	571-712-0.3	
569-502-0.6	570-615-0	571-201-0.6	
569-516-0	570-706-0	571-405-0	
569-603-0.3	570-709-0	571-406-0	
569-607-0	570-808-0.6	571-407-0	
569-607-0.3		571-414-0	
569-609-0		571-609-0	
569-609-0.3		571-611-0	
569-703-0		571-616-0	
569-703-0.9		571-617-0	
569-705-0		571-619-1.5	
569-705-0.3		571-814-0.3	
569-706-0		571-818-0.6	
569-708-0		571-819-0	
569-710-0			
569-711-0			
569-711-0.3			
569-801-0.3			

achelle

rom: Ruth Cheung [rcheung@ninyoandmoore.com]
ent: Tuesday, August 06, 2002 3:46 PM
o: 'Rachelle'; 'David Shaler (E-mail)'
ubject: Title 22 Metals

Title 22 Metals.xls

Rachelle,
Please run the following samples for Title 22 Metals. Please do not list
Pb in your emailed results. There should be a total of 120 samples to be
run.
Thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

569-102-0.9	570-101-0	571-101-0.9
569-112-0	570-101-0.6	571-104-0
569-201-0	570-201-0	571-201-0.6
569-206-0.6	570-205-0.9	571-108-1.5
569-106-1.5	570-106-0.3	571-111-0.3
569-212-0	570-208-1.5	571-207-0
569-401-0.6	570-111-0.6	571-210-0.6
569-301-0	570-214-0	571-115-0.9
569-303-0.9	570-115-0.3	571-214-0.3
569-404-0.6	570-119-0.9	571-120-0
569-408-0.9	570-224-0.6	571-217-1.5
569-314-0	570-401-0	571-220-0.6
569-313-0.3	570-401-0.3	571-301-0.3
569-502-0.6	570-304-1.5	571-405-0
569-602-1.5	570-307-0.9	571-306-0.9
569-607-0.3	570-311-0.6	571-407-0
569-607-0	570-312-0.6	571-310-0.9
569-508-0.9	570-316-0.3	571-315-0.3
569-511-0.6	570-601-0	571-412-1.5
569-612-1.5	570-505-1.5	571-317-0
569-516-0	570-508-0	571-320-0.6
569-801-0.3	570-610-0.6	571-416-0.9
569-519-0.6	570-511-0.9	571-325-0.3
569-803-0.9	570-615-0	571-421-1.5
569-705-0	570-514-0.3	571-425-0
569-806-1.5	570-517-0	571-501-0.6
569-708-0.3	570-618-0.6	571-503-0.9
569-711-0	570-621-1.5	571-603-0.3
569-811-0	570-703-0.9	571-507-0
	570-804-0	571-609-0
	570-706-0	571-510-1.5
	570-709-0	571-611-0
	570-808-0.6	571-514-0
	570-711-1.5	571-614-0.3
	570-812-0.3	571-517-0.9
		571-617-0.6
		571-520-1.5
		571-621-0.3
		571-524-0
		571-624-0.9
		571-529-0.3
		571-628-0.6
		571-703-1.5
		571-707-0
		571-804-0.9
		571-809-0.3
		571-711-0
		571-712-0
		571-814-0.3
		571-818-0.6
		571-819-0
		571-827-1.5

571-832-0.9
571-836-0.3
571-837-0.6
571-842-0

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Wednesday, August 07, 2002 10:28 AM
To: 'Rachelle'
Subject: RE: Title 22 Metals

Sorry for the mistake. Please change to the following:
569-602-1.5 to 0.6
569-803-0.9 to 0.6
571-217-1.5 to 0.6
571-320-0.6 to 0
571-421-1.5 to 0
571-503-0.9 to 0.6
571-510-1.5 to 0.6
571-520-1.5 to 0
571-703-1.5 to 0.6
571-804-0.9 to 0.6
571-827-1.5 to 0.3
571-837-0.6 to 0.3
570-119-0.9 to 0.6
570-208-1.5 to 0.3
570-621-1.5 to 0.3
570-703-0.9 to 0.3

thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

-----Original Message-----
From: Rachelle [SMTP:Rachelle@ATLGlobal.com]
Sent: Wednesday, August 07, 2002 9:49 AM
To: 'Ruth Cheung'
Subject: RE: Title 22 Metals

Hi Ruth,
Please check if the following samples exist, I don't see it on our database:
569-602-1.5
569-803-0.9
571-217-1.5
571-320-0.6
571-421-1.5
571-503-0.9
571-510-1.5
571-520-1.5
571-703-1.5
571-804-0.9
571-827-1.5
571-837-0.6
570-119-0.9
570-208-1.5
570-621-1.5
570-703-0.9
If it does exist, can you let me know when it was collected so I can track
them.
Thanks,
Rachelle
-----Original Message-----
From: Ruth Cheung [mailto:rcheung@ninyoandmoore.com]

Sent: Tuesday, August 06, 2002 3:46 PM
To: 'Rachelle'; 'David Shaler (E-mail)'
Subject: Title 22 Metals

Rachelle,
Please run the following samples for Title 22 Metals. Please do not list
Pb in your emailed results. There should be a total of 120 samples to be
run.
Thanks.

Ruth L. Cheung
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Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Thursday, August 08, 2002 9:14 AM
To: 'Rachelle'
Subject: TCLP Analysis

TCLP-3.xls

In addition to the 90 TCLP already run please run the following samples for
TCLP. There should be a list of 350 samples.
Thanks for a the hard work and timely results.

Ruth L. Cheung
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-----Original Message-----
From: Rachelle [SMTP:Rachelle@ATLGlobal.com]
Sent: Wednesday, August 07, 2002 5:02 PM
To: 'David Shaler (E-mail)'
Cc: 'Ruth Cheung (E-mail)'
Subject: TCLP Results

<<57931TCLP.xls>> <<58001TCLP.xls>> <<58021TCLP.xls>> <<58022TCLP.xls>>
<<58023TCLP.xls>> <<58024TCLP.xls>> <<58049TCLP.xls>> <<58050TCLP.xls>>
<<58052TCLP.xls>> <<58053TCLP.xls>> <<58065TCLP.xls>> <<58066TCLP.xls>>
<<58067TCLP.xls>> <<58068TCLP.xls>> <<58069TCLP.xls>>

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<< File: 57931TCLP.xls >> << File: 58001TCLP.xls >> << File: 58021TCLP.xls >> << File: 58022TCLP.xls >> << File: 58023TCLP.xls >> << File: 58024TCLP.xls >> << File: 58049TCLP.xls >> << File: 58050TCLP.xls >> << File: 58052TCLP.xls >> << File: 58053TCLP.xls >> << File: 58065TCLP.xls >> << File: 58066TCLP.xls >> << File: 58067TCLP.xls >> << File: 58068TCLP.xls >> << File: 58069TCLP.xls >>

569-404-0	2 STLC	170
569-402-0	2 STLC	130
569-406-0	2 STLC	120
569-515-0	2 STLC	110
569-611-0	2 STLC	100
569-409-0	2 STLC	94
569-603-0	2 STLC	93
569-104-0.6	2 STLC	91
569-807-0	2 STLC	86
569-608-0	2 STLC	86
569-501-0	2 STLC	84
569-710-0.3	2 STLC	83
569-908-0	2 STLC	83
569-609-0.6	2 STLC	80
569-803-0	2 STLC	79
569-105-0	2 STLC	78
569-512-0	2 STLC	77
569-513-0	2 STLC	77
569-302-0	2 STLC	74
569-805-0	2 STLC	73
569-517-0	2 STLC	71
569-704-0.3	2 STLC	71
569-703-0.6	2 STLC	70
569-514-0.3	2 STLC	70
569-803-0.3	2 STLC	69
569-409-0.6	2 STLC	69
569-411-0	2 STLC	68
569-102-0.6	2 STLC	68
569-809-0	2 STLC	65
569-605-0	2 STLC	65
569-711-0.6	2 STLC	62
569-806-0	2 STLC	60
569-802-0.3	2 STLC	60
569-410-0	2 STLC	59
569-501-0.6	2 STLC	59
569-808-0.3	2 STLC	58
569-104-0	2 STLC	56
569-804-0	2 STLC	54
569-610-0	2 STLC	54
569-608-0.3	2 STLC	53
569-213-0	2 STLC	49
569-701-0	2 STLC	47
569-311-0	2 STLC	47
569-609-0.9	2 STLC	46
569-513-0.3	2 STLC	45
569-801-0.6	2 STLC	44
569-514-0	2 STLC	42
569-805-0.6	2 STLC	42
569-408-1.5	2 STLC	42
569-807-0.3	2 STLC	40
569-204-0	2 STLC	40
569-517-0.3	2 STLC	36
569-518-0	2 STLC	36
569-606-0.3	2 STLC	36
569-705-1.5	2 STLC	35
569-303-0.6	2 STLC	34
569-516-0.3	2 STLC	33
569-705-0.6	2 STLC	33
569-802-0	2 STLC	33
569-515-0.6	2 STLC	32
569-704-0	2 STLC	32
569-401-0.3	2 STLC	32
569-207-0	2 STLC	32
569-608-0.6	2 STLC	31
569-104-0.3	2 STLC	31
569-201-0.6	2 STLC	30
569-515-0.3	2 STLC	28
569-212-0.6	2 STLC	28
569-103-0	2 STLC	28
569-313-0	2 STLC	27
569-103-0.3	2 STLC	26
569-705-0.9	2 STLC	25
569-707-0.3	2 STLC	25
569-515-1.5	2 STLC	24
569-508-0	2 STLC	24
569-801-0	2 STLC	24
569-402-0.6	2 STLC	24
569-516-0.6	2 STLC	22
569-509-0.3	2 STLC	22
569-106-0	2 STLC	22
569-106-0.3	2 STLC	22
569-202-0	2 STLC	21
569-905-1.5	2 STLC	21
569-205-0	2 STLC	20
569-707-0	2 STLC	19
570-515-0.3	2 STLC	120
570-911-0	2 STLC	110
570-114-0.0	2 STLC	110
570-504-0.6	2 STLC	100
570-811-1.5	2 STLC	90
570-615-0.6	2 STLC	84
570-305-0	2 STLC	79
570-314-0.6	2 STLC	76
570-505-0.6	2 STLC	75
570-208-0.6	2 STLC	74
570-116-0.0	2 STLC	73
570-102-0	2 STLC	65
570-804-0.6	2 STLC	64
570-704-0	2 STLC	63
570-508-0.6	2 STLC	60
570-706-0.3	2 STLC	60
570-303-0	2 STLC	58
570-311-1.5	2 STLC	58
570-117-0.0	2 STLC	58
570-208-0.3	2 STLC	58
570-709-0.6	2 STLC	57
570-703-0	2 STLC	55
570-206-0	2 STLC	54
570-301-0	2 STLC	53
570-603-0.3	2 STLC	46
570-711-0.6	2 STLC	46
570-206-0.3	2 STLC	45
570-103-0	2 STLC	44
570-602-0	2 STLC	41
570-209-0	2 STLC	40
570-210-0	2 STLC	40
570-117-0.3	2 STLC	39
570-103-0.6	2 STLC	37
570-110-0.6	2 STLC	37
570-805-0.9	2 STLC	36
570-112-1.5	2 STLC	35
570-614-0	2 STLC	34
570-713-0.3	2 STLC	33
570-513-0	2 STLC	32
570-312-0.3	2 STLC	31
570-503-0.6	2 STLC	31
570-510-0.6	2 STLC	31
570-202-0	2 STLC	31
570-207-0	2 STLC	31
570-209-0.3	2 STLC	31
570-703-0.3	2 STLC	30
570-401-0	2 STLC	30
570-610-0.9	2 STLC	29
570-809-0.6	2 STLC	29
570-509-0.9	2 STLC	29
570-210-0.6	2 STLC	29
570-211-0	2 STLC	29
570-603-0	2 STLC	28
570-119-0	2 STLC	28
570-713-0.6	2 STLC	28
570-108-0	2 STLC	27
570-708-0.6	2 STLC	27
570-224-0	2 STLC	26
570-601-0	2 STLC	26
570-710-0.6	2 STLC	26
570-614-0.6	2 STLC	26
570-118-0.3	2 STLC	26
570-304-0	2 STLC	25
570-707-0.6	2 STLC	25
570-510-0	2 STLC	25
570-110-0	2 STLC	24
570-223-0	2 STLC	24
570-117-0.6	2 STLC	24
570-616-0	2 STLC	23
570-704-0.3	2 STLC	22
570-513-0.6	2 STLC	22
570-221-0.0	2 STLC	22
570-617-0	2 STLC	21
570-214-0.3	2 STLC	21
570-122-0.9	2 STLC	20
570-313-0.6	2 STLC	19
570-207-0.6	2 STLC	19
570-120-0.9	2 STLC	18
570-506-0	2 STLC	18
570-102-0.9	2 STLC	17
570-216-0	2 STLC	17
570-225-0	2 STLC	17
570-304-0.3	2 STLC	17
570-409-0	2 STLC	17
570-713-0	2 STLC	17
571-521-0	2 STLC	230
571-324-0.9	2 STLC	110
571-818-0	2 STLC	110
571-819-0.6	2 STLC	110
571-708-0	2 STLC	110
571-103-0.6	2 STLC	110
571-617-0.3	2 STLC	100
571-611-0.6	2 STLC	92
571-712-0.9	2 STLC	81
571-105-0.6	2 STLC	81
571-313-0	2 STLC	79
571-508-0	2 STLC	73
571-518-0.3	2 STLC	73
571-217-0	2 STLC	68
571-516-0	2 STLC	66
571-701-0.3	2 STLC	66
571-710-0.6	2 STLC	65
571-512-0	2 STLC	64
571-308-0.9	2 STLC	61
571-701-0	2 STLC	61
571-514-0.3	2 STLC	59
571-415-0	2 STLC	58
571-616-0.6	2 STLC	57
571-517-0	2 STLC	56
571-112-0.9	2 STLC	56
571-214-0	2 STLC	55
571-415-0.3	2 STLC	55
571-405-0.6	2 STLC	55
571-530-0	2 STLC	55
571-831-0	2 STLC	53
571-709-0	2 STLC	53
571-103-0.0	2 STLC	52
571-312-0	2 STLC	51
571-526-0	2 STLC	51
571-819-1.5	2 STLC	51
571-515-0	2 STLC	50
571-833-0	2 STLC	49
571-815-0.6	2 STLC	47
571-517-0.3	2 STLC	46
571-610-0	2 STLC	46
571-413-0	2 STLC	46
571-815-0	2 STLC	45
571-514-0.9	2 STLC	44
571-505-1.5	2 STLC	44
571-528-0	2 STLC	44
571-610-0.6	2 STLC	43
571-629-0	2 STLC	43
571-604-0	2 STLC	42
571-213-0	2 STLC	41
571-812-0	2 STLC	41
571-706-0	2 STLC	41
571-530-0.6	2 STLC	41
571-305-0	2 STLC	40
571-523-0.3	2 STLC	39
571-510-0	2 STLC	39
571-305-0.9	2 STLC	39
571-818-1.5	2 STLC	39
571-703-0	2 STLC	38
571-520-0.3	2 STLC	36
571-216-0	2 STLC	34
571-827-0	2 STLC	34
571-708-0.3	2 STLC	34
571-514-0.6	2 STLC	33
571-528-1.5	2 STLC	33
571-803-0	2 STLC	33
571-414-0.3	2 STLC	33
571-813-0.3	2 STLC	32
571-523-0	2 STLC	31
571-326-0	2 STLC	31
571-502-0.6	2 STLC	31
571-624-1.5	2 STLC	31
571-330-0	2 STLC	31
571-512-0.3	2 STLC	30
571-521-0.6	2 STLC	29
571-706-0.3	2 STLC	29
571-814-0.6	2 STLC	28
571-616-1.5	2 STLC	28
571-835-0	2 STLC	28
571-811-0.3	2 STLC	28
571-101-0.6	2 STLC	28
571-112-0	2 STLC	28
571-315-0	2 STLC	27
571-622-0	2 STLC	27
571-607-0.6	2 STLC	27
571-609-0.6	2 STLC	27

569-709-0	2 STLC	19
569-202-0.3	2 STLC	19
569-602-0	2 STLC	19
569-207-0.3	2 STLC	19
569-706-0.3	2 STLC	17
569-807-0.9	2 STLC	17
569-104-0.9	2 STLC	17
569-505-0.6	2 STLC	17
569-704-0.6	2 STLC	16
569-808-0.6	2 STLC	16
569-212-0.3	2 STLC	16
569-612-0	2 STLC	16
569-704-1.5	2 STLC	15
569-411-0.3	2 STLC	15
569-113-0	2 STLC	15
569-807-0.6	2 STLC	14
569-311-0.3	2 STLC	12
569-312-0	2 STLC	10
569-311-0.9	2 STLC	8.3

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570-401-0.3	2 STLC	17
570-616-0.6	2 STLC	17
570-308-0	2 STLC	16
570-807-0.9	2 STLC	16
570-701-0.6	2 STLC	16
570-617-0.3	2 STLC	16
570-107-0.6	2 STLC	15
570-911-0.6	2 STLC	15
570-707-0	2 STLC	15
570-518-0	2 STLC	15
570-111-0.0	2 STLC	15
570-109-0.6	2 STLC	14
570-401-0.9	2 STLC	4.1
570-408-0	2 STLC	4
570-409-0.3	2 STLC	3
570-401-0.6		0
570-401-1.5		0
570-408-0.6		0
570-408-1.5		0

104

571-837-0.3	2 STLC	27
571-520-0	2 STLC	26
571-516-0.3	2 STLC	26
571-420-0	2 STLC	26
571-102-0.6	2 STLC	26
571-517-1.5	2 STLC	25
571-513-0.6	2 STLC	25
571-623-0.6	2 STLC	25
571-112-0.3	2 STLC	25
571-326-0.6	2 STLC	24
571-619-0.3	2 STLC	24
571-619-0.9	2 STLC	24
571-528-0.3	2 STLC	24
571-706-0.6	2 STLC	24
571-112-0.6	2 STLC	24
571-327-0.6	2 STLC	23
571-817-0	2 STLC	23
571-425-0.6	2 STLC	22
571-118-0	2 STLC	22
571-829-0	2 STLC	22
571-828-0	2 STLC	22
571-122-0	2 STLC	21
571-101-1.5	2 STLC	21
571-530-0.3	2 STLC	21
571-406-0.6	2 STLC	20
571-517-0.6	2 STLC	20
571-835-0.3	2 STLC	20
571-501-0	2 STLC	20
571-518-0.9	2 STLC	19
571-510-0.3	2 STLC	19
571-814-0.9	2 STLC	19
571-522-0.6	2 STLC	19
571-622-1.5	2 STLC	19
571-812-0.6	2 STLC	19
571-701-0.6	2 STLC	19
571-704-0	2 STLC	19
571-711-0.6	2 STLC	19
571-212-0	2 STLC	18
571-839-0.6	2 STLC	18
571-610-1.5	2 STLC	18
571-709-0.3	2 STLC	18
571-311-0.6	2 STLC	17
571-620-0	2 STLC	17
571-109-0	2 STLC	17
571-704-0.3	2 STLC	17
571-207-1.5	2 STLC	16
571-203-0	2 STLC	16
571-616-0.3	2 STLC	16
571-317-0.3	2 STLC	16
571-629-0.3	2 STLC	16
571-416-0	2 STLC	15
571-419-0	2 STLC	15
571-526-0.3	2 STLC	15
571-619-0	2 STLC	15
571-606-0	2 STLC	15
571-115-0.6	2 STLC	14
571-202-0.9	2 STLC	11

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057998	571-315-0.3	EPA 6010B	Nickel	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-315-0.3	EPA 6010B	Selenium	2.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-315-0.3	EPA 6010B	Silver	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-315-0.3	EPA 6010B	Thallium	2.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-315-0.3	EPA 6010B	Vanadium	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-315-0.3	EPA 6010B	Zinc	5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-315-0.3	EPA 7471A	Mercury	0.1	1	7/18/2002	8/12/2002	8/7/2002
057998	571-315-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-315-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-315-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-504-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-504-0	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
057998	571-504-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-504-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-504-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-504-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-506-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-506-0	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
057998	571-506-0	WET/ EPA 7420	Lead	0.4	2	7/18/2002	7/31/2002	7/28/2002
057998	571-506-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-506-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-506-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-508-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/15/2002	8/14/2002
057998	571-508-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-508-0	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
057998	571-508-0	WET/ EPA 7420	Lead	2	10	7/18/2002	7/31/2002	7/28/2002
057998	571-508-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-508-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-508-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-508-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-511-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/5/2002
057998	571-511-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-511-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-511-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-511-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-511-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002

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tblTEMP

WorkOrder	ClientSampID	TestNo	Analyte	PQL	DF	CollectionDate	AnalDate	PrepDate
057998	571-311-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-311-0	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
057998	571-311-0	WET/ EPA 7420	Lead	0.4	2	7/18/2002	7/31/2002	7/28/2002
057998	571-311-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-311-0.6	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/15/2002	8/14/2002
057998	571-311-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-311-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
057998	571-311-0.6	WET/ EPA 7420	Lead	0.4	2	7/18/2002	7/31/2002	7/28/2002
057998	571-312-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/15/2002	8/14/2002
057998	571-312-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-312-0	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
057998	571-312-0	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
057998	571-312-0	WET/ EPA 7420	Lead	2	10	7/18/2002	7/31/2002	7/28/2002
057998	571-312-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-312-0.3	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/31/2002	7/28/2002
057998	571-312-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-312-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
057998	571-312-0.6	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/31/2002	7/28/2002
057998	571-314-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-314-0	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/31/2002	7/28/2002
057998	571-314-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-315-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/15/2002	8/14/2002
057998	571-315-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-315-0	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
057998	571-315-0	WET/ EPA 7420	Lead	0.8	4	7/18/2002	7/31/2002	7/28/2002
057998	571-315-0.3	EPA 6010B	Antimony	2.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-315-0.3	EPA 6010B	Arsenic	2.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-315-0.3	EPA 6010B	Barium	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-315-0.3	EPA 6010B	Beryllium	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-315-0.3	EPA 6010B	Cadmium	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-315-0.3	EPA 6010B	Chromium	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-315-0.3	EPA 6010B	Cobalt	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-315-0.3	EPA 6010B	Copper	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-315-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-315-0.3	EPA 6010B	Molybdenum	2.5	10	7/18/2002	8/10/2002	8/9/2002

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057998	571-511-1.5	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
057998	571-512-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/15/2002	8/14/2002
057998	571-512-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-512-0	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
057998	571-512-0	WET/ EPA 7420	Lead	2	10	7/18/2002	7/31/2002	7/28/2002
057998	571-512-0.3	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/15/2002	8/14/2002
057998	571-512-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-512-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
057998	571-512-0.3	WET/ EPA 7420	Lead	0.8	4	7/18/2002	7/31/2002	7/28/2002
057998	571-512-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-512-0.6	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/31/2002	7/28/2002
057998	571-512-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-512-0.9	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
057998	571-512-0.9	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/31/2002	7/28/2002
057998	571-512-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-515-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/15/2002	8/14/2002
057998	571-515-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-515-0	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/1/2002
057998	571-515-0	WET/ EPA 7420	Lead	1.6	8	7/18/2002	7/30/2002	7/28/2002
057998	571-515-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-515-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-515-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-515-0.9	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
057998	571-516-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/15/2002	8/14/2002
057998	571-516-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-516-0	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/1/2002
057998	571-516-0	WET/ EPA 7420	Lead	1.6	8	7/18/2002	7/30/2002	7/28/2002
057998	571-516-0.3	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/15/2002	8/14/2002
057998	571-516-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-516-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/1/2002
057998	571-516-0.3	WET/ EPA 7420	Lead	0.8	4	7/18/2002	7/30/2002	7/28/2002
057998	571-516-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-516-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-516-0.9	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/1/2002
057998	571-516-0.9	WET/ EPA 7420	Lead	0.4	2	7/18/2002	7/30/2002	7/28/2002
057998	571-519-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002

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057998	571-519-0	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/30/2002	7/28/2002
057998	571-519-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-519-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/1/2002
057998	571-519-0.3	WET/ EPA 7420	Lead	0.4	2	7/18/2002	7/30/2002	7/28/2002
057998	571-519-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-519-0.6	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
057998	571-519-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/1/2002
057998	571-519-0.6	WET/ EPA 7420	Lead	0.4	2	7/18/2002	7/30/2002	7/28/2002
057998	571-520-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/16/2002	8/15/2002
057998	571-520-0	EPA 6010B	Antimony	2.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-520-0	EPA 6010B	Arsenic	2.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-520-0	EPA 6010B	Barium	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-520-0	EPA 6010B	Beryllium	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-520-0	EPA 6010B	Cadmium	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-520-0	EPA 6010B	Chromium	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-520-0	EPA 6010B	Cobalt	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-520-0	EPA 6010B	Copper	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-520-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-520-0	EPA 6010B	Molybdenum	2.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-520-0	EPA 6010B	Nickel	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-520-0	EPA 6010B	Selenium	2.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-520-0	EPA 6010B	Silver	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-520-0	EPA 6010B	Thallium	2.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-520-0	EPA 6010B	Vanadium	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-520-0	EPA 6010B	Zinc	5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-520-0	EPA 7471A	Mercury	0.1	1	7/18/2002	8/13/2002	8/7/2002
057998	571-520-0	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/1/2002
057998	571-520-0	WET/ EPA 7420	Lead	0.8	4	7/18/2002	7/30/2002	7/28/2002
057998	571-520-0.3	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/15/2002	8/14/2002
057998	571-520-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-520-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/1/2002
057998	571-520-0.3	WET/ EPA 7420	Lead	0.8	4	7/18/2002	7/30/2002	7/28/2002
057998	571-523-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/15/2002	8/14/2002
057998	571-523-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-523-0	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/1/2002
057998	571-523-0	WET/ EPA 7420	Lead	0.8	4	7/18/2002	7/30/2002	7/28/2002

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057998	571-523-0.3	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/15/2002	8/14/2002
057998	571-523-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-523-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/1/2002
057998	571-523-0.3	WET/ EPA 7420	Lead	1.2	6	7/18/2002	7/30/2002	7/28/2002
057998	571-524-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/5/2002
057998	571-524-0	EPA 6010B	Antimony	2.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-524-0	EPA 6010B	Arsenic	2.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-524-0	EPA 6010B	Barium	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-524-0	EPA 6010B	Beryllium	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-524-0	EPA 6010B	Cadmium	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-524-0	EPA 6010B	Chromium	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-524-0	EPA 6010B	Cobalt	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-524-0	EPA 6010B	Copper	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-524-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-524-0	EPA 6010B	Molybdenum	2.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-524-0	EPA 6010B	Nickel	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-524-0	EPA 6010B	Selenium	2.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-524-0	EPA 6010B	Silver	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-524-0	EPA 6010B	Thallium	2.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-524-0	EPA 6010B	Vanadium	1.5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-524-0	EPA 6010B	Zinc	5	10	7/18/2002	8/10/2002	8/9/2002
057998	571-524-0	EPA 7471A	Mercury	0.1	1	7/18/2002	8/12/2002	8/7/2002
057998	571-524-0	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
057998	571-524-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-524-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-524-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	571-524-0.9	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/1/2002
057998	571-524-0.9	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/30/2002	7/28/2002
057998	571-524-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057998	EB-18	EPA 6010B	Lead	0.005	1	7/18/2002	7/23/2002	7/22/2002

August 15, 2002

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AUG 2 6 2002

NINYO & MOORE
ORANGE COUNTY OFFICE

David Shaler
Ninyo & Moore
475 Goddard Suite 200
Irvine, CA 92618
TEL: (949) 753-7070
FAX: (949) 753-7071

RE: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

Attention: David Shaler

ELAP No.: 1838
NELAP No.: 02107CA
Workorder No.: 058000

Enclosed are the results for sample(s) received on July 20, 2002 by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

This cover letter is an integral part of this analytical report.

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) 7-18-02

Received by: (name/date/time) 4:00p

Relinquished by: (name/date/time) 7-18-02 7:05

Received by: (name/date/time) 7.18.02 7:16pm

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
058000 - 001	EB- 20	7/18/02	13:40	P	X	
2	571- 529-0		8:55	B	X	X
3	571- 529-0.3		8:57		X	
4	571- 529-0.6		9:00		X	
5	571- 529-0.9		9:04		X	
6	571- 529-1.5		9:07		X	
7	571- 527-0		8:53		X	
8	571- 527-0.3		8:55		X	
9	571- 527-0.6		8:58		X	
10	571- 527-0.9		9:03		X	
11	571- 526-0		9:18		X	
12	571- 526-0.3		9:20		X	
13	571- 526-0.6		9:28		X	X
14	571- 526-0.9		9:33		X	
15	571- 526-1.5		9:38		X	
16	571- 525-0		9:25		X	
17	571- 525-0.3		9:27		X	
18	571- 525-0.6		9:30		X	
19	571- 525-0.9		9:33		X	
20	571- 525-1.5		9:37		X	
21	571- 518-0		10:05		X	
22	571- 518-0.3		10:09		X	
23	571- 518-0.6		10:15		X	
24	571- 518-0.9		10:16		X	X
25	571- 517-0		10:05		X	
26	571- 517-0.3		10:07		X	
27	571- 517-0.6		10:10		X	
28	571- 517-0.9		10:13		X	
29	571- 517-1.5		10:18		X	
30	571- 514-0		10:37		X	
31	571- 514-0.3		10:41		X	
32	571- 514-0.6		10:46		X	
33	571- 514-0.9		10:49		X	
34	571- 513-0		10:40		X	X
35	571- 513-0.3		10:41		X	
36	571- 513-0.6		10:43		X	
37	571- 513-0.9		10:47		X	
38	571- 513-1.5		10:51		X	
39	571- 510-0		11:05		X	
40	571- 510-0.3		11:07		X	
41	571- 510-0.6		11:10		X	
42	571- 509-0		11:05		X	
43	571- 509-0.3		11:20		X	X
44	571- 509-0.6		11:23		X	
45	571- 509-0.9		11:26		X	
46	571- 203-0		13:08		X	
47	571- 203-0.3		13:11		X	
48	571- 203-0.6		13:19		X	
49	571- 204-0		1:09		X	
50	571- 204-0.3		1:12		X	
51	571- 205-0		1:17		X	
52	571- 205-0.3		1:21		X	
53	571- 205-0.6		1:24		X	X
54	571- 123-0		13:49		X	
55	571- 123-0.3		13:58		X	
56	571- 122-0		1:50		X	
57	571- 122-0.3		1:54		X	
58	571- 122-0.6		1:58		X	
59	571- 122-0.9		2:01		X	
60	571- 122-1.5		2:05		X	

Total # of samples: 60

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Date: *25-Jul-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	EB-20
Lab Order:	058000		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/18/2002 3:40:00 PM
Lab ID:	058000-001A	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	(EPA 3010A)			**EPA 6010B**		
RunID: ICP2_020722G	QC Batch: 9747					Analyst: **RQ**
Lead	ND	0.0050		mg/L	1	7/22/2002

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interferen
H - Sample exceeded analytical holding time
E - Value above quantitation range
Results are wet unless otherwise specified

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3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058000
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/20/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058000-002A	571-529-0	49	mg/Kg	9800	5	1	7/18/2002	7/24/2002
058000-003A	571-529-0.3	62	mg/Kg	9800	5	1	7/18/2002	7/24/2002
058000-004A	571-529-0.6	57	mg/Kg	9801	5	1	7/18/2002	7/24/2002
058000-005A	571-529-0.9	44	mg/Kg	9801	5	1	7/18/2002	7/24/2002
058000-006A	571-529-1.5	28	mg/Kg	9801	5	1	7/18/2002	7/24/2002
058000-007A	571-527-0	75	mg/Kg	9801	5	1	7/18/2002	7/24/2002
058000-008A	571-527-0.3	82	mg/Kg	9801	5	1	7/18/2002	7/24/2002
058000-009A	571-527-0.6	71	mg/Kg	9801	5	1	7/18/2002	7/24/2002
058000-010A	571-527-0.9	62	mg/Kg	9801	5	1	7/18/2002	7/24/2002
058000-011A	571-526-0	870	mg/Kg	9801	5	1	7/18/2002	7/24/2002
058000-012A	571-526-0.3	170	mg/Kg	9801	5	1	7/18/2002	7/24/2002

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interferen
H - Sample exceeded analytical holding time
E - Value above quantitation range
Results are wet unless otherwise specified

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058000
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/20/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058000-013A	571-526-0.6	15	mg/Kg	9801	5	1	7/18/2002	7/24/2002
058000-014A	571-526-0.9	18	mg/Kg	9801	5	1	7/18/2002	7/24/2002
058000-015A	571-526-1.5	38	mg/Kg	9801	5	1	7/18/2002	7/24/2002
058000-016A	571-525-0	220	mg/Kg	9801	5	1	7/18/2002	7/24/2002
058000-017A	571-525-0.3	230	mg/Kg	9801	5	1	7/18/2002	7/24/2002
058000-018A	571-525-0.6	42	mg/Kg	9801	5	1	7/18/2002	7/24/2002
058000-019A	571-525-0.9	5.9	mg/Kg	9801	5	1	7/18/2002	7/24/2002
058000-020A	571-525-1.5	780	mg/Kg	9801	5	1	7/18/2002	7/24/2002
058000-021A	571-518-0	5.4	mg/Kg	9801	5	1	7/18/2002	7/24/2002
058000-022A	571-518-0.3	880	mg/Kg	9801	5	1	7/18/2002	7/24/2002
058000-023A	571-518-0.6	110	mg/Kg	9801	5	1	7/18/2002	7/24/2002

Qualifiers:

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DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interferen
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Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058000
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/20/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058000-024A	571-518-0.9	300	mg/Kg	9802	5	1	7/18/2002	7/24/2002
058000-025A	571-517-0	540	mg/Kg	9802	5	1	7/18/2002	7/24/2002
058000-026A	571-517-0.3	500	mg/Kg	9802	5	1	7/18/2002	7/24/2002
058000-027A	571-517-0.6	300	mg/Kg	9802	5	1	7/18/2002	7/24/2002
058000-028A	571-517-0.9	250	mg/Kg	9802	5	1	7/18/2002	7/24/2002
058000-029A	571-517-1.5	350	mg/Kg	9802	5	1	7/18/2002	7/24/2002
058000-030A	571-514-0	1500	mg/Kg	9802	5	1	7/18/2002	7/24/2002
058000-031A	571-514-0.3	740	mg/Kg	9802	5	1	7/18/2002	7/24/2002
058000-032A	571-514-0.6	370	mg/Kg	9802	5	1	7/18/2002	7/24/2002
058000-033A	571-514-0.9	490	mg/Kg	9802	5	1	7/18/2002	7/24/2002
058000-034A	571-513-0	19	mg/Kg	9802	5	1	7/18/2002	7/24/2002

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Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058000
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/20/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058000-035A	571-513-0.3	57	mg/Kg	9802	5	1	7/18/2002	7/24/2002
058000-036A	571-513-0.6	210	mg/Kg	9802	5	1	7/18/2002	7/24/2002
058000-037A	571-513-0.9	150	mg/Kg	9802	5	1	7/18/2002	7/24/2002
058000-038A	571-513-1.5	6.6	mg/Kg	9802	5	1	7/18/2002	7/24/2002
058000-039A	571-510-0	650	mg/Kg	9802	5	1	7/18/2002	7/24/2002
058000-040A	571-510-0.3	260	mg/Kg	9802	5	1	7/18/2002	7/24/2002
058000-041A	571-510-0.6	92	mg/Kg	9802	5	1	7/18/2002	7/24/2002
058000-042A	571-509-0	52	mg/Kg	9802	5	1	7/18/2002	7/24/2002
058000-043A	571-509-0.3	ND	mg/Kg	9802	5	1	7/18/2002	7/24/2002
058000-044A	571-509-0.6	ND	mg/Kg	9803	5	1	7/18/2002	7/24/2002
058000-045A	571-509-0.9	ND	mg/Kg	9803	5	1	7/18/2002	7/24/2002

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Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058000
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/20/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058000-046A	571-203-0	500	mg/Kg	9803	5	1	7/18/2002	7/24/2002
058000-047A	571-203-0.3	250	mg/Kg	9803	5	1	7/18/2002	7/24/2002
058000-048A	571-203-0.6	55	mg/Kg	9803	5	1	7/18/2002	7/24/2002
058000-049A	571-204-0	41	mg/Kg	9803	5	1	7/18/2002	7/24/2002
058000-050A	571-204-0.3	21	mg/Kg	9803	5	1	7/18/2002	7/24/2002
058000-051A	571-205-0	110	mg/Kg	9803	5	1	7/18/2002	7/24/2002
058000-052A	571-205-0.3	43	mg/Kg	9803	5	1	7/18/2002	7/24/2002
058000-053A	571-205-0.6	63	mg/Kg	9803	5	1	7/18/2002	7/24/2002
058000-054A	571-123-0	190	mg/Kg	9803	5	1	7/18/2002	7/24/2002
058000-055A	571-123-0.3	13	mg/Kg	9803	5	1	7/18/2002	7/24/2002
058000-056A	571-122-0	320	mg/Kg	9803	5	1	7/18/2002	7/24/2002

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Date: 7/25/2002

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EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058000
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/20/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058000-057A	571-122-0.3	9.5	mg/Kg	9803	5	1	7/18/2002	7/24/2002
058000-058A	571-122-0.6	6.9	mg/Kg	9803	5	1	7/18/2002	7/24/2002
058000-059A	571-122-0.9	9.5	mg/Kg	9803	5	1	7/18/2002	7/24/2002
058000-060A	571-122-1.5	12	mg/Kg	9803	5	1	7/18/2002	7/24/2002

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Date: 7/25/2002

pH
EPA 9045C

CLIENT:	Ninyo & Moore	**Lab Order:**	058000
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/20/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058000-002A	571-529-0	7.16	pH Units	R19742	0.1	1	7/18/2002	7/23/2002
058000-013A	571-526-0.6	8.09	pH Units	R19742	0.1	1	7/18/2002	7/23/2002
058000-024A	571-518-0.9	8.23	pH Units	R19742	0.1	1	7/18/2002	7/23/2002
058000-034A	571-513-0	8.23	pH Units	R19742	0.1	1	7/18/2002	7/23/2002
058000-043A	571-509-0.3	6.82	pH Units	R19743	0.1	1	7/18/2002	7/23/2002
058000-053A	571-205-0.6	6.07	pH Units	R19743	0.1	1	7/18/2002	7/23/2002

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Date: 8/1/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058000
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/20/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058000-003A	571-529-0.3	2.5	mg/L	9905	0.2	1	7/18/2002	7/31/2002
058000-004A	571-529-0.6	2.5	mg/L	9905	0.2	1	7/18/2002	7/31/2002
058000-007A	571-527-0	4.2	mg/L	9905	0.2	1	7/18/2002	7/31/2002
058000-008A	571-527-0.3	5.0	mg/L	9905	0.2	1	7/18/2002	7/31/2002
058000-009A	571-527-0.6	2.6	mg/L	9906	0.2	1	7/18/2002	8/1/2002
058000-010A	571-527-0.9	3.0	mg/L	9906	0.2	1	7/18/2002	8/1/2002
058000-011A	571-526-0	51	mg/L	9906	2	10	7/18/2002	8/1/2002
058000-012A	571-526-0.3	15	mg/L	9906	0.4	2	7/18/2002	8/1/2002
058000-016A	571-525-0	9.2	mg/L	9906	0.2	1	7/18/2002	8/1/2002
058000-017A	571-525-0.3	10	mg/L	9906	0.2	1	7/18/2002	8/1/2002
058000-020A	571-525-1.5	ND	mg/L	9906	0.2	1	7/18/2002	8/1/2002

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Date: 8/1/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058000
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/20/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058000-022A	571-518-0.3	73	mg/L	9906	2	10	7/18/2002	8/1/2002
058000-023A	571-518-0.6	6.3	mg/L	9906	0.2	1	7/18/2002	8/1/2002
058000-024A	571-518-0.9	19	mg/L	9906	0.4	2	7/18/2002	8/1/2002
058000-025A	571-517-0	56	mg/L	9906	2	10	7/18/2002	8/1/2002
058000-026A	571-517-0.3	46	mg/L	9906	2	10	7/18/2002	8/1/2002
058000-027A	571-517-0.6	20	mg/L	9906	0.4	2	7/18/2002	8/1/2002
058000-028A	571-517-0.9	5.1	mg/L	9906	0.2	1	7/18/2002	8/1/2002
058000-029A	571-517-1.5	25	mg/L	9906	0.8	4	7/18/2002	8/1/2002
058000-031A	571-514-0.3	59	mg/L	9906	2	10	7/18/2002	8/1/2002
058000-032A	571-514-0.6	33	mg/L	9906	0.8	4	7/18/2002	8/1/2002
058000-033A	571-514-0.9	44	mg/L	9906	2	10	7/18/2002	8/1/2002

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Date: 8/1/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058000
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/20/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058000-035A	571-513-0.3	5.4	mg/L	9906	0.2	1	7/18/2002	8/1/2002
058000-036A	571-513-0.6	25	mg/L	9906	0.8	4	7/18/2002	8/1/2002
058000-037A	571-513-0.9	7.8	mg/L	9907	0.2	1	7/18/2002	8/1/2002
058000-039A	571-510-0	39	mg/L	9907	2	10	7/18/2002	8/1/2002
058000-040A	571-510-0.3	19	mg/L	9907	0.4	2	7/18/2002	8/1/2002
058000-041A	571-510-0.6	2.2	mg/L	9907	0.2	1	7/18/2002	8/1/2002
058000-042A	571-509-0	1.4	mg/L	9907	0.2	1	7/18/2002	8/1/2002
058000-046A	571-203-0	16	mg/L	9907	0.4	2	7/18/2002	8/1/2002
058000-047A	571-203-0.3	10	mg/L	9907	0.2	1	7/18/2002	8/1/2002
058000-048A	571-203-0.6	4.4	mg/L	9907	0.2	1	7/18/2002	8/1/2002
058000-051A	571-205-0	3.7	mg/L	9907	0.2	1	7/18/2002	8/1/2002

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Date: 8/1/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058000
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/20/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058000-053A	571-205-0.6	2.7	mg/L	9907	0.2	1	7/18/2002	8/1/2002
058000-054A	571-123-0	10	mg/L	9907	0.2	1	7/18/2002	8/1/2002
058000-056A	571-122-0	21	mg/L	9907	0.8	4	7/18/2002	8/1/2002

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Date: 8/7/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058000
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/20/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058000-011A	571-526-0	ND	mg/L	10035	0.2	1	7/18/2002	8/7/2002
058000-012A	571-526-0.3	0.28	mg/L	10035	0.2	1	7/18/2002	8/7/2002
058000-016A	571-525-0	ND	mg/L	10035	0.2	1	7/18/2002	8/7/2002
058000-017A	571-525-0.3	ND	mg/L	10035	0.2	1	7/18/2002	8/7/2002
058000-022A	571-518-0.3	0.51	mg/L	10035	0.2	1	7/18/2002	8/7/2002
058000-023A	571-518-0.6	ND	mg/L	10035	0.2	1	7/18/2002	8/7/2002
058000-024A	571-518-0.9	ND	mg/L	10035	0.2	1	7/18/2002	8/7/2002
058000-025A	571-517-0	0.22	mg/L	10035	0.2	1	7/18/2002	8/7/2002
058000-026A	571-517-0.3	ND	mg/L	10035	0.2	1	7/18/2002	8/7/2002
058000-027A	571-517-0.6	ND	mg/L	10035	0.2	1	7/18/2002	8/7/2002
058000-028A	571-517-0.9	ND	mg/L	10035	0.2	1	7/18/2002	8/7/2002

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LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058000
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/20/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058000-029A	571-517-1.5	ND	mg/L	10035	0.2	1	7/18/2002	8/7/2002
058000-031A	571-514-0.3	ND	mg/L	10036	0.2	1	7/18/2002	8/7/2002
058000-032A	571-514-0.6	ND	mg/L	10036	0.2	1	7/18/2002	8/7/2002
058000-033A	571-514-0.9	ND	mg/L	10036	0.2	1	7/18/2002	8/7/2002
058000-035A	571-513-0.3	ND	mg/L	10036	0.2	1	7/18/2002	8/7/2002
058000-036A	571-513-0.6	ND	mg/L	10036	0.2	1	7/18/2002	8/7/2002
058000-037A	571-513-0.9	ND	mg/L	10036	0.2	1	7/18/2002	8/7/2002
058000-039A	571-510-0	ND	mg/L	10036	0.2	1	7/18/2002	8/7/2002
058000-040A	571-510-0.3	ND	mg/L	10036	0.2	1	7/18/2002	8/7/2002
058000-046A	571-203-0	ND	mg/L	10036	0.2	1	7/18/2002	8/7/2002
058000-047A	571-203-0.3	ND	mg/L	10036	0.2	1	7/18/2002	8/7/2002

Qualifiers:

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S - Spike/Surrogate outside of limits due to matrix interferen
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LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058000
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/20/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058000-054A	571-123-0	ND	mg/L	10036	0.2	1	7/18/2002	8/7/2002
058000-056A	571-122-0	ND	mg/L	10036	0.2	1	7/18/2002	8/7/2002

Qualifiers:

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J - Analyte detected below quantitation limits
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S - Spike/Surrogate outside of limits due to matrix interferen
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Results are wet unless otherwise specified

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3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-529-0.3
Lab Order:	058000		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/18/2002 8:57:00 AM
Lab ID:	058000-003A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810C	QC Batch: 10214					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	8.4	2.5		mg/Kg	10	8/10/2002
Barium	330	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	1.8	1.5		mg/Kg	10	8/10/2002
Chromium	52	1.5		mg/Kg	10	8/10/2002
Cobalt	13	1.5		mg/Kg	10	8/10/2002
Copper	37	1.5		mg/Kg	10	8/10/2002
Molybdenum	6.5	2.5		mg/Kg	10	8/10/2002
Nickel	47	1.5		mg/Kg	10	8/10/2002
Selenium	7.8	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	130	1.5		mg/Kg	10	8/10/2002
Zinc	160	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020812D	QC Batch: 10169					Analyst: **NS**
Mercury	0.13	0.10		mg/Kg	1	8/12/2002

Qualifiers:

ND - Not Detected at the Reporting Limit
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B - Analyte detected in the associated Method Blank
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S - Spike/Surrogate outside of limits due to matrix interferen
H - Sample exceeded analytical holding time
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Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-517-0.9
Lab Order:	058000		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/18/2002 10:13:00 AM
Lab ID:	058000-028A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810C	QC Batch: 10214					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	6.1	2.5		mg/Kg	10	8/10/2002
Barium	210	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	4.1	1.5		mg/Kg	10	8/10/2002
Chromium	46	1.5		mg/Kg	10	8/10/2002
Cobalt	13	1.5		mg/Kg	10	8/10/2002
Copper	69	1.5		mg/Kg	10	8/10/2002
Molybdenum	7.4	2.5		mg/Kg	10	8/10/2002
Nickel	47	1.5		mg/Kg	10	8/10/2002
Selenium	16	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	99	1.5		mg/Kg	10	8/10/2002
Zinc	100	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020812D	QC Batch: 10169					Analyst: **NS**
Mercury	0.15	0.10		mg/Kg	1	8/12/2002

Qualifiers:

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Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-514-0
Lab Order:	058000		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/18/2002 10:37:00 AM
Lab ID:	058000-030A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810D	QC Batch: 10215					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	5.5	2.5		mg/Kg	10	8/10/2002
Barium	230	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	23	1.5		mg/Kg	10	8/10/2002
Cobalt	9.5	1.5		mg/Kg	10	8/10/2002
Copper	72	1.5		mg/Kg	10	8/10/2002
Molybdenum	3.0	2.5		mg/Kg	10	8/10/2002
Nickel	20	1.5		mg/Kg	10	8/10/2002
Selenium	9.2	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	33	1.5		mg/Kg	10	8/10/2002
Zinc	390	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020812D	QC Batch: 10169					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/12/2002

Qualifiers:

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Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-510-0.6
Lab Order:	058000		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/18/2002 11:10:00 AM
Lab ID:	058000-041A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810D	QC Batch: 10215					Analyst: **RQ**
Antimony	2.8	2.5		mg/Kg	10	8/10/2002
Arsenic	ND	2.5		mg/Kg	10	8/10/2002
Barium	210	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	2.5	1.5		mg/Kg	10	8/10/2002
Chromium	33	1.5		mg/Kg	10	8/10/2002
Cobalt	15	1.5		mg/Kg	10	8/10/2002
Copper	26	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	35	1.5		mg/Kg	10	8/10/2002
Selenium	12	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	65	1.5		mg/Kg	10	8/10/2002
Zinc	75	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020813F	QC Batch: 10207					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/13/2002

Qualifiers:

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Advanced Technology Laboratories

Date: 8/15/2002

LEAD BY ATOMIC ABSORPTION
EPA 1311/ 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058000
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/20/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058000-011A	571-526-0	0.73	mg/L	10335	0.2	1	7/18/2002	8/14/2002
058000-012A	571-526-0.3	0.31	mg/L	10335	0.2	1	7/18/2002	8/14/2002
058000-022A	571-518-0.3	2.6	mg/L	10335	0.2	1	7/18/2002	8/14/2002
058000-024A	571-518-0.9	0.55	mg/L	10335	0.2	1	7/18/2002	8/14/2002
058000-025A	571-517-0	5.6	mg/L	10335	0.2	1	7/18/2002	8/14/2002
058000-026A	571-517-0.3	3.7	mg/L	10335	0.2	1	7/18/2002	8/14/2002
058000-027A	571-517-0.6	0.70	mg/L	10335	0.2	1	7/18/2002	8/14/2002
058000-029A	571-517-1.5	0.33	mg/L	10335	0.2	1	7/18/2002	8/14/2002
058000-030A	571-514-0	6.5	mg/L	10089	0.2	1	7/18/2002	8/6/2002
058000-031A	571-514-0.3	3.5	mg/L	10335	0.2	1	7/18/2002	8/14/2002
058000-032A	571-514-0.6	2.8	mg/L	10335	0.2	1	7/18/2002	8/14/2002

Qualifiers:

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Results are wet unless otherwise specified

Advanced Technology Laboratories
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Advanced Technology Laboratories

Date: 8/15/2002

LEAD BY ATOMIC ABSORPTION
EPA 1311/ 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058000
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/20/2002
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058000-033A	571-514-0.9	2.4	mg/L	10336	0.2	1	7/18/2002	8/14/2002
058000-036A	571-513-0.6	1.1	mg/L	10336	0.2	1	7/18/2002	8/14/2002
058000-039A	571-510-0	1.4	mg/L	10336	0.2	1	7/18/2002	8/14/2002
058000-040A	571-510-0.3	0.79	mg/L	10336	0.2	1	7/18/2002	8/14/2002
058000-046A	571-203-0	0.70	mg/L	10336	0.2	1	7/18/2002	8/14/2002
058000-056A	571-122-0	0.68	mg/L	10336	0.2	1	7/18/2002	8/14/2002

Qualifiers:

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Advanced Technology Laboratories

Date: *15-Aug-02*

CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10035

Sample ID: **MB-10035**	SampType: **mblk**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/7/2002**	Run ID: **AA2_020807D**
Client ID: **ZZZZZ**	Batch ID: **10035**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314874**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-10035A**	SampType: **mblk**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/1/2002**	Run ID: **AA2_020807D**
Client ID: **ZZZZZ**	Batch ID: **10035**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314875**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-10035B**	SampType: **mblk**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/1/2002**	Run ID: **AA2_020807D**
Client ID: **ZZZZZ**	Batch ID: **10035**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314888**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05907	0.20									

Sample ID: **LCS-10035**	SampType: **lcs**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/7/2002**	Run ID: **AA2_020807D**
Client ID: **ZZZZZ**	Batch ID: **10035**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314902**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.49	0.20	7.5	0	99.9	80	120	0	0		

Sample ID: **058000-012AMS**	SampType: **MS**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/7/2002**	Run ID: **AA2_020807D**
Client ID: **571-526-0.3**	Batch ID: **10035**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314887**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.393	0.20	5	0.2781	102	80	120	0	0		

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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10035

Sample ID: 058000-029AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807D
Client ID: 571-517-1.5	Batch ID: 10035	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314900

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.922	0.20	5	0.06788	97.1	80	120	0	0		

Sample ID: 058000-012ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807D
Client ID: 571-526-0.3	Batch ID: 10035	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314886

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.4161	0.20	0	0	0	0	0	0.2781	39.8	30	R

Sample ID: 058000-029ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807D
Client ID: 571-517-1.5	Batch ID: 10035	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314899

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05691	0.20	0	0	0	0	0	0.06788	0	30	J

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DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10036

Sample ID: MB-10036	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807E
Client ID: ZZZZZ	Batch ID: 10036	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314906

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10036A	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807E
Client ID: ZZZZZ	Batch ID: 10036	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314908

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10036B	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807E
Client ID: ZZZZZ	Batch ID: 10036	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314921

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10036	SampType: lcs	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807E
Client ID: ZZZZZ	Batch ID: 10036	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314933

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.269	0.20	7.5	0	96.9	80	120	0	0		

Sample ID: 058000-047AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807E
Client ID: 571-203-0.3	Batch ID: 10036	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314920

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.937	0.20	5	0.05554	97.6	80	120	0	0		

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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10036

Sample ID: 058001-051AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807E
Client ID: ZZZZZ	Batch ID: 10036	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314931

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.856	0.20	5	0	97.1	80	120	0	0		

Sample ID: 058000-047ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807E
Client ID: 571-203-0.3	Batch ID: 10036	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314919

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0.05554	0	30	

Sample ID: 058001-051ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807E
Client ID: ZZZZZ	Batch ID: 10036	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314930

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0	30	

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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
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CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10089

Sample ID: MB-10089	SampType: mblk	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806J
Client ID: ZZZZZ	Batch ID: 10089	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314634

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10080-TCLP	SampType: mblk	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806J
Client ID: ZZZZZ	Batch ID: 10089	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314635

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10089	SampType: lcs	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806J
Client ID: ZZZZZ	Batch ID: 10089	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314648

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.134	0.20	1	0	113	80	120	0	0		

Sample ID: 058021-007AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806J
Client ID: ZZZZZ	Batch ID: 10089	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314646

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.899	0.20	2.5	6.518	95.2	80	120	0	0		

Sample ID: 058021-007ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806J
Client ID: ZZZZZ	Batch ID: 10089	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314645

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.801	0.20	0	0	0	0	0	6.518	79.8	30	R

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Advanced Technology Laboratories
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CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10169

Sample ID: MB-10169	SampType: mblk	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812D
Client ID: ZZZZZ	Batch ID: 10169	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317160

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-10169	SampType: lcs	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812D
Client ID: ZZZZZ	Batch ID: 10169	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317159

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.833	0.10	2.08	0	88.1	80	120	0	0		

Sample ID: 058020-058AMS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812D
Client ID: ZZZZZ	Batch ID: 10169	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317157

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9644	0.10	0.83	0.09029	105	62	146	0	0		

Sample ID: 058020-058AMSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812D
Client ID: ZZZZZ	Batch ID: 10169	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317158

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9574	0.10	0.83	0.09029	104	62	146	0.9644	0.726	33	

Sample ID: 058020-058ADUP	SampType: DUP	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812D
Client ID: ZZZZZ	Batch ID: 10169	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317156

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.08648	0.10	0	0	0	0	0	0.09029	0	30	J

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CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10207

Sample ID: MB-10207	SampType: mblk	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813F
Client ID: ZZZZZ	Batch ID: 10207	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318517

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-10207	SampType: lcs	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813F
Client ID: ZZZZZ	Batch ID: 10207	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318516

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.081	0.10	2.08	0	100	80	120	0	0		

Sample ID: 058021-054AMS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813F
Client ID: ZZZZZ	Batch ID: 10207	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318514

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9716	0.10	0.83	0.0326	113	62	146	0	0		

Sample ID: 058021-054AMSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813F
Client ID: ZZZZZ	Batch ID: 10207	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318515

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.935	0.10	0.83	0.0326	109	62	146	0.9716	3.84	33	

Sample ID: 058021-054ADUP	SampType: DUP	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813F
Client ID: ZZZZZ	Batch ID: 10207	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318513

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10	0	0	0	0	0	0.0326	0	30	

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Calculations are based on raw values
DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10214

Sample ID: MB-10214	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: ZZZZZ	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316649

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.1718	0.25									
Arsenic	0.04361	0.25									
Barium	ND	0.15									
Beryllium	ND	0.15									
Cadmium	ND	0.15									
Chromium	ND	0.15									
Cobalt	0.01124	0.15									
Copper	ND	0.15									
Molybdenum	0.07668	0.25									
Nickel	0.00859	0.15									
Selenium	0.08038	0.25									
Silver	ND	0.15									
Thallium	ND	0.25									
Vanadium	ND	0.15									
Zinc	0.01372	0.50									

Sample ID: LCS-10214	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: ZZZZZ	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316648

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	47.37	0.25	50	0	94.7	80	120	0	0		
Arsenic	49.23	0.25	50	0	98.5	80	120	0	0		
Barium	50.87	0.15	50	0	102	80	120	0	0		
Beryllium	50.48	0.15	50	0	101	80	120	0	0		
Cadmium	50.45	0.15	50	0	101	80	120	0	0		
Chromium	51.14	0.15	50	0	102	80	120	0	0		
Cobalt	50.06	0.15	50	0	100	80	120	0	0		
Copper	49	0.15	50	0	98	80	120	0	0		
Molybdenum	48.81	0.25	50	0	97.6	80	120	0	0		
Nickel	48.87	0.15	50	0	97.7	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike/Surrogate outside limits due to matrix interference; DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10214

Sample ID: LCS-10214	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: ZZZZZ	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316648

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	49.08	0.25	50	0	98.2	80	120	0	0		
Silver	49.37	0.15	50	0	98.7	80	120	0	0		
Thallium	47.17	0.25	50	0	94.3	80	120	0	0		
Vanadium	52	0.15	50	0	104	80	120	0	0		
Zinc	48.86	0.50	50	0	97.7	80	120	0	0		

Sample ID: 058000-028AMS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: 571-517-0.9	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316645

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	74.17	2.5	125	0	59.3	32	115	0	0		
Arsenic	126.9	2.5	125	6.085	96.6	59	111	0	0		
Barium	321.8	1.5	125	208.7	90.5	34	151	0	0		
Beryllium	120.4	1.5	125	0	96.3	56	112	0	0		
Cadmium	128.5	1.5	125	4.104	99.5	52	120	0	0		
Chromium	174.2	1.5	125	46.43	102	56	118	0	0		
Cobalt	136.2	1.5	125	12.97	98.6	58	117	0	0		
Copper	157.2	1.5	125	68.99	70.6	58	134	0	0		
Molybdenum	126.6	2.5	125	7.406	95.3	56	115	0	0		
Nickel	166.3	1.5	125	46.76	95.7	52	120	0	0		
Selenium	134.7	2.5	125	16.42	94.6	46	108	0	0		
Silver	122.4	1.5	125	0	97.9	74	117	0	0		
Thallium	104.8	2.5	125	0	83.8	62	117	0	0		
Vanadium	232.5	1.5	125	98.92	107	55	122	0	0		
Zinc	225.8	5.0	125	102.5	98.6	43	134	0	0		

Sample ID: 058000-028AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: 571-517-0.9	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316646

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:
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CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10214

Sample ID: 058000-028AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: 571-517-0.9	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316646

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	66.7	2.5	125	0	53.4	32	115	74.17	10.6	20	
Arsenic	123.5	2.5	125	6.085	94	59	111	126.9	2.66	20	
Barium	339.6	1.5	125	208.7	105	34	151	321.8	5.40	20	
Beryllium	117.6	1.5	125	0	94.1	56	112	120.4	2.37	20	
Cadmium	125.6	1.5	125	4.104	97.2	52	120	128.5	2.34	20	
Chromium	174.5	1.5	125	46.43	102	56	118	174.2	0.137	20	
Cobalt	133.9	1.5	125	12.97	96.8	58	117	136.2	1.68	20	
Copper	152	1.5	125	68.99	66.4	58	134	157.2	3.39	20	
Molybdenum	122.9	2.5	125	7.406	92.4	56	115	126.6	2.95	20	
Nickel	170.9	1.5	125	46.76	99.3	52	120	166.3	2.73	20	
Selenium	137.6	2.5	125	16.42	97	46	108	134.7	2.16	20	
Silver	119.9	1.5	125	0	95.9	74	117	122.4	2.01	20	
Thallium	104.6	2.5	125	0	83.7	62	117	104.8	0.104	20	
Vanadium	235.9	1.5	125	98.92	110	55	122	232.5	1.49	20	
Zinc	224.7	5.0	125	102.5	97.8	43	134	225.8	0.455	20	

Sample ID: 058000-028ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: 571-517-0.9	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316644

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.1277	2.5	0	0	0	0	0	0	0	30	J
Arsenic	7.906	2.5	0	0	0	0	0	6.085	26.0	30	
Barium	260	1.5	0	0	0	0	0	208.7	21.9	30	
Beryllium	ND	1.5	0	0	0	0	0	0	0	30	
Cadmium	4.654	1.5	0	0	0	0	0	4.104	12.6	30	
Chromium	48.65	1.5	0	0	0	0	0	46.43	4.67	30	
Cobalt	11.26	1.5	0	0	0	0	0	12.97	14.1	30	
Copper	37.08	1.5	0	0	0	0	0	68.99	60.2	30	R
Molybdenum	9.152	2.5	0	0	0	0	0	7.406	21.1	30	
Nickel	50.81	1.5	0	0	0	0	0	46.76	8.31	30	

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CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10214

Sample ID: 058000-028ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810C
Client ID: 571-517-0.9	Batch ID: 10214	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316644

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	15.47	2.5	0	0	0	0	0	16.42	5.96	30	
Silver	ND	1.5	0	0	0	0	0	0	0	30	
Thallium	ND	2.5	0	0	0	0	0	0	0	30	
Vanadium	105.5	1.5	0	0	0	0	0	98.92	6.47	30	
Zinc	114.5	5.0	0	0	0	0	0	102.5	11.0	30	

Qualifiers:
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CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10215

Sample ID: MB-10215	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: ZZZZZ	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316664

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.08521	0.25									
Arsenic	ND	0.25									
Barium	0.005349	0.15									
Beryllium	ND	0.15									
Cadmium	ND	0.15									
Chromium	ND	0.15									
Cobalt	0.001667	0.15									
Copper	ND	0.15									
Molybdenum	0.07279	0.25									
Nickel	ND	0.15									
Selenium	0.25	0.25									
Silver	0.01038	0.15									
Thallium	ND	0.25									
Vanadium	ND	0.15									
Zinc	0.06014	0.50									

Sample ID: LCS-10215	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: ZZZZZ	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316663

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	47.71	0.25	50	0	95.4	80	120	0	0		
Arsenic	49.61	0.25	50	0	99.2	80	120	0	0		
Barium	51.01	0.15	50	0	102	80	120	0	0		
Beryllium	49.87	0.15	50	0	99.7	80	120	0	0		
Cadmium	49.8	0.15	50	0	99.6	80	120	0	0		
Chromium	51.15	0.15	50	0	102	80	120	0	0		
Cobalt	49.91	0.15	50	0	99.8	80	120	0	0		
Copper	49.14	0.15	50	0	98.3	80	120	0	0		
Molybdenum	49.23	0.25	50	0	98.5	80	120	0	0		
Nickel	48.85	0.15	50	0	97.7	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; S - Spike/Surrogate outside limits due to matrix interference; B - Analyte detected in the associated Method Blank; **Calculations are based on raw values**; DO - Surrogate diluted out; H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10215

Sample ID: LCS-10215	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: ZZZZZ	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316663

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	50.06	0.25	50	0	100	80	120	0	0		
Silver	49.57	0.15	50	0	99.1	80	120	0	0		
Thallium	47.49	0.25	50	0	95	80	120	0	0		
Vanadium	52.2	0.15	50	0	104	80	120	0	0		
Zinc	49.29	0.50	50	0	98.6	80	120	0	0		

Sample ID: 058021-007AMS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: ZZZZZ	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316660

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	83.37	2.5	125	0	66.7	32	115	0	0		
Arsenic	123	2.5	125	5.058	94.3	59	111	0	0		
Barium	504.1	1.5	125	259.3	196	34	151	0	0		S
Beryllium	117.6	1.5	125	0	94.1	56	112	0	0		
Cadmium	124.8	1.5	125	3.507	97.1	52	120	0	0		
Chromium	168.1	1.5	125	36.03	106	56	118	0	0		
Cobalt	134.3	1.5	125	10.69	98.9	58	117	0	0		
Copper	284.3	1.5	125	116.6	134	58	134	0	0		S
Molybdenum	124.9	2.5	125	6.943	94.4	56	115	0	0		
Nickel	157.5	1.5	125	34.07	98.8	52	120	0	0		
Selenium	130	2.5	125	13.73	93	46	108	0	0		
Silver	119.4	1.5	125	0	95.5	74	117	0	0		
Thallium	105.8	2.5	125	0	84.7	62	117	0	0		
Vanadium	169.1	1.5	125	42.6	101	55	122	0	0		
Zinc	809.5	5.0	125	652	126	43	134	0	0		

Sample ID: 058021-007AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: ZZZZZ	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316661

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike/Surrogate outside limits due to matrix interference; DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10215

Sample ID: 058021-007AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: ZZZZZ	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316661

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	78.16	2.5	125	0	62.5	32	115	83.37	6.45	20	
Arsenic	120.2	2.5	125	5.058	92.1	59	111	123	2.32	20	
Barium	389.5	1.5	125	259.3	104	34	151	504.1	25.7	20	R
Beryllium	114.7	1.5	125	0	91.8	56	112	117.6	2.49	20	
Cadmium	123	1.5	125	3.507	95.6	52	120	124.8	1.46	20	
Chromium	164	1.5	125	36.03	102	56	118	168.1	2.44	20	
Cobalt	132.6	1.5	125	10.69	97.5	58	117	134.3	1.27	20	
Copper	235.9	1.5	125	116.6	95.4	58	134	284.3	18.6	20	
Molybdenum	122.9	2.5	125	6.943	92.7	56	115	124.9	1.66	20	
Nickel	165.2	1.5	125	34.07	105	52	120	157.5	4.75	20	
Selenium	132.4	2.5	125	13.73	94.9	46	108	130	1.81	20	
Silver	117	1.5	125	0	93.6	74	117	119.4	2.08	20	
Thallium	105.3	2.5	125	0	84.2	62	117	105.8	0.485	20	
Vanadium	169.3	1.5	125	42.6	101	55	122	169.1	0.117	20	
Zinc	828	5.0	125	652	141	43	134	809.5	2.26	20	S

Sample ID: 058021-007ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: ZZZZZ	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316659

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	1.159	2.5	0	0	0	0	0	0	0	30	J
Arsenic	4.62	2.5	0	0	0	0	0	5.058	9.05	30	
Barium	267	1.5	0	0	0	0	0	259.3	2.92	30	
Beryllium	ND	1.5	0	0	0	0	0	0	0	30	
Cadmium	3.474	1.5	0	0	0	0	0	3.507	0.956	30	
Chromium	37.32	1.5	0	0	0	0	0	36.03	3.51	30	
Cobalt	12.16	1.5	0	0	0	0	0	10.69	12.8	30	
Copper	119.2	1.5	0	0	0	0	0	116.6	2.18	30	
Molybdenum	8.809	2.5	0	0	0	0	0	6.943	23.7	30	
Nickel	34.96	1.5	0	0	0	0	0	34.07	2.60	30	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike/Surrogate outside limits due to matrix interference; DO - Surrogate diluted out
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R - RPD outside accepted recovery limits; **Calculations are based on raw values**

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CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10215

Sample ID: 058021-007ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: ZZZZZ	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316659

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	15.19	2.5	0	0	0	0	0	13.73	10.1	30	
Silver	ND	1.5	0	0	0	0	0	0	0	30	
Thallium	ND	2.5	0	0	0	0	0	0	0	30	
Vanadium	44.45	1.5	0	0	0	0	0	42.6	4.24	30	
Zinc	679.5	5.0	0	0	0	0	0	652	4.14	30	

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Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10335

Sample ID: MB-10335	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814<
Client ID: ZZZZZ	Batch ID: 10335	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318817

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10260-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814<
Client ID: ZZZZZ	Batch ID: 10335	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318818

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10335	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814<
Client ID: ZZZZZ	Batch ID: 10335	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318832

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.132	0.20	1	0	113	80	120	0	0		

Sample ID: 058000-032AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814<
Client ID: 571-514-0.6	Batch ID: 10335	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318830

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.912	0.20	2.5	2.78	125	80	120	0	0		S

Sample ID: 058000-032ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814<
Client ID: 571-514-0.6	Batch ID: 10335	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318829

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.098	0.20	0	0	0	0	0	2.78	10.8	30	

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10336

Sample ID: MB-10336	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814L
Client ID: ZZZZZ	Batch ID: 10336	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318833

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10261-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814L
Client ID: ZZZZZ	Batch ID: 10336	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318834

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10336	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814L
Client ID: ZZZZZ	Batch ID: 10336	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318848

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.098	0.20	1	0	110	80	120	0	0		

Sample ID: 058001-040AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814L
Client ID: ZZZZZ	Batch ID: 10336	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318846

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.591	0.20	2.5	1.279	92.5	80	120	0	0		

Sample ID: 058001-040ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814L
Client ID: ZZZZZ	Batch ID: 10336	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318845

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.384	0.20	0	0	0	0	0	1.279	7.89	30	

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Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9747

Sample ID: MB-9747	SampType: MBLK	TestCode: 6010_W	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020722F
Client ID: ZZZZZ	Batch ID: 9747	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/22/2002	SeqNo: 303172

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	0	0.0030									
Lead	0	0.0050									
Nickel	0	0.0030									

Sample ID: LCS-9747	SampType: LCS	TestCode: 6010_W	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020722F
Client ID: ZZZZZ	Batch ID: 9747	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/22/2002	SeqNo: 303173

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	0.96	0.0030	1	0	96	80	120	0	0		
Lead	0.95	0.0050	1	0	95	80	120	0	0		
Nickel	0.93	0.0030	1	0	93	80	120	0	0		

Sample ID: 058000-001AMS	SampType: MS	TestCode: 6010_W	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020722F
Client ID: EB-20	Batch ID: 9747	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/22/2002	SeqNo: 303179

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	2.54	0.0030	2.5	0	102	72	123	0	0		
Lead	2.33	0.0050	2.5	0.00326	93.1	66	118	0	0		
Nickel	2.4	0.0030	2.5	0	96	64	121	0	0		

Sample ID: 058000-001AMSD	SampType: MSD	TestCode: 6010_W	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020722F
Client ID: EB-20	Batch ID: 9747	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/22/2002	SeqNo: 303180

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	2.39	0.0030	2.5	0	95.6	72	123	2.54	6.09	20	
Lead	2.2	0.0050	2.5	0.00326	87.9	66	118	2.33	5.74	20	
Nickel	2.25	0.0030	2.5	0	90	64	121	2.4	6.45	20	

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9747

Sample ID: 058000-001ADUP	SampType: DUP	TestCode: 6010_W	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020722F
Client ID: EB-20	Batch ID: 9747	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/22/2002	SeqNo: 303178

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	0.00268	0.0030	0	0	0	0	0	0	0	30	J
Lead	0	0.0050	0	0	0	0	0	0.00326	0	30	
Nickel	0	0.0030	0	0	0	0	0	0	0	30	

Sample ID: MB-9747	SampType: MBLK	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020722G
Client ID: ZZZZZ	Batch ID: 9747	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/22/2002	SeqNo: 303181

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050									

Sample ID: LCS-9747	SampType: LCS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020722G
Client ID: ZZZZZ	Batch ID: 9747	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/22/2002	SeqNo: 303182

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.95	0.0050	1	0	95	80	120	0	0		

Sample ID: 058000-001AMS	SampType: MS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020722G
Client ID: EB-20	Batch ID: 9747	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/22/2002	SeqNo: 303188

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.33	0.0050	2.5	0	93.2	66	118	0	0		

Sample ID: 058000-001ADUP	SampType: DUP	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020722G
Client ID: EB-20	Batch ID: 9747	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/22/2002	SeqNo: 303187

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050	0	0	0	0	0	0	0	30	

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9800

Sample ID: MB-9800A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724H
Client ID: ZZZZZ	Batch ID: 9800	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305604

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9800B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724H
Client ID: ZZZZZ	Batch ID: 9800	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305605

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: 057999-051AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724H
Client ID: ZZZZZ	Batch ID: 9800	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305589

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	204.2	5.0	250	12.65	76.6	47	128	0	0		

Sample ID: 058000-003AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724H
Client ID: 571-529-0.3	Batch ID: 9800	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305601

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	287.9	5.0	250	62.06	90.3	47	128	0	0		

Sample ID: 058000-003AMSD	SampType: MSD	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724H
Client ID: 571-529-0.3	Batch ID: 9800	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305602

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	293.8	5.0	250	62.06	92.7	47	128	287.9	2.02	20	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike/Surrogate outside limits due to matrix interference; DO - Surrogate diluted out; J - Analyte detected below quantitation limits; B - Analyte detected in the associated Method Blank; H - Sample exceeded holding time; R - RPD outside accepted recovery limits; **Calculations are based on raw values**

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9800

Sample ID: 057999-051ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724H
Client ID: ZZZZZ	Batch ID: 9800	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305588

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	13.77	5.0	0	0	0	0	0	12.65	8.49	30	

Sample ID: 058000-003ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724H
Client ID: 571-529-0.3	Batch ID: 9800	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305600

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	58.35	5.0	0	0	0	0	0	62.06	6.18	30	

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9801

Sample ID: MB-9801A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724I
Client ID: ZZZZZ	Batch ID: 9801	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305632

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9801B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724I
Client ID: ZZZZZ	Batch ID: 9801	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305633

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9801	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724I
Client ID: ZZZZZ	Batch ID: 9801	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305631

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	241.5	5.0	250	0	96.6	80	120	0	0		

Sample ID: 058000-013AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724I
Client ID: 571-526-0.6	Batch ID: 9801	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305617

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	236.5	5.0	250	14.9	88.6	47	128	0	0		

Sample ID: 058000-023AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724I
Client ID: 571-518-0.6	Batch ID: 9801	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305629

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	404.4	5.0	250	114.9	116	47	128	0	0		

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Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9801

Sample ID: 058000-013ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724I
Client ID: 571-526-0.6	Batch ID: 9801	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305616

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	9.863	5.0	0	0	0	0	0	14.9	40.7	30	R

Sample ID: 058000-023ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724I
Client ID: 571-518-0.6	Batch ID: 9801	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305628

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	186.8	5.0	0	0	0	0	0	114.9	47.6	30	R

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CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9802

Sample ID: MB-9802A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724J
Client ID: ZZZZZ	Batch ID: 9802	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305660

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9802B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724J
Client ID: ZZZZZ	Batch ID: 9802	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305661

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9802	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724J
Client ID: ZZZZZ	Batch ID: 9802	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305659

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	239.1	5.0	250	0	95.6	80	120	0	0		

Sample ID: 058000-033AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724J
Client ID: 571-514-0.9	Batch ID: 9802	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305645

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	819.7	5.0	250	489.6	132	47	128	0	0		S

Sample ID: 058000-043AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724J
Client ID: 571-509-0.3	Batch ID: 9802	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305657

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	201	5.0	250	4.83	78.5	47	128	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9802

Sample ID: 058000-033ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724J
Client ID: 571-514-0.9	Batch ID: 9802	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305644

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	588.8	5.0	0	0	0	0	0	489.6	18.4	30	

Sample ID: 058000-043ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724J
Client ID: 571-509-0.3	Batch ID: 9802	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305656

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.711	5.0	0	0	0	0	0	4.83	16.7	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
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Calculations are based on raw values
DO - Surrogate diluted out
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ANALYTICAL QC SUMMARY REPORT

BatchID: 9803

Sample ID: MB-9803A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724K
Client ID: ZZZZZ	Batch ID: 9803	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305688

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9803B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724K
Client ID: ZZZZZ	Batch ID: 9803	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305689

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9803	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724K
Client ID: ZZZZZ	Batch ID: 9803	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305687

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	251.3	5.0	250	0	101	80	120	0	0		

Sample ID: 058000-053AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724K
Client ID: 571-205-0.6	Batch ID: 9803	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305672

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	265	5.0	250	63.3	80.7	47	128	0	0		

Sample ID: 058001-004AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724K
Client ID: ZZZZZ	Batch ID: 9803	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305684

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	150.6	5.0	250	2.847	59.1	47	128	0	0		

Qualifiers:
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ANALYTICAL QC SUMMARY REPORT

BatchID: 9803

Sample ID: 058000-053ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724K
Client ID: 571-205-0.6	Batch ID: 9803	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305671

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	66.43	5.0	0	0	0	0	0	63.3	4.81	30	

Sample ID: 058001-004ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020724K
Client ID: ZZZZZ	Batch ID: 9803	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305683

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.907	5.0	0	0	0	0	0	2.847	0	30	J

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9905

Sample ID: MB-9905A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020731A
Client ID: ZZZZZ	Batch ID: 9905	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310414

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9905B	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020731A
Client ID: ZZZZZ	Batch ID: 9905	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310427

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9905	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020731A
Client ID: ZZZZZ	Batch ID: 9905	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310442

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.07326	0.20									

Sample ID: LCS-9905	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020731A
Client ID: ZZZZZ	Batch ID: 9905	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310441

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.751	0.20	7.5	0	103	80	120	0	0		

Sample ID: 057999-041AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020731A
Client ID: ZZZZZ	Batch ID: 9905	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310426

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	153.5	4.0	100	55.02	98.5	80	120	0	0		

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9905

Sample ID: 057999-056AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020731A
Client ID: ZZZZZ	Batch ID: 9905	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310439

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	163.2	4.0	100	60.03	103	80	120	0	0		

Sample ID: 057999-041ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020731A
Client ID: ZZZZZ	Batch ID: 9905	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310425

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	48.67	2.0	0	0	0	0	0	55.02	12.3	30	

Sample ID: 057999-056ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020731A
Client ID: ZZZZZ	Batch ID: 9905	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310438

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	60.41	2.0	0	0	0	0	0	60.03	0.634	30	

Qualifiers:
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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9906

Sample ID: MB-9906	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020801A
Client ID: ZZZZZ	Batch ID: 9906	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310832

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.0604	0.20									

Sample ID: MB-9906A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020801A
Client ID: ZZZZZ	Batch ID: 9906	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310833

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.07824	0.20									

Sample ID: MB-9906B	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020801A
Client ID: ZZZZZ	Batch ID: 9906	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310846

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.06628	0.20									

Sample ID: LCS-9906	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020801A
Client ID: ZZZZZ	Batch ID: 9906	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310864

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.765	0.20	7.5	0	104	80	120	0	0		

Sample ID: 058000-024AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020801A
Client ID: 571-518-0.9	Batch ID: 9906	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310845

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	39.4	0.80	20	19.15	101	80	120	0	0		

Qualifiers:
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DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 058000
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ANALYTICAL QC SUMMARY REPORT

BatchID: 9906

Sample ID: 058000-036AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020801A
Client ID: 571-513-0.6	Batch ID: 9906	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310860

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	66.87	1.6	40	25.38	104	80	120	0	0		

Sample ID: 058000-024ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020801A
Client ID: 571-518-0.9	Batch ID: 9906	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310844

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	20.27	0.40	0	0	0	0	0	19.15	5.71	30	

Sample ID: 058000-036ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020801A
Client ID: 571-513-0.6	Batch ID: 9906	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310858

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	20.34	0.80	0	0	0	0	0	25.38	22.0	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9907

Sample ID: MB-9907	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020801B
Client ID: ZZZZZ	Batch ID: 9907	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310857

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.06295	0.20									

Sample ID: MB-9907A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020801B
Client ID: ZZZZZ	Batch ID: 9907	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310859

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9907B	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020801B
Client ID: ZZZZZ	Batch ID: 9907	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310897

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9907	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020801B
Client ID: ZZZZZ	Batch ID: 9907	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310922

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.761	0.20	7.5	0	103	80	120	0	0		

Sample ID: 058000-053AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020801B
Client ID: 571-205-0.6	Batch ID: 9907	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310895

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.649	0.20	5	2.672	99.5	80	120	0	0		

Qualifiers:
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9907

Sample ID: 058001-036AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020801B
Client ID: ZZZZZ	Batch ID: 9907	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310924

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.779	0.20	5	2.579	104	80	120	0	0		

Sample ID: 058000-053ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020801B
Client ID: 571-205-0.6	Batch ID: 9907	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310893

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.571	0.20	0	0	0	0	0	2.672	3.88	30	

Sample ID: 058001-036ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020801B
Client ID: ZZZZZ	Batch ID: 9907	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 310917

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.966	0.20	0	0	0	0	0	2.579	42.4	30	R

Qualifiers:
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: R19742

Sample ID: **058000-034ADUP**	SampType: **DUP**	TestCode: **9045_S**	Units: **pH Units**	Prep Date: **7/23/2002**	Run ID: **WETCHEM_020723G**
Client ID: **571-513-0**	Batch ID: **R19742**	TestNo: **EPA 9045C**		Analysis Date: **7/23/2002**	SeqNo: **305443**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	8.22	0.10	0	0	0	0	0	8.23	0.122	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: R19743

Sample ID: **058001-044ADUP** SampType: **DUP** TestCode: **9045_S** Units: **pH Units** Prep Date: **7/23/2002** Run ID: **WETCHEM_020723H**
Client ID: **ZZZZZ** Batch ID: **R19743** TestNo: **EPA 9045C** Analysis Date: **7/23/2002** SeqNo: **305455**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.55	0.10	0	0	0	0	0	7.59	0.528	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
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S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Rachelle

From: Steve Reese [sreese@ninyoandmoore.com]
Sent: Wednesday, July 31, 2002 9:27 AM
To: 'rachelle@atlglobal.com'
Cc: David Shaler (E-mail); Ruth Cheung (E-mail)
Subject: TCLP Analysis

TCLP.xls

Rachelle,
Attached please find a list of samples to be run for the TCLP analysis. Currently, we selected all of the samples that are greater than 1,000 mg/kg
of TTLC results. However, they will be ran by instruction only. There may
be more samples chosen for TCLP analysis in the future, but please run these 82 samples for now. Please call with any questions.
Thank you, Steve

Stephen S. Reese
Senior Staff Environmental Scientist
Ninyo & Moore Geotechnical & Environmental Sciences Consultants
475 Goddard, Suite 200
Irvine, California 92618
Tel: (949) 753-7070
Fax: (949) 753-7071
Email: sreese@ninyoandmoore.com
www.ninyoandmoore.com

RUN FOR TCLP ANALYSIS			
33	20	29	82
569-101-0	570-101-0	571-104-0	
569-102-0	570-101-0.6	571-120-0	
569-102-0.3	570-102-0.6	571-310-0.9	
569-102-0.9	570-103-1.5	571-317-0	
569-111-0	570-114-0.6	571-320-0	
569-112-0	570-115-0	571-325-0.6	
569-112-0.6	570-119-0.3	571-507-0	
569-201-0	570-201-0	571-511-0	
569-212-0	570-214-0	571-514-0	
569-301-0	570-311-0.6	571-524-0	
569-303-0.9	570-312-0.6	571-710-0	
569-314-0	570-504-0	571-710-0.3	
569-401-0	570-508-0	571-711-0	
569-404-0.6	570-517-0	571-711-0.3	
569-405-0.6	570-517-0.3	571-712-0	
569-408-0.9	570-610-0.6	571-712-0.3	
569-502-0.6	570-615-0	571-201-0.6	
569-516-0	570-706-0	571-405-0	
569-603-0.3	570-709-0	571-406-0	
569-607-0	570-808-0.6	571-407-0	
569-607-0.3		571-414-0	
569-609-0		571-609-0	
569-609-0.3		571-611-0	
569-703-0		571-616-0	
569-703-0.9		571-617-0	
569-705-0		571-619-1.5	
569-705-0.3		571-814-0.3	
569-706-0		571-818-0.6	
569-708-0		571-819-0	
569-710-0			
569-711-0			
569-711-0.3			
569-801-0.3			

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Tuesday, August 06, 2002 3:46 PM
To: 'Rachelle'; 'David Shaler (E-mail)'
Subject: Title 22 Metals

Title 22 Metals.xls

Rachelle,
Please run the following samples for Title 22 Metals. Please do not list
Pb in your emailed results. There should be a total of 120 samples to be
run.
Thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

569-102-0.9	570-101-0	571-101-0.9
569-112-0	570-101-0.6	571-104-0
569-201-0	570-201-0	571-201-0.6
569-206-0.6	570-205-0.9	571-108-1.5
569-106-1.5	570-106-0.3	571-111-0.3
569-212-0	570-208-1.5	571-207-0
569-401-0.6	570-111-0.6	571-210-0.6
569-301-0	570-214-0	571-115-0.9
569-303-0.9	570-115-0.3	571-214-0.3
569-404-0.6	570-119-0.9	571-120-0
569-408-0.9	570-224-0.6	571-217-1.5
569-314-0	570-401-0	571-220-0.6
569-313-0.3	570-401-0.3	571-301-0.3
569-502-0.6	570-304-1.5	571-405-0
569-602-1.5	570-307-0.9	571-306-0.9
569-607-0.3	570-311-0.6	571-407-0
569-607-0	570-312-0.6	571-310-0.9
569-508-0.9	570-316-0.3	571-315-0.3
569-511-0.6	570-601-0	571-412-1.5
569-612-1.5	570-505-1.5	571-317-0
569-516-0	570-508-0	571-320-0.6
569-801-0.3	570-610-0.6	571-416-0.9
569-519-0.6	570-511-0.9	571-325-0.3
569-803-0.9	570-615-0	571-421-1.5
569-705-0	570-514-0.3	571-425-0
569-806-1.5	570-517-0	571-501-0.6
569-708-0.3	570-618-0.6	571-503-0.9
569-711-0	570-621-1.5	571-603-0.3
569-811-0	570-703-0.9	571-507-0
	570-804-0	571-609-0
	570-706-0	571-510-1.5
	570-709-0	571-611-0
	570-808-0.6	571-514-0
	570-711-1.5	571-614-0.3
	570-812-0.3	571-517-0.9
		571-617-0.6
		571-520-1.5
		571-621-0.3
		571-524-0
		571-624-0.9
		571-529-0.3
		571-628-0.6
		571-703-1.5
		571-707-0
		571-804-0.9
		571-809-0.3
		571-711-0
		571-712-0
		571-814-0.3
		571-818-0.6
		571-819-0
		571-827-1.5

571-832-0.9
571-836-0.3
571-837-0.6
571-842-0

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Wednesday, August 07, 2002 10:28 AM
To: 'Rachelle'
Subject: RE: Title 22 Metals

Sorry for the mistake. Please change to the following:
569-602-1.5 to 0.6
569-803-0.9 to 0.6
571-217-1.5 to 0.6
571-320-0.6 to 0
571-421-1.5 to 0
571-503-0.9 to 0.6
571-510-1.5 to 0.6
571-520-1.5 to 0
571-703-1.5 to 0.6
571-804-0.9 to 0.6
571-827-1.5 to 0.3
571-837-0.6 to 0.3
570-119-0.9 to 0.6
570-208-1.5 to 0.3
570-621-1.5 to 0.3
570-703-0.9 to 0.3

thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

-----Original Message-----
From: Rachelle [SMTP:Rachelle@ATLGlobal.com]
Sent: Wednesday, August 07, 2002 9:49 AM
To: 'Ruth Cheung'
Subject: RE: Title 22 Metals

Hi Ruth,
Please check if the following samples exist, I don't see it on our database:
569-602-1.5
569-803-0.9
571-217-1.5
571-320-0.6
571-421-1.5
571-503-0.9
571-510-1.5
571-520-1.5
571-703-1.5
571-804-0.9
571-827-1.5
571-837-0.6
570-119-0.9
570-208-1.5
570-621-1.5
570-703-0.9
If it does exist, can you let me know when it was collected so I can track
them.
Thanks,
Rachelle
-----Original Message-----
From: Ruth Cheung [mailto:rcheung@ninyoandmoore.com]

Sent: Tuesday, August 06, 2002 3:46 PM
To: 'Rachelle'; 'David Shaler (E-mail)'
Subject: Title 22 Metals

Rachelle,
Please run the following samples for Title 22 Metals. Please do not list
Pb in your emailed results. There should be a total of 120 samples to be
run.
Thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Thursday, August 08, 2002 9:14 AM
To: 'Rachelle'
Subject: TCLP Analysis

TCLP-3.xls

In addition to the 90 TCLP already run please run the following samples for
TCLP. There should be a list of 350 samples.
Thanks for a the hard work and timely results.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

-----Original Message-----
From: Rachelle [SMTP:Rachelle@ATLGlobal.com]
Sent: Wednesday, August 07, 2002 5:02 PM
To: 'David Shaler (E-mail)'
Cc: 'Ruth Cheung (E-mail)'
Subject: TCLP Results

<<57931TCLP.xls>> <<58001TCLP.xls>> <<58021TCLP.xls>>
<<58022TCLP.xls>>
<<58023TCLP.xls>> <<58024TCLP.xls>> <<58049TCLP.xls>>
<<58050TCLP.xls>>
<<58052TCLP.xls>> <<58053TCLP.xls>> <<58065TCLP.xls>>
<<58066TCLP.xls>>
<<58067TCLP.xls>> <<58068TCLP.xls>> <<58069TCLP.xls>>

Rachelle Arada
Project Coordinator
www.atlglobal.com
voice: 562.989.4045 ext 237
fax : 562.989.4040

<< File: 57931TCLP.xls >> << File: 58001TCLP.xls >> << File:
58021TCLP.xls >> << File: 58022TCLP.xls >> << File: 58023TCLP.xls >>
<<
File: 58024TCLP.xls >> << File: 58049TCLP.xls >> << File:
58050TCLP.xls
>> << File: 58052TCLP.xls >> << File: 58053TCLP.xls >> << File:
58065TCLP.xls >> << File: 58066TCLP.xls >> << File: 58067TCLP.xls >>
<<
File: 58068TCLP.xls >> << File: 58069TCLP.xls >>

569-404-0	2. STLC	170	570-515-0.3	2. STLC	120	571-521-0	2. STLC	230
569-402-0	2. STLC	130	570-811-0	2. STLC	110	571-324-0.9	2. STLC	110
569-406-0	2. STLC	120	570-114-0.0	2. STLC	110	571-818-0	2. STLC	110
569-515-0	2. STLC	110	570-504-0.6	2. STLC	100	571-819-0.6	2. STLC	110
569-611-0	2. STLC	100	570-811-1.5	2. STLC	90	571-708-0	2. STLC	110
569-409-0	2. STLC	94	570-615-0.6	2. STLC	84	571-103-0.6	2. STLC	110
569-603-0	2. STLC	93	570-305-0	2. STLC	79	571-617-0.3	2. STLC	100
569-104-0.6	2. STLC	91	570-314-0.6	2. STLC	76	571-611-0.6	2. STLC	92
569-807-0	2. STLC	86	570-505-0.6	2. STLC	75	571-712-0.9	2. STLC	91
569-608-0	2. STLC	86	570-208-0.6	2. STLC	74	571-105-0.6	2. STLC	81
569-501-0	2. STLC	84	570-116-0.0	2. STLC	73	571-313-0	2. STLC	79
569-710-0.3	2. STLC	83	570-102-0	2. STLC	65	571-508-0	2. STLC	73
569-808-0	2. STLC	83	570-804-0.6	2. STLC	64	571-518-0.3	2. STLC	73
569-609-0.6	2. STLC	80	570-704-0	2. STLC	63	571-217-0	2. STLC	68
569-803-0	2. STLC	79	570-508-0.6	2. STLC	60	571-516-0	2. STLC	66
569-105-0	2. STLC	78	570-706-0.3	2. STLC	60	571-701-0.3	2. STLC	66
569-512-0	2. STLC	77	570-303-0	2. STLC	58	571-710-0.6	2. STLC	65
569-513-0	2. STLC	77	570-311-1.5	2. STLC	58	571-512-0	2. STLC	64
569-302-0	2. STLC	74	570-117-0.0	2. STLC	58	571-308-0.9	2. STLC	61
569-805-0	2. STLC	73	570-208-0.3	2. STLC	58	571-701-0	2. STLC	61
569-517-0	2. STLC	71	570-709-0.6	2. STLC	57	571-514-0.3	2. STLC	59
569-704-0.3	2. STLC	71	570-703-0	2. STLC	55	571-415-0	2. STLC	58
569-703-0.6	2. STLC	70	570-206-0	2. STLC	54	571-616-0.6	2. STLC	57
569-514-0.3	2. STLC	70	570-301-0	2. STLC	53	571-517-0	2. STLC	56
569-803-0.3	2. STLC	69	570-603-0.3	2. STLC	46	571-112-0.9	2. STLC	56
569-409-0.6	2. STLC	69	570-711-0.6	2. STLC	46	571-214-0	2. STLC	55
569-411-0	2. STLC	68	570-206-0.3	2. STLC	45	571-415-0.3	2. STLC	55
569-102-0.6	2. STLC	68	570-103-0	2. STLC	44	571-405-0.6	2. STLC	55
569-809-0	2. STLC	65	570-602-0	2. STLC	41	571-530-0	2. STLC	55
569-605-0	2. STLC	65	570-209-0	2. STLC	40	571-831-0	2. STLC	53
569-711-0.6	2. STLC	62	570-210-0	2. STLC	40	571-709-0	2. STLC	53
569-806-0	2. STLC	60	570-117-0.3	2. STLC	39	571-103-0.0	2. STLC	52
569-802-0.3	2. STLC	60	570-103-0.6	2. STLC	37	571-312-0	2. STLC	51
569-410-0	2. STLC	59	570-110-0.6	2. STLC	37	571-526-0	2. STLC	51
569-501-0.6	2. STLC	59	570-805-0.9	2. STLC	36	571-819-1.5	2. STLC	51
569-808-0.3	2. STLC	58	570-112-1.5	2. STLC	35	571-515-0	2. STLC	50
569-104-0	2. STLC	56	570-614-0	2. STLC	34	571-833-0	2. STLC	49
569-804-0	2. STLC	54	570-713-0.3	2. STLC	33	571-815-0.6	2. STLC	47
569-610-0	2. STLC	54	570-513-0	2. STLC	32	571-517-0.3	2. STLC	46
569-608-0.3	2. STLC	53	570-312-0.3	2. STLC	31	571-610-0	2. STLC	46
569-213-0	2. STLC	49	570-503-0.6	2. STLC	31	571-413-0	2. STLC	46
569-701-0	2. STLC	47	570-510-0.6	2. STLC	31	571-815-0	2. STLC	45
569-311-0	2. STLC	47	570-202-0	2. STLC	31	571-514-0.9	2. STLC	44
569-609-0.9	2. STLC	46	570-207-0	2. STLC	31	571-505-1.5	2. STLC	44
569-513-0.3	2. STLC	45	570-209-0.3	2. STLC	31	571-528-0	2. STLC	44
569-801-0.6	2. STLC	44	570-703-0.3	2. STLC	30	571-610-0.6	2. STLC	43
569-514-0	2. STLC	42	570-401-0	2. STLC	30	571-629-0	2. STLC	43
569-805-0.6	2. STLC	42	570-610-0.9	2. STLC	29	571-604-0	2. STLC	42
569-408-1.5	2. STLC	42	570-809-0.6	2. STLC	29	571-213-0	2. STLC	41
569-807-0.3	2. STLC	40	570-509-0.9	2. STLC	29	571-812-0	2. STLC	41
569-204-0	2. STLC	40	570-210-0.6	2. STLC	29	571-706-0	2. STLC	41
569-517-0.3	2. STLC	36	570-211-0	2. STLC	29	571-530-0.6	2. STLC	41
569-518-0	2. STLC	36	570-603-0	2. STLC	28	571-305-0	2. STLC	40
569-806-0.3	2. STLC	36	570-119-0	2. STLC	28	571-523-0.3	2. STLC	39
569-705-1.5	2. STLC	35	570-713-0.6	2. STLC	28	571-510-0	2. STLC	39
569-303-0.6	2. STLC	34	570-108-0	2. STLC	27	571-305-0.9	2. STLC	39
569-516-0.3	2. STLC	33	570-708-0.6	2. STLC	27	571-818-1.5	2. STLC	39
569-705-0.6	2. STLC	33	570-224-0	2. STLC	26	571-703-0	2. STLC	38
569-802-0	2. STLC	33	570-601-0	2. STLC	26	571-520-0.3	2. STLC	36
569-515-0.6	2. STLC	32	570-710-0.6	2. STLC	26	571-216-0	2. STLC	34
569-704-0	2. STLC	32	570-614-0.6	2. STLC	26	571-827-0	2. STLC	34
569-401-0.3	2. STLC	32	570-118-0.3	2. STLC	26	571-708-0.3	2. STLC	34
569-207-0	2. STLC	32	570-304-0	2. STLC	25	571-514-0.6	2. STLC	33
569-608-0.6	2. STLC	31	570-707-0.6	2. STLC	25	571-528-1.5	2. STLC	33
569-104-0.3	2. STLC	31	570-510-0	2. STLC	25	571-803-0	2. STLC	33
569-201-0.6	2. STLC	30	570-110-0	2. STLC	24	571-414-0.3	2. STLC	33
569-515-0.3	2. STLC	28	570-223-0	2. STLC	24	571-813-0.3	2. STLC	32
569-212-0.6	2. STLC	28	570-117-0.6	2. STLC	24	571-523-0	2. STLC	31
569-103-0	2. STLC	28	570-616-0	2. STLC	23	571-326-0	2. STLC	31
569-313-0	2. STLC	27	570-704-0.3	2. STLC	22	571-502-0.6	2. STLC	31
569-103-0.3	2. STLC	26	570-513-0.6	2. STLC	22	571-624-1.5	2. STLC	31
569-705-0.9	2. STLC	25	570-221-0.0	2. STLC	22	571-330-0	2. STLC	31
569-707-0.3	2. STLC	25	570-617-0	2. STLC	21	571-512-0.3	2. STLC	30
569-515-1.5	2. STLC	24	570-214-0.3	2. STLC	21	571-521-0.6	2. STLC	29
569-508-0	2. STLC	24	570-122-0.9	2. STLC	20	571-706-0.3	2. STLC	29
569-801-0	2. STLC	24	570-313-0.6	2. STLC	19	571-814-0.6	2. STLC	28
569-402-0.6	2. STLC	24	570-207-0.6	2. STLC	19	571-616-1.5	2. STLC	28
569-516-0.6	2. STLC	22	570-120-0.9	2. STLC	18	571-835-0	2. STLC	28
569-509-0.3	2. STLC	22	570-506-0	2. STLC	18	571-811-0.3	2. STLC	28
569-106-0	2. STLC	22	570-102-0.9	2. STLC	17	571-101-0.6	2. STLC	28
569-106-0.3	2. STLC	22	570-216-0	2. STLC	17	571-112-0	2. STLC	28
569-202-0	2. STLC	21	570-225-0	2. STLC	17	571-315-0	2. STLC	27
569-805-1.5	2. STLC	21	570-304-0.3	2. STLC	17	571-622-0	2. STLC	27
569-205-0	2. STLC	20	570-409-0	2. STLC	17	571-607-0.6	2. STLC	27
569-707-0	2. STLC	19	570-713-0	2. STLC	17	571-609-0.6	2. STLC	27

569-709-0	2. STLC	19
569-202-0.3	2. STLC	19
569-602-0	2. STLC	19
569-207-0.3	2. STLC	19
569-706-0.3	2. STLC	17
569-807-0.9	2. STLC	17
569-104-0.9	2. STLC	17
569-505-0.6	2. STLC	17
569-704-0.6	2. STLC	16
569-808-0.6	2. STLC	16
569-212-0.3	2. STLC	16
569-612-0	2. STLC	16
569-704-1.5	2. STLC	15
569-411-0.3	2. STLC	15
569-113-0	2. STLC	15
569-807-0.6	2. STLC	14
569-311-0.3	2. STLC	12
569-312-0	2. STLC	10
569-311-0.9	2. STLC	8.3

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570-401-0.3	2. STLC	17
570-616-0.6	2. STLC	17
570-308-0	2. STLC	16
570-807-0.9	2. STLC	16
570-701-0.6	2. STLC	16
570-617-0.3	2. STLC	16
570-107-0.6	2. STLC	15
570-811-0.6	2. STLC	15
570-707-0	2. STLC	15
570-518-0	2. STLC	15
570-111-0.0	2. STLC	15
570-109-0.6	2. STLC	14
570-401-0.9	2. STLC	4.1
570-408-0	2. STLC	4
570-409-0.3	2. STLC	3
570-401-0.6		0
570-401-1.5		0
570-408-0.6		0
570-408-1.5		0

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571-837-0.3	2. STLC	27
571-520-0	2. STLC	26
571-516-0.3	2. STLC	26
571-420-0	2. STLC	26
571-102-0.6	2. STLC	26
571-517-1.5	2. STLC	25
571-513-0.6	2. STLC	25
571-623-0.6	2. STLC	25
571-112-0.3	2. STLC	25
571-326-0.6	2. STLC	24
571-619-0.3	2. STLC	24
571-619-0.9	2. STLC	24
571-528-0.3	2. STLC	24
571-706-0.6	2. STLC	24
571-112-0.6	2. STLC	24
571-327-0.6	2. STLC	23
571-817-0	2. STLC	23
571-425-0.6	2. STLC	22
571-118-0	2. STLC	22
571-829-0	2. STLC	22
571-828-0	2. STLC	22
571-122-0	2. STLC	21
571-101-1.5	2. STLC	21
571-530-0.3	2. STLC	21
571-406-0.6	2. STLC	20
571-517-0.6	2. STLC	20
571-835-0.3	2. STLC	20
571-501-0	2. STLC	20
571-518-0.9	2. STLC	19
571-510-0.3	2. STLC	19
571-814-0.9	2. STLC	19
571-522-0.6	2. STLC	19
571-622-1.5	2. STLC	19
571-812-0.6	2. STLC	19
571-701-0.6	2. STLC	19
571-704-0	2. STLC	19
571-711-0.6	2. STLC	19
571-212-0	2. STLC	18
571-839-0.6	2. STLC	18
571-610-1.5	2. STLC	18
571-709-0.3	2. STLC	18
571-311-0.6	2. STLC	17
571-620-0	2. STLC	17
571-109-0	2. STLC	17
571-704-0.3	2. STLC	17
571-207-1.5	2. STLC	16
571-203-0	2. STLC	16
571-616-0.3	2. STLC	16
571-317-0.3	2. STLC	16
571-629-0.3	2. STLC	16
571-416-0	2. STLC	15
571-419-0	2. STLC	15
571-526-0.3	2. STLC	15
571-619-0	2. STLC	15
571-606-0	2. STLC	15
571-115-0.6	2. STLC	14
571-202-0.9	2. STLC	11

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tblTEMP

WorkOrder	ClientSampID	TestNo	Analyte	PQL	DF	CollectionDate	AnalDate	PrepDate
058000	571-122-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/14/2002	8/13/2002
058000	571-122-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-122-0	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058000	571-122-0	WET/ EPA 7420	Lead	0.8	4	7/18/2002	8/1/2002	7/29/2002
058000	571-122-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-122-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-122-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-122-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-123-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-123-0	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058000	571-123-0	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058000	571-123-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-203-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/14/2002	8/13/2002
058000	571-203-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-203-0	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058000	571-203-0	WET/ EPA 7420	Lead	0.4	2	7/18/2002	8/1/2002	7/29/2002
058000	571-203-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-203-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058000	571-203-0.3	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058000	571-203-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-203-0.6	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058000	571-204-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-204-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-205-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-205-0	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058000	571-205-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-205-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-205-0.6	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
058000	571-205-0.6	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058000	571-509-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-509-0	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058000	571-509-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-509-0.3	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
058000	571-509-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-509-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002

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058000	571-510-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/14/2002	8/13/2002
058000	571-510-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-510-0	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058000	571-510-0	WET/ EPA 7420	Lead	2	10	7/18/2002	8/1/2002	7/29/2002
058000	571-510-0.3	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/14/2002	8/13/2002
058000	571-510-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-510-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058000	571-510-0.3	WET/ EPA 7420	Lead	0.4	2	7/18/2002	8/1/2002	7/29/2002
058000	571-510-0.6	EPA 6010B	Antimony	2.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-510-0.6	EPA 6010B	Arsenic	2.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-510-0.6	EPA 6010B	Barium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-510-0.6	EPA 6010B	Beryllium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-510-0.6	EPA 6010B	Cadmium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-510-0.6	EPA 6010B	Chromium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-510-0.6	EPA 6010B	Cobalt	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-510-0.6	EPA 6010B	Copper	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-510-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-510-0.6	EPA 6010B	Molybdenum	2.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-510-0.6	EPA 6010B	Nickel	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-510-0.6	EPA 6010B	Selenium	2.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-510-0.6	EPA 6010B	Silver	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-510-0.6	EPA 6010B	Thallium	2.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-510-0.6	EPA 6010B	Vanadium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-510-0.6	EPA 6010B	Zinc	5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-510-0.6	EPA 7471A	Mercury	0.1	1	7/18/2002	8/13/2002	8/7/2002
058000	571-510-0.6	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058000	571-513-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-513-0	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
058000	571-513-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-513-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058000	571-513-0.3	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058000	571-513-0.6	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/14/2002	8/13/2002
058000	571-513-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-513-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058000	571-513-0.6	WET/ EPA 7420	Lead	0.8	4	7/18/2002	8/1/2002	7/29/2002
058000	571-513-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002

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058000	571-513-0.9	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058000	571-513-0.9	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058000	571-513-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-514-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/5/2002
058000	571-514-0	EPA 6010B	Antimony	2.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-514-0	EPA 6010B	Arsenic	2.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-514-0	EPA 6010B	Barium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-514-0	EPA 6010B	Beryllium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-514-0	EPA 6010B	Cadmium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-514-0	EPA 6010B	Chromium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-514-0	EPA 6010B	Cobalt	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-514-0	EPA 6010B	Copper	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-514-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-514-0	EPA 6010B	Molybdenum	2.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-514-0	EPA 6010B	Nickel	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-514-0	EPA 6010B	Selenium	2.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-514-0	EPA 6010B	Silver	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-514-0	EPA 6010B	Thallium	2.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-514-0	EPA 6010B	Vanadium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-514-0	EPA 6010B	Zinc	5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-514-0	EPA 7471A	Mercury	0.1	1	7/18/2002	8/12/2002	8/7/2002
058000	571-514-0.3	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/14/2002	8/13/2002
058000	571-514-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-514-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058000	571-514-0.3	WET/ EPA 7420	Lead	2	10	7/18/2002	8/1/2002	7/29/2002
058000	571-514-0.6	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/14/2002	8/13/2002
058000	571-514-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-514-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058000	571-514-0.6	WET/ EPA 7420	Lead	0.8	4	7/18/2002	8/1/2002	7/29/2002
058000	571-514-0.9	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/14/2002	8/13/2002
058000	571-514-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-514-0.9	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058000	571-514-0.9	WET/ EPA 7420	Lead	2	10	7/18/2002	8/1/2002	7/29/2002
058000	571-517-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/14/2002	8/13/2002
058000	571-517-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-517-0	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002

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058000	571-517-0	WET/ EPA 7420	Lead	2	10	7/18/2002	8/1/2002	7/29/2002
058000	571-517-0.3	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/14/2002	8/13/2002
058000	571-517-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-517-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058000	571-517-0.3	WET/ EPA 7420	Lead	2	10	7/18/2002	8/1/2002	7/29/2002
058000	571-517-0.6	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/14/2002	8/13/2002
058000	571-517-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-517-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058000	571-517-0.6	WET/ EPA 7420	Lead	0.4	2	7/18/2002	8/1/2002	7/29/2002
058000	571-517-0.9	EPA 6010B	Antimony	2.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-517-0.9	EPA 6010B	Arsenic	2.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-517-0.9	EPA 6010B	Barium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-517-0.9	EPA 6010B	Beryllium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-517-0.9	EPA 6010B	Cadmium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-517-0.9	EPA 6010B	Chromium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-517-0.9	EPA 6010B	Cobalt	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-517-0.9	EPA 6010B	Copper	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-517-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-517-0.9	EPA 6010B	Molybdenum	2.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-517-0.9	EPA 6010B	Nickel	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-517-0.9	EPA 6010B	Selenium	2.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-517-0.9	EPA 6010B	Silver	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-517-0.9	EPA 6010B	Thallium	2.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-517-0.9	EPA 6010B	Vanadium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-517-0.9	EPA 6010B	Zinc	5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-517-0.9	EPA 7471A	Mercury	0.1	1	7/18/2002	8/12/2002	8/7/2002
058000	571-517-0.9	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058000	571-517-0.9	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058000	571-517-1.5	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/14/2002	8/13/2002
058000	571-517-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-517-1.5	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058000	571-517-1.5	WET/ EPA 7420	Lead	0.8	4	7/18/2002	8/1/2002	7/29/2002
058000	571-518-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-518-0.3	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/14/2002	8/13/2002
058000	571-518-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-518-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002

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058000	571-518-0.3	WET/ EPA 7420	Lead	2	10	7/18/2002	8/1/2002	7/29/2002
058000	571-518-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-518-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058000	571-518-0.6	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058000	571-518-0.9	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/14/2002	8/13/2002
058000	571-518-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-518-0.9	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
058000	571-518-0.9	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058000	571-518-0.9	WET/ EPA 7420	Lead	0.4	2	7/18/2002	8/1/2002	7/29/2002
058000	571-525-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-525-0	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058000	571-525-0	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058000	571-525-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-525-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058000	571-525-0.3	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058000	571-525-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-525-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-525-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-525-1.5	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058000	571-526-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/14/2002	8/13/2002
058000	571-526-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-526-0	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058000	571-526-0	WET/ EPA 7420	Lead	2	10	7/18/2002	8/1/2002	7/29/2002
058000	571-526-0.3	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/14/2002	8/13/2002
058000	571-526-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-526-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
058000	571-526-0.3	WET/ EPA 7420	Lead	0.4	2	7/18/2002	8/1/2002	7/29/2002
058000	571-526-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-526-0.6	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
058000	571-526-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-526-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-527-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-527-0	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/31/2002	7/28/2002
058000	571-527-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-527-0.3	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/31/2002	7/28/2002
058000	571-527-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002

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058000	571-527-0.6	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058000	571-527-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-527-0.9	WET/ EPA 7420	Lead	0.2	1	7/18/2002	8/1/2002	7/29/2002
058000	571-529-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-529-0	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
058000	571-529-0.3	EPA 6010B	Antimony	2.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-529-0.3	EPA 6010B	Arsenic	2.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-529-0.3	EPA 6010B	Barium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-529-0.3	EPA 6010B	Beryllium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-529-0.3	EPA 6010B	Cadmium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-529-0.3	EPA 6010B	Chromium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-529-0.3	EPA 6010B	Cobalt	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-529-0.3	EPA 6010B	Copper	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-529-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-529-0.3	EPA 6010B	Molybdenum	2.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-529-0.3	EPA 6010B	Nickel	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-529-0.3	EPA 6010B	Selenium	2.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-529-0.3	EPA 6010B	Silver	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-529-0.3	EPA 6010B	Thallium	2.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-529-0.3	EPA 6010B	Vanadium	1.5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-529-0.3	EPA 6010B	Zinc	5	10	7/18/2002	8/10/2002	8/9/2002
058000	571-529-0.3	EPA 7471A	Mercury	0.1	1	7/18/2002	8/12/2002	8/7/2002
058000	571-529-0.3	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/31/2002	7/28/2002
058000	571-529-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-529-0.6	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/31/2002	7/28/2002
058000	571-529-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	571-529-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/23/2002
058000	EB-20	EPA 6010B	Lead	0.005	1	7/18/2002	7/22/2002	7/22/2002

August 19, 2002

David Shaler
Ninyo & Moore
475 Goddard Suite 200
Irvine, CA 92618
TEL: (949) 753-7070
FAX: (949) 753-7071

ELAP No.: 1838
NELAP No.: 02107CA
Workorder No.: 057974

RE: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

Attention: David Shaler

Enclosed are the results for sample(s) received on July 17, 2002 by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

RECEIVED
AUG 2 6 2002
NINYO & MOORE
ORANGE COUNTY OFFICE

This cover letter is an integral part of this analytical report.

Laboratory	Site	Consultant
Advanced Technology Laboratories 3275 Walnut Avenue, Signal Hill, CA 90807 Tel. (562) 989-4045 Fax (562) 989-6348	Caltrans/I-10 (605-57)/Lead Survey TO 07-117070-PX Project # 203939001	Ninyo & Moore - David Shaler/Steve Reese 475 Goddard, Suite 200, Irvine, CA 92618 Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) [signature] 7-17-02	Received by: (name/date/time) [signature] 7/17/02
Relinquished by: (name/date/time) [signature] 7/17/02 1725	Received by: (name/date/time) [signature] 7/17/02 17:25

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB-13	7/17/02	15:45	B	X	
	570-201-0.0		13:05	P	X	X
	570-201-0.3		13:10		X	
	570-201-0.6		13:14		X	
	570-201-0.9		13:17		X	
	570-202-0.0		13:25		X	
	570-202-0.3		13:29		X	
	570-202-0.6		13:35		X	
	570-202-0.9		13:40		X	
	570-202-1.5		13:45		X	
	570-209-0.0		14:00		X	
	570-209-0.3		14:03		X	X
	570-209-0.6		14:08		X	
	570-104-0.0		14:35		X	
	570-104-0.3		14:40		X	
	570-104-0.6		14:46		X	
	570-104-0.9		14:48		X	
	570-104-1.5		14:52		X	
	570-105-0.0		15:00		X	
	570-105-0.3		15:03		X	
	570-106-0.6		15:05		X	
	570-105-0.9		16:08		X	X
	570-105-1.5		15:12		X	
	570-103-0		14:55		X	
	570-103-0.3		14:56		X	
	570-103-0.6		14:57		X	
	570-103-0.9		14:58		X	
	570-103-1.5		15:00		X	
	570-102-0		15:07		X	
	570-102-0.3		15:09		X	
	570-102-0.6		15:10		X	X
	570-102-0.9		15:11		X	
	570-102-1.5		15:13		X	
	570-101-0		15:25		X	
	570-101-0.3		15:27		X	
	570-101-0.6		15:28		X	
	570-101-0.9		15:30		X	
	570-101-1.5		15:35		X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
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	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	
	570-				X	

Total # of samples: 38

Advanced Technology Laboratories

Date: *24-Jul-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	EB-13
Lab Order:	057974		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/17/2002 3:45:00 PM
Lab ID:	057974-001A	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	(EPA 3010A)			**EPA 6010B**		
RunID: ICP2_020723B	QC Batch: 9745					Analyst: **RQ**
Lead	ND	0.0050		mg/L	1	7/23/2002

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

Advanced Technology Laboratories

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Advanced Technology Laboratories

Date: 7/24/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057974
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057974-002A	571-201-0.0	15	mg/Kg	9639	5	1	7/17/2002	7/22/2002
057974-003A	571-201-0.3	76	mg/Kg	9639	5	1	7/17/2002	7/22/2002
057974-004A	571-201-0.6	1100	mg/Kg	9639	5	1	7/17/2002	7/22/2002
057974-005A	571-201-0.9	22	mg/Kg	9639	5	1	7/17/2002	7/22/2002
057974-006A	571-202-0.0	13	mg/Kg	9639	5	1	7/17/2002	7/22/2002
057974-007A	571-202-0.3	13	mg/Kg	9639	5	1	7/17/2002	7/22/2002
057974-008A	571-202-0.6	22	mg/Kg	9639	5	1	7/17/2002	7/22/2002
057974-009A	571-202-0.9	270	mg/Kg	9640	5	1	7/17/2002	7/23/2002
057974-010A	571-202-1.5	8.2	mg/Kg	9640	5	1	7/17/2002	7/23/2002
057974-011A	571-209-0.0	49	mg/Kg	9640	5	1	7/17/2002	7/23/2002
057974-012A	571-209-0.3	ND	mg/Kg	9640	5	1	7/17/2002	7/23/2002

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interferen
H - Sample exceeded analytical holding time
E - Value above quantitation range
Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/24/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057974
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057974-013A	571-209-0.6	10	mg/Kg	9640	5	1	7/17/2002	7/23/2002
057974-014A	571-104-0.0	1100	mg/Kg	9640	5	1	7/17/2002	7/23/2002
057974-015A	571-104-0.3	ND	mg/Kg	9640	5	1	7/17/2002	7/23/2002
057974-016A	571-104-0.6	ND	mg/Kg	9640	5	1	7/17/2002	7/23/2002
057974-017A	571-104-0.9	14	mg/Kg	9640	5	1	7/17/2002	7/23/2002
057974-018A	571-104-1.5	5.2	mg/Kg	9640	5	1	7/17/2002	7/23/2002
057974-019A	571-105-0.0	45	mg/Kg	9640	5	1	7/17/2002	7/23/2002
057974-020A	571-105-0.3	59	mg/Kg	9640	5	1	7/17/2002	7/23/2002
057974-021A	571-105-0.6	560	mg/Kg	9640	5	1	7/17/2002	7/23/2002
057974-022A	571-105-0.9	11	mg/Kg	9640	5	1	7/17/2002	7/23/2002
057974-023A	571-105-1.5	33	mg/Kg	9640	5	1	7/17/2002	7/23/2002

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interferen
H - Sample exceeded analytical holding time
E - Value above quantitation range
Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/24/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057974
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057974-024A	571-103-0.0	560	mg/Kg	9640	5	1	7/17/2002	7/23/2002
057974-025A	571-103-0.3	12	mg/Kg	9640	5	1	7/17/2002	7/23/2002
057974-026A	571-103-0.6	610	mg/Kg	9640	5	1	7/17/2002	7/23/2002
057974-027A	571-103-0.9	6.8	mg/Kg	9640	5	1	7/17/2002	7/23/2002
057974-028A	571-103-1.5	10	mg/Kg	9640	5	1	7/17/2002	7/23/2002
057974-029A	571-102-0.0	9.9	mg/Kg	9641	5	1	7/17/2002	7/23/2002
057974-030A	571-102-0.3	13	mg/Kg	9641	5	1	7/17/2002	7/23/2002
057974-031A	571-102-0.6	480	mg/Kg	9641	5	1	7/17/2002	7/23/2002
057974-032A	571-102-0.9	16	mg/Kg	9641	5	1	7/17/2002	7/23/2002
057974-033A	571-102-1.5	6.7	mg/Kg	9641	5	1	7/17/2002	7/23/2002
057974-034A	571-101-0.0	80	mg/Kg	9641	5	1	7/17/2002	7/23/2002

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- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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Date: 7/24/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057974
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057974-035A	571-101-0.3	330	mg/Kg	9641	5	1	7/17/2002	7/23/2002
057974-036A	571-101-0.6	360	mg/Kg	9641	5	1	7/17/2002	7/23/2002
057974-037A	571-101-0.9	13	mg/Kg	9641	5	1	7/17/2002	7/23/2002
057974-038A	571-101-1.5	190	mg/Kg	9641	5	1	7/17/2002	7/23/2002

Qualifiers:

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- H - Sample exceeded analytical holding time
- E - Value above quantitation range
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Advanced Technology Laboratories

Date: 7/24/2002

pH
EPA 9045C

CLIENT:	Ninyo & Moore	**Lab Order:**	057974
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057974-002A	571-201-0.0	7.99	pH Units	R19608	0.1	1	7/17/2002	7/21/2002
057974-012A	571-209-0.3	7.81	pH Units	R19608	0.1	1	7/17/2002	7/21/2002
057974-022A	571-105-0.9	7.91	pH Units	R19608	0.1	1	7/17/2002	7/21/2002
057974-031A	571-102-0.6	7.91	pH Units	R19608	0.1	1	7/17/2002	7/21/2002

Qualifiers:

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- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/30/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057974
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057974-003A	571-201-0.3	5.0	mg/L	9896	0.2	1	7/17/2002	7/29/2002
057974-009A	571-202-0.9	11	mg/L	9896	0.4	2	7/17/2002	7/29/2002
057974-020A	571-105-0.3	3.2	mg/L	9896	0.2	1	7/17/2002	7/29/2002
057974-021A	571-105-0.6	81	mg/L	9896	2	10	7/17/2002	7/29/2002
057974-024A	571-103-0.0	52	mg/L	9896	1.6	8	7/17/2002	7/29/2002
057974-026A	571-103-0.6	110	mg/L	9896	4	20	7/17/2002	7/29/2002
057974-031A	571-102-0.6	26	mg/L	9896	0.8	4	7/17/2002	7/29/2002
057974-034A	571-101-0.0	2.5	mg/L	9896	0.2	1	7/17/2002	7/29/2002
057974-035A	571-101-0.3	14	mg/L	9896	0.4	2	7/17/2002	7/29/2002
057974-036A	571-101-0.6	28	mg/L	9896	0.8	4	7/17/2002	7/29/2002
057974-038A	571-101-1.5	21	mg/L	9896	0.8	4	7/17/2002	7/29/2002

Qualifiers:

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- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 8/5/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057974
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057974-009A	571-202-0.9	ND	mg/L	9985	0.2	1	7/17/2002	8/2/2002
057974-021A	571-105-0.6	ND	mg/L	9986	0.2	1	7/17/2002	8/2/2002
057974-024A	571-103-0.0	ND	mg/L	9986	0.2	1	7/17/2002	8/2/2002
057974-026A	571-103-0.6	ND	mg/L	9986	0.2	1	7/17/2002	8/2/2002
057974-031A	571-102-0.6	ND	mg/L	9986	0.2	1	7/17/2002	8/2/2002
057974-035A	571-101-0.3	ND	mg/L	9986	0.2	1	7/17/2002	8/2/2002
057974-036A	571-101-0.6	ND	mg/L	9986	0.2	1	7/17/2002	8/2/2002
057974-038A	571-101-1.5	ND	mg/L	9986	0.2	1	7/17/2002	8/2/2002

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- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: *13-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-201-0.6
Lab Order:	057974		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/17/2002 1:14:00 PM
Lab ID:	057974-004A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP2_020810D	QC Batch: 10211					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	10	2.5		mg/Kg	10	8/10/2002
Barium	140	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	20	1.5		mg/Kg	10	8/10/2002
Cobalt	10	1.5		mg/Kg	10	8/10/2002
Copper	55	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	20	1.5		mg/Kg	10	8/10/2002
Selenium	ND	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	45	1.5		mg/Kg	10	8/10/2002
Zinc	360	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020809C	QC Batch: 10166					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/9/2002

Qualifiers:

ND - Not Detected at the Reporting Limit
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DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interferen
H - Sample exceeded analytical holding time
E - Value above quantitation range
Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: *13-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-104-0.0
Lab Order:	057974		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/17/2002 2:35:00 PM
Lab ID:	057974-014A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810A	QC Batch: 10212					Analyst: **RQ**
Antimony	4.9	2.5		mg/Kg	10	8/10/2002
Arsenic	7.2	2.5		mg/Kg	10	8/10/2002
Barium	110	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	22	1.5		mg/Kg	10	8/10/2002
Cobalt	12	1.5		mg/Kg	10	8/10/2002
Copper	27	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	19	1.5		mg/Kg	10	8/10/2002
Selenium	ND	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	50	1.5		mg/Kg	10	8/10/2002
Zinc	120	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020809C	QC Batch: 10166					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/9/2002

Qualifiers:

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Results are wet unless otherwise specified

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Date: *13-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-101-0.9
Lab Order:	057974		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/17/2002 3:30:00 PM
Lab ID:	057974-037A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810A	QC Batch: 10212					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	ND	2.5		mg/Kg	10	8/10/2002
Barium	130	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	20	1.5		mg/Kg	10	8/10/2002
Cobalt	13	1.5		mg/Kg	10	8/10/2002
Copper	20	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	16	1.5		mg/Kg	10	8/10/2002
Selenium	4.0	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	48	1.5		mg/Kg	10	8/10/2002
Zinc	82	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020809D	QC Batch: 10167					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/9/2002

Qualifiers:

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DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interferen
H - Sample exceeded analytical holding time
E - Value above quantitation range
Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 8/19/2002

LEAD BY ATOMIC ABSORPTION
EPA 1311/ 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057974
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057974-004A	571-201-0.6	0.41	mg/L	10087	0.2	1	7/17/2002	8/6/2002
057974-009A	571-202-0.9	0.35	mg/L	10354	0.2	1	7/17/2002	8/14/2002
057974-014A	571-104-0.0	0.81	mg/L	10087	0.2	1	7/17/2002	8/6/2002
057974-021A	571-105-0.6	2.2	mg/L	10354	0.2	1	7/17/2002	8/14/2002
057974-024A	571-103-0.0	1.0	mg/L	10354	0.2	1	7/17/2002	8/14/2002
057974-026A	571-103-0.6	0.39	mg/L	10354	0.2	1	7/17/2002	8/14/2002
057974-031A	571-102-0.6	2.0	mg/L	10354	0.2	1	7/17/2002	8/14/2002
057974-036A	571-101-0.6	0.31	mg/L	10399	0.2	1	7/17/2002	8/16/2002
057974-038A	571-101-1.5	1.7	mg/L	10399	0.2	1	7/17/2002	8/16/2002

Qualifiers:

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DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interferen
H - Sample exceeded analytical holding time
E - Value above quantitation range
Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: *19-Aug-02*

CLIENT: Ninyo & Moore
Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10087

Sample ID: **MB-10087**	SampType: **mblk**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/5/2002**	Run ID: **AA2_020806H**
Client ID: **ZZZZZ**	Batch ID: **10087**	TestNo: **EPA 1311/ 74 (EPA 3010A)**		Analysis Date: **8/6/2002**	SeqNo: **314602**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-10078-TCLP**	SampType: **mblk**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/5/2002**	Run ID: **AA2_020806H**
Client ID: **ZZZZZ**	Batch ID: **10087**	TestNo: **EPA 1311/ 74 (EPA 3010A)**		Analysis Date: **8/6/2002**	SeqNo: **314603**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **LCS-10087**	SampType: **lcs**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/5/2002**	Run ID: **AA2_020806H**
Client ID: **ZZZZZ**	Batch ID: **10087**	TestNo: **EPA 1311/ 74 (EPA 3010A)**		Analysis Date: **8/6/2002**	SeqNo: **314617**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.184	0.20	1	0	118	80	120	0	0		

Sample ID: **057978-007AMS**	SampType: **MS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/5/2002**	Run ID: **AA2_020806H**
Client ID: **ZZZZZ**	Batch ID: **10087**	TestNo: **EPA 1311/ 74 (EPA 3010A)**		Analysis Date: **8/6/2002**	SeqNo: **314615**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.241	0.20	2.717	0.09022	116	80	120	0	0		

Sample ID: **057978-007ADUP**	SampType: **DUP**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/5/2002**	Run ID: **AA2_020806H**
Client ID: **ZZZZZ**	Batch ID: **10087**	TestNo: **EPA 1311/ 74 (EPA 3010A)**		Analysis Date: **8/6/2002**	SeqNo: **314614**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0.09022	0	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10166

Sample ID: MB-10166	SampType: mblk	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020809C
Client ID: ZZZZZ	Batch ID: 10166	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/9/2002	SeqNo: 316736

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-10166	SampType: lcs	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020809C
Client ID: ZZZZZ	Batch ID: 10166	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/9/2002	SeqNo: 316735

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.239	0.10	2.08	0	108	80	120	0	0		

Sample ID: 057974-014AMS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020809C
Client ID: 571-104-0.0	Batch ID: 10166	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/9/2002	SeqNo: 316733

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9807	0.10	0.83	0.03978	113	62	146	0	0		

Sample ID: 057974-014AMSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020809C
Client ID: 571-104-0.0	Batch ID: 10166	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/9/2002	SeqNo: 316734

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.183	0.10	0.83	0.03978	138	62	146	0.9807	18.7	33	

Sample ID: 057974-014ADUP	SampType: DUP	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020809C
Client ID: 571-104-0.0	Batch ID: 10166	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/9/2002	SeqNo: 316732

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.03631	0.10	0	0	0	0	0	0.03978	0	30	J

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; S - Spike/Surrogate outside limits due to matrix interference; B - Analyte detected in the associated Method Blank; **Calculations are based on raw values**; DO - Surrogate diluted out; H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10167

Sample ID: MB-10167	SampType: mblk	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020809D
Client ID: ZZZZZ	Batch ID: 10167	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/9/2002	SeqNo: 316751

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-10167	SampType: lcs	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020809D
Client ID: ZZZZZ	Batch ID: 10167	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/9/2002	SeqNo: 316750

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.232	0.10	2.08	0	107	80	120	0	0		

Sample ID: 057978-007AMS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020809D
Client ID: ZZZZZ	Batch ID: 10167	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/9/2002	SeqNo: 316748

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9805	0.10	0.83	0.03622	114	62	146	0	0		

Sample ID: 057978-007AMSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020809D
Client ID: ZZZZZ	Batch ID: 10167	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/9/2002	SeqNo: 316749

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9802	0.10	0.83	0.03622	114	62	146	0.9805	0.0281	33	

Sample ID: 057978-007ADUP	SampType: DUP	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020809D
Client ID: ZZZZZ	Batch ID: 10167	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/9/2002	SeqNo: 316747

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.03011	0.10	0	0	0	0	0	0.03622	0	30	J

Qualifiers:
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
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CLIENT: Ninyo & Moore
Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10211

Sample ID: MB-10211	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810D
Client ID: ZZZZZ	Batch ID: 10211	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316604

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.011	0.25									J
Arsenic	ND	0.25									
Barium	0.002	0.15									J
Beryllium	0.011	0.15									J
Cadmium	0.0245	0.15									J
Chromium	ND	0.15									
Cobalt	0.02	0.15									J
Copper	ND	0.15									
Molybdenum	ND	0.25									
Nickel	ND	0.15									
Selenium	ND	0.25									
Silver	0.036	0.15									J
Thallium	0.1145	0.25									J
Vanadium	ND	0.15									
Zinc	0.2355	0.50									J

Sample ID: LCS-10211	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810D
Client ID: ZZZZZ	Batch ID: 10211	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316590

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	47	0.25	50	0	94	80	120	0	0		
Arsenic	47.5	0.25	50	0	95	80	120	0	0		
Barium	52	0.15	50	0	104	80	120	0	0		
Beryllium	47	0.15	50	0	94	80	120	0	0		
Cadmium	46.5	0.15	50	0	93	80	120	0	0		
Chromium	49.5	0.15	50	0	99	80	120	0	0		
Cobalt	48	0.15	50	0	96	80	120	0	0		
Copper	49.5	0.15	50	0	99	80	120	0	0		
Molybdenum	48.5	0.25	50	0	97	80	120	0	0		
Nickel	46.5	0.15	50	0	93	80	120	0	0		

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CLIENT: Ninyo & Moore
Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10211

Sample ID: LCS-10211	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810D
Client ID: ZZZZZ	Batch ID: 10211	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316590

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	43.5	0.25	50	0	87	80	120	0	0		
Silver	49	0.15	50	0	98	80	120	0	0		
Thallium	49.5	0.25	50	0	99	80	120	0	0		
Vanadium	48	0.15	50	0	96	80	120	0	0		
Zinc	48.5	0.50	50	0	97	80	120	0	0		

Sample ID: 057974-004AMS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810D
Client ID: 571-201-0.6	Batch ID: 10211	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316602

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	65	2.5	125	1.445	50.8	32	115	0	0		
Arsenic	130	2.5	125	10	96	59	111	0	0		
Barium	255	1.5	125	145	88	34	151	0	0		
Beryllium	120	1.5	125	0	96	56	112	0	0		
Cadmium	115	1.5	125	0	92	52	120	0	0		
Chromium	145	1.5	125	20	100	56	118	0	0		
Cobalt	130	1.5	125	10	96	58	117	0	0		
Copper	190	1.5	125	55	108	58	134	0	0		
Molybdenum	120	2.5	125	2.09	94.3	56	115	0	0		
Nickel	135	1.5	125	20	92	52	120	0	0		
Selenium	120	2.5	125	0	96	46	108	0	0		
Silver	120	1.5	125	0.105	95.9	74	117	0	0		
Thallium	125	2.5	125	1.965	98.4	62	117	0	0		
Vanadium	160	1.5	125	45	92	55	122	0	0		
Zinc	405	5.0	125	365	32	43	134	0	0		S

Sample ID: 057974-004AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810D
Client ID: 571-201-0.6	Batch ID: 10211	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316603

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; S - Spike/Surrogate outside limits due to matrix interference; B - Analyte detected in the associated Method Blank; DO - Surrogate diluted out; H - Sample exceeded holding time

Calculations are based on raw values

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Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10211

Sample ID: 057974-004AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810D
Client ID: 571-201-0.6	Batch ID: 10211	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316603

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	70	2.5	125	1.445	54.8	32	115	65	7.41	20	
Arsenic	125	2.5	125	10	92	59	111	130	3.92	20	
Barium	245	1.5	125	145	80	34	151	255	4.00	20	
Beryllium	115	1.5	125	0	92	56	112	120	4.26	20	
Cadmium	110	1.5	125	0	88	52	120	115	4.44	20	
Chromium	135	1.5	125	20	92	56	118	145	7.14	20	
Cobalt	125	1.5	125	10	92	58	117	130	3.92	20	
Copper	170	1.5	125	55	92	58	134	190	11.1	20	
Molybdenum	115	2.5	125	2.09	90.3	56	115	120	4.26	20	
Nickel	135	1.5	125	20	92	52	120	135	0	20	
Selenium	115	2.5	125	0	92	46	108	120	4.26	20	
Silver	115	1.5	125	0.105	91.9	74	117	120	4.26	20	
Thallium	125	2.5	125	1.965	98.4	62	117	125	0	20	
Vanadium	155	1.5	125	45	88	55	122	160	3.17	20	
Zinc	380	5.0	125	365	12	43	134	405	6.37	20	S

Sample ID: 057974-004ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810D
Client ID: 571-201-0.6	Batch ID: 10211	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316601

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.765	2.5	0	0	0	0	0	1.445	0	30	J
Arsenic	10	2.5	0	0	0	0	0	10	0	30	
Barium	140	1.5	0	0	0	0	0	145	3.51	30	
Beryllium	ND	1.5	0	0	0	0	0	0	0	30	
Cadmium	ND	1.5	0	0	0	0	0	0	0	30	
Chromium	20	1.5	0	0	0	0	0	20	0	30	
Cobalt	10	1.5	0	0	0	0	0	10	0	30	
Copper	55	1.5	0	0	0	0	0	55	0	30	
Molybdenum	2.46	2.5	0	0	0	0	0	2.09	0	30	J
Nickel	20	1.5	0	0	0	0	0	20	0	30	

Qualifiers:
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10211

Sample ID: 057974-004ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810D
Client ID: 571-201-0.6	Batch ID: 10211	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316601

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	ND	2.5	0	0	0	0	0	0	0	30	
Silver	0.24	1.5	0	0	0	0	0	0.105	0	30	J
Thallium	2.23	2.5	0	0	0	0	0	1.965	0	30	J
Vanadium	45	1.5	0	0	0	0	0	45	0	30	
Zinc	295	5.0	0	0	0	0	0	365	21.2	30	

Qualifiers: ND - Not Detected at the Reporting Limit
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Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10212

Sample ID: MB-10212	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810A
Client ID: ZZZZZ	Batch ID: 10212	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316619

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.25									
Arsenic	0.1147	0.25									
Barium	0.003603	0.15									
Beryllium	0.002941	0.15									
Cadmium	0.004818	0.15									
Chromium	ND	0.15									
Cobalt	0.01964	0.15									
Copper	0.008961	0.15									
Molybdenum	0.04121	0.25									
Nickel	0.0113	0.15									
Selenium	ND	0.25									
Silver	ND	0.15									
Thallium	0.1531	0.25									
Vanadium	ND	0.15									
Zinc	0.08338	0.50									

Sample ID: LCS-10212	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810A
Client ID: ZZZZZ	Batch ID: 10212	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316618

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	48.68	0.25	50	0	97.4	80	120	0	0		
Arsenic	51.35	0.25	50	0	103	80	120	0	0		
Barium	48.71	0.15	50	0	97.4	80	120	0	0		
Beryllium	47.87	0.15	50	0	95.7	80	120	0	0		
Cadmium	48.67	0.15	50	0	97.3	80	120	0	0		
Chromium	48.68	0.15	50	0	97.4	80	120	0	0		
Cobalt	48.29	0.15	50	0	96.6	80	120	0	0		
Copper	47.01	0.15	50	0	94	80	120	0	0		
Molybdenum	49.69	0.25	50	0	99.4	80	120	0	0		
Nickel	46.93	0.15	50	0	93.9	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike/Surrogate outside limits due to matrix interference; DO - Surrogate diluted out
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R - RPD outside accepted recovery limits

Calculations are based on raw values

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10212

Sample ID: LCS-10212	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810A
Client ID: ZZZZZ	Batch ID: 10212	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316618

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	50.21	0.25	50	0	100	80	120	0	0		
Silver	47.28	0.15	50	0	94.6	80	120	0	0		
Thallium	48.85	0.25	50	0	97.7	80	120	0	0		
Vanadium	49.59	0.15	50	0	99.2	80	120	0	0		
Zinc	51.34	0.50	50	0	103	80	120	0	0		

Sample ID: 057976-039AMS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810A
Client ID: ZZZZZ	Batch ID: 10212	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316615

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	96.62	2.5	125	0.7801	76.7	32	115	0	0		
Arsenic	127.7	2.5	125	0.5443	102	59	111	0	0		
Barium	194	1.5	125	66.27	102	34	151	0	0		
Beryllium	123.9	1.5	125	0	99.1	56	112	0	0		
Cadmium	127.7	1.5	125	0.3148	102	52	120	0	0		
Chromium	145.5	1.5	125	16.31	103	56	118	0	0		
Cobalt	138.7	1.5	125	10.8	102	58	117	0	0		
Copper	141.6	1.5	125	13.91	102	58	134	0	0		
Molybdenum	123.8	2.5	125	0	99.1	56	115	0	0		
Nickel	135.3	1.5	125	10.63	99.8	52	120	0	0		
Selenium	136.5	2.5	125	4.448	106	46	108	0	0		
Silver	122.2	1.5	125	0	97.8	74	117	0	0		
Thallium	119.1	2.5	125	0	95.3	62	117	0	0		
Vanadium	177.1	1.5	125	44.22	106	55	122	0	0		
Zinc	175.7	5.0	125	42.27	107	43	134	0	0		

Sample ID: 057976-039AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810A
Client ID: ZZZZZ	Batch ID: 10212	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316616

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:
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DO - Surrogate diluted out
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Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10212

Sample ID: 057976-039AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810A
Client ID: ZZZZZ	Batch ID: 10212	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316616

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	94.39	2.5	125	0.7801	74.9	32	115	96.62	2.34	20	
Arsenic	124.1	2.5	125	0.5443	98.8	59	111	127.7	2.85	20	
Barium	189.1	1.5	125	66.27	98.2	34	151	194	2.60	20	
Beryllium	116	1.5	125	0	92.8	56	112	123.9	6.62	20	
Cadmium	123.3	1.5	125	0.3148	98.4	52	120	127.7	3.48	20	
Chromium	136	1.5	125	16.31	95.8	56	118	145.5	6.70	20	
Cobalt	134.7	1.5	125	10.8	99.1	58	117	138.7	2.95	20	
Copper	133.5	1.5	125	13.91	95.6	58	134	141.6	5.89	20	
Molybdenum	119.9	2.5	125	0	95.9	56	115	123.8	3.21	20	
Nickel	130.8	1.5	125	10.63	96.2	52	120	135.3	3.39	20	
Selenium	131.4	2.5	125	4.448	102	46	108	136.5	3.82	20	
Silver	116.9	1.5	125	0	93.5	74	117	122.2	4.43	20	
Thallium	115.2	2.5	125	0	92.2	62	117	119.1	3.34	20	
Vanadium	167.3	1.5	125	44.22	98.5	55	122	177.1	5.66	20	
Zinc	167.6	5.0	125	42.27	100	43	134	175.7	4.72	20	

Sample ID: 057976-039ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810A
Client ID: ZZZZZ	Batch ID: 10212	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316614

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	1.827	2.5	0	0	0	0	0	0.7801	0	30	J
Arsenic	0.6013	2.5	0	0	0	0	0	0.5443	0	30	J
Barium	67.22	1.5	0	0	0	0	0	66.27	1.43	30	
Beryllium	ND	1.5	0	0	0	0	0	0	0	30	
Cadmium	0.3312	1.5	0	0	0	0	0	0.3148	0	30	J
Chromium	16.43	1.5	0	0	0	0	0	16.31	0.692	30	
Cobalt	10.53	1.5	0	0	0	0	0	10.8	2.54	30	
Copper	15.87	1.5	0	0	0	0	0	13.91	13.1	30	
Molybdenum	0.05129	2.5	0	0	0	0	0	0	0	30	J
Nickel	10.75	1.5	0	0	0	0	0	10.63	1.05	30	

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CLIENT: Ninyo & Moore
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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10212

Sample ID: 057976-039ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810A
Client ID: ZZZZZ	Batch ID: 10212	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316614

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	9.746	2.5	0	0	0	0	0	4.448	74.7	30	R
Silver	ND	1.5	0	0	0	0	0	0	0	30	
Thallium	ND	2.5	0	0	0	0	0	0	0	30	
Vanadium	45.9	1.5	0	0	0	0	0	44.22	3.73	30	
Zinc	47.12	5.0	0	0	0	0	0	42.27	10.9	30	

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10354

Sample ID: MB-10354	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814S
Client ID: ZZZZZ	Batch ID: 10354	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318968

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.08864	0.20									

Sample ID: MB-10268-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814S
Client ID: ZZZZZ	Batch ID: 10354	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318969

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10354	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814S
Client ID: ZZZZZ	Batch ID: 10354	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318983

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.103	0.20	1	0	110	80	120	0	0		

Sample ID: 057974-031AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814S
Client ID: 571-102-0.6	Batch ID: 10354	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318981

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.121	0.20	2.5	2.037	43.4	80	120	0	0		S

Sample ID: 057974-031ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814S
Client ID: 571-102-0.6	Batch ID: 10354	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318980

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.978	0.20	0	0	0	0	0	2.037	2.94	30	

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CLIENT: Ninyo & Moore
Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10399

Sample ID: MB-10399	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816B
Client ID: ZZZZZ	Batch ID: 10399	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319808

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10378-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816B
Client ID: ZZZZZ	Batch ID: 10399	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319809

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0		

Sample ID: LCS-10399	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816B
Client ID: ZZZZZ	Batch ID: 10399	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319823

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.111	0.20	1	0	111	80	120	0	0		

Sample ID: 057996-059AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816B
Client ID: ZZZZZ	Batch ID: 10399	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319821

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.355	0.20	2.5	0.8373	101	80	120	0	0		

Sample ID: 057996-059ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816B
Client ID: ZZZZZ	Batch ID: 10399	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319820

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.418	0.20	0	0	0	0	0	0.8373	51.5	30	R

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CLIENT: Ninyo & Moore
Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9639

Sample ID: MB-9639A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722E
Client ID: ZZZZZ	Batch ID: 9639	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303132

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.336	5.0									

Sample ID: MB-9639B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722E
Client ID: ZZZZZ	Batch ID: 9639	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303133

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.242	5.0									

Sample ID: LCS-9639	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722E
Client ID: ZZZZZ	Batch ID: 9639	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303131

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	216.9	5.0	250	0	86.8	80	120	0	0		

Sample ID: 057972-051AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722E
Client ID: ZZZZZ	Batch ID: 9639	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303117

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	377.8	5.0	250	134.7	97.3	47	128	0	0		

Sample ID: 057974-008AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722E
Client ID: 571-202-0.6	Batch ID: 9639	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303129

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	213.5	5.0	250	21.53	76.8	47	128	0	0		

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CLIENT: Ninyo & Moore
Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9639

Sample ID: 057972-051ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722E
Client ID: ZZZZZ	Batch ID: 9639	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303116

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	169.5	5.0	0	0	0	0	0	134.7	22.9	30	

Sample ID: 057974-008ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722E
Client ID: 571-202-0.6	Batch ID: 9639	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303128

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	18.3	5.0	0	0	0	0	0	21.53	16.2	30	

Qualifiers:
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ANALYTICAL QC SUMMARY REPORT

BatchID: 9640

Sample ID: MB-9640A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020723A
Client ID: ZZZZZ	Batch ID: 9640	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/23/2002	SeqNo: 303658

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9640B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020723A
Client ID: ZZZZZ	Batch ID: 9640	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/23/2002	SeqNo: 303659

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9640	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020723A
Client ID: ZZZZZ	Batch ID: 9640	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/23/2002	SeqNo: 303657

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	226.5	5.0	250	0	90.6	80	120	0	0		

Sample ID: 057974-018AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020723A
Client ID: 571-104-1.5	Batch ID: 9640	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/23/2002	SeqNo: 303643

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	244.4	5.0	250	5.205	95.7	47	128	0	0		

Sample ID: 057974-028AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020723A
Client ID: 571-103-1.5	Batch ID: 9640	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/23/2002	SeqNo: 303655

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	249.7	5.0	250	10.4	95.7	47	128	0	0		

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Advanced Technology Laboratories

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9640

Sample ID: 057974-018ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020723A
Client ID: 571-104-1.5	Batch ID: 9640	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/23/2002	SeqNo: 303642

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.175	5.0	0	0	0	0	0	5.205	0	30	J

Sample ID: 057974-028ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020723A
Client ID: 571-103-1.5	Batch ID: 9640	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/23/2002	SeqNo: 303654

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	9.358	5.0	0	0	0	0	0	10.4	10.5	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9641

Sample ID: MB-9641A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020723B
Client ID: ZZZZZ	Batch ID: 9641	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/23/2002	SeqNo: 303686

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9641B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020723B
Client ID: ZZZZZ	Batch ID: 9641	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/23/2002	SeqNo: 303687

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9641	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020723B
Client ID: ZZZZZ	Batch ID: 9641	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/23/2002	SeqNo: 303685

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	247.5	5.0	250	0	99	80	120	0	0		

Sample ID: 057974-038AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020723B
Client ID: 571-101-1.5	Batch ID: 9641	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/23/2002	SeqNo: 303671

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	417.6	5.0	250	192.9	89.9	47	128	0	0		

Sample ID: 057975-011AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020723B
Client ID: ZZZZZ	Batch ID: 9641	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/23/2002	SeqNo: 303683

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	216.8	5.0	250	11.02	82.3	47	128	0	0		

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Advanced Technology Laboratories

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CLIENT: Ninyo & Moore
Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9641

Sample ID: 057974-038ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020723B
Client ID: 571-101-1.5	Batch ID: 9641	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/23/2002	SeqNo: 303670

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	183.1	5.0	0	0	0	0	0	192.9	5.21	30	

Sample ID: 057975-011ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020723B
Client ID: ZZZZZ	Batch ID: 9641	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/23/2002	SeqNo: 303682

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	14.66	5.0	0	0	0	0	0	11.02	28.3	30	

Qualifiers:
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DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9745

Sample ID: MB-9745	SampType: MBLK	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303590

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050									

Sample ID: LCS-9745	SampType: LCS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303591

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.96	0.0050	1	0	96	80	120	0	0		

Sample ID: 057999-001AMS	SampType: MS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303603

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.54	0.0050	2.5	0	102	66	118	0	0		

Sample ID: 057999-001ADUP	SampType: DUP	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303602

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050	0	0	0	0	0	0	0	30	

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CLIENT: Ninyo & Moore
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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9896

Sample ID: MB-9896	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020729C
Client ID: ZZZZZ	Batch ID: 9896	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309233

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9896A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020729C
Client ID: ZZZZZ	Batch ID: 9896	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309234

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9896B	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020729C
Client ID: ZZZZZ	Batch ID: 9896	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309247

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.06413	0.20									

Sample ID: LCS-9896	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020729C
Client ID: ZZZZZ	Batch ID: 9896	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309261

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.755	0.20	7.5	0	103	80	120	0	0		

Sample ID: 057974-021AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020729C
Client ID: 571-105-0.6	Batch ID: 9896	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309246

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	313	8.0	200	81.36	116	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9896

Sample ID: 057975-014AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020729C
Client ID: ZZZZZ	Batch ID: 9896	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309259

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	15.21	0.40	10	5.625	95.9	80	120	0	0		

Sample ID: 057974-021ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020729C
Client ID: 571-105-0.6	Batch ID: 9896	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309245

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	80.86	2.0	0	0	0	0	0	81.36	0.611	30	

Sample ID: 057975-014ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020729C
Client ID: ZZZZZ	Batch ID: 9896	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309258

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	15.68	0.40	0	0	0	0	0	5.625	94.4	30	R

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9985

Sample ID: MB-9985	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802M
Client ID: ZZZZZ	Batch ID: 9985	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312517

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9985A	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020802M
Client ID: ZZZZZ	Batch ID: 9985	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312518

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9985B	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020802M
Client ID: ZZZZZ	Batch ID: 9985	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312531

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9985	SampType: LCS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802M
Client ID: ZZZZZ	Batch ID: 9985	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312545

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.542	0.20	7.5	0	101	80	120	0	0		

Sample ID: 057972-025AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802M
Client ID: ZZZZZ	Batch ID: 9985	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312530

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.391	0.20	5	0.0602	107	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; S - Spike/Surrogate outside limits due to matrix interference; B - Analyte detected in the associated Method Blank; **Calculations are based on raw values**; DO - Surrogate diluted out; H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9985

Sample ID: 057974-009AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802M
Client ID: 571-202-0.9	Batch ID: 9985	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312543

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.358	0.20	5	0.0494	106	80	120	0	0		

Sample ID: 057972-025ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020802M
Client ID: ZZZZZ	Batch ID: 9985	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312529

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.09255	0.20	0	0	0	0	0	0.0602	0	30	J

Sample ID: 057974-009ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020802M
Client ID: 571-202-0.9	Batch ID: 9985	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312542

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0.0494	0	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9986

Sample ID: MB-9986	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802O
Client ID: ZZZZZ	Batch ID: 9986	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312574

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9986A	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020802O
Client ID: ZZZZZ	Batch ID: 9986	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312575

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9986B	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020802O
Client ID: ZZZZZ	Batch ID: 9986	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312588

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9986	SampType: LCS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802O
Client ID: ZZZZZ	Batch ID: 9986	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312602

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.522	0.20	7.5	0	100	80	120	0	0		

Sample ID: 057977-006AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802O
Client ID: ZZZZZ	Batch ID: 9986	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312587

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.313	0.20	5	0.07351	105	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9986

Sample ID: 057978-009AMSD	SampType: MSD	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802O
Client ID: ZZZZZ	Batch ID: 9986	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312601

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.498	0.20	5	0.2267	105	80	120	5.382	2.13	20	

Sample ID: 057977-006ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020802O
Client ID: ZZZZZ	Batch ID: 9986	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312586

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.08167	0.20	0	0	0	0	0	0.07351	0	30	J

Sample ID: 057978-009ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020802O
Client ID: ZZZZZ	Batch ID: 9986	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312599

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.2293	0.20	0	0	0	0	0	0.2267	1.14	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: R19608

Sample ID: 057974-031A-DUP	SampType: DUP	TestCode: 9045_S	Units: pH Units	Prep Date: 7/21/2002	Run ID: WETCHEM_020721D
Client ID: 571-102-0.6	Batch ID: R19608	TestNo: EPA 9045C		Analysis Date: 7/21/2002	SeqNo: 302573

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.961	0.10	0	0	0	0	0	7.913	0.605	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Rachelle

From: Steve Reese [sreese@ninyoandmoore.com]
Sent: Wednesday, July 31, 2002 9:27 AM
To: 'rachelle@atlglobal.com'
Cc: David Shaler (E-mail); Ruth Cheung (E-mail)
Subject: TCLP Analysis

TCLP.xls

Rachelle,
Attached please find a list of samples to be run for the TCLP analysis. Currently, we selected all of the samples that are greater than 1,000 mg/kg
of TTLC results. However, they will be ran by instruction only. There may
be more samples chosen for TCLP analysis in the future, but please run these 82 samples for now. Please call with any questions.
Thank you, Steve

Stephen S. Reese
Senior Staff Environmental Scientist
Ninyo & Moore Geotechnical & Environmental Sciences Consultants
475 Goddard, Suite 200
Irvine, California 92618
Tel: (949) 753-7070
Fax: (949) 753-7071
Email: sreese@ninyoandmoore.com
www.ninyoandmoore.com

RUN FOR TCLP ANALYSIS			
33	20	29	82
569-101-0	570-101-0	571-104-0	
569-102-0	570-101-0.6	571-120-0	
569-102-0.3	570-102-0.6	571-310-0.9	
569-102-0.9	570-103-1.5	571-317-0	
569-111-0	570-114-0.6	571-320-0	
569-112-0	570-115-0	571-325-0.6	
569-112-0.6	570-119-0.3	571-507-0	
569-201-0	570-201-0	571-511-0	
569-212-0	570-214-0	571-514-0	
569-301-0	570-311-0.6	571-524-0	
569-303-0.9	570-312-0.6	571-710-0	
569-314-0	570-504-0	571-710-0.3	
569-401-0	570-508-0	571-711-0	
569-404-0.6	570-517-0	571-711-0.3	
569-405-0.6	570-517-0.3	571-712-0	
569-408-0.9	570-610-0.6	571-712-0.3	
569-502-0.6	570-615-0	571-201-0.6	
569-516-0	570-706-0	571-405-0	
569-603-0.3	570-709-0	571-406-0	
569-607-0	570-808-0.6	571-407-0	
569-607-0.3		571-414-0	
569-609-0		571-609-0	
569-609-0.3		571-611-0	
569-703-0		571-616-0	
569-703-0.9		571-617-0	
569-705-0		571-619-1.5	
569-705-0.3		571-814-0.3	
569-706-0		571-818-0.6	
569-708-0		571-819-0	
569-710-0			
569-711-0			
569-711-0.3			
569-801-0.3			

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Tuesday, August 06, 2002 3:46 PM
To: 'Rachelle'; 'David Shaler (E-mail)'
Subject: Title 22 Metals

Title 22 Metals.xls

Rachelle,
Please run the following samples for Title 22 Metals. Please do not list
Pb in your emailed results. There should be a total of 120 samples to be
run.
Thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

569-102-0.9	570-101-0	571-101-0.9
569-112-0	570-101-0.6	571-104-0
569-201-0	570-201-0	571-201-0.6
569-206-0.6	570-205-0.9	571-108-1.5
569-106-1.5	570-106-0.3	571-111-0.3
569-212-0	570-208-1.5	571-207-0
569-401-0.6	570-111-0.6	571-210-0.6
569-301-0	570-214-0	571-115-0.9
569-303-0.9	570-115-0.3	571-214-0.3
569-404-0.6	570-119-0.9	571-120-0
569-408-0.9	570-224-0.6	571-217-1.5
569-314-0	570-401-0	571-220-0.6
569-313-0.3	570-401-0.3	571-301-0.3
569-502-0.6	570-304-1.5	571-405-0
569-602-1.5	570-307-0.9	571-306-0.9
569-607-0.3	570-311-0.6	571-407-0
569-607-0	570-312-0.6	571-310-0.9
569-508-0.9	570-316-0.3	571-315-0.3
569-511-0.6	570-601-0	571-412-1.5
569-612-1.5	570-505-1.5	571-317-0
569-516-0	570-508-0	571-320-0.6
569-801-0.3	570-610-0.6	571-416-0.9
569-519-0.6	570-511-0.9	571-325-0.3
569-803-0.9	570-615-0	571-421-1.5
569-705-0	570-514-0.3	571-425-0
569-806-1.5	570-517-0	571-501-0.6
569-708-0.3	570-618-0.6	571-503-0.9
569-711-0	570-621-1.5	571-603-0.3
569-811-0	570-703-0.9	571-507-0
	570-804-0	571-609-0
	570-706-0	571-510-1.5
	570-709-0	571-611-0
	570-808-0.6	571-514-0
	570-711-1.5	571-614-0.3
	570-812-0.3	571-517-0.9
		571-617-0.6
		571-520-1.5
		571-621-0.3
		571-524-0
		571-624-0.9
		571-529-0.3
		571-628-0.6
		571-703-1.5
		571-707-0
		571-804-0.9
		571-809-0.3
		571-711-0
		571-712-0
		571-814-0.3
		571-818-0.6
		571-819-0
		571-827-1.5

571-832-0.9
571-836-0.3
571-837-0.6
571-842-0

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Thursday, August 08, 2002 9:14 AM
To: 'Rachelle'
Subject: TCLP Analysis

TCLP-3.xls

In addition to the 90 TCLP already run please run the following samples for
TCLP. There should be a list of 350 samples.
Thanks for a the hard work and timely results.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

-----Original Message-----
From: Rachelle [SMTP:Rachelle@ATLGlobal.com]
Sent: Wednesday, August 07, 2002 5:02 PM
To: 'David Shaler (E-mail)'
Cc: 'Ruth Cheung (E-mail)'
Subject: TCLP Results

<<57931TCLP.xls>> <<58001TCLP.xls>> <<58021TCLP.xls>> <<58022TCLP.xls>>
<<58023TCLP.xls>> <<58024TCLP.xls>> <<58049TCLP.xls>> <<58050TCLP.xls>>
<<58052TCLP.xls>> <<58053TCLP.xls>> <<58065TCLP.xls>> <<58066TCLP.xls>>
<<58067TCLP.xls>> <<58068TCLP.xls>> <<58069TCLP.xls>>

Rachelle Arada
Project Coordinator
www.atlglobal.com
voice: 562.989.4045 ext 237
fax : 562.989.4040

<< File: 57931TCLP.xls >> << File: 58001TCLP.xls >> << File: 58021TCLP.xls >> << File: 58022TCLP.xls >> << File: 58023TCLP.xls >> << File: 58024TCLP.xls >> << File: 58049TCLP.xls >> << File: 58050TCLP.xls >> << File: 58052TCLP.xls >> << File: 58053TCLP.xls >> << File: 58065TCLP.xls >> << File: 58066TCLP.xls >> << File: 58067TCLP.xls >> << File: 58068TCLP.xls >> << File: 58069TCLP.xls >>

569-404-0	2. STLC	170
569-402-0	2. STLC	130
569-406-0	2. STLC	120
569-515-0	2. STLC	110
569-611-0	2. STLC	100
569-409-0	2. STLC	94
569-603-0	2. STLC	93
569-104-0.6	2. STLC	91
569-807-0	2. STLC	86
569-608-0	2. STLC	86
569-501-0	2. STLC	84
569-710-0.3	2. STLC	83
569-808-0	2. STLC	83
569-609-0.6	2. STLC	80
569-803-0	2. STLC	79
569-105-0	2. STLC	78
569-512-0	2. STLC	77
569-513-0	2. STLC	77
569-302-0	2. STLC	74
569-805-0	2. STLC	73
569-517-0	2. STLC	71
569-704-0.3	2. STLC	71
569-703-0.6	2. STLC	70
569-514-0.3	2. STLC	70
569-803-0.3	2. STLC	69
569-409-0.6	2. STLC	69
569-411-0	2. STLC	68
569-102-0.6	2. STLC	68
569-809-0	2. STLC	65
569-605-0	2. STLC	65
569-711-0.6	2. STLC	62
569-806-0	2. STLC	60
569-802-0.3	2. STLC	60
569-410-0	2. STLC	59
569-501-0.6	2. STLC	59
569-808-0.3	2. STLC	58
569-104-0	2. STLC	56
569-804-0	2. STLC	54
569-610-0	2. STLC	54
569-608-0.3	2. STLC	53
569-213-0	2. STLC	49
569-701-0	2. STLC	47
569-311-0	2. STLC	47
569-609-0.9	2. STLC	46
569-513-0.3	2. STLC	45
569-801-0.6	2. STLC	44
569-514-0	2. STLC	42
569-805-0.6	2. STLC	42
569-406-1.5	2. STLC	42
569-807-0.3	2. STLC	40
569-204-0	2. STLC	40
569-517-0.3	2. STLC	36
569-518-0	2. STLC	36
569-806-0.3	2. STLC	36
569-705-1.5	2. STLC	35
569-303-0.6	2. STLC	34
569-516-0.3	2. STLC	33
569-705-0.6	2. STLC	33
569-802-0	2. STLC	33
569-515-0.6	2. STLC	32
569-704-0	2. STLC	32
569-401-0.3	2. STLC	32
569-207-0	2. STLC	32
569-608-0.6	2. STLC	31
569-104-0.3	2. STLC	31
569-201-0.6	2. STLC	30
569-515-0.3	2. STLC	28
569-212-0.6	2. STLC	28
569-103-0	2. STLC	28
569-313-0	2. STLC	27
569-103-0.3	2. STLC	26
569-705-0.9	2. STLC	25
569-707-0.3	2. STLC	25
569-515-1.5	2. STLC	24
569-508-0	2. STLC	24
569-801-0	2. STLC	24
569-402-0.6	2. STLC	24
569-516-0.6	2. STLC	22
569-508-0.3	2. STLC	22
569-106-0	2. STLC	22
569-106-0.3	2. STLC	22
569-202-0	2. STLC	21
569-805-1.5	2. STLC	21
569-205-0	2. STLC	20
569-707-0	2. STLC	19
570-515-0.3	2. STLC	120
570-611-0	2. STLC	110
570-114-0.0	2. STLC	110
570-504-0.6	2. STLC	100
570-611-1.5	2. STLC	90
570-615-0.6	2. STLC	84
570-305-0	2. STLC	79
570-314-0.6	2. STLC	76
570-505-0.6	2. STLC	75
570-208-0.6	2. STLC	74
570-116-0.0	2. STLC	73
570-102-0	2. STLC	65
570-804-0.6	2. STLC	64
570-704-0	2. STLC	63
570-508-0.6	2. STLC	60
570-706-0.3	2. STLC	60
570-303-0	2. STLC	58
570-311-1.5	2. STLC	58
570-117-0.0	2. STLC	58
570-208-0.3	2. STLC	58
570-709-0.6	2. STLC	57
570-703-0	2. STLC	55
570-206-0	2. STLC	54
570-301-0	2. STLC	53
570-603-0.3	2. STLC	46
570-711-0.6	2. STLC	46
570-206-0.3	2. STLC	45
570-103-0	2. STLC	44
570-602-0	2. STLC	41
570-209-0	2. STLC	40
570-210-0	2. STLC	40
570-117-0.3	2. STLC	39
570-103-0.6	2. STLC	37
570-110-0.6	2. STLC	37
570-805-0.9	2. STLC	36
570-112-1.5	2. STLC	35
570-614-0	2. STLC	34
570-713-0.3	2. STLC	33
570-513-0	2. STLC	32
570-312-0.3	2. STLC	31
570-503-0.6	2. STLC	31
570-510-0.6	2. STLC	31
570-202-0	2. STLC	31
570-207-0	2. STLC	31
570-208-0.3	2. STLC	31
570-703-0.3	2. STLC	30
570-401-0	2. STLC	30
570-610-0.9	2. STLC	29
570-809-0.6	2. STLC	29
570-508-0.9	2. STLC	29
570-210-0.6	2. STLC	29
570-211-0	2. STLC	29
570-603-0	2. STLC	28
570-119-0	2. STLC	28
570-713-0.6	2. STLC	28
570-108-0	2. STLC	27
570-708-0.6	2. STLC	27
570-224-0	2. STLC	26
570-601-0	2. STLC	26
570-710-0.6	2. STLC	26
570-614-0.6	2. STLC	26
570-118-0.3	2. STLC	26
570-304-0	2. STLC	25
570-707-0.6	2. STLC	25
570-510-0	2. STLC	25
570-110-0	2. STLC	24
570-223-0	2. STLC	24
570-117-0.6	2. STLC	24
570-616-0	2. STLC	23
570-704-0.3	2. STLC	22
570-513-0.6	2. STLC	22
570-221-0.0	2. STLC	22
570-617-0	2. STLC	21
570-214-0.3	2. STLC	21
570-122-0.9	2. STLC	20
570-313-0.6	2. STLC	19
570-207-0.6	2. STLC	19
570-120-0.9	2. STLC	18
570-506-0	2. STLC	18
570-102-0.9	2. STLC	17
570-216-0	2. STLC	17
570-225-0	2. STLC	17
570-304-0.3	2. STLC	17
570-409-0	2. STLC	17
570-713-0	2. STLC	17
571-521-0	2. STLC	230
571-324-0.9	2. STLC	110
571-818-0	2. STLC	110
571-619-0.6	2. STLC	110
571-708-0	2. STLC	110
571-103-0.6	2. STLC	110
571-617-0.3	2. STLC	100
571-611-0.6	2. STLC	92
571-712-0.9	2. STLC	81
571-105-0.6	2. STLC	81
571-313-0	2. STLC	79
571-508-0	2. STLC	73
571-518-0.3	2. STLC	73
571-217-0	2. STLC	68
571-516-0	2. STLC	66
571-701-0.3	2. STLC	66
571-710-0.6	2. STLC	65
571-512-0	2. STLC	64
571-308-0.9	2. STLC	61
571-701-0	2. STLC	61
571-514-0.3	2. STLC	59
571-415-0	2. STLC	58
571-616-0.6	2. STLC	57
571-517-0	2. STLC	56
571-112-0.9	2. STLC	56
571-214-0	2. STLC	55
571-415-0.3	2. STLC	55
571-405-0.6	2. STLC	55
571-530-0	2. STLC	55
571-831-0	2. STLC	53
571-709-0	2. STLC	53
571-103-0.0	2. STLC	52
571-312-0	2. STLC	51
571-526-0	2. STLC	51
571-819-1.5	2. STLC	51
571-515-0	2. STLC	50
571-833-0	2. STLC	49
571-815-0.6	2. STLC	47
571-517-0.3	2. STLC	46
571-610-0	2. STLC	46
571-413-0	2. STLC	46
571-815-0	2. STLC	45
571-514-0.9	2. STLC	44
571-505-1.5	2. STLC	44
571-528-0	2. STLC	44
571-610-0.6	2. STLC	43
571-629-0	2. STLC	43
571-804-0	2. STLC	42
571-213-0	2. STLC	41
571-812-0	2. STLC	41
571-706-0	2. STLC	41
571-530-0.6	2. STLC	41
571-305-0	2. STLC	40
571-523-0.3	2. STLC	39
571-510-0	2. STLC	39
571-305-0.9	2. STLC	39
571-818-1.5	2. STLC	39
571-703-0	2. STLC	38
571-520-0.3	2. STLC	36
571-216-0	2. STLC	34
571-827-0	2. STLC	34
571-708-0.3	2. STLC	34
571-514-0.6	2. STLC	33
571-528-1.5	2. STLC	33
571-803-0	2. STLC	33
571-414-0.3	2. STLC	33
571-813-0.3	2. STLC	32
571-523-0	2. STLC	31
571-326-0	2. STLC	31
571-502-0.6	2. STLC	31
571-624-1.5	2. STLC	31
571-330-0	2. STLC	31
571-512-0.3	2. STLC	30
571-521-0.6	2. STLC	29
571-706-0.3	2. STLC	29
571-814-0.6	2. STLC	28
571-616-1.5	2. STLC	28
571-835-0	2. STLC	28
571-811-0.3	2. STLC	28
571-101-0.6	2. STLC	28
571-112-0	2. STLC	28
571-315-0	2. STLC	27
571-622-0	2. STLC	27
571-607-0.6	2. STLC	27
571-609-0.6	2. STLC	27

569-709-0	2. STLC	19
569-202-0.3	2. STLC	19
569-602-0	2. STLC	19
569-207-0.3	2. STLC	19
569-706-0.3	2. STLC	17
569-807-0.9	2. STLC	17
569-104-0.9	2. STLC	17
569-505-0.6	2. STLC	17
569-704-0.6	2. STLC	16
569-808-0.6	2. STLC	16
569-212-0.3	2. STLC	16
569-612-0	2. STLC	16
569-704-1.5	2. STLC	15
569-411-0.3	2. STLC	15
569-113-0	2. STLC	15
569-807-0.6	2. STLC	14
569-311-0.3	2. STLC	12
569-312-0	2. STLC	10
569-311-0.9	2. STLC	8.3

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570-401-0.3	2. STLC	17
570-616-0.6	2. STLC	17
570-308-0	2. STLC	16
570-807-0.9	2. STLC	16
570-701-0.6	2. STLC	16
570-617-0.3	2. STLC	16
570-107-0.6	2. STLC	15
570-811-0.6	2. STLC	15
570-707-0	2. STLC	15
570-518-0	2. STLC	15
570-111-0.0	2. STLC	15
570-109-0.6	2. STLC	14
570-401-0.9	2. STLC	4.1
570-408-0	2. STLC	4
570-409-0.3	2. STLC	3
570-401-0.6		0
570-401-1.5		0
570-408-0.6		0
570-408-1.5		0

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571-837-0.3	2. STLC	27
571-520-0	2. STLC	26
571-516-0.3	2. STLC	26
571-420-0	2. STLC	26
571-102-0.6	2. STLC	26
571-517-1.5	2. STLC	25
571-513-0.6	2. STLC	25
571-623-0.6	2. STLC	25
571-112-0.3	2. STLC	25
571-326-0.6	2. STLC	24
571-619-0.3	2. STLC	24
571-619-0.9	2. STLC	24
571-528-0.3	2. STLC	24
571-706-0.6	2. STLC	24
571-112-0.6	2. STLC	24
571-327-0.6	2. STLC	23
571-817-0	2. STLC	23
571-425-0.6	2. STLC	22
571-118-0	2. STLC	22
571-829-0	2. STLC	22
571-828-0	2. STLC	22
571-122-0	2. STLC	21
571-101-1.5	2. STLC	21
571-530-0.3	2. STLC	21
571-406-0.6	2. STLC	20
571-517-0.6	2. STLC	20
571-835-0.3	2. STLC	20
571-501-0	2. STLC	20
571-518-0.9	2. STLC	19
571-510-0.3	2. STLC	19
571-814-0.9	2. STLC	19
571-522-0.6	2. STLC	19
571-622-1.5	2. STLC	19
571-812-0.6	2. STLC	19
571-701-0.6	2. STLC	19
571-704-0	2. STLC	19
571-711-0.6	2. STLC	19
571-212-0	2. STLC	18
571-839-0.6	2. STLC	18
571-610-1.5	2. STLC	18
571-709-0.3	2. STLC	18
571-311-0.6	2. STLC	17
571-620-0	2. STLC	17
571-109-0	2. STLC	17
571-704-0.3	2. STLC	17
571-207-1.5	2. STLC	16
571-203-0	2. STLC	16
571-616-0.3	2. STLC	16
571-317-0.3	2. STLC	16
571-629-0.3	2. STLC	16
571-416-0	2. STLC	15
571-419-0	2. STLC	15
571-526-0.3	2. STLC	15
571-619-0	2. STLC	15
571-606-0	2. STLC	15
571-115-0.6	2. STLC	14
571-202-0.9	2. STLC	11

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tblTEMP

WorkOrder	ClientSampID	TestNo	Analyte	PQL	DF	CollectionDate	AnalDate	PrepDate
057974	571-101-0.0	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-101-0.0	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057974	571-101-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-101-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057974	571-101-0.3	WET/ EPA 7420	Lead	0.4	2	7/17/2002	7/29/2002	7/26/2002
057974	571-101-0.6	EPA 1311/ 7420	Lead	0.2	1	7/17/2002	8/16/2002	8/15/2002
057974	571-101-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-101-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057974	571-101-0.6	WET/ EPA 7420	Lead	0.8	4	7/17/2002	7/29/2002	7/26/2002
057974	571-101-0.9	EPA 6010B	Antimony	2.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-101-0.9	EPA 6010B	Arsenic	2.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-101-0.9	EPA 6010B	Barium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-101-0.9	EPA 6010B	Beryllium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-101-0.9	EPA 6010B	Cadmium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-101-0.9	EPA 6010B	Chromium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-101-0.9	EPA 6010B	Cobalt	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-101-0.9	EPA 6010B	Copper	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-101-0.9	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-101-0.9	EPA 6010B	Molybdenum	2.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-101-0.9	EPA 6010B	Nickel	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-101-0.9	EPA 6010B	Selenium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-101-0.9	EPA 6010B	Silver	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-101-0.9	EPA 6010B	Thallium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-101-0.9	EPA 6010B	Vanadium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-101-0.9	EPA 6010B	Zinc	5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-101-0.9	EPA 7471A	Mercury	0.1	1	7/17/2002	8/9/2002	8/7/2002
057974	571-101-1.5	EPA 1311/ 7420	Lead	0.2	1	7/17/2002	8/16/2002	8/15/2002
057974	571-101-1.5	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-101-1.5	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057974	571-101-1.5	WET/ EPA 7420	Lead	0.8	4	7/17/2002	7/29/2002	7/26/2002
057974	571-102-0.0	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-102-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-102-0.6	EPA 1311/ 7420	Lead	0.2	1	7/17/2002	8/14/2002	8/13/2002
057974	571-102-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-102-0.6	EPA 9045C	pH	0.1	1	7/17/2002	7/21/2002	7/21/2002

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057974	571-102-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057974	571-102-0.6	WET/ EPA 7420	Lead	0.8	4	7/17/2002	7/29/2002	7/26/2002
057974	571-102-0.9	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-102-1.5	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-103-0.0	EPA 1311/ 7420	Lead	0.2	1	7/17/2002	8/14/2002	8/13/2002
057974	571-103-0.0	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-103-0.0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057974	571-103-0.0	WET/ EPA 7420	Lead	1.6	8	7/17/2002	7/29/2002	7/26/2002
057974	571-103-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-103-0.6	EPA 1311/ 7420	Lead	0.2	1	7/17/2002	8/14/2002	8/13/2002
057974	571-103-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-103-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057974	571-103-0.6	WET/ EPA 7420	Lead	4	20	7/17/2002	7/29/2002	7/26/2002
057974	571-103-0.9	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-103-1.5	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-104-0.0	EPA 1311/ 7420	Lead	0.2	1	7/17/2002	8/6/2002	8/5/2002
057974	571-104-0.0	EPA 6010B	Antimony	2.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-104-0.0	EPA 6010B	Arsenic	2.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-104-0.0	EPA 6010B	Barium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-104-0.0	EPA 6010B	Beryllium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-104-0.0	EPA 6010B	Cadmium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-104-0.0	EPA 6010B	Chromium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-104-0.0	EPA 6010B	Cobalt	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-104-0.0	EPA 6010B	Copper	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-104-0.0	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-104-0.0	EPA 6010B	Molybdenum	2.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-104-0.0	EPA 6010B	Nickel	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-104-0.0	EPA 6010B	Selenium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-104-0.0	EPA 6010B	Silver	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-104-0.0	EPA 6010B	Thallium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-104-0.0	EPA 6010B	Vanadium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-104-0.0	EPA 6010B	Zinc	5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-104-0.0	EPA 7471A	Mercury	0.1	1	7/17/2002	8/9/2002	8/7/2002
057974	571-104-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-104-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-104-0.9	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002

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057974	571-104-1.5	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-105-0.0	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-105-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-105-0.3	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057974	571-105-0.6	EPA 1311/ 7420	Lead	0.2	1	7/17/2002	8/14/2002	8/13/2002
057974	571-105-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-105-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057974	571-105-0.6	WET/ EPA 7420	Lead	2	10	7/17/2002	7/29/2002	7/26/2002
057974	571-105-0.9	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-105-0.9	EPA 9045C	pH	0.1	1	7/17/2002	7/21/2002	7/21/2002
057974	571-105-1.5	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-201-0.0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057974	571-201-0.0	EPA 9045C	pH	0.1	1	7/17/2002	7/21/2002	7/21/2002
057974	571-201-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057974	571-201-0.3	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057974	571-201-0.6	EPA 1311/ 7420	Lead	0.2	1	7/17/2002	8/6/2002	8/5/2002
057974	571-201-0.6	EPA 6010B	Antimony	2.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-201-0.6	EPA 6010B	Arsenic	2.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-201-0.6	EPA 6010B	Barium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-201-0.6	EPA 6010B	Beryllium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-201-0.6	EPA 6010B	Cadmium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-201-0.6	EPA 6010B	Chromium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-201-0.6	EPA 6010B	Cobalt	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-201-0.6	EPA 6010B	Copper	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-201-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057974	571-201-0.6	EPA 6010B	Molybdenum	2.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-201-0.6	EPA 6010B	Nickel	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-201-0.6	EPA 6010B	Selenium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-201-0.6	EPA 6010B	Silver	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-201-0.6	EPA 6010B	Thallium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-201-0.6	EPA 6010B	Vanadium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-201-0.6	EPA 6010B	Zinc	5	10	7/17/2002	8/10/2002	8/8/2002
057974	571-201-0.6	EPA 7471A	Mercury	0.1	1	7/17/2002	8/9/2002	8/7/2002
057974	571-201-0.9	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057974	571-202-0.0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057974	571-202-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002

057974	571-202-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057974	571-202-0.9	EPA 1311/ 7420	Lead	0.2	1	7/17/2002	8/14/2002	8/13/2002
057974	571-202-0.9	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-202-0.9	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057974	571-202-0.9	WET/ EPA 7420	Lead	0.4	2	7/17/2002	7/29/2002	7/26/2002
057974	571-202-1.5	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-209-0.0	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-209-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	571-209-0.3	EPA 9045C	pH	0.1	1	7/17/2002	7/21/2002	7/21/2002
057974	571-209-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057974	EB-13	EPA 6010B	Lead	0.005	1	7/17/2002	7/23/2002	7/22/2002

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September 13, 2002

David Shaler
Ninyo & Moore
475 Goddard Suite 200
Irvine, CA 92618
TEL: (949) 753-7070
FAX: (949) 753-7071

RE: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

Attention: David Shaler

ELAP No.: 1838
NELAP No.: 02107CA
Workorder No.: 057974

Enclosed are the results for sample(s) received on July 17, 2002 by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

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SEP 20 2002
NINYO & MOORE
ORANGE COUNTY OFFICE

This cover letter and a case narrative are an integral part of this analytical report.

CLIENT: Ninyo & Moore
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170
Lab Order: 057974

CASE NARRATIVE

Enclosed is the result for the additional analysis requested on 09/09/02.

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: *13-Sep-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-201-0.3
Lab Order:	057974		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/17/2002 1:10:00 PM
Lab ID:	057974-003A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
LEAD BY ATOMIC ABSORPTION DI WATER (WET)				**WET DI/ EPA 7420**		
RunID: AA2_020913A	QC Batch: 10636					Analyst: **JT**
Lead	0.49	0.20		mg/L	1	9/13/2002

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: *13-Sep-02*

CLIENT: Ninyo & Moore
Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI

Sample ID: **MB-9985**	SampType: **MBLK**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/2/2002**	Run ID: **AA2_020802M**
Client ID: **ZZZZZ**	Batch ID: **9985**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/2/2002**	SeqNo: **312517**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-9985A**	SampType: **MBLK**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **7/31/2002**	Run ID: **AA2_020802M**
Client ID: **ZZZZZ**	Batch ID: **9985**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/2/2002**	SeqNo: **312518**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-9985B**	SampType: **MBLK**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **7/31/2002**	Run ID: **AA2_020802M**
Client ID: **ZZZZZ**	Batch ID: **9985**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/2/2002**	SeqNo: **312531**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-9986**	SampType: **MBLK**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/2/2002**	Run ID: **AA2_020802O**
Client ID: **ZZZZZ**	Batch ID: **9986**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/2/2002**	SeqNo: **312574**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-9986A**	SampType: **MBLK**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **7/31/2002**	Run ID: **AA2_020802O**
Client ID: **ZZZZZ**	Batch ID: **9986**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/2/2002**	SeqNo: **312575**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO- Surrogate dilute out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI

Sample ID: MB-9986B	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020802O
Client ID: ZZZZZ	Batch ID: 9986	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312588

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10636	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 9/13/2002	Run ID: AA2_020913A
Client ID: ZZZZZ	Batch ID: 10636	TestNo: WET DI/ EPA (WET)		Analysis Date: 9/13/2002	SeqNo: 327358

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10636A	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 9/10/2002	Run ID: AA2_020913A
Client ID: ZZZZZ	Batch ID: 10636	TestNo: WET DI/ EPA (WET)		Analysis Date: 9/13/2002	SeqNo: 327359

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9985	SampType: LCS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802M
Client ID: ZZZZZ	Batch ID: 9985	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312545

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.542	0.20	7.5	0	101	80	120	0	0		

Sample ID: LCS-9986	SampType: LCS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802O
Client ID: ZZZZZ	Batch ID: 9986	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312602

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.522	0.20	7.5	0	100	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO- Surrogate dilute out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI

Sample ID: LCS-10636	SampType: LCS	TestCode: 7420_DI	Units: mg/L	Prep Date: 9/13/2002	Run ID: AA2_020913A
Client ID: ZZZZZ	Batch ID: 10636	TestNo: WET DI/ EPA (WET)		Analysis Date: 9/13/2002	SeqNo: 327367

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.246	0.20	5	0	105	80	120	0	0		

Sample ID: 057972-025AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802M
Client ID: ZZZZZ	Batch ID: 9985	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312530

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.391	0.20	5	0.0602	107	80	120	0	0		

Sample ID: 057974-009AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802M
Client ID: 571-202-0.9	Batch ID: 9985	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312543

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.358	0.20	5	0.0494	106	80	120	0	0		

Sample ID: 057977-006AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802O
Client ID: ZZZZZ	Batch ID: 9986	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312587

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.313	0.20	5	0.07351	105	80	120	0	0		

Sample ID: 058000-008AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 9/13/2002	Run ID: AA2_020913A
Client ID: ZZZZZ	Batch ID: 10636	TestNo: WET DI/ EPA (WET)		Analysis Date: 9/13/2002	SeqNo: 327366

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.344	0.20	5	1.13	84.3	80	120	0	0		

Qualifiers:

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R - RPD outside accepted recovery limits
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO- Surrogate dilute out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI

Sample ID: 057978-009AMSD	SampType: MSD	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802O
Client ID: ZZZZZ	Batch ID: 9986	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312601

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.498	0.20	5	0.2267	105	80	120	5.382	2.13	20	

Sample ID: 058000-008AMSD	SampType: MSD	TestCode: 7420_DI	Units: mg/L	Prep Date: 9/13/2002	Run ID: AA2_020913A
Client ID: ZZZZZ	Batch ID: 10636	TestNo: WET DI/ EPA (WET)		Analysis Date: 9/13/2002	SeqNo: 327365

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.498	0.20	5	1.13	87.4	80	120	5.344	2.83	20	

Sample ID: 057972-025ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020802M
Client ID: ZZZZZ	Batch ID: 9985	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312529

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.09255	0.20	0	0	0	0	0	0.0602	0	30	J

Sample ID: 057974-009ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020802M
Client ID: 571-202-0.9	Batch ID: 9985	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312542

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0.0494	0	30	

Sample ID: 057977-006ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020802O
Client ID: ZZZZZ	Batch ID: 9986	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312586

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.08167	0.20	0	0	0	0	0	0.07351	0	30	J

Qualifiers:
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S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO- Surrogate dilute out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057974
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI

Sample ID: 057978-009ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020802O
Client ID: ZZZZZ	Batch ID: 9986	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312599

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.2293	0.20	0	0	0	0	0	0.2267	1.14	30	

Sample ID: 058000-008ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 9/10/2002	Run ID: AA2_020913A
Client ID: ZZZZZ	Batch ID: 10636	TestNo: WET DI/ EPA (WET)		Analysis Date: 9/13/2002	SeqNo: 327364

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.6968	0.20	0	0	0	0	0	1.13	47.4	30	R

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO- Surrogate dilute out
H - Sample exceeded holding time

Rachelle

From: Steve Reese [sreese@ninyoandmoore.com]
Sent: Monday, September 09, 2002 1:42 PM
To: Rachelle@Advanced Labs (E-mail)
Cc: David Shaler (E-mail)
Subject: Request for Additional Analyses: CALTRANS I-10 Freeway Project

Rachelle,
RE: CALTRANS I-10 Freeway Project (N&M #203939001)
We want to request additional analyses run on 4 samples with STLC= 5.0 mg/L, we want all 4 analyzed for DI-WET method.
The samples are:

ATL COC#	N&M Sample ID
57975	570-803-0.3
57974	571-201-0.3
57996	571-411-0
58000	571-527-0.3

Please contact myself or David Shaler with any questions or comments.
Thank you, Steve

September 13, 2002

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SEP 2 0 2002

NINYO & MOORE
ORANGE COUNTY OFFICE

David Shaler
Ninyo & Moore
475 Goddard Suite 200
Irvine, CA 92618
TEL: (949) 753-7070
FAX: (949) 753-7071

RE: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

Attention: David Shaler

ELAP No.: 1838
NELAP No.: 02107CA
Workorder No.: 057996

Enclosed are the results for sample(s) received on July 18, 2002 by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

This cover letter and a case narrative are an integral part of this analytical report.

CLIENT: Ninyo & Moore
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170
Lab Order: 057996

CASE NARRATIVE

Enclosed is the result for the additional analysis requested on 09/09/02.

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: *13-Sep-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-411-0
Lab Order:	057996		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/18/2002 12:34:00 PM
Lab ID:	057996-032A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
LEAD BY ATOMIC ABSORPTION DI WATER (WET)				**WET DI/ EPA 7420**		
RunID: AA2_020913A	QC Batch: 10636					Analyst: **JT**
Lead	0.83	0.20		mg/L	1	9/13/2002

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: *13-Sep-02*

CLIENT: Ninyo & Moore
Work Order: 057996
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI

Sample ID: **MB-10033**	SampType: **MBLK**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020806F**
Client ID: **ZZZZZ**	Batch ID: **10033**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/6/2002**	SeqNo: **314551**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05628	0.20									

Sample ID: **MB-10033A**	SampType: **MBLK**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/1/2002**	Run ID: **AA2_020806F**
Client ID: **ZZZZZ**	Batch ID: **10033**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/6/2002**	SeqNo: **314552**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.0534	0.20									

Sample ID: **MB-10033B**	SampType: **MBLK**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/1/2002**	Run ID: **AA2_020806F**
Client ID: **ZZZZZ**	Batch ID: **10033**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/6/2002**	SeqNo: **314565**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05983	0.20									

Sample ID: **MB-10032**	SampType: **mblk**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/7/2002**	Run ID: **AA2_020807B**
Client ID: **ZZZZZ**	Batch ID: **10032**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314816**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-10032A**	SampType: **mblk**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/1/2002**	Run ID: **AA2_020807B**
Client ID: **ZZZZZ**	Batch ID: **10032**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314817**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

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Calculations are based on raw values
DO- Surrogate dilute out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057996
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI

Sample ID: MB-10032B	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807B
Client ID: ZZZZZ	Batch ID: 10032	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314830

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10636	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 9/13/2002	Run ID: AA2_020913A
Client ID: ZZZZZ	Batch ID: 10636	TestNo: WET DI/ EPA (WET)		Analysis Date: 9/13/2002	SeqNo: 327358

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10636A	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 9/10/2002	Run ID: AA2_020913A
Client ID: ZZZZZ	Batch ID: 10636	TestNo: WET DI/ EPA (WET)		Analysis Date: 9/13/2002	SeqNo: 327359

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10033	SampType: LCS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020806F
Client ID: ZZZZZ	Batch ID: 10033	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/6/2002	SeqNo: 314579

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.432	0.20	7.5	0	99.1	80	120	0	0		

Sample ID: LCS-10032	SampType: lcs	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807B
Client ID: ZZZZZ	Batch ID: 10032	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314844

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.461	0.20	7.5	0	99.5	80	120	0	0		

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CLIENT: Ninyo & Moore
Work Order: 057996
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI

Sample ID: LCS-10636	SampType: LCS	TestCode: 7420_DI	Units: mg/L	Prep Date: 9/13/2002	Run ID: AA2_020913A
Client ID: ZZZZZ	Batch ID: 10636	TestNo: WET DI/ EPA (WET)		Analysis Date: 9/13/2002	SeqNo: 327367

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.246	0.20	5	0	105	80	120	0	0		

Sample ID: 057998-005AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020806F
Client ID: ZZZZZ	Batch ID: 10033	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/6/2002	SeqNo: 314564

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.233	0.20	5	0.06025	103	80	120	0	0		

Sample ID: 057998-018AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020806F
Client ID: ZZZZZ	Batch ID: 10033	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/6/2002	SeqNo: 314577

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.261	0.20	5	0.07802	104	80	120	0	0		

Sample ID: 057976-049AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807B
Client ID: ZZZZZ	Batch ID: 10032	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314829

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.906	0.20	5	0	98.1	80	120	0	0		

Sample ID: 057996-024AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807B
Client ID: 571-408-0.6	Batch ID: 10032	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314842

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.887	0.20	5	0	97.7	80	120	0	0		

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CLIENT: Ninyo & Moore
Work Order: 057996
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI

Sample ID: 058000-008AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 9/13/2002	Run ID: AA2_020913A
Client ID: ZZZZZ	Batch ID: 10636	TestNo: WET DI/ EPA (WET)		Analysis Date: 9/13/2002	SeqNo: 327366

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.344	0.20	5	1.13	84.3	80	120	0	0		

Sample ID: 058000-008AMSD	SampType: MSD	TestCode: 7420_DI	Units: mg/L	Prep Date: 9/13/2002	Run ID: AA2_020913A
Client ID: ZZZZZ	Batch ID: 10636	TestNo: WET DI/ EPA (WET)		Analysis Date: 9/13/2002	SeqNo: 327365

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.498	0.20	5	1.13	87.4	80	120	5.344	2.83	20	

Sample ID: 057998-005ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020806F
Client ID: ZZZZZ	Batch ID: 10033	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/6/2002	SeqNo: 314563

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0.06025	0	30	

Sample ID: 057998-018ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020806F
Client ID: ZZZZZ	Batch ID: 10033	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/6/2002	SeqNo: 314576

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.1009	0.20	0	0	0	0	0	0.07802	0	30	J

Sample ID: 057976-049ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807B
Client ID: ZZZZZ	Batch ID: 10032	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314828

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0	30	

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Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057996
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI

Sample ID: 057996-024ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807B
Client ID: 571-408-0.6	Batch ID: 10032	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314841

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0	30	

Sample ID: 058000-008ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 9/10/2002	Run ID: AA2_020913A
Client ID: ZZZZZ	Batch ID: 10636	TestNo: WET DI/ EPA (WET)		Analysis Date: 9/13/2002	SeqNo: 327364

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.6968	0.20	0	0	0	0	0	1.13	47.4	30	R

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Rachelle

From: Steve Reese [sreese@ninyoandmoore.com]
Sent: Monday, September 09, 2002 1:42 PM
To: Rachelle@Advanced Labs (E-mail)
Cc: David Shaler (E-mail)
Subject: Request for Additional Analyses: CALTRANS I-10 Freeway Project

Rachelle,
RE: CALTRANS I-10 Freeway Project (N&M #203939001)
We want to request additional analyses run on 4 samples with STLC= 5.0 mg/L, we want all 4 analyzed for DI-WET method.
The samples are:

ATL COC#	N&M Sample ID
57975	570-803-0.3
57974	571-201-0.3
57996	571-411-0
58000	571-527-0.3

Please contact myself or David Shaler with any questions or comments.
Thank you, Steve

September 13, 2002

David Shaler
Ninyo & Moore
475 Goddard Suite 200
Irvine, CA 92618
TEL: (949) 753-7070
FAX: (949) 753-7071

ELAP No.: 1838
NELAP No.: 02107CA
Workorder No.: 058000

RE: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

Attention: David Shaler

Enclosed are the results for sample(s) received on July 20, 2002 by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

This cover letter and a case narrative are an integral part of this analytical report.

CLIENT: Ninyo & Moore
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170
Lab Order: 058000

CASE NARRATIVE

Enclosed is the result for the additional analysis requested on 09/09/02.

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: *13-Sep-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-527-0.3
Lab Order:	058000		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/18/2002 8:55:00 AM
Lab ID:	058000-008A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
LEAD BY ATOMIC ABSORPTION DI WATER (WET)				**WET DI/ EPA 7420**		
RunID: AA2_020913A	QC Batch: 10636					Analyst: **JT**
Lead	1.1	0.20		mg/L	1	9/13/2002

Qualifiers:

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3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: *13-Sep-02*

CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI

Sample ID: **MB-10035**	SampType: **mblk**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/7/2002**	Run ID: **AA2_020807D**
Client ID: **ZZZZZ**	Batch ID: **10035**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314874**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-10035A**	SampType: **mblk**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/1/2002**	Run ID: **AA2_020807D**
Client ID: **ZZZZZ**	Batch ID: **10035**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314875**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-10035B**	SampType: **mblk**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/1/2002**	Run ID: **AA2_020807D**
Client ID: **ZZZZZ**	Batch ID: **10035**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314888**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05907	0.20									

Sample ID: **MB-10036**	SampType: **mblk**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/7/2002**	Run ID: **AA2_020807E**
Client ID: **ZZZZZ**	Batch ID: **10036**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314906**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-10036A**	SampType: **mblk**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/1/2002**	Run ID: **AA2_020807E**
Client ID: **ZZZZZ**	Batch ID: **10036**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314908**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

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Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI

Sample ID: MB-10036B	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807E
Client ID: ZZZZZ	Batch ID: 10036	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314921

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10636	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 9/13/2002	Run ID: AA2_020913A
Client ID: ZZZZZ	Batch ID: 10636	TestNo: WET DI/ EPA (WET)		Analysis Date: 9/13/2002	SeqNo: 327358

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10636A	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 9/10/2002	Run ID: AA2_020913A
Client ID: ZZZZZ	Batch ID: 10636	TestNo: WET DI/ EPA (WET)		Analysis Date: 9/13/2002	SeqNo: 327359

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10035	SampType: lcs	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807D
Client ID: ZZZZZ	Batch ID: 10035	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314902

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.49	0.20	7.5	0	99.9	80	120	0	0		

Sample ID: LCS-10036	SampType: lcs	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807E
Client ID: ZZZZZ	Batch ID: 10036	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314933

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.269	0.20	7.5	0	96.9	80	120	0	0		

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H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI

Sample ID: LCS-10636	SampType: LCS	TestCode: 7420_DI	Units: mg/L	Prep Date: 9/13/2002	Run ID: AA2_020913A
Client ID: ZZZZZ	Batch ID: 10636	TestNo: WET DI/ EPA (WET)		Analysis Date: 9/13/2002	SeqNo: 327367

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.246	0.20	5	0	105	80	120	0	0		

Sample ID: 058000-012AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807D
Client ID: 571-526-0.3	Batch ID: 10035	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314887

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.393	0.20	5	0.2781	102	80	120	0	0		

Sample ID: 058000-029AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807D
Client ID: 571-517-1.5	Batch ID: 10035	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314900

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.922	0.20	5	0.06788	97.1	80	120	0	0		

Sample ID: 058000-047AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807E
Client ID: 571-203-0.3	Batch ID: 10036	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314920

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.937	0.20	5	0.05554	97.6	80	120	0	0		

Sample ID: 058001-051AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807E
Client ID: ZZZZZ	Batch ID: 10036	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314931

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.856	0.20	5	0	97.1	80	120	0	0		

Qualifiers:
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J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO- Surrogate dilute out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI

Sample ID: 058000-008AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 9/13/2002	Run ID: AA2_020913A
Client ID: 571-527-0.3	Batch ID: 10636	TestNo: WET DI/ EPA (WET)		Analysis Date: 9/13/2002	SeqNo: 327366

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.344	0.20	5	1.13	84.3	80	120	0	0		

Sample ID: 058000-008AMSD	SampType: MSD	TestCode: 7420_DI	Units: mg/L	Prep Date: 9/13/2002	Run ID: AA2_020913A
Client ID: 571-527-0.3	Batch ID: 10636	TestNo: WET DI/ EPA (WET)		Analysis Date: 9/13/2002	SeqNo: 327365

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.498	0.20	5	1.13	87.4	80	120	5.344	2.83	20	

Sample ID: 058000-012ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807D
Client ID: 571-526-0.3	Batch ID: 10035	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314886

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.4161	0.20	0	0	0	0	0	0.2781	39.8	30	R

Sample ID: 058000-029ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807D
Client ID: 571-517-1.5	Batch ID: 10035	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314899

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05691	0.20	0	0	0	0	0	0.06788	0	30	J

Sample ID: 058000-047ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807E
Client ID: 571-203-0.3	Batch ID: 10036	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314919

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0.05554	0	30	

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Calculations are based on raw values
DO- Surrogate dilute out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058000
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI

Sample ID: 058001-051ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807E
Client ID: ZZZZZ	Batch ID: 10036	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314930

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0	30	

Sample ID: 058000-008ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 9/10/2002	Run ID: AA2_020913A
Client ID: 571-527-0.3	Batch ID: 10636	TestNo: WET DI/ EPA (WET)		Analysis Date: 9/13/2002	SeqNo: 327364

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.6968	0.20	0	0	0	0	0	1.13	47.4	30	R

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Calculations are based on raw values
DO- Surrogate dilute out
H - Sample exceeded holding time

Rachelle

From: Steve Reese [sreese@ninyoandmoore.com]
Sent: Monday, September 09, 2002 1:42 PM
To: Rachelle@Advanced Labs (E-mail)
Cc: David Shaler (E-mail)
Subject: Request for Additional Analyses: CALTRANS I-10 Freeway Project

Rachelle,
RE: CALTRANS I-10 Freeway Project (N&M #203939001)
We want to request additional analyses run on 4 samples with STLC= 5.0 mg/L, we want all 4 analyzed for DI-WET method.
The samples are:

ATL COC#	N&M Sample ID
57975	570-803-0.3
57974	571-201-0.3
57996	571-411-0
58000	571-527-0.3

Please contact myself or David Shaler with any questions or comments.
Thank you, Steve

August 19, 2002

David Shaler
Ninyo & Moore
475 Goddard Suite 200
Irvine, CA 92618
TEL: (949) 753-7070
FAX: (949) 753-7071

RE: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

Attention: David Shaler

ELAP No.: 1838
NELAP No.: 02107CA
Workorder No.: 057996

Enclosed are the results for sample(s) received on July 18, 2002 by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

RECEIVED
AUG 2 6 2002
NINYO & MOORE
ORANGE COUNTY OFFICE

This cover letter is an integral part of this analytical report.

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) 7-18-02

Received by: (name/date/time) 7-18-02 4:00

Relinquished by: (name/date/time) 7-18-02 7:05p

Received by: (name/date/time) 7-18-02 7:16pm

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB-16	7/18/02	15:30	P	X	
	571-401-0		11:15		X	X
	571-401-0.3		11:17		X	
	571-403-0		11:25		X	
	571-403-0.3		11:26		X	
	571-403-0.6		11:28		X	
	571-405-0		11:35		X	
	571-405-0.3		11:36		X	
	571-405-0.6		11:37		X	
	571-405-0.9		11:38		X	
	571-405-1.5		11:39		X	X
	571-406-0		11:43		X	
	571-406-0.3		11:44		X	
	571-406-0.6		11:45		X	
	571-406-0.9		11:46		X	
	571-406-1.5		11:48		X	
	571-407-0		11:53		X	
	571-407-0.3		11:54		X	
	571-407-0.6		11:55		X	
	571-407-0.9		11:56		X	
	571-407-1.5		11:58		X	X
	571-408-0		12:10		X	
	571-408-0.3		12:11		X	
	571-408-0.6		12:12		X	
	571-408-0.9		12:13		X	
	571-408-1.5		12:15		X	
	571-409-0		12:20		X	
	571-409-0.3		12:21		X	
	571-409-0.6		12:22		X	
	571-409-0.9		12:24		X	
	571-409-1.5		12:26		X	X
	571-411-0		12:34		X	
	571-411-0.3		12:36		X	
	571-411-0.6		12:38		X	
	571-411-0.9		12:39		X	
	571-411-1.5		12:41		X	
	571-422-0		12:56		X	
	571-422-0.3		12:58		X	
	571-422-0.6		13:00		X	
	571-422-0.9		13:02		X	
	571-422-1.5		13:05		X	X
	571-423-0		13:10		X	
	571-423-0.3		13:12		X	
	571-423-0.6		13:13		X	
	571-423-0.9		13:15		X	
	571-423-1.5		13:17		X	
	571-425-0		13:21		X	
	571-425-0.3		13:22		X	
	571-425-0.6		13:24		X	
	571-425-0.9		13:26		X	
	571-425-1.5		13:28		X	X
	571-326-0		14:00		X	
	571-326-0.3		14:01		X	
	571-326-0.6		14:02		X	
	571-326-0.9		14:03		X	
	571-326-1.5		14:05		X	
	571-327-0		14:14		X	
	571-327-0.3		14:16		X	
	571-327-0.6		14:17		X	
	571-327-0.9		14:18		X	

Total # of samples: 60

Advanced Technology Laboratories

Date: *25-Jul-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	EB-16
Lab Order:	057996		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/18/2002 3:30:00 PM
Lab ID:	057996-001A	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	(EPA 3010A)			**EPA 6010B**		
RunID: ICP2_020723B	QC Batch: 9745					Analyst: **RQ**
Lead	ND	0.0050		mg/L	1	7/23/2002

Qualifiers:

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- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

Advanced Technology Laboratories

3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057996
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057996-002A	571-401-0	23	mg/Kg	9713	5	1	7/18/2002	7/24/2002
057996-003A	571-401-0.3	16	mg/Kg	9713	5	1	7/18/2002	7/24/2002
057996-004A	571-403-0	100	mg/Kg	9713	5	1	7/18/2002	7/24/2002
057996-005A	571-403-0.3	99	mg/Kg	9713	5	1	7/18/2002	7/24/2002
057996-006A	571-403-0.6	220	mg/Kg	9713	5	1	7/18/2002	7/24/2002
057996-007A	571-405-0	1800	mg/Kg	9713	5	1	7/18/2002	7/24/2002
057996-008A	571-405-0.3	9.5	mg/Kg	9713	5	1	7/18/2002	7/24/2002
057996-009A	571-405-0.6	230	mg/Kg	9713	5	1	7/18/2002	7/24/2002
057996-010A	571-405-0.9	18	mg/Kg	9713	5	1	7/18/2002	7/24/2002
057996-011A	571-405-1.5	32	mg/Kg	9713	5	1	7/18/2002	7/24/2002
057996-012A	571-406-0	1500	mg/Kg	9713	5	1	7/18/2002	7/24/2002

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Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057996
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057996-013A	571-406-0.3	ND	mg/Kg	9713	5	1	7/18/2002	7/24/2002
057996-014A	571-406-0.6	440	mg/Kg	9713	5	1	7/18/2002	7/24/2002
057996-015A	571-406-0.9	ND	mg/Kg	9713	5	1	7/18/2002	7/24/2002
057996-016A	571-406-1.5	42	mg/Kg	9713	5	1	7/18/2002	7/24/2002
057996-017A	571-407-0	3600	mg/Kg	9713	15	3	7/18/2002	7/24/2002
057996-018A	571-407-0.3	420	mg/Kg	9713	5	1	7/18/2002	7/24/2002
057996-019A	571-407-0.6	450	mg/Kg	9713	5	1	7/18/2002	7/24/2002
057996-020A	571-407-0.9	240	mg/Kg	9713	5	1	7/18/2002	7/24/2002
057996-021A	571-407-1.5	6.0	mg/Kg	9713	5	1	7/18/2002	7/24/2002
057996-022A	571-408-0	180	mg/Kg	9714	5	1	7/18/2002	7/24/2002
057996-023A	571-408-0.3	ND	mg/Kg	9714	5	1	7/18/2002	7/24/2002

Qualifiers:

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Advanced Technology Laboratories 3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057996
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057996-024A	571-408-0.6	190	mg/Kg	9714	5	1	7/18/2002	7/24/2002
057996-025A	571-408-0.9	ND	mg/Kg	9714	5	1	7/18/2002	7/24/2002
057996-026A	571-408-1.5	ND	mg/Kg	9714	5	1	7/18/2002	7/24/2002
057996-027A	571-409-0	9.5	mg/Kg	9714	5	1	7/18/2002	7/24/2002
057996-028A	571-409-0.3	6.0	mg/Kg	9714	5	1	7/18/2002	7/24/2002
057996-029A	571-409-0.6	16	mg/Kg	9714	5	1	7/18/2002	7/24/2002
057996-030A	571-409-0.9	6.5	mg/Kg	9714	5	1	7/18/2002	7/24/2002
057996-031A	571-409-1.5	20	mg/Kg	9714	5	1	7/18/2002	7/24/2002
057996-032A	571-411-0	340	mg/Kg	9714	5	1	7/18/2002	7/24/2002
057996-033A	571-411-0.3	14	mg/Kg	9714	5	1	7/18/2002	7/24/2002
057996-034A	571-411-0.6	300	mg/Kg	9714	5	1	7/18/2002	7/24/2002

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Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057996
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057996-035A	571-411-0.9	ND	mg/Kg	9714	5	1	7/18/2002	7/24/2002
057996-036A	571-411-1.5	7.0	mg/Kg	9714	5	1	7/18/2002	7/24/2002
057996-037A	571-422-0	17	mg/Kg	9714	5	1	7/18/2002	7/24/2002
057996-038A	571-422-0.3	12	mg/Kg	9714	5	1	7/18/2002	7/24/2002
057996-039A	571-422-0.6	82	mg/Kg	9714	5	1	7/18/2002	7/24/2002
057996-040A	571-422-0.9	ND	mg/Kg	9714	5	1	7/18/2002	7/24/2002
057996-041A	571-422-1.5	230	mg/Kg	9714	5	1	7/18/2002	7/24/2002
057996-042A	571-423-0	130	mg/Kg	9715	5	1	7/18/2002	7/24/2002
057996-043A	571-423-0.3	6.5	mg/Kg	9715	5	1	7/18/2002	7/24/2002
057996-044A	571-423-0.6	17	mg/Kg	9715	5	1	7/18/2002	7/24/2002
057996-045A	571-423-0.9	29	mg/Kg	9715	5	1	7/18/2002	7/24/2002

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Advanced Technology Laboratories *3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040*

Advanced Technology Laboratories

Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057996
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057996-046A	571-423-1.5	ND	mg/Kg	9715	5	1	7/18/2002	7/24/2002
057996-047A	571-425-0	53	mg/Kg	9715	5	1	7/18/2002	7/24/2002
057996-048A	571-425-0.3	ND	mg/Kg	9715	5	1	7/18/2002	7/24/2002
057996-049A	571-425-0.6	610	mg/Kg	9715	5	1	7/18/2002	7/24/2002
057996-050A	571-425-0.9	ND	mg/Kg	9715	5	1	7/18/2002	7/24/2002
057996-051A	571-425-1.5	26	mg/Kg	9715	5	1	7/18/2002	7/24/2002
057996-052A	571-326-0	440	mg/Kg	9715	5	1	7/18/2002	7/24/2002
057996-053A	571-326-0.3	14	mg/Kg	9715	5	1	7/18/2002	7/24/2002
057996-054A	571-326-0.6	170	mg/Kg	9715	5	1	7/18/2002	7/24/2002
057996-055A	571-326-0.9	19	mg/Kg	9715	5	1	7/18/2002	7/24/2002
057996-056A	571-326-1.5	18	mg/Kg	9715	5	1	7/18/2002	7/24/2002

Qualifiers:

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- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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Date: 7/25/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057996
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057996-057A	571-327-0	54	mg/Kg	9715	5	1	7/18/2002	7/24/2002
057996-058A	571-327-0.3	21	mg/Kg	9715	5	1	7/18/2002	7/24/2002
057996-059A	571-327-0.6	310	mg/Kg	9715	5	1	7/18/2002	7/24/2002
057996-060A	571-327-0.9	62	mg/Kg	9715	5	1	7/18/2002	7/24/2002

Qualifiers:

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- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
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Date: 7/25/2002

pH
EPA 9045C

CLIENT:	Ninyo & Moore	**Lab Order:**	057996
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057996-002A	571-401-0	7.61	pH Units	R19676	0.1	1	7/18/2002	7/23/2002
057996-011A	571-405-1.5	6.84	pH Units	R19676	0.1	1	7/18/2002	7/23/2002
057996-021A	571-407-1.5	7.72	pH Units	R19676	0.1	1	7/18/2002	7/23/2002
057996-031A	571-409-1.5	6.20	pH Units	R19676	0.1	1	7/18/2002	7/23/2002
057996-041A	571-422-1.5	7.78	pH Units	R19676	0.1	1	7/18/2002	7/23/2002
057996-051A	571-425-1.5	7.33	pH Units	R19676	0.1	1	7/18/2002	7/23/2002

Qualifiers:

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- S - Spike/Surrogate outside of limits due to matrix interferen
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- E - Value above quantitation range
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Date: 8/1/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057996
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057996-004A	571-403-0	4.8	mg/L	9922	0.2	1	7/18/2002	7/31/2002
057996-005A	571-403-0.3	4.0	mg/L	9922	0.2	1	7/18/2002	7/31/2002
057996-006A	571-403-0.6	5.3	mg/L	9922	0.2	1	7/18/2002	7/31/2002
057996-009A	571-405-0.6	55	mg/L	9901	1.6	8	7/18/2002	7/30/2002
057996-014A	571-406-0.6	20	mg/L	9901	0.8	4	7/18/2002	7/30/2002
057996-018A	571-407-0.3	13	mg/L	9901	0.4	2	7/18/2002	7/30/2002
057996-019A	571-407-0.6	13	mg/L	9901	0.4	2	7/18/2002	7/30/2002
057996-020A	571-407-0.9	13	mg/L	9901	0.4	2	7/18/2002	7/30/2002
057996-022A	571-408-0	2.1	mg/L	9901	0.2	1	7/18/2002	7/30/2002
057996-024A	571-408-0.6	6.2	mg/L	9901	0.2	1	7/18/2002	7/30/2002
057996-032A	571-411-0	5.0	mg/L	9901	0.2	1	7/18/2002	7/30/2002

Qualifiers:

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- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 8/1/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057996
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057996-034A	571-411-0.6	7.9	mg/L	9901	0.2	1	7/18/2002	7/30/2002
057996-039A	571-422-0.6	3.4	mg/L	9901	0.2	1	7/18/2002	7/30/2002
057996-041A	571-422-1.5	ND	mg/L	9901	0.2	1	7/18/2002	7/30/2002
057996-042A	571-423-0	2.2	mg/L	9901	0.2	1	7/18/2002	7/30/2002
057996-047A	571-425-0	2.8	mg/L	9901	0.2	1	7/18/2002	7/30/2002
057996-049A	571-425-0.6	22	mg/L	9901	0.8	4	7/18/2002	7/30/2002
057996-052A	571-326-0	31	mg/L	9901	0.8	4	7/18/2002	7/30/2002
057996-054A	571-326-0.6	24	mg/L	9901	0.8	4	7/18/2002	7/30/2002
057996-057A	571-327-0	2.2	mg/L	9901	0.2	1	7/18/2002	7/30/2002
057996-059A	571-327-0.6	23	mg/L	9901	0.8	4	7/18/2002	7/30/2002
057996-060A	571-327-0.9	4.6	mg/L	9901	0.2	1	7/18/2002	7/30/2002

Qualifiers:

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- J - Analyte detected below quantitation limits
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- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
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- Results are wet unless otherwise specified

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Date: 8/7/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057996
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057996-006A	571-403-0.6	ND	mg/L	10032	0.2	1	7/18/2002	8/7/2002
057996-009A	571-405-0.6	ND	mg/L	10032	0.2	1	7/18/2002	8/7/2002
057996-014A	571-406-0.6	ND	mg/L	10032	0.2	1	7/18/2002	8/7/2002
057996-018A	571-407-0.3	ND	mg/L	10032	0.2	1	7/18/2002	8/7/2002
057996-019A	571-407-0.6	ND	mg/L	10032	0.2	1	7/18/2002	8/7/2002
057996-020A	571-407-0.9	ND	mg/L	10032	0.2	1	7/18/2002	8/7/2002
057996-024A	571-408-0.6	ND	mg/L	10032	0.2	1	7/18/2002	8/7/2002
057996-034A	571-411-0.6	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057996-049A	571-425-0.6	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057996-052A	571-326-0	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002
057996-054A	571-326-0.6	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
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- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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Date: 8/7/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057996
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057996-059A	571-327-0.6	ND	mg/L	10033	0.2	1	7/18/2002	8/6/2002

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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Date: *13-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-405-0
Lab Order:	057996		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/18/2002 11:35:00 AM
Lab ID:	057996-007A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810B	QC Batch: 10213					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	3.7	2.5		mg/Kg	10	8/10/2002
Barium	170	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	2.0	1.5		mg/Kg	10	8/10/2002
Chromium	35	1.5		mg/Kg	10	8/10/2002
Cobalt	13	1.5		mg/Kg	10	8/10/2002
Copper	52	1.5		mg/Kg	10	8/10/2002
Molybdenum	2.6	2.5		mg/Kg	10	8/10/2002
Nickel	26	1.5		mg/Kg	10	8/10/2002
Selenium	7.1	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	48	1.5		mg/Kg	10	8/10/2002
Zinc	550	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020812C	QC Batch: 10168					Analyst: **NS**
Mercury	0.11	0.10		mg/Kg	1	8/12/2002

Qualifiers:

ND - Not Detected at the Reporting Limit
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DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interferen
H - Sample exceeded analytical holding time
E - Value above quantitation range
Results are wet unless otherwise specified

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Date: *13-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-407-0
Lab Order:	057996		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/18/2002 11:53:00 AM
Lab ID:	057996-017A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810B	QC Batch: 10213					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	4.8	2.5		mg/Kg	10	8/10/2002
Barium	150	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	2.6	1.5		mg/Kg	10	8/10/2002
Chromium	33	1.5		mg/Kg	10	8/10/2002
Cobalt	9.6	1.5		mg/Kg	10	8/10/2002
Copper	49	1.5		mg/Kg	10	8/10/2002
Molybdenum	3.4	2.5		mg/Kg	10	8/10/2002
Nickel	37	1.5		mg/Kg	10	8/10/2002
Selenium	7.6	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	47	1.5		mg/Kg	10	8/10/2002
Zinc	530	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020812C	QC Batch: 10168					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/12/2002

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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H - Sample exceeded analytical holding time
E - Value above quantitation range
Results are wet unless otherwise specified

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Date: *13-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-425-0
Lab Order:	057996		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/18/2002 1:21:00 PM
Lab ID:	057996-047A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810B	QC Batch: 10213					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	ND	2.5		mg/Kg	10	8/10/2002
Barium	130	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	13	1.5		mg/Kg	10	8/10/2002
Cobalt	9.3	1.5		mg/Kg	10	8/10/2002
Copper	16	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	8.4	1.5		mg/Kg	10	8/10/2002
Selenium	3.5	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	32	1.5		mg/Kg	10	8/10/2002
Zinc	56	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020812C	QC Batch: 10168					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/12/2002

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interferen
H - Sample exceeded analytical holding time
E - Value above quantitation range
Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 8/19/2002

LEAD BY ATOMIC ABSORPTION
EPA 1311/ 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057996
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/18/2002 7:16:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057996-007A	571-405-0	ND	mg/L	10088	0.2	1	7/18/2002	8/6/2002
057996-009A	571-405-0.6	1.1	mg/L	10399	0.2	1	7/18/2002	8/16/2002
057996-012A	571-406-0	0.68	mg/L	10088	0.2	1	7/18/2002	8/6/2002
057996-014A	571-406-0.6	0.58	mg/L	10399	0.2	1	7/18/2002	8/16/2002
057996-017A	571-407-0	1.3	mg/L	10088	0.2	1	7/18/2002	8/6/2002
057996-049A	571-425-0.6	5.3	mg/L	10399	0.2	1	7/18/2002	8/16/2002
057996-052A	571-326-0	2.4	mg/L	10399	0.2	1	7/18/2002	8/16/2002
057996-054A	571-326-0.6	2.3	mg/L	10399	0.2	1	7/18/2002	8/16/2002
057996-059A	571-327-0.6	0.84	mg/L	10399	0.2	1	7/18/2002	8/16/2002

Qualifiers:

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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interferen
H - Sample exceeded analytical holding time
E - Value above quantitation range
Results are wet unless otherwise specified

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CLIENT: Ninyo & Moore
Work Order: 057996
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10032

Sample ID: **MB-10032**	SampType: **mblk**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/7/2002**	Run ID: **AA2_020807B**
Client ID: **ZZZZZ**	Batch ID: **10032**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314816**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-10032A**	SampType: **mblk**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/1/2002**	Run ID: **AA2_020807B**
Client ID: **ZZZZZ**	Batch ID: **10032**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314817**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-10032B**	SampType: **mblk**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/1/2002**	Run ID: **AA2_020807B**
Client ID: **ZZZZZ**	Batch ID: **10032**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314830**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **LCS-10032**	SampType: **lcs**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/7/2002**	Run ID: **AA2_020807B**
Client ID: **ZZZZZ**	Batch ID: **10032**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314844**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.461	0.20	7.5	0	99.5	80	120	0	0		

Sample ID: **057976-049AMS**	SampType: **MS**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/7/2002**	Run ID: **AA2_020807B**
Client ID: **ZZZZZ**	Batch ID: **10032**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314829**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.906	0.20	5	0	98.1	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; S - Spike/Surrogate outside limits due to matrix interference; B - Analyte detected in the associated Method Blank; **Calculations are based on raw values**; DO - Surrogate diluted out; H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057996
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10032

Sample ID: 057996-024AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807B
Client ID: 571-408-0.6	Batch ID: 10032	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314842

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.887	0.20	5	0	97.7	80	120	0	0		

Sample ID: 057976-049ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807B
Client ID: ZZZZZ	Batch ID: 10032	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314828

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0	30	

Sample ID: 057996-024ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807B
Client ID: 571-408-0.6	Batch ID: 10032	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314841

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0	30	

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 057996
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10033

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID: **MB-10033** SampType: **MBLK** TestCode: **7420_DI** Units: **mg/L** Prep Date: **8/6/2002** Run ID: **AA2_020806F**											
Client ID: **ZZZZZ** Batch ID: **10033** TestNo: **WET DI/ EPA (WET)** Analysis Date: **8/6/2002** SeqNo: **314551**											
Lead	0.05628	0.20									
Sample ID: **MB-10033A** SampType: **MBLK** TestCode: **7420_DI** Units: **mg/L** Prep Date: **8/1/2002** Run ID: **AA2_020806F**											
Client ID: **ZZZZZ** Batch ID: **10033** TestNo: **WET DI/ EPA (WET)** Analysis Date: **8/6/2002** SeqNo: **314552**											
Lead	0.0534	0.20									
Sample ID: **MB-10033B** SampType: **MBLK** TestCode: **7420_DI** Units: **mg/L** Prep Date: **8/1/2002** Run ID: **AA2_020806F**											
Client ID: **ZZZZZ** Batch ID: **10033** TestNo: **WET DI/ EPA (WET)** Analysis Date: **8/6/2002** SeqNo: **314565**											
Lead	0.05983	0.20									
Sample ID: **LCS-10033** SampType: **LCS** TestCode: **7420_DI** Units: **mg/L** Prep Date: **8/6/2002** Run ID: **AA2_020806F**											
Client ID: **ZZZZZ** Batch ID: **10033** TestNo: **WET DI/ EPA (WET)** Analysis Date: **8/6/2002** SeqNo: **314579**											
Lead	7.432	0.20	7.5	0	99.1	80	120	0	0		
Sample ID: **057998-005AMS** SampType: **MS** TestCode: **7420_DI** Units: **mg/L** Prep Date: **8/6/2002** Run ID: **AA2_020806F**											
Client ID: **ZZZZZ** Batch ID: **10033** TestNo: **WET DI/ EPA (WET)** Analysis Date: **8/6/2002** SeqNo: **314564**											
Lead	5.233	0.20	5	0.06025	103	80	120	0	0		

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10033

Sample ID: 057998-018AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020806F
Client ID: ZZZZZ	Batch ID: 10033	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/6/2002	SeqNo: 314577

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.261	0.20	5	0.07802	104	80	120	0	0		

Sample ID: 057998-005ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020806F
Client ID: ZZZZZ	Batch ID: 10033	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/6/2002	SeqNo: 314563

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0.06025	0	30	

Sample ID: 057998-018ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020806F
Client ID: ZZZZZ	Batch ID: 10033	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/6/2002	SeqNo: 314576

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.1009	0.20	0	0	0	0	0	0.07802	0	30	J

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10088

Sample ID: MB-10088	SampType: mblk	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806I
Client ID: ZZZZZ	Batch ID: 10088	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314618

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10079-TCLP	SampType: mblk	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806I
Client ID: ZZZZZ	Batch ID: 10088	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314619

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10088	SampType: lcs	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806I
Client ID: ZZZZZ	Batch ID: 10088	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314633

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.169	0.20	1	0	117	80	120	0	0		

Sample ID: 057998-027AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806I
Client ID: ZZZZZ	Batch ID: 10088	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314631

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.157	0.20	2.5	3.691	98.7	80	120	0	0		

Sample ID: 057998-027ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806I
Client ID: ZZZZZ	Batch ID: 10088	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314630

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.031	0.20	0	0	0	0	0	3.691	19.6	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10168

Sample ID: MB-10168	SampType: MBLK	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812C
Client ID: ZZZZZ	Batch ID: 10168	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 316983

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-10168	SampType: LCS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812C
Client ID: ZZZZZ	Batch ID: 10168	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 316982

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.032	0.10	2.08	0	97.7	80	120	0	0		

Sample ID: 057999-016AMS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812C
Client ID: ZZZZZ	Batch ID: 10168	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 316980

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9936	0.10	0.83	0.05175	113	62	146	0	0		

Sample ID: 057999-016AMSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812C
Client ID: ZZZZZ	Batch ID: 10168	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 316981

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9878	0.10	0.83	0.05175	113	62	146	0.9936	0.582	33	

Sample ID: 057999-016ADUP	SampType: DUP	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812C
Client ID: ZZZZZ	Batch ID: 10168	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 316979

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0746	0.10	0	0	0	0	0	0.05175	0	30	J

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Work Order: 057996
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10213

Sample ID: MB-10213	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: ZZZZZ	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316634

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.1049	0.25									J
Arsenic	0.01134	0.25									J
Barium	ND	0.15									
Beryllium	0.001497	0.15									J
Cadmium	ND	0.15									
Chromium	ND	0.15									
Cobalt	0.008285	0.15									J
Copper	ND	0.15									
Molybdenum	0.03155	0.25									J
Nickel	0.02092	0.15									J
Selenium	ND	0.25									
Silver	0.04761	0.15									J
Thallium	0.1615	0.25									J
Vanadium	ND	0.15									
Zinc	0.2176	0.50									J

Sample ID: LCS-10213	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: ZZZZZ	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316633

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	47.62	0.25	50	0	95.2	80	120	0	0		
Arsenic	51.84	0.25	50	0	104	80	120	0	0		
Barium	48.27	0.15	50	0	96.5	80	120	0	0		
Beryllium	47.2	0.15	50	0	94.4	80	120	0	0		
Cadmium	48.14	0.15	50	0	96.3	80	120	0	0		
Chromium	47.49	0.15	50	0	95	80	120	0	0		
Cobalt	47.79	0.15	50	0	95.6	80	120	0	0		
Copper	46.09	0.15	50	0	92.2	80	120	0	0		
Molybdenum	49.16	0.25	50	0	98.3	80	120	0	0		
Nickel	46.3	0.15	50	0	92.6	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike/Surrogate outside limits due to matrix interference; DO - Surrogate diluted out
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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10213

Sample ID: LCS-10213	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: ZZZZZ	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316633

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	51.76	0.25	50	0	104	80	120	0	0		
Silver	46.17	0.15	50	0	92.3	80	120	0	0		
Thallium	49.01	0.25	50	0	98	80	120	0	0		
Vanadium	48.51	0.15	50	0	97	80	120	0	0		
Zinc	52.5	0.50	50	0	105	80	120	0	0		

Sample ID: 057997-003AMS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: ZZZZZ	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316630

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	79.9	2.5	125	2.788	61.7	32	115	0	0		
Arsenic	127.7	2.5	125	1.548	101	59	111	0	0		
Barium	257.1	1.5	125	117.9	111	34	151	0	0		
Beryllium	121.5	1.5	125	0	97.2	56	112	0	0		
Cadmium	127.6	1.5	125	0.3295	102	52	120	0	0		
Chromium	148.3	1.5	125	20.21	102	56	118	0	0		
Cobalt	143	1.5	125	15.43	102	58	117	0	0		
Copper	147.5	1.5	125	20.79	101	58	134	0	0		
Molybdenum	120.5	2.5	125	0.08681	96.4	56	115	0	0		
Nickel	142.3	1.5	125	16.95	100	52	120	0	0		
Selenium	140.4	2.5	125	5.02	108	46	108	0	0		S
Silver	114.4	1.5	125	0	91.5	74	117	0	0		
Thallium	114.6	2.5	125	0	91.7	62	117	0	0		
Vanadium	193.1	1.5	125	60.22	106	55	122	0	0		
Zinc	197.5	5.0	125	61.86	109	43	134	0	0		

Sample ID: 057997-003AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: ZZZZZ	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316631

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

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Calculations are based on raw values

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10213

Sample ID: 057997-003AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: ZZZZZ	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316631

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	80.18	2.5	125	2.788	61.9	32	115	79.9	0.348	20	
Arsenic	125.9	2.5	125	1.548	99.5	59	111	127.7	1.42	20	
Barium	244.9	1.5	125	117.9	102	34	151	257.1	4.87	20	
Beryllium	118.2	1.5	125	0	94.5	56	112	121.5	2.79	20	
Cadmium	127.4	1.5	125	0.3295	102	52	120	127.6	0.121	20	
Chromium	143.8	1.5	125	20.21	98.9	56	118	148.3	3.04	20	
Cobalt	142.2	1.5	125	15.43	101	58	117	143	0.570	20	
Copper	142.8	1.5	125	20.79	97.6	58	134	147.5	3.23	20	
Molybdenum	121.1	2.5	125	0.08681	96.8	56	115	120.5	0.434	20	
Nickel	140.8	1.5	125	16.95	99.1	52	120	142.3	1.04	20	
Selenium	134.4	2.5	125	5.02	104	46	108	140.4	4.35	20	
Silver	103.4	1.5	125	0	82.7	74	117	114.4	10.1	20	
Thallium	113.3	2.5	125	0	90.6	62	117	114.6	1.17	20	
Vanadium	184.2	1.5	125	60.22	99.2	55	122	193.1	4.72	20	
Zinc	192.3	5.0	125	61.86	104	43	134	197.5	2.66	20	

Sample ID: 057997-003ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: ZZZZZ	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316629

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.811	2.5	0	0	0	0	0	2.788	0.832	30	
Arsenic	0.1834	2.5	0	0	0	0	0	1.548	0	30	J
Barium	126.8	1.5	0	0	0	0	0	117.9	7.31	30	
Beryllium	ND	1.5	0	0	0	0	0	0	0	30	
Cadmium	0.3828	1.5	0	0	0	0	0	0.3295	0	30	J
Chromium	21.21	1.5	0	0	0	0	0	20.21	4.85	30	
Cobalt	16.27	1.5	0	0	0	0	0	15.43	5.30	30	
Copper	22	1.5	0	0	0	0	0	20.79	5.65	30	
Molybdenum	ND	2.5	0	0	0	0	0	0.08681	0	30	
Nickel	18.08	1.5	0	0	0	0	0	16.95	6.49	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10213

Sample ID: 057997-003ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: ZZZZZ	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316629

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	0.8151	2.5	0	0	0	0	0	5.02	0	30	J
Silver	ND	1.5	0	0	0	0	0	0	0	30	
Thallium	ND	2.5	0	0	0	0	0	0	0	30	
Vanadium	62.37	1.5	0	0	0	0	0	60.22	3.51	30	
Zinc	66.48	5.0	0	0	0	0	0	61.86	7.21	30	

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CLIENT: Ninyo & Moore
Work Order: 057996
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10399

Sample ID: MB-10399	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816B
Client ID: ZZZZZ	Batch ID: 10399	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319808

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10378-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816B
Client ID: ZZZZZ	Batch ID: 10399	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319809

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0		

Sample ID: LCS-10399	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816B
Client ID: ZZZZZ	Batch ID: 10399	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319823

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.111	0.20	1	0	111	80	120	0	0		

Sample ID: 057996-059AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816B
Client ID: 571-327-0.6	Batch ID: 10399	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319821

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.355	0.20	2.5	0.8373	101	80	120	0	0		

Sample ID: 057996-059ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816B
Client ID: 571-327-0.6	Batch ID: 10399	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319820

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.418	0.20	0	0	0	0	0	0.8373	51.5	30	R

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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
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CLIENT: Ninyo & Moore
Work Order: 057996
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9713

Sample ID: MB-9713A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP2_020724B
Client ID: ZZZZZ	Batch ID: 9713	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305338

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9713B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP2_020724B
Client ID: ZZZZZ	Batch ID: 9713	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305353

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.2705	5.0									J

Sample ID: LCS-9713	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP2_020724B
Client ID: ZZZZZ	Batch ID: 9713	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305339

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	255.5	5.0	250	0	102	80	120	0	0		

Sample ID: 057996-011AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP2_020724B
Client ID: 571-405-1.5	Batch ID: 9713	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305351

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	250.5	5.0	250	32.5	87.2	47	128	0	0		

Sample ID: 057996-021AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP2_020724B
Client ID: 571-407-1.5	Batch ID: 9713	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305365

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	239.5	5.0	250	6	93.4	47	128	0	0		

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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057996
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9713

Sample ID: 057996-011ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP2_020724B
Client ID: 571-405-1.5	Batch ID: 9713	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305350

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	10.5	5.0	0	0	0	0	0	32.5	102	30	R

Sample ID: 057996-021ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP2_020724B
Client ID: 571-407-1.5	Batch ID: 9713	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305364

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.5	5.0	0	0	0	0	0	6	8.70	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
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DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 057996
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9714

Sample ID: MB-9714A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP2_020724A
Client ID: ZZZZZ	Batch ID: 9714	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305308

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9714B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP2_020724A
Client ID: ZZZZZ	Batch ID: 9714	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305322

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9714	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP2_020724A
Client ID: ZZZZZ	Batch ID: 9714	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305309

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	261.5	5.0	250	0	105	80	120	0	0		

Sample ID: 057996-031AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP2_020724A
Client ID: 571-409-1.5	Batch ID: 9714	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305321

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	259	5.0	250	19.5	95.8	47	128	0	0		

Sample ID: 057996-041AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP2_020724A
Client ID: 571-422-1.5	Batch ID: 9714	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305334

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	394.5	5.0	250	225.5	67.6	47	128	0	0		

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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057996
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9714

Sample ID: 057996-031ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP2_020724A
Client ID: 571-409-1.5	Batch ID: 9714	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305320

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	27.5	5.0	0	0	0	0	0	19.5	34.0	30	R

Sample ID: 057996-041ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP2_020724A
Client ID: 571-422-1.5	Batch ID: 9714	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305333

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	163.5	5.0	0	0	0	0	0	225.5	31.9	30	R

Qualifiers: ND - Not Detected at the Reporting Limit
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Work Order: 057996
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ANALYTICAL QC SUMMARY REPORT

BatchID: 9715

Sample ID: MB-9715A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP2_020724C
Client ID: ZZZZZ	Batch ID: 9715	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305524

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9715B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP2_020724C
Client ID: ZZZZZ	Batch ID: 9715	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305538

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9715	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP2_020724C
Client ID: ZZZZZ	Batch ID: 9715	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305525

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	261.5	5.0	250	0	105	80	120	0	0		

Sample ID: 057996-051AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP2_020724C
Client ID: 571-425-1.5	Batch ID: 9715	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305537

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	251.5	5.0	250	26.5	90	47	128	0	0		

Sample ID: 057996-050AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP2_020724C
Client ID: 571-425-0.9	Batch ID: 9715	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305549

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	235.5	5.0	250	2.5	93.2	47	128	0	0		

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057996
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9715

Sample ID: 057996-051ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP2_020724C
Client ID: 571-425-1.5	Batch ID: 9715	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305536

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	16.5	5.0	0	0	0	0	0	26.5	46.5	30	R

Sample ID: 057996-050ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP2_020724C
Client ID: 571-425-0.9	Batch ID: 9715	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/24/2002	SeqNo: 305548

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.5	5.0	0	0	0	0	0	2.5	0	30	J

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Work Order: 057996
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9745

Sample ID: MB-9745	SampType: MBLK	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303590

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050									

Sample ID: LCS-9745	SampType: LCS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303591

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.96	0.0050	1	0	96	80	120	0	0		

Sample ID: 057999-001AMS	SampType: MS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303603

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.54	0.0050	2.5	0	102	66	118	0	0		

Sample ID: 057999-001ADUP	SampType: DUP	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303602

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050	0	0	0	0	0	0	0	30	

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Work Order: 057996
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9901

Sample ID: MB-9901	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020730C
Client ID: ZZZZZ	Batch ID: 9901	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310035

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.07992	0.20									

Sample ID: MB-9901A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020730C
Client ID: ZZZZZ	Batch ID: 9901	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310036

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05799	0.20									

Sample ID: MB-9901B	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020730C
Client ID: ZZZZZ	Batch ID: 9901	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310049

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9901	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020730C
Client ID: ZZZZZ	Batch ID: 9901	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310063

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.789	0.20	7.5	0	104	80	120	0	0		

Sample ID: 057996-039AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020730C
Client ID: 571-422-0.6	Batch ID: 9901	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310048

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.026	0.20	5	3.4	92.5	80	120	0	0		

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DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057996
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9901

Sample ID: 057997-009AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020730C
Client ID: ZZZZZ	Batch ID: 9901	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310061

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	264.5	6.4	160	112.2	95.2	80	120	0	0		

Sample ID: 057996-039ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020730C
Client ID: 571-422-0.6	Batch ID: 9901	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310047

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.97	0.20	0	0	0	0	0	3.4	15.5	30	

Sample ID: 057997-009ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020730C
Client ID: ZZZZZ	Batch ID: 9901	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 310060

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	112	3.2	0	0	0	0	0	112.2	0.115	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
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DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057996
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9922

Sample ID: MB-9922	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020731B
Client ID: ZZZZZ	Batch ID: 9922	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310443

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05552	0.20									

Sample ID: MB-9922A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020731B
Client ID: ZZZZZ	Batch ID: 9922	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310444

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.04871	0.20									

Sample ID: LCS-9922	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020731B
Client ID: ZZZZZ	Batch ID: 9922	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310451

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.702	0.20	7.5	0	103	80	120	0	0		

Sample ID: 057996-006AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020731B
Client ID: 571-403-0.6	Batch ID: 9922	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310449

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	15.44	0.40	10	5.342	101	80	120	0	0		

Sample ID: 057996-006ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/28/2002	Run ID: AA2_020731B
Client ID: 571-403-0.6	Batch ID: 9922	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310448

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.295	0.20	0	0	0	0	0	5.342	0.894	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057996
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: R19676

Sample ID: 057997-033ADUP	SampType: DUP	TestCode: 9045_S	Units: pH Units	Prep Date: 7/23/2002	Run ID: WETCHEM_020723E
Client ID: ZZZZZ	Batch ID: R19676	TestNo: EPA 9045C		Analysis Date: 7/23/2002	SeqNo: 303820

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.85	0.10	0	0	0	0	0	7.834	0.204	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Rachelle

From: Steve Reese [sreese@ninyoandmoore.com]
Sent: Wednesday, July 31, 2002 9:27 AM
To: 'rachelle@atlglobal.com'
Cc: David Shaler (E-mail); Ruth Cheung (E-mail)
Subject: TCLP Analysis

TCLP.xls

Rachelle,
Attached please find a list of samples to be run for the TCLP analysis. Currently, we selected all of the samples that are greater than 1,000 mg/kg
of TTLC results. However, they will be ran by instruction only. There may
be more samples chosen for TCLP analysis in the future, but please run these 82 samples for now. Please call with any questions.
Thank you, Steve

Stephen S. Reese
Senior Staff Environmental Scientist
Ninyo & Moore Geotechnical & Environmental Sciences Consultants
475 Goddard, Suite 200
Irvine, California 92618
Tel: (949) 753-7070
Fax: (949) 753-7071
Email: sreese@ninyoandmoore.com
www.ninyoandmoore.com

RUN FOR TCLP ANALYSIS			
33	**20**	**29**	**82**
569-101-0	570-101-0	571-104-0	
569-102-0	570-101-0.6	571-120-0	
569-102-0.3	570-102-0.6	571-310-0.9	
569-102-0.9	570-103-1.5	571-317-0	
569-111-0	570-114-0.6	571-320-0	
569-112-0	570-115-0	571-325-0.6	
569-112-0.6	570-119-0.3	571-507-0	
569-201-0	570-201-0	571-511-0	
569-212-0	570-214-0	571-514-0	
569-301-0	570-311-0.6	571-524-0	
569-303-0.9	570-312-0.6	571-710-0	
569-314-0	570-504-0	571-710-0.3	
569-401-0	570-508-0	571-711-0	
569-404-0.6	570-517-0	571-711-0.3	
569-405-0.6	570-517-0.3	571-712-0	
569-408-0.9	570-610-0.6	571-712-0.3	
569-502-0.6	570-615-0	571-201-0.6	
569-516-0	570-706-0	571-405-0	
569-603-0.3	570-709-0	571-406-0	
569-607-0	570-808-0.6	571-407-0	
569-607-0.3		571-414-0	
569-609-0		571-609-0	
569-609-0.3		571-611-0	
569-703-0		571-616-0	
569-703-0.9		571-617-0	
569-705-0		571-619-1.5	
569-705-0.3		571-814-0.3	
569-706-0		571-818-0.6	
569-708-0		571-819-0	
569-710-0			
569-711-0			
569-711-0.3			
569-801-0.3			

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Tuesday, August 06, 2002 3:46 PM
To: 'Rachelle'; 'David Shaler (E-mail)'
Subject: Title 22 Metals

Title 22 Metals.xls

Rachelle,
Please run the following samples for Title 22 Metals. Please do not list
Pb in your emailed results. There should be a total of 120 samples to be
run.
Thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

569-102-0.9	570-101-0	571-101-0.9
569-112-0	570-101-0.6	571-104-0
569-201-0	570-201-0	571-201-0.6
569-206-0.6	570-205-0.9	571-108-1.5
569-106-1.5	570-106-0.3	571-111-0.3
569-212-0	570-208-1.5	571-207-0
569-401-0.6	570-111-0.6	571-210-0.6
569-301-0	570-214-0	571-115-0.9
569-303-0.9	570-115-0.3	571-214-0.3
569-404-0.6	570-119-0.9	571-120-0
569-408-0.9	570-224-0.6	571-217-1.5
569-314-0	570-401-0	571-220-0.6
569-313-0.3	570-401-0.3	571-301-0.3
569-502-0.6	570-304-1.5	571-405-0
569-602-1.5	570-307-0.9	571-306-0.9
569-607-0.3	570-311-0.6	571-407-0
569-607-0	570-312-0.6	571-310-0.9
569-508-0.9	570-316-0.3	571-315-0.3
569-511-0.6	570-601-0	571-412-1.5
569-612-1.5	570-505-1.5	571-317-0
569-516-0	570-508-0	571-320-0.6
569-801-0.3	570-610-0.6	571-416-0.9
569-519-0.6	570-511-0.9	571-325-0.3
569-803-0.9	570-615-0	571-421-1.5
569-705-0	570-514-0.3	571-425-0
569-806-1.5	570-517-0	571-501-0.6
569-708-0.3	570-618-0.6	571-503-0.9
569-711-0	570-621-1.5	571-603-0.3
569-811-0	570-703-0.9	571-507-0
	570-804-0	571-609-0
	570-706-0	571-510-1.5
	570-709-0	571-611-0
	570-808-0.6	571-514-0
	570-711-1.5	571-614-0.3
	570-812-0.3	571-517-0.9
		571-617-0.6
		571-520-1.5
		571-621-0.3
		571-524-0
		571-624-0.9
		571-529-0.3
		571-628-0.6
		571-703-1.5
		571-707-0
		571-804-0.9
		571-809-0.3
		571-711-0
		571-712-0
		571-814-0.3
		571-818-0.6
		571-819-0
		571-827-1.5

571-832-0.9
571-836-0.3
571-837-0.6
571-842-0

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Thursday, August 08, 2002 9:14 AM
To: 'Rachelle'
Subject: TCLP Analysis

TCLP-3.xls

In addition to the 90 TCLP already run please run the following samples for
TCLP. There should be a list of 350 samples.
Thanks for a the hard work and timely results.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

-----Original Message-----
From: Rachelle [SMTP:Rachelle@ATLGlobal.com]
Sent: Wednesday, August 07, 2002 5:02 PM
To: 'David Shaler (E-mail)'
Cc: 'Ruth Cheung (E-mail)'
Subject: TCLP Results

<<57931TCLP.xls>> <<58001TCLP.xls>> <<58021TCLP.xls>> <<58022TCLP.xls>>
<<58023TCLP.xls>> <<58024TCLP.xls>> <<58049TCLP.xls>> <<58050TCLP.xls>>
<<58052TCLP.xls>> <<58053TCLP.xls>> <<58065TCLP.xls>> <<58066TCLP.xls>>
<<58067TCLP.xls>> <<58068TCLP.xls>> <<58069TCLP.xls>>

Rachelle Arada
Project Coordinator
www.atlglobal.com
voice: 562.989.4045 ext 237
fax : 562.989.4040

<< File: 57931TCLP.xls >> << File: 58001TCLP.xls >> << File: 58021TCLP.xls >> << File: 58022TCLP.xls >> << File: 58023TCLP.xls >> << File: 58024TCLP.xls >> << File: 58049TCLP.xls >> << File: 58050TCLP.xls >> << File: 58052TCLP.xls >> << File: 58053TCLP.xls >> << File: 58065TCLP.xls >> << File: 58066TCLP.xls >> << File: 58067TCLP.xls >> << File: 58068TCLP.xls >> << File: 58069TCLP.xls >>

569-404-0	2. STLC	170	570-515-0.3	2. STLC	120	571-521-0	2. STLC	230
569-402-0	2. STLC	130	570-811-0	2. STLC	110	571-324-0.9	2. STLC	110
569-406-0	2. STLC	120	570-114-0.0	2. STLC	110	571-818-0	2. STLC	110
569-515-0	2. STLC	110	570-504-0.6	2. STLC	100	571-819-0.6	2. STLC	110
569-611-0	2. STLC	100	570-811-1.5	2. STLC	90	571-708-0	2. STLC	110
569-409-0	2. STLC	94	570-615-0.6	2. STLC	84	571-103-0.6	2. STLC	110
569-603-0	2. STLC	93	570-305-0	2. STLC	79	571-617-0.3	2. STLC	100
569-104-0.6	2. STLC	91	570-314-0.6	2. STLC	76	571-611-0.6	2. STLC	92
569-807-0	2. STLC	86	570-505-0.6	2. STLC	75	571-712-0.9	2. STLC	81
569-608-0	2. STLC	86	570-208-0.6	2. STLC	74	571-105-0.6	2. STLC	81
569-501-0	2. STLC	84	570-116-0.0	2. STLC	73	571-313-0	2. STLC	79
569-710-0.3	2. STLC	83	570-102-0	2. STLC	65	571-508-0	2. STLC	73
569-808-0	2. STLC	83	570-804-0.6	2. STLC	64	571-518-0.3	2. STLC	73
569-609-0.6	2. STLC	80	570-704-0	2. STLC	63	571-217-0	2. STLC	68
569-803-0	2. STLC	79	570-508-0.6	2. STLC	60	571-516-0	2. STLC	66
569-105-0	2. STLC	78	570-706-0.3	2. STLC	60	571-701-0.3	2. STLC	66
569-512-0	2. STLC	77	570-303-0	2. STLC	58	571-710-0.6	2. STLC	65
569-513-0	2. STLC	77	570-311-1.5	2. STLC	58	571-512-0	2. STLC	64
569-302-0	2. STLC	74	570-117-0.0	2. STLC	58	571-308-0.9	2. STLC	61
569-805-0	2. STLC	73	570-208-0.3	2. STLC	58	571-701-0	2. STLC	61
569-517-0	2. STLC	71	570-709-0.6	2. STLC	57	571-514-0.3	2. STLC	59
569-704-0.3	2. STLC	71	570-703-0	2. STLC	55	571-415-0	2. STLC	58
569-703-0.6	2. STLC	70	570-206-0	2. STLC	54	571-616-0.6	2. STLC	57
569-514-0.3	2. STLC	70	570-301-0	2. STLC	53	571-517-0	2. STLC	56
569-803-0.3	2. STLC	69	570-603-0.3	2. STLC	46	571-112-0.9	2. STLC	56
569-409-0.6	2. STLC	69	570-711-0.6	2. STLC	46	571-214-0	2. STLC	55
569-411-0	2. STLC	68	570-206-0.3	2. STLC	45	571-415-0.3	2. STLC	55
569-102-0.6	2. STLC	68	570-103-0	2. STLC	44	571-405-0.6	2. STLC	55
569-809-0	2. STLC	65	570-602-0	2. STLC	41	571-530-0	2. STLC	55
569-605-0	2. STLC	65	570-209-0	2. STLC	40	571-831-0	2. STLC	53
569-711-0.6	2. STLC	62	570-210-0	2. STLC	40	571-709-0	2. STLC	53
569-806-0	2. STLC	60	570-117-0.3	2. STLC	39	571-103-0.0	2. STLC	52
569-802-0.3	2. STLC	60	570-103-0.6	2. STLC	37	571-312-0	2. STLC	51
569-410-0	2. STLC	59	570-110-0.6	2. STLC	37	571-526-0	2. STLC	51
569-501-0.6	2. STLC	59	570-805-0.9	2. STLC	36	571-819-1.5	2. STLC	51
569-808-0.3	2. STLC	58	570-112-1.5	2. STLC	35	571-515-0	2. STLC	50
569-104-0	2. STLC	56	570-614-0	2. STLC	34	571-833-0	2. STLC	49
569-804-0	2. STLC	54	570-713-0.3	2. STLC	33	571-815-0.6	2. STLC	47
569-610-0	2. STLC	54	570-513-0	2. STLC	32	571-517-0.3	2. STLC	46
569-608-0.3	2. STLC	53	570-312-0.3	2. STLC	31	571-610-0	2. STLC	46
569-213-0	2. STLC	49	570-503-0.6	2. STLC	31	571-413-0	2. STLC	46
569-701-0	2. STLC	47	570-510-0.6	2. STLC	31	571-815-0	2. STLC	45
569-311-0	2. STLC	47	570-202-0	2. STLC	31	571-514-0.9	2. STLC	44
569-609-0.9	2. STLC	46	570-207-0	2. STLC	31	571-505-1.5	2. STLC	44
569-513-0.3	2. STLC	45	570-209-0.3	2. STLC	31	571-528-0	2. STLC	44
569-801-0.6	2. STLC	44	570-703-0.3	2. STLC	30	571-610-0.6	2. STLC	43
569-514-0	2. STLC	42	570-401-0	2. STLC	30	571-629-0	2. STLC	43
569-805-0.6	2. STLC	42	570-610-0.9	2. STLC	29	571-604-0	2. STLC	42
569-408-1.5	2. STLC	42	570-809-0.6	2. STLC	29	571-213-0	2. STLC	41
569-807-0.3	2. STLC	40	570-509-0.9	2. STLC	29	571-812-0	2. STLC	41
569-204-0	2. STLC	40	570-210-0.6	2. STLC	29	571-706-0	2. STLC	41
569-517-0.3	2. STLC	36	570-211-0	2. STLC	29	571-530-0.6	2. STLC	41
569-518-0	2. STLC	36	570-603-0	2. STLC	28	571-305-0	2. STLC	40
569-806-0.3	2. STLC	36	570-119-0	2. STLC	28	571-523-0.3	2. STLC	39
569-705-1.5	2. STLC	35	570-713-0.6	2. STLC	28	571-510-0	2. STLC	39
569-303-0.6	2. STLC	34	570-108-0	2. STLC	27	571-305-0.9	2. STLC	39
569-516-0.3	2. STLC	33	570-708-0.6	2. STLC	27	571-818-1.5	2. STLC	39
569-705-0.6	2. STLC	33	570-224-0	2. STLC	26	571-703-0	2. STLC	38
569-802-0	2. STLC	33	570-601-0	2. STLC	26	571-520-0.3	2. STLC	36
569-515-0.6	2. STLC	32	570-710-0.6	2. STLC	26	571-216-0	2. STLC	34
569-704-0	2. STLC	32	570-614-0.6	2. STLC	26	571-827-0	2. STLC	34
569-401-0.3	2. STLC	32	570-118-0.3	2. STLC	26	571-708-0.3	2. STLC	34
569-207-0	2. STLC	32	570-304-0	2. STLC	25	571-514-0.6	2. STLC	33
569-608-0.6	2. STLC	31	570-707-0.6	2. STLC	25	571-528-1.5	2. STLC	33
569-104-0.3	2. STLC	31	570-510-0	2. STLC	25	571-803-0	2. STLC	33
569-201-0.6	2. STLC	30	570-110-0	2. STLC	24	571-414-0.3	2. STLC	33
569-515-0.3	2. STLC	28	570-223-0	2. STLC	24	571-813-0.3	2. STLC	32
569-212-0.6	2. STLC	28	570-117-0.6	2. STLC	24	571-523-0	2. STLC	31
569-103-0	2. STLC	28	570-616-0	2. STLC	23	571-326-0	2. STLC	31
569-313-0	2. STLC	27	570-704-0.3	2. STLC	22	571-502-0.6	2. STLC	31
569-103-0.3	2. STLC	26	570-513-0.6	2. STLC	22	571-624-1.5	2. STLC	31
569-705-0.9	2. STLC	25	570-221-0.0	2. STLC	22	571-330-0	2. STLC	31
569-707-0.3	2. STLC	25	570-617-0	2. STLC	21	571-512-0.3	2. STLC	30
569-515-1.5	2. STLC	24	570-214-0.3	2. STLC	21	571-521-0.6	2. STLC	29
569-508-0	2. STLC	24	570-122-0.9	2. STLC	20	571-706-0.3	2. STLC	29
569-801-0	2. STLC	24	570-313-0.6	2. STLC	19	571-814-0.6	2. STLC	28
569-402-0.6	2. STLC	24	570-207-0.6	2. STLC	19	571-616-1.5	2. STLC	28
569-516-0.6	2. STLC	22	570-120-0.9	2. STLC	18	571-835-0	2. STLC	28
569-509-0.3	2. STLC	22	570-506-0	2. STLC	18	571-811-0.3	2. STLC	28
569-106-0	2. STLC	22	570-102-0.9	2. STLC	17	571-101-0.6	2. STLC	28
569-106-0.3	2. STLC	22	570-216-0	2. STLC	17	571-112-0	2. STLC	28
569-202-0	2. STLC	21	570-225-0	2. STLC	17	571-315-0	2. STLC	27
569-805-1.5	2. STLC	21	570-304-0.3	2. STLC	17	571-622-0	2. STLC	27
569-205-0	2. STLC	20	570-409-0	2. STLC	17	571-607-0.6	2. STLC	27
569-707-0	2. STLC	19	570-713-0	2. STLC	17	571-609-0.6	2. STLC	27

569-709-0	2. STLC	19
569-202-0.3	2. STLC	19
569-602-0	2. STLC	19
569-207-0.3	2. STLC	19
569-706-0.3	2. STLC	17
569-807-0.9	2. STLC	17
569-104-0.9	2. STLC	17
569-505-0.6	2. STLC	17
569-704-0.6	2. STLC	16
569-808-0.6	2. STLC	16
569-212-0.3	2. STLC	16
569-612-0	2. STLC	16
569-704-1.5	2. STLC	15
569-411-0.3	2. STLC	15
569-113-0	2. STLC	15
569-807-0.6	2. STLC	14
569-311-0.3	2. STLC	12
569-312-0	2. STLC	10
569-311-0.9	2. STLC	8.3

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570-401-0.3	2. STLC	17
570-616-0.6	2. STLC	17
570-308-0	2. STLC	16
570-807-0.9	2. STLC	16
570-701-0.6	2. STLC	16
570-617-0.3	2. STLC	16
570-107-0.6	2. STLC	15
570-811-0.6	2. STLC	15
570-707-0	2. STLC	15
570-518-0	2. STLC	15
570-111-0.0	2. STLC	15
570-109-0.6	2. STLC	14
570-401-0.9	2. STLC	4.1
570-408-0	2. STLC	4
570-409-0.3	2. STLC	3
570-401-0.6		0
570-401-1.5		0
570-408-0.6		0
570-408-1.5		0

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571-837-0.3	2. STLC	27
571-520-0	2. STLC	26
571-516-0.3	2. STLC	26
571-420-0	2. STLC	26
571-102-0.6	2. STLC	26
571-517-1.5	2. STLC	25
571-513-0.6	2. STLC	25
571-623-0.6	2. STLC	25
571-112-0.3	2. STLC	25
571-326-0.6	2. STLC	24
571-619-0.3	2. STLC	24
571-519-0.9	2. STLC	24
571-528-0.3	2. STLC	24
571-706-0.6	2. STLC	24
571-112-0.6	2. STLC	24
571-327-0.6	2. STLC	23
571-817-0	2. STLC	23
571-425-0.6	2. STLC	22
571-118-0	2. STLC	22
571-829-0	2. STLC	22
571-828-0	2. STLC	22
571-122-0	2. STLC	21
571-101-1.5	2. STLC	21
571-530-0.3	2. STLC	21
571-406-0.6	2. STLC	20
571-517-0.6	2. STLC	20
571-835-0.3	2. STLC	20
571-501-0	2. STLC	20
571-518-0.9	2. STLC	19
571-510-0.3	2. STLC	19
571-814-0.9	2. STLC	19
571-522-0.6	2. STLC	19
571-622-1.5	2. STLC	19
571-812-0.6	2. STLC	19
571-701-0.6	2. STLC	19
571-704-0	2. STLC	19
571-711-0.6	2. STLC	19
571-212-0	2. STLC	18
571-839-0.6	2. STLC	18
571-610-1.5	2. STLC	18
571-709-0.3	2. STLC	18
571-311-0.6	2. STLC	17
571-620-0	2. STLC	17
571-109-0	2. STLC	17
571-704-0.3	2. STLC	17
571-207-1.5	2. STLC	16
571-203-0	2. STLC	16
571-616-0.3	2. STLC	16
571-317-0.3	2. STLC	16
571-629-0.3	2. STLC	16
571-416-0	2. STLC	15
571-419-0	2. STLC	15
571-526-0.3	2. STLC	15
571-619-0	2. STLC	15
571-606-0	2. STLC	15
571-115-0.6	2. STLC	14
571-202-0.9	2. STLC	11

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WorkOrder	ClientSampID	TestNo	Analyte	PQL	DF	CollectionDate	AnalDate	PrepDate
057996	571-326-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/16/2002	8/15/2002
057996	571-326-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-326-0	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/1/2002
057996	571-326-0	WET/ EPA 7420	Lead	0.8	4	7/18/2002	7/30/2002	7/28/2002
057996	571-326-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-326-0.6	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/16/2002	8/15/2002
057996	571-326-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-326-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/1/2002
057996	571-326-0.6	WET/ EPA 7420	Lead	0.8	4	7/18/2002	7/30/2002	7/28/2002
057996	571-326-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-326-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-327-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-327-0	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/30/2002	7/28/2002
057996	571-327-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-327-0.6	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/16/2002	8/15/2002
057996	571-327-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-327-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/1/2002
057996	571-327-0.6	WET/ EPA 7420	Lead	0.8	4	7/18/2002	7/30/2002	7/28/2002
057996	571-327-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-327-0.9	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/30/2002	7/28/2002
057996	571-401-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-401-0	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
057996	571-401-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-403-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-403-0	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/31/2002	7/28/2002
057996	571-403-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-403-0.3	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/31/2002	7/28/2002
057996	571-403-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-403-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
057996	571-403-0.6	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/31/2002	7/28/2002
057996	571-405-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/5/2002
057996	571-405-0	EPA 6010B	Antimony	2.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-405-0	EPA 6010B	Arsenic	2.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-405-0	EPA 6010B	Barium	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-405-0	EPA 6010B	Beryllium	1.5	10	7/18/2002	8/10/2002	8/8/2002

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057996	571-405-0	EPA 6010B	Cadmium	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-405-0	EPA 6010B	Chromium	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-405-0	EPA 6010B	Cobalt	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-405-0	EPA 6010B	Copper	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-405-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-405-0	EPA 6010B	Molybdenum	2.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-405-0	EPA 6010B	Nickel	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-405-0	EPA 6010B	Selenium	2.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-405-0	EPA 6010B	Silver	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-405-0	EPA 6010B	Thallium	2.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-405-0	EPA 6010B	Vanadium	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-405-0	EPA 6010B	Zinc	5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-405-0	EPA 7471A	Mercury	0.1	1	7/18/2002	8/12/2002	8/7/2002
057996	571-405-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-405-0.6	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/16/2002	8/15/2002
057996	571-405-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-405-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
057996	571-405-0.6	WET/ EPA 7420	Lead	1.6	8	7/18/2002	7/30/2002	7/28/2002
057996	571-405-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-405-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-405-1.5	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
057996	571-406-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/5/2002
057996	571-406-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-406-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-406-0.6	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/16/2002	8/15/2002
057996	571-406-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-406-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
057996	571-406-0.6	WET/ EPA 7420	Lead	0.8	4	7/18/2002	7/30/2002	7/28/2002
057996	571-406-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-406-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-407-0	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/5/2002
057996	571-407-0	EPA 6010B	Antimony	2.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-407-0	EPA 6010B	Arsenic	2.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-407-0	EPA 6010B	Barium	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-407-0	EPA 6010B	Beryllium	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-407-0	EPA 6010B	Cadmium	1.5	10	7/18/2002	8/10/2002	8/8/2002

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057996	571-407-0	EPA 6010B	Chromium	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-407-0	EPA 6010B	Cobalt	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-407-0	EPA 6010B	Copper	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-407-0	EPA 6010B	Lead	15	3	7/18/2002	7/24/2002	7/19/2002
057996	571-407-0	EPA 6010B	Molybdenum	2.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-407-0	EPA 6010B	Nickel	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-407-0	EPA 6010B	Selenium	2.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-407-0	EPA 6010B	Silver	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-407-0	EPA 6010B	Thallium	2.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-407-0	EPA 6010B	Vanadium	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-407-0	EPA 6010B	Zinc	5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-407-0	EPA 7471A	Mercury	0.1	1	7/18/2002	8/12/2002	8/7/2002
057996	571-407-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-407-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
057996	571-407-0.3	WET/ EPA 7420	Lead	0.4	2	7/18/2002	7/30/2002	7/28/2002
057996	571-407-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-407-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
057996	571-407-0.6	WET/ EPA 7420	Lead	0.4	2	7/18/2002	7/30/2002	7/28/2002
057996	571-407-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-407-0.9	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
057996	571-407-0.9	WET/ EPA 7420	Lead	0.4	2	7/18/2002	7/30/2002	7/28/2002
057996	571-407-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-407-1.5	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
057996	571-408-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-408-0	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/30/2002	7/28/2002
057996	571-408-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-408-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-408-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/7/2002	8/1/2002
057996	571-408-0.6	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/30/2002	7/28/2002
057996	571-408-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-408-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-409-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-409-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-409-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-409-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-409-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002

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057996	571-409-1.5	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
057996	571-411-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-411-0	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/30/2002	7/28/2002
057996	571-411-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-411-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-411-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/1/2002
057996	571-411-0.6	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/30/2002	7/28/2002
057996	571-411-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-411-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-422-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-422-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-422-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-422-0.6	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/30/2002	7/28/2002
057996	571-422-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-422-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-422-1.5	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
057996	571-422-1.5	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/30/2002	7/28/2002
057996	571-423-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-423-0	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/30/2002	7/28/2002
057996	571-423-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-423-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-423-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-423-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-425-0	EPA 6010B	Antimony	2.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-425-0	EPA 6010B	Arsenic	2.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-425-0	EPA 6010B	Barium	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-425-0	EPA 6010B	Beryllium	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-425-0	EPA 6010B	Cadmium	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-425-0	EPA 6010B	Chromium	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-425-0	EPA 6010B	Cobalt	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-425-0	EPA 6010B	Copper	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-425-0	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-425-0	EPA 6010B	Molybdenum	2.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-425-0	EPA 6010B	Nickel	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-425-0	EPA 6010B	Selenium	2.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-425-0	EPA 6010B	Silver	1.5	10	7/18/2002	8/10/2002	8/8/2002

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057996	571-425-0	EPA 6010B	Thallium	2.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-425-0	EPA 6010B	Vanadium	1.5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-425-0	EPA 6010B	Zinc	5	10	7/18/2002	8/10/2002	8/8/2002
057996	571-425-0	EPA 7471A	Mercury	0.1	1	7/18/2002	8/12/2002	8/7/2002
057996	571-425-0	WET/ EPA 7420	Lead	0.2	1	7/18/2002	7/30/2002	7/28/2002
057996	571-425-0.3	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-425-0.6	EPA 1311/ 7420	Lead	0.2	1	7/18/2002	8/16/2002	8/15/2002
057996	571-425-0.6	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-425-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/18/2002	8/6/2002	8/1/2002
057996	571-425-0.6	WET/ EPA 7420	Lead	0.8	4	7/18/2002	7/30/2002	7/28/2002
057996	571-425-0.9	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-425-1.5	EPA 6010B	Lead	5	1	7/18/2002	7/24/2002	7/19/2002
057996	571-425-1.5	EPA 9045C	pH	0.1	1	7/18/2002	7/23/2002	7/23/2002
057996	EB-16	EPA 6010B	Lead	0.005	1	7/18/2002	7/23/2002	7/22/2002

August 15, 2002

David Shaler
Ninyo & Moore
475 Goddard Suite 200
Irvine, CA 92618
TEL: (949) 753-7070
FAX: (949) 753-7071

ELAP No.: 1838
NELAP No.: 02107CA
Workorder No.: 057976

RE: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

Attention: David Shaler

Enclosed are the results for sample(s) received on July 17, 2002 by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

RECEIVED
AUG 2 6 2002
NINYO & MOORE
ORANGE COUNTY OFFICE

This cover letter is an integral part of this analytical report.

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) [illegible] 7-17-02
Received by: (name/date/time) [illegible] 7/17/02

Relinquished by: (name/date/time) [illegible] 7/17/02 1725
Received by: (name/date/time) [illegible] 7/17/02 17:25pm

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB- 11	7/17/02	15:35	P	X	
	571- 214 -0		8:40	B	X	X
	571- 214 -0.3		8:43		X	
	571- 214 -0.6		8:47		X	
	571- 215 -0		8:50		X	
	571- 215 -0.3		8:52		X	
	571- 215 -0.6		8:57		X	
	571- 215 -0.9		8:50		X	
	571- 216 -0		9:00		X	
	571- 216 -0.3		9:02		X	
	571- 216 -0.6		9:09		X	
	571- 217 -0		9:01		X	X
	571- 217 -0.3		9:09		X	
	571- 217 -0.6		9:13		X	
	571- 218 -0		9:15		X	
	571- 218 -0.6		9:17		X	
	571- 218 -0.9		9:19		X	
	571- 219 -0		9:32		X	
	571- 219 -0.3		9:35		X	
	571- 219 -0.6		9:37		X	
	571- 219 -0.9		9:40		X	
	571- 219 -1.5		9:44		X	
	571- 220 -0		9:30		X	X
	571- 220 -0.3		9:56		X	
	571- 220 -0.6		9:71		X	
	571- 220 -0.9		9:49		X	
	571- 220 -1.5		9:54		X	
	571- 402 -0		10:07		X	
	571- 402 -0.3		10:13		X	
	571- 402 -0.6		10:19		X	
	571- 404 -0		10:13		X	
	571- 404 -0.3		10:17		X	
	571- 415 -0		10:43		X	
	571- 415 -0.3		10:47		X	X
	571- 415 -0.6		10:53		X	
	571- 416 -0		10:47		X	
	571- 416 -0.3		10:51		X	
	571- 416 -0.6		10:54		X	
	571- 416 -0.9		10:57		X	
	571- 417 -0		11:11		X	
	571- 417 -0.3		11:15		X	
	571- 418 -0		11:10		X	
	571- 419 -0		12:48		X	
	571- 419 -0.3		12:52		X	
	571- 419 -0.6		12:55		X	X
	571- 419 -0.9		1:00		X	
	571- 419 -1.5		1:06		X	
	571- 420 -0		13:05		X	
	571- 420 -0.3		13:07		X	
	571- 420 -0.6		13:16		X	
	571- 421 -0		12:50		X	
	571- 424 -0		1:20		X	
	571- 424 -0.3		1:23		X	
	571- 424 -0.6		1:27		X	
	571- 304 -0		1:50		X	
	571- 304 -0.3		1:52		X	X
	571- 304 -0.6		1:57		X	
	571- 304 -0.9		2:00		X	
	571- 302 -0		13:49		X	
	571- 302 -0.3		13:54		X	

Total # of samples: 60

Advanced Technology Laboratories

Date: *24-Jul-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	EB-11
Lab Order:	057976		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/17/2002 3:35:00 PM
Lab ID:	057976-001A	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	(EPA 3010A)			**EPA 6010B**		
RunID: ICP2_020723B	QC Batch: 9745					Analyst: **RQ**
Lead	ND	0.0050		mg/L	1	7/23/2002

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- E - Value above quantitation range
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Advanced Technology Laboratories *3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040*

Advanced Technology Laboratories

Date: 7/29/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057976
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057976-002A	571-214-0	640	mg/Kg	9644	5	1	7/17/2002	7/22/2002
057976-003A	571-214-0.3	1000	mg/Kg	9644	5	1	7/17/2002	7/22/2002
057976-004A	571-214-0.6	87	mg/Kg	9644	5	1	7/17/2002	7/22/2002
057976-005A	571-215-0	170	mg/Kg	9644	5	1	7/17/2002	7/22/2002
057976-006A	571-215-0.3	23	mg/Kg	9644	5	1	7/17/2002	7/22/2002
057976-007A	571-215-0.6	13	mg/Kg	9644	5	1	7/17/2002	7/22/2002
057976-008A	571-215-0.9	86	mg/Kg	9644	5	1	7/17/2002	7/22/2002
057976-009A	571-216-0	360	mg/Kg	9644	5	1	7/17/2002	7/22/2002
057976-010A	571-216-0.3	28	mg/Kg	9644	5	1	7/17/2002	7/22/2002
057976-011A	571-216-0.6	76	mg/Kg	9644	5	1	7/17/2002	7/22/2002
057976-012A	571-217-0	990	mg/Kg	9644	5	1	7/17/2002	7/22/2002

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Advanced Technology Laboratories

Date: 7/29/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057976
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057976-013A	571-217-0.3	83	mg/Kg	9688	5	1	7/17/2002	7/22/2002
057976-014A	571-217-0.6	91	mg/Kg	9688	5	1	7/17/2002	7/22/2002
057976-015A	571-218-0	110	mg/Kg	9688	5	1	7/17/2002	7/22/2002
057976-016A	571-218-0.3	8.5	mg/Kg	9688	5	1	7/17/2002	7/22/2002
057976-017A	571-218-0.6	25	mg/Kg	9688	5	1	7/17/2002	7/22/2002
057976-018A	571-219-0	31	mg/Kg	9688	5	1	7/17/2002	7/22/2002
057976-019A	571-219-0.3	51	mg/Kg	9688	5	1	7/17/2002	7/22/2002
057976-020A	571-219-0.6	21	mg/Kg	9688	5	1	7/17/2002	7/22/2002
057976-021A	571-219-0.9	10	mg/Kg	9688	5	1	7/17/2002	7/22/2002
057976-022A	571-219-1.5	30	mg/Kg	9688	5	1	7/17/2002	7/22/2002
057976-023A	571-220-0	66	mg/Kg	9688	5	1	7/17/2002	7/22/2002

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Advanced Technology Laboratories

Date: 7/29/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057976
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057976-024A	571-220-0.3	21	mg/Kg	9688	5	1	7/17/2002	7/22/2002
057976-025A	571-220-0.6	20	mg/Kg	9688	5	1	7/17/2002	7/22/2002
057976-026A	571-220-0.9	27	mg/Kg	9688	5	1	7/17/2002	7/22/2002
057976-027A	571-220-1.5	25	mg/Kg	9688	5	1	7/17/2002	7/22/2002
057976-028A	571-402-0	100	mg/Kg	9688	5	1	7/17/2002	7/22/2002
057976-029A	571-402-0.3	34	mg/Kg	9688	5	1	7/17/2002	7/22/2002
057976-030A	571-402-0.6	15	mg/Kg	9688	5	1	7/17/2002	7/22/2002
057976-031A	571-404-0	110	mg/Kg	9688	5	1	7/17/2002	7/22/2002
057976-032A	571-404-0.3	210	mg/Kg	9688	5	1	7/17/2002	7/22/2002
057976-033A	571-415-0	790	mg/Kg	9689	5	1	7/17/2002	7/22/2002
057976-034A	571-415-0.3	880	mg/Kg	9689	5	1	7/17/2002	7/22/2002

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Date: 7/29/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057976
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057976-035A	571-415-0.6	210	mg/Kg	9689	5	1	7/17/2002	7/22/2002
057976-036A	571-416-0	110	mg/Kg	9689	5	1	7/17/2002	7/22/2002
057976-037A	571-416-0.3	67	mg/Kg	9689	5	1	7/17/2002	7/22/2002
057976-038A	571-416-0.6	6.5	mg/Kg	9689	5	1	7/17/2002	7/22/2002
057976-039A	571-416-0.9	5.5	mg/Kg	9689	5	1	7/17/2002	7/22/2002
057976-040A	571-417-0	46	mg/Kg	9689	5	1	7/17/2002	7/22/2002
057976-041A	571-417-0.3	48	mg/Kg	9689	5	1	7/17/2002	7/22/2002
057976-042A	571-418-0	240	mg/Kg	9689	5	1	7/17/2002	7/22/2002
057976-043A	571-419-0	280	mg/Kg	9689	5	1	7/17/2002	7/22/2002
057976-044A	571-419-0.3	49	mg/Kg	9689	5	1	7/17/2002	7/22/2002
057976-045A	571-419-0.6	21	mg/Kg	9689	5	1	7/17/2002	7/22/2002

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Advanced Technology Laboratories

Date: 7/29/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057976
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057976-046A	571-419-0.9	8.4	mg/Kg	9689	5	1	7/17/2002	7/22/2002
057976-047A	571-419-1.5	8.1	mg/Kg	9689	5	1	7/17/2002	7/22/2002
057976-048A	571-420-0	380	mg/Kg	9689	5	1	7/17/2002	7/22/2002
057976-049A	571-420-0.3	240	mg/Kg	9689	5	1	7/17/2002	7/22/2002
057976-050A	571-420-06	360	mg/Kg	9689	5	1	7/17/2002	7/22/2002
057976-051A	571-421-0	130	mg/Kg	9689	5	1	7/17/2002	7/22/2002
057976-052A	571-424-0	18	mg/Kg	9689	5	1	7/17/2002	7/22/2002
057976-053A	571-424-0.3	25	mg/Kg	9690	5	1	7/17/2002	7/23/2002
057976-054A	571-424-0.6	6.2	mg/Kg	9690	5	1	7/17/2002	7/23/2002
057976-055A	571-304-0	9.6	mg/Kg	9690	5	1	7/17/2002	7/23/2002
057976-056A	571-304-0.3	36	mg/Kg	9690	5	1	7/17/2002	7/23/2002

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Advanced Technology Laboratories

Date: 7/29/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057976
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057976-057A	571-304-0.6	18	mg/Kg	9690	5	1	7/17/2002	7/23/2002
057976-058A	571-304-0.9	7.9	mg/Kg	9690	5	1	7/17/2002	7/23/2002
057976-059A	571-302-0	310	mg/Kg	9690	5	1	7/17/2002	7/23/2002
057976-060A	571-302-0.3	56	mg/Kg	9690	5	1	7/17/2002	7/23/2002

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Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 7/29/2002

pH
EPA 9045C

CLIENT:	Ninyo & Moore	**Lab Order:**	057976
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057976-002A	571-214-0	5.88	pH Units	R19672	0.1	1	7/17/2002	7/23/2002
057976-012A	571-217-0	6.73	pH Units	R19672	0.1	1	7/17/2002	7/23/2002
057976-023A	571-220-0	7.93	pH Units	R19672	0.1	1	7/17/2002	7/23/2002
057976-034A	571-415-0.3	7.55	pH Units	R19672	0.1	1	7/17/2002	7/23/2002
057976-045A	571-419-0.6	8.18	pH Units	R19675	0.1	1	7/17/2002	7/23/2002
057976-056A	571-304-0.3	7.57	pH Units	R19675	0.1	1	7/17/2002	7/23/2002

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3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 8/1/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057976
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057976-002A	571-214-0	55	mg/L	9897	1.6	8	7/17/2002	7/31/2002
057976-004A	571-214-0.6	3.8	mg/L	9897	0.2	1	7/17/2002	7/31/2002
057976-005A	571-215-0	11	mg/L	9897	0.4	2	7/17/2002	7/31/2002
057976-008A	571-215-0.9	2.3	mg/L	9897	0.2	1	7/17/2002	7/31/2002
057976-009A	571-216-0	34	mg/L	9897	0.8	4	7/17/2002	7/31/2002
057976-011A	571-216-0.6	2.5	mg/L	9898	0.2	1	7/17/2002	7/29/2002
057976-012A	571-217-0	68	mg/L	9898	1.6	8	7/17/2002	7/29/2002
057976-013A	571-217-0.3	4.1	mg/L	9898	0.2	1	7/17/2002	7/29/2002
057976-014A	571-217-0.6	4.9	mg/L	9898	0.2	1	7/17/2002	7/29/2002
057976-015A	571-218-0	4.3	mg/L	9898	0.2	1	7/17/2002	7/29/2002
057976-019A	571-219-0.3	1.7	mg/L	9898	0.2	1	7/17/2002	7/29/2002

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Advanced Technology Laboratories

Date: 8/1/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057976
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057976-023A	571-220-0	2.8	mg/L	9898	0.2	1	7/17/2002	7/29/2002
057976-028A	571-402-0	7.6	mg/L	9898	0.2	1	7/17/2002	7/29/2002
057976-031A	571-404-0	11	mg/L	9898	0.4	2	7/17/2002	7/29/2002
057976-032A	571-404-0.3	8.3	mg/L	9898	0.2	1	7/17/2002	7/29/2002
057976-033A	571-415-0	58	mg/L	9898	1.6	8	7/17/2002	7/29/2002
057976-034A	571-415-0.3	55	mg/L	9898	1.6	8	7/17/2002	7/29/2002
057976-035A	571-415-0.6	13	mg/L	9898	0.4	2	7/17/2002	7/29/2002
057976-036A	571-416-0	15	mg/L	9898	0.4	2	7/17/2002	7/29/2002
057976-037A	571-416-0.3	5.2	mg/L	9898	0.2	1	7/17/2002	7/29/2002
057976-042A	571-418-0	9.8	mg/L	9898	0.2	1	7/17/2002	7/29/2002
057976-043A	571-419-0	15	mg/L	9898	0.4	2	7/17/2002	7/29/2002

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LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057976
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057976-048A	571-420-0	26	mg/L	9898	0.8	4	7/17/2002	7/29/2002
057976-049A	571-420-0.3	8.9	mg/L	9898	0.2	1	7/17/2002	7/29/2002
057976-050A	571-420-06	12	mg/L	9898	0.4	2	7/17/2002	7/29/2002
057976-051A	571-421-0	6.3	mg/L	9899	0.2	1	7/17/2002	7/30/2002
057976-059A	571-302-0	12	mg/L	9899	0.4	2	7/17/2002	7/30/2002
057976-060A	571-302-0.3	1.6	mg/L	9899	0.2	1	7/17/2002	7/30/2002

Qualifiers:

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DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interferen
H - Sample exceeded analytical holding time
E - Value above quantitation range
Results are wet unless otherwise specified

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 8/7/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057976
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057976-002A	571-214-0	ND	mg/L	10031	0.2	1	7/17/2002	8/7/2002
057976-005A	571-215-0	ND	mg/L	10031	0.2	1	7/17/2002	8/7/2002
057976-009A	571-216-0	ND	mg/L	10031	0.2	1	7/17/2002	8/7/2002
057976-012A	571-217-0	ND	mg/L	10031	0.2	1	7/17/2002	8/7/2002
057976-028A	571-402-0	ND	mg/L	10031	0.2	1	7/17/2002	8/7/2002
057976-031A	571-404-0	ND	mg/L	10031	0.2	1	7/17/2002	8/7/2002
057976-032A	571-404-0.3	ND	mg/L	10032	0.2	1	7/17/2002	8/7/2002
057976-033A	571-415-0	ND	mg/L	10032	0.2	1	7/17/2002	8/7/2002
057976-034A	571-415-0.3	ND	mg/L	10032	0.2	1	7/17/2002	8/7/2002
057976-035A	571-415-0.6	ND	mg/L	10032	0.2	1	7/17/2002	8/7/2002
057976-036A	571-416-0	ND	mg/L	10032	0.2	1	7/17/2002	8/7/2002

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Date: 8/7/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057976
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057976-037A	571-416-0.3	ND	mg/L	10032	0.2	1	7/17/2002	8/7/2002
057976-042A	571-418-0	ND	mg/L	10032	0.2	1	7/17/2002	8/7/2002
057976-043A	571-419-0	ND	mg/L	10032	0.2	1	7/17/2002	8/7/2002
057976-048A	571-420-0	0.24	mg/L	10032	0.2	1	7/17/2002	8/7/2002
057976-049A	571-420-0.3	ND	mg/L	10032	0.2	1	7/17/2002	8/7/2002
057976-050A	571-420-06	ND	mg/L	10032	0.2	1	7/17/2002	8/7/2002
057976-051A	571-421-0	ND	mg/L	10032	0.2	1	7/17/2002	8/7/2002
057976-059A	571-302-0	ND	mg/L	10032	0.2	1	7/17/2002	8/7/2002

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Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-214-0.3
Lab Order:	057976		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/17/2002 8:43:00 AM
Lab ID:	057976-003A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810A	QC Batch: 10212					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	ND	2.5		mg/Kg	10	8/10/2002
Barium	130	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	31	1.5		mg/Kg	10	8/10/2002
Cobalt	13	1.5		mg/Kg	10	8/10/2002
Copper	55	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	24	1.5		mg/Kg	10	8/10/2002
Selenium	13	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	49	1.5		mg/Kg	10	8/10/2002
Zinc	250	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020809D	QC Batch: 10167					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/9/2002

Qualifiers:

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S - Spike/Surrogate outside of limits due to matrix interferen
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Results are wet unless otherwise specified

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Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-217-0.6
Lab Order:	057976		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/17/2002 9:13:00 AM
Lab ID:	057976-014A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810A	QC Batch: 10212					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	ND	2.5		mg/Kg	10	8/10/2002
Barium	91	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	13	1.5		mg/Kg	10	8/10/2002
Cobalt	9.4	1.5		mg/Kg	10	8/10/2002
Copper	24	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	11	1.5		mg/Kg	10	8/10/2002
Selenium	ND	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	38	1.5		mg/Kg	10	8/10/2002
Zinc	59	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020813F	QC Batch: 10207					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/13/2002

Qualifiers:

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- H - Sample exceeded analytical holding time
- E - Value above quantitation range
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Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-220-0.6
Lab Order:	057976		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/17/2002 9:41:00 AM
Lab ID:	057976-025A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810A	QC Batch: 10212					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	ND	2.5		mg/Kg	10	8/10/2002
Barium	120	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	22	1.5		mg/Kg	10	8/10/2002
Cobalt	11	1.5		mg/Kg	10	8/10/2002
Copper	22	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	17	1.5		mg/Kg	10	8/10/2002
Selenium	3.5	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	54	1.5		mg/Kg	10	8/10/2002
Zinc	92	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020809D	QC Batch: 10167					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/9/2002

Qualifiers:

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Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-416-0.9
Lab Order:	057976		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/17/2002 10:57:00 AM
Lab ID:	057976-039A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810A	QC Batch: 10212					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	ND	2.5		mg/Kg	10	8/10/2002
Barium	66	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	16	1.5		mg/Kg	10	8/10/2002
Cobalt	11	1.5		mg/Kg	10	8/10/2002
Copper	14	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	11	1.5		mg/Kg	10	8/10/2002
Selenium	4.4	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	44	1.5		mg/Kg	10	8/10/2002
Zinc	42	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020809D	QC Batch: 10167					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/9/2002

Qualifiers:

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CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-421-0
Lab Order:	057976		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/17/2002 12:50:00 PM
Lab ID:	057976-051A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810B	QC Batch: 10213					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	3.2	2.5		mg/Kg	10	8/10/2002
Barium	130	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	23	1.5		mg/Kg	10	8/10/2002
Cobalt	12	1.5		mg/Kg	10	8/10/2002
Copper	24	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	20	1.5		mg/Kg	10	8/10/2002
Selenium	11	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	55	1.5		mg/Kg	10	8/10/2002
Zinc	130	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020813F	QC Batch: 10207					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/13/2002

Qualifiers:

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Results are wet unless otherwise specified

Advanced Technology Laboratories

Date: 8/15/2002

LEAD BY ATOMIC ABSORPTION
EPA 1311/ 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057976
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057976-002A	571-214-0	0.96	mg/L	10365	0.2	1	7/17/2002	8/15/2002
057976-003A	571-214-0.3	0.95	mg/L	10087	0.2	1	7/17/2002	8/6/2002
057976-009A	571-216-0	1.3	mg/L	10365	0.2	1	7/17/2002	8/15/2002
057976-012A	571-217-0	1.6	mg/L	10366	0.2	1	7/17/2002	8/15/2002
057976-033A	571-415-0	2.4	mg/L	10366	0.2	1	7/17/2002	8/15/2002
057976-034A	571-415-0.3	2.6	mg/L	10366	0.2	1	7/17/2002	8/15/2002
057976-036A	571-416-0	2.6	mg/L	10366	0.2	1	7/17/2002	8/15/2002
057976-043A	571-419-0	0.36	mg/L	10366	0.2	1	7/17/2002	8/15/2002
057976-048A	571-420-0	0.65	mg/L	10366	0.2	1	7/17/2002	8/15/2002

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Advanced Technology Laboratories

Date: *15-Aug-02*

CLIENT: Ninyo & Moore
Work Order: 057976
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10031

Sample ID: **MB-10031**	SampType: **mblk**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/7/2002**	Run ID: **AA2_020807A**
Client ID: **ZZZZZ**	Batch ID: **10031**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314787**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-10031A**	SampType: **mblk**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/1/2002**	Run ID: **AA2_020807A**
Client ID: **ZZZZZ**	Batch ID: **10031**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314788**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-10031B**	SampType: **mblk**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/1/2002**	Run ID: **AA2_020807A**
Client ID: **ZZZZZ**	Batch ID: **10031**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314801**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **LCS-10031**	SampType: **lcs**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/7/2002**	Run ID: **AA2_020807A**
Client ID: **ZZZZZ**	Batch ID: **10031**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314815**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.355	0.20	7.5	0	98.1	80	120	0	0		

Sample ID: **057975-044AMS**	SampType: **MS**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/7/2002**	Run ID: **AA2_020807A**
Client ID: **ZZZZZ**	Batch ID: **10031**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/7/2002**	SeqNo: **314800**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.077	0.20	5	0	102	80	120	0	0		

Qualifiers:
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057976
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10031

Sample ID: 057976-031AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807A
Client ID: 571-404-0	Batch ID: 10031	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314813

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.894	0.20	5	0	97.9	80	120	0	0		

Sample ID: 057975-044ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807A
Client ID: ZZZZZ	Batch ID: 10031	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314799

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0	30	

Sample ID: 057976-031ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807A
Client ID: 571-404-0	Batch ID: 10031	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314812

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0	30	

Qualifiers:
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057976
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10032

Sample ID: MB-10032	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807B
Client ID: ZZZZZ	Batch ID: 10032	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314816

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10032A	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807B
Client ID: ZZZZZ	Batch ID: 10032	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314817

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10032B	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807B
Client ID: ZZZZZ	Batch ID: 10032	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314830

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10032	SampType: lcs	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807B
Client ID: ZZZZZ	Batch ID: 10032	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314844

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.461	0.20	7.5	0	99.5	80	120	0	0		

Sample ID: 057976-049AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807B
Client ID: 571-420-0.3	Batch ID: 10032	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314829

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.906	0.20	5	0	98.1	80	120	0	0		

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Advanced Technology Laboratories
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CLIENT: Ninyo & Moore
Work Order: 057976
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10032

Sample ID: 057996-024AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/7/2002	Run ID: AA2_020807B
Client ID: ZZZZZ	Batch ID: 10032	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314842

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.887	0.20	5	0	97.7	80	120	0	0		

Sample ID: 057976-049ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807B
Client ID: 571-420-0.3	Batch ID: 10032	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314828

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0	30	

Sample ID: 057996-024ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020807B
Client ID: ZZZZZ	Batch ID: 10032	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/7/2002	SeqNo: 314841

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0	30	

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Work Order: 057976
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10087

Sample ID: MB-10087	SampType: mblk	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806H
Client ID: ZZZZZ	Batch ID: 10087	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314602

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10078-TCLP	SampType: mblk	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806H
Client ID: ZZZZZ	Batch ID: 10087	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314603

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10087	SampType: lcs	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806H
Client ID: ZZZZZ	Batch ID: 10087	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314617

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.184	0.20	1	0	118	80	120	0	0		

Sample ID: 057978-007AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806H
Client ID: ZZZZZ	Batch ID: 10087	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314615

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.241	0.20	2.717	0.09022	116	80	120	0	0		

Sample ID: 057978-007ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806H
Client ID: ZZZZZ	Batch ID: 10087	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314614

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0.09022	0	30	

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Work Order: 057976
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10167

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID: MB-10167 SampType: **mblk** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **8/7/2002** Run ID: **AA1_020809D**											
Client ID: **ZZZZZ** Batch ID: **10167** TestNo: **EPA 7471A (EPA 7471)** Analysis Date: **8/9/2002** SeqNo: **316751**											
Mercury	ND	0.10									
Sample ID: LCS-10167 SampType: **lcs** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **8/7/2002** Run ID: **AA1_020809D**											
Client ID: **ZZZZZ** Batch ID: **10167** TestNo: **EPA 7471A (EPA 7471)** Analysis Date: **8/9/2002** SeqNo: **316750**											
Mercury	2.232	0.10	2.08	0	107	80	120	0	0		
Sample ID: 057978-007AMS SampType: **MS** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **8/7/2002** Run ID: **AA1_020809D**											
Client ID: **ZZZZZ** Batch ID: **10167** TestNo: **EPA 7471A (EPA 7471)** Analysis Date: **8/9/2002** SeqNo: **316748**											
Mercury	0.9805	0.10	0.83	0.03622	114	62	146	0	0		
Sample ID: 057978-007AMSD SampType: **MSD** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **8/7/2002** Run ID: **AA1_020809D**											
Client ID: **ZZZZZ** Batch ID: **10167** TestNo: **EPA 7471A (EPA 7471)** Analysis Date: **8/9/2002** SeqNo: **316749**											
Mercury	0.9802	0.10	0.83	0.03622	114	62	146	0.9805	0.0281	33	
Sample ID: 057978-007ADUP SampType: **DUP** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **8/7/2002** Run ID: **AA1_020809D**											
Client ID: **ZZZZZ** Batch ID: **10167** TestNo: **EPA 7471A (EPA 7471)** Analysis Date: **8/9/2002** SeqNo: **316747**											
Mercury	0.03011	0.10	0	0	0	0	0	0.03622	0	30	J

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10207

Sample ID: MB-10207	SampType: mblk	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813F
Client ID: ZZZZZ	Batch ID: 10207	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318517

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-10207	SampType: lcs	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813F
Client ID: ZZZZZ	Batch ID: 10207	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318516

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.081	0.10	2.08	0	100	80	120	0	0		

Sample ID: 058021-054AMS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813F
Client ID: ZZZZZ	Batch ID: 10207	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318514

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9716	0.10	0.83	0.0326	113	62	146	0	0		

Sample ID: 058021-054AMSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813F
Client ID: ZZZZZ	Batch ID: 10207	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318515

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.935	0.10	0.83	0.0326	109	62	146	0.9716	3.84	33	

Sample ID: 058021-054ADUP	SampType: DUP	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813F
Client ID: ZZZZZ	Batch ID: 10207	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318513

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10	0	0	0	0	0	0.0326	0	30	

Qualifiers:
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ANALYTICAL QC SUMMARY REPORT

BatchID: 10212

Sample ID: MB-10212	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810A
Client ID: ZZZZZ	Batch ID: 10212	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316619

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.25									
Arsenic	0.1147	0.25									
Barium	0.003603	0.15									
Beryllium	0.002941	0.15									
Cadmium	0.004818	0.15									
Chromium	ND	0.15									
Cobalt	0.01964	0.15									
Copper	0.008961	0.15									
Molybdenum	0.04121	0.25									
Nickel	0.0113	0.15									
Selenium	ND	0.25									
Silver	ND	0.15									
Thallium	0.1531	0.25									
Vanadium	ND	0.15									
Zinc	0.08338	0.50									

Sample ID: LCS-10212	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810A
Client ID: ZZZZZ	Batch ID: 10212	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316618

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	48.68	0.25	50	0	97.4	80	120	0	0		
Arsenic	51.35	0.25	50	0	103	80	120	0	0		
Barium	48.71	0.15	50	0	97.4	80	120	0	0		
Beryllium	47.87	0.15	50	0	95.7	80	120	0	0		
Cadmium	48.67	0.15	50	0	97.3	80	120	0	0		
Chromium	48.68	0.15	50	0	97.4	80	120	0	0		
Cobalt	48.29	0.15	50	0	96.6	80	120	0	0		
Copper	47.01	0.15	50	0	94	80	120	0	0		
Molybdenum	49.69	0.25	50	0	99.4	80	120	0	0		
Nickel	46.93	0.15	50	0	93.9	80	120	0	0		

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Calculations are based on raw values

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10212

Sample ID: LCS-10212	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810A
Client ID: ZZZZZ	Batch ID: 10212	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316618

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	50.21	0.25	50	0	100	80	120	0	0		
Silver	47.28	0.15	50	0	94.6	80	120	0	0		
Thallium	48.85	0.25	50	0	97.7	80	120	0	0		
Vanadium	49.59	0.15	50	0	99.2	80	120	0	0		
Zinc	51.34	0.50	50	0	103	80	120	0	0		

Sample ID: 057976-039AMS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810A
Client ID: 571-416-0.9	Batch ID: 10212	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316615

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	96.62	2.5	125	0.7801	76.7	32	115	0	0		
Arsenic	127.7	2.5	125	0.5443	102	59	111	0	0		
Barium	194	1.5	125	66.27	102	34	151	0	0		
Beryllium	123.9	1.5	125	0	99.1	56	112	0	0		
Cadmium	127.7	1.5	125	0.3148	102	52	120	0	0		
Chromium	145.5	1.5	125	16.31	103	56	118	0	0		
Cobalt	138.7	1.5	125	10.8	102	58	117	0	0		
Copper	141.6	1.5	125	13.91	102	58	134	0	0		
Molybdenum	123.8	2.5	125	0	99.1	56	115	0	0		
Nickel	135.3	1.5	125	10.63	99.8	52	120	0	0		
Selenium	136.5	2.5	125	4.448	106	46	108	0	0		
Silver	122.2	1.5	125	0	97.8	74	117	0	0		
Thallium	119.1	2.5	125	0	95.3	62	117	0	0		
Vanadium	177.1	1.5	125	44.22	106	55	122	0	0		
Zinc	175.7	5.0	125	42.27	107	43	134	0	0		

Sample ID: 057976-039AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810A
Client ID: 571-416-0.9	Batch ID: 10212	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316616

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10212

Sample ID: 057976-039AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810A
Client ID: 571-416-0.9	Batch ID: 10212	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316616

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	94.39	2.5	125	0.7801	74.9	32	115	96.62	2.34	20	
Arsenic	124.1	2.5	125	0.5443	98.8	59	111	127.7	2.85	20	
Barium	189.1	1.5	125	66.27	98.2	34	151	194	2.60	20	
Beryllium	116	1.5	125	0	92.8	56	112	123.9	6.62	20	
Cadmium	123.3	1.5	125	0.3148	98.4	52	120	127.7	3.48	20	
Chromium	136	1.5	125	16.31	95.8	56	118	145.5	6.70	20	
Cobalt	134.7	1.5	125	10.8	99.1	58	117	138.7	2.95	20	
Copper	133.5	1.5	125	13.91	95.6	58	134	141.6	5.89	20	
Molybdenum	119.9	2.5	125	0	95.9	56	115	123.8	3.21	20	
Nickel	130.8	1.5	125	10.63	96.2	52	120	135.3	3.39	20	
Selenium	131.4	2.5	125	4.448	102	46	108	136.5	3.82	20	
Silver	116.9	1.5	125	0	93.5	74	117	122.2	4.43	20	
Thallium	115.2	2.5	125	0	92.2	62	117	119.1	3.34	20	
Vanadium	167.3	1.5	125	44.22	98.5	55	122	177.1	5.66	20	
Zinc	167.6	5.0	125	42.27	100	43	134	175.7	4.72	20	

Sample ID: 057976-039ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810A
Client ID: 571-416-0.9	Batch ID: 10212	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316614

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	1.827	2.5	0	0	0	0	0	0.7801	0	30	J
Arsenic	0.6013	2.5	0	0	0	0	0	0.5443	0	30	J
Barium	67.22	1.5	0	0	0	0	0	66.27	1.43	30	
Beryllium	ND	1.5	0	0	0	0	0	0	0	30	
Cadmium	0.3312	1.5	0	0	0	0	0	0.3148	0	30	J
Chromium	16.43	1.5	0	0	0	0	0	16.31	0.692	30	
Cobalt	10.53	1.5	0	0	0	0	0	10.8	2.54	30	
Copper	15.87	1.5	0	0	0	0	0	13.91	13.1	30	
Molybdenum	0.05129	2.5	0	0	0	0	0	0	0	30	J
Nickel	10.75	1.5	0	0	0	0	0	10.63	1.05	30	

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CLIENT: Ninyo & Moore
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ANALYTICAL QC SUMMARY REPORT

BatchID: 10212

Sample ID: **057976-039ADUP** SampType: **DUP** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **8/8/2002** Run ID: **ICP5_020810A**
Client ID: **571-416-0.9** Batch ID: **10212** TestNo: **EPA 6010B** **(EPA 3050A)** Analysis Date: **8/10/2002** SeqNo: **316614**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	9.746	2.5	0	0	0	0	0	4.448	74.7	30	R
Silver	ND	1.5	0	0	0	0	0	0	0	30	
Thallium	ND	2.5	0	0	0	0	0	0	0	30	
Vanadium	45.9	1.5	0	0	0	0	0	44.22	3.73	30	
Zinc	47.12	5.0	0	0	0	0	0	42.27	10.9	30	

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
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CLIENT: Ninyo & Moore
Work Order: 057976
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10213

Sample ID: MB-10213	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: ZZZZZ	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316634

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.1049	0.25									J
Arsenic	0.01134	0.25									J
Barium	ND	0.15									
Beryllium	0.001497	0.15									J
Cadmium	ND	0.15									
Chromium	ND	0.15									
Cobalt	0.008285	0.15									J
Copper	ND	0.15									
Molybdenum	0.03155	0.25									J
Nickel	0.02092	0.15									J
Selenium	ND	0.25									
Silver	0.04761	0.15									J
Thallium	0.1615	0.25									J
Vanadium	ND	0.15									
Zinc	0.2176	0.50									J

Sample ID: LCS-10213	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: ZZZZZ	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316633

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	47.62	0.25	50	0	95.2	80	120	0	0		
Arsenic	51.84	0.25	50	0	104	80	120	0	0		
Barium	48.27	0.15	50	0	96.5	80	120	0	0		
Beryllium	47.2	0.15	50	0	94.4	80	120	0	0		
Cadmium	48.14	0.15	50	0	96.3	80	120	0	0		
Chromium	47.49	0.15	50	0	95	80	120	0	0		
Cobalt	47.79	0.15	50	0	95.6	80	120	0	0		
Copper	46.09	0.15	50	0	92.2	80	120	0	0		
Molybdenum	49.16	0.25	50	0	98.3	80	120	0	0		
Nickel	46.3	0.15	50	0	92.6	80	120	0	0		

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Work Order: 057976
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10213

Sample ID: LCS-10213	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: ZZZZZ	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316633

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	51.76	0.25	50	0	104	80	120	0	0		
Silver	46.17	0.15	50	0	92.3	80	120	0	0		
Thallium	49.01	0.25	50	0	98	80	120	0	0		
Vanadium	48.51	0.15	50	0	97	80	120	0	0		
Zinc	52.5	0.50	50	0	105	80	120	0	0		

Sample ID: 057997-003AMS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: ZZZZZ	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316630

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	79.9	2.5	125	2.788	61.7	32	115	0	0		
Arsenic	127.7	2.5	125	1.548	101	59	111	0	0		
Barium	257.1	1.5	125	117.9	111	34	151	0	0		
Beryllium	121.5	1.5	125	0	97.2	56	112	0	0		
Cadmium	127.6	1.5	125	0.3295	102	52	120	0	0		
Chromium	148.3	1.5	125	20.21	102	56	118	0	0		
Cobalt	143	1.5	125	15.43	102	58	117	0	0		
Copper	147.5	1.5	125	20.79	101	58	134	0	0		
Molybdenum	120.5	2.5	125	0.08681	96.4	56	115	0	0		
Nickel	142.3	1.5	125	16.95	100	52	120	0	0		
Selenium	140.4	2.5	125	5.02	108	46	108	0	0		S
Silver	114.4	1.5	125	0	91.5	74	117	0	0		
Thallium	114.6	2.5	125	0	91.7	62	117	0	0		
Vanadium	193.1	1.5	125	60.22	106	55	122	0	0		
Zinc	197.5	5.0	125	61.86	109	43	134	0	0		

Sample ID: 057997-003AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: ZZZZZ	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316631

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike/Surrogate outside limits due to matrix interference; DO - Surrogate diluted out
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ANALYTICAL QC SUMMARY REPORT

BatchID: 10213

Sample ID: 057997-003AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: ZZZZZ	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316631

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	80.18	2.5	125	2.788	61.9	32	115	79.9	0.348	20	
Arsenic	125.9	2.5	125	1.548	99.5	59	111	127.7	1.42	20	
Barium	244.9	1.5	125	117.9	102	34	151	257.1	4.87	20	
Beryllium	118.2	1.5	125	0	94.5	56	112	121.5	2.79	20	
Cadmium	127.4	1.5	125	0.3295	102	52	120	127.6	0.121	20	
Chromium	143.8	1.5	125	20.21	98.9	56	118	148.3	3.04	20	
Cobalt	142.2	1.5	125	15.43	101	58	117	143	0.570	20	
Copper	142.8	1.5	125	20.79	97.6	58	134	147.5	3.23	20	
Molybdenum	121.1	2.5	125	0.08681	96.8	56	115	120.5	0.434	20	
Nickel	140.8	1.5	125	16.95	99.1	52	120	142.3	1.04	20	
Selenium	134.4	2.5	125	5.02	104	46	108	140.4	4.35	20	
Silver	103.4	1.5	125	0	82.7	74	117	114.4	10.1	20	
Thallium	113.3	2.5	125	0	90.6	62	117	114.6	1.17	20	
Vanadium	184.2	1.5	125	60.22	99.2	55	122	193.1	4.72	20	
Zinc	192.3	5.0	125	61.86	104	43	134	197.5	2.66	20	

Sample ID: 057997-003ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: ZZZZZ	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316629

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.811	2.5	0	0	0	0	0	2.788	0.832	30	
Arsenic	0.1834	2.5	0	0	0	0	0	1.548	0	30	J
Barium	126.8	1.5	0	0	0	0	0	117.9	7.31	30	
Beryllium	ND	1.5	0	0	0	0	0	0	0	30	
Cadmium	0.3828	1.5	0	0	0	0	0	0.3295	0	30	J
Chromium	21.21	1.5	0	0	0	0	0	20.21	4.85	30	
Cobalt	16.27	1.5	0	0	0	0	0	15.43	5.30	30	
Copper	22	1.5	0	0	0	0	0	20.79	5.65	30	
Molybdenum	ND	2.5	0	0	0	0	0	0.08681	0	30	
Nickel	18.08	1.5	0	0	0	0	0	16.95	6.49	30	

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CLIENT: Ninyo & Moore
Work Order: 057976
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10213

Sample ID: 057997-003ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP5_020810B
Client ID: ZZZZZ	Batch ID: 10213	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316629

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	0.8151	2.5	0	0	0	0	0	5.02	0	30	J
Silver	ND	1.5	0	0	0	0	0	0	0	30	
Thallium	ND	2.5	0	0	0	0	0	0	0	30	
Vanadium	62.37	1.5	0	0	0	0	0	60.22	3.51	30	
Zinc	66.48	5.0	0	0	0	0	0	61.86	7.21	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10365

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID: MB-10365 SampType: MBLK TestCode: 7420_TC Units: mg/L Prep Date: 8/14/2002 Run ID: AA2_020814Y											
Client ID: ZZZZZ Batch ID: 10365 TestNo: EPA 1311/ 74 (EPA 3010A) Analysis Date: 8/15/2002 SeqNo: 319063											
Lead	ND	0.20									
Sample ID: MB-10274-TCLP SampType: MBLK TestCode: 7420_TC Units: mg/L Prep Date: 8/14/2002 Run ID: AA2_020814Y											
Client ID: ZZZZZ Batch ID: 10365 TestNo: EPA 1311/ 74 (EPA 3010A) Analysis Date: 8/15/2002 SeqNo: 319064											
Lead	ND	0.20									
Sample ID: LCS-10365 SampType: LCS TestCode: 7420_TC Units: mg/L Prep Date: 8/14/2002 Run ID: AA2_020814Y											
Client ID: ZZZZZ Batch ID: 10365 TestNo: EPA 1311/ 74 (EPA 3010A) Analysis Date: 8/15/2002 SeqNo: 319078											
Lead	1.189	0.20	1	0	119	80	120	0	0		
Sample ID: 057976-009AMS SampType: MS TestCode: 7420_TC Units: mg/L Prep Date: 8/14/2002 Run ID: AA2_020814Y											
Client ID: 571-216-0 Batch ID: 10365 TestNo: EPA 1311/ 74 (EPA 3010A) Analysis Date: 8/15/2002 SeqNo: 319076											
Lead	4.274	0.20	2.5	1.259	121	80	120	0	0		S
Sample ID: 057976-009ADUP SampType: DUP TestCode: 7420_TC Units: mg/L Prep Date: 8/14/2002 Run ID: AA2_020814Y											
Client ID: 571-216-0 Batch ID: 10365 TestNo: EPA 1311/ 74 (EPA 3010A) Analysis Date: 8/15/2002 SeqNo: 319075											
Lead	1.193	0.20	0	0	0	0	0	1.259	5.35	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10366

Sample ID: MB-10366	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814Z
Client ID: ZZZZZ	Batch ID: 10366	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319079

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10275-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814Z
Client ID: ZZZZZ	Batch ID: 10366	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319080

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10366	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814Z
Client ID: ZZZZZ	Batch ID: 10366	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319094

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.118	0.20	1	0	112	80	120	0	0		

Sample ID: 057978-019AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814Z
Client ID: ZZZZZ	Batch ID: 10366	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319092

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.69	0.20	3.125	2.135	81.8	80	120	0	0		

Sample ID: 057978-019ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814Z
Client ID: ZZZZZ	Batch ID: 10366	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319091

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.943	0.20	0	0	0	0	0	2.135	9.40	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9644

Sample ID: MB-9644A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722G
Client ID: ZZZZZ	Batch ID: 9644	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303293

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9644B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722G
Client ID: ZZZZZ	Batch ID: 9644	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303294

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9644	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722G
Client ID: ZZZZZ	Batch ID: 9644	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303292

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	223.6	5.0	250	0	89.4	80	120	0	0		

Sample ID: 057976-002AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722G
Client ID: 571-214-0	Batch ID: 9644	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303278

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1102	5.0	250	644.2	183	47	128	0	0		S

Sample ID: 057976-012AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722G
Client ID: 571-217-0	Batch ID: 9644	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303290

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1404	5.0	250	988.5	166	47	128	0	0		S

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9644

Sample ID: 057976-002ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722G
Client ID: 571-214-0	Batch ID: 9644	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303277

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	709.6	5.0	0	0	0	0	0	644.2	9.66	30	

Sample ID: 057976-012ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722G
Client ID: 571-217-0	Batch ID: 9644	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303289

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	968.4	5.0	0	0	0	0	0	988.5	2.05	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9688

Sample ID: MB-9688A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722H
Client ID: ZZZZZ	Batch ID: 9688	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303347

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9688B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722H
Client ID: ZZZZZ	Batch ID: 9688	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303348

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9688	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722H
Client ID: ZZZZZ	Batch ID: 9688	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303346

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	234.7	5.0	250	0	93.9	80	120	0	0		

Sample ID: 057976-022AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722H
Client ID: 571-219-1.5	Batch ID: 9688	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303332

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	215	5.0	250	29.63	74.2	47	128	0	0		

Sample ID: 057976-032AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722H
Client ID: 571-404-0.3	Batch ID: 9688	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303344

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	358.9	5.0	250	211.6	58.9	47	128	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057976
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9688

Sample ID: 057976-022ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722H
Client ID: 571-219-1.5	Batch ID: 9688	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303331

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	33.67	5.0	0	0	0	0	0	29.63	12.8	30	

Sample ID: 057976-032ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722H
Client ID: 571-404-0.3	Batch ID: 9688	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303343

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	190.4	5.0	0	0	0	0	0	211.6	10.5	30	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057976
Project: . Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9689

Sample ID: MB-9689A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722I
Client ID: ZZZZZ	Batch ID: 9689	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303451

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9689B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722I
Client ID: ZZZZZ	Batch ID: 9689	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303452

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9689	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722I
Client ID: ZZZZZ	Batch ID: 9689	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303450

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	230.7	5.0	250	0	92.3	80	120	0	0		

Sample ID: 057976-042AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722I
Client ID: 571-418-0	Batch ID: 9689	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303436

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	410.2	5.0	250	243.9	66.5	47	128	0	0		

Sample ID: 057976-052AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722I
Client ID: 571-424-0	Batch ID: 9689	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303448

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	248.3	5.0	250	17.88	92.2	47	128	0	0		

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057976
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9689

Sample ID: 057976-042ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722I
Client ID: 571-418-0	Batch ID: 9689	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303435

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	185.1	5.0	0	0	0	0	0	243.9	27.4	30	

Sample ID: 057976-052ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722I
Client ID: 571-424-0	Batch ID: 9689	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303447

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	17.62	5.0	0	0	0	0	0	17.88	1.46	30	

Qualifiers:
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CLIENT: Ninyo & Moore
Work Order: 057976
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9690

Sample ID: MB-9690A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020723E
Client ID: ZZZZZ	Batch ID: 9690	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/23/2002	SeqNo: 304103

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9690B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020723E
Client ID: ZZZZZ	Batch ID: 9690	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/23/2002	SeqNo: 304104

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9690	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020723E
Client ID: ZZZZZ	Batch ID: 9690	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/23/2002	SeqNo: 304102

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	231.9	5.0	250	0	92.8	80	120	0	0		

Sample ID: 057977-003AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020723E
Client ID: ZZZZZ	Batch ID: 9690	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/23/2002	SeqNo: 304088

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	233.9	5.0	250	24.37	83.8	47	128	0	0		

Sample ID: 057977-013AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020723E
Client ID: ZZZZZ	Batch ID: 9690	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/23/2002	SeqNo: 304100

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1409	5.0	250	1403	2.2	47	128	0	0		S

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CLIENT: Ninyo & Moore
Work Order: 057976
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9690

Sample ID: 057977-003ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020723E
Client ID: ZZZZZ	Batch ID: 9690	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/23/2002	SeqNo: 304087

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	19.84	5.0	0	0	0	0	0	24.37	20.5	30	

Sample ID: 057977-013ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020723E
Client ID: ZZZZZ	Batch ID: 9690	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/23/2002	SeqNo: 304099

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1423	5.0	0	0	0	0	0	1403	1.40	30	

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CLIENT: Ninyo & Moore
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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9745

Sample ID: MB-9745	SampType: MBLK	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303590

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050									

Sample ID: LCS-9745	SampType: LCS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303591

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.96	0.0050	1	0	96	80	120	0	0		

Sample ID: 057999-001AMS	SampType: MS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303603

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.54	0.0050	2.5	0	102	66	118	0	0		

Sample ID: 057999-001ADUP	SampType: DUP	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303602

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050	0	0	0	0	0	0	0	30	

Qualifiers:
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Work Order: 057976
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9897

Sample ID: MB-9897	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020731C
Client ID: ZZZZZ	Batch ID: 9897	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310452

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9897A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020731C
Client ID: ZZZZZ	Batch ID: 9897	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310453

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9897B	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020731C
Client ID: ZZZZZ	Batch ID: 9897	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310476

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9897	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020731C
Client ID: ZZZZZ	Batch ID: 9897	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310511

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.908	0.20	7.5	0	92.1	80	120	0	0		

Sample ID: 057975-047AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020731C
Client ID: ZZZZZ	Batch ID: 9897	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310473

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	16.64	0.40	10	8.317	83.2	80	120	0	0		

Qualifiers:
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CLIENT: Ninyo & Moore
Work Order: 057976
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9897

Sample ID: 057976-009AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020731C
Client ID: 571-216-0	Batch ID: 9897	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310509

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	68.91	1.6	40	33.54	88.4	80	120	0	0		

Sample ID: 057975-047ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020731C
Client ID: ZZZZZ	Batch ID: 9897	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310471

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.02	0.20	0	0	0	0	0	8.317	3.64	30	

Sample ID: 057976-009ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020731C
Client ID: 571-216-0	Batch ID: 9897	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/31/2002	SeqNo: 310508

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	33.45	0.80	0	0	0	0	0	33.54	0.285	30	

Qualifiers:
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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9898

Sample ID: MB-9898	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020729D
Client ID: ZZZZZ	Batch ID: 9898	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309262

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9898A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020729D
Client ID: ZZZZZ	Batch ID: 9898	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309263

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9898B	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020729D
Client ID: ZZZZZ	Batch ID: 9898	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309276

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9898	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020729D
Client ID: ZZZZZ	Batch ID: 9898	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309290

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.415	0.20	7.5	0	98.9	80	120	0	0		

Sample ID: 057976-032AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020729D
Client ID: 571-404-0.3	Batch ID: 9898	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309275

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	17.36	0.40	10	8.275	90.9	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; S - Spike/Surrogate outside limits due to matrix interference; B - Analyte detected in the associated Method Blank; **Calculations are based on raw values**; DO - Surrogate diluted out; H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057976
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9898

Sample ID: 057976-050AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020729D
Client ID: 571-420-06	Batch ID: 9898	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309288

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	29.6	0.80	20	12.01	87.9	80	120	0	0		

Sample ID: 057976-032ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020729D
Client ID: 571-404-0.3	Batch ID: 9898	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309274

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	9.031	0.20	0	0	0	0	0	8.275	8.73	30	

Sample ID: 057976-050ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020729D
Client ID: 571-420-06	Batch ID: 9898	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309287

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	12.11	0.40	0	0	0	0	0	12.01	0.834	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057976
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9899

Sample ID: MB-9899	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020730A
Client ID: ZZZZZ	Batch ID: 9899	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 309614

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9899A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020730A
Client ID: ZZZZZ	Batch ID: 9899	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 309615

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9899B	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020730A
Client ID: ZZZZZ	Batch ID: 9899	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 309628

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9899	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020730A
Client ID: ZZZZZ	Batch ID: 9899	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 309642

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.422	0.20	7.5	0	99	80	120	0	0		

Sample ID: 057977-012AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020730A
Client ID: ZZZZZ	Batch ID: 9899	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 309627

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.963	0.20	5	1.424	90.8	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057976
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9899

Sample ID: 057978-009AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020730A
Client ID: ZZZZZ	Batch ID: 9899	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 309640

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	161.2	4.0	100	59.83	101	80	120	0	0		

Sample ID: 057977-012ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020730A
Client ID: ZZZZZ	Batch ID: 9899	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 309626

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.256	0.20	0	0	0	0	0	1.424	12.6	30	

Sample ID: 057978-009ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020730A
Client ID: ZZZZZ	Batch ID: 9899	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/30/2002	SeqNo: 309639

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	64.91	2.0	0	0	0	0	0	59.83	8.15	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057976
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: R19672

Sample ID: 057976-034ADUP	SampType: DUP	TestCode: 9045_S	Units: pH Units	Prep Date: 7/23/2002	Run ID: WETCHEM_020723B
Client ID: 571-415-0.3	Batch ID: R19672	TestNo: EPA 9045C		Analysis Date: 7/23/2002	SeqNo: 303785

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.522	0.10	0	0	0	0	0	7.553	0.411	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057976
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: R19675

Sample ID: 057978-042A-DUP	SampType: DUP	TestCode: 9045_S	Units: pH Units	Prep Date: 7/23/2002	Run ID: WETCHEM_020723D
Client ID: ZZZZZ	Batch ID: R19675	TestNo: EPA 9045C		Analysis Date: 7/23/2002	SeqNo: 303806

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	8.126	0.10	0	0	0	0	0	8.187	0.748	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Rachelle

From: Nancy Anglin [nanglin@ninyoandmoore.com]
Sent: Friday, July 19, 2002 12:56 PM
To: 'Rachelle'
Subject: Caltrans I10 Lead

Rachelle,

On Wednesday 07/17/02 we submitted samples with an incorrect COC. Sample
571-218-0.9 is listed on the COC. However, the sample does not exist. Sample 571-218-0.3 is not listed on the COC. However, the sample was submitted. Please change the COC by removing 571-218-0.9 and adding 571-218-0.3 in its place.

Thanks,

Nancy

Ninyo & Moore Transmittal

475 Goddard, Suite 200, Irvine, California 92618 ◆ Phone 949/753-7070 ◆ Fax 949/753-7071 ◆ www.ninyoandmoore.com

To:	Sophie	**Date:**	July 26, 2002
Firm:	Advanced Technology Laboratories	**Fax No:**	562-989-4040
Address:	3275 Walnut Avenue Signal Hill, CA 90807	**Telephone No:**	562-989-4045
From:	Steve Reese	**Total Pages Including Transmittal:**	
Subject:	Authorization to correct COC's	**Project No:**	203939001

☐ **Urgent**	☐ **For Approval**	☒ **For Your Use**	☐ **Please Reply**	☒ **As Requested**
Original Document:	☐ **Will Not Follow**	☐ **Will Follow**	☐ **By U.S. Mail**	☐ **By Other**

Sophie,
Based on your submittal of lab results, we noted that on the COC starting with EB-11, a correction needs to be made.

Sample 571-218-0.6 (time 9:17) and sample 571-218-0.9 (time 9:19) should be Sample 571-218-0.3 (time 9:17) and sample 571-218-0.6 (time 9:19). The –0.9 sample was never collected and the –0.3 sample never was written on the COC. Please call if you have any questions, but please make this correction regarding the accurate lab result and correcting the COC.

Thank you,
Steve

- **Geotechnical Engineering**
- **Engineering Geology**
- **Materials Testing and Inspection**
- **Construction Management**
- **Engineering Design**
- **Environmental Engineering**
- **Environmental Site Assessments**
- **Regulatory Compliance and Permitting**
- **Water Quality and Resource Evaluations**
- **Hazardous Waste Management**
- **Soil and Groundwater Remediation**
- **Asbestos and Lead-Based Paint Surveys**
- **Geophysical Studies**
- **Mineral Resource Evaluations**
- **Value Engineering**
- **Forensic Studies**
- **Expert Witness Testimony**

Laboratory	Site	Consultant
Advanced Technology Laboratories	[illegible] (STS-ST)/Lead Survey	Ninyo & Moore - David Shulz/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90505	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel (562) 989-4045 Fax (562) 989-4040	Project # [illegible]	Tel (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT

Relinquished by (name/date/time) [signature] 7-17-02	Received by (name/date/time) [signature] 7/17/02
Relinquished by (name/date/time) [signature] 7/17/02 1725	Received by (name/date/time) [signature] 7/17/02 7:25pm

Lab No	Sample I.D.	Date	Time	Sample Container (P)lastic (B)rass	Total Lead EPA Method 6010	pH EPA Method 9045
	11	7/17/02	15:35	P	X	
	214-0	↓	8:40	B	X	X
	214-0.3		8:43	↓	X	
	214-0.6		8:47		X	
	215-0		8:40		X	
	215-0.3		8:42		X	
	215-0.6		8:47		X	
	215-0.9		8:50		X	
	216-0		9:00		X	
	216-0.3		9:02		X	
	216-0.6		9:04		X	
	217-0		9:01		X	X
	217-0.3		9:09		X	
	217-0.6		9:13		X	
	218-0		9:15		X	
	218-0.3		9:17		X	
	218-0.6		9:19		X	
	219-0		9:32		X	
	219-0.3		9:35		X	
	219-0.6		9:37		X	
	219-0.9		9:40		X	
	219-1.5		9:44		X	
	220-0		9:30		X	X
	220-0.3		9:36		X	
	220-0.6		9:41		X	
	220-0.9		9:49		X	
	220-1.5		9:54		X	
	402-0		10:03		X	
	402-0.3		10:13		X	
	402-0.6		10:19		X	
	404-0		10:13		X	
	404-0.3		10:17		X	
	415-0		10:43		X	
	415-0.3		10:47		X	X
	415-0.6		10:53		X	
	416-0		10:47		X	
	416-0.3		10:51		X	
	416-0.6		10:54		X	
	416-0.9		10:57		X	
	417-0		11:11		X	
	417-0.3		11:15		X	
	418-0		11:10		X	
	419-0		12:48		X	
	419-0.3		12:52		X	
	419-0.6		12:55		X	X
	419-0.9		1:00		X	
	419-1.5		1:06		X	
	420-0		13:05		X	
	420-0.3		13:07		X	
	420-0.6		13:16		X	
	421-0		12:50		X	
	424-0		1:20		X	
	424-0.3		1:23		X	
	424-0.6		1:27		X	
	304-0		1:50		X	
	304-0.3		1:52		X	X
	304-0.6		1:57		X	
	304-0.9		2:00		X	
	302-0		13:49		X	
	302-0.3	↓	13:54	↓	X	

Total # of samples: 60

Rachelle

From: Steve Reese [sreese@ninyoandmoore.com]
Sent: Wednesday, July 31, 2002 3:04 PM
To: Rachelle@Advanced Labs (E-mail)
Cc: David Shaler (E-mail); Ruth Cheung (E-mail)
Subject: More TCLP Analyses

TCLP-2.xls

Rachelle,
Attached please find a list of 8 more TCLP analyses. Thanks, Steve

Stephen S. Reese
Senior Staff Environmental Scientist
Ninyo & Moore Geotechnical & Environmental Sciences Consultants
475 Goddard, Suite 200
Irvine, California 92618
Tel: (949) 753-7070
Fax: (949) 753-7071
Email: sreese@ninyoandmoore.com
www.ninyoandmoore.com

RUN FOR TCLP ANALYSIS			
1	5	2	8
569-805-0.3	570-113-0.3	571-214-0.3	
	570-712-0.6	571-618-0.9	
	570-208-0		
	570-804-0		
	570-812-0.3		

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Tuesday, August 06, 2002 3:46 PM
To: 'Rachelle'; 'David Shaler (E-mail)'
Subject: Title 22 Metals

itle 22 Metals.xls

Rachelle,
lease run the following samples for Title 22 Metals. Please do not
ist
o in your emailed results. There should be a total of 120 samples to
e
un.
hanks.

uth L. Cheung
taff Environmental Scientist
inyo & Moore
(949) 753-7070 x2273

569-102-0.9	570-101-0	571-101-0.9
569-112-0	570-101-0.6	571-104-0
569-201-0	570-201-0	571-201-0.6
569-206-0.6	570-205-0.9	571-108-1.5
569-106-1.5	570-106-0.3	571-111-0.3
569-212-0	570-208-1.5	571-207-0
569-401-0.6	570-111-0.6	571-210-0.6
569-301-0	570-214-0	571-115-0.9
569-303-0.9	570-115-0.3	571-214-0.3
569-404-0.6	570-119-0.9	571-120-0
569-408-0.9	570-224-0.6	571-217-1.5
569-314-0	570-401-0	571-220-0.6
569-313-0.3	570-401-0.3	571-301-0.3
569-502-0.6	570-304-1.5	571-405-0
569-602-1.5	570-307-0.9	571-306-0.9
569-607-0.3	570-311-0.6	571-407-0
569-607-0	570-312-0.6	571-310-0.9
569-508-0.9	570-316-0.3	571-315-0.3
569-511-0.6	570-601-0	571-412-1.5
569-612-1.5	570-505-1.5	571-317-0
569-516-0	570-508-0	571-320-0.6
569-801-0.3	570-610-0.6	571-416-0.9
569-519-0.6	570-511-0.9	571-325-0.3
569-803-0.9	570-615-0	571-421-1.5
569-705-0	570-514-0.3	571-425-0
569-806-1.5	570-517-0	571-501-0.6
569-708-0.3	570-618-0.6	571-503-0.9
569-711-0	570-621-1.5	571-603-0.3
569-811-0	570-703-0.9	571-507-0
	570-804-0	571-609-0
	570-706-0	571-510-1.5
	570-709-0	571-611-0
	570-808-0.6	571-514-0
	570-711-1.5	571-614-0.3
	570-812-0.3	571-517-0.9
		571-617-0.6
		571-520-1.5
		571-621-0.3
		571-524-0
		571-624-0.9
		571-529-0.3
		571-628-0.6
		571-703-1.5
		571-707-0
		571-804-0.9
		571-809-0.3
		571-711-0
		571-712-0
		571-814-0.3
		571-818-0.6
		571-819-0
		571-827-1.5

571-832-0.9
571-836-0.3
571-837-0.6
571-842-0

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Wednesday, August 07, 2002 10:28 AM
To: 'Rachelle'
Subject: RE: Title 22 Metals

Sorry for the mistake. Please change to the following:
569-602-1.5 to 0.6
569-803-0.9 to 0.6
571-217-1.5 to 0.6
571-320-0.6 to 0
571-421-1.5 to 0
571-503-0.9 to 0.6
571-510-1.5 to 0.6
571-520-1.5 to 0
571-703-1.5 to 0.6
571-804-0.9 to 0.6
571-827-1.5 to 0.3
571-837-0.6 to 0.3
570-119-0.9 to 0.6
570-208-1.5 to 0.3
570-621-1.5 to 0.3
570-703-0.9 to 0.3

thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

-----Original Message-----
From: Rachelle [SMTP:Rachelle@ATLGlobal.com]
Sent: Wednesday, August 07, 2002 9:49 AM
To: 'Ruth Cheung'
Subject: RE: Title 22 Metals

Hi Ruth,
Please check if the following samples exist, I don't see it on our database:
569-602-1.5
569-803-0.9
571-217-1.5
571-320-0.6
571-421-1.5
571-503-0.9
571-510-1.5
571-520-1.5
571-703-1.5
571-804-0.9
571-827-1.5
571-837-0.6
570-119-0.9
570-208-1.5
570-621-1.5
570-703-0.9
If it does exist, can you let me know when it was collected so I can track
them.
Thanks,
Rachelle
-----Original Message-----
From: Ruth Cheung [mailto:rcheung@ninyoandmoore.com]

Sent: Tuesday, August 06, 2002 3:46 PM
To: 'Rachelle'; 'David Shaler (E-mail)'
Subject: Title 22 Metals

Rachelle,
Please run the following samples for Title 22 Metals. Please do not list
Pb in your emailed results. There should be a total of 120 samples to be
run.
Thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Thursday, August 08, 2002 9:14 AM
To: 'Rachelle'
Subject: TCLP Analysis

TCLP-3.xls

In addition to the 90 TCLP already run please run the following samples for
TCLP. There should be a list of 350 samples.
Thanks for a the hard work and timely results.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

-----Original Message-----
From: Rachelle [SMTP:Rachelle@ATLGlobal.com]
Sent: Wednesday, August 07, 2002 5:02 PM
To: 'David Shaler (E-mail)'
Cc: 'Ruth Cheung (E-mail)'
Subject: TCLP Results

<<57931TCLP.xls>> <<58001TCLP.xls>> <<58021TCLP.xls>> <<58022TCLP.xls>>
<<58023TCLP.xls>> <<58024TCLP.xls>> <<58049TCLP.xls>> <<58050TCLP.xls>>
<<58052TCLP.xls>> <<58053TCLP.xls>> <<58065TCLP.xls>> <<58066TCLP.xls>>
<<58067TCLP.xls>> <<58068TCLP.xls>> <<58069TCLP.xls>>

Rachelle Arada
Project Coordinator
www.atlglobal.com
voice: 562.989.4045 ext 237
fax : 562.989.4040

<< File: 57931TCLP.xls >> << File: 58001TCLP.xls >> << File: 58021TCLP.xls >> << File: 58022TCLP.xls >> << File: 58023TCLP.xls >> << File: 58024TCLP.xls >> << File: 58049TCLP.xls >> << File: 58050TCLP.xls >> << File: 58052TCLP.xls >> << File: 58053TCLP.xls >> << File: 58065TCLP.xls >> << File: 58066TCLP.xls >> << File: 58067TCLP.xls >> << File: 58068TCLP.xls >> << File: 58069TCLP.xls >>

569-404-0	2. STLC	170
569-402-0	2. STLC	130
569-406-0	2. STLC	120
569-515-0	2. STLC	110
569-611-0	2. STLC	100
569-409-0	2. STLC	94
569-603-0	2. STLC	93
569-104-0.6	2. STLC	91
569-807-0	2. STLC	86
569-608-0	2. STLC	86
569-501-0	2. STLC	84
569-710-0.3	2. STLC	83
569-808-0	2. STLC	83
569-609-0.6	2. STLC	80
569-803-0	2. STLC	79
569-105-0	2. STLC	78
569-512-0	2. STLC	77
569-513-0	2. STLC	77
569-302-0	2. STLC	74
569-805-0	2. STLC	73
569-517-0	2. STLC	71
569-704-0.3	2. STLC	71
569-703-0.6	2. STLC	70
569-514-0.3	2. STLC	70
569-803-0.3	2. STLC	69
569-409-0.6	2. STLC	69
569-411-0	2. STLC	68
569-102-0.6	2. STLC	68
569-809-0	2. STLC	65
569-605-0	2. STLC	65
569-711-0.6	2. STLC	62
569-806-0	2. STLC	60
569-802-0.3	2. STLC	60
569-410-0	2. STLC	59
569-501-0.6	2. STLC	59
569-808-0.3	2. STLC	58
569-104-0	2. STLC	56
569-804-0	2. STLC	54
569-610-0	2. STLC	54
569-608-0.3	2. STLC	53
569-213-0	2. STLC	49
569-701-0	2. STLC	47
569-311-0	2. STLC	47
569-609-0.9	2. STLC	46
569-513-0.3	2. STLC	45
569-801-0.6	2. STLC	44
569-514-0	2. STLC	42
569-805-0.6	2. STLC	42
569-408-1.5	2. STLC	42
569-807-0.3	2. STLC	40
569-204-0	2. STLC	40
569-517-0.3	2. STLC	36
569-518-0	2. STLC	36
569-806-0.3	2. STLC	36
569-705-1.5	2. STLC	35
569-303-0.6	2. STLC	34
569-516-0.3	2. STLC	33
569-705-0.6	2. STLC	33
569-802-0	2. STLC	33
569-515-0.6	2. STLC	32
569-704-0	2. STLC	32
569-401-0.3	2. STLC	32
569-207-0	2. STLC	32
569-608-0.6	2. STLC	31
569-104-0.3	2. STLC	31
569-201-0.6	2. STLC	30
569-515-0.3	2. STLC	28
569-212-0.6	2. STLC	28
569-103-0	2. STLC	28
569-313-0	2. STLC	27
569-103-0.3	2. STLC	26
569-705-0.9	2. STLC	25
569-707-0.3	2. STLC	25
569-515-1.5	2. STLC	24
569-508-0	2. STLC	24
569-801-0	2. STLC	24
569-402-0.6	2. STLC	24
569-516-0.6	2. STLC	22
569-509-0.3	2. STLC	22
569-106-0	2. STLC	22
569-106-0.3	2. STLC	22
569-202-0	2. STLC	21
569-805-1.5	2. STLC	21
569-205-0	2. STLC	20
569-707-0	2. STLC	19
570-515-0.3	2. STLC	120
570-811-0	2. STLC	110
570-114-0.0	2. STLC	110
570-504-0.6	2. STLC	100
570-811-1.5	2. STLC	90
570-615-0.6	2. STLC	84
570-305-0	2. STLC	79
570-314-0.6	2. STLC	76
570-505-0.6	2. STLC	75
570-208-0.6	2. STLC	74
570-116-0.0	2. STLC	73
570-102-0	2. STLC	65
570-804-0.6	2. STLC	64
570-704-0	2. STLC	63
570-508-0.6	2. STLC	60
570-706-0.3	2. STLC	60
570-303-0	2. STLC	58
570-311-1.5	2. STLC	58
570-117-0.0	2. STLC	58
570-208-0.3	2. STLC	58
570-709-0.6	2. STLC	57
570-703-0	2. STLC	55
570-206-0	2. STLC	54
570-301-0	2. STLC	53
570-603-0.3	2. STLC	46
570-711-0.6	2. STLC	46
570-206-0.3	2. STLC	45
570-103-0	2. STLC	44
570-602-0	2. STLC	41
570-209-0	2. STLC	40
570-210-0	2. STLC	40
570-117-0.3	2. STLC	39
570-103-0.6	2. STLC	37
570-110-0.6	2. STLC	37
570-805-0.9	2. STLC	36
570-112-1.5	2. STLC	35
570-614-0	2. STLC	34
570-713-0.3	2. STLC	33
570-513-0	2. STLC	32
570-312-0.3	2. STLC	31
570-503-0.6	2. STLC	31
570-510-0.6	2. STLC	31
570-202-0	2. STLC	31
570-207-0	2. STLC	31
570-209-0.3	2. STLC	31
570-703-0.3	2. STLC	30
570-401-0	2. STLC	30
570-610-0.9	2. STLC	29
570-809-0.6	2. STLC	29
570-509-0.9	2. STLC	29
570-210-0.6	2. STLC	29
570-211-0	2. STLC	29
570-603-0	2. STLC	28
570-119-0	2. STLC	28
570-713-0.6	2. STLC	28
570-108-0	2. STLC	27
570-708-0.6	2. STLC	27
570-224-0	2. STLC	26
570-601-0	2. STLC	26
570-710-0.6	2. STLC	26
570-614-0.6	2. STLC	26
570-118-0.3	2. STLC	26
570-304-0	2. STLC	25
570-707-0.6	2. STLC	25
570-510-0	2. STLC	25
570-110-0	2. STLC	24
570-223-0	2. STLC	24
570-117-0.6	2. STLC	24
570-616-0	2. STLC	23
570-704-0.3	2. STLC	22
570-513-0.6	2. STLC	22
570-221-0.0	2. STLC	22
570-617-0	2. STLC	21
570-214-0.3	2. STLC	21
570-122-0.9	2. STLC	20
570-313-0.6	2. STLC	19
570-207-0.6	2. STLC	19
570-120-0.9	2. STLC	18
570-506-0	2. STLC	18
570-102-0.9	2. STLC	17
570-216-0	2. STLC	17
570-225-0	2. STLC	17
570-304-0.3	2. STLC	17
570-409-0	2. STLC	17
570-713-0	2. STLC	17
571-521-0	2. STLC	230
571-324-0.9	2. STLC	110
571-818-0	2. STLC	110
571-819-0.6	2. STLC	110
571-708-0	2. STLC	110
571-103-0.6	2. STLC	110
571-617-0.3	2. STLC	100
571-611-0.6	2. STLC	92
571-712-0.9	2. STLC	81
571-105-0.6	2. STLC	81
571-313-0	2. STLC	79
571-508-0	2. STLC	73
571-518-0.3	2. STLC	73
571-217-0	2. STLC	68
571-516-0	2. STLC	66
571-701-0.3	2. STLC	66
571-710-0.6	2. STLC	65
571-512-0	2. STLC	64
571-308-0.9	2. STLC	61
571-701-0	2. STLC	61
571-514-0.3	2. STLC	59
571-415-0	2. STLC	58
571-616-0.6	2. STLC	57
571-517-0	2. STLC	56
571-112-0.9	2. STLC	56
571-214-0	2. STLC	55
571-415-0.3	2. STLC	55
571-405-0.6	2. STLC	55
571-530-0	2. STLC	55
571-831-0	2. STLC	53
571-709-0	2. STLC	53
571-103-0.0	2. STLC	52
571-312-0	2. STLC	51
571-526-0	2. STLC	51
571-819-1.5	2. STLC	51
571-515-0	2. STLC	50
571-833-0	2. STLC	49
571-815-0.6	2. STLC	47
571-517-0.3	2. STLC	46
571-610-0	2. STLC	46
571-413-0	2. STLC	46
571-815-0	2. STLC	45
571-514-0.9	2. STLC	44
571-505-1.5	2. STLC	44
571-528-0	2. STLC	44
571-610-0.6	2. STLC	43
571-629-0	2. STLC	43
571-604-0	2. STLC	42
571-213-0	2. STLC	41
571-812-0	2. STLC	41
571-706-0	2. STLC	41
571-530-0.6	2. STLC	41
571-305-0	2. STLC	40
571-523-0.3	2. STLC	39
571-510-0	2. STLC	39
571-305-0.9	2. STLC	39
571-818-1.5	2. STLC	39
571-703-0	2. STLC	38
571-520-0.3	2. STLC	36
571-216-0	2. STLC	34
571-827-0	2. STLC	34
571-708-0.3	2. STLC	34
571-514-0.6	2. STLC	33
571-528-1.5	2. STLC	33
571-803-0	2. STLC	33
571-414-0.3	2. STLC	33
571-813-0.3	2. STLC	32
571-523-0	2. STLC	31
571-326-0	2. STLC	31
571-502-0.6	2. STLC	31
571-624-1.5	2. STLC	31
571-330-0	2. STLC	31
571-512-0.3	2. STLC	30
571-521-0.6	2. STLC	29
571-706-0.3	2. STLC	29
571-814-0.6	2. STLC	28
571-616-1.5	2. STLC	28
571-835-0	2. STLC	28
571-811-0.3	2. STLC	28
571-101-0.6	2. STLC	28
571-112-0	2. STLC	28
571-315-0	2. STLC	27
571-622-0	2. STLC	27
571-607-0.6	2. STLC	27
571-609-0.6	2. STLC	27

569-709-0	2. STLC	19
569-202-0.3	2. STLC	19
569-602-0	2. STLC	19
569-207-0.3	2. STLC	19
569-706-0.3	2. STLC	17
569-807-0.9	2. STLC	17
569-104-0.9	2. STLC	17
569-505-0.6	2. STLC	17
569-704-0.6	2. STLC	16
569-808-0.6	2. STLC	16
569-212-0.3	2. STLC	16
569-612-0	2. STLC	16
569-704-1.5	2. STLC	15
569-411-0.3	2. STLC	15
569-113-0	2. STLC	15
569-807-0.6	2. STLC	14
569-311-0.3	2. STLC	12
569-312-0	2. STLC	10
569-311-0.9	2. STLC	8.3

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570-401-0.3	2. STLC	17
570-616-0.6	2. STLC	17
570-308-0	2. STLC	16
570-807-0.9	2. STLC	16
570-701-0.6	2. STLC	16
570-617-0.3	2. STLC	16
570-107-0.6	2. STLC	15
570-811-0.6	2. STLC	15
570-707-0	2. STLC	15
570-518-0	2. STLC	15
570-111-0.0	2. STLC	15
570-109-0.6	2. STLC	14
570-401-0.9	2. STLC	4.1
570-408-0	2. STLC	4
570-409-0.3	2. STLC	3
570-401-0.6		0
570-401-1.5		0
570-408-0.6		0
570-408-1.5		0

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571-837-0.3	2. STLC	27
571-520-0	2. STLC	26
571-516-0.3	2. STLC	26
571-420-0	2. STLC	26
571-102-0.6	2. STLC	26
571-517-1.5	2. STLC	25
571-513-0.6	2. STLC	25
571-623-0.6	2. STLC	25
571-112-0.3	2. STLC	25
571-326-0.6	2. STLC	24
571-619-0.3	2. STLC	24
571-619-0.9	2. STLC	24
571-528-0.3	2. STLC	24
571-706-0.6	2. STLC	24
571-112-0.6	2. STLC	24
571-327-0.6	2. STLC	23
571-817-0	2. STLC	23
571-425-0.6	2. STLC	22
571-118-0	2. STLC	22
571-829-0	2. STLC	22
571-828-0	2. STLC	22
571-122-0	2. STLC	21
571-101-1.5	2. STLC	21
571-530-0.3	2. STLC	21
571-406-0.6	2. STLC	20
571-517-0.6	2. STLC	20
571-835-0.3	2. STLC	20
571-501-0	2. STLC	20
571-518-0.9	2. STLC	19
571-510-0.3	2. STLC	19
571-814-0.9	2. STLC	19
571-522-0.6	2. STLC	19
571-622-1.5	2. STLC	19
571-812-0.6	2. STLC	19
571-701-0.6	2. STLC	19
571-704-0	2. STLC	19
571-711-0.6	2. STLC	19
571-212-0	2. STLC	18
571-839-0.6	2. STLC	18
571-610-1.5	2. STLC	18
571-709-0.3	2. STLC	18
571-311-0.6	2. STLC	17
571-620-0	2. STLC	17
571-109-0	2. STLC	17
571-704-0.3	2. STLC	17
571-207-1.5	2. STLC	16
571-203-0	2. STLC	16
571-616-0.3	2. STLC	16
571-317-0.3	2. STLC	16
571-629-0.3	2. STLC	16
571-416-0	2. STLC	15
571-419-0	2. STLC	15
571-526-0.3	2. STLC	15
571-619-0	2. STLC	15
571-606-0	2. STLC	15
571-115-0.6	2. STLC	14
571-202-0.9	2. STLC	11

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tblTEMP

WorkOrder	ClientSampID	TestNo	Analyte	PQL	DF	CollectionDate	AnalDate	PrepDate
057976	571-214-0	EPA 1311/ 7420	Lead	0.2	1	7/17/2002	8/15/2002	8/14/2002
057976	571-214-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-214-0	EPA 9045C	pH	0.1	1	7/17/2002	7/23/2002	7/23/2002
057976	571-214-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/7/2002	8/1/2002
057976	571-214-0	WET/ EPA 7420	Lead	1.6	8	7/17/2002	7/31/2002	7/26/2002
057976	571-214-0.3	EPA 1311/ 7420	Lead	0.2	1	7/17/2002	8/6/2002	8/5/2002
057976	571-214-0.3	EPA 6010B	Antimony	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-214-0.3	EPA 6010B	Arsenic	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-214-0.3	EPA 6010B	Barium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-214-0.3	EPA 6010B	Beryllium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-214-0.3	EPA 6010B	Cadmium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-214-0.3	EPA 6010B	Chromium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-214-0.3	EPA 6010B	Cobalt	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-214-0.3	EPA 6010B	Copper	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-214-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-214-0.3	EPA 6010B	Molybdenum	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-214-0.3	EPA 6010B	Nickel	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-214-0.3	EPA 6010B	Selenium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-214-0.3	EPA 6010B	Silver	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-214-0.3	EPA 6010B	Thallium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-214-0.3	EPA 6010B	Vanadium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-214-0.3	EPA 6010B	Zinc	5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-214-0.3	EPA 7471A	Mercury	0.1	1	7/17/2002	8/9/2002	8/7/2002
057976	571-214-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-214-0.6	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/31/2002	7/26/2002
057976	571-215-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-215-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/7/2002	8/1/2002
057976	571-215-0	WET/ EPA 7420	Lead	0.4	2	7/17/2002	7/31/2002	7/26/2002
057976	571-215-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-215-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-215-0.9	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-215-0.9	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/31/2002	7/26/2002
057976	571-216-0	EPA 1311/ 7420	Lead	0.2	1	7/17/2002	8/15/2002	8/14/2002
057976	571-216-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-216-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/7/2002	8/1/2002

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057976	571-216-0	WET/ EPA 7420	Lead	0.8	4	7/17/2002	7/31/2002	7/26/2002
057976	571-216-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-216-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-216-0.6	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057976	571-217-0	EPA 1311/ 7420	Lead	0.2	1	7/17/2002	8/15/2002	8/14/2002
057976	571-217-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-217-0	EPA 9045C	pH	0.1	1	7/17/2002	7/23/2002	7/23/2002
057976	571-217-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/7/2002	8/1/2002
057976	571-217-0	WET/ EPA 7420	Lead	1.6	8	7/17/2002	7/29/2002	7/26/2002
057976	571-217-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-217-0.3	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057976	571-217-0.6	EPA 6010B	Antimony	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-217-0.6	EPA 6010B	Arsenic	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-217-0.6	EPA 6010B	Barium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-217-0.6	EPA 6010B	Beryllium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-217-0.6	EPA 6010B	Cadmium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-217-0.6	EPA 6010B	Chromium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-217-0.6	EPA 6010B	Cobalt	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-217-0.6	EPA 6010B	Copper	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-217-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-217-0.6	EPA 6010B	Molybdenum	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-217-0.6	EPA 6010B	Nickel	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-217-0.6	EPA 6010B	Selenium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-217-0.6	EPA 6010B	Silver	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-217-0.6	EPA 6010B	Thallium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-217-0.6	EPA 6010B	Vanadium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-217-0.6	EPA 6010B	Zinc	5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-217-0.6	EPA 7471A	Mercury	0.1	1	7/17/2002	8/13/2002	8/7/2002
057976	571-217-0.6	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057976	571-218-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-218-0	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057976	571-218-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-218-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-219-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-219-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-219-0.3	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002

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057976	571-219-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-219-0.9	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-219-1.5	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-220-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-220-0	EPA 9045C	pH	0.1	1	7/17/2002	7/23/2002	7/23/2002
057976	571-220-0	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057976	571-220-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-220-0.6	EPA 6010B	Antimony	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-220-0.6	EPA 6010B	Arsenic	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-220-0.6	EPA 6010B	Barium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-220-0.6	EPA 6010B	Beryllium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-220-0.6	EPA 6010B	Cadmium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-220-0.6	EPA 6010B	Chromium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-220-0.6	EPA 6010B	Cobalt	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-220-0.6	EPA 6010B	Copper	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-220-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-220-0.6	EPA 6010B	Molybdenum	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-220-0.6	EPA 6010B	Nickel	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-220-0.6	EPA 6010B	Selenium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-220-0.6	EPA 6010B	Silver	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-220-0.6	EPA 6010B	Thallium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-220-0.6	EPA 6010B	Vanadium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-220-0.6	EPA 6010B	Zinc	5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-220-0.6	EPA 7471A	Mercury	0.1	1	7/17/2002	8/9/2002	8/7/2002
057976	571-220-0.9	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-220-1.5	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-302-0	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057976	571-302-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/7/2002	8/1/2002
057976	571-302-0	WET/ EPA 7420	Lead	0.4	2	7/17/2002	7/30/2002	7/26/2002
057976	571-302-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057976	571-302-0.3	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/30/2002	7/26/2002
057976	571-304-0	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057976	571-304-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057976	571-304-0.3	EPA 9045C	pH	0.1	1	7/17/2002	7/23/2002	7/23/2002
057976	571-304-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057976	571-304-0.9	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002

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057976	571-402-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-402-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/7/2002	8/1/2002
057976	571-402-0	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057976	571-402-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-402-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-404-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-404-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/7/2002	8/1/2002
057976	571-404-0	WET/ EPA 7420	Lead	0.4	2	7/17/2002	7/29/2002	7/26/2002
057976	571-404-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-404-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/7/2002	8/1/2002
057976	571-404-0.3	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057976	571-415-0	EPA 1311/ 7420	Lead	0.2	1	7/17/2002	8/15/2002	8/14/2002
057976	571-415-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-415-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/7/2002	8/1/2002
057976	571-415-0	WET/ EPA 7420	Lead	1.6	8	7/17/2002	7/29/2002	7/26/2002
057976	571-415-0.3	EPA 1311/ 7420	Lead	0.2	1	7/17/2002	8/15/2002	8/14/2002
057976	571-415-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-415-0.3	EPA 9045C	pH	0.1	1	7/17/2002	7/23/2002	7/23/2002
057976	571-415-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/7/2002	8/1/2002
057976	571-415-0.3	WET/ EPA 7420	Lead	1.6	8	7/17/2002	7/29/2002	7/26/2002
057976	571-415-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-415-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/7/2002	8/1/2002
057976	571-415-0.6	WET/ EPA 7420	Lead	0.4	2	7/17/2002	7/29/2002	7/26/2002
057976	571-416-0	EPA 1311/ 7420	Lead	0.2	1	7/17/2002	8/15/2002	8/14/2002
057976	571-416-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-416-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/7/2002	8/1/2002
057976	571-416-0	WET/ EPA 7420	Lead	0.4	2	7/17/2002	7/29/2002	7/26/2002
057976	571-416-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-416-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/7/2002	8/1/2002
057976	571-416-0.3	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057976	571-416-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-416-0.9	EPA 6010B	Antimony	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-416-0.9	EPA 6010B	Arsenic	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-416-0.9	EPA 6010B	Barium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-416-0.9	EPA 6010B	Beryllium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-416-0.9	EPA 6010B	Cadmium	1.5	10	7/17/2002	8/10/2002	8/8/2002

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057976	571-416-0.9	EPA 6010B	Chromium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-416-0.9	EPA 6010B	Cobalt	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-416-0.9	EPA 6010B	Copper	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-416-0.9	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-416-0.9	EPA 6010B	Molybdenum	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-416-0.9	EPA 6010B	Nickel	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-416-0.9	EPA 6010B	Selenium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-416-0.9	EPA 6010B	Silver	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-416-0.9	EPA 6010B	Thallium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-416-0.9	EPA 6010B	Vanadium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-416-0.9	EPA 6010B	Zinc	5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-416-0.9	EPA 7471A	Mercury	0.1	1	7/17/2002	8/9/2002	8/7/2002
057976	571-417-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-417-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-418-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-418-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/7/2002	8/1/2002
057976	571-418-0	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057976	571-419-0	EPA 1311/ 7420	Lead	0.2	1	7/17/2002	8/15/2002	8/14/2002
057976	571-419-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-419-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/7/2002	8/1/2002
057976	571-419-0	WET/ EPA 7420	Lead	0.4	2	7/17/2002	7/29/2002	7/26/2002
057976	571-419-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-419-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-419-0.6	EPA 9045C	pH	0.1	1	7/17/2002	7/23/2002	7/23/2002
057976	571-419-0.9	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-419-1.5	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-420-0	EPA 1311/ 7420	Lead	0.2	1	7/17/2002	8/15/2002	8/14/2002
057976	571-420-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-420-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/7/2002	8/1/2002
057976	571-420-0	WET/ EPA 7420	Lead	0.8	4	7/17/2002	7/29/2002	7/26/2002
057976	571-420-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-420-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/7/2002	8/1/2002
057976	571-420-0.3	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057976	571-420-06	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-420-06	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/7/2002	8/1/2002
057976	571-420-06	WET/ EPA 7420	Lead	0.4	2	7/17/2002	7/29/2002	7/26/2002

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057976	571-421-0	EPA 6010B	Antimony	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-421-0	EPA 6010B	Arsenic	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-421-0	EPA 6010B	Barium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-421-0	EPA 6010B	Beryllium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-421-0	EPA 6010B	Cadmium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-421-0	EPA 6010B	Chromium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-421-0	EPA 6010B	Cobalt	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-421-0	EPA 6010B	Copper	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-421-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-421-0	EPA 6010B	Molybdenum	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-421-0	EPA 6010B	Nickel	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-421-0	EPA 6010B	Selenium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-421-0	EPA 6010B	Silver	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-421-0	EPA 6010B	Thallium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-421-0	EPA 6010B	Vanadium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-421-0	EPA 6010B	Zinc	5	10	7/17/2002	8/10/2002	8/8/2002
057976	571-421-0	EPA 7471A	Mercury	0.1	1	7/17/2002	8/13/2002	8/7/2002
057976	571-421-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/7/2002	8/1/2002
057976	571-421-0	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/30/2002	7/26/2002
057976	571-424-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057976	571-424-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057976	571-424-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/23/2002	7/19/2002
057976	EB-11	EPA 6010B	Lead	0.005	1	7/17/2002	7/23/2002	7/22/2002

August 19, 2002

David Shaler
Ninyo & Moore
475 Goddard Suite 200
Irvine, CA 92618
TEL: (949) 753-7070
FAX: (949) 753-7071

RE: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

Attention: David Shaler

ELAP No.: 1838
NELAP No.: 02107CA
Workorder No.: 057972

Enclosed are the results for sample(s) received on July 17, 2002 by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

for

Eddie F. Rodriguez
Laboratory Director

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AUG 2 6 2002
NINYO & MOORE
ORANGE COUNTY OFFICE

This cover letter is an integral part of this analytical report.

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) 7-17-02

Received by: (name/date/time) 7/17/02

Relinquished by: (name/date/time) 7/17/02 1725

Received by: (name/date/time) 7/17/02 17:25

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB- 10	7/17/02	3:30	P	X	
	571- 410 - 0	7/17/02	10:40	B	X	X
	571- 410 - 0.3		10:42		X	
	571- 410 - 0.6		10:45		X	
	571- 410 - 0.9		10:47		X	
	571- 412 - 0		10:56		X	
	571- 412 - 0.3		10:59		X	
	571- 412 - 0.6		11:02		X	
	571- 412 - 0.9		11:05		X	
	571- 412 - 1.5		11:10		X	
	571- 413 - 0		10:54		X	
	571- 413 - 0.3		10:58		X	X
	571- 413 - 0.6		11:02		X	
	571- 413 - 0.9		11:11		X	
	571- 414 - 0		11:23		X	
	571- 414 - 0.3		11:25		X	
	571- 414 - 0.6		11:32		X	
	571- 602 - 0		12:47		X	
	571- 602 - 0.3		12:50		X	
	571- 602 - 0.6		12:53		X	
	571- 602 - 0.9		12:56		X	
	571- 604 - 0		12:58		X	X
	571- 604 - 0.3		1:07		X	
	571- 604 - 0.6		1:12		X	
	571- 606 - 0		1:08		X	
	571- 606 - 0.3		1:10		X	
	571- 605 - 0		1:19		X	
	571- 605 - 0.3		1:22		X	
	571- 605 - 0.6		1:28		X	
	571- 603 - 0		1:34		X	
	571- 603 - 0.3		1:40		X	
	571- 601 - 0		1:37		X	X
	571- 601 - 0.3		1:44		X	
	571- 501 - 0		2:45		X	
	571- 501 - 0.3		2:48		X	
	571- 501 - 0.6		2:54		X	
	571- 501 - 0.9		3:03		X	
	571- 503 - 0		2:16		X	
	571- 503 - 0.3		2:29		X	
	571- 503 - 0.6		2:33		X	
	571- 530 - 0		2:41		X	
	571- 530 - 0.3		2:45		X	X
	571- 530 - 0.6		2:50		X	
43	571- 530 - 0.9		2:54		X	
	571- 302 - 0.6		14:04		X	
	571- 301 - 0		14:18		X	
	571- 301 - 0.3		14:28		X	
	571- 301 - 0.6		14:33		X	
	571- 301 - 0.9		14:34		X	
	571- 301 - 1.5		14:39		X	
	571- 124 - 0		2:19		X	
	571- 124 - 0.3		2:21		X	
	571- 124 - 0.6		2:24		X	X
	571- 124 - 0.9		2:28		X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	

Total # of samples: 54

Advanced Technology Laboratories

Date: *24-Jul-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	EB-10
Lab Order:	057972		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/17/2002 3:30:00 PM
Lab ID:	057972-001A	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	(EPA 3010A)			**EPA 6010B**		
RunID: ICP2_020723B	QC Batch: 9745					Analyst: **RQ**
Lead	ND	0.0050		mg/L	1	7/23/2002

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 7/30/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057972
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057972-002A	571-410-0	140	mg/Kg	9637	5	1	7/17/2002	7/22/2002
057972-003A	571-410-0.3	9.8	mg/Kg	9637	5	1	7/17/2002	7/22/2002
057972-004A	571-410-0.6	7.1	mg/Kg	9637	5	1	7/17/2002	7/22/2002
057972-005A	571-410-0.9	7.1	mg/Kg	9637	5	1	7/17/2002	7/22/2002
057972-006A	571-412-0	79	mg/Kg	9637	5	1	7/17/2002	7/22/2002
057972-007A	571-412-0.3	100	mg/Kg	9637	5	1	7/17/2002	7/22/2002
057972-008A	571-412-0.6	48	mg/Kg	9637	5	1	7/17/2002	7/22/2002
057972-009A	571-412-0.9	45	mg/Kg	9637	5	1	7/17/2002	7/22/2002
057972-010A	571-412-1.5	8.1	mg/Kg	9637	5	1	7/17/2002	7/22/2002
057972-011A	571-413-0	660	mg/Kg	9637	5	1	7/17/2002	7/22/2002
057972-012A	571-413-0.3	110	mg/Kg	9637	5	1	7/17/2002	7/22/2002

Qualifiers:

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- E - Value above quantitation range
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Advanced Technology Laboratories

Date: 7/30/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057972
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057972-013A	571-413-0.6	8.2	mg/Kg	9637	5	1	7/17/2002	7/22/2002
057972-014A	571-413-0.9	15	mg/Kg	9637	5	1	7/17/2002	7/22/2002
057972-015A	571-414-0	1700	mg/Kg	9637	5	1	7/17/2002	7/22/2002
057972-016A	571-414-0.3	570	mg/Kg	9637	5	1	7/17/2002	7/22/2002
057972-017A	571-414-0.6	15	mg/Kg	9637	5	1	7/17/2002	7/22/2002
057972-018A	571-602-0	97	mg/Kg	9637	5	1	7/17/2002	7/22/2002
057972-019A	571-602-0.3	10	mg/Kg	9637	5	1	7/17/2002	7/22/2002
057972-020A	571-602-0.6	250	mg/Kg	9637	5	1	7/17/2002	7/22/2002
057972-021A	571-602-0.9	19	mg/Kg	9637	5	1	7/17/2002	7/22/2002
057972-022A	571-604-0	820	mg/Kg	9638	5	1	7/17/2002	7/22/2002
057972-023A	571-604-0.3	82	mg/Kg	9638	5	1	7/17/2002	7/22/2002

Qualifiers:

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Advanced Technology Laboratories

Date: 7/30/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057972
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057972-024A	571-604-0.6	87	mg/Kg	9638	5	1	7/17/2002	7/22/2002
057972-025A	571-606-0	180	mg/Kg	9638	5	1	7/17/2002	7/22/2002
057972-026A	571-606-0.3	78	mg/Kg	9638	5	1	7/17/2002	7/22/2002
057972-027A	571-605-0	110	mg/Kg	9638	5	1	7/17/2002	7/22/2002
057972-028A	571-605-0.3	60	mg/Kg	9638	5	1	7/17/2002	7/22/2002
057972-029A	571-605-0.6	21	mg/Kg	9638	5	1	7/17/2002	7/22/2002
057972-030A	571-603-0	25	mg/Kg	9638	5	1	7/17/2002	7/22/2002
057972-031A	571-603-0.3	47	mg/Kg	9638	5	1	7/17/2002	7/22/2002
057972-032A	571-601-0	120	mg/Kg	9638	5	1	7/17/2002	7/22/2002
057972-033A	571-601-0.3	64	mg/Kg	9638	5	1	7/17/2002	7/22/2002
057972-034A	571-501-0	300	mg/Kg	9638	5	1	7/17/2002	7/22/2002

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Date: 7/30/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057972
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057972-035A	571-501-0.3	26	mg/Kg	9638	5	1	7/17/2002	7/22/2002
057972-036A	571-501-0.6	19	mg/Kg	9638	5	1	7/17/2002	7/22/2002
057972-037A	571-501-0.9	50	mg/Kg	9638	5	1	7/17/2002	7/22/2002
057972-038A	571-503-0	50	mg/Kg	9638	5	1	7/17/2002	7/22/2002
057972-039A	571-503-0.3	19	mg/Kg	9638	5	1	7/17/2002	7/22/2002
057972-040A	571-503-0.6	28	mg/Kg	9638	5	1	7/17/2002	7/22/2002
057972-041A	571-330-0	780	mg/Kg	9638	5	1	7/17/2002	7/22/2002
057972-042A	571-330-0.3	22	mg/Kg	9639	5	1	7/17/2002	7/22/2002
057972-043A	571-330-0.6	140	mg/Kg	9639	5	1	7/17/2002	7/22/2002
057972-044A	571-330-0.9	22	mg/Kg	9639	5	1	7/17/2002	7/22/2002
057972-045A	571-302-0.6	67	mg/Kg	9639	5	1	7/17/2002	7/22/2002

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Date: 7/30/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	057972
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057972-046A	571-301-0	150	mg/Kg	9639	5	1	7/17/2002	7/22/2002
057972-047A	571-301-0.3	40	mg/Kg	9639	5	1	7/17/2002	7/22/2002
057972-048A	571-301-0.6	69	mg/Kg	9639	5	1	7/17/2002	7/22/2002
057972-049A	571-301-0.9	15	mg/Kg	9639	5	1	7/17/2002	7/22/2002
057972-050A	571-301-1.5	49	mg/Kg	9639	5	1	7/17/2002	7/22/2002
057972-051A	571-124-0	130	mg/Kg	9639	5	1	7/17/2002	7/22/2002
057972-052A	571-124-0.3	34	mg/Kg	9639	5	1	7/17/2002	7/22/2002
057972-053A	571-124-0.6	5.9	mg/Kg	9639	5	1	7/17/2002	7/22/2002
057972-054A	571-124-0.9	24	mg/Kg	9639	5	1	7/17/2002	7/22/2002

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H - Sample exceeded analytical holding time
E - Value above quantitation range
Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/30/2002

pH
EPA 9045C

CLIENT:	Ninyo & Moore	**Lab Order:**	057972
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057972-002A	571-410-0	6.46	pH Units	R19608	0.1	1	7/17/2002	7/21/2002
057972-012A	571-413-0.3	7.37	pH Units	R19608	0.1	1	7/17/2002	7/21/2002
057972-022A	571-604-0	7.66	pH Units	R19608	0.1	1	7/17/2002	7/21/2002
057972-032A	571-601-0	7.62	pH Units	R19608	0.1	1	7/17/2002	7/21/2002
057972-042A	571-330-0.3	7.49	pH Units	R19608	0.1	1	7/17/2002	7/21/2002
057972-053A	571-124-0.6	8.98	pH Units	R19608	0.1	1	7/17/2002	7/21/2002

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Date: 7/30/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057972
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057972-002A	571-410-0	8.2	mg/L	9895	0.2	1	7/17/2002	7/29/2002
057972-006A	571-412-0	4.7	mg/L	9895	0.2	1	7/17/2002	7/29/2002
057972-007A	571-412-0.3	6.8	mg/L	9895	0.2	1	7/17/2002	7/29/2002
057972-011A	571-413-0	46	mg/L	9895	1.6	8	7/17/2002	7/29/2002
057972-012A	571-413-0.3	12	mg/L	9895	0.4	2	7/17/2002	7/29/2002
057972-016A	571-414-0.3	33	mg/L	9895	1.2	6	7/17/2002	7/29/2002
057972-018A	571-602-0	7.4	mg/L	9895	0.2	1	7/17/2002	7/29/2002
057972-020A	571-602-0.6	0.48	mg/L	9895	0.2	1	7/17/2002	7/29/2002
057972-022A	571-604-0	42	mg/L	9895	1.6	8	7/17/2002	7/29/2002
057972-023A	571-604-0.3	5.9	mg/L	9895	0.2	1	7/17/2002	7/29/2002
057972-024A	571-604-0.6	9.3	mg/L	9895	0.2	1	7/17/2002	7/29/2002

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Advanced Technology Laboratories

Date: 7/30/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057972
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057972-025A	571-606-0	15	mg/L	9895	0.4	2	7/17/2002	7/29/2002
057972-026A	571-606-0.3	8.7	mg/L	9895	0.2	1	7/17/2002	7/29/2002
057972-027A	571-605-0	11	mg/L	9895	0.4	2	7/17/2002	7/29/2002
057972-028A	571-605-0.3	4.6	mg/L	9895	0.2	1	7/17/2002	7/29/2002
057972-032A	571-601-0	9.3	mg/L	9895	0.2	1	7/17/2002	7/29/2002
057972-033A	571-601-0.3	5.1	mg/L	9895	0.2	1	7/17/2002	7/29/2002
057972-034A	571-501-0	20	mg/L	9895	0.8	4	7/17/2002	7/29/2002
057972-037A	571-501-0.9	4.1	mg/L	9895	0.2	1	7/17/2002	7/29/2002
057972-038A	571-503-0	1.9	mg/L	9895	0.2	1	7/17/2002	7/29/2002
057972-041A	571-330-0	31	mg/L	9896	0.8	4	7/17/2002	7/29/2002
057972-043A	571-330-0.6	6.0	mg/L	9896	0.2	1	7/17/2002	7/29/2002

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Advanced Technology Laboratories

Date: 7/30/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057972
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057972-045A	571-302-0.6	2.6	mg/L	9896	0.2	1	7/17/2002	7/29/2002
057972-046A	571-301-0	14	mg/L	9896	0.4	2	7/17/2002	7/29/2002
057972-048A	571-301-0.6	4.1	mg/L	9896	0.2	1	7/17/2002	7/29/2002
057972-051A	571-124-0	9.2	mg/L	9896	0.2	1	7/17/2002	7/29/2002

Qualifiers:

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Advanced Technology Laboratories

Date: 8/5/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057972
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057972-002A	571-410-0	ND	mg/L	9985	0.2	1	7/17/2002	8/2/2002
057972-007A	571-412-0.3	ND	mg/L	9985	0.2	1	7/17/2002	8/2/2002
057972-011A	571-413-0	ND	mg/L	9985	0.2	1	7/17/2002	8/2/2002
057972-012A	571-413-0.3	ND	mg/L	9985	0.2	1	7/17/2002	8/2/2002
057972-016A	571-414-0.3	ND	mg/L	9985	0.2	1	7/17/2002	8/2/2002
057972-018A	571-602-0	ND	mg/L	9985	0.2	1	7/17/2002	8/2/2002
057972-022A	571-604-0	0.21	mg/L	9985	0.2	1	7/17/2002	8/2/2002
057972-023A	571-604-0.3	ND	mg/L	9985	0.2	1	7/17/2002	8/2/2002
057972-024A	571-604-0.6	ND	mg/L	9985	0.2	1	7/17/2002	8/2/2002
057972-025A	571-606-0	ND	mg/L	9985	0.2	1	7/17/2002	8/2/2002
057972-026A	571-606-0.3	ND	mg/L	9985	0.2	1	7/17/2002	8/2/2002

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Advanced Technology Laboratories
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Advanced Technology Laboratories

Date: 8/5/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057972
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057972-027A	571-605-0	ND	mg/L	9985	0.2	1	7/17/2002	8/2/2002
057972-032A	571-601-0	ND	mg/L	9985	0.2	1	7/17/2002	8/2/2002
057972-033A	571-601-0.3	ND	mg/L	9985	0.2	1	7/17/2002	8/2/2002
057972-034A	571-501-0	ND	mg/L	9985	0.2	1	7/17/2002	8/2/2002
057972-041A	571-330-0	ND	mg/L	9985	0.2	1	7/17/2002	8/2/2002
057972-043A	571-330-0.6	ND	mg/L	9985	0.2	1	7/17/2002	8/2/2002
057972-046A	571-301-0	ND	mg/L	9985	0.2	1	7/17/2002	8/2/2002
057972-051A	571-124-0	ND	mg/L	9985	0.2	1	7/17/2002	8/2/2002

Qualifiers:

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Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-412-1.5
Lab Order:	057972		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/17/2002 11:10:00 AM
Lab ID:	057972-010A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP2_020810D	QC Batch: 10211					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	15	2.5		mg/Kg	10	8/10/2002
Barium	140	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	15	1.5		mg/Kg	10	8/10/2002
Cobalt	10	1.5		mg/Kg	10	8/10/2002
Copper	20	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	15	1.5		mg/Kg	10	8/10/2002
Selenium	ND	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	2.5	2.5		mg/Kg	10	8/10/2002
Vanadium	55	1.5		mg/Kg	10	8/10/2002
Zinc	65	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020809C	QC Batch: 10166					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/9/2002

Qualifiers:

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Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-603-0.3
Lab Order:	057972		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/17/2002 1:40:00 PM
Lab ID:	057972-031A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP2_020810D	QC Batch: 10211					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	10	2.5		mg/Kg	10	8/10/2002
Barium	120	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	10	1.5		mg/Kg	10	8/10/2002
Cobalt	5.0	1.5		mg/Kg	10	8/10/2002
Copper	10	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	10	1.5		mg/Kg	10	8/10/2002
Selenium	ND	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	35	1.5		mg/Kg	10	8/10/2002
Zinc	60	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020809C	QC Batch: 10166					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/9/2002

Qualifiers:

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- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

Advanced Technology Laboratories 3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-501-0.6
Lab Order:	057972		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/17/2002 2:54:00 PM
Lab ID:	057972-036A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP2_020810D	QC Batch: 10211					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	5.0	2.5		mg/Kg	10	8/10/2002
Barium	110	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	5.0	1.5		mg/Kg	10	8/10/2002
Cobalt	5.0	1.5		mg/Kg	10	8/10/2002
Copper	10	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	5.0	1.5		mg/Kg	10	8/10/2002
Selenium	ND	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	30	1.5		mg/Kg	10	8/10/2002
Zinc	55	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020809C	QC Batch: 10166					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/9/2002

Qualifiers:

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DO - Surrogate Diluted Out
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Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-503-0.6
Lab Order:	057972		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/17/2002 2:33:00 PM
Lab ID:	057972-040A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP2_020810D	QC Batch: 10211					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	10	2.5		mg/Kg	10	8/10/2002
Barium	160	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	20	1.5		mg/Kg	10	8/10/2002
Cobalt	5.0	1.5		mg/Kg	10	8/10/2002
Copper	30	1.5		mg/Kg	10	8/10/2002
Molybdenum	3.6	2.5		mg/Kg	10	8/10/2002
Nickel	20	1.5		mg/Kg	10	8/10/2002
Selenium	ND	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	65	1.5		mg/Kg	10	8/10/2002
Zinc	85	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020813E	QC Batch: 10206					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/13/2002

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Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-301-0.3
Lab Order:	057972		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/17/2002 2:28:00 PM
Lab ID:	057972-047A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP2_020810D	QC Batch: 10211					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	10	2.5		mg/Kg	10	8/10/2002
Barium	100	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	5.0	1.5		mg/Kg	10	8/10/2002
Cobalt	5.0	1.5		mg/Kg	10	8/10/2002
Copper	15	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	5.0	1.5		mg/Kg	10	8/10/2002
Selenium	ND	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	40	1.5		mg/Kg	10	8/10/2002
Zinc	65	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020809C	QC Batch: 10166					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/9/2002

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H - Sample exceeded analytical holding time
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Advanced Technology Laboratories

Date: 8/19/2002

LEAD BY ATOMIC ABSORPTION
EPA 1311/ 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	057972
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/17/2002 5:25:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
057972-011A	571-413-0	0.59	mg/L	10398	0.2	1	7/17/2002	8/16/2002
057972-015A	571-414-0	1.8	mg/L	10087	0.2	1	7/17/2002	8/6/2002
057972-016A	571-414-0.3	0.79	mg/L	10398	0.2	1	7/17/2002	8/16/2002
057972-022A	571-604-0	1.8	mg/L	10398	0.2	1	7/17/2002	8/16/2002
057972-025A	571-606-0	0.34	mg/L	10398	0.2	1	7/17/2002	8/16/2002
057972-034A	571-501-0	0.83	mg/L	10399	0.2	1	7/17/2002	8/16/2002
057972-041A	571-330-0	1.1	mg/L	10399	0.2	1	7/17/2002	8/16/2002

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Date: *19-Aug-02*

CLIENT: Ninyo & Moore
Work Order: 057972
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10087

Sample ID: MB-10087	SampType: mblk	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806H
Client ID: ZZZZZ	Batch ID: 10087	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314602

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10078-TCLP	SampType: mblk	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806H
Client ID: ZZZZZ	Batch ID: 10087	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314603

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10087	SampType: lcs	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806H
Client ID: ZZZZZ	Batch ID: 10087	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314617

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.184	0.20	1	0	118	80	120	0	0		

Sample ID: 057978-007AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806H
Client ID: ZZZZZ	Batch ID: 10087	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314615

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.241	0.20	2.717	0.09022	116	80	120	0	0		

Sample ID: 057978-007ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806H
Client ID: ZZZZZ	Batch ID: 10087	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314614

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0.09022	0	30	

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Calculations are based on raw values
DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 057972
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10166

Sample ID: MB-10166	SampType: mblk	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020809C
Client ID: ZZZZZ	Batch ID: 10166	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/9/2002	SeqNo: 316736

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-10166	SampType: lcs	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020809C
Client ID: ZZZZZ	Batch ID: 10166	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/9/2002	SeqNo: 316735

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.239	0.10	2.08	0	108	80	120	0	0		

Sample ID: 057974-014AMS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020809C
Client ID: ZZZZZ	Batch ID: 10166	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/9/2002	SeqNo: 316733

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9807	0.10	0.83	0.03978	113	62	146	0	0		

Sample ID: 057974-014AMSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020809C
Client ID: ZZZZZ	Batch ID: 10166	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/9/2002	SeqNo: 316734

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.183	0.10	0.83	0.03978	138	62	146	0.9807	18.7	33	

Sample ID: 057974-014ADUP	SampType: DUP	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020809C
Client ID: ZZZZZ	Batch ID: 10166	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/9/2002	SeqNo: 316732

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.03631	0.10	0	0	0	0	0	0.03978	0	30	J

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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057972
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10206

Sample ID: MB-10206	SampType: mblk	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813E
Client ID: ZZZZZ	Batch ID: 10206	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318502

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-10206	SampType: lcs	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813E
Client ID: ZZZZZ	Batch ID: 10206	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318501

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.067	0.10	2.08	0	99.4	80	120	0	0		

Sample ID: 058166-035AMS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813E
Client ID: ZZZZZ	Batch ID: 10206	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318499

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9595	0.10	0.83	0.04226	111	62	146	0	0		

Sample ID: 058166-035AMSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813E
Client ID: ZZZZZ	Batch ID: 10206	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318500

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.977	0.10	0.83	0.04226	113	62	146	0.9595	1.80	33	

Sample ID: 058166-035ADUP	SampType: DUP	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813E
Client ID: ZZZZZ	Batch ID: 10206	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318498

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.04707	0.10	0	0	0	0	0	0.04226	0	30	J

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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057972
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10211

Sample ID: MB-10211	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810D
Client ID: ZZZZZ	Batch ID: 10211	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316604

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.011	0.25									J
Arsenic	ND	0.25									
Barium	0.002	0.15									J
Beryllium	0.011	0.15									J
Cadmium	0.0245	0.15									J
Chromium	ND	0.15									
Cobalt	0.02	0.15									J
Copper	ND	0.15									
Molybdenum	ND	0.25									
Nickel	ND	0.15									
Selenium	ND	0.25									
Silver	0.036	0.15									J
Thallium	0.1145	0.25									J
Vanadium	ND	0.15									
Zinc	0.2355	0.50									J

Sample ID: LCS-10211	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810D
Client ID: ZZZZZ	Batch ID: 10211	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316590

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	47	0.25	50	0	94	80	120	0	0		
Arsenic	47.5	0.25	50	0	95	80	120	0	0		
Barium	52	0.15	50	0	104	80	120	0	0		
Beryllium	47	0.15	50	0	94	80	120	0	0		
Cadmium	46.5	0.15	50	0	93	80	120	0	0		
Chromium	49.5	0.15	50	0	99	80	120	0	0		
Cobalt	48	0.15	50	0	96	80	120	0	0		
Copper	49.5	0.15	50	0	99	80	120	0	0		
Molybdenum	48.5	0.25	50	0	97	80	120	0	0		
Nickel	46.5	0.15	50	0	93	80	120	0	0		

Qualifiers:
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DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 057972
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10211

Sample ID: LCS-10211	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810D
Client ID: ZZZZZ	Batch ID: 10211	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316590

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	43.5	0.25	50	0	87	80	120	0	0		
Silver	49	0.15	50	0	98	80	120	0	0		
Thallium	49.5	0.25	50	0	99	80	120	0	0		
Vanadium	48	0.15	50	0	96	80	120	0	0		
Zinc	48.5	0.50	50	0	97	80	120	0	0		

Sample ID: 057974-004AMS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810D
Client ID: ZZZZZ	Batch ID: 10211	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316602

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	65	2.5	125	1.445	50.8	32	115	0	0		
Arsenic	130	2.5	125	10	96	59	111	0	0		
Barium	255	1.5	125	145	88	34	151	0	0		
Beryllium	120	1.5	125	0	96	56	112	0	0		
Cadmium	115	1.5	125	0	92	52	120	0	0		
Chromium	145	1.5	125	20	100	56	118	0	0		
Cobalt	130	1.5	125	10	96	58	117	0	0		
Copper	190	1.5	125	55	108	58	134	0	0		
Molybdenum	120	2.5	125	2.09	94.3	56	115	0	0		
Nickel	135	1.5	125	20	92	52	120	0	0		
Selenium	120	2.5	125	0	96	46	108	0	0		
Silver	120	1.5	125	0.105	95.9	74	117	0	0		
Thallium	125	2.5	125	1.965	98.4	62	117	0	0		
Vanadium	160	1.5	125	45	92	55	122	0	0		
Zinc	405	5.0	125	365	32	43	134	0	0		S

Sample ID: 057974-004AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810D
Client ID: ZZZZZ	Batch ID: 10211	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316603

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike/Surrogate outside limits due to matrix interference; DO - Surrogate diluted out; J - Analyte detected below quantitation limits; B - Analyte detected in the associated Method Blank; H - Sample exceeded holding time; R - RPD outside accepted recovery limits

Calculations are based on raw values

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CLIENT: Ninyo & Moore
Work Order: 057972
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10211

Sample ID: 057974-004AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810D
Client ID: ZZZZZ	Batch ID: 10211	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316603

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	70	2.5	125	1.445	54.8	32	115	65	7.41	20	
Arsenic	125	2.5	125	10	92	59	111	130	3.92	20	
Barium	245	1.5	125	145	80	34	151	255	4.00	20	
Beryllium	115	1.5	125	0	92	56	112	120	4.26	20	
Cadmium	110	1.5	125	0	88	52	120	115	4.44	20	
Chromium	135	1.5	125	20	92	56	118	145	7.14	20	
Cobalt	125	1.5	125	10	92	58	117	130	3.92	20	
Copper	170	1.5	125	55	92	58	134	190	11.1	20	
Molybdenum	115	2.5	125	2.09	90.3	56	115	120	4.26	20	
Nickel	135	1.5	125	20	92	52	120	135	0	20	
Selenium	115	2.5	125	0	92	46	108	120	4.26	20	
Silver	115	1.5	125	0.105	91.9	74	117	120	4.26	20	
Thallium	125	2.5	125	1.965	98.4	62	117	125	0	20	
Vanadium	155	1.5	125	45	88	55	122	160	3.17	20	
Zinc	380	5.0	125	365	12	43	134	405	6.37	20	S

Sample ID: 057974-004ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810D
Client ID: ZZZZZ	Batch ID: 10211	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316601

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.765	2.5	0	0	0	0	0	1.445	0	30	J
Arsenic	10	2.5	0	0	0	0	0	10	0	30	
Barium	140	1.5	0	0	0	0	0	145	3.51	30	
Beryllium	ND	1.5	0	0	0	0	0	0	0	30	
Cadmium	ND	1.5	0	0	0	0	0	0	0	30	
Chromium	20	1.5	0	0	0	0	0	20	0	30	
Cobalt	10	1.5	0	0	0	0	0	10	0	30	
Copper	55	1.5	0	0	0	0	0	55	0	30	
Molybdenum	2.46	2.5	0	0	0	0	0	2.09	0	30	J
Nickel	20	1.5	0	0	0	0	0	20	0	30	

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; S - Spike/Surrogate outside limits due to matrix interference; B - Analyte detected in the associated Method Blank; **Calculations are based on raw values**; DO - Surrogate diluted out; H - Sample exceeded holding time

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Work Order: 057972
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10211

Sample ID: 057974-004ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/8/2002	Run ID: ICP2_020810D
Client ID: ZZZZZ	Batch ID: 10211	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316601

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	ND	2.5	0	0	0	0	0	0	0	30	
Silver	0.24	1.5	0	0	0	0	0	0.105	0	30	J
Thallium	2.23	2.5	0	0	0	0	0	1.965	0	30	J
Vanadium	45	1.5	0	0	0	0	0	45	0	30	
Zinc	295	5.0	0	0	0	0	0	365	21.2	30	

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10398

Sample ID: MB-10398	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816A
Client ID: ZZZZZ	Batch ID: 10398	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319792

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10377-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816A
Client ID: ZZZZZ	Batch ID: 10398	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319793

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0		

Sample ID: LCS-10398	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816A
Client ID: ZZZZZ	Batch ID: 10398	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319807

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.058	0.20	1	0	106	80	120	0	0		

Sample ID: 057972-025AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816A
Client ID: 571-606-0	Batch ID: 10398	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319805

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.851	0.20	2.5	0.3406	100	80	120	0	0		

Sample ID: 057972-025ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816A
Client ID: 571-606-0	Batch ID: 10398	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319804

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.3508	0.20	0	0	0	0	0	0.3406	2.97	30	

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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Work Order: 057972
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10399

Sample ID: MB-10399	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816B
Client ID: ZZZZZ	Batch ID: 10399	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319808

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10378-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816B
Client ID: ZZZZZ	Batch ID: 10399	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319809

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0		

Sample ID: LCS-10399	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816B
Client ID: ZZZZZ	Batch ID: 10399	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319823

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.111	0.20	1	0	111	80	120	0	0		

Sample ID: 057996-059AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816B
Client ID: ZZZZZ	Batch ID: 10399	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319821

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.355	0.20	2.5	0.8373	101	80	120	0	0		

Sample ID: 057996-059ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816B
Client ID: ZZZZZ	Batch ID: 10399	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319820

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.418	0.20	0	0	0	0	0	0.8373	51.5	30	R

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Calculations are based on raw values
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H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 057972
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9637

Sample ID: MB-9637A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722C
Client ID: ZZZZZ	Batch ID: 9637	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 302970

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9637B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722C
Client ID: ZZZZZ	Batch ID: 9637	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 302971

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9637	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722C
Client ID: ZZZZZ	Batch ID: 9637	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 302969

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	239.1	5.0	250	0	95.6	80	120	0	0		

Sample ID: 057972-011AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722C
Client ID: 571-413-0	Batch ID: 9637	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 302955

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	915.7	5.0	250	659.4	103	47	128	0	0		

Sample ID: 057972-021AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722C
Client ID: 571-602-0.9	Batch ID: 9637	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 302967

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	231.9	5.0	250	18.76	85.3	47	128	0	0		

Qualifiers:
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DO - Surrogate diluted out
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Work Order: 057972
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9637

Sample ID: 057972-011ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722C
Client ID: 571-413-0	Batch ID: 9637	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 302954

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	642.2	5.0	0	0	0	0	0	659.4	2.63	30	

Sample ID: 057972-021ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722C
Client ID: 571-602-0.9	Batch ID: 9637	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 302966

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	20.75	5.0	0	0	0	0	0	18.76	10.1	30	

Qualifiers:
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DO - Surrogate diluted out
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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9638

Sample ID: MB-9638A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722D
Client ID: ZZZZZ	Batch ID: 9638	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303044

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9638B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722D
Client ID: ZZZZZ	Batch ID: 9638	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303045

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9638	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722D
Client ID: ZZZZZ	Batch ID: 9638	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303043

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	241.8	5.0	250	0	96.7	80	120	0	0		

Sample ID: 057972-031AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722D
Client ID: 571-603-0.3	Batch ID: 9638	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303029

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	247.6	5.0	250	47.29	80.1	47	128	0	0		

Sample ID: 057972-041AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722D
Client ID: 571-330-0	Batch ID: 9638	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303041

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	629.3	5.0	250	778.4	-59.6	47	128	0	0		S

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
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Work Order: 057972
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9638

Sample ID: 057972-031ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722D
Client ID: 571-603-0.3	Batch ID: 9638	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303028

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	26.36	5.0	0	0	0	0	0	47.29	56.9	30	R

Sample ID: 057972-041ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722D
Client ID: 571-330-0	Batch ID: 9638	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303040

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	433	5.0	0	0	0	0	0	778.4	57.0	30	R

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9639

Sample ID: MB-9639A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722E
Client ID: ZZZZZ	Batch ID: 9639	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303132

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.336	5.0									

Sample ID: MB-9639B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722E
Client ID: ZZZZZ	Batch ID: 9639	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303133

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.242	5.0									

Sample ID: LCS-9639	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722E
Client ID: ZZZZZ	Batch ID: 9639	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303131

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	216.9	5.0	250	0	86.8	80	120	0	0		

Sample ID: 057972-051AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722E
Client ID: 571-124-0	Batch ID: 9639	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303117

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	377.8	5.0	250	134.7	97.3	47	128	0	0		

Sample ID: 057974-008AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722E
Client ID: ZZZZZ	Batch ID: 9639	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303129

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	213.5	5.0	250	21.53	76.8	47	128	0	0		

Qualifiers:
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 057972
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9639

Sample ID: 057972-051ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722E
Client ID: 571-124-0	Batch ID: 9639	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303116

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	169.5	5.0	0	0	0	0	0	134.7	22.9	30	

Sample ID: 057974-008ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/19/2002	Run ID: ICP5_020722E
Client ID: ZZZZZ	Batch ID: 9639	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/22/2002	SeqNo: 303128

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	18.3	5.0	0	0	0	0	0	21.53	16.2	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
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Calculations are based on raw values
DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 057972
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9745

Sample ID: MB-9745	SampType: MBLK	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303590

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050									

Sample ID: LCS-9745	SampType: LCS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303591

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.96	0.0050	1	0	96	80	120	0	0		

Sample ID: 057999-001AMS	SampType: MS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303603

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.54	0.0050	2.5	0	102	66	118	0	0		

Sample ID: 057999-001ADUP	SampType: DUP	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/22/2002	Run ID: ICP2_020723B
Client ID: ZZZZZ	Batch ID: 9745	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/23/2002	SeqNo: 303602

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050	0	0	0	0	0	0	0	30	

Qualifiers:
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CLIENT: Ninyo & Moore
Work Order: 057972
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9895

Sample ID: MB-9895	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020729B
Client ID: ZZZZZ	Batch ID: 9895	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309204

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9895A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020729B
Client ID: ZZZZZ	Batch ID: 9895	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309205

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9895B	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020729B
Client ID: ZZZZZ	Batch ID: 9895	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309218

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9895	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020729B
Client ID: ZZZZZ	Batch ID: 9895	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309232

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.633	0.20	7.5	0	102	80	120	0	0		

Sample ID: 057972-023AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020729B
Client ID: 571-604-0.3	Batch ID: 9895	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309217

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	15.65	0.40	10	5.873	97.8	80	120	0	0		

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Calculations are based on raw values
DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 057972
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9895

Sample ID: 057972-038AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020729B
Client ID: 571-503-0	Batch ID: 9895	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309230

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.549	0.20	5	1.889	93.2	80	120	0	0		

Sample ID: 057972-023ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020729B
Client ID: 571-604-0.3	Batch ID: 9895	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309216

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.231	0.20	0	0	0	0	0	5.873	5.92	30	

Sample ID: 057972-038ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020729B
Client ID: 571-503-0	Batch ID: 9895	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309229

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.749	0.20	0	0	0	0	0	1.889	7.73	30	

Qualifiers:
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Calculations are based on raw values
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CLIENT: Ninyo & Moore
Work Order: 057972
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9896

Sample ID: MB-9896	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020729C
Client ID: ZZZZZ	Batch ID: 9896	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309233

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9896A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020729C
Client ID: ZZZZZ	Batch ID: 9896	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309234

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9896B	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020729C
Client ID: ZZZZZ	Batch ID: 9896	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309247

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.06413	0.20									

Sample ID: LCS-9896	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020729C
Client ID: ZZZZZ	Batch ID: 9896	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309261

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.755	0.20	7.5	0	103	80	120	0	0		

Sample ID: 057974-021AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020729C
Client ID: ZZZZZ	Batch ID: 9896	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309246

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	313	8.0	200	81.36	116	80	120	0	0		

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Calculations are based on raw values
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CLIENT: Ninyo & Moore
Work Order: 057972
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9896

Sample ID: 057975-014AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020729C
Client ID: ZZZZZ	Batch ID: 9896	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309259

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	15.21	0.40	10	5.625	95.9	80	120	0	0		

Sample ID: 057974-021ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020729C
Client ID: ZZZZZ	Batch ID: 9896	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309245

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	80.86	2.0	0	0	0	0	0	81.36	0.611	30	

Sample ID: 057975-014ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/26/2002	Run ID: AA2_020729C
Client ID: ZZZZZ	Batch ID: 9896	TestNo: WET/ EPA 74 (WET)		Analysis Date: 7/29/2002	SeqNo: 309258

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	15.68	0.40	0	0	0	0	0	5.625	94.4	30	R

Qualifiers:
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CLIENT: Ninyo & Moore
Work Order: 057972
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9985

Sample ID: MB-9985	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802M
Client ID: ZZZZZ	Batch ID: 9985	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312517

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9985A	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020802M
Client ID: ZZZZZ	Batch ID: 9985	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312518

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9985B	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020802M
Client ID: ZZZZZ	Batch ID: 9985	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312531

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9985	SampType: LCS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802M
Client ID: ZZZZZ	Batch ID: 9985	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312545

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.542	0.20	7.5	0	101	80	120	0	0		

Sample ID: 057972-025AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802M
Client ID: 571-606-0	Batch ID: 9985	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312530

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.391	0.20	5	0.0602	107	80	120	0	0		

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Work Order: 057972
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9985

Sample ID: 057974-009AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802M
Client ID: ZZZZZ	Batch ID: 9985	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312543

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.358	0.20	5	0.0494	106	80	120	0	0		

Sample ID: 057972-025ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020802M
Client ID: 571-606-0	Batch ID: 9985	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312529

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.09255	0.20	0	0	0	0	0	0.0602	0	30	J

Sample ID: 057974-009ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 7/31/2002	Run ID: AA2_020802M
Client ID: ZZZZZ	Batch ID: 9985	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/2/2002	SeqNo: 312542

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0.0494	0	30	

Qualifiers:
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CLIENT: Ninyo & Moore
Work Order: 057972
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: R19608

Sample ID: 057974-031A-DUP	SampType: DUP	TestCode: 9045_S	Units: pH Units	Prep Date: 7/21/2002	Run ID: WETCHEM_020721D
Client ID: ZZZZZ	Batch ID: R19608	TestNo: EPA 9045C		Analysis Date: 7/21/2002	SeqNo: 302573

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.961	0.10	0	0	0	0	0	7.913	0.605	20	

Qualifiers:
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Ninyo & Moore Transmittal

475 Goddard, Suite 200, Irvine, California 92618 ◆ Phone 949/753-7070 ◆ Fax 949/753-7071 ◆ www.ninyoandmoore.com

To:	Rachelle	**Date:**	July 30, 2002
Firm:	Advanced Technology Laboratories	**Fax No:**	562-989-4040
Address:	3275 Walnut Avenue Signal Hill, CA 90807	**Telephone No:**	562-989-4045
From:	Steve Reese	**Total Pages Including Transmittal:**	
Subject:	Corrections	**Project No:**	203939001

☒ **Urgent**	☐ **For Approval**	☒ **For Your Use**	☐ **Please Reply**	☐ **As Requested**
Original Document:	☒ **Will Not Follow**	☐ **Will Follow**	☐ **By U.S. Mail**	☐ **By Other**

Rachelle,
We have found a few more errors that need to be corrected.

1. Attached please find COC EB-10 dated 7/17/02. We incorrectly wrote on the COC for samples 571-**530**-0, -0.3, -0.6, and -0.9. Please change these sample numbers to 571-**330**-0, -0.3, -0.6, and -0.9 as I have done on the COC. The correct samples for 571-530-0, -0.3, and –0.6 are on EB-32 dated 7/22/02 (no change needed).

2. For the sample 571-**522**-1.5 on COC EB-28 dated 7/22/02, you submitted data for that sample as 571-**552**-1.5. A sample with this ID does not exist. Please correct your data (no change needed on COC).

3. As a general rule for your data compilation and presentation, all of our samples for soil end with any one of the suffixes –0, -0.3, -0.6, -0.9, or –1.5. We have noted some samples that were missing decimal places, etc., in your preliminary data submittal. Also, all of our prefixes for soil samples begin with 569-, 570-, or 571-. Please note for future submittals and submittal of the final data.

Thank you,
Steve

- Geotechnical Engineering
- Engineering Geology
- Materials Testing and Inspection
- Construction Management
- Engineering Design
- Environmental Engineering
- Environmental Site Assessments
- Regulatory Compliance and Permitting
- Water Quality and Resource Evaluations
- Hazardous Waste Management
- Soil and Groundwater Remediation
- Asbestos and Lead-Based Paint Surveys
- Geophysical Studies
- Mineral Resource Evaluations
- Value Engineering
- Forensic Studies
- Expert Witness Testimony

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (ADL57)/Lead Survey	Ninyo & Moore - David Shuler/Steve Reese
1275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117720-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel (562) 989-4045 Fax (562) 989-4040	Project # 203325001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications 5 Day TAT.

Relinquished by (name/date/time) [signature] 7-17-02 — Received by: (name/date/time) [signature] 7/17/02
Relinquished by: (name/date/time) [signature] 1725 — Received by: (name/date/time) [signature] 7/17/02 17:25

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	ED-10	7/17/02	3:30	P.	X	
	571-410-0	7/17/02	10:40	B	X	X
	571-410-0.3		10:42		X	
	571-410-0.6		10:45		X	
	571-410-0.9		10:47		X	
	571-412-0		10:56		X	
	571-412-0.3		10:59		X	
	571-412-0.6		11:02		X	
	571-412-0.9		11:05		X	
	571-412-1.5		11:10		X	
	571-413-0		10:54		X	
	571-413-0.3		10:58		X	X
	571-413-0.6		11:02		X	
	571-413-0.9		11:11		X	
	571-414-0		11:23		X	
	571-414-0.3		11:25		X	
	571-414-0.6		11:32		X	
	571-602-0		12:47		X	
	571-602-0.3		12:50		X	
	571-602-0.6		12:53		X	
	571-602-0.9		12:56		X	
	571-604-0		12:58		X	X
	571-604-0.3		1:07		X	
	571-604-0.6		1:12		X	
	571-606-0		1:08		X	
	571-606-0.3		1:10		X	
	571-605-0		1:17		X	
	571-605-0.3		1:22		X	
	571-605-0.6		1:25		X	
	571-603-0		1:34		X	
	571-603-0.3		1:40		X	
	571-601-0		1:37		X	X
	571-601-0.3		1:44		X	
	571-501-0		2:45		X	
	571-501-0.3		2:48		X	
	571-501-0.6		2:54		X	
	571-501-0.9		3:03		X	
	571-503-0		2:16		X	
	571-503-0.3		2:29		X	
	571-503-0.6		2:33		X	
	571-330-0		2:41		X	
	571-330-0.3		2:45		X	X
	571-330-0.6		2:50		X	
	571-330-0.9		2:54		X	
	571-302-0.6		14:04		X	
	571-301-0		14:18		X	
	571-301-0.3		14:28		X	
	571-301-0.6		14:33		X	
	571-301-0.9		14:34		X	
	571-301-1.5		14:39		X	
	571-124-0		2:19		X	
	571-124-0.3		2:21		X	
	571-124-0.6		~~2:20~~ 2:22		X	X
	571-124-0.9		2:25		X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	

Total # of samples: 54

Change -530 to -330

43.

Rachelle

From: Steve Reese [sreese@ninyoandmoore.com]
Sent: Wednesday, July 31, 2002 9:27 AM
To: 'rachelle@atlglobal.com'
Cc: David Shaler (E-mail); Ruth Cheung (E-mail)
Subject: TCLP Analysis

TCLP.xls

Rachelle,
Attached please find a list of samples to be run for the TCLP analysis. Currently, we selected all of the samples that are greater than 1,000 mg/kg
of TTLC results. However, they will be ran by instruction only. There may
be more samples chosen for TCLP analysis in the future, but please run these 82 samples for now. Please call with any questions.
Thank you, Steve

Stephen S. Reese
Senior Staff Environmental Scientist
Ninyo & Moore Geotechnical & Environmental Sciences Consultants
475 Goddard, Suite 200
Irvine, California 92618
Tel: (949) 753-7070
Fax: (949) 753-7071
Email: sreese@ninyoandmoore.com
www.ninyoandmoore.com

RUN FOR TCLP ANALYSIS			
33	**20**	**29**	**82**
569-101-0	570-101-0	571-104-0	
569-102-0	570-101-0.6	571-120-0	
569-102-0.3	570-102-0.6	571-310-0.9	
569-102-0.9	570-103-1.5	571-317-0	
569-111-0	570-114-0.6	571-320-0	
569-112-0	570-115-0	571-325-0.6	
569-112-0.6	570-119-0.3	571-507-0	
569-201-0	570-201-0	571-511-0	
569-212-0	570-214-0	571-514-0	
569-301-0	570-311-0.6	571-524-0	
569-303-0.9	570-312-0.6	571-710-0	
569-314-0	570-504-0	571-710-0.3	
569-401-0	570-508-0	571-711-0	
569-404-0.6	570-517-0	571-711-0.3	
569-405-0.6	570-517-0.3	571-712-0	
569-408-0.9	570-610-0.6	571-712-0.3	
569-502-0.6	570-615-0	571-201-0.6	
569-516-0	570-706-0	571-405-0	
569-603-0.3	570-709-0	571-406-0	
569-607-0	570-808-0.6	571-407-0	
569-607-0.3		571-414-0	
569-609-0		571-609-0	
569-609-0.3		571-611-0	
569-703-0		571-616-0	
569-703-0.9		571-617-0	
569-705-0		571-619-1.5	
569-705-0.3		571-814-0.3	
569-706-0		571-818-0.6	
569-708-0		571-819-0	
569-710-0			
569-711-0			
569-711-0.3			
569-801-0.3			

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Tuesday, August 06, 2002 3:46 PM
To: 'Rachelle'; 'David Shaler (E-mail)'
Subject: Title 22 Metals

Title 22 Metals.xls

Rachelle,
Please run the following samples for Title 22 Metals. Please do not list
Pb in your emailed results. There should be a total of 120 samples to be
run.
Thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

569-102-0.9	570-101-0	571-101-0.9
569-112-0	570-101-0.6	571-104-0
569-201-0	570-201-0	571-201-0.6
569-206-0.6	570-205-0.9	571-108-1.5
569-106-1.5	570-106-0.3	571-111-0.3
569-212-0	570-208-1.5	571-207-0
569-401-0.6	570-111-0.6	571-210-0.6
569-301-0	570-214-0	571-115-0.9
569-303-0.9	570-115-0.3	571-214-0.3
569-404-0.6	570-119-0.9	571-120-0
569-408-0.9	570-224-0.6	571-217-1.5
569-314-0	570-401-0	571-220-0.6
569-313-0.3	570-401-0.3	571-301-0.3
569-502-0.6	570-304-1.5	571-405-0
569-602-1.5	570-307-0.9	571-306-0.9
569-607-0.3	570-311-0.6	571-407-0
569-607-0	570-312-0.6	571-310-0.9
569-508-0.9	570-316-0.3	571-315-0.3
569-511-0.6	570-601-0	571-412-1.5
569-612-1.5	570-505-1.5	571-317-0
569-516-0	570-508-0	571-320-0.6
569-801-0.3	570-610-0.6	571-416-0.9
569-519-0.6	570-511-0.9	571-325-0.3
569-803-0.9	570-615-0	571-421-1.5
569-705-0	570-514-0.3	571-425-0
569-806-1.5	570-517-0	571-501-0.6
569-708-0.3	570-618-0.6	571-503-0.9
569-711-0	570-621-1.5	571-603-0.3
569-811-0	570-703-0.9	571-507-0
	570-804-0	571-609-0
	570-706-0	571-510-1.5
	570-709-0	571-611-0
	570-808-0.6	571-514-0
	570-711-1.5	571-614-0.3
	570-812-0.3	571-517-0.9
		571-617-0.6
		571-520-1.5
		571-621-0.3
		571-524-0
		571-624-0.9
		571-529-0.3
		571-628-0.6
		571-703-1.5
		571-707-0
		571-804-0.9
		571-809-0.3
		571-711-0
		571-712-0
		571-814-0.3
		571-818-0.6
		571-819-0
		571-827-1.5

571-832-0.9
571-836-0.3
571-837-0.6
571-842-0

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Wednesday, August 07, 2002 10:28 AM
To: 'Rachelle'
Subject: RE: Title 22 Metals

Sorry for the mistake. Please change to the following:
569-602-1.5 to 0.6
569-803-0.9 to 0.6
571-217-1.5 to 0.6
571-320-0.6 to 0
571-421-1.5 to 0
571-503-0.9 to 0.6
571-510-1.5 to 0.6
571-520-1.5 to 0
571-703-1.5 to 0.6
571-804-0.9 to 0.6
571-827-1.5 to 0.3
571-837-0.6 to 0.3
570-119-0.9 to 0.6
570-208-1.5 to 0.3
570-621-1.5 to 0.3
570-703-0.9 to 0.3

thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

-----Original Message-----
From: Rachelle [SMTP:Rachelle@ATLGlobal.com]
Sent: Wednesday, August 07, 2002 9:49 AM
To: 'Ruth Cheung'
Subject: RE: Title 22 Metals

Hi Ruth,
Please check if the following samples exist, I don't see it on our database:
569-602-1.5
569-803-0.9
571-217-1.5
571-320-0.6
571-421-1.5
571-503-0.9
571-510-1.5
571-520-1.5
571-703-1.5
571-804-0.9
571-827-1.5
571-837-0.6
570-119-0.9
570-208-1.5
570-621-1.5
570-703-0.9
If it does exist, can you let me know when it was collected so I can track
them.
Thanks,
Rachelle
-----Original Message-----
From: Ruth Cheung [mailto:rcheung@ninyoandmoore.com]

Sent: Tuesday, August 06, 2002 3:46 PM
To: 'Rachelle'; 'David Shaler (E-mail)'
Subject: Title 22 Metals

Rachelle,
Please run the following samples for Title 22 Metals. Please do not list
Pb in your emailed results. There should be a total of 120 samples to be
run.
Thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Thursday, August 08, 2002 9:14 AM
To: 'Rachelle'
Subject: TCLP Analysis

TCLP-3.xls

In addition to the 90 TCLP already run please run the following samples for
TCLP. There should be a list of 350 samples.
Thanks for a the hard work and timely results.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

-----Original Message-----
From: Rachelle [SMTP:Rachelle@ATLGlobal.com]
Sent: Wednesday, August 07, 2002 5:02 PM
To: 'David Shaler (E-mail)'
Cc: 'Ruth Cheung (E-mail)'
Subject: TCLP Results

<<57931TCLP.xls>> <<58001TCLP.xls>> <<58021TCLP.xls>> <<58022TCLP.xls>>
<<58023TCLP.xls>> <<58024TCLP.xls>> <<58049TCLP.xls>> <<58050TCLP.xls>>
<<58052TCLP.xls>> <<58053TCLP.xls>> <<58065TCLP.xls>> <<58066TCLP.xls>>
<<58067TCLP.xls>> <<58068TCLP.xls>> <<58069TCLP.xls>>

Rachelle Arada
Project Coordinator
www.atlglobal.com
voice: 562.989.4045 ext 237
fax : 562.989.4040

<< File: 57931TCLP.xls >> << File: 58001TCLP.xls >> << File: 58021TCLP.xls >> << File: 58022TCLP.xls >> << File: 58023TCLP.xls >> << File: 58024TCLP.xls >> << File: 58049TCLP.xls >> << File: 58050TCLP.xls >> << File: 58052TCLP.xls >> << File: 58053TCLP.xls >> << File: 58065TCLP.xls >> << File: 58066TCLP.xls >> << File: 58067TCLP.xls >> << File: 58068TCLP.xls >> << File: 58069TCLP.xls >>

569-404-0	2. STLC	170
569-402-0	2. STLC	130
569-406-0	2. STLC	120
569-515-0	2. STLC	110
569-611-0	2. STLC	100
569-409-0	2. STLC	94
569-603-0	2. STLC	93
569-104-0.6	2. STLC	91
569-807-0	2. STLC	86
569-608-0	2. STLC	86
569-501-0	2. STLC	84
569-710-0.3	2. STLC	83
569-808-0	2. STLC	83
569-609-0.6	2. STLC	80
569-803-0	2. STLC	79
569-105-0	2. STLC	78
569-512-0	2. STLC	77
569-513-0	2. STLC	77
569-302-0	2. STLC	74
569-805-0	2. STLC	73
569-517-0	2. STLC	71
569-704-0.3	2. STLC	71
569-703-0.6	2. STLC	70
569-514-0.3	2. STLC	70
569-803-0.3	2. STLC	69
569-409-0.6	2. STLC	69
569-411-0	2. STLC	68
569-102-0.6	2. STLC	68
569-809-0	2. STLC	65
569-605-0	2. STLC	65
569-711-0.6	2. STLC	62
569-806-0	2. STLC	60
569-802-0.3	2. STLC	60
569-410-0	2. STLC	59
569-501-0.6	2. STLC	59
569-808-0.3	2. STLC	58
569-104-0	2. STLC	56
569-804-0	2. STLC	54
569-610-0	2. STLC	54
569-608-0.3	2. STLC	53
569-213-0	2. STLC	49
569-701-0	2. STLC	47
569-311-0	2. STLC	47
569-609-0.9	2. STLC	46
569-513-0.3	2. STLC	45
569-801-0.6	2. STLC	44
569-514-0	2. STLC	42
569-805-0.6	2. STLC	42
569-408-1.5	2. STLC	42
569-807-0.3	2. STLC	40
569-204-0	2. STLC	40
569-517-0.3	2. STLC	36
569-518-0	2. STLC	36
569-806-0.3	2. STLC	36
569-705-1.5	2. STLC	35
569-303-0.6	2. STLC	34
569-516-0.3	2. STLC	33
569-705-0.6	2. STLC	33
569-802-0	2. STLC	33
569-515-0.6	2. STLC	32
569-704-0	2. STLC	32
569-401-0.3	2. STLC	32
569-207-0	2. STLC	32
569-608-0.6	2. STLC	31
569-104-0.3	2. STLC	31
569-201-0.6	2. STLC	30
569-515-0.3	2. STLC	28
569-212-0.6	2. STLC	28
569-103-0	2. STLC	28
569-313-0	2. STLC	27
569-103-0.3	2. STLC	26
569-705-0.9	2. STLC	25
569-707-0.3	2. STLC	25
569-515-1.5	2. STLC	24
569-508-0	2. STLC	24
569-801-0	2. STLC	24
569-402-0.6	2. STLC	24
569-516-0.6	2. STLC	22
569-509-0.3	2. STLC	22
569-106-0	2. STLC	22
569-106-0.3	2. STLC	22
569-202-0	2. STLC	21
569-805-1.5	2. STLC	21
569-205-0	2. STLC	20
569-707-0	2. STLC	19
570-515-0.3	2. STLC	120
570-611-0	2. STLC	110
570-114-0.0	2. STLC	110
570-504-0.6	2. STLC	100
570-811-1.5	2. STLC	90
570-615-0.6	2. STLC	84
570-305-0	2. STLC	79
570-314-0.6	2. STLC	76
570-505-0.6	2. STLC	75
570-209-0.6	2. STLC	74
570-116-0.0	2. STLC	73
570-102-0	2. STLC	65
570-804-0.6	2. STLC	64
570-704-0	2. STLC	63
570-508-0.6	2. STLC	60
570-706-0.3	2. STLC	60
570-303-0	2. STLC	58
570-311-1.5	2. STLC	58
570-117-0.0	2. STLC	58
570-208-0.3	2. STLC	58
570-709-0.6	2. STLC	57
570-703-0	2. STLC	55
570-206-0	2. STLC	54
570-301-0	2. STLC	53
570-603-0.3	2. STLC	46
570-711-0.6	2. STLC	46
570-206-0.3	2. STLC	45
570-103-0	2. STLC	44
570-602-0	2. STLC	41
570-209-0	2. STLC	40
570-210-0	2. STLC	40
570-117-0.3	2. STLC	38
570-103-0.6	2. STLC	37
570-110-0.6	2. STLC	37
570-805-0.9	2. STLC	36
570-112-1.5	2. STLC	35
570-614-0	2. STLC	34
570-713-0.3	2. STLC	33
570-513-0	2. STLC	32
570-312-0.3	2. STLC	31
570-503-0.6	2. STLC	31
570-510-0.6	2. STLC	31
570-202-0	2. STLC	31
570-207-0	2. STLC	31
570-209-0.3	2. STLC	31
570-703-0.3	2. STLC	30
570-401-0	2. STLC	30
570-610-0.9	2. STLC	29
570-809-0.6	2. STLC	29
570-509-0.9	2. STLC	29
570-210-0.6	2. STLC	29
570-211-0	2. STLC	29
570-603-0	2. STLC	28
570-119-0	2. STLC	28
570-713-0.6	2. STLC	28
570-108-0	2. STLC	27
570-708-0.6	2. STLC	27
570-224-0	2. STLC	26
570-601-0	2. STLC	26
570-710-0.6	2. STLC	26
570-614-0.6	2. STLC	26
570-118-0.3	2. STLC	26
570-304-0	2. STLC	25
570-707-0.6	2. STLC	25
570-510-0	2. STLC	25
570-110-0	2. STLC	24
570-223-0	2. STLC	24
570-117-0.6	2. STLC	24
570-616-0	2. STLC	23
570-704-0.3	2. STLC	22
570-513-0.6	2. STLC	22
570-221-0.0	2. STLC	22
570-617-0	2. STLC	21
570-214-0.3	2. STLC	21
570-122-0.9	2. STLC	20
570-313-0.6	2. STLC	19
570-207-0.6	2. STLC	19
570-120-0.9	2. STLC	18
570-506-0	2. STLC	18
570-102-0.9	2. STLC	17
570-216-0	2. STLC	17
570-225-0	2. STLC	17
570-304-0.3	2. STLC	17
570-409-0	2. STLC	17
570-713-0	2. STLC	17
571-521-0	2. STLC	230
571-324-0.9	2. STLC	110
571-818-0	2. STLC	110
571-819-0.6	2. STLC	110
571-708-0	2. STLC	110
571-103-0.6	2. STLC	110
571-617-0.3	2. STLC	100
571-611-0.6	2. STLC	92
571-712-0.9	2. STLC	81
571-105-0.6	2. STLC	81
571-313-0	2. STLC	79
571-508-0	2. STLC	73
571-518-0.3	2. STLC	73
571-217-0	2. STLC	68
571-516-0	2. STLC	66
571-701-0.3	2. STLC	66
571-710-0.6	2. STLC	65
571-512-0	2. STLC	64
571-308-0.9	2. STLC	61
571-701-0	2. STLC	61
571-514-0.3	2. STLC	59
571-415-0	2. STLC	58
571-616-0.6	2. STLC	57
571-517-0	2. STLC	56
571-112-0.9	2. STLC	56
571-214-0	2. STLC	55
571-415-0.3	2. STLC	55
571-405-0.6	2. STLC	55
571-530-0	2. STLC	55
571-831-0	2. STLC	53
571-709-0	2. STLC	53
571-103-0.0	2. STLC	52
571-312-0	2. STLC	51
571-526-0	2. STLC	51
571-819-1.5	2. STLC	51
571-515-0	2. STLC	50
571-833-0	2. STLC	49
571-815-0.6	2. STLC	47
571-517-0.3	2. STLC	46
571-610-0	2. STLC	46
571-413-0	2. STLC	46
571-815-0	2. STLC	45
571-514-0.9	2. STLC	44
571-505-1.5	2. STLC	44
571-528-0	2. STLC	44
571-610-0.6	2. STLC	43
571-629-0	2. STLC	43
571-604-0	2. STLC	42
571-213-0	2. STLC	41
571-812-0	2. STLC	41
571-706-0	2. STLC	41
571-530-0.6	2. STLC	41
571-305-0	2. STLC	40
571-523-0.3	2. STLC	39
571-510-0	2. STLC	39
571-305-0.9	2. STLC	39
571-818-1.5	2. STLC	39
571-703-0	2. STLC	38
571-520-0.3	2. STLC	36
571-216-0	2. STLC	34
571-827-0	2. STLC	34
571-708-0.3	2. STLC	34
571-514-0.6	2. STLC	33
571-528-1.5	2. STLC	33
571-803-0	2. STLC	33
571-414-0.3	2. STLC	33
571-813-0.3	2. STLC	32
571-523-0	2. STLC	31
571-326-0	2. STLC	31
571-502-0.6	2. STLC	31
571-624-1.5	2. STLC	31
571-330-0	2. STLC	31
571-512-0.3	2. STLC	30
571-521-0.6	2. STLC	29
571-706-0.3	2. STLC	29
571-814-0.6	2. STLC	28
571-616-1.5	2. STLC	28
571-835-0	2. STLC	28
571-811-0.3	2. STLC	28
571-101-0.6	2. STLC	28
571-112-0	2. STLC	28
571-315-0	2. STLC	27
571-622-0	2. STLC	27
571-607-0.6	2. STLC	27
571-609-0.6	2. STLC	27

569-709-0	2. STLC	19
569-202-0.3	2. STLC	19
569-602-0	2. STLC	19
569-207-0.3	2. STLC	19
569-706-0.3	2. STLC	17
569-807-0.9	2. STLC	17
569-104-0.9	2. STLC	17
569-505-0.6	2. STLC	17
569-704-0.6	2. STLC	16
569-808-0.6	2. STLC	16
569-212-0.3	2. STLC	16
569-612-0	2. STLC	16
569-704-1.5	2. STLC	15
569-411-0.3	2. STLC	15
569-113-0	2. STLC	15
569-807-0.6	2. STLC	14
569-311-0.3	2. STLC	12
569-312-0	2. STLC	10
569-311-0.9	2. STLC	8.3

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570-401-0.3	2. STLC	17
570-616-0.6	2. STLC	17
570-308-0	2. STLC	16
570-807-0.9	2. STLC	16
570-701-0.6	2. STLC	16
570-617-0.3	2. STLC	16
570-107-0.6	2. STLC	15
570-811-0.6	2. STLC	15
570-707-0	2. STLC	15
570-518-0	2. STLC	15
570-111-0.0	2. STLC	15
570-109-0.6	2. STLC	14
570-401-0.9	2. STLC	4.1
570-408-0	2. STLC	4
570-409-0.3	2. STLC	3
570-401-0.6		0
570-401-1.5		0
570-408-0.6		0
570-408-1.5		0

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571-837-0.3	2. STLC	27
571-520-0	2. STLC	26
571-516-0.3	2. STLC	26
571-420-0	2. STLC	26
571-102-0.6	2. STLC	26
571-517-1.5	2. STLC	25
571-513-0.6	2. STLC	25
571-623-0.6	2. STLC	25
571-112-0.3	2. STLC	25
571-326-0.6	2. STLC	24
571-619-0.3	2. STLC	24
571-619-0.9	2. STLC	24
571-528-0.3	2. STLC	24
571-706-0.6	2. STLC	24
571-112-0.6	2. STLC	24
571-327-0.6	2. STLC	23
571-817-0	2. STLC	23
571-425-0.6	2. STLC	22
571-118-0	2. STLC	22
571-829-0	2. STLC	22
571-828-0	2. STLC	22
571-122-0	2. STLC	21
571-101-1.5	2. STLC	21
571-530-0.3	2. STLC	21
571-406-0.6	2. STLC	20
571-517-0.6	2. STLC	20
571-835-0.3	2. STLC	20
571-501-0	2. STLC	20
571-518-0.9	2. STLC	19
571-510-0.3	2. STLC	19
571-814-0.9	2. STLC	19
571-522-0.6	2. STLC	19
571-622-1.5	2. STLC	19
571-812-0.6	2. STLC	19
571-701-0.6	2. STLC	19
571-704-0	2. STLC	19
571-711-0.6	2. STLC	19
571-212-0	2. STLC	18
571-839-0.6	2. STLC	18
571-610-1.5	2. STLC	18
571-709-0.3	2. STLC	18
571-311-0.6	2. STLC	17
571-620-0	2. STLC	17
571-109-0	2. STLC	17
571-704-0.3	2. STLC	17
571-207-1.5	2. STLC	16
571-203-0	2. STLC	16
571-616-0.3	2. STLC	16
571-317-0.3	2. STLC	16
571-629-0.3	2. STLC	16
571-416-0	2. STLC	15
571-419-0	2. STLC	15
571-526-0.3	2. STLC	15
571-619-0	2. STLC	15
571-606-0	2. STLC	15
571-115-0.6	2. STLC	14
571-202-0.9	2. STLC	11

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tblTEMP

WorkOrder	ClientSampID	TestNo	Analyte	PQL	DF	CollectionDate	AnalDate	PrepDate
057972	571-124-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-124-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057972	571-124-0	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057972	571-124-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-124-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-124-0.6	EPA 9045C	pH	0.1	1	7/17/2002	7/21/2002	7/21/2002
057972	571-124-0.9	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-301-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-301-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057972	571-301-0	WET/ EPA 7420	Lead	0.4	2	7/17/2002	7/29/2002	7/26/2002
057972	571-301-0.3	EPA 6010B	Antimony	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-301-0.3	EPA 6010B	Arsenic	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-301-0.3	EPA 6010B	Barium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-301-0.3	EPA 6010B	Beryllium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-301-0.3	EPA 6010B	Cadmium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-301-0.3	EPA 6010B	Chromium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-301-0.3	EPA 6010B	Cobalt	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-301-0.3	EPA 6010B	Copper	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-301-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-301-0.3	EPA 6010B	Molybdenum	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-301-0.3	EPA 6010B	Nickel	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-301-0.3	EPA 6010B	Selenium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-301-0.3	EPA 6010B	Silver	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-301-0.3	EPA 6010B	Thallium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-301-0.3	EPA 6010B	Vanadium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-301-0.3	EPA 6010B	Zinc	5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-301-0.3	EPA 7471A	Mercury	0.1	1	7/17/2002	8/9/2002	8/7/2002
057972	571-301-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-301-0.6	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057972	571-301-0.9	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-301-1.5	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-302-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-302-0.6	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057972	571-330-0	EPA 1311/ 7420	Lead	0.2	1	7/17/2002	8/16/2002	8/15/2002
057972	571-330-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002

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057972	571-330-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057972	571-330-0	WET/ EPA 7420	Lead	0.8	4	7/17/2002	7/29/2002	7/26/2002
057972	571-330-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-330-0.3	EPA 9045C	pH	0.1	1	7/17/2002	7/21/2002	7/21/2002
057972	571-330-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-330-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057972	571-330-0.6	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057972	571-330-0.9	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-410-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-410-0	EPA 9045C	pH	0.1	1	7/17/2002	7/21/2002	7/21/2002
057972	571-410-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057972	571-410-0	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057972	571-410-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-410-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-410-0.9	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-412-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-412-0	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057972	571-412-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-412-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057972	571-412-0.3	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057972	571-412-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-412-0.9	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-412-1.5	EPA 6010B	Antimony	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-412-1.5	EPA 6010B	Arsenic	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-412-1.5	EPA 6010B	Barium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-412-1.5	EPA 6010B	Beryllium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-412-1.5	EPA 6010B	Cadmium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-412-1.5	EPA 6010B	Chromium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-412-1.5	EPA 6010B	Cobalt	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-412-1.5	EPA 6010B	Copper	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-412-1.5	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-412-1.5	EPA 6010B	Molybdenum	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-412-1.5	EPA 6010B	Nickel	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-412-1.5	EPA 6010B	Selenium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-412-1.5	EPA 6010B	Silver	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-412-1.5	EPA 6010B	Thallium	2.5	10	7/17/2002	8/10/2002	8/8/2002

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057972	571-412-1.5	EPA 6010B	Vanadium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-412-1.5	EPA 6010B	Zinc	5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-412-1.5	EPA 7471A	Mercury	0.1	1	7/17/2002	8/9/2002	8/7/2002
057972	571-413-0	EPA 1311/7420	Lead	0.2	1	7/17/2002	8/16/2002	8/15/2002
057972	571-413-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-413-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057972	571-413-0	WET/ EPA 7420	Lead	1.6	8	7/17/2002	7/29/2002	7/26/2002
057972	571-413-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-413-0.3	EPA 9045C	pH	0.1	1	7/17/2002	7/21/2002	7/21/2002
057972	571-413-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057972	571-413-0.3	WET/ EPA 7420	Lead	0.4	2	7/17/2002	7/29/2002	7/26/2002
057972	571-413-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-413-0.9	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-414-0	EPA 1311/7420	Lead	0.2	1	7/17/2002	8/6/2002	8/5/2002
057972	571-414-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-414-0.3	EPA 1311/7420	Lead	0.2	1	7/17/2002	8/16/2002	8/15/2002
057972	571-414-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-414-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057972	571-414-0.3	WET/ EPA 7420	Lead	1.2	6	7/17/2002	7/29/2002	7/26/2002
057972	571-414-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-501-0	EPA 1311/7420	Lead	0.2	1	7/17/2002	8/16/2002	8/15/2002
057972	571-501-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-501-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057972	571-501-0	WET/ EPA 7420	Lead	0.8	4	7/17/2002	7/29/2002	7/26/2002
057972	571-501-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-501-0.6	EPA 6010B	Antimony	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-501-0.6	EPA 6010B	Arsenic	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-501-0.6	EPA 6010B	Barium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-501-0.6	EPA 6010B	Beryllium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-501-0.6	EPA 6010B	Cadmium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-501-0.6	EPA 6010B	Chromium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-501-0.6	EPA 6010B	Cobalt	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-501-0.6	EPA 6010B	Copper	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-501-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-501-0.6	EPA 6010B	Molybdenum	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-501-0.6	EPA 6010B	Nickel	1.5	10	7/17/2002	8/10/2002	8/8/2002

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057972	571-501-0.6	EPA 6010B	Selenium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-501-0.6	EPA 6010B	Silver	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-501-0.6	EPA 6010B	Thallium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-501-0.6	EPA 6010B	Vanadium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-501-0.6	EPA 6010B	Zinc	5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-501-0.6	EPA 7471A	Mercury	0.1	1	7/17/2002	8/9/2002	8/7/2002
057972	571-501-0.9	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-501-0.9	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057972	571-503-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-503-0	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057972	571-503-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-503-0.6	EPA 6010B	Antimony	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-503-0.6	EPA 6010B	Arsenic	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-503-0.6	EPA 6010B	Barium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-503-0.6	EPA 6010B	Beryllium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-503-0.6	EPA 6010B	Cadmium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-503-0.6	EPA 6010B	Chromium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-503-0.6	EPA 6010B	Cobalt	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-503-0.6	EPA 6010B	Copper	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-503-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-503-0.6	EPA 6010B	Molybdenum	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-503-0.6	EPA 6010B	Nickel	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-503-0.6	EPA 6010B	Selenium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-503-0.6	EPA 6010B	Silver	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-503-0.6	EPA 6010B	Thallium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-503-0.6	EPA 6010B	Vanadium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-503-0.6	EPA 6010B	Zinc	5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-503-0.6	EPA 7471A	Mercury	0.1	1	7/17/2002	8/13/2002	8/7/2002
057972	571-601-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-601-0	EPA 9045C	pH	0.1	1	7/17/2002	7/21/2002	7/21/2002
057972	571-601-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057972	571-601-0	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057972	571-601-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-601-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057972	571-601-0.3	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057972	571-602-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002

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057972	571-602-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057972	571-602-0	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057972	571-602-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-602-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-602-0.6	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057972	571-602-0.9	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-603-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-603-0.3	EPA 6010B	Antimony	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-603-0.3	EPA 6010B	Arsenic	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-603-0.3	EPA 6010B	Barium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-603-0.3	EPA 6010B	Beryllium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-603-0.3	EPA 6010B	Cadmium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-603-0.3	EPA 6010B	Chromium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-603-0.3	EPA 6010B	Cobalt	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-603-0.3	EPA 6010B	Copper	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-603-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-603-0.3	EPA 6010B	Molybdenum	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-603-0.3	EPA 6010B	Nickel	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-603-0.3	EPA 6010B	Selenium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-603-0.3	EPA 6010B	Silver	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-603-0.3	EPA 6010B	Thallium	2.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-603-0.3	EPA 6010B	Vanadium	1.5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-603-0.3	EPA 6010B	Zinc	5	10	7/17/2002	8/10/2002	8/8/2002
057972	571-603-0.3	EPA 7471A	Mercury	0.1	1	7/17/2002	8/9/2002	8/7/2002
057972	571-604-0	EPA 1311/ 7420	Lead	0.2	1	7/17/2002	8/16/2002	8/15/2002
057972	571-604-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-604-0	EPA 9045C	pH	0.1	1	7/17/2002	7/21/2002	7/21/2002
057972	571-604-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057972	571-604-0	WET/ EPA 7420	Lead	1.6	8	7/17/2002	7/29/2002	7/26/2002
057972	571-604-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-604-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057972	571-604-0.3	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057972	571-604-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-604-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057972	571-604-0.6	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057972	571-605-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002

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057972	571-605-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057972	571-605-0	WET/ EPA 7420	Lead	0.4	2	7/17/2002	7/29/2002	7/26/2002
057972	571-605-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-605-0.3	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057972	571-605-0.6	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-606-0	EPA 1311/ 7420	Lead	0.2	1	7/17/2002	8/16/2002	8/15/2002
057972	571-606-0	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-606-0	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057972	571-606-0	WET/ EPA 7420	Lead	0.4	2	7/17/2002	7/29/2002	7/26/2002
057972	571-606-0.3	EPA 6010B	Lead	5	1	7/17/2002	7/22/2002	7/19/2002
057972	571-606-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/17/2002	8/2/2002	7/31/2002
057972	571-606-0.3	WET/ EPA 7420	Lead	0.2	1	7/17/2002	7/29/2002	7/26/2002
057972	EB-10	EPA 6010B	Lead	0.005	1	7/17/2002	7/23/2002	7/22/2002

August 15, 2002

David Shaler
Ninyo & Moore
475 Goddard Suite 200
Irvine, CA 92618
TEL: (949) 753-7070
FAX: (949) 753-7071

RE: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

Attention: David Shaler

ELAP No.: 1838
NELAP No.: 02107CA
Workorder No.: 058053

Enclosed are the results for sample(s) received on July 22, 2002 by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

for

Eddie F. Rodriguez
Laboratory Director

RECEIVED
AUG 2 6 2002
NINYO & MOORE
ORANGE COUNTY OFFICE

This cover letter is an integral part of this analytical report.

Laboratory	Site	Consultant
Advanced Technology Laboratories 3275 Walnut Avenue, Signal Hill, CA 90807 Tel. (562) 989-4045 Fax (562) 989-6348	Caltrans/I-10 (605-57)/Lead Survey TO 07-117070-PX Project # 203939001	Ninyo & Moore - David Shaler/Steve Reese 475 Goddard, Suite 200, Irvine, CA 92618 Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions

See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) Steve [illegible] 7-22-02	Received by: (name/date/time) Eddie Rodriguez 7/22/02 450P
Relinquished by: (name/date/time) [illegible] 7/22/02 600P	Received by: (name/date/time) [illegible] 7/22/02 600P

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB-32	7/22/02	3:20	P	X	
	571-114-1.5		12:51		X	X
	571-113-0	↓	13:00	↓	X	
	571-113-0.3		13:01		X	
	571-113-0.6		13:02		X	
	571-113-0.9		13:03		X	
	571-113-1.5		13:05		X	
	571-111-0		13:15		X	
	571-111-0.3		13:16		X	
	571-111-0.6		13:17		X	
	571-111-0.9		13:18		X	
	571-111-1.5		13:20		X	
	571-112-0		13:25		X	X
	571-112-0.3		13:26		X	
	571-112-0.6		13:27		X	
	571-112-0.9		13:29		X	
	571-112-1.5		13:30		X	
	571-108-0		13:35		X	
	571-108-0.3		13:36		X	
	571-108-0.6		13:38		X	
	571-108-0.9		13:40		X	
	571-108-1.5	↓	13:45	↓	X	
	571-319-0	↓	9:01	B	X	X
	571-319-0.3		9:04	↓	X	
	571-320-0		8:54		X	
	571-530-0		10:17		X	
	571-530-0.3		10:19		X	
	571-530-0.6		10:26		X	
	571-617-0		9:17		X	
	571-617-0.3		9:23		X	
	571-617-0.6		9:26		X	
	571-617-0.9		9:28		X	
	571-626-0		9:43		X	X
	571-626-0.3		9:46		X	
	571-626-0.6		~~[illegible]~~ 9:50		X	
	571-626-0.9		~~[illegible]~~ 9:52		X	
	571-628-0		~~[illegible]~~ 9:43		X	
	571-628-0.3		~~[illegible]~~ 9:46		X	
	571-628-0.6		~~[illegible]~~ 9:48		X	
	571-629-0		10:11		X	
	571-629-0.3		10:14		X	
	571-629-0.6		10:15		X	
	571-629-0.9		10:18		X	X
	571-629-1.5	↓	10:21	↓	X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	

Total # of samples: 44

Advanced Technology Laboratories

Date: *29-Jul-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	EB-32
Lab Order:	058053		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/22/2002 3:20:00 PM
Lab ID:	058053-001A	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	(EPA 3010A)			**EPA 6010B**		
RunID: ICP2_020726F	QC Batch: 9878					Analyst: **RQ**
Lead	ND	0.0050		mg/L	1	7/26/2002

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/29/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058053
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058053-002A	571-114-1.5	12	mg/Kg	9839	5	1	7/22/2002	7/26/2002
058053-003A	571-113-0	59	mg/Kg	9839	5	1	7/22/2002	7/26/2002
058053-004A	571-113-0.3	17	mg/Kg	9839	5	1	7/22/2002	7/26/2002
058053-005A	571-113-0.6	81	mg/Kg	9839	5	1	7/22/2002	7/26/2002
058053-006A	571-113-0.9	5.3	mg/Kg	9839	5	1	7/22/2002	7/26/2002
058053-007A	571-113-1.5	ND	mg/Kg	9839	5	1	7/22/2002	7/26/2002
058053-008A	571-111-0	45	mg/Kg	9839	5	1	7/22/2002	7/26/2002
058053-009A	571-111-0.3	82	mg/Kg	9839	5	1	7/22/2002	7/26/2002
058053-010A	571-111-0.6	59	mg/Kg	9839	5	1	7/22/2002	7/26/2002
058053-011A	571-111-0.9	7.6	mg/Kg	9839	5	1	7/22/2002	7/26/2002
058053-012A	571-111-1.5	16	mg/Kg	9839	5	1	7/22/2002	7/26/2002

Qualifiers:

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- J - Analyte detected below quantitation limits
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- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/29/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058053
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058053-013A	571-112-0	500	mg/Kg	9839	5	1	7/22/2002	7/26/2002
058053-014A	571-112-0.3	55	mg/Kg	9839	5	1	7/22/2002	7/26/2002
058053-015A	571-112-0.6	110	mg/Kg	9839	5	1	7/22/2002	7/26/2002
058053-016A	571-112-0.9	710	mg/Kg	9839	5	1	7/22/2002	7/26/2002
058053-017A	571-112-1.5	ND	mg/Kg	9839	5	1	7/22/2002	7/26/2002
058053-018A	571-108-0	22	mg/Kg	9840	5	1	7/22/2002	7/27/2002
058053-019A	571-108-0.3	33	mg/Kg	9840	5	1	7/22/2002	7/27/2002
058053-020A	571-108-0.6	30	mg/Kg	9840	5	1	7/22/2002	7/27/2002
058053-021A	571-108-0.9	6.6	mg/Kg	9840	5	1	7/22/2002	7/27/2002
058053-022A	571-108-1.5	8.2	mg/Kg	9840	5	1	7/22/2002	7/27/2002
058053-023A	571-319-0	16	mg/Kg	9840	5	1	7/22/2002	7/27/2002

Qualifiers:

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- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/29/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058053
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058053-024A	571-319-0.3	110	mg/Kg	9840	5	1	7/22/2002	7/27/2002
058053-025A	571-320-0	1100	mg/Kg	9840	5	1	7/22/2002	7/27/2002
058053-026A	571-530-0	660	mg/Kg	9840	5	1	7/22/2002	7/27/2002
058053-027A	571-530-0.3	370	mg/Kg	9840	5	1	7/22/2002	7/27/2002
058053-028A	571-530-0.6	470	mg/Kg	9840	5	1	7/22/2002	7/27/2002
058053-029A	571-617-0	1300	mg/Kg	9840	5	1	7/22/2002	7/27/2002
058053-030A	571-617-0.3	800	mg/Kg	9840	5	1	7/22/2002	7/27/2002
058053-031A	571-617-0.6	100	mg/Kg	9840	5	1	7/22/2002	7/27/2002
058053-032A	571-617-0.9	81	mg/Kg	9840	5	1	7/22/2002	7/27/2002
058053-033A	571-626-0	83	mg/Kg	9840	5	1	7/22/2002	7/27/2002
058053-034A	571-626-0.3	ND	mg/Kg	9840	5	1	7/22/2002	7/27/2002

Qualifiers:

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- J - Analyte detected below quantitation limits
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- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
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- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/29/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058053
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058053-035A	571-626-0.6	10	mg/Kg	9840	5	1	7/22/2002	7/27/2002
058053-036A	571-626-0.9	13	mg/Kg	9840	5	1	7/22/2002	7/27/2002
058053-037A	571-628-0	12	mg/Kg	9840	5	1	7/22/2002	7/27/2002
058053-038A	571-628-0.3	9.8	mg/Kg	9865	5	1	7/22/2002	7/27/2002
058053-039A	571-628-0.6	11	mg/Kg	9865	5	1	7/22/2002	7/27/2002
058053-040A	571-629-0	470	mg/Kg	9865	5	1	7/22/2002	7/27/2002
058053-041A	571-629-0.3	220	mg/Kg	9865	5	1	7/22/2002	7/27/2002
058053-042A	571-629-0.6	110	mg/Kg	9865	5	1	7/22/2002	7/27/2002
058053-043A	571-629-0.9	46	mg/Kg	9865	5	1	7/22/2002	7/27/2002
058053-044A	571-629-1.5	61	mg/Kg	9865	5	1	7/22/2002	7/27/2002

Qualifiers:

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- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/29/2002

pH
EPA 9045C

CLIENT:	Ninyo & Moore	**Lab Order:**	058053
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058053-002A	571-114-1.5	8.06	pH Units	R19858	0.1	1	7/22/2002	7/26/2002
058053-013A	571-112-0	7.42	pH Units	R19858	0.1	1	7/22/2002	7/26/2002
058053-023A	571-319-0	5.04	pH Units	R19858	0.1	1	7/22/2002	7/26/2002
058053-033A	571-626-0	7.54	pH Units	R19858	0.1	1	7/22/2002	7/26/2002
058053-043A	571-629-0.9	8.84	pH Units	R19858	0.1	1	7/22/2002	7/26/2002

Qualifiers:

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B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interferen
H - Sample exceeded analytical holding time
E - Value above quantitation range
Results are wet unless otherwise specified

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 8/7/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058053
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058053-003A	571-113-0	2.9	mg/L	9951	0.2	1	7/22/2002	8/2/2002
058053-005A	571-113-0.6	6.1	mg/L	9951	0.2	1	7/22/2002	8/2/2002
058053-009A	571-111-0.3	ND	mg/L	9951	0.2	1	7/22/2002	8/2/2002
058053-010A	571-111-0.6	2.1	mg/L	9951	0.2	1	7/22/2002	8/2/2002
058053-013A	571-112-0	28	mg/L	9951	0.8	4	7/22/2002	8/2/2002
058053-014A	571-112-0.3	25	mg/L	9951	0.8	4	7/22/2002	8/2/2002
058053-015A	571-112-0.6	24	mg/L	9951	0.8	4	7/22/2002	8/2/2002
058053-016A	571-112-0.9	56	mg/L	9951	2	10	7/22/2002	8/2/2002
058053-024A	571-319-0.3	9.2	mg/L	9951	0.2	1	7/22/2002	8/2/2002
058053-026A	571-530-0	55	mg/L	9951	2	10	7/22/2002	8/2/2002
058053-027A	571-530-0.3	21	mg/L	9951	0.8	4	7/22/2002	8/2/2002

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Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 8/7/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058053
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058053-028A	571-530-0.6	41	mg/L	9951	2	10	7/22/2002	8/2/2002
058053-030A	571-617-0.3	100	mg/L	9951	4	20	7/22/2002	8/2/2002
058053-031A	571-617-0.6	13	mg/L	9951	0.4	2	7/22/2002	8/2/2002
058053-032A	571-617-0.9	2.3	mg/L	9951	0.2	1	7/22/2002	8/2/2002
058053-033A	571-626-0	4.5	mg/L	9951	0.2	1	7/22/2002	8/2/2002
058053-040A	571-629-0	43	mg/L	9951	2	10	7/22/2002	8/2/2002
058053-041A	571-629-0.3	16	mg/L	9951	0.4	2	7/22/2002	8/2/2002
058053-042A	571-629-0.6	9.4	mg/L	9951	0.2	1	7/22/2002	8/2/2002
058053-044A	571-629-1.5	4.8	mg/L	9952	0.2	1	7/22/2002	8/2/2002

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Advanced Technology Laboratories

Date: 8/12/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058053
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058053-005A	571-113-0.6	ND	mg/L	10135	0.2	1	7/22/2002	8/9/2002
058053-013A	571-112-0	ND	mg/L	10136	0.2	1	7/22/2002	8/9/2002
058053-014A	571-112-0.3	1.2	mg/L	10136	0.2	1	7/22/2002	8/9/2002
058053-015A	571-112-0.6	ND	mg/L	10136	0.2	1	7/22/2002	8/9/2002
058053-016A	571-112-0.9	ND	mg/L	10136	0.2	1	7/22/2002	8/9/2002
058053-024A	571-319-0.3	0.40	mg/L	10136	0.2	1	7/22/2002	8/9/2002
058053-026A	571-530-0	ND	mg/L	10136	0.2	1	7/22/2002	8/9/2002
058053-027A	571-530-0.3	ND	mg/L	10136	0.2	1	7/22/2002	8/9/2002
058053-028A	571-530-0.6	ND	mg/L	10136	0.2	1	7/22/2002	8/9/2002
058053-030A	571-617-0.3	23	mg/L	10136	0.8	4	7/22/2002	8/9/2002
058053-031A	571-617-0.6	2.2	mg/L	10136	0.2	1	7/22/2002	8/9/2002

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Advanced Technology Laboratories

Date: 8/12/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058053
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058053-040A	571-629-0	ND	mg/L	10136	0.2	1	7/22/2002	8/9/2002
058053-041A	571-629-0.3	ND	mg/L	10136	0.2	1	7/22/2002	8/9/2002
058053-042A	571-629-0.6	ND	mg/L	10136	0.2	1	7/22/2002	8/9/2002

Qualifiers:

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- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
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- S - Spike/Surrogate outside of limits due to matrix interferen
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Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-111-0.3
Lab Order:	058053		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/22/2002 1:16:00 PM
Lab ID:	058053-009A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP2_020812B	QC Batch: 10218					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/12/2002
Arsenic	15	2.5		mg/Kg	10	8/12/2002
Barium	140	1.5		mg/Kg	10	8/12/2002
Beryllium	ND	1.5		mg/Kg	10	8/12/2002
Cadmium	ND	1.5		mg/Kg	10	8/12/2002
Chromium	25	1.5		mg/Kg	10	8/12/2002
Cobalt	15	1.5		mg/Kg	10	8/12/2002
Copper	25	1.5		mg/Kg	10	8/12/2002
Molybdenum	ND	2.5		mg/Kg	10	8/12/2002
Nickel	20	1.5		mg/Kg	10	8/12/2002
Selenium	ND	2.5		mg/Kg	10	8/12/2002
Silver	ND	1.5		mg/Kg	10	8/12/2002
Thallium	ND	2.5		mg/Kg	10	8/12/2002
Vanadium	60	1.5		mg/Kg	10	8/12/2002
Zinc	60	5.0		mg/Kg	10	8/12/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020814D	QC Batch: 10328					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/14/2002

Qualifiers:

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B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interferen
H - Sample exceeded analytical holding time
E - Value above quantitation range
Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-108-1.5
Lab Order:	058053		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/22/2002 1:45:00 PM
Lab ID:	058053-022A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP2_020812B	QC Batch: 10218					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/12/2002
Arsenic	15	2.5		mg/Kg	10	8/12/2002
Barium	140	1.5		mg/Kg	10	8/12/2002
Beryllium	ND	1.5		mg/Kg	10	8/12/2002
Cadmium	ND	1.5		mg/Kg	10	8/12/2002
Chromium	20	1.5		mg/Kg	10	8/12/2002
Cobalt	10	1.5		mg/Kg	10	8/12/2002
Copper	15	1.5		mg/Kg	10	8/12/2002
Molybdenum	ND	2.5		mg/Kg	10	8/12/2002
Nickel	15	1.5		mg/Kg	10	8/12/2002
Selenium	ND	2.5		mg/Kg	10	8/12/2002
Silver	ND	1.5		mg/Kg	10	8/12/2002
Thallium	ND	2.5		mg/Kg	10	8/12/2002
Vanadium	50	1.5		mg/Kg	10	8/12/2002
Zinc	60	5.0		mg/Kg	10	8/12/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020814D	QC Batch: 10328					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/14/2002

Qualifiers:

- ND - Not Detected at the Reporting Limit
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Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-320-0
Lab Order:	058053		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/22/2002 8:54:00 AM
Lab ID:	058053-025A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP2_020812B	QC Batch: 10218					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/12/2002
Arsenic	10	2.5		mg/Kg	10	8/12/2002
Barium	140	1.5		mg/Kg	10	8/12/2002
Beryllium	ND	1.5		mg/Kg	10	8/12/2002
Cadmium	ND	1.5		mg/Kg	10	8/12/2002
Chromium	25	1.5		mg/Kg	10	8/12/2002
Cobalt	10	1.5		mg/Kg	10	8/12/2002
Copper	50	1.5		mg/Kg	10	8/12/2002
Molybdenum	ND	2.5		mg/Kg	10	8/12/2002
Nickel	30	1.5		mg/Kg	10	8/12/2002
Selenium	ND	2.5		mg/Kg	10	8/12/2002
Silver	ND	1.5		mg/Kg	10	8/12/2002
Thallium	ND	2.5		mg/Kg	10	8/12/2002
Vanadium	35	1.5		mg/Kg	10	8/12/2002
Zinc	330	5.0		mg/Kg	10	8/12/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020813H	QC Batch: 10200					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/13/2002

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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DO - Surrogate Diluted Out
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Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-617-0.6
Lab Order:	058053		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/22/2002 9:26:00 AM
Lab ID:	058053-031A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP2_020812B	QC Batch: 10218					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/12/2002
Arsenic	5.0	2.5		mg/Kg	10	8/12/2002
Barium	35	1.5		mg/Kg	10	8/12/2002
Beryllium	ND	1.5		mg/Kg	10	8/12/2002
Cadmium	ND	1.5		mg/Kg	10	8/12/2002
Chromium	5.0	1.5		mg/Kg	10	8/12/2002
Cobalt	5.0	1.5		mg/Kg	10	8/12/2002
Copper	10	1.5		mg/Kg	10	8/12/2002
Molybdenum	ND	2.5		mg/Kg	10	8/12/2002
Nickel	5.0	1.5		mg/Kg	10	8/12/2002
Selenium	ND	2.5		mg/Kg	10	8/12/2002
Silver	ND	1.5		mg/Kg	10	8/12/2002
Thallium	ND	2.5		mg/Kg	10	8/12/2002
Vanadium	15	1.5		mg/Kg	10	8/12/2002
Zinc	70	5.0		mg/Kg	10	8/12/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020814D	QC Batch: 10328					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/14/2002

Qualifiers:

ND - Not Detected at the Reporting Limit
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Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-628-0.6
Lab Order:	058053		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/22/2002 9:48:00 AM
Lab ID:	058053-039A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP2_020812B	QC Batch: 10218					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/12/2002
Arsenic	10	2.5		mg/Kg	10	8/12/2002
Barium	120	1.5		mg/Kg	10	8/12/2002
Beryllium	ND	1.5		mg/Kg	10	8/12/2002
Cadmium	ND	1.5		mg/Kg	10	8/12/2002
Chromium	35	1.5		mg/Kg	10	8/12/2002
Cobalt	10	1.5		mg/Kg	10	8/12/2002
Copper	20	1.5		mg/Kg	10	8/12/2002
Molybdenum	5.0	2.5		mg/Kg	10	8/12/2002
Nickel	30	1.5		mg/Kg	10	8/12/2002
Selenium	ND	2.5		mg/Kg	10	8/12/2002
Silver	ND	1.5		mg/Kg	10	8/12/2002
Thallium	3.3	2.5		mg/Kg	10	8/12/2002
Vanadium	75	1.5		mg/Kg	10	8/12/2002
Zinc	90	5.0		mg/Kg	10	8/12/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020814D	QC Batch: 10328					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/14/2002

Qualifiers:

ND - Not Detected at the Reporting Limit
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Date: 8/15/2002

LEAD BY ATOMIC ABSORPTION
EPA 1311/ 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058053
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058053-013A	571-112-0	0.69	mg/L	10334	0.2	1	7/22/2002	8/14/2002
058053-014A	571-112-0.3	0.51	mg/L	10334	0.2	1	7/22/2002	8/14/2002
058053-015A	571-112-0.6	0.40	mg/L	10334	0.2	1	7/22/2002	8/14/2002
058053-016A	571-112-0.9	ND	mg/L	10334	0.2	1	7/22/2002	8/14/2002
058053-025A	571-320-0	3.1	mg/L	10118	0.2	1	7/22/2002	8/7/2002
058053-026A	571-530-0	2.0	mg/L	10334	0.2	1	7/22/2002	8/14/2002
058053-027A	571-530-0.3	1.2	mg/L	10334	0.2	1	7/22/2002	8/14/2002
058053-028A	571-530-0.6	0.95	mg/L	10334	0.2	1	7/22/2002	8/14/2002
058053-029A	571-617-0	2.4	mg/L	10118	0.2	1	7/22/2002	8/7/2002
058053-030A	571-617-0.3	15	mg/L	10334	0.4	2	7/22/2002	8/14/2002
058053-040A	571-629-0	0.61	mg/L	10334	0.2	1	7/22/2002	8/14/2002

Qualifiers:

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- E - Value above quantitation range
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Advanced Technology Laboratories

Date: 8/15/2002

LEAD BY ATOMIC ABSORPTION
EPA 1311/ 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058053
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058053-041A	571-629-0.3	0.26	mg/L	10334	0.2	1	7/22/2002	8/14/2002

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
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Advanced Technology Laboratories

Date: *15-Aug-02*

CLIENT: Ninyo & Moore
Work Order: 058053
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10118

Sample ID: **MB-10118**	SampType: **mblk**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020807H**
Client ID: **ZZZZZ**	Batch ID: **10118**	TestNo: **EPA 1311/ 74 (EPA 3010A)**		Analysis Date: **8/7/2002**	SeqNo: **314988**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-10100-TCLP**	SampType: **mblk**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020807H**
Client ID: **ZZZZZ**	Batch ID: **10118**	TestNo: **EPA 1311/ 74 (EPA 3010A)**		Analysis Date: **8/7/2002**	SeqNo: **314989**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **LCS-10118**	SampType: **lcs**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020807H**
Client ID: **ZZZZZ**	Batch ID: **10118**	TestNo: **EPA 1311/ 74 (EPA 3010A)**		Analysis Date: **8/7/2002**	SeqNo: **315003**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.187	0.20	1	0	119	80	120	0	0		

Sample ID: **058065-042AMS**	SampType: **MS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020807H**
Client ID: **ZZZZZ**	Batch ID: **10118**	TestNo: **EPA 1311/ 74 (EPA 3010A)**		Analysis Date: **8/7/2002**	SeqNo: **315001**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	21.61	0.80	2.5	30.73	-365	80	120	0	0		S

Sample ID: **058065-042ADUP**	SampType: **DUP**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020807H**
Client ID: **ZZZZZ**	Batch ID: **10118**	TestNo: **EPA 1311/ 74 (EPA 3010A)**		Analysis Date: **8/7/2002**	SeqNo: **315000**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	23.57	0.80	0	0	0	0	0	30.73	26.4	30	

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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 058053
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10135

Sample ID: MB-10135	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809O
Client ID: ZZZZZ	Batch ID: 10135	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316454

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10135A	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809O
Client ID: ZZZZZ	Batch ID: 10135	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316455

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10135B	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809O
Client ID: ZZZZZ	Batch ID: 10135	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316468

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10135	SampType: lcs	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809O
Client ID: ZZZZZ	Batch ID: 10135	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316482

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.313	0.20	7.5	0	97.5	80	120	0	0		

Sample ID: 058052-035AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809O
Client ID: ZZZZZ	Batch ID: 10135	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316467

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.57	0.20	5	3.488	102	80	120	0	0		

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10135

Sample ID: 058053-055AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809O
Client ID: ZZZZZ	Batch ID: 10135	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316480

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.188	0.20	5	0	104	80	120	0	0		

Sample ID: 058052-035ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809O
Client ID: ZZZZZ	Batch ID: 10135	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316466

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.339	0.20	0	0	0	0	0	3.488	4.36	30	

Sample ID: 058053-005ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809O
Client ID: 571-113-0.6	Batch ID: 10135	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316479

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0	30	

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10136

Sample ID: MB-10136	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809P
Client ID: ZZZZZ	Batch ID: 10136	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316483

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10136A	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809P
Client ID: ZZZZZ	Batch ID: 10136	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316484

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10136B	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809P
Client ID: ZZZZZ	Batch ID: 10136	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316497

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10136	SampType: lcs	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809P
Client ID: ZZZZZ	Batch ID: 10136	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316504

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.826	0.20	7.5	0	91	80	120	0	0		

Sample ID: 058053-031AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809P
Client ID: 571-617-0.6	Batch ID: 10136	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316496

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.981	0.20	5	2.233	95	80	120	0	0		

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10136

Sample ID: 058053-042AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809P
Client ID: 571-629-0.6	Batch ID: 10136	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316502

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.593	0.20	5	0	91.9	80	120	0	0		

Sample ID: 058053-031ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809P
Client ID: 571-617-0.6	Batch ID: 10136	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316495

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.097	0.20	0	0	0	0	0	2.233	6.32	30	

Sample ID: 058053-042ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809P
Client ID: 571-629-0.6	Batch ID: 10136	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316501

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10200

Sample ID: MB-10200	SampType: mblk	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020813H
Client ID: ZZZZZ	Batch ID: 10200	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318539

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-10200	SampType: lcs	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020813H
Client ID: ZZZZZ	Batch ID: 10200	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318538

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.757	0.10	2.08	0	84.5	80	120	0	0		

Sample ID: 058065-042AMS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020813H
Client ID: ZZZZZ	Batch ID: 10200	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318536

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9147	0.10	0.83	0.03671	106	62	146	0	0		

Sample ID: 058065-042AMSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020813H
Client ID: ZZZZZ	Batch ID: 10200	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318537

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.8786	0.10	0.83	0.03671	101	62	146	0.9147	4.03	33	

Sample ID: 058065-042ADUP	SampType: DUP	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020813H
Client ID: ZZZZZ	Batch ID: 10200	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318535

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.02939	0.10	0	0	0	0	0	0.03671	0	30	J

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10218

Sample ID: MB-10218	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP2_020812B
Client ID: ZZZZZ	Batch ID: 10218	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/12/2002	SeqNo: 317355

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.0525	0.25									J
Arsenic	0.1295	0.25									J
Barium	0.009	0.15									J
Beryllium	0.007	0.15									J
Cadmium	0.006	0.15									J
Chromium	0.15	0.15									
Cobalt	ND	0.15									
Copper	0.0295	0.15									J
Molybdenum	ND	0.25									
Nickel	0.1385	0.15									J
Selenium	ND	0.25									
Silver	0.018	0.15									J
Thallium	ND	0.25									
Vanadium	ND	0.15									
Zinc	0.0775	0.50									J

Sample ID: LCS-10218	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP2_020812B
Client ID: ZZZZZ	Batch ID: 10218	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/12/2002	SeqNo: 317356

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	42.5	0.25	50	0	85	80	120	0	0		
Arsenic	43.5	0.25	50	0	87	80	120	0	0		
Barium	46	0.15	50	0	92	80	120	0	0		
Beryllium	43	0.15	50	0	86	80	120	0	0		
Cadmium	42.5	0.15	50	0	85	80	120	0	0		
Chromium	44.5	0.15	50	0	89	80	120	0	0		
Cobalt	44	0.15	50	0	88	80	120	0	0		
Copper	44.5	0.15	50	0	89	80	120	0	0		
Molybdenum	44.5	0.25	50	0	89	80	120	0	0		
Nickel	43	0.15	50	0	86	80	120	0	0		

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Calculations are based on raw values

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CLIENT: Ninyo & Moore
Work Order: 058053
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10218

Sample ID: LCS-10218	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP2_020812B
Client ID: ZZZZZ	Batch ID: 10218	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/12/2002	SeqNo: 317356

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	40	0.25	50	0	80	80	120	0	0		
Silver	44.5	0.15	50	0	89	80	120	0	0		
Thallium	44.5	0.25	50	0	89	80	120	0	0		
Vanadium	44.5	0.15	50	0	89	80	120	0	0		
Zinc	46	0.50	50	0	92	80	120	0	0		

Sample ID: 058065-034AMS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP2_020812B
Client ID: ZZZZZ	Batch ID: 10218	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/12/2002	SeqNo: 317368

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	80	2.5	125	5	60	32	115	0	0		
Arsenic	125	2.5	125	10	92	59	111	0	0		
Barium	300	1.5	125	160	112	34	151	0	0		
Beryllium	120	1.5	125	0	96	56	112	0	0		
Cadmium	115	1.5	125	0	92	52	120	0	0		
Chromium	145	1.5	125	905	-608	56	118	0	0		S
Cobalt	125	1.5	125	10	92	58	117	0	0		
Copper	180	1.5	125	85	76	58	134	0	0		
Molybdenum	115	2.5	125	10	84	56	115	0	0		
Nickel	140	1.5	125	435	-236	52	120	0	0		S
Selenium	115	2.5	125	0	92	46	108	0	0		
Silver	90	1.5	125	0.2	71.8	74	117	0	0		S
Thallium	115	2.5	125	0.41	91.7	62	117	0	0		
Vanadium	140	1.5	125	30	88	55	122	0	0		
Zinc	620	5.0	125	645	-20	43	134	0	0		S

Sample ID: 058065-034AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP2_020812B
Client ID: ZZZZZ	Batch ID: 10218	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/12/2002	SeqNo: 317369

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

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Calculations are based on raw values

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CLIENT: Ninyo & Moore
Work Order: 058053
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10218

Sample ID: 058065-034AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP2_020812B
Client ID: ZZZZZ	Batch ID: 10218	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/12/2002	SeqNo: 317369

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	75	2.5	125	5	56	32	115	80	6.45	20	
Arsenic	130	2.5	125	10	96	59	111	125	3.92	20	
Barium	395	1.5	125	160	188	34	151	300	27.3	20	SR
Beryllium	120	1.5	125	0	96	56	112	120	0	20	
Cadmium	120	1.5	125	0	96	52	120	115	4.26	20	
Chromium	140	1.5	125	905	-612	56	118	145	3.51	20	S
Cobalt	125	1.5	125	10	92	58	117	125	0	20	
Copper	180	1.5	125	85	76	58	134	180	0	20	
Molybdenum	120	2.5	125	10	88	56	115	115	4.26	20	
Nickel	135	1.5	125	435	-240	52	120	140	3.64	20	S
Selenium	115	2.5	125	0	92	46	108	115	0	20	
Silver	90	1.5	125	0.2	71.8	74	117	90	0	20	S
Thallium	120	2.5	125	0.41	95.7	62	117	115	4.26	20	
Vanadium	140	1.5	125	30	88	55	122	140	0	20	
Zinc	680	5.0	125	645	28	43	134	620	9.23	20	S

Sample ID: 058065-034ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP2_020812B
Client ID: ZZZZZ	Batch ID: 10218	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/12/2002	SeqNo: 317367

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.385	2.5	0	0	0	0	0	5	0	30	J
Arsenic	10	2.5	0	0	0	0	0	10	0	30	
Barium	130	1.5	0	0	0	0	0	160	20.7	30	
Beryllium	0.57	1.5	0	0	0	0	0	0	0	30	J
Cadmium	0.47	1.5	0	0	0	0	0	0	0	30	J
Chromium	20	1.5	0	0	0	0	0	905	191	30	R
Cobalt	5	1.5	0	0	0	0	0	10	66.7	30	R
Copper	65	1.5	0	0	0	0	0	85	26.7	30	
Molybdenum	4.395	2.5	0	0	0	0	0	10	77.9	30	R
Nickel	20	1.5	0	0	0	0	0	435	182	30	R

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10218

Sample ID: 058065-034ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP2_020812B
Client ID: ZZZZZ	Batch ID: 10218	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/12/2002	SeqNo: 317367

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	ND	2.5	0	0	0	0	0	0	0	30	
Silver	0.96	1.5	0	0	0	0	0	0.2	0	30	J
Thallium	3.2	2.5	0	0	0	0	0	0.41	155	30	R
Vanadium	25	1.5	0	0	0	0	0	30	18.2	30	
Zinc	595	5.0	0	0	0	0	0	645	8.06	30	

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DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 058053
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10328

Sample ID: MB-10328	SampType: MBLK	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020814D
Client ID: ZZZZZ	Batch ID: 10328	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/14/2002	SeqNo: 318603

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-10328	SampType: LCS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020814D
Client ID: ZZZZZ	Batch ID: 10328	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/14/2002	SeqNo: 318602

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.126	0.10	2.08	0	102	80	120	0	0		

Sample ID: 058065-054AMS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020814D
Client ID: ZZZZZ	Batch ID: 10328	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/14/2002	SeqNo: 318600

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.8605	0.10	0.83	0.07835	94.2	62	146	0	0		

Sample ID: 058065-054AMSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020814D
Client ID: ZZZZZ	Batch ID: 10328	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/14/2002	SeqNo: 318601

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9227	0.10	0.83	0.07835	102	62	146	0.8605	6.98	33	

Sample ID: 058065-054ADUP	SampType: DUP	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020814D
Client ID: ZZZZZ	Batch ID: 10328	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/14/2002	SeqNo: 318599

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0741	0.10	0	0	0	0	0	0.07835	0	30	J

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Work Order: 058053
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10334

Sample ID: MB-10334	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814K
Client ID: ZZZZZ	Batch ID: 10334	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318801

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10259-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814K
Client ID: ZZZZZ	Batch ID: 10334	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318802

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10334	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814K
Client ID: ZZZZZ	Batch ID: 10334	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318816

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.091	0.20	1	0	109	80	120	0	0		

Sample ID: 058053-041AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814K
Client ID: 571-629-0.3	Batch ID: 10334	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318814

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.85	0.20	2.5	0.265	103	80	120	0	0		

Sample ID: 058053-041ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814K
Client ID: 571-629-0.3	Batch ID: 10334	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318813

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.184	0.20	0	0	0	0	0	0.265	0	30	J

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9839

Sample ID: MB-9839A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726O
Client ID: ZZZZZ	Batch ID: 9839	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307839

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9839B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726O
Client ID: ZZZZZ	Batch ID: 9839	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307840

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9839	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726O
Client ID: ZZZZZ	Batch ID: 9839	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307838

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	248.8	5.0	250	0	99.5	80	120	0	0		

Sample ID: 058053-007AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726O
Client ID: 571-113-1.5	Batch ID: 9839	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307824

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	194	5.0	250	2.53	76.6	47	128	0	0		

Sample ID: 058053-017AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726O
Client ID: 571-112-1.5	Batch ID: 9839	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307836

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	202.6	5.0	250	4.215	79.4	47	128	0	0		

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9839

Sample ID: 058053-007ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726O
Client ID: 571-113-1.5	Batch ID: 9839	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307823

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	38.07	5.0	0	0	0	0	0	2.53	175	30	R

Sample ID: 058053-017ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726O
Client ID: 571-112-1.5	Batch ID: 9839	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307835

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.657	5.0	0	0	0	0	0	4.215	29.2	30	

Qualifiers:
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ANALYTICAL QC SUMMARY REPORT

BatchID: 9840

Sample ID: MB-9840A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020727A
Client ID: ZZZZZ	Batch ID: 9840	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/27/2002	SeqNo: 307969

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9840B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020727A
Client ID: ZZZZZ	Batch ID: 9840	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/27/2002	SeqNo: 307970

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9840	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020727A
Client ID: ZZZZZ	Batch ID: 9840	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/27/2002	SeqNo: 307968

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	270.4	5.0	250	0	108	80	120	0	0		

Sample ID: 058053-027AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020727A
Client ID: 571-530-0.3	Batch ID: 9840	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/27/2002	SeqNo: 307954

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	460.3	5.0	250	372.3	35.2	47	128	0	0		S

Sample ID: 058053-037AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020727A
Client ID: 571-628-0	Batch ID: 9840	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/27/2002	SeqNo: 307966

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	216	5.0	250	11.55	81.8	47	128	0	0		

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9840

Sample ID: 058053-027ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020727A
Client ID: 571-530-0.3	Batch ID: 9840	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/27/2002	SeqNo: 307953

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	243.9	5.0	0	0	0	0	0	372.3	41.7	30	R

Sample ID: 058053-037ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020727A
Client ID: 571-628-0	Batch ID: 9840	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/27/2002	SeqNo: 307965

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	12.95	5.0	0	0	0	0	0	11.55	11.4	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9865

Sample ID: MB-9865A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/25/2002	Run ID: ICP5_020727B
Client ID: ZZZZZ	Batch ID: 9865	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/27/2002	SeqNo: 307997

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9865B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/25/2002	Run ID: ICP5_020727B
Client ID: ZZZZZ	Batch ID: 9865	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/27/2002	SeqNo: 307998

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9865	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/25/2002	Run ID: ICP5_020727B
Client ID: ZZZZZ	Batch ID: 9865	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/27/2002	SeqNo: 307996

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	273.4	5.0	250	0	109	80	120	0	0		

Sample ID: 058065-004AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/25/2002	Run ID: ICP5_020727B
Client ID: ZZZZZ	Batch ID: 9865	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/27/2002	SeqNo: 307982

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	253.5	5.0	250	33.92	87.8	47	128	0	0		

Sample ID: 058065-014AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/25/2002	Run ID: ICP5_020727B
Client ID: ZZZZZ	Batch ID: 9865	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/27/2002	SeqNo: 307994

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	183.7	5.0	250	5	71.5	47	128	0	0		

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9865

Sample ID: 058065-004ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/25/2002	Run ID: ICP5_020727B
Client ID: ZZZZZ	Batch ID: 9865	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/27/2002	SeqNo: 307981

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	35.5	5.0	0	0	0	0	0	33.92	4.53	30	

Sample ID: 058065-014ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/25/2002	Run ID: ICP5_020727B
Client ID: ZZZZZ	Batch ID: 9865	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/27/2002	SeqNo: 307993

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.601	5.0	0	0	0	0	0	5	11.3	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9878

Sample ID: MB-9878	SampType: MBLK	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/26/2002	Run ID: ICP2_020726F
Client ID: ZZZZZ	Batch ID: 9878	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/26/2002	SeqNo: 307841

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.00451	0.0050									

Sample ID: LCS-9878	SampType: LCS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/26/2002	Run ID: ICP2_020726F
Client ID: ZZZZZ	Batch ID: 9878	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/26/2002	SeqNo: 307842

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1	0.0050	1	0	100	80	120	0	0		

Sample ID: 058069-001AMS	SampType: MS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/26/2002	Run ID: ICP2_020726F
Client ID: ZZZZZ	Batch ID: 9878	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/26/2002	SeqNo: 307854

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.48	0.0050	2.5	0	99.2	66	118	0	0		

Sample ID: 058069-001ADUP	SampType: dup	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/26/2002	Run ID: ICP2_020726F
Client ID: ZZZZZ	Batch ID: 9878	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/26/2002	SeqNo: 307853

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050	0	0	0	0	0	0	0	30	

Qualifiers:
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ANALYTICAL QC SUMMARY REPORT

BatchID: 9951

Sample ID: MB-9951	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802Q
Client ID: ZZZZZ	Batch ID: 9951	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 312632

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9951A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020802Q
Client ID: ZZZZZ	Batch ID: 9951	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 312633

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9951B	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020802Q
Client ID: ZZZZZ	Batch ID: 9951	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 312646

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05954	0.20									

Sample ID: LCS-9951	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802Q
Client ID: ZZZZZ	Batch ID: 9951	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 312660

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.55	0.20	7.5	0	101	80	120	0	0		

Sample ID: 058053-042AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802Q
Client ID: 571-629-0.6	Batch ID: 9951	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 312645

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	18.54	0.40	10	9.44	91	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058053
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9951

Sample ID: 058053-042AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802Q
Client ID: 571-629-0.6	Batch ID: 9951	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 312658

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	18.55	0.40	10	9.44	91.1	80	120	0	0		

Sample ID: 058053-024ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020802Q
Client ID: 571-319-0.3	Batch ID: 9951	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 312644

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.543	0.20	0	0	0	0	0	9.247	50.1	30	R

Sample ID: 058053-042ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020802Q
Client ID: 571-629-0.6	Batch ID: 9951	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 312657

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.049	0.20	0	0	0	0	0	9.44	15.9	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058053
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9952

Sample ID: MB-9952	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802R
Client ID: ZZZZZ	Batch ID: 9952	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 312661

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.08531	0.20									

Sample ID: MB-9952A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020802R
Client ID: ZZZZZ	Batch ID: 9952	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 312662

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.06305	0.20									

Sample ID: LCS-9952	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802R
Client ID: ZZZZZ	Batch ID: 9952	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 312667

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.604	0.20	7.5	0	101	80	120	0	0		

Sample ID: 058053-044AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802R
Client ID: 571-629-1.5	Batch ID: 9952	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 312665

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	9.845	0.20	5	4.82	101	80	120	0	0		

Sample ID: 058053-044ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020802R
Client ID: 571-629-1.5	Batch ID: 9952	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 312664

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.249	0.20	0	0	0	0	0	4.82	12.6	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058053
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: R19858

Sample ID: 058053-043ADUP	SampType: DUP	TestCode: 9045_S	Units: pH Units	Prep Date: 7/26/2002	Run ID: WETCHEM_020726C
Client ID: 571-629-0.9	Batch ID: R19858	TestNo: EPA 9045C		Analysis Date: 7/26/2002	SeqNo: 307254

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	8.81	0.10	0	0	0	0	0	8.84	0.340	20	

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; S - Spike/Surrogate outside limits due to matrix interference; B - Analyte detected in the associated Method Blank; **Calculations are based on raw values**; DO - Surrogate diluted out; H - Sample exceeded holding time

Rachelle

From: Steve Reese [sreese@ninyoandmoore.com]
Sent: Wednesday, July 31, 2002 9:27 AM
To: 'rachelle@atlglobal.com'
Cc: David Shaler (E-mail); Ruth Cheung (E-mail)
Subject: TCLP Analysis

TCLP.xls

Rachelle,
Attached please find a list of samples to be run for the TCLP analysis. Currently, we selected all of the samples that are greater than 1,000 mg/kg
of TTLC results. However, they will be ran by instruction only. There may
be more samples chosen for TCLP analysis in the future, but please run these 82 samples for now. Please call with any questions.
Thank you, Steve

Stephen S. Reese
Senior Staff Environmental Scientist
Ninyo & Moore Geotechnical & Environmental Sciences Consultants
475 Goddard, Suite 200
Irvine, California 92618
Tel: (949) 753-7070
Fax: (949) 753-7071
Email: sreese@ninyoandmoore.com
www.ninyoandmoore.com

RUN FOR TCLP ANALYSIS

33	20	29
569-101-0	570-101-0	571-104-0
569-102-0	570-101-0.6	571-120-0
569-102-0.3	570-102-0.6	571-310-0.9
569-102-0.9	570-103-1.5	571-317-0
569-111-0	570-114-0.6	571-320-0
569-112-0	570-115-0	571-325-0.6
569-112-0.6	570-119-0.3	571-507-0
569-201-0	570-201-0	571-511-0
569-212-0	570-214-0	571-514-0
569-301-0	570-311-0.6	571-524-0
569-303-0.9	570-312-0.6	571-710-0
569-314-0	570-504-0	571-710-0.3
569-401-0	570-508-0	571-711-0
569-404-0.6	570-517-0	571-711-0.3
569-405-0.6	570-517-0.3	571-712-0
569-408-0.9	570-610-0.6	571-712-0.3
569-502-0.6	570-615-0	571-201-0.6
569-516-0	570-706-0	571-405-0
569-603-0.3	570-709-0	571-406-0
569-607-0	570-808-0.6	571-407-0
569-607-0.3		571-414-0
569-609-0		571-609-0
569-609-0.3		571-611-0
569-703-0		571-616-0
569-703-0.9		571-617-0
569-705-0		571-619-1.5
569-705-0.3		571-814-0.3
569-706-0		571-818-0.6
569-708-0		571-819-0
569-710-0		
569-711-0		
569-711-0.3		
569-801-0.3		

82

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Tuesday, August 06, 2002 3:46 PM
To: 'Rachelle'; 'David Shaler (E-mail)'
Subject: Title 22 Metals

Title 22 Metals.xls

Rachelle,
Please run the following samples for Title 22 Metals. Please do not list
Pb in your emailed results. There should be a total of 120 samples to be
run.
Thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

569-102-0.9	570-101-0	571-101-0.9
569-112-0	570-101-0.6	571-104-0
569-201-0	570-201-0	571-201-0.6
569-206-0.6	570-205-0.9	571-108-1.5
569-106-1.5	570-106-0.3	571-111-0.3
569-212-0	570-208-1.5	571-207-0
569-401-0.6	570-111-0.6	571-210-0.6
569-301-0	570-214-0	571-115-0.9
569-303-0.9	570-115-0.3	571-214-0.3
569-404-0.6	570-119-0.9	571-120-0
569-408-0.9	570-224-0.6	571-217-1.5
569-314-0	570-401-0	571-220-0.6
569-313-0.3	570-401-0.3	571-301-0.3
569-502-0.6	570-304-1.5	571-405-0
569-602-1.5	570-307-0.9	571-306-0.9
569-607-0.3	570-311-0.6	571-407-0
569-607-0	570-312-0.6	571-310-0.9
569-508-0.9	570-316-0.3	571-315-0.3
569-511-0.6	570-601-0	571-412-1.5
569-612-1.5	570-505-1.5	571-317-0
569-516-0	570-508-0	571-320-0.6
569-801-0.3	570-610-0.6	571-416-0.9
569-519-0.6	570-511-0.9	571-325-0.3
569-803-0.9	570-615-0	571-421-1.5
569-705-0	570-514-0.3	571-425-0
569-806-1.5	570-517-0	571-501-0.6
569-708-0.3	570-618-0.6	571-503-0.9
569-711-0	570-621-1.5	571-603-0.3
569-811-0	570-703-0.9	571-507-0
	570-804-0	571-609-0
	570-706-0	571-510-1.5
	570-709-0	571-611-0
	570-808-0.6	571-514-0
	570-711-1.5	571-614-0.3
	570-812-0.3	571-517-0.9
		571-617-0.6
		571-520-1.5
		571-621-0.3
		571-524-0
		571-624-0.9
		571-529-0.3
		571-628-0.6
		571-703-1.5
		571-707-0
		571-804-0.9
		571-809-0.3
		571-711-0
		571-712-0
		571-814-0.3
		571-818-0.6
		571-819-0
		571-827-1.5

571-832-0.9
571-836-0.3
571-837-0.6
571-842-0

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Wednesday, August 07, 2002 10:28 AM
To: 'Rachelle'
Subject: RE: Title 22 Metals

Sorry for the mistake. Please change to the following:
569-602-1.5 to 0.6
569-803-0.9 to 0.6
571-217-1.5 to 0.6
571-320-0.6 to 0
571-421-1.5 to 0
571-503-0.9 to 0.6
571-510-1.5 to 0.6
571-520-1.5 to 0
571-703-1.5 to 0.6
571-804-0.9 to 0.6
571-827-1.5 to 0.3
571-837-0.6 to 0.3
570-119-0.9 to 0.6
570-208-1.5 to 0.3
570-621-1.5 to 0.3
570-703-0.9 to 0.3

thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

-----Original Message-----
From: Rachelle [SMTP:Rachelle@ATLGlobal.com]
Sent: Wednesday, August 07, 2002 9:49 AM
To: 'Ruth Cheung'
Subject: RE: Title 22 Metals

Hi Ruth,
Please check if the following samples exist, I don't see it on our database:
569-602-1.5
569-803-0.9
571-217-1.5
571-320-0.6
571-421-1.5
571-503-0.9
571-510-1.5
571-520-1.5
571-703-1.5
571-804-0.9
571-827-1.5
571-837-0.6
570-119-0.9
570-208-1.5
570-621-1.5
570-703-0.9
If it does exist, can you let me know when it was collected so I can track
them.
Thanks,
Rachelle
-----Original Message-----
From: Ruth Cheung [mailto:rcheung@ninyoandmoore.com]

Sent: Tuesday, August 06, 2002 3:46 PM
To: 'Rachelle'; 'David Shaler (E-mail)'
Subject: Title 22 Metals

Rachelle,
Please run the following samples for Title 22 Metals. Please do not list
Pb in your emailed results. There should be a total of 120 samples to be
run.
Thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Thursday, August 08, 2002 9:14 AM
To: 'Rachelle'
Subject: TCLP Analysis

TCLP-3.xls

In addition to the 90 TCLP already run please run the following samples for
TCLP. There should be a list of 350 samples.
Thanks for a the hard work and timely results.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

-----Original Message-----
From: Rachelle [SMTP:Rachelle@ATLGlobal.com]
Sent: Wednesday, August 07, 2002 5:02 PM
To: 'David Shaler (E-mail)'
Cc: 'Ruth Cheung (E-mail)'
Subject: TCLP Results

<<57931TCLP.xls>> <<58001TCLP.xls>> <<58021TCLP.xls>> <<58022TCLP.xls>>
<<58023TCLP.xls>> <<58024TCLP.xls>> <<58049TCLP.xls>> <<58050TCLP.xls>>
<<58052TCLP.xls>> <<58053TCLP.xls>> <<58065TCLP.xls>> <<58066TCLP.xls>>
<<58067TCLP.xls>> <<58068TCLP.xls>> <<58069TCLP.xls>>

Rachelle Arada
Project Coordinator
www.atlglobal.com
voice: 562.989.4045 ext 237
fax : 562.989.4040

<< File: 57931TCLP.xls >> << File: 58001TCLP.xls >> << File: 58021TCLP.xls >> << File: 58022TCLP.xls >> << File: 58023TCLP.xls >> << File: 58024TCLP.xls >> << File: 58049TCLP.xls >> << File: 58050TCLP.xls >> << File: 58052TCLP.xls >> << File: 58053TCLP.xls >> << File: 58065TCLP.xls >> << File: 58066TCLP.xls >> << File: 58067TCLP.xls >> << File: 58068TCLP.xls >> << File: 58069TCLP.xls >>

569-404-0	2. STLC	170
569-402-0	2. STLC	130
569-406-0	2. STLC	120
569-515-0	2. STLC	110
569-611-0	2. STLC	100
569-409-0	2. STLC	94
569-603-0	2. STLC	93
569-104-0.6	2. STLC	91
569-807-0	2. STLC	86
569-608-0	2. STLC	86
569-501-0	2. STLC	84
569-710-0.3	2. STLC	83
569-808-0	2. STLC	83
569-609-0.6	2. STLC	80
569-803-0	2. STLC	79
569-105-0	2. STLC	78
569-512-0	2. STLC	77
569-513-0	2. STLC	77
569-302-0	2. STLC	74
569-805-0	2. STLC	73
569-517-0	2. STLC	71
569-704-0.3	2. STLC	71
569-703-0.6	2. STLC	70
569-514-0.3	2. STLC	70
569-803-0.3	2. STLC	69
569-409-0.6	2. STLC	69
569-411-0	2. STLC	68
569-102-0.6	2. STLC	68
569-809-0	2. STLC	65
569-605-0	2. STLC	65
569-711-0.6	2. STLC	62
569-806-0	2. STLC	60
569-802-0.3	2. STLC	60
569-410-0	2. STLC	59
569-501-0.6	2. STLC	59
569-808-0.3	2. STLC	58
569-104-0	2. STLC	56
569-804-0	2. STLC	54
569-610-0	2. STLC	54
569-608-0.3	2. STLC	53
569-213-0	2. STLC	49
569-701-0	2. STLC	47
569-311-0	2. STLC	47
569-609-0.9	2. STLC	46
569-513-0.3	2. STLC	45
569-801-0.6	2. STLC	44
569-514-0	2. STLC	42
569-805-0.6	2. STLC	42
569-408-1.5	2. STLC	42
569-807-0.3	2. STLC	40
569-204-0	2. STLC	40
569-517-0.3	2. STLC	36
569-518-0	2. STLC	36
569-806-0.3	2. STLC	36
569-705-1.5	2. STLC	35
569-303-0.6	2. STLC	34
569-516-0.3	2. STLC	33
569-705-0.6	2. STLC	33
569-802-0	2. STLC	33
569-515-0.6	2. STLC	32
569-704-0	2. STLC	32
569-401-0.3	2. STLC	32
569-207-0	2. STLC	32
569-608-0.6	2. STLC	31
569-104-0.3	2. STLC	31
569-201-0.6	2. STLC	30
569-515-0.3	2. STLC	28
569-212-0.6	2. STLC	28
569-103-0	2. STLC	28
569-313-0	2. STLC	27
569-103-0.3	2. STLC	26
569-705-0.9	2. STLC	25
569-707-0.3	2. STLC	25
569-515-1.5	2. STLC	24
569-508-0	2. STLC	24
569-801-0	2. STLC	24
569-402-0.6	2. STLC	24
569-516-0.6	2. STLC	22
569-509-0.3	2. STLC	22
569-106-0	2. STLC	22
569-106-0.3	2. STLC	22
569-202-0	2. STLC	21
569-805-1.5	2. STLC	21
569-205-0	2. STLC	20
569-707-0	2. STLC	19
570-515-0.3	2. STLC	120
570-811-0	2. STLC	110
570-114-0.0	2. STLC	110
570-504-0.6	2. STLC	100
570-811-1.5	2. STLC	90
570-615-0.6	2. STLC	84
570-305-0	2. STLC	79
570-314-0.6	2. STLC	76
570-505-0.6	2. STLC	75
570-208-0.6	2. STLC	74
570-116-0.0	2. STLC	73
570-102-0	2. STLC	65
570-804-0.6	2. STLC	64
570-704-0	2. STLC	63
570-508-0.6	2. STLC	60
570-706-0.3	2. STLC	60
570-303-0	2. STLC	58
570-311-1.5	2. STLC	58
570-117-0.0	2. STLC	58
570-208-0.3	2. STLC	58
570-709-0.6	2. STLC	57
570-703-0	2. STLC	55
570-206-0	2. STLC	54
570-301-0	2. STLC	53
570-603-0.3	2. STLC	46
570-711-0.6	2. STLC	46
570-206-0.3	2. STLC	45
570-103-0	2. STLC	44
570-602-0	2. STLC	41
570-209-0	2. STLC	40
570-210-0	2. STLC	40
570-117-0.3	2. STLC	39
570-103-0.6	2. STLC	37
570-110-0.6	2. STLC	37
570-805-0.9	2. STLC	36
570-112-1.5	2. STLC	35
570-614-0	2. STLC	34
570-713-0.3	2. STLC	33
570-513-0	2. STLC	32
570-312-0.3	2. STLC	31
570-503-0.6	2. STLC	31
570-510-0.6	2. STLC	31
570-202-0	2. STLC	31
570-207-0	2. STLC	31
570-209-0.3	2. STLC	31
570-703-0.3	2. STLC	30
570-401-0	2. STLC	30
570-610-0.9	2. STLC	29
570-809-0.6	2. STLC	29
570-509-0.9	2. STLC	29
570-210-0.6	2. STLC	29
570-211-0	2. STLC	29
570-603-0	2. STLC	28
570-119-0	2. STLC	28
570-713-0.6	2. STLC	28
570-108-0	2. STLC	27
570-708-0.6	2. STLC	27
570-224-0	2. STLC	26
570-601-0	2. STLC	26
570-710-0.6	2. STLC	26
570-614-0.6	2. STLC	26
570-118-0.3	2. STLC	26
570-304-0	2. STLC	25
570-707-0.6	2. STLC	25
570-510-0	2. STLC	25
570-110-0	2. STLC	24
570-223-0	2. STLC	24
570-117-0.6	2. STLC	24
570-616-0	2. STLC	23
570-704-0.3	2. STLC	22
570-513-0.6	2. STLC	22
570-221-0.0	2. STLC	22
570-617-0	2. STLC	21
570-214-0.3	2. STLC	21
570-122-0.9	2. STLC	20
570-313-0.6	2. STLC	19
570-207-0.6	2. STLC	19
570-120-0.9	2. STLC	18
570-506-0	2. STLC	18
570-102-0.9	2. STLC	17
570-216-0	2. STLC	17
570-225-0	2. STLC	17
570-304-0.3	2. STLC	17
570-409-0	2. STLC	17
570-713-0	2. STLC	17
571-521-0	2. STLC	230
571-324-0.9	2. STLC	110
571-818-0	2. STLC	110
571-819-0.6	2. STLC	110
571-708-0	2. STLC	110
571-103-0.6	2. STLC	110
571-617-0.3	2. STLC	100
571-611-0.6	2. STLC	92
571-712-0.9	2. STLC	81
571-105-0.6	2. STLC	81
571-313-0	2. STLC	79
571-508-0	2. STLC	73
571-518-0.3	2. STLC	73
571-217-0	2. STLC	68
571-516-0	2. STLC	66
571-701-0.3	2. STLC	66
571-710-0.6	2. STLC	65
571-512-0	2. STLC	64
571-308-0.9	2. STLC	61
571-701-0	2. STLC	61
571-514-0.3	2. STLC	59
571-415-0	2. STLC	58
571-616-0.6	2. STLC	57
571-517-0	2. STLC	56
571-112-0.9	2. STLC	56
571-214-0	2. STLC	55
571-415-0.3	2. STLC	55
571-405-0.6	2. STLC	55
571-530-0	2. STLC	55
571-631-0	2. STLC	53
571-709-0	2. STLC	53
571-103-0.0	2. STLC	52
571-312-0	2. STLC	51
571-526-0	2. STLC	51
571-819-1.5	2. STLC	51
571-515-0	2. STLC	50
571-833-0	2. STLC	49
571-815-0.6	2. STLC	47
571-517-0.3	2. STLC	46
571-610-0	2. STLC	46
571-413-0	2. STLC	46
571-815-0	2. STLC	45
571-514-0.9	2. STLC	44
571-505-1.5	2. STLC	44
571-528-0	2. STLC	44
571-610-0.6	2. STLC	43
571-629-0	2. STLC	43
571-604-0	2. STLC	42
571-213-0	2. STLC	41
571-812-0	2. STLC	41
571-706-0	2. STLC	41
571-530-0.6	2. STLC	41
571-305-0	2. STLC	40
571-523-0.3	2. STLC	39
571-510-0	2. STLC	39
571-305-0.9	2. STLC	39
571-818-1.5	2. STLC	39
571-703-0	2. STLC	38
571-520-0.3	2. STLC	36
571-216-0	2. STLC	34
571-827-0	2. STLC	34
571-708-0.3	2. STLC	34
571-514-0.6	2. STLC	33
571-528-1.5	2. STLC	33
571-803-0	2. STLC	33
571-414-0.3	2. STLC	33
571-813-0.3	2. STLC	32
571-523-0	2. STLC	31
571-326-0	2. STLC	31
571-502-0.6	2. STLC	31
571-624-1.5	2. STLC	31
571-330-0	2. STLC	31
571-512-0.3	2. STLC	30
571-521-0.6	2. STLC	29
571-706-0.3	2. STLC	29
571-814-0.6	2. STLC	28
571-616-1.5	2. STLC	28
571-835-0	2. STLC	28
571-811-0.3	2. STLC	28
571-101-0.6	2. STLC	28
571-112-0	2. STLC	28
571-315-0	2. STLC	27
571-622-0	2. STLC	27
571-607-0.6	2. STLC	27
571-609-0.6	2. STLC	27

569-709-0	2. STLC	19
569-202-0.3	2. STLC	19
569-602-0	2. STLC	19
569-207-0.3	2. STLC	19
569-706-0.3	2. STLC	17
569-807-0.9	2. STLC	17
569-104-0.9	2. STLC	17
569-505-0.6	2. STLC	17
569-704-0.6	2. STLC	16
569-808-0.6	2. STLC	16
569-212-0.3	2. STLC	16
569-612-0	2. STLC	16
569-704-1.5	2. STLC	15
569-411-0.3	2. STLC	15
569-113-0	2. STLC	15
569-807-0.6	2. STLC	14
569-311-0.3	2. STLC	12
569-312-0	2. STLC	10
569-311-0.9	2. STLC	8.3

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570-401-0.3	2. STLC	17
570-616-0.6	2. STLC	17
570-308-0	2. STLC	16
570-807-0.9	2. STLC	16
570-701-0.6	2. STLC	16
570-617-0.3	2. STLC	16
570-107-0.6	2. STLC	15
570-811-0.6	2. STLC	15
570-707-0	2. STLC	15
570-518-0	2. STLC	15
570-111-0.0	2. STLC	15
570-109-0.6	2. STLC	14
570-401-0.9	2. STLC	4.1
570-408-0	2. STLC	4
570-409-0.3	2. STLC	3
570-401-0.6		0
570-401-1.5		0
570-408-0.6		0
570-408-1.5		0

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571-837-0.3	2. STLC	27
571-520-0	2. STLC	26
571-516-0.3	2. STLC	26
571-420-0	2. STLC	26
571-102-0.6	2. STLC	26
571-517-1.5	2. STLC	25
571-513-0.6	2. STLC	25
571-623-0.6	2. STLC	25
571-112-0.3	2. STLC	25
571-326-0.6	2. STLC	24
571-619-0.3	2. STLC	24
571-619-0.9	2. STLC	24
571-528-0.3	2. STLC	24
571-706-0.6	2. STLC	24
571-112-0.6	2. STLC	24
571-327-0.6	2. STLC	23
571-817-0	2. STLC	23
571-425-0.6	2. STLC	22
571-118-0	2. STLC	22
571-829-0	2. STLC	22
571-828-0	2. STLC	22
571-122-0	2. STLC	21
571-101-1.5	2. STLC	21
571-530-0.3	2. STLC	21
571-406-0.6	2. STLC	20
571-517-0.6	2. STLC	20
571-835-0.3	2. STLC	20
571-501-0	2. STLC	20
571-518-0.9	2. STLC	19
571-510-0.3	2. STLC	19
571-814-0.9	2. STLC	19
571-522-0.6	2. STLC	19
571-622-1.5	2. STLC	19
571-812-0.6	2. STLC	19
571-701-0.6	2. STLC	19
571-704-0	2. STLC	19
571-711-0.6	2. STLC	19
571-212-0	2. STLC	18
571-839-0.6	2. STLC	18
571-610-1.5	2. STLC	18
571-709-0.3	2. STLC	18
571-311-0.6	2. STLC	17
571-620-0	2. STLC	17
571-109-0	2. STLC	17
571-704-0.3	2. STLC	17
571-207-1.5	2. STLC	16
571-203-0	2. STLC	16
571-616-0.3	2. STLC	16
571-317-0.3	2. STLC	16
571-629-0.3	2. STLC	16
571-416-0	2. STLC	15
571-419-0	2. STLC	15
571-526-0.3	2. STLC	15
571-619-0	2. STLC	15
571-606-0	2. STLC	15
571-115-0.6	2. STLC	14
571-202-0.9	2. STLC	11

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tblTEMP

WorkOrder	ClientSampID	TestNo	Analyte	PQL	DF	CollectionDate	AnalDate	PrepDate
058053	571-108-0	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/24/2002
058053	571-108-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/24/2002
058053	571-108-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/24/2002
058053	571-108-0.9	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/24/2002
058053	571-108-1.5	EPA 6010B	Antimony	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-108-1.5	EPA 6010B	Arsenic	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-108-1.5	EPA 6010B	Barium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-108-1.5	EPA 6010B	Beryllium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-108-1.5	EPA 6010B	Cadmium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-108-1.5	EPA 6010B	Chromium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-108-1.5	EPA 6010B	Cobalt	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-108-1.5	EPA 6010B	Copper	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-108-1.5	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/24/2002
058053	571-108-1.5	EPA 6010B	Molybdenum	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-108-1.5	EPA 6010B	Nickel	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-108-1.5	EPA 6010B	Selenium	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-108-1.5	EPA 6010B	Silver	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-108-1.5	EPA 6010B	Thallium	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-108-1.5	EPA 6010B	Vanadium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-108-1.5	EPA 6010B	Zinc	5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-108-1.5	EPA 7471A	Mercury	0.1	1	7/22/2002	8/14/2002	8/13/2002
058053	571-111-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058053	571-111-0.3	EPA 6010B	Antimony	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-111-0.3	EPA 6010B	Arsenic	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-111-0.3	EPA 6010B	Barium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-111-0.3	EPA 6010B	Beryllium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-111-0.3	EPA 6010B	Cadmium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-111-0.3	EPA 6010B	Chromium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-111-0.3	EPA 6010B	Cobalt	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-111-0.3	EPA 6010B	Copper	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-111-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058053	571-111-0.3	EPA 6010B	Molybdenum	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-111-0.3	EPA 6010B	Nickel	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-111-0.3	EPA 6010B	Selenium	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-111-0.3	EPA 6010B	Silver	1.5	10	7/22/2002	8/12/2002	8/9/2002

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058053	571-111-0.3	EPA 6010B	Thallium	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-111-0.3	EPA 6010B	Vanadium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-111-0.3	EPA 6010B	Zinc	5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-111-0.3	EPA 7471A	Mercury	0.1	1	7/22/2002	8/14/2002	8/13/2002
058053	571-111-0.3	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058053	571-111-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058053	571-111-0.6	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058053	571-111-0.9	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058053	571-111-1.5	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058053	571-112-0	EPA 1311/ 7420	Lead	0.2	1	7/22/2002	8/14/2002	8/13/2002
058053	571-112-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058053	571-112-0	EPA 9045C	pH	0.1	1	7/22/2002	7/26/2002	7/26/2002
058053	571-112-0	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058053	571-112-0	WET/ EPA 7420	Lead	0.8	4	7/22/2002	8/2/2002	7/30/2002
058053	571-112-0.3	EPA 1311/ 7420	Lead	0.2	1	7/22/2002	8/14/2002	8/13/2002
058053	571-112-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058053	571-112-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058053	571-112-0.3	WET/ EPA 7420	Lead	0.8	4	7/22/2002	8/2/2002	7/30/2002
058053	571-112-0.6	EPA 1311/ 7420	Lead	0.2	1	7/22/2002	8/14/2002	8/13/2002
058053	571-112-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058053	571-112-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058053	571-112-0.6	WET/ EPA 7420	Lead	0.8	4	7/22/2002	8/2/2002	7/30/2002
058053	571-112-0.9	EPA 1311/ 7420	Lead	0.2	1	7/22/2002	8/14/2002	8/13/2002
058053	571-112-0.9	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058053	571-112-0.9	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058053	571-112-0.9	WET/ EPA 7420	Lead	2	10	7/22/2002	8/2/2002	7/30/2002
058053	571-112-1.5	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058053	571-113-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058053	571-113-0	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058053	571-113-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058053	571-113-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058053	571-113-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058053	571-113-0.6	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058053	571-113-0.9	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058053	571-113-1.5	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058053	571-114-1.5	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002

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058053	571-114-1.5	EPA 9045C	pH	0.1	1	7/22/2002	7/26/2002	7/26/2002
058053	571-319-0	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/24/2002
058053	571-319-0	EPA 9045C	pH	0.1	1	7/22/2002	7/26/2002	7/26/2002
058053	571-319-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/24/2002
058053	571-319-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058053	571-319-0.3	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058053	571-320-0	EPA 1311/ 7420	Lead	0.2	1	7/22/2002	8/7/2002	8/6/2002
058053	571-320-0	EPA 6010B	Antimony	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-320-0	EPA 6010B	Arsenic	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-320-0	EPA 6010B	Barium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-320-0	EPA 6010B	Beryllium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-320-0	EPA 6010B	Cadmium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-320-0	EPA 6010B	Chromium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-320-0	EPA 6010B	Cobalt	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-320-0	EPA 6010B	Copper	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-320-0	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/24/2002
058053	571-320-0	EPA 6010B	Molybdenum	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-320-0	EPA 6010B	Nickel	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-320-0	EPA 6010B	Selenium	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-320-0	EPA 6010B	Silver	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-320-0	EPA 6010B	Thallium	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-320-0	EPA 6010B	Vanadium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-320-0	EPA 6010B	Zinc	5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-320-0	EPA 7471A	Mercury	0.1	1	7/22/2002	8/13/2002	8/13/2002
058053	571-530-0	EPA 1311/ 7420	Lead	0.2	1	7/22/2002	8/14/2002	8/13/2002
058053	571-530-0	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/24/2002
058053	571-530-0	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058053	571-530-0	WET/ EPA 7420	Lead	2	10	7/22/2002	8/2/2002	7/30/2002
058053	571-530-0.3	EPA 1311/ 7420	Lead	0.2	1	7/22/2002	8/14/2002	8/13/2002
058053	571-530-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/24/2002
058053	571-530-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058053	571-530-0.3	WET/ EPA 7420	Lead	0.8	4	7/22/2002	8/2/2002	7/30/2002
058053	571-530-0.6	EPA 1311/ 7420	Lead	0.2	1	7/22/2002	8/14/2002	8/13/2002
058053	571-530-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/24/2002
058053	571-530-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058053	571-530-0.6	WET/ EPA 7420	Lead	2	10	7/22/2002	8/2/2002	7/30/2002

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058053	571-617-0	EPA 1311/ 7420	Lead	0.2	1	7/22/2002	8/7/2002	8/6/2002
058053	571-617-0	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/24/2002
058053	571-617-0.3	EPA 1311/ 7420	Lead	0.4	2	7/22/2002	8/14/2002	8/13/2002
058053	571-617-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/24/2002
058053	571-617-0.3	WET DI/ EPA 7420	Lead	0.8	4	7/22/2002	8/9/2002	8/6/2002
058053	571-617-0.3	WET/ EPA 7420	Lead	4	20	7/22/2002	8/2/2002	7/30/2002
058053	571-617-0.6	EPA 6010B	Antimony	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-617-0.6	EPA 6010B	Arsenic	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-617-0.6	EPA 6010B	Barium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-617-0.6	EPA 6010B	Beryllium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-617-0.6	EPA 6010B	Cadmium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-617-0.6	EPA 6010B	Chromium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-617-0.6	EPA 6010B	Cobalt	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-617-0.6	EPA 6010B	Copper	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-617-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/24/2002
058053	571-617-0.6	EPA 6010B	Molybdenum	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-617-0.6	EPA 6010B	Nickel	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-617-0.6	EPA 6010B	Selenium	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-617-0.6	EPA 6010B	Silver	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-617-0.6	EPA 6010B	Thallium	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-617-0.6	EPA 6010B	Vanadium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-617-0.6	EPA 6010B	Zinc	5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-617-0.6	EPA 7471A	Mercury	0.1	1	7/22/2002	8/14/2002	8/13/2002
058053	571-617-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058053	571-617-0.6	WET/ EPA 7420	Lead	0.4	2	7/22/2002	8/2/2002	7/30/2002
058053	571-617-0.9	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/24/2002
058053	571-617-0.9	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058053	571-626-0	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/24/2002
058053	571-626-0	EPA 9045C	pH	0.1	1	7/22/2002	7/26/2002	7/26/2002
058053	571-626-0	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058053	571-626-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/24/2002
058053	571-626-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/24/2002
058053	571-626-0.9	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/24/2002
058053	571-628-0	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/24/2002
058053	571-628-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/25/2002
058053	571-628-0.6	EPA 6010B	Antimony	2.5	10	7/22/2002	8/12/2002	8/9/2002

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058053	571-628-0.6	EPA 6010B	Arsenic	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-628-0.6	EPA 6010B	Barium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-628-0.6	EPA 6010B	Beryllium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-628-0.6	EPA 6010B	Cadmium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-628-0.6	EPA 6010B	Chromium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-628-0.6	EPA 6010B	Cobalt	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-628-0.6	EPA 6010B	Copper	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-628-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/25/2002
058053	571-628-0.6	EPA 6010B	Molybdenum	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-628-0.6	EPA 6010B	Nickel	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-628-0.6	EPA 6010B	Selenium	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-628-0.6	EPA 6010B	Silver	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-628-0.6	EPA 6010B	Thallium	2.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-628-0.6	EPA 6010B	Vanadium	1.5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-628-0.6	EPA 6010B	Zinc	5	10	7/22/2002	8/12/2002	8/9/2002
058053	571-628-0.6	EPA 7471A	Mercury	0.1	1	7/22/2002	8/14/2002	8/13/2002
058053	571-629-0	EPA 1311/ 7420	Lead	0.2	1	7/22/2002	8/14/2002	8/13/2002
058053	571-629-0	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/25/2002
058053	571-629-0	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058053	571-629-0	WET/ EPA 7420	Lead	2	10	7/22/2002	8/2/2002	7/30/2002
058053	571-629-0.3	EPA 1311/ 7420	Lead	0.2	1	7/22/2002	8/14/2002	8/13/2002
058053	571-629-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/25/2002
058053	571-629-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058053	571-629-0.3	WET/ EPA 7420	Lead	0.4	2	7/22/2002	8/2/2002	7/30/2002
058053	571-629-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/25/2002
058053	571-629-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058053	571-629-0.6	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058053	571-629-0.9	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/25/2002
058053	571-629-0.9	EPA 9045C	pH	0.1	1	7/22/2002	7/26/2002	7/26/2002
058053	571-629-1.5	EPA 6010B	Lead	5	1	7/22/2002	7/27/2002	7/25/2002
058053	571-629-1.5	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058053	EB-32	EPA 6010B	Lead	0.005	1	7/22/2002	7/26/2002	7/26/2002

August 19, 2002

David Shaler
Ninyo & Moore
475 Goddard Suite 200
Irvine, CA 92618
TEL: (949) 753-7070
FAX: (949) 753-7071

RE: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

Attention: David Shaler

ELAP No.: 1838
NELAP No.: 02107CA
Workorder No.: 058024

Enclosed are the results for sample(s) received on July 19, 2002 by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

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AUG 2 6 2002
NINYO & MOORE
ORANGE COUNTY OFFICE

This cover letter is an integral part of this analytical report.

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57) Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT

Relinquished by: (name/date/time) 7/19/02
Received by: (name/date/time) 7-19-02 3:45p
Relinquished by: (name/date/time) 7-19-02 6:40p
Received by: (name/date/time) 7-19-02 6:40p

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB- 27	7/19/02	15:30	P	X	
	571- 521 - 0	7/19/02	3:10		X	X
	571- 521 - 0.3		3:10		X	
	571- 521 - 0.6		3:10		X	
	571- 618 - 0		10:20		X	
	571- 618 - 0.3		10:20		X	
	571- 618 - 0.6		10:20		X	
	571- 618 - 0.9		10:25		X	
	571- 618 - 1.5		10:25		X	
	571- 619 - 0		10:40		X	
	571- 619 - 0.3		10:40		X	
	571- 619 - 0.6		10:40		X	
	571- 619 - 0.9		10:40		X	X
	571- 619 - 1.5		10:45		X	
	571- 620 - 0		11:00		X	
	571- 620 - 0.3		11:00		X	
	571- 620 - 0.6		11:00		X	
	571- 620 - 0.9		11:05		X	
	571- 620 - 1.5		11:10		X	
	571- 621 - 0		11:15		X	
	571- 621 - 0.3		11:15		X	
	571- 621 - 0.6		11:15		X	X
	571- 621 - 0.9		11:20		X	
	571- 621 - 1.5		11:25		X	
	571- 622 - 0		11:35		X	
	571- 622 - 0.3		11:35		X	
	571- 622 - 0.6		11:40		X	
	571- 622 - 0.9		11:45		X	
	571- 622 - 1.5		11:55		X	
	571- 625 - 0		12:35		X	
	571- 625 - 0.3		12:45		X	X
	571- 625 - 0.6		12:46		X	
	571- 625 - 0.9		12:50		X	
	571- 625 - 1.5		12:55		X	
	571- 623 - 0		11:55		X	
	571- 623 - 0.3		11:55		X	
	571- 623 - 0.6		11:55		X	
	571- 623 - 0.9		12:00		X	
	571- 623 - 1.5		12:05		X	
	571- 624 - 0		12:15		X	
	571- 624 - 0.3		12:15		X	X
	571- 624 - 0.6		12:15		X	
	571- 624 - 0.9		12:20		X	
	571- 624 - 1.5		12:25		X	
	571- 627 - 0		1:15		X	
	571- 627 - 0.3		1:15		X	
	571- 627 - 0.6		1:15		X	
	571- 627 - 0.9		1:20		X	
	571- 627 - 1.5		1:25		X	
	571- 528 - 0		2:45		X	
	571- 528 - 0.3		2:45		X	X
	571- 528 - 0.6		2:45		X	
	571- 528 - 0.9		2:45		X	
	571- 528 - 1.5		2:50		X	
	571- 714 - 0		1:55		X	
	571- 714 - 0.3		1:55		X	
	571- 714 - 0.6		1:55		X	
	571- 714 - 0.9		2:00		X	
	~~571-~~				~~X~~	
	~~571-~~					

Total # of samples: 59

Advanced Technology Laboratories

Date: *26-Jul-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	EB-27
Lab Order:	058024		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/19/2002 3:30:00 PM
Lab ID:	058024-001A	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	(EPA 3010A)			**EPA 6010B**		
RunID: ICP2_020725D	QC Batch: 9860					Analyst: **RQ**
Lead	0.0094	0.0050		mg/L	1	7/25/2002

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interfere

H - Sample exceeded analytical holding time

E - Value above quantitation range

Results are wet unless otherwise specified

Advanced Technology Laboratories

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Advanced Technology Laboratories

Date: 7/26/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058024
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058024-002A	571-521-0	370	mg/Kg	9817	5	1	7/19/2002	7/26/2002
058024-003A	571-521-0.3	42	mg/Kg	9817	5	1	7/19/2002	7/26/2002
058024-004A	571-521-0.6	420	mg/Kg	9817	5	1	7/19/2002	7/26/2002
058024-005A	571-618-0	31	mg/Kg	9817	5	1	7/19/2002	7/26/2002
058024-006A	571-618-0.3	10	mg/Kg	9817	5	1	7/19/2002	7/26/2002
058024-007A	571-618-0.6	ND	mg/Kg	9817	5	1	7/19/2002	7/26/2002
058024-008A	571-618-0.9	1000	mg/Kg	9817	5	1	7/19/2002	7/26/2002
058024-009A	571-618-1.5	ND	mg/Kg	9817	5	1	7/19/2002	7/26/2002
058024-010A	571-619-0	76	mg/Kg	9817	5	1	7/19/2002	7/26/2002
058024-011A	571-619-0.3	200	mg/Kg	9817	5	1	7/19/2002	7/26/2002
058024-012A	571-619-0.6	710	mg/Kg	9817	5	1	7/19/2002	7/26/2002

Qualifiers:

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- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interfere
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

Advanced Technology Laboratories *3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040*

Advanced Technology Laboratories

Date: 7/26/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058024
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058024-013A	571-619-0.9	960	mg/Kg	9817	5	1	7/19/2002	7/26/2002
058024-014A	571-619-1.5	1100	mg/Kg	9817	5	1	7/19/2002	7/26/2002
058024-015A	571-620-0	250	mg/Kg	9817	5	1	7/19/2002	7/26/2002
058024-016A	571-620-0.3	7.4	mg/Kg	9817	5	1	7/19/2002	7/26/2002
058024-017A	571-620-0.6	6.5	mg/Kg	9817	5	1	7/19/2002	7/26/2002
058024-018A	571-620-0.9	ND	mg/Kg	9818	5	1	7/19/2002	7/26/2002
058024-019A	571-620-1.5	ND	mg/Kg	9818	5	1	7/19/2002	7/26/2002
058024-020A	571-621-0	130	mg/Kg	9818	5	1	7/19/2002	7/26/2002
058024-021A	571-621-0.3	ND	mg/Kg	9818	5	1	7/19/2002	7/26/2002
058024-022A	571-621-0.6	ND	mg/Kg	9818	5	1	7/19/2002	7/26/2002
058024-023A	571-621-0.9	110	mg/Kg	9818	5	1	7/19/2002	7/26/2002

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- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interfere
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

Advanced Technology Laboratories
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Advanced Technology Laboratories

Date: 7/26/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058024
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058024-024A	571-621-1.5	220	mg/Kg	9818	5	1	7/19/2002	7/26/2002
058024-025A	571-622-0	370	mg/Kg	9818	5	1	7/19/2002	7/26/2002
058024-026A	571-622-0.3	ND	mg/Kg	9818	5	1	7/19/2002	7/26/2002
058024-027A	571-622-0.6	ND	mg/Kg	9818	5	1	7/19/2002	7/26/2002
058024-028A	571-622-0.9	ND	mg/Kg	9818	5	1	7/19/2002	7/26/2002
058024-029A	571-622-1.5	260	mg/Kg	9818	5	1	7/19/2002	7/26/2002
058024-030A	571-625-0	ND	mg/Kg	9818	5	1	7/19/2002	7/26/2002
058024-031A	571-625-0.3	ND	mg/Kg	9818	5	1	7/19/2002	7/26/2002
058024-032A	571-625-0.6	ND	mg/Kg	9818	5	1	7/19/2002	7/26/2002
058024-033A	571-625-0.9	7.0	mg/Kg	9818	5	1	7/19/2002	7/26/2002
058024-034A	571-625-1.5	12	mg/Kg	9818	5	1	7/19/2002	7/26/2002

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interfere
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- E - Value above quantitation range
- Results are wet unless otherwise specified

Advanced Technology Laboratories 3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 7/26/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058024
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058024-035A	571-623-0	23	mg/Kg	9818	5	1	7/19/2002	7/26/2002
058024-036A	571-623-0.3	ND	mg/Kg	9818	5	1	7/19/2002	7/26/2002
058024-037A	571-623-0.6	190	mg/Kg	9818	5	1	7/19/2002	7/26/2002
058024-038A	571-623-0.9	ND	mg/Kg	9829	5	1	7/19/2002	7/26/2002
058024-039A	571-623-1.5	29	mg/Kg	9829	5	1	7/19/2002	7/26/2002
058024-040A	571-624-0	160	mg/Kg	9829	5	1	7/19/2002	7/26/2002
058024-041A	571-624-0.3	76	mg/Kg	9829	5	1	7/19/2002	7/26/2002
058024-042A	571-624-0.6	ND	mg/Kg	9829	5	1	7/19/2002	7/26/2002
058024-043A	571-624-0.9	17	mg/Kg	9829	5	1	7/19/2002	7/26/2002
058024-044A	571-624-1.5	90	mg/Kg	9829	5	1	7/19/2002	7/26/2002
058024-045A	571-627-0	14	mg/Kg	9829	5	1	7/19/2002	7/26/2002

Qualifiers:

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- S - Spike/Surrogate outside of limits due to matrix interfere
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- E - Value above quantitation range
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Advanced Technology Laboratories

Date: 7/26/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058024
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058024-046A	571-627-0.3	17	mg/Kg	9829	5	1	7/19/2002	7/26/2002
058024-047A	571-627-0.6	10	mg/Kg	9829	5	1	7/19/2002	7/26/2002
058024-048A	571-627-0.9	14	mg/Kg	9829	5	1	7/19/2002	7/26/2002
058024-049A	571-627-1.5	ND	mg/Kg	9829	5	1	7/19/2002	7/26/2002
058024-050A	571-528-0	510	mg/Kg	9829	5	1	7/19/2002	7/26/2002
058024-051A	571-528-0.3	86	mg/Kg	9829	5	1	7/19/2002	7/26/2002
058024-052A	571-528-0.6	16	mg/Kg	9829	5	1	7/19/2002	7/26/2002
058024-053A	571-528-0.9	64	mg/Kg	9829	5	1	7/19/2002	7/26/2002
058024-054A	571-528-1.5	660	mg/Kg	9829	5	1	7/19/2002	7/26/2002
058024-055A	571-714-0	570	mg/Kg	9829	5	1	7/19/2002	7/26/2002
058024-056A	571-714-0.3	54	mg/Kg	9829	5	1	7/19/2002	7/26/2002

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interfere
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/26/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058024
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058024-057A	571-714-0.6	ND	mg/Kg	9829	5	1	7/19/2002	7/26/2002
058024-058A	571-714-0.9	680	mg/Kg	9830	5	1	7/19/2002	7/26/2002

Qualifiers:

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- S - Spike/Surrogate outside of limits due to matrix interfere
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
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Advanced Technology Laboratories

Date: 7/26/2002

pH
EPA 9045C

CLIENT:	Ninyo & Moore	**Lab Order:**	058024
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058024-002A	571-521-0	8.21	pH Units	R19800	0.1	1	7/19/2002	7/25/2002
058024-012A	571-619-0.6	8.27	pH Units	R19800	0.1	1	7/19/2002	7/25/2002
058024-022A	571-621-0.6	7.90	pH Units	R19800	0.1	1	7/19/2002	7/25/2002
058024-031A	571-625-0.3	8.40	pH Units	R19800	0.1	1	7/19/2002	7/25/2002
058024-041A	571-624-0.3	9.20	pH Units	R19800	0.1	1	7/19/2002	7/25/2002
058024-051A	571-528-0.3	8.96	pH Units	R19800	0.1	1	7/19/2002	7/25/2002

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Date: 8/2/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058024
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058024-002A	571-521-0	230	mg/L	9940	8	40	7/19/2002	8/2/2002
058024-004A	571-521-0.6	29	mg/L	9940	0.8	4	7/19/2002	8/2/2002
058024-010A	571-619-0	15	mg/L	9940	0.4	2	7/19/2002	8/2/2002
058024-011A	571-619-0.3	24	mg/L	9940	0.8	4	7/19/2002	8/2/2002
058024-012A	571-619-0.6	ND	mg/L	9940	0.2	1	7/19/2002	8/2/2002
058024-013A	571-619-0.9	24	mg/L	9940	0.8	4	7/19/2002	8/2/2002
058024-015A	571-620-0	17	mg/L	9940	0.4	2	7/19/2002	8/2/2002
058024-020A	571-621-0	1.7	mg/L	9940	0.2	1	7/19/2002	8/2/2002
058024-023A	571-621-0.9	9.6	mg/L	9940	0.2	1	7/19/2002	8/2/2002
058024-024A	571-621-1.5	5.8	mg/L	9940	0.2	1	7/19/2002	8/2/2002
058024-025A	571-622-0	27	mg/L	9940	0.8	4	7/19/2002	8/2/2002

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Advanced Technology Laboratories

Date: 8/2/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058024
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058024-029A	571-622-1.5	19	mg/L	9940	0.4	2	7/19/2002	8/2/2002
058024-037A	571-623-0.6	25	mg/L	9940	0.8	4	7/19/2002	8/2/2002
058024-040A	571-624-0	11	mg/L	9940	0.4	2	7/19/2002	8/2/2002
058024-041A	571-624-0.3	3.9	mg/L	9941	0.2	1	7/19/2002	8/2/2002
058024-044A	571-624-1.5	31	mg/L	9941	0.8	4	7/19/2002	8/2/2002
058024-050A	571-528-0	44	mg/L	9941	2	10	7/19/2002	8/2/2002
058024-051A	571-528-0.3	24	mg/L	9941	0.8	4	7/19/2002	8/2/2002
058024-053A	571-528-0.9	7.2	mg/L	9941	0.2	1	7/19/2002	8/2/2002
058024-054A	571-528-1.5	33	mg/L	9941	0.8	4	7/19/2002	8/2/2002
058024-055A	571-714-0	11	mg/L	9941	0.4	2	7/19/2002	8/2/2002
058024-056A	571-714-0.3	1.9	mg/L	9941	0.2	1	7/19/2002	8/2/2002

Qualifiers:

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Advanced Technology Laboratories

Date: 8/2/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058024
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058024-058A	571-714-0.9	0.84	mg/L	9941	0.2	1	7/19/2002	8/2/2002

Qualifiers:

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- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
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Advanced Technology Laboratories

Date: 8/12/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058024
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058024-002A	571-521-0	ND	mg/L	10132	0.2	1	7/19/2002	8/9/2002
058024-004A	571-521-0.6	ND	mg/L	10132	0.2	1	7/19/2002	8/9/2002
058024-010A	571-619-0	ND	mg/L	10132	0.2	1	7/19/2002	8/9/2002
058024-011A	571-619-0.3	ND	mg/L	10132	0.2	1	7/19/2002	8/9/2002
058024-013A	571-619-0.9	ND	mg/L	10132	0.2	1	7/19/2002	8/9/2002
058024-015A	571-620-0	ND	mg/L	10132	0.2	1	7/19/2002	8/9/2002
058024-023A	571-621-0.9	ND	mg/L	10132	0.2	1	7/19/2002	8/9/2002
058024-024A	571-621-1.5	ND	mg/L	10132	0.2	1	7/19/2002	8/9/2002
058024-025A	571-622-0	ND	mg/L	10132	0.2	1	7/19/2002	8/9/2002
058024-029A	571-622-1.5	ND	mg/L	10132	0.2	1	7/19/2002	8/9/2002
058024-037A	571-623-0.6	ND	mg/L	10132	0.2	1	7/19/2002	8/9/2002

Qualifiers:

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Advanced Technology Laboratories

Date: 8/12/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058024
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058024-040A	571-624-0	ND	mg/L	10132	0.2	1	7/19/2002	8/9/2002
058024-044A	571-624-1.5	0.37	mg/L	10132	0.2	1	7/19/2002	8/9/2002
058024-050A	571-528-0	ND	mg/L	10132	0.2	1	7/19/2002	8/9/2002
058024-051A	571-528-0.3	1.5	mg/L	10132	0.2	1	7/19/2002	8/9/2002
058024-053A	571-528-0.9	2.4	mg/L	10132	0.2	1	7/19/2002	8/9/2002
058024-054A	571-528-1.5	ND	mg/L	10132	0.2	1	7/19/2002	8/9/2002
058024-055A	571-714-0	ND	mg/L	10132	0.2	1	7/19/2002	8/9/2002

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Date: *13-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-621-0.3
Lab Order:	058024		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/19/2002 11:15:00 AM
Lab ID:	058024-021A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810E	QC Batch: 10216					Analyst: **RQ**
Antimony	3.0	2.5		mg/Kg	10	8/10/2002
Arsenic	3.5	2.5		mg/Kg	10	8/10/2002
Barium	210	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	1.9	1.5		mg/Kg	10	8/10/2002
Chromium	57	1.5		mg/Kg	10	8/10/2002
Cobalt	13	1.5		mg/Kg	10	8/10/2002
Copper	27	1.5		mg/Kg	10	8/10/2002
Molybdenum	13	2.5		mg/Kg	10	8/10/2002
Nickel	37	1.5		mg/Kg	10	8/10/2002
Selenium	7.5	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	99	1.5		mg/Kg	10	8/10/2002
Zinc	79	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020812E	QC Batch: 10170					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/12/2002

Qualifiers:

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E - Value above quantitation range
Results are wet unless otherwise specified

Advanced Technology Laboratories *3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040*

Advanced Technology Laboratories

Date: *13-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-624-0.9
Lab Order:	058024		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/19/2002 12:20:00 PM
Lab ID:	058024-043A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810F	QC Batch: 10217					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	7.3	2.5		mg/Kg	10	8/10/2002
Barium	180	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	3.5	1.5		mg/Kg	10	8/10/2002
Chromium	37	1.5		mg/Kg	10	8/10/2002
Cobalt	8.7	1.5		mg/Kg	10	8/10/2002
Copper	27	1.5		mg/Kg	10	8/10/2002
Molybdenum	8.5	2.5		mg/Kg	10	8/10/2002
Nickel	30	1.5		mg/Kg	10	8/10/2002
Selenium	12	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	70	1.5		mg/Kg	10	8/10/2002
Zinc	160	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020812E	QC Batch: 10170					Analyst: **NS**
Mercury	0.11	0.10		mg/Kg	1	8/12/2002

Qualifiers:

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E - Value above quantitation range
Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 8/19/2002

LEAD BY ATOMIC ABSORPTION
EPA 1311/ 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058024
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058024-002A	571-521-0	1.1	mg/L	10400	0.2	1	7/19/2002	8/16/2002
058024-004A	571-521-0.6	1.4	mg/L	10400	0.2	1	7/19/2002	8/16/2002
058024-008A	571-618-0.9	15	mg/L	10117	0.4	2	7/19/2002	8/7/2002
058024-010A	571-619-0	0.38	mg/L	10401	0.2	1	7/19/2002	8/16/2002
058024-011A	571-619-0.3	3.7	mg/L	10401	0.2	1	7/19/2002	8/16/2002
058024-013A	571-619-0.9	0.34	mg/L	10401	0.2	1	7/19/2002	8/16/2002
058024-014A	571-619-1.5	3.9	mg/L	10117	0.2	1	7/19/2002	8/7/2002
058024-015A	571-620-0	0.22	mg/L	10401	0.2	1	7/19/2002	8/16/2002
058024-025A	571-622-0	1.4	mg/L	10401	0.2	1	7/19/2002	8/16/2002
058024-029A	571-622-1.5	0.47	mg/L	10401	0.2	1	7/19/2002	8/16/2002
058024-037A	571-623-0.6	2.2	mg/L	10401	0.2	1	7/19/2002	8/16/2002

Qualifiers:

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- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
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Advanced Technology Laboratories

Date: 8/19/2002

LEAD BY ATOMIC ABSORPTION
EPA 1311/ 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058024
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058024-044A	571-624-1.5	1.2	mg/L	10401	0.2	1	7/19/2002	8/16/2002
058024-050A	571-528-0	7.7	mg/L	10401	0.2	1	7/19/2002	8/16/2002
058024-051A	571-528-0.3	0.77	mg/L	10401	0.2	1	7/19/2002	8/16/2002
058024-054A	571-528-1.5	7.3	mg/L	10402	0.2	1	7/19/2002	8/16/2002

Qualifiers:

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- J - Analyte detected below quantitation limits
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- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: *19-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-521-0
Lab Order:	058024		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/19/2002 3:10:00 PM
Lab ID:	058024-002A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	(EPA 3050M)			**EPA 6010B**		
RunID: ICP2_020814E	QC Batch: 10251					Analyst: **RQ**
Lead	2000	5.0		mg/Kg	1	8/14/2002
Lead	370	5.0		mg/Kg	1	7/26/2002

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: *19-Aug-02*

CLIENT: Ninyo & Moore
Work Order: 058024
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10117

Sample ID: **MB-10117**	SampType: **mblk**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020807G**
Client ID: **ZZZZZ**	Batch ID: **10117**	TestNo: **EPA 1311/ 74 (EPA 3010A)**		Analysis Date: **8/7/2002**	SeqNo: **314974**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-10099-TCLP**	SampType: **mblk**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020807G**
Client ID: **ZZZZZ**	Batch ID: **10117**	TestNo: **EPA 1311/ 74 (EPA 3010A)**		Analysis Date: **8/7/2002**	SeqNo: **314975**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **LCS-10117**	SampType: **lcs**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020807G**
Client ID: **ZZZZZ**	Batch ID: **10117**	TestNo: **EPA 1311/ 74 (EPA 3010A)**		Analysis Date: **8/7/2002**	SeqNo: **314987**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.191	0.20	1	0	119	80	120	0	0		

Sample ID: **058052-033AMS**	SampType: **MS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020807G**
Client ID: **ZZZZZ**	Batch ID: **10117**	TestNo: **EPA 1311/ 74 (EPA 3010A)**		Analysis Date: **8/7/2002**	SeqNo: **314985**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	14	0.40	2.5	12.85	45.8	80	120	0	0		S

Sample ID: **058052-033ADUP**	SampType: **DUP**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020807G**
Client ID: **ZZZZZ**	Batch ID: **10117**	TestNo: **EPA 1311/ 74 (EPA 3010A)**		Analysis Date: **8/7/2002**	SeqNo: **314984**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	11.8	0.40	0	0	0	0	0	12.85	8.54	30	

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; S - Spike/Surrogate outside limits due to matrix interference; B - Analyte detected in the associated Method Blank; **Calculations are based on raw values**; DO - Surrogate diluted out; H - Sample exceeded holding time

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10132

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID: **MB-10132** SampType: **mblk** TestCode: **7420_DI** Units: **mg/L** Prep Date: **8/9/2002** Run ID: **AA2_020809L**											
Client ID: **ZZZZZ** Batch ID: **10132** TestNo: **WET DI/ EPA (WET)** Analysis Date: **8/9/2002** SeqNo: **316367**											
Lead	ND	0.20									
Sample ID: **MB-10132A** SampType: **mblk** TestCode: **7420_DI** Units: **mg/L** Prep Date: **8/6/2002** Run ID: **AA2_020809L**											
Client ID: **ZZZZZ** Batch ID: **10132** TestNo: **WET DI/ EPA (WET)** Analysis Date: **8/9/2002** SeqNo: **316368**											
Lead	ND	0.20									
Sample ID: **MB-10132B** SampType: **mblk** TestCode: **7420_DI** Units: **mg/L** Prep Date: **8/6/2002** Run ID: **AA2_020809L**											
Client ID: **ZZZZZ** Batch ID: **10132** TestNo: **WET DI/ EPA (WET)** Analysis Date: **8/9/2002** SeqNo: **316381**											
Lead	ND	0.20									
Sample ID: **LCS-10132** SampType: **lcs** TestCode: **7420_DI** Units: **mg/L** Prep Date: **8/9/2002** Run ID: **AA2_020809L**											
Client ID: **ZZZZZ** Batch ID: **10132** TestNo: **WET DI/ EPA (WET)** Analysis Date: **8/9/2002** SeqNo: **316395**											
Lead	7.532	0.20	7.5	0	100	80	120	0	0		
Sample ID: **058024-024AMS** SampType: **MS** TestCode: **7420_DI** Units: **mg/L** Prep Date: **8/9/2002** Run ID: **AA2_020809L**											
Client ID: **571-621-1.5** Batch ID: **10132** TestNo: **WET DI/ EPA (WET)** Analysis Date: **8/9/2002** SeqNo: **316380**											
Lead	5.157	0.20	5	0.07144	102	80	120	0	0		

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10132

Sample ID: 058024-055AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809L
Client ID: 571-714-0	Batch ID: 10132	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316393

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.338	0.20	5	0	107	80	120	0	0		

Sample ID: 058024-024ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809L
Client ID: 571-621-1.5	Batch ID: 10132	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316379

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.09281	0.20	0	0	0	0	0	0.07144	0	30	J

Sample ID: 058024-055ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809L
Client ID: 571-714-0	Batch ID: 10132	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316392

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.1325	0.20	0	0	0	0	0	0	0	30	J

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10170

Sample ID: MB-10170	SampType: mblk	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812E
Client ID: ZZZZZ	Batch ID: 10170	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317175

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-10170	SampType: lcs	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812E
Client ID: ZZZZZ	Batch ID: 10170	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317174

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.901	0.10	2.08	0	91.4	80	120	0	0		

Sample ID: 058024-043AMS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812E
Client ID: 571-624-0.9	Batch ID: 10170	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317172

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.949	0.10	0.83	0.114	101	62	146	0	0		

Sample ID: 058024-043AMSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812E
Client ID: 571-624-0.9	Batch ID: 10170	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317173

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.032	0.10	0.83	0.114	111	62	146	0.949	8.40	33	

Sample ID: 058024-043ADUP	SampType: DUP	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812E
Client ID: 571-624-0.9	Batch ID: 10170	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317171

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0945	0.10	0	0	0	0	0	0.114	0	30	J

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Calculations are based on raw values
DO - Surrogate diluted out
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ANALYTICAL QC SUMMARY REPORT

BatchID: 10216

Sample ID: MB-10216	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316679

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.1421	0.25									
Arsenic	0.02648	0.25									
Barium	ND	0.15									
Beryllium	0.001215	0.15									
Cadmium	ND	0.15									
Chromium	ND	0.15									
Cobalt	0.005172	0.15									
Copper	ND	0.15									
Molybdenum	0.07367	0.25									
Nickel	0.006489	0.15									
Selenium	0.05497	0.25									
Silver	ND	0.15									
Thallium	0.08897	0.25									
Vanadium	ND	0.15									
Zinc	0.09435	0.50									

Sample ID: LCS-10216	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316678

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	47.1	0.25	50	0	94.2	80	120	0	0		
Arsenic	48.94	0.25	50	0	97.9	80	120	0	0		
Barium	50.36	0.15	50	0	101	80	120	0	0		
Beryllium	49.18	0.15	50	0	98.4	80	120	0	0		
Cadmium	49.21	0.15	50	0	98.4	80	120	0	0		
Chromium	50.53	0.15	50	0	101	80	120	0	0		
Cobalt	49.32	0.15	50	0	98.6	80	120	0	0		
Copper	48.56	0.15	50	0	97.1	80	120	0	0		
Molybdenum	48.4	0.25	50	0	96.8	80	120	0	0		
Nickel	48.24	0.15	50	0	96.5	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; S - Spike/Surrogate outside limits due to matrix interference; B - Analyte detected in the associated Method Blank; DO - Surrogate diluted out; H - Sample exceeded holding time

Calculations are based on raw values

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Work Order: 058024
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10216

Sample ID: LCS-10216	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316678

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	48.39	0.25	50	0	96.8	80	120	0	0		
Silver	49.09	0.15	50	0	98.2	80	120	0	0		
Thallium	46.69	0.25	50	0	93.4	80	120	0	0		
Vanadium	51.57	0.15	50	0	103	80	120	0	0		
Zinc	48.29	0.50	50	0	96.6	80	120	0	0		

Sample ID: 058024-021AMS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: 571-621-0.3	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316675

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	87.49	2.5	125	3.022	67.6	32	115	0	0		
Arsenic	113.3	2.5	125	3.538	87.8	59	111	0	0		
Barium	273.4	1.5	125	206.8	53.3	34	151	0	0		
Beryllium	122.1	1.5	125	0	97.7	56	112	0	0		
Cadmium	122	1.5	125	1.887	96.1	52	120	0	0		
Chromium	173.6	1.5	125	56.58	93.6	56	118	0	0		
Cobalt	136	1.5	125	13.36	98.1	58	117	0	0		
Copper	146.7	1.5	125	26.64	96	58	134	0	0		
Molybdenum	129.5	2.5	125	12.67	93.4	56	115	0	0		
Nickel	150.6	1.5	125	36.53	91.2	52	120	0	0		
Selenium	124.2	2.5	125	7.453	93.4	46	108	0	0		
Silver	122.3	1.5	125	0	97.8	74	117	0	0		
Thallium	109.5	2.5	125	0	87.6	62	117	0	0		
Vanadium	211.6	1.5	125	99.05	90	55	122	0	0		
Zinc	178	5.0	125	78.94	79.2	43	134	0	0		

Sample ID: 058024-021AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: 571-621-0.3	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316676

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; S - Spike/Surrogate outside limits due to matrix interference; B - Analyte detected in the associated Method Blank; **Calculations are based on raw values**; DO - Surrogate diluted out; H - Sample exceeded holding time

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10216

Sample ID: 058024-021AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: 571-621-0.3	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316676

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	79.83	2.5	125	3.022	61.4	32	115	87.49	9.16	20	
Arsenic	112.3	2.5	125	3.538	87	59	111	113.3	0.912	20	
Barium	258.1	1.5	125	206.8	41	34	151	273.4	5.78	20	
Beryllium	121.5	1.5	125	0	97.2	56	112	122.1	0.487	20	
Cadmium	120.9	1.5	125	1.887	95.2	52	120	122	0.906	20	
Chromium	176.9	1.5	125	56.58	96.3	56	118	173.6	1.87	20	
Cobalt	130.7	1.5	125	13.36	93.9	58	117	136	3.98	20	
Copper	147.1	1.5	125	26.64	96.4	58	134	146.7	0.314	20	
Molybdenum	129.1	2.5	125	12.67	93.2	56	115	129.5	0.274	20	
Nickel	150	1.5	125	36.53	90.8	52	120	150.6	0.398	20	
Selenium	120	2.5	125	7.453	90	46	108	124.2	3.40	20	
Silver	121.1	1.5	125	0	96.9	74	117	122.3	0.932	20	
Thallium	106	2.5	125	0	84.8	62	117	109.5	3.26	20	
Vanadium	218.2	1.5	125	99.05	95.4	55	122	211.6	3.09	20	
Zinc	182.3	5.0	125	78.94	82.7	43	134	178	2.42	20	

Sample ID: 058024-021ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: 571-621-0.3	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316674

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.47	2.5	0	0	0	0	0	3.022	0	30	J
Arsenic	2.484	2.5	0	0	0	0	0	3.538	0	30	J
Barium	152.8	1.5	0	0	0	0	0	206.8	30.1	30	R
Beryllium	ND	1.5	0	0	0	0	0	0	0	30	
Cadmium	1.783	1.5	0	0	0	0	0	1.887	5.68	30	
Chromium	47.99	1.5	0	0	0	0	0	56.58	16.4	30	
Cobalt	29.58	1.5	0	0	0	0	0	13.36	75.5	30	R
Copper	22.16	1.5	0	0	0	0	0	26.64	18.3	30	
Molybdenum	12.63	2.5	0	0	0	0	0	12.67	0.355	30	
Nickel	41.2	1.5	0	0	0	0	0	36.53	12.0	30	

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CLIENT: Ninyo & Moore
Work Order: 058024
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10216

Sample ID: 058024-021ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: 571-621-0.3	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316674

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	3.983	2.5	0	0	0	0	0	7.453	60.7	30	R
Silver	ND	1.5	0	0	0	0	0	0	0	30	
Thallium	ND	2.5	0	0	0	0	0	0	0	30	
Vanadium	82.39	1.5	0	0	0	0	0	99.05	18.4	30	
Zinc	65.24	5.0	0	0	0	0	0	78.94	19.0	30	

Qualifiers:
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CLIENT: Ninyo & Moore
Work Order: 058024
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10217

Sample ID: MB-10217	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316694

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.1157	0.25									J
Arsenic	0.1253	0.25									J
Barium	ND	0.15									
Beryllium	ND	0.15									
Cadmium	ND	0.15									
Chromium	ND	0.15									
Cobalt	0.005306	0.15									J
Copper	ND	0.15									
Molybdenum	0.0418	0.25									J
Nickel	0.006927	0.15									J
Selenium	0.25	0.25									
Silver	ND	0.15									
Thallium	0.009899	0.25									J
Vanadium	ND	0.15									
Zinc	0.05919	0.50									J

Sample ID: LCS-10217	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316693

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	46.11	0.25	50	0	92.2	80	120	0	0		
Arsenic	48.06	0.25	50	0	96.1	80	120	0	0		
Barium	49.52	0.15	50	0	99	80	120	0	0		
Beryllium	48.49	0.15	50	0	97	80	120	0	0		
Cadmium	48.5	0.15	50	0	97	80	120	0	0		
Chromium	51.07	0.15	50	0	102	80	120	0	0		
Cobalt	48.39	0.15	50	0	96.8	80	120	0	0		
Copper	48.14	0.15	50	0	96.3	80	120	0	0		
Molybdenum	47.41	0.25	50	0	94.8	80	120	0	0		
Nickel	47.63	0.15	50	0	95.3	80	120	0	0		

Qualifiers:
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058024
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10217

Sample ID: LCS-10217	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316693

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	48	0.25	50	0	96	80	120	0	0		
Silver	48.18	0.15	50	0	96.4	80	120	0	0		
Thallium	46.17	0.25	50	0	92.3	80	120	0	0		
Vanadium	50.62	0.15	50	0	101	80	120	0	0		
Zinc	49.52	0.50	50	0	99	80	120	0	0		

Sample ID: 058052-009AMS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316690

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	114.4	2.5	125	1.865	90	32	115	0	0		
Arsenic	129.3	2.5	125	2.067	102	59	111	0	0		
Barium	182.1	1.5	125	64.66	94	34	151	0	0		
Beryllium	130.9	1.5	125	0	105	56	112	0	0		
Cadmium	130.1	1.5	125	0.08258	104	52	120	0	0		
Chromium	136.6	1.5	125	10.36	101	56	118	0	0		
Cobalt	135.5	1.5	125	7.263	103	58	117	0	0		
Copper	137.5	1.5	125	14.64	98.3	58	134	0	0		
Molybdenum	124.1	2.5	125	0.4373	99	56	115	0	0		
Nickel	133.3	1.5	125	7.975	100	52	120	0	0		
Selenium	141.8	2.5	125	5.567	109	46	108	0	0		S
Silver	125.3	1.5	125	0	100	74	117	0	0		
Thallium	119	2.5	125	0	95.2	62	117	0	0		
Vanadium	150.6	1.5	125	25.65	99.9	55	122	0	0		
Zinc	160.1	5.0	125	37.03	98.4	43	134	0	0		

Sample ID: 058052-009AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316691

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10217

Sample ID: 058052-009AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316691

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	113.5	2.5	125	1.865	89.3	32	115	114.4	0.784	20	
Arsenic	128.4	2.5	125	2.067	101	59	111	129.3	0.735	20	
Barium	185.3	1.5	125	64.66	96.5	34	151	182.1	1.72	20	
Beryllium	127	1.5	125	0	102	56	112	130.9	3.05	20	
Cadmium	128.6	1.5	125	0.08258	103	52	120	130.1	1.17	20	
Chromium	135.2	1.5	125	10.36	99.9	56	118	136.6	1.04	20	
Cobalt	135.1	1.5	125	7.263	102	58	117	135.5	0.312	20	
Copper	133.5	1.5	125	14.64	95.1	58	134	137.5	2.89	20	
Molybdenum	123.3	2.5	125	0.4373	98.3	56	115	124.1	0.703	20	
Nickel	132.9	1.5	125	7.975	99.9	52	120	133.3	0.270	20	
Selenium	136.8	2.5	125	5.567	105	46	108	141.8	3.54	20	
Silver	122.7	1.5	125	0	98.1	74	117	125.3	2.09	20	
Thallium	118.1	2.5	125	0	94.4	62	117	119	0.780	20	
Vanadium	150.9	1.5	125	25.65	100	55	122	150.6	0.202	20	
Zinc	159.9	5.0	125	37.03	98.3	43	134	160.1	0.0866	20	

Sample ID: 058052-009ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316689

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.303	2.5	0	0	0	0	0	1.865	0	30	J
Arsenic	2.171	2.5	0	0	0	0	0	2.067	0	30	J
Barium	64.44	1.5	0	0	0	0	0	64.66	0.343	30	
Beryllium	ND	1.5	0	0	0	0	0	0	0	30	
Cadmium	0.09582	1.5	0	0	0	0	0	0.08258	0	30	J
Chromium	10.09	1.5	0	0	0	0	0	10.36	2.65	30	
Cobalt	6.643	1.5	0	0	0	0	0	7.263	8.92	30	
Copper	11.99	1.5	0	0	0	0	0	14.64	19.9	30	
Molybdenum	0.4112	2.5	0	0	0	0	0	0.4373	0	30	J
Nickel	7.392	1.5	0	0	0	0	0	7.975	7.59	30	

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Work Order: 058024
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10217

Sample ID: 058052-009ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316689

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	9.413	2.5	0	0	0	0	0	5.567	51.3	30	R
Silver	ND	1.5	0	0	0	0	0	0	0	30	
Thallium	ND	2.5	0	0	0	0	0	0	0	30	
Vanadium	25.22	1.5	0	0	0	0	0	25.65	1.68	30	
Zinc	35.35	5.0	0	0	0	0	0	37.03	4.62	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10251

Sample ID: MB-10251	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: ICP2_020814E
Client ID: ZZZZZ	Batch ID: 10251	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 8/14/2002	SeqNo: 318640

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-10251	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: ICP2_020814E
Client ID: ZZZZZ	Batch ID: 10251	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 8/14/2002	SeqNo: 318641

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	246	5.0	250	0	98.4	80	120	0	0		

Sample ID: 058066-007AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: ICP2_020814E
Client ID: ZZZZZ	Batch ID: 10251	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 8/14/2002	SeqNo: 318650

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	262.5	5.0	250	379	-46.6	47	128	0	0		S

Sample ID: 058066-007ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: ICP2_020814E
Client ID: ZZZZZ	Batch ID: 10251	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 8/14/2002	SeqNo: 318649

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	55.5	5.0	0	0	0	0	0	379	149	30	R

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10400

Sample ID: MB-10400	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816C
Client ID: ZZZZZ	Batch ID: 10400	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319824

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10379-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816C
Client ID: ZZZZZ	Batch ID: 10400	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319825

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0		

Sample ID: LCS-10400	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816C
Client ID: ZZZZZ	Batch ID: 10400	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319839

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.169	0.20	1	0	117	80	120	0	0		

Sample ID: 058024-004AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816C
Client ID: 571-521-0.6	Batch ID: 10400	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319837

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.633	0.20	2.5	1.42	129	80	120	0	0		S

Sample ID: 058024-004ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816C
Client ID: 571-521-0.6	Batch ID: 10400	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319836

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.47	0.20	0	0	0	0	0	1.42	3.45	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10401

Sample ID: MB-10401	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816D
Client ID: ZZZZZ	Batch ID: 10401	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319840

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.0817	0.20									

Sample ID: MB-10380-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816D
Client ID: ZZZZZ	Batch ID: 10401	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319841

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.08485	0.20									

Sample ID: LCS-10401	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816D
Client ID: ZZZZZ	Batch ID: 10401	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319855

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.142	0.20	1	0	114	80	120	0	0		

Sample ID: 058024-051AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816D
Client ID: 571-528-0.3	Batch ID: 10401	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319853

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.078	0.20	2.5	0.7669	92.4	80	120	0	0		

Sample ID: 058024-051ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816D
Client ID: 571-528-0.3	Batch ID: 10401	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319852

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.042	0.20	0	0	0	0	0	0.7669	30.4	30	R

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10402

Sample ID: MB-10402	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816E
Client ID: ZZZZZ	Batch ID: 10402	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319856

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.08955	0.20									

Sample ID: MB-10381-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816E
Client ID: ZZZZZ	Batch ID: 10402	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319857

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.09094	0.20									

Sample ID: LCS-10402	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816E
Client ID: ZZZZZ	Batch ID: 10402	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319871

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.077	0.20	1	0	108	80	120	0	0		

Sample ID: 058068-026AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816E
Client ID: ZZZZZ	Batch ID: 10402	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319869

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.742	0.20	2.5	6.212	61.2	80	120	0	0		S

Sample ID: 058068-026ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816E
Client ID: ZZZZZ	Batch ID: 10402	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319868

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.071	0.20	0	0	0	0	0	6.212	2.29	30	

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9817

Sample ID: MB-9817A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726E
Client ID: ZZZZZ	Batch ID: 9817	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307016

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9817B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726E
Client ID: ZZZZZ	Batch ID: 9817	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307017

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9817	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726E
Client ID: ZZZZZ	Batch ID: 9817	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307015

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	266.2	5.0	250	0	106	80	120	0	0		

Sample ID: 058024-007AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726E
Client ID: 571-618-0.6	Batch ID: 9817	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307001

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	157.2	5.0	250	1.8	62.2	47	128	0	0		

Sample ID: 058024-017AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726E
Client ID: 571-620-0.6	Batch ID: 9817	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307013

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	197.3	5.0	250	6.52	76.3	47	128	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
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CLIENT: Ninyo & Moore
Work Order: 058024
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9817

Sample ID: 058024-007ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726E
Client ID: 571-618-0.6	Batch ID: 9817	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307000

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.682	5.0	0	0	0	0	0	1.8	104	30	R

Sample ID: 058024-017ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726E
Client ID: 571-620-0.6	Batch ID: 9817	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307012

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.848	5.0	0	0	0	0	0	6.52	30.3	30	R

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Calculations are based on raw values
DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 058024
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9818

Sample ID: MB-9818A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP2_020726A
Client ID: ZZZZZ	Batch ID: 9818	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307021

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9818B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP2_020726A
Client ID: ZZZZZ	Batch ID: 9818	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307035

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9818	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP2_020726A
Client ID: ZZZZZ	Batch ID: 9818	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307022

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	257.5	5.0	250	0	103	80	120	0	0		

Sample ID: 058024-027AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP2_020726A
Client ID: 571-622-0.6	Batch ID: 9818	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307034

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	179	5.0	250	2	70.8	47	128	0	0		

Sample ID: 058024-037AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP2_020726A
Client ID: 571-623-0.6	Batch ID: 9818	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307048

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	333	5.0	250	186.5	58.6	47	128	0	0		

Qualifiers:
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J - Analyte detected below quantitation limits
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 058024
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9818

Sample ID: 058024-027ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP2_020726A
Client ID: 571-622-0.6	Batch ID: 9818	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307033

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.5	5.0	0	0	0	0	0	2	0	30	J

Sample ID: 058024-037ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP2_020726A
Client ID: 571-623-0.6	Batch ID: 9818	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307046

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	249	5.0	0	0	0	0	0	186.5	28.7	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
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B - Analyte detected in the associated Method Blank
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CLIENT: Ninyo & Moore
Work Order: 058024
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9829

Sample ID: MB-9829A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP2_020726B
Client ID: ZZZZZ	Batch ID: 9829	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307106

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.22	5.0									J

Sample ID: MB-9829B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP2_020726B
Client ID: ZZZZZ	Batch ID: 9829	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307120

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9829	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP2_020726B
Client ID: ZZZZZ	Batch ID: 9829	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307107

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	262.5	5.0	250	0	105	80	120	0	0		

Sample ID: 058024-047AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP2_020726B
Client ID: 571-627-0.6	Batch ID: 9829	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307119

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	119.5	5.0	250	10.5	43.6	47	128	0	0		S

Sample ID: 058024-057AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP2_020726B
Client ID: 571-714-0.6	Batch ID: 9829	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307132

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	181.5	5.0	250	2	71.8	47	128	0	0		

Qualifiers:
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J - Analyte detected below quantitation limits
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 058024
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9829

Sample ID: 058024-047ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP2_020726B
Client ID: 571-627-0.6	Batch ID: 9829	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307118

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.5	5.0	0	0	0	0	0	10.5	33.3	30	R

Sample ID: 058024-057ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP2_020726B
Client ID: 571-714-0.6	Batch ID: 9829	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307131

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3	5.0	0	0	0	0	0	2	0	30	J

Qualifiers:
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ANALYTICAL QC SUMMARY REPORT

BatchID: 9830

Sample ID: MB-9830A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726F
Client ID: ZZZZZ	Batch ID: 9830	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307298

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.3345	5.0									

Sample ID: MB-9830B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726F
Client ID: ZZZZZ	Batch ID: 9830	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307299

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.4305	5.0									

Sample ID: LCS-9830	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726F
Client ID: ZZZZZ	Batch ID: 9830	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307297

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	258.1	5.0	250	0	103	80	120	0	0		

Sample ID: 058049-010AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726F
Client ID: ZZZZZ	Batch ID: 9830	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307283

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	204.2	5.0	250	2.955	80.5	47	128	0	0		

Sample ID: 058049-020AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726F
Client ID: ZZZZZ	Batch ID: 9830	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307295

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	223.5	5.0	250	12.25	84.5	47	128	0	0		

Qualifiers:
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ANALYTICAL QC SUMMARY REPORT

BatchID: 9830

Sample ID: 058049-010ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726F
Client ID: ZZZZZ	Batch ID: 9830	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307282

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.84	5.0	0	0	0	0	0	2.955	0	30	J

Sample ID: 058049-020ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726F
Client ID: ZZZZZ	Batch ID: 9830	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307294

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	19.6	5.0	0	0	0	0	0	12.25	46.1	30	R

Qualifiers:
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ANALYTICAL QC SUMMARY REPORT

BatchID: 9860

Sample ID: MB-9860	SampType: MBLK	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/25/2002	Run ID: ICP2_020725D
Client ID: ZZZZZ	Batch ID: 9860	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/25/2002	SeqNo: 306194

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050									

Sample ID: LCS-9860	SampType: LCS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/25/2002	Run ID: ICP2_020725D
Client ID: ZZZZZ	Batch ID: 9860	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/25/2002	SeqNo: 306195

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.99	0.0050	1	0	99	80	120	0	0		

Sample ID: 058024-001AMS	SampType: MS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/25/2002	Run ID: ICP2_020725D
Client ID: EB-27	Batch ID: 9860	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/25/2002	SeqNo: 306203

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.21	0.0050	2.5	0.00942	88	66	118	0	0		

Sample ID: 058024-001ADUP	SampType: DUP	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/25/2002	Run ID: ICP2_020725D
Client ID: EB-27	Batch ID: 9860	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/25/2002	SeqNo: 306202

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.01	0.0050	0	0	0	0	0	0.00942	5.97	30	

Qualifiers:
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ANALYTICAL QC SUMMARY REPORT

BatchID: 9940

Sample ID: MB-9940	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802C
Client ID: ZZZZZ	Batch ID: 9940	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311887

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9940A	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802C
Client ID: ZZZZZ	Batch ID: 9940	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311888

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.04727	0.20									

Sample ID: MB-9940B	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802C
Client ID: ZZZZZ	Batch ID: 9940	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311901

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.07302	0.20									

Sample ID: LCS-9940	SampType: lcs	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802C
Client ID: ZZZZZ	Batch ID: 9940	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311915

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.567	0.20	7.5	0	101	80	120	0	0		

Sample ID: 058024-011AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802C
Client ID: 571-619-0.3	Batch ID: 9940	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311900

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	77.27	2.0	50	24.48	106	80	120	0	0		

Qualifiers:
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DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9940

Sample ID: 058024-040AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802C
Client ID: 571-624-0	Batch ID: 9940	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311913

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	30.43	0.80	20	11.46	94.8	80	120	0	0		

Sample ID: 058024-011ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802C
Client ID: 571-619-0.3	Batch ID: 9940	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311899

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	30.6	0.80	0	0	0	0	0	24.48	22.2	30	

Sample ID: 058024-040ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802C
Client ID: 571-624-0	Batch ID: 9940	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311912

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.075	0.40	0	0	0	0	0	11.46	34.6	30	R

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058024
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9941

Sample ID: **MB-9941** SampType: **MBLK** TestCode: **6010_ST** Units: **mg/L** Prep Date: **7/29/2002** Run ID: **ICP2_020731H**
Client ID: **ZZZZZ** Batch ID: **9941** TestNo: **WET/ EPA 60 (WET)** Analysis Date: **7/31/2002** SeqNo: **310409**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0	0.10									
Chromium	0	0.10									
Lead	0	0.10									
Nickel	0	0.10									

Sample ID: **LCS-9941** SampType: **LCS** TestCode: **6010_ST** Units: **mg/L** Prep Date: **7/29/2002** Run ID: **ICP2_020731H**
Client ID: **ZZZZZ** Batch ID: **9941** TestNo: **WET/ EPA 60 (WET)** Analysis Date: **7/31/2002** SeqNo: **310410**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	0.98	0.10	1	0	98	80	120	0	0		
Chromium	1.01	0.10	1	0	101	80	120	0	0		
Lead	0.98	0.10	1	0	98	80	120	0	0		
Nickel	0.95	0.10	1	0	95	80	120	0	0		

Sample ID: **058115-001AMS** SampType: **MS** TestCode: **6010_ST** Units: **mg/L** Prep Date: **7/29/2002** Run ID: **ICP2_020731H**
Client ID: **ZZZZZ** Batch ID: **9941** TestNo: **WET/ EPA 60 (WET)** Analysis Date: **7/31/2002** SeqNo: **310412**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	21.6	1.0	25	0	86.4	63	123	0	0		
Chromium	22.7	1.0	25	0.4	89.2	68	118	0	0		
Lead	20.8	1.0	25	0.2	82.4	66	118	0	0		
Nickel	21.2	1.0	25	0.3	83.6	64	121	0	0		

Sample ID: **058115-001AMSD** SampType: **MSD** TestCode: **6010_ST** Units: **mg/L** Prep Date: **7/29/2002** Run ID: **ICP2_020731H**
Client ID: **ZZZZZ** Batch ID: **9941** TestNo: **WET/ EPA 60 (WET)** Analysis Date: **7/31/2002** SeqNo: **310413**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	21.8	1.0	25	0	87.2	63	123	21.6	0.922	20	
Chromium	22.7	1.0	25	0.4	89.2	68	118	22.7	0	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
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CLIENT: Ninyo & Moore
Work Order: 058024
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9941

Sample ID: 058115-001AMSD	SampType: MSD	TestCode: 6010_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: ICP2_020731H
Client ID: ZZZZZ	Batch ID: 9941	TestNo: WET/ EPA 60 (WET)		Analysis Date: 7/31/2002	SeqNo: 310413

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	20.9	1.0	25	0.2	82.8	66	118	20.8	0.480	20	
Nickel	21.2	1.0	25	0.3	83.6	64	121	21.2	0	20	

Sample ID: MB-9941	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802D
Client ID: ZZZZZ	Batch ID: 9941	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311916

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9941A	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802D
Client ID: ZZZZZ	Batch ID: 9941	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311917

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9941	SampType: lcs	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802D
Client ID: ZZZZZ	Batch ID: 9941	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311931

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.406	0.20	7.5	0	98.7	80	120	0	0		

Sample ID: 058024-058AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802D
Client ID: 571-714-0.9	Batch ID: 9941	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311929

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.821	0.20	5	0.8388	99.6	80	120	0	0		

Qualifiers:
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J - Analyte detected below quantitation limits
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
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CLIENT: Ninyo & Moore
Work Order: 058024
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9941

Sample ID: 058024-058ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802D
Client ID: 571-714-0.9	Batch ID: 9941	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311928

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.143	0.20	0	0	0	0	0	0.8388	30.7	30	R

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058024
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: R19800

Sample ID: 058024-051ADUP	SampType: DUP	TestCode: 9045_S	Units: pH Units	Prep Date: 7/25/2002	Run ID: WETCHEM_020725C
Client ID: 571-528-0.3	Batch ID: R19800	TestNo: EPA 9045C		Analysis Date: 7/25/2002	SeqNo: 306559

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	8.9	0.10	0	0	0	0	0	8.96	0.672	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Rachelle

From: Steve Reese [sreese@ninyoandmoore.com]
Sent: Wednesday, July 31, 2002 9:27 AM
To: 'rachelle@atlglobal.com'
Cc: David Shaler (E-mail); Ruth Cheung (E-mail)
Subject: TCLP Analysis

TCLP.xls

Rachelle,
Attached please find a list of samples to be run for the TCLP analysis. Currently, we selected all of the samples that are greater than 1,000 mg/kg
of TTLC results. However, they will be ran by instruction only. There may
be more samples chosen for TCLP analysis in the future, but please run these 82 samples for now. Please call with any questions.
Thank you, Steve

Stephen S. Reese
Senior Staff Environmental Scientist
Ninyo & Moore Geotechnical & Environmental Sciences Consultants
475 Goddard, Suite 200
Irvine, California 92618
Tel: (949) 753-7070
Fax: (949) 753-7071
Email: sreese@ninyoandmoore.com
www.ninyoandmoore.com

RUN FOR TCLP ANALYSIS			
33	20	29	82
569-101-0	570-101-0	571-104-0	
569-102-0	570-101-0.6	571-120-0	
569-102-0.3	570-102-0.6	571-310-0.9	
569-102-0.9	570-103-1.5	571-317-0	
569-111-0	570-114-0.6	571-320-0	
569-112-0	570-115-0	571-325-0.6	
569-112-0.6	570-119-0.3	571-507-0	
569-201-0	570-201-0	571-511-0	
569-212-0	570-214-0	571-514-0	
569-301-0	570-311-0.6	571-524-0	
569-303-0.9	570-312-0.6	571-710-0	
569-314-0	570-504-0	571-710-0.3	
569-401-0	570-508-0	571-711-0	
569-404-0.6	570-517-0	571-711-0.3	
569-405-0.6	570-517-0.3	571-712-0	
569-408-0.9	570-610-0.6	571-712-0.3	
569-502-0.6	570-615-0	571-201-0.6	
569-516-0	570-706-0	571-405-0	
569-603-0.3	570-709-0	571-406-0	
569-607-0	570-808-0.6	571-407-0	
569-607-0.3		571-414-0	
569-609-0		571-609-0	
569-609-0.3		571-611-0	
569-703-0		571-616-0	
569-703-0.9		571-617-0	
569-705-0		571-619-1.5	
569-705-0.3		571-814-0.3	
569-706-0		571-818-0.6	
569-708-0		571-819-0	
569-710-0			
569-711-0			
569-711-0.3			
569-801-0.3			

Rachelle

From: Steve Reese [sreese@ninyoandmoore.com]
Sent: Wednesday, July 31, 2002 3:04 PM
To: Rachelle@Advanced Labs (E-mail)
Cc: David Shaler (E-mail); Ruth Cheung (E-mail)
Subject: More TCLP Analyses

TCLP-2.xls

Rachelle,
Attached please find a list of 8 more TCLP analyses. Thanks, Steve

Stephen S. Reese
Senior Staff Environmental Scientist
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Email: sreese@ninyoandmoore.com
www.ninyoandmoore.com

RUN FOR TCLP ANALYSIS			
1	5	2	8
569-805-0.3	570-113-0.3	571-214-0.3	
	570-712-0.6	571-618-0.9	
	570-208-0		
	570-804-0		
	570-812-0.3		

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Tuesday, August 06, 2002 3:46 PM
To: 'Rachelle'; 'David Shaler (E-mail)'
Subject: Title 22 Metals

Title 22 Metals.xls

Rachelle,
Please run the following samples for Title 22 Metals. Please do not list
Pb in your emailed results. There should be a total of 120 samples to be
run.
Thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

569-102-0.9	570-101-0	571-101-0.9
569-112-0	570-101-0.6	571-104-0
569-201-0	570-201-0	571-201-0.6
569-206-0.6	570-205-0.9	571-108-1.5
569-106-1.5	570-106-0.3	571-111-0.3
569-212-0	570-208-1.5	571-207-0
569-401-0.6	570-111-0.6	571-210-0.6
569-301-0	570-214-0	571-115-0.9
569-303-0.9	570-115-0.3	571-214-0.3
569-404-0.6	570-119-0.9	571-120-0
569-408-0.9	570-224-0.6	571-217-1.5
569-314-0	570-401-0	571-220-0.6
569-313-0.3	570-401-0.3	571-301-0.3
569-502-0.6	570-304-1.5	571-405-0
569-602-1.5	570-307-0.9	571-306-0.9
569-607-0.3	570-311-0.6	571-407-0
569-607-0	570-312-0.6	571-310-0.9
569-508-0.9	570-316-0.3	571-315-0.3
569-511-0.6	570-601-0	571-412-1.5
569-612-1.5	570-505-1.5	571-317-0
569-516-0	570-508-0	571-320-0.6
569-801-0.3	570-610-0.6	571-416-0.9
569-519-0.6	570-511-0.9	571-325-0.3
569-803-0.9	570-615-0	571-421-1.5
569-705-0	570-514-0.3	571-425-0
569-806-1.5	570-517-0	571-501-0.6
569-708-0.3	570-618-0.6	571-503-0.9
569-711-0	570-621-1.5	571-603-0.3
569-811-0	570-703-0.9	571-507-0
	570-804-0	571-609-0
	570-706-0	571-510-1.5
	570-709-0	571-611-0
	570-808-0.6	571-514-0
	570-711-1.5	571-614-0.3
	570-812-0.3	571-517-0.9
		571-617-0.6
		571-520-1.5
		571-621-0.3
		571-524-0
		571-624-0.9
		571-529-0.3
		571-628-0.6
		571-703-1.5
		571-707-0
		571-804-0.9
		571-809-0.3
		571-711-0
		571-712-0
		571-814-0.3
		571-818-0.6
		571-819-0
		571-827-1.5

571-832-0.9
571-836-0.3
571-837-0.6
571-842-0

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Thursday, August 08, 2002 9:14 AM
To: 'Rachelle'
Subject: TCLP Analysis

TCLP-3.xls

In addition to the 90 TCLP already run please run the following samples for
TCLP. There should be a list of 350 samples.
Thanks for a the hard work and timely results.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

-----Original Message-----
From: Rachelle [SMTP:Rachelle@ATLGlobal.com]
Sent: Wednesday, August 07, 2002 5:02 PM
To: 'David Shaler (E-mail)'
Cc: 'Ruth Cheung (E-mail)'
Subject: TCLP Results

<<57931TCLP.xls>> <<58001TCLP.xls>> <<58021TCLP.xls>> <<58022TCLP.xls>>
<<58023TCLP.xls>> <<58024TCLP.xls>> <<58049TCLP.xls>> <<58050TCLP.xls>>
<<58052TCLP.xls>> <<58053TCLP.xls>> <<58065TCLP.xls>> <<58066TCLP.xls>>
<<58067TCLP.xls>> <<58068TCLP.xls>> <<58069TCLP.xls>>

Rachelle Arada
Project Coordinator
www.atlglobal.com
voice: 562.989.4045 ext 237
fax : 562.989.4040

<< File: 57931TCLP.xls >> << File: 58001TCLP.xls >> << File: 58021TCLP.xls >> << File: 58022TCLP.xls >> << File: 58023TCLP.xls >> << File: 58024TCLP.xls >> << File: 58049TCLP.xls >> << File: 58050TCLP.xls >> << File: 58052TCLP.xls >> << File: 58053TCLP.xls >> << File: 58065TCLP.xls >> << File: 58066TCLP.xls >> << File: 58067TCLP.xls >> << File: 58068TCLP.xls >> << File: 58069TCLP.xls >>

569-404-0	2. STLC	170	570-515-0.3	2. STLC	120	571-521-0	2. STLC	230
569-402-0	2. STLC	130	570-811-0	2. STLC	110	571-324-0.9	2. STLC	110
569-406-0	2. STLC	120	570-114-0.0	2. STLC	110	571-818-0	2. STLC	110
569-515-0	2. STLC	110	570-504-0.6	2. STLC	100	571-819-0.6	2. STLC	110
569-611-0	2. STLC	100	570-811-1.5	2. STLC	90	571-708-0	2. STLC	110
569-409-0	2. STLC	94	570-615-0.6	2. STLC	84	571-103-0.6	2. STLC	110
569-603-0	2. STLC	93	570-305-0	2. STLC	79	571-617-0.3	2. STLC	100
569-104-0.6	2. STLC	91	570-314-0.6	2. STLC	76	571-611-0.6	2. STLC	92
569-807-0	2. STLC	86	570-505-0.6	2. STLC	75	571-712-0.9	2. STLC	81
569-608-0	2. STLC	86	570-208-0.6	2. STLC	74	571-105-0.6	2. STLC	81
569-501-0	2. STLC	84	570-116-0.0	2. STLC	73	571-313-0	2. STLC	79
569-710-0.3	2. STLC	83	570-102-0	2. STLC	65	571-508-0	2. STLC	73
569-808-0	2. STLC	83	570-804-0.6	2. STLC	64	571-518-0.3	2. STLC	73
569-609-0.6	2. STLC	80	570-704-0	2. STLC	63	571-217-0	2. STLC	68
569-803-0	2. STLC	79	570-508-0.6	2. STLC	60	571-516-0	2. STLC	66
569-105-0	2. STLC	78	570-706-0.3	2. STLC	60	571-701-0.3	2. STLC	66
569-512-0	2. STLC	77	570-303-0	2. STLC	58	571-710-0.6	2. STLC	65
569-513-0	2. STLC	77	570-311-1.5	2. STLC	58	571-512-0	2. STLC	64
569-302-0	2. STLC	74	570-117-0.0	2. STLC	58	571-308-0.9	2. STLC	61
569-805-0	2. STLC	73	570-208-0.3	2. STLC	58	571-701-0	2. STLC	61
569-517-0	2. STLC	71	570-709-0.6	2. STLC	57	571-514-0.3	2. STLC	59
569-704-0.3	2. STLC	71	570-703-0	2. STLC	55	571-415-0	2. STLC	58
569-703-0.6	2. STLC	70	570-206-0	2. STLC	54	571-616-0.6	2. STLC	57
569-514-0.3	2. STLC	70	570-301-0	2. STLC	53	571-517-0	2. STLC	56
569-803-0.3	2. STLC	69	570-603-0.3	2. STLC	46	571-112-0.9	2. STLC	56
569-409-0.6	2. STLC	69	570-711-0.6	2. STLC	46	571-214-0	2. STLC	55
569-411-0	2. STLC	68	570-206-0.3	2. STLC	45	571-415-0.3	2. STLC	55
569-102-0.6	2. STLC	68	570-103-0	2. STLC	44	571-405-0.6	2. STLC	55
569-809-0	2. STLC	65	570-602-0	2. STLC	41	571-530-0	2. STLC	55
569-605-0	2. STLC	65	570-209-0	2. STLC	40	571-831-0	2. STLC	53
569-711-0.6	2. STLC	62	570-210-0	2. STLC	40	571-709-0	2. STLC	53
569-806-0	2. STLC	60	570-117-0.3	2. STLC	39	571-103-0.0	2. STLC	52
569-802-0.3	2. STLC	60	570-103-0.6	2. STLC	37	571-312-0	2. STLC	51
569-410-0	2. STLC	59	570-110-0.6	2. STLC	37	571-526-0	2. STLC	51
569-501-0.6	2. STLC	59	570-805-0.9	2. STLC	36	571-819-1.5	2. STLC	51
569-808-0.3	2. STLC	58	570-112-1.5	2. STLC	35	571-515-0	2. STLC	50
569-104-0	2. STLC	56	570-614-0	2. STLC	34	571-833-0	2. STLC	49
569-804-0	2. STLC	54	570-713-0.3	2. STLC	33	571-815-0.6	2. STLC	47
569-610-0	2. STLC	54	570-513-0	2. STLC	32	571-517-0.3	2. STLC	46
569-606-0.3	2. STLC	53	570-312-0.3	2. STLC	31	571-610-0	2. STLC	46
569-213-0	2. STLC	49	570-503-0.6	2. STLC	31	571-413-0	2. STLC	46
569-701-0	2. STLC	47	570-510-0.6	2. STLC	31	571-815-0	2. STLC	45
569-311-0	2. STLC	47	570-202-0	2. STLC	31	571-514-0.9	2. STLC	44
569-609-0.9	2. STLC	46	570-207-0	2. STLC	31	571-505-1.5	2. STLC	44
569-513-0.3	2. STLC	45	570-209-0.3	2. STLC	31	571-528-0	2. STLC	44
569-801-0.6	2. STLC	44	570-703-0.3	2. STLC	30	571-610-0.6	2. STLC	43
569-514-0	2. STLC	42	570-401-0	2. STLC	30	571-629-0	2. STLC	43
569-805-0.6	2. STLC	42	570-610-0.9	2. STLC	29	571-604-0	2. STLC	42
569-406-1.5	2. STLC	42	570-809-0.6	2. STLC	29	571-213-0	2. STLC	41
569-807-0.3	2. STLC	40	570-509-0.9	2. STLC	29	571-812-0	2. STLC	41
569-204-0	2. STLC	40	570-210-0.6	2. STLC	29	571-706-0	2. STLC	41
569-517-0.3	2. STLC	36	570-211-0	2. STLC	29	571-530-0.6	2. STLC	41
569-518-0	2. STLC	36	570-603-0	2. STLC	28	571-305-0	2. STLC	40
569-806-0.3	2. STLC	36	570-119-0	2. STLC	28	571-523-0.3	2. STLC	39
569-705-1.5	2. STLC	35	570-713-0.6	2. STLC	28	571-510-0	2. STLC	39
569-303-0.6	2. STLC	34	570-108-0	2. STLC	27	571-305-0.9	2. STLC	39
569-516-0.3	2. STLC	33	570-708-0.6	2. STLC	27	571-618-1.5	2. STLC	39
569-705-0.6	2. STLC	33	570-224-0	2. STLC	26	571-703-0	2. STLC	38
569-802-0	2. STLC	33	570-601-0	2. STLC	26	571-520-0.3	2. STLC	36
569-515-0.6	2. STLC	32	570-710-0.6	2. STLC	26	571-216-0	2. STLC	34
569-704-0	2. STLC	32	570-614-0.6	2. STLC	26	571-827-0	2. STLC	34
569-401-0.3	2. STLC	32	570-118-0.3	2. STLC	26	571-708-0.3	2. STLC	34
569-207-0	2. STLC	32	570-304-0	2. STLC	25	571-514-0.6	2. STLC	33
569-608-0.6	2. STLC	31	570-707-0.6	2. STLC	25	571-528-1.5	2. STLC	33
569-104-0.3	2. STLC	31	570-510-0	2. STLC	25	571-803-0	2. STLC	33
569-201-0.6	2. STLC	30	570-110-0	2. STLC	24	571-414-0.3	2. STLC	33
569-515-0.3	2. STLC	28	570-223-0	2. STLC	24	571-813-0.3	2. STLC	32
569-212-0.6	2. STLC	28	570-117-0.6	2. STLC	24	571-523-0	2. STLC	31
569-103-0	2. STLC	28	570-516-0	2. STLC	23	571-326-0	2. STLC	31
569-313-0	2. STLC	27	570-704-0.3	2. STLC	22	571-502-0.6	2. STLC	31
569-103-0.3	2. STLC	26	570-513-0.6	2. STLC	22	571-624-1.5	2. STLC	31
569-705-0.9	2. STLC	25	570-221-0.0	2. STLC	22	571-330-0	2. STLC	31
569-707-0.3	2. STLC	25	570-617-0	2. STLC	21	571-512-0.3	2. STLC	30
569-515-1.5	2. STLC	24	570-214-0.3	2. STLC	21	571-521-0.6	2. STLC	29
569-508-0	2. STLC	24	570-122-0.9	2. STLC	20	571-706-0.3	2. STLC	29
569-801-0	2. STLC	24	570-313-0.6	2. STLC	19	571-814-0.6	2. STLC	28
569-402-0.6	2. STLC	24	570-207-0.6	2. STLC	19	571-616-1.5	2. STLC	28
569-516-0.6	2. STLC	22	570-120-0.9	2. STLC	18	571-835-0	2. STLC	28
569-509-0.3	2. STLC	22	570-506-0	2. STLC	18	571-811-0.3	2. STLC	28
569-106-0	2. STLC	22	570-102-0.9	2. STLC	17	571-101-0.6	2. STLC	28
569-106-0.3	2. STLC	22	570-216-0	2. STLC	17	571-112-0	2. STLC	28
569-202-0	2. STLC	21	570-225-0	2. STLC	17	571-315-0	2. STLC	27
569-805-1.5	2. STLC	21	570-304-0.3	2. STLC	17	571-622-0	2. STLC	27
569-205-0	2. STLC	20	570-409-0	2. STLC	17	571-607-0.6	2. STLC	27
569-707-0	2. STLC	19	570-713-0	2. STLC	17	571-609-0.6	2. STLC	27

569-709-0	2. STLC	19
569-202-0.3	2. STLC	19
569-602-0	2. STLC	19
569-207-0.3	2. STLC	19
569-706-0.3	2. STLC	17
569-807-0.9	2. STLC	17
569-104-0.9	2. STLC	17
569-505-0.6	2. STLC	17
569-704-0.6	2. STLC	16
569-808-0.6	2. STLC	16
569-212-0.3	2. STLC	16
569-612-0	2. STLC	16
569-704-1.5	2. STLC	15
569-411-0.3	2. STLC	15
569-113-0	2. STLC	15
569-807-0.6	2. STLC	14
569-311-0.3	2. STLC	12
569-312-0	2. STLC	10
569-311-0.9	2. STLC	8.3

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570-401-0.3	2. STLC	17
570-616-0.6	2. STLC	17
570-308-0	2. STLC	16
570-807-0.9	2. STLC	16
570-701-0.6	2. STLC	16
570-617-0.3	2. STLC	16
570-107-0.6	2. STLC	15
570-811-0.6	2. STLC	15
570-707-0	2. STLC	15
570-518-0	2. STLC	15
570-111-0.0	2. STLC	15
570-109-0.6	2. STLC	14
570-401-0.9	2. STLC	4.1
570-408-0	2. STLC	4
570-409-0.3	2. STLC	3
570-401-0.6		0
570-401-1.5		0
570-408-0.6		0
570-408-1.5		0

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571-837-0.3	2. STLC	27
571-520-0	2. STLC	26
571-516-0.3	2. STLC	26
571-420-0	2. STLC	26
571-102-0.6	2. STLC	26
571-517-1.5	2. STLC	25
571-513-0.6	2. STLC	25
571-623-0.6	2. STLC	25
571-112-0.3	2. STLC	25
571-326-0.6	2. STLC	24
571-619-0.3	2. STLC	24
571-619-0.9	2. STLC	24
571-528-0.3	2. STLC	24
571-706-0.6	2. STLC	24
571-112-0.6	2. STLC	24
571-327-0.6	2. STLC	23
571-817-0	2. STLC	23
571-425-0.6	2. STLC	22
571-118-0	2. STLC	22
571-829-0	2. STLC	22
571-828-0	2. STLC	22
571-122-0	2. STLC	21
571-101-1.5	2. STLC	21
571-530-0.3	2. STLC	21
571-406-0.6	2. STLC	20
571-517-0.6	2. STLC	20
571-835-0.3	2. STLC	20
571-501-0	2. STLC	20
571-518-0.9	2. STLC	19
571-510-0.3	2. STLC	19
571-814-0.9	2. STLC	19
571-522-0.6	2. STLC	19
571-522-1.5	2. STLC	19
571-812-0.6	2. STLC	19
571-701-0.6	2. STLC	19
571-704-0	2. STLC	19
571-711-0.6	2. STLC	19
571-212-0	2. STLC	18
571-839-0.6	2. STLC	18
571-610-1.5	2. STLC	18
571-709-0.3	2. STLC	18
571-311-0.6	2. STLC	17
571-620-0	2. STLC	17
571-109-0	2. STLC	17
571-704-0.3	2. STLC	17
571-207-1.5	2. STLC	16
571-203-0	2. STLC	16
571-616-0.3	2. STLC	16
571-317-0.3	2. STLC	16
571-629-0.3	2. STLC	16
571-416-0	2. STLC	15
571-419-0	2. STLC	15
571-526-0.3	2. STLC	15
571-619-0	2. STLC	15
571-606-0	2. STLC	15
571-115-0.6	2. STLC	14
571-202-0.9	2. STLC	11

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tblTEMP

WorkOrder	ClientSampID	TestNo	Analyte	PQL	DF	CollectionDate	AnalDate	PrepDate
058024	571-521-0	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/16/2002	8/15/2002
058024	571-521-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-521-0	EPA 6010B	Lead	5	1	7/19/2002	8/14/2002	8/13/2002
058024	571-521-0	EPA 9045C	pH	0.1	1	7/19/2002	7/25/2002	7/25/2002
058024	571-521-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058024	571-521-0	WET/ EPA 7420	Lead	8	40	7/19/2002	8/2/2002	7/29/2002
058024	571-521-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-521-0.6	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/16/2002	8/15/2002
058024	571-521-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-521-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058024	571-521-0.6	WET/ EPA 7420	Lead	0.8	4	7/19/2002	8/2/2002	7/29/2002
058024	571-528-0	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/16/2002	8/15/2002
058024	571-528-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/24/2002
058024	571-528-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058024	571-528-0	WET/ EPA 7420	Lead	2	10	7/19/2002	8/2/2002	7/29/2002
058024	571-528-0.3	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/16/2002	8/15/2002
058024	571-528-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/24/2002
058024	571-528-0.3	EPA 9045C	pH	0.1	1	7/19/2002	7/25/2002	7/25/2002
058024	571-528-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058024	571-528-0.3	WET/ EPA 7420	Lead	0.8	4	7/19/2002	8/2/2002	7/29/2002
058024	571-528-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/24/2002
058024	571-528-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/24/2002
058024	571-528-0.9	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058024	571-528-0.9	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058024	571-528-1.5	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/16/2002	8/15/2002
058024	571-528-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/24/2002
058024	571-528-1.5	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058024	571-528-1.5	WET/ EPA 7420	Lead	0.8	4	7/19/2002	8/2/2002	7/29/2002
058024	571-618-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-618-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-618-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-618-0.9	EPA 1311/ 7420	Lead	0.4	2	7/19/2002	8/7/2002	8/6/2002
058024	571-618-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-618-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-619-0	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/16/2002	8/15/2002

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058024	571-619-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-619-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058024	571-619-0	WET/ EPA 7420	Lead	0.4	2	7/19/2002	8/2/2002	7/29/2002
058024	571-619-0.3	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/16/2002	8/15/2002
058024	571-619-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-619-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058024	571-619-0.3	WET/ EPA 7420	Lead	0.8	4	7/19/2002	8/2/2002	7/29/2002
058024	571-619-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-619-0.6	EPA 9045C	pH	0.1	1	7/19/2002	7/25/2002	7/25/2002
058024	571-619-0.6	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058024	571-619-0.9	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/16/2002	8/15/2002
058024	571-619-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-619-0.9	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058024	571-619-0.9	WET/ EPA 7420	Lead	0.8	4	7/19/2002	8/2/2002	7/29/2002
058024	571-619-1.5	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/7/2002	8/6/2002
058024	571-619-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-620-0	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/16/2002	8/15/2002
058024	571-620-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-620-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058024	571-620-0	WET/ EPA 7420	Lead	0.4	2	7/19/2002	8/2/2002	7/29/2002
058024	571-620-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-620-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-620-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-620-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-621-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-621-0	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058024	571-621-0.3	EPA 6010B	Antimony	2.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-621-0.3	EPA 6010B	Arsenic	2.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-621-0.3	EPA 6010B	Barium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-621-0.3	EPA 6010B	Beryllium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-621-0.3	EPA 6010B	Cadmium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-621-0.3	EPA 6010B	Chromium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-621-0.3	EPA 6010B	Cobalt	1.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-621-0.3	EPA 6010B	Copper	1.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-621-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-621-0.3	EPA 6010B	Molybdenum	2.5	10	7/19/2002	8/10/2002	8/9/2002

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058024	571-621-0.3	EPA 6010B	Nickel	1.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-621-0.3	EPA 6010B	Selenium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-621-0.3	EPA 6010B	Silver	1.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-621-0.3	EPA 6010B	Thallium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-621-0.3	EPA 6010B	Vanadium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-621-0.3	EPA 6010B	Zinc	5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-621-0.3	EPA 7471A	Mercury	0.1	1	7/19/2002	8/12/2002	8/7/2002
058024	571-621-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-621-0.6	EPA 9045C	pH	0.1	1	7/19/2002	7/25/2002	7/25/2002
058024	571-621-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-621-0.9	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058024	571-621-0.9	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058024	571-621-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-621-1.5	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058024	571-621-1.5	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058024	571-622-0	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/16/2002	8/15/2002
058024	571-622-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-622-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058024	571-622-0	WET/ EPA 7420	Lead	0.8	4	7/19/2002	8/2/2002	7/29/2002
058024	571-622-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-622-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-622-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-622-1.5	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/16/2002	8/15/2002
058024	571-622-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-622-1.5	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058024	571-622-1.5	WET/ EPA 7420	Lead	0.4	2	7/19/2002	8/2/2002	7/29/2002
058024	571-623-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-623-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-623-0.6	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/16/2002	8/15/2002
058024	571-623-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-623-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058024	571-623-0.6	WET/ EPA 7420	Lead	0.8	4	7/19/2002	8/2/2002	7/29/2002
058024	571-623-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/24/2002
058024	571-623-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/24/2002
058024	571-624-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/24/2002
058024	571-624-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002

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058024	571-624-0	WET/ EPA 7420	Lead	0.4	2	7/19/2002	8/2/2002	7/29/2002
058024	571-624-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/24/2002
058024	571-624-0.3	EPA 9045C	pH	0.1	1	7/19/2002	7/25/2002	7/25/2002
058024	571-624-0.3	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058024	571-624-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/24/2002
058024	571-624-0.9	EPA 6010B	Antimony	2.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-624-0.9	EPA 6010B	Arsenic	2.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-624-0.9	EPA 6010B	Barium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-624-0.9	EPA 6010B	Beryllium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-624-0.9	EPA 6010B	Cadmium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-624-0.9	EPA 6010B	Chromium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-624-0.9	EPA 6010B	Cobalt	1.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-624-0.9	EPA 6010B	Copper	1.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-624-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/24/2002
058024	571-624-0.9	EPA 6010B	Molybdenum	2.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-624-0.9	EPA 6010B	Nickel	1.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-624-0.9	EPA 6010B	Selenium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-624-0.9	EPA 6010B	Silver	1.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-624-0.9	EPA 6010B	Thallium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-624-0.9	EPA 6010B	Vanadium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-624-0.9	EPA 6010B	Zinc	5	10	7/19/2002	8/10/2002	8/9/2002
058024	571-624-0.9	EPA 7471A	Mercury	0.1	1	7/19/2002	8/12/2002	8/7/2002
058024	571-624-1.5	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/16/2002	8/15/2002
058024	571-624-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/24/2002
058024	571-624-1.5	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058024	571-624-1.5	WET/ EPA 7420	Lead	0.8	4	7/19/2002	8/2/2002	7/29/2002
058024	571-625-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-625-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-625-0.3	EPA 9045C	pH	0.1	1	7/19/2002	7/25/2002	7/25/2002
058024	571-625-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-625-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-625-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058024	571-627-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/24/2002
058024	571-627-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/24/2002
058024	571-627-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/24/2002
058024	571-627-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/24/2002

058024	571-627-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/24/2002
058024	571-714-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/24/2002
058024	571-714-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058024	571-714-0	WET/ EPA 7420	Lead	0.4	2	7/19/2002	8/2/2002	7/29/2002
058024	571-714-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/24/2002
058024	571-714-0.3	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058024	571-714-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/24/2002
058024	571-714-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/24/2002
058024	571-714-0.9	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058024	EB-27	EPA 6010B	Lead	0.005	1	7/19/2002	7/25/2002	7/25/2002

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August 19, 2002

David Shaler
Ninyo & Moore
475 Goddard Suite 200
Irvine, CA 92618
TEL: (949) 753-7070
FAX: (949) 753-7071

RE: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

Attention: David Shaler

ELAP No.: 1838
NELAP No.: 02107CA
Workorder No.: 058021

Enclosed are the results for sample(s) received on July 19, 2002 by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

for

Eddie F. Rodriguez
Laboratory Director

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NINYO & MOORE
ORANGE COUNTY OFFICE

This cover letter is an integral part of this analytical report.

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) 7-19-02

Received by: (name/date/time) 7-19-02 3:20p

Relinquished by: (name/date/time) 7-19-02 6:40p

Received by: (name/date/time) 7-19-02 6:40p

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB-24	7/19/02	3:30	P	X	
	571-313-0	7/19/02	9:03	B	X	X
	571-313-0.3		9:08		X	
	571-313-0.6		9:12		X	
	571-313-0.9		9:17		X	
	571-313-1.5		9:25		X	
	571-317-0		9:00		X	
	571-317-0.3		9:03		X	
	571-317-0.6		9:06		X	
	571-317-0.9		9:09		X	
	571-316-0		9:20		X	X
	571-316-0.3		9:23		X	
	571-316-0.6		9:26		X	
	571-316-0.9		9:30		X	
	571-805-0		10:03		X	
	571-805-0.3		10:05		X	
	571-805-0.6		10:07		X	
	571-805-0.9		10:10		X	
	571-805-1.5		10:13		X	
	571-807-0		10:11		X	
	571-807-0.3		10:15		X	X
	571-807-0.6		10:22		X	
	571-807-0.9		10:27		X	
	571-807-1.5		10:36		X	
	571-808-0		10:29		X	
	571-808-0.3		10:31		X	
	571-808-0.6		10:33		X	
	571-808-0.9		10:34		X	
	571-808-1.5		10:37		X	
	571-829-0		11:00		X	
	571-829-0.3		11:06		X	X
	571-831-0		11:20		X	
	571-831-0.3		11:24		X	
	571-831-0.6		11:27		X	
	571-833-0		11:50		X	
	571-833-0.3		11:53		X	
	571-833-0.6		11:57		X	
	571-837-0		1:15		X	
	571-837-0.3		1:18		X	
	571-835-0		1:11		X	
	571-835-0.3		1:15		X	X
	571-835-0.6		1:19		X	
	571-835-0.9		1:24		X	
	571-840-0		1:30		X	
	571-840-0.3		1:33		X	
	571-840-0.6		1:36		X	
	571-828-0		1:58		X	
	571-828-0.3		2:05		X	
	571-828-0.6		2:01		X	
	571-830-0		2:10		X	
	571-830-0.3		2:13		X	X
	571-830-0.6		2:18		X	
	571-827-0		2:15		X	
	571-827-0.3		2:19		X	
	571-827-0.6		2:24		X	
	571-712-0		12:07		X	
	571-712-0.3		12:11		X	
	571-712-0.6		12:16		X	
	571-712-0.9		12:20		X	
	571-				X	

Total # of samples: 59

Advanced Technology Laboratories

Date: *26-Jul-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	EB-24
Lab Order:	058021		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/19/2002 3:30:00 PM
Lab ID:	058021-001A	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	(EPA 3010A)			**EPA 6010B**		
RunID: ICP2_020725E	QC Batch: 9864					Analyst: **RQ**
Lead	ND	0.0050		mg/L	1	7/25/2002

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike/Surrogate outside of limits due to matrix interfere
	J - Analyte detected below quantitation limits	H - Sample exceeded analytical holding time
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	DO - Surrogate Diluted Out	Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/26/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058021
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058021-002A	571-313-0	610	mg/Kg	9809	5	1	7/19/2002	7/25/2002
058021-003A	571-313-0.3	45	mg/Kg	9809	5	1	7/19/2002	7/25/2002
058021-004A	571-313-0.6	75	mg/Kg	9809	5	1	7/19/2002	7/25/2002
058021-005A	571-313-0.9	69	mg/Kg	9809	5	1	7/19/2002	7/25/2002
058021-006A	571-313-1.5	83	mg/Kg	9809	5	1	7/19/2002	7/25/2002
058021-007A	571-317-0	1200	mg/Kg	9809	5	1	7/19/2002	7/25/2002
058021-008A	571-317-0.3	220	mg/Kg	9809	5	1	7/19/2002	7/25/2002
058021-009A	571-317-0.6	120	mg/Kg	9809	5	1	7/19/2002	7/25/2002
058021-010A	571-317-0.9	18	mg/Kg	9809	5	1	7/19/2002	7/25/2002
058021-011A	571-316-0	120	mg/Kg	9809	5	1	7/19/2002	7/25/2002
058021-012A	571-316-0.3	99	mg/Kg	9809	5	1	7/19/2002	7/25/2002

Qualifiers:

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- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interfere
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- E - Value above quantitation range
- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/26/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058021
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058021-013A	571-316-0.6	57	mg/Kg	9810	5	1	7/19/2002	7/25/2002
058021-014A	571-316-0.9	39	mg/Kg	9810	5	1	7/19/2002	7/25/2002
058021-015A	571-805-0	34	mg/Kg	9810	5	1	7/19/2002	7/25/2002
058021-016A	571-805-0.3	5.0	mg/Kg	9810	5	1	7/19/2002	7/25/2002
058021-017A	571-805-0.6	ND	mg/Kg	9810	5	1	7/19/2002	7/25/2002
058021-018A	571-805-0.9	ND	mg/Kg	9810	5	1	7/19/2002	7/25/2002
058021-019A	571-805-1.5	5.0	mg/Kg	9810	5	1	7/19/2002	7/25/2002
058021-020A	571-807-0	20	mg/Kg	9810	5	1	7/19/2002	7/25/2002
058021-021A	571-807-0.3	20	mg/Kg	9810	5	1	7/19/2002	7/25/2002
058021-022A	571-807-0.6	8.5	mg/Kg	9810	5	1	7/19/2002	7/25/2002
058021-023A	571-807-0.9	5.0	mg/Kg	9810	5	1	7/19/2002	7/25/2002

Qualifiers:

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Results are wet unless otherwise specified

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Date: 7/26/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058021
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058021-024A	571-807-1.5	ND	mg/Kg	9810	5	1	7/19/2002	7/25/2002
058021-025A	571-808-0	22	mg/Kg	9810	5	1	7/19/2002	7/25/2002
058021-026A	571-808-0.3	10	mg/Kg	9810	5	1	7/19/2002	7/25/2002
058021-027A	571-808-0.6	ND	mg/Kg	9810	5	1	7/19/2002	7/25/2002
058021-028A	571-808-0.9	5.1	mg/Kg	9810	5	1	7/19/2002	7/25/2002
058021-029A	571-808-1.5	5.5	mg/Kg	9810	5	1	7/19/2002	7/25/2002
058021-030A	571-829-0	330	mg/Kg	9810	5	1	7/19/2002	7/25/2002
058021-031A	571-829-0.3	13	mg/Kg	9810	5	1	7/19/2002	7/25/2002
058021-032A	571-831-0	720	mg/Kg	9810	5	1	7/19/2002	7/25/2002
058021-033A	571-831-0.3	75	mg/Kg	9811	5	1	7/19/2002	7/25/2002
058021-034A	571-831-0.6	120	mg/Kg	9811	5	1	7/19/2002	7/25/2002

Qualifiers:

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Results are wet unless otherwise specified

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Date: 7/26/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058021
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058021-035A	571-833-0	480	mg/Kg	9811	5	1	7/19/2002	7/25/2002
058021-036A	571-833-0.3	120	mg/Kg	9811	5	1	7/19/2002	7/25/2002
058021-037A	571-833-0.6	80	mg/Kg	9811	5	1	7/19/2002	7/25/2002
058021-038A	571-837-0	110	mg/Kg	9811	5	1	7/19/2002	7/25/2002
058021-039A	571-837-0.3	250	mg/Kg	9811	5	1	7/19/2002	7/25/2002
058021-040A	571-835-0	620	mg/Kg	9811	5	1	7/19/2002	7/25/2002
058021-041A	571-835-0.3	240	mg/Kg	9811	5	1	7/19/2002	7/25/2002
058021-042A	571-835-0.6	29	mg/Kg	9811	5	1	7/19/2002	7/25/2002
058021-043A	571-835-0.9	230	mg/Kg	9811	5	1	7/19/2002	7/25/2002
058021-044A	571-840-0	8.5	mg/Kg	9811	5	1	7/19/2002	7/25/2002
058021-045A	571-840-0.3	5.2	mg/Kg	9811	5	1	7/19/2002	7/25/2002

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Advanced Technology Laboratories

Date: 7/26/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058021
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058021-046A	571-840-0.6	6.6	mg/Kg	9811	5	1	7/19/2002	7/25/2002
058021-047A	571-828-0	250	mg/Kg	9811	5	1	7/19/2002	7/25/2002
058021-048A	571-828-0.3	170	mg/Kg	9811	5	1	7/19/2002	7/25/2002
058021-049A	571-828-0.6	220	mg/Kg	9811	5	1	7/19/2002	7/25/2002
058021-050A	571-830-0	83	mg/Kg	9811	5	1	7/19/2002	7/25/2002
058021-051A	571-830-0.3	38	mg/Kg	9811	5	1	7/19/2002	7/25/2002
058021-052A	571-830-0.6	20	mg/Kg	9811	5	1	7/19/2002	7/25/2002
058021-053A	571-827-0	640	mg/Kg	9812	5	1	7/19/2002	7/25/2002
058021-054A	571-827-0.3	200	mg/Kg	9812	5	1	7/19/2002	7/25/2002
058021-055A	571-827-0.6	110	mg/Kg	9812	5	1	7/19/2002	7/25/2002
058021-056A	571-712-0	2800	mg/Kg	9812	5	1	7/19/2002	7/25/2002

Qualifiers:

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Date: 7/26/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058021
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058021-057A	571-712-0.3	1300	mg/Kg	9812	5	1	7/19/2002	7/25/2002
058021-058A	571-712-0.6	250	mg/Kg	9812	5	1	7/19/2002	7/25/2002
058021-059A	571-712-0.9	770	mg/Kg	9812	5	1	7/19/2002	7/25/2002

Qualifiers:

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- S - Spike/Surrogate outside of limits due to matrix interfere
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
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Date: 7/26/2002

pH
EPA 9045C

CLIENT:	Ninyo & Moore	**Lab Order:**	058021
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058021-002A	571-313-0	8.09	pH Units	R19798	0.1	1	7/19/2002	7/25/2002
058021-011A	571-316-0	7.54	pH Units	R19798	0.1	1	7/19/2002	7/25/2002
058021-021A	571-807-0.3	8.07	pH Units	R19798	0.1	1	7/19/2002	7/25/2002
058021-031A	571-829-0.3	8.96	pH Units	R19798	0.1	1	7/19/2002	7/25/2002
058021-041A	571-835-0.3	7.77	pH Units	R19803	0.1	1	7/19/2002	7/25/2002
058021-051A	571-830-0.3	7.22	pH Units	R19803	0.1	1	7/19/2002	7/25/2002

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Date: 8/2/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058021
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058021-002A	571-313-0	79	mg/L	9936	3.2	16	7/19/2002	8/1/2002
058021-004A	571-313-0.6	3.5	mg/L	9936	0.2	1	7/19/2002	8/1/2002
058021-005A	571-313-0.9	4.7	mg/L	9936	0.2	1	7/19/2002	8/1/2002
058021-006A	571-313-1.5	5.2	mg/L	9936	0.2	1	7/19/2002	8/1/2002
058021-008A	571-317-0.3	16	mg/L	9936	0.4	2	7/19/2002	8/1/2002
058021-009A	571-317-0.6	6.5	mg/L	9936	0.2	1	7/19/2002	8/1/2002
058021-011A	571-316-0	7.2	mg/L	9936	0.2	1	7/19/2002	8/1/2002
058021-012A	571-316-0.3	5.2	mg/L	9937	0.2	1	7/19/2002	8/1/2002
058021-013A	571-316-0.6	3.2	mg/L	9937	0.2	1	7/19/2002	8/1/2002
058021-030A	571-829-0	22	mg/L	9937	0.8	4	7/19/2002	8/1/2002
058021-032A	571-831-0	53	mg/L	9937	1.6	8	7/19/2002	8/1/2002

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Date: 8/2/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058021
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058021-033A	571-831-0.3	2.5	mg/L	9937	0.2	1	7/19/2002	8/1/2002
058021-034A	571-831-0.6	5.3	mg/L	9937	0.2	1	7/19/2002	8/1/2002
058021-035A	571-833-0	49	mg/L	9937	1.6	8	7/19/2002	8/1/2002
058021-036A	571-833-0.3	13	mg/L	9937	0.4	2	7/19/2002	8/1/2002
058021-037A	571-833-0.6	8.0	mg/L	9937	0.2	1	7/19/2002	8/1/2002
058021-038A	571-837-0	6.3	mg/L	9937	0.2	1	7/19/2002	8/1/2002
058021-039A	571-837-0.3	27	mg/L	9937	0.8	4	7/19/2002	8/1/2002
058021-040A	571-835-0	28	mg/L	9937	0.8	4	7/19/2002	8/1/2002
058021-041A	571-835-0.3	20	mg/L	9937	0.8	4	7/19/2002	8/1/2002
058021-043A	571-835-0.9	12	mg/L	9937	0.4	2	7/19/2002	8/1/2002
058021-047A	571-828-0	22	mg/L	9937	0.8	4	7/19/2002	8/1/2002

Qualifiers:

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Date: 8/2/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058021
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058021-048A	571-828-0.3	8.1	mg/L	9937	0.2	1	7/19/2002	8/1/2002
058021-049A	571-828-0.6	12	mg/L	9937	0.4	2	7/19/2002	8/1/2002
058021-050A	571-830-0	3.8	mg/L	9937	0.2	1	7/19/2002	8/1/2002
058021-053A	571-827-0	34	mg/L	9937	0.8	4	7/19/2002	8/1/2002
058021-054A	571-827-0.3	11	mg/L	9937	0.4	2	7/19/2002	8/1/2002
058021-055A	571-827-0.6	7.2	mg/L	9938	0.2	1	7/19/2002	8/2/2002
058021-058A	571-712-0.6	11	mg/L	9938	0.4	2	7/19/2002	8/2/2002
058021-059A	571-712-0.9	81	mg/L	9938	2	10	7/19/2002	8/2/2002

Qualifiers:

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Date: 8/12/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058021
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058021-002A	571-313-0	ND	mg/L	10129	0.2	1	7/19/2002	8/9/2002
058021-006A	571-313-1.5	ND	mg/L	10129	0.2	1	7/19/2002	8/9/2002
058021-008A	571-317-0.3	ND	mg/L	10129	0.2	1	7/19/2002	8/9/2002
058021-009A	571-317-0.6	0.71	mg/L	10129	0.2	1	7/19/2002	8/9/2002
058021-011A	571-316-0	ND	mg/L	10129	0.2	1	7/19/2002	8/9/2002
058021-012A	571-316-0.3	ND	mg/L	10129	0.2	1	7/19/2002	8/9/2002
058021-030A	571-829-0	0.24	mg/L	10129	0.2	1	7/19/2002	8/9/2002
058021-032A	571-831-0	ND	mg/L	10129	0.2	1	7/19/2002	8/9/2002
058021-034A	571-831-0.6	ND	mg/L	10129	0.2	1	7/19/2002	8/9/2002
058021-035A	571-833-0	ND	mg/L	10129	0.2	1	7/19/2002	8/9/2002
058021-036A	571-833-0.3	ND	mg/L	10129	0.2	1	7/19/2002	8/9/2002

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Date: 8/12/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058021
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058021-037A	571-833-0.6	ND	mg/L	10129	0.2	1	7/19/2002	8/9/2002
058021-038A	571-837-0	ND	mg/L	10129	0.2	1	7/19/2002	8/9/2002
058021-039A	571-837-0.3	ND	mg/L	10129	0.2	1	7/19/2002	8/9/2002
058021-040A	571-835-0	ND	mg/L	10129	0.2	1	7/19/2002	8/9/2002
058021-041A	571-835-0.3	ND	mg/L	10130	0.2	1	7/19/2002	8/9/2002
058021-043A	571-835-0.9	ND	mg/L	10130	0.2	1	7/19/2002	8/9/2002
058021-047A	571-828-0	ND	mg/L	10130	0.2	1	7/19/2002	8/9/2002
058021-048A	571-828-0.3	ND	mg/L	10130	0.2	1	7/19/2002	8/9/2002
058021-049A	571-828-0.6	ND	mg/L	10130	0.2	1	7/19/2002	8/9/2002
058021-053A	571-827-0	ND	mg/L	10130	0.2	1	7/19/2002	8/9/2002
058021-054A	571-827-0.3	ND	mg/L	10130	0.2	1	7/19/2002	8/9/2002

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Date: 8/12/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058021
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058021-055A	571-827-0.6	ND	mg/L	10130	0.2	1	7/19/2002	8/9/2002
058021-058A	571-712-0.6	2.7	mg/L	10130	0.2	1	7/19/2002	8/9/2002
058021-059A	571-712-0.9	10	mg/L	10130	0.2	1	7/19/2002	8/9/2002

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Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-317-0
Lab Order:	058021		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/19/2002 9:00:00 AM
Lab ID:	058021-007A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810D	QC Batch: 10215					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	5.1	2.5		mg/Kg	10	8/10/2002
Barium	260	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	3.5	1.5		mg/Kg	10	8/10/2002
Chromium	36	1.5		mg/Kg	10	8/10/2002
Cobalt	11	1.5		mg/Kg	10	8/10/2002
Copper	120	1.5		mg/Kg	10	8/10/2002
Molybdenum	6.9	2.5		mg/Kg	10	8/10/2002
Nickel	34	1.5		mg/Kg	10	8/10/2002
Selenium	14	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	43	1.5		mg/Kg	10	8/10/2002
Zinc	650	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020812E	QC Batch: 10170					Analyst: **NS**
Mercury	0.14	0.10		mg/Kg	1	8/12/2002

Qualifiers:

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Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-837-0.3
Lab Order:	058021		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/19/2002 1:18:00 PM
Lab ID:	058021-039A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810E	QC Batch: 10216					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	7.4	2.5		mg/Kg	10	8/10/2002
Barium	130	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	1.9	1.5		mg/Kg	10	8/10/2002
Chromium	24	1.5		mg/Kg	10	8/10/2002
Cobalt	11	1.5		mg/Kg	10	8/10/2002
Copper	34	1.5		mg/Kg	10	8/10/2002
Molybdenum	6.3	2.5		mg/Kg	10	8/10/2002
Nickel	25	1.5		mg/Kg	10	8/10/2002
Selenium	12	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	51	1.5		mg/Kg	10	8/10/2002
Zinc	140	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020813F	QC Batch: 10207					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/13/2002

Qualifiers:

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Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-827-0.3
Lab Order:	058021		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/19/2002 2:19:00 PM
Lab ID:	058021-054A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810E	QC Batch: 10216					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	2.7	2.5		mg/Kg	10	8/10/2002
Barium	170	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	21	1.5		mg/Kg	10	8/10/2002
Cobalt	8.5	1.5		mg/Kg	10	8/10/2002
Copper	25	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	17	1.5		mg/Kg	10	8/10/2002
Selenium	7.1	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	43	1.5		mg/Kg	10	8/10/2002
Zinc	270	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020813F	QC Batch: 10207					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/13/2002

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Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-712-0
Lab Order:	058021		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/19/2002 12:07:00 PM
Lab ID:	058021-056A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810E	QC Batch: 10216					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	11	2.5		mg/Kg	10	8/10/2002
Barium	190	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	3.1	1.5		mg/Kg	10	8/10/2002
Chromium	49	1.5		mg/Kg	10	8/10/2002
Cobalt	20	1.5		mg/Kg	10	8/10/2002
Copper	65	1.5		mg/Kg	10	8/10/2002
Molybdenum	13	2.5		mg/Kg	10	8/10/2002
Nickel	44	1.5		mg/Kg	10	8/10/2002
Selenium	16	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	74	1.5		mg/Kg	10	8/10/2002
Zinc	460	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020812E	QC Batch: 10170					Analyst: **NS**
Mercury	0.14	0.10		mg/Kg	1	8/12/2002

Qualifiers:

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Advanced Technology Laboratories

Date: 8/19/2002

LEAD BY ATOMIC ABSORPTION
EPA 1311/ 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058021
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058021-002A	571-313-0	1.1	mg/L	10357	0.2	1	7/19/2002	8/15/2002
058021-007A	571-317-0	6.5	mg/L	10089	0.2	1	7/19/2002	8/6/2002
058021-008A	571-317-0.3	0.49	mg/L	10357	0.2	1	7/19/2002	8/15/2002
058021-030A	571-829-0	0.57	mg/L	10357	0.2	1	7/19/2002	8/15/2002
058021-032A	571-831-0	0.94	mg/L	10357	0.2	1	7/19/2002	8/15/2002
058021-035A	571-833-0	0.62	mg/L	10359	0.2	1	7/19/2002	8/15/2002
058021-039A	571-837-0.3	14	mg/L	10400	0.4	2	7/19/2002	8/16/2002
058021-040A	571-835-0	0.33	mg/L	10359	0.2	1	7/19/2002	8/15/2002
058021-041A	571-835-0.3	1.7	mg/L	10359	0.2	1	7/19/2002	8/15/2002
058021-047A	571-828-0	0.60	mg/L	10359	0.2	1	7/19/2002	8/15/2002
058021-053A	571-827-0	1.8	mg/L	10359	0.2	1	7/19/2002	8/15/2002

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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Date: 8/19/2002

LEAD BY ATOMIC ABSORPTION
EPA 1311/ 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058021
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058021-056A	571-712-0	7.0	mg/L	10116	0.2	1	7/19/2002	8/7/2002
058021-057A	571-712-0.3	4.9	mg/L	10116	0.2	1	7/19/2002	8/7/2002
058021-059A	571-712-0.9	4.4	mg/L	10359	0.2	1	7/19/2002	8/15/2002

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CLIENT: Ninyo & Moore
Work Order: 058021
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10089

Sample ID: MB-10089	SampType: mblk	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806J
Client ID: ZZZZZ	Batch ID: 10089	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314634

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10080-TCLP	SampType: mblk	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806J
Client ID: ZZZZZ	Batch ID: 10089	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314635

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10089	SampType: lcs	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806J
Client ID: ZZZZZ	Batch ID: 10089	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314648

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.134	0.20	1	0	113	80	120	0	0		

Sample ID: 058021-007AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806J
Client ID: 571-317-0	Batch ID: 10089	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314646

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.899	0.20	2.5	6.518	95.2	80	120	0	0		

Sample ID: 058021-007ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/5/2002	Run ID: AA2_020806J
Client ID: 571-317-0	Batch ID: 10089	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/6/2002	SeqNo: 314645

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.801	0.20	0	0	0	0	0	6.518	79.8	30	R

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CLIENT: Ninyo & Moore
Work Order: 058021
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10116

Sample ID: MB-10116	SampType: mblk	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020807F
Client ID: ZZZZZ	Batch ID: 10116	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/7/2002	SeqNo: 314960

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10098-TCLP	SampType: mblk	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020807F
Client ID: ZZZZZ	Batch ID: 10116	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/7/2002	SeqNo: 314961

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10116	SampType: lcs	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020807F
Client ID: ZZZZZ	Batch ID: 10116	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/7/2002	SeqNo: 314973

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.128	0.20	1	0	113	80	120	0	0		

Sample ID: 058023-024AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020807F
Client ID: ZZZZZ	Batch ID: 10116	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/7/2002	SeqNo: 314971

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	9.109	0.20	2.5	6.649	98.4	80	120	0	0		

Sample ID: 058023-024ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020807F
Client ID: ZZZZZ	Batch ID: 10116	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/7/2002	SeqNo: 314970

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.177	0.20	0	0	0	0	0	6.649	7.65	30	

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Calculations are based on raw values
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CLIENT: Ninyo & Moore
Work Order: 058021
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10129

Sample ID: MB-10129	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809I
Client ID: ZZZZZ	Batch ID: 10129	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316280

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10129A	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809I
Client ID: ZZZZZ	Batch ID: 10129	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316281

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10129B	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809I
Client ID: ZZZZZ	Batch ID: 10129	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316294

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10129	SampType: lcs	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809I
Client ID: ZZZZZ	Batch ID: 10129	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316308

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.514	0.20	7.5	0	100	80	120	0	0		

Sample ID: 058021-011AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809I
Client ID: 571-316-0	Batch ID: 10129	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316293

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.438	0.20	5	0.1964	105	80	120	0	0		

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10129

Sample ID: 058021-040AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809I
Client ID: 571-835-0	Batch ID: 10129	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316306

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.4	0.20	5	0.1124	106	80	120	0	0		

Sample ID: 058021-011ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809I
Client ID: 571-316-0	Batch ID: 10129	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316292

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.07935	0.20	0	0	0	0	0	0.1964	0	30	J

Sample ID: 058021-040ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809I
Client ID: 571-835-0	Batch ID: 10129	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316305

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.06612	0.20	0	0	0	0	0	0.1124	0	30	J

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10130

Sample ID: MB-10130	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809J
Client ID: ZZZZZ	Batch ID: 10130	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316309

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10130A	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809J
Client ID: ZZZZZ	Batch ID: 10130	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316310

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10130B	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809J
Client ID: ZZZZZ	Batch ID: 10130	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316323

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10130	SampType: lcs	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809J
Client ID: ZZZZZ	Batch ID: 10130	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316337

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.485	0.20	7.5	0	99.8	80	120	0	0		

Sample ID: 058021-059AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809J
Client ID: 571-712-0.9	Batch ID: 10130	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316322

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	30.4	0.80	20	10.21	101	80	120	0	0		

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CLIENT: Ninyo & Moore
Work Order: 058021
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10130

Sample ID: 058022-026AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809J
Client ID: ZZZZZ	Batch ID: 10130	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316335

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.436	0.20	5	0	109	80	120	0	0		

Sample ID: 058021-059ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809J
Client ID: 571-712-0.9	Batch ID: 10130	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316321

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.035	0.20	0	0	0	0	0	10.21	36.8	30	R

Sample ID: 058022-026ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809J
Client ID: ZZZZZ	Batch ID: 10130	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316334

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0	30	

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CLIENT: Ninyo & Moore
Work Order: 058021
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10170

Sample ID: MB-10170	SampType: mblk	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812E
Client ID: ZZZZZ	Batch ID: 10170	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317175

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-10170	SampType: lcs	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812E
Client ID: ZZZZZ	Batch ID: 10170	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317174

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.901	0.10	2.08	0	91.4	80	120	0	0		

Sample ID: 058024-043AMS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812E
Client ID: ZZZZZ	Batch ID: 10170	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317172

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.949	0.10	0.83	0.114	101	62	146	0	0		

Sample ID: 058024-043AMSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812E
Client ID: ZZZZZ	Batch ID: 10170	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317173

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.032	0.10	0.83	0.114	111	62	146	0.949	8.40	33	

Sample ID: 058024-043ADUP	SampType: DUP	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812E
Client ID: ZZZZZ	Batch ID: 10170	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317171

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0945	0.10	0	0	0	0	0	0.114	0	30	J

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CLIENT: Ninyo & Moore
Work Order: 058021
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10207

Sample ID: MB-10207	SampType: mblk	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813F
Client ID: ZZZZZ	Batch ID: 10207	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318517

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-10207	SampType: lcs	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813F
Client ID: ZZZZZ	Batch ID: 10207	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318516

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.081	0.10	2.08	0	100	80	120	0	0		

Sample ID: 058021-054AMS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813F
Client ID: 571-827-0.3	Batch ID: 10207	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318514

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9716	0.10	0.83	0.0326	113	62	146	0	0		

Sample ID: 058021-054AMSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813F
Client ID: 571-827-0.3	Batch ID: 10207	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318515

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.935	0.10	0.83	0.0326	109	62	146	0.9716	3.84	33	

Sample ID: 058021-054ADUP	SampType: DUP	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020813F
Client ID: 571-827-0.3	Batch ID: 10207	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318513

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10	0	0	0	0	0	0.0326	0	30	

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 058021
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10215

Sample ID: MB-10215	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: ZZZZZ	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316664

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.08521	0.25									
Arsenic	ND	0.25									
Barium	0.005349	0.15									
Beryllium	ND	0.15									
Cadmium	ND	0.15									
Chromium	ND	0.15									
Cobalt	0.001667	0.15									
Copper	ND	0.15									
Molybdenum	0.07279	0.25									
Nickel	ND	0.15									
Selenium	0.25	0.25									
Silver	0.01038	0.15									
Thallium	ND	0.25									
Vanadium	ND	0.15									
Zinc	0.06014	0.50									

Sample ID: LCS-10215	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: ZZZZZ	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316663

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	47.71	0.25	50	0	95.4	80	120	0	0		
Arsenic	49.61	0.25	50	0	99.2	80	120	0	0		
Barium	51.01	0.15	50	0	102	80	120	0	0		
Beryllium	49.87	0.15	50	0	99.7	80	120	0	0		
Cadmium	49.8	0.15	50	0	99.6	80	120	0	0		
Chromium	51.15	0.15	50	0	102	80	120	0	0		
Cobalt	49.91	0.15	50	0	99.8	80	120	0	0		
Copper	49.14	0.15	50	0	98.3	80	120	0	0		
Molybdenum	49.23	0.25	50	0	98.5	80	120	0	0		
Nickel	48.85	0.15	50	0	97.7	80	120	0	0		

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Work Order: 058021
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10215

Sample ID: LCS-10215	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: ZZZZZ	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316663

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	50.06	0.25	50	0	100	80	120	0	0		
Silver	49.57	0.15	50	0	99.1	80	120	0	0		
Thallium	47.49	0.25	50	0	95	80	120	0	0		
Vanadium	52.2	0.15	50	0	104	80	120	0	0		
Zinc	49.29	0.50	50	0	98.6	80	120	0	0		

Sample ID: 058021-007AMS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: 571-317-0	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316660

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	83.37	2.5	125	0	66.7	32	115	0	0		
Arsenic	123	2.5	125	5.058	94.3	59	111	0	0		
Barium	504.1	1.5	125	259.3	196	34	151	0	0		S
Beryllium	117.6	1.5	125	0	94.1	56	112	0	0		
Cadmium	124.8	1.5	125	3.507	97.1	52	120	0	0		
Chromium	168.1	1.5	125	36.03	106	56	118	0	0		
Cobalt	134.3	1.5	125	10.69	98.9	58	117	0	0		
Copper	284.3	1.5	125	116.6	134	58	134	0	0		S
Molybdenum	124.9	2.5	125	6.943	94.4	56	115	0	0		
Nickel	157.5	1.5	125	34.07	98.8	52	120	0	0		
Selenium	130	2.5	125	13.73	93	46	108	0	0		
Silver	119.4	1.5	125	0	95.5	74	117	0	0		
Thallium	105.8	2.5	125	0	84.7	62	117	0	0		
Vanadium	169.1	1.5	125	42.6	101	55	122	0	0		
Zinc	809.5	5.0	125	652	126	43	134	0	0		

Sample ID: 058021-007AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: 571-317-0	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316661

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike/Surrogate outside limits due to matrix interference; DO - Surrogate diluted out
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R - RPD outside accepted recovery limits; **Calculations are based on raw values**

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10215

Sample ID: 058021-007AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: 571-317-0	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316661

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	78.16	2.5	125	0	62.5	32	115	83.37	6.45	20	
Arsenic	120.2	2.5	125	5.058	92.1	59	111	123	2.32	20	
Barium	389.5	1.5	125	259.3	104	34	151	504.1	25.7	20	R
Beryllium	114.7	1.5	125	0	91.8	56	112	117.6	2.49	20	
Cadmium	123	1.5	125	3.507	95.6	52	120	124.8	1.46	20	
Chromium	164	1.5	125	36.03	102	56	118	168.1	2.44	20	
Cobalt	132.6	1.5	125	10.69	97.5	58	117	134.3	1.27	20	
Copper	235.9	1.5	125	116.6	95.4	58	134	284.3	18.6	20	
Molybdenum	122.9	2.5	125	6.943	92.7	56	115	124.9	1.66	20	
Nickel	165.2	1.5	125	34.07	105	52	120	157.5	4.75	20	
Selenium	132.4	2.5	125	13.73	94.9	46	108	130	1.81	20	
Silver	117	1.5	125	0	93.6	74	117	119.4	2.08	20	
Thallium	105.3	2.5	125	0	84.2	62	117	105.8	0.485	20	
Vanadium	169.3	1.5	125	42.6	101	55	122	169.1	0.117	20	
Zinc	828	5.0	125	652	141	43	134	809.5	2.26	20	S

Sample ID: 058021-007ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810D
Client ID: 571-317-0	Batch ID: 10215	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316659

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	1.159	2.5	0	0	0	0	0	0	0	30	J
Arsenic	4.62	2.5	0	0	0	0	0	5.058	9.05	30	
Barium	267	1.5	0	0	0	0	0	259.3	2.92	30	
Beryllium	ND	1.5	0	0	0	0	0	0	0	30	
Cadmium	3.474	1.5	0	0	0	0	0	3.507	0.956	30	
Chromium	37.32	1.5	0	0	0	0	0	36.03	3.51	30	
Cobalt	12.16	1.5	0	0	0	0	0	10.69	12.8	30	
Copper	119.2	1.5	0	0	0	0	0	116.6	2.18	30	
Molybdenum	8.809	2.5	0	0	0	0	0	6.943	23.7	30	
Nickel	34.96	1.5	0	0	0	0	0	34.07	2.60	30	

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10215

Sample ID: **058021-007ADUP** SampType: **DUP** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **8/9/2002** Run ID: **ICP5_020810D**
Client ID: **571-317-0** Batch ID: **10215** TestNo: **EPA 6010B** **(EPA 3050A)** Analysis Date: **8/10/2002** SeqNo: **316659**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	15.19	2.5	0	0	0	0	0	13.73	10.1	30	
Silver	ND	1.5	0	0	0	0	0	0	0	30	
Thallium	ND	2.5	0	0	0	0	0	0	0	30	
Vanadium	44.45	1.5	0	0	0	0	0	42.6	4.24	30	
Zinc	679.5	5.0	0	0	0	0	0	652	4.14	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10216

Sample ID: MB-10216	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316679

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.1421	0.25									
Arsenic	0.02648	0.25									
Barium	ND	0.15									
Beryllium	0.001215	0.15									
Cadmium	ND	0.15									
Chromium	ND	0.15									
Cobalt	0.005172	0.15									
Copper	ND	0.15									
Molybdenum	0.07367	0.25									
Nickel	0.006489	0.15									
Selenium	0.05497	0.25									
Silver	ND	0.15									
Thallium	0.08897	0.25									
Vanadium	ND	0.15									
Zinc	0.09435	0.50									

Sample ID: LCS-10216	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316678

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	47.1	0.25	50	0	94.2	80	120	0	0		
Arsenic	48.94	0.25	50	0	97.9	80	120	0	0		
Barium	50.36	0.15	50	0	101	80	120	0	0		
Beryllium	49.18	0.15	50	0	98.4	80	120	0	0		
Cadmium	49.21	0.15	50	0	98.4	80	120	0	0		
Chromium	50.53	0.15	50	0	101	80	120	0	0		
Cobalt	49.32	0.15	50	0	98.6	80	120	0	0		
Copper	48.56	0.15	50	0	97.1	80	120	0	0		
Molybdenum	48.4	0.25	50	0	96.8	80	120	0	0		
Nickel	48.24	0.15	50	0	96.5	80	120	0	0		

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10216

Sample ID: LCS-10216	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316678

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	48.39	0.25	50	0	96.8	80	120	0	0		
Silver	49.09	0.15	50	0	98.2	80	120	0	0		
Thallium	46.69	0.25	50	0	93.4	80	120	0	0		
Vanadium	51.57	0.15	50	0	103	80	120	0	0		
Zinc	48.29	0.50	50	0	96.6	80	120	0	0		

Sample ID: 058024-021AMS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316675

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	87.49	2.5	125	3.022	67.6	32	115	0	0		
Arsenic	113.3	2.5	125	3.538	87.8	59	111	0	0		
Barium	273.4	1.5	125	206.8	53.3	34	151	0	0		
Beryllium	122.1	1.5	125	0	97.7	56	112	0	0		
Cadmium	122	1.5	125	1.887	96.1	52	120	0	0		
Chromium	173.6	1.5	125	56.58	93.6	56	118	0	0		
Cobalt	136	1.5	125	13.36	98.1	58	117	0	0		
Copper	146.7	1.5	125	26.64	96	58	134	0	0		
Molybdenum	129.5	2.5	125	12.67	93.4	56	115	0	0		
Nickel	150.6	1.5	125	36.53	91.2	52	120	0	0		
Selenium	124.2	2.5	125	7.453	93.4	46	108	0	0		
Silver	122.3	1.5	125	0	97.8	74	117	0	0		
Thallium	109.5	2.5	125	0	87.6	62	117	0	0		
Vanadium	211.6	1.5	125	99.05	90	55	122	0	0		
Zinc	178	5.0	125	78.94	79.2	43	134	0	0		

Sample ID: 058024-021AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316676

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; S - Spike/Surrogate outside limits due to matrix interference; B - Analyte detected in the associated Method Blank; **Calculations are based on raw values**; DO - Surrogate diluted out; H - Sample exceeded holding time

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Work Order: 058021
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10216

Sample ID: 058024-021AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316676

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	79.83	2.5	125	3.022	61.4	32	115	87.49	9.16	20	
Arsenic	112.3	2.5	125	3.538	87	59	111	113.3	0.912	20	
Barium	258.1	1.5	125	206.8	41	34	151	273.4	5.78	20	
Beryllium	121.5	1.5	125	0	97.2	56	112	122.1	0.487	20	
Cadmium	120.9	1.5	125	1.887	95.2	52	120	122	0.906	20	
Chromium	176.9	1.5	125	56.58	96.3	56	118	173.6	1.87	20	
Cobalt	130.7	1.5	125	13.36	93.9	58	117	136	3.98	20	
Copper	147.1	1.5	125	26.64	96.4	58	134	146.7	0.314	20	
Molybdenum	129.1	2.5	125	12.67	93.2	56	115	129.5	0.274	20	
Nickel	150	1.5	125	36.53	90.8	52	120	150.6	0.398	20	
Selenium	120	2.5	125	7.453	90	46	108	124.2	3.40	20	
Silver	121.1	1.5	125	0	96.9	74	117	122.3	0.932	20	
Thallium	106	2.5	125	0	84.8	62	117	109.5	3.26	20	
Vanadium	218.2	1.5	125	99.05	95.4	55	122	211.6	3.09	20	
Zinc	182.3	5.0	125	78.94	82.7	43	134	178	2.42	20	

Sample ID: 058024-021ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316674

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.47	2.5	0	0	0	0	0	3.022	0	30	J
Arsenic	2.484	2.5	0	0	0	0	0	3.538	0	30	J
Barium	152.8	1.5	0	0	0	0	0	206.8	30.1	30	R
Beryllium	ND	1.5	0	0	0	0	0	0	0	30	
Cadmium	1.783	1.5	0	0	0	0	0	1.887	5.68	30	
Chromium	47.99	1.5	0	0	0	0	0	56.58	16.4	30	
Cobalt	29.58	1.5	0	0	0	0	0	13.36	75.5	30	R
Copper	22.16	1.5	0	0	0	0	0	26.64	18.3	30	
Molybdenum	12.63	2.5	0	0	0	0	0	12.67	0.355	30	
Nickel	41.2	1.5	0	0	0	0	0	36.53	12.0	30	

Qualifiers: ND - Not Detected at the Reporting Limit
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CLIENT: Ninyo & Moore
Work Order: 058021
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10216

Sample ID: **058024-021ADUP** SampType: **DUP** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **8/9/2002** Run ID: **ICP5_020810E**
Client ID: **ZZZZZ** Batch ID: **10216** TestNo: **EPA 6010B** **(EPA 3050A)** Analysis Date: **8/10/2002** SeqNo: **316674**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	3.983	2.5	0	0	0	0	0	7.453	60.7	30	R
Silver	ND	1.5	0	0	0	0	0	0	0	30	
Thallium	ND	2.5	0	0	0	0	0	0	0	30	
Vanadium	82.39	1.5	0	0	0	0	0	99.05	18.4	30	
Zinc	65.24	5.0	0	0	0	0	0	78.94	19.0	30	

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 058021
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10357

Sample ID: MB-10357	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814V
Client ID: ZZZZZ	Batch ID: 10357	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319016

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10271-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814V
Client ID: ZZZZZ	Batch ID: 10357	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319017

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10357	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814V
Client ID: ZZZZZ	Batch ID: 10357	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319031

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.104	0.20	1	0	110	80	120	0	0		

Sample ID: 058021-032AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814V
Client ID: 571-831-0	Batch ID: 10357	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319029

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.5	0.20	2.5	0.9359	103	80	120	0	0		

Sample ID: 058021-032ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814V
Client ID: 571-831-0	Batch ID: 10357	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319028

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.8754	0.20	0	0	0	0	0	0.9359	6.68	30	

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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10359

Sample ID: MB-10359	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814W
Client ID: ZZZZZ	Batch ID: 10359	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319032

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10272-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814W
Client ID: ZZZZZ	Batch ID: 10359	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319033

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10359	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814W
Client ID: ZZZZZ	Batch ID: 10359	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319047

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.017	0.20	1	0	102	80	120	0	0		

Sample ID: 058021-059AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814W
Client ID: 571-712-0.9	Batch ID: 10359	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319045

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.223	0.20	2.5	4.397	113	80	120	0	0		

Sample ID: 058021-059ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814W
Client ID: 571-712-0.9	Batch ID: 10359	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/15/2002	SeqNo: 319044

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.234	0.20	0	0	0	0	0	4.397	17.4	30	

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; S - Spike/Surrogate outside limits due to matrix interference; B - Analyte detected in the associated Method Blank; **Calculations are based on raw values**; DO - Surrogate diluted out; H - Sample exceeded holding time

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10400

Sample ID: MB-10400	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816C
Client ID: ZZZZZ	Batch ID: 10400	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319824

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10379-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816C
Client ID: ZZZZZ	Batch ID: 10400	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319825

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0		

Sample ID: LCS-10400	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816C
Client ID: ZZZZZ	Batch ID: 10400	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319839

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.169	0.20	1	0	117	80	120	0	0		

Sample ID: 058024-004AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816C
Client ID: ZZZZZ	Batch ID: 10400	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319837

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.633	0.20	2.5	1.42	129	80	120	0	0		S

Sample ID: 058024-004ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/15/2002	Run ID: AA2_020816C
Client ID: ZZZZZ	Batch ID: 10400	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/16/2002	SeqNo: 319836

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.47	0.20	0	0	0	0	0	1.42	3.45	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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ANALYTICAL QC SUMMARY REPORT

BatchID: 9809

Sample ID: MB-9809A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725F
Client ID: ZZZZZ	Batch ID: 9809	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306401

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9809B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725F
Client ID: ZZZZZ	Batch ID: 9809	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306402

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9809	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725F
Client ID: ZZZZZ	Batch ID: 9809	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306400

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	212.3	5.0	250	0	84.9	80	120	0	0		

Sample ID: 058021-002AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725F
Client ID: 571-313-0	Batch ID: 9809	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306386

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	779	5.0	250	611.2	67.1	47	128	0	0		

Sample ID: 058021-012AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725F
Client ID: 571-316-0.3	Batch ID: 9809	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306398

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	330.2	5.0	250	98.8	92.6	47	128	0	0		

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9809

Sample ID: 058021-002ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725F
Client ID: 571-313-0	Batch ID: 9809	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306385

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	611.4	5.0	0	0	0	0	0	611.2	0.0367	30	

Sample ID: 058021-012ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725F
Client ID: 571-316-0.3	Batch ID: 9809	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306397

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	131.1	5.0	0	0	0	0	0	98.8	28.1	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9810

Sample ID: MB-9810A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725G
Client ID: ZZZZZ	Batch ID: 9810	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306429

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9810B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725G
Client ID: ZZZZZ	Batch ID: 9810	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306430

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.3125	5.0									J

Sample ID: LCS-9810	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725G
Client ID: ZZZZZ	Batch ID: 9810	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306428

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	227.3	5.0	250	0	90.9	80	120	0	0		

Sample ID: 058021-022AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725G
Client ID: 571-807-0.6	Batch ID: 9810	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306414

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	201.8	5.0	250	8.506	77.3	47	128	0	0		

Sample ID: 058021-032AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725G
Client ID: 571-831-0	Batch ID: 9810	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306426

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1002	5.0	250	722.3	112	47	128	0	0		

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9810

Sample ID: 058021-022ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725G
Client ID: 571-807-0.6	Batch ID: 9810	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306413

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.09	5.0	0	0	0	0	0	8.506	50.2	30	R

Sample ID: 058021-032ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725G
Client ID: 571-831-0	Batch ID: 9810	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306425

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	604.7	5.0	0	0	0	0	0	722.3	17.7	30	

Qualifiers:
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DO - Surrogate diluted out
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ANALYTICAL QC SUMMARY REPORT

BatchID: 9811

Sample ID: MB-9811A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725H
Client ID: ZZZZZ	Batch ID: 9811	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306457

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.515	5.0									J

Sample ID: MB-9811B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725H
Client ID: ZZZZZ	Batch ID: 9811	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306458

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.385	5.0									J

Sample ID: LCS-9811	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725H
Client ID: ZZZZZ	Batch ID: 9811	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306456

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	246.6	5.0	250	0	98.6	80	120	0	0		

Sample ID: 058021-042AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725H
Client ID: 571-835-0.6	Batch ID: 9811	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306442

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	226.2	5.0	250	29.34	78.8	47	128	0	0		

Sample ID: 058021-052AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725H
Client ID: 571-830-0.6	Batch ID: 9811	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306454

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	214.3	5.0	250	20.03	77.7	47	128	0	0		

Qualifiers:
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DO - Surrogate diluted out
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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9811

Sample ID: 058021-042ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725H
Client ID: 571-835-0.6	Batch ID: 9811	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306441

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	19.03	5.0	0	0	0	0	0	29.34	42.6	30	R

Sample ID: 058021-052ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725H
Client ID: 571-830-0.6	Batch ID: 9811	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306453

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	23.34	5.0	0	0	0	0	0	20.03	15.2	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
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ANALYTICAL QC SUMMARY REPORT

BatchID: 9812

Sample ID: MB-9812A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725I
Client ID: ZZZZZ	Batch ID: 9812	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306536

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.3563	5.0									

Sample ID: MB-9812B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725I
Client ID: ZZZZZ	Batch ID: 9812	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306537

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.5318	5.0									

Sample ID: LCS-9812	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725I
Client ID: ZZZZZ	Batch ID: 9812	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306535

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	201.6	5.0	250	0	80.6	80	120	0	0		

Sample ID: 058022-004AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725I
Client ID: ZZZZZ	Batch ID: 9812	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306520

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	400.7	5.0	250	294.9	42.3	47	128	0	0		S

Sample ID: 058022-014AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725I
Client ID: ZZZZZ	Batch ID: 9812	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306532

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	353.1	5.0	250	125.3	91.1	47	128	0	0		

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 058021
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9812

Sample ID: 058022-004ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725I
Client ID: ZZZZZ	Batch ID: 9812	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306519

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	339.5	5.0	0	0	0	0	0	294.9	14.0	30	

Sample ID: 058022-014ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725I
Client ID: ZZZZZ	Batch ID: 9812	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306531

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	400	5.0	0	0	0	0	0	125.3	105	30	R

Qualifiers:
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ANALYTICAL QC SUMMARY REPORT

BatchID: 9864

Sample ID: MB-9864	SampType: MBLK	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/25/2002	Run ID: ICP2_020725E
Client ID: ZZZZZ	Batch ID: 9864	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/25/2002	SeqNo: 306333

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050									

Sample ID: LCS-9864	SampType: LCS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/25/2002	Run ID: ICP2_020725E
Client ID: ZZZZZ	Batch ID: 9864	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/25/2002	SeqNo: 306334

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.94	0.0050	1	0	94	80	120	0	0		

Sample ID: 058021-001AMS	SampType: MS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/25/2002	Run ID: ICP2_020725E
Client ID: EB-24	Batch ID: 9864	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/25/2002	SeqNo: 306337

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.32	0.0050	2.5	0	92.8	66	118	0	0		

Sample ID: 058021-001ADUP	SampType: DUP	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/25/2002	Run ID: ICP2_020725E
Client ID: EB-24	Batch ID: 9864	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/25/2002	SeqNo: 306336

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.00727	0.0050	0	0	0	0	0	0	200	30	R

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9936

Sample ID: MB-9936	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020801H
Client ID: ZZZZZ	Batch ID: 9936	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 311563

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9936A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020801H
Client ID: ZZZZZ	Batch ID: 9936	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 311564

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9936B	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020801H
Client ID: ZZZZZ	Batch ID: 9936	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 311577

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05713	0.20									

Sample ID: LCS-9936	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020801H
Client ID: ZZZZZ	Batch ID: 9936	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 311591

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.77	0.20	7.5	0	104	80	120	0	0		

Sample ID: 058020-053AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020801H
Client ID: ZZZZZ	Batch ID: 9936	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 311576

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.303	0.20	5	2.242	101	80	120	0	0		

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9936

Sample ID: 058021-011AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020801H
Client ID: 571-316-0	Batch ID: 9936	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 311589

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	17.06	0.40	10	7.233	98.2	80	120	0	0		

Sample ID: 058021-011AMSD	SampType: MSD	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020801H
Client ID: 571-316-0	Batch ID: 9936	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 311590

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	17.06	0.40	10	7.233	98.3	80	120	17.06	0.0295	20	

Sample ID: 058020-053ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020801H
Client ID: ZZZZZ	Batch ID: 9936	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 311575

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.38	0.20	0	0	0	0	0	2.242	5.98	30	

Sample ID: 058021-011ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020801H
Client ID: 571-316-0	Batch ID: 9936	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 311588

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	11.2	0.40	0	0	0	0	0	7.233	43.0	30	R

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Work Order: 058021
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9937

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID: **MB-9937** SampType: **MBLK** TestCode: **7420_ST** Units: **mg/L** Prep Date: **8/1/2002** Run ID: **AA2_020801I**											
Client ID: **ZZZZZ** Batch ID: **9937** TestNo: **WET/ EPA 74 (WET)** Analysis Date: **8/1/2002** SeqNo: **311592**											
Lead	ND	0.20									
Sample ID: **MB-9937A** SampType: **MBLK** TestCode: **7420_ST** Units: **mg/L** Prep Date: **7/29/2002** Run ID: **AA2_020801I**											
Client ID: **ZZZZZ** Batch ID: **9937** TestNo: **WET/ EPA 74 (WET)** Analysis Date: **8/1/2002** SeqNo: **311593**											
Lead	ND	0.20									
Sample ID: **MB-9937B** SampType: **MBLK** TestCode: **7420_ST** Units: **mg/L** Prep Date: **7/29/2002** Run ID: **AA2_020801I**											
Client ID: **ZZZZZ** Batch ID: **9937** TestNo: **WET/ EPA 74 (WET)** Analysis Date: **8/1/2002** SeqNo: **311606**											
Lead	ND	0.20									
Sample ID: **LCS-9937** SampType: **LCS** TestCode: **7420_ST** Units: **mg/L** Prep Date: **8/1/2002** Run ID: **AA2_020801I**											
Client ID: **ZZZZZ** Batch ID: **9937** TestNo: **WET/ EPA 74 (WET)** Analysis Date: **8/1/2002** SeqNo: **311620**											
Lead	7.599	0.20	7.5	0	101	80	120	0	0		
Sample ID: **058021-038AMS** SampType: **MS** TestCode: **7420_ST** Units: **mg/L** Prep Date: **8/1/2002** Run ID: **AA2_020801I**											
Client ID: **571-837-0** Batch ID: **9937** TestNo: **WET/ EPA 74 (WET)** Analysis Date: **8/1/2002** SeqNo: **311605**											
Lead	15.84	0.40	10	6.274	95.6	80	120	0	0		

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9937

Sample ID: 058021-054AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/1/2002	Run ID: AA2_020801I
Client ID: 571-827-0.3	Batch ID: 9937	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 311618

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	30.33	0.80	20	10.83	97.5	80	120	0	0		

Sample ID: 058021-038ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020801I
Client ID: 571-837-0	Batch ID: 9937	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 311604

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.352	0.20	0	0	0	0	0	6.274	1.24	30	

Sample ID: 058021-054ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020801I
Client ID: 571-827-0.3	Batch ID: 9937	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/1/2002	SeqNo: 311617

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	10.85	0.40	0	0	0	0	0	10.83	0.155	30	

Qualifiers:
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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9938

Sample ID: MB-9938	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802A
Client ID: ZZZZZ	Batch ID: 9938	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311621

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.07517	0.20									

Sample ID: MB-9938A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802A
Client ID: ZZZZZ	Batch ID: 9938	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311622

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05474	0.20									

Sample ID: MB-9938B	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802A
Client ID: ZZZZZ	Batch ID: 9938	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311635

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9938	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802A
Client ID: ZZZZZ	Batch ID: 9938	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311649

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.671	0.20	7.5	0	102	80	120	0	0		

Sample ID: 058022-016AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802A
Client ID: ZZZZZ	Batch ID: 9938	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311634

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	93.62	2.0	50	46.29	94.6	80	120	0	0		

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9938

Sample ID: 058022-047AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802A
Client ID: ZZZZZ	Batch ID: 9938	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311647

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	155.4	4.0	100	56.73	98.7	80	120	0	0		

Sample ID: 058022-016ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802A
Client ID: ZZZZZ	Batch ID: 9938	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311633

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	30.97	2.0	0	0	0	0	0	46.29	39.7	30	R

Sample ID: 058022-047ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802A
Client ID: ZZZZZ	Batch ID: 9938	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311646

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	41.54	2.0	0	0	0	0	0	56.73	30.9	30	R

Qualifiers:
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DO - Surrogate diluted out
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ANALYTICAL QC SUMMARY REPORT

BatchID: R19798

Sample ID: **058021-031ADUP**	SampType: **DUP**	TestCode: **9045_S**	Units: **pH Units**	Prep Date: **7/25/2002**	Run ID: **WETCHEM_020725A**
Client ID: **571-829-0.3**	Batch ID: **R19798**	TestNo: **EPA 9045C**		Analysis Date: **7/25/2002**	SeqNo: **306215**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	9	0.10	0	0	0	0	0	8.96	0.445	20	

Qualifiers:
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ANALYTICAL QC SUMMARY REPORT

BatchID: R19803

Sample ID: 058023-012ADUP	SampType: DUP	TestCode: 9045_S	Units: pH Units	Prep Date: 7/25/2002	Run ID: WETCHEM_020725B
Client ID: ZZZZZ	Batch ID: R19803	TestNo: EPA 9045C		Analysis Date: 7/25/2002	SeqNo: 306548

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.85	0.10	0	0	0	0	0	7.84	0.127	20	

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Rachelle

From: Steve Reese [sreese@ninyoandmoore.com]
Sent: Wednesday, July 31, 2002 9:27 AM
To: 'rachelle@atlglobal.com'
Cc: David Shaler (E-mail); Ruth Cheung (E-mail)
Subject: TCLP Analysis

TCLP.xls

Rachelle,
Attached please find a list of samples to be run for the TCLP analysis. Currently, we selected all of the samples that are greater than 1,000 mg/kg
of TTLC results. However, they will be ran by instruction only. There may
be more samples chosen for TCLP analysis in the future, but please run these 82 samples for now. Please call with any questions.
Thank you, Steve

Stephen S. Reese
Senior Staff Environmental Scientist
Ninyo & Moore Geotechnical & Environmental Sciences Consultants
475 Goddard, Suite 200
Irvine, California 92618
Tel: (949) 753-7070
Fax: (949) 753-7071
Email: sreese@ninyoandmoore.com
www.ninyoandmoore.com

RUN FOR TCLP ANALYSIS

33	20	29
569-101-0	570-101-0	571-104-0
569-102-0	570-101-0.6	571-120-0
569-102-0.3	570-102-0.6	571-310-0.9
569-102-0.9	570-103-1.5	571-317-0
569-111-0	570-114-0.6	571-320-0
569-112-0	570-115-0	571-325-0.6
569-112-0.6	570-119-0.3	571-507-0
569-201-0	570-201-0	571-511-0
569-212-0	570-214-0	571-514-0
569-301-0	570-311-0.6	571-524-0
569-303-0.9	570-312-0.6	571-710-0
569-314-0	570-504-0	571-710-0.3
569-401-0	570-508-0	571-711-0
569-404-0.6	570-517-0	571-711-0.3
569-405-0.6	570-517-0.3	571-712-0
569-408-0.9	570-610-0.6	571-712-0.3
569-502-0.6	570-615-0	571-201-0.6
569-516-0	570-706-0	571-405-0
569-603-0.3	570-709-0	571-406-0
569-607-0	570-808-0.6	571-407-0
569-607-0.3		571-414-0
569-609-0		571-609-0
569-609-0.3		571-611-0
569-703-0		571-616-0
569-703-0.9		571-617-0
569-705-0		571-619-1.5
569-705-0.3		571-814-0.3
569-706-0		571-818-0.6
569-708-0		571-819-0
569-710-0		
569-711-0		
569-711-0.3		
569-801-0.3		

82

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Tuesday, August 06, 2002 3:46 PM
To: 'Rachelle'; 'David Shaler (E-mail)'
Subject: Title 22 Metals

Title 22 Metals.xls

Rachelle,
Please run the following samples for Title 22 Metals. Please do not list
Pb in your emailed results. There should be a total of 120 samples to be
run.
Thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

569-102-0.9	570-101-0	571-101-0.9
569-112-0	570-101-0.6	571-104-0
569-201-0	570-201-0	571-201-0.6
569-206-0.6	570-205-0.9	571-108-1.5
569-106-1.5	570-106-0.3	571-111-0.3
569-212-0	570-208-1.5	571-207-0
569-401-0.6	570-111-0.6	571-210-0.6
569-301-0	570-214-0	571-115-0.9
569-303-0.9	570-115-0.3	571-214-0.3
569-404-0.6	570-119-0.9	571-120-0
569-408-0.9	570-224-0.6	571-217-1.5
569-314-0	570-401-0	571-220-0.6
569-313-0.3	570-401-0.3	571-301-0.3
569-502-0.6	570-304-1.5	571-405-0
569-602-1.5	570-307-0.9	571-306-0.9
569-607-0.3	570-311-0.6	571-407-0
569-607-0	570-312-0.6	571-310-0.9
569-508-0.9	570-316-0.3	571-315-0.3
569-511-0.6	570-601-0	571-412-1.5
569-612-1.5	570-505-1.5	571-317-0
569-516-0	570-508-0	571-320-0.6
569-801-0.3	570-610-0.6	571-416-0.9
569-519-0.6	570-511-0.9	571-325-0.3
569-803-0.9	570-615-0	571-421-1.5
569-705-0	570-514-0.3	571-425-0
569-806-1.5	570-517-0	571-501-0.6
569-708-0.3	570-618-0.6	571-503-0.9
569-711-0	570-621-1.5	571-603-0.3
569-811-0	570-703-0.9	571-507-0
	570-804-0	571-609-0
	570-706-0	571-510-1.5
	570-709-0	571-611-0
	570-808-0.6	571-514-0
	570-711-1.5	571-614-0.3
	570-812-0.3	571-517-0.9
		571-617-0.6
		571-520-1.5
		571-621-0.3
		571-524-0
		571-624-0.9
		571-529-0.3
		571-628-0.6
		571-703-1.5
		571-707-0
		571-804-0.9
		571-809-0.3
		571-711-0
		571-712-0
		571-814-0.3
		571-818-0.6
		571-819-0
		571-827-1.5

571-832-0.9
571-836-0.3
571-837-0.6
571-842-0

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Wednesday, August 07, 2002 10:28 AM
To: 'Rachelle'
Subject: RE: Title 22 Metals

Sorry for the mistake. Please change to the following:
569-602-1.5 to 0.6
569-803-0.9 to 0.6
571-217-1.5 to 0.6
571-320-0.6 to 0
571-421-1.5 to 0
571-503-0.9 to 0.6
571-510-1.5 to 0.6
571-520-1.5 to 0
571-703-1.5 to 0.6
571-804-0.9 to 0.6
571-827-1.5 to 0.3
571-837-0.6 to 0.3
570-119-0.9 to 0.6
570-208-1.5 to 0.3
570-621-1.5 to 0.3
570-703-0.9 to 0.3

thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

-----Original Message-----
From: Rachelle [SMTP:Rachelle@ATLGlobal.com]
Sent: Wednesday, August 07, 2002 9:49 AM
To: 'Ruth Cheung'
Subject: RE: Title 22 Metals

Hi Ruth,
Please check if the following samples exist, I don't see it on our database:
569-602-1.5
569-803-0.9
571-217-1.5
571-320-0.6
571-421-1.5
571-503-0.9
571-510-1.5
571-520-1.5
571-703-1.5
571-804-0.9
571-827-1.5
571-837-0.6
570-119-0.9
570-208-1.5
570-621-1.5
570-703-0.9
If it does exist, can you let me know when it was collected so I can track
them.
Thanks,
Rachelle
-----Original Message-----
From: Ruth Cheung [mailto:rcheung@ninyoandmoore.com]

Sent: Tuesday, August 06, 2002 3:46 PM
To: 'Rachelle'; 'David Shaler (E-mail)'
Subject: Title 22 Metals

Rachelle,
Please run the following samples for Title 22 Metals. Please do not list
Pb in your emailed results. There should be a total of 120 samples to be
run.
Thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Thursday, August 08, 2002 9:14 AM
To: 'Rachelle'
Subject: TCLP Analysis

TCLP-3.xls

In addition to the 90 TCLP already run please run the following samples for
TCLP. There should be a list of 350 samples.
Thanks for a the hard work and timely results.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

-----Original Message-----
From: Rachelle [SMTP:Rachelle@ATLGlobal.com]
Sent: Wednesday, August 07, 2002 5:02 PM
To: 'David Shaler (E-mail)'
Cc: 'Ruth Cheung (E-mail)'
Subject: TCLP Results

<<57931TCLP.xls>> <<58001TCLP.xls>> <<58021TCLP.xls>> <<58022TCLP.xls>>
<<58023TCLP.xls>> <<58024TCLP.xls>> <<58049TCLP.xls>> <<58050TCLP.xls>>
<<58052TCLP.xls>> <<58053TCLP.xls>> <<58065TCLP.xls>> <<58066TCLP.xls>>
<<58067TCLP.xls>> <<58068TCLP.xls>> <<58069TCLP.xls>>

Rachelle Arada
Project Coordinator
www.atlglobal.com
voice: 562.989.4045 ext 237
fax : 562.989.4040

<< File: 57931TCLP.xls >> << File: 58001TCLP.xls >> << File: 58021TCLP.xls >> << File: 58022TCLP.xls >> << File: 58023TCLP.xls >> << File: 58024TCLP.xls >> << File: 58049TCLP.xls >> << File: 58050TCLP.xls >> << File: 58052TCLP.xls >> << File: 58053TCLP.xls >> << File: 58065TCLP.xls >> << File: 58066TCLP.xls >> << File: 58067TCLP.xls >> << File: 58068TCLP.xls >> << File: 58069TCLP.xls >>

569-404-0	2. STLC	170	570-515-0.3	2. STLC	120	571-521-0	2. STLC	230
569-402-0	2. STLC	130	570-811-0	2. STLC	110	571-324-0.9	2. STLC	110
569-406-0	2. STLC	120	570-114-0.0	2. STLC	110	571-818-0	2. STLC	110
569-515-0	2. STLC	110	570-504-0.6	2. STLC	100	571-819-0.6	2. STLC	110
569-611-0	2. STLC	100	570-811-1.5	2. STLC	90	571-708-0	2. STLC	110
569-409-0	2. STLC	94	570-615-0.6	2. STLC	84	571-103-0.6	2. STLC	110
569-603-0	2. STLC	93	570-305-0	2. STLC	79	571-617-0.3	2. STLC	100
569-104-0.6	2. STLC	91	570-314-0.6	2. STLC	76	571-611-0.6	2. STLC	92
569-807-0	2. STLC	86	570-505-0.6	2. STLC	75	571-712-0.9	2. STLC	91
569-608-0	2. STLC	86	570-209-0.6	2. STLC	74	571-105-0.6	2. STLC	91
569-501-0	2. STLC	84	570-116-0.0	2. STLC	73	571-313-0	2. STLC	79
569-710-0.3	2. STLC	83	570-102-0	2. STLC	65	571-508-0	2. STLC	73
569-808-0	2. STLC	83	570-804-0.6	2. STLC	64	571-518-0.3	2. STLC	73
569-609-0.6	2. STLC	80	570-704-0	2. STLC	63	571-217-0	2. STLC	68
569-803-0	2. STLC	79	570-508-0.6	2. STLC	60	571-516-0	2. STLC	66
569-105-0	2. STLC	78	570-706-0.3	2. STLC	60	571-701-0.3	2. STLC	66
569-512-0	2. STLC	77	570-303-0	2. STLC	59	571-710-0.6	2. STLC	65
569-513-0	2. STLC	77	570-311-1.5	2. STLC	58	571-512-0	2. STLC	64
569-302-0	2. STLC	74	570-117-0.0	2. STLC	58	571-308-0.9	2. STLC	61
569-805-0	2. STLC	73	570-208-0.3	2. STLC	58	571-701-0	2. STLC	61
569-517-0	2. STLC	71	570-709-0.6	2. STLC	57	571-514-0.3	2. STLC	59
569-704-0.3	2. STLC	71	570-703-0	2. STLC	55	571-415-0	2. STLC	58
569-703-0.6	2. STLC	70	570-206-0	2. STLC	54	571-616-0.6	2. STLC	57
569-514-0.3	2. STLC	70	570-301-0	2. STLC	53	571-517-0	2. STLC	56
569-803-0.3	2. STLC	69	570-603-0.3	2. STLC	46	571-112-0.9	2. STLC	56
569-409-0.6	2. STLC	69	570-711-0.6	2. STLC	46	571-214-0	2. STLC	55
569-411-0	2. STLC	68	570-206-0.3	2. STLC	45	571-415-0.3	2. STLC	55
569-102-0.6	2. STLC	68	570-103-0	2. STLC	44	571-405-0.6	2. STLC	55
569-809-0	2. STLC	65	570-602-0	2. STLC	41	571-530-0	2. STLC	55
569-605-0	2. STLC	65	570-209-0	2. STLC	40	571-831-0	2. STLC	53
569-711-0.6	2. STLC	62	570-210-0	2. STLC	40	571-709-0	2. STLC	53
569-806-0	2. STLC	60	570-117-0.3	2. STLC	39	571-103-0.0	2. STLC	52
569-802-0.3	2. STLC	60	570-103-0.6	2. STLC	37	571-312-0	2. STLC	51
569-410-0	2. STLC	59	570-110-0.6	2. STLC	37	571-526-0	2. STLC	51
569-501-0.6	2. STLC	59	570-805-0.9	2. STLC	36	571-819-1.5	2. STLC	51
569-808-0.3	2. STLC	58	570-112-1.5	2. STLC	35	571-515-0	2. STLC	50
569-104-0	2. STLC	56	570-614-0	2. STLC	34	571-833-0	2. STLC	49
569-804-0	2. STLC	54	570-713-0.3	2. STLC	33	571-815-0.6	2. STLC	47
569-610-0	2. STLC	54	570-513-0	2. STLC	32	571-517-0.3	2. STLC	46
569-608-0.3	2. STLC	53	570-312-0.3	2. STLC	31	571-610-0	2. STLC	46
569-213-0	2. STLC	49	570-503-0.6	2. STLC	31	571-413-0	2. STLC	46
569-701-0	2. STLC	47	570-510-0.6	2. STLC	31	571-815-0	2. STLC	45
569-311-0	2. STLC	47	570-202-0	2. STLC	31	571-514-0.9	2. STLC	44
569-609-0.9	2. STLC	46	570-207-0	2. STLC	31	571-505-1.5	2. STLC	44
569-513-0.3	2. STLC	45	570-209-0.3	2. STLC	31	571-528-0	2. STLC	44
569-801-0.6	2. STLC	44	570-703-0.3	2. STLC	30	571-610-0.6	2. STLC	43
569-514-0	2. STLC	42	570-401-0	2. STLC	30	571-629-0	2. STLC	43
569-805-0.6	2. STLC	42	570-610-0.9	2. STLC	29	571-604-0	2. STLC	42
569-408-1.5	2. STLC	42	570-809-0.6	2. STLC	29	571-213-0	2. STLC	41
569-807-0.3	2. STLC	40	570-509-0.9	2. STLC	29	571-812-0	2. STLC	41
569-204-0	2. STLC	40	570-210-0.6	2. STLC	29	571-706-0	2. STLC	41
569-517-0.3	2. STLC	36	570-211-0	2. STLC	29	571-530-0.6	2. STLC	41
569-518-0	2. STLC	36	570-603-0	2. STLC	28	571-305-0	2. STLC	40
569-806-0.3	2. STLC	36	570-119-0	2. STLC	28	571-523-0.3	2. STLC	39
569-705-1.5	2. STLC	35	570-713-0.6	2. STLC	28	571-510-0	2. STLC	39
569-303-0.6	2. STLC	34	570-108-0	2. STLC	27	571-305-0.9	2. STLC	39
569-516-0.3	2. STLC	33	570-708-0.6	2. STLC	27	571-818-1.5	2. STLC	39
569-705-0.6	2. STLC	33	570-224-0	2. STLC	26	571-703-0	2. STLC	38
569-802-0	2. STLC	33	570-601-0	2. STLC	26	571-520-0.3	2. STLC	36
569-515-0.6	2. STLC	32	570-710-0.6	2. STLC	26	571-216-0	2. STLC	34
569-704-0	2. STLC	32	570-614-0.6	2. STLC	26	571-827-0	2. STLC	34
569-401-0.3	2. STLC	32	570-118-0.3	2. STLC	26	571-708-0.3	2. STLC	34
569-207-0	2. STLC	32	570-304-0	2. STLC	25	571-514-0.6	2. STLC	33
569-608-0.6	2. STLC	31	570-707-0.6	2. STLC	25	571-528-1.5	2. STLC	33
569-104-0.3	2. STLC	31	570-510-0	2. STLC	25	571-803-0	2. STLC	33
569-201-0.6	2. STLC	30	570-110-0	2. STLC	24	571-414-0.3	2. STLC	33
569-515-0.3	2. STLC	28	570-223-0	2. STLC	24	571-813-0.3	2. STLC	32
569-212-0.6	2. STLC	28	570-117-0.6	2. STLC	24	571-523-0	2. STLC	31
569-103-0	2. STLC	28	570-616-0	2. STLC	23	571-326-0	2. STLC	31
569-313-0	2. STLC	27	570-704-0.3	2. STLC	22	571-502-0.6	2. STLC	31
569-103-0.3	2. STLC	26	570-513-0.6	2. STLC	22	571-624-1.5	2. STLC	31
569-705-0.9	2. STLC	25	570-221-0.0	2. STLC	22	571-330-0	2. STLC	31
569-707-0.3	2. STLC	25	570-617-0	2. STLC	21	571-512-0.3	2. STLC	30
569-515-1.5	2. STLC	24	570-214-0.3	2. STLC	21	571-521-0.6	2. STLC	29
569-508-0	2. STLC	24	570-122-0.9	2. STLC	20	571-706-0.3	2. STLC	29
569-801-0	2. STLC	24	570-313-0.6	2. STLC	19	571-814-0.6	2. STLC	28
569-402-0.6	2. STLC	24	570-207-0.6	2. STLC	19	571-616-1.5	2. STLC	28
569-516-0.6	2. STLC	22	570-120-0.9	2. STLC	18	571-835-0	2. STLC	28
569-509-0.3	2. STLC	22	570-506-0	2. STLC	18	571-811-0.3	2. STLC	28
569-106-0	2. STLC	22	570-102-0.9	2. STLC	17	571-101-0.6	2. STLC	28
569-106-0.3	2. STLC	22	570-216-0	2. STLC	17	571-112-0	2. STLC	28
569-202-0	2. STLC	21	570-225-0	2. STLC	17	571-315-0	2. STLC	27
569-805-1.5	2. STLC	21	570-304-0.3	2. STLC	17	571-622-0	2. STLC	27
569-205-0	2. STLC	20	570-409-0	2. STLC	17	571-607-0.6	2. STLC	27
569-707-0	2. STLC	19	570-713-0	2. STLC	17	571-609-0.6	2. STLC	27

569-709-0	2. STLC	19
569-202-0.3	2. STLC	19
569-602-0	2. STLC	19
569-207-0.3	2. STLC	19
569-706-0.3	2. STLC	17
569-807-0.9	2. STLC	17
569-104-0.9	2. STLC	17
569-505-0.6	2. STLC	17
569-704-0.6	2. STLC	16
569-808-0.6	2. STLC	16
569-212-0.3	2. STLC	16
569-612-0	2. STLC	16
569-704-1.5	2. STLC	15
569-411-0.3	2. STLC	15
569-113-0	2. STLC	15
569-807-0.6	2. STLC	14
569-311-0.3	2. STLC	12
569-312-0	2. STLC	10
569-311-0.9	2. STLC	8.3

104

570-401-0.3	2. STLC	17
570-616-0.6	2. STLC	17
570-308-0	2. STLC	16
570-807-0.9	2. STLC	16
570-701-0.6	2. STLC	16
570-617-0.3	2. STLC	16
570-107-0.6	2. STLC	15
570-811-0.6	2. STLC	15
570-707-0	2. STLC	15
570-518-0	2. STLC	15
570-111-0.0	2. STLC	15
570-109-0.6	2. STLC	14
570-401-0.9	2. STLC	4.1
570-408-0	2. STLC	4
570-409-0.3	2. STLC	3
570-401-0.6		0
570-401-1.5		0
570-408-0.6		0
570-408-1.5		0

104

571-837-0.3	2. STLC	27
571-520-0	2. STLC	26
571-516-0.3	2. STLC	26
571-420-0	2. STLC	26
571-102-0.6	2. STLC	26
571-517-1.5	2. STLC	25
571-513-0.6	2. STLC	25
571-623-0.6	2. STLC	25
571-112-0.3	2. STLC	25
571-326-0.6	2. STLC	24
571-619-0.3	2. STLC	24
571-619-0.9	2. STLC	24
571-528-0.3	2. STLC	24
571-706-0.6	2. STLC	24
571-112-0.6	2. STLC	24
571-327-0.6	2. STLC	23
571-817-0	2. STLC	23
571-425-0.6	2. STLC	22
571-118-0	2. STLC	22
571-829-0	2. STLC	22
571-828-0	2. STLC	22
571-122-0	2. STLC	21
571-101-1.5	2. STLC	21
571-530-0.3	2. STLC	21
571-406-0.6	2. STLC	20
571-517-0.6	2. STLC	20
571-835-0.3	2. STLC	20
571-501-0	2. STLC	20
571-518-0.9	2. STLC	19
571-510-0.3	2. STLC	19
571-814-0.9	2. STLC	19
571-522-0.6	2. STLC	19
571-622-1.5	2. STLC	19
571-812-0.6	2. STLC	19
571-701-0.6	2. STLC	19
571-704-0	2. STLC	19
571-711-0.6	2. STLC	19
571-212-0	2. STLC	18
571-839-0.6	2. STLC	18
571-610-1.5	2. STLC	18
571-709-0.3	2. STLC	18
571-311-0.6	2. STLC	17
571-620-0	2. STLC	17
571-109-0	2. STLC	17
571-704-0.3	2. STLC	17
571-207-1.5	2. STLC	16
571-203-0	2. STLC	16
571-616-0.3	2. STLC	16
571-317-0.3	2. STLC	16
571-629-0.3	2. STLC	16
571-416-0	2. STLC	15
571-419-0	2. STLC	15
571-526-0.3	2. STLC	15
571-619-0	2. STLC	15
571-606-0	2. STLC	15
571-115-0.6	2. STLC	14
571-202-0.9	2. STLC	11

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tblTEMP

WorkOrder	ClientSampID	TestNo	Analyte	PQL	DF	CollectionDate	AnalDate	PrepDate
058021	571-313-0	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/15/2002	8/13/2002
058021	571-313-0	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-313-0	EPA 9045C	pH	0.1	1	7/19/2002	7/25/2002	7/25/2002
058021	571-313-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-313-0	WET/ EPA 7420	Lead	3.2	16	7/19/2002	8/1/2002	7/29/2002
058021	571-313-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-313-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-313-0.6	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/1/2002	7/29/2002
058021	571-313-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-313-0.9	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/1/2002	7/29/2002
058021	571-313-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-313-1.5	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-313-1.5	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/1/2002	7/29/2002
058021	571-316-0	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-316-0	EPA 9045C	pH	0.1	1	7/19/2002	7/25/2002	7/25/2002
058021	571-316-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-316-0	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/1/2002	7/29/2002
058021	571-316-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-316-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-316-0.3	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/1/2002	7/29/2002
058021	571-316-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-316-0.6	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/1/2002	7/29/2002
058021	571-316-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-317-0	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/6/2002	8/5/2002
058021	571-317-0	EPA 6010B	Antimony	2.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-317-0	EPA 6010B	Arsenic	2.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-317-0	EPA 6010B	Barium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-317-0	EPA 6010B	Beryllium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-317-0	EPA 6010B	Cadmium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-317-0	EPA 6010B	Chromium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-317-0	EPA 6010B	Cobalt	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-317-0	EPA 6010B	Copper	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-317-0	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-317-0	EPA 6010B	Molybdenum	2.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-317-0	EPA 6010B	Nickel	1.5	10	7/19/2002	8/10/2002	8/9/2002

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058021	571-317-0	EPA 6010B	Selenium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-317-0	EPA 6010B	Silver	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-317-0	EPA 6010B	Thallium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-317-0	EPA 6010B	Vanadium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-317-0	EPA 6010B	Zinc	5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-317-0	EPA 7471A	Mercury	0.1	1	7/19/2002	8/12/2002	8/7/2002
058021	571-317-0.3	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/15/2002	8/13/2002
058021	571-317-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-317-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-317-0.3	WET/ EPA 7420	Lead	0.4	2	7/19/2002	8/1/2002	7/29/2002
058021	571-317-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-317-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-317-0.6	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/1/2002	7/29/2002
058021	571-317-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-712-0	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/7/2002	8/6/2002
058021	571-712-0	EPA 6010B	Antimony	2.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-712-0	EPA 6010B	Arsenic	2.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-712-0	EPA 6010B	Barium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-712-0	EPA 6010B	Beryllium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-712-0	EPA 6010B	Cadmium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-712-0	EPA 6010B	Chromium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-712-0	EPA 6010B	Cobalt	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-712-0	EPA 6010B	Copper	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-712-0	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-712-0	EPA 6010B	Molybdenum	2.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-712-0	EPA 6010B	Nickel	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-712-0	EPA 6010B	Selenium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-712-0	EPA 6010B	Silver	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-712-0	EPA 6010B	Thallium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-712-0	EPA 6010B	Vanadium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-712-0	EPA 6010B	Zinc	5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-712-0	EPA 7471A	Mercury	0.1	1	7/19/2002	8/12/2002	8/7/2002
058021	571-712-0.3	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/7/2002	8/6/2002
058021	571-712-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-712-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-712-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002

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058021	571-712-0.6	WET/ EPA 7420	Lead	0.4	2	7/19/2002	8/2/2002	7/29/2002
058021	571-712-0.9	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/15/2002	8/14/2002
058021	571-712-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-712-0.9	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-712-0.9	WET/ EPA 7420	Lead	2	10	7/19/2002	8/2/2002	7/29/2002
058021	571-805-0	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-805-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-805-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-805-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-805-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-807-0	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-807-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-807-0.3	EPA 9045C	pH	0.1	1	7/19/2002	7/25/2002	7/25/2002
058021	571-807-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-807-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-807-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-808-0	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-808-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-808-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-808-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-808-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-827-0	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/15/2002	8/14/2002
058021	571-827-0	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-827-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-827-0	WET/ EPA 7420	Lead	0.8	4	7/19/2002	8/1/2002	7/29/2002
058021	571-827-0.3	EPA 6010B	Antimony	2.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-827-0.3	EPA 6010B	Arsenic	2.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-827-0.3	EPA 6010B	Barium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-827-0.3	EPA 6010B	Beryllium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-827-0.3	EPA 6010B	Cadmium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-827-0.3	EPA 6010B	Chromium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-827-0.3	EPA 6010B	Cobalt	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-827-0.3	EPA 6010B	Copper	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-827-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-827-0.3	EPA 6010B	Molybdenum	2.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-827-0.3	EPA 6010B	Nickel	1.5	10	7/19/2002	8/10/2002	8/9/2002

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058021	571-827-0.3	EPA 6010B	Selenium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-827-0.3	EPA 6010B	Silver	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-827-0.3	EPA 6010B	Thallium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-827-0.3	EPA 6010B	Vanadium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-827-0.3	EPA 6010B	Zinc	5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-827-0.3	EPA 7471A	Mercury	0.1	1	7/19/2002	8/13/2002	8/7/2002
058021	571-827-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-827-0.3	WET/ EPA 7420	Lead	0.4	2	7/19/2002	8/1/2002	7/29/2002
058021	571-827-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-827-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-827-0.6	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058021	571-828-0	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/15/2002	8/14/2002
058021	571-828-0	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-828-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-828-0	WET/ EPA 7420	Lead	0.8	4	7/19/2002	8/1/2002	7/29/2002
058021	571-828-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-828-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-828-0.3	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/1/2002	7/29/2002
058021	571-828-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-828-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-828-0.6	WET/ EPA 7420	Lead	0.4	2	7/19/2002	8/1/2002	7/29/2002
058021	571-829-0	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/15/2002	8/13/2002
058021	571-829-0	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-829-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-829-0	WET/ EPA 7420	Lead	0.8	4	7/19/2002	8/1/2002	7/29/2002
058021	571-829-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-829-0.3	EPA 9045C	pH	0.1	1	7/19/2002	7/25/2002	7/25/2002
058021	571-830-0	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-830-0	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/1/2002	7/29/2002
058021	571-830-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-830-0.3	EPA 9045C	pH	0.1	1	7/19/2002	7/25/2002	7/25/2002
058021	571-830-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-831-0	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/15/2002	8/13/2002
058021	571-831-0	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-831-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-831-0	WET/ EPA 7420	Lead	1.6	8	7/19/2002	8/1/2002	7/29/2002

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058021	571-831-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-831-0.3	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/1/2002	7/29/2002
058021	571-831-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-831-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-831-0.6	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/1/2002	7/29/2002
058021	571-833-0	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/15/2002	8/14/2002
058021	571-833-0	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-833-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-833-0	WET/ EPA 7420	Lead	1.6	8	7/19/2002	8/1/2002	7/29/2002
058021	571-833-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-833-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-833-0.3	WET/ EPA 7420	Lead	0.4	2	7/19/2002	8/1/2002	7/29/2002
058021	571-833-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-833-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-833-0.6	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/1/2002	7/29/2002
058021	571-835-0	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/15/2002	8/14/2002
058021	571-835-0	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-835-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-835-0	WET/ EPA 7420	Lead	0.8	4	7/19/2002	8/1/2002	7/29/2002
058021	571-835-0.3	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/15/2002	8/14/2002
058021	571-835-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-835-0.3	EPA 9045C	pH	0.1	1	7/19/2002	7/25/2002	7/25/2002
058021	571-835-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-835-0.3	WET/ EPA 7420	Lead	0.8	4	7/19/2002	8/1/2002	7/29/2002
058021	571-835-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-835-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-835-0.9	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-835-0.9	WET/ EPA 7420	Lead	0.4	2	7/19/2002	8/1/2002	7/29/2002
058021	571-837-0	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-837-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-837-0	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/1/2002	7/29/2002
058021	571-837-0.3	EPA 1311/ 7420	Lead	0.4	2	7/19/2002	8/16/2002	8/15/2002
058021	571-837-0.3	EPA 6010B	Antimony	2.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-837-0.3	EPA 6010B	Arsenic	2.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-837-0.3	EPA 6010B	Barium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-837-0.3	EPA 6010B	Beryllium	1.5	10	7/19/2002	8/10/2002	8/9/2002

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058021	571-837-0.3	EPA 6010B	Cadmium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-837-0.3	EPA 6010B	Chromium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-837-0.3	EPA 6010B	Cobalt	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-837-0.3	EPA 6010B	Copper	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-837-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-837-0.3	EPA 6010B	Molybdenum	2.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-837-0.3	EPA 6010B	Nickel	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-837-0.3	EPA 6010B	Selenium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-837-0.3	EPA 6010B	Silver	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-837-0.3	EPA 6010B	Thallium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-837-0.3	EPA 6010B	Vanadium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-837-0.3	EPA 6010B	Zinc	5	10	7/19/2002	8/10/2002	8/9/2002
058021	571-837-0.3	EPA 7471A	Mercury	0.1	1	7/19/2002	8/13/2002	8/7/2002
058021	571-837-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058021	571-837-0.3	WET/ EPA 7420	Lead	0.8	4	7/19/2002	8/1/2002	7/29/2002
058021	571-840-0	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-840-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	571-840-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058021	EB-24	EPA 6010B	Lead	0.005	1	7/19/2002	7/25/2002	7/25/2002

August 15, 2002

David Shaler
Ninyo & Moore
475 Goddard Suite 200
Irvine, CA 92618
TEL: (949) 753-7070
FAX: (949) 753-7071

RE: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

Attention: David Shaler

ELAP No.: 1838
NELAP No.: 02107CA
Workorder No.: 058049

Enclosed are the results for sample(s) received on July 22, 2002 by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

J Kelly for

Eddie F. Rodriguez
Laboratory Director

RECEIVED
AUG 2 6 2002
NINYO & MOORE
ORANGE COUNTY OFFICE

NINYO & MOORE
Orange County Office
Approval Date: _____
Project #: _____
Amount To Pay: _____
Approved By: _____
Approved By: _____

This cover letter is an integral part of this analytical report.

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions

See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) [illegible] 7-22-02

Received by: (name/date/time) Eddie Rodriguez 7/22/02

Relinquished by: (name/date/time) [illegible] 7/22/02 6:00P

Received by: (name/date/time) [illegible] 7/22/02 6:00P

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB-28	7/22/02		P	X	
	571-329-0		8:45		X	X
	571-329-0.3		8:46		X	
	571-329-0.6		8:47		X	
	571-329-0.9		8:49		X	
	571-329-1.5		8:51		X	
	571-328-0		8:65		X	
	571-328-0.3		8:56		X	
	571-328-0.6		8:58		X	
	571-328-0.9		8:59		X	
	571-328-1.5		9:01		X	
	571-838-0		9:32		X	X
	571-838-0.3		9:33		X	
	571-838-0.6		9:35		X	
	571-838-0.9		9:36		X	
	571-838-1.5		9:38		X	
	571-839-0		9:41		X	
	571-839-0.3		9:42		X	
	571-839-0.6		9:44		X	
	571-839-0.9		9:45		X	
	571-839-1.5		9:47		X	X
	571-841-0		9:52		X	
	571-841-0.3		9:53		X	
	571-841-0.6		9:55		X	
	571-841-0.9		9:56		X	
	571-841-1.5		9:57		X	
	571-842-0		10:05		X	
	571-842-0.3		10:06		X	
	571-842-0.6		10:08		X	
	571-842-0.9		10:09		X	
	571-842-1.5		10:11		X	X
	571-522-0		11:10		X	
	571-522-0.3		11:11		X	
	571-522-0.6		11:13		X	
	571-522-0.9		11:14		X	
	571-522-1.5		11:15		X	
	571-507-0		11:28		X	
	571-507-0.3		11:29		X	
	571-507-0.6		11:31		X	
	571-507-0.9		11:32		X	
	571-507-1.5		11:34		X	X
	571-~~571~~-505-0		11:40		X	
	571-505-0.3		11:41		X	
	571-505-0.6		11:43		X	
	571-505-0.9		11:45		X	
	571-505-1.5		11:55		X	
	571-502-0		12:00		X	
	571-502-0.3		12:02		X	
	571-502-0.6		12:04		X	
	571-502-0.9		12:05		X	
	571-502-1.5		12:06		X	
	571-115-0		12:35		X	X
	571-115-0.3		12:36		X	
	571-115-0.6		12:37		X	
	571-115-0.9		12:38		X	
	571-115-1.5		12:40		X	
	571-114-0		12:45		X	
	571-114-0.3		12:47		X	
	571-114-0.6		12:48		X	
	571-114-0.9		12:49		X	

Total # of samples: 60

Advanced Technology Laboratories

Date: *29-Jul-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	EB-28
Lab Order:	058049		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/22/2002
Lab ID:	058049-001A	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	(EPA 3010A)			**EPA 6010B**		
RunID: ICP2_020726F	QC Batch: 9878					Analyst: **RQ**
Lead	0.0098	0.0050		mg/L	1	7/26/2002

Qualifiers:

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B - Analyte detected in the associated Method Blank

DO - Surrogate Diluted Out

S - Spike/Surrogate outside of limits due to matrix interferen

H - Sample exceeded analytical holding time

E - Value above quantitation range

Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/30/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058049
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058049-002A	571-329-0	8.7	mg/Kg	9830	5	1	7/22/2002	7/26/2002
058049-003A	571-329-0.3	6.7	mg/Kg	9830	5	1	7/22/2002	7/26/2002
058049-004A	571-329-0.6	63	mg/Kg	9830	5	1	7/22/2002	7/26/2002
058049-005A	571-329-0.9	ND	mg/Kg	9830	5	1	7/22/2002	7/26/2002
058049-006A	571-329-1.5	ND	mg/Kg	9830	5	1	7/22/2002	7/26/2002
058049-007A	571-328-0	120	mg/Kg	9830	5	1	7/22/2002	7/26/2002
058049-008A	571-328-0.3	9.6	mg/Kg	9830	5	1	7/22/2002	7/26/2002
058049-009A	571-328-0.6	64	mg/Kg	9830	5	1	7/22/2002	7/26/2002
058049-010A	571-328-0.9	ND	mg/Kg	9830	5	1	7/22/2002	7/26/2002
058049-011A	571-328-1.5	8.2	mg/Kg	9830	5	1	7/22/2002	7/26/2002
058049-012A	571-838-0	52	mg/Kg	9830	5	1	7/22/2002	7/26/2002

Qualifiers:

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Advanced Technology Laboratories

Date: 7/30/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058049
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058049-013A	571-838-0.3	33	mg/Kg	9830	5	1	7/22/2002	7/26/2002
058049-014A	571-838-0.6	270	mg/Kg	9830	5	1	7/22/2002	7/26/2002
058049-015A	571-838-0.9	ND	mg/Kg	9830	5	1	7/22/2002	7/26/2002
058049-016A	571-838-1.5	ND	mg/Kg	9830	5	1	7/22/2002	7/26/2002
058049-017A	571-839-0	37	mg/Kg	9830	5	1	7/22/2002	7/26/2002
058049-018A	571-839-0.3	18	mg/Kg	9830	5	1	7/22/2002	7/26/2002
058049-019A	571-839-0.6	140	mg/Kg	9830	5	1	7/22/2002	7/26/2002
058049-020A	571-839-0.9	12	mg/Kg	9830	5	1	7/22/2002	7/26/2002
058049-021A	571-839-1.5	ND	mg/Kg	9831	5	1	7/22/2002	7/26/2002
058049-022A	571-841-0	ND	mg/Kg	9831	5	1	7/22/2002	7/26/2002
058049-023A	571-841-0.3	ND	mg/Kg	9831	5	1	7/22/2002	7/26/2002

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- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/30/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058049
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058049-024A	571-841-0.6	44	mg/Kg	9831	5	1	7/22/2002	7/26/2002
058049-025A	571-841-0.9	8.6	mg/Kg	9831	5	1	7/22/2002	7/26/2002
058049-026A	571-841-1.5	ND	mg/Kg	9831	5	1	7/22/2002	7/26/2002
058049-027A	571-842-0	11	mg/Kg	9831	5	1	7/22/2002	7/26/2002
058049-028A	571-842-0.3	5.0	mg/Kg	9831	5	1	7/22/2002	7/26/2002
058049-029A	571-842-0.6	260	mg/Kg	9831	5	1	7/22/2002	7/26/2002
058049-030A	571-842-0.9	ND	mg/Kg	9831	5	1	7/22/2002	7/26/2002
058049-031A	571-842-1.5	77	mg/Kg	9831	5	1	7/22/2002	7/26/2002
058049-032A	571-522-0	40	mg/Kg	9831	5	1	7/22/2002	7/26/2002
058049-033A	571-522-0.3	ND	mg/Kg	9831	5	1	7/22/2002	7/26/2002
058049-034A	571-522-0.6	330	mg/Kg	9831	5	1	7/22/2002	7/26/2002

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- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/30/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058049
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058049-035A	571-522-0.9	ND	mg/Kg	9831	5	1	7/22/2002	7/26/2002
058049-036A	571-522-1.5	ND	mg/Kg	9831	5	1	7/22/2002	7/26/2002
058049-037A	571-507-0	1500	mg/Kg	9831	5	1	7/22/2002	7/26/2002
058049-038A	571-507-0.3	5.9	mg/Kg	9831	5	1	7/22/2002	7/26/2002
058049-039A	571-507-0.6	8.7	mg/Kg	9831	5	1	7/22/2002	7/26/2002
058049-040A	571-507-0.9	6.8	mg/Kg	9831	5	1	7/22/2002	7/26/2002
058049-041A	571-507-1.5	10	mg/Kg	9832	5	1	7/22/2002	7/26/2002
058049-042A	571-505-0	ND	mg/Kg	9832	5	1	7/22/2002	7/26/2002
058049-043A	571-505-0.3	56	mg/Kg	9832	5	1	7/22/2002	7/26/2002
058049-044A	571-505-0.6	140	mg/Kg	9832	5	1	7/22/2002	7/26/2002
058049-045A	571-505-0.9	ND	mg/Kg	9832	5	1	7/22/2002	7/26/2002

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Advanced Technology Laboratories

Date: 7/30/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058049
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058049-046A	571-505-1.5	280	mg/Kg	9832	5	1	7/22/2002	7/26/2002
058049-047A	571-502-0	110	mg/Kg	9832	5	1	7/22/2002	7/26/2002
058049-048A	571-502-0.3	9.1	mg/Kg	9832	5	1	7/22/2002	7/26/2002
058049-049A	571-502-0.6	230	mg/Kg	9832	5	1	7/22/2002	7/26/2002
058049-050A	571-502-0.9	5.5	mg/Kg	9832	5	1	7/22/2002	7/26/2002
058049-051A	571-502-1.5	7.8	mg/Kg	9832	5	1	7/22/2002	7/26/2002
058049-052A	571-115-0	150	mg/Kg	9832	5	1	7/22/2002	7/26/2002
058049-053A	571-115-0.3	170	mg/Kg	9832	5	1	7/22/2002	7/26/2002
058049-054A	571-115-0.6	170	mg/Kg	9832	5	1	7/22/2002	7/26/2002
058049-055A	571-115-0.9	15	mg/Kg	9832	5	1	7/22/2002	7/26/2002
058049-056A	571-115-1.5	ND	mg/Kg	9832	5	1	7/22/2002	7/26/2002

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Advanced Technology Laboratories *3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040*

Advanced Technology Laboratories

Date: 7/30/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058049
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058049-057A	571-114-0	120	mg/Kg	9832	5	1	7/22/2002	7/26/2002
058049-058A	571-114-0.3	120	mg/Kg	9832	5	1	7/22/2002	7/26/2002
058049-059A	571-114-0.6	170	mg/Kg	9832	5	1	7/22/2002	7/26/2002
058049-060A	571-114-0.9	420	mg/Kg	9832	5	1	7/22/2002	7/26/2002

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DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interferen
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E - Value above quantitation range
Results are wet unless otherwise specified

Advanced Technology Laboratories 3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 7/30/2002

pH
EPA 9045C

CLIENT:	Ninyo & Moore	**Lab Order:**	058049
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058049-002A	571-329-0	8.46	pH Units	R19855	0.1	1	7/22/2002	7/26/2002
058049-012A	571-838-0	8.46	pH Units	R19855	0.1	1	7/22/2002	7/26/2002
058049-021A	571-839-1.5	8.40	pH Units	R19855	0.1	1	7/22/2002	7/26/2002
058049-031A	571-842-1.5	8.41	pH Units	R19855	0.1	1	7/22/2002	7/26/2002
058049-041A	571-507-1.5	8.44	pH Units	R19855	0.1	1	7/22/2002	7/26/2002
058049-052A	571-115-0	7.21	pH Units	R19855	0.1	1	7/22/2002	7/26/2002

Qualifiers:

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- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 8/2/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058049
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058049-004A	571-329-0.6	2.9	mg/L	9947	0.2	1	7/22/2002	8/2/2002
058049-007A	571-328-0	2.5	mg/L	9947	0.2	1	7/22/2002	8/2/2002
058049-009A	571-328-0.6	0.43	mg/L	9947	0.2	1	7/22/2002	8/2/2002
058049-012A	571-838-0	5.8	mg/L	9947	0.2	1	7/22/2002	8/2/2002
058049-014A	571-838-0.6	12	mg/L	9947	0.4	2	7/22/2002	8/2/2002
058049-019A	571-839-0.6	18	mg/L	9947	0.4	2	7/22/2002	8/2/2002
058049-029A	571-842-0.6	10	mg/L	9947	0.2	1	7/22/2002	8/2/2002
058049-031A	571-842-1.5	1.7	mg/L	9947	0.2	1	7/22/2002	8/2/2002
058049-034A	571-522-0.6	19	mg/L	9947	0.4	2	7/22/2002	8/2/2002
058049-043A	571-505-0.3	ND	mg/L	9947	0.2	1	7/22/2002	8/2/2002
058049-044A	571-505-0.6	0.33	mg/L	9947	0.2	1	7/22/2002	8/2/2002

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Advanced Technology Laboratories

Date: 8/2/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058049
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058049-046A	571-505-1.5	44	mg/L	9947	2	10	7/22/2002	8/2/2002
058049-047A	571-502-0	3.1	mg/L	9947	0.2	1	7/22/2002	8/2/2002
058049-049A	571-502-0.6	31	mg/L	9947	0.8	4	7/22/2002	8/2/2002
058049-052A	571-115-0	10	mg/L	9947	0.2	1	7/22/2002	8/2/2002
058049-053A	571-115-0.3	9.2	mg/L	9947	0.2	1	7/22/2002	8/2/2002
058049-054A	571-115-0.6	14	mg/L	9947	0.4	2	7/22/2002	8/2/2002
058049-057A	571-114-0	7.1	mg/L	9947	0.2	1	7/22/2002	8/2/2002
058049-058A	571-114-0.3	6.8	mg/L	9947	0.2	1	7/22/2002	8/2/2002
058049-059A	571-114-0.6	3.8	mg/L	9947	0.2	1	7/22/2002	8/2/2002
058049-060A	571-114-0.9	5.1	mg/L	9948	0.2	1	7/22/2002	8/2/2002

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Advanced Technology Laboratories

Date: 8/12/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058049
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058049-012A	571-838-0	ND	mg/L	10133	0.2	1	7/22/2002	8/9/2002
058049-014A	571-838-0.6	ND	mg/L	10133	0.2	1	7/22/2002	8/9/2002
058049-019A	571-839-0.6	ND	mg/L	10133	0.2	1	7/22/2002	8/9/2002
058049-029A	571-842-0.6	ND	mg/L	10133	0.2	1	7/22/2002	8/9/2002
058049-034A	571-522-0.6	ND	mg/L	10133	0.2	1	7/22/2002	8/9/2002
058049-046A	571-505-1.5	0.23	mg/L	10133	0.2	1	7/22/2002	8/9/2002
058049-049A	571-502-0.6	0.25	mg/L	10133	0.2	1	7/22/2002	8/9/2002
058049-052A	571-115-0	1.6	mg/L	10133	0.2	1	7/22/2002	8/9/2002
058049-053A	571-115-0.3	1.1	mg/L	10133	0.2	1	7/22/2002	8/9/2002
058049-054A	571-115-0.6	2.0	mg/L	10133	0.2	1	7/22/2002	8/9/2002
058049-057A	571-114-0	ND	mg/L	10133	0.2	1	7/22/2002	8/9/2002

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Advanced Technology Laboratories

Date: 8/12/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058049
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058049-058A	571-114-0.3	0.32	mg/L	10133	0.2	1	7/22/2002	8/9/2002
058049-060A	571-114-0.9	ND	mg/L	10133	0.2	1	7/22/2002	8/9/2002

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Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-842-0
Lab Order:	058049		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/22/2002 10:05:00 AM
Lab ID:	058049-027A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810F	QC Batch: 10217					Analyst: **RQ**
Antimony	2.6	2.5		mg/Kg	10	8/10/2002
Arsenic	7.6	2.5		mg/Kg	10	8/10/2002
Barium	270	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	17	1.5		mg/Kg	10	8/10/2002
Cobalt	19	1.5		mg/Kg	10	8/10/2002
Copper	25	1.5		mg/Kg	10	8/10/2002
Molybdenum	4.2	2.5		mg/Kg	10	8/10/2002
Nickel	26	1.5		mg/Kg	10	8/10/2002
Selenium	14	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	45	1.5		mg/Kg	10	8/10/2002
Zinc	58	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020813G	QC Batch: 10199					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/13/2002

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Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-507-0
Lab Order:	058049		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/22/2002 11:28:00 AM
Lab ID:	058049-037A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810F	QC Batch: 10217					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	7.4	2.5		mg/Kg	10	8/10/2002
Barium	260	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	2.0	1.5		mg/Kg	10	8/10/2002
Chromium	37	1.5		mg/Kg	10	8/10/2002
Cobalt	9.1	1.5		mg/Kg	10	8/10/2002
Copper	190	1.5		mg/Kg	10	8/10/2002
Molybdenum	6.3	2.5		mg/Kg	10	8/10/2002
Nickel	26	1.5		mg/Kg	10	8/10/2002
Selenium	11	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	42	1.5		mg/Kg	10	8/10/2002
Zinc	500	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020813G	QC Batch: 10199					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/13/2002

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Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-115-0.9
Lab Order:	058049		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/22/2002 12:38:00 PM
Lab ID:	058049-055A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810F	QC Batch: 10217					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	ND	2.5		mg/Kg	10	8/10/2002
Barium	130	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	19	1.5		mg/Kg	10	8/10/2002
Cobalt	14	1.5		mg/Kg	10	8/10/2002
Copper	23	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	16	1.5		mg/Kg	10	8/10/2002
Selenium	14	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	50	1.5		mg/Kg	10	8/10/2002
Zinc	230	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020813G	QC Batch: 10199					Analyst: **NS**
Mercury	0.17	0.10		mg/Kg	1	8/13/2002

Qualifiers:

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Advanced Technology Laboratories

Date: 8/15/2002

LEAD BY ATOMIC ABSORPTION
EPA 1311/ 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058049
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058049-019A	571-839-0.6	0.23	mg/L	10346	0.2	1	7/22/2002	8/14/2002
058049-034A	571-522-0.6	0.49	mg/L	10346	0.2	1	7/22/2002	8/14/2002
058049-037A	571-507-0	ND	mg/L	10117	0.2	1	7/22/2002	8/7/2002
058049-046A	571-505-1.5	1.1	mg/L	10346	0.2	1	7/22/2002	8/14/2002
058049-049A	571-502-0.6	1.7	mg/L	10346	0.2	1	7/22/2002	8/14/2002
058049-054A	571-115-0.6	0.60	mg/L	10346	0.2	1	7/22/2002	8/14/2002

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Advanced Technology Laboratories

Date: *15-Aug-02*

CLIENT: Ninyo & Moore
Work Order: 058049
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10117

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID: **MB-10117** SampType: **mblk** TestCode: **7420_TC** Units: **mg/L** Prep Date: **8/6/2002** Run ID: **AA2_020807G**											
Client ID: **ZZZZZ** Batch ID: **10117** TestNo: **EPA 1311/ 74 (EPA 3010A)** Analysis Date: **8/7/2002** SeqNo: **314974**											
Lead	ND	0.20									
Sample ID: **MB-10099-TCLP** SampType: **mblk** TestCode: **7420_TC** Units: **mg/L** Prep Date: **8/6/2002** Run ID: **AA2_020807G**											
Client ID: **ZZZZZ** Batch ID: **10117** TestNo: **EPA 1311/ 74 (EPA 3010A)** Analysis Date: **8/7/2002** SeqNo: **314975**											
Lead	ND	0.20									
Sample ID: **LCS-10117** SampType: **lcs** TestCode: **7420_TC** Units: **mg/L** Prep Date: **8/6/2002** Run ID: **AA2_020807G**											
Client ID: **ZZZZZ** Batch ID: **10117** TestNo: **EPA 1311/ 74 (EPA 3010A)** Analysis Date: **8/7/2002** SeqNo: **314987**											
Lead	1.191	0.20	1	0	119	80	120	0	0		
Sample ID: **058052-033AMS** SampType: **MS** TestCode: **7420_TC** Units: **mg/L** Prep Date: **8/6/2002** Run ID: **AA2_020807G**											
Client ID: **ZZZZZ** Batch ID: **10117** TestNo: **EPA 1311/ 74 (EPA 3010A)** Analysis Date: **8/7/2002** SeqNo: **314985**											
Lead	14	0.40	2.5	12.85	45.8	80	120	0	0		S
Sample ID: **058052-033ADUP** SampType: **DUP** TestCode: **7420_TC** Units: **mg/L** Prep Date: **8/6/2002** Run ID: **AA2_020807G**											
Client ID: **ZZZZZ** Batch ID: **10117** TestNo: **EPA 1311/ 74 (EPA 3010A)** Analysis Date: **8/7/2002** SeqNo: **314984**											
Lead	11.8	0.40	0	0	0	0	0	12.85	8.54	30	

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Calculations are based on raw values
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Advanced Technology Laboratories
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CLIENT: Ninyo & Moore
Work Order: 058049
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10133

Sample ID: MB-10133	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809M
Client ID: ZZZZZ	Batch ID: 10133	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316396

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.04782	0.20									J

Sample ID: MB-10133A	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809M
Client ID: ZZZZZ	Batch ID: 10133	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316397

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10133B	SampType: MBLK	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809M
Client ID: ZZZZZ	Batch ID: 10133	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316410

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0		

Sample ID: LCS-10133	SampType: lcs	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809M
Client ID: ZZZZZ	Batch ID: 10133	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316424

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.391	0.20	7.5	0	98.5	80	120	0	0		

Sample ID: 058049-054AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809M
Client ID: 571-115-0.6	Batch ID: 10133	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316409

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.766	0.20	5	2.006	95.2	80	120	0	0		

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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 058049
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10133

Sample ID: 058050-017AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809M
Client ID: ZZZZZ	Batch ID: 10133	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316422

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	29.29	0.80	20	10.58	93.5	80	120	0	0		

Sample ID: 058049-054ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809M
Client ID: 571-115-0.6	Batch ID: 10133	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316408

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.333	0.20	0	0	0	0	0	2.006	40.3	30	R

Sample ID: 058050-017ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809M
Client ID: ZZZZZ	Batch ID: 10133	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316421

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	9.079	0.20	0	0	0	0	0	10.58	15.2	30	

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CLIENT: Ninyo & Moore
Work Order: 058049
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10199

Sample ID: MB-10199	SampType: mblk	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020813G
Client ID: ZZZZZ	Batch ID: 10199	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318529

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-10199	SampType: lcs	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020813G
Client ID: ZZZZZ	Batch ID: 10199	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318528

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.045	0.10	2.08	0	98.3	80	120	0	0		

Sample ID: 058052-032AMS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020813G
Client ID: ZZZZZ	Batch ID: 10199	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318526

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9967	0.10	0.83	0.1735	99.2	62	146	0	0		

Sample ID: 058052-032AMSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020813G
Client ID: ZZZZZ	Batch ID: 10199	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318527

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.148	0.10	0.83	0.1735	117	62	146	0.9967	14.1	33	

Sample ID: 058052-032ADUP	SampType: DUP	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020813G
Client ID: ZZZZZ	Batch ID: 10199	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/13/2002	SeqNo: 318525

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.1487	0.10	0	0	0	0	0	0.1735	15.4	30	

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CLIENT: Ninyo & Moore
Work Order: 058049
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10217

Sample ID: MB-10217	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316694

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.1157	0.25									J
Arsenic	0.1253	0.25									J
Barium	ND	0.15									
Beryllium	ND	0.15									
Cadmium	ND	0.15									
Chromium	ND	0.15									
Cobalt	0.005306	0.15									J
Copper	ND	0.15									
Molybdenum	0.0418	0.25									J
Nickel	0.006927	0.15									J
Selenium	0.25	0.25									
Silver	ND	0.15									
Thallium	0.009899	0.25									J
Vanadium	ND	0.15									
Zinc	0.05919	0.50									J

Sample ID: LCS-10217	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316693

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	46.11	0.25	50	0	92.2	80	120	0	0		
Arsenic	48.06	0.25	50	0	96.1	80	120	0	0		
Barium	49.52	0.15	50	0	99	80	120	0	0		
Beryllium	48.49	0.15	50	0	97	80	120	0	0		
Cadmium	48.5	0.15	50	0	97	80	120	0	0		
Chromium	51.07	0.15	50	0	102	80	120	0	0		
Cobalt	48.39	0.15	50	0	96.8	80	120	0	0		
Copper	48.14	0.15	50	0	96.3	80	120	0	0		
Molybdenum	47.41	0.25	50	0	94.8	80	120	0	0		
Nickel	47.63	0.15	50	0	95.3	80	120	0	0		

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CLIENT: Ninyo & Moore
Work Order: 058049
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10217

Sample ID: LCS-10217	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316693

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	48	0.25	50	0	96	80	120	0	0		
Silver	48.18	0.15	50	0	96.4	80	120	0	0		
Thallium	46.17	0.25	50	0	92.3	80	120	0	0		
Vanadium	50.62	0.15	50	0	101	80	120	0	0		
Zinc	49.52	0.50	50	0	99	80	120	0	0		

Sample ID: 058052-009AMS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316690

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	114.4	2.5	125	1.865	90	32	115	0	0		
Arsenic	129.3	2.5	125	2.067	102	59	111	0	0		
Barium	182.1	1.5	125	64.66	94	34	151	0	0		
Beryllium	130.9	1.5	125	0	105	56	112	0	0		
Cadmium	130.1	1.5	125	0.08258	104	52	120	0	0		
Chromium	136.6	1.5	125	10.36	101	56	118	0	0		
Cobalt	135.5	1.5	125	7.263	103	58	117	0	0		
Copper	137.5	1.5	125	14.64	98.3	58	134	0	0		
Molybdenum	124.1	2.5	125	0.4373	99	56	115	0	0		
Nickel	133.3	1.5	125	7.975	100	52	120	0	0		
Selenium	141.8	2.5	125	5.567	109	46	108	0	0		S
Silver	125.3	1.5	125	0	100	74	117	0	0		
Thallium	119	2.5	125	0	95.2	62	117	0	0		
Vanadium	150.6	1.5	125	25.65	99.9	55	122	0	0		
Zinc	160.1	5.0	125	37.03	98.4	43	134	0	0		

Sample ID: 058052-009AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316691

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike/Surrogate outside limits due to matrix interference; DO - Surrogate diluted out; J - Analyte detected below quantitation limits; B - Analyte detected in the associated Method Blank; H - Sample exceeded holding time; R - RPD outside accepted recovery limits

Calculations are based on raw values

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10217

Sample ID: 058052-009AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316691

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	113.5	2.5	125	1.865	89.3	32	115	114.4	0.784	20	
Arsenic	128.4	2.5	125	2.067	101	59	111	129.3	0.735	20	
Barium	185.3	1.5	125	64.66	96.5	34	151	182.1	1.72	20	
Beryllium	127	1.5	125	0	102	56	112	130.9	3.05	20	
Cadmium	128.6	1.5	125	0.08258	103	52	120	130.1	1.17	20	
Chromium	135.2	1.5	125	10.36	99.9	56	118	136.6	1.04	20	
Cobalt	135.1	1.5	125	7.263	102	58	117	135.5	0.312	20	
Copper	133.5	1.5	125	14.64	95.1	58	134	137.5	2.89	20	
Molybdenum	123.3	2.5	125	0.4373	98.3	56	115	124.1	0.703	20	
Nickel	132.9	1.5	125	7.975	99.9	52	120	133.3	0.270	20	
Selenium	136.8	2.5	125	5.567	105	46	108	141.8	3.54	20	
Silver	122.7	1.5	125	0	98.1	74	117	125.3	2.09	20	
Thallium	118.1	2.5	125	0	94.4	62	117	119	0.780	20	
Vanadium	150.9	1.5	125	25.65	100	55	122	150.6	0.202	20	
Zinc	159.9	5.0	125	37.03	98.3	43	134	160.1	0.0866	20	

Sample ID: 058052-009ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316689

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.303	2.5	0	0	0	0	0	1.865	0	30	J
Arsenic	2.171	2.5	0	0	0	0	0	2.067	0	30	J
Barium	64.44	1.5	0	0	0	0	0	64.66	0.343	30	
Beryllium	ND	1.5	0	0	0	0	0	0	0	30	
Cadmium	0.09582	1.5	0	0	0	0	0	0.08258	0	30	J
Chromium	10.09	1.5	0	0	0	0	0	10.36	2.65	30	
Cobalt	6.643	1.5	0	0	0	0	0	7.263	8.92	30	
Copper	11.99	1.5	0	0	0	0	0	14.64	19.9	30	
Molybdenum	0.4112	2.5	0	0	0	0	0	0.4373	0	30	J
Nickel	7.392	1.5	0	0	0	0	0	7.975	7.59	30	

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CLIENT: Ninyo & Moore
Work Order: 058049
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10217

Sample ID: **058052-009ADUP** SampType: **DUP** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **8/9/2002** Run ID: **ICP5_020810F**
Client ID: **ZZZZZ** Batch ID: **10217** TestNo: **EPA 6010B** **(EPA 3050A)** Analysis Date: **8/10/2002** SeqNo: **316689**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	9.413	2.5	0	0	0	0	0	5.567	51.3	30	R
Silver	ND	1.5	0	0	0	0	0	0	0	30	
Thallium	ND	2.5	0	0	0	0	0	0	0	30	
Vanadium	25.22	1.5	0	0	0	0	0	25.65	1.68	30	
Zinc	35.35	5.0	0	0	0	0	0	37.03	4.62	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 10346

Sample ID: MB-10346	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814O
Client ID: ZZZZZ	Batch ID: 10346	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318904

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10264-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814O
Client ID: ZZZZZ	Batch ID: 10346	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318905

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10346	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814O
Client ID: ZZZZZ	Batch ID: 10346	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318919

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.164	0.20	1	0	116	80	120	0	0		

Sample ID: 058049-054AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814O
Client ID: 571-115-0.6	Batch ID: 10346	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318917

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.263	0.20	2.5	0.6036	106	80	120	0	0		

Sample ID: 058049-054ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814O
Client ID: 571-115-0.6	Batch ID: 10346	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318916

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.6097	0.20	0	0	0	0	0	0.6036	1.01	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9830

Sample ID: MB-9830A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726F
Client ID: ZZZZZ	Batch ID: 9830	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307298

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.3345	5.0									

Sample ID: MB-9830B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726F
Client ID: ZZZZZ	Batch ID: 9830	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307299

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.4305	5.0									

Sample ID: LCS-9830	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726F
Client ID: ZZZZZ	Batch ID: 9830	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307297

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	258.1	5.0	250	0	103	80	120	0	0		

Sample ID: 058049-010AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726F
Client ID: 571-328-0.9	Batch ID: 9830	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307283

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	204.2	5.0	250	2.955	80.5	47	128	0	0		

Sample ID: 058049-020AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726F
Client ID: 571-839-0.9	Batch ID: 9830	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307295

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	223.5	5.0	250	12.25	84.5	47	128	0	0		

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9830

Sample ID: 058049-010ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726F
Client ID: 571-328-0.9	Batch ID: 9830	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307282

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.84	5.0	0	0	0	0	0	2.955	0	30	J

Sample ID: 058049-020ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726F
Client ID: 571-839-0.9	Batch ID: 9830	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307294

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	19.6	5.0	0	0	0	0	0	12.25	46.1	30	R

Qualifiers:
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CLIENT: Ninyo & Moore
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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9831

Sample ID: MB-9831A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726G
Client ID: ZZZZZ	Batch ID: 9831	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307365

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9831B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726G
Client ID: ZZZZZ	Batch ID: 9831	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307366

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.249	5.0									

Sample ID: LCS-9831	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726G
Client ID: ZZZZZ	Batch ID: 9831	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307364

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	264.2	5.0	250	0	106	80	120	0	0		

Sample ID: 058049-030AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726G
Client ID: 571-842-0.9	Batch ID: 9831	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307350

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	164.7	5.0	250	2.24	65	47	128	0	0		

Sample ID: 058049-040AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726G
Client ID: 571-507-0.9	Batch ID: 9831	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307362

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	187.7	5.0	250	6.826	72.3	47	128	0	0		

Qualifiers:
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
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CLIENT: Ninyo & Moore
Work Order: 058049
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9831

Sample ID: 058049-030ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726G
Client ID: 571-842-0.9	Batch ID: 9831	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307349

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.115	5.0	0	0	0	0	0	2.24	0	30	J

Sample ID: 058049-040ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726G
Client ID: 571-507-0.9	Batch ID: 9831	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307361

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	10.22	5.0	0	0	0	0	0	6.826	39.8	30	R

Qualifiers:
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 058049
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9832

Sample ID: MB-9832A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726H
Client ID: ZZZZZ	Batch ID: 9832	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307643

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.26	5.0									J

Sample ID: MB-9832B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726H
Client ID: ZZZZZ	Batch ID: 9832	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307644

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.357	5.0									

Sample ID: LCS-9832	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726H
Client ID: ZZZZZ	Batch ID: 9832	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307642

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	252.6	5.0	250	0	101	80	120	0	0		

Sample ID: 058049-050AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726H
Client ID: 571-502-0.9	Batch ID: 9832	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307628

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	172.4	5.0	250	5.532	66.8	47	128	0	0		

Sample ID: 058049-060AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726H
Client ID: 571-114-0.9	Batch ID: 9832	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307640

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	506.4	5.0	250	420	34.6	47	128	0	0		S

Qualifiers:
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S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 058049
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9832

Sample ID: 058049-050ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726H
Client ID: 571-502-0.9	Batch ID: 9832	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307627

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.291	5.0	0	0	0	0	0	5.532	27.4	30	

Sample ID: 058049-060ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726H
Client ID: 571-114-0.9	Batch ID: 9832	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307639

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	505	5.0	0	0	0	0	0	420	18.4	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
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DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 058049
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9878

Sample ID: MB-9878	SampType: MBLK	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/26/2002	Run ID: ICP2_020726F
Client ID: ZZZZZ	Batch ID: 9878	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/26/2002	SeqNo: 307841

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.00451	0.0050									

Sample ID: LCS-9878	SampType: LCS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/26/2002	Run ID: ICP2_020726F
Client ID: ZZZZZ	Batch ID: 9878	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/26/2002	SeqNo: 307842

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1	0.0050	1	0	100	80	120	0	0		

Sample ID: 058069-001AMS	SampType: MS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/26/2002	Run ID: ICP2_020726F
Client ID: ZZZZZ	Batch ID: 9878	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/26/2002	SeqNo: 307854

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.48	0.0050	2.5	0	99.2	66	118	0	0		

Sample ID: 058069-001ADUP	SampType: dup	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/26/2002	Run ID: ICP2_020726F
Client ID: ZZZZZ	Batch ID: 9878	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/26/2002	SeqNo: 307853

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050	0	0	0	0	0	0	0	30	

Qualifiers:
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 058049
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9947

Sample ID: MB-9947	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802E
Client ID: ZZZZZ	Batch ID: 9947	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311932

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05858	0.20									

Sample ID: MB-9947A	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020802E
Client ID: ZZZZZ	Batch ID: 9947	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311933

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.08016	0.20									

Sample ID: MB-9947B	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020802E
Client ID: ZZZZZ	Batch ID: 9947	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311946

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9947	SampType: lcs	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802E
Client ID: ZZZZZ	Batch ID: 9947	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311960

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.602	0.20	7.5	0	101	80	120	0	0		

Sample ID: 058049-043AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802E
Client ID: 571-505-0.3	Batch ID: 9947	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311945

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.766	0.20	5	0.06586	94	80	120	0	0		

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 058049
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9947

Sample ID: 058049-059AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802E
Client ID: 571-114-0.6	Batch ID: 9947	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311958

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.322	0.20	5	3.803	90.4	80	120	0	0		

Sample ID: 058049-043ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020802E
Client ID: 571-505-0.3	Batch ID: 9947	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311944

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.8043	0.20	0	0	0	0	0	0.06586	170	30	R

Sample ID: 058049-059ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020802E
Client ID: 571-114-0.6	Batch ID: 9947	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311957

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.899	0.20	0	0	0	0	0	3.803	25.2	30	

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 058049
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9948

Sample ID: MB-9948	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802F
Client ID: ZZZZZ	Batch ID: 9948	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311961

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9948A	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020802F
Client ID: ZZZZZ	Batch ID: 9948	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311962

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9948B	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020802F
Client ID: ZZZZZ	Batch ID: 9948	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311975

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9948	SampType: lcs	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802F
Client ID: ZZZZZ	Batch ID: 9948	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311989

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.47	0.20	7.5	0	99.6	80	120	0	0		

Sample ID: 058050-018AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802F
Client ID: ZZZZZ	Batch ID: 9948	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311974

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	70.85	1.6	40	31.81	97.6	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike/Surrogate outside limits due to matrix interference; DO - Surrogate diluted out; J - Analyte detected below quantitation limits; B - Analyte detected in the associated Method Blank; H - Sample exceeded holding time; R - RPD outside accepted recovery limits

Calculations are based on raw values

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CLIENT: Ninyo & Moore
Work Order: 058049
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9948

Sample ID: 058050-035AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802F
Client ID: ZZZZZ	Batch ID: 9948	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311987

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	166.6	4.0	100	70.42	96.2	80	120	0	0		

Sample ID: 058050-018ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020802F
Client ID: ZZZZZ	Batch ID: 9948	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311973

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	29.58	0.80	0	0	0	0	0	31.81	7.29	30	

Sample ID: 058050-035ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020802F
Client ID: ZZZZZ	Batch ID: 9948	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311986

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	80.21	2.0	0	0	0	0	0	70.42	13.0	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 058049
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: R19855

Sample ID: 058050-031ADUP	SampType: DUP	TestCode: 9045_S	Units: pH Units	Prep Date: 7/26/2002	Run ID: WETCHEM_020726A
Client ID: ZZZZZ	Batch ID: R19855	TestNo: EPA 9045C		Analysis Date: 7/26/2002	SeqNo: 307192

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.42	0.10	0	0	0	0	0	7.33	1.22	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Rachelle

From: Steve Reese [sreese@ninyoandmoore.com]
Sent: Wednesday, July 31, 2002 9:27 AM
To: 'rachelle@atlglobal.com'
Cc: David Shaler (E-mail); Ruth Cheung (E-mail)
Subject: TCLP Analysis

TCLP.xls

Rachelle,
Attached please find a list of samples to be run for the TCLP analysis. Currently, we selected all of the samples that are greater than 1,000 mg/kg
of TTLC results. However, they will be ran by instruction only. There may
be more samples chosen for TCLP analysis in the future, but please run these 82 samples for now. Please call with any questions.
Thank you, Steve

Stephen S. Reese
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www.ninyoandmoore.com

RUN FOR TCLP ANALYSIS			
33	20	29	82
569-101-0	570-101-0	571-104-0	
569-102-0	570-101-0.6	571-120-0	
569-102-0.3	570-102-0.6	571-310-0.9	
569-102-0.9	570-103-1.5	571-317-0	
569-111-0	570-114-0.6	571-320-0	
569-112-0	570-115-0	571-325-0.6	
569-112-0.6	570-119-0.3	571-507-0	
569-201-0	570-201-0	571-511-0	
569-212-0	570-214-0	571-514-0	
569-301-0	570-311-0.6	571-524-0	
569-303-0.9	570-312-0.6	571-710-0	
569-314-0	570-504-0	571-710-0.3	
569-401-0	570-508-0	571-711-0	
569-404-0.6	570-517-0	571-711-0.3	
569-405-0.6	570-517-0.3	571-712-0	
569-408-0.9	570-610-0.6	571-712-0.3	
569-502-0.6	570-615-0	571-201-0.6	
569-516-0	570-706-0	571-405-0	
569-603-0.3	570-709-0	571-406-0	
569-607-0	570-808-0.6	571-407-0	
569-607-0.3		571-414-0	
569-609-0		571-609-0	
569-609-0.3		571-611-0	
569-703-0		571-616-0	
569-703-0.9		571-617-0	
569-705-0		571-619-1.5	
569-705-0.3		571-814-0.3	
569-706-0		571-818-0.6	
569-708-0		571-819-0	
569-710-0			
569-711-0			
569-711-0.3			
569-801-0.3			

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Tuesday, August 06, 2002 3:46 PM
To: 'Rachelle'; 'David Shaler (E-mail)'
Subject: Title 22 Metals

Title 22 Metals.xls

Rachelle,
Please run the following samples for Title 22 Metals. Please do not list
Pb in your emailed results. There should be a total of 120 samples to be
run.
Thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

569-102-0.9	570-101-0	571-101-0.9
569-112-0	570-101-0.6	571-104-0
569-201-0	570-201-0	571-201-0.6
569-206-0.6	570-205-0.9	571-108-1.5
569-106-1.5	570-106-0.3	571-111-0.3
569-212-0	570-208-1.5	571-207-0
569-401-0.6	570-111-0.6	571-210-0.6
569-301-0	570-214-0	571-115-0.9
569-303-0.9	570-115-0.3	571-214-0.3
569-404-0.6	570-119-0.9	571-120-0
569-408-0.9	570-224-0.6	571-217-1.5
569-314-0	570-401-0	571-220-0.6
569-313-0.3	570-401-0.3	571-301-0.3
569-502-0.6	570-304-1.5	571-405-0
569-602-1.5	570-307-0.9	571-306-0.9
569-607-0.3	570-311-0.6	571-407-0
569-607-0	570-312-0.6	571-310-0.9
569-508-0.9	570-316-0.3	571-315-0.3
569-511-0.6	570-601-0	571-412-1.5
569-612-1.5	570-505-1.5	571-317-0
569-516-0	570-508-0	571-320-0.6
569-801-0.3	570-610-0.6	571-416-0.9
569-519-0.6	570-511-0.9	571-325-0.3
569-803-0.9	570-615-0	571-421-1.5
569-705-0	570-514-0.3	571-425-0
569-806-1.5	570-517-0	571-501-0.6
569-708-0.3	570-618-0.6	571-503-0.9
569-711-0	570-621-1.5	571-603-0.3
569-811-0	570-703-0.9	571-507-0
	570-804-0	571-609-0
	570-706-0	571-510-1.5
	570-709-0	571-611-0
	570-808-0.6	571-514-0
	570-711-1.5	571-614-0.3
	570-812-0.3	571-517-0.9
		571-617-0.6
		571-520-1.5
		571-621-0.3
		571-524-0
		571-624-0.9
		571-529-0.3
		571-628-0.6
		571-703-1.5
		571-707-0
		571-804-0.9
		571-809-0.3
		571-711-0
		571-712-0
		571-814-0.3
		571-818-0.6
		571-819-0
		571-827-1.5

571-832-0.9
571-836-0.3
571-837-0.6
571-842-0

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Thursday, August 08, 2002 9:14 AM
To: 'Rachelle'
Subject: TCLP Analysis

TCLP-3.xls

In addition to the 90 TCLP already run please run the following samples for
TCLP. There should be a list of 350 samples.
Thanks for a the hard work and timely results.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

-----Original Message-----
From: Rachelle [SMTP:Rachelle@ATLGlobal.com]
Sent: Wednesday, August 07, 2002 5:02 PM
To: 'David Shaler (E-mail)'
Cc: 'Ruth Cheung (E-mail)'
Subject: TCLP Results

<<57931TCLP.xls>> <<58001TCLP.xls>> <<58021TCLP.xls>> <<58022TCLP.xls>>
<<58023TCLP.xls>> <<58024TCLP.xls>> <<58049TCLP.xls>> <<58050TCLP.xls>>
<<58052TCLP.xls>> <<58053TCLP.xls>> <<58065TCLP.xls>> <<58066TCLP.xls>>
<<58067TCLP.xls>> <<58068TCLP.xls>> <<58069TCLP.xls>>

Rachelle Arada
Project Coordinator
www.atlglobal.com
voice: 562.989.4045 ext 237
fax : 562.989.4040

<< File: 57931TCLP.xls >> << File: 58001TCLP.xls >> << File: 58021TCLP.xls >> << File: 58022TCLP.xls >> << File: 58023TCLP.xls >> << File: 58024TCLP.xls >> << File: 58049TCLP.xls >> << File: 58050TCLP.xls >> << File: 58052TCLP.xls >> << File: 58053TCLP.xls >> << File: 58065TCLP.xls >> << File: 58066TCLP.xls >> << File: 58067TCLP.xls >> << File: 58068TCLP.xls >> << File: 58069TCLP.xls >>

569-404-0	2. STLC	170	570-515-0.3	2. STLC	120	571-521-0	2. STLC	230
569-402-0	2. STLC	130	570-811-0	2. STLC	110	571-324-0.9	2. STLC	110
569-406-0	2. STLC	120	570-114-0.0	2. STLC	110	571-818-0	2. STLC	110
569-515-0	2. STLC	110	570-504-0.6	2. STLC	100	571-819-0.6	2. STLC	110
569-611-0	2. STLC	100	570-811-1.5	2. STLC	90	571-708-0	2. STLC	110
569-409-0	2. STLC	94	570-615-0.6	2. STLC	84	571-103-0.6	2. STLC	110
569-603-0	2. STLC	93	570-305-0	2. STLC	79	571-617-0.3	2. STLC	100
569-104-0.6	2. STLC	91	570-314-0.6	2. STLC	76	571-611-0.6	2. STLC	92
569-807-0	2. STLC	86	570-505-0.6	2. STLC	75	571-712-0.9	2. STLC	81
569-608-0	2. STLC	86	570-208-0.6	2. STLC	74	571-105-0.6	2. STLC	81
569-501-0	2. STLC	84	570-116-0.0	2. STLC	73	571-313-0	2. STLC	79
569-710-0.3	2. STLC	83	570-102-0	2. STLC	65	571-508-0	2. STLC	73
569-808-0	2. STLC	83	570-804-0.6	2. STLC	64	571-518-0.3	2. STLC	73
569-609-0.6	2. STLC	80	570-704-0	2. STLC	63	571-217-0	2. STLC	68
569-803-0	2. STLC	79	570-508-0.6	2. STLC	60	571-516-0	2. STLC	66
569-105-0	2. STLC	78	570-706-0.3	2. STLC	60	571-701-0.3	2. STLC	66
569-512-0	2. STLC	77	570-303-0	2. STLC	58	571-710-0.6	2. STLC	65
569-513-0	2. STLC	77	570-311-1.5	2. STLC	58	571-512-0	2. STLC	64
569-302-0	2. STLC	74	570-117-0.0	2. STLC	58	571-308-0.9	2. STLC	61
569-805-0	2. STLC	73	570-208-0.3	2. STLC	58	571-701-0	2. STLC	61
569-517-0	2. STLC	71	570-709-0.6	2. STLC	57	571-514-0.3	2. STLC	59
569-704-0.3	2. STLC	71	570-703-0	2. STLC	55	571-415-0	2. STLC	58
569-703-0.6	2. STLC	70	570-206-0	2. STLC	54	571-616-0.6	2. STLC	57
569-514-0.3	2. STLC	70	570-301-0	2. STLC	53	571-517-0	2. STLC	56
569-803-0.3	2. STLC	69	570-603-0.3	2. STLC	46	571-112-0.9	2. STLC	56
569-409-0.6	2. STLC	69	570-711-0.6	2. STLC	46	571-214-0	2. STLC	55
569-411-0	2. STLC	68	570-206-0.3	2. STLC	45	571-415-0.3	2. STLC	55
569-102-0.6	2. STLC	68	570-103-0	2. STLC	44	571-405-0.6	2. STLC	55
569-809-0	2. STLC	65	570-602-0	2. STLC	41	571-530-0	2. STLC	55
569-605-0	2. STLC	65	570-209-0	2. STLC	40	571-831-0	2. STLC	53
569-711-0.6	2. STLC	62	570-210-0	2. STLC	40	571-709-0	2. STLC	53
569-806-0	2. STLC	60	570-117-0.3	2. STLC	39	571-103-0.0	2. STLC	52
569-802-0.3	2. STLC	60	570-103-0.6	2. STLC	37	571-312-0	2. STLC	51
569-410-0	2. STLC	59	570-110-0.6	2. STLC	37	571-526-0	2. STLC	51
569-501-0.6	2. STLC	59	570-805-0.9	2. STLC	36	571-819-1.5	2. STLC	51
569-808-0.3	2. STLC	58	570-112-1.5	2. STLC	35	571-515-0	2. STLC	50
569-104-0	2. STLC	56	570-614-0	2. STLC	34	571-833-0	2. STLC	49
569-804-0	2. STLC	54	570-713-0.3	2. STLC	33	571-815-0.6	2. STLC	47
569-610-0	2. STLC	54	570-513-0	2. STLC	32	571-517-0.3	2. STLC	46
569-608-0.3	2. STLC	53	570-312-0.3	2. STLC	31	571-610-0	2. STLC	46
569-213-0	2. STLC	49	570-503-0.6	2. STLC	31	571-413-0	2. STLC	46
569-701-0	2. STLC	47	570-510-0.6	2. STLC	31	571-815-0	2. STLC	45
569-311-0	2. STLC	47	570-202-0	2. STLC	31	571-514-0.9	2. STLC	44
569-609-0.9	2. STLC	46	570-207-0	2. STLC	31	571-505-1.5	2. STLC	44
569-513-0.3	2. STLC	45	570-209-0.3	2. STLC	31	571-528-0	2. STLC	44
569-801-0.6	2. STLC	44	570-703-0.3	2. STLC	30	571-610-0.6	2. STLC	43
569-514-0	2. STLC	42	570-401-0	2. STLC	30	571-629-0	2. STLC	43
569-805-0.6	2. STLC	42	570-610-0.9	2. STLC	29	571-604-0	2. STLC	42
569-408-1.5	2. STLC	42	570-809-0.6	2. STLC	29	571-213-0	2. STLC	41
569-807-0.3	2. STLC	40	570-509-0.9	2. STLC	29	571-812-0	2. STLC	41
569-204-0	2. STLC	40	570-210-0.6	2. STLC	29	571-706-0	2. STLC	41
569-517-0.3	2. STLC	36	570-211-0	2. STLC	29	571-530-0.6	2. STLC	41
569-518-0	2. STLC	36	570-603-0	2. STLC	28	571-305-0	2. STLC	40
569-806-0.3	2. STLC	36	570-119-0	2. STLC	28	571-523-0.3	2. STLC	39
569-705-1.5	2. STLC	35	570-713-0.6	2. STLC	28	571-510-0	2. STLC	39
569-303-0.6	2. STLC	34	570-108-0	2. STLC	27	571-305-0.9	2. STLC	39
569-516-0.3	2. STLC	33	570-708-0.6	2. STLC	27	571-818-1.5	2. STLC	39
569-705-0.6	2. STLC	33	570-224-0	2. STLC	26	571-703-0	2. STLC	38
569-802-0	2. STLC	33	570-601-0	2. STLC	26	571-520-0.3	2. STLC	36
569-515-0.6	2. STLC	32	570-710-0.6	2. STLC	26	571-216-0	2. STLC	34
569-704-0	2. STLC	32	570-614-0.6	2. STLC	26	571-827-0	2. STLC	34
569-401-0.3	2. STLC	32	570-118-0.3	2. STLC	26	571-708-0.3	2. STLC	34
569-207-0	2. STLC	32	570-304-0	2. STLC	25	571-514-0.6	2. STLC	33
569-608-0.6	2. STLC	31	570-707-0.6	2. STLC	25	571-528-1.5	2. STLC	33
569-104-0.3	2. STLC	31	570-510-0	2. STLC	25	571-803-0	2. STLC	33
569-201-0.6	2. STLC	30	570-110-0	2. STLC	24	571-414-0.3	2. STLC	33
569-515-0.3	2. STLC	28	570-223-0	2. STLC	24	571-813-0.3	2. STLC	32
569-212-0.6	2. STLC	28	570-117-0.6	2. STLC	24	571-523-0	2. STLC	31
569-103-0	2. STLC	28	570-616-0	2. STLC	23	571-326-0	2. STLC	31
569-313-0	2. STLC	27	570-704-0.3	2. STLC	22	571-502-0.6	2. STLC	31
569-103-0.3	2. STLC	26	570-513-0.6	2. STLC	22	571-624-1.5	2. STLC	31
569-705-0.9	2. STLC	25	570-221-0.0	2. STLC	22	571-330-0	2. STLC	31
569-707-0.3	2. STLC	25	570-617-0	2. STLC	21	571-512-0.3	2. STLC	30
569-515-1.5	2. STLC	24	570-214-0.3	2. STLC	21	571-521-0.6	2. STLC	29
569-508-0	2. STLC	24	570-122-0.9	2. STLC	20	571-706-0.3	2. STLC	29
569-801-0	2. STLC	24	570-313-0.6	2. STLC	19	571-814-0.6	2. STLC	28
569-402-0.6	2. STLC	24	570-207-0.6	2. STLC	19	571-616-1.5	2. STLC	28
569-516-0.6	2. STLC	22	570-120-0.9	2. STLC	18	571-835-0	2. STLC	28
569-509-0.3	2. STLC	22	570-506-0	2. STLC	18	571-811-0.3	2. STLC	28
569-106-0	2. STLC	22	570-102-0.9	2. STLC	17	571-101-0.6	2. STLC	28
569-106-0.3	2. STLC	22	570-216-0	2. STLC	17	571-112-0	2. STLC	28
569-202-0	2. STLC	21	570-225-0	2. STLC	17	571-315-0	2. STLC	27
569-805-1.5	2. STLC	21	570-304-0.3	2. STLC	17	571-622-0	2. STLC	27
569-205-0	2. STLC	20	570-409-0	2. STLC	17	571-607-0.6	2. STLC	27
569-707-0	2. STLC	19	570-713-0	2. STLC	17	571-609-0.6	2. STLC	27

569-709-0	2. STLC	19
569-202-0.3	2. STLC	19
569-602-0	2. STLC	19
569-207-0.3	2. STLC	19
569-706-0.3	2. STLC	17
569-807-0.9	2. STLC	17
569-104-0.9	2. STLC	17
569-505-0.6	2. STLC	17
569-704-0.6	2. STLC	16
569-808-0.6	2. STLC	16
569-212-0.3	2. STLC	16
569-612-0	2. STLC	16
569-704-1.5	2. STLC	15
569-411-0.3	2. STLC	15
569-113-0	2. STLC	15
569-807-0.6	2. STLC	14
569-311-0.3	2. STLC	12
569-312-0	2. STLC	10
569-311-0.9	2. STLC	8.3

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570-401-0.3	2. STLC	17
570-616-0.6	2. STLC	17
570-308-0	2. STLC	16
570-807-0.9	2. STLC	16
570-701-0.6	2. STLC	16
570-617-0.3	2. STLC	16
570-107-0.6	2. STLC	15
570-811-0.6	2. STLC	15
570-707-0	2. STLC	15
570-518-0	2. STLC	15
570-111-0.0	2. STLC	15
570-109-0.6	2. STLC	14
570-401-0.9	2. STLC	4.1
570-408-0	2. STLC	4
570-409-0.3	2. STLC	3
570-401-0.6		0
570-401-1.5		0
570-408-0.6		0
570-408-1.5		0

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571-837-0.3	2. STLC	27
571-520-0	2. STLC	26
571-516-0.3	2. STLC	26
571-420-0	2. STLC	26
571-102-0.6	2. STLC	26
571-517-1.5	2. STLC	25
571-513-0.6	2. STLC	25
571-623-0.6	2. STLC	25
571-112-0.3	2. STLC	25
571-326-0.6	2. STLC	24
571-619-0.3	2. STLC	24
571-619-0.9	2. STLC	24
571-528-0.3	2. STLC	24
571-706-0.6	2. STLC	24
571-112-0.6	2. STLC	24
571-327-0.6	2. STLC	23
571-817-0	2. STLC	23
571-425-0.6	2. STLC	22
571-118-0	2. STLC	22
571-829-0	2. STLC	22
571-828-0	2. STLC	22
571-122-0	2. STLC	21
571-101-1.5	2. STLC	21
571-530-0.3	2. STLC	21
571-406-0.6	2. STLC	20
571-517-0.6	2. STLC	20
571-835-0.3	2. STLC	20
571-501-0	2. STLC	20
571-518-0.9	2. STLC	19
571-510-0.3	2. STLC	19
571-814-0.9	2. STLC	19
571-522-0.6	2. STLC	19
571-622-1.5	2. STLC	19
571-812-0.6	2. STLC	19
571-701-0.6	2. STLC	19
571-704-0	2. STLC	19
571-711-0.6	2. STLC	19
571-212-0	2. STLC	18
571-839-0.6	2. STLC	18
571-610-1.5	2. STLC	18
571-709-0.3	2. STLC	18
571-311-0.6	2. STLC	17
571-620-0	2. STLC	17
571-109-0	2. STLC	17
571-704-0.3	2. STLC	17
571-207-1.5	2. STLC	16
571-203-0	2. STLC	16
571-616-0.3	2. STLC	16
571-317-0.3	2. STLC	16
571-629-0.3	2. STLC	16
571-416-0	2. STLC	15
571-419-0	2. STLC	15
571-526-0.3	2. STLC	15
571-619-0	2. STLC	15
571-606-0	2. STLC	15
571-115-0.6	2. STLC	14
571-202-0.9	2. STLC	11

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Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

tblTEMP

WorkOrder	ClientSampID	TestNo	Analyte	PQL	DF	CollectionDate	AnalDate	PrepDate
058049	571-114-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-114-0	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058049	571-114-0	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058049	571-114-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-114-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058049	571-114-0.3	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058049	571-114-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-114-0.6	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058049	571-114-0.9	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-114-0.9	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058049	571-114-0.9	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058049	571-115-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-115-0	EPA 9045C	pH	0.1	1	7/22/2002	7/26/2002	7/26/2002
058049	571-115-0	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058049	571-115-0	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058049	571-115-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-115-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058049	571-115-0.3	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058049	571-115-0.6	EPA 1311/ 7420	Lead	0.2	1	7/22/2002	8/14/2002	8/13/2002
058049	571-115-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-115-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058049	571-115-0.6	WET/ EPA 7420	Lead	0.4	2	7/22/2002	8/2/2002	7/30/2002
058049	571-115-0.9	EPA 6010B	Antimony	2.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-115-0.9	EPA 6010B	Arsenic	2.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-115-0.9	EPA 6010B	Barium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-115-0.9	EPA 6010B	Beryllium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-115-0.9	EPA 6010B	Cadmium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-115-0.9	EPA 6010B	Chromium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-115-0.9	EPA 6010B	Cobalt	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-115-0.9	EPA 6010B	Copper	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-115-0.9	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-115-0.9	EPA 6010B	Molybdenum	2.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-115-0.9	EPA 6010B	Nickel	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-115-0.9	EPA 6010B	Selenium	2.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-115-0.9	EPA 6010B	Silver	1.5	10	7/22/2002	8/10/2002	8/9/2002

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058049	571-115-0.9	EPA 6010B	Thallium	2.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-115-0.9	EPA 6010B	Vanadium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-115-0.9	EPA 6010B	Zinc	5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-115-0.9	EPA 7471A	Mercury	0.1	1	7/22/2002	8/13/2002	8/13/2002
058049	571-115-1.5	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-328-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-328-0	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058049	571-328-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-328-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-328-0.6	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058049	571-328-0.9	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-328-1.5	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-329-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-329-0	EPA 9045C	pH	0.1	1	7/22/2002	7/26/2002	7/26/2002
058049	571-329-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-329-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-329-0.6	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058049	571-329-0.9	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-329-1.5	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-502-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-502-0	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058049	571-502-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-502-0.6	EPA 1311/ 7420	Lead	0.2	1	7/22/2002	8/14/2002	8/13/2002
058049	571-502-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-502-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058049	571-502-0.6	WET/ EPA 7420	Lead	0.8	4	7/22/2002	8/2/2002	7/30/2002
058049	571-502-0.9	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-502-1.5	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-505-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-505-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-505-0.3	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058049	571-505-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-505-0.6	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058049	571-505-0.9	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-505-1.5	EPA 1311/ 7420	Lead	0.2	1	7/22/2002	8/14/2002	8/13/2002
058049	571-505-1.5	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002

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058049	571-505-1.5	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058049	571-505-1.5	WET/ EPA 7420	Lead	2	10	7/22/2002	8/2/2002	7/30/2002
058049	571-507-0	EPA 1311/ 7420	Lead	0.2	1	7/22/2002	8/7/2002	8/6/2002
058049	571-507-0	EPA 6010B	Antimony	2.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-507-0	EPA 6010B	Arsenic	2.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-507-0	EPA 6010B	Barium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-507-0	EPA 6010B	Beryllium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-507-0	EPA 6010B	Cadmium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-507-0	EPA 6010B	Chromium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-507-0	EPA 6010B	Cobalt	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-507-0	EPA 6010B	Copper	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-507-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-507-0	EPA 6010B	Molybdenum	2.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-507-0	EPA 6010B	Nickel	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-507-0	EPA 6010B	Selenium	2.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-507-0	EPA 6010B	Silver	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-507-0	EPA 6010B	Thallium	2.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-507-0	EPA 6010B	Vanadium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-507-0	EPA 6010B	Zinc	5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-507-0	EPA 7471A	Mercury	0.1	1	7/22/2002	8/13/2002	8/13/2002
058049	571-507-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-507-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-507-0.9	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-507-1.5	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-507-1.5	EPA 9045C	pH	0.1	1	7/22/2002	7/26/2002	7/26/2002
058049	571-522-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-522-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-522-0.6	EPA 1311/ 7420	Lead	0.2	1	7/22/2002	8/14/2002	8/13/2002
058049	571-522-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-522-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058049	571-522-0.6	WET/ EPA 7420	Lead	0.4	2	7/22/2002	8/2/2002	7/30/2002
058049	571-522-0.9	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-522-1.5	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-838-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-838-0	EPA 9045C	pH	0.1	1	7/22/2002	7/26/2002	7/26/2002
058049	571-838-0	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002

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058049	571-838-0	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058049	571-838-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-838-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-838-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058049	571-838-0.6	WET/ EPA 7420	Lead	0.4	2	7/22/2002	8/2/2002	7/30/2002
058049	571-838-0.9	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-838-1.5	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-839-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-839-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-839-0.6	EPA 1311/ 7420	Lead	0.2	1	7/22/2002	8/14/2002	8/13/2002
058049	571-839-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-839-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058049	571-839-0.6	WET/ EPA 7420	Lead	0.4	2	7/22/2002	8/2/2002	7/30/2002
058049	571-839-0.9	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-839-1.5	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-839-1.5	EPA 9045C	pH	0.1	1	7/22/2002	7/26/2002	7/26/2002
058049	571-841-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-841-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-841-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-841-0.9	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-841-1.5	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-842-0	EPA 6010B	Antimony	2.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-842-0	EPA 6010B	Arsenic	2.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-842-0	EPA 6010B	Barium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-842-0	EPA 6010B	Beryllium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-842-0	EPA 6010B	Cadmium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-842-0	EPA 6010B	Chromium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-842-0	EPA 6010B	Cobalt	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-842-0	EPA 6010B	Copper	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-842-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-842-0	EPA 6010B	Molybdenum	2.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-842-0	EPA 6010B	Nickel	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-842-0	EPA 6010B	Selenium	2.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-842-0	EPA 6010B	Silver	1.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-842-0	EPA 6010B	Thallium	2.5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-842-0	EPA 6010B	Vanadium	1.5	10	7/22/2002	8/10/2002	8/9/2002

058049	571-842-0	EPA 6010B	Zinc	5	10	7/22/2002	8/10/2002	8/9/2002
058049	571-842-0	EPA 7471A	Mercury	0.1	1	7/22/2002	8/13/2002	8/13/2002
058049	571-842-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-842-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-842-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058049	571-842-0.6	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058049	571-842-0.9	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-842-1.5	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058049	571-842-1.5	EPA 9045C	pH	0.1	1	7/22/2002	7/26/2002	7/26/2002
058049	571-842-1.5	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058049	EB-28	EPA 6010B	Lead	0.005	1	7/22/2002	7/26/2002	7/26/2002

Advanced Technology Laboratories
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August 15, 2002

David Shaler
Ninyo & Moore
475 Goddard Suite 200
Irvine, CA 92618
TEL: (949) 753-7070
FAX: (949) 753-7071

RE: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

Attention: David Shaler

ELAP No.: 1838
NELAP No.: 02107CA
Workorder No.: 058022

Enclosed are the results for sample(s) received on July 19, 2002 by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

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NINYO & MOORE
ORANGE COUNTY OFFICE

This cover letter is an integral part of this analytical report.

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions
See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) 7-19-02	Received by: (name/date/time) 7-19-02 3:30p
Relinquished by: (name/date/time) 7-19-02 6:40p	Received by: (name/date/time) 7-19-02 640p2

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB-25	7/19/02	15:25	P	X	
	571-607-0		9:10		X	X
	571-607-0.3		9:11		X	
	571-607-0.6		9:12		X	
	571-607-0.9		913		X	
	571-607-1.5		9:15		X	
	571-608-0		9:20		X	
	571-608-0.3		9:21		X	
	571-608-0.6		9:23		X	
	571-608-0.9		9:24		X	
	571-608-1.5		9:27		X	X
	571-609-0		9:32		X	
	571-609-0.3		9:33		X	
	571-609-0.6		9:34		X	
	571-609-0.9		9:36		X	
	571-~~609-1.5~~ 610-0		9:39		X	
	571-610-0.3		9:41		X	
	571-610-0.6		9:42		X	
	571-610-0.9		9:43		X	
	571-610-1.5		9:45		X	
	571-611-0		9:53		X	X
	571-611-0.3		9:54		X	
	571-611-0.6		9:57		X	
	571-611-0.9		9:58		X	
	571-611-1.5		9:59		X	
	571-612-0		10:02		X	
	571-612-0.3		10:04		X	
	571-612-0.6		10:05		X	
	571-612-0.9		10:08		X	
	571-612-1.5		10:10		X	
	571-613-0		10:14		X	X
	571-613-0.3		10:15		X	
	571-613-0.6		10:16		X	
	571-613-0.9		10:17		X	
	571-613-1.5		10:18		X	
	571-614-0		10:22		X	
	571-614-0.3		10:23		X	
	571-614-0.6		10:25		X	
	571-614-0.9		10:26		X	
	571-614-1.5		10:28		X	X
	571-615-0		10:35		X	
	571-615-0.3		10:36		X	
	571-615-0.6		10:38		X	
	571-615-0.9		10:39		X	
	571-616-0		10:53		X	
	571-616-0.3		10:55		X	
	571-616-0.6		10:56		X	
	571-616-0.9		10:58		X	
	571-616-1.5		11:00		X	
	571-812-0		11:25		X	X
	571-812-0.3		11:26		X	
	571-812-0.6		11:27		X	
	571-812-0.9		11:28		X	
	571-812-1.5		11:31		X	
	571-813-0		11:35		X	
	571-813-0.3		11:36		X	
	571-813-0.6		11:37		X	
	571-813-0.9		11:38		X	
	571-814-0		11:41		X	
	571-814-0.3		11:42		X	
Total # of samples:	60					

Advanced Technology Laboratories

Date: *29-Jul-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	EB-25
Lab Order:	058022		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/19/2002 3:25:00 PM
Lab ID:	058022-001A	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	(EPA 3010A)			**EPA 6010B**		
RunID: ICP2_020725D	QC Batch: 9860					Analyst: **RQ**
Lead	ND	0.0050		mg/L	1	7/25/2002

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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Date: 7/26/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058022
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058022-002A	571-607-0	80	mg/Kg	9812	5	1	7/19/2002	7/25/2002
058022-003A	571-607-0.3	7.4	mg/Kg	9812	5	1	7/19/2002	7/25/2002
058022-004A	571-607-0.6	290	mg/Kg	9812	5	1	7/19/2002	7/25/2002
058022-005A	571-607-0.9	5.9	mg/Kg	9812	5	1	7/19/2002	7/25/2002
058022-006A	571-607-1.5	10	mg/Kg	9812	5	1	7/19/2002	7/25/2002
058022-007A	571-608-0	240	mg/Kg	9812	5	1	7/19/2002	7/25/2002
058022-008A	571-608-0.3	22	mg/Kg	9812	5	1	7/19/2002	7/25/2002
058022-009A	571-608-0.6	130	mg/Kg	9812	5	1	7/19/2002	7/25/2002
058022-010A	571-608-0.9	7.3	mg/Kg	9812	5	1	7/19/2002	7/25/2002
058022-011A	571-608-1.5	100	mg/Kg	9812	5	1	7/19/2002	7/25/2002
058022-012A	571-609-0	1800	mg/Kg	9812	5	1	7/19/2002	7/25/2002

Qualifiers:

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Advanced Technology Laboratories

Date: 7/26/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058022
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058022-013A	571-609-0.3	6.2	mg/Kg	9812	5	1	7/19/2002	7/25/2002
058022-014A	571-609-0.6	130	mg/Kg	9812	5	1	7/19/2002	7/25/2002
058022-015A	571-609-0.9	13	mg/Kg	9813	5	1	7/19/2002	7/26/2002
058022-016A	571-610-0	580	mg/Kg	9813	5	1	7/19/2002	7/26/2002
058022-017A	571-610-0.3	6.6	mg/Kg	9813	5	1	7/19/2002	7/26/2002
058022-018A	571-610-0.6	140	mg/Kg	9813	5	1	7/19/2002	7/26/2002
058022-019A	571-610-0.9	18	mg/Kg	9813	5	1	7/19/2002	7/26/2002
058022-020A	571-610-1.5	610	mg/Kg	9813	5	1	7/19/2002	7/26/2002
058022-021A	571-611-0	2200	mg/Kg	9813	5	1	7/19/2002	7/26/2002
058022-022A	571-611-0.3	14	mg/Kg	9813	5	1	7/19/2002	7/26/2002
058022-023A	571-611-0.6	840	mg/Kg	9813	5	1	7/19/2002	7/26/2002

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Date: 7/26/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058022
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058022-024A	571-611-0.9	13	mg/Kg	9813	5	1	7/19/2002	7/26/2002
058022-025A	571-611-1.5	12	mg/Kg	9813	5	1	7/19/2002	7/26/2002
058022-026A	571-612-0	110	mg/Kg	9813	5	1	7/19/2002	7/26/2002
058022-027A	571-612-0.3	ND	mg/Kg	9813	5	1	7/19/2002	7/26/2002
058022-028A	571-612-0.6	38	mg/Kg	9813	5	1	7/19/2002	7/26/2002
058022-029A	571-612-0.9	12	mg/Kg	9813	5	1	7/19/2002	7/26/2002
058022-030A	571-612-1.5	13	mg/Kg	9813	5	1	7/19/2002	7/26/2002
058022-031A	571-613-0	90	mg/Kg	9813	5	1	7/19/2002	7/26/2002
058022-032A	571-613-0.3	170	mg/Kg	9813	5	1	7/19/2002	7/26/2002
058022-033A	571-613-0.6	48	mg/Kg	9813	5	1	7/19/2002	7/26/2002
058022-034A	571-613-0.9	ND	mg/Kg	9813	5	1	7/19/2002	7/26/2002

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Advanced Technology Laboratories

Date: 7/26/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058022
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058022-035A	571-613-1.5	31	mg/Kg	9814	5	1	7/19/2002	7/26/2002
058022-036A	571-614-0	59	mg/Kg	9814	5	1	7/19/2002	7/26/2002
058022-037A	571-614-0.3	5.8	mg/Kg	9814	5	1	7/19/2002	7/26/2002
058022-039A	571-614-0.9	36	mg/Kg	9814	5	1	7/19/2002	7/26/2002
058022-040A	571-614-1.5	89	mg/Kg	9814	5	1	7/19/2002	7/26/2002
058022-041A	571-615-0	ND	mg/Kg	9814	5	1	7/19/2002	7/26/2002
058022-042A	571-615-0.3	ND	mg/Kg	9814	5	1	7/19/2002	7/26/2002
058022-043A	571-615-0.6	49	mg/Kg	9814	5	1	7/19/2002	7/26/2002
058022-044A	571-615-0.9	ND	mg/Kg	9814	5	1	7/19/2002	7/26/2002
058022-045A	571-616-0	1500	mg/Kg	9814	5	1	7/19/2002	7/26/2002
058022-046A	571-616-0.3	95	mg/Kg	9814	5	1	7/19/2002	7/26/2002

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Date: 7/26/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058022
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058022-047A	571-616-0.6	580	mg/Kg	9814	5	1	7/19/2002	7/26/2002
058022-048A	571-616-0.9	22	mg/Kg	9814	5	1	7/19/2002	7/26/2002
058022-049A	571-616-1.5	280	mg/Kg	9814	5	1	7/19/2002	7/26/2002
058022-050A	571-812-0	310	mg/Kg	9814	5	1	7/19/2002	7/26/2002
058022-051A	571-812-0.3	6.1	mg/Kg	9814	5	1	7/19/2002	7/26/2002
058022-052A	571-812-0.6	220	mg/Kg	9814	5	1	7/19/2002	7/26/2002
058022-053A	571-812-0.9	ND	mg/Kg	9814	5	1	7/19/2002	7/26/2002
058022-054A	571-812-1.5	ND	mg/Kg	9814	5	1	7/19/2002	7/26/2002
058022-055A	571-813-0	320	mg/Kg	9814	5	1	7/19/2002	7/26/2002
058022-056A	571-813-0.3	640	mg/Kg	9815	5	1	7/19/2002	7/26/2002
058022-057A	571-813-0.6	130	mg/Kg	9815	5	1	7/19/2002	7/26/2002

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Advanced Technology Laboratories

Date: 7/26/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058022
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058022-058A	571-813-0.9	320	mg/Kg	9815	5	1	7/19/2002	7/26/2002
058022-059A	571-814-0	61	mg/Kg	9815	5	1	7/19/2002	7/26/2002
058022-060A	571-814-0.3	3000	mg/Kg	9815	5	1	7/19/2002	7/26/2002

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- S - Spike/Surrogate outside of limits due to matrix interfere
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Advanced Technology Laboratories

Date: 7/26/2002

pH
EPA 9045C

CLIENT:	Ninyo & Moore	**Lab Order:**	058022
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058022-002A	571-607-0	7.88	pH Units	R19803	0.1	1	7/19/2002	7/25/2002
058022-011A	571-608-1.5	7.45	pH Units	R19803	0.1	1	7/19/2002	7/25/2002
058022-021A	571-611-0	8.42	pH Units	R19803	0.1	1	7/19/2002	7/25/2002
058022-031A	571-613-0	8.47	pH Units	R19803	0.1	1	7/19/2002	7/25/2002
058022-040A	571-614-1.5	8.16	pH Units	R19803	0.1	1	7/19/2002	7/25/2002
058022-050A	571-812-0	7.98	pH Units	R19803	0.1	1	7/19/2002	7/25/2002

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Advanced Technology Laboratories

Date: 8/2/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058022
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058022-002A	571-607-0	0.91	mg/L	9938	0.2	1	7/19/2002	8/2/2002
058022-004A	571-607-0.6	27	mg/L	9938	0.8	4	7/19/2002	8/2/2002
058022-007A	571-608-0	7.6	mg/L	9938	0.2	1	7/19/2002	8/2/2002
058022-009A	571-608-0.6	9.0	mg/L	9938	0.2	1	7/19/2002	8/2/2002
058022-011A	571-608-1.5	6.3	mg/L	9938	0.2	1	7/19/2002	8/2/2002
058022-014A	571-609-0.6	27	mg/L	9938	0.8	4	7/19/2002	8/2/2002
058022-016A	571-610-0	46	mg/L	9938	2	10	7/19/2002	8/2/2002
058022-018A	571-610-0.6	43	mg/L	9938	2	10	7/19/2002	8/2/2002
058022-020A	571-610-1.5	18	mg/L	9938	0.4	2	7/19/2002	8/2/2002
058022-023A	571-611-0.6	92	mg/L	9938	2	10	7/19/2002	8/2/2002
058022-026A	571-612-0	9.2	mg/L	9938	0.2	1	7/19/2002	8/2/2002

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Advanced Technology Laboratories

Date: 8/2/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058022
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058022-031A	571-613-0	8.3	mg/L	9938	0.2	1	7/19/2002	8/2/2002
058022-032A	571-613-0.3	1.0	mg/L	9938	0.2	1	7/19/2002	8/2/2002
058022-036A	571-614-0	7.9	mg/L	9938	0.2	1	7/19/2002	8/2/2002
058022-040A	571-614-1.5	2.7	mg/L	9938	0.2	1	7/19/2002	8/2/2002
058022-046A	571-616-0.3	16	mg/L	9938	0.4	2	7/19/2002	8/2/2002
058022-047A	571-616-0.6	57	mg/L	9938	2	10	7/19/2002	8/2/2002
058022-049A	571-616-1.5	28	mg/L	9939	0.8	4	7/19/2002	8/2/2002
058022-050A	571-812-0	41	mg/L	9939	2	10	7/19/2002	8/2/2002
058022-052A	571-812-0.6	19	mg/L	9939	0.4	2	7/19/2002	8/2/2002
058022-055A	571-813-0	3.0	mg/L	9939	0.2	1	7/19/2002	8/2/2002
058022-056A	571-813-0.3	32	mg/L	9939	0.8	4	7/19/2002	8/2/2002

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Advanced Technology Laboratories

Date: 8/2/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058022
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058022-057A	571-813-0.6	6.2	mg/L	9939	0.2	1	7/19/2002	8/2/2002
058022-058A	571-813-0.9	14	mg/L	9939	0.4	2	7/19/2002	8/2/2002
058022-059A	571-814-0	4.5	mg/L	9939	0.2	1	7/19/2002	8/2/2002

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Date: 8/12/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058022
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058022-004A	571-607-0.6	ND	mg/L	10130	0.2	1	7/19/2002	8/9/2002
058022-007A	571-608-0	ND	mg/L	10130	0.2	1	7/19/2002	8/9/2002
058022-009A	571-608-0.6	ND	mg/L	10130	0.2	1	7/19/2002	8/9/2002
058022-011A	571-608-1.5	ND	mg/L	10130	0.2	1	7/19/2002	8/9/2002
058022-014A	571-609-0.6	ND	mg/L	10130	0.2	1	7/19/2002	8/9/2002
058022-016A	571-610-0	0.27	mg/L	10130	0.2	1	7/19/2002	8/9/2002
058022-018A	571-610-0.6	ND	mg/L	10130	0.2	1	7/19/2002	8/9/2002
058022-020A	571-610-1.5	ND	mg/L	10130	0.2	1	7/19/2002	8/9/2002
058022-023A	571-611-0.6	ND	mg/L	10130	0.2	1	7/19/2002	8/9/2002
058022-026A	571-612-0	ND	mg/L	10130	0.2	1	7/19/2002	8/9/2002
058022-031A	571-613-0	ND	mg/L	10131	0.2	1	7/19/2002	8/9/2002

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Advanced Technology Laboratories

Date: 8/12/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058022
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058022-036A	571-614-0	ND	mg/L	10131	0.2	1	7/19/2002	8/9/2002
058022-046A	571-616-0.3	ND	mg/L	10131	0.2	1	7/19/2002	8/9/2002
058022-047A	571-616-0.6	ND	mg/L	10131	0.2	1	7/19/2002	8/9/2002
058022-049A	571-616-1.5	ND	mg/L	10131	0.2	1	7/19/2002	8/9/2002
058022-050A	571-812-0	ND	mg/L	10131	0.2	1	7/19/2002	8/9/2002
058022-052A	571-812-0.6	ND	mg/L	10131	0.2	1	7/19/2002	8/9/2002
058022-056A	571-813-0.3	ND	mg/L	10131	0.2	1	7/19/2002	8/9/2002
058022-057A	571-813-0.6	ND	mg/L	10131	0.2	1	7/19/2002	8/9/2002
058022-058A	571-813-0.9	ND	mg/L	10131	0.2	1	7/19/2002	8/9/2002

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Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-609-0
Lab Order:	058022		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/19/2002 9:32:00 AM
Lab ID:	058022-012A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810E	QC Batch: 10216					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	5.3	2.5		mg/Kg	10	8/10/2002
Barium	250	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	4.7	1.5		mg/Kg	10	8/10/2002
Chromium	42	1.5		mg/Kg	10	8/10/2002
Cobalt	9.3	1.5		mg/Kg	10	8/10/2002
Copper	93	1.5		mg/Kg	10	8/10/2002
Molybdenum	9.7	2.5		mg/Kg	10	8/10/2002
Nickel	43	1.5		mg/Kg	10	8/10/2002
Selenium	9.2	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	60	1.5		mg/Kg	10	8/10/2002
Zinc	850	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020812E	QC Batch: 10170					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/12/2002

Qualifiers:

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- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
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Advanced Technology Laboratories 3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-611-0
Lab Order:	058022		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/19/2002 9:53:00 AM
Lab ID:	058022-021A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810E	QC Batch: 10216					Analyst: **RQ**
Antimony	7.5	2.5		mg/Kg	10	8/10/2002
Arsenic	5.5	2.5		mg/Kg	10	8/10/2002
Barium	100	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	20	1.5		mg/Kg	10	8/10/2002
Cobalt	9.0	1.5		mg/Kg	10	8/10/2002
Copper	27	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	23	1.5		mg/Kg	10	8/10/2002
Selenium	5.6	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	41	1.5		mg/Kg	10	8/10/2002
Zinc	210	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020812E	QC Batch: 10170					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/12/2002

Qualifiers:

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DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interferen
H - Sample exceeded analytical holding time
E - Value above quantitation range
Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-614-0.3
Lab Order:	058022		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/19/2002 10:23:00 AM
Lab ID:	058022-037A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810E	QC Batch: 10216					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	6.6	2.5		mg/Kg	10	8/10/2002
Barium	120	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	19	1.5		mg/Kg	10	8/10/2002
Cobalt	8.7	1.5		mg/Kg	10	8/10/2002
Copper	16	1.5		mg/Kg	10	8/10/2002
Molybdenum	4.5	2.5		mg/Kg	10	8/10/2002
Nickel	17	1.5		mg/Kg	10	8/10/2002
Selenium	7.9	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	57	1.5		mg/Kg	10	8/10/2002
Zinc	54	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020814D	QC Batch: 10328					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/14/2002

Qualifiers:

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- H - Sample exceeded analytical holding time
- E - Value above quantitation range
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Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-814-0.3
Lab Order:	058022		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/19/2002 11:42:00 AM
Lab ID:	058022-060A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810E	QC Batch: 10216					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	5.5	2.5		mg/Kg	10	8/10/2002
Barium	160	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	2.7	1.5		mg/Kg	10	8/10/2002
Chromium	40	1.5		mg/Kg	10	8/10/2002
Cobalt	9.1	1.5		mg/Kg	10	8/10/2002
Copper	150	1.5		mg/Kg	10	8/10/2002
Molybdenum	14	2.5		mg/Kg	10	8/10/2002
Nickel	69	1.5		mg/Kg	10	8/10/2002
Selenium	21	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	38	1.5		mg/Kg	10	8/10/2002
Zinc	770	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020812E	QC Batch: 10170					Analyst: **NS**
Mercury	0.11	0.10		mg/Kg	1	8/12/2002

Qualifiers:

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H - Sample exceeded analytical holding time
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Advanced Technology Laboratories

Date: 8/15/2002

LEAD BY ATOMIC ABSORPTION
EPA 1311/ 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058022
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058022-004A	571-607-0.6	0.25	mg/L	10337	0.2	1	7/19/2002	8/14/2002
058022-012A	571-609-0	5.8	mg/L	10116	0.2	1	7/19/2002	8/7/2002
058022-014A	571-609-0.6	6.2	mg/L	10337	0.2	1	7/19/2002	8/14/2002
058022-016A	571-610-0	12	mg/L	10337	0.4	2	7/19/2002	8/14/2002
058022-018A	571-610-0.6	2.9	mg/L	10337	0.2	1	7/19/2002	8/14/2002
058022-020A	571-610-1.5	0.49	mg/L	10337	0.2	1	7/19/2002	8/14/2002
058022-021A	571-611-0	16	mg/L	10116	0.4	2	7/19/2002	8/7/2002
058022-023A	571-611-0.6	17	mg/L	10337	0.4	2	7/19/2002	8/14/2002
058022-045A	571-616-0	11	mg/L	10116	0.4	2	7/19/2002	8/7/2002
058022-046A	571-616-0.3	3.9	mg/L	10337	0.2	1	7/19/2002	8/14/2002
058022-047A	571-616-0.6	3.6	mg/L	10337	0.2	1	7/19/2002	8/14/2002

Qualifiers:

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DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interferen
H - Sample exceeded analytical holding time
E - Value above quantitation range
Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 8/15/2002

LEAD BY ATOMIC ABSORPTION
EPA 1311/ 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058022
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058022-049A	571-616-1.5	0.22	mg/L	10337	0.2	1	7/19/2002	8/14/2002
058022-050A	571-812-0	1.3	mg/L	10337	0.2	1	7/19/2002	8/14/2002
058022-052A	571-812-0.6	1.2	mg/L	10345	0.2	1	7/19/2002	8/14/2002
058022-056A	571-813-0.3	7.5	mg/L	10345	0.2	1	7/19/2002	8/14/2002
058022-060A	571-814-0.3	0.48	mg/L	10116	0.2	1	7/19/2002	8/7/2002

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Advanced Technology Laboratories

Date: *15-Aug-02*

CLIENT: Ninyo & Moore
Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10116

Sample ID: **MB-10116**	SampType: **mblk**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020807F**
Client ID: **ZZZZZ**	Batch ID: **10116**	TestNo: **EPA 1311/ 74**	**(EPA 3010A)**	Analysis Date: **8/7/2002**	SeqNo: **314960**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-10098-TCLP**	SampType: **mblk**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020807F**
Client ID: **ZZZZZ**	Batch ID: **10116**	TestNo: **EPA 1311/ 74**	**(EPA 3010A)**	Analysis Date: **8/7/2002**	SeqNo: **314961**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **LCS-10116**	SampType: **lcs**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020807F**
Client ID: **ZZZZZ**	Batch ID: **10116**	TestNo: **EPA 1311/ 74**	**(EPA 3010A)**	Analysis Date: **8/7/2002**	SeqNo: **314973**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.128	0.20	1	0	113	80	120	0	0		

Sample ID: **058023-024AMS**	SampType: **MS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020807F**
Client ID: **ZZZZZ**	Batch ID: **10116**	TestNo: **EPA 1311/ 74**	**(EPA 3010A)**	Analysis Date: **8/7/2002**	SeqNo: **314971**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	9.109	0.20	2.5	6.649	98.4	80	120	0	0		

Sample ID: **058023-024ADUP**	SampType: **DUP**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020807F**
Client ID: **ZZZZZ**	Batch ID: **10116**	TestNo: **EPA 1311/ 74**	**(EPA 3010A)**	Analysis Date: **8/7/2002**	SeqNo: **314970**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.177	0.20	0	0	0	0	0	6.649	7.65	30	

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; S - Spike/Surrogate outside limits due to matrix interference; B - Analyte detected in the associated Method Blank; **Calculations are based on raw values**; DO - Surrogate diluted out; H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10130

Sample ID: MB-10130	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809J
Client ID: ZZZZZ	Batch ID: 10130	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316309

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10130A	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809J
Client ID: ZZZZZ	Batch ID: 10130	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316310

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10130B	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809J
Client ID: ZZZZZ	Batch ID: 10130	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316323

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10130	SampType: lcs	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809J
Client ID: ZZZZZ	Batch ID: 10130	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316337

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.485	0.20	7.5	0	99.8	80	120	0	0		

Sample ID: 058021-059AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809J
Client ID: ZZZZZ	Batch ID: 10130	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316322

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	30.4	0.80	20	10.21	101	80	120	0	0		

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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10130

Sample ID: 058022-026AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809J
Client ID: 571-612-0	Batch ID: 10130	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316335

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.436	0.20	5	0	109	80	120	0	0		

Sample ID: 058021-059ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809J
Client ID: ZZZZZ	Batch ID: 10130	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316321

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.035	0.20	0	0	0	0	0	10.21	36.8	30	R

Sample ID: 058022-026ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809J
Client ID: 571-612-0	Batch ID: 10130	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316334

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0	0	30	

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10131

Sample ID: MB-10131	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809K
Client ID: ZZZZZ	Batch ID: 10131	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316338

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10131A	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809K
Client ID: ZZZZZ	Batch ID: 10131	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316339

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10131B	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809K
Client ID: ZZZZZ	Batch ID: 10131	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316352

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10131	SampType: lcs	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809K
Client ID: ZZZZZ	Batch ID: 10131	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316366

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.4	0.20	7.5	0	98.7	80	120	0	0		

Sample ID: 058022-058AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809K
Client ID: 571-813-0.9	Batch ID: 10131	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316351

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.204	0.20	5	0	104	80	120	0	0		

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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10131

Sample ID: 058023-026AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809K
Client ID: ZZZZZ	Batch ID: 10131	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316364

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.991	0.20	5	1.588	108	80	120	0	0		

Sample ID: 058022-058ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809K
Client ID: 571-813-0.9	Batch ID: 10131	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316350

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05662	0.20	0	0	0	0	0	0	0	30	J

Sample ID: 058023-026ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809K
Client ID: ZZZZZ	Batch ID: 10131	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316363

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.865	0.20	0	0	0	0	0	1.588	133	30	R

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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10170

Sample ID: MB-10170	SampType: mblk	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812E
Client ID: ZZZZZ	Batch ID: 10170	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317175

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-10170	SampType: lcs	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812E
Client ID: ZZZZZ	Batch ID: 10170	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317174

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.901	0.10	2.08	0	91.4	80	120	0	0		

Sample ID: 058024-043AMS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812E
Client ID: ZZZZZ	Batch ID: 10170	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317172

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.949	0.10	0.83	0.114	101	62	146	0	0		

Sample ID: 058024-043AMSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812E
Client ID: ZZZZZ	Batch ID: 10170	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317173

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.032	0.10	0.83	0.114	111	62	146	0.949	8.40	33	

Sample ID: 058024-043ADUP	SampType: DUP	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812E
Client ID: ZZZZZ	Batch ID: 10170	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317171

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0945	0.10	0	0	0	0	0	0.114	0	30	J

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Calculations are based on raw values
DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10216

Sample ID: MB-10216	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316679

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.1421	0.25									
Arsenic	0.02648	0.25									
Barium	ND	0.15									
Beryllium	0.001215	0.15									
Cadmium	ND	0.15									
Chromium	ND	0.15									
Cobalt	0.005172	0.15									
Copper	ND	0.15									
Molybdenum	0.07367	0.25									
Nickel	0.006489	0.15									
Selenium	0.05497	0.25									
Silver	ND	0.15									
Thallium	0.08897	0.25									
Vanadium	ND	0.15									
Zinc	0.09435	0.50									

Sample ID: LCS-10216	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316678

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	47.1	0.25	50	0	94.2	80	120	0	0		
Arsenic	48.94	0.25	50	0	97.9	80	120	0	0		
Barium	50.36	0.15	50	0	101	80	120	0	0		
Beryllium	49.18	0.15	50	0	98.4	80	120	0	0		
Cadmium	49.21	0.15	50	0	98.4	80	120	0	0		
Chromium	50.53	0.15	50	0	101	80	120	0	0		
Cobalt	49.32	0.15	50	0	98.6	80	120	0	0		
Copper	48.56	0.15	50	0	97.1	80	120	0	0		
Molybdenum	48.4	0.25	50	0	96.8	80	120	0	0		
Nickel	48.24	0.15	50	0	96.5	80	120	0	0		

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CLIENT: Ninyo & Moore
Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10216

Sample ID: LCS-10216	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316678

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	48.39	0.25	50	0	96.8	80	120	0	0		
Silver	49.09	0.15	50	0	98.2	80	120	0	0		
Thallium	46.69	0.25	50	0	93.4	80	120	0	0		
Vanadium	51.57	0.15	50	0	103	80	120	0	0		
Zinc	48.29	0.50	50	0	96.6	80	120	0	0		

Sample ID: 058024-021AMS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316675

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	87.49	2.5	125	3.022	67.6	32	115	0	0		
Arsenic	113.3	2.5	125	3.538	87.8	59	111	0	0		
Barium	273.4	1.5	125	206.8	53.3	34	151	0	0		
Beryllium	122.1	1.5	125	0	97.7	56	112	0	0		
Cadmium	122	1.5	125	1.887	96.1	52	120	0	0		
Chromium	173.6	1.5	125	56.58	93.6	56	118	0	0		
Cobalt	136	1.5	125	13.36	98.1	58	117	0	0		
Copper	146.7	1.5	125	26.64	96	58	134	0	0		
Molybdenum	129.5	2.5	125	12.67	93.4	56	115	0	0		
Nickel	150.6	1.5	125	36.53	91.2	52	120	0	0		
Selenium	124.2	2.5	125	7.453	93.4	46	108	0	0		
Silver	122.3	1.5	125	0	97.8	74	117	0	0		
Thallium	109.5	2.5	125	0	87.6	62	117	0	0		
Vanadium	211.6	1.5	125	99.05	90	55	122	0	0		
Zinc	178	5.0	125	78.94	79.2	43	134	0	0		

Sample ID: 058024-021AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316676

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

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Calculations are based on raw values

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CLIENT: Ninyo & Moore
Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10216

Sample ID: 058024-021AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316676

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	79.83	2.5	125	3.022	61.4	32	115	87.49	9.16	20	
Arsenic	112.3	2.5	125	3.538	87	59	111	113.3	0.912	20	
Barium	258.1	1.5	125	206.8	41	34	151	273.4	5.78	20	
Beryllium	121.5	1.5	125	0	97.2	56	112	122.1	0.487	20	
Cadmium	120.9	1.5	125	1.887	95.2	52	120	122	0.906	20	
Chromium	176.9	1.5	125	56.58	96.3	56	118	173.6	1.87	20	
Cobalt	130.7	1.5	125	13.36	93.9	58	117	136	3.98	20	
Copper	147.1	1.5	125	26.64	96.4	58	134	146.7	0.314	20	
Molybdenum	129.1	2.5	125	12.67	93.2	56	115	129.5	0.274	20	
Nickel	150	1.5	125	36.53	90.8	52	120	150.6	0.398	20	
Selenium	120	2.5	125	7.453	90	46	108	124.2	3.40	20	
Silver	121.1	1.5	125	0	96.9	74	117	122.3	0.932	20	
Thallium	106	2.5	125	0	84.8	62	117	109.5	3.26	20	
Vanadium	218.2	1.5	125	99.05	95.4	55	122	211.6	3.09	20	
Zinc	182.3	5.0	125	78.94	82.7	43	134	178	2.42	20	

Sample ID: 058024-021ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316674

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.47	2.5	0	0	0	0	0	3.022	0	30	J
Arsenic	2.484	2.5	0	0	0	0	0	3.538	0	30	J
Barium	152.8	1.5	0	0	0	0	0	206.8	30.1	30	R
Beryllium	ND	1.5	0	0	0	0	0	0	0	30	
Cadmium	1.783	1.5	0	0	0	0	0	1.887	5.68	30	
Chromium	47.99	1.5	0	0	0	0	0	56.58	16.4	30	
Cobalt	29.58	1.5	0	0	0	0	0	13.36	75.5	30	R
Copper	22.16	1.5	0	0	0	0	0	26.64	18.3	30	
Molybdenum	12.63	2.5	0	0	0	0	0	12.67	0.355	30	
Nickel	41.2	1.5	0	0	0	0	0	36.53	12.0	30	

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CLIENT: Ninyo & Moore
Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10216

Sample ID: 058024-021ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316674

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	3.983	2.5	0	0	0	0	0	7.453	60.7	30	R
Silver	ND	1.5	0	0	0	0	0	0	0	30	
Thallium	ND	2.5	0	0	0	0	0	0	0	30	
Vanadium	82.39	1.5	0	0	0	0	0	99.05	18.4	30	
Zinc	65.24	5.0	0	0	0	0	0	78.94	19.0	30	

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10328

Sample ID: MB-10328	SampType: MBLK	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020814D
Client ID: ZZZZZ	Batch ID: 10328	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/14/2002	SeqNo: 318603

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-10328	SampType: LCS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020814D
Client ID: ZZZZZ	Batch ID: 10328	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/14/2002	SeqNo: 318602

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.126	0.10	2.08	0	102	80	120	0	0		

Sample ID: 058065-054AMS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020814D
Client ID: ZZZZZ	Batch ID: 10328	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/14/2002	SeqNo: 318600

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.8605	0.10	0.83	0.07835	94.2	62	146	0	0		

Sample ID: 058065-054AMSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020814D
Client ID: ZZZZZ	Batch ID: 10328	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/14/2002	SeqNo: 318601

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9227	0.10	0.83	0.07835	102	62	146	0.8605	6.98	33	

Sample ID: 058065-054ADUP	SampType: DUP	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020814D
Client ID: ZZZZZ	Batch ID: 10328	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/14/2002	SeqNo: 318599

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0741	0.10	0	0	0	0	0	0.07835	0	30	J

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CLIENT: Ninyo & Moore
Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10337

Sample ID: MB-10337	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814M
Client ID: ZZZZZ	Batch ID: 10337	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318872

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10262-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814M
Client ID: ZZZZZ	Batch ID: 10337	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318873

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10337	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814M
Client ID: ZZZZZ	Batch ID: 10337	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318887

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.198	0.20	1	0	120	80	120	0	0		

Sample ID: 058022-050AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814M
Client ID: 571-812-0	Batch ID: 10337	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318885

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.689	0.20	2.5	1.311	175	80	120	0	0		S

Sample ID: 058022-050ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814M
Client ID: 571-812-0	Batch ID: 10337	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318884

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.259	0.20	0	0	0	0	0	1.311	4.11	30	

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Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10345

Sample ID: MB-10345	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814N
Client ID: ZZZZZ	Batch ID: 10345	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318888

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.06072	0.20									

Sample ID: MB-10263-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814N
Client ID: ZZZZZ	Batch ID: 10345	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318889

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.09608	0.20									

Sample ID: LCS-10345	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814N
Client ID: ZZZZZ	Batch ID: 10345	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318903

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.189	0.20	1	0	119	80	120	0	0		

Sample ID: 058023-026AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814N
Client ID: ZZZZZ	Batch ID: 10345	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318901

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	11.8	0.40	2.5	7.496	172	80	120	0	0		S

Sample ID: 058023-026ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814N
Client ID: ZZZZZ	Batch ID: 10345	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318900

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.125	0.20	0	0	0	0	0	7.496	8.06	30	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike/Surrogate outside limits due to matrix interference; DO - Surrogate diluted out; J - Analyte detected below quantitation limits; B - Analyte detected in the associated Method Blank; H - Sample exceeded holding time; R - RPD outside accepted recovery limits

Calculations are based on raw values

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CLIENT: Ninyo & Moore
Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9812

Sample ID: MB-9812A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725I
Client ID: ZZZZZ	Batch ID: 9812	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306536

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.3563	5.0									

Sample ID: MB-9812B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725I
Client ID: ZZZZZ	Batch ID: 9812	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306537

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.5318	5.0									

Sample ID: LCS-9812	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725I
Client ID: ZZZZZ	Batch ID: 9812	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306535

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	201.6	5.0	250	0	80.6	80	120	0	0		

Sample ID: 058022-004AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725I
Client ID: 571-607-0.6	Batch ID: 9812	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306520

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	400.7	5.0	250	294.9	42.3	47	128	0	0		S

Sample ID: 058022-014AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725I
Client ID: 571-609-0.6	Batch ID: 9812	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306532

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	353.1	5.0	250	125.3	91.1	47	128	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9812

Sample ID: 058022-004ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725I
Client ID: 571-607-0.6	Batch ID: 9812	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306519

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	339.5	5.0	0	0	0	0	0	294.9	14.0	30	

Sample ID: 058022-014ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020725I
Client ID: 571-609-0.6	Batch ID: 9812	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/25/2002	SeqNo: 306531

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	400	5.0	0	0	0	0	0	125.3	105	30	R

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
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Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9813

Sample ID: MB-9813A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726A
Client ID: ZZZZZ	Batch ID: 9813	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307580

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9813B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726A
Client ID: ZZZZZ	Batch ID: 9813	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307581

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9813	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726A
Client ID: ZZZZZ	Batch ID: 9813	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307579

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	279.3	5.0	250	0	112	80	120	0	0		

Sample ID: 058022-024AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726A
Client ID: 571-611-0.9	Batch ID: 9813	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307565

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	214.9	5.0	250	13.27	80.6	47	128	0	0		

Sample ID: 058022-034AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726A
Client ID: 571-613-0.9	Batch ID: 9813	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307577

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	180.1	5.0	250	1.68	71.4	47	128	0	0		

Qualifiers:
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J - Analyte detected below quantitation limits
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9813

Sample ID: 058022-024ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726A
Client ID: 571-611-0.9	Batch ID: 9813	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307564

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	16.03	5.0	0	0	0	0	0	13.27	18.9	30	

Sample ID: 058022-034ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726A
Client ID: 571-613-0.9	Batch ID: 9813	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307576

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.52	5.0	0	0	0	0	0	1.68	0	30	J

Qualifiers:
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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9814

Sample ID: MB-9814A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726B
Client ID: ZZZZZ	Batch ID: 9814	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307608

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9814B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726B
Client ID: ZZZZZ	Batch ID: 9814	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307609

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9814	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726B
Client ID: ZZZZZ	Batch ID: 9814	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307607

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	258.8	5.0	250	0	104	80	120	0	0		

Sample ID: 058022-045AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726B
Client ID: 571-616-0	Batch ID: 9814	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307593

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2067	5.0	250	1473	238	47	128	0	0		S

Sample ID: 058022-055AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726B
Client ID: 571-813-0	Batch ID: 9814	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307605

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	198	5.0	250	317.1	-47.6	47	128	0	0		S

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike/Surrogate outside limits due to matrix interference; DO - Surrogate diluted out; J - Analyte detected below quantitation limits; B - Analyte detected in the associated Method Blank; H - Sample exceeded holding time; R - RPD outside accepted recovery limits

Calculations are based on raw values

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Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9814

Sample ID: 058022-045ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726B
Client ID: 571-616-0	Batch ID: 9814	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307592

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1726	5.0	0	0	0	0	0	1473	15.8	30	

Sample ID: 058022-055ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726B
Client ID: 571-813-0	Batch ID: 9814	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307604

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	57.53	5.0	0	0	0	0	0	317.1	139	30	R

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9815

Sample ID: MB-9815A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726C
Client ID: ZZZZZ	Batch ID: 9815	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 306960

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9815B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726C
Client ID: ZZZZZ	Batch ID: 9815	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 306961

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9815	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726C
Client ID: ZZZZZ	Batch ID: 9815	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 306959

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	274.3	5.0	250	0	110	80	120	0	0		

Sample ID: 058023-006AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726C
Client ID: ZZZZZ	Batch ID: 9815	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 306945

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	186	5.0	250	2.18	73.5	47	128	0	0		

Sample ID: 058023-016AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726C
Client ID: ZZZZZ	Batch ID: 9815	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 306957

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	190.7	5.0	250	4.02	74.7	47	128	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9815

Sample ID: 058023-006ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726C
Client ID: ZZZZZ	Batch ID: 9815	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 306944

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	18.75	5.0	0	0	0	0	0	2.18	158	30	R

Sample ID: 058023-016ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726C
Client ID: ZZZZZ	Batch ID: 9815	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 306956

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.73	5.0	0	0	0	0	0	4.02	0	30	J

Qualifiers:
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9860

Sample ID: MB-9860	SampType: MBLK	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/25/2002	Run ID: ICP2_020725D
Client ID: ZZZZZ	Batch ID: 9860	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/25/2002	SeqNo: 306194

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050									

Sample ID: LCS-9860	SampType: LCS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/25/2002	Run ID: ICP2_020725D
Client ID: ZZZZZ	Batch ID: 9860	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/25/2002	SeqNo: 306195

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.99	0.0050	1	0	99	80	120	0	0		

Sample ID: 058024-001AMS	SampType: MS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/25/2002	Run ID: ICP2_020725D
Client ID: ZZZZZ	Batch ID: 9860	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/25/2002	SeqNo: 306203

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.21	0.0050	2.5	0.00942	88	66	118	0	0		

Sample ID: 058024-001ADUP	SampType: DUP	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/25/2002	Run ID: ICP2_020725D
Client ID: ZZZZZ	Batch ID: 9860	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/25/2002	SeqNo: 306202

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.01	0.0050	0	0	0	0	0	0.00942	5.97	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
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DO - Surrogate diluted out
H - Sample exceeded holding time

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9938

Sample ID: MB-9938	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802A
Client ID: ZZZZZ	Batch ID: 9938	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311621

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.07517	0.20									

Sample ID: MB-9938A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802A
Client ID: ZZZZZ	Batch ID: 9938	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311622

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05474	0.20									

Sample ID: MB-9938B	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802A
Client ID: ZZZZZ	Batch ID: 9938	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311635

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9938	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802A
Client ID: ZZZZZ	Batch ID: 9938	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311649

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.671	0.20	7.5	0	102	80	120	0	0		

Sample ID: 058022-016AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802A
Client ID: 571-610-0	Batch ID: 9938	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311634

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	93.62	2.0	50	46.29	94.6	80	120	0	0		

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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9938

Sample ID: 058022-047AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802A
Client ID: 571-616-0.6	Batch ID: 9938	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311647

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	155.4	4.0	100	56.73	98.7	80	120	0	0		

Sample ID: 058022-016ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802A
Client ID: 571-610-0	Batch ID: 9938	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311633

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	30.97	2.0	0	0	0	0	0	46.29	39.7	30	R

Sample ID: 058022-047ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802A
Client ID: 571-616-0.6	Batch ID: 9938	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311646

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	41.54	2.0	0	0	0	0	0	56.73	30.9	30	R

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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9939

Sample ID: MB-9939	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802B
Client ID: ZZZZZ	Batch ID: 9939	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311858

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.04895	0.20									

Sample ID: MB-9939A	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802B
Client ID: ZZZZZ	Batch ID: 9939	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311859

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05501	0.20									

Sample ID: MB-9939B	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802B
Client ID: ZZZZZ	Batch ID: 9939	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311872

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.08174	0.20									

Sample ID: LCS-9939	SampType: lcs	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802B
Client ID: ZZZZZ	Batch ID: 9939	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311886

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.439	0.20	7.5	0	99.2	80	120	0	0		

Sample ID: 058023-003AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802B
Client ID: ZZZZZ	Batch ID: 9939	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311871

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	38.1	0.80	20	18.7	97	80	120	0	0		

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Calculations are based on raw values
DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9939

Sample ID: 058023-027AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802B
Client ID: ZZZZZ	Batch ID: 9939	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311884

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.715	0.20	5	0.06327	93	80	120	0	0		

Sample ID: 058023-003ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802B
Client ID: ZZZZZ	Batch ID: 9939	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311870

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	17.49	0.40	0	0	0	0	0	18.7	6.72	30	

Sample ID: 058023-027ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802B
Client ID: ZZZZZ	Batch ID: 9939	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311883

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0.06327	0	30	

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
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Advanced Technology Laboratories

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CLIENT: Ninyo & Moore
Work Order: 058022
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: R19803

Sample ID: **058023-012ADUP** SampType: **DUP** TestCode: **9045_S** Units: **pH Units** Prep Date: **7/25/2002** Run ID: **WETCHEM_020725B**
Client ID: **ZZZZZ** Batch ID: **R19803** TestNo: **EPA 9045C** Analysis Date: **7/25/2002** SeqNo: **306548**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.85	0.10	0	0	0	0	0	7.84	0.127	20	

Qualifiers: ND - Not Detected at the Reporting Limit
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Thursday, August 08, 2002 9:14 AM
To: 'Rachelle'
Subject: TCLP Analysis

TCLP-3.xls

In addition to the 90 TCLP already run please run the following samples for
TCLP. There should be a list of 350 samples.
Thanks for a the hard work and timely results.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

-----Original Message-----
From: Rachelle [SMTP:Rachelle@ATLGlobal.com]
Sent: Wednesday, August 07, 2002 5:02 PM
To: 'David Shaler (E-mail)'
Cc: 'Ruth Cheung (E-mail)'
Subject: TCLP Results

<<57931TCLP.xls>> <<58001TCLP.xls>> <<58021TCLP.xls>> <<58022TCLP.xls>>
<<58023TCLP.xls>> <<58024TCLP.xls>> <<58049TCLP.xls>> <<58050TCLP.xls>>
<<58052TCLP.xls>> <<58053TCLP.xls>> <<58065TCLP.xls>> <<58066TCLP.xls>>
<<58067TCLP.xls>> <<58068TCLP.xls>> <<58069TCLP.xls>>

Rachelle Arada
Project Coordinator
www.atlglobal.com
voice: 562.989.4045 ext 237
fax : 562.989.4040

<< File: 57931TCLP.xls >> << File: 58001TCLP.xls >> << File: 58021TCLP.xls >> << File: 58022TCLP.xls >> << File: 58023TCLP.xls >> << File: 58024TCLP.xls >> << File: 58049TCLP.xls >> << File: 58050TCLP.xls >> << File: 58052TCLP.xls >> << File: 58053TCLP.xls >> << File: 58065TCLP.xls >> << File: 58066TCLP.xls >> << File: 58067TCLP.xls >> << File: 58068TCLP.xls >> << File: 58069TCLP.xls >>

569-404-0	2. STLC	170	570-515-0.3	2. STLC	120	571-521-0	2. STLC	230
569-402-0	2. STLC	130	570-811-0	2. STLC	110	571-324-0.9	2. STLC	110
569-406-0	2. STLC	120	570-114-0.0	2. STLC	110	571-818-0	2. STLC	110
569-515-0	2. STLC	110	570-504-0.6	2. STLC	100	571-819-0.6	2. STLC	110
569-611-0	2. STLC	100	570-811-1.5	2. STLC	90	571-708-0	2. STLC	110
569-409-0	2. STLC	94	570-615-0.6	2. STLC	84	571-103-0.6	2. STLC	110
569-603-0	2. STLC	93	570-305-0	2. STLC	79	571-617-0.3	2. STLC	100
569-104-0.6	2. STLC	91	570-314-0.6	2. STLC	76	571-611-0.6	2. STLC	92
569-807-0	2. STLC	86	570-505-0.6	2. STLC	75	571-712-0.9	2. STLC	81
569-608-0	2. STLC	86	570-208-0.6	2. STLC	74	571-105-0.6	2. STLC	81
569-501-0	2. STLC	84	570-116-0.0	2. STLC	73	571-313-0	2. STLC	79
569-710-0.3	2. STLC	83	570-102-0	2. STLC	65	571-508-0	2. STLC	73
569-808-0	2. STLC	83	570-804-0.6	2. STLC	64	571-518-0.3	2. STLC	73
569-609-0.6	2. STLC	80	570-704-0	2. STLC	63	571-217-0	2. STLC	68
569-803-0	2. STLC	79	570-508-0.6	2. STLC	60	571-516-0	2. STLC	66
569-105-0	2. STLC	78	570-706-0.3	2. STLC	60	571-701-0.3	2. STLC	66
569-512-0	2. STLC	77	570-303-0	2. STLC	58	571-710-0.6	2. STLC	65
569-513-0	2. STLC	77	570-311-1.5	2. STLC	58	571-512-0	2. STLC	64
569-302-0	2. STLC	74	570-117-0.0	2. STLC	58	571-308-0.9	2. STLC	61
569-805-0	2. STLC	73	570-208-0.3	2. STLC	58	571-701-0	2. STLC	61
569-517-0	2. STLC	71	570-709-0.6	2. STLC	57	571-514-0.3	2. STLC	59
569-704-0.3	2. STLC	71	570-703-0	2. STLC	55	571-415-0	2. STLC	58
569-703-0.6	2. STLC	70	570-206-0	2. STLC	54	571-616-0.6	2. STLC	57
569-514-0.3	2. STLC	70	570-301-0	2. STLC	53	571-517-0	2. STLC	56
569-803-0.3	2. STLC	69	570-603-0.3	2. STLC	46	571-112-0.9	2. STLC	56
569-409-0.6	2. STLC	68	570-711-0.6	2. STLC	46	571-214-0	2. STLC	55
569-411-0	2. STLC	68	570-206-0.3	2. STLC	45	571-415-0.3	2. STLC	55
569-102-0.6	2. STLC	68	570-103-0	2. STLC	44	571-405-0.6	2. STLC	55
569-809-0	2. STLC	65	570-602-0	2. STLC	41	571-530-0	2. STLC	55
569-605-0	2. STLC	65	570-209-0	2. STLC	40	571-831-0	2. STLC	53
569-711-0.6	2. STLC	62	570-210-0	2. STLC	40	571-709-0	2. STLC	53
569-806-0	2. STLC	60	570-117-0.3	2. STLC	39	571-103-0.0	2. STLC	52
569-802-0.3	2. STLC	60	570-103-0.6	2. STLC	37	571-312-0	2. STLC	51
569-410-0	2. STLC	59	570-110-0.6	2. STLC	37	571-526-0	2. STLC	51
569-501-0.6	2. STLC	59	570-805-0.9	2. STLC	36	571-819-1.5	2. STLC	51
569-808-0.3	2. STLC	58	570-112-1.5	2. STLC	35	571-515-0	2. STLC	50
569-104-0	2. STLC	56	570-614-0	2. STLC	34	571-833-0	2. STLC	49
569-804-0	2. STLC	54	570-713-0.3	2. STLC	33	571-815-0.6	2. STLC	47
569-610-0	2. STLC	54	570-513-0	2. STLC	32	571-517-0.3	2. STLC	46
569-608-0.3	2. STLC	53	570-312-0.3	2. STLC	31	571-610-0	2. STLC	46
569-213-0	2. STLC	49	570-503-0.6	2. STLC	31	571-413-0	2. STLC	46
569-701-0	2. STLC	47	570-510-0.6	2. STLC	31	571-815-0	2. STLC	45
569-311-0	2. STLC	47	570-202-0	2. STLC	31	571-514-0.9	2. STLC	44
569-609-0.9	2. STLC	46	570-207-0	2. STLC	31	571-505-1.5	2. STLC	44
569-513-0.3	2. STLC	45	570-209-0.3	2. STLC	31	571-528-0	2. STLC	44
569-801-0.6	2. STLC	44	570-703-0.3	2. STLC	30	571-610-0.6	2. STLC	43
569-514-0	2. STLC	42	570-401-0	2. STLC	30	571-629-0	2. STLC	43
569-805-0.6	2. STLC	42	570-610-0.9	2. STLC	29	571-604-0	2. STLC	42
569-408-1.5	2. STLC	42	570-809-0.6	2. STLC	29	571-213-0	2. STLC	41
569-807-0.3	2. STLC	40	570-509-0.9	2. STLC	29	571-812-0	2. STLC	41
569-204-0	2. STLC	40	570-210-0.6	2. STLC	29	571-706-0	2. STLC	41
569-517-0.3	2. STLC	36	570-211-0	2. STLC	29	571-530-0.6	2. STLC	41
569-518-0	2. STLC	36	570-603-0	2. STLC	28	571-305-0	2. STLC	40
569-806-0.3	2. STLC	36	570-119-0	2. STLC	28	571-523-0.3	2. STLC	39
569-705-1.5	2. STLC	35	570-713-0.6	2. STLC	28	571-510-0	2. STLC	39
569-303-0.6	2. STLC	34	570-108-0	2. STLC	27	571-305-0.9	2. STLC	39
569-516-0.3	2. STLC	33	570-708-0.6	2. STLC	27	571-818-1.5	2. STLC	39
569-705-0.6	2. STLC	33	570-224-0	2. STLC	26	571-703-0	2. STLC	38
569-802-0	2. STLC	33	570-601-0	2. STLC	26	571-520-0.3	2. STLC	36
569-515-0.6	2. STLC	32	570-710-0.6	2. STLC	26	571-216-0	2. STLC	34
569-704-0	2. STLC	32	570-614-0.6	2. STLC	26	571-827-0	2. STLC	34
569-401-0.3	2. STLC	32	570-118-0.3	2. STLC	26	571-708-0.3	2. STLC	34
569-207-0	2. STLC	32	570-304-0	2. STLC	25	571-514-0.6	2. STLC	33
569-608-0.6	2. STLC	31	570-707-0.6	2. STLC	25	571-528-1.5	2. STLC	33
569-104-0.3	2. STLC	31	570-510-0	2. STLC	25	571-803-0	2. STLC	33
569-201-0.6	2. STLC	30	570-110-0	2. STLC	24	571-414-0.3	2. STLC	33
569-515-0.3	2. STLC	28	570-223-0	2. STLC	24	571-813-0.3	2. STLC	32
569-212-0.6	2. STLC	28	570-117-0.6	2. STLC	24	571-523-0	2. STLC	31
569-103-0	2. STLC	28	570-616-0	2. STLC	23	571-326-0	2. STLC	31
569-313-0	2. STLC	27	570-704-0.3	2. STLC	22	571-502-0.6	2. STLC	31
569-103-0.3	2. STLC	26	570-513-0.6	2. STLC	22	571-624-1.5	2. STLC	31
569-705-0.9	2. STLC	25	570-221-0.0	2. STLC	22	571-330-0	2. STLC	31
569-707-0.3	2. STLC	25	570-617-0	2. STLC	21	571-512-0.3	2. STLC	30
569-515-1.5	2. STLC	24	570-214-0.3	2. STLC	21	571-521-0.6	2. STLC	29
569-508-0	2. STLC	24	570-122-0.9	2. STLC	20	571-706-0.3	2. STLC	29
569-801-0	2. STLC	24	570-313-0.6	2. STLC	19	571-814-0.6	2. STLC	28
569-402-0.6	2. STLC	24	570-207-0.6	2. STLC	19	571-616-1.5	2. STLC	28
569-516-0.6	2. STLC	22	570-120-0.9	2. STLC	18	571-835-0	2. STLC	28
569-509-0.3	2. STLC	22	570-506-0	2. STLC	18	571-811-0.3	2. STLC	28
569-106-0	2. STLC	22	570-102-0.9	2. STLC	17	571-101-0.6	2. STLC	28
569-106-0.3	2. STLC	22	570-216-0	2. STLC	17	571-112-0	2. STLC	28
569-202-0	2. STLC	21	570-225-0	2. STLC	17	571-315-0	2. STLC	27
569-805-1.5	2. STLC	21	570-304-0.3	2. STLC	17	571-622-0	2. STLC	27
569-205-0	2. STLC	20	570-409-0	2. STLC	17	571-607-0.6	2. STLC	27
569-707-0	2. STLC	19	570-713-0	2. STLC	17	571-609-0.6	2. STLC	27

569-709-0	2. STLC	19
569-202-0.3	2. STLC	19
569-602-0	2. STLC	19
569-207-0.3	2. STLC	19
569-706-0.3	2. STLC	17
569-807-0.9	2. STLC	17
569-104-0.9	2. STLC	17
569-505-0.6	2. STLC	17
569-704-0.6	2. STLC	16
569-808-0.6	2. STLC	16
569-212-0.3	2. STLC	16
569-612-0	2. STLC	16
569-704-1.5	2. STLC	15
569-411-0.3	2. STLC	15
569-113-0	2. STLC	15
569-807-0.6	2. STLC	14
569-311-0.3	2. STLC	12
569-312-0	2. STLC	10
569-311-0.9	2. STLC	8.3

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570-401-0.3	2. STLC	17
570-616-0.6	2. STLC	17
570-308-0	2. STLC	16
570-807-0.9	2. STLC	16
570-701-0.6	2. STLC	16
570-617-0.3	2. STLC	16
570-107-0.6	2. STLC	15
570-811-0.6	2. STLC	15
570-707-0	2. STLC	15
570-518-0	2. STLC	15
570-111-0.0	2. STLC	15
570-109-0.6	2. STLC	14
570-401-0.9	2. STLC	4.1
570-408-0	2. STLC	4
570-409-0.3	2. STLC	3
570-401-0.6		0
570-401-1.5		0
570-408-0.6		0
570-408-1.5		0

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571-837-0.3	2. STLC	27
571-520-0	2. STLC	26
571-516-0.3	2. STLC	26
571-420-0	2. STLC	26
571-102-0.6	2. STLC	26
571-517-1.5	2. STLC	25
571-513-0.6	2. STLC	25
571-623-0.6	2. STLC	25
571-112-0.3	2. STLC	25
571-326-0.6	2. STLC	24
571-619-0.3	2. STLC	24
571-619-0.9	2. STLC	24
571-528-0.3	2. STLC	24
571-706-0.6	2. STLC	24
571-112-0.6	2. STLC	24
571-327-0.6	2. STLC	23
571-817-0	2. STLC	23
571-425-0.6	2. STLC	22
571-118-0	2. STLC	22
571-829-0	2. STLC	22
571-828-0	2. STLC	22
571-122-0	2. STLC	21
571-101-1.5	2. STLC	21
571-530-0.3	2. STLC	21
571-406-0.6	2. STLC	20
571-517-0.6	2. STLC	20
571-835-0.3	2. STLC	20
571-501-0	2. STLC	20
571-518-0.9	2. STLC	19
571-510-0.3	2. STLC	19
571-814-0.9	2. STLC	19
571-522-0.6	2. STLC	19
571-622-1.5	2. STLC	19
571-812-0.6	2. STLC	19
571-701-0.6	2. STLC	19
571-704-0	2. STLC	19
571-711-0.6	2. STLC	19
571-212-0	2. STLC	18
571-839-0.6	2. STLC	18
571-610-1.5	2. STLC	18
571-709-0.3	2. STLC	18
571-311-0.6	2. STLC	17
571-620-0	2. STLC	17
571-109-0	2. STLC	17
571-704-0.3	2. STLC	17
571-207-1.5	2. STLC	16
571-203-0	2. STLC	16
571-616-0.3	2. STLC	16
571-317-0.3	2. STLC	16
571-629-0.3	2. STLC	16
571-416-0	2. STLC	15
571-419-0	2. STLC	15
571-526-0.3	2. STLC	15
571-619-0	2. STLC	15
571-606-0	2. STLC	15
571-115-0.6	2. STLC	14
571-202-0.9	2. STLC	11

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Rachelle

From: Steve Reese [sreese@ninyoandmoore.com]
Sent: Wednesday, July 31, 2002 9:27 AM
To: 'rachelle@atlglobal.com'
Cc: David Shaler (E-mail); Ruth Cheung (E-mail)
Subject: TCLP Analysis

TCLP.xls

Rachelle,
Attached please find a list of samples to be run for the TCLP analysis. Currently, we selected all of the samples that are greater than 1,000 mg/kg
of TTLC results. However, they will be ran by instruction only. There may
be more samples chosen for TCLP analysis in the future, but please run these 82 samples for now. Please call with any questions.
Thank you, Steve

Stephen S. Reese
Senior Staff Environmental Scientist
Ninyo & Moore Geotechnical & Environmental Sciences Consultants
475 Goddard, Suite 200
Irvine, California 92618
Tel: (949) 753-7070
Fax: (949) 753-7071
Email: sreese@ninyoandmoore.com
www.ninyoandmoore.com

RUN FOR TCLP ANALYSIS			
33	20	29	82
569-101-0	570-101-0	571-104-0	
569-102-0	570-101-0.6	571-120-0	
569-102-0.3	570-102-0.6	571-310-0.9	
569-102-0.9	570-103-1.5	571-317-0	
569-111-0	570-114-0.6	571-320-0	
569-112-0	570-115-0	571-325-0.6	
569-112-0.6	570-119-0.3	571-507-0	
569-201-0	570-201-0	571-511-0	
569-212-0	570-214-0	571-514-0	
569-301-0	570-311-0.6	571-524-0	
569-303-0.9	570-312-0.6	571-710-0	
569-314-0	570-504-0	571-710-0.3	
569-401-0	570-508-0	571-711-0	
569-404-0.6	570-517-0	571-711-0.3	
569-405-0.6	570-517-0.3	571-712-0	
569-408-0.9	570-610-0.6	571-712-0.3	
569-502-0.6	570-615-0	571-201-0.6	
569-516-0	570-706-0	571-405-0	
569-603-0.3	570-709-0	571-406-0	
569-607-0	570-808-0.6	571-407-0	
569-607-0.3		571-414-0	
569-609-0		571-609-0	
569-609-0.3		571-611-0	
569-703-0		571-616-0	
569-703-0.9		571-617-0	
569-705-0		571-619-1.5	
569-705-0.3		571-814-0.3	
569-706-0		571-818-0.6	
569-708-0		571-819-0	
569-710-0			
569-711-0			
569-711-0.3			
569-801-0.3			

Ninyo & Moore Transmittal

475 Goddard, Suite 200, Irvine, California 92618 ◆ Phone 949/753-7070 ◆ Fax 949/753-7071 ◆ www.ninyoandmoore.com

To:	Sophie	**Date:**	July 25, 2002
Firm:	Advanced Technology Laboratories	**Fax No:**	562-989-4040
Address:	3275 Walnut Avenue Signal Hill, CA 90807	**Telephone No:**	562-989-4045
From:	Steve Reese	**Total Pages Including Transmittal:**	
Subject:	Authorization to correct COC's	**Project No:**	203939001

☐ **Urgent**	☐ **For Approval**	☒ **For Your Use**	☐ **Please Reply**	☒ **As Requested**
Original Document:	☐ **Will Not Follow**	☐ **Will Follow**	☐ **By U.S. Mail**	☐ **By Other**

Sophie,
As discussed, please correct sample 571-608-0.9 on the COC by matching it with the time of the sample 571-609-0.9 that was written twice. If sample 571-614-0.6 cannot be found then it must be lost because according to our records we did collect that sample. Also, please correct sample 569-606-0.9 is actually 569-608-0.9.
Thank you,
Steve

- **Geotechnical Engineering**
- **Engineering Geology**
- **Materials Testing and Inspection**
- **Construction Management**
- **Engineering Design**
- **Environmental Engineering**
- **Environmental Site Assessments**
- **Regulatory Compliance and Permitting**
- **Water Quality and Resource Evaluations**
- **Hazardous Waste Management**
- **Soil and Groundwater Remediation**
- **Asbestos and Lead-Based Paint Surveys**
- **Geophysical Studies**
- **Mineral Resource Evaluations**
- **Value Engineering**
- **Forensic Studies**
- **Expert Witness Testimony**

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Tuesday, August 06, 2002 3:46 PM
To: 'Rachelle'; 'David Shaler (E-mail)'
Subject: Title 22 Metals

Title 22 Metals.xls

Rachelle,
Please run the following samples for Title 22 Metals. Please do not list
Pb in your emailed results. There should be a total of 120 samples to be
run.
Thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

569-102-0.9	570-101-0	571-101-0.9
569-112-0	570-101-0.6	571-104-0
569-201-0	570-201-0	571-201-0.6
569-206-0.6	570-205-0.9	571-108-1.5
569-106-1.5	570-106-0.3	571-111-0.3
569-212-0	570-208-1.5	571-207-0
569-401-0.6	570-111-0.6	571-210-0.6
569-301-0	570-214-0	571-115-0.9
569-303-0.9	570-115-0.3	571-214-0.3
569-404-0.6	570-119-0.9	571-120-0
569-408-0.9	570-224-0.6	571-217-1.5
569-314-0	570-401-0	571-220-0.6
569-313-0.3	570-401-0.3	571-301-0.3
569-502-0.6	570-304-1.5	571-405-0
569-602-1.5	570-307-0.9	571-306-0.9
569-607-0.3	570-311-0.6	571-407-0
569-607-0	570-312-0.6	571-310-0.9
569-508-0.9	570-316-0.3	571-315-0.3
569-511-0.6	570-601-0	571-412-1.5
569-612-1.5	570-505-1.5	571-317-0
569-516-0	570-508-0	571-320-0.6
569-801-0.3	570-610-0.6	571-416-0.9
569-519-0.6	570-511-0.9	571-325-0.3
569-803-0.9	570-615-0	571-421-1.5
569-705-0	570-514-0.3	571-425-0
569-806-1.5	570-517-0	571-501-0.6
569-708-0.3	570-618-0.6	571-503-0.9
569-711-0	570-621-1.5	571-603-0.3
569-811-0	570-703-0.9	571-507-0
	570-804-0	571-609-0
	570-706-0	571-510-1.5
	570-709-0	571-611-0
	570-808-0.6	571-514-0
	570-711-1.5	571-614-0.3
	570-812-0.3	571-517-0.9
		571-617-0.6
		571-520-1.5
		571-621-0.3
		571-524-0
		571-624-0.9
		571-529-0.3
		571-628-0.6
		571-703-1.5
		571-707-0
		571-804-0.9
		571-809-0.3
		571-711-0
		571-712-0
		571-814-0.3
		571-818-0.6
		571-819-0
		571-827-1.5

571-832-0.9
571-836-0.3
571-837-0.6
571-842-0

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tblTEMP

WorkOrder	ClientSampID	TestNo	Analyte	PQL	DF	CollectionDate	AnalDate	PrepDate
058022	571-607-0	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058022	571-607-0	EPA 9045C	pH	0.1	1	7/19/2002	7/25/2002	7/25/2002
058022	571-607-0	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058022	571-607-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058022	571-607-0.6	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/14/2002	8/13/2002
058022	571-607-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058022	571-607-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058022	571-607-0.6	WET/ EPA 7420	Lead	0.8	4	7/19/2002	8/2/2002	7/29/2002
058022	571-607-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058022	571-607-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058022	571-608-0	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058022	571-608-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058022	571-608-0	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058022	571-608-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058022	571-608-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058022	571-608-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058022	571-608-0.6	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058022	571-608-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058022	571-608-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058022	571-608-1.5	EPA 9045C	pH	0.1	1	7/19/2002	7/25/2002	7/25/2002
058022	571-608-1.5	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058022	571-608-1.5	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058022	571-609-0	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/7/2002	8/6/2002
058022	571-609-0	EPA 6010B	Antimony	2.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-609-0	EPA 6010B	Arsenic	2.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-609-0	EPA 6010B	Barium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-609-0	EPA 6010B	Beryllium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-609-0	EPA 6010B	Cadmium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-609-0	EPA 6010B	Chromium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-609-0	EPA 6010B	Cobalt	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-609-0	EPA 6010B	Copper	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-609-0	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058022	571-609-0	EPA 6010B	Molybdenum	2.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-609-0	EPA 6010B	Nickel	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-609-0	EPA 6010B	Selenium	2.5	10	7/19/2002	8/10/2002	8/9/2002

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058022	571-609-0	EPA 6010B	Silver	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-609-0	EPA 6010B	Thallium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-609-0	EPA 6010B	Vanadium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-609-0	EPA 6010B	Zinc	5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-609-0	EPA 7471A	Mercury	0.1	1	7/19/2002	8/12/2002	8/7/2002
058022	571-609-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058022	571-609-0.6	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/14/2002	8/13/2002
058022	571-609-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/25/2002	7/23/2002
058022	571-609-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058022	571-609-0.6	WET/ EPA 7420	Lead	0.8	4	7/19/2002	8/2/2002	7/29/2002
058022	571-609-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-610-0	EPA 1311/ 7420	Lead	0.4	2	7/19/2002	8/14/2002	8/13/2002
058022	571-610-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-610-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058022	571-610-0	WET/ EPA 7420	Lead	2	10	7/19/2002	8/2/2002	7/29/2002
058022	571-610-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-610-0.6	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/14/2002	8/13/2002
058022	571-610-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-610-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058022	571-610-0.6	WET/ EPA 7420	Lead	2	10	7/19/2002	8/2/2002	7/29/2002
058022	571-610-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-610-1.5	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/14/2002	8/13/2002
058022	571-610-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-610-1.5	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058022	571-610-1.5	WET/ EPA 7420	Lead	0.4	2	7/19/2002	8/2/2002	7/29/2002
058022	571-611-0	EPA 1311/ 7420	Lead	0.4	2	7/19/2002	8/7/2002	8/6/2002
058022	571-611-0	EPA 6010B	Antimony	2.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-611-0	EPA 6010B	Arsenic	2.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-611-0	EPA 6010B	Barium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-611-0	EPA 6010B	Beryllium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-611-0	EPA 6010B	Cadmium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-611-0	EPA 6010B	Chromium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-611-0	EPA 6010B	Cobalt	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-611-0	EPA 6010B	Copper	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-611-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-611-0	EPA 6010B	Molybdenum	2.5	10	7/19/2002	8/10/2002	8/9/2002

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058022	571-611-0	EPA 6010B	Nickel	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-611-0	EPA 6010B	Selenium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-611-0	EPA 6010B	Silver	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-611-0	EPA 6010B	Thallium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-611-0	EPA 6010B	Vanadium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-611-0	EPA 6010B	Zinc	5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-611-0	EPA 7471A	Mercury	0.1	1	7/19/2002	8/12/2002	8/7/2002
058022	571-611-0	EPA 9045C	pH	0.1	1	7/19/2002	7/25/2002	7/25/2002
058022	571-611-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-611-0.6	EPA 1311/ 7420	Lead	0.4	2	7/19/2002	8/14/2002	8/13/2002
058022	571-611-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-611-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058022	571-611-0.6	WET/ EPA 7420	Lead	2	10	7/19/2002	8/2/2002	7/29/2002
058022	571-611-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-611-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-612-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-612-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058022	571-612-0	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058022	571-612-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-612-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-612-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-612-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-613-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-613-0	EPA 9045C	pH	0.1	1	7/19/2002	7/25/2002	7/25/2002
058022	571-613-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058022	571-613-0	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058022	571-613-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-613-0.3	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058022	571-613-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-613-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-613-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-614-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-614-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058022	571-614-0	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058022	571-614-0.3	EPA 6010B	Antimony	2.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-614-0.3	EPA 6010B	Arsenic	2.5	10	7/19/2002	8/10/2002	8/9/2002

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058022	571-614-0.3	EPA 6010B	Barium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-614-0.3	EPA 6010B	Beryllium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-614-0.3	EPA 6010B	Cadmium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-614-0.3	EPA 6010B	Chromium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-614-0.3	EPA 6010B	Cobalt	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-614-0.3	EPA 6010B	Copper	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-614-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-614-0.3	EPA 6010B	Molybdenum	2.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-614-0.3	EPA 6010B	Nickel	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-614-0.3	EPA 6010B	Selenium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-614-0.3	EPA 6010B	Silver	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-614-0.3	EPA 6010B	Thallium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-614-0.3	EPA 6010B	Vanadium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-614-0.3	EPA 6010B	Zinc	5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-614-0.3	EPA 7471A	Mercury	0.1	1	7/19/2002	8/14/2002	8/13/2002
058022	571-614-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-614-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-614-1.5	EPA 9045C	pH	0.1	1	7/19/2002	7/25/2002	7/25/2002
058022	571-614-1.5	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058022	571-615-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-615-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-615-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-615-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-616-0	EPA 1311/ 7420	Lead	0.4	2	7/19/2002	8/7/2002	8/6/2002
058022	571-616-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-616-0.3	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/14/2002	8/13/2002
058022	571-616-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-616-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058022	571-616-0.3	WET/ EPA 7420	Lead	0.4	2	7/19/2002	8/2/2002	7/29/2002
058022	571-616-0.6	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/14/2002	8/13/2002
058022	571-616-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-616-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058022	571-616-0.6	WET/ EPA 7420	Lead	2	10	7/19/2002	8/2/2002	7/29/2002
058022	571-616-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-616-1.5	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/14/2002	8/13/2002
058022	571-616-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002

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058022	571-616-1.5	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058022	571-616-1.5	WET/ EPA 7420	Lead	0.8	4	7/19/2002	8/2/2002	7/29/2002
058022	571-812-0	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/14/2002	8/13/2002
058022	571-812-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-812-0	EPA 9045C	pH	0.1	1	7/19/2002	7/25/2002	7/25/2002
058022	571-812-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058022	571-812-0	WET/ EPA 7420	Lead	2	10	7/19/2002	8/2/2002	7/29/2002
058022	571-812-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-812-0.6	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/14/2002	8/13/2002
058022	571-812-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-812-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058022	571-812-0.6	WET/ EPA 7420	Lead	0.4	2	7/19/2002	8/2/2002	7/29/2002
058022	571-812-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-812-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-813-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-813-0	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058022	571-813-0.3	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/14/2002	8/13/2002
058022	571-813-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-813-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058022	571-813-0.3	WET/ EPA 7420	Lead	0.8	4	7/19/2002	8/2/2002	7/29/2002
058022	571-813-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-813-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058022	571-813-0.6	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058022	571-813-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-813-0.9	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058022	571-813-0.9	WET/ EPA 7420	Lead	0.4	2	7/19/2002	8/2/2002	7/29/2002
058022	571-814-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-814-0	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058022	571-814-0.3	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/7/2002	8/6/2002
058022	571-814-0.3	EPA 6010B	Antimony	2.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-814-0.3	EPA 6010B	Arsenic	2.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-814-0.3	EPA 6010B	Barium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-814-0.3	EPA 6010B	Beryllium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-814-0.3	EPA 6010B	Cadmium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-814-0.3	EPA 6010B	Chromium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-814-0.3	EPA 6010B	Cobalt	1.5	10	7/19/2002	8/10/2002	8/9/2002

058022	571-814-0.3	EPA 6010B	Copper	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-814-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058022	571-814-0.3	EPA 6010B	Molybdenum	2.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-814-0.3	EPA 6010B	Nickel	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-814-0.3	EPA 6010B	Selenium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-814-0.3	EPA 6010B	Silver	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-814-0.3	EPA 6010B	Thallium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-814-0.3	EPA 6010B	Vanadium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-814-0.3	EPA 6010B	Zinc	5	10	7/19/2002	8/10/2002	8/9/2002
058022	571-814-0.3	EPA 7471A	Mercury	0.1	1	7/19/2002	8/12/2002	8/7/2002
058022	EB-25	EPA 6010B	Lead	0.005	1	7/19/2002	7/25/2002	7/25/2002

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August 15, 2002

David Shaler
Ninyo & Moore
475 Goddard Suite 200
Irvine, CA 92618
TEL: (949) 753-7070
FAX: (949) 753-7071

RE: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

Attention: David Shaler

ELAP No.: 1838
NELAP No.: 02107CA
Workorder No.: 058051

Enclosed are the results for sample(s) received on July 22, 2002 by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

J. Kelley for

Eddie F. Rodriguez
Laboratory Director

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NINYO & MOORE
ORANGE COUNTY OFFICE

This cover letter and a case narrative are an integral part of this analytical report.

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions

See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) [illegible] 7-22-02	Received by: (name/date/time) Eddie Rodriguez 7/22/02 4:50p
Relinquished by: (name/date/time) [illegible] 7/22/02 6:00p	Received by: (name/date/time) [illegible] 7/22/02 6:00p

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB- 30	7/22/02	3:30	P	X	
	571- 832-0	7/22/02	9:00	B	X	X
	571- 832-0.3		9:03		X	
	571- 832-0.6		9:06		X	
	571- 832-0.9		9:09		X	
	571- 832-1.5		9:15		X	
	571- 834-0		9:05		X	
	571- 834-0.3		9:08		X	
	571- 834-0.6		9:13		X	
	571- 836-0		9:27		X	
	571- 836-0.3		9:30		X	X
	571- 836-0.6		9:35		X	
	571- 109-0		10:08		X	
	571- 109-0.3		10:10		X	
	571- ~~9-5~~ 110-0		9:53		X	
	571- 110-0.3		9:57		X	
	571- 110-0.6		10:02		X	
	571- 107-0		10:27		X	
	571- 107-0.3		10:30		X	
	571- 107-0.6		10:33		X	
	571- 107-0.9		10:36		X	X
	571- 106-0		10:32		X	
	571- 106-0.3		10:36		X	
	571- 106-0.6		10:40		X	
	571- 106-0.9		10:47		X	
	571- 206-0		11:24		X	
	571- 206-0.3		11:25		X	
	571- 206-0.6		11:28		X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
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	571-				X	
	571-				X	
	571-				X	

Advanced Technology Laboratories

Date: *29-Jul-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	EB-30
Lab Order:	058051		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/22/2002 3:30:00 PM
Lab ID:	058051-001A	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	(EPA 3010A)			**EPA 6010B**		
RunID: ICP2_020726F	QC Batch: 9878					Analyst: **RQ**
Lead	ND	0.0050		mg/L	1	7/26/2002

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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Date: 7/29/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058051
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058051-002A	571-832-0	23	mg/Kg	9835	5	1	7/22/2002	7/26/2002
058051-003A	571-832-0.3	5.3	mg/Kg	9835	5	1	7/22/2002	7/26/2002
058051-004A	571-832-0.6	ND	mg/Kg	9835	5	1	7/22/2002	7/26/2002
058051-005A	571-832-0.9	ND	mg/Kg	9835	5	1	7/22/2002	7/26/2002
058051-006A	571-832-1.5	7.2	mg/Kg	9835	5	1	7/22/2002	7/26/2002
058051-007A	571-834-0	56	mg/Kg	9835	5	1	7/22/2002	7/26/2002
058051-008A	571-834-0.3	ND	mg/Kg	9835	5	1	7/22/2002	7/26/2002
058051-009A	571-834-0.6	6.2	mg/Kg	9835	5	1	7/22/2002	7/26/2002
058051-010A	571-836-0	240	mg/Kg	9835	5	1	7/22/2002	7/26/2002
058051-011A	571-836-0.3	ND	mg/Kg	9835	5	1	7/22/2002	7/26/2002
058051-012A	571-836-0.6	ND	mg/Kg	9835	5	1	7/22/2002	7/26/2002

Qualifiers:

- ND - Not Detected at the Reporting Limit
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- S - Spike/Surrogate outside of limits due to matrix interferen
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Advanced Technology Laboratories

Date: 7/29/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058051
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058051-013A	571-109-0	180	mg/Kg	9835	5	1	7/22/2002	7/26/2002
058051-014A	571-109-0.3	45	mg/Kg	9835	5	1	7/22/2002	7/26/2002
058051-015A	571-110-0	64	mg/Kg	9835	5	1	7/22/2002	7/26/2002
058051-016A	571-110-0.3	42	mg/Kg	9835	5	1	7/22/2002	7/26/2002
058051-017A	571-110-0.6	41	mg/Kg	9836	5	1	7/22/2002	7/26/2002
058051-018A	571-107-0	90	mg/Kg	9836	5	1	7/22/2002	7/26/2002
058051-019A	571-107-0.3	85	mg/Kg	9836	5	1	7/22/2002	7/26/2002
058051-020A	571-107-0.6	240	mg/Kg	9836	5	1	7/22/2002	7/26/2002
058051-021A	571-107-0.9	91	mg/Kg	9836	5	1	7/22/2002	7/26/2002
058051-022A	571-106-0	150	mg/Kg	9836	5	1	7/22/2002	7/26/2002
058051-023A	571-106-0.3	19	mg/Kg	9836	5	1	7/22/2002	7/26/2002

Qualifiers:

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- J - Analyte detected below quantitation limits
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Date: 7/29/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058051
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058051-024A	571-106-0.6	9.6	mg/Kg	9836	5	1	7/22/2002	7/26/2002
058051-025A	571-106-0.9	6.7	mg/Kg	9836	5	1	7/22/2002	7/26/2002
058051-026A	571-206-0	84	mg/Kg	9836	5	1	7/22/2002	7/26/2002
058051-027A	571-206-0.3	93	mg/Kg	9836	5	1	7/22/2002	7/26/2002
058051-028A	571-206-0.6	43	mg/Kg	9836	5	1	7/22/2002	7/26/2002

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interferen
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/29/2002

pH
EPA 9045C

CLIENT:	Ninyo & Moore	**Lab Order:**	058051
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058051-002A	571-832-0	8.17	pH Units	R19857	0.1	1	7/22/2002	7/26/2002
058051-011A	571-836-0.3	7.76	pH Units	R19857	0.1	1	7/22/2002	7/26/2002
058051-021A	571-107-0.9	7.78	pH Units	R19857	0.1	1	7/22/2002	7/26/2002

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interferen
H - Sample exceeded analytical holding time
E - Value above quantitation range
Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 8/2/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058051
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058051-007A	571-834-0	0.37	mg/L	9949	0.2	1	7/22/2002	8/2/2002
058051-010A	571-836-0	10	mg/L	9949	0.2	1	7/22/2002	8/2/2002
058051-013A	571-109-0	17	mg/L	9949	0.4	2	7/22/2002	8/2/2002
058051-015A	571-110-0	3.4	mg/L	9949	0.2	1	7/22/2002	8/2/2002
058051-018A	571-107-0	4.6	mg/L	9949	0.2	1	7/22/2002	8/2/2002
058051-019A	571-107-0.3	4.6	mg/L	9949	0.2	1	7/22/2002	8/2/2002
058051-020A	571-107-0.6	9.9	mg/L	9949	0.2	1	7/22/2002	8/2/2002
058051-021A	571-107-0.9	4.1	mg/L	9949	0.2	1	7/22/2002	8/2/2002
058051-022A	571-106-0	9.0	mg/L	9949	0.2	1	7/22/2002	8/2/2002
058051-026A	571-206-0	8.2	mg/L	9949	0.2	1	7/22/2002	8/2/2002
058051-027A	571-206-0.3	5.1	mg/L	9949	0.2	1	7/22/2002	8/2/2002

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
DO - Surrogate Diluted Out
S - Spike/Surrogate outside of limits due to matrix interferen
H - Sample exceeded analytical holding time
E - Value above quantitation range
Results are wet unless otherwise specified

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: 8/12/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058051
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058051-010A	571-836-0	ND	mg/L	10134	0.2	1	7/22/2002	8/9/2002
058051-013A	571-109-0	ND	mg/L	10134	0.2	1	7/22/2002	8/9/2002
058051-020A	571-107-0.6	ND	mg/L	10134	0.2	1	7/22/2002	8/9/2002
058051-022A	571-106-0	ND	mg/L	10134	0.2	1	7/22/2002	8/9/2002
058051-026A	571-206-0	ND	mg/L	10134	0.2	1	7/22/2002	8/9/2002
058051-027A	571-206-0.3	ND	mg/L	10134	0.2	1	7/22/2002	8/9/2002

Qualifiers:

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- H - Sample exceeded analytical holding time
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Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-832-0.9
Lab Order:	058051		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/22/2002 9:09:00 AM
Lab ID:	058051-005A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810F	QC Batch: 10217					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	11	2.5		mg/Kg	10	8/10/2002
Barium	320	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	11	1.5		mg/Kg	10	8/10/2002
Chromium	57	1.5		mg/Kg	10	8/10/2002
Cobalt	13	1.5		mg/Kg	10	8/10/2002
Copper	25	1.5		mg/Kg	10	8/10/2002
Molybdenum	14	2.5		mg/Kg	10	8/10/2002
Nickel	43	1.5		mg/Kg	10	8/10/2002
Selenium	15	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	140	1.5		mg/Kg	10	8/10/2002
Zinc	120	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020814D	QC Batch: 10328					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/14/2002

Qualifiers:

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Advanced Technology Laboratories 3275 Walnut Avenue, Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Advanced Technology Laboratories

Date: *14-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-836-0.3
Lab Order:	058051		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/22/2002 9:30:00 AM
Lab ID:	058051-011A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810F	QC Batch: 10217					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	ND	2.5		mg/Kg	10	8/10/2002
Barium	110	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	19	1.5		mg/Kg	10	8/10/2002
Cobalt	8.4	1.5		mg/Kg	10	8/10/2002
Copper	11	1.5		mg/Kg	10	8/10/2002
Molybdenum	ND	2.5		mg/Kg	10	8/10/2002
Nickel	15	1.5		mg/Kg	10	8/10/2002
Selenium	9.7	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	43	1.5		mg/Kg	10	8/10/2002
Zinc	52	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020814D	QC Batch: 10328					Analyst: **NS**
Mercury	ND	0.10		mg/Kg	1	8/14/2002

Qualifiers:

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Advanced Technology Laboratories
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Advanced Technology Laboratories

Date: 8/15/2002

LEAD BY ATOMIC ABSORPTION
EPA 1311/ 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058051
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/22/2002 6:00:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058051-013A	571-109-0	0.78	mg/L	10370	0.2	1	7/22/2002	8/14/2002

Qualifiers:

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Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058051
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10134

Sample ID: **MB-10134**	SampType: **mblk**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/9/2002**	Run ID: **AA2_020809N**
Client ID: **ZZZZZ**	Batch ID: **10134**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/9/2002**	SeqNo: **316425**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-10134A**	SampType: **mblk**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020809N**
Client ID: **ZZZZZ**	Batch ID: **10134**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/9/2002**	SeqNo: **316426**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-10134B**	SampType: **mblk**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020809N**
Client ID: **ZZZZZ**	Batch ID: **10134**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/9/2002**	SeqNo: **316439**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **LCS-10134**	SampType: **lcs**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/9/2002**	Run ID: **AA2_020809N**
Client ID: **ZZZZZ**	Batch ID: **10134**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/9/2002**	SeqNo: **316453**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.494	0.20	7.5	0	99.9	80	120	0	0		

Sample ID: **058050-037AMS**	SampType: **MS**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **8/9/2002**	Run ID: **AA2_020809N**
Client ID: **ZZZZZ**	Batch ID: **10134**	TestNo: **WET DI/ EPA (WET)**		Analysis Date: **8/9/2002**	SeqNo: **316438**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.363	0.20	5	2.141	104	80	120	0	0		

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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058051
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10134

Sample ID: 058052-017AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809N
Client ID: ZZZZZ	Batch ID: 10134	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316451

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	16.45	0.40	10	6.063	104	80	120	0	0		

Sample ID: 058050-037ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809N
Client ID: ZZZZZ	Batch ID: 10134	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316437

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.357	0.20	0	0	0	0	0	2.141	44.2	30	R

Sample ID: 058052-017ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809N
Client ID: ZZZZZ	Batch ID: 10134	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316450

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	11.9	0.40	0	0	0	0	0	6.063	65.0	30	R

Qualifiers:
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B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058051
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10217

Sample ID: MB-10217	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316694

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.1157	0.25									J
Arsenic	0.1253	0.25									J
Barium	ND	0.15									
Beryllium	ND	0.15									
Cadmium	ND	0.15									
Chromium	ND	0.15									
Cobalt	0.005306	0.15									J
Copper	ND	0.15									
Molybdenum	0.0418	0.25									J
Nickel	0.006927	0.15									J
Selenium	0.25	0.25									
Silver	ND	0.15									
Thallium	0.009899	0.25									J
Vanadium	ND	0.15									
Zinc	0.05919	0.50									J

Sample ID: LCS-10217	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316693

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	46.11	0.25	50	0	92.2	80	120	0	0		
Arsenic	48.06	0.25	50	0	96.1	80	120	0	0		
Barium	49.52	0.15	50	0	99	80	120	0	0		
Beryllium	48.49	0.15	50	0	97	80	120	0	0		
Cadmium	48.5	0.15	50	0	97	80	120	0	0		
Chromium	51.07	0.15	50	0	102	80	120	0	0		
Cobalt	48.39	0.15	50	0	96.8	80	120	0	0		
Copper	48.14	0.15	50	0	96.3	80	120	0	0		
Molybdenum	47.41	0.25	50	0	94.8	80	120	0	0		
Nickel	47.63	0.15	50	0	95.3	80	120	0	0		

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Calculations are based on raw values

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CLIENT: Ninyo & Moore
Work Order: 058051
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10217

Sample ID: LCS-10217	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316693

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	48	0.25	50	0	96	80	120	0	0		
Silver	48.18	0.15	50	0	96.4	80	120	0	0		
Thallium	46.17	0.25	50	0	92.3	80	120	0	0		
Vanadium	50.62	0.15	50	0	101	80	120	0	0		
Zinc	49.52	0.50	50	0	99	80	120	0	0		

Sample ID: 058052-009AMS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316690

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	114.4	2.5	125	1.865	90	32	115	0	0		
Arsenic	129.3	2.5	125	2.067	102	59	111	0	0		
Barium	182.1	1.5	125	64.66	94	34	151	0	0		
Beryllium	130.9	1.5	125	0	105	56	112	0	0		
Cadmium	130.1	1.5	125	0.08258	104	52	120	0	0		
Chromium	136.6	1.5	125	10.36	101	56	118	0	0		
Cobalt	135.5	1.5	125	7.263	103	58	117	0	0		
Copper	137.5	1.5	125	14.64	98.3	58	134	0	0		
Molybdenum	124.1	2.5	125	0.4373	99	56	115	0	0		
Nickel	133.3	1.5	125	7.975	100	52	120	0	0		
Selenium	141.8	2.5	125	5.567	109	46	108	0	0		S
Silver	125.3	1.5	125	0	100	74	117	0	0		
Thallium	119	2.5	125	0	95.2	62	117	0	0		
Vanadium	150.6	1.5	125	25.65	99.9	55	122	0	0		
Zinc	160.1	5.0	125	37.03	98.4	43	134	0	0		

Sample ID: 058052-009AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316691

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike/Surrogate outside limits due to matrix interference; DO - Surrogate diluted out; J - Analyte detected below quantitation limits; B - Analyte detected in the associated Method Blank; H - Sample exceeded holding time; R - RPD outside accepted recovery limits; **Calculations are based on raw values**

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058051
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10217

Sample ID: 058052-009AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316691

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	113.5	2.5	125	1.865	89.3	32	115	114.4	0.784	20	
Arsenic	128.4	2.5	125	2.067	101	59	111	129.3	0.735	20	
Barium	185.3	1.5	125	64.66	96.5	34	151	182.1	1.72	20	
Beryllium	127	1.5	125	0	102	56	112	130.9	3.05	20	
Cadmium	128.6	1.5	125	0.08258	103	52	120	130.1	1.17	20	
Chromium	135.2	1.5	125	10.36	99.9	56	118	136.6	1.04	20	
Cobalt	135.1	1.5	125	7.263	102	58	117	135.5	0.312	20	
Copper	133.5	1.5	125	14.64	95.1	58	134	137.5	2.89	20	
Molybdenum	123.3	2.5	125	0.4373	98.3	56	115	124.1	0.703	20	
Nickel	132.9	1.5	125	7.975	99.9	52	120	133.3	0.270	20	
Selenium	136.8	2.5	125	5.567	105	46	108	141.8	3.54	20	
Silver	122.7	1.5	125	0	98.1	74	117	125.3	2.09	20	
Thallium	118.1	2.5	125	0	94.4	62	117	119	0.780	20	
Vanadium	150.9	1.5	125	25.65	100	55	122	150.6	0.202	20	
Zinc	159.9	5.0	125	37.03	98.3	43	134	160.1	0.0866	20	

Sample ID: 058052-009ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316689

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.303	2.5	0	0	0	0	0	1.865	0	30	J
Arsenic	2.171	2.5	0	0	0	0	0	2.067	0	30	J
Barium	64.44	1.5	0	0	0	0	0	64.66	0.343	30	
Beryllium	ND	1.5	0	0	0	0	0	0	0	30	
Cadmium	0.09582	1.5	0	0	0	0	0	0.08258	0	30	J
Chromium	10.09	1.5	0	0	0	0	0	10.36	2.65	30	
Cobalt	6.643	1.5	0	0	0	0	0	7.263	8.92	30	
Copper	11.99	1.5	0	0	0	0	0	14.64	19.9	30	
Molybdenum	0.4112	2.5	0	0	0	0	0	0.4373	0	30	J
Nickel	7.392	1.5	0	0	0	0	0	7.975	7.59	30	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike/Surrogate outside limits due to matrix interference; DO - Surrogate diluted out
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R - RPD outside accepted recovery limits; **Calculations are based on raw values**

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CLIENT: Ninyo & Moore
Work Order: 058051
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10217

Sample ID: 058052-009ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810F
Client ID: ZZZZZ	Batch ID: 10217	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316689

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	9.413	2.5	0	0	0	0	0	5.567	51.3	30	R
Silver	ND	1.5	0	0	0	0	0	0	0	30	
Thallium	ND	2.5	0	0	0	0	0	0	0	30	
Vanadium	25.22	1.5	0	0	0	0	0	25.65	1.68	30	
Zinc	35.35	5.0	0	0	0	0	0	37.03	4.62	30	

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Calculations are based on raw values
DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 058051
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10328

Sample ID: MB-10328	SampType: MBLK	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020814D
Client ID: ZZZZZ	Batch ID: 10328	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/14/2002	SeqNo: 318603

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-10328	SampType: LCS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020814D
Client ID: ZZZZZ	Batch ID: 10328	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/14/2002	SeqNo: 318602

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.126	0.10	2.08	0	102	80	120	0	0		

Sample ID: 058065-054AMS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020814D
Client ID: ZZZZZ	Batch ID: 10328	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/14/2002	SeqNo: 318600

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.8605	0.10	0.83	0.07835	94.2	62	146	0	0		

Sample ID: 058065-054AMSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020814D
Client ID: ZZZZZ	Batch ID: 10328	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/14/2002	SeqNo: 318601

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.9227	0.10	0.83	0.07835	102	62	146	0.8605	6.98	33	

Sample ID: 058065-054ADUP	SampType: DUP	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/13/2002	Run ID: AA1_020814D
Client ID: ZZZZZ	Batch ID: 10328	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/14/2002	SeqNo: 318599

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0741	0.10	0	0	0	0	0	0.07835	0	30	J

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Calculations are based on raw values
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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10370

Sample ID: MB-10370	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814^
Client ID: ZZZZZ	Batch ID: 10370	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 319143

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10279-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814^
Client ID: ZZZZZ	Batch ID: 10370	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 319144

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10370	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814^
Client ID: ZZZZZ	Batch ID: 10370	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 319158

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.015	0.20	1	0	101	80	120	0	0		

Sample ID: 058052-029AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814^
Client ID: ZZZZZ	Batch ID: 10370	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 319156

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.614	0.20	2.5	0.9754	106	80	120	0	0		

Sample ID: 058052-029ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/14/2002	Run ID: AA2_020814^
Client ID: ZZZZZ	Batch ID: 10370	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 319155

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.9112	0.20	0	0	0	0	0	0.9754	6.80	30	

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Calculations are based on raw values
DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 058051
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9835

Sample ID: MB-9835A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726K
Client ID: ZZZZZ	Batch ID: 9835	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307727

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.3675	5.0									J

Sample ID: MB-9835B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726K
Client ID: ZZZZZ	Batch ID: 9835	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307728

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.26	5.0									

Sample ID: LCS-9835	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726K
Client ID: ZZZZZ	Batch ID: 9835	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307726

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	250.7	5.0	250	0	100	80	120	0	0		

Sample ID: 058051-006AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726K
Client ID: 571-832-1.5	Batch ID: 9835	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307712

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	199.1	5.0	250	7.156	76.8	47	128	0	0		

Sample ID: 058051-016AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726K
Client ID: 571-110-0.3	Batch ID: 9835	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307724

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	240.6	5.0	250	42.04	79.4	47	128	0	0		

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DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 058051
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9835

Sample ID: 058051-006ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726K
Client ID: 571-832-1.5	Batch ID: 9835	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307711

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.807	5.0	0	0	0	0	0	7.156	20.7	30	

Sample ID: 058051-016ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726K
Client ID: 571-110-0.3	Batch ID: 9835	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307723

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	61.86	5.0	0	0	0	0	0	42.04	38.1	30	R

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9836

Sample ID: MB-9836A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726L
Client ID: ZZZZZ	Batch ID: 9836	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307755

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9836B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726L
Client ID: ZZZZZ	Batch ID: 9836	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307756

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9836	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726L
Client ID: ZZZZZ	Batch ID: 9836	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307754

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	260.4	5.0	250	0	104	80	120	0	0		

Sample ID: 058051-026AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726L
Client ID: 571-206-0	Batch ID: 9836	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307740

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	320.9	5.0	250	84.24	94.7	47	128	0	0		

Sample ID: 058052-009AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726L
Client ID: ZZZZZ	Batch ID: 9836	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307752

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	175.3	5.0	250	2.78	69	47	128	0	0		

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 058051
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9836

Sample ID: 058051-026ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726L
Client ID: 571-206-0	Batch ID: 9836	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307739

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	111.9	5.0	0	0	0	0	0	84.24	28.2	30	

Sample ID: 058052-009ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/24/2002	Run ID: ICP5_020726L
Client ID: ZZZZZ	Batch ID: 9836	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307751

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.22	5.0	0	0	0	0	0	2.78	0	30	J

Qualifiers:
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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9878

Sample ID: MB-9878	SampType: MBLK	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/26/2002	Run ID: ICP2_020726F
Client ID: ZZZZZ	Batch ID: 9878	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/26/2002	SeqNo: 307841

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.00451	0.0050									

Sample ID: LCS-9878	SampType: LCS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/26/2002	Run ID: ICP2_020726F
Client ID: ZZZZZ	Batch ID: 9878	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/26/2002	SeqNo: 307842

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1	0.0050	1	0	100	80	120	0	0		

Sample ID: 058069-001AMS	SampType: MS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/26/2002	Run ID: ICP2_020726F
Client ID: ZZZZZ	Batch ID: 9878	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/26/2002	SeqNo: 307854

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.48	0.0050	2.5	0	99.2	66	118	0	0		

Sample ID: 058069-001ADUP	SampType: dup	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/26/2002	Run ID: ICP2_020726F
Client ID: ZZZZZ	Batch ID: 9878	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/26/2002	SeqNo: 307853

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050	0	0	0	0	0	0	0	30	

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9949

Sample ID: MB-9949	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802G
Client ID: ZZZZZ	Batch ID: 9949	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311990

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9949A	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020802G
Client ID: ZZZZZ	Batch ID: 9949	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311991

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9949B	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020802G
Client ID: ZZZZZ	Batch ID: 9949	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 312004

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-9949	SampType: lcs	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802G
Client ID: ZZZZZ	Batch ID: 9949	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 312018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.497	0.20	7.5	0	100	80	120	0	0		

Sample ID: 058051-020AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802G
Client ID: 571-107-0.6	Batch ID: 9949	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 312003

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	20.04	0.40	10	9.923	101	80	120	0	0		

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CLIENT: Ninyo & Moore
Work Order: 058051
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9949

Sample ID: 058052-017AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802G
Client ID: ZZZZZ	Batch ID: 9949	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 312016

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	171.1	4.0	100	77.12	93.9	80	120	0	0		

Sample ID: 058051-020ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020802G
Client ID: 571-107-0.6	Batch ID: 9949	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 312002

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	9.937	0.20	0	0	0	0	0	9.923	0.136	30	

Sample ID: 058052-017ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/30/2002	Run ID: AA2_020802G
Client ID: ZZZZZ	Batch ID: 9949	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 312015

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	77.89	2.0	0	0	0	0	0	77.12	0.992	30	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058051
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: R19857

Sample ID: **058052-043ADUP**	SampType: **DUP**	TestCode: **9045_S**	Units: **pH Units**	Prep Date: **7/26/2002**	Run ID: **WETCHEM_020726B**
Client ID: **ZZZZZ**	Batch ID: **R19857**	TestNo: **EPA 9045C**		Analysis Date: **7/26/2002**	SeqNo: **307246**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	8.4	0.10	0	0	0	0	0	8.42	0.238	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Tuesday, August 06, 2002 3:46 PM
To: 'Rachelle'; 'David Shaler (E-mail)'
Subject: Title 22 Metals

Title 22 Metals.xls

Rachelle,
Please run the following samples for Title 22 Metals. Please do not list
Pb in your emailed results. There should be a total of 120 samples to be
run.
Thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

569-102-0.9	570-101-0	571-101-0.9
569-112-0	570-101-0.6	571-104-0
569-201-0	570-201-0	571-201-0.6
569-206-0.6	570-205-0.9	571-108-1.5
569-106-1.5	570-106-0.3	571-111-0.3
569-212-0	570-208-1.5	571-207-0
569-401-0.6	570-111-0.6	571-210-0.6
569-301-0	570-214-0	571-115-0.9
569-303-0.9	570-115-0.3	571-214-0.3
569-404-0.6	570-119-0.9	571-120-0
569-408-0.9	570-224-0.6	571-217-1.5
569-314-0	570-401-0	571-220-0.6
569-313-0.3	570-401-0.3	571-301-0.3
569-502-0.6	570-304-1.5	571-405-0
569-602-1.5	570-307-0.9	571-306-0.9
569-607-0.3	570-311-0.6	571-407-0
569-607-0	570-312-0.6	571-310-0.9
569-508-0.9	570-316-0.3	571-315-0.3
569-511-0.6	570-601-0	571-412-1.5
569-612-1.5	570-505-1.5	571-317-0
569-516-0	570-508-0	571-320-0.6
569-801-0.3	570-610-0.6	571-416-0.9
569-519-0.6	570-511-0.9	571-325-0.3
569-803-0.9	570-615-0	571-421-1.5
569-705-0	570-514-0.3	571-425-0
569-806-1.5	570-517-0	571-501-0.6
569-708-0.3	570-618-0.6	571-503-0.9
569-711-0	570-621-1.5	571-603-0.3
569-811-0	570-703-0.9	571-507-0
	570-804-0	571-609-0
	570-706-0	571-510-1.5
	570-709-0	571-611-0
	570-808-0.6	571-514-0
	570-711-1.5	571-614-0.3
	570-812-0.3	571-517-0.9
		571-617-0.6
		571-520-1.5
		571-621-0.3
		571-524-0
		571-624-0.9
		571-529-0.3
		571-628-0.6
		571-703-1.5
		571-707-0
		571-804-0.9
		571-809-0.3
		571-711-0
		571-712-0
		571-814-0.3
		571-818-0.6
		571-819-0
		571-827-1.5

571-832-0.9
571-836-0.3
571-837-0.6
571-842-0

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Thursday, August 08, 2002 9:14 AM
To: 'Rachelle'
Subject: TCLP Analysis

TCLP-3.xls

In addition to the 90 TCLP already run please run the following samples for
TCLP. There should be a list of 350 samples.
Thanks for a the hard work and timely results.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

-----Original Message-----
From: Rachelle [SMTP:Rachelle@ATLGlobal.com]
Sent: Wednesday, August 07, 2002 5:02 PM
To: 'David Shaler (E-mail)'
Cc: 'Ruth Cheung (E-mail)'
Subject: TCLP Results

<<57931TCLP.xls>> <<58001TCLP.xls>> <<58021TCLP.xls>> <<58022TCLP.xls>>
<<58023TCLP.xls>> <<58024TCLP.xls>> <<58049TCLP.xls>> <<58050TCLP.xls>>
<<58052TCLP.xls>> <<58053TCLP.xls>> <<58065TCLP.xls>> <<58066TCLP.xls>>
<<58067TCLP.xls>> <<58068TCLP.xls>> <<58069TCLP.xls>>

Rachelle Arada
Project Coordinator
www.atlglobal.com
voice: 562.989.4045 ext 237
fax : 562.989.4040

<< File: 57931TCLP.xls >> << File: 58001TCLP.xls >> << File: 58021TCLP.xls >> << File: 58022TCLP.xls >> << File: 58023TCLP.xls >> << File: 58024TCLP.xls >> << File: 58049TCLP.xls >> << File: 58050TCLP.xls >> << File: 58052TCLP.xls >> << File: 58053TCLP.xls >> << File: 58065TCLP.xls >> << File: 58066TCLP.xls >> << File: 58067TCLP.xls >> << File: 58068TCLP.xls >> << File: 58069TCLP.xls >>

569-404-0	2. STLC	170	570-515-0.3	2. STLC	120	571-521-0	2. STLC	230
569-402-0	2. STLC	130	570-811-0	2. STLC	110	571-324-0.9	2. STLC	110
569-406-0	2. STLC	120	570-114-0.0	2. STLC	110	571-818-0	2. STLC	110
569-515-0	2. STLC	110	570-504-0.6	2. STLC	100	571-819-0.6	2. STLC	110
569-611-0	2. STLC	100	570-811-1.5	2. STLC	90	571-708-0	2. STLC	110
569-409-0	2. STLC	94	570-615-0.6	2. STLC	84	571-103-0.6	2. STLC	110
569-603-0	2. STLC	93	570-305-0	2. STLC	79	571-617-0.3	2. STLC	100
569-104-0.6	2. STLC	91	570-314-0.6	2. STLC	76	571-611-0.6	2. STLC	92
569-807-0	2. STLC	86	570-505-0.6	2. STLC	75	571-712-0.9	2. STLC	81
569-608-0	2. STLC	86	570-208-0.6	2. STLC	74	571-105-0.6	2. STLC	81
569-501-0	2. STLC	84	570-116-0.0	2. STLC	73	571-313-0	2. STLC	79
569-710-0.3	2. STLC	83	570-102-0	2. STLC	65	571-508-0	2. STLC	73
569-808-0	2. STLC	83	570-804-0.6	2. STLC	64	571-518-0.3	2. STLC	73
569-609-0.6	2. STLC	80	570-704-0	2. STLC	63	571-217-0	2. STLC	68
569-803-0	2. STLC	79	570-508-0.6	2. STLC	60	571-516-0	2. STLC	66
569-105-0	2. STLC	78	570-706-0.3	2. STLC	60	571-701-0.3	2. STLC	66
569-512-0	2. STLC	77	570-303-0	2. STLC	58	571-710-0.6	2. STLC	65
569-513-0	2. STLC	77	570-311-1.5	2. STLC	58	571-512-0	2. STLC	64
569-302-0	2. STLC	74	570-117-0.0	2. STLC	58	571-308-0.9	2. STLC	61
569-805-0	2. STLC	73	570-208-0.3	2. STLC	58	571-701-0	2. STLC	61
569-517-0	2. STLC	71	570-709-0.6	2. STLC	57	571-514-0.3	2. STLC	59
569-704-0.3	2. STLC	71	570-703-0	2. STLC	55	571-415-0	2. STLC	58
569-703-0.6	2. STLC	70	570-206-0	2. STLC	54	571-616-0.6	2. STLC	57
569-514-0.3	2. STLC	70	570-301-0	2. STLC	53	571-517-0	2. STLC	56
569-803-0.3	2. STLC	69	570-603-0.3	2. STLC	46	571-112-0.9	2. STLC	56
569-409-0.6	2. STLC	69	570-711-0.6	2. STLC	46	571-214-0	2. STLC	55
569-411-0	2. STLC	68	570-206-0.3	2. STLC	45	571-415-0.3	2. STLC	55
569-102-0.6	2. STLC	68	570-103-0	2. STLC	44	571-405-0.6	2. STLC	55
569-809-0	2. STLC	65	570-602-0	2. STLC	41	571-530-0	2. STLC	55
569-605-0	2. STLC	65	570-209-0	2. STLC	40	571-831-0	2. STLC	53
569-711-0.6	2. STLC	62	570-210-0	2. STLC	40	571-709-0	2. STLC	53
569-806-0	2. STLC	60	570-117-0.3	2. STLC	39	571-103-0.0	2. STLC	52
569-802-0.3	2. STLC	60	570-103-0.6	2. STLC	37	571-312-0	2. STLC	51
569-410-0	2. STLC	59	570-110-0.6	2. STLC	37	571-526-0	2. STLC	51
569-501-0.6	2. STLC	59	570-805-0.9	2. STLC	36	571-819-1.5	2. STLC	51
569-808-0.3	2. STLC	58	570-112-1.5	2. STLC	35	571-515-0	2. STLC	50
569-104-0	2. STLC	56	570-614-0	2. STLC	34	571-833-0	2. STLC	49
569-804-0	2. STLC	54	570-713-0.3	2. STLC	33	571-815-0.6	2. STLC	47
569-610-0	2. STLC	54	570-513-0	2. STLC	32	571-517-0.3	2. STLC	46
569-608-0.3	2. STLC	53	570-312-0.3	2. STLC	31	571-610-0	2. STLC	46
569-213-0	2. STLC	49	570-503-0.6	2. STLC	31	571-413-0	2. STLC	46
569-701-0	2. STLC	47	570-510-0.6	2. STLC	31	571-815-0	2. STLC	45
569-311-0	2. STLC	47	570-202-0	2. STLC	31	571-514-0.9	2. STLC	44
569-609-0.9	2. STLC	46	570-207-0	2. STLC	31	571-505-1.5	2. STLC	44
569-513-0.3	2. STLC	45	570-209-0.3	2. STLC	31	571-528-0	2. STLC	44
569-801-0.6	2. STLC	44	570-703-0.3	2. STLC	30	571-610-0.6	2. STLC	43
569-514-0	2. STLC	42	570-401-0	2. STLC	30	571-629-0	2. STLC	43
569-805-0.6	2. STLC	42	570-610-0.9	2. STLC	29	571-604-0	2. STLC	42
569-408-1.5	2. STLC	42	570-809-0.6	2. STLC	29	571-213-0	2. STLC	41
569-807-0.3	2. STLC	40	570-509-0.9	2. STLC	29	571-812-0	2. STLC	41
569-204-0	2. STLC	40	570-210-0.6	2. STLC	29	571-706-0	2. STLC	41
569-517-0.3	2. STLC	36	570-211-0	2. STLC	29	571-530-0.6	2. STLC	41
569-518-0	2. STLC	36	570-603-0	2. STLC	28	571-305-0	2. STLC	40
569-806-0.3	2. STLC	36	570-119-0	2. STLC	28	571-523-0.3	2. STLC	39
569-705-1.5	2. STLC	35	570-713-0.6	2. STLC	28	571-510-0	2. STLC	39
569-303-0.6	2. STLC	34	570-108-0	2. STLC	27	571-305-0.9	2. STLC	39
569-516-0.3	2. STLC	33	570-708-0.6	2. STLC	27	571-818-1.5	2. STLC	39
569-705-0.6	2. STLC	33	570-224-0	2. STLC	26	571-703-0	2. STLC	38
569-802-0	2. STLC	33	570-601-0	2. STLC	26	571-520-0.3	2. STLC	36
569-515-0.6	2. STLC	32	570-710-0.6	2. STLC	26	571-216-0	2. STLC	34
569-704-0	2. STLC	32	570-614-0.6	2. STLC	26	571-827-0	2. STLC	34
569-401-0.3	2. STLC	32	570-118-0.3	2. STLC	26	571-708-0.3	2. STLC	34
569-207-0	2. STLC	32	570-304-0	2. STLC	25	571-514-0.6	2. STLC	33
569-608-0.6	2. STLC	31	570-707-0.6	2. STLC	25	571-528-1.5	2. STLC	33
569-104-0.3	2. STLC	31	570-510-0	2. STLC	25	571-803-0	2. STLC	33
569-201-0.6	2. STLC	30	570-110-0	2. STLC	24	571-414-0.3	2. STLC	33
569-515-0.3	2. STLC	28	570-223-0	2. STLC	24	571-813-0.3	2. STLC	32
569-212-0.6	2. STLC	28	570-117-0.6	2. STLC	24	571-523-0	2. STLC	31
569-103-0	2. STLC	28	570-616-0	2. STLC	23	571-326-0	2. STLC	31
569-313-0	2. STLC	27	570-704-0.3	2. STLC	22	571-502-0.6	2. STLC	31
569-103-0.3	2. STLC	26	570-513-0.6	2. STLC	22	571-624-1.5	2. STLC	31
569-705-0.9	2. STLC	25	570-221-0.0	2. STLC	22	571-330-0	2. STLC	31
569-707-0.3	2. STLC	25	570-617-0	2. STLC	21	571-512-0.3	2. STLC	30
569-515-1.5	2. STLC	24	570-214-0.3	2. STLC	21	571-521-0.6	2. STLC	29
569-508-0	2. STLC	24	570-122-0.9	2. STLC	20	571-706-0.3	2. STLC	29
569-801-0	2. STLC	24	570-313-0.6	2. STLC	19	571-814-0.6	2. STLC	28
569-402-0.6	2. STLC	24	570-207-0.6	2. STLC	19	571-616-1.5	2. STLC	28
569-516-0.6	2. STLC	22	570-120-0.9	2. STLC	18	571-835-0	2. STLC	28
569-509-0.3	2. STLC	22	570-506-0	2. STLC	18	571-811-0.3	2. STLC	28
569-106-0	2. STLC	22	570-102-0.9	2. STLC	17	571-101-0.6	2. STLC	28
569-106-0.3	2. STLC	22	570-216-0	2. STLC	17	571-112-0	2. STLC	28
569-202-0	2. STLC	21	570-225-0	2. STLC	17	571-315-0	2. STLC	27
569-805-1.5	2. STLC	21	570-304-0.3	2. STLC	17	571-622-0	2. STLC	27
569-205-0	2. STLC	20	570-409-0	2. STLC	17	571-607-0.6	2. STLC	27
569-707-0	2. STLC	19	570-713-0	2. STLC	17	571-609-0.6	2. STLC	27

569-709-0	2. STLC	19
569-202-0.3	2. STLC	19
569-602-0	2. STLC	19
569-207-0.3	2. STLC	19
569-706-0.3	2. STLC	17
569-807-0.9	2. STLC	17
569-104-0.9	2. STLC	17
569-505-0.6	2. STLC	17
569-704-0.6	2. STLC	16
569-808-0.6	2. STLC	16
569-212-0.3	2. STLC	16
569-612-0	2. STLC	16
569-704-1.5	2. STLC	15
569-411-0.3	2. STLC	15
569-113-0	2. STLC	15
569-807-0.6	2. STLC	14
569-311-0.3	2. STLC	12
569-312-0	2. STLC	10
569-311-0.9	2. STLC	8.3

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570-401-0.3	2. STLC	17
570-616-0.6	2. STLC	17
570-308-0	2. STLC	16
570-807-0.9	2. STLC	16
570-701-0.6	2. STLC	16
570-617-0.3	2. STLC	16
570-107-0.6	2. STLC	15
570-811-0.6	2. STLC	15
570-707-0	2. STLC	15
570-518-0	2. STLC	15
570-111-0.0	2. STLC	15
570-109-0.6	2. STLC	14
570-401-0.9	2. STLC	4.1
570-408-0	2. STLC	4
570-409-0.3	2. STLC	3
570-401-0.6		0
570-401-1.5		0
570-408-0.6		0
570-408-1.5		0

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571-837-0.3	2. STLC	27
571-520-0	2. STLC	26
571-516-0.3	2. STLC	26
571-420-0	2. STLC	26
571-102-0.6	2. STLC	26
571-517-1.5	2. STLC	25
571-513-0.6	2. STLC	25
571-623-0.6	2. STLC	25
571-112-0.3	2. STLC	25
571-326-0.6	2. STLC	24
571-619-0.3	2. STLC	24
571-619-0.9	2. STLC	24
571-528-0.3	2. STLC	24
571-706-0.6	2. STLC	24
571-112-0.6	2. STLC	24
571-327-0.6	2. STLC	23
571-817-0	2. STLC	23
571-425-0.6	2. STLC	22
571-118-0	2. STLC	22
571-829-0	2. STLC	22
571-828-0	2. STLC	22
571-122-0	2. STLC	21
571-101-1.5	2. STLC	21
571-530-0.3	2. STLC	21
571-406-0.6	2. STLC	20
571-517-0.6	2. STLC	20
571-835-0.3	2. STLC	20
571-501-0	2. STLC	20
571-518-0.9	2. STLC	19
571-510-0.3	2. STLC	19
571-814-0.9	2. STLC	19
571-522-0.6	2. STLC	19
571-622-1.5	2. STLC	19
571-812-0.6	2. STLC	19
571-701-0.6	2. STLC	19
571-704-0	2. STLC	19
571-711-0.6	2. STLC	19
571-212-0	2. STLC	18
571-839-0.6	2. STLC	18
571-610-1.5	2. STLC	18
571-709-0.3	2. STLC	18
571-311-0.6	2. STLC	17
571-620-0	2. STLC	17
571-109-0	2. STLC	17
571-704-0.3	2. STLC	17
571-207-1.5	2. STLC	16
571-203-0	2. STLC	16
571-616-0.3	2. STLC	16
571-317-0.3	2. STLC	16
571-629-0.3	2. STLC	16
571-416-0	2. STLC	15
571-419-0	2. STLC	15
571-526-0.3	2. STLC	15
571-619-0	2. STLC	15
571-606-0	2. STLC	15
571-115-0.6	2. STLC	14
571-202-0.9	2. STLC	11

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Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

tblTEMP

WorkOrder	ClientSampID	TestNo	Analyte	PQL	DF	CollectionDate	AnalDate	PrepDate
058051	571-106-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-106-0	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058051	571-106-0	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058051	571-106-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-106-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-106-0.9	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-107-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-107-0	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058051	571-107-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-107-0.3	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058051	571-107-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-107-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058051	571-107-0.6	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058051	571-107-0.9	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-107-0.9	EPA 9045C	pH	0.1	1	7/22/2002	7/26/2002	7/26/2002
058051	571-107-0.9	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058051	571-109-0	EPA 1311/ 7420	Lead	0.2	1	7/22/2002	8/14/2002	8/14/2002
058051	571-109-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-109-0	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058051	571-109-0	WET/ EPA 7420	Lead	0.4	2	7/22/2002	8/2/2002	7/30/2002
058051	571-109-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-110-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-110-0	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058051	571-110-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-110-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-206-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-206-0	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058051	571-206-0	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058051	571-206-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-206-0.3	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058051	571-206-0.3	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058051	571-206-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-832-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-832-0	EPA 9045C	pH	0.1	1	7/22/2002	7/26/2002	7/26/2002
058051	571-832-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002

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058051	571-832-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-832-0.9	EPA 6010B	Antimony	2.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-832-0.9	EPA 6010B	Arsenic	2.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-832-0.9	EPA 6010B	Barium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-832-0.9	EPA 6010B	Beryllium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-832-0.9	EPA 6010B	Cadmium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-832-0.9	EPA 6010B	Chromium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-832-0.9	EPA 6010B	Cobalt	1.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-832-0.9	EPA 6010B	Copper	1.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-832-0.9	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-832-0.9	EPA 6010B	Molybdenum	2.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-832-0.9	EPA 6010B	Nickel	1.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-832-0.9	EPA 6010B	Selenium	2.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-832-0.9	EPA 6010B	Silver	1.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-832-0.9	EPA 6010B	Thallium	2.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-832-0.9	EPA 6010B	Vanadium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-832-0.9	EPA 6010B	Zinc	5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-832-0.9	EPA 7471A	Mercury	0.1	1	7/22/2002	8/14/2002	8/13/2002
058051	571-832-1.5	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-834-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-834-0	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058051	571-834-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-834-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-836-0	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-836-0	WET DI/ EPA 7420	Lead	0.2	1	7/22/2002	8/9/2002	8/6/2002
058051	571-836-0	WET/ EPA 7420	Lead	0.2	1	7/22/2002	8/2/2002	7/30/2002
058051	571-836-0.3	EPA 6010B	Antimony	2.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-836-0.3	EPA 6010B	Arsenic	2.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-836-0.3	EPA 6010B	Barium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-836-0.3	EPA 6010B	Beryllium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-836-0.3	EPA 6010B	Cadmium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-836-0.3	EPA 6010B	Chromium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-836-0.3	EPA 6010B	Cobalt	1.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-836-0.3	EPA 6010B	Copper	1.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-836-0.3	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	571-836-0.3	EPA 6010B	Molybdenum	2.5	10	7/22/2002	8/10/2002	8/9/2002

058051	571-836-0.3	EPA 6010B	Nickel	1.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-836-0.3	EPA 6010B	Selenium	2.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-836-0.3	EPA 6010B	Silver	1.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-836-0.3	EPA 6010B	Thallium	2.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-836-0.3	EPA 6010B	Vanadium	1.5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-836-0.3	EPA 6010B	Zinc	5	10	7/22/2002	8/10/2002	8/9/2002
058051	571-836-0.3	EPA 7471A	Mercury	0.1	1	7/22/2002	8/14/2002	8/13/2002
058051	571-836-0.3	EPA 9045C	pH	0.1	1	7/22/2002	7/26/2002	7/26/2002
058051	571-836-0.6	EPA 6010B	Lead	5	1	7/22/2002	7/26/2002	7/24/2002
058051	EB-30	EPA 6010B	Lead	0.005	1	7/22/2002	7/26/2002	7/26/2002

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August 15, 2002

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AUG 2 6 2002

NINYO & MOORE
ORANGE COUNTY OFFICE

David Shaler
Ninyo & Moore
475 Goddard Suite 200
Irvine, CA 92618
TEL: (949) 753-7070
FAX: (949) 753-7071

RE: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

Attention: David Shaler

ELAP No.: 1838
NELAP No.: 02107CA
Workorder No.: 058023

Enclosed are the results for sample(s) received on July 19, 2002 by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

for

Eddie F. Rodriguez
Laboratory Director

This cover letter is an integral part of this analytical report.

Laboratory	Site	Consultant
Advanced Technology Laboratories	Caltrans/I-10 (605-57)/Lead Survey	Ninyo & Moore - David Shaler/Steve Reese
3275 Walnut Avenue, Signal Hill, CA 90807	TO 07-117070-PX	475 Goddard, Suite 200, Irvine, CA 92618
Tel. (562) 989-4045 Fax (562) 989-6348	Project # 203939001	Tel. (949) 753-7070 Fax (949) 753-7071

Special Instructions

See Project specifications. 5 Day TAT.

Relinquished by: (name/date/time) [signature] 7-19-02	Received by: (name/date/time) [signature] 7-19-02 3:45p
Relinquished by: (name/date/time) [signature] 7-19-02 6:40p	Received by: (name/date/time) [signature] 7-19-02 6:40p

Lab No	Sample I.D	Date	Time	Sample container P=plastic B=brass	Analyses: Total Lead EPA Method 6010	Analyses: pH EPA Method 9045
	EB-26	7/19/02	15:26	P	X	
	571-814-0.6		11:43		X	X
	571-814-0.9		11:45		X	
	571-814-1.5		11:46		X	
	571-815-0		12:00		X	
	571-815-0.3		12:01		X	
	571-815-0.6		12:02		X	
	571-815-0.9		12:03		X	
	571-815-1.5		12:04		X	
	571-816-0		12:15		X	
	571-816-0.3		12:16		X	
	571-816-0.6		12:17		X	
	571-816-0.9		12:18		X	X
	571-816-1.5		12:19		X	
	571-817-0		12:28		X	
	571-817-0.3		12:29		X	
	571-817-0.6		12:31		X	
	571-817-0.9		12:33		X	
	571-818-0		13:50		X	
	571-818-0.3		13:51		X	
	571-818-0.6		13:52		X	
	571-818-0.9		13:53		X	X
	571-818-1.5		13:55		X	
	571-819-0		14:05		X	
	571-819-0.3		14:06		X	
	571-819-0.6		14:08		X	
	571-819-0.9		14:10		X	
	571-819-1.5		14:15		X	
	571-820-0		14:30		X	
	571-820-0.3		14:31		X	
	571-820-0.6		14:32		X	
	571-820-0.9		14:33		X	X
	571-821-0		14:48		X	
	571-821-0.3		14:50		X	
	571-821-0.6		14:52		X	
	571-821-0.9		14:54		X	
	571-821-1.5		14:55		X	
	571-713-0		2:15		X	
	571-713-0.3		2:15		X	
	571-713-0.6		2:15		X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	
	571-				X	

Total # of samples: 40

Advanced Technology Laboratories

Date: *26-Jul-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	EB-26
Lab Order:	058023		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/19/2002 3:26:00 PM
Lab ID:	058023-001A	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	(EPA 3010A)			**EPA 6010B**		
RunID: ICP2_020725D	QC Batch: 9860					Analyst: **RQ**
Lead	ND	0.0050		mg/L	1	7/25/2002

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interfere
- H - Sample exceeded analytical holding time
- E - Value above quantitation range
- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/26/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058023
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058023-002A	571-814-0.6	500	mg/Kg	9815	5	1	7/19/2002	7/26/2002
058023-003A	571-814-09	370	mg/Kg	9815	5	1	7/19/2002	7/26/2002
058023-004A	571-814-1.5	ND	mg/Kg	9815	5	1	7/19/2002	7/26/2002
058023-005A	571-815-0	360	mg/Kg	9815	5	1	7/19/2002	7/26/2002
058023-006A	571-815-0.3	ND	mg/Kg	9815	5	1	7/19/2002	7/26/2002
058023-007A	571-815-0.6	570	mg/Kg	9815	5	1	7/19/2002	7/26/2002
058023-008A	571-815-0.9	86	mg/Kg	9815	5	1	7/19/2002	7/26/2002
058023-009A	571-815-1.5	6.9	mg/Kg	9815	5	1	7/19/2002	7/26/2002
058023-010A	571-816-0	44	mg/Kg	9815	5	1	7/19/2002	7/26/2002
058023-011A	571-816-0.3	8.3	mg/Kg	9815	5	1	7/19/2002	7/26/2002
058023-012A	571-816-0.6	80	mg/Kg	9815	5	1	7/19/2002	7/26/2002

Qualifiers:

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- E - Value above quantitation range
- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/26/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058023
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058023-013A	571-816-0.9	ND	mg/Kg	9815	5	1	7/19/2002	7/26/2002
058023-014A	571-816-1.5	ND	mg/Kg	9815	5	1	7/19/2002	7/26/2002
058023-015A	571-817-0	76	mg/Kg	9815	5	1	7/19/2002	7/26/2002
058023-016A	571-817-0.3	ND	mg/Kg	9815	5	1	7/19/2002	7/26/2002
058023-017A	571-817-0.6	240	mg/Kg	9816	5	1	7/19/2002	7/26/2002
058023-018A	571-817-0.9	12	mg/Kg	9816	5	1	7/19/2002	7/26/2002
058023-019A	571-818-0	950	mg/Kg	9816	5	1	7/19/2002	7/26/2002
058023-020A	571-818-0.3	16	mg/Kg	9816	5	1	7/19/2002	7/26/2002
058023-021A	571-818-0.6	1100	mg/Kg	9816	5	1	7/19/2002	7/26/2002
058023-022A	571-818-0.9	5.7	mg/Kg	9816	5	1	7/19/2002	7/26/2002
058023-023A	571-818-1.5	300	mg/Kg	9816	5	1	7/19/2002	7/26/2002

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- Results are wet unless otherwise specified

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Date: 7/26/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058023
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058023-024A	571-819-0	1600	mg/Kg	9816	5	1	7/19/2002	7/26/2002
058023-025A	571-819-0.3	16	mg/Kg	9816	5	1	7/19/2002	7/26/2002
058023-026A	571-819-0.6	770	mg/Kg	9816	5	1	7/19/2002	7/26/2002
058023-027A	571-819-0.9	140	mg/Kg	9816	5	1	7/19/2002	7/26/2002
058023-028A	571-819-1.5	830	mg/Kg	9816	5	1	7/19/2002	7/26/2002
058023-029A	571-820-0	29	mg/Kg	9816	5	1	7/19/2002	7/26/2002
058023-030A	571-820-0.3	18	mg/Kg	9816	5	1	7/19/2002	7/26/2002
058023-031A	571-820-0.6	18	mg/Kg	9816	5	1	7/19/2002	7/26/2002
058023-032A	571-820-0.9	24	mg/Kg	9816	5	1	7/19/2002	7/26/2002
058023-033A	571-821-0	45	mg/Kg	9816	5	1	7/19/2002	7/26/2002
058023-034A	571-821-0.3	9.9	mg/Kg	9816	5	1	7/19/2002	7/26/2002

Qualifiers:

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- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interfere
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- E - Value above quantitation range
- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/26/2002

LEAD BY ICP
EPA 6010B

CLIENT:	Ninyo & Moore	**Lab Order:**	058023
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	RQ

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058023-035A	571-821-0.6	68	mg/Kg	9816	5	1	7/19/2002	7/26/2002
058023-036A	571-821-0.9	64	mg/Kg	9816	5	1	7/19/2002	7/26/2002
058023-037A	571-821-1.5	73	mg/Kg	9817	5	1	7/19/2002	7/26/2002
058023-038A	571-713-0	350	mg/Kg	9817	5	1	7/19/2002	7/26/2002
058023-039A	571-713-0.3	86	mg/Kg	9817	5	1	7/19/2002	7/26/2002
058023-040A	571-713-0.6	ND	mg/Kg	9817	5	1	7/19/2002	7/26/2002

Qualifiers:

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- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- DO - Surrogate Diluted Out
- S - Spike/Surrogate outside of limits due to matrix interfere
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- E - Value above quantitation range
- Results are wet unless otherwise specified

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Advanced Technology Laboratories

Date: 7/26/2002

pH
EPA 9045C

CLIENT:	Ninyo & Moore	**Lab Order:**	058023
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	JT

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058023-002A	571-814-0.6	7.85	pH Units	R19803	0.1	1	7/19/2002	7/25/2002
058023-012A	571-816-0.6	7.84	pH Units	R19803	0.1	1	7/19/2002	7/25/2002
058023-022A	571-818-0.9	8.54	pH Units	R19800	0.1	1	7/19/2002	7/25/2002
058023-032A	571-820-0.9	8.47	pH Units	R19800	0.1	1	7/19/2002	7/25/2002

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Date: 8/2/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058023
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058023-002A	571-814-0.6	28	mg/L	9939	0.8	4	7/19/2002	8/2/2002
058023-003A	571-814-09	19	mg/L	9939	0.4	2	7/19/2002	8/2/2002
058023-005A	571-815-0	45	mg/L	9939	2	10	7/19/2002	8/2/2002
058023-007A	571-815-0.6	47	mg/L	9939	2	10	7/19/2002	8/2/2002
058023-008A	571-815-0.9	6.9	mg/L	9939	0.2	1	7/19/2002	8/2/2002
058023-012A	571-816-0.6	1.8	mg/L	9939	0.2	1	7/19/2002	8/2/2002
058023-015A	571-817-0	23	mg/L	9939	0.8	4	7/19/2002	8/2/2002
058023-017A	571-817-0.6	9.2	mg/L	9939	0.2	1	7/19/2002	8/2/2002
058023-019A	571-818-0	110	mg/L	9939	4	20	7/19/2002	8/2/2002
058023-023A	571-818-1.5	39	mg/L	9939	2	10	7/19/2002	8/2/2002
058023-026A	571-819-0.6	110	mg/L	9939	4	20	7/19/2002	8/2/2002

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Advanced Technology Laboratories

Date: 8/2/2002

LEAD BY ATOMIC ABSORPTION
WET/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058023
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058023-027A	571-819-0.9	ND	mg/L	9939	0.2	1	7/19/2002	8/2/2002
058023-028A	571-819-1.5	51	mg/L	9940	2	10	7/19/2002	8/2/2002
058023-035A	571-821-0.6	0.91	mg/L	9940	0.2	1	7/19/2002	8/2/2002
058023-036A	571-821-0.9	0.93	mg/L	9940	0.2	1	7/19/2002	8/2/2002
058023-037A	571-821-1.5	0.95	mg/L	9940	0.2	1	7/19/2002	8/2/2002
058023-038A	571-713-0	13	mg/L	9940	0.4	2	7/19/2002	8/2/2002
058023-039A	571-713-0.3	0.41	mg/L	9940	0.2	1	7/19/2002	8/2/2002

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Date: 8/12/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058023
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058023-002A	571-814-0.6	ND	mg/L	10131	0.2	1	7/19/2002	8/9/2002
058023-003A	571-814-09	0.32	mg/L	10131	0.2	1	7/19/2002	8/9/2002
058023-005A	571-815-0	5.4	mg/L	10131	0.2	1	7/19/2002	8/9/2002
058023-007A	571-815-0.6	ND	mg/L	10131	0.2	1	7/19/2002	8/9/2002
058023-008A	571-815-0.9	ND	mg/L	10131	0.2	1	7/19/2002	8/9/2002
058023-015A	571-817-0	ND	mg/L	10131	0.2	1	7/19/2002	8/9/2002
058023-017A	571-817-0.6	ND	mg/L	10131	0.2	1	7/19/2002	8/9/2002
058023-019A	571-818-0	ND	mg/L	10131	0.2	1	7/19/2002	8/9/2002
058023-023A	571-818-1.5	ND	mg/L	10131	0.2	1	7/19/2002	8/9/2002
058023-026A	571-819-0.6	1.6	mg/L	10131	0.2	1	7/19/2002	8/9/2002
058023-028A	571-819-1.5	7.9	mg/L	10132	0.2	1	7/19/2002	8/9/2002

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Date: 8/12/2002

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058023
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058023-038A	571-713-0	ND	mg/L	10132	0.2	1	7/19/2002	8/9/2002

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Date: *13-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-818-0.6
Lab Order:	058023		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/19/2002 1:52:00 PM
Lab ID:	058023-021A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810E	QC Batch: 10216					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	12	2.5		mg/Kg	10	8/10/2002
Barium	190	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	2.4	1.5		mg/Kg	10	8/10/2002
Chromium	37	1.5		mg/Kg	10	8/10/2002
Cobalt	9.7	1.5		mg/Kg	10	8/10/2002
Copper	49	1.5		mg/Kg	10	8/10/2002
Molybdenum	5.9	2.5		mg/Kg	10	8/10/2002
Nickel	26	1.5		mg/Kg	10	8/10/2002
Selenium	12	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	45	1.5		mg/Kg	10	8/10/2002
Zinc	510	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020812E	QC Batch: 10170					Analyst: **NS**
Mercury	0.19	0.10		mg/Kg	1	8/12/2002

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Date: *13-Aug-02*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	571-819-0
Lab Order:	058023		
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Collection Date:**	7/19/2002 2:05:00 PM
Lab ID:	058023-024A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ICP METALS						
	(EPA 3050A)			**EPA 6010B**		
RunID: ICP5_020810E	QC Batch: 10216					Analyst: **RQ**
Antimony	ND	2.5		mg/Kg	10	8/10/2002
Arsenic	8.7	2.5		mg/Kg	10	8/10/2002
Barium	160	1.5		mg/Kg	10	8/10/2002
Beryllium	ND	1.5		mg/Kg	10	8/10/2002
Cadmium	ND	1.5		mg/Kg	10	8/10/2002
Chromium	15	1.5		mg/Kg	10	8/10/2002
Cobalt	13	1.5		mg/Kg	10	8/10/2002
Copper	26	1.5		mg/Kg	10	8/10/2002
Molybdenum	5.9	2.5		mg/Kg	10	8/10/2002
Nickel	19	1.5		mg/Kg	10	8/10/2002
Selenium	17	2.5		mg/Kg	10	8/10/2002
Silver	ND	1.5		mg/Kg	10	8/10/2002
Thallium	ND	2.5		mg/Kg	10	8/10/2002
Vanadium	39	1.5		mg/Kg	10	8/10/2002
Zinc	200	5.0		mg/Kg	10	8/10/2002
MERCURY BY COLD VAPOR TECHNIQUE						
	(EPA 7471)			**EPA 7471A**		
RunID: AA1_020812E	QC Batch: 10170					Analyst: **NS**
Mercury	0.10	0.10		mg/Kg	1	8/12/2002

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Advanced Technology Laboratories

Date: 8/15/2002

LEAD BY ATOMIC ABSORPTION
EPA 1311/ 7420

CLIENT:	Ninyo & Moore	**Lab Order:**	058023
Project:	Caltrans/I-10(605-57)/Lead Survey TO 07-1170	**Date Received:**	7/19/2002 6:40:0
Project No:		**Matrix:**	Soil
PO No:		**Analyst:**	NS

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
058023-002A	571-814-0.6	1.2	mg/L	10345	0.2	1	7/19/2002	8/14/2002
058023-003A	571-814-09	0.52	mg/L	10345	0.2	1	7/19/2002	8/14/2002
058023-005A	571-815-0	6.4	mg/L	10345	0.2	1	7/19/2002	8/14/2002
058023-007A	571-815-0.6	1.6	mg/L	10345	0.2	1	7/19/2002	8/14/2002
058023-015A	571-817-0	1.0	mg/L	10345	0.2	1	7/19/2002	8/14/2002
058023-019A	571-818-0	13	mg/L	10345	0.4	2	7/19/2002	8/14/2002
058023-021A	571-818-0.6	5.2	mg/L	10116	0.2	1	7/19/2002	8/7/2002
058023-023A	571-818-1.5	8.4	mg/L	10345	0.2	1	7/19/2002	8/14/2002
058023-024A	571-819-0	6.6	mg/L	10116	0.2	1	7/19/2002	8/7/2002
058023-026A	571-819-0.6	7.5	mg/L	10345	0.2	1	7/19/2002	8/14/2002
058023-028A	571-819-1.5	5.5	mg/L	10346	0.2	1	7/19/2002	8/14/2002

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CLIENT: Ninyo & Moore
Work Order: 058023
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10116

Sample ID: **MB-10116**	SampType: **mblk**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020807F**
Client ID: **ZZZZZ**	Batch ID: **10116**	TestNo: **EPA 1311/ 74 (EPA 3010A)**		Analysis Date: **8/7/2002**	SeqNo: **314960**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **MB-10098-TCLP**	SampType: **mblk**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020807F**
Client ID: **ZZZZZ**	Batch ID: **10116**	TestNo: **EPA 1311/ 74 (EPA 3010A)**		Analysis Date: **8/7/2002**	SeqNo: **314961**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: **LCS-10116**	SampType: **lcs**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020807F**
Client ID: **ZZZZZ**	Batch ID: **10116**	TestNo: **EPA 1311/ 74 (EPA 3010A)**		Analysis Date: **8/7/2002**	SeqNo: **314973**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.128	0.20	1	0	113	80	120	0	0		

Sample ID: **058023-024AMS**	SampType: **MS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020807F**
Client ID: **571-819-0**	Batch ID: **10116**	TestNo: **EPA 1311/ 74 (EPA 3010A)**		Analysis Date: **8/7/2002**	SeqNo: **314971**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	9.109	0.20	2.5	6.649	98.4	80	120	0	0		

Sample ID: **058023-024ADUP**	SampType: **DUP**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **8/6/2002**	Run ID: **AA2_020807F**
Client ID: **571-819-0**	Batch ID: **10116**	TestNo: **EPA 1311/ 74 (EPA 3010A)**		Analysis Date: **8/7/2002**	SeqNo: **314970**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.177	0.20	0	0	0	0	0	6.649	7.65	30	

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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 058023
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10131

Sample ID: MB-10131	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809K
Client ID: ZZZZZ	Batch ID: 10131	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316338

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10131A	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809K
Client ID: ZZZZZ	Batch ID: 10131	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316339

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10131B	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809K
Client ID: ZZZZZ	Batch ID: 10131	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316352

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10131	SampType: lcs	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809K
Client ID: ZZZZZ	Batch ID: 10131	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316366

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.4	0.20	7.5	0	98.7	80	120	0	0		

Sample ID: 058022-058AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809K
Client ID: ZZZZZ	Batch ID: 10131	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316351

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.204	0.20	5	0	104	80	120	0	0		

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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 058023
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10131

Sample ID: 058023-026AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809K
Client ID: 571-819-0.6	Batch ID: 10131	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316364

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.991	0.20	5	1.588	108	80	120	0	0		

Sample ID: 058022-058ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809K
Client ID: ZZZZZ	Batch ID: 10131	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316350

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05662	0.20	0	0	0	0	0	0	0	30	J

Sample ID: 058023-026ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809K
Client ID: 571-819-0.6	Batch ID: 10131	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316363

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.865	0.20	0	0	0	0	0	1.588	133	30	R

Qualifiers:
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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
Work Order: 058023
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10132

Sample ID: MB-10132	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809L
Client ID: ZZZZZ	Batch ID: 10132	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316367

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10132A	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809L
Client ID: ZZZZZ	Batch ID: 10132	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316368

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10132B	SampType: mblk	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809L
Client ID: ZZZZZ	Batch ID: 10132	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316381

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10132	SampType: lcs	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809L
Client ID: ZZZZZ	Batch ID: 10132	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316395

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.532	0.20	7.5	0	100	80	120	0	0		

Sample ID: 058024-024AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809L
Client ID: ZZZZZ	Batch ID: 10132	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316380

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.157	0.20	5	0.07144	102	80	120	0	0		

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Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
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CLIENT: Ninyo & Moore
Work Order: 058023
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10132

Sample ID: 058024-055AMS	SampType: MS	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/9/2002	Run ID: AA2_020809L
Client ID: ZZZZZ	Batch ID: 10132	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316393

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.338	0.20	5	0	107	80	120	0	0		

Sample ID: 058024-024ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809L
Client ID: ZZZZZ	Batch ID: 10132	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316379

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.09281	0.20	0	0	0	0	0	0.07144	0	30	J

Sample ID: 058024-055ADUP	SampType: DUP	TestCode: 7420_DI	Units: mg/L	Prep Date: 8/6/2002	Run ID: AA2_020809L
Client ID: ZZZZZ	Batch ID: 10132	TestNo: WET DI/ EPA (WET)		Analysis Date: 8/9/2002	SeqNo: 316392

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.1325	0.20	0	0	0	0	0	0	0	30	J

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CLIENT: Ninyo & Moore
Work Order: 058023
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10170

Sample ID: MB-10170	SampType: mblk	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812E
Client ID: ZZZZZ	Batch ID: 10170	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317175

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-10170	SampType: lcs	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812E
Client ID: ZZZZZ	Batch ID: 10170	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317174

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.901	0.10	2.08	0	91.4	80	120	0	0		

Sample ID: 058024-043AMS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812E
Client ID: ZZZZZ	Batch ID: 10170	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317172

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.949	0.10	0.83	0.114	101	62	146	0	0		

Sample ID: 058024-043AMSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812E
Client ID: ZZZZZ	Batch ID: 10170	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317173

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.032	0.10	0.83	0.114	111	62	146	0.949	8.40	33	

Sample ID: 058024-043ADUP	SampType: DUP	TestCode: 7471_S	Units: mg/Kg	Prep Date: 8/7/2002	Run ID: AA1_020812E
Client ID: ZZZZZ	Batch ID: 10170	TestNo: EPA 7471A	(EPA 7471)	Analysis Date: 8/12/2002	SeqNo: 317171

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.0945	0.10	0	0	0	0	0	0.114	0	30	J

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CLIENT: Ninyo & Moore
Work Order: 058023
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10216

Sample ID: MB-10216	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316679

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.1421	0.25									
Arsenic	0.02648	0.25									
Barium	ND	0.15									
Beryllium	0.001215	0.15									
Cadmium	ND	0.15									
Chromium	ND	0.15									
Cobalt	0.005172	0.15									
Copper	ND	0.15									
Molybdenum	0.07367	0.25									
Nickel	0.006489	0.15									
Selenium	0.05497	0.25									
Silver	ND	0.15									
Thallium	0.08897	0.25									
Vanadium	ND	0.15									
Zinc	0.09435	0.50									

Sample ID: LCS-10216	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316678

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	47.1	0.25	50	0	94.2	80	120	0	0		
Arsenic	48.94	0.25	50	0	97.9	80	120	0	0		
Barium	50.36	0.15	50	0	101	80	120	0	0		
Beryllium	49.18	0.15	50	0	98.4	80	120	0	0		
Cadmium	49.21	0.15	50	0	98.4	80	120	0	0		
Chromium	50.53	0.15	50	0	101	80	120	0	0		
Cobalt	49.32	0.15	50	0	98.6	80	120	0	0		
Copper	48.56	0.15	50	0	97.1	80	120	0	0		
Molybdenum	48.4	0.25	50	0	96.8	80	120	0	0		
Nickel	48.24	0.15	50	0	96.5	80	120	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike/Surrogate outside limits due to matrix interference; DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
Work Order: 058023
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10216

Sample ID: LCS-10216	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316678

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	48.39	0.25	50	0	96.8	80	120	0	0		
Silver	49.09	0.15	50	0	98.2	80	120	0	0		
Thallium	46.69	0.25	50	0	93.4	80	120	0	0		
Vanadium	51.57	0.15	50	0	103	80	120	0	0		
Zinc	48.29	0.50	50	0	96.6	80	120	0	0		

Sample ID: 058024-021AMS	SampType: MS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316675

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	87.49	2.5	125	3.022	67.6	32	115	0	0		
Arsenic	113.3	2.5	125	3.538	87.8	59	111	0	0		
Barium	273.4	1.5	125	206.8	53.3	34	151	0	0		
Beryllium	122.1	1.5	125	0	97.7	56	112	0	0		
Cadmium	122	1.5	125	1.887	96.1	52	120	0	0		
Chromium	173.6	1.5	125	56.58	93.6	56	118	0	0		
Cobalt	136	1.5	125	13.36	98.1	58	117	0	0		
Copper	146.7	1.5	125	26.64	96	58	134	0	0		
Molybdenum	129.5	2.5	125	12.67	93.4	56	115	0	0		
Nickel	150.6	1.5	125	36.53	91.2	52	120	0	0		
Selenium	124.2	2.5	125	7.453	93.4	46	108	0	0		
Silver	122.3	1.5	125	0	97.8	74	117	0	0		
Thallium	109.5	2.5	125	0	87.6	62	117	0	0		
Vanadium	211.6	1.5	125	99.05	90	55	122	0	0		
Zinc	178	5.0	125	78.94	79.2	43	134	0	0		

Sample ID: 058024-021AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316676

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10216

Sample ID: 058024-021AMSD	SampType: MSD	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316676

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	79.83	2.5	125	3.022	61.4	32	115	87.49	9.16	20	
Arsenic	112.3	2.5	125	3.538	87	59	111	113.3	0.912	20	
Barium	258.1	1.5	125	206.8	41	34	151	273.4	5.78	20	
Beryllium	121.5	1.5	125	0	97.2	56	112	122.1	0.487	20	
Cadmium	120.9	1.5	125	1.887	95.2	52	120	122	0.906	20	
Chromium	176.9	1.5	125	56.58	96.3	56	118	173.6	1.87	20	
Cobalt	130.7	1.5	125	13.36	93.9	58	117	136	3.98	20	
Copper	147.1	1.5	125	26.64	96.4	58	134	146.7	0.314	20	
Molybdenum	129.1	2.5	125	12.67	93.2	56	115	129.5	0.274	20	
Nickel	150	1.5	125	36.53	90.8	52	120	150.6	0.398	20	
Selenium	120	2.5	125	7.453	90	46	108	124.2	3.40	20	
Silver	121.1	1.5	125	0	96.9	74	117	122.3	0.932	20	
Thallium	106	2.5	125	0	84.8	62	117	109.5	3.26	20	
Vanadium	218.2	1.5	125	99.05	95.4	55	122	211.6	3.09	20	
Zinc	182.3	5.0	125	78.94	82.7	43	134	178	2.42	20	

Sample ID: 058024-021ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316674

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.47	2.5	0	0	0	0	0	3.022	0	30	J
Arsenic	2.484	2.5	0	0	0	0	0	3.538	0	30	J
Barium	152.8	1.5	0	0	0	0	0	206.8	30.1	30	R
Beryllium	ND	1.5	0	0	0	0	0	0	0	30	
Cadmium	1.783	1.5	0	0	0	0	0	1.887	5.68	30	
Chromium	47.99	1.5	0	0	0	0	0	56.58	16.4	30	
Cobalt	29.58	1.5	0	0	0	0	0	13.36	75.5	30	R
Copper	22.16	1.5	0	0	0	0	0	26.64	18.3	30	
Molybdenum	12.63	2.5	0	0	0	0	0	12.67	0.355	30	
Nickel	41.2	1.5	0	0	0	0	0	36.53	12.0	30	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike/Surrogate outside limits due to matrix interference; DO - Surrogate diluted out
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CLIENT: Ninyo & Moore
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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 10216

Sample ID: 058024-021ADUP	SampType: DUP	TestCode: 6010_S	Units: mg/Kg	Prep Date: 8/9/2002	Run ID: ICP5_020810E
Client ID: ZZZZZ	Batch ID: 10216	TestNo: EPA 6010B	(EPA 3050A)	Analysis Date: 8/10/2002	SeqNo: 316674

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	3.983	2.5	0	0	0	0	0	7.453	60.7	30	R
Silver	ND	1.5	0	0	0	0	0	0	0	30	
Thallium	ND	2.5	0	0	0	0	0	0	0	30	
Vanadium	82.39	1.5	0	0	0	0	0	99.05	18.4	30	
Zinc	65.24	5.0	0	0	0	0	0	78.94	19.0	30	

Qualifiers:
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ANALYTICAL QC SUMMARY REPORT

BatchID: 10345

Sample ID: MB-10345	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814N
Client ID: ZZZZZ	Batch ID: 10345	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318888

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.06072	0.20									

Sample ID: MB-10263-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814N
Client ID: ZZZZZ	Batch ID: 10345	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318889

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.09608	0.20									

Sample ID: LCS-10345	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814N
Client ID: ZZZZZ	Batch ID: 10345	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318903

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.189	0.20	1	0	119	80	120	0	0		

Sample ID: 058023-026AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814N
Client ID: 571-819-0.6	Batch ID: 10345	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318901

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	11.8	0.40	2.5	7.496	172	80	120	0	0		S

Sample ID: 058023-026ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814N
Client ID: 571-819-0.6	Batch ID: 10345	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318900

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.125	0.20	0	0	0	0	0	7.496	8.06	30	

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits; S - Spike/Surrogate outside limits due to matrix interference; B - Analyte detected in the associated Method Blank; **Calculations are based on raw values**; DO - Surrogate diluted out; H - Sample exceeded holding time

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CLIENT: Ninyo & Moore
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ANALYTICAL QC SUMMARY REPORT

BatchID: 10346

Sample ID: MB-10346	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814O
Client ID: ZZZZZ	Batch ID: 10346	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318904

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-10264-TCLP	SampType: MBLK	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814O
Client ID: ZZZZZ	Batch ID: 10346	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318905

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: LCS-10346	SampType: LCS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814O
Client ID: ZZZZZ	Batch ID: 10346	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318919

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.164	0.20	1	0	116	80	120	0	0		

Sample ID: 058049-054AMS	SampType: MS	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814O
Client ID: ZZZZZ	Batch ID: 10346	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318917

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.263	0.20	2.5	0.6036	106	80	120	0	0		

Sample ID: 058049-054ADUP	SampType: DUP	TestCode: 7420_TC	Units: mg/L	Prep Date: 8/13/2002	Run ID: AA2_020814O
Client ID: ZZZZZ	Batch ID: 10346	TestNo: EPA 1311/ 74 (EPA 3010A)		Analysis Date: 8/14/2002	SeqNo: 318916

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.6097	0.20	0	0	0	0	0	0.6036	1.01	30	

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CLIENT: Ninyo & Moore
Work Order: 058023
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9815

Sample ID: MB-9815A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726C
Client ID: ZZZZZ	Batch ID: 9815	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 306960

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9815B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726C
Client ID: ZZZZZ	Batch ID: 9815	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 306961

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9815	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726C
Client ID: ZZZZZ	Batch ID: 9815	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 306959

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	274.3	5.0	250	0	110	80	120	0	0		

Sample ID: 058023-006AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726C
Client ID: 571-815-0.3	Batch ID: 9815	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 306945

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	186	5.0	250	2.18	73.5	47	128	0	0		

Sample ID: 058023-016AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726C
Client ID: 571-817-0.3	Batch ID: 9815	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 306957

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	190.7	5.0	250	4.02	74.7	47	128	0	0		

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Work Order: 058023
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9815

Sample ID: 058023-006ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726C
Client ID: 571-815-0.3	Batch ID: 9815	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 306944

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	18.75	5.0	0	0	0	0	0	2.18	158	30	R

Sample ID: 058023-016ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726C
Client ID: 571-817-0.3	Batch ID: 9815	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 306956

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.73	5.0	0	0	0	0	0	4.02	0	30	J

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CLIENT: Ninyo & Moore
Work Order: 058023
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9816

Sample ID: MB-9816A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726D
Client ID: ZZZZZ	Batch ID: 9816	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 306988

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9816B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726D
Client ID: ZZZZZ	Batch ID: 9816	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 306989

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9816	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726D
Client ID: ZZZZZ	Batch ID: 9816	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 306987

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	277.4	5.0	250	0	111	80	120	0	0		

Sample ID: 058023-026AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726D
Client ID: 571-819-0.6	Batch ID: 9816	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 306973

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1411	5.0	250	770.4	256	47	128	0	0		S

Sample ID: 058023-036AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726D
Client ID: 571-821-0.9	Batch ID: 9816	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 306985

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	219.2	5.0	250	64.08	62	47	128	0	0		

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Work Order: 058023
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9816

Sample ID: 058023-026ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726D
Client ID: 571-819-0.6	Batch ID: 9816	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 306972

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	992.2	5.0	0	0	0	0	0	770.4	25.2	30	

Sample ID: 058023-036ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726D
Client ID: 571-821-0.9	Batch ID: 9816	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 306984

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	12.83	5.0	0	0	0	0	0	64.08	133	30	R

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9817

Sample ID: MB-9817A	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726E
Client ID: ZZZZZ	Batch ID: 9817	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307016

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: MB-9817B	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726E
Client ID: ZZZZZ	Batch ID: 9817	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307017

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: LCS-9817	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726E
Client ID: ZZZZZ	Batch ID: 9817	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307015

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	266.2	5.0	250	0	106	80	120	0	0		

Sample ID: 058024-007AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726E
Client ID: ZZZZZ	Batch ID: 9817	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307001

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	157.2	5.0	250	1.8	62.2	47	128	0	0		

Sample ID: 058024-017AMS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726E
Client ID: ZZZZZ	Batch ID: 9817	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307013

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	197.3	5.0	250	6.52	76.3	47	128	0	0		

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CLIENT: Ninyo & Moore
Work Order: 058023
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9817

Sample ID: 058024-007ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726E
Client ID: ZZZZZ	Batch ID: 9817	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307000

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.682	5.0	0	0	0	0	0	1.8	104	30	R

Sample ID: 058024-017ADUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 7/23/2002	Run ID: ICP5_020726E
Client ID: ZZZZZ	Batch ID: 9817	TestNo: EPA 6010B	(EPA 3050M)	Analysis Date: 7/26/2002	SeqNo: 307012

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.848	5.0	0	0	0	0	0	6.52	30.3	30	R

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9860

Sample ID: MB-9860	SampType: MBLK	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/25/2002	Run ID: ICP2_020725D
Client ID: ZZZZZ	Batch ID: 9860	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/25/2002	SeqNo: 306194

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.0050									

Sample ID: LCS-9860	SampType: LCS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/25/2002	Run ID: ICP2_020725D
Client ID: ZZZZZ	Batch ID: 9860	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/25/2002	SeqNo: 306195

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.99	0.0050	1	0	99	80	120	0	0		

Sample ID: 058024-001AMS	SampType: MS	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/25/2002	Run ID: ICP2_020725D
Client ID: ZZZZZ	Batch ID: 9860	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/25/2002	SeqNo: 306203

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.21	0.0050	2.5	0.00942	88	66	118	0	0		

Sample ID: 058024-001ADUP	SampType: DUP	TestCode: 6010_WPB	Units: mg/L	Prep Date: 7/25/2002	Run ID: ICP2_020725D
Client ID: ZZZZZ	Batch ID: 9860	TestNo: EPA 6010B	(EPA 3010A)	Analysis Date: 7/25/2002	SeqNo: 306202

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.01	0.0050	0	0	0	0	0	0.00942	5.97	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9939

Sample ID: MB-9939	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802B
Client ID: ZZZZZ	Batch ID: 9939	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311858

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.04895	0.20									

Sample ID: MB-9939A	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802B
Client ID: ZZZZZ	Batch ID: 9939	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311859

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.05501	0.20									

Sample ID: MB-9939B	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802B
Client ID: ZZZZZ	Batch ID: 9939	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311872

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.08174	0.20									

Sample ID: LCS-9939	SampType: lcs	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802B
Client ID: ZZZZZ	Batch ID: 9939	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311886

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.439	0.20	7.5	0	99.2	80	120	0	0		

Sample ID: 058023-003AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802B
Client ID: 571-814-09	Batch ID: 9939	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311871

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	38.1	0.80	20	18.7	97	80	120	0	0		

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Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9939

Sample ID: 058023-027AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802B
Client ID: 571-819-0.9	Batch ID: 9939	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311884

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.715	0.20	5	0.06327	93	80	120	0	0		

Sample ID: 058023-003ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802B
Client ID: 571-814-09	Batch ID: 9939	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311870

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	17.49	0.40	0	0	0	0	0	18.7	6.72	30	

Sample ID: 058023-027ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802B
Client ID: 571-819-0.9	Batch ID: 9939	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311883

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20	0	0	0	0	0	0.06327	0	30	

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ANALYTICAL QC SUMMARY REPORT

BatchID: 9940

Sample ID: MB-9940	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802C
Client ID: ZZZZZ	Batch ID: 9940	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311887

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.20									

Sample ID: MB-9940A	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802C
Client ID: ZZZZZ	Batch ID: 9940	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311888

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.04727	0.20									

Sample ID: MB-9940B	SampType: mblk	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802C
Client ID: ZZZZZ	Batch ID: 9940	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311901

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.07302	0.20									

Sample ID: LCS-9940	SampType: lcs	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802C
Client ID: ZZZZZ	Batch ID: 9940	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311915

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.567	0.20	7.5	0	101	80	120	0	0		

Sample ID: 058024-011AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802C
Client ID: ZZZZZ	Batch ID: 9940	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311900

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	77.27	2.0	50	24.48	106	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058023
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: 9940

Sample ID: 058024-040AMS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 8/2/2002	Run ID: AA2_020802C
Client ID: ZZZZZ	Batch ID: 9940	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311913

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	30.43	0.80	20	11.46	94.8	80	120	0	0		

Sample ID: 058024-011ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802C
Client ID: ZZZZZ	Batch ID: 9940	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311899

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	30.6	0.80	0	0	0	0	0	24.48	22.2	30	

Sample ID: 058024-040ADUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 7/29/2002	Run ID: AA2_020802C
Client ID: ZZZZZ	Batch ID: 9940	TestNo: WET/ EPA 74 (WET)		Analysis Date: 8/2/2002	SeqNo: 311912

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.075	0.40	0	0	0	0	0	11.46	34.6	30	R

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058023
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: R19800

Sample ID: **058024-051ADUP**	SampType: **DUP**	TestCode: **9045_S**	Units: **pH Units**	Prep Date: **7/25/2002**	Run ID: **WETCHEM_020725C**
Client ID: **ZZZZZ**	Batch ID: **R19800**	TestNo: **EPA 9045C**		Analysis Date: **7/25/2002**	SeqNo: **306559**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	8.9	0.10	0	0	0	0	0	8.96	0.672	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Advanced Technology Laboratories

3275 Walnut Avenue Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Ninyo & Moore
Work Order: 058023
Project: Caltrans/I-10(605-57)/Lead Survey TO 07-1170

ANALYTICAL QC SUMMARY REPORT

BatchID: R19803

Sample ID: **058023-012ADUP**	SampType: **DUP**	TestCode: **9045_S**	Units: **pH Units**	Prep Date: **7/25/2002**	Run ID: **WETCHEM_020725B**
Client ID: **571-816-0.6**	Batch ID: **R19803**	TestNo: **EPA 9045C**		Analysis Date: **7/25/2002**	SeqNo: **306548**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.85	0.10	0	0	0	0	0	7.84	0.127	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
R - RPD outside accepted recovery limits
S - Spike/Surrogate outside limits due to matrix interference
B - Analyte detected in the associated Method Blank
Calculations are based on raw values
DO - Surrogate diluted out
H - Sample exceeded holding time

Rachelle

From: Steve Reese [sreese@ninyoandmoore.com]
Sent: Wednesday, July 31, 2002 9:27 AM
To: 'rachelle@atlglobal.com'
Cc: David Shaler (E-mail); Ruth Cheung (E-mail)
Subject: TCLP Analysis

TCLP.xls

Rachelle,
Attached please find a list of samples to be run for the TCLP analysis. Currently, we selected all of the samples that are greater than 1,000 mg/kg
of TTLC results. However, they will be ran by instruction only. There may
be more samples chosen for TCLP analysis in the future, but please run these 82 samples for now. Please call with any questions.
Thank you, Steve

Stephen S. Reese
Senior Staff Environmental Scientist
Ninyo & Moore Geotechnical & Environmental Sciences Consultants
475 Goddard, Suite 200
Irvine, California 92618
Tel: (949) 753-7070
Fax: (949) 753-7071
Email: sreese@ninyoandmoore.com
www.ninyoandmoore.com

RUN FOR TCLP ANALYSIS			
33	20	29	82
569-101-0	570-101-0	571-104-0	
569-102-0	570-101-0.6	571-120-0	
569-102-0.3	570-102-0.6	571-310-0.9	
569-102-0.9	570-103-1.5	571-317-0	
569-111-0	570-114-0.6	571-320-0	
569-112-0	570-115-0	571-325-0.6	
569-112-0.6	570-119-0.3	571-507-0	
569-201-0	570-201-0	571-511-0	
569-212-0	570-214-0	571-514-0	
569-301-0	570-311-0.6	571-524-0	
569-303-0.9	570-312-0.6	571-710-0	
569-314-0	570-504-0	571-710-0.3	
569-401-0	570-508-0	571-711-0	
569-404-0.6	570-517-0	571-711-0.3	
569-405-0.6	570-517-0.3	571-712-0	
569-408-0.9	570-610-0.6	571-712-0.3	
569-502-0.6	570-615-0	571-201-0.6	
569-516-0	570-706-0	571-405-0	
569-603-0.3	570-709-0	571-406-0	
569-607-0	570-808-0.6	571-407-0	
569-607-0.3		571-414-0	
569-609-0		571-609-0	
569-609-0.3		571-611-0	
569-703-0		571-616-0	
569-703-0.9		571-617-0	
569-705-0		571-619-1.5	
569-705-0.3		571-814-0.3	
569-706-0		571-818-0.6	
569-708-0		571-819-0	
569-710-0			
569-711-0			
569-711-0.3			
569-801-0.3			

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Tuesday, August 06, 2002 3:46 PM
To: 'Rachelle'; 'David Shaler (E-mail)'
Subject: Title 22 Metals

Title 22 Metals.xls

Rachelle,
Please run the following samples for Title 22 Metals. Please do not list
Pb in your emailed results. There should be a total of 120 samples to be
run.
Thanks.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

569-102-0.9	570-101-0	571-101-0.9
569-112-0	570-101-0.6	571-104-0
569-201-0	570-201-0	571-201-0.6
569-206-0.6	570-205-0.9	571-108-1.5
569-106-1.5	570-106-0.3	571-111-0.3
569-212-0	570-208-1.5	571-207-0
569-401-0.6	570-111-0.6	571-210-0.6
569-301-0	570-214-0	571-115-0.9
569-303-0.9	570-115-0.3	571-214-0.3
569-404-0.6	570-119-0.9	571-120-0
569-408-0.9	570-224-0.6	571-217-1.5
569-314-0	570-401-0	571-220-0.6
569-313-0.3	570-401-0.3	571-301-0.3
569-502-0.6	570-304-1.5	571-405-0
569-602-1.5	570-307-0.9	571-306-0.9
569-607-0.3	570-311-0.6	571-407-0
569-607-0	570-312-0.6	571-310-0.9
569-508-0.9	570-316-0.3	571-315-0.3
569-511-0.6	570-601-0	571-412-1.5
569-612-1.5	570-505-1.5	571-317-0
569-516-0	570-508-0	571-320-0.6
569-801-0.3	570-610-0.6	571-416-0.9
569-519-0.6	570-511-0.9	571-325-0.3
569-803-0.9	570-615-0	571-421-1.5
569-705-0	570-514-0.3	571-425-0
569-806-1.5	570-517-0	571-501-0.6
569-708-0.3	570-618-0.6	571-503-0.9
569-711-0	570-621-1.5	571-603-0.3
569-811-0	570-703-0.9	571-507-0
	570-804-0	571-609-0
	570-706-0	571-510-1.5
	570-709-0	571-611-0
	570-808-0.6	571-514-0
	570-711-1.5	571-614-0.3
	570-812-0.3	571-517-0.9
		571-617-0.6
		571-520-1.5
		571-621-0.3
		571-524-0
		571-624-0.9
		571-529-0.3
		571-628-0.6
		571-703-1.5
		571-707-0
		571-804-0.9
		571-809-0.3
		571-711-0
		571-712-0
		571-814-0.3
		571-818-0.6
		571-819-0
		571-827-1.5

571-832-0.9
571-836-0.3
571-837-0.6
571-842-0

Rachelle

From: Ruth Cheung [rcheung@ninyoandmoore.com]
Sent: Thursday, August 08, 2002 9:14 AM
To: 'Rachelle'
Subject: TCLP Analysis

TCLP-3.xls

In addition to the 90 TCLP already run please run the following samples for
TCLP. There should be a list of 350 samples.
Thanks for a the hard work and timely results.

Ruth L. Cheung
Staff Environmental Scientist
Ninyo & Moore
(949) 753-7070 x2273

-----Original Message-----
From: Rachelle [SMTP:Rachelle@ATLGlobal.com]
Sent: Wednesday, August 07, 2002 5:02 PM
To: 'David Shaler (E-mail)'
Cc: 'Ruth Cheung (E-mail)'
Subject: TCLP Results

<<57931TCLP.xls>> <<58001TCLP.xls>> <<58021TCLP.xls>>
<<58022TCLP.xls>>
<<58023TCLP.xls>> <<58024TCLP.xls>> <<58049TCLP.xls>>
<<58050TCLP.xls>>
<<58052TCLP.xls>> <<58053TCLP.xls>> <<58065TCLP.xls>>
<<58066TCLP.xls>>
<<58067TCLP.xls>> <<58068TCLP.xls>> <<58069TCLP.xls>>

Rachelle Arada
Project Coordinator
www.atlglobal.com
voice: 562.989.4045 ext 237
fax : 562.989.4040

<< File: 57931TCLP.xls >> << File: 58001TCLP.xls >> << File:
58021TCLP.xls >> << File: 58022TCLP.xls >> << File: 58023TCLP.xls >>
<<
File: 58024TCLP.xls >> << File: 58049TCLP.xls >> << File:
58050TCLP.xls
>> << File: 58052TCLP.xls >> << File: 58053TCLP.xls >> << File:
58065TCLP.xls >> << File: 58066TCLP.xls >> << File: 58067TCLP.xls >>
<<
File: 58068TCLP.xls >> << File: 58069TCLP.xls >>

569-404-0	2. STLC	170	570-515-0.3	2. STLC	120	571-521-0	2. STLC	230
569-402-0	2. STLC	130	570-811-0	2. STLC	110	571-324-0.9	2. STLC	110
569-406-0	2. STLC	120	570-114-0.0	2. STLC	110	571-818-0	2. STLC	110
569-515-0	2. STLC	110	570-504-0.6	2. STLC	100	571-819-0.6	2. STLC	110
569-611-0	2. STLC	100	570-811-1.5	2. STLC	90	571-708-0	2. STLC	110
569-409-0	2. STLC	94	570-615-0.6	2. STLC	84	571-103-0.6	2. STLC	110
569-603-0	2. STLC	93	570-305-0	2. STLC	79	571-617-0.3	2. STLC	100
569-104-0.6	2. STLC	91	570-314-0.6	2. STLC	76	571-611-0.6	2. STLC	92
569-807-0	2. STLC	86	570-505-0.6	2. STLC	75	571-712-0.9	2. STLC	81
569-608-0	2. STLC	86	570-208-0.6	2. STLC	74	571-105-0.6	2. STLC	81
569-501-0	2. STLC	84	570-116-0.0	2. STLC	73	571-313-0	2. STLC	79
569-710-0.3	2. STLC	83	570-102-0	2. STLC	65	571-508-0	2. STLC	73
569-808-0	2. STLC	83	570-804-0.6	2. STLC	64	571-518-0.3	2. STLC	73
569-609-0.6	2. STLC	80	570-704-0	2. STLC	63	571-217-0	2. STLC	68
569-803-0	2. STLC	79	570-508-0.6	2. STLC	60	571-516-0	2. STLC	66
569-105-0	2. STLC	78	570-706-0.3	2. STLC	60	571-701-0.3	2. STLC	66
569-512-0	2. STLC	77	570-303-0	2. STLC	58	571-710-0.6	2. STLC	65
569-513-0	2. STLC	77	570-311-1.5	2. STLC	58	571-512-0	2. STLC	64
569-302-0	2. STLC	74	570-117-0.0	2. STLC	58	571-308-0.9	2. STLC	61
569-805-0	2. STLC	73	570-208-0.3	2. STLC	58	571-701-0	2. STLC	61
569-517-0	2. STLC	71	570-709-0.6	2. STLC	57	571-514-0.3	2. STLC	59
569-704-0.3	2. STLC	71	570-703-0	2. STLC	55	571-415-0	2. STLC	58
569-703-0.6	2. STLC	70	570-206-0	2. STLC	54	571-616-0.6	2. STLC	57
569-514-0.3	2. STLC	70	570-301-0	2. STLC	53	571-517-0	2. STLC	56
569-803-0.3	2. STLC	69	570-603-0.3	2. STLC	46	571-112-0.9	2. STLC	56
569-409-0.6	2. STLC	69	570-711-0.6	2. STLC	46	571-214-0	2. STLC	55
569-411-0	2. STLC	68	570-206-0.3	2. STLC	45	571-415-0.3	2. STLC	55
569-102-0.6	2. STLC	68	570-103-0	2. STLC	44	571-405-0.6	2. STLC	55
569-809-0	2. STLC	65	570-602-0	2. STLC	41	571-530-0	2. STLC	55
569-605-0	2. STLC	65	570-209-0	2. STLC	40	571-831-0	2. STLC	53
569-711-0.6	2. STLC	62	570-210-0	2. STLC	40	571-709-0	2. STLC	53
569-806-0	2. STLC	60	570-117-0.3	2. STLC	39	571-103-0.0	2. STLC	52
569-802-0.3	2. STLC	60	570-103-0.6	2. STLC	37	571-312-0	2. STLC	51
569-410-0	2. STLC	59	570-110-0.6	2. STLC	37	571-526-0	2. STLC	51
569-501-0.6	2. STLC	59	570-805-0.9	2. STLC	36	571-819-1.5	2. STLC	51
569-808-0.3	2. STLC	58	570-112-1.5	2. STLC	35	571-515-0	2. STLC	50
569-104-0	2. STLC	56	570-614-0	2. STLC	34	571-833-0	2. STLC	49
569-804-0	2. STLC	54	570-713-0.3	2. STLC	33	571-815-0.6	2. STLC	47
569-610-0	2. STLC	54	570-513-0	2. STLC	32	571-517-0.3	2. STLC	46
569-608-0.3	2. STLC	53	570-312-0.3	2. STLC	31	571-610-0	2. STLC	46
569-213-0	2. STLC	49	570-503-0.6	2. STLC	31	571-413-0	2. STLC	46
569-701-0	2. STLC	47	570-510-0.6	2. STLC	31	571-815-0	2. STLC	45
569-311-0	2. STLC	47	570-202-0	2. STLC	31	571-514-0.9	2. STLC	44
569-609-0.9	2. STLC	46	570-207-0	2. STLC	31	571-505-1.5	2. STLC	44
569-513-0.3	2. STLC	45	570-209-0.3	2. STLC	31	571-528-0	2. STLC	44
569-801-0.6	2. STLC	44	570-703-0.3	2. STLC	30	571-610-0.6	2. STLC	43
569-514-0	2. STLC	42	570-401-0	2. STLC	30	571-629-0	2. STLC	43
569-805-0.6	2. STLC	42	570-610-0.9	2. STLC	29	571-604-0	2. STLC	42
569-408-1.5	2. STLC	42	570-809-0.6	2. STLC	29	571-213-0	2. STLC	41
569-807-0.3	2. STLC	40	570-509-0.9	2. STLC	29	571-812-0	2. STLC	41
569-204-0	2. STLC	40	570-210-0.6	2. STLC	29	571-706-0	2. STLC	41
569-517-0.3	2. STLC	36	570-211-0	2. STLC	29	571-530-0.6	2. STLC	41
569-518-0	2. STLC	36	570-603-0	2. STLC	28	571-305-0	2. STLC	40
569-806-0.3	2. STLC	36	570-119-0	2. STLC	28	571-523-0.3	2. STLC	39
569-705-1.5	2. STLC	35	570-713-0.6	2. STLC	28	571-510-0	2. STLC	39
569-303-0.6	2. STLC	34	570-108-0	2. STLC	27	571-305-0.9	2. STLC	39
569-516-0.3	2. STLC	33	570-708-0.6	2. STLC	27	571-818-1.5	2. STLC	39
569-705-0.6	2. STLC	33	570-224-0	2. STLC	26	571-703-0	2. STLC	38
569-802-0	2. STLC	33	570-601-0	2. STLC	26	571-520-0.3	2. STLC	36
569-515-0.6	2. STLC	32	570-710-0.6	2. STLC	26	571-216-0	2. STLC	34
569-704-0	2. STLC	32	570-614-0.6	2. STLC	26	571-827-0	2. STLC	34
569-401-0.3	2. STLC	32	570-118-0.3	2. STLC	26	571-708-0.3	2. STLC	34
569-207-0	2. STLC	32	570-304-0	2. STLC	25	571-514-0.6	2. STLC	33
569-608-0.6	2. STLC	31	570-707-0.6	2. STLC	25	571-528-1.5	2. STLC	33
569-104-0.3	2. STLC	31	570-510-0	2. STLC	25	571-803-0	2. STLC	33
569-201-0.6	2. STLC	30	570-110-0	2. STLC	24	571-414-0.3	2. STLC	33
569-515-0.3	2. STLC	28	570-223-0	2. STLC	24	571-813-0.3	2. STLC	32
569-212-0.6	2. STLC	28	570-117-0.6	2. STLC	24	571-523-0	2. STLC	31
569-103-0	2. STLC	28	570-616-0	2. STLC	23	571-326-0	2. STLC	31
569-313-0	2. STLC	27	570-704-0.3	2. STLC	22	571-502-0.6	2. STLC	31
569-103-0.3	2. STLC	26	570-513-0.6	2. STLC	22	571-624-1.5	2. STLC	31
569-705-0.9	2. STLC	25	570-221-0.0	2. STLC	22	571-330-0	2. STLC	31
569-707-0.3	2. STLC	25	570-617-0	2. STLC	21	571-512-0.3	2. STLC	30
569-515-1.5	2. STLC	24	570-214-0.3	2. STLC	21	571-521-0.6	2. STLC	29
569-508-0	2. STLC	24	570-122-0.9	2. STLC	20	571-706-0.3	2. STLC	29
569-801-0	2. STLC	24	570-313-0.6	2. STLC	19	571-814-0.6	2. STLC	28
569-402-0.6	2. STLC	24	570-207-0.6	2. STLC	19	571-616-1.5	2. STLC	28
569-516-0.6	2. STLC	22	570-120-0.9	2. STLC	18	571-835-0	2. STLC	28
569-509-0.3	2. STLC	22	570-506-0	2. STLC	18	571-811-0.3	2. STLC	28
569-106-0	2. STLC	22	570-102-0.9	2. STLC	17	571-101-0.6	2. STLC	28
569-106-0.3	2. STLC	22	570-216-0	2. STLC	17	571-112-0	2. STLC	28
569-202-0	2. STLC	21	570-225-0	2. STLC	17	571-315-0	2. STLC	27
569-805-1.5	2. STLC	21	570-304-0.3	2. STLC	17	571-622-0	2. STLC	27
569-205-0	2. STLC	20	570-409-0	2. STLC	17	571-607-0.6	2. STLC	27
569-707-0	2. STLC	19	570-713-0	2. STLC	17	571-609-0.6	2. STLC	27

569-709-0	2. STLC	19
569-202-0.3	2. STLC	19
569-602-0	2. STLC	19
569-207-0.3	2. STLC	19
569-706-0.3	2. STLC	17
569-807-0.9	2. STLC	17
569-104-0.9	2. STLC	17
569-505-0.6	2. STLC	17
569-704-0.6	2. STLC	16
569-808-0.6	2. STLC	16
569-212-0.3	2. STLC	16
569-612-0	2. STLC	16
569-704-1.5	2. STLC	15
569-411-0.3	2. STLC	15
569-113-0	2. STLC	15
569-807-0.6	2. STLC	14
569-311-0.3	2. STLC	12
569-312-0	2. STLC	10
569-311-0.9	2. STLC	8.3

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570-401-0.3	2. STLC	17
570-616-0.6	2. STLC	17
570-308-0	2. STLC	16
570-807-0.9	2. STLC	16
570-701-0.6	2. STLC	16
570-617-0.3	2. STLC	16
570-107-0.6	2. STLC	15
570-811-0.6	2. STLC	15
570-707-0	2. STLC	15
570-518-0	2. STLC	15
570-111-0.0	2. STLC	15
570-109-0.6	2. STLC	14
570-401-0.9	2. STLC	4.1
570-408-0	2. STLC	4
570-409-0.3	2. STLC	3
570-401-0.6		0
570-401-1.5		0
570-408-0.6		0
570-408-1.5		0

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571-837-0.3	2. STLC	27
571-520-0	2. STLC	26
571-516-0.3	2. STLC	26
571-420-0	2. STLC	26
571-102-0.6	2. STLC	26
571-517-1.5	2. STLC	25
571-513-0.6	2. STLC	25
571-623-0.6	2. STLC	25
571-112-0.3	2. STLC	25
571-326-0.6	2. STLC	24
571-619-0.3	2. STLC	24
571-619-0.9	2. STLC	24
571-528-0.3	2. STLC	24
571-706-0.6	2. STLC	24
571-112-0.6	2. STLC	24
571-327-0.6	2. STLC	23
571-817-0	2. STLC	23
571-425-0.6	2. STLC	22
571-118-0	2. STLC	22
571-829-0	2. STLC	22
571-828-0	2. STLC	22
571-122-0	2. STLC	21
571-101-1.5	2. STLC	21
571-530-0.3	2. STLC	21
571-406-0.6	2. STLC	20
571-517-0.6	2. STLC	20
571-835-0.3	2. STLC	20
571-501-0	2. STLC	20
571-518-0.9	2. STLC	19
571-510-0.3	2. STLC	19
571-814-0.9	2. STLC	19
571-522-0.6	2. STLC	19
571-622-1.5	2. STLC	19
571-812-0.6	2. STLC	19
571-701-0.6	2. STLC	19
571-704-0	2. STLC	19
571-711-0.6	2. STLC	19
571-212-0	2. STLC	18
571-839-0.6	2. STLC	18
571-610-1.5	2. STLC	18
571-709-0.3	2. STLC	18
571-311-0.6	2. STLC	17
571-620-0	2. STLC	17
571-109-0	2. STLC	17
571-704-0.3	2. STLC	17
571-207-1.5	2. STLC	16
571-203-0	2. STLC	16
571-616-0.3	2. STLC	16
571-317-0.3	2. STLC	16
571-629-0.3	2. STLC	16
571-416-0	2. STLC	15
571-419-0	2. STLC	15
571-526-0.3	2. STLC	15
571-619-0	2. STLC	15
571-606-0	2. STLC	15
571-115-0.6	2. STLC	14
571-202-0.9	2. STLC	11

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tblTEMP

WorkOrder	ClientSampID	TestNo	Analyte	PQL	DF	CollectionDate	AnalDate	PrepDate
058023	571-713-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-713-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058023	571-713-0	WET/ EPA 7420	Lead	0.4	2	7/19/2002	8/2/2002	7/29/2002
058023	571-713-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-713-0.3	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058023	571-713-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-814-0.6	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/14/2002	8/13/2002
058023	571-814-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-814-0.6	EPA 9045C	pH	0.1	1	7/19/2002	7/25/2002	7/25/2002
058023	571-814-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058023	571-814-0.6	WET/ EPA 7420	Lead	0.8	4	7/19/2002	8/2/2002	7/29/2002
058023	571-814-09	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/14/2002	8/13/2002
058023	571-814-09	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-814-09	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058023	571-814-09	WET/ EPA 7420	Lead	0.4	2	7/19/2002	8/2/2002	7/29/2002
058023	571-814-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-815-0	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/14/2002	8/13/2002
058023	571-815-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-815-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058023	571-815-0	WET/ EPA 7420	Lead	2	10	7/19/2002	8/2/2002	7/29/2002
058023	571-815-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-815-0.6	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/14/2002	8/13/2002
058023	571-815-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-815-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058023	571-815-0.6	WET/ EPA 7420	Lead	2	10	7/19/2002	8/2/2002	7/29/2002
058023	571-815-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-815-0.9	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058023	571-815-0.9	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058023	571-815-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-816-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-816-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-816-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-816-0.6	EPA 9045C	pH	0.1	1	7/19/2002	7/25/2002	7/25/2002
058023	571-816-0.6	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058023	571-816-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002

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058023	571-816-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-817-0	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/14/2002	8/13/2002
058023	571-817-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-817-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058023	571-817-0	WET/ EPA 7420	Lead	0.8	4	7/19/2002	8/2/2002	7/29/2002
058023	571-817-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-817-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-817-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058023	571-817-0.6	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058023	571-817-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-818-0	EPA 1311/ 7420	Lead	0.4	2	7/19/2002	8/14/2002	8/13/2002
058023	571-818-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-818-0	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058023	571-818-0	WET/ EPA 7420	Lead	4	20	7/19/2002	8/2/2002	7/29/2002
058023	571-818-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-818-0.6	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/7/2002	8/6/2002
058023	571-818-0.6	EPA 6010B	Antimony	2.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-818-0.6	EPA 6010B	Arsenic	2.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-818-0.6	EPA 6010B	Barium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-818-0.6	EPA 6010B	Beryllium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-818-0.6	EPA 6010B	Cadmium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-818-0.6	EPA 6010B	Chromium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-818-0.6	EPA 6010B	Cobalt	1.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-818-0.6	EPA 6010B	Copper	1.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-818-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-818-0.6	EPA 6010B	Molybdenum	2.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-818-0.6	EPA 6010B	Nickel	1.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-818-0.6	EPA 6010B	Selenium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-818-0.6	EPA 6010B	Silver	1.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-818-0.6	EPA 6010B	Thallium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-818-0.6	EPA 6010B	Vanadium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-818-0.6	EPA 6010B	Zinc	5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-818-0.6	EPA 7471A	Mercury	0.1	1	7/19/2002	8/12/2002	8/7/2002
058023	571-818-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-818-0.9	EPA 9045C	pH	0.1	1	7/19/2002	7/25/2002	7/25/2002
058023	571-818-1.5	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/14/2002	8/13/2002

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058023	571-818-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-818-1.5	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058023	571-818-1.5	WET/ EPA 7420	Lead	2	10	7/19/2002	8/2/2002	7/29/2002
058023	571-819-0	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/7/2002	8/6/2002
058023	571-819-0	EPA 6010B	Antimony	2.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-819-0	EPA 6010B	Arsenic	2.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-819-0	EPA 6010B	Barium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-819-0	EPA 6010B	Beryllium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-819-0	EPA 6010B	Cadmium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-819-0	EPA 6010B	Chromium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-819-0	EPA 6010B	Cobalt	1.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-819-0	EPA 6010B	Copper	1.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-819-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-819-0	EPA 6010B	Molybdenum	2.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-819-0	EPA 6010B	Nickel	1.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-819-0	EPA 6010B	Selenium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-819-0	EPA 6010B	Silver	1.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-819-0	EPA 6010B	Thallium	2.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-819-0	EPA 6010B	Vanadium	1.5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-819-0	EPA 6010B	Zinc	5	10	7/19/2002	8/10/2002	8/9/2002
058023	571-819-0	EPA 7471A	Mercury	0.1	1	7/19/2002	8/12/2002	8/7/2002
058023	571-819-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-819-0.6	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/14/2002	8/13/2002
058023	571-819-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-819-0.6	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058023	571-819-0.6	WET/ EPA 7420	Lead	4	20	7/19/2002	8/2/2002	7/29/2002
058023	571-819-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-819-0.9	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058023	571-819-1.5	EPA 1311/ 7420	Lead	0.2	1	7/19/2002	8/14/2002	8/13/2002
058023	571-819-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-819-1.5	WET DI/ EPA 7420	Lead	0.2	1	7/19/2002	8/9/2002	8/6/2002
058023	571-819-1.5	WET/ EPA 7420	Lead	2	10	7/19/2002	8/2/2002	7/29/2002
058023	571-820-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-820-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-820-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-820-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002

058023	571-820-0.9	EPA 9045C	pH	0.1	1	7/19/2002	7/25/2002	7/25/2002
058023	571-821-0	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-821-0.3	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-821-0.6	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-821-0.6	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058023	571-821-0.9	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-821-0.9	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058023	571-821-1.5	EPA 6010B	Lead	5	1	7/19/2002	7/26/2002	7/23/2002
058023	571-821-1.5	WET/ EPA 7420	Lead	0.2	1	7/19/2002	8/2/2002	7/29/2002
058023	EB-26	EPA 6010B	Lead	0.005	1	7/19/2002	7/25/2002	7/25/2002

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APPENDIX B

CALTRANS HAZ GIS DATABASE EXCEL SPREADSHEET DELIVERABLES

sample date	sample depth	sample ID	test type	value	result units	method detection limit	analysis date	analyte	matrix	lab name
7/17/02	0.0 m	571-101-0.0	1. TTLC	80	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.0 m	571-101-0.0	2. STLC	2.5	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-101-0.3	1. TTLC	330	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-101-0.3	2. STLC	14	mg/L	0.4	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-101-0.3	3. STLC-DI	0.05	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-101-0.6	1. TTLC	360	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-101-0.6	2. STLC	28	mg/L	0.8	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-101-0.6	3. STLC-DI	0.07	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-101-0.6	4. TCLP	0.31	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-101-0.9	1. TTLC	13	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	1.5 m	571-101-1.5	1. TTLC	190	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	1.5 m	571-101-1.5	2. STLC	21	mg/L	0.8	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	1.5 m	571-101-1.5	3. STLC-DI	0.1	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	1.5 m	571-101-1.5	4. TCLP	1.7	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.0 m	571-102-0.0	1. TTLC	9.9	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-102-0.3	1. TTLC	13	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-102-0.6	1. TTLC	480	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-102-0.6	5. PH	7.9	pH Units	0.1	7/21/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-102-0.6	2. STLC	26	mg/L	0.8	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-102-0.6	3. STLC-DI	0.06	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-102-0.6	4. TCLP	2	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-102-0.9	1. TTLC	16	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	1.5 m	571-102-1.5	1. TTLC	6.7	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-103-0	4. TCLP	1	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.0 m	571-103-0.0	1. TTLC	560	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.0 m	571-103-0.0	2. STLC	52	mg/L	1.6	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.0 m	571-103-0.0	3. STLC-DI	0	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-103-0.3	1. TTLC	12	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-103-0.6	1. TTLC	610	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-103-0.6	2. STLC	110	mg/L	4	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-103-0.6	3. STLC-DI	0.08	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-103-0.6	4. TCLP	0.39	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-103-0.9	1. TTLC	6.8	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	1.5 m	571-103-1.5	1. TTLC	10	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-104-0	4. TCLP	0.81	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.0 m	571-104-0.0	1. TTLC	1100	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-104-0.3	1. TTLC	5	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-104-0.6	1. TTLC	2	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-104-0.9	1. TTLC	14	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	1.5 m	571-104-1.5	1. TTLC	5.2	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.0 m	571-105-0.0	1. TTLC	45	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-105-0.3	1. TTLC	59	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-105-0.3	2. STLC	3.2	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-105-0.6	1. TTLC	560	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/17/02	0.6 m	571-105-0.6	2. STLC	81	mg/L	2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-105-0.6	3. STLC-DI	0.05	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-105-0.6	4. TCLP	2.2	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-105-0.9	1. TTLC	11	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-105-0.9	5. PH	7.9	pH Units	0.1	7/21/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/17/02	1.5 m	571-105-1.5	1. TTLC	33	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-106-0	1. TTLC	150	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-106-0	2. STLC	9	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-106-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-106-0.3	1. TTLC	19	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-106-0.6	1. TTLC	9.6	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-106-0.9	1. TTLC	6.7	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-107-0	1. TTLC	90	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-107-0	2. STLC	4.6	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-107-0.3	1. TTLC	85	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-107-0.3	2. STLC	4.6	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-107-0.6	1. TTLC	240	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-107-0.6	2. STLC	9.9	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-107-0.6	3. STLC-DI	0.07	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-107-0.9	1. TTLC	91	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-107-0.9	5. PH	7.8	pH Units	0.1	7/26/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-107-0.9	2. STLC	4.1	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-108-0	1. TTLC	22	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-108-0.3	1. TTLC	33	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-108-0.6	1. TTLC	30	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-108-0.9	1. TTLC	6.6	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-108-1.5	1. TTLC	8.2	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-109-0	1. TTLC	180	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-109-0	2. STLC	17	mg/L	0.4	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-109-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-109-0	4. TCLP	0.78	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-109-0.3	1. TTLC	45	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-110-0	1. TTLC	64	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-110-0	2. STLC	3.4	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-110-0.3	1. TTLC	42	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-110-0.6	1. TTLC	41	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-111-0	1. TTLC	45	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-111-0.3	1. TTLC	82	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-111-0.3	2. STLC	0.09	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-111-0.6	1. TTLC	59	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-111-0.6	2. STLC	2.1	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-111-0.9	1. TTLC	7.6	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-111-1.5	1. TTLC	16	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-112-0	1. TTLC	500	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-112-0	5. PH	7.4	pH Units	0.1	7/26/02	pH	Soil	Advanced Technology Lab., Signal Hill

7/22/02	0 m	571-112-0	2. STLC	28	mg/L	0.8	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-112-0	3. STLC-DI	0.05	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-112-0	4. TCLP	0.69	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-112-0.3	1. TTLC	55	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-112-0.3	2. STLC	25	mg/L	0.8	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-112-0.3	3. STLC-DI	1.2	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-112-0.3	4. TCLP	0.51	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-112-0.6	1. TTLC	110	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-112-0.6	2. STLC	24	mg/L	0.8	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-112-0.6	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-112-0.6	4. TCLP	0.4	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-112-0.9	1. TTLC	710	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-112-0.9	2. STLC	56	mg/L	2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-112-0.9	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-112-0.9	4. TCLP	0.1	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-112-1.5	1. TTLC	4	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-113-0	1. TTLC	59	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-113-0	2. STLC	2.9	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-113-0.3	1. TTLC	17	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-113-0.6	1. TTLC	81	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-113-0.6	2. STLC	6.1	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-113-0.6	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-113-0.9	1. TTLC	5.3	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-113-1.5	1. TTLC	3	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-114-0	1. TTLC	120	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-114-0	2. STLC	7.1	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-114-0	3. STLC-DI	0.07	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-114-0.3	1. TTLC	120	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-114-0.3	2. STLC	6.8	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-114-0.3	3. STLC-DI	0.32	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-114-0.6	1. TTLC	170	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-114-0.6	2. STLC	3.8	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-114-0.9	1. TTLC	420	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-114-0.9	2. STLC	5.1	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-114-0.9	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-114-1.5	1. TTLC	12	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-114-1.5	5. PH	8.1	pH Units	0.1	7/26/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-115-0	1. TTLC	150	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-115-0	5. PH	7.2	pH Units	0.1	7/26/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-115-0	2. STLC	10	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-115-0	3. STLC-DI	1.6	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-115-0.3	1. TTLC	170	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-115-0.3	2. STLC	9.2	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-115-0.3	3. STLC-DI	1.1	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-115-0.6	1. TTLC	170	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/22/02	0.6 m	571-115-0.6	2. STLC	14	mg/L	0.4	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-115-0.6	3. STLC-DI	2	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-115-0.6	4. TCLP	0.6	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-115-0.9	1. TTLC	15	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-115-1.5	1. TTLC	4	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-116-0	1. TTLC	46	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-116-0	5. PH	7.6	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-116-0.3	1. TTLC	30	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-116-0.6	1. TTLC	3	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-116-0.9	1. TTLC	78	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-116-0.9	2. STLC	0.06	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-116-1.5	1. TTLC	3	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-117-0	1. TTLC	24	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-117-0.3	1. TTLC	2	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-117-0.6	1. TTLC	2	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-117-0.9	1. TTLC	85	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-117-0.9	2. STLC	0.07	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-117-1.5	1. TTLC	4	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-118-0	1. TTLC	270	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-118-0	5. PH	6.5	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-118-0	2. STLC	22	mg/L	0.8	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-118-0	3. STLC-DI	0.1	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-118-0	4. TCLP	0.31	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-118-0.3	1. TTLC	15	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-118-0.6	1. TTLC	57	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-118-0.6	2. STLC	0.1	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-118-0.9	1. TTLC	5.9	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-118-1.5	1. TTLC	12	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-119-0	1. TTLC	11	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-119-0.3	1. TTLC	4	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-119-0.6	1. TTLC	2	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-119-0.9	1. TTLC	7.7	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-119-1.5	1. TTLC	3	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-120-0	1. TTLC	1800	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-120-0	4. TCLP	0.57	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-120-0.3	1. TTLC	98	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-120-0.3	2. STLC	6.7	mg/L	0.2	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-120-0.3	3. STLC-DI	0	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-120-0.6	1. TTLC	25	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-120-0.9	1. TTLC	13	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-120-0.9	5. PH	7.8	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-120-1.5	1. TTLC	38	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-121-0	1. TTLC	230	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-121-0	2. STLC	13	mg/L	0.4	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-121-0	3. STLC-DI	0.09	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/18/02	0.3 m	571-121-0.3	1. TTLC	12	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-121-0.6	1. TTLC	13	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-121-0.9	1. TTLC	6.2	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-121-1.5	1. TTLC	8.1	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-122-0	1. TTLC	320	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-122-0	2. STLC	21	mg/L	0.8	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-122-0	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-122-0	4. TCLP	0.68	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-122-0.3	1. TTLC	9.5	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-122-0.6	1. TTLC	6.9	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-122-0.9	1. TTLC	9.5	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-122-1.5	1. TTLC	12	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-123-0	1. TTLC	190	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-123-0	2. STLC	10	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-123-0	3. STLC-DI	0.07	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-123-0.3	1. TTLC	13	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-124-0	1. TTLC	130	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-124-0	2. STLC	9.2	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-124-0	3. STLC-DI	0	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-124-0.3	1. TTLC	34	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-124-0.6	1. TTLC	5.9	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-124-0.6	5. PH	9	pH Units	0.1	7/21/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-124-0.9	1. TTLC	24	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.0 m	571-201-0.0	1. TTLC	15	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.0 m	571-201-0.0	5. PH	8	pH Units	0.1	7/21/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-201-0.3	1. TTLC	76	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-201-0.3	2. STLC	5	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-201-0.6	1. TTLC	1100	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-201-0.6	4. TCLP	0.41	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-201-0.9	1. TTLC	22	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.0 m	571-202-0.0	1. TTLC	13	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-202-0.3	1. TTLC	13	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-202-0.6	1. TTLC	22	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-202-0.9	1. TTLC	270	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-202-0.9	2. STLC	11	mg/L	0.4	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-202-0.9	3. STLC-DI	0.05	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-202-0.9	4. TCLP	0.35	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	1.5 m	571-202-1.5	1. TTLC	8.2	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-203-0	1. TTLC	500	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-203-0	2. STLC	16	mg/L	0.4	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-203-0	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-203-0	4. TCLP	0.7	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-203-0.3	1. TTLC	250	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-203-0.3	2. STLC	10	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-203-0.3	3. STLC-DI	0.06	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/18/02	0.6 m	571-203-0.6	1. TTLC	55	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-203-0.6	2. STLC	4.4	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-204-0	1. TTLC	41	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-204-0.3	1. TTLC	21	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-205-0	1. TTLC	110	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-205-0	2. STLC	3.7	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-205-0.3	1. TTLC	43	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-205-0.6	1. TTLC	63	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-205-0.6	5. PH	6.1	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-205-0.6	2. STLC	2.7	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-206-0	1. TTLC	84	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-206-0	2. STLC	8.2	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-206-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-206-0.3	1. TTLC	93	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-206-0.3	2. STLC	5.1	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-206-0.3	3. STLC-DI	0.1	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-206-0.6	1. TTLC	43	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0 m	571-207-0	1. TTLC	73	mg/Kg	5	7/19/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0 m	571-207-0	5. PH	7.4	pH Units	0.1	7/21/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0 m	571-207-0	2. STLC	3.6	mg/L	0.2	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.3 m	571-207-0.3	1. TTLC	31	mg/Kg	5	7/19/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.6 m	571-207-0.6	1. TTLC	45	mg/Kg	5	7/19/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.9 m	571-207-0.9	1. TTLC	44	mg/Kg	5	7/19/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	1.5 m	571-207-1.5	1. TTLC	240	mg/Kg	5	7/19/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	1.5 m	571-207-1.5	2. STLC	16	mg/L	0.4	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	1.5 m	571-207-1.5	3. STLC-DI	0.1	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	1.5 m	571-207-1.5	4. TCLP	0.32	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0 m	571-208-0	3. STLC-DI	0.1	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.0 m	571-208-0.0	1. TTLC	220	mg/Kg	5	7/19/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.0 m	571-208-0.0	2. STLC	9.3	mg/L	0.2	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.3 m	571-208-0.3	1. TTLC	55	mg/Kg	5	7/19/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.3 m	571-208-0.3	2. STLC	2.6	mg/L	0.2	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.6 m	571-208-0.6	1. TTLC	37	mg/Kg	5	7/19/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.0 m	571-209-0.0	1. TTLC	49	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-209-0.3	1. TTLC	4	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-209-0.3	5. PH	7.8	pH Units	0.1	7/21/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-209-0.6	1. TTLC	10	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.0 m	571-210-0.0	1. TTLC	63	mg/Kg	5	7/19/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.0 m	571-210-0.0	2. STLC	2.7	mg/L	0.2	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.3 m	571-210-0.3	1. TTLC	34	mg/Kg	5	7/19/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.6 m	571-210-0.6	1. TTLC	6.6	mg/Kg	5	7/19/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.9 m	571-210-0.9	1. TTLC	5.3	mg/Kg	5	7/19/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.9 m	571-210-0.9	5. PH	7.2	pH Units	0.1	7/21/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/16/02	1.5 m	571-210-1.5	1. TTLC	4	mg/Kg	5	7/19/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0 m	571-211-0	1. TTLC	110	mg/Kg	5	7/19/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/16/02	0 m	571-211-0	2. STLC	3.1	mg/L	0.2	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.3 m	571-211-0.3	1. TTLC	25	mg/Kg	5	7/19/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.6 m	571-211-0.6	1. TTLC	21	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0 m	571-212-0	1. TTLC	200	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0 m	571-212-0	2. STLC	18	mg/L	0.4	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0 m	571-212-0	3. STLC-DI	0.1	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0 m	571-212-0	4. TCLP	0.1	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.3 m	571-212-0.3	1. TTLC	49	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.6 m	571-212-0.6	1. TTLC	32	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.9 m	571-212-0.9	1. TTLC	15	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0 m	571-213-0	1. TTLC	360	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0 m	571-213-0	2. STLC	41	mg/L	0.8	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0 m	571-213-0	3. STLC-DI	0.2	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0 m	571-213-0	4. TCLP	0.66	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.3 m	571-213-0.3	1. TTLC	20	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.6 m	571-213-0.6	1. TTLC	14	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.6 m	571-213-0.6	5. PH	8.5	pH Units	0.1	7/21/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/16/02	0.9 m	571-213-0.9	1. TTLC	11	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-214-0	1. TTLC	640	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-214-0	5. PH	5.9	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-214-0	2. STLC	55	mg/L	1.6	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-214-0	3. STLC-DI	0.2	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-214-0	4. TCLP	0.96	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-214-0.3	1. TTLC	1000	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-214-0.3	4. TCLP	0.95	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-214-0.6	1. TTLC	87	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-214-0.6	2. STLC	3.8	mg/L	0.2	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-215-0	1. TTLC	170	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-215-0	2. STLC	11	mg/L	0.4	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-215-0	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-215-0.3	1. TTLC	23	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-215-0.6	1. TTLC	13	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-215-0.9	1. TTLC	86	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-215-0.9	2. STLC	2.3	mg/L	0.2	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-216-0	1. TTLC	360	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-216-0	2. STLC	34	mg/L	0.8	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-216-0	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-216-0	4. TCLP	1.3	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-216-0.3	1. TTLC	28	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-216-0.6	1. TTLC	76	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-216-0.6	2. STLC	2.5	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-217-0	1. TTLC	990	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-217-0	5. PH	6.7	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-217-0	2. STLC	68	mg/L	1.6	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-217-0	3. STLC-DI	0.1	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/17/02	0 m	571-217-0	4. TCLP	1.6	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-217-0.3	1. TTLC	83	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-217-0.3	2. STLC	4.1	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-217-0.6	1. TTLC	91	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-217-0.6	2. STLC	4.9	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-218-0	1. TTLC	110	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-218-0	2. STLC	4.3	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-218-0.3	1. TTLC	8.5	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-218-0.6	1. TTLC	25	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-219-0	1. TTLC	31	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-219-0.3	1. TTLC	51	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-219-0.3	2. STLC	1.7	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-219-0.6	1. TTLC	21	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-219-0.9	1. TTLC	10	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	1.5 m	571-219-1.5	1. TTLC	30	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-220-0	1. TTLC	66	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-220-0	5. PH	7.9	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-220-0	2. STLC	2.8	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-220-0.3	1. TTLC	21	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-220-0.6	1. TTLC	20	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-220-0.9	1. TTLC	27	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	1.5 m	571-220-1.5	1. TTLC	25	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-301-0	1. TTLC	150	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-301-0	2. STLC	14	mg/L	0.4	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-301-0	3. STLC-DI	0.06	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-301-0.3	1. TTLC	40	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-301-0.6	1. TTLC	69	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-301-0.6	2. STLC	4.1	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-301-0.9	1. TTLC	15	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	1.5 m	571-301-1.5	1. TTLC	49	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-302-0	1. TTLC	310	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-302-0	2. STLC	12	mg/L	0.4	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-302-0	3. STLC-DI	0.09	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-302-0.3	1. TTLC	56	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-302-0.3	2. STLC	1.6	mg/L	0.2	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-302-0.6	1. TTLC	67	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-302-0.6	2. STLC	2.6	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-304-0	1. TTLC	9.6	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-304-0.3	1. TTLC	36	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-304-0.3	5. PH	7.6	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-304-0.6	1. TTLC	18	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-304-0.9	1. TTLC	7.9	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-305-0	1. TTLC	320	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-305-0	5. PH	6.2	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-305-0	2. STLC	40	mg/L	2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/18/02	0 m	571-305-0	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-305-0	4. TCLP	1.2	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-305-0.3	1. TTLC	6.4	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-305-0.6	1. TTLC	28	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-305-0.9	1. TTLC	670	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-305-0.9	2. STLC	39	mg/L	2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-305-0.9	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-305-0.9	4. TCLP	1.2	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-305-1.5	1. TTLC	6.6	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-306-0	1. TTLC	30	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-306-0.3	1. TTLC	3	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-306-0.6	1. TTLC	6.7	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-306-0.9	1. TTLC	140	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-306-0.9	2. STLC	0.46	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-306-1.5	1. TTLC	6.7	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-307-0	1. TTLC	15	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-307-0.3	1. TTLC	6.4	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-307-0.3	5. PH	7.6	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-307-0.6	1. TTLC	4	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-307-0.9	1. TTLC	5.7	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-307-1.5	1. TTLC	54	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-307-1.5	2. STLC	2.6	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-308-0	1. TTLC	35	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-308-0.3	1. TTLC	5.4	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-308-0.6	1. TTLC	4	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-308-0.9	1. TTLC	580	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-308-0.9	2. STLC	61	mg/L	2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-308-0.9	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-308-0.9	4. TCLP	1.3	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-308-1.5	1. TTLC	17	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-309-0	1. TTLC	6.6	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-309-0.3	1. TTLC	4	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-309-0.6	1. TTLC	2	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-309-0.6	5. PH	7.6	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-309-0.9	1. TTLC	36	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-309-1.5	1. TTLC	8.8	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-310-0	1. TTLC	59	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-310-0	2. STLC	1.6	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-310-0.3	1. TTLC	6.7	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-310-0.6	1. TTLC	7.5	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-310-0.9	1. TTLC	1200	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-310-0.9	4. TCLP	10	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-310-1.5	1. TTLC	110	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-310-1.5	2. STLC	7.4	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-310-1.5	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/18/02	0 m	571-311-0	1. TTLC	140	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-311-0	2. STLC	11	mg/L	0.4	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-311-0	3. STLC-DI	0.09	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-311-0.3	1. TTLC	36	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-311-0.6	1. TTLC	250	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-311-0.6	2. STLC	17	mg/L	0.4	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-311-0.6	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-311-0.6	4. TCLP	0.36	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-312-0	1. TTLC	760	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-312-0	5. PH	7.4	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-312-0	2. STLC	51	mg/L	2	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-312-0	3. STLC-DI	0.1	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-312-0	4. TCLP	1.1	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-312-0.3	1. TTLC	83	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-312-0.3	2. STLC	1.7	mg/L	0.2	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-312-0.6	1. TTLC	100	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-312-0.6	2. STLC	9.7	mg/L	0.2	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-312-0.6	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-313-0	1. TTLC	610	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-313-0	5. PH	8.1	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-313-0	2. STLC	79	mg/L	3.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-313-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-313-0	4. TCLP	1.1	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-313-0.3	1. TTLC	45	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-313-0.6	1. TTLC	75	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-313-0.6	2. STLC	3.5	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-313-0.9	1. TTLC	69	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-313-0.9	2. STLC	4.7	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-313-1.5	1. TTLC	83	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-313-1.5	2. STLC	5.2	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-313-1.5	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-314-0	1. TTLC	79	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-314-0	2. STLC	3.1	mg/L	0.2	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-314-0.3	1. TTLC	40	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-315-0	1. TTLC	380	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-315-0	2. STLC	27	mg/L	0.8	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-315-0	3. STLC-DI	0.1	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-315-0	4. TCLP	0.42	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-315-0.3	1. TTLC	9.3	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-315-0.6	1. TTLC	16	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-315-0.9	1. TTLC	6.6	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-315-1.5	1. TTLC	18	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-316-0	1. TTLC	120	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-316-0	5. PH	7.5	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-316-0	2. STLC	7.2	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/19/02	0 m	571-316-0	3. STLC-DI	0.2 mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-316-0.3	1. TTLC	99 mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-316-0.3	2. STLC	5.2 mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-316-0.3	3. STLC-DI	0 mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-316-0.6	1. TTLC	57 mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-316-0.6	2. STLC	3.2 mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-316-0.9	1. TTLC	39 mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-317-0	1. TTLC	1200 mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-317-0	4. TCLP	6.5 mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-317-0.3	1. TTLC	220 mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-317-0.3	2. STLC	16 mg/L	0.4	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-317-0.3	3. STLC-DI	0 mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-317-0.3	4. TCLP	0.49 mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-317-0.6	1. TTLC	120 mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-317-0.6	2. STLC	6.5 mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-317-0.6	3. STLC-DI	0.71 mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-317-0.9	1. TTLC	18 mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-319-0	1. TTLC	16 mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-319-0	5. PH	5 pH Units	0.1	7/26/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-319-0.3	1. TTLC	110 mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-319-0.3	2. STLC	9.2 mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-319-0.3	3. STLC-DI	0.4 mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-320-0	1. TTLC	1100 mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-320-0	4. TCLP	3.1 mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-321-0	1. TTLC	6.5 mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-321-0.3	1. TTLC	100 mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-321-0.3	2. STLC	1.8 mg/L	0.2	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-321-0.6	1. TTLC	90 mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-321-0.6	5. PH	7.8 pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-321-0.6	2. STLC	3.8 mg/L	0.2	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-321-0.9	1. TTLC	8.1 mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-321-1.5	1. TTLC	3 mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-322-0	1. TTLC	18 mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-322-0.3	1. TTLC	60 mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-322-0.3	2. STLC	3.9 mg/L	0.2	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-322-0.6	1. TTLC	180 mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-322-0.6	2. STLC	10 mg/L	0.4	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-322-0.6	3. STLC-DI	0 mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-322-0.9	1. TTLC	5 mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-323-0	1. TTLC	88 mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-323-0	5. PH	8.1 pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-323-0	2. STLC	2.7 mg/L	0.2	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-323-0.3	1. TTLC	14 mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-323-0.6	1. TTLC	280 mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-323-0.6	2. STLC	1.9 mg/L	0.2	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/18/02	0.9 m	571-323-0.9	1. TTLC	4	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-323-1.5	1. TTLC	5	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-324-0	1. TTLC	35	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-324-0.3	1. TTLC	5	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-324-0.6	1. TTLC	6.5	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-324-0.9	1. TTLC	820	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-324-0.9	2. STLC	110	mg/L	3.2	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-324-0.9	3. STLC-DI	0.05	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-324-0.9	4. TCLP	0.23	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-324-1.5	1. TTLC	11	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-325-0	1. TTLC	27	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-325-0.3	1. TTLC	5	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-325-0.6	1. TTLC	1700	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-325-0.6	4. TCLP	3	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-325-0.9	1. TTLC	5.8	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-326-0	1. TTLC	440	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-326-0	2. STLC	31	mg/L	0.8	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-326-0	3. STLC-DI	0	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-326-0	4. TCLP	2.4	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-326-0.3	1. TTLC	14	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-326-0.6	1. TTLC	170	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-326-0.6	2. STLC	24	mg/L	0.8	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-326-0.6	3. STLC-DI	0	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-326-0.6	4. TCLP	2.3	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-326-0.9	1. TTLC	19	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-326-1.5	1. TTLC	18	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-327-0	1. TTLC	54	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-327-0	2. STLC	2.2	mg/L	0.2	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-327-0.3	1. TTLC	21	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-327-0.6	1. TTLC	310	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-327-0.6	2. STLC	23	mg/L	0.8	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-327-0.6	3. STLC-DI	0.05	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-327-0.6	4. TCLP	0.84	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-327-0.9	1. TTLC	62	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-327-0.9	2. STLC	4.6	mg/L	0.2	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-328-0	1. TTLC	120	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-328-0	2. STLC	2.5	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-328-0.3	1. TTLC	9.6	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-328-0.6	1. TTLC	64	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-328-0.6	2. STLC	0.43	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-328-0.9	1. TTLC	3	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-328-1.5	1. TTLC	8.2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-329-0	1. TTLC	8.7	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-329-0	5. PH	8.5	pH Units	0.1	7/26/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-329-0.3	1. TTLC	6.7	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/22/02	0.6 m	571-329-0.6	1. TTLC	63	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-329-0.6	2. STLC	2.9	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-329-0.9	1. TTLC	4	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-329-1.5	1. TTLC	3	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-330-0	1. TTLC	780	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-330-0	2. STLC	31	mg/L	0.8	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-330-0	3. STLC-DI	0.07	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-330-0	4. TCLP	1.1	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-330-0.3	1. TTLC	22	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-330-0.3	5. PH	7.5	pH Units	0.1	7/21/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-330-0.6	1. TTLC	140	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-330-0.6	2. STLC	6	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-330-0.6	3. STLC-DI	0	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-330-0.9	1. TTLC	22	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-401-0	1. TTLC	23	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-401-0	5. PH	7.6	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-401-0.3	1. TTLC	16	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-402-0	1. TTLC	100	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-402-0	2. STLC	7.6	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-402-0	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-402-0.3	1. TTLC	34	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-402-0.6	1. TTLC	15	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-403-0	1. TTLC	100	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-403-0	2. STLC	4.8	mg/L	0.2	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-403-0.3	1. TTLC	99	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-403-0.3	2. STLC	4	mg/L	0.2	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-403-0.6	1. TTLC	220	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-403-0.6	2. STLC	5.3	mg/L	0.2	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-403-0.6	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-404-0	1. TTLC	110	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-404-0	2. STLC	11	mg/L	0.4	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-404-0	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-404-0.3	1. TTLC	210	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-404-0.3	2. STLC	8.3	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-404-0.3	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-405-0	1. TTLC	1800	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-405-0	4. TCLP	0.1	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-405-0.3	1. TTLC	9.5	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-405-0.6	1. TTLC	230	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-405-0.6	2. STLC	55	mg/L	1.6	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-405-0.6	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-405-0.6	4. TCLP	1.1	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-405-0.9	1. TTLC	18	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-405-1.5	1. TTLC	32	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-405-1.5	5. PH	6.8	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill

7/18/02	0 m	571-406-0	1. TTLC	1500	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-406-0	4. TCLP	0.68	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-406-0.3	1. TTLC	2	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-406-0.6	1. TTLC	440	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-406-0.6	2. STLC	20	mg/L	0.8	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-406-0.6	3. STLC-DI	0.2	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-406-0.6	4. TCLP	0.58	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-406-0.9	1. TTLC	4	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-406-1.5	1. TTLC	42	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-407-0	1. TTLC	3600	mg/Kg	15	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-407-0	4. TCLP	1.3	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-407-0.3	1. TTLC	420	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-407-0.3	2. STLC	13	mg/L	0.4	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-407-0.3	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-407-0.6	1. TTLC	450	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-407-0.6	2. STLC	13	mg/L	0.4	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-407-0.6	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-407-0.9	1. TTLC	240	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-407-0.9	2. STLC	13	mg/L	0.4	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-407-0.9	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-407-1.5	1. TTLC	6	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-407-1.5	5. PH	7.7	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-408-0	1. TTLC	180	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-408-0	2. STLC	2.1	mg/L	0.2	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-408-0.3	1. TTLC	4	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-408-0.6	1. TTLC	190	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-408-0.6	2. STLC	6.2	mg/L	0.2	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-408-0.6	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-408-0.9	1. TTLC	4	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-408-1.5	1. TTLC	4	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-409-0	1. TTLC	9.5	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-409-0.3	1. TTLC	6	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-409-0.6	1. TTLC	16	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-409-0.9	1. TTLC	6.5	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-409-1.5	1. TTLC	20	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-409-1.5	5. PH	6.2	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-410-0	1. TTLC	140	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-410-0	5. PH	6.5	pH Units	0.1	7/21/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-410-0	2. STLC	8.2	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-410-0	3. STLC-DI	0.1	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-410-0.3	1. TTLC	9.8	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-410-0.6	1. TTLC	7.1	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-410-0.9	1. TTLC	7.1	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-411-0	1. TTLC	340	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-411-0	2. STLC	5	mg/L	0.2	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/18/02	0.3 m	571-411-0.3	1. TTLC	14	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-411-0.6	1. TTLC	300	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-411-0.6	2. STLC	7.9	mg/L	0.2	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-411-0.6	3. STLC-DI	0	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-411-0.9	1. TTLC	4	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-411-1.5	1. TTLC	7	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-412-0	1. TTLC	79	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-412-0	2. STLC	4.7	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-412-0.3	1. TTLC	100	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-412-0.3	2. STLC	6.8	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-412-0.3	3. STLC-DI	0.06	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-412-0.6	1. TTLC	48	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-412-0.9	1. TTLC	45	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	1.5 m	571-412-1.5	1. TTLC	8.1	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-413-0	1. TTLC	660	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-413-0	2. STLC	46	mg/L	1.6	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-413-0	3. STLC-DI	0.09	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-413-0	4. TCLP	0.59	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-413-0.3	1. TTLC	110	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-413-0.3	5. PH	7.4	pH Units	0.1	7/21/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-413-0.3	2. STLC	12	mg/L	0.4	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-413-0.3	3. STLC-DI	0.07	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-413-0.6	1. TTLC	8.2	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-413-0.9	1. TTLC	15	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-414-0	1. TTLC	1700	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-414-0	4. TCLP	1.8	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-414-0.3	1. TTLC	570	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-414-0.3	2. STLC	33	mg/L	1.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-414-0.3	3. STLC-DI	0	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-414-0.3	4. TCLP	0.79	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-414-0.6	1. TTLC	15	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-415-0	1. TTLC	790	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-415-0	2. STLC	58	mg/L	1.6	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-415-0	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-415-0	4. TCLP	2.4	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-415-0.3	1. TTLC	880	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-415-0.3	5. PH	7.6	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-415-0.3	2. STLC	55	mg/L	1.6	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-415-0.3	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-415-0.3	4. TCLP	2.6	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-415-0.6	1. TTLC	210	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-415-0.6	2. STLC	13	mg/L	0.4	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-415-0.6	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-416-0	1. TTLC	110	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-416-0	2. STLC	15	mg/L	0.4	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/17/02	0 m	571-416-0	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-416-0	4. TCLP	2.6	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-416-0.3	1. TTLC	67	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-416-0.3	2. STLC	5.2	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-416-0.3	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-416-0.6	1. TTLC	6.5	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-416-0.9	1. TTLC	5.5	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-417-0	1. TTLC	46	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-417-0.3	1. TTLC	48	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-418-0	1. TTLC	240	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-418-0	2. STLC	9.8	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-418-0	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-419-0	1. TTLC	280	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-419-0	2. STLC	15	mg/L	0.4	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-419-0	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-419-0	4. TCLP	0.36	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-419-0.3	1. TTLC	49	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-419-0.6	1. TTLC	21	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-419-0.6	5. PH	8.2	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-419-0.9	1. TTLC	8.4	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	1.5 m	571-419-1.5	1. TTLC	8.1	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-420-0	1. TTLC	380	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-420-0	2. STLC	26	mg/L	0.8	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-420-0	3. STLC-DI	0.24	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-420-0	4. TCLP	0.65	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-420-0.3	1. TTLC	240	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-420-0.3	2. STLC	8.9	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-420-0.3	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-420-0.6	1. TTLC	360	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-420-0.6	2. STLC	12	mg/L	0.4	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-420-0.6	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-421-0	1. TTLC	130	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-421-0	2. STLC	6.3	mg/L	0.2	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-421-0	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-422-0	1. TTLC	17	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-422-0.3	1. TTLC	12	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-422-0.6	1. TTLC	82	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-422-0.6	2. STLC	3.4	mg/L	0.2	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-422-0.9	1. TTLC	4	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-422-1.5	1. TTLC	230	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-422-1.5	5. PH	7.8	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-422-1.5	2. STLC	0.07	mg/L	0.2	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-423-0	1. TTLC	130	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-423-0	2. STLC	2.2	mg/L	0.2	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-423-0.3	1. TTLC	6.5	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/18/02	0.6 m	571-423-0.6	1. TTLC	17	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-423-0.9	1. TTLC	29	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-423-1.5	1. TTLC	4	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-424-0	1. TTLC	18	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-424-0.3	1. TTLC	25	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-424-0.6	1. TTLC	6.2	mg/Kg	5	7/23/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-425-0	1. TTLC	53	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-425-0	2. STLC	2.8	mg/L	0.2	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-425-0.3	1. TTLC	4	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-425-0.6	1. TTLC	610	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-425-0.6	2. STLC	22	mg/L	0.8	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-425-0.6	3. STLC-DI	0	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-425-0.6	4. TCLP	5.3	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-425-0.9	1. TTLC	2	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-425-1.5	1. TTLC	26	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-425-1.5	5. PH	7.3	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-501-0	1. TTLC	300	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-501-0	2. STLC	20	mg/L	0.8	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-501-0	3. STLC-DI	0.07	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-501-0	4. TCLP	0.83	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-501-0.3	1. TTLC	26	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-501-0.6	1. TTLC	19	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-501-0.9	1. TTLC	50	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-501-0.9	2. STLC	4.1	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-502-0	1. TTLC	110	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-502-0	2. STLC	3.1	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-502-0.3	1. TTLC	9.1	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-502-0.6	1. TTLC	230	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-502-0.6	2. STLC	31	mg/L	0.8	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-502-0.6	3. STLC-DI	0.25	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-502-0.6	4. TCLP	1.7	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-502-0.9	1. TTLC	5.5	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-502-1.5	1. TTLC	7.8	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-503-0	1. TTLC	50	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-503-0	2. STLC	1.9	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-503-0.3	1. TTLC	19	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-503-0.6	1. TTLC	28	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-504-0	1. TTLC	38	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-504-0	5. PH	6.6	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-504-0.3	1. TTLC	4	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-504-0.6	1. TTLC	6.5	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-504-0.9	1. TTLC	3	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-504-1.5	1. TTLC	3	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-505-0	1. TTLC	4	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-505-0.3	1. TTLC	56	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/22/02	0.3 m	571-505-0.3	2. STLC	0.07	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-505-0.6	1. TTLC	140	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-505-0.6	2. STLC	0.33	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-505-0.9	1. TTLC	4	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-505-1.5	1. TTLC	280	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-505-1.5	2. STLC	44	mg/L	2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-505-1.5	3. STLC-DI	0.23	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-505-1.5	4. TCLP	1.1	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-506-0	1. TTLC	160	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-506-0	2. STLC	11	mg/L	0.4	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-506-0	3. STLC-DI	0.08	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-506-0.3	1. TTLC	16	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-506-0.6	1. TTLC	17	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-506-0.9	1. TTLC	17	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-507-0	1. TTLC	1500	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-507-0	4. TCLP	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-507-0.3	1. TTLC	5.9	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-507-0.6	1. TTLC	8.7	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-507-0.9	1. TTLC	6.8	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-507-1.5	1. TTLC	10	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-507-1.5	5. PH	8.4	pH Units	0.1	7/26/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-508-0	1. TTLC	830	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-508-0	2. STLC	73	mg/L	2	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-508-0	3. STLC-DI	0.23	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-508-0	4. TCLP	0.7	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-508-0.3	1. TTLC	11	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-508-0.6	1. TTLC	5.8	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-508-0.9	1. TTLC	15	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-508-1.5	1. TTLC	5.1	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-509-0	1. TTLC	52	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-509-0	2. STLC	1.4	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-509-0.3	1. TTLC	5	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-509-0.3	5. PH	6.8	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-509-0.6	1. TTLC	4	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-509-0.9	1. TTLC	3	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-510-0	1. TTLC	650	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-510-0	2. STLC	39	mg/L	2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-510-0	3. STLC-DI	0.1	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-510-0	4. TCLP	1.4	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-510-0.3	1. TTLC	260	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-510-0.3	2. STLC	19	mg/L	0.4	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-510-0.3	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-510-0.3	4. TCLP	0.79	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-510-0.6	1. TTLC	92	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-510-0.6	2. STLC	2.2	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/18/02	0 m	571-511-0	1. TTLC	1100	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-511-0	4. TCLP	3.7	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-511-0.3	1. TTLC	24	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-511-0.6	1. TTLC	7.9	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-511-0.9	1. TTLC	6.4	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-511-1.5	1. TTLC	48	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-511-1.5	5. PH	7.7	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-512-0	1. TTLC	830	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-512-0	2. STLC	64	mg/L	2	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-512-0	3. STLC-DI	0.05	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-512-0	4. TCLP	1.5	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-512-0.3	1. TTLC	360	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-512-0.3	2. STLC	30	mg/L	0.8	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-512-0.3	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-512-0.3	4. TCLP	1	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-512-0.6	1. TTLC	58	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-512-0.6	2. STLC	4.5	mg/L	0.2	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-512-0.9	1. TTLC	120	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-512-0.9	2. STLC	7.5	mg/L	0.2	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-512-0.9	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-512-1.5	1. TTLC	29	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-513-0	1. TTLC	19	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-513-0	5. PH	8.2	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-513-0.3	1. TTLC	57	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-513-0.3	2. STLC	5.4	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-513-0.3	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-513-0.6	1. TTLC	210	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-513-0.6	2. STLC	25	mg/L	0.8	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-513-0.6	3. STLC-DI	0.06	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-513-0.6	4. TCLP	1.1	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-513-0.9	1. TTLC	150	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-513-0.9	2. STLC	7.8	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-513-0.9	3. STLC-DI	0.05	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-513-1.5	1. TTLC	6.6	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-514-0	1. TTLC	1500	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-514-0	4. TCLP	6.5	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-514-0.3	1. TTLC	740	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-514-0.3	2. STLC	59	mg/L	2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-514-0.3	3. STLC-DI	0.08	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-514-0.3	4. TCLP	3.5	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-514-0.6	1. TTLC	370	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-514-0.6	2. STLC	33	mg/L	0.8	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-514-0.6	3. STLC-DI	0.07	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-514-0.6	4. TCLP	2.8	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-514-0.9	1. TTLC	490	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/18/02	0.9 m	571-514-0.9	2. STLC	44	mg/L	2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-514-0.9	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-514-0.9	4. TCLP	2.4	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-515-0	1. TTLC	860	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-515-0	2. STLC	50	mg/L	1.6	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-515-0	3. STLC-DI	0.08	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-515-0	4. TCLP	5.4	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-515-0.3	1. TTLC	21	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-515-0.6	1. TTLC	29	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-515-0.9	1. TTLC	12	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-515-0.9	5. PH	8.6	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-516-0	1. TTLC	980	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-516-0	2. STLC	66	mg/L	1.6	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-516-0	3. STLC-DI	0.08	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-516-0	4. TCLP	8.7	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-516-0.3	1. TTLC	210	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-516-0.3	2. STLC	26	mg/L	0.8	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-516-0.3	3. STLC-DI	0.1	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-516-0.3	4. TCLP	3.6	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-516-0.6	1. TTLC	7.8	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-516-0.9	1. TTLC	130	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-516-0.9	2. STLC	11	mg/L	0.4	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-516-0.9	3. STLC-DI	0.06	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-517-0	1. TTLC	540	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-517-0	2. STLC	56	mg/L	2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-517-0	3. STLC-DI	0.22	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-517-0	4. TCLP	5.6	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-517-0.3	1. TTLC	500	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-517-0.3	2. STLC	46	mg/L	2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-517-0.3	3. STLC-DI	0.07	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-517-0.3	4. TCLP	3.7	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-517-0.6	1. TTLC	300	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-517-0.6	2. STLC	20	mg/L	0.4	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-517-0.6	3. STLC-DI	0.08	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-517-0.6	4. TCLP	0.7	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-517-0.9	1. TTLC	250	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-517-0.9	2. STLC	5.1	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-517-0.9	3. STLC-DI	0.07	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-517-1.5	1. TTLC	350	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-517-1.5	2. STLC	25	mg/L	0.8	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-517-1.5	3. STLC-DI	0.07	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-517-1.5	4. TCLP	0.33	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-518-0	1. TTLC	5.4	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-518-0.3	1. TTLC	880	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-518-0.3	2. STLC	73	mg/L	2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/18/02	0.3 m	571-518-0.3	3. STLC-DI	0.51	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-518-0.3	4. TCLP	2.6	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-518-0.6	1. TTLC	110	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-518-0.6	2. STLC	6.3	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-518-0.6	3. STLC-DI	0.06	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-518-0.9	1. TTLC	300	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-518-0.9	5. PH	8.2	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-518-0.9	2. STLC	19	mg/L	0.4	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-518-0.9	3. STLC-DI	0.1	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-518-0.9	4. TCLP	0.55	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-519-0	1. TTLC	94	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-519-0	2. STLC	3.2	mg/L	0.2	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-519-0.3	1. TTLC	140	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-519-0.3	2. STLC	10	mg/L	0.4	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-519-0.3	3. STLC-DI	0.06	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-519-0.6	1. TTLC	220	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-519-0.6	5. PH	7.8	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-519-0.6	2. STLC	12	mg/L	0.4	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-519-0.6	3. STLC-DI	0.05	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-520-0	1. TTLC	510	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-520-0	2. STLC	26	mg/L	0.8	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-520-0	3. STLC-DI	0.1	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-520-0	4. TCLP	2	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-520-0.3	1. TTLC	490	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-520-0.3	2. STLC	36	mg/L	0.8	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-520-0.3	3. STLC-DI	0.08	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-520-0.3	4. TCLP	1.5	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-521-0	1. TTLC	2000	mg/Kg	5	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-521-0	5. PH	8.2	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-521-0	2. STLC	230	mg/L	8	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-521-0	3. STLC-DI	0.06	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-521-0	4. TCLP	1.1	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-521-0.3	1. TTLC	42	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-521-0.6	1. TTLC	420	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-521-0.6	2. STLC	29	mg/L	0.8	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-521-0.6	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-521-0.6	4. TCLP	1.4	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-522-0	1. TTLC	40	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-522-0.3	1. TTLC	5	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-522-0.6	1. TTLC	330	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-522-0.6	2. STLC	19	mg/L	0.4	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-522-0.6	3. STLC-DI	0.09	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-522-0.6	4. TCLP	0.49	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-522-0.9	1. TTLC	4	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-522-1.5	1. TTLC	3	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/18/02	0 m	571-523-0	1. TTLC	190	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-523-0	2. STLC	31	mg/L	0.8	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-523-0	3. STLC-DI	0	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-523-0	4. TCLP	2	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-523-0.3	1. TTLC	700	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-523-0.3	2. STLC	39	mg/L	1.2	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-523-0.3	3. STLC-DI	0	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-523-0.3	4. TCLP	0.59	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-524-0	1. TTLC	1900	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-524-0	5. PH	7.4	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-524-0	4. TCLP	2.8	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-524-0.3	1. TTLC	37	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-524-0.6	1. TTLC	19	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-524-0.9	1. TTLC	230	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-524-0.9	2. STLC	9.2	mg/L	0.2	7/30/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-524-0.9	3. STLC-DI	0.06	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-524-1.5	1. TTLC	17	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-525-0	1. TTLC	220	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-525-0	2. STLC	9.2	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-525-0	3. STLC-DI	0.1	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-525-0.3	1. TTLC	230	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-525-0.3	2. STLC	10	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-525-0.3	3. STLC-DI	0.08	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-525-0.6	1. TTLC	42	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-525-0.9	1. TTLC	5.9	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-525-1.5	1. TTLC	780	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-525-1.5	2. STLC	0.07	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-526-0	1. TTLC	870	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-526-0	2. STLC	51	mg/L	2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-526-0	3. STLC-DI	0	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-526-0	4. TCLP	0.73	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-526-0.3	1. TTLC	170	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-526-0.3	2. STLC	15	mg/L	0.4	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-526-0.3	3. STLC-DI	0.28	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-526-0.3	4. TCLP	0.31	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-526-0.6	1. TTLC	15	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-526-0.6	5. PH	8.1	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-526-0.9	1. TTLC	18	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-526-1.5	1. TTLC	38	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-527-0	1. TTLC	75	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-527-0	2. STLC	4.2	mg/L	0.2	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-527-0.3	1. TTLC	82	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-527-0.3	2. STLC	5	mg/L	0.2	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-527-0.6	1. TTLC	71	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-527-0.6	2. STLC	2.6	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/18/02	0.9 m	571-527-0.9	1. TTLC	62	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-527-0.9	2. STLC	3	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-528-0	1. TTLC	510	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-528-0	2. STLC	44	mg/L	2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-528-0	3. STLC-DI	0.1	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-528-0	4. TCLP	7.7	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-528-0.3	1. TTLC	86	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-528-0.3	5. PH	9	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-528-0.3	2. STLC	24	mg/L	0.8	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-528-0.3	3. STLC-DI	1.5	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-528-0.3	4. TCLP	0.77	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-528-0.6	1. TTLC	16	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-528-0.9	1. TTLC	64	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-528-0.9	2. STLC	7.2	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-528-0.9	3. STLC-DI	2.4	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-528-1.5	1. TTLC	660	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-528-1.5	2. STLC	33	mg/L	0.8	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-528-1.5	3. STLC-DI	0.06	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-528-1.5	4. TCLP	7.3	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-529-0	1. TTLC	49	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0 m	571-529-0	5. PH	7.2	pH Units	0.1	7/23/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-529-0.3	1. TTLC	62	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.3 m	571-529-0.3	2. STLC	2.5	mg/L	0.2	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-529-0.6	1. TTLC	57	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.6 m	571-529-0.6	2. STLC	2.5	mg/L	0.2	7/31/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	0.9 m	571-529-0.9	1. TTLC	44	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/18/02	1.5 m	571-529-1.5	1. TTLC	28	mg/Kg	5	7/24/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-530-0	1. TTLC	660	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-530-0	2. STLC	55	mg/L	2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-530-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-530-0	4. TCLP	2	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-530-0.3	1. TTLC	370	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-530-0.3	2. STLC	21	mg/L	0.8	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-530-0.3	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-530-0.3	4. TCLP	1.2	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-530-0.6	1. TTLC	470	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-530-0.6	2. STLC	41	mg/L	2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-530-0.6	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-530-0.6	4. TCLP	0.95	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-601-0	1. TTLC	120	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-601-0	5. PH	7.6	pH Units	0.1	7/21/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-601-0	2. STLC	9.3	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-601-0	3. STLC-DI	0	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-601-0.3	1. TTLC	64	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-601-0.3	2. STLC	5.1	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/17/02	0.3 m	571-601-0.3	3. STLC-DI	0	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-602-0	1. TTLC	97	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-602-0	2. STLC	7.4	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-602-0	3. STLC-DI	0.06	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-602-0.3	1. TTLC	10	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-602-0.6	1. TTLC	250	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-602-0.6	2. STLC	0.48	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.9 m	571-602-0.9	1. TTLC	19	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-603-0	1. TTLC	25	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-603-0.3	1. TTLC	47	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-604-0	1. TTLC	820	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-604-0	5. PH	7.7	pH Units	0.1	7/21/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-604-0	2. STLC	42	mg/L	1.6	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-604-0	3. STLC-DI	0.21	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-604-0	4. TCLP	1.8	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-604-0.3	1. TTLC	82	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-604-0.3	2. STLC	5.9	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-604-0.3	3. STLC-DI	0.07	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-604-0.6	1. TTLC	87	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-604-0.6	2. STLC	9.3	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-604-0.6	3. STLC-DI	0	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-605-0	1. TTLC	110	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-605-0	2. STLC	11	mg/L	0.4	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-605-0	3. STLC-DI	0.09	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-605-0.3	1. TTLC	60	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-605-0.3	2. STLC	4.6	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.6 m	571-605-0.6	1. TTLC	21	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-606-0	1. TTLC	180	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-606-0	2. STLC	15	mg/L	0.4	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-606-0	3. STLC-DI	0.06	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0 m	571-606-0	4. TCLP	0.34	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-606-0.3	1. TTLC	78	mg/Kg	5	7/22/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-606-0.3	2. STLC	8.7	mg/L	0.2	7/29/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/17/02	0.3 m	571-606-0.3	3. STLC-DI	0.08	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-607-0	1. TTLC	80	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-607-0	5. PH	7.9	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-607-0	2. STLC	0.91	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-607-0.3	1. TTLC	7.4	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-607-0.6	1. TTLC	290	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-607-0.6	2. STLC	27	mg/L	0.8	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-607-0.6	3. STLC-DI	0.06	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-607-0.6	4. TCLP	0.25	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-607-0.9	1. TTLC	5.9	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-607-1.5	1. TTLC	10	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-608-0	1. TTLC	240	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/19/02	0 m	571-608-0	2. STLC	7.6	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-608-0	3. STLC-DI	0.2	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-608-0.3	1. TTLC	22	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-608-0.6	1. TTLC	130	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-608-0.6	2. STLC	9	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-608-0.6	3. STLC-DI	0.05	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-608-0.9	1. TTLC	7.3	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-608-1.5	1. TTLC	100	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-608-1.5	5. PH	7.4	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-608-1.5	2. STLC	6.3	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-608-1.5	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-609-0	1. TTLC	1800	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-609-0	4. TCLP	5.8	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-609-0.3	1. TTLC	6.2	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-609-0.6	1. TTLC	130	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-609-0.6	2. STLC	27	mg/L	0.8	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-609-0.6	3. STLC-DI	0.1	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-609-0.6	4. TCLP	6.2	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-609-0.9	1. TTLC	13	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-610-0	1. TTLC	580	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-610-0	2. STLC	46	mg/L	2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-610-0	3. STLC-DI	0.27	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-610-0	4. TCLP	12	mg/L	0.4	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-610-0.3	1. TTLC	6.6	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-610-0.6	1. TTLC	140	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-610-0.6	2. STLC	43	mg/L	2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-610-0.6	3. STLC-DI	0.09	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-610-0.6	4. TCLP	2.9	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-610-0.9	1. TTLC	18	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-610-1.5	1. TTLC	610	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-610-1.5	2. STLC	18	mg/L	0.4	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-610-1.5	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-610-1.5	4. TCLP	0.49	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-611-0	1. TTLC	2200	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-611-0	5. PH	8.4	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-611-0	4. TCLP	16	mg/L	0.4	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-611-0.3	1. TTLC	14	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-611-0.6	1. TTLC	840	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-611-0.6	2. STLC	92	mg/L	2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-611-0.6	3. STLC-DI	0.2	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-611-0.6	4. TCLP	17	mg/L	0.4	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-611-0.9	1. TTLC	13	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-611-1.5	1. TTLC	12	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-612-0	1. TTLC	110	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-612-0	2. STLC	9.2	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/19/02	0 m	571-612-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-612-0.3	1. TTLC	4	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-612-0.6	1. TTLC	38	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-612-0.9	1. TTLC	12	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-612-1.5	1. TTLC	13	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-613-0	1. TTLC	90	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-613-0	5. PH	8.5	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-613-0	2. STLC	8.3	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-613-0	3. STLC-DI	0.06	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-613-0.3	1. TTLC	170	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-613-0.3	2. STLC	1	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-613-0.6	1. TTLC	48	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-613-0.9	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-613-1.5	1. TTLC	31	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-614-0	1. TTLC	59	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-614-0	2. STLC	7.9	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-614-0	3. STLC-DI	0.05	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-614-0.3	1. TTLC	5.8	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-614-0.9	1. TTLC	36	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-614-1.5	1. TTLC	89	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-614-1.5	5. PH	8.2	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-614-1.5	2. STLC	2.7	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-615-0	1. TTLC	1	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-615-0.3	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-615-0.6	1. TTLC	49	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-615-0.9	1. TTLC	4	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-616-0	1. TTLC	1500	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-616-0	4. TCLP	11	mg/L	0.4	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-616-0.3	1. TTLC	95	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-616-0.3	2. STLC	16	mg/L	0.4	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-616-0.3	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-616-0.3	4. TCLP	3.9	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-616-0.6	1. TTLC	580	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-616-0.6	2. STLC	57	mg/L	2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-616-0.6	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-616-0.6	4. TCLP	3.6	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-616-0.9	1. TTLC	22	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-616-1.5	1. TTLC	280	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-616-1.5	2. STLC	28	mg/L	0.8	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-616-1.5	3. STLC-DI	0.09	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-616-1.5	4. TCLP	0.22	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-617-0	1. TTLC	1300	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-617-0	4. TCLP	2.4	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-617-0.3	1. TTLC	800	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-617-0.3	2. STLC	100	mg/L	4	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/22/02	0.3 m	571-617-0.3	3. STLC-DI	23	mg/L	0.8	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-617-0.3	4. TCLP	15	mg/L	0.4	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-617-0.6	1. TTLC	100	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-617-0.6	2. STLC	13	mg/L	0.4	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-617-0.6	3. STLC-DI	2.2	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-617-0.9	1. TTLC	81	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-617-0.9	2. STLC	2.3	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-618-0	1. TTLC	31	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-618-0.3	1. TTLC	10	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-618-0.6	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-618-0.9	1. TTLC	1000	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-618-0.9	4. TCLP	15	mg/L	0.4	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-618-1.5	1. TTLC	5	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-619-0	1. TTLC	76	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-619-0	2. STLC	15	mg/L	0.4	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-619-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-619-0	4. TCLP	0.38	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-619-0.3	1. TTLC	200	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-619-0.3	2. STLC	24	mg/L	0.8	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-619-0.3	3. STLC-DI	0.05	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-619-0.3	4. TCLP	3.7	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-619-0.6	1. TTLC	710	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-619-0.6	5. PH	8.3	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-619-0.6	2. STLC	0.2	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-619-0.9	1. TTLC	960	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-619-0.9	2. STLC	24	mg/L	0.8	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-619-0.9	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-619-0.9	4. TCLP	0.34	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-619-1.5	1. TTLC	1100	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-619-1.5	4. TCLP	3.9	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-620-0	1. TTLC	250	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-620-0	2. STLC	17	mg/L	0.4	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-620-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-620-0	4. TCLP	0.22	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-620-0.3	1. TTLC	7.4	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-620-0.6	1. TTLC	6.5	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-620-0.9	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-620-1.5	1. TTLC	1	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-621-0	1. TTLC	130	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-621-0	2. STLC	1.7	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-621-0.3	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-621-0.6	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-621-0.6	5. PH	7.9	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-621-0.9	1. TTLC	110	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-621-0.9	2. STLC	9.6	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/19/02	0.9 m	571-621-0.9	3. STLC-DI	0.1	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-621-1.5	1. TTLC	220	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-621-1.5	2. STLC	5.8	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-621-1.5	3. STLC-DI	0.07	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-622-0	1. TTLC	370	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-622-0	2. STLC	27	mg/L	0.8	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-622-0	3. STLC-DI	0.1	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-622-0	4. TCLP	1.4	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-622-0.3	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-622-0.6	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-622-0.9	1. TTLC	4	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-622-1.5	1. TTLC	260	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-622-1.5	2. STLC	19	mg/L	0.4	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-622-1.5	3. STLC-DI	0.1	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-622-1.5	4. TCLP	0.47	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-623-0	1. TTLC	23	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-623-0.3	1. TTLC	3	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-623-0.6	1. TTLC	190	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-623-0.6	2. STLC	25	mg/L	0.8	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-623-0.6	3. STLC-DI	0.07	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-623-0.6	4. TCLP	2.2	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-623-0.9	1. TTLC	4	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-623-1.5	1. TTLC	29	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-624-0	1. TTLC	160	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-624-0	2. STLC	11	mg/L	0.4	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-624-0	3. STLC-DI	0.1	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-624-0.3	1. TTLC	76	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-624-0.3	5. PH	9.2	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-624-0.3	2. STLC	3.9	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-624-0.6	1. TTLC	4	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-624-0.9	1. TTLC	17	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-624-1.5	1. TTLC	90	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-624-1.5	2. STLC	31	mg/L	0.8	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-624-1.5	3. STLC-DI	0.37	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-624-1.5	4. TCLP	1.2	mg/L	0.2	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-625-0	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-625-0.3	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-625-0.3	5. PH	8.4	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-625-0.6	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-625-0.9	1. TTLC	7	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-625-1.5	1. TTLC	12	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-626-0	1. TTLC	83	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-626-0	5. PH	7.5	pH Units	0.1	7/26/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-626-0	2. STLC	4.5	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-626-0.3	1. TTLC	4	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/22/02	0.6 m	571-626-0.6	1. TTLC	10	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-626-0.9	1. TTLC	13	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-627-0	1. TTLC	14	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-627-0.3	1. TTLC	17	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-627-0.6	1. TTLC	10	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-627-0.9	1. TTLC	14	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-627-1.5	1. TTLC	4	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-628-0	1. TTLC	12	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-628-0.3	1. TTLC	9.8	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-628-0.6	1. TTLC	11	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-629-0	1. TTLC	470	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-629-0	2. STLC	43	mg/L	2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-629-0	3. STLC-DI	0.05	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-629-0	4. TCLP	0.61	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-629-0.3	1. TTLC	220	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-629-0.3	2. STLC	16	mg/L	0.4	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-629-0.3	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-629-0.3	4. TCLP	0.26	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-629-0.6	1. TTLC	110	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-629-0.6	2. STLC	9.4	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-629-0.6	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-629-0.9	1. TTLC	46	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-629-0.9	5. PH	8.8	pH Units	0.1	7/26/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-629-1.5	1. TTLC	61	mg/Kg	5	7/27/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-629-1.5	2. STLC	4.8	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-701-0	1. TTLC	370	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-701-0	2. STLC	61	mg/L	2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-701-0	3. STLC-DI	0.06	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-701-0	4. TCLP	2.3	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-701-0.3	1. TTLC	610	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-701-0.3	2. STLC	66	mg/L	2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-701-0.3	3. STLC-DI	0.07	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-701-0.3	4. TCLP	2.1	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-701-0.6	1. TTLC	190	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-701-0.6	2. STLC	19	mg/L	0.4	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-701-0.6	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-701-0.6	4. TCLP	0.72	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-702-0	1. TTLC	40	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-702-0.3	1. TTLC	20	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-702-0.6	1. TTLC	23	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-702-0.9	1. TTLC	14	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-702-1.5	1. TTLC	5.9	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-702-1.5	5. PH	8.4	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-703-0	1. TTLC	310	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-703-0	2. STLC	38	mg/L	2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/19/02	0 m	571-703-0	3. STLC-DI	5	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-703-0	4. TCLP	4.3	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-703-0.3	1. TTLC	100	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-703-0.3	2. STLC	10	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-703-0.3	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-703-0.6	1. TTLC	50	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-703-0.6	2. STLC	2.6	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-704-0	1. TTLC	200	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-704-0	2. STLC	19	mg/L	0.4	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-704-0	3. STLC-DI	1.3	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-704-0	4. TCLP	0.48	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-704-0.3	1. TTLC	210	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-704-0.3	2. STLC	17	mg/L	0.4	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-704-0.3	3. STLC-DI	1.2	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-704-0.3	4. TCLP	0.58	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-706-0	1. TTLC	370	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-706-0	2. STLC	41	mg/L	2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-706-0	3. STLC-DI	0.1	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-706-0	4. TCLP	1.8	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-706-0.3	1. TTLC	390	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-706-0.3	2. STLC	29	mg/L	0.8	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-706-0.3	3. STLC-DI	0.5	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-706-0.3	4. TCLP	2.8	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-706-0.6	1. TTLC	230	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-706-0.6	2. STLC	24	mg/L	0.8	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-706-0.6	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-706-0.6	4. TCLP	1.1	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-707-0	1. TTLC	98	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-707-0	2. STLC	5.2	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-707-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-707-0.3	1. TTLC	180	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-707-0.3	5. PH	8.1	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-707-0.3	2. STLC	11	mg/L	0.4	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-707-0.3	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-707-0.6	1. TTLC	150	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-707-0.6	2. STLC	11	mg/L	0.4	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-707-0.6	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-707-0.9	1. TTLC	39	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-708-0	1. TTLC	890	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-708-0	2. STLC	110	mg/L	3.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-708-0	3. STLC-DI	0.22	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-708-0	4. TCLP	3.4	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-708-0.3	1. TTLC	470	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-708-0.3	2. STLC	34	mg/L	0.8	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-708-0.3	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/19/02	0.3 m	571-708-0.3	4. TCLP	2.1	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-708-0.6	1. TTLC	25	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-709-0	1. TTLC	650	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-709-0	2. STLC	53	mg/L	1.6	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-709-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-709-0	4. TCLP	2.1	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-709-0.3	1. TTLC	190	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-709-0.3	2. STLC	18	mg/L	0.8	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-709-0.3	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-709-0.3	4. TCLP	0.77	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-709-0.6	1. TTLC	54	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-709-0.6	2. STLC	2.2	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-710-0	1. TTLC	1300	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-710-0	4. TCLP	9.5	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-710-0.3	1. TTLC	1300	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-710-0.3	4. TCLP	9.4	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-710-0.6	1. TTLC	620	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-710-0.6	2. STLC	65	mg/L	1.6	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-710-0.6	3. STLC-DI	6.5	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-710-0.6	4. TCLP	6.8	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-710-0.9	1. TTLC	140	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-710-0.9	2. STLC	10	mg/L	0.4	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-710-0.9	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-711-0	1. TTLC	1700	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-711-0	4. TCLP	13	mg/L	0.4	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-711-0.3	1. TTLC	1300	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-711-0.3	4. TCLP	6.6	mg/L	0.2	8/6/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-711-0.6	1. TTLC	300	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-711-0.6	5. PH	8.5	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-711-0.6	2. STLC	19	mg/L	0.8	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-711-0.6	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-711-0.6	4. TCLP	0.36	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-712-0	1. TTLC	2800	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-712-0	4. TCLP	7	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-712-0.3	1. TTLC	1300	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-712-0.3	4. TCLP	4.9	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-712-0.6	1. TTLC	250	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-712-0.6	2. STLC	11	mg/L	0.4	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-712-0.6	3. STLC-DI	2.7	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-712-0.9	1. TTLC	770	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-712-0.9	2. STLC	81	mg/L	2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-712-0.9	3. STLC-DI	10	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-712-0.9	4. TCLP	4.4	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-713-0	1. TTLC	350	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-713-0	2. STLC	13	mg/L	0.4	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/19/02	0 m	571-713-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-713-0.3	1. TTLC	86	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-713-0.3	2. STLC	0.41	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-713-0.6	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-714-0	1. TTLC	570	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-714-0	2. STLC	11	mg/L	0.4	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-714-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-714-0.3	1. TTLC	54	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-714-0.3	2. STLC	1.9	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-714-0.6	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-714-0.9	1. TTLC	680	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-714-0.9	2. STLC	0.84	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-801-0	1. TTLC	76	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-801-0	5. PH	6.7	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-801-0	2. STLC	11	mg/L	0.4	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-801-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-801-0.3	1. TTLC	62	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-801-0.3	2. STLC	6.2	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-801-0.3	3. STLC-DI	0.06	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-801-0.6	1. TTLC	44	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-801-0.9	1. TTLC	27	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-801-1.5	1. TTLC	35	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-802-0	1. TTLC	50	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-802-0	2. STLC	3.7	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-802-0.3	1. TTLC	37	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-802-0.6	1. TTLC	12	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-803-0	1. TTLC	460	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-803-0	2. STLC	33	mg/L	0.8	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-803-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-803-0	4. TCLP	0.43	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-803-0.3	1. TTLC	39	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-803-0.6	1. TTLC	12	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-803-0.6	5. PH	8.6	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-804-0	1. TTLC	24	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-804-0.3	1. TTLC	22	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-804-0.6	1. TTLC	22	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-805-0	1. TTLC	34	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-805-0.3	1. TTLC	5	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-805-0.6	1. TTLC	3	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-805-0.9	1. TTLC	4	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-805-1.5	1. TTLC	5	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-807-0	1. TTLC	20	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-807-0.3	1. TTLC	20	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-807-0.3	5. PH	8.1	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-807-0.6	1. TTLC	8.5	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/19/02	0.9 m	571-807-0.9	1. TTLC	5	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-807-1.5	1. TTLC	4	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-808-0	1. TTLC	22	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-808-0.3	1. TTLC	10	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-808-0.6	1. TTLC	4	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-808-0.9	1. TTLC	5.1	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-808-1.5	1. TTLC	5.5	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-809-0	1. TTLC	29	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-809-0.3	1. TTLC	58	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-809-0.3	2. STLC	4.5	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-810-0	1. TTLC	36	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-810-0.3	1. TTLC	20	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-810-0.6	1. TTLC	5	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-810-0.9	1. TTLC	4	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-810-1.5	1. TTLC	9.1	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-811-0	1. TTLC	97	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-811-0	5. PH	7.8	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-811-0	2. STLC	7.4	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-811-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-811-0.3	1. TTLC	690	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-811-0.3	2. STLC	28	mg/L	0.8	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-811-0.3	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-811-0.3	4. TCLP	0.2	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-811-0.6	1. TTLC	76	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-811-0.6	2. STLC	3.3	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-811-0.9	1. TTLC	3	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-811-1.5	1. TTLC	19	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-812-0	1. TTLC	310	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-812-0	5. PH	8	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-812-0	2. STLC	41	mg/L	2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-812-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-812-0	4. TCLP	1.3	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-812-0.3	1. TTLC	6.1	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-812-0.6	1. TTLC	220	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-812-0.6	2. STLC	19	mg/L	0.4	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-812-0.6	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-812-0.6	4. TCLP	1.2	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-812-0.9	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-812-1.5	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-813-0	1. TTLC	320	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-813-0	2. STLC	3	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-813-0.3	1. TTLC	640	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-813-0.3	2. STLC	32	mg/L	0.8	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-813-0.3	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-813-0.3	4. TCLP	7.5	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/19/02	0.6 m	571-813-0.6	1. TTLC	130	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-813-0.6	2. STLC	6.2	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-813-0.6	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-813-0.9	1. TTLC	320	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-813-0.9	2. STLC	14	mg/L	0.4	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-813-0.9	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-814-0	1. TTLC	61	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-814-0	2. STLC	4.5	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-814-0.3	1. TTLC	3000	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-814-0.3	4. TCLP	0.48	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-814-0.6	1. TTLC	500	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-814-0.6	5. PH	7.8	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-814-0.6	2. STLC	28	mg/L	0.8	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-814-0.6	3. STLC-DI	0.1	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-814-0.6	4. TCLP	1.2	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	09 m	571-814-0.9	1. TTLC	370	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-814-0.9	2. STLC	19	mg/L	0.4	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-814-0.9	3. STLC-DI	0.32	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-814-0.9	4. TCLP	0.52	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-814-1.5	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-815-0	1. TTLC	360	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-815-0	2. STLC	45	mg/L	2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-815-0	3. STLC-DI	5.4	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-815-0	4. TCLP	6.4	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-815-0.3	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-815-0.6	1. TTLC	570	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-815-0.6	2. STLC	47	mg/L	2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-815-0.6	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-815-0.6	4. TCLP	1.6	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-815-0.9	1. TTLC	86	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-815-0.9	2. STLC	6.9	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-815-0.9	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-815-1.5	1. TTLC	6.9	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-816-0	1. TTLC	44	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-816-0.3	1. TTLC	8.3	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-816-0.6	1. TTLC	80	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-816-0.6	5. PH	7.8	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-816-0.6	2. STLC	1.8	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-816-0.9	1. TTLC	1	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-816-1.5	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-817-0	1. TTLC	76	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-817-0	2. STLC	23	mg/L	0.8	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-817-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-817-0	4. TCLP	1	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-817-0.3	1. TTLC	4	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/19/02	0.6 m	571-817-0.6	1. TTLC	240	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-817-0.6	2. STLC	9.2	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-817-0.6	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-817-0.9	1. TTLC	12	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-818-0	1. TTLC	950	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-818-0	2. STLC	110	mg/L	4	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-818-0	3. STLC-DI	0.07	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-818-0	4. TCLP	13	mg/L	0.4	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-818-0.3	1. TTLC	16	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-818-0.6	1. TTLC	1100	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-818-0.6	4. TCLP	5.2	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-818-0.9	1. TTLC	5.7	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-818-0.9	5. PH	8.5	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-818-1.5	1. TTLC	300	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-818-1.5	2. STLC	39	mg/L	2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-818-1.5	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-818-1.5	4. TCLP	8.4	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-819-0	1. TTLC	1600	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-819-0	4. TCLP	6.6	mg/L	0.2	8/7/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-819-0.3	1. TTLC	16	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-819-0.6	1. TTLC	770	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-819-0.6	2. STLC	110	mg/L	4	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-819-0.6	3. STLC-DI	1.6	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-819-0.6	4. TCLP	7.5	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-819-0.9	1. TTLC	140	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-819-0.9	2. STLC	0.06	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-819-1.5	1. TTLC	830	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-819-1.5	2. STLC	51	mg/L	2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-819-1.5	3. STLC-DI	7.9	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-819-1.5	4. TCLP	5.5	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-820-0	1. TTLC	29	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-820-0.3	1. TTLC	18	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-820-0.6	1. TTLC	18	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-820-0.9	1. TTLC	24	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-820-0.9	5. PH	8.5	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-821-0	1. TTLC	45	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-821-0.3	1. TTLC	9.9	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-821-0.6	1. TTLC	68	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-821-0.6	2. STLC	0.91	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-821-0.9	1. TTLC	64	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-821-0.9	2. STLC	0.93	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-821-1.5	1. TTLC	73	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	1.5 m	571-821-1.5	2. STLC	0.95	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-827-0	1. TTLC	640	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-827-0	2. STLC	34	mg/L	0.8	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/19/02	0 m	571-827-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-827-0	4. TCLP	1.8	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-827-0.3	1. TTLC	200	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-827-0.3	2. STLC	11	mg/L	0.4	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-827-0.3	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-827-0.6	1. TTLC	110	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-827-0.6	2. STLC	7.2	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-827-0.6	3. STLC-DI	0.05	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-828-0	1. TTLC	250	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-828-0	2. STLC	22	mg/L	0.8	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-828-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-828-0	4. TCLP	0.6	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-828-0.3	1. TTLC	170	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-828-0.3	2. STLC	8.1	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-828-0.3	3. STLC-DI	0.06	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-828-0.6	1. TTLC	220	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-828-0.6	2. STLC	12	mg/L	0.4	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-828-0.6	3. STLC-DI	0.08	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-829-0	1. TTLC	330	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-829-0	2. STLC	22	mg/L	0.8	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-829-0	3. STLC-DI	0.24	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-829-0	4. TCLP	0.57	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-829-0.3	1. TTLC	13	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-829-0.3	5. PH	9	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-830-0	1. TTLC	83	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-830-0	2. STLC	3.8	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-830-0.3	1. TTLC	38	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-830-0.3	5. PH	7.2	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-830-0.6	1. TTLC	20	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-831-0	1. TTLC	720	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-831-0	2. STLC	53	mg/L	1.6	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-831-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-831-0	4. TCLP	0.94	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-831-0.3	1. TTLC	75	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-831-0.3	2. STLC	2.5	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-831-0.6	1. TTLC	120	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-831-0.6	2. STLC	5.3	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-831-0.6	3. STLC-DI	0.1	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-832-0	1. TTLC	23	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-832-0	5. PH	8.2	pH Units	0.1	7/26/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-832-0.3	1. TTLC	5.3	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-832-0.6	1. TTLC	4	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-832-0.9	1. TTLC	5	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-832-1.5	1. TTLC	7.2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-833-0	1. TTLC	480	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/19/02	0 m	571-833-0	2. STLC	49	mg/L	1.6	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-833-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-833-0	4. TCLP	0.62	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-833-0.3	1. TTLC	120	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-833-0.3	2. STLC	13	mg/L	0.4	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-833-0.3	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-833-0.6	1. TTLC	80	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-833-0.6	2. STLC	8	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-833-0.6	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-834-0	1. TTLC	56	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-834-0	2. STLC	0.37	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-834-0.3	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-834-0.6	1. TTLC	6.2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-835-0	1. TTLC	620	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-835-0	2. STLC	28	mg/L	0.8	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-835-0	3. STLC-DI	0.1	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-835-0	4. TCLP	0.33	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-835-0.3	1. TTLC	240	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-835-0.3	5. PH	7.8	pH Units	0.1	7/25/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-835-0.3	2. STLC	20	mg/L	0.8	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-835-0.3	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-835-0.3	4. TCLP	1.7	mg/L	0.2	8/15/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-835-0.6	1. TTLC	29	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-835-0.9	1. TTLC	230	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-835-0.9	2. STLC	12	mg/L	0.4	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.9 m	571-835-0.9	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-836-0	1. TTLC	240	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-836-0	2. STLC	10	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-836-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-836-0.3	1. TTLC	4	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-836-0.3	5. PH	7.8	pH Units	0.1	7/26/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-836-0.6	1. TTLC	4	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-837-0	1. TTLC	110	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-837-0	2. STLC	6.3	mg/L	0.2	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-837-0	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-837-0.3	1. TTLC	250	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-837-0.3	2. STLC	27	mg/L	0.8	8/1/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-837-0.3	3. STLC-DI	0.07	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-837-0.3	4. TCLP	14	mg/L	0.4	8/16/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-838-0	1. TTLC	52	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-838-0	5. PH	8.5	pH Units	0.1	7/26/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-838-0	2. STLC	5.8	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-838-0	3. STLC-DI	0.08	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-838-0.3	1. TTLC	33	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-838-0.6	1. TTLC	270	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill

7/22/02	0.6 m	571-838-0.6	2. STLC	12	mg/L	0.4	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-838-0.6	3. STLC-DI	0	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-838-0.9	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-838-1.5	1. TTLC	4	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-839-0	1. TTLC	37	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-839-0.3	1. TTLC	18	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-839-0.6	1. TTLC	140	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-839-0.6	2. STLC	18	mg/L	0.4	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-839-0.6	3. STLC-DI	0.06	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-839-0.6	4. TCLP	0.23	mg/L	0.2	8/14/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-839-0.9	1. TTLC	12	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-839-1.5	1. TTLC	3	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-839-1.5	5. PH	8.4	pH Units	0.1	7/26/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0 m	571-840-0	1. TTLC	8.5	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.3 m	571-840-0.3	1. TTLC	5.2	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/19/02	0.6 m	571-840-0.6	1. TTLC	6.6	mg/Kg	5	7/25/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-841-0	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-841-0.3	1. TTLC	3	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-841-0.6	1. TTLC	44	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-841-0.9	1. TTLC	8.6	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-841-1.5	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0 m	571-842-0	1. TTLC	11	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.3 m	571-842-0.3	1. TTLC	5	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-842-0.6	1. TTLC	260	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-842-0.6	2. STLC	10	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.6 m	571-842-0.6	3. STLC-DI	0.07	mg/L	0.2	8/9/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	0.9 m	571-842-0.9	1. TTLC	2	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-842-1.5	1. TTLC	77	mg/Kg	5	7/26/02	Lead	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-842-1.5	5. PH	8.4	pH Units	0.1	7/26/02	pH	Soil	Advanced Technology Lab., Signal Hill
7/22/02	1.5 m	571-842-1.5	2. STLC	1.7	mg/L	0.2	8/2/02	Lead	Soil	Advanced Technology Lab., Signal Hill

unique id	borehole id	Borehole Latitud	Borehole Longitude	Northing	Easting
571	571-101	34.07226349	-117.8958897	12370507.041	1369210.594
571	571-102	34.07225573	-117.8950228	12370501.921	1369473.011
571	571-103	34.07223557	-117.8940922	12370492.121	1369754.666
571	571-104	34.07224142	-117.8928076	12370490.851	1370143.576
571	571-105	34.07225237	-117.8921816	12370493.182	1370333.118
571	571-106	34.07236982	-117.8921588	12370535.848	1370340.402
571	571-107	34.07248755	-117.8914682	12370576.853	1370549.841
571	571-108	34.07222154	-117.8910804	12370479.058	1370666.411
571	571-109	34.07221577	-117.8906072	12370475.712	1370809.651
571	571-110	34.0724932	-117.8895025	12370573.728	1371144.943
571	571-111	34.07271662	-117.8893542	12370654.617	1371190.560
571	571-112	34.07217318	-117.8892583	12370456.663	1371217.859
571	571-113	34.07233989	-117.8887213	12370515.900	1371380.951
571	571-114	34.07220733	-117.8874017	12370464.205	1371780.032
571	571-115	34.0721693	-117.8871429	12370449.690	1371858.261
571	571-116	34.07220483	-117.8866154	12370461.232	1372018.072
571	571-117	34.07219141	-117.8857801	12370454.159	1372270.888
571	571-118	34.07222742	-117.8849596	12370465.106	1372519.392
571	571-119	34.07218082	-117.8841593	12370446.060	1372761.524
571	571-120	34.07218551	-117.8833465	12370445.638	1373007.611
571	571-121	34.07226218	-117.8825376	12370471.415	1373252.731
571	571-122	34.07212051	-117.8821592	12370418.889	1373366.853
571	571-123	34.07229873	-117.8818707	12370482.971	1373454.746
571	571-124	34.0722062	-117.8814753	12370448.278	1373574.143
571	571-201	34.07181366	-117.8952855	12370341.794	1369392.083
571	571-202	34.0718047	-117.8946012	12370336.719	1369599.195
571	571-203	34.07178021	-117.893825	12370325.756	1369834.110
571	571-204	34.07172107	-117.893032	12370302.145	1370073.982
571	571-205	34.07170466	-117.8921718	12370293.902	1370334.371
571	571-206	34.07167268	-117.8913736	12370280.162	1370575.899
571	571-207	34.07168302	-117.8905829	12370281.835	1370815.300
571	571-208	34.07157793	-117.8895463	12370240.872	1371128.782
571	571-209	34.07177671	-117.889233	12370312.365	1371224.273
571	571-210	34.07132077	-117.8888491	12370145.484	1371339.055
571	571-211	34.07169211	-117.8884917	12370279.637	1371448.422
571	571-212	34.07168533	-117.8879776	12370275.819	1371604.031

571	571-213	34.07170588	-117.8871608	12370281.147	1371851.379
571	571-214	34.07168525	-117.8862946	12370271.368	1372113.544
571	571-215	34.07170037	-117.8855367	12370274.881	1372343.039
571	571-216	34.07171727	-117.8847834	12370279.057	1372571.148
571	571-217	34.07171759	-117.8835058	12370275.829	1372957.928
571	571-218	34.07169009	-117.8826509	12370263.591	1373216.632
571	571-219	34.07156974	-117.8820051	12370218.121	1373411.765
571	571-220	34.07151839	-117.8815044	12370198.132	1373563.181
571	571-301	34.07223551	-117.8810841	12370457.918	1373692.694
571	571-302	34.07216817	-117.8802083	12370431.139	1373957.612
571	571-304	34.07231023	-117.8795883	12370481.203	1374145.745
571	571-305	34.07206254	-117.8790795	12370389.770	1374299.000
571	571-306	34.0721407	-117.8782875	12370416.144	1374539.021
571	571-307	34.07208954	-117.8776218	12370395.805	1374740.385
571	571-308	34.07208523	-117.8768302	12370392.181	1374980.015
571	571-309	34.07206898	-117.8762355	12370384.725	1375159.999
571	571-310	34.07206085	-117.8754306	12370379.681	1375403.644
571	571-311	34.07208697	-117.8749549	12370387.950	1375547.752
571	571-312	34.07206644	-117.8746102	12370379.589	1375652.021
571	571-313	34.07203353	-117.8742256	12370366.619	1375768.371
571	571-314	34.07235826	-117.8742736	12370484.881	1375754.836
571	571-315	34.07247257	-117.8739427	12370525.609	1375855.370
571	571-316	34.07200686	-117.8734081	12370354.803	1376015.764
571	571-317	34.07200439	-117.8726047	12370351.829	1376258.985
571	571-319	34.07202073	-117.8712722	12370354.335	1376662.432
571	571-320	34.07199726	-117.8704669	12370343.718	1376906.133
571	571-321	34.07195404	-117.8696376	12370325.859	1377157.064
571	571-322	34.07188362	-117.8687655	12370297.999	1377420.878
571	571-323	34.07176074	-117.8680356	12370251.419	1377641.439
571	571-324	34.07160802	-117.8672356	12370193.806	1377883.162
571	571-325	34.07140501	-117.8664283	12370117.879	1378126.949
571	571-326	34.07116949	-117.865703	12370030.339	1378345.786
571	571-327	34.07089304	-117.8651252	12369928.287	1378519.878
571	571-328	34.07094178	-117.8649491	12369945.571	1378573.323
571	571-329	34.07070991	-117.8641844	12369859.261	1378804.124
571	571-330	34.07054423	-117.8644497	12369799.667	1378723.281
571	571-401	34.07171296	-117.8807421	12370266.927	1373794.577

571	571-402	34.07145665	-117.8810843	12370174.574	1373690.163
571	571-403	34.0716856	-117.8800633	12370255.205	1373999.993
571	571-404	34.0716175	-117.8798244	12370229.807	1374072.100
571	571-405	34.07160913	-117.8791624	12370225.039	1374272.487
571	571-406	34.0716495	-117.878373	12370237.671	1374511.586
571	571-407	34.07163618	-117.8775464	12370230.678	1374761.780
571	571-408	34.07158915	-117.8767558	12370211.517	1375000.982
571	571-409	34.07153512	-117.8758738	12370189.571	1375267.827
571	571-410	34.07150792	-117.8750013	12370177.415	1375531.882
571	571-411	34.07159155	-117.8746662	12370206.973	1375633.610
571	571-412	34.07138892	-117.8742006	12370132.052	1375773.911
571	571-413	34.07161463	-117.8738484	12370213.253	1375881.236
571	571-414	34.0715848	-117.8731838	12370200.682	1376082.366
571	571-415	34.07153909	-117.8720769	12370181.191	1376417.302
571	571-416	34.07155123	-117.8710075	12370182.850	1376741.101
571	571-417	34.0715159	-117.870166	12370167.827	1376995.746
571	571-418	34.07146982	-117.8693705	12370149.017	1377236.423
571	571-419	34.07131519	-117.8682976	12370090.005	1377560.751
571	571-420	34.0710856	-117.8675318	12370004.515	1377791.882
571	571-421	34.07080325	-117.8667213	12369899.715	1378036.372
571	571-422	34.07096748	-117.866761	12369959.562	1378024.865
571	571-423	34.07068579	-117.8659999	12369855.134	1378254.406
571	571-424	34.07044625	-117.865929	12369767.810	1378275.141
571	571-425	34.07053452	-117.8655332	12369798.905	1378395.257
571	571-501	34.07023792	-117.8638024	12369686.575	1378918.316
571	571-502	34.06986246	-117.8632295	12369548.522	1379090.597
571	571-503	34.07029878	-117.86289	12369706.384	1379194.737
571	571-504	34.07052883	-117.8626374	12369789.428	1379271.898
571	571-505	34.06964225	-117.8627982	12369467.308	1379220.492
571	571-506	34.0696536	-117.8624275	12369470.491	1379332.748
571	571-507	34.06926881	-117.862096	12369329.661	1379431.930
571	571-508	34.0690749	-117.8615556	12369257.739	1379594.959
571	571-509	34.06868523	-117.8605452	12369113.406	1379899.650
571	571-510	34.06838317	-117.8595215	12369000.912	1380208.655
571	571-511	34.06823837	-117.8584224	12368945.440	1380540.963
571	571-512	34.06825593	-117.8573181	12368949.024	1380875.336
571	571-513	34.0683333	-117.8562477	12368974.458	1381199.625

571	571-514	34.06845077	-117.8551557	12369014.425	1381530.609
571	571-515	34.06854379	-117.8540661	12369045.508	1381860.748
571	571-516	34.06862326	-117.8530156	12369071.763	1382179.015
571	571-517	34.06863201	-117.8518925	12369072.112	1382519.059
571	571-518	34.06859834	-117.8507812	12369057.062	1382855.426
571	571-519	34.06852075	-117.8497253	12369026.181	1383174.847
571	571-520	34.06848635	-117.8486	12369010.838	1383515.434
571	571-521	34.06844532	-117.8475152	12368993.186	1383843.711
571	571-522	34.06849956	-117.846378	12369010.066	1384188.186
571	571-523	34.06858425	-117.8452967	12369038.170	1384515.782
571	571-524	34.06875794	-117.8442357	12369098.702	1384837.527
571	571-525	34.068953	-117.8431948	12369167.066	1385153.233
571	571-526	34.06912958	-117.8421106	12369228.600	1385482.017
571	571-527	34.06922134	-117.8410314	12369259.292	1385808.986
571	571-528	34.06913284	-117.841033	12369227.102	1385808.263
571	571-529	34.06928894	-117.8399877	12369281.289	1386125.190
571	571-530	34.06901267	-117.8397183	12369180.112	1386205.902
571	571-601	34.06980189	-117.8646482	12369530.117	1378660.905
571	571-602	34.06999234	-117.8645098	12369599.046	1378703.395
571	571-603	34.06941084	-117.8636883	12369385.397	1378950.324
571	571-604	34.06949354	-117.8635817	12369415.210	1378982.853
571	571-605	34.069062	-117.862946	12369256.595	1379173.978
571	571-606	34.06912843	-117.8628151	12369280.429	1379213.803
571	571-607	34.06859754	-117.8618741	12369084.893	1379497.077
571	571-608	34.06822886	-117.8608572	12368948.176	1379803.804
571	571-609	34.06799134	-117.8598234	12368859.137	1380116.064
571	571-610	34.06783222	-117.8587405	12368798.494	1380443.406
571	571-611	34.06781836	-117.8576489	12368790.678	1380773.846
571	571-612	34.06783952	-117.856558	12368795.608	1381104.204
571	571-613	34.06796036	-117.8555105	12368836.915	1381421.703
571	571-614	34.06807644	-117.8544294	12368876.410	1381749.344
571	571-615	34.0681633	-117.8533534	12368905.289	1382075.372
571	571-616	34.06822273	-117.8522737	12368924.182	1382402.423
571	571-617	34.06817872	-117.8511974	12368905.457	1382728.143
571	571-618	34.06814282	-117.8501281	12368889.705	1383051.768
571	571-619	34.06807618	-117.8490543	12368862.762	1383376.649
571	571-620	34.06805055	-117.8479723	12368850.720	1383704.138

571	571-621	34.06802628	-117.8468936	12368839.185	1384030.635
571	571-622	34.06806443	-117.8460731	12368851.006	1384279.155
571	571-623	34.06820281	-117.8449904	12368898.638	1384607.369
571	571-624	34.06837358	-117.8439256	12368958.102	1384930.255
571	571-625	34.06855447	-117.8428886	12369021.319	1385244.752
571	571-626	34.06866944	-117.8418292	12369060.504	1385565.822
571	571-627	34.06871893	-117.8408907	12369076.169	1385850.086
571	571-628	34.06858956	-117.8407505	12369028.758	1385892.164
571	571-629	34.06850577	-117.8398249	12368995.971	1386172.118
571	571-701	34.06894053	-117.839227	12369152.649	1386354.425
571	571-702	34.069005	-117.8386107	12369174.570	1386541.211
571	571-703	34.06862885	-117.8381107	12369036.491	1386691.466
571	571-704	34.06872768	-117.837915	12369071.960	1386750.989
571	571-706	34.06841862	-117.8371773	12368957.697	1386973.418
571	571-707	34.06807132	-117.8361967	12368828.923	1387269.251
571	571-708	34.06775493	-117.8351651	12368711.270	1387580.632
571	571-709	34.06748581	-117.8341687	12368610.905	1387881.490
571	571-710	34.06714706	-117.8331229	12368485.091	1388197.105
571	571-711	34.06682204	-117.832113	12368364.360	1388501.903
571	571-712	34.06643735	-117.8311518	12368222.048	1388791.769
571	571-713	34.0658722	-117.8302401	12368014.210	1389066.124
571	571-714	34.06536119	-117.8293979	12367826.242	1389319.592
571	571-801	34.06853825	-117.8394044	12369006.742	1386299.533
571	571-802	34.06828014	-117.8390683	12368912.008	1386400.509
571	571-803	34.06827338	-117.8383745	12368907.826	1386610.544
571	571-804	34.06803097	-117.8380079	12368818.733	1386720.796
571	571-805	34.06786771	-117.8374983	12368758.075	1386874.589
571	571-807	34.06777493	-117.8369601	12368722.988	1387037.264
571	571-808	34.06752288	-117.835943	12368628.778	1387344.432
571	571-809	34.06722587	-117.8348865	12368518.115	1387663.422
571	571-810	34.0669094	-117.8338387	12368400.397	1387979.694
571	571-811	34.0666025	-117.8328267	12368286.256	1388285.165
571	571-812	34.06626135	-117.8318994	12368159.862	1388564.916
571	571-813	34.06575575	-117.8310244	12367973.776	1388828.332
571	571-814	34.06520126	-117.8301102	12367769.809	1389103.461
571	571-815	34.06466814	-117.8291579	12367573.526	1389390.197
571	571-816	34.06440038	-117.8284505	12367474.381	1389603.580

571	571-817	34.06406476	-117.8274385	12367349.806	1389909.008
571	571-818	34.06386897	-117.8263247	12367275.854	1390245.645
571	571-819	34.0637783	-117.8252556	12367240.255	1390569.063
571	571-820	34.06367724	-117.8241929	12367200.895	1390890.519
571	571-821	34.06362842	-117.8233025	12367180.964	1391159.962
571	571-827	34.06344447	-117.8171858	12367099.196	1393011.337
571	571-828	34.06340807	-117.8161468	12367083.443	1393325.782
571	571-829	34.06352622	-117.8155611	12367125.008	1393503.464
571	571-830	34.06336024	-117.8150516	12367063.398	1393657.258
571	571-831	34.06356578	-117.8144766	12367136.784	1393831.938
571	571-832	34.06334753	-117.8139722	12367056.171	1393984.024
571	571-833	34.06354017	-117.8134142	12367124.910	1394153.516
571	571-834	34.06328297	-117.8128795	12367030.055	1394314.656
571	571-835	34.06355403	-117.8123223	12367127.324	1394484.128
571	571-836	34.06295747	-117.8120499	12366909.646	1394564.893
571	571-837	34.06356577	-117.8116529	12367129.986	1394686.834
571	571-838	34.06374606	-117.8117088	12367195.707	1394670.440
571	571-839	34.06393003	-117.8101851	12367258.975	1395132.306
571	571-840	34.06349335	-117.8101483	12367100.027	1395142.188
571	571-841	34.06413485	-117.8092049	12367331.138	1395429.658
571	571-842	34.06437459	-117.8080419	12367415.571	1395782.436

APPENDIX C

STATISTICAL ANALYSES

TABLE C-1
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-101	0	571-101-0	80	0.0444	0.044459089
571-101	0.3	571-101-0.3	330	0.1833	0.184376191
571-101	0.6	571-101-0.6	360	0.2000	0.201357921
571-101	0.9	571-101-0.9	13	0.0072	0.007222285
571-101	1.5	571-101-1.5	190	0.1056	0.105752561
571-102	0	571-102-0	9.9	0.0055	0.005500028
571-102	0.3	571-102-0.3	13	0.0072	0.007222285
571-102	0.6	571-102-0.6	480	0.2667	0.269932796
571-102	0.9	571-102-0.9	16	0.0089	0.008889006
571-102	1.5	571-102-1.5	6.7	0.0037	0.003722231
571-103	0	571-103-0	560	0.3111	0.316361940
571-103	0.3	571-103-0.3	12	0.0067	0.006666716
571-103	0.6	571-103-0.6	610	0.3389	0.345735651
571-103	0.9	571-103-0.9	6.8	0.0038	0.003777787
571-103	1.5	571-103-1.5	10	0.0056	0.005555584
571-104	0	571-104-0	1100	0.6111	0.657463556
571-104	0.3	571-104-0.3	5	0.0028	0.002777781
571-104	0.6	571-104-0.6	2	0.0011	0.001111111
571-104	0.9	571-104-0.9	14	0.0078	0.007777856
571-104	1.5	571-104-1.5	5.2	0.0029	0.002888893
571-105	0	571-105-0	45	0.0250	0.025002605
571-105	0.3	571-105-0.3	59	0.0328	0.032783650
571-105	0.6	571-105-0.6	560	0.3111	0.316361940
571-105	0.9	571-105-0.9	11	0.0061	0.006111149
571-105	1.5	571-105-1.5	33	0.0183	0.018334360
571-106	0	571-106-0	150	0.0833	0.083430087
571-106	0.3	571-106-0.3	19	0.0106	0.010555752
571-106	0.6	571-106-0.6	9.6	0.0053	0.005333359
571-106	0.9	571-106-0.9	6.7	0.0037	0.003722231
571-107	0	571-107-0	90	0.0500	0.050020857
571-107	0.3	571-107-0.3	85	0.0472	0.047239790

TABLE C-1
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-107	0.6	571-107-0.6	240	0.1333	0.133731589
571-107	0.9	571-107-0.9	91	0.0506	0.050577116
571-108	0	571-108-0	22	0.0122	0.012222527
571-108	0.3	571-108-0.3	33	0.0183	0.018334360
571-108	0.6	571-108-0.6	30	0.0167	0.016667438
571-108	0.9	571-108-0.9	6.6	0.0037	0.003666675
571-108	1.5	571-108-1.5	8.2	0.0046	0.004555571
571-109	0	571-109-0	180	0.1000	0.100167421
571-109	0.3	571-109-0.3	45	0.0250	0.025002605
571-110	0	571-110-0	64	0.0356	0.035563051
571-110	0.3	571-110-0.3	42	0.0233	0.023335451
571-110	0.6	571-110-0.6	41	0.0228	0.022779748
571-111	0	571-111-0	45	0.0250	0.025002605
571-111	0.3	571-111-0.3	82	0.0456	0.045571327
571-111	0.6	571-111-0.6	59	0.0328	0.032783650
571-111	0.9	571-111-0.9	7.6	0.0042	0.004222235
571-111	1.5	571-111-1.5	16	0.0089	0.008889006
571-112	0	571-112-0	500	0.2778	0.281480073
571-112	0.3	571-112-0.3	55	0.0306	0.030560312
571-112	0.6	571-112-0.6	110	0.0611	0.061149212
571-112	0.9	571-112-0.9	710	0.3944	0.405463198
571-112	1.5	571-112-1.5	4	0.0022	0.002222224
571-113	0	571-113-0	59	0.0328	0.032783650
571-113	0.3	571-113-0.3	17	0.0094	0.009444585
571-113	0.6	571-113-0.6	81	0.0450	0.045015201
571-113	0.9	571-113-0.9	5.3	0.0029	0.002944449
571-113	1.5	571-113-1.5	3	0.0017	0.001666667
571-114	0	571-114-0	120	0.0667	0.066716148
571-114	0.3	571-114-0.3	120	0.0667	0.066716148
571-114	0.6	571-114-0.6	170	0.0944	0.094585415
571-114	0.9	571-114-0.9	420	0.2333	0.235504237

TABLE C-1
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-114	1.5	571-114-1.5	12	0.0067	0.006666716
571-115	0	571-115-0	150	0.0833	0.083430087
571-115	0.3	571-115-0.3	170	0.0944	0.094585415
571-115	0.6	571-115-0.6	170	0.0944	0.094585415
571-115	0.9	571-115-0.9	15	0.0083	0.008333430
571-115	1.5	571-115-1.5	4	0.0022	0.002222224
571-116	0	571-116-0	46	0.0256	0.025558338
571-116	0.3	571-116-0.3	30	0.0167	0.016667438
571-116	0.6	571-116-0.6	3	0.0017	0.001666667
571-116	0.9	571-116-0.9	78	0.0433	0.043346907
571-116	1.5	571-116-1.5	3	0.0017	0.001666667
571-117	0	571-117-0	24	0.0133	0.013333728
571-117	0.3	571-117-0.3	2	0.0011	0.001111111
571-117	0.6	571-117-0.6	2	0.0011	0.001111111
571-117	0.9	571-117-0.9	85	0.0472	0.047239790
571-117	1.5	571-117-1.5	4	0.0022	0.002222224
571-118	0	571-118-0	270	0.1500	0.150568273
571-118	0.3	571-118-0.3	15	0.0083	0.008333430
571-118	0.6	571-118-0.6	57	0.0317	0.031671961
571-118	0.9	571-118-0.9	5.9	0.0033	0.003277784
571-118	1.5	571-118-1.5	12	0.0067	0.006666716
571-119	0	571-119-0	11	0.0061	0.006111149
571-119	0.3	571-119-0.3	4	0.0022	0.002222224
571-119	0.6	571-119-0.6	2	0.0011	0.001111111
571-119	0.9	571-119-0.9	7.7	0.0043	0.004277791
571-119	1.5	571-119-1.5	3	0.0017	0.001666667
571-120	0	571-120-0	1800	1.0000	1.570796327
571-120	0.3	571-120-0.3	98	0.0544	0.054471378
571-120	0.6	571-120-0.6	25	0.0139	0.013889335
571-120	0.9	571-120-0.9	13	0.0072	0.007222285
571-120	1.5	571-120-1.5	38	0.0211	0.021112680

TABLE C-1
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-121	0	571-121-0	230	0.1278	0.128128066
571-121	0.3	571-121-0.3	12	0.0067	0.006666716
571-121	0.6	571-121-0.6	13	0.0072	0.007222285
571-121	0.9	571-121-0.9	6.2	0.0034	0.003444451
571-121	1.5	571-121-1.5	8.1	0.0045	0.004500015
571-122	0	571-122-0	320	0.1778	0.178727795
571-122	0.3	571-122-0.3	9.5	0.0053	0.005277802
571-122	0.6	571-122-0.6	6.9	0.0038	0.003833343
571-122	0.9	571-122-0.9	9.5	0.0053	0.005277802
571-122	1.5	571-122-1.5	12	0.0067	0.006666716
571-123	0	571-123-0	190	0.1056	0.105752561
571-123	0.3	571-123-0.3	13	0.0072	0.007222285
571-124	0	571-124-0	130	0.0722	0.072285156
571-124	0.3	571-124-0.3	34	0.0189	0.018890012
571-124	0.6	571-124-0.6	5.9	0.0033	0.003277784
571-124	0.9	571-124-0.9	24	0.0133	0.013333728

Total Lead	Max TTLC:	1800.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	109		109			
Sample Mean:	114		0.070			
Delta = RT - mean	236					
Appropriate Number of Samples:	2					
Standard Deviation of Sample:	238		0.176			
Standard Deviation of Mean:	23		0.017			
Sample Variance:	56631		0.031			
t-value for 90%:	1.290	Need to Transform Data	1.290			
Upper Confidence Limit for 90%:			0.091			
Reverse Transformation for 90%			164.21	mg/kg	11.00	mg/l
t-value for 95%:			1.661			
Upper Confidence Limit for 95%:			0.098			
Reverse Transformation for 95%			175.43	mg/kg	12.01	mg/l

TABLE C-2
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
SURFACE LAYER

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-101	0	571-101-0	80	0.0444	0.044459089
571-102	0	571-102-0	9.9	0.0055	0.005500028
571-103	0	571-103-0	560	0.3111	0.316361940
571-104	0	571-104-0	1100	0.6111	0.657463556
571-105	0	571-105-0	45	0.0250	0.025002605
571-106	0	571-106-0	150	0.0833	0.083430087
571-107	0	571-107-0	90	0.0500	0.050020857
571-108	0	571-108-0	22	0.0122	0.012222527
571-109	0	571-109-0	180	0.1000	0.100167421
571-110	0	571-110-0	64	0.0356	0.035563051
571-111	0	571-111-0	45	0.0250	0.025002605
571-112	0	571-112-0	500	0.2778	0.281480073
571-113	0	571-113-0	59	0.0328	0.032783650
571-114	0	571-114-0	120	0.0667	0.066716148
571-115	0	571-115-0	150	0.0833	0.083430087
571-116	0	571-116-0	46	0.0256	0.025558338
571-117	0	571-117-0	24	0.0133	0.013333728
571-118	0	571-118-0	270	0.1500	0.150568273
571-119	0	571-119-0	11	0.0061	0.006111149
571-120	0	571-120-0	1800	1.0000	1.570796327
571-121	0	571-121-0	230	0.1278	0.128128066

TABLE C-2
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
SURFACE LAYER

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-122	0	571-122-0	320	0.1778	0.178727795
571-123	0	571-123-0	190	0.1056	0.105752561
571-124	0	571-124-0	130	0.0722	0.072285156

Total Lead	Max TTLC:	1800.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	24		24			
Sample Mean:	258		0.170			
Delta = RT - mean	92					
Appropriate Number of Samples:	34					
Standard Deviation of Sample:	407		0.331			
Standard Deviation of Mean:	83		0.067			
Sample Variance:	165938		0.109			
t-value for 90%:	1.319	Need to Transform Data	1.319			
Upper Confidence Limit for 90%:			0.259			
Reverse Transformation for 90%			460.35	mg/kg	37.51	mg/l
t-value for 95%:			1.714			
Upper Confidence Limit for 95%:			0.285			
Reverse Transformation for 95%			506.56	mg/kg	41.64	mg/l

TABLE C-3
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-101	0.3	571-101-0.3	330	0.4648	0.483395989
571-101	0.6	571-101-0.6	360	0.5070	0.531749739
571-101	0.9	571-101-0.9	13	0.0183	0.018310882
571-101	1.5	571-101-1.5	190	0.2676	0.270907173
571-102	0.3	571-102-0.3	13	0.0183	0.018310882
571-102	0.6	571-102-0.6	480	0.6761	0.742397348
571-102	0.9	571-102-0.9	16	0.0225	0.022537119
571-102	1.5	571-102-1.5	6.7	0.0094	0.009436760
571-103	0.3	571-103-0.3	12	0.0169	0.016902213
571-103	0.6	571-103-0.6	610	0.8592	1.033615930
571-103	0.9	571-103-0.9	6.8	0.0096	0.009577611
571-103	1.5	571-103-1.5	10	0.0141	0.014084973
571-104	0.3	571-104-0.3	5	0.0070	0.007042312
571-104	0.6	571-104-0.6	2	0.0028	0.002816905
571-104	0.9	571-104-0.9	14	0.0197	0.019719588
571-104	1.5	571-104-1.5	5.2	0.0073	0.007324009
571-105	0.3	571-105-0.3	59	0.0831	0.083194528
571-105	0.6	571-105-0.6	560	0.7887	0.908744231
571-105	0.9	571-105-0.9	11	0.0155	0.015493578
571-105	1.5	571-105-1.5	33	0.0465	0.046495624
571-106	0.3	571-106-0.3	19	0.0268	0.026763758
571-106	0.6	571-106-0.6	9.6	0.0135	0.013521539
571-106	0.9	571-106-0.9	6.7	0.0094	0.009436760
571-107	0.3	571-107-0.3	85	0.1197	0.120006147
571-107	0.6	571-107-0.6	240	0.3380	0.344820947
571-107	0.9	571-107-0.9	91	0.1282	0.128522546
571-108	0.3	571-108-0.3	33	0.0465	0.046495624

TABLE C-3
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-108	0.6	571-108-0.6	30	0.0423	0.042266104
571-108	0.9	571-108-0.9	6.6	0.0093	0.009295909
571-108	1.5	571-108-1.5	8.2	0.0115	0.011549553
571-109	0.3	571-109-0.3	45	0.0634	0.063422792
571-110	0.3	571-110-0.3	42	0.0592	0.059189484
571-110	0.6	571-110-0.6	41	0.0577	0.057778621
571-111	0.3	571-111-0.3	82	0.1155	0.115751264
571-111	0.6	571-111-0.6	59	0.0831	0.083194528
571-111	0.9	571-111-0.9	7.6	0.0107	0.010704430
571-111	1.5	571-111-1.5	16	0.0225	0.022537119
571-112	0.3	571-112-0.3	55	0.0775	0.077542474
571-112	0.6	571-112-0.6	110	0.1549	0.155556170
571-112	0.9	571-112-0.9	710	1.0000	1.570796327
571-112	1.5	571-112-1.5	4	0.0056	0.005633833
571-113	0.3	571-113-0.3	17	0.0239	0.023945950
571-113	0.6	571-113-0.6	81	0.1141	0.114333441
571-113	0.9	571-113-0.9	5.3	0.0075	0.007464858
571-113	1.5	571-113-1.5	3	0.0042	0.004225365
571-114	0.3	571-114-0.3	120	0.1690	0.169829277
571-114	0.6	571-114-0.6	170	0.2394	0.241785551
571-114	0.9	571-114-0.9	420	0.5915	0.632979052
571-114	1.5	571-114-1.5	12	0.0169	0.016902213
571-115	0.3	571-115-0.3	170	0.2394	0.241785551
571-115	0.6	571-115-0.6	170	0.2394	0.241785551
571-115	0.9	571-115-0.9	15	0.0211	0.021128332
571-115	1.5	571-115-1.5	4	0.0056	0.005633833
571-116	0.3	571-116-0.3	30	0.0423	0.042266104

TABLE C-3
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-116	0.6	571-116-0.6	3	0.0042	0.004225365
571-116	0.9	571-116-0.9	78	0.1099	0.110081346
571-116	1.5	571-116-1.5	3	0.0042	0.004225365
571-117	0.3	571-117-0.3	2	0.0028	0.002816905
571-117	0.6	571-117-0.6	2	0.0028	0.002816905
571-117	0.9	571-117-0.9	85	0.1197	0.120006147
571-117	1.5	571-117-1.5	4	0.0056	0.005633833
571-118	0.3	571-118-0.3	15	0.0211	0.021128332
571-118	0.6	571-118-0.6	57	0.0803	0.080368179
571-118	0.9	571-118-0.9	5.9	0.0083	0.008309955
571-118	1.5	571-118-1.5	12	0.0169	0.016902213
571-119	0.3	571-119-0.3	4	0.0056	0.005633833
571-119	0.6	571-119-0.6	2	0.0028	0.002816905
571-119	0.9	571-119-0.9	7.7	0.0108	0.010845283
571-119	1.5	571-119-1.5	3	0.0042	0.004225365
571-120	0.3	571-120-0.3	98	0.1380	0.138470250
571-120	0.6	571-120-0.6	25	0.0352	0.035218548
571-120	0.9	571-120-0.9	13	0.0183	0.018310882
571-120	1.5	571-120-1.5	38	0.0535	0.053546712
571-121	0.3	571-121-0.3	12	0.0169	0.016902213
571-121	0.6	571-121-0.6	13	0.0183	0.018310882
571-121	0.9	571-121-0.9	6.2	0.0087	0.008732505
571-121	1.5	571-121-1.5	8.1	0.0114	0.011408698
571-122	0.3	571-122-0.3	9.5	0.0134	0.013380681
571-122	0.6	571-122-0.6	6.9	0.0097	0.009718463
571-122	0.9	571-122-0.9	9.5	0.0134	0.013380681
571-122	1.5	571-122-1.5	12	0.0169	0.016902213

TABLE C-3
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-123	0.3	571-123-0.3	13	0.0183	0.018310882
571-124	0.3	571-124-0.3	34	0.0479	0.047905645
571-124	0.6	571-124-0.6	5.9	0.0083	0.008309955
571-124	0.9	571-124-0.9	24	0.0338	0.033809258

Total Lead	Max TTLC:	710.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	85		85			
Sample Mean:	74		0.116			
Delta = RT - mean	276					
Appropriate Number of Samples:	0					
Standard Deviation of Sample:	141		0.250			
Standard Deviation of Mean:	15		0.027			
Sample Variance:	19796		0.063			
t-value for 90%:	1.293	Need to Transform Data	1.293			
Upper Confidence Limit for 90%:			0.151			
Reverse Transformation for 90%			106.92	mg/kg	5.88	mg/l
t-value for 95%:			1.666			
Upper Confidence Limit for 95%:			0.161			
Reverse Transformation for 95%			114.03	mg/kg	6.51	mg/l

TABLE C-4
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
SURFACE AND 0.3-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-101	0	571-101-0	80	0.0444	0.044459089
571-101	0.3	571-101-0.3	330	0.1833	0.184376191
571-102	0	571-102-0	9.9	0.0055	0.005500028
571-102	0.3	571-102-0.3	13	0.0072	0.007222285
571-103	0	571-103-0	560	0.3111	0.316361940
571-103	0.3	571-103-0.3	12	0.0067	0.006666716
571-104	0	571-104-0	1100	0.6111	0.657463556
571-104	0.3	571-104-0.3	5	0.0028	0.002777781
571-105	0	571-105-0	45	0.0250	0.025002605
571-105	0.3	571-105-0.3	59	0.0328	0.032783650
571-106	0	571-106-0	150	0.0833	0.083430087
571-106	0.3	571-106-0.3	19	0.0106	0.010555752
571-107	0	571-107-0	90	0.0500	0.050020857
571-107	0.3	571-107-0.3	85	0.0472	0.047239790
571-108	0	571-108-0	22	0.0122	0.012222527
571-108	0.3	571-108-0.3	33	0.0183	0.018334360
571-109	0	571-109-0	180	0.1000	0.100167421
571-109	0.3	571-109-0.3	45	0.0250	0.025002605
571-110	0	571-110-0	64	0.0356	0.035563051
571-110	0.3	571-110-0.3	42	0.0233	0.023335451
571-111	0	571-111-0	45	0.0250	0.025002605
571-111	0.3	571-111-0.3	82	0.0456	0.045571327
571-112	0	571-112-0	500	0.2778	0.281480073
571-112	0.3	571-112-0.3	55	0.0306	0.030560312
571-113	0	571-113-0	59	0.0328	0.032783650
571-113	0.3	571-113-0.3	17	0.0094	0.009444585
571-114	0	571-114-0	120	0.0667	0.066716148
571-114	0.3	571-114-0.3	120	0.0667	0.066716148
571-115	0	571-115-0	150	0.0833	0.083430087
571-115	0.3	571-115-0.3	170	0.0944	0.094585415
571-116	0	571-116-0	46	0.0256	0.025558338
571-116	0.3	571-116-0.3	30	0.0167	0.016667438

TABLE C-4
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
SURFACE AND 0.3-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-117	0	571-117-0	24	0.0133	0.013333728
571-117	0.3	571-117-0.3	2	0.0011	0.001111111
571-118	0	571-118-0	270	0.1500	0.150568273
571-118	0.3	571-118-0.3	15	0.0083	0.008333430
571-119	0	571-119-0	11	0.0061	0.006111149
571-119	0.3	571-119-0.3	4	0.0022	0.002222224
571-120	0	571-120-0	1800	1.0000	1.570796327
571-120	0.3	571-120-0.3	98	0.0544	0.054471378
571-121	0	571-121-0	230	0.1278	0.128128066
571-121	0.3	571-121-0.3	12	0.0067	0.006666716
571-122	0	571-122-0	320	0.1778	0.178727795
571-122	0.3	571-122-0.3	9.5	0.0053	0.005277802
571-123	0	571-123-0	190	0.1056	0.105752561
571-123	0.3	571-123-0.3	13	0.0072	0.007222285
571-124	0	571-124-0	130	0.0722	0.072285156
571-124	0.3	571-124-0.3	34	0.0189	0.018890012

Total Lead	Max TTLC:	1800.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	48		48			
Sample Mean:	156		0.100			
Delta = RT - mean	194					
Appropriate Number of Samples:	4					
Standard Deviation of Sample:	307		0.243			
Standard Deviation of Mean:	44		0.035			
Sample Variance:	94361		0.059			
t-value for 90%:	1.301	Need to Transform Data	1.301			
Upper Confidence Limit for 90%:			0.146			
Reverse Transformation for 90%			261.19	mg/kg	19.68	mg/l
t-value for 95%:			1.679			
Upper Confidence Limit for 95%:			0.159			
Reverse Transformation for 95%			284.87	mg/kg	21.80	mg/l

TABLE C-5
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-101	0.6	571-101-0.6	360	0.5070	0.531749739
571-101	0.9	571-101-0.9	13	0.0183	0.018310882
571-101	1.5	571-101-1.5	190	0.2676	0.270907173
571-102	0.6	571-102-0.6	480	0.6761	0.742397348
571-102	0.9	571-102-0.9	16	0.0225	0.022537119
571-102	1.5	571-102-1.5	6.7	0.0094	0.009436760
571-103	0.6	571-103-0.6	610	0.8592	1.033615930
571-103	0.9	571-103-0.9	6.8	0.0096	0.009577611
571-103	1.5	571-103-1.5	10	0.0141	0.014084973
571-104	0.6	571-104-0.6	2	0.0028	0.002816905
571-104	0.9	571-104-0.9	14	0.0197	0.019719588
571-104	1.5	571-104-1.5	5.2	0.0073	0.007324009
571-105	0.6	571-105-0.6	560	0.7887	0.908744231
571-105	0.9	571-105-0.9	11	0.0155	0.015493578
571-105	1.5	571-105-1.5	33	0.0465	0.046495624
571-106	0.6	571-106-0.6	9.6	0.0135	0.013521539
571-106	0.9	571-106-0.9	6.7	0.0094	0.009436760
571-107	0.6	571-107-0.6	240	0.3380	0.344820947
571-107	0.9	571-107-0.9	91	0.1282	0.128522546
571-108	0.6	571-108-0.6	30	0.0423	0.042266104
571-108	0.9	571-108-0.9	6.6	0.0093	0.009295909
571-108	1.5	571-108-1.5	8.2	0.0115	0.011549553
571-110	0.6	571-110-0.6	41	0.0577	0.057778621
571-111	0.6	571-111-0.6	59	0.0831	0.083194528
571-111	0.9	571-111-0.9	7.6	0.0107	0.010704430
571-111	1.5	571-111-1.5	16	0.0225	0.022537119
571-112	0.6	571-112-0.6	110	0.1549	0.155556170

TABLE C-5
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-112	0.9	571-112-0.9	710	1.0000	1.570796327
571-112	1.5	571-112-1.5	4	0.0056	0.005633833
571-113	0.6	571-113-0.6	81	0.1141	0.114333441
571-113	0.9	571-113-0.9	5.3	0.0075	0.007464858
571-113	1.5	571-113-1.5	3	0.0042	0.004225365
571-114	0.6	571-114-0.6	170	0.2394	0.241785551
571-114	0.9	571-114-0.9	420	0.5915	0.632979052
571-114	1.5	571-114-1.5	12	0.0169	0.016902213
571-115	0.6	571-115-0.6	170	0.2394	0.241785551
571-115	0.9	571-115-0.9	15	0.0211	0.021128332
571-115	1.5	571-115-1.5	4	0.0056	0.005633833
571-116	0.6	571-116-0.6	3	0.0042	0.004225365
571-116	0.9	571-116-0.9	78	0.1099	0.110081346
571-116	1.5	571-116-1.5	3	0.0042	0.004225365
571-117	0.6	571-117-0.6	2	0.0028	0.002816905
571-117	0.9	571-117-0.9	85	0.1197	0.120006147
571-117	1.5	571-117-1.5	4	0.0056	0.005633833
571-118	0.6	571-118-0.6	57	0.0803	0.080368179
571-118	0.9	571-118-0.9	5.9	0.0083	0.008309955
571-118	1.5	571-118-1.5	12	0.0169	0.016902213
571-119	0.6	571-119-0.6	2	0.0028	0.002816905
571-119	0.9	571-119-0.9	7.7	0.0108	0.010845283
571-119	1.5	571-119-1.5	3	0.0042	0.004225365
571-120	0.6	571-120-0.6	25	0.0352	0.035218548
571-120	0.9	571-120-0.9	13	0.0183	0.018310882
571-120	1.5	571-120-1.5	38	0.0535	0.053546712
571-121	0.6	571-121-0.6	13	0.0183	0.018310882

TABLE C-5
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-121	0.9	571-121-0.9	6.2	0.0087	0.008732505
571-121	1.5	571-121-1.5	8.1	0.0114	0.011408698
571-122	0.6	571-122-0.6	6.9	0.0097	0.009718463
571-122	0.9	571-122-0.9	9.5	0.0134	0.013380681
571-122	1.5	571-122-1.5	12	0.0169	0.016902213
571-124	0.6	571-124-0.6	5.9	0.0083	0.008309955
571-124	0.9	571-124-0.9	24	0.0338	0.033809258

Total Lead	Max TTLC:	710.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	61		61			
Sample Mean:	81		0.131			
Delta = RT - mean	269					
Appropriate Number of Samples:	1					
Standard Deviation of Sample:	160		0.288			
Standard Deviation of Mean:	20		0.037			
Sample Variance:	25507		0.083			
t-value for 90%:	1.296	Need to Transform Data	1.296			
Upper Confidence Limit for 90%:			0.179			
Reverse Transformation for 90%			126.37	mg/kg	7.62	mg/l
t-value for 95%:			1.671			
Upper Confidence Limit for 95%:			0.193			
Reverse Transformation for 95%			136.01	mg/kg	8.48	mg/l

TABLE C-6
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
SURFACE, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-101	0	571-101-0	80	0.0444	0.044459089
571-101	0.3	571-101-0.3	330	0.1833	0.184376191
571-101	0.6	571-101-0.6	360	0.2000	0.201357921
571-102	0	571-102-0	9.9	0.0055	0.005500028
571-102	0.3	571-102-0.3	13	0.0072	0.007222285
571-102	0.6	571-102-0.6	480	0.2667	0.269932796
571-103	0	571-103-0	560	0.3111	0.316361940
571-103	0.3	571-103-0.3	12	0.0067	0.006666716
571-103	0.6	571-103-0.6	610	0.3389	0.345735651
571-104	0	571-104-0	1100	0.6111	0.657463556
571-104	0.3	571-104-0.3	5	0.0028	0.002777781
571-104	0.6	571-104-0.6	2	0.0011	0.001111111
571-105	0	571-105-0	45	0.0250	0.025002605
571-105	0.3	571-105-0.3	59	0.0328	0.032783650
571-105	0.6	571-105-0.6	560	0.3111	0.316361940
571-106	0	571-106-0	150	0.0833	0.083430087
571-106	0.3	571-106-0.3	19	0.0106	0.010555752
571-106	0.6	571-106-0.6	9.6	0.0053	0.005333359
571-107	0	571-107-0	90	0.0500	0.050020857
571-107	0.3	571-107-0.3	85	0.0472	0.047239790
571-107	0.6	571-107-0.6	240	0.1333	0.133731589
571-108	0	571-108-0	22	0.0122	0.012222527
571-108	0.3	571-108-0.3	33	0.0183	0.018334360
571-108	0.6	571-108-0.6	30	0.0167	0.016667438
571-109	0	571-109-0	180	0.1000	0.100167421
571-109	0.3	571-109-0.3	45	0.0250	0.025002605
571-110	0	571-110-0	64	0.0356	0.035563051
571-110	0.3	571-110-0.3	42	0.0233	0.023335451
571-110	0.6	571-110-0.6	41	0.0228	0.022779748
571-111	0	571-111-0	45	0.0250	0.025002605
571-111	0.3	571-111-0.3	82	0.0456	0.045571327

TABLE C-6
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
SURFACE, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-111	0.6	571-111-0.6	59	0.0328	0.032783650
571-112	0	571-112-0	500	0.2778	0.281480073
571-112	0.3	571-112-0.3	55	0.0306	0.030560312
571-112	0.6	571-112-0.6	110	0.0611	0.061149212
571-113	0	571-113-0	59	0.0328	0.032783650
571-113	0.3	571-113-0.3	17	0.0094	0.009444585
571-113	0.6	571-113-0.6	81	0.0450	0.045015201
571-114	0	571-114-0	120	0.0667	0.066716148
571-114	0.3	571-114-0.3	120	0.0667	0.066716148
571-114	0.6	571-114-0.6	170	0.0944	0.094585415
571-115	0	571-115-0	150	0.0833	0.083430087
571-115	0.3	571-115-0.3	170	0.0944	0.094585415
571-115	0.6	571-115-0.6	170	0.0944	0.094585415
571-116	0	571-116-0	46	0.0256	0.025558338
571-116	0.3	571-116-0.3	30	0.0167	0.016667438
571-116	0.6	571-116-0.6	3	0.0017	0.001666667
571-117	0	571-117-0	24	0.0133	0.013333728
571-117	0.3	571-117-0.3	2	0.0011	0.001111111
571-117	0.6	571-117-0.6	2	0.0011	0.001111111
571-118	0	571-118-0	270	0.1500	0.150568273
571-118	0.3	571-118-0.3	15	0.0083	0.008333430
571-118	0.6	571-118-0.6	57	0.0317	0.031671961
571-119	0	571-119-0	11	0.0061	0.006111149
571-119	0.3	571-119-0.3	4	0.0022	0.002222224
571-119	0.6	571-119-0.6	2	0.0011	0.001111111
571-120	0	571-120-0	1800	1.0000	1.570796327
571-120	0.3	571-120-0.3	98	0.0544	0.054471378
571-120	0.6	571-120-0.6	25	0.0139	0.013889335
571-121	0	571-121-0	230	0.1278	0.128128066
571-121	0.3	571-121-0.3	12	0.0067	0.006666716
571-121	0.6	571-121-0.6	13	0.0072	0.007222285

TABLE C-6
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
SURFACE, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-122	0	571-122-0	320	0.1778	0.178727795
571-122	0.3	571-122-0.3	9.5	0.0053	0.005277802
571-122	0.6	571-122-0.6	6.9	0.0038	0.003833343
571-123	0	571-123-0	190	0.1056	0.105752561
571-123	0.3	571-123-0.3	13	0.0072	0.007222285
571-124	0	571-124-0	130	0.0722	0.072285156
571-124	0.3	571-124-0.3	34	0.0189	0.018890012
571-124	0.6	571-124-0.6	5.9	0.0033	0.003277784

Total Lead	Max TTLC:	1800.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	70		70			
Sample Mean:	151		0.093			
Delta = RT - mean	199					
Appropriate Number of Samples:	3					
Standard Deviation of Sample:	275		0.210			
Standard Deviation of Mean:	33		0.025			
Sample Variance:	75517		0.044			
t-value for 90%:	1.295	Need to Transform Data	1.295			
Upper Confidence Limit for 90%:			0.125			
Reverse Transformation for 90%			225.05	mg/kg	16.45	mg/l
t-value for 95%:			1.669			
Upper Confidence Limit for 95%:			0.135			
Reverse Transformation for 95%			241.79	mg/kg	17.95	mg/l

TABLE C-7
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-101	0.9	571-101-0.9	13	0.0183	0.018310882
571-101	1.5	571-101-1.5	190	0.2676	0.270907173
571-102	0.9	571-102-0.9	16	0.0225	0.022537119
571-102	1.5	571-102-1.5	6.7	0.0094	0.009436760
571-103	0.9	571-103-0.9	6.8	0.0096	0.009577611
571-103	1.5	571-103-1.5	10	0.0141	0.014084973
571-104	0.9	571-104-0.9	14	0.0197	0.019719588
571-104	1.5	571-104-1.5	5.2	0.0073	0.007324009
571-105	0.9	571-105-0.9	11	0.0155	0.015493578
571-105	1.5	571-105-1.5	33	0.0465	0.046495624
571-106	0.9	571-106-0.9	6.7	0.0094	0.009436760
571-107	0.9	571-107-0.9	91	0.1282	0.128522546
571-108	0.9	571-108-0.9	6.6	0.0093	0.009295909
571-108	1.5	571-108-1.5	8.2	0.0115	0.011549553
571-111	0.9	571-111-0.9	7.6	0.0107	0.010704430
571-111	1.5	571-111-1.5	16	0.0225	0.022537119
571-112	0.9	571-112-0.9	710	1.0000	1.570796327
571-112	1.5	571-112-1.5	4	0.0056	0.005633833
571-113	0.9	571-113-0.9	5.3	0.0075	0.007464858
571-113	1.5	571-113-1.5	3	0.0042	0.004225365
571-114	0.9	571-114-0.9	420	0.5915	0.632979052
571-114	1.5	571-114-1.5	12	0.0169	0.016902213
571-115	0.9	571-115-0.9	15	0.0211	0.021128332
571-115	1.5	571-115-1.5	4	0.0056	0.005633833
571-116	0.9	571-116-0.9	78	0.1099	0.110081346
571-116	1.5	571-116-1.5	3	0.0042	0.004225365
571-117	0.9	571-117-0.9	85	0.1197	0.120006147

TABLE C-7
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-117	1.5	571-117-1.5	4	0.0056	0.005633833
571-118	0.9	571-118-0.9	5.9	0.0083	0.008309955
571-118	1.5	571-118-1.5	12	0.0169	0.016902213
571-119	0.9	571-119-0.9	7.7	0.0108	0.010845283
571-119	1.5	571-119-1.5	3	0.0042	0.004225365
571-120	0.9	571-120-0.9	13	0.0183	0.018310882
571-120	1.5	571-120-1.5	38	0.0535	0.053546712
571-121	0.9	571-121-0.9	6.2	0.0087	0.008732505
571-121	1.5	571-121-1.5	8.1	0.0114	0.011408698
571-122	0.9	571-122-0.9	9.5	0.0134	0.013380681
571-122	1.5	571-122-1.5	12	0.0169	0.016902213
571-124	0.9	571-124-0.9	24	0.0338	0.033809258

Total Lead	Max TTLC:	710.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	39		39			
Sample Mean:	49		0.085			
Delta = RT - mean	301					
Appropriate Number of Samples:	0					
Standard Deviation of Sample:	131		0.267			
Standard Deviation of Mean:	21		0.043			
Sample Variance:	17078		0.071			
t-value for 90%:	1.304	Need to Transform Data	1.304			
Upper Confidence Limit for 90%:			0.141			
Reverse Transformation for 90%			99.86	mg/kg	5.24	mg/l
t-value for 95%:			1.687			
Upper Confidence Limit for 95%:			0.157			
Reverse Transformation for 95%			111.33	mg/kg	6.27	mg/l

TABLE C-8
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
SURFACE, 0.3, 0.6, AND 0.9-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-101	0	571-101-0	80	0.0444	0.044459089
571-101	0.3	571-101-0.3	330	0.1833	0.184376191
571-101	0.6	571-101-0.6	360	0.2000	0.201357921
571-101	0.9	571-101-0.9	13	0.0072	0.007222285
571-102	0	571-102-0	9.9	0.0055	0.005500028
571-102	0.3	571-102-0.3	13	0.0072	0.007222285
571-102	0.6	571-102-0.6	480	0.2667	0.269932796
571-102	0.9	571-102-0.9	16	0.0089	0.008889006
571-103	0	571-103-0	560	0.3111	0.316361940
571-103	0.3	571-103-0.3	12	0.0067	0.006666716
571-103	0.6	571-103-0.6	610	0.3389	0.345735651
571-103	0.9	571-103-0.9	6.8	0.0038	0.003777787
571-104	0	571-104-0	1100	0.6111	0.657463556
571-104	0.3	571-104-0.3	5	0.0028	0.002777781
571-104	0.6	571-104-0.6	2	0.0011	0.001111111
571-104	0.9	571-104-0.9	14	0.0078	0.007777856
571-105	0	571-105-0	45	0.0250	0.025002605
571-105	0.3	571-105-0.3	59	0.0328	0.032783650
571-105	0.6	571-105-0.6	560	0.3111	0.316361940
571-105	0.9	571-105-0.9	11	0.0061	0.006111149
571-106	0	571-106-0	150	0.0833	0.083430087
571-106	0.3	571-106-0.3	19	0.0106	0.010555752
571-106	0.6	571-106-0.6	9.6	0.0053	0.005333359
571-106	0.9	571-106-0.9	6.7	0.0037	0.003722231
571-107	0	571-107-0	90	0.0500	0.050020857
571-107	0.3	571-107-0.3	85	0.0472	0.047239790
571-107	0.6	571-107-0.6	240	0.1333	0.133731589
571-107	0.9	571-107-0.9	91	0.0506	0.050577116

TABLE C-8
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
SURFACE, 0.3, 0.6, AND 0.9-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-108	0	571-108-0	22	0.0122	0.012222527
571-108	0.3	571-108-0.3	33	0.0183	0.018334360
571-108	0.6	571-108-0.6	30	0.0167	0.016667438
571-108	0.9	571-108-0.9	6.6	0.0037	0.003666675
571-109	0	571-109-0	180	0.1000	0.100167421
571-109	0.3	571-109-0.3	45	0.0250	0.025002605
571-110	0	571-110-0	64	0.0356	0.035563051
571-110	0.3	571-110-0.3	42	0.0233	0.023335451
571-110	0.6	571-110-0.6	41	0.0228	0.022779748
571-111	0	571-111-0	45	0.0250	0.025002605
571-111	0.3	571-111-0.3	82	0.0456	0.045571327
571-111	0.6	571-111-0.6	59	0.0328	0.032783650
571-111	0.9	571-111-0.9	7.6	0.0042	0.004222235
571-112	0	571-112-0	500	0.2778	0.281480073
571-112	0.3	571-112-0.3	55	0.0306	0.030560312
571-112	0.6	571-112-0.6	110	0.0611	0.061149212
571-112	0.9	571-112-0.9	710	0.3944	0.405463198
571-113	0	571-113-0	59	0.0328	0.032783650
571-113	0.3	571-113-0.3	17	0.0094	0.009444585
571-113	0.6	571-113-0.6	81	0.0450	0.045015201
571-113	0.9	571-113-0.9	5.3	0.0029	0.002944449
571-114	0	571-114-0	120	0.0667	0.066716148
571-114	0.3	571-114-0.3	120	0.0667	0.066716148
571-114	0.6	571-114-0.6	170	0.0944	0.094585415
571-114	0.9	571-114-0.9	420	0.2333	0.235504237
571-115	0	571-115-0	150	0.0833	0.083430087
571-115	0.3	571-115-0.3	170	0.0944	0.094585415
571-115	0.6	571-115-0.6	170	0.0944	0.094585415

TABLE C-8
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
SURFACE, 0.3, 0.6, AND 0.9-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-115	0.9	571-115-0.9	15	0.0083	0.008333430
571-116	0	571-116-0	46	0.0256	0.025558338
571-116	0.3	571-116-0.3	30	0.0167	0.016667438
571-116	0.6	571-116-0.6	3	0.0017	0.001666667
571-116	0.9	571-116-0.9	78	0.0433	0.043346907
571-117	0	571-117-0	24	0.0133	0.013333728
571-117	0.3	571-117-0.3	2	0.0011	0.001111111
571-117	0.6	571-117-0.6	2	0.0011	0.001111111
571-117	0.9	571-117-0.9	85	0.0472	0.047239790
571-118	0	571-118-0	270	0.1500	0.150568273
571-118	0.3	571-118-0.3	15	0.0083	0.008333430
571-118	0.6	571-118-0.6	57	0.0317	0.031671961
571-118	0.9	571-118-0.9	5.9	0.0033	0.003277784
571-119	0	571-119-0	11	0.0061	0.006111149
571-119	0.3	571-119-0.3	4	0.0022	0.002222224
571-119	0.6	571-119-0.6	2	0.0011	0.001111111
571-119	0.9	571-119-0.9	7.7	0.0043	0.004277791
571-120	0	571-120-0	1800	1.0000	1.570796327
571-120	0.3	571-120-0.3	98	0.0544	0.054471378
571-120	0.6	571-120-0.6	25	0.0139	0.013889335
571-120	0.9	571-120-0.9	13	0.0072	0.007222285
571-121	0	571-121-0	230	0.1278	0.128128066
571-121	0.3	571-121-0.3	12	0.0067	0.006666716
571-121	0.6	571-121-0.6	13	0.0072	0.007222285
571-121	0.9	571-121-0.9	6.2	0.0034	0.003444451
571-122	0	571-122-0	320	0.1778	0.178727795
571-122	0.3	571-122-0.3	9.5	0.0053	0.005277802
571-122	0.6	571-122-0.6	6.9	0.0038	0.003833343

TABLE C-8
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
SURFACE, 0.3, 0.6, AND 0.9-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-122	0.9	571-122-0.9	9.5	0.0053	0.005277802
571-123	0	571-123-0	190	0.1056	0.105752561
571-123	0.3	571-123-0.3	13	0.0072	0.007222285
571-124	0	571-124-0	130	0.0722	0.072285156
571-124	0.3	571-124-0.3	34	0.0189	0.018890012
571-124	0.6	571-124-0.6	5.9	0.0033	0.003277784
571-124	0.9	571-124-0.9	24	0.0133	0.013333728

Total Lead	Max TTLC:	1800.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	91		91			
Sample Mean:	133		0.081			
Delta = RT - mean	217					
Appropriate Number of Samples:	2					
Standard Deviation of Sample:	256		0.191			
Standard Deviation of Mean:	27		0.020			
Sample Variance:	65500		0.036			
t-value for 90%:	1.293	Need to Transform Data	1.293			
Upper Confidence Limit for 90%:			0.107			
Reverse Transformation for 90%			192.07	mg/kg	13.50	mg/l
t-value for 95%:			1.665			
Upper Confidence Limit for 95%:			0.114			
Reverse Transformation for 95%			205.37	mg/kg	14.69	mg/l

TABLE C-9
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 100s
1.5-METER LAYER

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-101	1.5	571-101-1.5	190	1.0000	1.570796327
571-102	1.5	571-102-1.5	6.7	0.0353	0.035270470
571-103	1.5	571-103-1.5	10	0.0526	0.052655908
571-104	1.5	571-104-1.5	5.2	0.0274	0.027371839
571-105	1.5	571-105-1.5	33	0.1737	0.174569514
571-108	1.5	571-108-1.5	8.2	0.0432	0.043171304
571-111	1.5	571-111-1.5	16	0.0842	0.084310374
571-112	1.5	571-112-1.5	4	0.0211	0.021054187
571-113	1.5	571-113-1.5	3	0.0158	0.015790130
571-114	1.5	571-114-1.5	12	0.0632	0.063199959
571-115	1.5	571-115-1.5	4	0.0211	0.021054187
571-116	1.5	571-116-1.5	3	0.0158	0.015790130
571-117	1.5	571-117-1.5	4	0.0211	0.021054187
571-118	1.5	571-118-1.5	12	0.0632	0.063199959
571-119	1.5	571-119-1.5	3	0.0158	0.015790130
571-120	1.5	571-120-1.5	38	0.2000	0.201357921
571-121	1.5	571-121-1.5	8.1	0.0426	0.042644503
571-122	1.5	571-122-1.5	12	0.0632	0.063199959

Total Lead	Max TTLC:	190.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	18		18			
Sample Mean:	21		0.141			
Delta = RT - mean	329					
Appropriate Number of Samples:	0					
Standard Deviation of Sample:	43		0.361			
Standard Deviation of Mean:	10		0.085			
Sample Variance:	1883		0.130			
t-value for 90%:	1.333	Need to Transform Data	1.333			
Upper Confidence Limit for 90%:			0.254			
Reverse Transformation for 90%			47.74	mg/kg	0.58	mg/l
t-value for 95%:			1.740			
Upper Confidence Limit for 95%:			0.289			
Reverse Transformation for 95%			54.08	mg/kg	1.15	mg/l

TABLE C-10
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-301	0	571-301-0	150	0.0882	0.088350189
571-301	0.3	571-301-0.3	40	0.0235	0.023531583
571-301	0.6	571-301-0.6	69	0.0406	0.040599388
571-301	0.9	571-301-0.9	15	0.0088	0.008823644
571-301	1.5	571-301-1.5	49	0.0288	0.028827522
571-302	0	571-302-0	310	0.1824	0.183378988
571-302	0.3	571-302-0.3	56	0.0329	0.032947137
571-302	0.6	571-302-0.6	67	0.0394	0.039421975
571-304	0	571-304-0	9.6	0.0056	0.005647089
571-304	0.3	571-304-0.3	36	0.0212	0.021178054
571-304	0.6	571-304-0.6	18	0.0106	0.010588433
571-304	0.9	571-304-0.9	7.9	0.0046	0.004647076
571-305	0	571-305-0	320	0.1882	0.189365010
571-305	0.3	571-305-0.3	6.4	0.0038	0.003764715
571-305	0.6	571-305-0.6	28	0.0165	0.016471333
571-305	0.9	571-305-0.9	670	0.3941	0.405107593
571-305	1.5	571-305-1.5	6.6	0.0039	0.003882363
571-306	0	571-306-0	30	0.0176	0.017647975
571-306	0.3	571-306-0.3	3	0.0018	0.001764707
571-306	0.6	571-306-0.6	6.7	0.0039	0.003941187
571-306	0.9	571-306-0.9	140	0.0824	0.082446313
571-306	1.5	571-306-1.5	6.7	0.0039	0.003941187
571-307	0	571-307-0	15	0.0088	0.008823644
571-307	0.3	571-307-0.3	6.4	0.0038	0.003764715
571-307	0.6	571-307-0.6	4	0.0024	0.002352943
571-307	0.9	571-307-0.9	5.7	0.0034	0.003352947
571-307	1.5	571-307-1.5	54	0.0318	0.031770050
571-308	0	571-308-0	35	0.0206	0.020589690

TABLE C-10
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-308	0.3	571-308-0.3	5.4	0.0032	0.003176476
571-308	0.6	571-308-0.6	4	0.0024	0.002352943
571-308	0.9	571-308-0.9	580	0.3412	0.348168179
571-308	1.5	571-308-1.5	17	0.0100	0.010000167
571-309	0	571-309-0	6.6	0.0039	0.003882363
571-309	0.3	571-309-0.3	4	0.0024	0.002352943
571-309	0.6	571-309-0.6	2	0.0012	0.001176471
571-309	0.9	571-309-0.9	36	0.0212	0.021178054
571-309	1.5	571-309-1.5	8.8	0.0052	0.005176494
571-310	0	571-310-0	59	0.0347	0.034712853
571-310	0.3	571-310-0.3	6.7	0.0039	0.003941187
571-310	0.6	571-310-0.6	7.5	0.0044	0.004411779
571-310	0.9	571-310-0.9	1200	0.7059	0.783668056
571-310	1.5	571-310-1.5	110	0.0647	0.064751120
571-311	0	571-311-0	140	0.0824	0.082446313
571-311	0.3	571-311-0.3	36	0.0212	0.021178054
571-311	0.6	571-311-0.6	250	0.1471	0.147594106
571-312	0	571-312-0	760	0.4471	0.463474576
571-312	0.3	571-312-0.3	83	0.0488	0.048842947
571-312	0.6	571-312-0.6	100	0.0588	0.058857506
571-313	0	571-313-0	610	0.3588	0.367007181
571-313	0.3	571-313-0.3	45	0.0265	0.026473680
571-313	0.6	571-313-0.6	75	0.0441	0.044131971
571-313	0.9	571-313-0.9	69	0.0406	0.040599388
571-313	1.5	571-313-1.5	83	0.0488	0.048842947
571-314	0	571-314-0	79	0.0465	0.046487330
571-314	0.3	571-314-0.3	40	0.0235	0.023531583
571-315	0	571-315-0	380	0.2235	0.225434010

TABLE C-10
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-315	0.3	571-315-0.3	9.3	0.0055	0.005470616
571-315	0.6	571-315-0.6	16	0.0094	0.009411904
571-315	0.9	571-315-0.9	6.6	0.0039	0.003882363
571-315	1.5	571-315-1.5	18	0.0106	0.010588433
571-316	0	571-316-0	120	0.0706	0.070646987
571-316	0.3	571-316-0.3	99	0.0582	0.058268260
571-316	0.6	571-316-0.6	57	0.0335	0.033535697
571-316	0.9	571-316-0.9	39	0.0229	0.022943189
571-317	0	571-317-0	1200	0.7059	0.783668056
571-317	0.3	571-317-0.3	220	0.1294	0.129775733
571-317	0.6	571-317-0.6	120	0.0706	0.070646987
571-317	0.9	571-317-0.9	18	0.0106	0.010588433
571-319	0	571-319-0	16	0.0094	0.009411904
571-319	0.3	571-319-0.3	110	0.0647	0.064751120
571-320	0	571-320-0	1100	0.6471	0.703720508
571-321	0	571-321-0	6.5	0.0038	0.003823539
571-321	0.3	571-321-0.3	100	0.0588	0.058857506
571-321	0.6	571-321-0.6	90	0.0529	0.052965938
571-321	0.9	571-321-0.9	8.1	0.0048	0.004764724
571-321	1.5	571-321-1.5	3	0.0018	0.001764707
571-322	0	571-322-0	18	0.0106	0.010588433
571-322	0.3	571-322-0.3	60	0.0353	0.035301449
571-322	0.6	571-322-0.6	180	0.1059	0.106081200
571-322	0.9	571-322-0.9	5	0.0029	0.002941181
571-323	0	571-323-0	88	0.0518	0.051787852
571-323	0.3	571-323-0.3	14	0.0082	0.008235387
571-323	0.6	571-323-0.6	280	0.1647	0.165459814
571-323	0.9	571-323-0.9	4	0.0024	0.002352943

TABLE C-10
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-323	1.5	571-323-1.5	5	0.0029	0.002941181
571-324	0	571-324-0	35	0.0206	0.020589690
571-324	0.3	571-324-0.3	5	0.0029	0.002941181
571-324	0.6	571-324-0.6	6.5	0.0038	0.003823539
571-324	0.9	571-324-0.9	820	0.4824	0.503338809
571-324	1.5	571-324-1.5	11	0.0065	0.006470633
571-325	0	571-325-0	27	0.0159	0.015883021
571-325	0.3	571-325-0.3	5	0.0029	0.002941181
571-325	0.6	571-325-0.6	1700	1.0000	1.570796312
571-325	0.9	571-325-0.9	5.8	0.0034	0.003411771
571-326	0	571-326-0	440	0.2588	0.261804030
571-326	0.3	571-326-0.3	14	0.0082	0.008235387
571-326	0.6	571-326-0.6	170	0.1000	0.100167421
571-326	0.9	571-326-0.9	19	0.0112	0.011176703
571-326	1.5	571-326-1.5	18	0.0106	0.010588433
571-327	0	571-327-0	54	0.0318	0.031770050
571-327	0.3	571-327-0.3	21	0.0124	0.012353255
571-327	0.6	571-327-0.6	310	0.1824	0.183378988
571-327	0.9	571-327-0.9	62	0.0365	0.036478678
571-328	0	571-328-0	120	0.0706	0.070646987
571-328	0.3	571-328-0.3	9.6	0.0056	0.005647089
571-328	0.6	571-328-0.6	64	0.0376	0.037655957
571-328	0.9	571-328-0.9	3	0.0018	0.001764707
571-328	1.5	571-328-1.5	8.2	0.0048	0.004823548
571-329	0	571-329-0	8.7	0.0051	0.005117669
571-329	0.3	571-329-0.3	6.7	0.0039	0.003941187
571-329	0.6	571-329-0.6	63	0.0371	0.037067311
571-329	0.9	571-329-0.9	4	0.0024	0.002352943

TABLE C-10
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-329	1.5	571-329-1.5	3	0.0018	0.001764707
571-330	0	571-330-0	780	0.4588	0.476670677
571-330	0.3	571-330-0.3	22	0.0129	0.012941538
571-330	0.6	571-330-0.6	140	0.0824	0.082446313
571-330	0.9	571-330-0.9	22	0.0129	0.012941538

Total Lead	Max TTLC:	1700.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	117		117			
Sample Mean:	136		0.088			
Delta = RT - mean	214					
Appropriate Number of Samples:	3					
Standard Deviation of Sample:	278		0.204			
Standard Deviation of Mean:	26		0.019			
Sample Variance:	77537		0.042			
t-value for 90%:	1.289	Need to Transform Data	1.289			
Upper Confidence Limit for 90%:			0.112			
Reverse Transformation for 90%			189.93	mg/kg	13.30	mg/l
t-value for 95%:			1.659			
Upper Confidence Limit for 95%:			0.119			
Reverse Transformation for 95%			201.70	mg/kg	14.36	mg/l

TABLE C-11
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
SURFACE LAYER

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-301	0	571-301-0	150	0.1250	0.125327831
571-302	0	571-302-0	310	0.2583	0.261296576
571-304	0	571-304-0	9.6	0.0080	0.008000085
571-305	0	571-305-0	320	0.2667	0.269932796
571-306	0	571-306-0	30	0.0250	0.025002605
571-307	0	571-307-0	15	0.0125	0.012500326
571-308	0	571-308-0	35	0.0292	0.029170804
571-309	0	571-309-0	6.6	0.0055	0.005500028
571-310	0	571-310-0	59	0.0492	0.049186497
571-311	0	571-311-0	140	0.1167	0.116932961
571-312	0	571-312-0	760	0.6333	0.685852965
571-313	0	571-313-0	610	0.5083	0.533248309
571-314	0	571-314-0	79	0.0658	0.065880980
571-315	0	571-315-0	380	0.3167	0.322213232
571-316	0	571-316-0	120	0.1000	0.100167421
571-317	0	571-317-0	1200	1.0000	1.570796327
571-319	0	571-319-0	16	0.0133	0.013333728
571-320	0	571-320-0	1100	0.9167	1.159658464
571-321	0	571-321-0	6.5	0.0054	0.005416693
571-322	0	571-322-0	18	0.0150	0.015000563
571-323	0	571-323-0	88	0.0733	0.073399221
571-324	0	571-324-0	35	0.0292	0.029170804
571-325	0	571-325-0	27	0.0225	0.022501899
571-326	0	571-326-0	440	0.3667	0.375423608
571-327	0	571-327-0	54	0.0450	0.045015201

TABLE C-11
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
SURFACE LAYER

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-328	0	571-328-0	120	0.1000	0.100167421
571-329	0	571-329-0	8.7	0.0073	0.007250064
571-330	0	571-330-0	780	0.6500	0.707584437

Total Lead	Max TTLC:	1200.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	28		28			
Sample Mean:	247		0.241			
Delta = RT - mean	103					
Appropriate Number of Samples:	19					
Standard Deviation of Sample:	341		0.380			
Standard Deviation of Mean:	64		0.072			
Sample Variance:	116003		0.144			
t-value for 90%:	1.314	Need to Transform Data	1.314			
Upper Confidence Limit for 90%:			0.335			
Reverse Transformation for 90%			394.43	mg/kg	31.61	mg/l
t-value for 95%:			1.703			
Upper Confidence Limit for 95%:			0.363			
Reverse Transformation for 95%			425.94	mg/kg	34.43	mg/l

TABLE C-12
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-301	0.3	571-301-0.3	40	0.0235	0.023531583
571-301	0.6	571-301-0.6	69	0.0406	0.040599388
571-301	0.9	571-301-0.9	15	0.0088	0.008823644
571-301	1.5	571-301-1.5	49	0.0288	0.028827522
571-302	0.3	571-302-0.3	56	0.0329	0.032947137
571-302	0.6	571-302-0.6	67	0.0394	0.039421975
571-304	0.3	571-304-0.3	36	0.0212	0.021178054
571-304	0.6	571-304-0.6	18	0.0106	0.010588433
571-304	0.9	571-304-0.9	7.9	0.0046	0.004647076
571-305	0.3	571-305-0.3	6.4	0.0038	0.003764715
571-305	0.6	571-305-0.6	28	0.0165	0.016471333
571-305	0.9	571-305-0.9	670	0.3941	0.405107593
571-305	1.5	571-305-1.5	6.6	0.0039	0.003882363
571-306	0.3	571-306-0.3	3	0.0018	0.001764707
571-306	0.6	571-306-0.6	6.7	0.0039	0.003941187
571-306	0.9	571-306-0.9	140	0.0824	0.082446313
571-306	1.5	571-306-1.5	6.7	0.0039	0.003941187
571-307	0.3	571-307-0.3	6.4	0.0038	0.003764715
571-307	0.6	571-307-0.6	4	0.0024	0.002352943
571-307	0.9	571-307-0.9	5.7	0.0034	0.003352947
571-307	1.5	571-307-1.5	54	0.0318	0.031770050
571-308	0.3	571-308-0.3	5.4	0.0032	0.003176476
571-308	0.6	571-308-0.6	4	0.0024	0.002352943
571-308	0.9	571-308-0.9	580	0.3412	0.348168179
571-308	1.5	571-308-1.5	17	0.0100	0.010000167
571-309	0.3	571-309-0.3	4	0.0024	0.002352943
571-309	0.6	571-309-0.6	2	0.0012	0.001176471
571-309	0.9	571-309-0.9	36	0.0212	0.021178054

TABLE C-12
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-309	1.5	571-309-1.5	8.8	0.0052	0.005176494
571-310	0.3	571-310-0.3	6.7	0.0039	0.003941187
571-310	0.6	571-310-0.6	7.5	0.0044	0.004411779
571-310	0.9	571-310-0.9	1200	0.7059	0.783668056
571-310	1.5	571-310-1.5	110	0.0647	0.064751120
571-311	0.3	571-311-0.3	36	0.0212	0.021178054
571-311	0.6	571-311-0.6	250	0.1471	0.147594106
571-312	0.3	571-312-0.3	83	0.0488	0.048842947
571-312	0.6	571-312-0.6	100	0.0588	0.058857506
571-313	0.3	571-313-0.3	45	0.0265	0.026473680
571-313	0.6	571-313-0.6	75	0.0441	0.044131971
571-313	0.9	571-313-0.9	69	0.0406	0.040599388
571-313	1.5	571-313-1.5	83	0.0488	0.048842947
571-314	0.3	571-314-0.3	40	0.0235	0.023531583
571-315	0.3	571-315-0.3	9.3	0.0055	0.005470616
571-315	0.6	571-315-0.6	16	0.0094	0.009411904
571-315	0.9	571-315-0.9	6.6	0.0039	0.003882363
571-315	1.5	571-315-1.5	18	0.0106	0.010588433
571-316	0.3	571-316-0.3	99	0.0582	0.058268260
571-316	0.6	571-316-0.6	57	0.0335	0.033535697
571-316	0.9	571-316-0.9	39	0.0229	0.022943189
571-317	0.3	571-317-0.3	220	0.1294	0.129775733
571-317	0.6	571-317-0.6	120	0.0706	0.070646987
571-317	0.9	571-317-0.9	18	0.0106	0.010588433
571-319	0.3	571-319-0.3	110	0.0647	0.064751120
571-321	0.3	571-321-0.3	100	0.0588	0.058857506
571-321	0.6	571-321-0.6	90	0.0529	0.052965938
571-321	0.9	571-321-0.9	8.1	0.0048	0.004764724

TABLE C-12
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-321	1.5	571-321-1.5	3	0.0018	0.001764707
571-322	0.3	571-322-0.3	60	0.0353	0.035301449
571-322	0.6	571-322-0.6	180	0.1059	0.106081200
571-322	0.9	571-322-0.9	5	0.0029	0.002941181
571-323	0.3	571-323-0.3	14	0.0082	0.008235387
571-323	0.6	571-323-0.6	280	0.1647	0.165459814
571-323	0.9	571-323-0.9	4	0.0024	0.002352943
571-323	1.5	571-323-1.5	5	0.0029	0.002941181
571-324	0.3	571-324-0.3	5	0.0029	0.002941181
571-324	0.6	571-324-0.6	6.5	0.0038	0.003823539
571-324	0.9	571-324-0.9	820	0.4824	0.503338809
571-324	1.5	571-324-1.5	11	0.0065	0.006470633
571-325	0.3	571-325-0.3	5	0.0029	0.002941181
571-325	0.6	571-325-0.6	1700	1.0000	1.570796312
571-325	0.9	571-325-0.9	5.8	0.0034	0.003411771
571-326	0.3	571-326-0.3	14	0.0082	0.008235387
571-326	0.6	571-326-0.6	170	0.1000	0.100167421
571-326	0.9	571-326-0.9	19	0.0112	0.011176703
571-326	1.5	571-326-1.5	18	0.0106	0.010588433
571-327	0.3	571-327-0.3	21	0.0124	0.012353255
571-327	0.6	571-327-0.6	310	0.1824	0.183378988
571-327	0.9	571-327-0.9	62	0.0365	0.036478678
571-328	0.3	571-328-0.3	9.6	0.0056	0.005647089
571-328	0.6	571-328-0.6	64	0.0376	0.037655957
571-328	0.9	571-328-0.9	3	0.0018	0.001764707
571-328	1.5	571-328-1.5	8.2	0.0048	0.004823548
571-329	0.3	571-329-0.3	6.7	0.0039	0.003941187
571-329	0.6	571-329-0.6	63	0.0371	0.037067311

TABLE C-12
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-329	0.9	571-329-0.9	4	0.0024	0.002352943
571-329	1.5	571-329-1.5	3	0.0018	0.001764707
571-330	0.3	571-330-0.3	22	0.0129	0.012941538
571-330	0.6	571-330-0.6	140	0.0824	0.082446313
571-330	0.9	571-330-0.9	22	0.0129	0.012941538

Total Lead	Max TTLC:	1700.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	89		89			
Sample Mean:	101		0.067			
Delta = RT - mean	249					
Appropriate Number of Samples:	2					
Standard Deviation of Sample:	248		0.197			
Standard Deviation of Mean:	26		0.021			
Sample Variance:	61489		0.039			
t-value for 90%:	1.293	Need to Transform Data	1.293			
Upper Confidence Limit for 90%:			0.094			
Reverse Transformation for 90%			160.27	mg/kg	10.65	mg/l
t-value for 95%:			1.665			
Upper Confidence Limit for 95%:			0.102			
Reverse Transformation for 95%			173.39	mg/kg	11.82	mg/l

TABLE C-13
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
SURFACE AND 0.3-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-301	0	571-301-0	150	0.1250	0.125327831
571-301	0.3	571-301-0.3	40	0.0333	0.033339509
571-302	0	571-302-0	310	0.2583	0.261296576
571-302	0.3	571-302-0.3	56	0.0467	0.046683622
571-304	0	571-304-0	9.6	0.0080	0.008000085
571-304	0.3	571-304-0.3	36	0.0300	0.030004502
571-305	0	571-305-0	320	0.2667	0.269932796
571-305	0.3	571-305-0.3	6.4	0.0053	0.005333359
571-306	0	571-306-0	30	0.0250	0.025002605
571-306	0.3	571-306-0.3	3	0.0025	0.002500003
571-307	0	571-307-0	15	0.0125	0.012500326
571-307	0.3	571-307-0.3	6.4	0.0053	0.005333359
571-308	0	571-308-0	35	0.0292	0.029170804
571-308	0.3	571-308-0.3	5.4	0.0045	0.004500015
571-309	0	571-309-0	6.6	0.0055	0.005500028
571-309	0.3	571-309-0.3	4	0.0033	0.003333340
571-310	0	571-310-0	59	0.0492	0.049186497
571-310	0.3	571-310-0.3	6.7	0.0056	0.005583362
571-311	0	571-311-0	140	0.1167	0.116932961
571-311	0.3	571-311-0.3	36	0.0300	0.030004502
571-312	0	571-312-0	760	0.6333	0.685852965
571-312	0.3	571-312-0.3	83	0.0692	0.069221935
571-313	0	571-313-0	610	0.5083	0.533248309
571-313	0.3	571-313-0.3	45	0.0375	0.037508795
571-314	0	571-314-0	79	0.0658	0.065880980
571-314	0.3	571-314-0.3	40	0.0333	0.033339509

TABLE C-13
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
SURFACE AND 0.3-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-315	0	571-315-0	380	0.3167	0.322213232
571-315	0.3	571-315-0.3	9.3	0.0078	0.007750078
571-316	0	571-316-0	120	0.1000	0.100167421
571-316	0.3	571-316-0.3	99	0.0825	0.082593874
571-317	0	571-317-0	1200	1.0000	1.570796327
571-317	0.3	571-317-0.3	220	0.1833	0.184376191
571-319	0	571-319-0	16	0.0133	0.013333728
571-319	0.3	571-319-0.3	110	0.0917	0.091795530
571-320	0	571-320-0	1100	0.9167	1.159658464
571-321	0	571-321-0	6.5	0.0054	0.005416693
571-321	0.3	571-321-0.3	100	0.0833	0.083430087
571-322	0	571-322-0	18	0.0150	0.015000563
571-322	0.3	571-322-0.3	60	0.0500	0.050020857
571-323	0	571-323-0	88	0.0733	0.073399221
571-323	0.3	571-323-0.3	14	0.0117	0.011666931
571-324	0	571-324-0	35	0.0292	0.029170804
571-324	0.3	571-324-0.3	5	0.0042	0.004166679
571-325	0	571-325-0	27	0.0225	0.022501899
571-325	0.3	571-325-0.3	5	0.0042	0.004166679
571-326	0	571-326-0	440	0.3667	0.375423608
571-326	0.3	571-326-0.3	14	0.0117	0.011666931
571-327	0	571-327-0	54	0.0450	0.045015201
571-327	0.3	571-327-0.3	21	0.0175	0.017500893
571-328	0	571-328-0	120	0.1000	0.100167421
571-328	0.3	571-328-0.3	9.6	0.0080	0.008000085

TABLE C-13
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
SURFACE AND 0.3-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-329	0	571-329-0	8.7	0.0073	0.007250064
571-329	0.3	571-329-0.3	6.7	0.0056	0.005583362
571-330	0	571-330-0	780	0.6500	0.707584437
571-330	0.3	571-330-0.3	22	0.0183	0.018334360

Total Lead	Max TTLC:	1200.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	55		55			
Sample Mean:	145		0.139			
Delta = RT - mean	205					
Appropriate Number of Samples:	3					
Standard Deviation of Sample:	265		0.290			
Standard Deviation of Mean:	36		0.039			
Sample Variance:	70119		0.084			
t-value for 90%:	1.298	Need to Transform Data	1.298			
Upper Confidence Limit for 90%:			0.189			
Reverse Transformation for 90%			225.84	mg/kg	16.52	mg/l
t-value for 95%:			1.675			
Upper Confidence Limit for 95%:			0.204			
Reverse Transformation for 95%			243.17	mg/kg	18.07	mg/l

TABLE C-14
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
0.6, 0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-301	0.6	571-301-0.6	69	0.0406	0.040599388
571-301	0.9	571-301-0.9	15	0.0088	0.008823644
571-301	1.5	571-301-1.5	49	0.0288	0.028827522
571-302	0.6	571-302-0.6	67	0.0394	0.039421975
571-304	0.6	571-304-0.6	18	0.0106	0.010588433
571-304	0.9	571-304-0.9	7.9	0.0046	0.004647076
571-305	0.6	571-305-0.6	28	0.0165	0.016471333
571-305	0.9	571-305-0.9	670	0.3941	0.405107593
571-305	1.5	571-305-1.5	6.6	0.0039	0.003882363
571-306	0.6	571-306-0.6	6.7	0.0039	0.003941187
571-306	0.9	571-306-0.9	140	0.0824	0.082446313
571-306	1.5	571-306-1.5	6.7	0.0039	0.003941187
571-307	0.6	571-307-0.6	4	0.0024	0.002352943
571-307	0.9	571-307-0.9	5.7	0.0034	0.003352947
571-307	1.5	571-307-1.5	54	0.0318	0.031770050
571-308	0.6	571-308-0.6	4	0.0024	0.002352943
571-308	0.9	571-308-0.9	580	0.3412	0.348168179
571-308	1.5	571-308-1.5	17	0.0100	0.010000167
571-309	0.6	571-309-0.6	2	0.0012	0.001176471
571-309	0.9	571-309-0.9	36	0.0212	0.021178054
571-309	1.5	571-309-1.5	8.8	0.0052	0.005176494
571-310	0.6	571-310-0.6	7.5	0.0044	0.004411779
571-310	0.9	571-310-0.9	1200	0.7059	0.783668056
571-310	1.5	571-310-1.5	110	0.0647	0.064751120
571-311	0.6	571-311-0.6	250	0.1471	0.147594106
571-312	0.6	571-312-0.6	100	0.0588	0.058857506
571-313	0.6	571-313-0.6	75	0.0441	0.044131971
571-313	0.9	571-313-0.9	69	0.0406	0.040599388

TABLE C-14
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
0.6, 0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-313	1.5	571-313-1.5	83	0.0488	0.048842947
571-315	0.6	571-315-0.6	16	0.0094	0.009411904
571-315	0.9	571-315-0.9	6.6	0.0039	0.003882363
571-315	1.5	571-315-1.5	18	0.0106	0.010588433
571-316	0.6	571-316-0.6	57	0.0335	0.033535697
571-316	0.9	571-316-0.9	39	0.0229	0.022943189
571-317	0.6	571-317-0.6	120	0.0706	0.070646987
571-317	0.9	571-317-0.9	18	0.0106	0.010588433
571-321	0.6	571-321-0.6	90	0.0529	0.052965938
571-321	0.9	571-321-0.9	8.1	0.0048	0.004764724
571-321	1.5	571-321-1.5	3	0.0018	0.001764707
571-322	0.6	571-322-0.6	180	0.1059	0.106081200
571-322	0.9	571-322-0.9	5	0.0029	0.002941181
571-323	0.6	571-323-0.6	280	0.1647	0.165459814
571-323	0.9	571-323-0.9	4	0.0024	0.002352943
571-323	1.5	571-323-1.5	5	0.0029	0.002941181
571-324	0.6	571-324-0.6	6.5	0.0038	0.003823539
571-324	0.9	571-324-0.9	820	0.4824	0.503338809
571-324	1.5	571-324-1.5	11	0.0065	0.006470633
571-325	0.6	571-325-0.6	1700	1.0000	1.570796312
571-325	0.9	571-325-0.9	5.8	0.0034	0.003411771
571-326	0.6	571-326-0.6	170	0.1000	0.100167421
571-326	0.9	571-326-0.9	19	0.0112	0.011176703
571-326	1.5	571-326-1.5	18	0.0106	0.010588433
571-327	0.6	571-327-0.6	310	0.1824	0.183378988
571-327	0.9	571-327-0.9	62	0.0365	0.036478678
571-328	0.6	571-328-0.6	64	0.0376	0.037655957
571-328	0.9	571-328-0.9	3	0.0018	0.001764707

TABLE C-14
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
0.6, 0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-328	1.5	571-328-1.5	8.2	0.0048	0.004823548
571-329	0.6	571-329-0.6	63	0.0371	0.037067311
571-329	0.9	571-329-0.9	4	0.0024	0.002352943
571-329	1.5	571-329-1.5	3	0.0018	0.001764707
571-330	0.6	571-330-0.6	140	0.0824	0.082446313
571-330	0.9	571-330-0.9	22	0.0129	0.012941538

Total Lead	Max TTLC:	1700.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	62		62			
Sample Mean:	129		0.087			
Delta = RT - mean	221					
Appropriate Number of Samples:	3					
Standard Deviation of Sample:	292		0.233			
Standard Deviation of Mean:	37		0.030			
Sample Variance:	85244		0.054			
t-value for 90%:	1.296	Need to Transform Data	1.296			
Upper Confidence Limit for 90%:			0.125			
Reverse Transformation for 90%			212.05	mg/kg	15.28	mg/l
t-value for 95%:			1.671			
Upper Confidence Limit for 95%:			0.136			
Reverse Transformation for 95%			230.74	mg/kg	16.96	mg/l

TABLE C-15
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
SURFACE, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-301	0	571-301-0	150	0.0882	0.088350189
571-301	0.3	571-301-0.3	40	0.0235	0.023531583
571-301	0.6	571-301-0.6	69	0.0406	0.040599388
571-302	0	571-302-0	310	0.1824	0.183378988
571-302	0.3	571-302-0.3	56	0.0329	0.032947137
571-302	0.6	571-302-0.6	67	0.0394	0.039421975
571-304	0	571-304-0	9.6	0.0056	0.005647089
571-304	0.3	571-304-0.3	36	0.0212	0.021178054
571-304	0.6	571-304-0.6	18	0.0106	0.010588433
571-305	0	571-305-0	320	0.1882	0.189365010
571-305	0.3	571-305-0.3	6.4	0.0038	0.003764715
571-305	0.6	571-305-0.6	28	0.0165	0.016471333
571-306	0	571-306-0	30	0.0176	0.017647975
571-306	0.3	571-306-0.3	3	0.0018	0.001764707
571-306	0.6	571-306-0.6	6.7	0.0039	0.003941187
571-307	0	571-307-0	15	0.0088	0.008823644
571-307	0.3	571-307-0.3	6.4	0.0038	0.003764715
571-307	0.6	571-307-0.6	4	0.0024	0.002352943
571-308	0	571-308-0	35	0.0206	0.020589690
571-308	0.3	571-308-0.3	5.4	0.0032	0.003176476
571-308	0.6	571-308-0.6	4	0.0024	0.002352943
571-309	0	571-309-0	6.6	0.0039	0.003882363
571-309	0.3	571-309-0.3	4	0.0024	0.002352943
571-309	0.6	571-309-0.6	2	0.0012	0.001176471
571-310	0	571-310-0	59	0.0347	0.034712853
571-310	0.3	571-310-0.3	6.7	0.0039	0.003941187
571-310	0.6	571-310-0.6	7.5	0.0044	0.004411779
571-311	0	571-311-0	140	0.0824	0.082446313
571-311	0.3	571-311-0.3	36	0.0212	0.021178054
571-311	0.6	571-311-0.6	250	0.1471	0.147594106
571-312	0	571-312-0	760	0.4471	0.463474576
571-312	0.3	571-312-0.3	83	0.0488	0.048842947

TABLE C-15
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
SURFACE, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-312	0.6	571-312-0.6	100	0.0588	0.058857506
571-313	0	571-313-0	610	0.3588	0.367007181
571-313	0.3	571-313-0.3	45	0.0265	0.026473680
571-313	0.6	571-313-0.6	75	0.0441	0.044131971
571-314	0	571-314-0	79	0.0465	0.046487330
571-314	0.3	571-314-0.3	40	0.0235	0.023531583
571-315	0	571-315-0	380	0.2235	0.225434010
571-315	0.3	571-315-0.3	9.3	0.0055	0.005470616
571-315	0.6	571-315-0.6	16	0.0094	0.009411904
571-316	0	571-316-0	120	0.0706	0.070646987
571-316	0.3	571-316-0.3	99	0.0582	0.058268260
571-316	0.6	571-316-0.6	57	0.0335	0.033535697
571-317	0	571-317-0	1200	0.7059	0.783668056
571-317	0.3	571-317-0.3	220	0.1294	0.129775733
571-317	0.6	571-317-0.6	120	0.0706	0.070646987
571-319	0	571-319-0	16	0.0094	0.009411904
571-319	0.3	571-319-0.3	110	0.0647	0.064751120
571-320	0	571-320-0	1100	0.6471	0.703720508
571-321	0	571-321-0	6.5	0.0038	0.003823539
571-321	0.3	571-321-0.3	100	0.0588	0.058857506
571-321	0.6	571-321-0.6	90	0.0529	0.052965938
571-322	0	571-322-0	18	0.0106	0.010588433
571-322	0.3	571-322-0.3	60	0.0353	0.035301449
571-322	0.6	571-322-0.6	180	0.1059	0.106081200
571-323	0	571-323-0	88	0.0518	0.051787852
571-323	0.3	571-323-0.3	14	0.0082	0.008235387
571-323	0.6	571-323-0.6	280	0.1647	0.165459814
571-324	0	571-324-0	35	0.0206	0.020589690
571-324	0.3	571-324-0.3	5	0.0029	0.002941181
571-324	0.6	571-324-0.6	6.5	0.0038	0.003823539
571-325	0	571-325-0	27	0.0159	0.015883021
571-325	0.3	571-325-0.3	5	0.0029	0.002941181

TABLE C-15
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
SURFACE, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-325	0.6	571-325-0.6	1700	1.0000	1.570796312
571-326	0	571-326-0	440	0.2588	0.261804030
571-326	0.3	571-326-0.3	14	0.0082	0.008235387
571-326	0.6	571-326-0.6	170	0.1000	0.100167421
571-327	0	571-327-0	54	0.0318	0.031770050
571-327	0.3	571-327-0.3	21	0.0124	0.012353255
571-327	0.6	571-327-0.6	310	0.1824	0.183378988
571-328	0	571-328-0	120	0.0706	0.070646987
571-328	0.3	571-328-0.3	9.6	0.0056	0.005647089
571-328	0.6	571-328-0.6	64	0.0376	0.037655957
571-329	0	571-329-0	8.7	0.0051	0.005117669
571-329	0.3	571-329-0.3	6.7	0.0039	0.003941187
571-329	0.6	571-329-0.6	63	0.0371	0.037067311
571-330	0	571-330-0	780	0.4588	0.476670677
571-330	0.3	571-330-0.3	22	0.0129	0.012941538
571-330	0.6	571-330-0.6	140	0.0824	0.082446313

Total Lead	Max TTLC:	1700.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	80		80			
Sample Mean:	148		0.096			
Delta = RT - mean	202					
Appropriate Number of Samples:	3					
Standard Deviation of Sample:	286		0.219			
Standard Deviation of Mean:	32		0.025			
Sample Variance:	81894		0.048			
t-value for 90%:	1.294	Need to Transform Data	1.294			
Upper Confidence Limit for 90%:			0.128			
Reverse Transformation for 90%			217.08	mg/kg	15.73	mg/l
t-value for 95%:			1.667			
Upper Confidence Limit for 95%:			0.137			
Reverse Transformation for 95%			232.50	mg/kg	17.11	mg/l

TABLE C-16
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-301	0.9	571-301-0.9	15	0.0125	0.012500326
571-301	1.5	571-301-1.5	49	0.0408	0.040844689
571-304	0.9	571-304-0.9	7.9	0.0066	0.006583381
571-305	0.9	571-305-0.9	670	0.5583	0.592375479
571-305	1.5	571-305-1.5	6.6	0.0055	0.005500028
571-306	0.9	571-306-0.9	140	0.1167	0.116932961
571-306	1.5	571-306-1.5	6.7	0.0056	0.005583362
571-307	0.9	571-307-0.9	5.7	0.0048	0.004750018
571-307	1.5	571-307-1.5	54	0.0450	0.045015201
571-308	0.9	571-308-0.9	580	0.4833	0.504458353
571-308	1.5	571-308-1.5	17	0.0142	0.014167141
571-309	0.9	571-309-0.9	36	0.0300	0.030004502
571-309	1.5	571-309-1.5	8.8	0.0073	0.007333399
571-310	0.9	571-310-0.9	1200	1.0000	1.570796327
571-310	1.5	571-310-1.5	110	0.0917	0.091795530
571-313	0.9	571-313-0.9	69	0.0575	0.057531732
571-313	1.5	571-313-1.5	83	0.0692	0.069221935
571-315	0.9	571-315-0.9	6.6	0.0055	0.005500028
571-315	1.5	571-315-1.5	18	0.0150	0.015000563
571-316	0.9	571-316-0.9	39	0.0325	0.032505724
571-317	0.9	571-317-0.9	18	0.0150	0.015000563
571-321	0.9	571-321-0.9	8.1	0.0068	0.006750051
571-321	1.5	571-321-1.5	3	0.0025	0.002500003
571-322	0.9	571-322-0.9	5	0.0042	0.004166679
571-323	0.9	571-323-0.9	4	0.0033	0.003333340
571-323	1.5	571-323-1.5	5	0.0042	0.004166679
571-324	0.9	571-324-0.9	820	0.6833	0.752318481
571-324	1.5	571-324-1.5	11	0.0092	0.009166795
571-325	0.9	571-325-0.9	5.8	0.0048	0.004833352
571-326	0.9	571-326-0.9	19	0.0158	0.015833995

TABLE C-16
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-326	1.5	571-326-1.5	18	0.0150	0.015000563
571-327	0.9	571-327-0.9	62	0.0517	0.051689681
571-328	0.9	571-328-0.9	3	0.0025	0.002500003
571-328	1.5	571-328-1.5	8.2	0.0068	0.006833387
571-329	0.9	571-329-0.9	4	0.0033	0.003333340
571-329	1.5	571-329-1.5	3	0.0025	0.002500003
571-330	0.9	571-330-0.9	22	0.0183	0.018334360

Total Lead	Max TTLC:	1200.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	37		37			
Sample Mean:	112		0.112			
Delta = RT - mean	238					
Appropriate Number of Samples:	2					
Standard Deviation of Sample:	263		0.299			
Standard Deviation of Mean:	43		0.049			
Sample Variance:	69237		0.089			
t-value for 90%:	1.306	Need to Transform Data	1.306			
Upper Confidence Limit for 90%:			0.176			
Reverse Transformation for 90%			210.37	mg/kg	15.13	mg/l
t-value for 95%:			1.689			
Upper Confidence Limit for 95%:			0.195			
Reverse Transformation for 95%			232.59	mg/kg	17.12	mg/l

TABLE C-17
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
SURFACE, 0.3, 0.6, AND 0.9-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-301	0	571-301-0	150	0.0882	0.088350189
571-301	0.3	571-301-0.3	40	0.0235	0.023531583
571-301	0.6	571-301-0.6	69	0.0406	0.040599388
571-301	0.9	571-301-0.9	15	0.0088	0.008823644
571-302	0	571-302-0	310	0.1824	0.183378988
571-302	0.3	571-302-0.3	56	0.0329	0.032947137
571-302	0.6	571-302-0.6	67	0.0394	0.039421975
571-304	0	571-304-0	9.6	0.0056	0.005647089
571-304	0.3	571-304-0.3	36	0.0212	0.021178054
571-304	0.6	571-304-0.6	18	0.0106	0.010588433
571-304	0.9	571-304-0.9	7.9	0.0046	0.004647076
571-305	0	571-305-0	320	0.1882	0.189365010
571-305	0.3	571-305-0.3	6.4	0.0038	0.003764715
571-305	0.6	571-305-0.6	28	0.0165	0.016471333
571-305	0.9	571-305-0.9	670	0.3941	0.405107593
571-306	0	571-306-0	30	0.0176	0.017647975
571-306	0.3	571-306-0.3	3	0.0018	0.001764707
571-306	0.6	571-306-0.6	6.7	0.0039	0.003941187
571-306	0.9	571-306-0.9	140	0.0824	0.082446313
571-307	0	571-307-0	15	0.0088	0.008823644
571-307	0.3	571-307-0.3	6.4	0.0038	0.003764715
571-307	0.6	571-307-0.6	4	0.0024	0.002352943
571-307	0.9	571-307-0.9	5.7	0.0034	0.003352947
571-308	0	571-308-0	35	0.0206	0.020589690
571-308	0.3	571-308-0.3	5.4	0.0032	0.003176476
571-308	0.6	571-308-0.6	4	0.0024	0.002352943
571-308	0.9	571-308-0.9	580	0.3412	0.348168179
571-309	0	571-309-0	6.6	0.0039	0.003882363
571-309	0.3	571-309-0.3	4	0.0024	0.002352943
571-309	0.6	571-309-0.6	2	0.0012	0.001176471

TABLE C-17
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
SURFACE, 0.3, 0.6, AND 0.9-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-309	0.9	571-309-0.9	36	0.0212	0.021178054
571-310	0	571-310-0	59	0.0347	0.034712853
571-310	0.3	571-310-0.3	6.7	0.0039	0.003941187
571-310	0.6	571-310-0.6	7.5	0.0044	0.004411779
571-310	0.9	571-310-0.9	1200	0.7059	0.783668056
571-311	0	571-311-0	140	0.0824	0.082446313
571-311	0.3	571-311-0.3	36	0.0212	0.021178054
571-311	0.6	571-311-0.6	250	0.1471	0.147594106
571-312	0	571-312-0	760	0.4471	0.463474576
571-312	0.3	571-312-0.3	83	0.0488	0.048842947
571-312	0.6	571-312-0.6	100	0.0588	0.058857506
571-313	0	571-313-0	610	0.3588	0.367007181
571-313	0.3	571-313-0.3	45	0.0265	0.026473680
571-313	0.6	571-313-0.6	75	0.0441	0.044131971
571-313	0.9	571-313-0.9	69	0.0406	0.040599388
571-314	0	571-314-0	79	0.0465	0.046487330
571-314	0.3	571-314-0.3	40	0.0235	0.023531583
571-315	0	571-315-0	380	0.2235	0.225434010
571-315	0.3	571-315-0.3	9.3	0.0055	0.005470616
571-315	0.6	571-315-0.6	16	0.0094	0.009411904
571-315	0.9	571-315-0.9	6.6	0.0039	0.003882363
571-316	0	571-316-0	120	0.0706	0.070646987
571-316	0.3	571-316-0.3	99	0.0582	0.058268260
571-316	0.6	571-316-0.6	57	0.0335	0.033535697
571-316	0.9	571-316-0.9	39	0.0229	0.022943189
571-317	0	571-317-0	1200	0.7059	0.783668056
571-317	0.3	571-317-0.3	220	0.1294	0.129775733
571-317	0.6	571-317-0.6	120	0.0706	0.070646987
571-317	0.9	571-317-0.9	18	0.0106	0.010588433
571-319	0	571-319-0	16	0.0094	0.009411904

TABLE C-17
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
SURFACE, 0.3, 0.6, AND 0.9-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-319	0.3	571-319-0.3	110	0.0647	0.064751120
571-320	0	571-320-0	1100	0.6471	0.703720508
571-321	0	571-321-0	6.5	0.0038	0.003823539
571-321	0.3	571-321-0.3	100	0.0588	0.058857506
571-321	0.6	571-321-0.6	90	0.0529	0.052965938
571-321	0.9	571-321-0.9	8.1	0.0048	0.004764724
571-322	0	571-322-0	18	0.0106	0.010588433
571-322	0.3	571-322-0.3	60	0.0353	0.035301449
571-322	0.6	571-322-0.6	180	0.1059	0.106081200
571-322	0.9	571-322-0.9	5	0.0029	0.002941181
571-323	0	571-323-0	88	0.0518	0.051787852
571-323	0.3	571-323-0.3	14	0.0082	0.008235387
571-323	0.6	571-323-0.6	280	0.1647	0.165459814
571-323	0.9	571-323-0.9	4	0.0024	0.002352943
571-324	0	571-324-0	35	0.0206	0.020589690
571-324	0.3	571-324-0.3	5	0.0029	0.002941181
571-324	0.6	571-324-0.6	6.5	0.0038	0.003823539
571-324	0.9	571-324-0.9	820	0.4824	0.503338809
571-325	0	571-325-0	27	0.0159	0.015883021
571-325	0.3	571-325-0.3	5	0.0029	0.002941181
571-325	0.6	571-325-0.6	1700	1.0000	1.570796312
571-325	0.9	571-325-0.9	5.8	0.0034	0.003411771
571-326	0	571-326-0	440	0.2588	0.261804030
571-326	0.3	571-326-0.3	14	0.0082	0.008235387
571-326	0.6	571-326-0.6	170	0.1000	0.100167421
571-326	0.9	571-326-0.9	19	0.0112	0.011176703
571-327	0	571-327-0	54	0.0318	0.031770050
571-327	0.3	571-327-0.3	21	0.0124	0.012353255
571-327	0.6	571-327-0.6	310	0.1824	0.183378988
571-327	0.9	571-327-0.9	62	0.0365	0.036478678

TABLE C-17
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
SURFACE, 0.3, 0.6, AND 0.9-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-328	0	571-328-0	120	0.0706	0.070646987
571-328	0.3	571-328-0.3	9.6	0.0056	0.005647089
571-328	0.6	571-328-0.6	64	0.0376	0.037655957
571-328	0.9	571-328-0.9	3	0.0018	0.001764707
571-329	0	571-329-0	8.7	0.0051	0.005117669
571-329	0.3	571-329-0.3	6.7	0.0039	0.003941187
571-329	0.6	571-329-0.6	63	0.0371	0.037067311
571-329	0.9	571-329-0.9	4	0.0024	0.002352943
571-330	0	571-330-0	780	0.4588	0.476670677
571-330	0.3	571-330-0.3	22	0.0129	0.012941538
571-330	0.6	571-330-0.6	140	0.0824	0.082446313
571-330	0.9	571-330-0.9	22	0.0129	0.012941538

Total Lead	Max TTLC:	1700.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	102		102			
Sample Mean:	152		0.098			
Delta = RT - mean	198					
Appropriate Number of Samples:	4					
Standard Deviation of Sample:	295		0.216			
Standard Deviation of Mean:	29		0.021			
Sample Variance:	86860		0.047			
t-value for 90%:	1.291	Need to Transform Data	1.291			
Upper Confidence Limit for 90%:			0.126			
Reverse Transformation for 90%			213.46	mg/kg	15.41	mg/l
t-value for 95%:			1.662			
Upper Confidence Limit for 95%:			0.134			
Reverse Transformation for 95%			226.85	mg/kg	16.61	mg/l

TABLE C-18
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 300s
1.5-METER LAYER

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-301	1.5	571-301-1.5	49	0.4455	0.461681896
571-305	1.5	571-305-1.5	6.6	0.0600	0.060036058
571-306	1.5	571-306-1.5	6.7	0.0609	0.060946815
571-307	1.5	571-307-1.5	54	0.4909	0.513132926
571-308	1.5	571-308-1.5	17	0.1545	0.155167364
571-309	1.5	571-309-1.5	8.8	0.0800	0.080085580
571-310	1.5	571-310-1.5	110	1.0000	1.570796327
571-313	1.5	571-313-1.5	83	0.7545	0.854961200
571-315	1.5	571-315-1.5	18	0.1636	0.164375584
571-321	1.5	571-321-1.5	3	0.0273	0.027276109
571-323	1.5	571-323-1.5	5	0.0455	0.045470212
571-324	1.5	571-324-1.5	11	0.1000	0.100167421
571-326	1.5	571-326-1.5	18	0.1636	0.164375584
571-328	1.5	571-328-1.5	8.2	0.0745	0.074614670
571-329	1.5	571-329-1.5	3	0.0273	0.027276109

Total Lead	Max TTLC:	110.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	15		15			
Sample Mean:	27		0.291			
Delta = RT - mean	323					
Appropriate Number of Samples:	0					
Standard Deviation of Sample:	33		0.424			
Standard Deviation of Mean:	8		0.110			
Sample Variance:	1065		0.180			
t-value for 90%:	1.345	Need to Transform Data	1.345			
Upper Confidence Limit for 90%:			0.438			
Reverse Transformation for 90%			46.65	mg/kg	0.48	mg/l
t-value for 95%:			1.761			
Upper Confidence Limit for 95%:			0.484			
Reverse Transformation for 95%			51.14	mg/kg	0.88	mg/l

TABLE C-19
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-501	0	571-501-0	300	0.1500	0.150568273
571-501	0.3	571-501-0.3	26	0.0130	0.013000366
571-501	0.6	571-501-0.6	19	0.0095	0.009500143
571-501	0.9	571-501-0.9	50	0.0250	0.025002605
571-502	0	571-502-0	110	0.0550	0.055027767
571-502	0.3	571-502-0.3	9.1	0.0046	0.004550016
571-502	0.6	571-502-0.6	230	0.1150	0.115255000
571-502	0.9	571-502-0.9	5.5	0.0028	0.002750003
571-502	1.5	571-502-1.5	7.8	0.0039	0.003900010
571-503	0	571-503-0	50	0.0250	0.025002605
571-503	0.3	571-503-0.3	19	0.0095	0.009500143
571-503	0.6	571-503-0.6	28	0.0140	0.014000457
571-504	0	571-504-0	38	0.0190	0.019001143
571-504	0.3	571-504-0.3	4	0.0020	0.002000001
571-504	0.6	571-504-0.6	6.5	0.0033	0.003250006
571-504	0.9	571-504-0.9	3	0.0015	0.001500001
571-504	1.5	571-504-1.5	3	0.0015	0.001500001
571-505	0	571-505-0	4	0.0020	0.002000001
571-505	0.3	571-505-0.3	56	0.0280	0.028003660
571-505	0.6	571-505-0.6	140	0.0700	0.070057293
571-505	0.9	571-505-0.9	4	0.0020	0.002000001
571-505	1.5	571-505-1.5	280	0.1400	0.140461415
571-506	0	571-506-0	160	0.0800	0.080085580
571-506	0.3	571-506-0.3	16	0.0080	0.008000085
571-506	0.6	571-506-0.6	17	0.0085	0.008500102
571-506	0.9	571-506-0.9	17	0.0085	0.008500102
571-507	0	571-507-0	1500	0.7500	0.848062079
571-507	0.3	571-507-0.3	5.9	0.0030	0.002950004
571-507	0.6	571-507-0.6	8.7	0.0044	0.004350014
571-507	0.9	571-507-0.9	6.8	0.0034	0.003400007

TABLE C-19
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-507	1.5	571-507-1.5	10	0.0050	0.005000021
571-508	0	571-508-0	830	0.4150	0.427942803
571-508	0.3	571-508-0.3	11	0.0055	0.005500028
571-508	0.6	571-508-0.6	5.8	0.0029	0.002900004
571-508	0.9	571-508-0.9	15	0.0075	0.007500070
571-508	1.5	571-508-1.5	5.1	0.0026	0.002550003
571-509	0	571-509-0	52	0.0260	0.026002930
571-509	0.3	571-509-0.3	5	0.0025	0.002500003
571-509	0.6	571-509-0.6	4	0.0020	0.002000001
571-509	0.9	571-509-0.9	3	0.0015	0.001500001
571-510	0	571-510-0	650	0.3250	0.331011728
571-510	0.3	571-510-0.3	260	0.1300	0.130368980
571-510	0.6	571-510-0.6	92	0.0460	0.046016238
571-511	0	571-511-0	1100	0.5500	0.582364238
571-511	0.3	571-511-0.3	24	0.0120	0.012000288
571-511	0.6	571-511-0.6	7.9	0.0040	0.003950010
571-511	0.9	571-511-0.9	6.4	0.0032	0.003200005
571-511	1.5	571-511-1.5	48	0.0240	0.024002305
571-512	0	571-512-0	830	0.4150	0.427942803
571-512	0.3	571-512-0.3	360	0.1800	0.180986451
571-512	0.6	571-512-0.6	58	0.0290	0.029004066
571-512	0.9	571-512-0.9	120	0.0600	0.060036058
571-512	1.5	571-512-1.5	29	0.0145	0.014500508
571-513	0	571-513-0	19	0.0095	0.009500143
571-513	0.3	571-513-0.3	57	0.0285	0.028503860
571-513	0.6	571-513-0.6	210	0.1050	0.105193901
571-513	0.9	571-513-0.9	150	0.0750	0.075070491
571-513	1.5	571-513-1.5	6.6	0.0033	0.003300006
571-514	0	571-514-0	1500	0.7500	0.848062079
571-514	0.3	571-514-0.3	740	0.3700	0.379009021

TABLE C-19
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-514	0.6	571-514-0.6	370	0.1850	0.186071862
571-514	0.9	571-514-0.9	490	0.2450	0.247519693
571-515	0	571-515-0	860	0.4300	0.444492777
571-515	0.3	571-515-0.3	21	0.0105	0.010500193
571-515	0.6	571-515-0.6	29	0.0145	0.014500508
571-515	0.9	571-515-0.9	12	0.0060	0.006000036
571-516	0	571-516-0	980	0.4900	0.512089753
571-516	0.3	571-516-0.3	210	0.1050	0.105193901
571-516	0.6	571-516-0.6	7.8	0.0039	0.003900010
571-516	0.9	571-516-0.9	130	0.0650	0.065045858
571-517	0	571-517-0	540	0.2700	0.273393031
571-517	0.3	571-517-0.3	500	0.2500	0.252680255
571-517	0.6	571-517-0.6	300	0.1500	0.150568273
571-517	0.9	571-517-0.9	250	0.1250	0.125327831
571-517	1.5	571-517-1.5	350	0.1750	0.175905768
571-518	0	571-518-0	5.4	0.0027	0.002700003
571-518	0.3	571-518-0.3	880	0.4400	0.455598673
571-518	0.6	571-518-0.6	110	0.0550	0.055027767
571-518	0.9	571-518-0.9	300	0.1500	0.150568273
571-519	0	571-519-0	94	0.0470	0.047017321
571-519	0.3	571-519-0.3	140	0.0700	0.070057293
571-519	0.6	571-519-0.6	220	0.1100	0.110223050
571-520	0	571-520-0	510	0.2550	0.257847703
571-520	0.3	571-520-0.3	490	0.2450	0.247519693
571-521	0	571-521-0	2000	1.0000	1.570796327
571-521	0.3	571-521-0.3	42	0.0210	0.021001544
571-521	0.6	571-521-0.6	420	0.2100	0.211574960
571-522	0	571-522-0	40	0.0200	0.020001334
571-522	0.3	571-522-0.3	5	0.0025	0.002500003
571-522	0.6	571-522-0.6	330	0.1650	0.165758011

TABLE C-19
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-522	0.9	571-522-0.9	4	0.0020	0.002000001
571-522	1.5	571-522-1.5	3	0.0015	0.001500001
571-523	0	571-523-0	190	0.0950	0.095143479
571-523	0.3	571-523-0.3	700	0.3500	0.357571104
571-524	0	571-524-0	1900	0.9500	1.253235898
571-524	0.3	571-524-0.3	37	0.0185	0.018501055
571-524	0.6	571-524-0.6	19	0.0095	0.009500143
571-524	0.9	571-524-0.9	230	0.1150	0.115255000
571-524	1.5	571-524-1.5	17	0.0085	0.008500102
571-525	0	571-525-0	220	0.1100	0.110223050
571-525	0.3	571-525-0.3	230	0.1150	0.115255000
571-525	0.6	571-525-0.6	42	0.0210	0.021001544
571-525	0.9	571-525-0.9	5.9	0.0030	0.002950004
571-525	1.5	571-525-1.5	780	0.3900	0.400631593
571-526	0	571-526-0	870	0.4350	0.450038277
571-526	0.3	571-526-0.3	170	0.0850	0.085102688
571-526	0.6	571-526-0.6	15	0.0075	0.007500070
571-526	0.9	571-526-0.9	18	0.0090	0.009000122
571-526	1.5	571-526-1.5	38	0.0190	0.019001143
571-527	0	571-527-0	75	0.0375	0.037508795
571-527	0.3	571-527-0.3	82	0.0410	0.041011496
571-527	0.6	571-527-0.6	71	0.0355	0.035507461
571-527	0.9	571-527-0.9	62	0.0310	0.031004967
571-528	0	571-528-0	510	0.2550	0.257847703
571-528	0.3	571-528-0.3	86	0.0430	0.043013262
571-528	0.6	571-528-0.6	16	0.0080	0.008000085
571-528	0.9	571-528-0.9	64	0.0320	0.032005464
571-528	1.5	571-528-1.5	660	0.3300	0.336303575
571-529	0	571-529-0	49	0.0245	0.024502452
571-529	0.3	571-529-0.3	62	0.0310	0.031004967

TABLE C-19
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-529	0.6	571-529-0.6	57	0.0285	0.028503860
571-529	0.9	571-529-0.9	44	0.0220	0.022001775
571-529	1.5	571-529-1.5	28	0.0140	0.014000457
571-530	0	571-530-0	660	0.3300	0.336303575
571-530	0.3	571-530-0.3	370	0.1850	0.186071862
571-530	0.6	571-530-0.6	470	0.2350	0.237218568

Total Lead	Max TTLC:	2000.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	126		126			
Sample Mean:	237		0.128			
Delta = RT - mean	113					
Appropriate Number of Samples:	18					
Standard Deviation of Sample:	374		0.231			
Standard Deviation of Mean:	33		0.021			
Sample Variance:	140111		0.053			
t-value for 90%:	1.282	Need to Transform Data	1.282			
Upper Confidence Limit for 90%:			0.155			
Reverse Transformation for 90%			308.46	mg/kg	23.91	mg/l
t-value for 95%:			1.645			
Upper Confidence Limit for 95%:			0.162			
Reverse Transformation for 95%			323.22	mg/kg	25.23	mg/l

TABLE C-20
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
SURFACE LAYER

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-501	0	571-501-0	300	0.1500	0.150568273
571-502	0	571-502-0	110	0.0550	0.055027767
571-503	0	571-503-0	50	0.0250	0.025002605
571-504	0	571-504-0	38	0.0190	0.019001143
571-505	0	571-505-0	4	0.0020	0.002000001
571-506	0	571-506-0	160	0.0800	0.080085580
571-507	0	571-507-0	1500	0.7500	0.848062079
571-508	0	571-508-0	830	0.4150	0.427942803
571-509	0	571-509-0	52	0.0260	0.026002930
571-510	0	571-510-0	650	0.3250	0.331011728
571-511	0	571-511-0	1100	0.5500	0.582364238
571-512	0	571-512-0	830	0.4150	0.427942803
571-513	0	571-513-0	19	0.0095	0.009500143
571-514	0	571-514-0	1500	0.7500	0.848062079
571-515	0	571-515-0	860	0.4300	0.444492777
571-516	0	571-516-0	980	0.4900	0.512089753
571-517	0	571-517-0	540	0.2700	0.273393031
571-518	0	571-518-0	5.4	0.0027	0.002700003
571-519	0	571-519-0	94	0.0470	0.047017321
571-520	0	571-520-0	510	0.2550	0.257847703
571-521	0	571-521-0	2000	1.0000	1.570796327
571-522	0	571-522-0	40	0.0200	0.020001334
571-523	0	571-523-0	190	0.0950	0.095143479
571-524	0	571-524-0	1900	0.9500	1.253235898
571-525	0	571-525-0	220	0.1100	0.110223050
571-526	0	571-526-0	870	0.4350	0.450038277

TABLE C-20
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
SURFACE LAYER

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-527	0	571-527-0	75	0.0375	0.037508795
571-528	0	571-528-0	510	0.2550	0.257847703
571-529	0	571-529-0	49	0.0245	0.024502452
571-530	0	571-530-0	660	0.3300	0.336303575

*571-521-0 was deleted as an outlier.

Total Lead	Max TTLC:	2000.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	30		30			
Sample Mean:	555		0.318			
Delta = RT - mean	-205					
Appropriate Number of Samples:	14					
Standard Deviation of Sample:	582		0.385			
Standard Deviation of Mean:	106		0.070			
Sample Variance:	338812		0.149			
t-value for 90%:	1.311	Need to Transform Data	1.311			
Upper Confidence Limit for 90%:			0.410			
Reverse Transformation for 90%			796.84	mg/kg	67.62	mg/l
t-value for 95%:			1.699			
Upper Confidence Limit for 95%:			0.437			
Reverse Transformation for 95%			846.63	mg/kg	72.08	mg/l

TABLE C-21
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-501	0.3	571-501-0.3	26	0.0295	0.029549755
571-501	0.6	571-501-0.6	19	0.0216	0.021592587
571-501	0.9	571-501-0.9	50	0.0568	0.056848797
571-502	0.3	571-502-0.3	9.1	0.0103	0.010341093
571-502	0.6	571-502-0.6	230	0.2614	0.264434676
571-502	0.9	571-502-0.9	5.5	0.0063	0.006250041
571-502	1.5	571-502-1.5	7.8	0.0089	0.008863752
571-503	0.3	571-503-0.3	19	0.0216	0.021592587
571-503	0.6	571-503-0.6	28	0.0318	0.031823553
571-504	0.3	571-504-0.3	4	0.0045	0.004545470
571-504	0.6	571-504-0.6	6.5	0.0074	0.007386431
571-504	0.9	571-504-0.9	3	0.0034	0.003409098
571-504	1.5	571-504-1.5	3	0.0034	0.003409098
571-505	0.3	571-505-0.3	56	0.0636	0.063679392
571-505	0.6	571-505-0.6	140	0.1591	0.159769766
571-505	0.9	571-505-0.9	4	0.0045	0.004545470
571-505	1.5	571-505-1.5	280	0.3182	0.323811015
571-506	0.3	571-506-0.3	16	0.0182	0.018182820
571-506	0.6	571-506-0.6	17	0.0193	0.019319384
571-506	0.9	571-506-0.9	17	0.0193	0.019319384
571-507	0.3	571-507-0.3	5.9	0.0067	0.006704596
571-507	0.6	571-507-0.6	8.7	0.0099	0.009886525
571-507	0.9	571-507-0.9	6.8	0.0077	0.007727350
571-507	1.5	571-507-1.5	10	0.0114	0.011363881
571-508	0.3	571-508-0.3	11	0.0125	0.012500326
571-508	0.6	571-508-0.6	5.8	0.0066	0.006590957
571-508	0.9	571-508-0.9	15	0.0170	0.017046280
571-508	1.5	571-508-1.5	5.1	0.0058	0.005795487

TABLE C-21
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-509	0.3	571-509-0.3	5	0.0057	0.005681849
571-509	0.6	571-509-0.6	4	0.0045	0.004545470
571-509	0.9	571-509-0.9	3	0.0034	0.003409098
571-510	0.3	571-510-0.3	260	0.2955	0.299931270
571-510	0.6	571-510-0.6	92	0.1045	0.104736840
571-511	0.3	571-511-0.3	24	0.0273	0.027276109
571-511	0.6	571-511-0.6	7.9	0.0090	0.008977393
571-511	0.9	571-511-0.9	6.4	0.0073	0.007272791
571-511	1.5	571-511-1.5	48	0.0545	0.054572538
571-512	0.3	571-512-0.3	360	0.4091	0.421457568
571-512	0.6	571-512-0.6	58	0.0659	0.065956903
571-512	0.9	571-512-0.9	120	0.1364	0.136789827
571-512	1.5	571-512-1.5	29	0.0330	0.032960513
571-513	0.3	571-513-0.3	57	0.0648	0.064818105
571-513	0.6	571-513-0.6	210	0.2386	0.240961403
571-513	0.9	571-513-0.9	150	0.1705	0.171290947
571-513	1.5	571-513-1.5	6.6	0.0075	0.007500070
571-514	0.3	571-514-0.3	740	0.8409	0.998960879
571-514	0.6	571-514-0.6	370	0.4205	0.433946241
571-514	0.9	571-514-0.9	490	0.5568	0.590550272
571-515	0.3	571-515-0.3	21	0.0239	0.023865902
571-515	0.6	571-515-0.6	29	0.0330	0.032960513
571-515	0.9	571-515-0.9	12	0.0136	0.013636786
571-516	0.3	571-516-0.3	210	0.2386	0.240961403
571-516	0.6	571-516-0.6	7.8	0.0089	0.008863752
571-516	0.9	571-516-0.9	130	0.1477	0.148269936
571-517	0.3	571-517-0.3	500	0.5682	0.604294693
571-517	0.6	571-517-0.6	300	0.3409	0.347883747

TABLE C-21
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-517	0.9	571-517-0.9	250	0.2841	0.288058137
571-517	1.5	571-517-1.5	350	0.3977	0.409038435
571-518	0.3	571-518-0.3	880	1.0000	1.570796327
571-518	0.6	571-518-0.6	110	0.1250	0.125327831
571-518	0.9	571-518-0.9	300	0.3409	0.347883747
571-519	0.3	571-519-0.3	140	0.1591	0.159769766
571-519	0.6	571-519-0.6	220	0.2500	0.252680255
571-520	0.3	571-520-0.3	490	0.5568	0.590550272
571-521	0.3	571-521-0.3	42	0.0477	0.047745411
571-521	0.6	571-521-0.6	420	0.4773	0.497548524
571-522	0.3	571-522-0.3	5	0.0057	0.005681849
571-522	0.6	571-522-0.6	330	0.3750	0.384396774
571-522	0.9	571-522-0.9	4	0.0045	0.004545470
571-522	1.5	571-522-1.5	3	0.0034	0.003409098
571-523	0.3	571-523-0.3	700	0.7955	0.919757269
571-524	0.3	571-524-0.3	37	0.0420	0.042057853
571-524	0.6	571-524-0.6	19	0.0216	0.021592587
571-524	0.9	571-524-0.9	230	0.2614	0.264434676
571-524	1.5	571-524-1.5	17	0.0193	0.019319384
571-525	0.3	571-525-0.3	230	0.2614	0.264434676
571-525	0.6	571-525-0.6	42	0.0477	0.047745411
571-525	0.9	571-525-0.9	5.9	0.0067	0.006704596
571-525	1.5	571-525-1.5	780	0.8864	1.089431042
571-526	0.3	571-526-0.3	170	0.1932	0.194404022
571-526	0.6	571-526-0.6	15	0.0170	0.017046280
571-526	0.9	571-526-0.9	18	0.0205	0.020455972
571-526	1.5	571-526-1.5	38	0.0432	0.043195249
571-527	0.3	571-527-0.3	82	0.0932	0.093317195

TABLE C-21
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-527	0.6	571-527-0.6	71	0.0807	0.080769609
571-527	0.9	571-527-0.9	62	0.0705	0.070512964
571-528	0.3	571-528-0.3	86	0.0977	0.097883504
571-528	0.6	571-528-0.6	16	0.0182	0.018182820
571-528	0.9	571-528-0.9	64	0.0727	0.072791538
571-528	1.5	571-528-1.5	660	0.7500	0.848062079
571-529	0.3	571-529-0.3	62	0.0705	0.070512964
571-529	0.6	571-529-0.6	57	0.0648	0.064818105
571-529	0.9	571-529-0.9	44	0.0500	0.050020857
571-529	1.5	571-529-1.5	28	0.0318	0.031823553
571-530	0.3	571-530-0.3	370	0.4205	0.433946241
571-530	0.6	571-530-0.6	470	0.5341	0.563432078

Total Lead	Max TTLC:	880.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	96		96			
Sample Mean:	137		0.171			
Delta = RT - mean	213					
Appropriate Number of Samples:	1					
Standard Deviation of Sample:	197		0.273			
Standard Deviation of Mean:	20		0.028			
Sample Variance:	38969		0.075			
t-value for 90%:	1.292	Need to Transform Data	1.292			
Upper Confidence Limit for 90%:			0.207			
Reverse Transformation for 90%			180.69	mg/kg	12.48	mg/l
t-value for 95%:			1.663			
Upper Confidence Limit for 95%:			0.217			
Reverse Transformation for 95%			189.59	mg/kg	13.27	mg/l

TABLE C-22
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
SURFACE LAYER AND 0.3-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-501	0	571-501-0	300	0.1500	0.150568273
571-501	0.3	571-501-0.3	26	0.0130	0.013000366
571-502	0	571-502-0	110	0.0550	0.055027767
571-502	0.3	571-502-0.3	9.1	0.0046	0.004550016
571-503	0	571-503-0	50	0.0250	0.025002605
571-503	0.3	571-503-0.3	19	0.0095	0.009500143
571-504	0	571-504-0	38	0.0190	0.019001143
571-504	0.3	571-504-0.3	4	0.0020	0.002000001
571-505	0	571-505-0	4	0.0020	0.002000001
571-505	0.3	571-505-0.3	56	0.0280	0.028003660
571-506	0	571-506-0	160	0.0800	0.080085580
571-506	0.3	571-506-0.3	16	0.0080	0.008000085
571-507	0	571-507-0	1500	0.7500	0.848062079
571-507	0.3	571-507-0.3	5.9	0.0030	0.002950004
571-508	0	571-508-0	830	0.4150	0.427942803
571-508	0.3	571-508-0.3	11	0.0055	0.005500028
571-509	0	571-509-0	52	0.0260	0.026002930
571-509	0.3	571-509-0.3	5	0.0025	0.002500003
571-510	0	571-510-0	650	0.3250	0.331011728
571-510	0.3	571-510-0.3	260	0.1300	0.130368980
571-511	0	571-511-0	1100	0.5500	0.582364238
571-511	0.3	571-511-0.3	24	0.0120	0.012000288
571-512	0	571-512-0	830	0.4150	0.427942803
571-512	0.3	571-512-0.3	360	0.1800	0.180986451
571-513	0	571-513-0	19	0.0095	0.009500143
571-513	0.3	571-513-0.3	57	0.0285	0.028503860
571-514	0	571-514-0	1500	0.7500	0.848062079
571-514	0.3	571-514-0.3	740	0.3700	0.379009021

TABLE C-22
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
SURFACE LAYER AND 0.3-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-515	0	571-515-0	860	0.4300	0.444492777
571-515	0.3	571-515-0.3	21	0.0105	0.010500193
571-516	0	571-516-0	980	0.4900	0.512089753
571-516	0.3	571-516-0.3	210	0.1050	0.105193901
571-517	0	571-517-0	540	0.2700	0.273393031
571-517	0.3	571-517-0.3	500	0.2500	0.252680255
571-518	0	571-518-0	5.4	0.0027	0.002700003
571-518	0.3	571-518-0.3	880	0.4400	0.455598673
571-519	0	571-519-0	94	0.0470	0.047017321
571-519	0.3	571-519-0.3	140	0.0700	0.070057293
571-520	0	571-520-0	510	0.2550	0.257847703
571-520	0.3	571-520-0.3	490	0.2450	0.247519693
571-521	0	571-521-0	2000	1.0000	1.570796327
571-521	0.3	571-521-0.3	42	0.0210	0.021001544
571-522	0	571-522-0	40	0.0200	0.020001334
571-522	0.3	571-522-0.3	5	0.0025	0.002500003
571-523	0	571-523-0	190	0.0950	0.095143479
571-523	0.3	571-523-0.3	700	0.3500	0.357571104
571-524	0	571-524-0	1900	0.9500	1.253235898
571-524	0.3	571-524-0.3	37	0.0185	0.018501055
571-525	0	571-525-0	220	0.1100	0.110223050
571-525	0.3	571-525-0.3	230	0.1150	0.115255000
571-526	0	571-526-0	870	0.4350	0.450038277
571-526	0.3	571-526-0.3	170	0.0850	0.085102688
571-527	0	571-527-0	75	0.0375	0.037508795
571-527	0.3	571-527-0.3	82	0.0410	0.041011496
571-528	0	571-528-0	510	0.2550	0.257847703
571-528	0.3	571-528-0.3	86	0.0430	0.043013262

TABLE C-22
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
SURFACE LAYER AND 0.3-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-529	0	571-529-0	49	0.0245	0.024502452
571-529	0.3	571-529-0.3	62	0.0310	0.031004967
571-530	0	571-530-0	660	0.3300	0.336303575
571-530	0.3	571-530-0.3	370	0.1850	0.186071862

Total Lead	Max TTLC:	2000.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	60		60			
Sample Mean:	371		0.206			
Delta = RT - mean	-21					
Appropriate Number of Samples:	873					
Standard Deviation of Sample:	480		0.306			
Standard Deviation of Mean:	62		0.039			
Sample Variance:	230718		0.093			
t-value for 90%:	1.296	Need to Transform Data	1.296			
Upper Confidence Limit for 90%:			0.257			
Reverse Transformation for 90%			509.14	mg/kg	41.87	mg/l
t-value for 95%:			1.672			
Upper Confidence Limit for 95%:			0.272			
Reverse Transformation for 95%			537.79	mg/kg	44.44	mg/l

TABLE C-23
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
0.6, 0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-501	0.6	571-501-0.6	19	0.0244	0.024361384
571-501	0.9	571-501-0.9	50	0.0641	0.064146547
571-502	0.6	571-502-0.6	230	0.2949	0.299321345
571-502	0.9	571-502-0.9	5.5	0.0071	0.007051340
571-502	1.5	571-502-1.5	7.8	0.0100	0.010000167
571-503	0.6	571-503-0.6	28	0.0359	0.035905150
571-504	0.6	571-504-0.6	6.5	0.0083	0.008333430
571-504	0.9	571-504-0.9	3	0.0038	0.003846163
571-504	1.5	571-504-1.5	3	0.0038	0.003846163
571-505	0.6	571-505-0.6	140	0.1795	0.180465140
571-505	0.9	571-505-0.9	4	0.0051	0.005128228
571-505	1.5	571-505-1.5	280	0.3590	0.367168776
571-506	0.6	571-506-0.6	17	0.0218	0.021796598
571-506	0.9	571-506-0.9	17	0.0218	0.021796598
571-507	0.6	571-507-0.6	8.7	0.0112	0.011154077
571-507	0.9	571-507-0.9	6.8	0.0087	0.008718059
571-507	1.5	571-507-1.5	10	0.0128	0.012820864
571-508	0.6	571-508-0.6	5.8	0.0074	0.007435966
571-508	0.9	571-508-0.9	15	0.0192	0.019231955
571-508	1.5	571-508-1.5	5.1	0.0065	0.006538508
571-509	0.6	571-509-0.6	4	0.0051	0.005128228
571-509	0.9	571-509-0.9	3	0.0038	0.003846163
571-510	0.6	571-510-0.6	92	0.1179	0.118223926
571-511	0.6	571-511-0.6	7.9	0.0101	0.010128378
571-511	0.9	571-511-0.9	6.4	0.0082	0.008205220
571-511	1.5	571-511-1.5	48	0.0615	0.061577369
571-512	0.6	571-512-0.6	58	0.0744	0.074427670
571-512	0.9	571-512-0.9	120	0.1538	0.154459598

TABLE C-23
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
0.6, 0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-512	1.5	571-512-1.5	29	0.0372	0.037188058
571-513	0.6	571-513-0.6	210	0.2692	0.272594219
571-513	0.9	571-513-0.9	150	0.1923	0.193513193
571-513	1.5	571-513-1.5	6.6	0.0085	0.008461639
571-514	0.6	571-514-0.6	370	0.4744	0.494235725
571-514	0.9	571-514-0.9	490	0.6282	0.679244166
571-515	0.6	571-515-0.6	29	0.0372	0.037188058
571-515	0.9	571-515-0.9	12	0.0154	0.015385222
571-516	0.6	571-516-0.6	7.8	0.0100	0.010000167
571-516	0.9	571-516-0.9	130	0.1667	0.167448079
571-517	0.6	571-517-0.6	300	0.3846	0.394791120
571-517	0.9	571-517-0.9	250	0.3205	0.326270819
571-517	1.5	571-517-1.5	350	0.4487	0.465330236
571-518	0.6	571-518-0.6	110	0.1410	0.141497333
571-518	0.9	571-518-0.9	300	0.3846	0.394791120
571-519	0.6	571-519-0.6	220	0.2821	0.285931529
571-521	0.6	571-521-0.6	420	0.5385	0.568610300
571-522	0.6	571-522-0.6	330	0.4231	0.436838450
571-522	0.9	571-522-0.9	4	0.0051	0.005128228
571-522	1.5	571-522-1.5	3	0.0038	0.003846163
571-524	0.6	571-524-0.6	19	0.0244	0.024361384
571-524	0.9	571-524-0.9	230	0.2949	0.299321345
571-524	1.5	571-524-1.5	17	0.0218	0.021796598
571-525	0.6	571-525-0.6	42	0.0538	0.053872208
571-525	0.9	571-525-0.9	5.9	0.0076	0.007564175
571-525	1.5	571-525-1.5	780	1.0000	1.570796327
571-526	0.6	571-526-0.6	15	0.0192	0.019231955
571-526	0.9	571-526-0.9	18	0.0231	0.023078972

TABLE C-23
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
0.6, 0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-526	1.5	571-526-1.5	38	0.0487	0.048737241
571-527	0.6	571-527-0.6	71	0.0910	0.091151813
571-527	0.9	571-527-0.9	62	0.0795	0.079571121
571-528	0.6	571-528-0.6	16	0.0205	0.020514259
571-528	0.9	571-528-0.9	64	0.0821	0.082143629
571-528	1.5	571-528-1.5	660	0.8462	1.008726524
571-529	0.6	571-529-0.6	57	0.0731	0.073142121
571-529	0.9	571-529-0.9	44	0.0564	0.056440217
571-529	1.5	571-529-1.5	28	0.0359	0.035905150
571-530	0.6	571-530-0.6	470	0.6026	0.646710104

Total Lead	Max TTLC:	780.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	66		66			
Sample Mean:	115		0.161			
Delta = RT - mean	235					
Appropriate Number of Samples:	1					
Standard Deviation of Sample:	168		0.270			
Standard Deviation of Mean:	21		0.033			
Sample Variance:	28204		0.073			
t-value for 90%:	1.295	Need to Transform Data	1.295			
Upper Confidence Limit for 90%:			0.204			
Reverse Transformation for 90%			158.35	mg/kg	10.48	mg/l
t-value for 95%:			1.670			
Upper Confidence Limit for 95%:			0.217			
Reverse Transformation for 95%			167.84	mg/kg	11.33	mg/l

TABLE C-24
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
SURFACE LAYER, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-501	0	571-501-0	300	0.1500	0.150568273
571-501	0.3	571-501-0.3	26	0.0130	0.013000366
571-501	0.6	571-501-0.6	19	0.0095	0.009500143
571-502	0	571-502-0	110	0.0550	0.055027767
571-502	0.3	571-502-0.3	9.1	0.0046	0.004550016
571-502	0.6	571-502-0.6	230	0.1150	0.115255000
571-503	0	571-503-0	50	0.0250	0.025002605
571-503	0.3	571-503-0.3	19	0.0095	0.009500143
571-503	0.6	571-503-0.6	28	0.0140	0.014000457
571-504	0	571-504-0	38	0.0190	0.019001143
571-504	0.3	571-504-0.3	4	0.0020	0.002000001
571-504	0.6	571-504-0.6	6.5	0.0033	0.003250006
571-505	0	571-505-0	4	0.0020	0.002000001
571-505	0.3	571-505-0.3	56	0.0280	0.028003660
571-505	0.6	571-505-0.6	140	0.0700	0.070057293
571-506	0	571-506-0	160	0.0800	0.080085580
571-506	0.3	571-506-0.3	16	0.0080	0.008000085
571-506	0.6	571-506-0.6	17	0.0085	0.008500102
571-507	0	571-507-0	1500	0.7500	0.848062079
571-507	0.3	571-507-0.3	5.9	0.0030	0.002950004
571-507	0.6	571-507-0.6	8.7	0.0044	0.004350014
571-508	0	571-508-0	830	0.4150	0.427942803
571-508	0.3	571-508-0.3	11	0.0055	0.005500028
571-508	0.6	571-508-0.6	5.8	0.0029	0.002900004
571-509	0	571-509-0	52	0.0260	0.026002930
571-509	0.3	571-509-0.3	5	0.0025	0.002500003
571-509	0.6	571-509-0.6	4	0.0020	0.002000001
571-510	0	571-510-0	650	0.3250	0.331011728

TABLE C-24
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
SURFACE LAYER, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-510	0.3	571-510-0.3	260	0.1300	0.130368980
571-510	0.6	571-510-0.6	92	0.0460	0.046016238
571-511	0	571-511-0	1100	0.5500	0.582364238
571-511	0.3	571-511-0.3	24	0.0120	0.012000288
571-511	0.6	571-511-0.6	7.9	0.0040	0.003950010
571-512	0	571-512-0	830	0.4150	0.427942803
571-512	0.3	571-512-0.3	360	0.1800	0.180986451
571-512	0.6	571-512-0.6	58	0.0290	0.029004066
571-513	0	571-513-0	19	0.0095	0.009500143
571-513	0.3	571-513-0.3	57	0.0285	0.028503860
571-513	0.6	571-513-0.6	210	0.1050	0.105193901
571-514	0	571-514-0	1500	0.7500	0.848062079
571-514	0.3	571-514-0.3	740	0.3700	0.379009021
571-514	0.6	571-514-0.6	370	0.1850	0.186071862
571-515	0	571-515-0	860	0.4300	0.444492777
571-515	0.3	571-515-0.3	21	0.0105	0.010500193
571-515	0.6	571-515-0.6	29	0.0145	0.014500508
571-516	0	571-516-0	980	0.4900	0.512089753
571-516	0.3	571-516-0.3	210	0.1050	0.105193901
571-516	0.6	571-516-0.6	7.8	0.0039	0.003900010
571-517	0	571-517-0	540	0.2700	0.273393031
571-517	0.3	571-517-0.3	500	0.2500	0.252680255
571-517	0.6	571-517-0.6	300	0.1500	0.150568273
571-518	0	571-518-0	5.4	0.0027	0.002700003
571-518	0.3	571-518-0.3	880	0.4400	0.455598673
571-518	0.6	571-518-0.6	110	0.0550	0.055027767
571-519	0	571-519-0	94	0.0470	0.047017321
571-519	0.3	571-519-0.3	140	0.0700	0.070057293

TABLE C-24
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
SURFACE LAYER, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-519	0.6	571-519-0.6	220	0.1100	0.110223050
571-520	0	571-520-0	510	0.2550	0.257847703
571-520	0.3	571-520-0.3	490	0.2450	0.247519693
571-521	0	571-521-0	2000	1.0000	1.570796327
571-521	0.3	571-521-0.3	42	0.0210	0.021001544
571-521	0.6	571-521-0.6	420	0.2100	0.211574960
571-522	0	571-522-0	40	0.0200	0.020001334
571-522	0.3	571-522-0.3	5	0.0025	0.002500003
571-522	0.6	571-522-0.6	330	0.1650	0.165758011
571-523	0	571-523-0	190	0.0950	0.095143479
571-523	0.3	571-523-0.3	700	0.3500	0.357571104
571-524	0	571-524-0	1900	0.9500	1.253235898
571-524	0.3	571-524-0.3	37	0.0185	0.018501055
571-524	0.6	571-524-0.6	19	0.0095	0.009500143
571-525	0	571-525-0	220	0.1100	0.110223050
571-525	0.3	571-525-0.3	230	0.1150	0.115255000
571-525	0.6	571-525-0.6	42	0.0210	0.021001544
571-526	0	571-526-0	870	0.4350	0.450038277
571-526	0.3	571-526-0.3	170	0.0850	0.085102688
571-526	0.6	571-526-0.6	15	0.0075	0.007500070
571-527	0	571-527-0	75	0.0375	0.037508795
571-527	0.3	571-527-0.3	82	0.0410	0.041011496
571-527	0.6	571-527-0.6	71	0.0355	0.035507461
571-528	0	571-528-0	510	0.2550	0.257847703
571-528	0.3	571-528-0.3	86	0.0430	0.043013262
571-528	0.6	571-528-0.6	16	0.0080	0.008000085
571-529	0	571-529-0	49	0.0245	0.024502452
571-529	0.3	571-529-0.3	62	0.0310	0.031004967

TABLE C-24
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
SURFACE LAYER, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-529	0.6	571-529-0.6	57	0.0285	0.028503860
571-530	0	571-530-0	660	0.3300	0.336303575
571-530	0.3	571-530-0.3	370	0.1850	0.186071862
571-530	0.6	571-530-0.6	470	0.2350	0.237218568

Total Lead	Max TTLC:	2000.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	88		88			
Sample Mean:	291		0.159			
Delta = RT - mean	59					
Appropriate Number of Samples:	84					
Standard Deviation of Sample:	420		0.264			
Standard Deviation of Mean:	45		0.028			
Sample Variance:	176792		0.070			
t-value for 90%:	1.293	Need to Transform Data	1.293			
Upper Confidence Limit for 90%:			0.196			
Reverse Transformation for 90%			389.24	mg/kg	31.14	mg/l
t-value for 95%:			1.665			
Upper Confidence Limit for 95%:			0.206			
Reverse Transformation for 95%			409.76	mg/kg	32.98	mg/l

TABLE C-25
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-501	0.9	571-501-0.9	50	0.0641	0.064146547
571-502	0.9	571-502-0.9	5.5	0.0071	0.007051340
571-502	1.5	571-502-1.5	7.8	0.0100	0.010000167
571-504	0.9	571-504-0.9	3	0.0038	0.003846163
571-504	1.5	571-504-1.5	3	0.0038	0.003846163
571-505	0.9	571-505-0.9	4	0.0051	0.005128228
571-505	1.5	571-505-1.5	280	0.3590	0.367168776
571-506	0.9	571-506-0.9	17	0.0218	0.021796598
571-507	0.9	571-507-0.9	6.8	0.0087	0.008718059
571-507	1.5	571-507-1.5	10	0.0128	0.012820864
571-508	0.9	571-508-0.9	15	0.0192	0.019231955
571-508	1.5	571-508-1.5	5.1	0.0065	0.006538508
571-509	0.9	571-509-0.9	3	0.0038	0.003846163
571-511	0.9	571-511-0.9	6.4	0.0082	0.008205220
571-511	1.5	571-511-1.5	48	0.0615	0.061577369
571-512	0.9	571-512-0.9	120	0.1538	0.154459598
571-512	1.5	571-512-1.5	29	0.0372	0.037188058
571-513	0.9	571-513-0.9	150	0.1923	0.193513193
571-513	1.5	571-513-1.5	6.6	0.0085	0.008461639
571-514	0.9	571-514-0.9	490	0.6282	0.679244166
571-515	0.9	571-515-0.9	12	0.0154	0.015385222
571-516	0.9	571-516-0.9	130	0.1667	0.167448079
571-517	0.9	571-517-0.9	250	0.3205	0.326270819
571-517	1.5	571-517-1.5	350	0.4487	0.465330236
571-518	0.9	571-518-0.9	300	0.3846	0.394791120
571-522	0.9	571-522-0.9	4	0.0051	0.005128228
571-522	1.5	571-522-1.5	3	0.0038	0.003846163
571-524	0.9	571-524-0.9	230	0.2949	0.299321345

TABLE C-25
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-524	1.5	571-524-1.5	17	0.0218	0.021796598
571-525	0.9	571-525-0.9	5.9	0.0076	0.007564175
571-525	1.5	571-525-1.5	780	1.0000	1.570796327
571-526	0.9	571-526-0.9	18	0.0231	0.023078972
571-526	1.5	571-526-1.5	38	0.0487	0.048737241
571-527	0.9	571-527-0.9	62	0.0795	0.079571121
571-528	0.9	571-528-0.9	64	0.0821	0.082143629
571-528	1.5	571-528-1.5	660	0.8462	1.008726524
571-529	0.9	571-529-0.9	44	0.0564	0.056440217
571-529	1.5	571-529-1.5	28	0.0359	0.035905150

Total Lead	Max TTLC:	780.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	38		38			
Sample Mean:	112		0.166			
Delta = RT - mean	238					
Appropriate Number of Samples:	1					
Standard Deviation of Sample:	187		0.318			
Standard Deviation of Mean:	30		0.052			
Sample Variance:	34783		0.101			
t-value for 90%:	1.305	Need to Transform Data	1.305			
Upper Confidence Limit for 90%:			0.233			
Reverse Transformation for 90%			179.89	mg/kg	12.41	mg/l
t-value for 95%:			1.688			
Upper Confidence Limit for 95%:			0.252			
Reverse Transformation for 95%			194.82	mg/kg	13.74	mg/l

TABLE C-26
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
SURFACE LAYER, 0.3, 0.6, AND 0.9 METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-501	0	571-501-0	300	0.1500	0.150568273
571-501	0.3	571-501-0.3	26	0.0130	0.013000366
571-501	0.6	571-501-0.6	19	0.0095	0.009500143
571-501	0.9	571-501-0.9	50	0.0250	0.025002605
571-502	0	571-502-0	110	0.0550	0.055027767
571-502	0.3	571-502-0.3	9.1	0.0046	0.004550016
571-502	0.6	571-502-0.6	230	0.1150	0.115255000
571-502	0.9	571-502-0.9	5.5	0.0028	0.002750003
571-503	0	571-503-0	50	0.0250	0.025002605
571-503	0.3	571-503-0.3	19	0.0095	0.009500143
571-503	0.6	571-503-0.6	28	0.0140	0.014000457
571-504	0	571-504-0	38	0.0190	0.019001143
571-504	0.3	571-504-0.3	4	0.0020	0.002000001
571-504	0.6	571-504-0.6	6.5	0.0033	0.003250006
571-504	0.9	571-504-0.9	3	0.0015	0.001500001
571-505	0	571-505-0	4	0.0020	0.002000001
571-505	0.3	571-505-0.3	56	0.0280	0.028003660
571-505	0.6	571-505-0.6	140	0.0700	0.070057293
571-505	0.9	571-505-0.9	4	0.0020	0.002000001
571-506	0	571-506-0	160	0.0800	0.080085580
571-506	0.3	571-506-0.3	16	0.0080	0.008000085
571-506	0.6	571-506-0.6	17	0.0085	0.008500102
571-506	0.9	571-506-0.9	17	0.0085	0.008500102
571-507	0	571-507-0	1500	0.7500	0.848062079
571-507	0.3	571-507-0.3	5.9	0.0030	0.002950004
571-507	0.6	571-507-0.6	8.7	0.0044	0.004350014
571-507	0.9	571-507-0.9	6.8	0.0034	0.003400007
571-508	0	571-508-0	830	0.4150	0.427942803
571-508	0.3	571-508-0.3	11	0.0055	0.005500028
571-508	0.6	571-508-0.6	5.8	0.0029	0.002900004
571-508	0.9	571-508-0.9	15	0.0075	0.007500070
571-509	0	571-509-0	52	0.0260	0.026002930

TABLE C-26
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
SURFACE LAYER, 0.3, 0.6, AND 0.9 METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-509	0.3	571-509-0.3	5	0.0025	0.002500003
571-509	0.6	571-509-0.6	4	0.0020	0.002000001
571-509	0.9	571-509-0.9	3	0.0015	0.001500001
571-510	0	571-510-0	650	0.3250	0.331011728
571-510	0.3	571-510-0.3	260	0.1300	0.130368980
571-510	0.6	571-510-0.6	92	0.0460	0.046016238
571-511	0	571-511-0	1100	0.5500	0.582364238
571-511	0.3	571-511-0.3	24	0.0120	0.012000288
571-511	0.6	571-511-0.6	7.9	0.0040	0.003950010
571-511	0.9	571-511-0.9	6.4	0.0032	0.003200005
571-512	0	571-512-0	830	0.4150	0.427942803
571-512	0.3	571-512-0.3	360	0.1800	0.180986451
571-512	0.6	571-512-0.6	58	0.0290	0.029004066
571-512	0.9	571-512-0.9	120	0.0600	0.060036058
571-513	0	571-513-0	19	0.0095	0.009500143
571-513	0.3	571-513-0.3	57	0.0285	0.028503860
571-513	0.6	571-513-0.6	210	0.1050	0.105193901
571-513	0.9	571-513-0.9	150	0.0750	0.075070491
571-514	0	571-514-0	1500	0.7500	0.848062079
571-514	0.3	571-514-0.3	740	0.3700	0.379009021
571-514	0.6	571-514-0.6	370	0.1850	0.186071862
571-514	0.9	571-514-0.9	490	0.2450	0.247519693
571-515	0	571-515-0	860	0.4300	0.444492777
571-515	0.3	571-515-0.3	21	0.0105	0.010500193
571-515	0.6	571-515-0.6	29	0.0145	0.014500508
571-515	0.9	571-515-0.9	12	0.0060	0.006000036
571-516	0	571-516-0	980	0.4900	0.512089753
571-516	0.3	571-516-0.3	210	0.1050	0.105193901
571-516	0.6	571-516-0.6	7.8	0.0039	0.003900010
571-516	0.9	571-516-0.9	130	0.0650	0.065045858
571-517	0	571-517-0	540	0.2700	0.273393031
571-517	0.3	571-517-0.3	500	0.2500	0.252680255

TABLE C-26
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
SURFACE LAYER, 0.3, 0.6, AND 0.9 METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-517	0.6	571-517-0.6	300	0.1500	0.150568273
571-517	0.9	571-517-0.9	250	0.1250	0.125327831
571-518	0	571-518-0	5.4	0.0027	0.002700003
571-518	0.3	571-518-0.3	880	0.4400	0.455598673
571-518	0.6	571-518-0.6	110	0.0550	0.055027767
571-518	0.9	571-518-0.9	300	0.1500	0.150568273
571-519	0	571-519-0	94	0.0470	0.047017321
571-519	0.3	571-519-0.3	140	0.0700	0.070057293
571-519	0.6	571-519-0.6	220	0.1100	0.110223050
571-520	0	571-520-0	510	0.2550	0.257847703
571-520	0.3	571-520-0.3	490	0.2450	0.247519693
571-521	0	571-521-0	2000	1.0000	1.570796327
571-521	0.3	571-521-0.3	42	0.0210	0.021001544
571-521	0.6	571-521-0.6	420	0.2100	0.211574960
571-522	0	571-522-0	40	0.0200	0.020001334
571-522	0.3	571-522-0.3	5	0.0025	0.002500003
571-522	0.6	571-522-0.6	330	0.1650	0.165758011
571-522	0.9	571-522-0.9	4	0.0020	0.002000001
571-523	0	571-523-0	190	0.0950	0.095143479
571-523	0.3	571-523-0.3	700	0.3500	0.357571104
571-524	0	571-524-0	1900	0.9500	1.253235898
571-524	0.3	571-524-0.3	37	0.0185	0.018501055
571-524	0.6	571-524-0.6	19	0.0095	0.009500143
571-524	0.9	571-524-0.9	230	0.1150	0.115255000
571-525	0	571-525-0	220	0.1100	0.110223050
571-525	0.3	571-525-0.3	230	0.1150	0.115255000
571-525	0.6	571-525-0.6	42	0.0210	0.021001544
571-525	0.9	571-525-0.9	5.9	0.0030	0.002950004
571-526	0	571-526-0	870	0.4350	0.450038277
571-526	0.3	571-526-0.3	170	0.0850	0.085102688
571-526	0.6	571-526-0.6	15	0.0075	0.007500070
571-526	0.9	571-526-0.9	18	0.0090	0.009000122

TABLE C-26
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500s
SURFACE LAYER, 0.3, 0.6, AND 0.9 METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-527	0	571-527-0	75	0.0375	0.037508795
571-527	0.3	571-527-0.3	82	0.0410	0.041011496
571-527	0.6	571-527-0.6	71	0.0355	0.035507461
571-527	0.9	571-527-0.9	62	0.0310	0.031004967
571-528	0	571-528-0	510	0.2550	0.257847703
571-528	0.3	571-528-0.3	86	0.0430	0.043013262
571-528	0.6	571-528-0.6	16	0.0080	0.008000085
571-528	0.9	571-528-0.9	64	0.0320	0.032005464
571-529	0	571-529-0	49	0.0245	0.024502452
571-529	0.3	571-529-0.3	62	0.0310	0.031004967
571-529	0.6	571-529-0.6	57	0.0285	0.028503860
571-529	0.9	571-529-0.9	44	0.0220	0.022001775
571-530	0	571-530-0	660	0.3300	0.336303575
571-530	0.3	571-530-0.3	370	0.1850	0.186071862
571-530	0.6	571-530-0.6	470	0.2350	0.237218568

Total Lead	Max TTLC:	2000.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	111		111			
Sample Mean:	248		0.135			
Delta = RT - mean	102					
Appropriate Number of Samples:	24					
Standard Deviation of Sample:	387		0.241			
Standard Deviation of Mean:	37		0.023			
Sample Variance:	149821		0.058			
t-value for 90%:	1.290	Need to Transform Data	1.290			
Upper Confidence Limit for 90%:			0.165			
Reverse Transformation for 90%			328.43	mg/kg	25.70	mg/l
t-value for 95%:			1.660			
Upper Confidence Limit for 95%:			0.173			
Reverse Transformation for 95%			345.12	mg/kg	27.19	mg/l

TABLE C-27
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 500S
1.5-METER LAYER

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-502	1.5	571-502-1.5	7.8	0.0100	0.010000167
571-504	1.5	571-504-1.5	3	0.0038	0.003846163
571-505	1.5	571-505-1.5	280	0.3590	0.367168776
571-507	1.5	571-507-1.5	10	0.0128	0.012820864
571-508	1.5	571-508-1.5	5.1	0.0065	0.006538508
571-511	1.5	571-511-1.5	48	0.0615	0.061577369
571-512	1.5	571-512-1.5	29	0.0372	0.037188058
571-513	1.5	571-513-1.5	6.6	0.0085	0.008461639
571-517	1.5	571-517-1.5	350	0.4487	0.465330236
571-522	1.5	571-522-1.5	3	0.0038	0.003846163
571-524	1.5	571-524-1.5	17	0.0218	0.021796598
571-525	1.5	571-525-1.5	780	1.0000	1.570796327
571-526	1.5	571-526-1.5	38	0.0487	0.048737241
571-528	1.5	571-528-1.5	660	0.8462	1.008726524
571-529	1.5	571-529-1.5	28	0.0359	0.035905150

Total Lead	Max TTLC:	780.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	15		15			
Sample Mean:	151		0.244			
Delta = RT - mean	199					
Appropriate Number of Samples:	3					
Standard Deviation of Sample:	255		0.459			
Standard Deviation of Mean:	66		0.119			
Sample Variance:	64903		0.211			
t-value for 90%:	1.345	Need to Transform Data	1.345			
Upper Confidence Limit for 90%:			0.404			
Reverse Transformation for 90%			306.36	mg/kg	23.72	mg/l
t-value for 95%:			1.761			
Upper Confidence Limit for 95%:			0.453			
Reverse Transformation for 95%			341.35	mg/kg	26.86	mg/l

TABLE C-28
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 700s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-701	0	571-701-0	370	0.1321	0.132530485
571-701	0.3	571-701-0.3	610	0.2179	0.219618337
571-701	0.6	571-701-0.6	190	0.0679	0.067909327
571-702	0	571-702-0	40	0.0143	0.014286200
571-702	0.3	571-702-0.3	20	0.0071	0.007142918
571-702	0.6	571-702-0.6	23	0.0082	0.008214378
571-702	0.9	571-702-0.9	14	0.0050	0.005000021
571-702	1.5	571-702-1.5	5.9	0.0021	0.002107144
571-703	0	571-703-0	310	0.1107	0.110941725
571-703	0.3	571-703-0.3	100	0.0357	0.035721882
571-703	0.6	571-703-0.6	50	0.0179	0.017858092
571-704	0	571-704-0	200	0.0714	0.071489450
571-704	0.3	571-704-0.3	210	0.0750	0.075070491
571-706	0	571-706-0	370	0.1321	0.132530485
571-706	0.3	571-706-0.3	390	0.1393	0.139740061
571-706	0.6	571-706-0.6	230	0.0821	0.082235515
571-707	0	571-707-0	98	0.0350	0.035007150
571-707	0.3	571-707-0.3	180	0.0643	0.064330075
571-707	0.6	571-707-0.6	150	0.0536	0.053597086
571-707	0.9	571-707-0.9	39	0.0139	0.013929022
571-708	0	571-708-0	890	0.3179	0.323468561
571-708	0.3	571-708-0.3	470	0.1679	0.168655566
571-708	0.6	571-708-0.6	25	0.0089	0.008928690
571-709	0	571-709-0	650	0.2321	0.234280146
571-709	0.3	571-709-0.3	190	0.0679	0.067909327
571-709	0.6	571-709-0.6	54	0.0193	0.019286910
571-710	0	571-710-0	1300	0.4643	0.482827963
571-710	0.3	571-710-0.3	1300	0.4643	0.482827963
571-710	0.6	571-710-0.6	620	0.2214	0.223279164
571-710	0.9	571-710-0.9	140	0.0500	0.050020857

TABLE C-28
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 700s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-711	0	571-711-0	1700	0.6071	0.652459897
571-711	0.3	571-711-0.3	1300	0.4643	0.482827963
571-711	0.6	571-711-0.6	300	0.1071	0.107348916
571-712	0	571-712-0	2800	1.0000	1.570796327
571-712	0.3	571-712-0.3	1300	0.4643	0.482827963
571-712	0.6	571-712-0.6	250	0.0893	0.089404772
571-712	0.9	571-712-0.9	770	0.2750	0.278589702
571-713	0	571-713-0	350	0.1250	0.125327831
571-713	0.3	571-713-0.3	86	0.0307	0.030719117
571-713	0.6	571-713-0.6	2	0.0007	0.000714286
571-714	0	571-714-0	570	0.2036	0.205004360
571-714	0.3	571-714-0.3	54	0.0193	0.019286910
571-714	0.6	571-714-0.6	2	0.0007	0.000714286
571-714	0.9	571-714-0.9	680	0.2429	0.245310090

Total Lead	Max TTLC:	2800.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	44		44			
Sample Mean:	441		0.174			
Delta = RT - mean	-91					
Appropriate Number of Samples:	65					
Standard Deviation of Sample:	563		0.269			
Standard Deviation of Mean:	85		0.041			
Sample Variance:	316906		0.072			
t-value for 90%:	1.302	Need to Transform Data	1.302			
Upper Confidence Limit for 90%:			0.226			
Reverse Transformation for 90%			628.65	mg/kg	52.57	mg/l
t-value for 95%:			1.682			
Upper Confidence Limit for 95%:			0.242			
Reverse Transformation for 95%			670.61	mg/kg	56.33	mg/l

TABLE C-29
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 700s
SURFACE LAYER

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-701	0	571-701-0	370	0.1321	0.132530485
571-702	0	571-702-0	40	0.0143	0.014286200
571-703	0	571-703-0	310	0.1107	0.110941725
571-704	0	571-704-0	200	0.0714	0.071489450
571-706	0	571-706-0	370	0.1321	0.132530485
571-707	0	571-707-0	98	0.0350	0.035007150
571-708	0	571-708-0	890	0.3179	0.323468561
571-709	0	571-709-0	650	0.2321	0.234280146
571-710	0	571-710-0	1300	0.4643	0.482827963
571-711	0	571-711-0	1700	0.6071	0.652459897
571-712	0	571-712-0	2800	1.0000	1.570796327
571-713	0	571-713-0	350	0.1250	0.125327831
571-714	0	571-714-0	570	0.2036	0.205004360

Total Lead	Max TTLC:	2800.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	13		13			
Sample Mean:	742		0.315			
Delta = RT - mean	-392					
Appropriate Number of Samples:	7					
Standard Deviation of Sample:	782		0.419			
Standard Deviation of Mean:	217		0.116			
Sample Variance:	611900		0.176			
t-value for 90%:	1.356	Need to Transform Data	1.356			
Upper Confidence Limit for 90%:			0.472			
Reverse Transformation for 90%			1274.05	mg/kg	110.33	mg/l
t-value for 95%:			1.782			
Upper Confidence Limit for 95%:			0.522			
Reverse Transformation for 95%			1395.97	mg/kg	121.25	mg/l

TABLE C-30
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 700s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-701	0.3	571-701-0.3	610	0.4692	0.488419495
571-701	0.6	571-701-0.6	190	0.1462	0.146679243
571-702	0.3	571-702-0.3	20	0.0154	0.015385222
571-702	0.6	571-702-0.6	23	0.0177	0.017693231
571-702	0.9	571-702-0.9	14	0.0108	0.010769439
571-702	1.5	571-702-1.5	5.9	0.0045	0.004538477
571-703	0.3	571-703-0.3	100	0.0769	0.076999141
571-703	0.6	571-703-0.6	50	0.0385	0.038471027
571-704	0.3	571-704-0.3	210	0.1615	0.162249391
571-706	0.3	571-706-0.3	390	0.3000	0.304692654
571-706	0.6	571-706-0.6	230	0.1769	0.177859327
571-707	0.3	571-707-0.3	180	0.1385	0.138907821
571-707	0.6	571-707-0.6	150	0.1154	0.115642193
571-707	0.9	571-707-0.9	39	0.0300	0.030004502
571-708	0.3	571-708-0.3	470	0.3615	0.369917444
571-708	0.6	571-708-0.6	25	0.0192	0.019231955
571-709	0.3	571-709-0.3	190	0.1462	0.146679243
571-709	0.6	571-709-0.6	54	0.0415	0.041550416
571-710	0.3	571-710-0.3	1300	1.0000	1.570796327
571-710	0.6	571-710-0.6	620	0.4769	0.497150674
571-710	0.9	571-710-0.9	140	0.1077	0.107901564
571-711	0.3	571-711-0.3	1300	1.0000	1.570796327
571-711	0.6	571-711-0.6	300	0.2308	0.232868178
571-712	0.3	571-712-0.3	1300	1.0000	1.570796327
571-712	0.6	571-712-0.6	250	0.1923	0.193513193
571-712	0.9	571-712-0.9	770	0.5923	0.633920001
571-713	0.3	571-713-0.3	86	0.0662	0.066202193
571-713	0.6	571-713-0.6	2	0.0015	0.001538462

TABLE C-30
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 700s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-714	0.3	571-714-0.3	54	0.0415	0.041550416
571-714	0.6	571-714-0.6	2	0.0015	0.001538462
571-714	0.9	571-714-0.9	680	0.5231	0.550457170

Total Lead	Max TTLC:	1300.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	31		31			
Sample Mean:	315		0.301			
Delta = RT - mean	35					
Appropriate Number of Samples:	211					
Standard Deviation of Sample:	392		0.457			
Standard Deviation of Mean:	70		0.082			
Sample Variance:	153681		0.209			
t-value for 90%:	1.310	Need to Transform Data	1.310			
Upper Confidence Limit for 90%:			0.409			
Reverse Transformation for 90%			516.90	mg/kg	42.57	mg/l
t-value for 95%:			1.697			
Upper Confidence Limit for 95%:			0.441			
Reverse Transformation for 95%			554.51	mg/kg	45.93	mg/l

TABLE C-31
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 700s
SURFACE AND 0.3-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-701	0	571-701-0	370	0.1321	0.132530485
571-701	0.3	571-701-0.3	610	0.2179	0.219618337
571-702	0	571-702-0	40	0.0143	0.014286200
571-702	0.3	571-702-0.3	20	0.0071	0.007142918
571-703	0	571-703-0	310	0.1107	0.110941725
571-703	0.3	571-703-0.3	100	0.0357	0.035721882
571-704	0	571-704-0	200	0.0714	0.071489450
571-704	0.3	571-704-0.3	210	0.0750	0.075070491
571-706	0	571-706-0	370	0.1321	0.132530485
571-706	0.3	571-706-0.3	390	0.1393	0.139740061
571-707	0	571-707-0	98	0.0350	0.035007150
571-707	0.3	571-707-0.3	180	0.0643	0.064330075
571-708	0	571-708-0	890	0.3179	0.323468561
571-708	0.3	571-708-0.3	470	0.1679	0.168655566
571-709	0	571-709-0	650	0.2321	0.234280146
571-709	0.3	571-709-0.3	190	0.0679	0.067909327
571-710	0	571-710-0	1300	0.4643	0.482827963
571-710	0.3	571-710-0.3	1300	0.4643	0.482827963
571-711	0	571-711-0	1700	0.6071	0.652459897
571-711	0.3	571-711-0.3	1300	0.4643	0.482827963
571-712	0	571-712-0	2800	1.0000	1.570796327
571-712	0.3	571-712-0.3	1300	0.4643	0.482827963
571-713	0	571-713-0	350	0.1250	0.125327831

TABLE C-31
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 700s
SURFACE AND 0.3-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-713	0.3	571-713-0.3	86	0.0307	0.030719117
571-714	0	571-714-0	570	0.2036	0.205004360
571-714	0.3	571-714-0.3	54	0.0193	0.019286910

Total Lead	Max TTLC:	2800.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	26		26			
Sample Mean:	610		0.245			
Delta = RT - mean	-260					
Appropriate Number of Samples:	11					
Standard Deviation of Sample:	657		0.326			
Standard Deviation of Mean:	129		0.064			
Sample Variance:	431174		0.106			
t-value for 90%:	1.316	Need to Transform Data	1.316			
Upper Confidence Limit for 90%:			0.329			
Reverse Transformation for 90%			904.53	mg/kg	77.26	mg/l
t-value for 95%:			1.708			
Upper Confidence Limit for 95%:			0.354			
Reverse Transformation for 95%			970.57	mg/kg	83.17	mg/l

TABLE C-32
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 700s
0.6, 0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-701	0.6	571-701-0.6	190	0.2468	0.249328467
571-702	0.6	571-702-0.6	23	0.0299	0.029874573
571-702	0.9	571-702-0.9	14	0.0182	0.018182820
571-702	1.5	571-702-1.5	5.9	0.0077	0.007662413
571-703	0.6	571-703-0.6	50	0.0649	0.064980786
571-706	0.6	571-706-0.6	230	0.2987	0.303331536
571-707	0.6	571-707-0.6	150	0.1948	0.196058836
571-707	0.9	571-707-0.9	39	0.0506	0.050671031
571-708	0.6	571-708-0.6	25	0.0325	0.032473239
571-709	0.6	571-709-0.6	54	0.0701	0.070187483
571-710	0.6	571-710-0.6	620	0.8052	0.936003897
571-710	0.9	571-710-0.9	140	0.1818	0.182835137
571-711	0.6	571-711-0.6	300	0.3896	0.400208516
571-712	0.6	571-712-0.6	250	0.3247	0.330668436
571-712	0.9	571-712-0.9	770	1.0000	1.570796327
571-713	0.6	571-713-0.6	2	0.0026	0.002597406
571-714	0.6	571-714-0.6	2	0.0026	0.002597406
571-714	0.9	571-714-0.9	680	0.8831	1.082464856

Total Lead	Max TTLC:	770.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	18		18			
Sample Mean:	197		0.307			
Delta = RT - mean	153					
Appropriate Number of Samples:	5					
Standard Deviation of Sample:	247		0.442			
Standard Deviation of Mean:	58		0.104			
Sample Variance:	60794		0.196			
t-value for 90%:	1.333	Need to Transform Data	1.333			
Upper Confidence Limit for 90%:			0.446			
Reverse Transformation for 90%			332.31	mg/kg	26.05	mg/l
t-value for 95%:			1.740			
Upper Confidence Limit for 95%:			0.489			
Reverse Transformation for 95%			361.47	mg/kg	28.66	mg/l

TABLE C-33
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 700s
SURFACE, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-701	0	571-701-0	370	0.1321	0.132530485
571-701	0.3	571-701-0.3	610	0.2179	0.219618337
571-701	0.6	571-701-0.6	190	0.0679	0.067909327
571-702	0	571-702-0	40	0.0143	0.014286200
571-702	0.3	571-702-0.3	20	0.0071	0.007142918
571-702	0.6	571-702-0.6	23	0.0082	0.008214378
571-703	0	571-703-0	310	0.1107	0.110941725
571-703	0.3	571-703-0.3	100	0.0357	0.035721882
571-703	0.6	571-703-0.6	50	0.0179	0.017858092
571-704	0	571-704-0	200	0.0714	0.071489450
571-704	0.3	571-704-0.3	210	0.0750	0.075070491
571-706	0	571-706-0	370	0.1321	0.132530485
571-706	0.3	571-706-0.3	390	0.1393	0.139740061
571-706	0.6	571-706-0.6	230	0.0821	0.082235515
571-707	0	571-707-0	98	0.0350	0.035007150
571-707	0.3	571-707-0.3	180	0.0643	0.064330075
571-707	0.6	571-707-0.6	150	0.0536	0.053597086
571-708	0	571-708-0	890	0.3179	0.323468561
571-708	0.3	571-708-0.3	470	0.1679	0.168655566
571-708	0.6	571-708-0.6	25	0.0089	0.008928690
571-709	0	571-709-0	650	0.2321	0.234280146
571-709	0.3	571-709-0.3	190	0.0679	0.067909327
571-709	0.6	571-709-0.6	54	0.0193	0.019286910
571-710	0	571-710-0	1300	0.4643	0.482827963
571-710	0.3	571-710-0.3	1300	0.4643	0.482827963
571-710	0.6	571-710-0.6	620	0.2214	0.223279164
571-711	0	571-711-0	1700	0.6071	0.652459897
571-711	0.3	571-711-0.3	1300	0.4643	0.482827963
571-711	0.6	571-711-0.6	300	0.1071	0.107348916
571-712	0	571-712-0	2800	1.0000	1.570796327

TABLE C-33
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 700s
SURFACE, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-712	0.3	571-712-0.3	1300	0.4643	0.482827963
571-712	0.6	571-712-0.6	250	0.0893	0.089404772
571-713	0	571-713-0	350	0.1250	0.125327831
571-713	0.3	571-713-0.3	86	0.0307	0.030719117
571-713	0.6	571-713-0.6	2	0.0007	0.000714286
571-714	0	571-714-0	570	0.2036	0.205004360
571-714	0.3	571-714-0.3	54	0.0193	0.019286910
571-714	0.6	571-714-0.6	2	0.0007	0.000714286

Total Lead	Max TTLC:	2800.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	38		38			
Sample Mean:	467		0.185			
Delta = RT - mean	-117					
Appropriate Number of Samples:	43					
Standard Deviation of Sample:	588		0.284			
Standard Deviation of Mean:	95		0.046			
Sample Variance:	346260		0.081			
t-value for 90%:	1.305	Need to Transform Data	1.305			
Upper Confidence Limit for 90%:			0.246			
Reverse Transformation for 90%			680.82	mg/kg	57.24	mg/l
t-value for 95%:			1.688			
Upper Confidence Limit for 95%:			0.263			
Reverse Transformation for 95%			728.64	mg/kg	61.52	mg/l

TABLE C-34
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 700s
0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-702	0.9	571-702-0.9	14	0.0182	0.018182820
571-702	1.5	571-702-1.5	5.9	0.0077	0.007662413
571-707	0.9	571-707-0.9	39	0.0506	0.050671031
571-710	0.9	571-710-0.9	140	0.1818	0.182835137
571-712	0.9	571-712-0.9	770	1.0000	1.570796327
571-714	0.9	571-714-0.9	680	0.8831	1.082464856

Total Lead	Max TTLC:	770.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	6		6			
Sample Mean:	275		0.485			
Delta = RT - mean	75					
Appropriate Number of Samples:	48					
Standard Deviation of Sample:	353		0.673			
Standard Deviation of Mean:	144		0.275			
Sample Variance:	124701		0.452			
t-value for 90%:	1.476	Need to Transform Data	1.476			
Upper Confidence Limit for 90%:			0.891			
Reverse Transformation for 90%			598.68	mg/kg	49.89	mg/l
t-value for 95%:			2.015			
Upper Confidence Limit for 95%:			1.039			
Reverse Transformation for 95%			663.54	mg/kg	55.69	mg/l

TABLE C-35
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 700s
SURFACE, 0.3, 0.6, AND 0.9-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-701	0	571-701-0	370	0.1321	0.132530485
571-701	0.3	571-701-0.3	610	0.2179	0.219618337
571-701	0.6	571-701-0.6	190	0.0679	0.067909327
571-702	0	571-702-0	40	0.0143	0.014286200
571-702	0.3	571-702-0.3	20	0.0071	0.007142918
571-702	0.6	571-702-0.6	23	0.0082	0.008214378
571-702	0.9	571-702-0.9	14	0.0050	0.005000021
571-703	0	571-703-0	310	0.1107	0.110941725
571-703	0.3	571-703-0.3	100	0.0357	0.035721882
571-703	0.6	571-703-0.6	50	0.0179	0.017858092
571-704	0	571-704-0	200	0.0714	0.071489450
571-704	0.3	571-704-0.3	210	0.0750	0.075070491
571-706	0	571-706-0	370	0.1321	0.132530485
571-706	0.3	571-706-0.3	390	0.1393	0.139740061
571-706	0.6	571-706-0.6	230	0.0821	0.082235515
571-707	0	571-707-0	98	0.0350	0.035007150
571-707	0.3	571-707-0.3	180	0.0643	0.064330075
571-707	0.6	571-707-0.6	150	0.0536	0.053597086
571-707	0.9	571-707-0.9	39	0.0139	0.013929022
571-708	0	571-708-0	890	0.3179	0.323468561
571-708	0.3	571-708-0.3	470	0.1679	0.168655566
571-708	0.6	571-708-0.6	25	0.0089	0.008928690
571-709	0	571-709-0	650	0.2321	0.234280146
571-709	0.3	571-709-0.3	190	0.0679	0.067909327
571-709	0.6	571-709-0.6	54	0.0193	0.019286910
571-710	0	571-710-0	1300	0.4643	0.482827963
571-710	0.3	571-710-0.3	1300	0.4643	0.482827963
571-710	0.6	571-710-0.6	620	0.2214	0.223279164
571-710	0.9	571-710-0.9	140	0.0500	0.050020857
571-711	0	571-711-0	1700	0.6071	0.652459897

TABLE C-35
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 700s
SURFACE, 0.3, 0.6, AND 0.9-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-711	0.3	571-711-0.3	1300	0.4643	0.482827963
571-711	0.6	571-711-0.6	300	0.1071	0.107348916
571-712	0	571-712-0	2800	1.0000	1.570796327
571-712	0.3	571-712-0.3	1300	0.4643	0.482827963
571-712	0.6	571-712-0.6	250	0.0893	0.089404772
571-712	0.9	571-712-0.9	770	0.2750	0.278589702
571-713	0	571-713-0	350	0.1250	0.125327831
571-713	0.3	571-713-0.3	86	0.0307	0.030719117
571-713	0.6	571-713-0.6	2	0.0007	0.000714286
571-714	0	571-714-0	570	0.2036	0.205004360
571-714	0.3	571-714-0.3	54	0.0193	0.019286910
571-714	0.6	571-714-0.6	2	0.0007	0.000714286
571-714	0.9	571-714-0.9	680	0.2429	0.245310090

Total Lead	Max TTLC:	2800.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	43		43			
Sample Mean:	451		0.178			
Delta = RT - mean	-101					
Appropriate Number of Samples:	53					
Standard Deviation of Sample:	566		0.271			
Standard Deviation of Mean:	86		0.041			
Sample Variance:	319840		0.073			
t-value for 90%:	1.302	Need to Transform Data	1.302			
Upper Confidence Limit for 90%:			0.231			
Reverse Transformation for 90%			642.24	mg/kg	53.79	mg/l
t-value for 95%:			1.683			
Upper Confidence Limit for 95%:			0.247			
Reverse Transformation for 95%			684.96	mg/kg	57.61	mg/l

TABLE C-36
LEAD ANALYSES - SEGMENT 3 - WESTBOUND 700s
1.5-METER LAYER

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-702	1.5	571-702-1.5	5.9	1.0000	1.570796327

Total Lead	Max TTLC:	5.9	**Transformed Data**		**Soluble Data**	
Number of Samples:	1					
Sample Mean:	insufficient data					
Delta = RT - mean	insufficient data					
Appropriate Number of Samples:	insufficient data					
Standard Deviation of Sample:	insufficient data					
Standard Deviation of Mean:	insufficient data					
Sample Variance:	insufficient data					
t-value for 90%:	insufficient data					
Upper Confidence Limit for 90%:						
Reverse Transformation for 90%			NA	mg/kg	NA	mg/l
t-value for 95%:						
Upper Confidence Limit for 95%:						
Reverse Transformation for 95%			NA	mg/kg	NA	mg/l

TABLE C-37
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 200s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-201	0	571-201-0	15	0.0136	0.013636786
571-201	0.3	571-201-0.3	76	0.0691	0.069145996
571-201	0.6	571-201-0.6	1100	1.0000	1.570796327
571-201	0.9	571-201-0.9	22	0.0200	0.020001334
571-202	0	571-202-0	13	0.0118	0.011818457
571-202	0.3	571-202-0.3	13	0.0118	0.011818457
571-202	0.6	571-202-0.6	22	0.0200	0.020001334
571-202	0.9	571-202-0.9	270	0.2455	0.247988554
571-202	1.5	571-202-1.5	8.2	0.0075	0.007454614
571-203	0	571-203-0	500	0.4545	0.471861837
571-203	0.3	571-203-0.3	250	0.2273	0.229276203
571-203	0.6	571-203-0.6	55	0.0500	0.050020857
571-204	0	571-204-0	41	0.0373	0.037281363
571-204	0.3	571-204-0.3	21	0.0191	0.019092069
571-205	0	571-205-0	110	0.1000	0.100167421
571-205	0.3	571-205-0.3	43	0.0391	0.039100872
571-205	0.6	571-205-0.6	63	0.0573	0.057304084
571-206	0	571-206-0	84	0.0764	0.076438050
571-206	0.3	571-206-0.3	93	0.0845	0.084646501
571-206	0.6	571-206-0.6	43	0.0391	0.039100872
571-207	0	571-207-0	73	0.0664	0.066412446
571-207	0.3	571-207-0.3	31	0.0282	0.028185550
571-207	0.6	571-207-0.6	45	0.0409	0.040920510
571-207	0.9	571-207-0.9	44	0.0400	0.040010674
571-207	1.5	571-207-1.5	240	0.2182	0.219951015
571-208	0	571-208-0	220	0.2000	0.201357921
571-208	0.3	571-208-0.3	55	0.0500	0.050020857
571-208	0.6	571-208-0.6	37	0.0336	0.033642710
571-209	0	571-209-0	49	0.0445	0.044560200
571-209	0.3	571-209-0.3	4	0.0036	0.003636372

TABLE C-37
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 200s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-209	0.6	571-209-0.6	10	0.0091	0.009091034
571-210	0	571-210-0	63	0.0573	0.057304084
571-210	0.3	571-210-0.3	34	0.0309	0.030914015
571-210	0.6	571-210-0.6	6.6	0.0060	0.006000036
571-210	0.9	571-210-0.9	5.3	0.0048	0.004818200
571-210	1.5	571-210-1.5	4	0.0036	0.003636372
571-211	0	571-211-0	110	0.1000	0.100167421
571-211	0.3	571-211-0.3	25	0.0227	0.022729230
571-211	0.6	571-211-0.6	21	0.0191	0.019092069
571-212	0	571-212-0	200	0.1818	0.182835137
571-212	0.3	571-212-0.3	49	0.0445	0.044560200
571-212	0.6	571-212-0.6	32	0.0291	0.029095014
571-212	0.9	571-212-0.9	15	0.0136	0.013636786
571-213	0	571-213-0	360	0.3273	0.333415910
571-213	0.3	571-213-0.3	20	0.0182	0.018182820
571-213	0.6	571-213-0.6	14	0.0127	0.012727616
571-213	0.9	571-213-0.9	11	0.0100	0.010000167
571-214	0	571-214-0	640	0.5818	0.620962417
571-214	0.3	571-214-0.3	1000	0.9091	1.141096661
571-214	0.6	571-214-0.6	87	0.0791	0.079173599
571-215	0	571-215-0	170	0.1545	0.155167364
571-215	0.3	571-215-0.3	23	0.0209	0.020910615
571-215	0.6	571-215-0.6	13	0.0118	0.011818457
571-215	0.9	571-215-0.9	86	0.0782	0.078261684
571-216	0	571-216-0	360	0.3273	0.333415910
571-216	0.3	571-216-0.3	28	0.0255	0.025457295
571-216	0.6	571-216-0.6	76	0.0691	0.069145996
571-217	0	571-217-0	990	0.9000	1.119769515
571-217	0.3	571-217-0.3	83	0.0755	0.075526328
571-217	0.6	571-217-0.6	91	0.0827	0.082821926

TABLE C-37
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 200s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-218	0	571-218-0	110	0.1000	0.100167421
571-218	0.3	571-218-0.3	8.5	0.0077	0.007727350
571-218	0.6	571-218-0.6	25	0.0227	0.022729230
571-219	0	571-219-0	31	0.0282	0.028185550
571-219	0.3	571-219-0.3	51	0.0464	0.046380263
571-219	0.6	571-219-0.6	21	0.0191	0.019092069
571-219	0.9	571-219-0.9	10	0.0091	0.009091034
571-219	1.5	571-219-1.5	30	0.0273	0.027276109
571-220	0	571-220-0	66	0.0600	0.060036058
571-220	0.3	571-220-0.3	21	0.0191	0.019092069
571-220	0.6	571-220-0.6	20	0.0182	0.018182820
571-220	0.9	571-220-0.9	27	0.0245	0.024547920
571-220	1.5	571-220-1.5	25	0.0227	0.022729230

Total Lead	Max TTLC:	1100.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	73		73			
Sample Mean:	119		0.124			
Delta = RT - mean	231					
Appropriate Number of Samples:	2					
Standard Deviation of Sample:	221		0.267			
Standard Deviation of Mean:	26		0.031			
Sample Variance:	49014		0.071			
t-value for 90%:	1.295	Need to Transform Data	1.295			
Upper Confidence Limit for 90%:			0.164			
Reverse Transformation for 90%			179.62	mg/kg	12.29	mg/l
t-value for 95%:			1.668			
Upper Confidence Limit for 95%:			0.176			
Reverse Transformation for 95%			192.25	mg/kg	13.20	mg/l

TABLE C-38
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 200s
SURFACE LAYER

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-201	0	571-201-0	15	0.0152	0.015152095
571-202	0	571-202-0	13	0.0131	0.013131691
571-203	0	571-203-0	500	0.5051	0.529440481
571-204	0	571-204-0	41	0.0414	0.041425989
571-205	0	571-205-0	110	0.1111	0.111341014
571-206	0	571-206-0	84	0.0848	0.084950624
571-207	0	571-207-0	73	0.0737	0.073804359
571-208	0	571-208-0	220	0.2222	0.224093092
571-209	0	571-209-0	49	0.0495	0.049515180
571-210	0	571-210-0	63	0.0636	0.063679392
571-211	0	571-211-0	110	0.1111	0.111341014
571-212	0	571-212-0	200	0.2020	0.203420216
571-213	0	571-213-0	360	0.3636	0.372168534
571-214	0	571-214-0	640	0.6465	0.702941456
571-215	0	571-215-0	170	0.1717	0.172572468
571-216	0	571-216-0	360	0.3636	0.372168534
571-217	0	571-217-0	990	1.0000	1.570796327
571-218	0	571-218-0	110	0.1111	0.111341014
571-219	0	571-219-0	31	0.0313	0.031318251
571-220	0	571-220-0	66	0.0667	0.066716148

Total Lead	Max TTLC:	990.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	20		20			
Sample Mean:	210		0.246			
Delta = RT - mean	140					
Appropriate Number of Samples:	6					
Standard Deviation of Sample:	251		0.362			
Standard Deviation of Mean:	56		0.081			
Sample Variance:	62871		0.131			
t-value for 90%:	1.328	Need to Transform Data	1.328			
Upper Confidence Limit for 90%:			0.354			
Reverse Transformation for 90%			342.85	mg/kg	23.98	mg/l
t-value for 95%:			1.729			
Upper Confidence Limit for 95%:			0.386			
Reverse Transformation for 95%			372.83	mg/kg	26.13	mg/l

TABLE C-39
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 200s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-201	0.3	571-201-0.3	76	0.0691	0.069145996
571-201	0.6	571-201-0.6	1100	1.0000	1.570796327
571-201	0.9	571-201-0.9	22	0.0200	0.020001334
571-202	0.3	571-202-0.3	13	0.0118	0.011818457
571-202	0.6	571-202-0.6	22	0.0200	0.020001334
571-202	0.9	571-202-0.9	270	0.2455	0.247988554
571-202	1.5	571-202-1.5	8.2	0.0075	0.007454614
571-203	0.3	571-203-0.3	250	0.2273	0.229276203
571-203	0.6	571-203-0.6	55	0.0500	0.050020857
571-204	0.3	571-204-0.3	21	0.0191	0.019092069
571-205	0.3	571-205-0.3	43	0.0391	0.039100872
571-205	0.6	571-205-0.6	63	0.0573	0.057304084
571-206	0.3	571-206-0.3	93	0.0845	0.084646501
571-206	0.6	571-206-0.6	43	0.0391	0.039100872
571-207	0.3	571-207-0.3	31	0.0282	0.028185550
571-207	0.6	571-207-0.6	45	0.0409	0.040920510
571-207	0.9	571-207-0.9	44	0.0400	0.040010674
571-207	1.5	571-207-1.5	240	0.2182	0.219951015
571-208	0.3	571-208-0.3	55	0.0500	0.050020857
571-208	0.6	571-208-0.6	37	0.0336	0.033642710
571-209	0.3	571-209-0.3	4	0.0036	0.003636372
571-209	0.6	571-209-0.6	10	0.0091	0.009091034
571-210	0.3	571-210-0.3	34	0.0309	0.030914015
571-210	0.9	571-210-0.9	5.3	0.0048	0.004818200
571-210	0.6	571-210-0.6	6.6	0.0060	0.006000036

TABLE C-39
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 200s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-210	1.5	571-210-1.5	4	0.0036	0.003636372
571-211	0.3	571-211-0.3	25	0.0227	0.022729230
571-211	0.6	571-211-0.6	21	0.0191	0.019092069
571-212	0.3	571-212-0.3	49	0.0445	0.044560200
571-212	0.6	571-212-0.6	32	0.0291	0.029095014
571-212	0.9	571-212-0.9	15	0.0136	0.013636786
571-213	0.3	571-213-0.3	20	0.0182	0.018182820
571-213	0.6	571-213-0.6	14	0.0127	0.012727616
571-213	0.9	571-213-0.9	11	0.0100	0.010000167
571-214	0.3	571-214-0.3	1000	0.9091	1.141096661
571-214	0.6	571-214-0.6	87	0.0791	0.079173599
571-215	0.3	571-215-0.3	23	0.0209	0.020910615
571-215	0.6	571-215-0.6	13	0.0118	0.011818457
571-215	0.9	571-215-0.9	86	0.0782	0.078261684
571-216	0.3	571-216-0.3	28	0.0255	0.025457295
571-216	0.6	571-216-0.6	76	0.0691	0.069145996
571-217	0.3	571-217-0.3	83	0.0755	0.075526328
571-217	0.6	571-217-0.6	91	0.0827	0.082821926
571-218	0.3	571-218-0.3	8.5	0.0077	0.007727350
571-218	0.6	571-218-0.6	25	0.0227	0.022729230
571-219	0.3	571-219-0.3	51	0.0464	0.046380263
571-219	0.6	571-219-0.6	21	0.0191	0.019092069
571-219	0.9	571-219-0.9	10	0.0091	0.009091034
571-219	1.5	571-219-1.5	30	0.0273	0.027276109
571-220	0.3	571-220-0.3	21	0.0191	0.019092069

TABLE C-39
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 200s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-220	0.6	571-220-0.6	20	0.0182	0.018182820
571-220	0.9	571-220-0.9	27	0.0245	0.024547920
571-220	1.5	571-220-1.5	25	0.0227	0.022729230

Total Lead	Max TTLC:	1100.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	53		53			
Sample Mean:	85		0.093			
Delta = RT - mean	265					
Appropriate Number of Samples:	1					
Standard Deviation of Sample:	201		0.261			
Standard Deviation of Mean:	28		0.036			
Sample Variance:	40516		0.068			
t-value for 90%:	1.299	Need to Transform Data	1.299			
Upper Confidence Limit for 90%:			0.139			
Reverse Transformation for 90%			152.64	mg/kg	10.36	mg/l
t-value for 95%:			1.676			
Upper Confidence Limit for 95%:			0.153			
Reverse Transformation for 95%			167.38	mg/kg	11.42	mg/l

TABLE C-40
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 200s
SURFACE AND 0.3-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-201	0	571-201-0	15	0.0150	0.015000563
571-201	0.3	571-201-0.3	76	0.0760	0.076073353
571-202	0	571-202-0	13	0.0130	0.013000366
571-202	0.3	571-202-0.3	13	0.0130	0.013000366
571-203	0	571-203-0	500	0.5000	0.523598776
571-203	0.3	571-203-0.3	250	0.2500	0.252680255
571-204	0	571-204-0	41	0.0410	0.041011496
571-204	0.3	571-204-0.3	21	0.0210	0.021001544
571-205	0	571-205-0	110	0.1100	0.110223050
571-205	0.3	571-205-0.3	43	0.0430	0.043013262
571-206	0	571-206-0	84	0.0840	0.084099099
571-206	0.3	571-206-0.3	93	0.0930	0.093134584
571-207	0	571-207-0	73	0.0730	0.073064992
571-207	0.3	571-207-0.3	31	0.0310	0.031004967
571-208	0	571-208-0	220	0.2200	0.221814470
571-208	0.3	571-208-0.3	55	0.0550	0.055027767
571-209	0	571-209-0	49	0.0490	0.049019629
571-209	0.3	571-209-0.3	4	0.0040	0.004000011
571-210	0	571-210-0	63	0.0630	0.063041749
571-210	0.3	571-210-0.3	34	0.0340	0.034006554
571-211	0	571-211-0	110	0.1100	0.110223050
571-211	0.3	571-211-0.3	25	0.0250	0.025002605
571-212	0	571-212-0	200	0.2000	0.201357921
571-212	0.3	571-212-0.3	49	0.0490	0.049019629
571-213	0	571-213-0	360	0.3600	0.368267893
571-213	0.3	571-213-0.3	20	0.0200	0.020001334
571-214	0	571-214-0	640	0.6400	0.694498266
571-214	0.3	571-214-0.3	1000	1.0000	1.570796327
571-215	0	571-215-0	170	0.1700	0.170829669
571-215	0.3	571-215-0.3	23	0.0230	0.023002028

TABLE C-40
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 200s
SURFACE AND 0.3-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-216	0	571-216-0	360	0.3600	0.368267893
571-216	0.3	571-216-0.3	28	0.0280	0.028003660
571-217	0	571-217-0	990	0.9900	1.429256853
571-217	0.3	571-217-0.3	83	0.0830	0.083095594
571-218	0	571-218-0	110	0.1100	0.110223050
571-218	0.3	571-218-0.3	8.5	0.0085	0.008500102
571-219	0	571-219-0	31	0.0310	0.031004967
571-219	0.3	571-219-0.3	51	0.0510	0.051022134
571-220	0	571-220-0	66	0.0660	0.066048010
571-220	0.3	571-220-0.3	21	0.0210	0.021001544

Total Lead	Max TTLC:	1000.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	40		40			
Sample Mean:	153		0.181			
Delta = RT - mean	197					
Appropriate Number of Samples:	3					
Standard Deviation of Sample:	240		0.340			
Standard Deviation of Mean:	38		0.054			
Sample Variance:	57370		0.116			
t-value for 90%:	1.304	Need to Transform Data	1.304			
Upper Confidence Limit for 90%:			0.251			
Reverse Transformation for 90%			248.60	mg/kg	17.23	mg/l
t-value for 95%:			1.685			
Upper Confidence Limit for 95%:			0.272			
Reverse Transformation for 95%			268.41	mg/kg	18.65	mg/l

TABLE C-41
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 200s
0.6, 0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-201	0.6	571-201-0.6	1100	1.0000	1.570796327
571-201	0.9	571-201-0.9	22	0.0200	0.020001334
571-202	0.6	571-202-0.6	22	0.0200	0.020001334
571-202	0.9	571-202-0.9	270	0.2455	0.247988554
571-202	1.5	571-202-1.5	8.2	0.0075	0.007454614
571-203	0.6	571-203-0.6	55	0.0500	0.050020857
571-205	0.6	571-205-0.6	63	0.0573	0.057304084
571-206	0.6	571-206-0.6	43	0.0391	0.039100872
571-207	0.6	571-207-0.6	45	0.0409	0.040920510
571-207	0.9	571-207-0.9	44	0.0400	0.040010674
571-207	1.5	571-207-1.5	240	0.2182	0.219951015
571-208	0.6	571-208-0.6	37	0.0336	0.033642710
571-209	0.6	571-209-0.6	10	0.0091	0.009091034
571-209	0.9	571-209-0.9	5.3	0.0048	0.004818200
571-210	0.6	571-210-0.6	6.6	0.0060	0.006000036
571-210	1.5	571-210-1.5	4	0.0036	0.003636372
571-211	0.6	571-211-0.6	21	0.0191	0.019092069
571-212	0.6	571-212-0.6	32	0.0291	0.029095014
571-212	0.9	571-212-0.9	15	0.0136	0.013636786
571-213	0.6	571-213-0.6	14	0.0127	0.012727616
571-213	0.9	571-213-0.9	11	0.0100	0.010000167
571-214	0.6	571-214-0.6	87	0.0791	0.079173599
571-215	0.6	571-215-0.6	13	0.0118	0.011818457
571-215	0.9	571-215-0.9	86	0.0782	0.078261684
571-216	0.6	571-216-0.6	76	0.0691	0.069145996
571-217	0.6	571-217-0.6	91	0.0827	0.082821926
571-218	0.6	571-218-0.6	25	0.0227	0.022729230
571-219	0.6	571-219-0.6	21	0.0191	0.019092069

TABLE C-41
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 200s
0.6, 0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-219	0.9	571-219-0.9	10	0.0091	0.009091034
571-219	1.5	571-219-1.5	30	0.0273	0.027276109
571-220	0.6	571-220-0.6	20	0.0182	0.018182820
571-220	0.9	571-220-0.9	27	0.0245	0.024547920
571-220	1.5	571-220-1.5	25	0.0227	0.022729230

Total Lead	Max TTLC:	1100.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	33		33			
Sample Mean:	78		0.088			
Delta = RT - mean	272					
Appropriate Number of Samples:	1					
Standard Deviation of Sample:	193		0.272			
Standard Deviation of Mean:	34		0.047			
Sample Variance:	37167		0.074			
t-value for 90%:	1.309	Need to Transform Data	1.309			
Upper Confidence Limit for 90%:			0.150			
Reverse Transformation for 90%			164.77	mg/kg	11.23	mg/l
t-value for 95%:			1.694			
Upper Confidence Limit for 95%:			0.169			
Reverse Transformation for 95%			184.58	mg/kg	12.65	mg/l

TABLE C-42
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 200s
SURFACE, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-201	0	571-201-0	15	0.0136	0.013636786
571-201	0.3	571-201-0.3	76	0.0691	0.069145996
571-201	0.6	571-201-0.6	1100	1.0000	1.570796327
571-202	0	571-202-0	13	0.0118	0.011818457
571-202	0.3	571-202-0.3	13	0.0118	0.011818457
571-202	0.6	571-202-0.6	22	0.0200	0.020001334
571-203	0	571-203-0	500	0.4545	0.471861837
571-203	0.3	571-203-0.3	250	0.2273	0.229276203
571-203	0.6	571-203-0.6	55	0.0500	0.050020857
571-204	0	571-204-0	41	0.0373	0.037281363
571-204	0.3	571-204-0.3	21	0.0191	0.019092069
571-205	0	571-205-0	110	0.1000	0.100167421
571-205	0.3	571-205-0.3	43	0.0391	0.039100872
571-205	0.6	571-205-0.6	63	0.0573	0.057304084
571-206	0	571-206-0	84	0.0764	0.076438050
571-206	0.3	571-206-0.3	93	0.0845	0.084646501
571-206	0.6	571-206-0.6	43	0.0391	0.039100872
571-207	0	571-207-0	73	0.0664	0.066412446
571-207	0.3	571-207-0.3	31	0.0282	0.028185550
571-207	0.6	571-207-0.6	45	0.0409	0.040920510
571-208	0	571-208-0	220	0.2000	0.201357921
571-208	0.3	571-208-0.3	55	0.0500	0.050020857
571-208	0.6	571-208-0.6	37	0.0336	0.033642710
571-209	0	571-209-0	49	0.0445	0.044560200
571-209	0.3	571-209-0.3	4	0.0036	0.003636372
571-209	0.6	571-209-0.6	10	0.0091	0.009091034
571-210	0	571-210-0	63	0.0573	0.057304084
571-210	0.3	571-210-0.3	34	0.0309	0.030914015

TABLE C-42
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 200s
SURFACE, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-210	0.6	571-210-0.6	6.6	0.0060	0.006000036
571-211	0	571-211-0	110	0.1000	0.100167421
571-211	0.3	571-211-0.3	25	0.0227	0.022729230
571-211	0.6	571-211-0.6	21	0.0191	0.019092069
571-212	0	571-212-0	200	0.1818	0.182835137
571-212	0.3	571-212-0.3	49	0.0445	0.044560200
571-212	0.6	571-212-0.6	32	0.0291	0.029095014
571-213	0	571-213-0	360	0.3273	0.333415910
571-213	0.3	571-213-0.3	20	0.0182	0.018182820
571-213	0.6	571-213-0.6	14	0.0127	0.012727616
571-214	0	571-214-0	640	0.5818	0.620962417
571-214	0.3	571-214-0.3	1000	0.9091	1.141096661
571-214	0.6	571-214-0.6	87	0.0791	0.079173599
571-215	0	571-215-0	170	0.1545	0.155167364
571-215	0.3	571-215-0.3	23	0.0209	0.020910615
571-215	0.6	571-215-0.6	13	0.0118	0.011818457
571-216	0	571-216-0	360	0.3273	0.333415910
571-216	0.3	571-216-0.3	28	0.0255	0.025457295
571-216	0.6	571-216-0.6	76	0.0691	0.069145996
571-217	0	571-217-0	990	0.9000	1.119769515
571-217	0.3	571-217-0.3	83	0.0755	0.075526328
571-217	0.6	571-217-0.6	91	0.0827	0.082821926
571-218	0	571-218-0	110	0.1000	0.100167421
571-218	0.3	571-218-0.3	8.5	0.0077	0.007727350
571-218	0.6	571-218-0.6	25	0.0227	0.022729230
571-219	0	571-219-0	31	0.0282	0.028185550
571-219	0.3	571-219-0.3	51	0.0464	0.046380263
571-219	0.6	571-219-0.6	21	0.0191	0.019092069

TABLE C-42
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 200s
SURFACE, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-220	0	571-220-0	66	0.0600	0.060036058
571-220	0.3	571-220-0.3	21	0.0191	0.019092069
571-220	0.6	571-220-0.6	20	0.0182	0.018182820

Total Lead	Max TTLC:	1100.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	59		59			
Sample Mean:	134		0.141			
Delta = RT - mean	216					
Appropriate Number of Samples:	2					
Standard Deviation of Sample:	241		0.292			
Standard Deviation of Mean:	31		0.038			
Sample Variance:	57998		0.085			
t-value for 90%:	1.297	Need to Transform Data	1.297			
Upper Confidence Limit for 90%:			0.190			
Reverse Transformation for 90%			207.63	mg/kg	14.30	mg/l
t-value for 95%:			1.672			
Upper Confidence Limit for 95%:			0.204			
Reverse Transformation for 95%			223.04	mg/kg	15.40	mg/l

TABLE C-43
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 200s
0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-201	0.9	571-201-0.9	22	0.0815	0.081571914
571-202	0.9	571-202-0.9	270	1.0000	1.570796327
571-202	1.5	571-202-1.5	8.2	0.0304	0.030375041
571-207	0.9	571-207-0.9	44	0.1630	0.163693021
571-207	1.5	571-207-1.5	240	0.8889	1.094914077
571-210	0.9	571-210-0.9	5.3	0.0196	0.019630890
571-210	1.5	571-210-1.5	4	0.0148	0.014815357
571-212	0.9	571-212-0.9	15	0.0556	0.055584173
571-213	0.9	571-213-0.9	11	0.0407	0.040752019
571-215	0.9	571-215-0.9	86	0.3185	0.324166194
571-219	0.9	571-219-0.9	10	0.0370	0.037045510
571-219	1.5	571-219-1.5	30	0.1111	0.111341014
571-220	0.9	571-220-0.9	27	0.1000	0.100167421
571-220	1.5	571-220-1.5	25	0.0926	0.092725411

Total Lead	Max TTLC:	270.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	14		14			
Sample Mean:	57		0.267			
Delta = RT - mean	293					
Appropriate Number of Samples:	0					
Standard Deviation of Sample:	87		0.468			
Standard Deviation of Mean:	23		0.125			
Sample Variance:	7515		0.219			
t-value for 90%:	1.350	Need to Transform Data	1.350			
Upper Confidence Limit for 90%:			0.436			
Reverse Transformation for 90%			113.97	mg/kg	7.59	mg/l
t-value for 95%:			1.771			
Upper Confidence Limit for 95%:			0.488			
Reverse Transformation for 95%			126.69	mg/kg	8.50	mg/l

TABLE C-44
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 200s
SURFACE, 0.3, 0.6, AND 0.9-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-201	0	571-201-0	15	0.0136	0.013636786
571-201	0.3	571-201-0.3	76	0.0691	0.069145996
571-201	0.6	571-201-0.6	1100	1.0000	1.570796327
571-201	0.9	571-201-0.9	22	0.0200	0.020001334
571-202	0	571-202-0	13	0.0118	0.011818457
571-202	0.3	571-202-0.3	13	0.0118	0.011818457
571-202	0.6	571-202-0.6	22	0.0200	0.020001334
571-202	0.9	571-202-0.9	270	0.2455	0.247988554
571-203	0	571-203-0	500	0.4545	0.471861837
571-203	0.3	571-203-0.3	250	0.2273	0.229276203
571-203	0.6	571-203-0.6	55	0.0500	0.050020857
571-204	0	571-204-0	41	0.0373	0.037281363
571-204	0.3	571-204-0.3	21	0.0191	0.019092069
571-205	0	571-205-0	110	0.1000	0.100167421
571-205	0.3	571-205-0.3	43	0.0391	0.039100872
571-205	0.6	571-205-0.6	63	0.0573	0.057304084
571-206	0	571-206-0	84	0.0764	0.076438050
571-206	0.3	571-206-0.3	93	0.0845	0.084646501
571-206	0.6	571-206-0.6	43	0.0391	0.039100872
571-207	0	571-207-0	73	0.0664	0.066412446
571-207	0.3	571-207-0.3	31	0.0282	0.028185550
571-207	0.6	571-207-0.6	45	0.0409	0.040920510
571-207	0.9	571-207-0.9	44	0.0400	0.040010674
571-208	0	571-208-0	220	0.2000	0.201357921
571-208	0.3	571-208-0.3	55	0.0500	0.050020857
571-208	0.6	571-208-0.6	37	0.0336	0.033642710
571-209	0	571-209-0	49	0.0445	0.044560200
571-209	0.3	571-209-0.3	4	0.0036	0.003636372
571-209	0.6	571-209-0.6	10	0.0091	0.009091034
571-210	0	571-210-0	63	0.0573	0.057304084

TABLE C-44
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 200s
SURFACE, 0.3, 0.6, AND 0.9-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-210	0.3	571-210-0.3	34	0.0309	0.030914015
571-210	0.6	571-210-0.6	6.6	0.0060	0.006000036
571-210	0.9	571-210-0.9	5.3	0.0048	0.004818200
571-211	0	571-211-0	110	0.1000	0.100167421
571-211	0.3	571-211-0.3	25	0.0227	0.022729230
571-211	0.6	571-211-0.6	21	0.0191	0.019092069
571-212	0	571-212-0	200	0.1818	0.182835137
571-212	0.3	571-212-0.3	49	0.0445	0.044560200
571-212	0.6	571-212-0.6	32	0.0291	0.029095014
571-212	0.9	571-212-0.9	15	0.0136	0.013636786
571-213	0	571-213-0	360	0.3273	0.333415910
571-213	0.3	571-213-0.3	20	0.0182	0.018182820
571-213	0.6	571-213-0.6	14	0.0127	0.012727616
571-213	0.9	571-213-0.9	11	0.0100	0.010000167
571-214	0	571-214-0	640	0.5818	0.620962417
571-214	0.3	571-214-0.3	1000	0.9091	1.141096661
571-214	0.6	571-214-0.6	87	0.0791	0.079173599
571-215	0	571-215-0	170	0.1545	0.155167364
571-215	0.3	571-215-0.3	23	0.0209	0.020910615
571-215	0.6	571-215-0.6	13	0.0118	0.011818457
571-215	0.9	571-215-0.9	86	0.0782	0.078261684
571-216	0	571-216-0	360	0.3273	0.333415910
571-216	0.3	571-216-0.3	28	0.0255	0.025457295
571-216	0.6	571-216-0.6	76	0.0691	0.069145996
571-217	0	571-217-0	990	0.9000	1.119769515
571-217	0.3	571-217-0.3	83	0.0755	0.075526328
571-217	0.6	571-217-0.6	91	0.0827	0.082821926
571-218	0	571-218-0	110	0.1000	0.100167421
571-218	0.3	571-218-0.3	8.5	0.0077	0.007727350
571-218	0.6	571-218-0.6	25	0.0227	0.022729230

TABLE C-44
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 200s
SURFACE, 0.3, 0.6, AND 0.9-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-219	0	571-219-0	31	0.0282	0.028185550
571-219	0.3	571-219-0.3	51	0.0464	0.046380263
571-219	0.6	571-219-0.6	21	0.0191	0.019092069
571-219	0.9	571-219-0.9	10	0.0091	0.009091034
571-220	0	571-220-0	66	0.0600	0.060036058
571-220	0.3	571-220-0.3	21	0.0191	0.019092069
571-220	0.6	571-220-0.6	20	0.0182	0.018182820
571-220	0.9	571-220-0.9	27	0.0245	0.024547920

Total Lead	Max TTLC:	1100.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	68		68			
Sample Mean:	124		0.129			
Delta = RT - mean	226					
Appropriate Number of Samples:	2					
Standard Deviation of Sample:	228		0.275			
Standard Deviation of Mean:	28		0.033			
Sample Variance:	51801		0.076			
t-value for 90%:	1.295	Need to Transform Data	1.295			
Upper Confidence Limit for 90%:			0.172			
Reverse Transformation for 90%			187.98	mg/kg	12.89	mg/l
t-value for 95%:			1.669			
Upper Confidence Limit for 95%:			0.184			
Reverse Transformation for 95%			201.48	mg/kg	13.86	mg/l

TABLE C-45
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 200s
1.5-METER LAYER

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-202	1.5	571-202-1.5	8.2	0.0342	0.034173318
571-207	1.5	571-207-1.5	240	1.0000	1.570796327
571-210	1.5	571-210-1.5	4	0.0167	0.016667438
571-219	1.5	571-219-1.5	30	0.1250	0.125327831
571-220	1.5	571-220-1.5	25	0.1042	0.104355973

Total Lead	Max TTLC:	240.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	5		5			
Sample Mean:	61		0.370			
Delta = RT - mean	289					
Appropriate Number of Samples:	0					
Standard Deviation of Sample:	100		0.673			
Standard Deviation of Mean:	45		0.301			
Sample Variance:	10083		0.452			
t-value for 90%:	1.533	Need to Transform Data	1.533			
Upper Confidence Limit for 90%:			0.831			
Reverse Transformation for 90%			177.34	mg/kg	12.13	mg/l
t-value for 95%:			2.132			
Upper Confidence Limit for 95%:			1.012			
Reverse Transformation for 95%			203.45	mg/kg	14.00	mg/l

TABLE C-46
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 400s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-401	0	571-401-0	23	0.0064	0.006388932
571-401	0.3	571-401-0.3	16	0.0044	0.004444459
571-402	0	571-402-0	100	0.0278	0.027781351
571-402	0.3	571-402-0.3	34	0.0094	0.009444585
571-402	0.6	571-402-0.6	15	0.0042	0.004166679
571-403	0	571-403-0	100	0.0278	0.027781351
571-403	0.3	571-403-0.3	99	0.0275	0.027503467
571-403	0.6	571-403-0.6	220	0.0611	0.061149212
571-404	0	571-404-0	110	0.0306	0.030560312
571-404	0.3	571-404-0.3	210	0.0583	0.058366467
571-405	0	571-405-0	1800	0.5000	0.523598776
571-405	0.3	571-405-0.3	9.5	0.0026	0.002638892
571-405	0.6	571-405-0.6	230	0.0639	0.063932432
571-405	0.9	571-405-0.9	18	0.0050	0.005000021
571-405	1.5	571-405-1.5	32	0.0089	0.008889006
571-406	0	571-406-0	1500	0.4167	0.429775431
571-406	0.3	571-406-0.3	2	0.0006	0.000555556
571-406	0.6	571-406-0.6	440	0.1222	0.122528584
571-406	0.9	571-406-0.9	3	0.0008	0.000833333
571-406	1.5	571-406-1.5	42	0.0117	0.011666931
571-407	0	571-407-0	3600	1.0000	1.570796327
571-407	0.3	571-407-0.3	420	0.1167	0.116932961
571-407	0.6	571-407-0.6	450	0.1250	0.125327831
571-407	0.9	571-407-0.9	240	0.0667	0.066716148
571-407	1.5	571-407-1.5	6	0.0017	0.001666667
571-408	0	571-408-0	180	0.0500	0.050020857
571-408	0.3	571-408-0.3	4	0.0011	0.001111111
571-408	0.6	571-408-0.6	190	0.0528	0.052802311

TABLE C-46
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 400s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-408	0.9	571-408-0.9	4	0.0011	0.001111111
571-408	1.5	571-408-1.5	4	0.0011	0.001111111
571-409	0	571-409-0	9.5	0.0026	0.002638892
571-409	0.3	571-409-0.3	6	0.0017	0.001666667
571-409	0.6	571-409-0.6	16	0.0044	0.004444459
571-409	0.9	571-409-0.9	6.5	0.0018	0.001805557
571-409	1.5	571-409-1.5	20	0.0056	0.005555584
571-410	0	571-410-0	140	0.0389	0.038898698
571-410	0.3	571-410-0.3	9.8	0.0027	0.002722226
571-410	0.6	571-410-0.6	7.1	0.0020	0.001972224
571-410	0.9	571-410-0.9	7.1	0.0020	0.001972224
571-411	0	571-411-0	340	0.0944	0.094585415
571-411	0.3	571-411-0.3	14	0.0039	0.003888899
571-411	0.6	571-411-0.6	300	0.0833	0.083430087
571-411	0.9	571-411-0.9	4	0.0011	0.001111111
571-411	1.5	571-411-1.5	7	0.0019	0.001944446
571-412	0	571-412-0	79	0.0219	0.021946206
571-412	0.3	571-412-0.3	100	0.0278	0.027781351
571-412	0.6	571-412-0.6	48	0.0133	0.013333728
571-412	0.9	571-412-0.9	45	0.0125	0.012500326
571-412	1.5	571-412-1.5	8.1	0.0023	0.002250002
571-413	0	571-413-0	660	0.1833	0.184376191
571-413	0.3	571-413-0.3	110	0.0306	0.030560312
571-413	0.6	571-413-0.6	8.2	0.0023	0.002277780
571-413	0.9	571-413-0.9	15	0.0042	0.004166679
571-414	0	571-414-0	1700	0.4722	0.491810095
571-414	0.3	571-414-0.3	570	0.1583	0.159002465
571-414	0.6	571-414-0.6	15	0.0042	0.004166679

TABLE C-46
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 400s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-415	0	571-415-0	790	0.2194	0.221244998
571-415	0.3	571-415-0.3	880	0.2444	0.246946715
571-415	0.6	571-415-0.6	210	0.0583	0.058366467
571-416	0	571-416-0	110	0.0306	0.030560312
571-416	0.3	571-416-0.3	67	0.0186	0.018612186
571-416	0.6	571-416-0.6	6.5	0.0018	0.001805557
571-416	0.9	571-416-0.9	5.5	0.0015	0.001527778
571-417	0	571-417-0	46	0.0128	0.012778126
571-417	0.3	571-417-0.3	48	0.0133	0.013333728
571-418	0	571-418-0	240	0.0667	0.066716148
571-419	0	571-419-0	280	0.0778	0.077856410
571-419	0.3	571-419-0.3	49	0.0136	0.013611531
571-419	0.6	571-419-0.6	21	0.0058	0.005833366
571-419	0.9	571-419-0.9	8.4	0.0023	0.002333335
571-419	1.5	571-419-1.5	8.1	0.0023	0.002250002
571-420	0	571-420-0	380	0.1056	0.105752561
571-420	0.3	571-420-0.3	240	0.0667	0.066716148
571-420	0.6	571-420-0.6	360	0.1000	0.100167421
571-421	0	571-421-0	130	0.0361	0.036118964
571-422	0	571-422-0	17	0.0047	0.004722240
571-422	0.3	571-422-0.3	12	0.0033	0.003333340
571-422	0.6	571-422-0.6	82	0.0228	0.022779748
571-422	0.9	571-422-0.9	4	0.0011	0.001111111
571-422	1.5	571-422-1.5	230	0.0639	0.063932432
571-423	0	571-423-0	130	0.0361	0.036118964
571-423	0.3	571-423-0.3	6.5	0.0018	0.001805557
571-423	0.6	571-423-0.6	17	0.0047	0.004722240
571-423	0.9	571-423-0.9	29	0.0081	0.008055643

TABLE C-46
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 400s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-423	1.5	571-423-1.5	4	0.0011	0.001111111
571-424	0	571-424-0	18	0.0050	0.005000021
571-424	0.3	571-424-0.3	25	0.0069	0.006944500
571-424	0.6	571-424-0.6	6.2	0.0017	0.001722223
571-425	0	571-425-0	53	0.0147	0.014722754
571-425	0.3	571-425-0.3	4	0.0011	0.001111111
571-425	0.6	571-425-0.6	610	0.1694	0.170265935
571-425	0.9	571-425-0.9	2	0.0006	0.000555556
571-425	1.5	571-425-1.5	26	0.0072	0.007222285

Total Lead	Max TTLC:	3600.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	93		93			
Sample Mean:	210		0.065			
Delta = RT - mean	140					
Appropriate Number of Samples:	20					
Standard Deviation of Sample:	484		0.184			
Standard Deviation of Mean:	50		0.019			
Sample Variance:	234434		0.034			
t-value for 90%:	1.292	Need to Transform Data	1.292			
Upper Confidence Limit for 90%:			0.090			
Reverse Transformation for 90%			322.57	mg/kg	22.53	mg/l
t-value for 95%:			1.664			
Upper Confidence Limit for 95%:			0.097			
Reverse Transformation for 95%			347.99	mg/kg	24.35	mg/l

TABLE C-47
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 400s
SURFACE LAYER

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-401	0	571-401-0	23	0.0064	0.006388932
571-402	0	571-402-0	100	0.0278	0.027781351
571-403	0	571-403-0	100	0.0278	0.027781351
571-404	0	571-404-0	110	0.0306	0.030560312
571-405	0	571-405-0	1800	0.5000	0.523598776
571-406	0	571-406-0	1500	0.4167	0.429775431
571-407	0	571-407-0	3600	1.0000	1.570796327
571-408	0	571-408-0	180	0.0500	0.050020857
571-409	0	571-409-0	9.5	0.0026	0.002638892
571-410	0	571-410-0	140	0.0389	0.038898698
571-411	0	571-411-0	340	0.0944	0.094585415
571-412	0	571-412-0	79	0.0219	0.021946206
571-413	0	571-413-0	660	0.1833	0.184376191
571-414	0	571-414-0	1700	0.4722	0.491810095
571-415	0	571-415-0	790	0.2194	0.221244998
571-416	0	571-416-0	110	0.0306	0.030560312
571-417	0	571-417-0	46	0.0128	0.012778126
571-418	0	571-418-0	240	0.0667	0.066716148
571-419	0	571-419-0	280	0.0778	0.077856410
571-420	0	571-420-0	380	0.1056	0.105752561
571-421	0	571-421-0	130	0.0361	0.036118964
571-422	0	571-422-0	17	0.0047	0.004722240

TABLE C-47
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 400s
SURFACE LAYER

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-423	0	571-423-0	130	0.0361	0.036118964
571-424	0	571-424-0	18	0.0050	0.005000021
571-425	0	571-425-0	53	0.0147	0.014722754

Total Lead	Max TTLC:	3600.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	25		25			
Sample Mean:	501		0.165			
Delta = RT - mean	-151					
Appropriate Number of Samples:	53					
Standard Deviation of Sample:	833		0.330			
Standard Deviation of Mean:	167		0.066			
Sample Variance:	693856		0.109			
t-value for 90%:	1.318	Need to Transform Data	1.318			
Upper Confidence Limit for 90%:			0.252			
Reverse Transformation for 90%			896.00	mg/kg	63.59	mg/l
t-value for 95%:			1.711			
Upper Confidence Limit for 95%:			0.277			
Reverse Transformation for 95%			986.17	mg/kg	70.04	mg/l

TABLE C-48
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 400s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-401	0.3	571-401-0.3	16	0.0182	0.018182820
571-402	0.3	571-402-0.3	34	0.0386	0.038645983
571-402	0.6	571-402-0.6	15	0.0170	0.017046280
571-403	0.3	571-403-0.3	99	0.1125	0.112738666
571-403	0.6	571-403-0.6	220	0.2500	0.252680255
571-404	0.3	571-404-0.3	210	0.2386	0.240961403
571-405	0.3	571-405-0.3	9.5	0.0108	0.010795664
571-405	0.6	571-405-0.6	230	0.2614	0.264434676
571-405	0.9	571-405-0.9	18	0.0205	0.020455972
571-405	1.5	571-405-1.5	32	0.0364	0.036371655
571-406	0.3	571-406-0.3	2	0.0023	0.002272729
571-406	0.9	571-406-0.9	3	0.0034	0.003409098
571-406	0.6	571-406-0.6	440	0.5000	0.523598776
571-406	1.5	571-406-1.5	42	0.0477	0.047745411
571-407	0.3	571-407-0.3	420	0.4773	0.497548524
571-407	0.6	571-407-0.6	450	0.5114	0.536770839
571-407	0.9	571-407-0.9	240	0.2727	0.276226631
571-407	1.5	571-407-1.5	6	0.0068	0.006818235
571-408	0.3	571-408-0.3	4	0.0045	0.004545470
571-408	0.6	571-408-0.6	190	0.2159	0.217622785
571-408	0.9	571-408-0.9	4	0.0045	0.004545470
571-408	1.5	571-408-1.5	4	0.0045	0.004545470
571-409	0.3	571-409-0.3	6	0.0068	0.006818235
571-409	0.9	571-409-0.9	6.5	0.0074	0.007386431
571-409	0.6	571-409-0.6	16	0.0182	0.018182820
571-409	1.5	571-409-1.5	20	0.0227	0.022729230
571-410	0.3	571-410-0.3	9.8	0.0111	0.011136594
571-410	0.6	571-410-0.6	7.1	0.0081	0.008068269
571-410	0.9	571-410-0.9	7.1	0.0081	0.008068269
571-411	0.3	571-411-0.3	14	0.0159	0.015909762

TABLE C-48
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 400s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-411	0.6	571-411-0.6	300	0.3409	0.347883747
571-411	0.9	571-411-0.9	4	0.0045	0.004545470
571-411	1.5	571-411-1.5	7	0.0080	0.007954629
571-412	0.3	571-412-0.3	100	0.1136	0.113882364
571-412	0.6	571-412-0.6	48	0.0545	0.054572538
571-412	0.9	571-412-0.9	45	0.0511	0.051158676
571-412	1.5	571-412-1.5	8.1	0.0092	0.009204675
571-413	0.3	571-413-0.3	110	0.1250	0.125327831
571-413	0.6	571-413-0.6	8.2	0.0093	0.009318317
571-413	0.9	571-413-0.9	15	0.0170	0.017046280
571-414	0.3	571-414-0.3	570	0.6477	0.704597558
571-414	0.6	571-414-0.6	15	0.0170	0.017046280
571-415	0.3	571-415-0.3	880	1.0000	1.570796327
571-415	0.6	571-415-0.6	210	0.2386	0.240961403
571-416	0.3	571-416-0.3	67	0.0761	0.076210113
571-416	0.6	571-416-0.6	6.5	0.0074	0.007386431
571-416	0.9	571-416-0.9	5.5	0.0063	0.006250041
571-417	0.3	571-417-0.3	48	0.0545	0.054572538
571-419	0.3	571-419-0.3	49	0.0557	0.055710632
571-419	0.6	571-419-0.6	21	0.0239	0.023865902
571-419	0.9	571-419-0.9	8.4	0.0095	0.009545600
571-419	1.5	571-419-1.5	8.1	0.0092	0.009204675
571-420	0.3	571-420-0.3	240	0.2727	0.276226631
571-420	0.6	571-420-0.6	360	0.4091	0.421457568
571-422	0.3	571-422-0.3	12	0.0136	0.013636786
571-422	0.6	571-422-0.6	82	0.0932	0.093317195
571-422	0.9	571-422-0.9	4	0.0045	0.004545470
571-422	1.5	571-422-1.5	230	0.2614	0.264434676
571-423	0.3	571-423-0.3	6.5	0.0074	0.007386431
571-423	0.6	571-423-0.6	17	0.0193	0.019319384

TABLE C-48
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 400s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-423	0.9	571-423-0.9	29	0.0330	0.032960513
571-423	1.5	571-423-1.5	4	0.0045	0.004545470
571-424	0.3	571-424-0.3	25	0.0284	0.028412914
571-424	0.6	571-424-0.6	6.2	0.0070	0.007045513
571-425	0.3	571-425-0.3	4	0.0045	0.004545470
571-425	0.6	571-425-0.6	610	0.6932	0.765894251
571-425	0.9	571-425-0.9	2	0.0023	0.002272729
571-425	1.5	571-425-1.5	26	0.0295	0.029549755

Total Lead	Max TTLC:	880.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	68		68			
Sample Mean:	102		0.128			
Delta = RT - mean	248					
Appropriate Number of Samples:	1					
Standard Deviation of Sample:	173		0.249			
Standard Deviation of Mean:	21		0.030			
Sample Variance:	29936		0.062			
t-value for 90%:	1.295	Need to Transform Data	1.295			
Upper Confidence Limit for 90%:			0.167			
Reverse Transformation for 90%			146.62	mg/kg	9.93	mg/l
t-value for 95%:			1.669			
Upper Confidence Limit for 95%:			0.179			
Reverse Transformation for 95%			156.39	mg/kg	10.63	mg/l

TABLE C-49
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 400s
SURFACE AND 0.3-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-401	0	571-401-0	23	0.0064	0.006388932
571-401	0.3	571-401-0.3	16	0.0044	0.004444459
571-402	0	571-402-0	100	0.0278	0.027781351
571-402	0.3	571-402-0.3	34	0.0094	0.009444585
571-403	0	571-403-0	100	0.0278	0.027781351
571-403	0.3	571-403-0.3	99	0.0275	0.027503467
571-404	0	571-404-0	110	0.0306	0.030560312
571-404	0.3	571-404-0.3	210	0.0583	0.058366467
571-405	0	571-405-0	1800	0.5000	0.523598776
571-405	0.3	571-405-0.3	9.5	0.0026	0.002638892
571-406	0	571-406-0	1500	0.4167	0.429775431
571-406	0.3	571-406-0.3	2	0.0006	0.000555556
571-407	0	571-407-0	3600	1.0000	1.570796327
571-407	0.3	571-407-0.3	420	0.1167	0.116932961
571-408	0	571-408-0	180	0.0500	0.050020857
571-408	0.3	571-408-0.3	4	0.0011	0.001111111
571-409	0	571-409-0	9.5	0.0026	0.002638892
571-409	0.3	571-409-0.3	6	0.0017	0.001666667
571-410	0	571-410-0	140	0.0389	0.038898698
571-410	0.3	571-410-0.3	9.8	0.0027	0.002722226
571-411	0	571-411-0	340	0.0944	0.094585415
571-411	0.3	571-411-0.3	14	0.0039	0.003888899
571-412	0	571-412-0	79	0.0219	0.021946206
571-412	0.3	571-412-0.3	100	0.0278	0.027781351
571-413	0	571-413-0	660	0.1833	0.184376191
571-413	0.3	571-413-0.3	110	0.0306	0.030560312
571-414	0	571-414-0	1700	0.4722	0.491810095
571-414	0.3	571-414-0.3	570	0.1583	0.159002465
571-415	0	571-415-0	790	0.2194	0.221244998
571-415	0.3	571-415-0.3	880	0.2444	0.246946715
571-416	0	571-416-0	110	0.0306	0.030560312
571-416	0.3	571-416-0.3	67	0.0186	0.018612186

TABLE C-49
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 400s
SURFACE AND 0.3-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-417	0	571-417-0	46	0.0128	0.012778126
571-417	0.3	571-417-0.3	48	0.0133	0.013333728
571-418	0	571-418-0	240	0.0667	0.066716148
571-419	0	571-419-0	280	0.0778	0.077856410
571-419	0.3	571-419-0.3	49	0.0136	0.013611531
571-420	0	571-420-0	380	0.1056	0.105752561
571-420	0.3	571-420-0.3	240	0.0667	0.066716148
571-421	0	571-421-0	130	0.0361	0.036118964
571-422	0	571-422-0	17	0.0047	0.004722240
571-422	0.3	571-422-0.3	12	0.0033	0.003333340
571-423	0	571-423-0	130	0.0361	0.036118964
571-423	0.3	571-423-0.3	6.5	0.0018	0.001805557
571-424	0	571-424-0	18	0.0050	0.005000021
571-424	0.3	571-424-0.3	25	0.0069	0.006944500
571-425	0	571-425-0	53	0.0147	0.014722754
571-425	0.3	571-425-0.3	4	0.0011	0.001111111

Total Lead	Max TTLC:	3600.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	48		48			
Sample Mean:	322		0.103			
Delta = RT - mean	28					
Appropriate Number of Samples:	910					
Standard Deviation of Sample:	642		0.248			
Standard Deviation of Mean:	93		0.036			
Sample Variance:	412183		0.062			
t-value for 90%:	1.301	Need to Transform Data	1.301			
Upper Confidence Limit for 90%:			0.149			
Reverse Transformation for 90%			535.66	mg/kg	37.79	mg/l
t-value for 95%:			1.679			
Upper Confidence Limit for 95%:			0.163			
Reverse Transformation for 95%			583.94	mg/kg	41.24	mg/l

TABLE C-50
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 400s
0.6, 0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-402	0.6	571-402-0.6	15	0.0246	0.024592643
571-403	0.6	571-403-0.6	220	0.3607	0.368970852
571-405	0.6	571-405-0.6	230	0.3770	0.386608257
571-405	0.9	571-405-0.9	18	0.0295	0.029512481
571-405	1.5	571-405-1.5	32	0.0525	0.052483107
571-406	0.6	571-406-0.6	440	0.7213	0.805693981
571-406	0.9	571-406-0.9	3	0.0049	0.004918053
571-406	1.5	571-406-1.5	42	0.0689	0.068906976
571-407	0.6	571-407-0.6	450	0.7377	0.829664514
571-407	0.9	571-407-0.9	240	0.3934	0.404373236
571-407	1.5	571-407-1.5	6	0.0098	0.009836224
571-408	0.6	571-408-0.6	190	0.3115	0.316745286
571-408	0.9	571-408-0.9	4	0.0066	0.006557424
571-408	1.5	571-408-1.5	4	0.0066	0.006557424
571-409	0.6	571-409-0.6	16	0.0262	0.026232517
571-409	0.9	571-409-0.9	6.5	0.0107	0.010655939
571-409	1.5	571-409-1.5	20	0.0328	0.032792762
571-410	0.6	571-410-0.6	7.1	0.0116	0.011639607
571-410	0.9	571-410-0.9	7.1	0.0116	0.011639607
571-411	0.6	571-411-0.6	300	0.4918	0.514159597
571-411	0.9	571-411-0.9	4	0.0066	0.006557424
571-411	1.5	571-411-1.5	7	0.0115	0.011475662
571-412	0.6	571-412-0.6	48	0.0787	0.078769957
571-412	0.9	571-412-0.9	45	0.0738	0.073837567
571-412	1.5	571-412-1.5	8.1	0.0133	0.013279079
571-413	0.6	571-413-0.6	8.2	0.0134	0.013443028
571-413	0.9	571-413-0.9	15	0.0246	0.024592643
571-414	0.6	571-414-0.6	15	0.0246	0.024592643
571-415	0.6	571-415-0.6	210	0.3443	0.351452938
571-416	0.6	571-416-0.6	6.5	0.0107	0.010655939

TABLE C-50
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 400s
0.6, 0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-416	0.9	571-416-0.9	5.5	0.0090	0.009016516
571-419	0.6	571-419-0.6	21	0.0344	0.034433033
571-419	0.9	571-419-0.9	8.4	0.0138	0.013770927
571-419	1.5	571-419-1.5	8.1	0.0133	0.013279079
571-420	0.6	571-420-0.6	360	0.5902	0.631261895
571-422	0.6	571-422-0.6	82	0.1344	0.134834414
571-422	0.9	571-422-0.9	4	0.0066	0.006557424
571-422	1.5	571-422-1.5	230	0.3770	0.386608257
571-423	0.6	571-423-0.6	17	0.0279	0.027872461
571-423	0.9	571-423-0.9	29	0.0475	0.047558910
571-423	1.5	571-423-1.5	4	0.0066	0.006557424
571-424	0.6	571-424-0.6	6.2	0.0102	0.010164109
571-425	0.6	571-425-0.6	610	1.0000	1.570796327
571-425	0.9	571-425-0.9	2	0.0033	0.003278694
571-425	1.5	571-425-1.5	26	0.0426	0.042635867

Total Lead	Max TTLC:	610.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	45		45			
Sample Mean:	90		0.166			
Delta = RT - mean	260					
Appropriate Number of Samples:	1					
Standard Deviation of Sample:	146		0.305			
Standard Deviation of Mean:	22		0.046			
Sample Variance:	21300		0.093			
t-value for 90%:	1.302	Need to Transform Data	1.302			
Upper Confidence Limit for 90%:			0.225			
Reverse Transformation for 90%			136.23	mg/kg	9.19	mg/l
t-value for 95%:			1.681			
Upper Confidence Limit for 95%:			0.243			
Reverse Transformation for 95%			146.48	mg/kg	9.92	mg/l

TABLE C-51
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 400s
SURFACE, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-401	0	571-401-0	23	0.0064	0.006388932
571-401	0.3	571-401-0.3	16	0.0044	0.004444459
571-402	0	571-402-0	100	0.0278	0.027781351
571-402	0.3	571-402-0.3	34	0.0094	0.009444585
571-402	0.6	571-402-0.6	15	0.0042	0.004166679
571-403	0	571-403-0	100	0.0278	0.027781351
571-403	0.3	571-403-0.3	99	0.0275	0.027503467
571-403	0.6	571-403-0.6	220	0.0611	0.061149212
571-404	0	571-404-0	110	0.0306	0.030560312
571-404	0.3	571-404-0.3	210	0.0583	0.058366467
571-405	0	571-405-0	1800	0.5000	0.523598776
571-405	0.3	571-405-0.3	9.5	0.0026	0.002638892
571-405	0.6	571-405-0.6	230	0.0639	0.063932432
571-406	0	571-406-0	1500	0.4167	0.429775431
571-406	0.3	571-406-0.3	2	0.0006	0.000555556
571-406	0.6	571-406-0.6	440	0.1222	0.122528584
571-407	0	571-407-0	3600	1.0000	1.570796327
571-407	0.3	571-407-0.3	420	0.1167	0.116932961
571-407	0.6	571-407-0.6	450	0.1250	0.125327831
571-408	0	571-408-0	180	0.0500	0.050020857
571-408	0.3	571-408-0.3	4	0.0011	0.001111111
571-408	0.6	571-408-0.6	190	0.0528	0.052802311
571-409	0	571-409-0	9.5	0.0026	0.002638892
571-409	0.3	571-409-0.3	6	0.0017	0.001666667
571-409	0.6	571-409-0.6	16	0.0044	0.004444459
571-410	0	571-410-0	140	0.0389	0.038898698
571-410	0.3	571-410-0.3	9.8	0.0027	0.002722226
571-410	0.6	571-410-0.6	7.1	0.0020	0.001972224

TABLE C-51
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 400s
SURFACE, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-411	0	571-411-0	340	0.0944	0.094585415
571-411	0.3	571-411-0.3	14	0.0039	0.003888899
571-411	0.6	571-411-0.6	300	0.0833	0.083430087
571-412	0	571-412-0	79	0.0219	0.021946206
571-412	0.3	571-412-0.3	100	0.0278	0.027781351
571-412	0.6	571-412-0.6	48	0.0133	0.013333728
571-413	0	571-413-0	660	0.1833	0.184376191
571-413	0.3	571-413-0.3	110	0.0306	0.030560312
571-413	0.6	571-413-0.6	8.2	0.0023	0.002277780
571-414	0	571-414-0	1700	0.4722	0.491810095
571-414	0.3	571-414-0.3	570	0.1583	0.159002465
571-414	0.6	571-414-0.6	15	0.0042	0.004166679
571-415	0	571-415-0	790	0.2194	0.221244998
571-415	0.3	571-415-0.3	880	0.2444	0.246946715
571-415	0.6	571-415-0.6	210	0.0583	0.058366467
571-416	0	571-416-0	110	0.0306	0.030560312
571-416	0.3	571-416-0.3	67	0.0186	0.018612186
571-416	0.6	571-416-0.6	6.5	0.0018	0.001805557
571-417	0	571-417-0	46	0.0128	0.012778126
571-417	0.3	571-417-0.3	48	0.0133	0.013333728
571-418	0	571-418-0	240	0.0667	0.066716148
571-419	0	571-419-0	280	0.0778	0.077856410
571-419	0.3	571-419-0.3	49	0.0136	0.013611531
571-419	0.6	571-419-0.6	21	0.0058	0.005833366
571-420	0	571-420-0	380	0.1056	0.105752561
571-420	0.3	571-420-0.3	240	0.0667	0.066716148
571-420	0.6	571-420-0.6	360	0.1000	0.100167421
571-421	0	571-421-0	130	0.0361	0.036118964

TABLE C-51
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 400s
SURFACE, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-422	0	571-422-0	17	0.0047	0.004722240
571-422	0.3	571-422-0.3	12	0.0033	0.003333340
571-422	0.6	571-422-0.6	82	0.0228	0.022779748
571-423	0	571-423-0	130	0.0361	0.036118964
571-423	0.3	571-423-0.3	6.5	0.0018	0.001805557
571-423	0.6	571-423-0.6	17	0.0047	0.004722240
571-424	0	571-424-0	18	0.0050	0.005000021
571-424	0.3	571-424-0.3	25	0.0069	0.006944500
571-424	0.6	571-424-0.6	6.2	0.0017	0.001722223
571-425	0	571-425-0	53	0.0147	0.014722754
571-425	0.3	571-425-0.3	4	0.0011	0.001111111
571-425	0.6	571-425-0.6	610	0.1694	0.170265935

Total Lead	Max TTLC:	3600.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	68		68			
Sample Mean:	275		0.086			
Delta = RT - mean	75					
Appropriate Number of Samples:	92					
Standard Deviation of Sample:	552		0.211			
Standard Deviation of Mean:	67		0.026			
Sample Variance:	304237		0.045			
t-value for 90%:	1.295	Need to Transform Data	1.295			
Upper Confidence Limit for 90%:			0.119			
Reverse Transformation for 90%			427.51	mg/kg	30.04	mg/l
t-value for 95%:			1.669			
Upper Confidence Limit for 95%:			0.129			
Reverse Transformation for 95%			461.77	mg/kg	32.50	mg/l

TABLE C-52
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 400s
0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-405	0.9	571-405-0.9	18	0.0750	0.075070491
571-405	1.5	571-405-1.5	32	0.1333	0.133731589
571-406	0.9	571-406-0.9	3	0.0125	0.012500326
571-406	1.5	571-406-1.5	42	0.1750	0.175905768
571-407	0.9	571-407-0.9	240	1.0000	1.570796327
571-407	1.5	571-407-1.5	6	0.0250	0.025002605
571-408	0.9	571-408-0.9	4	0.0167	0.016667438
571-408	1.5	571-408-1.5	4	0.0167	0.016667438
571-409	0.9	571-409-0.9	6.5	0.0271	0.027086645
571-409	1.5	571-409-1.5	20	0.0833	0.083430087
571-410	0.9	571-410-0.9	7.1	0.0296	0.029587650
571-411	0.9	571-411-0.9	4	0.0167	0.016667438
571-411	1.5	571-411-1.5	7	0.0292	0.029170804
571-412	0.9	571-412-0.9	45	0.1875	0.188616386
571-412	1.5	571-412-1.5	8.1	0.0338	0.033756411
571-413	0.9	571-413-0.9	15	0.0625	0.062540762
571-416	0.9	571-416-0.9	5.5	0.0229	0.022918673
571-419	0.9	571-419-0.9	8.4	0.0350	0.035007150
571-419	1.5	571-419-1.5	8.1	0.0338	0.033756411
571-422	0.9	571-422-0.9	4	0.0167	0.016667438
571-422	1.5	571-422-1.5	230	0.9583	1.281109333
571-423	0.9	571-423-0.9	29	0.1208	0.121129324

TABLE C-52
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 400s
0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-423	1.5	571-423-1.5	4	0.0167	0.016667438
571-425	0.9	571-425-0.9	2	0.0083	0.008333430
571-425	1.5	571-425-1.5	26	0.1083	0.108546362

Total Lead	Max TTLC:	240.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	25		25			
Sample Mean:	31		0.166			
Delta = RT - mean	319					
Appropriate Number of Samples:	0					
Standard Deviation of Sample:	63		0.385			
Standard Deviation of Mean:	13		0.077			
Sample Variance:	3918		0.148			
t-value for 90%:	1.318	Need to Transform Data	1.318			
Upper Confidence Limit for 90%:			0.267			
Reverse Transformation for 90%			63.36	mg/kg	3.97	mg/l
t-value for 95%:			1.711			
Upper Confidence Limit for 95%:			0.297			
Reverse Transformation for 95%			70.33	mg/kg	4.47	mg/l

TABLE C-53
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-601	0	571-601-0	120	0.0545	0.054572538
571-601	0.3	571-601-0.3	64	0.0291	0.029095014
571-602	0	571-602-0	97	0.0441	0.044105207
571-602	0.3	571-602-0.3	10	0.0045	0.004545470
571-602	0.6	571-602-0.6	250	0.1136	0.113882364
571-602	0.9	571-602-0.9	19	0.0086	0.008636471
571-603	0	571-603-0	25	0.0114	0.011363881
571-603	0.3	571-603-0.3	47	0.0214	0.021365262
571-604	0	571-604-0	820	0.3727	0.381946351
571-604	0.3	571-604-0.3	82	0.0373	0.037281363
571-604	0.6	571-604-0.6	87	0.0395	0.039555769
571-605	0	571-605-0	110	0.0500	0.050020857
571-605	0.3	571-605-0.3	60	0.0273	0.027276109
571-605	0.6	571-605-0.6	21	0.0095	0.009545600
571-606	0	571-606-0	180	0.0818	0.081909743
571-606	0.3	571-606-0.3	78	0.0355	0.035461978
571-607	0	571-607-0	80	0.0364	0.036371655
571-607	0.3	571-607-0.3	7.4	0.0034	0.003363643
571-607	0.6	571-607-0.6	290	0.1318	0.132202944
571-607	0.9	571-607-0.9	5.9	0.0027	0.002681821
571-607	1.5	571-607-1.5	10	0.0045	0.004545470
571-608	0	571-608-0	240	0.1091	0.109308455
571-608	0.3	571-608-0.3	22	0.0100	0.010000167
571-608	0.6	571-608-0.6	130	0.0591	0.059125352
571-608	0.9	571-608-0.9	7.3	0.0033	0.003318188
571-608	1.5	571-608-1.5	100	0.0455	0.045470212
571-609	0	571-609-0	1800	0.8182	0.958241588
571-609	0.3	571-609-0.3	6.2	0.0028	0.002818186

TABLE C-53
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-609	0.6	571-609-0.6	130	0.0591	0.059125352
571-609	0.9	571-609-0.9	13	0.0059	0.005909125
571-610	0	571-610-0	580	0.2636	0.266790000
571-610	0.3	571-610-0.3	6.6	0.0030	0.003000005
571-610	0.6	571-610-0.6	140	0.0636	0.063679392
571-610	0.9	571-610-0.9	18	0.0082	0.008181909
571-610	1.5	571-610-1.5	610	0.2773	0.280954372
571-611	0	571-611-0	2200	1.0000	1.570796327
571-611	0.3	571-611-0.3	14	0.0064	0.006363679
571-611	0.6	571-611-0.6	840	0.3818	0.391762723
571-611	0.9	571-611-0.9	13	0.0059	0.005909125
571-611	1.5	571-611-1.5	12	0.0055	0.005454573
571-612	0	571-612-0	110	0.0500	0.050020857
571-612	0.3	571-612-0.3	4	0.0018	0.001818183
571-612	0.6	571-612-0.6	38	0.0173	0.017273586
571-612	0.9	571-612-0.9	12	0.0055	0.005454573
571-612	1.5	571-612-1.5	13	0.0059	0.005909125
571-613	0	571-613-0	90	0.0409	0.040920510
571-613	0.3	571-613-0.3	170	0.0773	0.077349835
571-613	0.6	571-613-0.6	48	0.0218	0.021819913
571-613	0.9	571-613-0.9	2	0.0009	0.000909091
571-613	1.5	571-613-1.5	31	0.0141	0.014091375
571-614	0	571-614-0	59	0.0268	0.026821398
571-614	0.3	571-614-0.3	5.8	0.0026	0.002636367
571-614	0.9	571-614-0.9	36	0.0164	0.016364367
571-614	1.5	571-614-1.5	89	0.0405	0.040465588
571-615	0	571-615-0	1	0.0005	0.000454545
571-615	0.3	571-615-0.3	2	0.0009	0.000909091

TABLE C-53
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-615	0.6	571-615-0.6	49	0.0223	0.022274569
571-615	0.9	571-615-0.9	4	0.0018	0.001818183
571-616	0	571-616-0	1500	0.6818	0.750245244
571-616	0.3	571-616-0.3	95	0.0432	0.043195249
571-616	0.6	571-616-0.6	580	0.2636	0.266790000
571-616	0.9	571-616-0.9	22	0.0100	0.010000167
571-616	1.5	571-616-1.5	280	0.1273	0.127618858
571-617	0	571-617-0	1300	0.5909	0.632185249
571-617	0.3	571-617-0.3	800	0.3636	0.372168534
571-617	0.6	571-617-0.6	100	0.0455	0.045470212
571-617	0.9	571-617-0.9	81	0.0368	0.036826505
571-618	0	571-618-0	31	0.0141	0.014091375
571-618	0.3	571-618-0.3	10	0.0045	0.004545470
571-618	0.6	571-618-0.6	2	0.0009	0.000909091
571-618	0.9	571-618-0.9	1000	0.4545	0.471861837
571-618	1.5	571-618-1.5	5	0.0023	0.002272729
571-619	0	571-619-0	76	0.0345	0.034552329
571-619	0.3	571-619-0.3	200	0.0909	0.091034778
571-619	0.6	571-619-0.6	710	0.3227	0.328609531
571-619	0.9	571-619-0.9	960	0.4364	0.451553259
571-619	1.5	571-619-1.5	1100	0.5000	0.523598776
571-620	0	571-620-0	250	0.1136	0.113882364
571-620	0.3	571-620-0.3	7.4	0.0034	0.003363643
571-620	0.6	571-620-0.6	6.5	0.0030	0.002954550
571-620	0.9	571-620-0.9	2	0.0009	0.000909091
571-620	1.5	571-620-1.5	1	0.0005	0.000454545
571-621	0	571-621-0	130	0.0591	0.059125352
571-621	0.3	571-621-0.3	2	0.0009	0.000909091

TABLE C-53
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-621	0.6	571-621-0.6	2	0.0009	0.000909091
571-621	0.9	571-621-0.9	110	0.0500	0.050020857
571-621	1.5	571-621-1.5	220	0.1000	0.100167421
571-622	0	571-622-0	370	0.1682	0.168984924
571-622	0.3	571-622-0.3	2	0.0009	0.000909091
571-622	0.6	571-622-0.6	2	0.0009	0.000909091
571-622	0.9	571-622-0.9	4	0.0018	0.001818183
571-622	1.5	571-622-1.5	260	0.1182	0.118458668
571-623	0	571-623-0	23	0.0105	0.010454736
571-623	0.3	571-623-0.3	3	0.0014	0.001363637
571-623	0.6	571-623-0.6	190	0.0864	0.086471358
571-623	0.9	571-623-0.9	4	0.0018	0.001818183
571-623	1.5	571-623-1.5	29	0.0132	0.013182200
571-624	0	571-624-0	160	0.0727	0.072791538
571-624	0.3	571-624-0.3	76	0.0345	0.034552329
571-624	0.6	571-624-0.6	4	0.0018	0.001818183
571-624	0.9	571-624-0.9	17	0.0077	0.007727350
571-624	1.5	571-624-1.5	90	0.0409	0.040920510
571-625	0	571-625-0	2	0.0009	0.000909091
571-625	0.3	571-625-0.3	2	0.0009	0.000909091
571-625	0.6	571-625-0.6	2	0.0009	0.000909091
571-625	0.9	571-625-0.9	7	0.0032	0.003181824
571-625	1.5	571-625-1.5	12	0.0055	0.005454573
571-626	0	571-626-0	83	0.0377	0.037736228
571-626	0.3	571-626-0.3	4	0.0018	0.001818183
571-626	0.6	571-626-0.6	10	0.0045	0.004545470
571-626	0.9	571-626-0.9	13	0.0059	0.005909125
571-627	0	571-627-0	14	0.0064	0.006363679

TABLE C-53
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-627	0.3	571-627-0.3	17	0.0077	0.007727350
571-627	0.6	571-627-0.6	10	0.0045	0.004545470
571-627	0.9	571-627-0.9	14	0.0064	0.006363679
571-627	1.5	571-627-1.5	4	0.0018	0.001818183
571-628	0	571-628-0	12	0.0055	0.005454573
571-628	0.3	571-628-0.3	9.8	0.0045	0.004454560
571-628	0.6	571-628-0.6	11	0.0050	0.005000021
571-629	0	571-629-0	470	0.2136	0.215295754
571-629	0.3	571-629-0.3	220	0.1000	0.100167421
571-629	0.6	571-629-0.6	110	0.0500	0.050020857
571-629	0.9	571-629-0.9	46	0.0209	0.020910615
571-629	1.5	571-629-1.5	61	0.0277	0.027730827

Total Lead	Max TTLC:	2200.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	124		124			
Sample Mean:	178		0.088			
Delta = RT - mean	172					
Appropriate Number of Samples:	7					
Standard Deviation of Sample:	362		0.204			
Standard Deviation of Mean:	32		0.018			
Sample Variance:	130961		0.042			
t-value for 90%:	1.282	Need to Transform Data	1.282			
Upper Confidence Limit for 90%:			0.112			
Reverse Transformation for 90%			245.50	mg/kg	17.01	mg/l
t-value for 95%:			1.645			
Upper Confidence Limit for 95%:			0.118			
Reverse Transformation for 95%			260.03	mg/kg	18.05	mg/l

TABLE C-54
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
SURFACE LAYER

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-601	0	571-601-0	120	0.0545	0.054572538
571-602	0	571-602-0	97	0.0441	0.044105207
571-603	0	571-603-0	25	0.0114	0.011363881
571-604	0	571-604-0	820	0.3727	0.381946351
571-605	0	571-605-0	110	0.0500	0.050020857
571-606	0	571-606-0	180	0.0818	0.081909743
571-607	0	571-607-0	80	0.0364	0.036371655
571-608	0	571-608-0	240	0.1091	0.109308455
571-609	0	571-609-0	1800	0.8182	0.958241588
571-610	0	571-610-0	580	0.2636	0.266790000
571-611	0	571-611-0	2200	1.0000	1.570796327
571-612	0	571-612-0	110	0.0500	0.050020857
571-613	0	571-613-0	90	0.0409	0.040920510
571-614	0	571-614-0	59	0.0268	0.026821398
571-615	0	571-615-0	1	0.0005	0.000454545
571-616	0	571-616-0	1500	0.6818	0.750245244
571-617	0	571-617-0	1300	0.5909	0.632185249
571-618	0	571-618-0	31	0.0141	0.014091375
571-619	0	571-619-0	76	0.0345	0.034552329
571-620	0	571-620-0	250	0.1136	0.113882364
571-621	0	571-621-0	130	0.0591	0.059125352
571-622	0	571-622-0	370	0.1682	0.168984924
571-623	0	571-623-0	23	0.0105	0.010454736
571-624	0	571-624-0	160	0.0727	0.072791538
571-625	0	571-625-0	2	0.0009	0.000909091
571-626	0	571-626-0	83	0.0377	0.037736228

TABLE C-54
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
SURFACE LAYER

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-627	0	571-627-0	14	0.0064	0.006363679
571-628	0	571-628-0	12	0.0055	0.005454573
571-629	0	571-629-0	470	0.2136	0.215295754

*571-619-0.6 was deleted as an outlier.

Total Lead	Max TTLC:	2200.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	29		29			
Sample Mean:	377		0.200			
Delta = RT - mean	-27					
Appropriate Number of Samples:	806					
Standard Deviation of Sample:	584		0.355			
Standard Deviation of Mean:	108		0.066			
Sample Variance:	340749		0.126			
t-value for 90%:	1.313	Need to Transform Data	1.313			
Upper Confidence Limit for 90%:			0.287			
Reverse Transformation for 90%			622.41	mg/kg	44.00	mg/l
t-value for 95%:			1.701			
Upper Confidence Limit for 95%:			0.312			
Reverse Transformation for 95%			676.22	mg/kg	47.85	mg/l

TABLE C-55
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-601	0.3	571-601-0.3	64	0.0582	0.058214694
571-602	0.3	571-602-0.3	10	0.0091	0.009091034
571-602	0.6	571-602-0.6	250	0.2273	0.229276203
571-602	0.9	571-602-0.9	19	0.0173	0.017273586
571-603	0.3	571-603-0.3	47	0.0427	0.042740284
571-604	0.3	571-604-0.3	82	0.0745	0.074614670
571-604	0.6	571-604-0.6	87	0.0791	0.079173599
571-605	0.3	571-605-0.3	60	0.0545	0.054572538
571-605	0.6	571-605-0.6	21	0.0191	0.019092069
571-606	0.3	571-606-0.3	78	0.0709	0.070968649
571-607	0.3	571-607-0.3	7.4	0.0067	0.006727323
571-607	0.6	571-607-0.6	290	0.2636	0.266790000
571-607	0.9	571-607-0.9	5.9	0.0054	0.005363662
571-607	1.5	571-607-1.5	10	0.0091	0.009091034
571-608	0.3	571-608-0.3	22	0.0200	0.020001334
571-608	0.6	571-608-0.6	130	0.1182	0.118458668
571-608	0.9	571-608-0.9	7.3	0.0066	0.006636412
571-608	1.5	571-608-1.5	100	0.0909	0.091034778
571-609	0.3	571-609-0.3	6.2	0.0056	0.005636393
571-609	0.6	571-609-0.6	130	0.1182	0.118458668
571-609	0.9	571-609-0.9	13	0.0118	0.011818457
571-610	0.3	571-610-0.3	6.6	0.0060	0.006000036
571-610	0.6	571-610-0.6	140	0.1273	0.127618858
571-610	0.9	571-610-0.9	18	0.0164	0.016364367
571-610	1.5	571-610-1.5	610	0.5545	0.587816639
571-611	0.3	571-611-0.3	14	0.0127	0.012727616
571-611	0.6	571-611-0.6	840	0.7636	0.868926637
571-611	0.9	571-611-0.9	13	0.0118	0.011818457
571-611	1.5	571-611-1.5	12	0.0109	0.010909307
571-612	0.3	571-612-0.3	4	0.0036	0.003636372

TABLE C-55
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-612	0.6	571-612-0.6	38	0.0345	0.034552329
571-612	0.9	571-612-0.9	12	0.0109	0.010909307
571-612	1.5	571-612-1.5	13	0.0118	0.011818457
571-613	0.3	571-613-0.3	170	0.1545	0.155167364
571-613	0.6	571-613-0.6	48	0.0436	0.043650224
571-613	0.9	571-613-0.9	2	0.0018	0.001818183
571-613	1.5	571-613-1.5	31	0.0282	0.028185550
571-614	0.3	571-614-0.3	5.8	0.0053	0.005272752
571-614	0.9	571-614-0.9	36	0.0327	0.032733118
571-614	1.5	571-614-1.5	89	0.0809	0.080997628
571-615	0.3	571-615-0.3	2	0.0018	0.001818183
571-615	0.6	571-615-0.6	49	0.0445	0.044560200
571-615	0.9	571-615-0.9	4	0.0036	0.003636372
571-616	0.3	571-616-0.3	95	0.0864	0.086471358
571-616	0.6	571-616-0.6	580	0.5273	0.555387653
571-616	0.9	571-616-0.9	22	0.0200	0.020001334
571-616	1.5	571-616-1.5	280	0.2545	0.257377646
571-617	0.3	571-617-0.3	800	0.7273	0.814339942
571-617	0.6	571-617-0.6	100	0.0909	0.091034778
571-617	0.9	571-617-0.9	81	0.0736	0.073703073
571-618	0.3	571-618-0.3	10	0.0091	0.009091034
571-618	0.6	571-618-0.6	2	0.0018	0.001818183
571-618	0.9	571-618-0.9	1000	0.9091	1.141096661
571-618	1.5	571-618-1.5	5	0.0045	0.004545470
571-619	0.3	571-619-0.3	200	0.1818	0.182835137
571-619	0.6	571-619-0.6	710	0.6455	0.701618245
571-619	0.9	571-619-0.9	960	0.8727	1.060761023
571-619	1.5	571-619-1.5	1100	1.0000	1.570796327
571-620	0.3	571-620-0.3	7.4	0.0067	0.006727323
571-620	0.6	571-620-0.6	6.5	0.0059	0.005909125

TABLE C-55
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-620	0.9	571-620-0.9	2	0.0018	0.001818183
571-620	1.5	571-620-1.5	1	0.0009	0.000909091
571-621	0.3	571-621-0.3	2	0.0018	0.001818183
571-621	0.6	571-621-0.6	2	0.0018	0.001818183
571-621	0.9	571-621-0.9	110	0.1000	0.100167421
571-621	1.5	571-621-1.5	220	0.2000	0.201357921
571-622	0.3	571-622-0.3	2	0.0018	0.001818183
571-622	0.6	571-622-0.6	2	0.0018	0.001818183
571-622	0.9	571-622-0.9	4	0.0036	0.003636372
571-622	1.5	571-622-1.5	260	0.2364	0.238621731
571-623	0.3	571-623-0.3	3	0.0027	0.002727276
571-623	0.6	571-623-0.6	190	0.1727	0.173597891
571-623	0.9	571-623-0.9	4	0.0036	0.003636372
571-623	1.5	571-623-1.5	29	0.0264	0.026366691
571-624	0.3	571-624-0.3	76	0.0691	0.069145996
571-624	0.6	571-624-0.6	4	0.0036	0.003636372
571-624	0.9	571-624-0.9	17	0.0155	0.015455161
571-624	1.5	571-624-1.5	90	0.0818	0.081909743
571-625	0.3	571-625-0.3	2	0.0018	0.001818183
571-625	0.6	571-625-0.6	2	0.0018	0.001818183
571-625	0.9	571-625-0.9	7	0.0064	0.006363679
571-625	1.5	571-625-1.5	12	0.0109	0.010909307
571-626	0.3	571-626-0.3	4	0.0036	0.003636372
571-626	0.6	571-626-0.6	10	0.0091	0.009091034
571-626	0.9	571-626-0.9	13	0.0118	0.011818457
571-627	0.3	571-627-0.3	17	0.0155	0.015455161
571-627	0.6	571-627-0.6	10	0.0091	0.009091034
571-627	0.9	571-627-0.9	14	0.0127	0.012727616
571-627	1.5	571-627-1.5	4	0.0036	0.003636372
571-628	0.3	571-628-0.3	9.8	0.0089	0.008909209

TABLE C-55
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-628	0.6	571-628-0.6	11	0.0100	0.010000167
571-629	0.3	571-629-0.3	220	0.2000	0.201357921
571-629	0.6	571-629-0.6	110	0.1000	0.100167421
571-629	0.9	571-629-0.9	46	0.0418	0.041830380
571-629	1.5	571-629-1.5	61	0.0555	0.055483007

Total Lead	Max TTLC:	1100.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	95		95			
Sample Mean:	117		0.120			
Delta = RT - mean	233					
Appropriate Number of Samples:	2					
Standard Deviation of Sample:	232		0.266			
Standard Deviation of Mean:	24		0.027			
Sample Variance:	53902		0.071			
t-value for 90%:	1.292	Need to Transform Data	1.292			
Upper Confidence Limit for 90%:			0.156			
Reverse Transformation for 90%			170.49	mg/kg	11.64	mg/l
t-value for 95%:			1.664			
Upper Confidence Limit for 95%:			0.166			
Reverse Transformation for 95%			181.52	mg/kg	12.43	mg/l

TABLE C-56
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
SURFACE AND 0.3-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-601	0	571-601-0	120	0.0545	0.054572538
571-601	0.3	571-601-0.3	64	0.0291	0.029095014
571-602	0	571-602-0	97	0.0441	0.044105207
571-602	0.3	571-602-0.3	10	0.0045	0.004545470
571-603	0	571-603-0	25	0.0114	0.011363881
571-603	0.3	571-603-0.3	47	0.0214	0.021365262
571-604	0	571-604-0	820	0.3727	0.381946351
571-604	0.3	571-604-0.3	82	0.0373	0.037281363
571-605	0	571-605-0	110	0.0500	0.050020857
571-605	0.3	571-605-0.3	60	0.0273	0.027276109
571-606	0	571-606-0	180	0.0818	0.081909743
571-606	0.3	571-606-0.3	78	0.0355	0.035461978
571-607	0	571-607-0	80	0.0364	0.036371655
571-607	0.3	571-607-0.3	7.4	0.0034	0.003363643
571-608	0	571-608-0	240	0.1091	0.109308455
571-608	0.3	571-608-0.3	22	0.0100	0.010000167
571-609	0	571-609-0	1800	0.8182	0.958241588
571-609	0.3	571-609-0.3	6.2	0.0028	0.002818186
571-610	0	571-610-0	580	0.2636	0.266790000
571-610	0.3	571-610-0.3	6.6	0.0030	0.003000005
571-611	0	571-611-0	2200	1.0000	1.570796327
571-611	0.3	571-611-0.3	14	0.0064	0.006363679
571-612	0	571-612-0	110	0.0500	0.050020857
571-612	0.3	571-612-0.3	4	0.0018	0.001818183
571-613	0	571-613-0	90	0.0409	0.040920510
571-613	0.3	571-613-0.3	170	0.0773	0.077349835
571-614	0	571-614-0	59	0.0268	0.026821398

TABLE C-56
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
SURFACE AND 0.3-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-614	0.3	571-614-0.3	5.8	0.0026	0.002636367
571-615	0	571-615-0	1	0.0005	0.000454545
571-615	0.3	571-615-0.3	2	0.0009	0.000909091
571-616	0	571-616-0	1500	0.6818	0.750245244
571-616	0.3	571-616-0.3	95	0.0432	0.043195249
571-617	0	571-617-0	1300	0.5909	0.632185249
571-617	0.3	571-617-0.3	800	0.3636	0.372168534
571-618	0	571-618-0	31	0.0141	0.014091375
571-618	0.3	571-618-0.3	10	0.0045	0.004545470
571-619	0	571-619-0	76	0.0345	0.034552329
571-619	0.3	571-619-0.3	200	0.0909	0.091034778
571-620	0	571-620-0	250	0.1136	0.113882364
571-620	0.3	571-620-0.3	7.4	0.0034	0.003363643
571-621	0	571-621-0	130	0.0591	0.059125352
571-621	0.3	571-621-0.3	2	0.0009	0.000909091
571-622	0	571-622-0	370	0.1682	0.168984924
571-622	0.3	571-622-0.3	2	0.0009	0.000909091
571-623	0	571-623-0	23	0.0105	0.010454736
571-623	0.3	571-623-0.3	3	0.0014	0.001363637
571-624	0	571-624-0	160	0.0727	0.072791538
571-624	0.3	571-624-0.3	76	0.0345	0.034552329
571-625	0	571-625-0	2	0.0009	0.000909091
571-625	0.3	571-625-0.3	2	0.0009	0.000909091
571-626	0	571-626-0	83	0.0377	0.037736228
571-626	0.3	571-626-0.3	4	0.0018	0.001818183
571-627	0	571-627-0	14	0.0064	0.006363679
571-627	0.3	571-627-0.3	17	0.0077	0.007727350

TABLE C-56
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
SURFACE AND 0.3-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-628	0	571-628-0	12	0.0055	0.005454573
571-628	0.3	571-628-0.3	9.8	0.0045	0.004454560
571-629	0	571-629-0	470	0.2136	0.215295754
571-629	0.3	571-629-0.3	220	0.1000	0.100167421

Total Lead	Max TTLC:	2200.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	58		58			
Sample Mean:	223		0.116			
Delta = RT - mean	127					
Appropriate Number of Samples:	21					
Standard Deviation of Sample:	450		0.268			
Standard Deviation of Mean:	59		0.035			
Sample Variance:	202861		0.072			
t-value for 90%:	1.297	Need to Transform Data	1.297			
Upper Confidence Limit for 90%:			0.162			
Reverse Transformation for 90%			354.27	mg/kg	24.80	mg/l
t-value for 95%:			1.673			
Upper Confidence Limit for 95%:			0.175			
Reverse Transformation for 95%			382.94	mg/kg	26.85	mg/l

TABLE C-57
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
0.6, 0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-602	0.6	571-602-0.6	250	0.2273	0.229276203
571-602	0.9	571-602-0.9	19	0.0173	0.017273586
571-604	0.6	571-604-0.6	87	0.0791	0.079173599
571-605	0.6	571-605-0.6	21	0.0191	0.019092069
571-607	0.6	571-607-0.6	290	0.2636	0.266790000
571-607	0.9	571-607-0.9	5.9	0.0054	0.005363662
571-607	1.5	571-607-1.5	10	0.0091	0.009091034
571-608	0.6	571-608-0.6	130	0.1182	0.118458668
571-608	0.9	571-608-0.9	7.3	0.0066	0.006636412
571-608	1.5	571-608-1.5	100	0.0909	0.091034778
571-609	0.6	571-609-0.6	130	0.1182	0.118458668
571-609	0.9	571-609-0.9	13	0.0118	0.011818457
571-610	0.6	571-610-0.6	140	0.1273	0.127618858
571-610	0.9	571-610-0.9	18	0.0164	0.016364367
571-610	1.5	571-610-1.5	610	0.5545	0.587816639
571-611	0.6	571-611-0.6	840	0.7636	0.868926637
571-611	0.9	571-611-0.9	13	0.0118	0.011818457
571-611	1.5	571-611-1.5	12	0.0109	0.010909307
571-612	0.6	571-612-0.6	38	0.0345	0.034552329
571-612	0.9	571-612-0.9	12	0.0109	0.010909307
571-612	1.5	571-612-1.5	13	0.0118	0.011818457
571-613	0.6	571-613-0.6	48	0.0436	0.043650224
571-613	0.9	571-613-0.9	2	0.0018	0.001818183
571-613	1.5	571-613-1.5	31	0.0282	0.028185550
571-614	0.9	571-614-0.9	36	0.0327	0.032733118
571-614	1.5	571-614-1.5	89	0.0809	0.080997628
571-615	0.6	571-615-0.6	49	0.0445	0.044560200
571-615	0.9	571-615-0.9	4	0.0036	0.003636372
571-616	0.6	571-616-0.6	580	0.5273	0.555387653
571-616	0.9	571-616-0.9	22	0.0200	0.020001334

TABLE C-57
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
0.6, 0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-616	1.5	571-616-1.5	280	0.2545	0.257377646
571-617	0.6	571-617-0.6	100	0.0909	0.091034778
571-617	0.9	571-617-0.9	81	0.0736	0.073703073
571-618	0.6	571-618-0.6	2	0.0018	0.001818183
571-618	0.9	571-618-0.9	1000	0.9091	1.141096661
571-618	1.5	571-618-1.5	5	0.0045	0.004545470
571-619	0.6	571-619-0.6	710	0.6455	0.701618245
571-619	0.9	571-619-0.9	960	0.8727	1.060761023
571-619	1.5	571-619-1.5	1100	1.0000	1.570796327
571-620	0.6	571-620-0.6	6.5	0.0059	0.005909125
571-620	0.9	571-620-0.9	2	0.0018	0.001818183
571-620	1.5	571-620-1.5	1	0.0009	0.000909091
571-621	0.6	571-621-0.6	2	0.0018	0.001818183
571-621	0.9	571-621-0.9	110	0.1000	0.100167421
571-621	1.5	571-621-1.5	220	0.2000	0.201357921
571-622	0.6	571-622-0.6	2	0.0018	0.001818183
571-622	0.9	571-622-0.9	4	0.0036	0.003636372
571-622	1.5	571-622-1.5	260	0.2364	0.238621731
571-623	0.6	571-623-0.6	190	0.1727	0.173597891
571-623	0.9	571-623-0.9	4	0.0036	0.003636372
571-623	1.5	571-623-1.5	29	0.0264	0.026366691
571-624	0.6	571-624-0.6	4	0.0036	0.003636372
571-624	0.9	571-624-0.9	17	0.0155	0.015455161
571-624	1.5	571-624-1.5	90	0.0818	0.081909743
571-625	0.6	571-625-0.6	2	0.0018	0.001818183
571-625	0.9	571-625-0.9	7	0.0064	0.006363679
571-625	1.5	571-625-1.5	12	0.0109	0.010909307
571-626	0.6	571-626-0.6	10	0.0091	0.009091034
571-626	0.9	571-626-0.9	13	0.0118	0.011818457
571-627	0.6	571-627-0.6	10	0.0091	0.009091034

TABLE C-57
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
0.6, 0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-627	0.9	571-627-0.9	14	0.0127	0.012727616
571-627	1.5	571-627-1.5	4	0.0036	0.003636372
571-628	0.6	571-628-0.6	11	0.0100	0.010000167
571-629	0.6	571-629-0.6	110	0.1000	0.100167421
571-629	0.9	571-629-0.9	46	0.0418	0.041830380
571-629	1.5	571-629-1.5	61	0.0555	0.055483007

Total Lead	Max TTLC:	1100.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	66		66			
Sample Mean:	138		0.144			
Delta = RT - mean	212					
Appropriate Number of Samples:	2					
Standard Deviation of Sample:	258		0.300			
Standard Deviation of Mean:	32		0.037			
Sample Variance:	66447		0.090			
t-value for 90%:	1.295	Need to Transform Data	1.295			
Upper Confidence Limit for 90%:			0.192			
Reverse Transformation for 90%			209.73	mg/kg	14.45	mg/l
t-value for 95%:			1.670			
Upper Confidence Limit for 95%:			0.206			
Reverse Transformation for 95%			224.69	mg/kg	15.52	mg/l

TABLE C-58
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
SURFACE, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-601	0	571-601-0	120	0.0545	0.054572538
571-601	0.3	571-601-0.3	64	0.0291	0.029095014
571-602	0	571-602-0	97	0.0441	0.044105207
571-602	0.3	571-602-0.3	10	0.0045	0.004545470
571-602	0.6	571-602-0.6	250	0.1136	0.113882364
571-603	0	571-603-0	25	0.0114	0.011363881
571-603	0.3	571-603-0.3	47	0.0214	0.021365262
571-604	0	571-604-0	820	0.3727	0.381946351
571-604	0.3	571-604-0.3	82	0.0373	0.037281363
571-604	0.6	571-604-0.6	87	0.0395	0.039555769
571-605	0	571-605-0	110	0.0500	0.050020857
571-605	0.3	571-605-0.3	60	0.0273	0.027276109
571-605	0.6	571-605-0.6	21	0.0095	0.009545600
571-606	0	571-606-0	180	0.0818	0.081909743
571-606	0.3	571-606-0.3	78	0.0355	0.035461978
571-607	0	571-607-0	80	0.0364	0.036371655
571-607	0.3	571-607-0.3	7.4	0.0034	0.003363643
571-607	0.6	571-607-0.6	290	0.1318	0.132202944
571-608	0	571-608-0	240	0.1091	0.109308455
571-608	0.3	571-608-0.3	22	0.0100	0.010000167
571-608	0.6	571-608-0.6	130	0.0591	0.059125352
571-609	0	571-609-0	1800	0.8182	0.958241588
571-609	0.3	571-609-0.3	6.2	0.0028	0.002818186
571-609	0.6	571-609-0.6	130	0.0591	0.059125352
571-610	0	571-610-0	580	0.2636	0.266790000
571-610	0.3	571-610-0.3	6.6	0.0030	0.003000005

TABLE C-58
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
SURFACE, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-610	0.6	571-610-0.6	140	0.0636	0.063679392
571-611	0	571-611-0	2200	1.0000	1.570796327
571-611	0.3	571-611-0.3	14	0.0064	0.006363679
571-611	0.6	571-611-0.6	840	0.3818	0.391762723
571-612	0	571-612-0	110	0.0500	0.050020857
571-612	0.3	571-612-0.3	4	0.0018	0.001818183
571-612	0.6	571-612-0.6	38	0.0173	0.017273586
571-613	0	571-613-0	90	0.0409	0.040920510
571-613	0.3	571-613-0.3	170	0.0773	0.077349835
571-613	0.6	571-613-0.6	48	0.0218	0.021819913
571-614	0	571-614-0	59	0.0268	0.026821398
571-614	0.3	571-614-0.3	5.8	0.0026	0.002636367
571-615	0	571-615-0	1	0.0005	0.000454545
571-615	0.3	571-615-0.3	2	0.0009	0.000909091
571-615	0.6	571-615-0.6	49	0.0223	0.022274569
571-616	0	571-616-0	1500	0.6818	0.750245244
571-616	0.3	571-616-0.3	95	0.0432	0.043195249
571-616	0.6	571-616-0.6	580	0.2636	0.266790000
571-617	0	571-617-0	1300	0.5909	0.632185249
571-617	0.3	571-617-0.3	800	0.3636	0.372168534
571-617	0.6	571-617-0.6	100	0.0455	0.045470212
571-618	0	571-618-0	31	0.0141	0.014091375
571-618	0.3	571-618-0.3	10	0.0045	0.004545470
571-618	0.6	571-618-0.6	2	0.0009	0.000909091
571-619	0	571-619-0	76	0.0345	0.034552329

TABLE C-58
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
SURFACE, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-619	0.3	571-619-0.3	200	0.0909	0.091034778
571-619	0.6	571-619-0.6	710	0.3227	0.328609531
571-620	0	571-620-0	250	0.1136	0.113882364
571-620	0.3	571-620-0.3	7.4	0.0034	0.003363643
571-620	0.6	571-620-0.6	6.5	0.0030	0.002954550
571-621	0	571-621-0	130	0.0591	0.059125352
571-621	0.3	571-621-0.3	2	0.0009	0.000909091
571-621	0.6	571-621-0.6	2	0.0009	0.000909091
571-622	0	571-622-0	370	0.1682	0.168984924
571-622	0.3	571-622-0.3	2	0.0009	0.000909091
571-622	0.6	571-622-0.6	2	0.0009	0.000909091
571-623	0	571-623-0	23	0.0105	0.010454736
571-623	0.3	571-623-0.3	3	0.0014	0.001363637
571-623	0.6	571-623-0.6	190	0.0864	0.086471358
571-624	0	571-624-0	160	0.0727	0.072791538
571-624	0.3	571-624-0.3	76	0.0345	0.034552329
571-624	0.6	571-624-0.6	4	0.0018	0.001818183
571-625	0	571-625-0	2	0.0009	0.000909091
571-625	0.3	571-625-0.3	2	0.0009	0.000909091
571-625	0.6	571-625-0.6	2	0.0009	0.000909091
571-626	0	571-626-0	83	0.0377	0.037736228
571-626	0.3	571-626-0.3	4	0.0018	0.001818183
571-626	0.6	571-626-0.6	10	0.0045	0.004545470
571-627	0	571-627-0	14	0.0064	0.006363679
571-627	0.3	571-627-0.3	17	0.0077	0.007727350

TABLE C-58
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
SURFACE, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-627	0.6	571-627-0.6	10	0.0045	0.004545470
571-628	0	571-628-0	12	0.0055	0.005454573
571-628	0.3	571-628-0.3	9.8	0.0045	0.004454560
571-628	0.6	571-628-0.6	11	0.0050	0.005000021
571-629	0	571-629-0	470	0.2136	0.215295754
571-629	0.3	571-629-0.3	220	0.1000	0.100167421
571-629	0.6	571-629-0.6	110	0.0500	0.050020857

Total Lead	Max TTLC:	2200.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	83		83			
Sample Mean:	201		0.102			
Delta = RT - mean	149					
Appropriate Number of Samples:	12					
Standard Deviation of Sample:	397		0.231			
Standard Deviation of Mean:	44		0.025			
Sample Variance:	157423		0.054			
t-value for 90%:	1.293	Need to Transform Data	1.293			
Upper Confidence Limit for 90%:			0.135			
Reverse Transformation for 90%			295.78	mg/kg	20.61	mg/l
t-value for 95%:			1.666			
Upper Confidence Limit for 95%:			0.144			
Reverse Transformation for 95%			316.43	mg/kg	22.09	mg/l

TABLE C-59
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-602	0.9	571-602-0.9	19	0.0173	0.017273586
571-607	0.9	571-607-0.9	5.9	0.0054	0.005363662
571-607	1.5	571-607-1.5	10	0.0091	0.009091034
571-608	0.9	571-608-0.9	7.3	0.0066	0.006636412
571-608	1.5	571-608-1.5	100	0.0909	0.091034778
571-609	0.9	571-609-0.9	13	0.0118	0.011818457
571-610	0.9	571-610-0.9	18	0.0164	0.016364367
571-610	1.5	571-610-1.5	610	0.5545	0.587816639
571-611	0.9	571-611-0.9	13	0.0118	0.011818457
571-611	1.5	571-611-1.5	12	0.0109	0.010909307
571-612	0.9	571-612-0.9	12	0.0109	0.010909307
571-612	1.5	571-612-1.5	13	0.0118	0.011818457
571-613	0.9	571-613-0.9	2	0.0018	0.001818183
571-613	1.5	571-613-1.5	31	0.0282	0.028185550
571-614	0.9	571-614-0.9	36	0.0327	0.032733118
571-614	1.5	571-614-1.5	89	0.0809	0.080997628
571-615	0.9	571-615-0.9	4	0.0036	0.003636372
571-616	0.9	571-616-0.9	22	0.0200	0.020001334
571-616	1.5	571-616-1.5	280	0.2545	0.257377646
571-617	0.9	571-617-0.9	81	0.0736	0.073703073
571-618	0.9	571-618-0.9	1000	0.9091	1.141096661
571-618	1.5	571-618-1.5	5	0.0045	0.004545470
571-619	0.9	571-619-0.9	960	0.8727	1.060761023
571-619	1.5	571-619-1.5	1100	1.0000	1.570796327
571-620	0.9	571-620-0.9	2	0.0018	0.001818183
571-620	1.5	571-620-1.5	1	0.0009	0.000909091
571-621	0.9	571-621-0.9	110	0.1000	0.100167421
571-621	1.5	571-621-1.5	220	0.2000	0.201357921
571-622	0.9	571-622-0.9	4	0.0036	0.003636372
571-622	1.5	571-622-1.5	260	0.2364	0.238621731

TABLE C-59
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-623	0.9	571-623-0.9	4	0.0036	0.003636372
571-623	1.5	571-623-1.5	29	0.0264	0.026366691
571-624	0.9	571-624-0.9	17	0.0155	0.015455161
571-624	1.5	571-624-1.5	90	0.0818	0.081909743
571-625	0.9	571-625-0.9	7	0.0064	0.006363679
571-625	1.5	571-625-1.5	12	0.0109	0.010909307
571-626	0.9	571-626-0.9	13	0.0118	0.011818457
571-627	0.9	571-627-0.9	14	0.0127	0.012727616
571-627	1.5	571-627-1.5	4	0.0036	0.003636372
571-629	0.9	571-629-0.9	46	0.0418	0.041830380
571-629	1.5	571-629-1.5	61	0.0555	0.055483007

Total Lead	Max TTLC:	1100.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	41		41			
Sample Mean:	130		0.143			
Delta = RT - mean	220					
Appropriate Number of Samples:	3					
Standard Deviation of Sample:	277		0.339			
Standard Deviation of Mean:	43		0.053			
Sample Variance:	76501		0.115			
t-value for 90%:	1.303	Need to Transform Data	1.303			
Upper Confidence Limit for 90%:			0.213			
Reverse Transformation for 90%			232.05	mg/kg	16.05	mg/l
t-value for 95%:			1.684			
Upper Confidence Limit for 95%:			0.233			
Reverse Transformation for 95%			253.71	mg/kg	17.60	mg/l

TABLE C-60
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
SURFACE, 0.3, 0.6, AND 0.9-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-601	0	571-601-0	120	0.0545	0.054572538
571-601	0.3	571-601-0.3	64	0.0291	0.029095014
571-602	0	571-602-0	97	0.0441	0.044105207
571-602	0.3	571-602-0.3	10	0.0045	0.004545470
571-602	0.6	571-602-0.6	250	0.1136	0.113882364
571-602	0.9	571-602-0.9	19	0.0086	0.008636471
571-603	0	571-603-0	25	0.0114	0.011363881
571-603	0.3	571-603-0.3	47	0.0214	0.021365262
571-604	0	571-604-0	820	0.3727	0.381946351
571-604	0.3	571-604-0.3	82	0.0373	0.037281363
571-604	0.6	571-604-0.6	87	0.0395	0.039555769
571-605	0	571-605-0	110	0.0500	0.050020857
571-605	0.3	571-605-0.3	60	0.0273	0.027276109
571-605	0.6	571-605-0.6	21	0.0095	0.009545600
571-606	0	571-606-0	180	0.0818	0.081909743
571-606	0.3	571-606-0.3	78	0.0355	0.035461978
571-607	0	571-607-0	80	0.0364	0.036371655
571-607	0.3	571-607-0.3	7.4	0.0034	0.003363643
571-607	0.6	571-607-0.6	290	0.1318	0.132202944
571-607	0.9	571-607-0.9	5.9	0.0027	0.002681821
571-608	0	571-608-0	240	0.1091	0.109308455
571-608	0.3	571-608-0.3	22	0.0100	0.010000167
571-608	0.6	571-608-0.6	130	0.0591	0.059125352
571-608	0.9	571-608-0.9	7.3	0.0033	0.003318188
571-609	0	571-609-0	1800	0.8182	0.958241588
571-609	0.3	571-609-0.3	6.2	0.0028	0.002818186
571-609	0.6	571-609-0.6	130	0.0591	0.059125352
571-609	0.9	571-609-0.9	13	0.0059	0.005909125
571-610	0	571-610-0	580	0.2636	0.266790000
571-610	0.3	571-610-0.3	6.6	0.0030	0.003000005
571-610	0.6	571-610-0.6	140	0.0636	0.063679392

TABLE C-60
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
SURFACE, 0.3, 0.6, AND 0.9-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-610	0.9	571-610-0.9	18	0.0082	0.008181909
571-611	0	571-611-0	2200	1.0000	1.570796327
571-611	0.3	571-611-0.3	14	0.0064	0.006363679
571-611	0.6	571-611-0.6	840	0.3818	0.391762723
571-611	0.9	571-611-0.9	13	0.0059	0.005909125
571-612	0	571-612-0	110	0.0500	0.050020857
571-612	0.3	571-612-0.3	4	0.0018	0.001818183
571-612	0.6	571-612-0.6	38	0.0173	0.017273586
571-612	0.9	571-612-0.9	12	0.0055	0.005454573
571-613	0	571-613-0	90	0.0409	0.040920510
571-613	0.3	571-613-0.3	170	0.0773	0.077349835
571-613	0.6	571-613-0.6	48	0.0218	0.021819913
571-613	0.9	571-613-0.9	2	0.0009	0.000909091
571-614	0	571-614-0	59	0.0268	0.026821398
571-614	0.3	571-614-0.3	5.8	0.0026	0.002636367
571-614	0.9	571-614-0.9	36	0.0164	0.016364367
571-615	0	571-615-0	1	0.0005	0.000454545
571-615	0.3	571-615-0.3	2	0.0009	0.000909091
571-615	0.6	571-615-0.6	49	0.0223	0.022274569
571-615	0.9	571-615-0.9	4	0.0018	0.001818183
571-616	0	571-616-0	1500	0.6818	0.750245244
571-616	0.3	571-616-0.3	95	0.0432	0.043195249
571-616	0.6	571-616-0.6	580	0.2636	0.266790000
571-616	0.9	571-616-0.9	22	0.0100	0.010000167
571-617	0	571-617-0	1300	0.5909	0.632185249
571-617	0.3	571-617-0.3	800	0.3636	0.372168534
571-617	0.6	571-617-0.6	100	0.0455	0.045470212
571-617	0.9	571-617-0.9	81	0.0368	0.036826505
571-618	0	571-618-0	31	0.0141	0.014091375
571-618	0.3	571-618-0.3	10	0.0045	0.004545470
571-618	0.6	571-618-0.6	2	0.0009	0.000909091

TABLE C-60
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
SURFACE, 0.3, 0.6, AND 0.9-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-618	0.9	571-618-0.9	1000	0.4545	0.471861837
571-619	0	571-619-0	76	0.0345	0.034552329
571-619	0.3	571-619-0.3	200	0.0909	0.091034778
571-619	0.6	571-619-0.6	710	0.3227	0.328609531
571-619	0.9	571-619-0.9	960	0.4364	0.451553259
571-620	0	571-620-0	250	0.1136	0.113882364
571-620	0.3	571-620-0.3	7.4	0.0034	0.003363643
571-620	0.6	571-620-0.6	6.5	0.0030	0.002954550
571-620	0.9	571-620-0.9	2	0.0009	0.000909091
571-621	0	571-621-0	130	0.0591	0.059125352
571-621	0.3	571-621-0.3	2	0.0009	0.000909091
571-621	0.6	571-621-0.6	2	0.0009	0.000909091
571-621	0.9	571-621-0.9	110	0.0500	0.050020857
571-622	0	571-622-0	370	0.1682	0.168984924
571-622	0.3	571-622-0.3	2	0.0009	0.000909091
571-622	0.6	571-622-0.6	2	0.0009	0.000909091
571-622	0.9	571-622-0.9	4	0.0018	0.001818183
571-623	0	571-623-0	23	0.0105	0.010454736
571-623	0.3	571-623-0.3	3	0.0014	0.001363637
571-623	0.6	571-623-0.6	190	0.0864	0.086471358
571-623	0.9	571-623-0.9	4	0.0018	0.001818183
571-624	0	571-624-0	160	0.0727	0.072791538
571-624	0.3	571-624-0.3	76	0.0345	0.034552329
571-624	0.6	571-624-0.6	4	0.0018	0.001818183
571-624	0.9	571-624-0.9	17	0.0077	0.007727350
571-625	0	571-625-0	2	0.0009	0.000909091
571-625	0.3	571-625-0.3	2	0.0009	0.000909091
571-625	0.6	571-625-0.6	2	0.0009	0.000909091
571-625	0.9	571-625-0.9	7	0.0032	0.003181824
571-626	0	571-626-0	83	0.0377	0.037736228
571-626	0.3	571-626-0.3	4	0.0018	0.001818183

TABLE C-60
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
SURFACE, 0.3, 0.6, AND 0.9-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-626	0.6	571-626-0.6	10	0.0045	0.004545470
571-626	0.9	571-626-0.9	13	0.0059	0.005909125
571-627	0	571-627-0	14	0.0064	0.006363679
571-627	0.3	571-627-0.3	17	0.0077	0.007727350
571-627	0.6	571-627-0.6	10	0.0045	0.004545470
571-627	0.9	571-627-0.9	14	0.0064	0.006363679
571-628	0	571-628-0	12	0.0055	0.005454573
571-628	0.3	571-628-0.3	9.8	0.0045	0.004454560
571-628	0.6	571-628-0.6	11	0.0050	0.005000021
571-629	0	571-629-0	470	0.2136	0.215295754
571-629	0.3	571-629-0.3	220	0.1000	0.100167421
571-629	0.6	571-629-0.6	110	0.0500	0.050020857
571-629	0.9	571-629-0.9	46	0.0209	0.020910615

Total Lead	Max TTLC:	2200.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	106		106			
Sample Mean:	180		0.091			
Delta = RT - mean	170					
Appropriate Number of Samples:	8					
Standard Deviation of Sample:	375		0.214			
Standard Deviation of Mean:	36		0.021			
Sample Variance:	140673		0.046			
t-value for 90%:	1.291	Need to Transform Data	1.291			
Upper Confidence Limit for 90%:			0.117			
Reverse Transformation for 90%			257.64	mg/kg	17.88	mg/l
t-value for 95%:			1.661			
Upper Confidence Limit for 95%:			0.125			
Reverse Transformation for 95%			274.46	mg/kg	19.08	mg/l

TABLE C-61
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 600s
1.5-METER LAYER

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-607	1.5	571-607-1.5	10	0.0091	0.009091034
571-608	1.5	571-608-1.5	100	0.0909	0.091034778
571-610	1.5	571-610-1.5	610	0.5545	0.587816639
571-611	1.5	571-611-1.5	12	0.0109	0.010909307
571-612	1.5	571-612-1.5	13	0.0118	0.011818457
571-613	1.5	571-613-1.5	31	0.0282	0.028185550
571-614	1.5	571-614-1.5	89	0.0809	0.080997628
571-616	1.5	571-616-1.5	280	0.2545	0.257377646
571-618	1.5	571-618-1.5	5	0.0045	0.004545470
571-619	1.5	571-619-1.5	1100	1.0000	1.570796327
571-620	1.5	571-620-1.5	1	0.0009	0.000909091
571-621	1.5	571-621-1.5	220	0.2000	0.201357921
571-622	1.5	571-622-1.5	260	0.2364	0.238621731
571-623	1.5	571-623-1.5	29	0.0264	0.026366691
571-624	1.5	571-624-1.5	90	0.0818	0.081909743
571-625	1.5	571-625-1.5	12	0.0109	0.010909307
571-627	1.5	571-627-1.5	4	0.0036	0.003636372
571-629	1.5	571-629-1.5	61	0.0555	0.055483007

Total Lead	Max TTLC:	1100.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	18		18			
Sample Mean:	163		0.182			
Delta = RT - mean	187					
Appropriate Number of Samples:	4					
Standard Deviation of Sample:	280		0.376			
Standard Deviation of Mean:	66		0.089			
Sample Variance:	78393		0.142			
t-value for 90%:	1.333	Need to Transform Data	1.333			
Upper Confidence Limit for 90%:			0.300			
Reverse Transformation for 90%			325.10	mg/kg	22.71	mg/l
t-value for 95%:			1.740			
Upper Confidence Limit for 95%:			0.336			
Reverse Transformation for 95%			362.83	mg/kg	25.41	mg/l

TABLE C-62
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-801	0	571-801-0	76	0.0253	0.025336044
571-801	0.3	571-801-0.3	62	0.0207	0.020668138
571-801	0.6	571-801-0.6	44	0.0147	0.014667193
571-801	0.9	571-801-0.9	27	0.0090	0.009000122
571-801	1.5	571-801-1.5	35	0.0117	0.011666931
571-802	0	571-802-0	50	0.0167	0.016667438
571-802	0.3	571-802-0.3	37	0.0123	0.012333646
571-802	0.6	571-802-0.6	12	0.0040	0.004000011
571-803	0	571-803-0	460	0.1533	0.153940620
571-803	0.3	571-803-0.3	39	0.0130	0.013000366
571-803	0.6	571-803-0.6	12	0.0040	0.004000011
571-804	0	571-804-0	24	0.0080	0.008000085
571-804	0.3	571-804-0.3	22	0.0073	0.007333399
571-804	0.6	571-804-0.6	22	0.0073	0.007333399
571-805	0	571-805-0	34	0.0113	0.011333576
571-805	0.3	571-805-0.3	5	0.0017	0.001666667
571-805	0.6	571-805-0.6	3	0.0010	0.001000000
571-805	0.9	571-805-0.9	4	0.0013	0.001333334
571-805	1.5	571-805-1.5	5	0.0017	0.001666667
571-807	0	571-807-0	20	0.0067	0.006666716
571-807	0.3	571-807-0.3	20	0.0067	0.006666716
571-807	0.6	571-807-0.6	8.5	0.0028	0.002833337
571-807	0.9	571-807-0.9	5	0.0017	0.001666667
571-807	1.5	571-807-1.5	4	0.0013	0.001333334
571-808	0	571-808-0	22	0.0073	0.007333399
571-808	0.3	571-808-0.3	10	0.0033	0.003333340
571-808	0.6	571-808-0.6	4	0.0013	0.001333334
571-808	0.9	571-808-0.9	5.1	0.0017	0.001700001

TABLE C-62
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-808	1.5	571-808-1.5	5.5	0.0018	0.001833334
571-809	0	571-809-0	29	0.0097	0.009666817
571-809	0.3	571-809-0.3	58	0.0193	0.019334538
571-810	0	571-810-0	36	0.0120	0.012000288
571-810	0.3	571-810-0.3	20	0.0067	0.006666716
571-810	0.6	571-810-0.6	5	0.0017	0.001666667
571-810	0.9	571-810-0.9	4	0.0013	0.001333334
571-810	1.5	571-810-1.5	9.1	0.0030	0.003033338
571-811	0	571-811-0	97	0.0323	0.032338970
571-811	0.3	571-811-0.3	690	0.2300	0.232077683
571-811	0.6	571-811-0.6	76	0.0253	0.025336044
571-811	0.9	571-811-0.9	3	0.0010	0.001000000
571-811	1.5	571-811-1.5	19	0.0063	0.006333376
571-812	0	571-812-0	310	0.1033	0.103518118
571-812	0.3	571-812-0.3	6.1	0.0020	0.002033335
571-812	0.6	571-812-0.6	220	0.0733	0.073399221
571-812	0.9	571-812-0.9	2	0.0007	0.000666667
571-812	1.5	571-812-1.5	2	0.0007	0.000666667
571-813	0	571-813-0	320	0.1067	0.106869981
571-813	0.3	571-813-0.3	640	0.2133	0.214985573
571-813	0.6	571-813-0.6	130	0.0433	0.043346907
571-813	0.9	571-813-0.9	320	0.1067	0.106869981
571-814	0	571-814-0	61	0.0203	0.020334735
571-814	0.3	571-814-0.3	3000	1.0000	1.570796327
571-814	0.6	571-814-0.6	500	0.1667	0.167448079
571-814	0.9	571-814-0.9	370	0.1233	0.123648166
571-814	1.5	571-814-1.5	2	0.0007	0.000666667
571-815	0	571-815-0	360	0.1200	0.120289882

TABLE C-62
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-815	0.3	571-815-0.3	2	0.0007	0.000666667
571-815	0.6	571-815-0.6	570	0.1900	0.191162147
571-815	0.9	571-815-0.9	86	0.0287	0.028670594
571-815	1.5	571-815-1.5	6.9	0.0023	0.002300002
571-816	0	571-816-0	44	0.0147	0.014667193
571-816	0.3	571-816-0.3	8.3	0.0028	0.002766670
571-816	0.6	571-816-0.6	80	0.0267	0.026669828
571-816	0.9	571-816-0.9	1	0.0003	0.000333333
571-816	1.5	571-816-1.5	2	0.0007	0.000666667
571-817	0	571-817-0	76	0.0253	0.025336044
571-817	0.3	571-817-0.3	4	0.0013	0.001333334
571-817	0.6	571-817-0.6	240	0.0800	0.080085580
571-817	0.9	571-817-0.9	12	0.0040	0.004000011
571-818	0	571-818-0	950	0.3167	0.322213232
571-818	0.3	571-818-0.3	16	0.0053	0.005333359
571-818	0.6	571-818-0.6	1100	0.3667	0.375423608
571-818	0.9	571-818-0.9	5.7	0.0019	0.001900001
571-818	1.5	571-818-1.5	300	0.1000	0.100167421
571-819	0	571-819-0	1600	0.5333	0.562536245
571-819	0.3	571-819-0.3	16	0.0053	0.005333359
571-819	0.6	571-819-0.6	770	0.2567	0.259571745
571-819	0.9	571-819-0.9	140	0.0467	0.046683622
571-819	1.5	571-819-1.5	830	0.2767	0.280323636
571-820	0	571-820-0	29	0.0097	0.009666817
571-820	0.3	571-820-0.3	18	0.0060	0.006000036
571-820	0.6	571-820-0.6	18	0.0060	0.006000036
571-820	0.9	571-820-0.9	24	0.0080	0.008000085
571-821	0	571-821-0	45	0.0150	0.015000563

TABLE C-62
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-821	0.3	571-821-0.3	9.9	0.0033	0.003300006
571-821	0.6	571-821-0.6	68	0.0227	0.022668608
571-821	0.9	571-821-0.9	64	0.0213	0.021334952
571-821	1.5	571-821-1.5	73	0.0243	0.024335735
571-827	0	571-827-0	640	0.2133	0.214985573
571-827	0.3	571-827-0.3	200	0.0667	0.066716148
571-827	0.6	571-827-0.6	110	0.0367	0.036674888
571-828	0	571-828-0	250	0.0833	0.083430087
571-828	0.3	571-828-0.3	170	0.0567	0.056697038
571-828	0.6	571-828-0.6	220	0.0733	0.073399221
571-829	0	571-829-0	330	0.1100	0.110223050
571-829	0.3	571-829-0.3	13	0.0043	0.004333347
571-830	0	571-830-0	83	0.0277	0.027670197
571-830	0.3	571-830-0.3	38	0.0127	0.012667005
571-830	0.6	571-830-0.6	20	0.0067	0.006666716
571-831	0	571-831-0	720	0.2400	0.242365851
571-831	0.3	571-831-0.3	75	0.0250	0.025002605
571-831	0.6	571-831-0.6	120	0.0400	0.040010674
571-832	0	571-832-0	23	0.0077	0.007666742
571-832	0.3	571-832-0.3	5.3	0.0018	0.001766668
571-832	0.6	571-832-0.6	4	0.0013	0.001333334
571-832	0.9	571-832-0.9	5	0.0017	0.001666667
571-832	1.5	571-832-1.5	7.2	0.0024	0.002400002
571-833	0	571-833-0	480	0.1600	0.160690653
571-833	0.3	571-833-0.3	120	0.0400	0.040010674
571-833	0.6	571-833-0.6	80	0.0267	0.026669828
571-834	0	571-834-0	56	0.0187	0.018667751
571-834	0.3	571-834-0.3	2	0.0007	0.000666667

TABLE C-62
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-834	0.6	571-834-0.6	6.2	0.0021	0.002066668
571-835	0	571-835-0	620	0.2067	0.208166843
571-835	0.3	571-835-0.3	240	0.0800	0.080085580
571-835	0.6	571-835-0.6	29	0.0097	0.009666817
571-835	0.9	571-835-0.9	230	0.0767	0.076741971
571-836	0	571-836-0	240	0.0800	0.080085580
571-836	0.3	571-836-0.3	4	0.0013	0.001333334
571-836	0.6	571-836-0.6	4	0.0013	0.001333334
571-837	0	571-837-0	110	0.0367	0.036674888
571-837	0.3	571-837-0.3	250	0.0833	0.083430087
571-838	0	571-838-0	52	0.0173	0.017334201
571-838	0.3	571-838-0.3	33	0.0110	0.011000222
571-838	0.6	571-838-0.6	270	0.0900	0.090121945
571-838	0.9	571-838-0.9	2	0.0007	0.000666667
571-838	1.5	571-838-1.5	4	0.0013	0.001333334
571-839	0	571-839-0	37	0.0123	0.012333646
571-839	0.3	571-839-0.3	18	0.0060	0.006000036
571-839	0.6	571-839-0.6	140	0.0467	0.046683622
571-839	0.9	571-839-0.9	12	0.0040	0.004000011
571-839	1.5	571-839-1.5	3	0.0010	0.001000000
571-840	0	571-840-0	8.5	0.0028	0.002833337
571-840	0.3	571-840-0.3	5.2	0.0017	0.001733334
571-840	0.6	571-840-0.6	6.6	0.0022	0.002200002
571-841	0	571-841-0	2	0.0007	0.000666667
571-841	0.3	571-841-0.3	3	0.0010	0.001000000
571-841	0.6	571-841-0.6	44	0.0147	0.014667193
571-841	0.9	571-841-0.9	8.6	0.0029	0.002866671
571-841	1.5	571-841-1.5	2	0.0007	0.000666667

TABLE C-62
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
COMBINED LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-842	0	571-842-0	11	0.0037	0.003666675
571-842	0.3	571-842-0.3	5	0.0017	0.001666667
571-842	0.6	571-842-0.6	260	0.0867	0.086775529
571-842	0.9	571-842-0.9	2	0.0007	0.000666667
571-842	1.5	571-842-1.5	77	0.0257	0.025669486

Total Lead	Max TTLC:	3000.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	145		145			
Sample Mean:	152		0.055			
Delta = RT - mean	198					
Appropriate Number of Samples:	5					
Standard Deviation of Sample:	338		0.151			
Standard Deviation of Mean:	28		0.013			
Sample Variance:	114351		0.023			
t-value for 90%:	1.282	Need to Transform Data	1.282			
Upper Confidence Limit for 90%:			0.071			
Reverse Transformation for 90%			213.51	mg/kg	14.72	mg/l
t-value for 95%:			1.645			
Upper Confidence Limit for 95%:			0.076			
Reverse Transformation for 95%			227.12	mg/kg	15.69	mg/l

TABLE C-63
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
SURFACE LAYER

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-801	0	571-801-0	76	0.0475	0.047517880
571-802	0	571-802-0	50	0.0313	0.031255088
571-803	0	571-803-0	460	0.2875	0.291615610
571-804	0	571-804-0	24	0.0150	0.015000563
571-805	0	571-805-0	34	0.0213	0.021251600
571-807	0	571-807-0	20	0.0125	0.012500326
571-808	0	571-808-0	22	0.0138	0.013750433
571-809	0	571-809-0	29	0.0181	0.018125993
571-810	0	571-810-0	36	0.0225	0.022501899
571-811	0	571-811-0	97	0.0606	0.060662198
571-812	0	571-812-0	310	0.1938	0.194983146
571-813	0	571-813-0	320	0.2000	0.201357921
571-814	0	571-814-0	61	0.0381	0.038134242
571-815	0	571-815-0	360	0.2250	0.226943036
571-816	0	571-816-0	44	0.0275	0.027503467
571-817	0	571-817-0	76	0.0475	0.047517880
571-818	0	571-818-0	950	0.5938	0.635711285
571-819	0	571-819-0	1600	1.0000	1.570796327
571-820	0	571-820-0	29	0.0181	0.018125993
571-821	0	571-821-0	45	0.0281	0.028128709
571-827	0	571-827-0	640	0.4000	0.411516846
571-828	0	571-828-0	250	0.1563	0.156892871
571-829	0	571-829-0	330	0.2063	0.207741002
571-830	0	571-830-0	83	0.0519	0.051898294
571-831	0	571-831-0	720	0.4500	0.466765339
571-832	0	571-832-0	23	0.0144	0.014375495
571-833	0	571-833-0	480	0.3000	0.304692654
571-834	0	571-834-0	56	0.0350	0.035007150
571-835	0	571-835-0	620	0.3875	0.397918162
571-836	0	571-836-0	240	0.1500	0.150568273

TABLE C-63
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
SURFACE LAYER

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-837	0	571-837-0	110	0.0688	0.068804274
571-838	0	571-838-0	52	0.0325	0.032505724
571-839	0	571-839-0	37	0.0231	0.023127062
571-840	0	571-840-0	8.5	0.0053	0.005312525
571-841	0	571-841-0	2	0.0013	0.001250000
571-842	0	571-842-0	11	0.0069	0.006875054

Total Lead	Max TTLC:	1600.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	36		36			
Sample Mean:	231		0.163			
Delta = RT - mean	119					
Appropriate Number of Samples:	13					
Standard Deviation of Sample:	335		0.287			
Standard Deviation of Mean:	56		0.048			
Sample Variance:	112043		0.082			
t-value for 90%:	1.307	Need to Transform Data	1.307			
Upper Confidence Limit for 90%:			0.225			
Reverse Transformation for 90%			357.40	mg/kg	25.02	mg/l
t-value for 95%:			1.691			
Upper Confidence Limit for 95%:			0.244			
Reverse Transformation for 95%			386.01	mg/kg	27.07	mg/l

TABLE C-64
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-801	0.3	571-801-0.3	62	0.0207	0.020668138
571-801	0.6	571-801-0.6	44	0.0147	0.014667193
571-801	0.9	571-801-0.9	27	0.0090	0.009000122
571-801	1.5	571-801-1.5	35	0.0117	0.011666931
571-802	0.3	571-802-0.3	37	0.0123	0.012333646
571-802	0.6	571-802-0.6	12	0.0040	0.004000011
571-803	0.3	571-803-0.3	39	0.0130	0.013000366
571-803	0.6	571-803-0.6	12	0.0040	0.004000011
571-804	0.3	571-804-0.3	22	0.0073	0.007333399
571-804	0.6	571-804-0.6	22	0.0073	0.007333399
571-805	0.3	571-805-0.3	5	0.0017	0.001666667
571-805	0.6	571-805-0.6	3	0.0010	0.001000000
571-805	0.9	571-805-0.9	4	0.0013	0.001333334
571-805	1.5	571-805-1.5	5	0.0017	0.001666667
571-807	0.3	571-807-0.3	20	0.0067	0.006666716
571-807	0.6	571-807-0.6	8.5	0.0028	0.002833337
571-807	0.9	571-807-0.9	5	0.0017	0.001666667
571-807	1.5	571-807-1.5	4	0.0013	0.001333334
571-808	0.3	571-808-0.3	10	0.0033	0.003333340
571-808	0.6	571-808-0.6	4	0.0013	0.001333334
571-808	0.9	571-808-0.9	5.1	0.0017	0.001700001
571-808	1.5	571-808-1.5	5.5	0.0018	0.001833334
571-809	0.3	571-809-0.3	58	0.0193	0.019334538
571-810	0.3	571-810-0.3	20	0.0067	0.006666716
571-810	0.6	571-810-0.6	5	0.0017	0.001666667
571-810	0.9	571-810-0.9	4	0.0013	0.001333334
571-810	1.5	571-810-1.5	9.1	0.0030	0.003033338
571-811	0.3	571-811-0.3	690	0.2300	0.232077683
571-811	0.6	571-811-0.6	76	0.0253	0.025336044
571-811	0.9	571-811-0.9	3	0.0010	0.001000000
571-811	1.5	571-811-1.5	19	0.0063	0.006333376

TABLE C-64
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-812	0.3	571-812-0.3	6.1	0.0020	0.002033335
571-812	0.6	571-812-0.6	220	0.0733	0.073399221
571-812	0.9	571-812-0.9	2	0.0007	0.000666667
571-812	1.5	571-812-1.5	2	0.0007	0.000666667
571-813	0.3	571-813-0.3	640	0.2133	0.214985573
571-813	0.6	571-813-0.6	130	0.0433	0.043346907
571-813	0.9	571-813-0.9	320	0.1067	0.106869981
571-814	0.3	571-814-0.3	3000	1.0000	1.570796327
571-814	0.6	571-814-0.6	500	0.1667	0.167448079
571-814	0.9	571-814-0.9	370	0.1233	0.123648166
571-814	1.5	571-814-1.5	2	0.0007	0.000666667
571-815	0.3	571-815-0.3	2	0.0007	0.000666667
571-815	0.6	571-815-0.6	570	0.1900	0.191162147
571-815	0.9	571-815-0.9	86	0.0287	0.028670594
571-815	1.5	571-815-1.5	6.9	0.0023	0.002300002
571-816	0.3	571-816-0.3	8.3	0.0028	0.002766670
571-816	0.6	571-816-0.6	80	0.0267	0.026669828
571-816	0.9	571-816-0.9	1	0.0003	0.000333333
571-816	1.5	571-816-1.5	2	0.0007	0.000666667
571-817	0.3	571-817-0.3	4	0.0013	0.001333334
571-817	0.6	571-817-0.6	240	0.0800	0.080085580
571-817	0.9	571-817-0.9	12	0.0040	0.004000011
571-818	0.3	571-818-0.3	16	0.0053	0.005333359
571-818	0.6	571-818-0.6	1100	0.3667	0.375423608
571-818	0.9	571-818-0.9	5.7	0.0019	0.001900001
571-818	1.5	571-818-1.5	300	0.1000	0.100167421
571-819	0.3	571-819-0.3	16	0.0053	0.005333359
571-819	0.6	571-819-0.6	770	0.2567	0.259571745
571-819	0.9	571-819-0.9	140	0.0467	0.046683622
571-819	1.5	571-819-1.5	830	0.2767	0.280323636
571-820	0.3	571-820-0.3	18	0.0060	0.006000036

TABLE C-64
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-820	0.6	571-820-0.6	18	0.0060	0.006000036
571-820	0.9	571-820-0.9	24	0.0080	0.008000085
571-821	0.3	571-821-0.3	9.9	0.0033	0.003300006
571-821	0.6	571-821-0.6	68	0.0227	0.022668608
571-821	0.9	571-821-0.9	64	0.0213	0.021334952
571-821	1.5	571-821-1.5	73	0.0243	0.024335735
571-827	0.3	571-827-0.3	200	0.0667	0.066716148
571-827	0.6	571-827-0.6	110	0.0367	0.036674888
571-828	0.3	571-828-0.3	170	0.0567	0.056697038
571-828	0.6	571-828-0.6	220	0.0733	0.073399221
571-829	0.3	571-829-0.3	13	0.0043	0.004333347
571-830	0.3	571-830-0.3	38	0.0127	0.012667005
571-830	0.6	571-830-0.6	20	0.0067	0.006666716
571-831	0.3	571-831-0.3	75	0.0250	0.025002605
571-831	0.6	571-831-0.6	120	0.0400	0.040010674
571-832	0.3	571-832-0.3	5.3	0.0018	0.001766668
571-832	0.6	571-832-0.6	4	0.0013	0.001333334
571-832	0.9	571-832-0.9	5	0.0017	0.001666667
571-832	1.5	571-832-1.5	7.2	0.0024	0.002400002
571-833	0.3	571-833-0.3	120	0.0400	0.040010674
571-833	0.6	571-833-0.6	80	0.0267	0.026669828
571-834	0.3	571-834-0.3	2	0.0007	0.000666667
571-834	0.6	571-834-0.6	6.2	0.0021	0.002066668
571-835	0.3	571-835-0.3	240	0.0800	0.080085580
571-835	0.6	571-835-0.6	29	0.0097	0.009666817
571-835	0.9	571-835-0.9	230	0.0767	0.076741971
571-836	0.3	571-836-0.3	4	0.0013	0.001333334
571-836	0.6	571-836-0.6	4	0.0013	0.001333334
571-837	0.3	571-837-0.3	250	0.0833	0.083430087
571-838	0.3	571-838-0.3	33	0.0110	0.011000222
571-838	0.6	571-838-0.6	270	0.0900	0.090121945

TABLE C-64
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
0.3, 0.6, 0.9, AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-838	0.9	571-838-0.9	2	0.0007	0.000666667
571-838	1.5	571-838-1.5	4	0.0013	0.001333334
571-839	0.3	571-839-0.3	18	0.0060	0.006000036
571-839	0.6	571-839-0.6	140	0.0467	0.046683622
571-839	0.9	571-839-0.9	12	0.0040	0.004000011
571-839	1.5	571-839-1.5	3	0.0010	0.001000000
571-840	0.3	571-840-0.3	5.2	0.0017	0.001733334
571-840	0.6	571-840-0.6	6.6	0.0022	0.002200002
571-841	0.3	571-841-0.3	3	0.0010	0.001000000
571-841	0.6	571-841-0.6	44	0.0147	0.014667193
571-841	0.9	571-841-0.9	8.6	0.0029	0.002866671
571-841	1.5	571-841-1.5	2	0.0007	0.000666667
571-842	0.3	571-842-0.3	5	0.0017	0.001666667
571-842	0.6	571-842-0.6	260	0.0867	0.086775529
571-842	0.9	571-842-0.9	2	0.0007	0.000666667
571-842	1.5	571-842-1.5	77	0.0257	0.025669486

Total Lead	Max TTLC:	3000.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	109		109			
Sample Mean:	126		0.048			
Delta = RT - mean	224					
Appropriate Number of Samples:	4					
Standard Deviation of Sample:	337		0.161			
Standard Deviation of Mean:	32		0.015			
Sample Variance:	113433		0.026			
t-value for 90%:	1.290	Need to Transform Data	1.290			
Upper Confidence Limit for 90%:			0.067			
Reverse Transformation for 90%			202.16	mg/kg	13.91	mg/l
t-value for 95%:			1.661			
Upper Confidence Limit for 95%:			0.073			
Reverse Transformation for 95%			219.25	mg/kg	15.13	mg/l

TABLE C-65
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
SURFACE AND 0.3-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-801	0	571-801-0	76	0.0253	0.025336044
571-801	0.3	571-801-0.3	62	0.0207	0.020668138
571-802	0	571-802-0	50	0.0167	0.016667438
571-802	0.3	571-802-0.3	37	0.0123	0.012333646
571-803	0	571-803-0	460	0.1533	0.153940620
571-803	0.3	571-803-0.3	39	0.0130	0.013000366
571-804	0	571-804-0	24	0.0080	0.008000085
571-804	0.3	571-804-0.3	22	0.0073	0.007333399
571-805	0	571-805-0	34	0.0113	0.011333576
571-805	0.3	571-805-0.3	5	0.0017	0.001666667
571-807	0	571-807-0	20	0.0067	0.006666716
571-807	0.3	571-807-0.3	20	0.0067	0.006666716
571-808	0	571-808-0	22	0.0073	0.007333399
571-808	0.3	571-808-0.3	10	0.0033	0.003333340
571-809	0	571-809-0	29	0.0097	0.009666817
571-809	0.3	571-809-0.3	58	0.0193	0.019334538
571-810	0	571-810-0	36	0.0120	0.012000288
571-810	0.3	571-810-0.3	20	0.0067	0.006666716
571-811	0	571-811-0	97	0.0323	0.032338970
571-811	0.3	571-811-0.3	690	0.2300	0.232077683
571-812	0	571-812-0	310	0.1033	0.103518118
571-812	0.3	571-812-0.3	6.1	0.0020	0.002033335
571-813	0	571-813-0	320	0.1067	0.106869981
571-813	0.3	571-813-0.3	640	0.2133	0.214985573
571-814	0	571-814-0	61	0.0203	0.020334735
571-814	0.3	571-814-0.3	3000	1.0000	1.570796327
571-815	0	571-815-0	360	0.1200	0.120289882
571-815	0.3	571-815-0.3	2	0.0007	0.000666667
571-816	0	571-816-0	44	0.0147	0.014667193
571-816	0.3	571-816-0.3	8.3	0.0028	0.002766670

TABLE C-65
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
SURFACE AND 0.3-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-817	0	571-817-0	76	0.0253	0.025336044
571-817	0.3	571-817-0.3	4	0.0013	0.001333334
571-818	0	571-818-0	950	0.3167	0.322213232
571-818	0.3	571-818-0.3	16	0.0053	0.005333359
571-819	0	571-819-0	1600	0.5333	0.562536245
571-819	0.3	571-819-0.3	16	0.0053	0.005333359
571-820	0	571-820-0	29	0.0097	0.009666817
571-820	0.3	571-820-0.3	18	0.0060	0.006000036
571-821	0	571-821-0	45	0.0150	0.015000563
571-821	0.3	571-821-0.3	9.9	0.0033	0.003300006
571-827	0	571-827-0	640	0.2133	0.214985573
571-827	0.3	571-827-0.3	200	0.0667	0.066716148
571-828	0	571-828-0	250	0.0833	0.083430087
571-828	0.3	571-828-0.3	170	0.0567	0.056697038
571-829	0	571-829-0	330	0.1100	0.110223050
571-829	0.3	571-829-0.3	13	0.0043	0.004333347
571-830	0	571-830-0	83	0.0277	0.027670197
571-830	0.3	571-830-0.3	38	0.0127	0.012667005
571-831	0	571-831-0	720	0.2400	0.242365851
571-831	0.3	571-831-0.3	75	0.0250	0.025002605
571-832	0	571-832-0	23	0.0077	0.007666742
571-832	0.3	571-832-0.3	5.3	0.0018	0.001766668
571-833	0	571-833-0	480	0.1600	0.160690653
571-833	0.3	571-833-0.3	120	0.0400	0.040010674
571-834	0	571-834-0	56	0.0187	0.018667751
571-834	0.3	571-834-0.3	2	0.0007	0.000666667
571-835	0	571-835-0	620	0.2067	0.208166843
571-835	0.3	571-835-0.3	240	0.0800	0.080085580
571-836	0	571-836-0	240	0.0800	0.080085580
571-836	0.3	571-836-0.3	4	0.0013	0.001333334

TABLE C-65
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
SURFACE AND 0.3-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-837	0	571-837-0	110	0.0367	0.036674888
571-837	0.3	571-837-0.3	250	0.0833	0.083430087
571-838	0	571-838-0	52	0.0173	0.017334201
571-838	0.3	571-838-0.3	33	0.0110	0.011000222
571-839	0	571-839-0	37	0.0123	0.012333646
571-839	0.3	571-839-0.3	18	0.0060	0.006000036
571-840	0	571-840-0	8.5	0.0028	0.002833337
571-840	0.3	571-840-0.3	5.2	0.0017	0.001733334
571-841	0	571-841-0	2	0.0007	0.000666667
571-841	0.3	571-841-0.3	3	0.0010	0.001000000
571-842	0	571-842-0	11	0.0037	0.003666675
571-842	0.3	571-842-0.3	5	0.0017	0.001666667

Total Lead	Max TTLC:	3000.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	72		72			
Sample Mean:	197		0.074			
Delta = RT - mean	153					
Appropriate Number of Samples:	13					
Standard Deviation of Sample:	431		0.202			
Standard Deviation of Mean:	51		0.024			
Sample Variance:	185341		0.041			
t-value for 90%:	1.295	Need to Transform Data	1.295			
Upper Confidence Limit for 90%:			0.105			
Reverse Transformation for 90%			314.23	mg/kg	21.93	mg/l
t-value for 95%:			1.669			
Upper Confidence Limit for 95%:			0.114			
Reverse Transformation for 95%			340.72	mg/kg	23.83	mg/l

TABLE C-66
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
0.6, 0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-801	0.6	571-801-0.6	44	0.0400	0.040010674
571-801	0.9	571-801-0.9	27	0.0245	0.024547920
571-801	1.5	571-801-1.5	35	0.0318	0.031823553
571-802	0.6	571-802-0.6	12	0.0109	0.010909307
571-803	0.6	571-803-0.6	12	0.0109	0.010909307
571-804	0.6	571-804-0.6	22	0.0200	0.020001334
571-805	0.6	571-805-0.6	3	0.0027	0.002727276
571-805	0.9	571-805-0.9	4	0.0036	0.003636372
571-805	1.5	571-805-1.5	5	0.0045	0.004545470
571-807	0.6	571-807-0.6	8.5	0.0077	0.007727350
571-807	0.9	571-807-0.9	5	0.0045	0.004545470
571-807	1.5	571-807-1.5	4	0.0036	0.003636372
571-808	0.6	571-808-0.6	4	0.0036	0.003636372
571-808	0.9	571-808-0.9	5.1	0.0046	0.004636380
571-808	1.5	571-808-1.5	5.5	0.0050	0.005000021
571-810	0.6	571-810-0.6	5	0.0045	0.004545470
571-810	0.9	571-810-0.9	4	0.0036	0.003636372
571-810	1.5	571-810-1.5	9.1	0.0083	0.008272822
571-811	0.6	571-811-0.6	76	0.0691	0.069145996
571-811	0.9	571-811-0.9	3	0.0027	0.002727276
571-811	1.5	571-811-1.5	19	0.0173	0.017273586
571-812	0.6	571-812-0.6	220	0.2000	0.201357921
571-812	0.9	571-812-0.9	2	0.0018	0.001818183
571-812	1.5	571-812-1.5	2	0.0018	0.001818183
571-813	0.6	571-813-0.6	130	0.1182	0.118458668
571-813	0.9	571-813-0.9	320	0.2909	0.295176886
571-814	0.6	571-814-0.6	500	0.4545	0.471861837
571-814	0.9	571-814-0.9	370	0.3364	0.343052865
571-814	1.5	571-814-1.5	2	0.0018	0.001818183
571-815	0.6	571-815-0.6	570	0.5182	0.544723722

TABLE C-66
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
0.6, 0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-815	0.9	571-815-0.9	86	0.0782	0.078261684
571-815	1.5	571-815-1.5	6.9	0.0063	0.006272768
571-816	0.6	571-816-0.6	80	0.0727	0.072791538
571-816	0.9	571-816-0.9	1	0.0009	0.000909091
571-816	1.5	571-816-1.5	2	0.0018	0.001818183
571-817	0.6	571-817-0.6	240	0.2182	0.219951015
571-817	0.9	571-817-0.9	12	0.0109	0.010909307
571-818	0.6	571-818-0.6	1100	1.0000	1.570796327
571-818	0.9	571-818-0.9	5.7	0.0052	0.005181841
571-818	1.5	571-818-1.5	300	0.2727	0.276226631
571-819	0.6	571-819-0.6	770	0.7000	0.775397497
571-819	0.9	571-819-0.9	140	0.1273	0.127618858
571-819	1.5	571-819-1.5	830	0.7545	0.854961200
571-820	0.6	571-820-0.6	18	0.0164	0.016364367
571-820	0.9	571-820-0.9	24	0.0218	0.021819913
571-821	0.6	571-821-0.6	68	0.0618	0.061857623
571-821	0.9	571-821-0.9	64	0.0582	0.058214694
571-821	1.5	571-821-1.5	73	0.0664	0.066412446
571-827	0.6	571-827-0.6	110	0.1000	0.100167421
571-828	0.6	571-828-0.6	220	0.2000	0.201357921
571-830	0.6	571-830-0.6	20	0.0182	0.018182820
571-831	0.6	571-831-0.6	120	0.1091	0.109308455
571-832	0.6	571-832-0.6	4	0.0036	0.003636372
571-832	0.9	571-832-0.9	5	0.0045	0.004545470
571-832	1.5	571-832-1.5	7.2	0.0065	0.006545501
571-833	0.6	571-833-0.6	80	0.0727	0.072791538
571-834	0.6	571-834-0.6	6.2	0.0056	0.005636393
571-835	0.6	571-835-0.6	29	0.0264	0.026366691
571-835	0.9	571-835-0.9	230	0.2091	0.210645228
571-836	0.6	571-836-0.6	4	0.0036	0.003636372

TABLE C-66
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
0.6, 0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-838	0.6	571-838-0.6	270	0.2455	0.247988554
571-838	0.9	571-838-0.9	2	0.0018	0.001818183
571-838	1.5	571-838-1.5	4	0.0036	0.003636372
571-839	0.6	571-839-0.6	140	0.1273	0.127618858
571-839	0.9	571-839-0.9	12	0.0109	0.010909307
571-839	1.5	571-839-1.5	3	0.0027	0.002727276
571-840	0.6	571-840-0.6	6.6	0.0060	0.006000036
571-841	0.6	571-841-0.6	44	0.0400	0.040010674
571-841	0.9	571-841-0.9	8.6	0.0078	0.007818261
571-841	1.5	571-841-1.5	2	0.0018	0.001818183
571-842	0.6	571-842-0.6	260	0.2364	0.238621731
571-842	0.9	571-842-0.9	2	0.0018	0.001818183
571-842	1.5	571-842-1.5	77	0.0700	0.070057293

Total Lead	Max TTLC:	1100.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	73		73			
Sample Mean:	108		0.110			
Delta = RT - mean	242					
Appropriate Number of Samples:	1					
Standard Deviation of Sample:	205		0.239			
Standard Deviation of Mean:	24		0.028			
Sample Variance:	42003		0.057			
t-value for 90%:	1.295	Need to Transform Data	1.295			
Upper Confidence Limit for 90%:			0.146			
Reverse Transformation for 90%			160.10	mg/kg	10.90	mg/l
t-value for 95%:			1.668			
Upper Confidence Limit for 95%:			0.157			
Reverse Transformation for 95%			171.47	mg/kg	11.71	mg/l

TABLE C-67
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
SURFACE, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-801	0	571-801-0	76	0.0253	0.025336044
571-801	0.3	571-801-0.3	62	0.0207	0.020668138
571-801	0.6	571-801-0.6	44	0.0147	0.014667193
571-802	0	571-802-0	50	0.0167	0.016667438
571-802	0.3	571-802-0.3	37	0.0123	0.012333646
571-802	0.6	571-802-0.6	12	0.0040	0.004000011
571-803	0	571-803-0	460	0.1533	0.153940620
571-803	0.3	571-803-0.3	39	0.0130	0.013000366
571-803	0.6	571-803-0.6	12	0.0040	0.004000011
571-804	0	571-804-0	24	0.0080	0.008000085
571-804	0.3	571-804-0.3	22	0.0073	0.007333399
571-804	0.6	571-804-0.6	22	0.0073	0.007333399
571-805	0	571-805-0	34	0.0113	0.011333576
571-805	0.3	571-805-0.3	5	0.0017	0.001666667
571-805	0.6	571-805-0.6	3	0.0010	0.001000000
571-807	0	571-807-0	20	0.0067	0.006666716
571-807	0.3	571-807-0.3	20	0.0067	0.006666716
571-807	0.6	571-807-0.6	8.5	0.0028	0.002833337
571-808	0	571-808-0	22	0.0073	0.007333399
571-808	0.3	571-808-0.3	10	0.0033	0.003333340
571-808	0.6	571-808-0.6	4	0.0013	0.001333334
571-809	0	571-809-0	29	0.0097	0.009666817
571-809	0.3	571-809-0.3	58	0.0193	0.019334538
571-810	0	571-810-0	36	0.0120	0.012000288
571-810	0.3	571-810-0.3	20	0.0067	0.006666716
571-810	0.6	571-810-0.6	5	0.0017	0.001666667
571-811	0	571-811-0	97	0.0323	0.032338970
571-811	0.3	571-811-0.3	690	0.2300	0.232077683
571-811	0.6	571-811-0.6	76	0.0253	0.025336044
571-812	0	571-812-0	310	0.1033	0.103518118

TABLE C-67
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
SURFACE, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-812	0.3	571-812-0.3	6.1	0.0020	0.002033335
571-812	0.6	571-812-0.6	220	0.0733	0.073399221
571-813	0	571-813-0	320	0.1067	0.106869981
571-813	0.3	571-813-0.3	640	0.2133	0.214985573
571-813	0.6	571-813-0.6	130	0.0433	0.043346907
571-814	0	571-814-0	61	0.0203	0.020334735
571-814	0.3	571-814-0.3	3000	1.0000	1.570796327
571-814	0.6	571-814-0.6	500	0.1667	0.167448079
571-815	0	571-815-0	360	0.1200	0.120289882
571-815	0.3	571-815-0.3	2	0.0007	0.000666667
571-815	0.6	571-815-0.6	570	0.1900	0.191162147
571-816	0	571-816-0	44	0.0147	0.014667193
571-816	0.3	571-816-0.3	8.3	0.0028	0.002766670
571-816	0.6	571-816-0.6	80	0.0267	0.026669828
571-817	0	571-817-0	76	0.0253	0.025336044
571-817	0.3	571-817-0.3	4	0.0013	0.001333334
571-817	0.6	571-817-0.6	240	0.0800	0.080085580
571-818	0	571-818-0	950	0.3167	0.322213232
571-818	0.3	571-818-0.3	16	0.0053	0.005333359
571-818	0.6	571-818-0.6	1100	0.3667	0.375423608
571-819	0	571-819-0	1600	0.5333	0.562536245
571-819	0.3	571-819-0.3	16	0.0053	0.005333359
571-819	0.6	571-819-0.6	770	0.2567	0.259571745
571-820	0	571-820-0	29	0.0097	0.009666817
571-820	0.3	571-820-0.3	18	0.0060	0.006000036
571-820	0.6	571-820-0.6	18	0.0060	0.006000036
571-821	0	571-821-0	45	0.0150	0.015000563
571-821	0.3	571-821-0.3	9.9	0.0033	0.003300006
571-821	0.6	571-821-0.6	68	0.0227	0.022668608
571-827	0	571-827-0	640	0.2133	0.214985573

TABLE C-67
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
SURFACE, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-827	0.3	571-827-0.3	200	0.0667	0.066716148
571-827	0.6	571-827-0.6	110	0.0367	0.036674888
571-828	0	571-828-0	250	0.0833	0.083430087
571-828	0.3	571-828-0.3	170	0.0567	0.056697038
571-828	0.6	571-828-0.6	220	0.0733	0.073399221
571-829	0	571-829-0	330	0.1100	0.110223050
571-829	0.3	571-829-0.3	13	0.0043	0.004333347
571-830	0	571-830-0	83	0.0277	0.027670197
571-830	0.3	571-830-0.3	38	0.0127	0.012667005
571-830	0.6	571-830-0.6	20	0.0067	0.006666716
571-831	0	571-831-0	720	0.2400	0.242365851
571-831	0.3	571-831-0.3	75	0.0250	0.025002605
571-831	0.6	571-831-0.6	120	0.0400	0.040010674
571-832	0	571-832-0	23	0.0077	0.007666742
571-832	0.3	571-832-0.3	5.3	0.0018	0.001766668
571-832	0.6	571-832-0.6	4	0.0013	0.001333334
571-833	0	571-833-0	480	0.1600	0.160690653
571-833	0.3	571-833-0.3	120	0.0400	0.040010674
571-833	0.6	571-833-0.6	80	0.0267	0.026669828
571-834	0	571-834-0	56	0.0187	0.018667751
571-834	0.3	571-834-0.3	2	0.0007	0.000666667
571-834	0.6	571-834-0.6	6.2	0.0021	0.002066668
571-835	0	571-835-0	620	0.2067	0.208166843
571-835	0.3	571-835-0.3	240	0.0800	0.080085580
571-835	0.6	571-835-0.6	29	0.0097	0.009666817
571-836	0	571-836-0	240	0.0800	0.080085580
571-836	0.3	571-836-0.3	4	0.0013	0.001333334
571-836	0.6	571-836-0.6	4	0.0013	0.001333334
571-837	0	571-837-0	110	0.0367	0.036674888
571-837	0.3	571-837-0.3	250	0.0833	0.083430087

TABLE C-67
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
SURFACE, 0.3 AND 0.6-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-838	0	571-838-0	52	0.0173	0.017334201
571-838	0.3	571-838-0.3	33	0.0110	0.011000222
571-838	0.6	571-838-0.6	270	0.0900	0.090121945
571-839	0	571-839-0	37	0.0123	0.012333646
571-839	0.3	571-839-0.3	18	0.0060	0.006000036
571-839	0.6	571-839-0.6	140	0.0467	0.046683622
571-840	0	571-840-0	8.5	0.0028	0.002833337
571-840	0.3	571-840-0.3	5.2	0.0017	0.001733334
571-840	0.6	571-840-0.6	6.6	0.0022	0.002200002
571-841	0	571-841-0	2	0.0007	0.000666667
571-841	0.3	571-841-0.3	3	0.0010	0.001000000
571-841	0.6	571-841-0.6	44	0.0147	0.014667193
571-842	0	571-842-0	11	0.0037	0.003666675
571-842	0.3	571-842-0.3	5	0.0017	0.001666667
571-842	0.6	571-842-0.6	260	0.0867	0.086775529

Total Lead	Max TTLC:	3000.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	105		105			
Sample Mean:	184		0.067			
Delta = RT - mean	166					
Appropriate Number of Samples:	9					
Standard Deviation of Sample:	382		0.173			
Standard Deviation of Mean:	37		0.017			
Sample Variance:	145590		0.030			
t-value for 90%:	1.291	Need to Transform Data	1.291			
Upper Confidence Limit for 90%:			0.089			
Reverse Transformation for 90%			267.57	mg/kg	18.59	mg/l
t-value for 95%:			1.661			
Upper Confidence Limit for 95%:			0.096			
Reverse Transformation for 95%			286.25	mg/kg	19.93	mg/l

TABLE C-68
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-801	0.9	571-801-0.9	27	0.0325	0.032535860
571-801	1.5	571-801-1.5	35	0.0422	0.042181182
571-805	0.9	571-805-0.9	4	0.0048	0.004819296
571-805	1.5	571-805-1.5	5	0.0060	0.006024133
571-807	0.9	571-807-0.9	5	0.0060	0.006024133
571-807	1.5	571-807-1.5	4	0.0048	0.004819296
571-808	0.9	571-808-0.9	5.1	0.0061	0.006144617
571-808	1.5	571-808-1.5	5.5	0.0066	0.006626555
571-810	0.9	571-810-0.9	4	0.0048	0.004819296
571-810	1.5	571-810-1.5	9.1	0.0110	0.010964075
571-811	0.9	571-811-0.9	3	0.0036	0.003614466
571-811	1.5	571-811-1.5	19	0.0229	0.022893566
571-812	0.9	571-812-0.9	2	0.0024	0.002409641
571-812	1.5	571-812-1.5	2	0.0024	0.002409641
571-813	0.9	571-813-0.9	320	0.3855	0.395795346
571-814	0.9	571-814-0.9	370	0.4458	0.462048941
571-814	1.5	571-814-1.5	2	0.0024	0.002409641
571-815	0.9	571-815-0.9	86	0.1036	0.103800759
571-815	1.5	571-815-1.5	6.9	0.0083	0.008313349
571-816	0.9	571-816-0.9	1	0.0012	0.001204820
571-816	1.5	571-816-1.5	2	0.0024	0.002409641
571-817	0.9	571-817-0.9	12	0.0145	0.014458335
571-818	0.9	571-818-0.9	5.7	0.0069	0.006867524
571-818	1.5	571-818-1.5	300	0.3614	0.369818044
571-819	0.9	571-819-0.9	140	0.1687	0.169484948
571-819	1.5	571-819-1.5	830	1.0000	1.570796327
571-820	0.9	571-820-0.9	24	0.0289	0.028919694
571-821	0.9	571-821-0.9	64	0.0771	0.077185050
571-821	1.5	571-821-1.5	73	0.0880	0.088065596
571-832	0.9	571-832-0.9	5	0.0060	0.006024133

TABLE C-68
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
0.9 AND 1.5-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-832	1.5	571-832-1.5	7.2	0.0087	0.008674808
571-835	0.9	571-835-0.9	230	0.2771	0.280783378
571-838	0.9	571-838-0.9	2	0.0024	0.002409641
571-838	1.5	571-838-1.5	4	0.0048	0.004819296
571-839	0.9	571-839-0.9	12	0.0145	0.014458335
571-839	1.5	571-839-1.5	3	0.0036	0.003614466
571-841	0.9	571-841-0.9	8.6	0.0104	0.010361631
571-841	1.5	571-841-1.5	2	0.0024	0.002409641
571-842	0.9	571-842-0.9	2	0.0024	0.002409641
571-842	1.5	571-842-1.5	77	0.0928	0.092904674

Total Lead	Max TTLC:	830.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	40		40			
Sample Mean:	68		0.097			
Delta = RT - mean	282					
Appropriate Number of Samples:	1					
Standard Deviation of Sample:	155		0.265			
Standard Deviation of Mean:	24		0.042			
Sample Variance:	23906		0.070			
t-value for 90%:	1.304	Need to Transform Data	1.304			
Upper Confidence Limit for 90%:			0.152			
Reverse Transformation for 90%			125.54	mg/kg	8.42	mg/l
t-value for 95%:			1.685			
Upper Confidence Limit for 95%:			0.168			
Reverse Transformation for 95%			138.65	mg/kg	9.36	mg/l

TABLE C-69
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
SURFACE, 0.3, 0.6, AND 0.9-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-801	0	571-801-0	76	0.0253	0.025336044
571-801	0.3	571-801-0.3	62	0.0207	0.020668138
571-801	0.6	571-801-0.6	44	0.0147	0.014667193
571-801	0.9	571-801-0.9	27	0.0090	0.009000122
571-802	0	571-802-0	50	0.0167	0.016667438
571-802	0.3	571-802-0.3	37	0.0123	0.012333646
571-802	0.6	571-802-0.6	12	0.0040	0.004000011
571-803	0	571-803-0	460	0.1533	0.153940620
571-803	0.3	571-803-0.3	39	0.0130	0.013000366
571-803	0.6	571-803-0.6	12	0.0040	0.004000011
571-804	0	571-804-0	24	0.0080	0.008000085
571-804	0.3	571-804-0.3	22	0.0073	0.007333399
571-804	0.6	571-804-0.6	22	0.0073	0.007333399
571-805	0	571-805-0	34	0.0113	0.011333576
571-805	0.3	571-805-0.3	5	0.0017	0.001666667
571-805	0.6	571-805-0.6	3	0.0010	0.001000000
571-805	0.9	571-805-0.9	4	0.0013	0.001333334
571-807	0	571-807-0	20	0.0067	0.006666716
571-807	0.3	571-807-0.3	20	0.0067	0.006666716
571-807	0.6	571-807-0.6	8.5	0.0028	0.002833337
571-807	0.9	571-807-0.9	5	0.0017	0.001666667
571-808	0	571-808-0	22	0.0073	0.007333399
571-808	0.3	571-808-0.3	10	0.0033	0.003333340
571-808	0.6	571-808-0.6	4	0.0013	0.001333334
571-808	0.9	571-808-0.9	5.1	0.0017	0.001700001
571-809	0	571-809-0	29	0.0097	0.009666817
571-809	0.3	571-809-0.3	58	0.0193	0.019334538
571-810	0	571-810-0	36	0.0120	0.012000288
571-810	0.3	571-810-0.3	20	0.0067	0.006666716
571-810	0.6	571-810-0.6	5	0.0017	0.001666667

TABLE C-69
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
SURFACE, 0.3, 0.6, AND 0.9-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-810	0.9	571-810-0.9	4	0.0013	0.001333334
571-811	0	571-811-0	97	0.0323	0.032338970
571-811	0.3	571-811-0.3	690	0.2300	0.232077683
571-811	0.6	571-811-0.6	76	0.0253	0.025336044
571-811	0.9	571-811-0.9	3	0.0010	0.001000000
571-812	0	571-812-0	310	0.1033	0.103518118
571-812	0.3	571-812-0.3	6.1	0.0020	0.002033335
571-812	0.6	571-812-0.6	220	0.0733	0.073399221
571-812	0.9	571-812-0.9	2	0.0007	0.000666667
571-813	0	571-813-0	320	0.1067	0.106869981
571-813	0.3	571-813-0.3	640	0.2133	0.214985573
571-813	0.6	571-813-0.6	130	0.0433	0.043346907
571-813	0.9	571-813-0.9	320	0.1067	0.106869981
571-814	0	571-814-0	61	0.0203	0.020334735
571-814	0.3	571-814-0.3	3000	1.0000	1.570796327
571-814	0.6	571-814-0.6	500	0.1667	0.167448079
571-814	0.9	571-814-0.9	370	0.1233	0.123648166
571-815	0	571-815-0	360	0.1200	0.120289882
571-815	0.3	571-815-0.3	2	0.0007	0.000666667
571-815	0.6	571-815-0.6	570	0.1900	0.191162147
571-815	0.9	571-815-0.9	86	0.0287	0.028670594
571-816	0	571-816-0	44	0.0147	0.014667193
571-816	0.3	571-816-0.3	8.3	0.0028	0.002766670
571-816	0.6	571-816-0.6	80	0.0267	0.026669828
571-816	0.9	571-816-0.9	1	0.0003	0.000333333
571-817	0	571-817-0	76	0.0253	0.025336044
571-817	0.3	571-817-0.3	4	0.0013	0.001333334
571-817	0.6	571-817-0.6	240	0.0800	0.080085580
571-817	0.9	571-817-0.9	12	0.0040	0.004000011
571-818	0	571-818-0	950	0.3167	0.322213232

TABLE C-69
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
SURFACE, 0.3, 0.6, AND 0.9-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-818	0.3	571-818-0.3	16	0.0053	0.005333359
571-818	0.6	571-818-0.6	1100	0.3667	0.375423608
571-818	0.9	571-818-0.9	5.7	0.0019	0.001900001
571-819	0	571-819-0	1600	0.5333	0.562536245
571-819	0.3	571-819-0.3	16	0.0053	0.005333359
571-819	0.6	571-819-0.6	770	0.2567	0.259571745
571-819	0.9	571-819-0.9	140	0.0467	0.046683622
571-820	0	571-820-0	29	0.0097	0.009666817
571-820	0.3	571-820-0.3	18	0.0060	0.006000036
571-820	0.6	571-820-0.6	18	0.0060	0.006000036
571-820	0.9	571-820-0.9	24	0.0080	0.008000085
571-821	0	571-821-0	45	0.0150	0.015000563
571-821	0.3	571-821-0.3	9.9	0.0033	0.003300006
571-821	0.6	571-821-0.6	68	0.0227	0.022668608
571-821	0.9	571-821-0.9	64	0.0213	0.021334952
571-827	0	571-827-0	640	0.2133	0.214985573
571-827	0.3	571-827-0.3	200	0.0667	0.066716148
571-827	0.6	571-827-0.6	110	0.0367	0.036674888
571-828	0	571-828-0	250	0.0833	0.083430087
571-828	0.3	571-828-0.3	170	0.0567	0.056697038
571-828	0.6	571-828-0.6	220	0.0733	0.073399221
571-829	0	571-829-0	330	0.1100	0.110223050
571-829	0.3	571-829-0.3	13	0.0043	0.004333347
571-830	0	571-830-0	83	0.0277	0.027670197
571-830	0.3	571-830-0.3	38	0.0127	0.012667005
571-830	0.6	571-830-0.6	20	0.0067	0.006666716
571-831	0	571-831-0	720	0.2400	0.242365851
571-831	0.3	571-831-0.3	75	0.0250	0.025002605
571-831	0.6	571-831-0.6	120	0.0400	0.040010674
571-832	0	571-832-0	23	0.0077	0.007666742

TABLE C-69
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
SURFACE, 0.3, 0.6, AND 0.9-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-832	0.3	571-832-0.3	5.3	0.0018	0.001766668
571-832	0.6	571-832-0.6	4	0.0013	0.001333334
571-832	0.9	571-832-0.9	5	0.0017	0.001666667
571-833	0	571-833-0	480	0.1600	0.160690653
571-833	0.3	571-833-0.3	120	0.0400	0.040010674
571-833	0.6	571-833-0.6	80	0.0267	0.026669828
571-834	0	571-834-0	56	0.0187	0.018667751
571-834	0.3	571-834-0.3	2	0.0007	0.000666667
571-834	0.6	571-834-0.6	6.2	0.0021	0.002066668
571-835	0	571-835-0	620	0.2067	0.208166843
571-835	0.3	571-835-0.3	240	0.0800	0.080085580
571-835	0.6	571-835-0.6	29	0.0097	0.009666817
571-835	0.9	571-835-0.9	230	0.0767	0.076741971
571-836	0	571-836-0	240	0.0800	0.080085580
571-836	0.3	571-836-0.3	4	0.0013	0.001333334
571-836	0.6	571-836-0.6	4	0.0013	0.001333334
571-837	0	571-837-0	110	0.0367	0.036674888
571-837	0.3	571-837-0.3	250	0.0833	0.083430087
571-838	0	571-838-0	52	0.0173	0.017334201
571-838	0.3	571-838-0.3	33	0.0110	0.011000222
571-838	0.6	571-838-0.6	270	0.0900	0.090121945
571-838	0.9	571-838-0.9	2	0.0007	0.000666667
571-839	0	571-839-0	37	0.0123	0.012333646
571-839	0.3	571-839-0.3	18	0.0060	0.006000036
571-839	0.6	571-839-0.6	140	0.0467	0.046683622
571-839	0.9	571-839-0.9	12	0.0040	0.004000011
571-840	0	571-840-0	8.5	0.0028	0.002833337
571-840	0.3	571-840-0.3	5.2	0.0017	0.001733334
571-840	0.6	571-840-0.6	6.6	0.0022	0.002200002
571-841	0	571-841-0	2	0.0007	0.000666667

TABLE C-69
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
SURFACE, 0.3, 0.6, AND 0.9-METER LAYERS

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-841	0.3	571-841-0.3	3	0.0010	0.001000000
571-841	0.6	571-841-0.6	44	0.0147	0.014667193
571-841	0.9	571-841-0.9	8.6	0.0029	0.002866671
571-842	0	571-842-0	11	0.0037	0.003666675
571-842	0.3	571-842-0.3	5	0.0017	0.001666667
571-842	0.6	571-842-0.6	260	0.0867	0.086775529
571-842	0.9	571-842-0.9	2	0.0007	0.000666667

Total Lead	Max TTLC:	3000.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	127		127			
Sample Mean:	163		0.059			
Delta = RT - mean	187					
Appropriate Number of Samples:	6					
Standard Deviation of Sample:	353		0.159			
Standard Deviation of Mean:	31		0.014			
Sample Variance:	124325		0.025			
t-value for 90%:	1.282	Need to Transform Data	1.282			
Upper Confidence Limit for 90%:			0.077			
Reverse Transformation for 90%			231.95	mg/kg	16.04	mg/l
t-value for 95%:			1.645			
Upper Confidence Limit for 95%:			0.083			
Reverse Transformation for 95%			247.27	mg/kg	17.14	mg/l

TABLE C-70
LEAD ANALYSES - SEGMENT 3 - EASTBOUND 800s
1.5-METER LAYER

Contractor Borehole ID	Depth (meters bgs)	Sample ID	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
571-801	1.5	571-801-1.5	35	0.0422	0.042181182
571-805	1.5	571-805-1.5	5	0.0060	0.006024133
571-807	1.5	571-807-1.5	4	0.0048	0.004819296
571-808	1.5	571-808-1.5	5.5	0.0066	0.006626555
571-810	1.5	571-810-1.5	9.1	0.0110	0.010964075
571-811	1.5	571-811-1.5	19	0.0229	0.022893566
571-812	1.5	571-812-1.5	2	0.0024	0.002409641
571-814	1.5	571-814-1.5	2	0.0024	0.002409641
571-815	1.5	571-815-1.5	6.9	0.0083	0.008313349
571-816	1.5	571-816-1.5	2	0.0024	0.002409641
571-818	1.5	571-818-1.5	300	0.3614	0.369818044
571-819	1.5	571-819-1.5	830	1.0000	1.570796327
571-821	1.5	571-821-1.5	73	0.0880	0.088065596
571-832	1.5	571-832-1.5	7.2	0.0087	0.008674808
571-838	1.5	571-838-1.5	4	0.0048	0.004819296
571-839	1.5	571-839-1.5	3	0.0036	0.003614466
571-841	1.5	571-841-1.5	2	0.0024	0.002409641
571-842	1.5	571-842-1.5	77	0.0928	0.092904674

Total Lead	Max TTLC:	830.0	**Transformed Data**		**Soluble Data**	
Number of Samples:	18		18			
Sample Mean:	77		0.125			
Delta = RT - mean	273					
Appropriate Number of Samples:	1					
Standard Deviation of Sample:	201		0.371			
Standard Deviation of Mean:	47		0.087			
Sample Variance:	40306		0.138			
t-value for 90%:	1.333	Need to Transform Data	1.333			
Upper Confidence Limit for 90%:			0.242			
Reverse Transformation for 90%			198.60	mg/kg	13.65	mg/l
t-value for 95%:			1.740			
Upper Confidence Limit for 95%:			0.277			
Reverse Transformation for 95%			227.17	mg/kg	15.70	mg/l

APPENDIX D

NORMAL DISTRIBUTION HISTOGRAMS

FIGURE D-1
NORMAL DISTRIBUTION HISTOGRAM
Segment 3 Westbound 100s

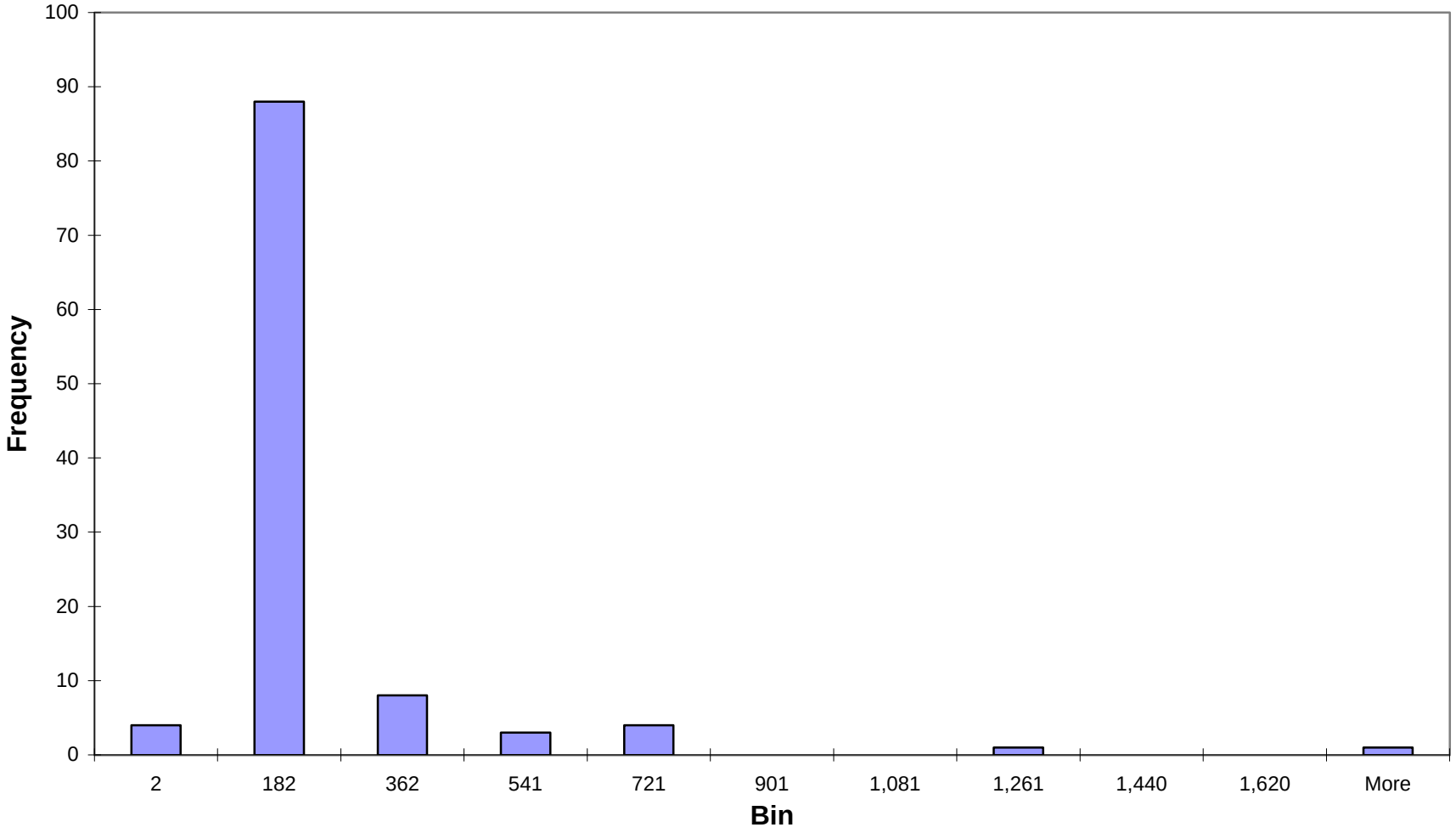


FIGURE D-2
NORMAL DISTRIBUTION HISTOGRAM
Segment 3 Westbound 300s

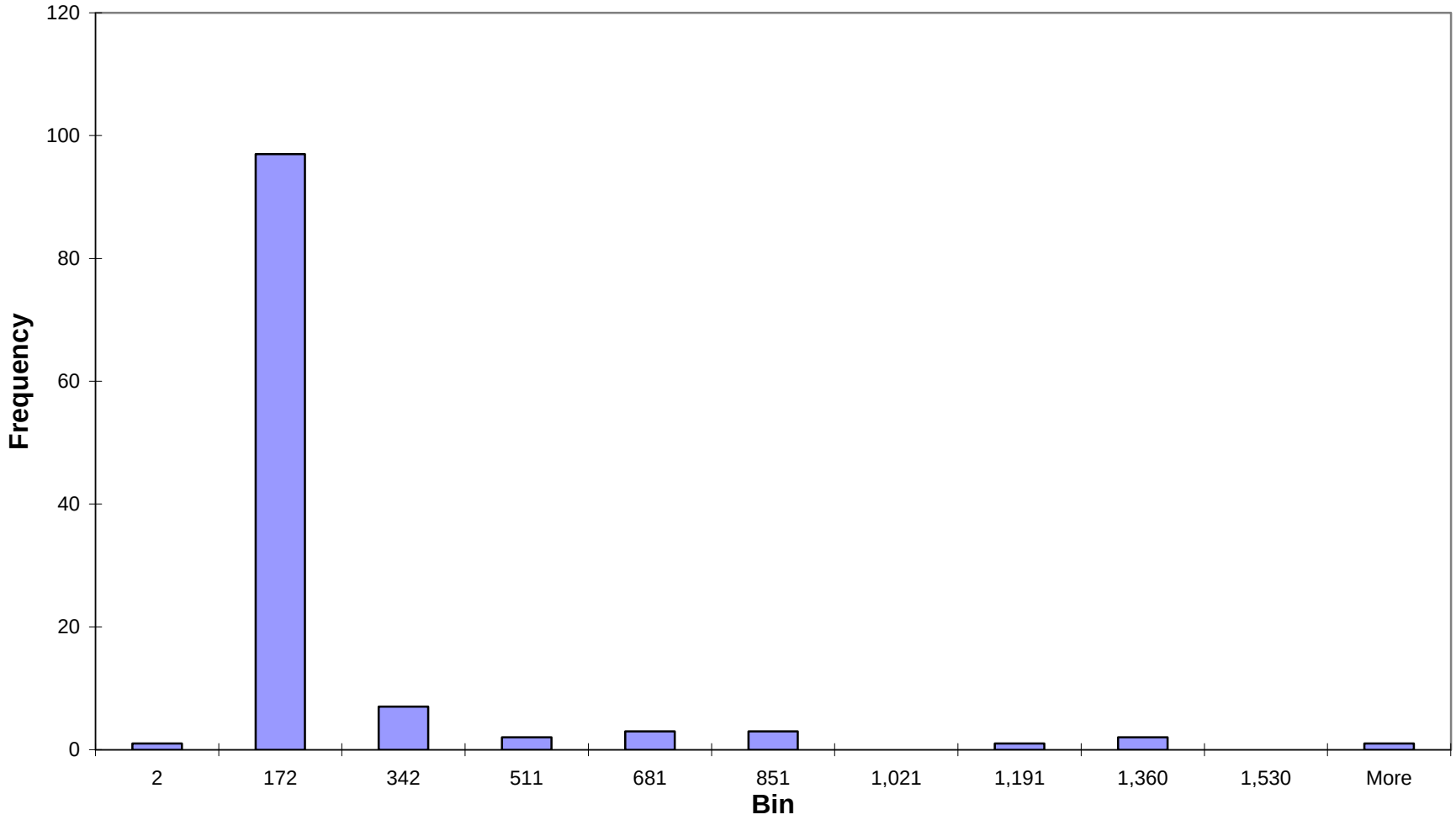


FIGURE D-3
NORMAL DISTRIBUTION HISTOGRAM
Segment 3 Westbound 500s

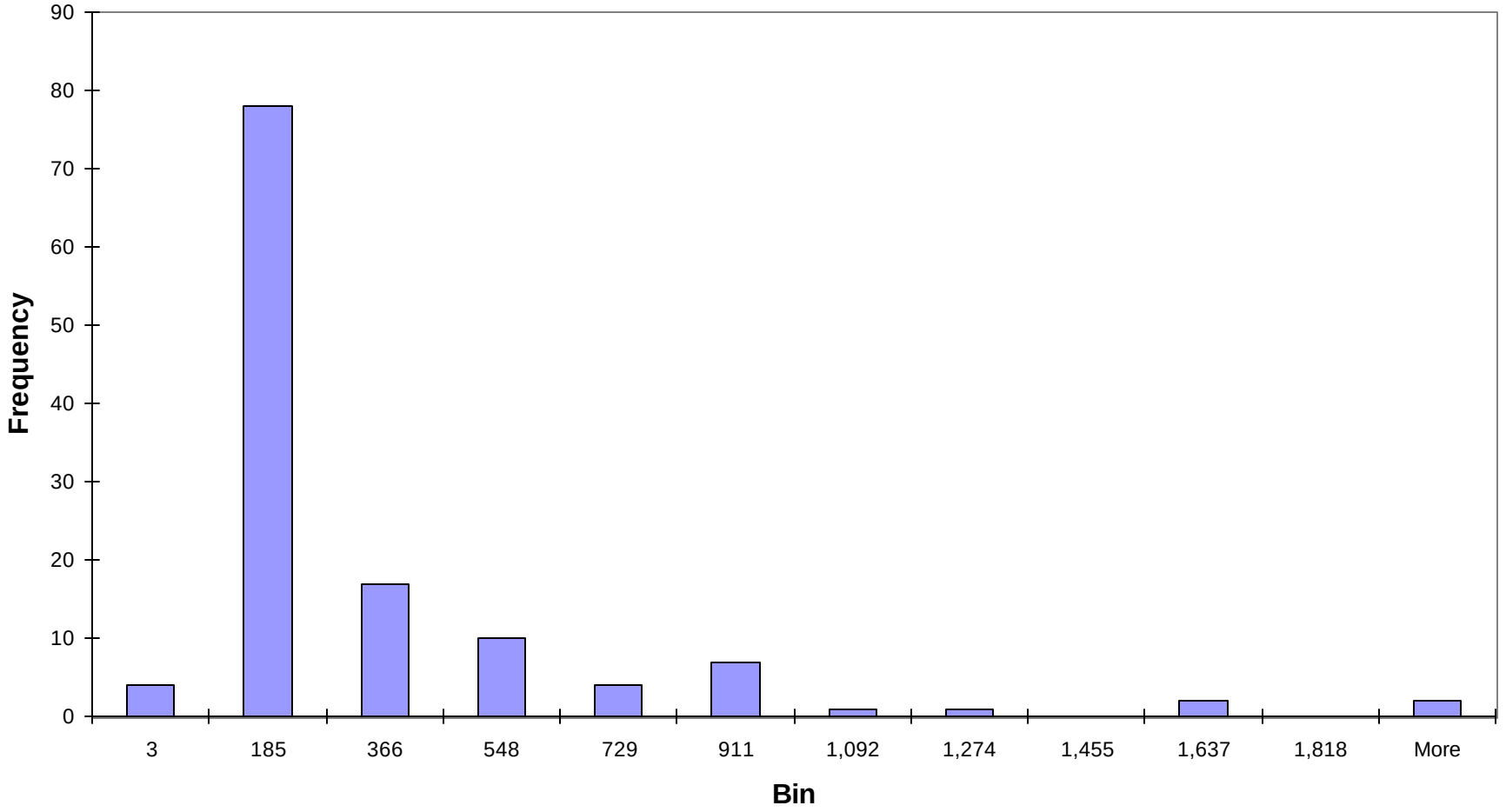


FIGURE D-4
NORMAL DISTRIBUTION HISTOGRAM
Segment 3 Westbound 700s

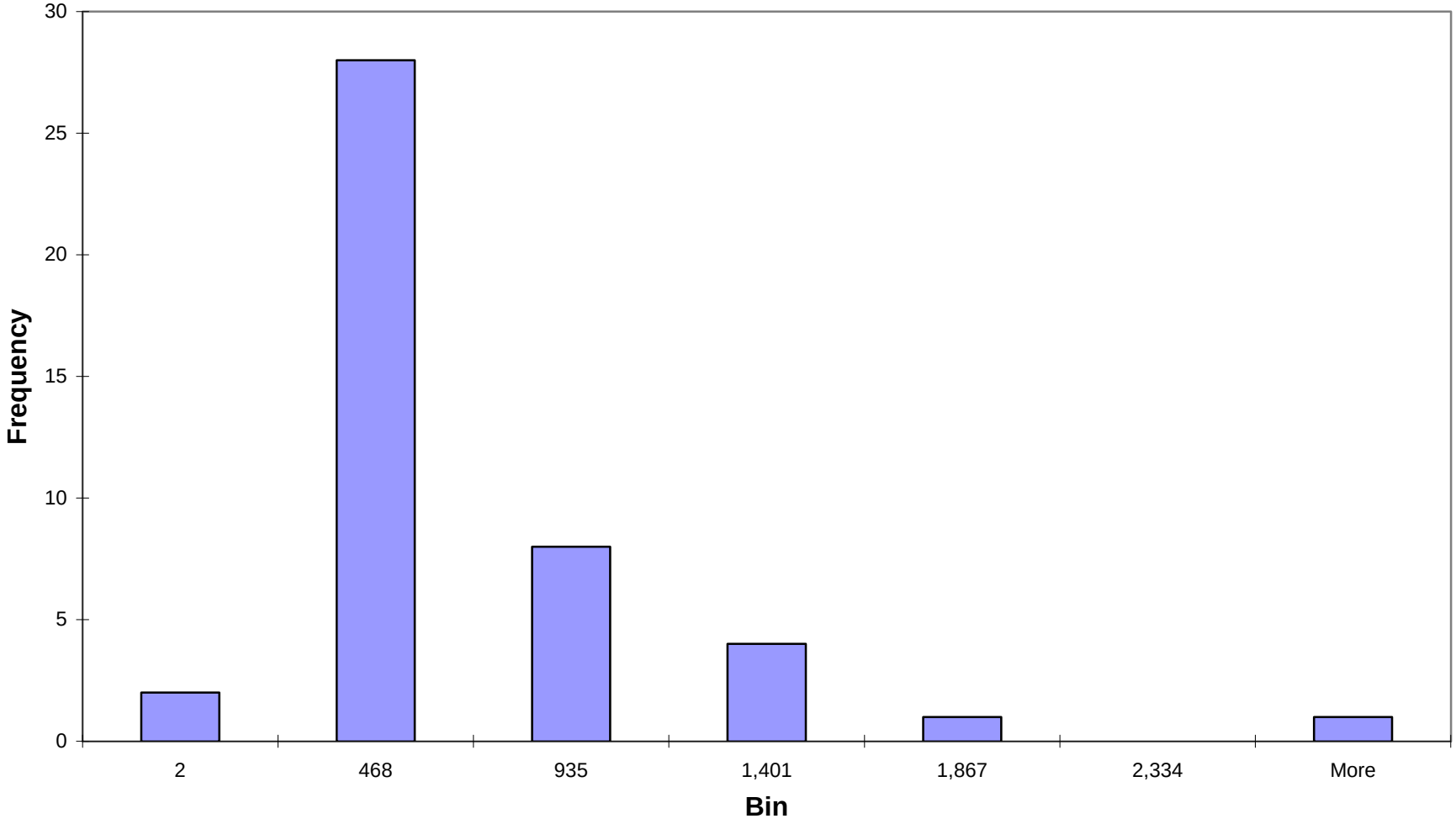


FIGURE D-5
NORMAL DISTRIBUTION HISTOGRAM
Segment 3 Eastbound 200s

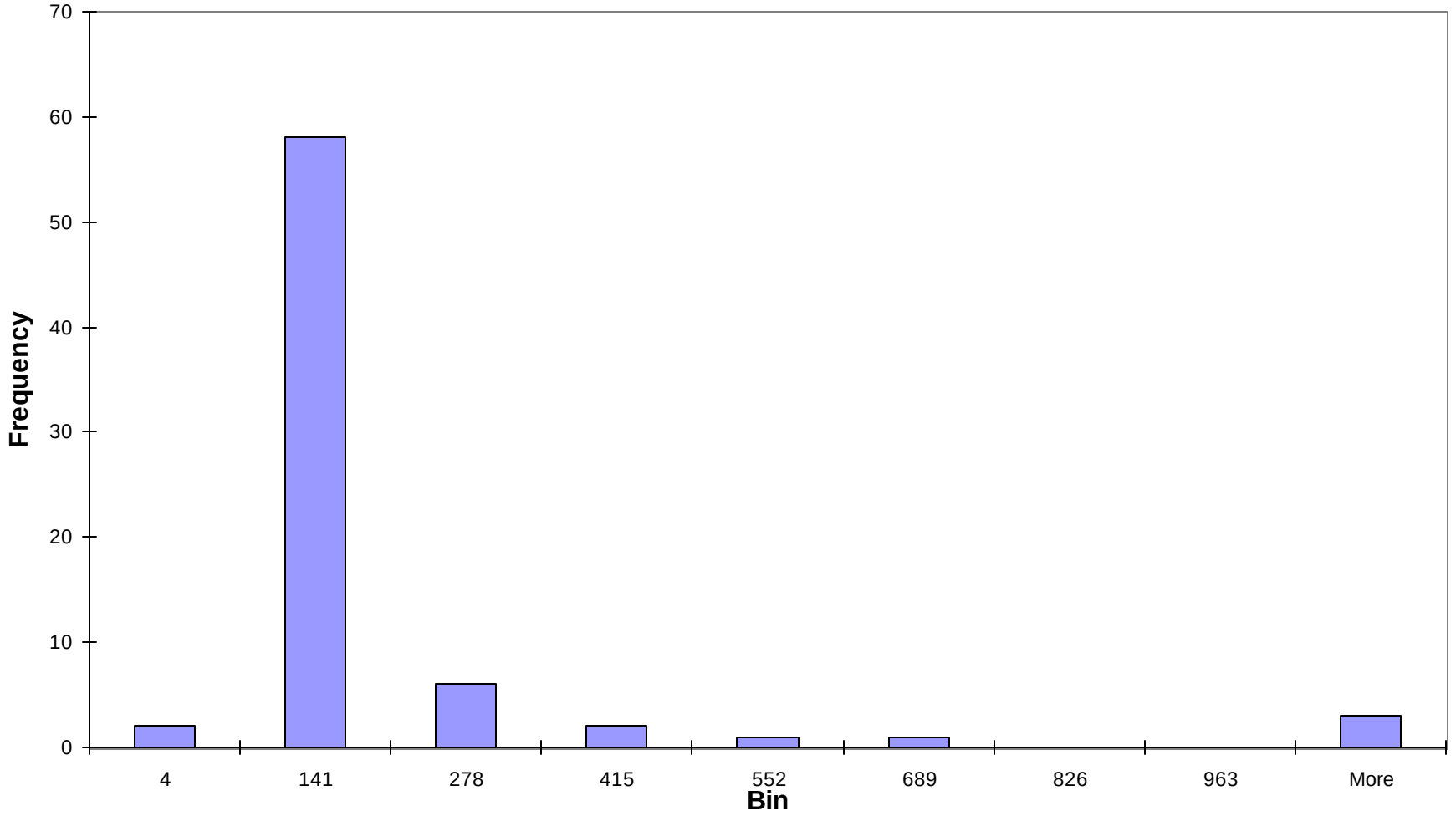


FIGURE D-6
NORMAL DISTRIBUTION HISTOGRAM
Segment 3 Eastbound 400s

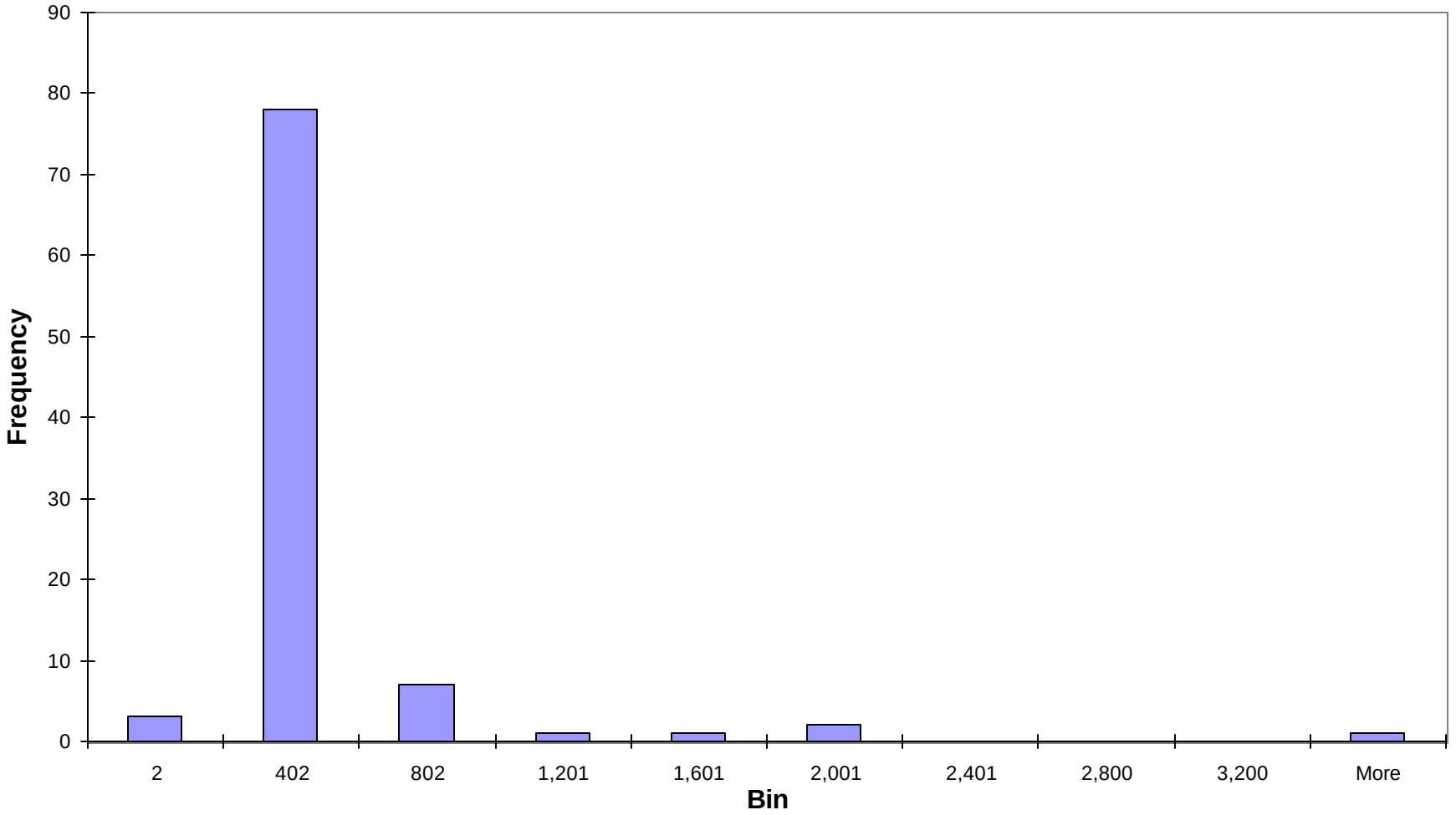


FIGURE D-7
NORMAL DISTRIBUTION HISTOGRAM
Segment 3 Eastbound 600s

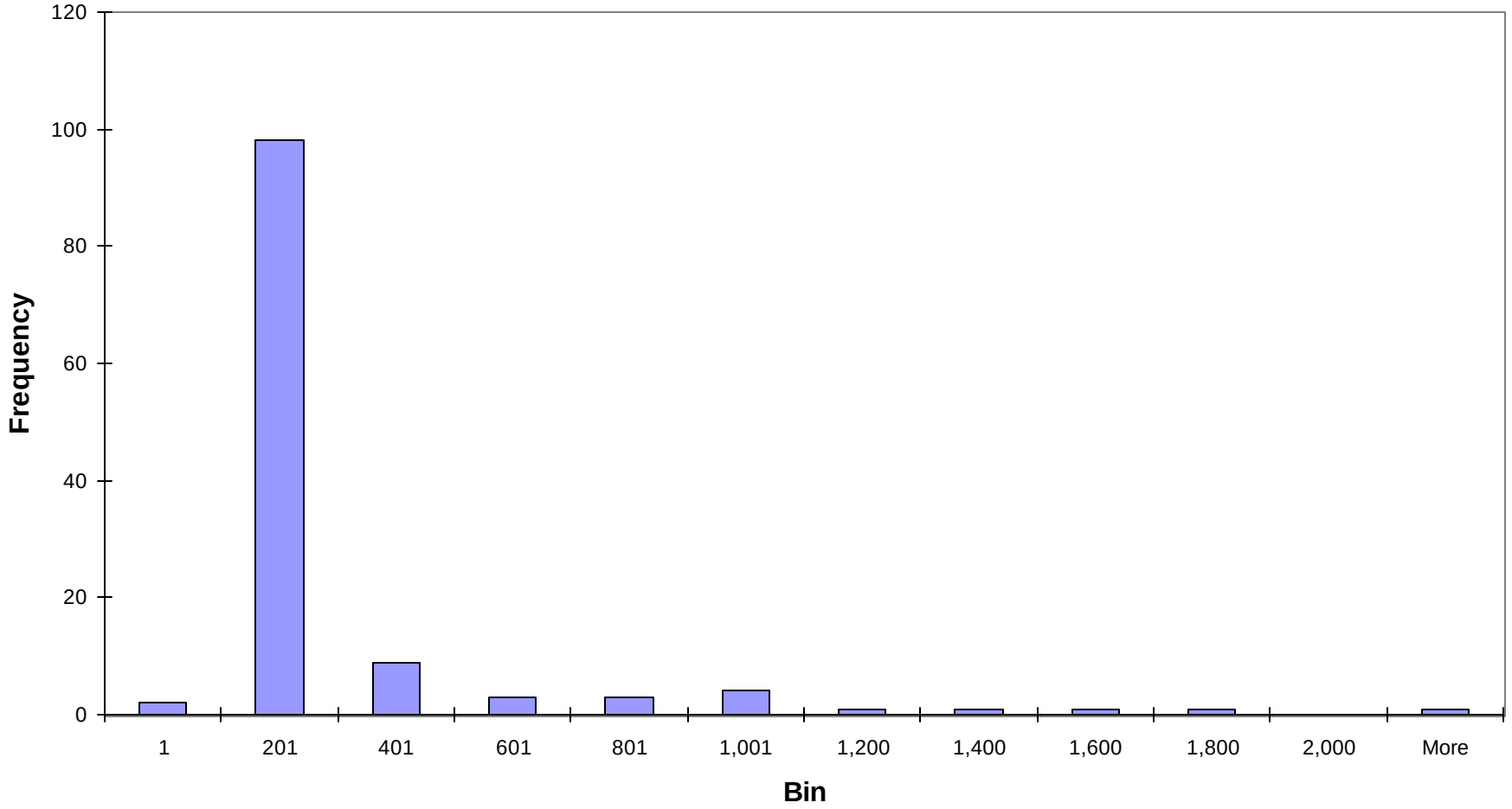
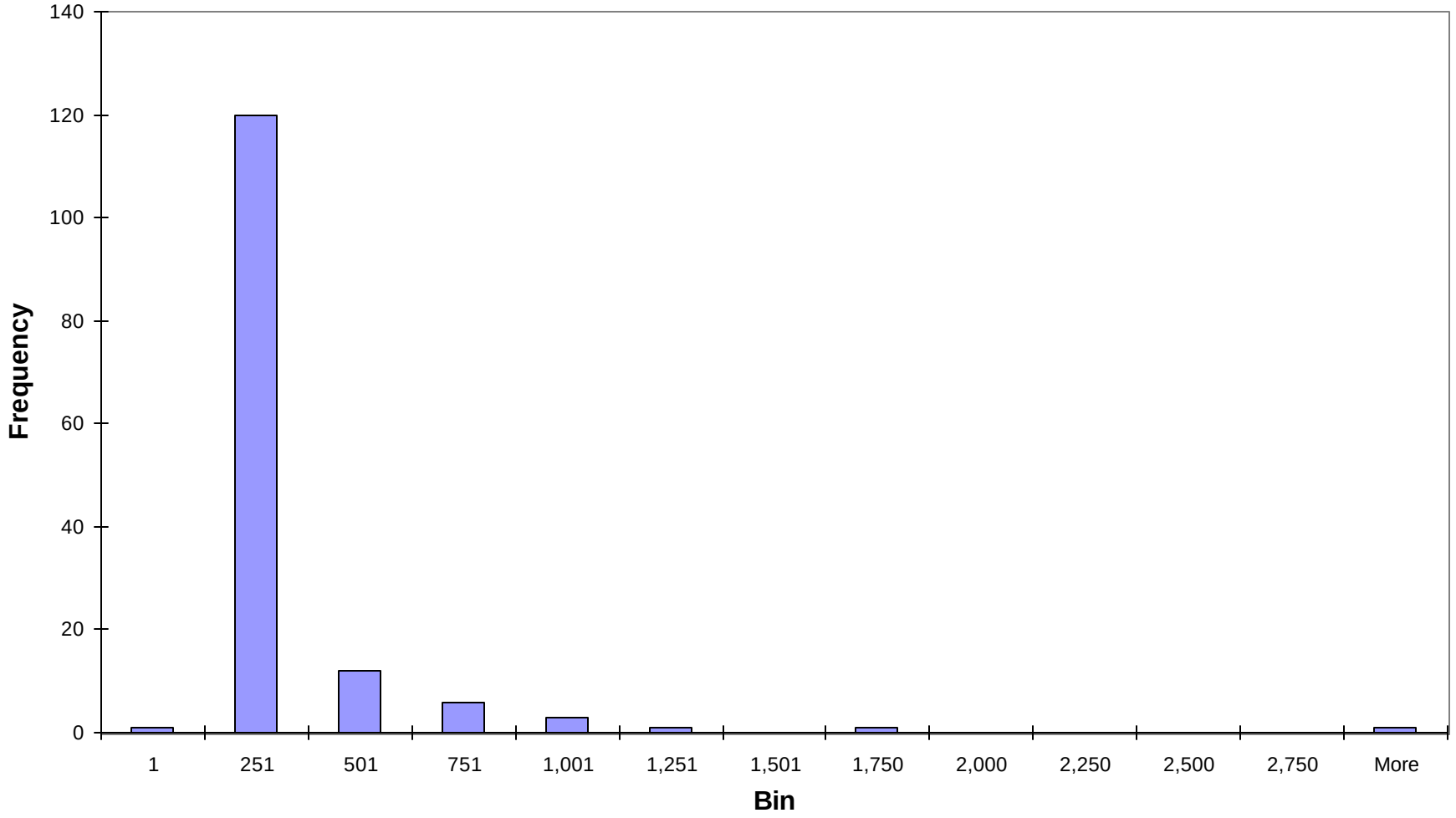


FIGURE D-8
NORMAL DISTRIBUTION HISTOGRAM
Segment 3 Eastbound 800s



APPENDIX E

CORRELATION OF TOTAL LEAD TO SOLUBLE LEAD

FIGURE E-1
CORRELATION OF TOTAL LEAD TO SOLUBLE LEAD
Segment 3 Westbound

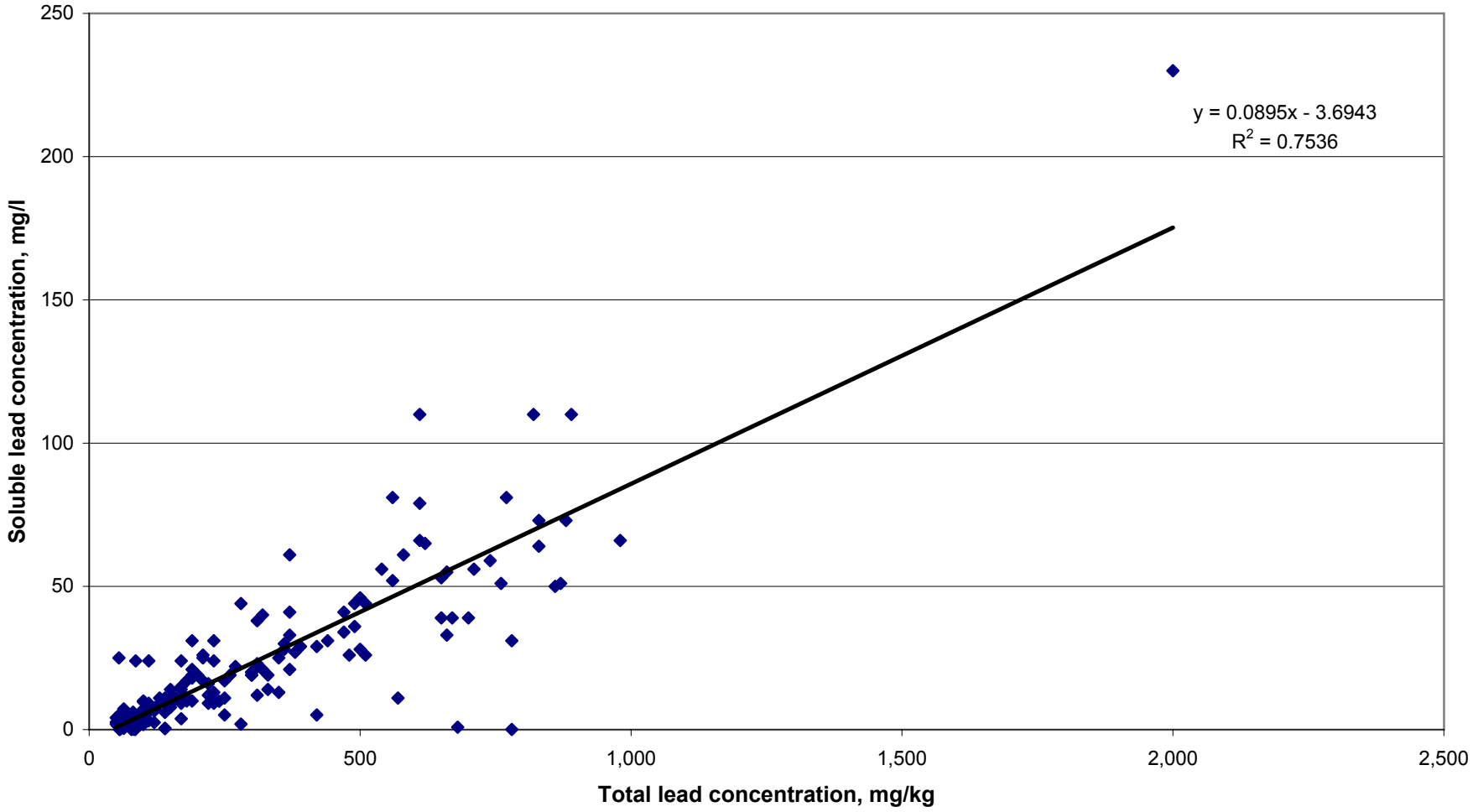
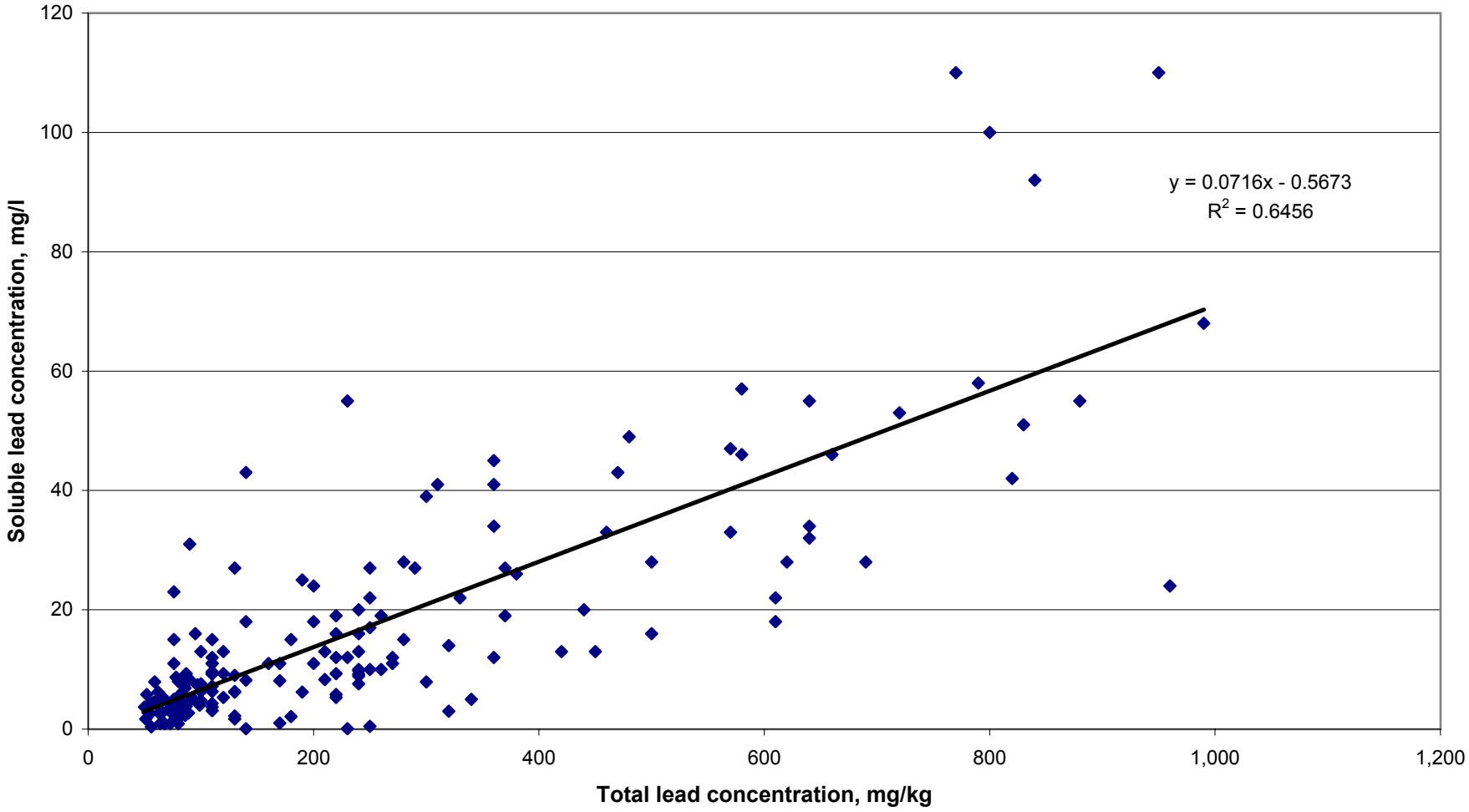


FIGURE E-2
CORRELATION OF TOTAL LEAD TO SOLUBLE LEAD
Segment 3 Eastbound



SUPPLEMENTAL AERIALLY DEPOSITED LEAD SITE INVESTIGATION REPORT FOR BRIDGE STRUCTURES AND RETAINING WALLS

SUPPLEMENTAL AERIALLY DEPOSITED LEAD SITE INVESTIGATION REPORT FOR BRIDGE STRUCTURES AND RETAINING WALLS

INTERSTATE 10 HOV LANE WIDENING PROJECT
SEGMENTS 2 AND 3
PUENTE AVENUE TO STATE ROUTE 57
07-LA-10, PM 33.4/42.4
LOS ANGELES COUNTY, CALIFORNIA

PREPARED FOR:
CALIFORNIA DEPARTMENT OF TRANSPORTATION
DISTRICT 7
100 SOUTH MAIN STREET
LOS ANGELES, CALIFORNIA

PREPARED BY:
GEOCON CONSULTANTS, INC.
3303 N. SAN FERNANDO BLVD., SUITE 100
BURBANK, CALIFORNIA

CALTRANS CONTRACT 07A2730
TASK ORDER NO. 11
EA NOs. 07-1170U1 and 07-119341
PROJECT NOs. 070000085-1 AND 0700000097-1

GEOCON PROJECT NO. S9500-06-04 **May 31, 2011**

May 31, 2011

Project 0153240110

Mr. Samuel Yang
California Department of Transportation
District 7
100 South Main Street
Los Angeles, California

Re: Supplemental Aerially Deposited Lead Site Investigation Report for Bridge Structures and Retaining Walls, Interstate 10 HOV Lane Widening Project, Segments 2 and 3, Puente Avenue to State Route 57, 07-LA-10, PM 33.4/42.4, Los Angeles County, California

Dear Mr. Yang:

AMEC Geomatrix, Inc. (AMEC), has reviewed the subject report that has been prepared by GEOCON Consultants, Inc. (GEOCON). The subject report was prepared by Geocon under subcontract to AMEC and in partial fulfillment of Task Order 11 to Contract 07A2730. The specifications, findings, and professional opinions are presented within the limits described by the client, after being prepared in accordance with generally accepted professional engineering and geologic practice. We find the report acceptable for its further use by Caltrans in the context of the report limitations provided by GEOCON. No warranty is expressed or implied.

Sincerely yours,
AMEC Geomatrix, Inc.

PROFESSIONAL GEOLOGIST
DUANE G. PAUL
No. 414
Exp. 12/31/11
CERTIFIED HYDROGEOLOGIST
STATE OF CALIFORNIA

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REGISTERED PROFESSIONAL ENGINEER
CALVIN HUNTER HARDCASTLE
No. C 44751
CIVIL
STATE OF CALIFORNIA

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AMEC Geomatrix

GEOCON
CONSULTANTS, INC.
GEOTECHNICAL ■ ENVIRONMENTAL ■ MATERIALS

Project No. S9500-06-04
May 31, 2011

Mr. Duane Paul, PG, CHG
AMEC Geomatrix Inc.
510 Superior Avenue, Suite 200
Newport Beach, CA 92663

Subject: INTERSTATE 10 HOV LANE WIDENING PROJECT, SEGMENTS 2 AND 3
PUENTE AVENUE TO STATE ROUTE 57
07-LA-10 PM 33.4/42.4 LOS ANGELES COUNTY, CALIFORNIA
CONTRACT NO. 07A2730, TASK ORDER NO. 11, EAs. 07-1170U1 AND 07-119341
CALTRANS PROJECT NOs. 070000085-1 AND 0700000097-1
SUPPLEMENTAL AERIALLY DEPOSITED LEAD SITE INVESTIGATION REPORT
FOR BRIDGE STRUCTURES AND RETAINING WALLS

Dear Mr. Paul:

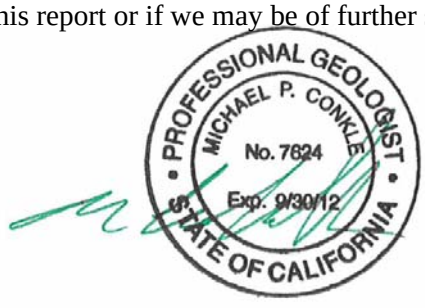
In accordance with Caltrans Contract No. 07A2730, Task Order No. 11 and the AMEC Geomatrix Agreement Number 2010-5005-15324 executed on December 16, 2010, Geocon Consultants, Inc. performed an aerially deposited lead investigation at specific locations between Puente Avenue and State Route 57 (PM 13.6/42.4) within the Interstate High Occupancy Vehicles lane project limits in the Cities of Baldwin Park and West Covina, Los Angeles County, California. The accompanying report summarizes the services performed, including the advancement of hand-auger and geoprobe borings, soil sampling, laboratory analyses, and global positioning system data acquisition.

The contents of this report reflect the views of the author, who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the State of California or the Federal Highway Administration. This report does not constitute a standard, specification, or regulation.

Please contact us if there are questions concerning this report or if we may be of further service.

Sincerely,

GEOCON CONSULTANTS, INC.



Mike Akoto
Staff Geologist

Michael P. Conkle, PG
Project Manager

(3/1CD) Addressee

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EXECUTIVE SUMMARY

Interstate (I-10) is an east-west route classified as interstate freeway that provides commuter access to the Los Angeles Central Business District from Riverside County. The Department of Transportation (Caltrans) plans to extend the existing I-10 High Occupancy Vehicle (HOV) lanes to Interstate 15 in San Bernardino County. Geocon Consultants, Inc. and AMEC Geomatrix Inc. performed an aerially deposited lead (ADL) investigation, at specific locations (Segments 2 and 3) within the I-10 HOV project limits. This investigation was performed between Puente Avenue and State Route 57 (PM 33.4/42.4) near the Cities of Baldwin Park and West Covina, Los Angeles County, California. The objective of the investigation was to evaluate soil at the Site for the potential presence of elevated concentrations of lead suspected due to impact from vehicle exhaust emissions when leaded gasoline was used. Caltrans will use information obtained from the investigation to determine soil disposal options and identify health and safety concerns during construction activities at the Sites.

Project Segment 2 extends between approximately Puente Avenue on the west and Citrus Street on the east. Project Segment 3 extends from approximately Citrus Street on the west to the Routes 10/57/210 Interchange on the east.

Laboratory analytical data verification was performed in accordance with the United States Environmental Protection Agency Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. Based on the data review some of the sample results were qualified as estimated values (J-flagged). The data qualifiers have been appended to the respective data in the analytical results summary tables (Table 1 through 4). A review of the laboratory QA/QC results indicates satisfactory data reporting, and the data are of sufficient quality for the purposes of this report. Sampling results by Segment are discussed below.

Segment 2 – EA 1170U1 (Caltrans Project No. 070000085-1)

Total lead was detected in 83 soil samples at a maximum concentration of 180 milligrams per kilogram (mg/kg). Total lead concentrations exceeding the Total Threshold Limit Concentration (TTLC) were not reported for any of the 83 soil samples collected within Segment 2. Eleven samples were analyzed for soluble lead using the waste extraction test (WET). WET lead was reported for the samples at concentrations ranging from 1.2 to 8.4 milligrams per liter (mg/l). Two of the eleven soil samples analyzed using the WET contained soluble lead concentrations greater than or equal to the Soluble Threshold Limit Concentration (STLC) of 5.0 mg/l and were further analyzed by the WET using de-ionized water as the extractant (DI-WET). DI-WET lead was reported for one of the samples at a concentration of 0.46 mg/l. Concentrations of Toxicity Characteristic Leaching Procedure (TCLP) lead in excess of 5.0 mg/l were not reported for the three samples analyzed. Analysis of selected soil samples indicate that the pH of the soil ranged from 7.5 to 8.4.

Analysis of three select soil samples for CCR Title 22 metals did not indicate the presence of metals at or above their respective TTLCs or ten times their respective STLCs (other than lead). The concentrations of metals, other than lead, reported in the soil samples were below their respective California Human Health Screening Levels (CHHSLs) for residential and industrial land use.

Segment 3 – EA 119341 (Caltrans Project No. 0700000097-1)

Total lead was detected in 187 soil samples at a maximum concentration of 590 mg/kg. Total lead concentrations exceeding the TTLC were not reported for any of the 187 soil samples collected within Segment 3. Fifty-three samples were analyzed for soluble lead using the WET. WET lead was reported for the samples at concentrations ranging from 1.6 to 57 mg/l. Forty-one soil samples were reported to contain (WET) soluble lead concentrations greater than or equal to the STLC and were further analyzed by DI-WET. DI-WET lead was not detected at concentrations equal to or exceeding the detection limit of 0.21 mg/l. Concentrations of TCLP lead in excess of 5.0 mg/l were not reported for the 26 samples analyzed. Analysis of selected soil samples indicate that the pH of the soil ranged from 7.2 to 8.4.

Analysis of thirteen select soil samples for CCR Title 22 metals did not indicate the presence of at or above their respective TTLCs or ten times their respective STLCs metals (other than lead). The concentrations of metals, other than lead, arsenic, and cadmium reported in the soil samples were below their respective CHHSLs for residential and industrial land use. Arsenic was reported for twelve of the samples at concentrations ranging from 1.2 to 8.5 mg/kg. The reported arsenic concentrations exceed the industrial and residential use CHHSLs of 0.24 and 0.07mg/kg, respectively; however the reported arsenic concentrations are within the reported range of background concentrations in California soils. Cadmium was reported for the samples at concentrations ranging from 0.77 to 6.8 mg/kg. The reported cadmium concentrations exceed the residential use CHHSL of 1.7 mg/kg but are less than the industrial use CHHSL of 7.5 mg/kg.

AERIALLY DEPOSITED LEAD SITE INVESTIGATION REPORT

1. INTRODUCTION

Interstate (I-10) is an east-west route classified as interstate freeway that provides commuter access to the Los Angeles Central Business District from Riverside County. The Department of Transportation (Caltrans) plans to extend the existing I-10 High Occupancy Vehicle (HOV) lanes to the Interstate 15 in San Bernardino County. Geocon Consultants, Inc. (Geocon) and AMEC Geomatrix Inc. (AMEC) performed an aerially deposited lead (ADL) investigation for Caltrans at specific locations (Segments 2 and 3) within the I-10 HOV project limits. This investigation was performed between Puente Avenue and State Route 57, Post Mile (PM) 33.4 to 42.4, near the Cities of Baldwin Park and West Covina, Los Angeles County, California (Figure 1). The investigation was conducted under Caltrans Contract No. 07A2730, Task Order (TO) No. 11, Expense Authorizations 07-1170U1 and 07-119341, and Caltrans Project Nos. 070000085-1 and 0700000097-1. A general description of the investigation objectives are summarized below.

1.1 Investigation Background/Objective

Testing by Caltrans throughout the State has shown that ADL exists in soil along major highway routes due to vehicle exhaust containing lead from the combustion of leaded gasoline. The concentration and distribution of ADL in soil is a function of many variables, but in general, highway age and traffic volume appear to be primary factors. The objective of the investigation was to evaluate soil at the Site for the potential presence of elevated concentrations of lead suspected due to impact from vehicle exhaust emissions when leaded gasoline was used. Caltrans will use information obtained from the investigation to determine soil management options (e.g., disposal or onsite reuse) and identify health and safety concerns during proposed construction activities at the Sites.

2. SCOPE OF SERVICES

We performed the scope of services summarized below as requested by Caltrans in TO No.11

2.1 Pre-field Activities

- Prepared a *Health and Safety Plan* (HSP) dated January 2011 to provide guidelines on the use of personal protective equipment and the health and safety procedures to be implemented by Geocon and AMEC personnel during field activities. The HSP specified the safety procedures for field work, summarized chemical hazard information, and identified site safety officers, emergency contacts, and the locations of emergency medical care facilities. A copy of the HSP is provided in Appendix A.

- Contacted Underground Service Alert (USA) to notify utility companies of the field activities. The USA ticket number are A10200149, A10200167, A10200178, A10200187, A10200198, A10200202, A10200209, A10200217, A10200228, A10200239, A10200262, A10200282, A10630603, and A10700568.

2.2 Field Activities

Field activities consisted of collecting 215 soil samples from 96 hand-auger borings between January 24 and January 28, 2011. Additional field activities, which consisted of collecting 55 soil samples from twelve direct-push borings, were performed by AMEC on March 15, 2011. The 108 borings were advanced at the approximate locations, selected by Caltrans, as shown on Figures 2-1 through 2-14. Photos of the boring locations and copies of the daily field notes from Geocon and AMEC are provided in Appendix B. Soil samples were collected from boreholes at 6-inch depth intervals, selected by Caltrans, ranging from the surface to a depth of 10 feet. Soil samples were homogenized in the field and placed in laboratory-provided sample containers for subsequent laboratory analysis.

2.3 GPS Coordinates

The borings were located with a Trimble GeoXT Global Positioning System (GPS) receiver using State Plane 83 coordinates and TerraSync™ software. Boring location latitude/longitude coordinates are provided on Tables 1 and 3.

2.4 Laboratory Analyses

Sample laboratory analyses were performed by ATL. Copies of laboratory reports and chain-of-custody (COC) documentation are in Appendix C. As requested by Caltrans in TO No. 11, samples were analyzed as follows:

- Two-hundred seventy soil samples were analyzed for total lead using Environmental Protection Agency (EPA) Test Method 6010B.
- Sixty-four soil samples with total lead concentration greater than or equal to 50 milligrams per kilogram (mg/kg) were analyzed for soluble lead by the California Waste Extraction Test (WET) using citrate acid as the extractant by EPA Test Method 7420.
- Forty-three samples with WET soluble lead concentrations greater than 5.0 mg/l and were analyzed for soluble lead using the WET with de-ionized water as the extractant (DI-WET).
- Twenty-nine soil samples with the highest total lead concentrations were also tested for soluble lead using the Toxicity Characteristic Leaching Procedure (TCLP) by EPA Test Method 1311/7420.
- Sixteen soil samples were analyzed for Title 22 metals according to Title 22 CCR, EPA Test Method 6010B and 7471A (mercury).
- The twenty-nine soil samples with the highest total lead concentrations were tested for pH using EPA Test Method 9045C.
- Twenty equipment blank water samples were analyzed for total lead using EPA Test Method 6010B.
- Four field blank water samples were analyzed for total lead using EPA Test Method 6010B.
- One sample of the source water used for equipment blank and field blank samples collected by AMEC was analyzed for total lead using EPA Test Method 6010B.

2.5 Report Preparation

This report was prepared to summarize the objectives, procedures, and results of the supplemental ADL investigation activities requested by Caltrans as performed by Geocon and AMEC.

3. INVESTIGATIVE METHODS

3.1 Soil Sampling

Soil samples were collected from borings advanced with 2.5-inch-diameter stainless steel hand-augers and a direct-push drilling rig. Surface vegetation (e.g., native grasses/forbs and landscaping plants) at the boring locations was removed prior to boring/sampling activities. Soil collected from each depth interval was placed into to a new re-sealable plastic bag and the soil was field homogenized within the sample bag. Homogenized soil within the bag was then transferred into a new 4-ounce, laboratory-provided, glass soil jar which was subsequently capped, labeled with the sample date/time and a unique soil sample number, placed in a chilled ice chest, and delivered to the analytical laboratory the same day the sample was collected.

Soil boring numbers were assigned based on a four-digit unique identification number provided by Caltrans (1127) and a sequential location number (101 through 196 for hand-auger borings and 201 through 212 for the direct-push borings). Soil sample numbers were designated by the boring number and the 6-inch depth interval from which the sample was collected. For example, the soil sample designated 1127-101-1.5-2.0 was obtained from a depth of approximately 1.5 to 2.0 feet from boring 1127-101 and soil sample designated 1127-201-3.5 was obtained from a depth of approximately 3.0 to 3.5 feet from boring 1127-201.

Quality Assurance/Quality Control (QA/QC) procedures conducted during field activities included decontamination of sampling equipment before each boring was advanced, single use of new re-sealable plastic bags and soil jars, and sample COC documentation. Hand-augers and direct-push sampling equipment were cleansed between borings by washing the equipment with an Alconox™ tap water solution followed by a tap water rinse and a final rinse with distilled/purified water.

The hand-auger borings were backfilled with surface soil from the immediate vicinity of the boring location. Direct-push borings were backfilled with hydrated bentonite chips. Decontamination water was discharged to the ground surface away from areas potentially associated with surface water bodies or storm drain inlets.

3.2 Equipment Blank Sampling

Sixteen equipment blank samples were collected by Geocon (one for each chain of custody completed) to verify proper cleaning of the hand-augers. The equipment blank samples were obtained by collecting distilled/purified water passed over the hand-augers into unpreserved, laboratory-provided containers.

Four equipment blank samples, four field blank samples, and one source water sample collected by AMEC Geomatrix, Inc. were analyzed to verify cleaning of the direct-push equipment. The equipment blank samples were obtained by collecting distilled/purified water through the direct-push sampling equipment into unpreserved, laboratory-provided containers. The field blank samples were collected by filling unpreserved laboratory-provided containers with distilled/purified water, and the source water sample was collected by filling unpreserved laboratory-provided container with distilled/ purified water used for both equipment blanks and field blank water samples.

3.3 Deviations from the Task Order

The TO served as the workplan for this investigation. The scope of work was performed as generally summarized in the TO with the following exceptions based on directions provided by Caltrans during sampling activities:

The TO indicated that hand auger equipment used for soil collection should be decontaminated prior to the collection of each sample at each depth. Approximately half way through the second day of sampling the onsite Caltrans representative observed that one of the Geocon sampling crews were decontaminating the equipment immediately after the collection of the soil sample and not immediately prior to sample collection. The error in sampling protocol was discussed with the sampling crew and they adjusted their decontamination procedures accordingly. Based on review of the analytical results this procedural error does not appear to have negatively impacted the sample results.

At Puente Avenue boring 1127-101 was not completed to the planned total depth of 9 feet because refusal conditions were encountered at 7.5 feet due to the presence of gravel. Boring 1127-102 was not completed also to the planned total depth of 9 feet because refusal conditions were encountered at 6 feet due to the presence of gravel. Boring 1127-103 was not completed to the total depth of 9 feet because refusal conditions were encountered at 2 feet due to the presence of gravel. Sample 1127-103-0.5-1.0 was collected at a depth of 0.5 to 1.0 foot, which was not originally specified in the TO. Boring 1127-104 was not completed to the planned total depth of 9 feet because refusal conditions were encountered at 4 feet due to the presence of gravel.

At Cameron Avenue, boring 1127-105 was not completed to the planned total depth of 9 feet because refusal conditions were encountered at 4.5 feet due to the presence of gravel. Boring 1127-106 was not

completed to the planned total depth 9 feet because of refusal conditions that were encountered at 4 feet due to the presence of gravel.

At West Covina Parkway Undercrossing/Pacific Avenue, boring 1127-110 was not completed to the planned total depth of 6 feet because refusal conditions were encountered at 3 feet due to the presence of gravel. Sample 1127-110-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not originally specified in the TO. Boring 1127-111 was not completed to the planned total depth of 6 feet because refusal conditions were encountered at 3 feet due to the presence of gravel. Sample 1127-111-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not originally specified in the TO. Boring 1127-112 was not completed to the planned total depth of 6 feet because refusal conditions were encountered at 3 feet due to the presence of gravel. Sample 1127-112-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not originally specified in the TO.

At Vincent Avenue Undercrossing, boring 1127-113 was not completed to the planned total depth of 5 feet because refusal conditions were encountered at 2.5 feet due to the presence of gravel. Boring 1127-114 was not completed to the planned total depth of 5 feet because refusal conditions were encountered at 4 feet due to the presence of gravel. Boring 1127-115 was also not completed to the planned total depth of 5 feet because refusal conditions were encountered at 4 feet due to the presence of gravel.

At Lark Allen Avenue Undercrossing, boring 1127-118 was not completed to the planned total depth of 6 feet because refusal conditions were encountered at 4.5 feet due to the presence of gravel and cobbles. Boring 1127-119 was not completed to the planned total depth of 10 feet because refusal conditions were encountered at 4 feet due to the presence of gravel. Boring 1127-120 was not completed to the planned total depth of 10 feet because refusal conditions were encountered at 4.5 feet due to the presence of gravel. Boring 1127-122 was not completed to the planned total depth of 10 feet because refusal conditions were encountered at 6 feet due to the presence of gravel.

At Azusa Avenue, boring 1127-125 was not completed to the planned total depth of 6 feet because refusal conditions were encountered at 2.5 feet due to the presence of gravel. Sample 1127-125-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not originally specified in the TO. Boring 1127-126 was not completed to the planned total depth of 6 feet because refusal conditions were encountered at 3 feet due to the presence of coarse gravel. Sample 1127-126-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not originally specified in the TO. Boring 1127-127 was not completed to the planned total depth of 6 feet because refusal conditions were encountered at 2.5 feet due to the presence of gravel. Sample 1127-127-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not originally specified in the TO. Boring 1127-128 was not completed to the planned total depth of 6 feet because refusal conditions were encountered at 2.5 feet due to the presence of gravel. Sample 1127-128-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not originally specified in the TO.

At Hollenbeck Street, boring 1127-129 was not completed to the planned total depth of 10 feet because refusal conditions were encountered at 4 feet due to the presence of gravel. Sample 1127-129-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not originally specified in the TO. Boring 1127-131 was not completed to the planned total depth of 10 feet because refusal conditions were encountered at 4.5 feet due to the presence of gravel. Sample 1127-131-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not originally specified in the TO. Boring 1127-132 was not completed to the planned total depth of 10 feet because refusal conditions were encountered at 5.5 feet due to the presence of gravel. Boring 1127-133 was not completed to the planned total depth of 10 feet because refusal conditions were encountered at 2.5 feet due to the presence of gravel. Boring 1127-134 was not completed to the planned total depth of 10 feet because refusal conditions were encountered at 5.5 feet due to the presence of gravel. Boring 1127-135 was not completed to the planned total depth of 10 feet because refusal conditions were encountered at 3 feet due to the presence of gravel. Sample 1127-135-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not originally specified in the TO. Boring 1127-136 was not completed to the planned total depth of 10 feet because refusal conditions were encountered at 5.5 feet due to the presence of gravel.

At Citrus Street, boring 1127-139 was not completed to the planned total depth of 9 feet because refusal conditions were encountered at 2 feet due to the presence of gravel. Sample 1127-139-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not originally specified in the TO. Boring 1127-140 was not completed to the planned total depth of 9 feet because refusal conditions were encountered at 2.5 feet due to the presence of gravel. Sample 1127-140-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not specified in the TO.

At Barranca Avenue Undercrossing, Boring 1127-141 was not completed to the planned total depth of 8 feet because refusal conditions were encountered at 2.5 feet due to the presence gravel. Sample 1127-141-0.5-1.0 was collected at 0.5 to 1.0 foot was not specified in the TO. Boring 1127-142 was not completed to the planned total depth of 8 feet because refusal conditions were encountered at 2 feet due to the presence of gravel. Sample 1127-142-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not specified in the TO. Boring 1127-143 was not completed to the planned total depth of 8 feet because refusal conditions were encountered at 3 feet due to the presence of gravel. Sample 1127-143-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not specified in the TO. Boring 1127-144 was not completed to the planned total depth of 8 feet because refusal conditions were encountered at 2 feet due to the presence of gravel. Sample 1127-144-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not specified in the TO. Boring 1127-145 was not completed to the planned total depth of 8 feet because refusal conditions were encountered at 2 feet due to the presence of gravel. Sample 1127-145-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not originally specified in the TO. Boring 1127-146 was not completed to the planned total depth of 8 feet because refusal conditions were encountered at 2 feet due to the presence of gravel. Sample 1127-146-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not specified in the TO. Boring 1127-147 was not completed to planned total depth of 8 feet because

refusal conditions were encountered at 7 feet due to the presence of gravel. Boring 1127-148 was completed to the planned total depth of 8 feet because refusal conditions were encountered at 5 feet due to the presence of gravel. Sample 1127-148-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not specified in the TO. Boring 1127-149 was not completed to planned total depth of 8 feet because refusal conditions were encountered at 6.5 feet due to the presence of gravels. Sample 1127-149-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not specified in the TO. Boring 1127-150 was not completed to the planned total depth of 8 feet because refusal conditions were encountered at 4.5 feet due to the presence of gravel.

At Grand Avenue undercrossing, Boring 1127-154 was not completed to planned total depth of 8 feet because refusal conditions were encountered at 2.5-feet due to the presence of gravel. Sample 1127-154-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not specified in the TO.

At Holt Avenue undercrossing, Boring 1127-156 was not completed to the planned total depth of 6 feet because of refusal conditions were encountered at 3 feet due to the presence of gravel. Sample 1127-156-0.5-1.0 was collected at 0.5 to 1.0 foot which was not specified in the TO. Boring 1127-157 was not completed to the planned total depth of 6 feet because refusal conditions were encountered at 2.5 feet due to the presence of gravel. Sample 1127-157-0.5-1.0 was collected at 0.5 to 1.0 feet, which was not specified in the TO. Boring 1127-158 was not completed to the planned total depth of 6 feet because refusal conditions were encountered at 4.5 feet due to the presence of gravel. Sample 1127-158-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not specified in the TO.

At Via Verde undercrossing, boring 1127-159 was not completed to the planned total depth of 5 feet because refusal conditions were encountered at 2 feet due to the presence of gravel. Boring 1127-160 was not completed to the planned total depth of 5 feet because refusal conditions were encountered at 2 feet due to the presence of gravel. Boring 1127-161 was not completed to the planned total depth of 5 feet because refusal conditions were encountered at 4 feet due to the presence of gravel. Boring 1127-162 was not completed to the planned total depth of 5 feet because refusal conditions were encountered at 3.5 feet due to the presence of gravel. Boring 1127-163 was completed to the planned total depth of 5 feet because refusal conditions were encountered at 4 feet due to the presence of gravel. Boring 1127-164 was not completed to the planned total depth of 5 feet because refusal conditions were encountered at 3 feet due to the presence of gravel. Boring 1127-165 was not completed to the planned total depth of 5 feet because refusal conditions were encountered at 2 feet due to the presence of gravel. Boring 1127-166 was not completed to the planned total depth of 5 feet because refusal conditions were encountered at 3.5 feet due to the presence of gravel.

At Kellogg Drive, boring 1127-168 was not completed to the planned total depth of 6 feet because refusal conditions were encountered at 2.5 feet due to the presence of gravel. Sample 1127-168-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not specified in the TO. Boring 1127-169 was not

completed to the planned total depth of 6 feet because refusal conditions were encountered at 3 feet due to the presence of gravel. Sample 1127-169-0.5-1.0 was collected at 0.5 to 1.0 foot which was not specified in the TO. Boring 1127-170 not completed to the planned total depth of 6 feet because refusal conditions were encountered at 3 feet due to the presence of gravel. Sample 1127-170-0.5-1.0 was collected at 0.5 to1.0 foot, which was not specified in the Caltrans TO. Boring 1127-172 was not completed to the planned total depth of 6 feet because refusal conditions were encountered at 3 feet due to the presence of gravel. Sample 1127-0.5-1.0 was collected at 0.5 to1.0 foot, which was not specified in Caltrans TO. Boring 1127-174 was not completed to the planned total depth of 6 feet because refusal conditions were encountered at 2.5 feet due to the presence of gravel. Sample 1127-174-0.5-1.0 was collected at 0.5 to 1.0 foot, which was not specified in the Caltrans TO.

Hand-auger borings 1127-175 through 1127-196, located between Via Verde and Kellogg Drive, were added by Caltrans after the start of the field sampling program and were not part of the original scope outlined in the TO.

The sampling performed by AMEC with a direct-push rig at borings 1127-201 through 1127-212 was added by Caltrans after the start of the field sampling program and was not part of the original scope outlined in the TO.

4. FIELD OBSERVATIONS AND INVESTIGATIVE RESULTS

Soil samples were collected from borings located in both Segment 2 and Segment 3 of the I-10 HOV project. Project Segment 2 extends between approximately Puente Avenue on the west and Citrus Street on the east. Borings 1127-101 through 1127-136 were advanced within Segment 2. Project Segment 3 extends from approximately Citrus Street on the west to the Routes 10/57/210 Interchange on the east. Borings 1127-137 through 1127-196, and 1127-201 through 1127-212 were advanced within Segment 3. Sampling results by Segment are discussed below.

4.1 Segment 2 – EA 1170U1, Caltrans Project No. 070000085-1

4.1.1 Soil Conditions

Soil conditions encountered within Segment 2 generally ranged from very dark brown sandy silt and silty sand with gravel to very dark brown clayey sand and clayey silt. Surface water and groundwater was not encountered at the boring locations. Boring logs are presented in Appendix D.

4.1.2 Soil Sample Analytical Results

The Segment 2 soil sample analytical results for total lead, WET lead, DI-WET lead, TCLP lead, and pH are summarized in Table 1. Soil sample analytical results for Title 22 metals are summarized in Table 2.

Copies of laboratory reports and COC documentation are in Appendix C. The following summarizes the soil sample analytical results:

- **Total lead** was reported for 83 soil samples at concentrations ranging from an estimated ("J" flagged) 2.4J to 180 milligrams per kilogram (mg/kg).

- **WET lead** was reported for eleven samples at concentrations ranging from 1.2 to 8.4 mg/l. WET lead concentrations that equal or exceed the STLC value of 5.0 milligrams per liter (mg/l) were reported for two of the samples.

- **DI-WET lead** was reported for one of the two samples analyzed at a concentration of 0.46 mg/l. DI-WET lead was not reported above the laboratory detection limit of 0.21 mg/l for the other sample analyzed.

- **TCLP lead** was reported for two of the three samples analyzed at concentrations of 0.28 and 0.30 mg/l. TCLP lead was not detected above the laboratory detection limit of 0.21 mg/l in the remaining samples. TCLP lead concentrations that equal or exceed the TCLP value of 5.0 mg/l were not reported in the samples.

- **Title 22 metals** arsenic, beryllium, molybdenum, selenium, silver, and thallium were not reported, at concentration above their respective laboratory reporting limits, in the three samples analyzed. Excluding lead, concentrations of the other reported Title 22 metals were less than ten times their respective STLCs.

- **Soil pH** values in the three samples tested ranged from 7.5 to 8.4.

4.2 Segment 3 – EA 119341, Caltrans Project No. 0700000097-1

4.2.1 Soil Conditions

Soil conditions encountered within Segment 3 hand-auger borings generally ranged from very dark brown sandy silt and silty sand with gravel to very dark brown clayey sand and clayey silt. Weathered sandstone (bedrock), overlain by 12 to 18 inches of brown silty to clayey sand was encountered in the direct-push borings 1127-201 through 1127-208. Soil conditions encountered within direct-push borings 1127-209 through 1127-212 generally consisted of dark brown clayey and silty sands, and brown to dark brown clay. Surface water and groundwater was not encountered at the boring locations. Boring logs are presented in Appendix D.

4.2.2 Soil Sample Analytical Results

The Segment 3 soil sample analytical results for total lead, WET lead, DI-WET lead, TCLP lead, and pH analyses are summarized in Table 3. Soil sample analytical results for Title 22 metals are summarized in Table 4. Copies of laboratory reports and COC documentation are in Appendix C. The following summarizes the soil sample analytical results:

- **Total lead** was reported for 187 soil samples at concentrations ranging from an estimated ("J" flagged) 2.5J to 590 mg/kg.

- **WET lead** was reported for 53 samples at concentrations ranging from 1.6 to 57 mg/l. WET lead concentrations that equal or exceed the STLC value of 5.0 mg/l were reported for 41 of the samples.

- **DI-WET lead** was not reported above the laboratory detection limit of 0.21 mg/l for the any of the 41 samples analyzed.

- **TCLP lead** was reported for 24 of the 26 samples analyzed at concentrations ranging from an estimated 0.21J to 2.6 mg/l. TCLP lead was not detected above the laboratory detection limit of 0.21 mg/l in the two remaining samples. TCLP lead concentrations that equal or exceed the TCLP value of 5.0 mg/l were not reported in the samples.

- **Title 22 metals** beryllium, silver, and thallium were not detected in the 13 samples analyzed at concentration above their respective laboratory reporting limits. Excluding lead, concentrations of the other reported Title 22 metals were less than ten times their respective STLCs.

- **Soil pH** values in the 26 samples tested ranged from 7.2 to 8.4.

4.3 Data Validation

Geocon, AMEC, and ATL use QA/QC measures to minimize and control errors associated with field and laboratory methods. Field QA/QC measures consist of cleaning sampling equipment between each use with a detergent solution followed by tap and distilled/purified water rinses. Based on the equipment blank sample analytical results, it appears that the field investigation was free from potential cross-contamination resulting from inadequate equipment decontamination.

Laboratory QA/QC measures include the use of matrix spikes, duplicates, and method blanks, in addition to calculation of percent recovery and relative percentage difference (RPD). Laboratory analytical data verification was performed in accordance with the United States Environmental Protection Agency Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. A data validation report based on review of the laboratory QA/QC results, for the data collected by Geocon and AMEC, is provided in Appendix E. Based on the data review some of the sample results were qualified as estimated values (J-flagged). The data qualifiers have been appended to the respective data in the analytical results summary tables (Table 1 through 4). A review of the laboratory QA/QC results indicates satisfactory data reporting, and the data are of sufficient quality for the purposes of this report.

5. FINDINGS

5.1 Segment 2 – EA 1170U1, Caltrans Project No. 070000085-1

5.1.1 Lead and pH

Total lead was detected in 83 soil samples at a maximum concentration of 180 mg/kg. Total lead concentrations exceeding the TTLC were not reported for any of the 83 soil samples collected within Segment 2. Two of the eleven soil samples analyzed using the WET contained soluble lead concentrations greater than or equal to the STLC of 5.0 mg/l and were further analyzed by DI-WET. DI-WET lead was reported for one of the samples at a concentration of 0.46 mg/l. Concentrations of TCLP lead in excess of 5.0 mg/l were not reported for the three samples analyzed. Analysis of selected soil samples indicate that the pH of the soil ranged from 7.5 to 8.4.

5.1.2 Title 22 Metals

Analysis of selected soil samples for CCR Title 22 metals did not indicate the presence of metals at or above their respective TTLCs or ten times their respective STLCs (other than lead). The concentrations of metals, other than lead, reported in the soil samples were below their respective California Human Health Screening Levels (CHHSLs) for residential and industrial land use.

5.2 Segment 3 – EA 119341, Caltrans Project No. 0700000097-1

5.2.1 Lead and pH

Total lead was detected in 187 soil samples at a maximum concentration of 590 mg/kg. Total lead concentrations exceeding the TTLC were not reported for any of the 187 soil samples collected within Segment 3. Forty-one soil samples were reported to contain (WET) soluble lead concentrations greater than or equal to the STLC and were further analyzed by DI-WET. DI-WET lead was not detected at concentrations equal to or exceeding the detection limit of 0.21 mg/l. Concentrations of TCLP lead in excess of 5.0 mg/l were not reported for the 26 samples analyzed. Analysis of selected soil samples indicate that the pH of the soil ranged from 7.2 to 8.4.

5.2.2 Title 22 Metals

Analysis of selected soil samples for CCR Title 22 metals did not indicate the presence of metals (other than lead) at or above their respective TTLCs or ten times their respective STLCs. The concentrations of metals, other than lead, arsenic, and cadmium reported in the soil samples were below their respective CHHSLs for residential and industrial land use.

Arsenic was detected in soil in twelve of the samples analyzed at concentrations ranging from 1.2 to 8.5J mg/kg. These results are greater than the residential/and industrial soil CHHSLs for arsenic of 0.07 and 0.24 mg/kg, respectively. Arsenic is a naturally occurring element; therefore, the concentrations

reported at the Site are compared to regional background concentrations. The March 2008 Department of Toxic Substance Control (DTSC) publication *Determination of a Southern California Regional Background Arsenic Concentration in Soil* establishes a regional background for arsenic within Southern California including Los Angeles County using naturally occurring and anthropogenic concentrations of arsenic. The report finds that the upper-bound background concentration for arsenic within Los Angeles County is 12 mg/kg. None of the detected arsenic concentrations exceeded 12 mg/kg, and therefore, the arsenic concentrations are considered to be consistent with background concentrations of arsenic in Los Angeles County.

Cadmium was detected in 13 soil samples at concentrations ranging from an estimated 0.77J to 6.8 mg/kg. Nine of the samples were reported to have cadmium concentrations greater than, or equal to, the residential soil CHHSL for cadmium of 1.7 mg/kg but less than the industrial CHHSL of 7.5 mg/kg.

Reported metals concentrations were compared with published background levels typically present in California soils as presented in *Background Concentrations of Trace and Major Elements in California Soils* (Kearney Foundation of Soil Science, Division of Agriculture and Natural Resources, University of California, March 1996). Concentrations of metals, other than lead, reported in soil samples collected from Segment 3 are within the published background ranges.

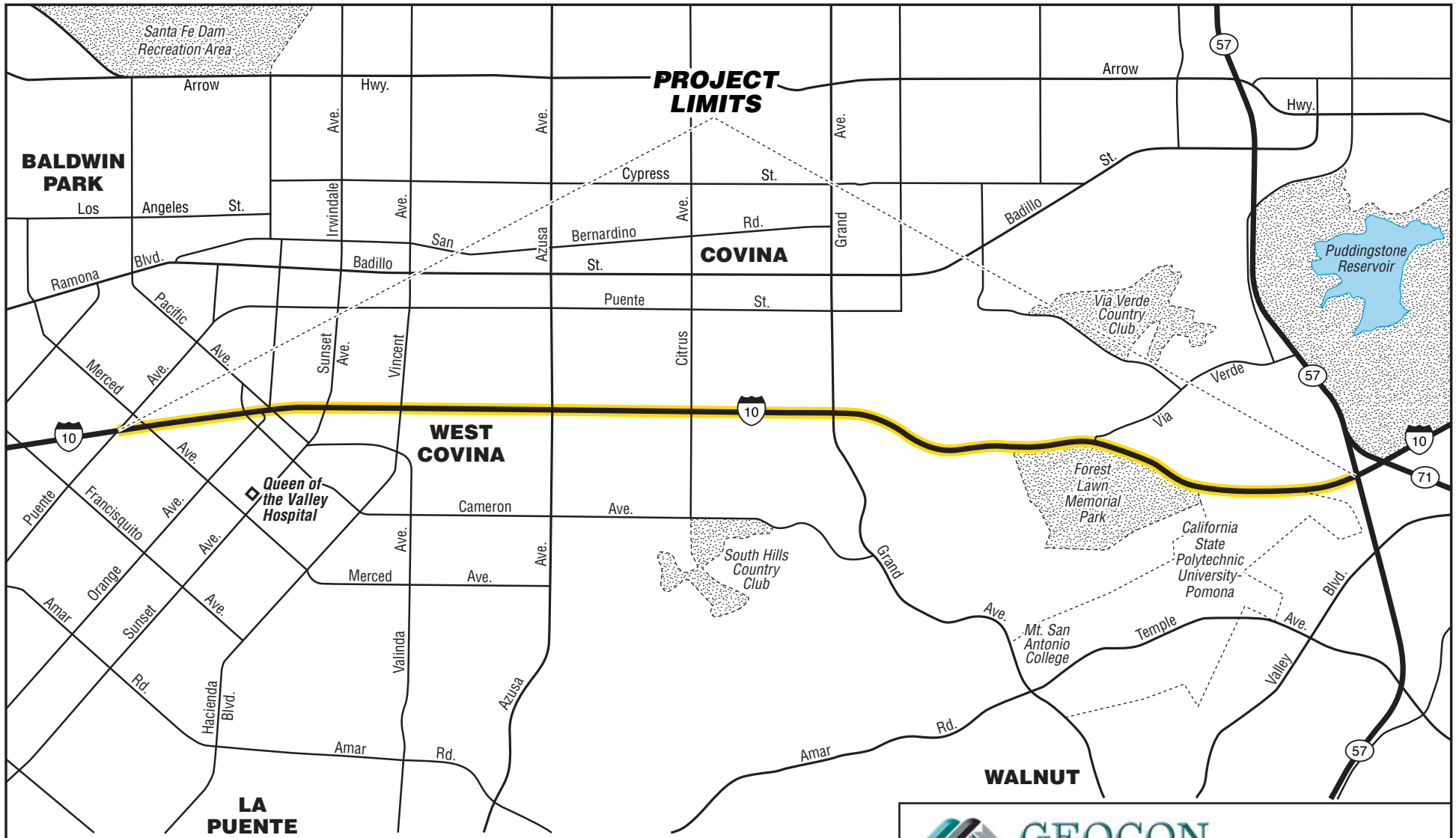
6. REPORT LIMITATIONS

This report has been prepared exclusively for AMEC and Caltrans. The information obtained is only relevant as of the date of the latest site visit and will require an update to reflect additional information obtained.

The findings presented herein are based on laboratory analytical results obtained from a limited number of samples collected from in-place soil and from widely spaced locations according to Caltrans-prescribed protocol. The purpose of these sampling and characterization activities was to allow Caltrans to reasonably predict the character of soil to be disturbed for planned construction activities within the described limits of the Caltrans right-of-way.

The Client should recognize that this report is not a comprehensive site characterization and should not be construed as such. The appropriate regulatory agency may require additional investigations. The findings as presented in this report are predicated on the results of the limited soil sampling and laboratory analyses performed. In addition, the information obtained is not intended to address potential impacts related to sources other than those specified herein.

Therefore, the report should only be deemed conclusive with respect to the information obtained. No guarantee or warranty of the results of the report is implied within the intent of this report or any subsequent reports, correspondence, or consultation, either express or implied. Geocon strived to perform the services summarized herein in accordance with the local standard of care in the geographic region at the time the services were rendered.



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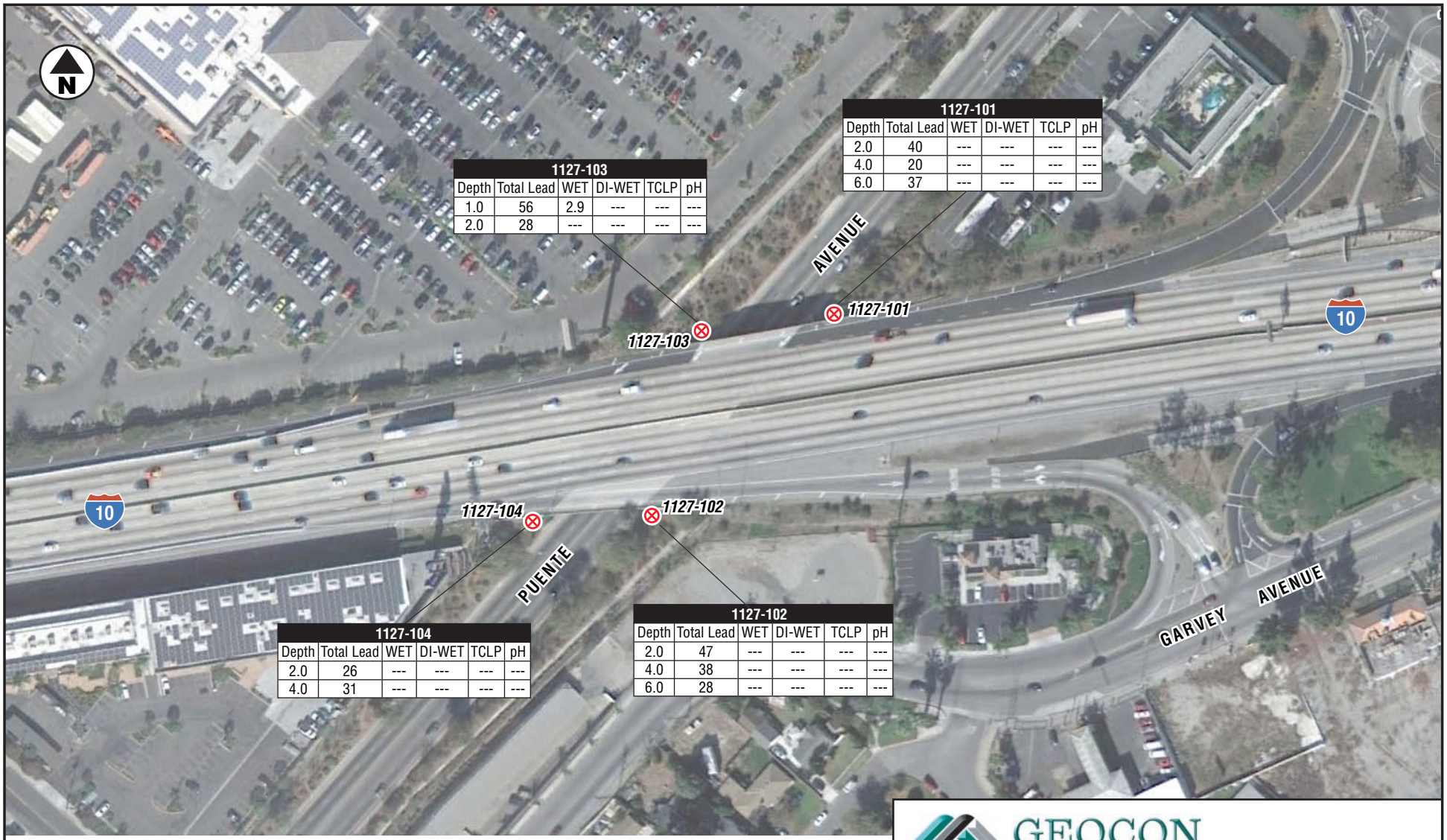
Interstate 10 HOV Lane Widening Project

Los Angeles County, California	**VICINITY MAP**	
GEOCON Proj. No. S9500-06-04		
Task Order No. 11	May 2011	Figure 1



LEGEND:

⊗ Approximate Boring Location

Total Lead Results in mg/kg
WET, DI-WET, TCLP Results in mg/l
Depth in Feet

<0.21 = Not Detected at or above laboratory detection limit indicated
--- = Analysis not performed
J = Result qualified as an estimated value due to analytical bias in precision or accuracy

0 150
Scale in Feet

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Interstate 10 HOV Lane Widening Project

Los Angeles County, California

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GEOCON Proj. No. S9500-06-04

Task Order No. 11 | May 2011 | Figure 2-1

1127-107

Depth	Total Lead	WET	DI-WET	TCLP	pH
2.0	9.7	---	---	---	---
4.0	8.1	---	---	---	---
6.0	12	---	---	---	---
9.0	4.8 J	---	---	---	---

1127-105

Depth	Total Lead	WET	DI-WET	TCLP	pH
2.0	120	4.2	---	0.30	8.4
4.0	11	---	---	---	---

1127-109

Depth	Total Lead	WET	DI-WET	TCLP	pH
2.0	4.6 J	---	---	---	---
4.0	2.5 J	---	---	---	---
6.0	2.4 J	---	---	---	---

1127-111

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	14	---	---	---	---
2.0	4.2 J	---	---	---	---

1127-106

Depth	Total Lead	WET	DI-WET	TCLP	pH
2.0	20	---	---	---	---
4.0	11	---	---	---	---

1127-110

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	11	---	---	---	---
2.0	10	---	---	---	---

1127-112

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	13	---	---	---	---
2.0	8.6	---	---	---	---

LEGEND:

⊗ Approximate Boring Location

Total Lead Results in mg/kg
WET, DI-WET, TCLP Results in mg/l
Depth in Feet
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0 150
Scale in Feet

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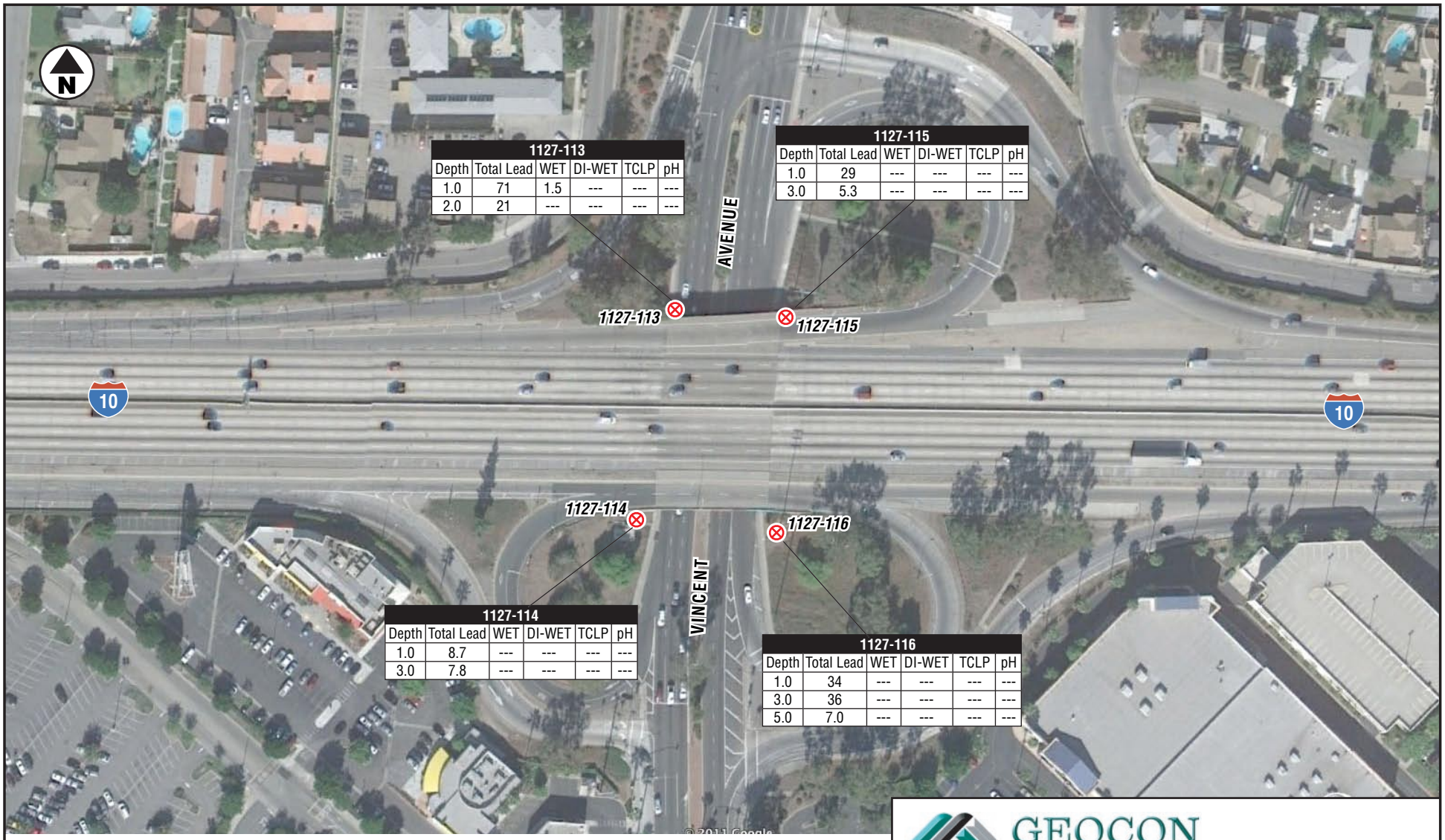
GEOCON Proj. No. S9500-06-04

Task Order No. 11 | May 2011 | Figure 2-2



1127-113					
Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	71	1.5	---	---	---
2.0	21	---	---	---	---

1127-115					
Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	29	---	---	---	---
3.0	5.3	---	---	---	---

1127-114					
Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	8.7	---	---	---	---
3.0	7.8	---	---	---	---

1127-116					
Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	34	---	---	---	---
3.0	36	---	---	---	---
5.0	7.0	---	---	---	---

LEGEND:

⊗ Approximate Boring Location

Total Lead Results in mg/kg
WET, DI-WET, TCLP Results in mg/l
Depth in Feet
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0 150
Scale in Feet

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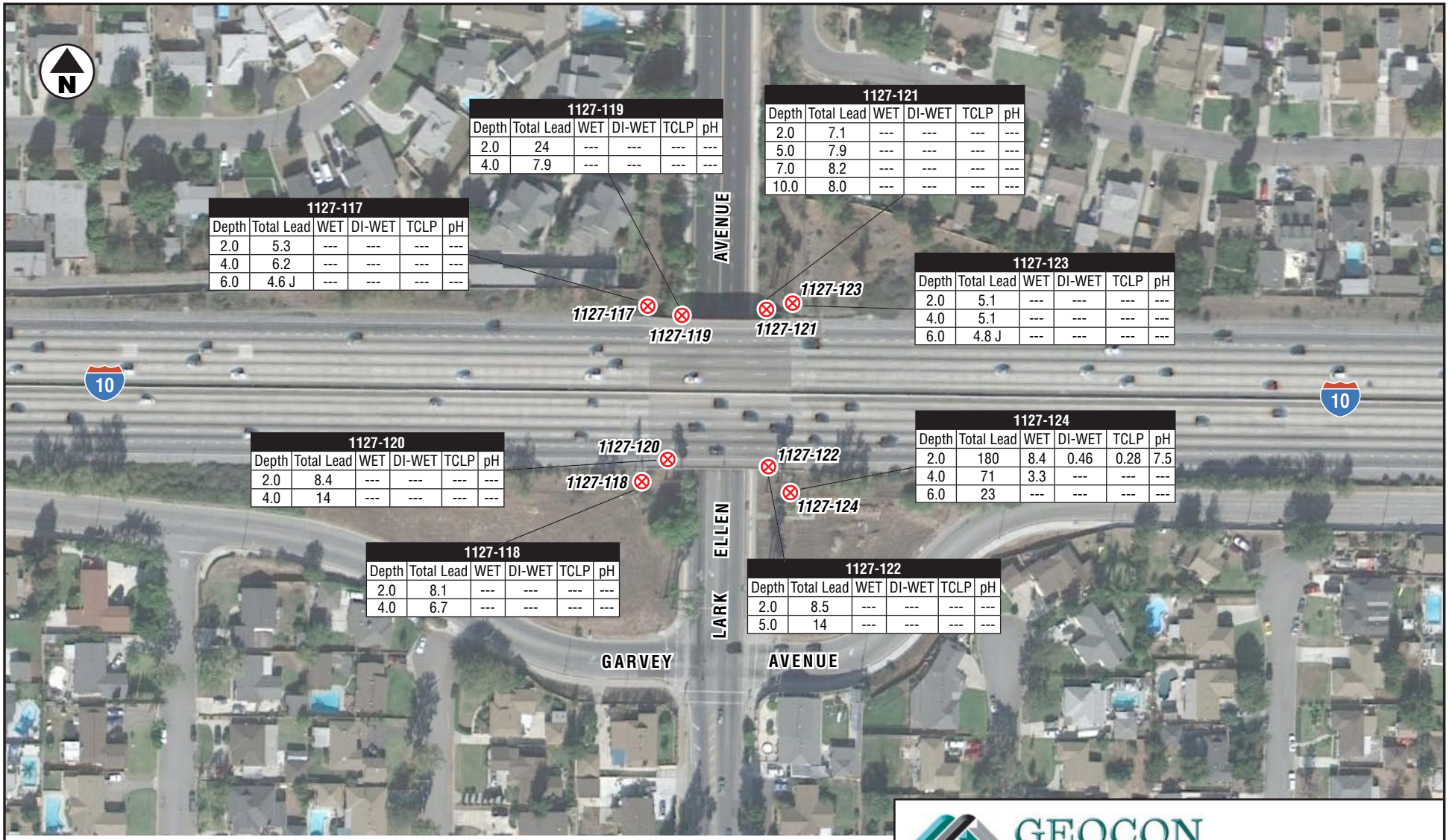
GEOCON Proj. No. S9500-06-04

Task Order No. 11 | May 2011 | Figure 2-3



LEGEND:

⊗ Approximate Boring Location

Total Lead Results in mg/kg
WET, DI-WET, TCLP Results in mg/l
Depth in Feet

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0 150
Scale in Feet

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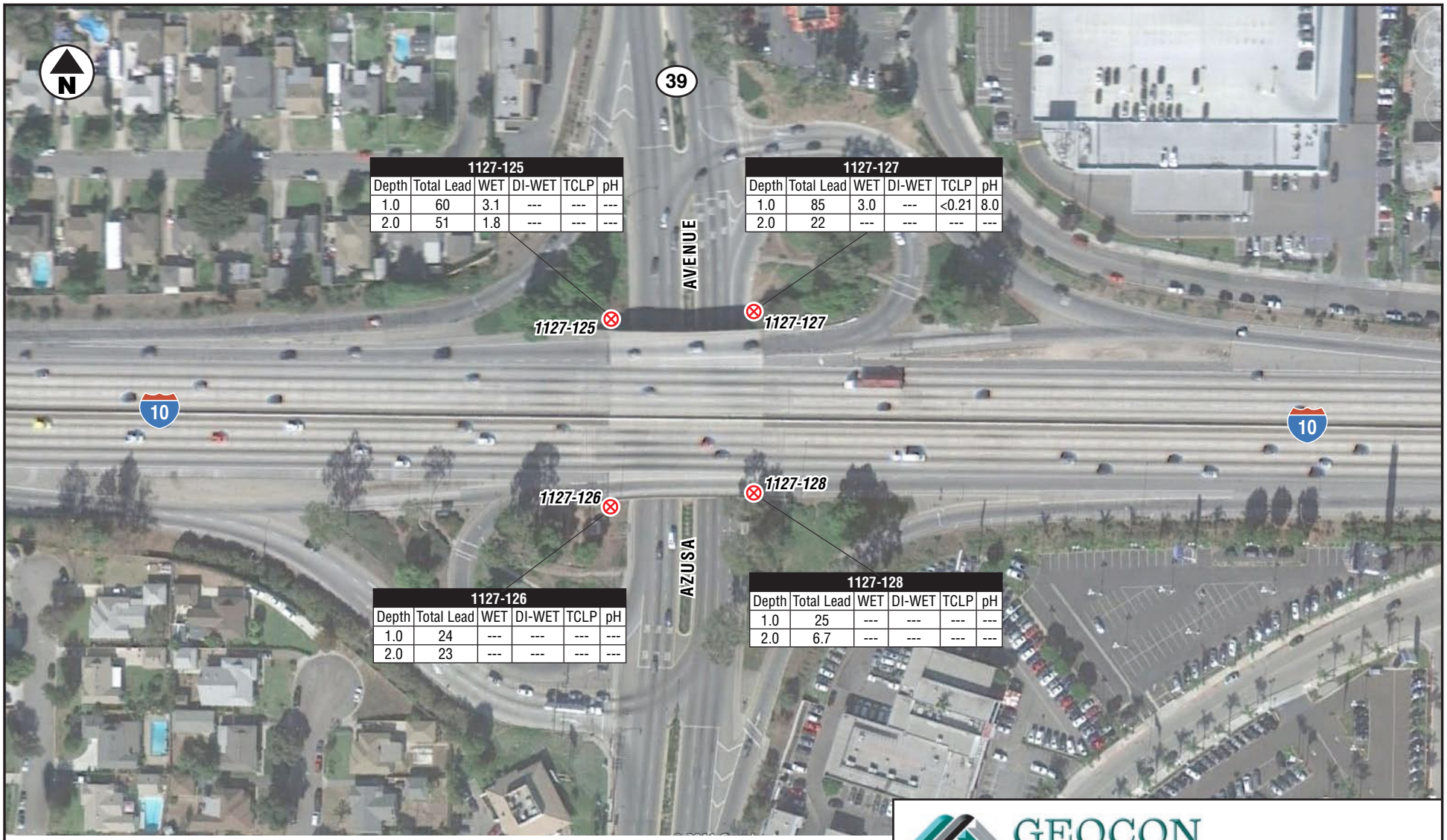
Task Order No. 11 | May 2011 | Figure 2-4



1127-125					
Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	60	3.1	---	---	---
2.0	51	1.8	---	---	---

1127-127					
Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	85	3.0	---	<0.21	8.0
2.0	22	---	---	---	---

1127-126					
Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	24	---	---	---	---
2.0	23	---	---	---	---

1127-128					
Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	25	---	---	---	---
2.0	6.7	---	---	---	---

LEGEND:

⊗ Approximate Boring Location

Total Lead Results in mg/kg
WET, DI-WET, TCLP Results in mg/l
Depth in Feet

<0.21 = Not Detected at or above laboratory detection limit indicated
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J = Result qualified as an estimated value due to analytical bias in precision or accuracy

0 150
Scale in Feet

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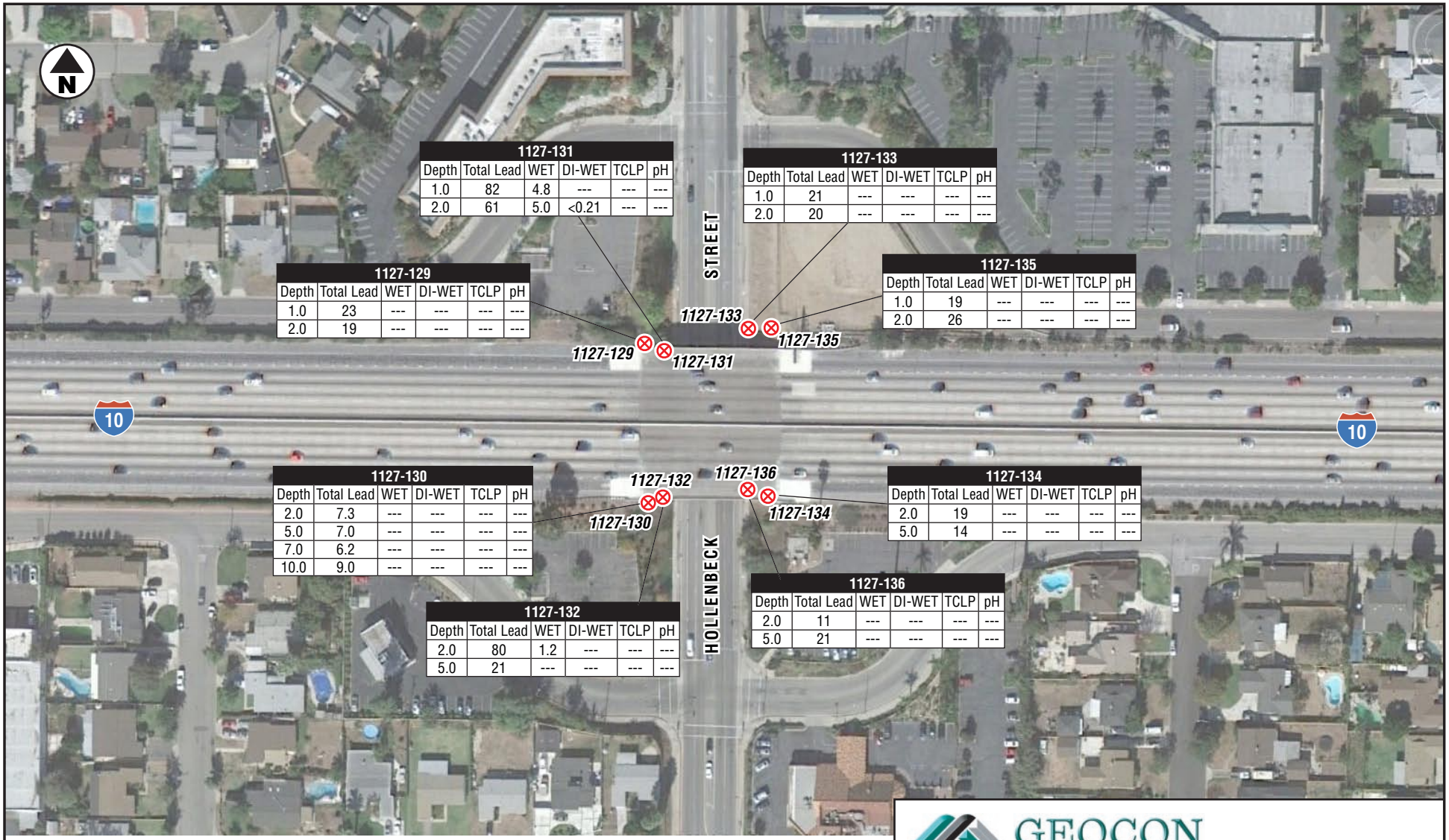
Task Order No. 11 | May 2011 | Figure 2-5



LEGEND:

⊗ Approximate Boring Location

Total Lead Results in mg/kg
WET, DI-WET, TCLP Results in mg/l
Depth in Feet
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0 150
Scale in Feet

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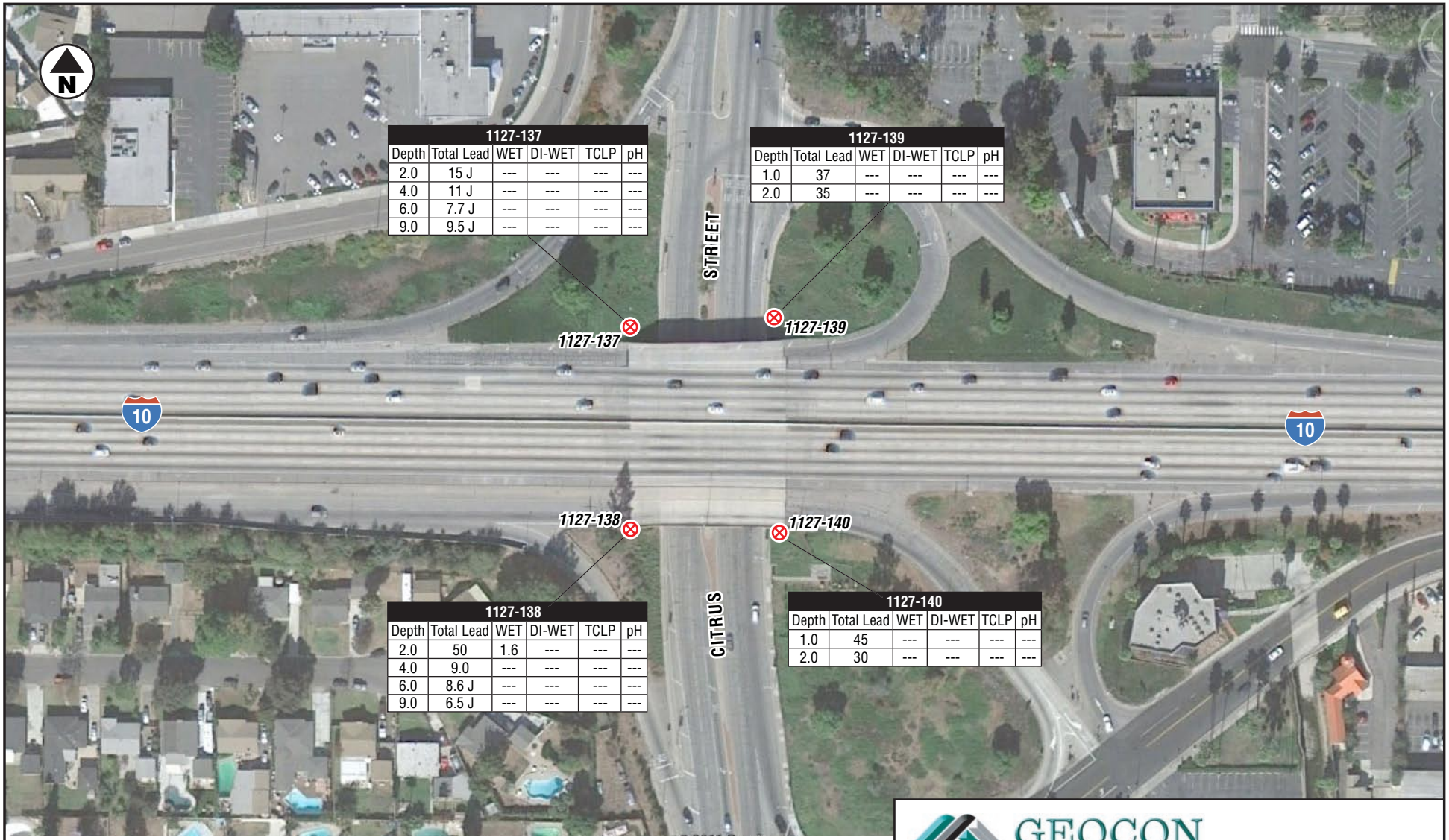
Task Order No. 11 | May 2011 | Figure 2-6



LEGEND:

⊗ Approximate Boring Location

Total Lead Results in mg/kg
WET, DI-WET, TCLP Results in mg/l
Depth in Feet

<0.21 = Not Detected at or above laboratory detection limit indicated
--- = Analysis not performed
J = Result qualified as an estimated value due to analytical bias in precision or accuracy

0 150
Scale in Feet

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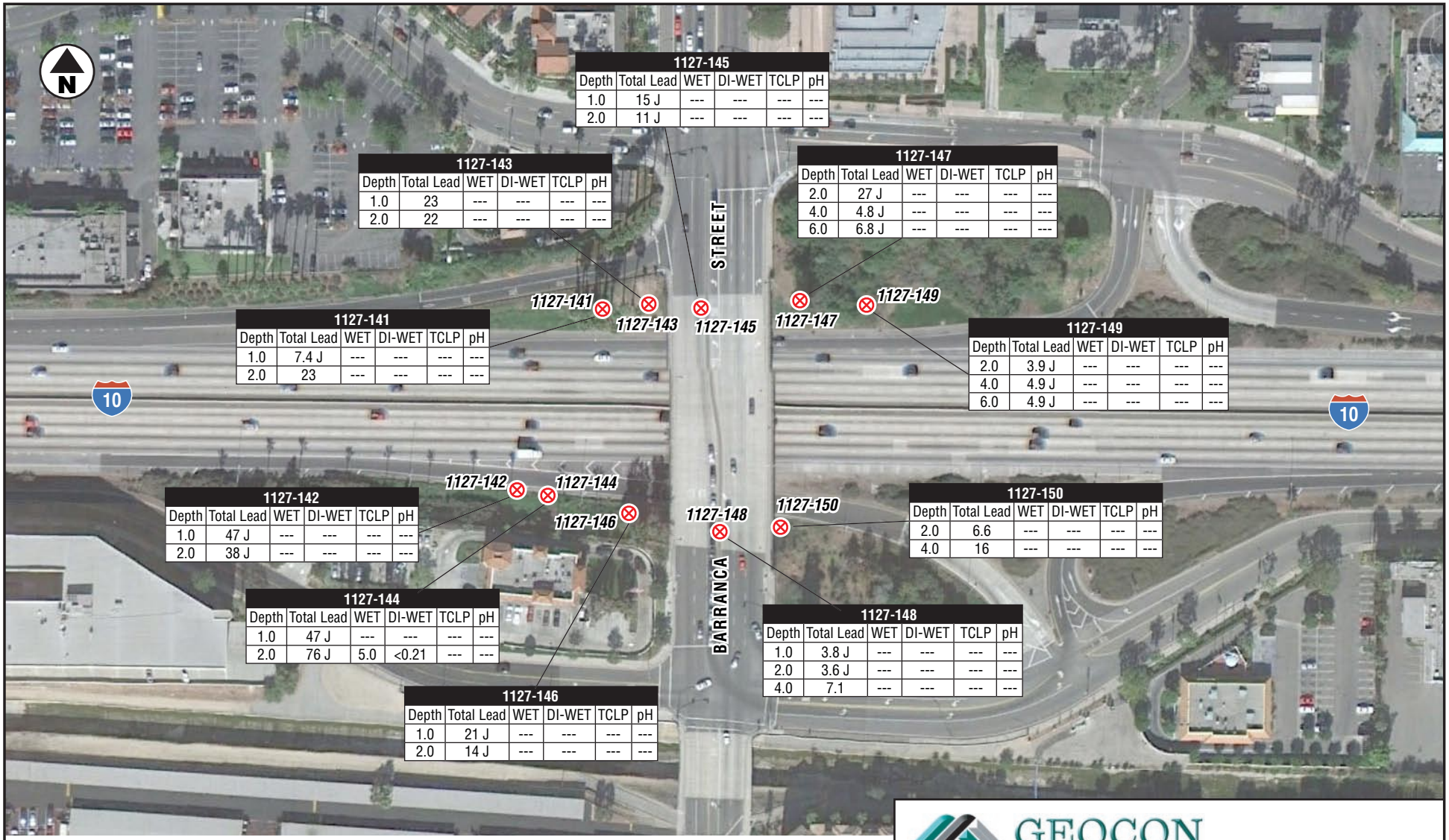
Task Order No. 11 | May 2011 | Figure 2-7



LEGEND:

⊗ Approximate Boring Location

Total Lead Results in mg/kg
WET, DI-WET, TCLP Results in mg/l
Depth in Feet
<0.21 = Not Detected at or above laboratory detection limit indicated
--- = Analysis not performed
J = Result qualified as an estimated value due to analytical bias in precision or accuracy

0 150
Scale in Feet

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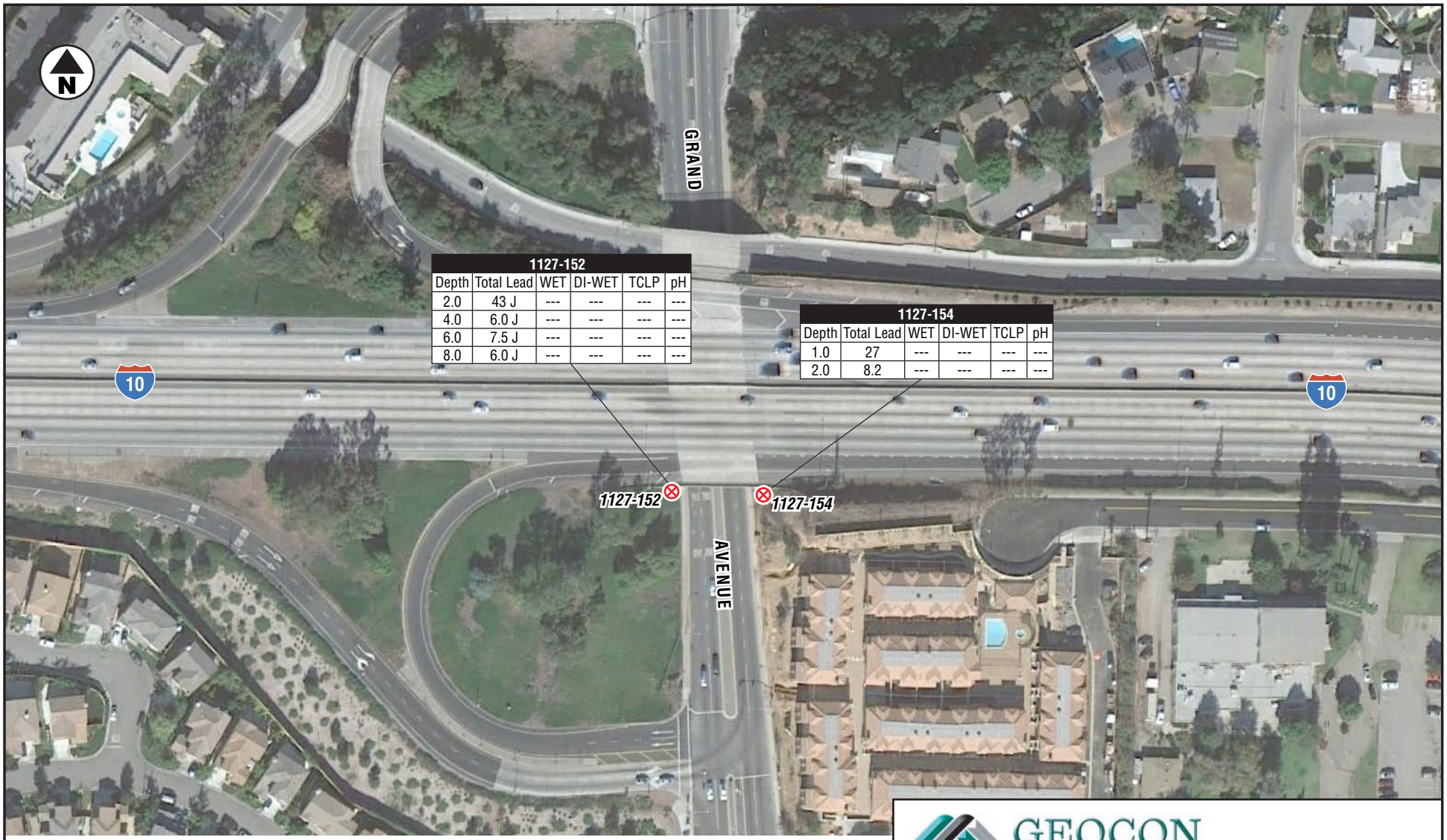
Task Order No. 11 | May 2011 | Figure 2-8



1127-152					
Depth	Total Lead	WET	DI-WET	TCLP	pH
2.0	43 J	---	---	---	---
4.0	6.0 J	---	---	---	---
6.0	7.5 J	---	---	---	---
8.0	6.0 J	---	---	---	---

1127-154					
Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	27	---	---	---	---
2.0	8.2	---	---	---	---

LEGEND:

⊗ Approximate Boring Location

Total Lead Results in mg/kg
WET, DI-WET, TCLP Results in mg/l
Depth in Feet
<0.21 = Not Detected at or above laboratory detection limit indicated
--- = Analysis not performed
J = Result qualified as an estimated value due to analytical bias in precision or accuracy

0 150
Scale in Feet

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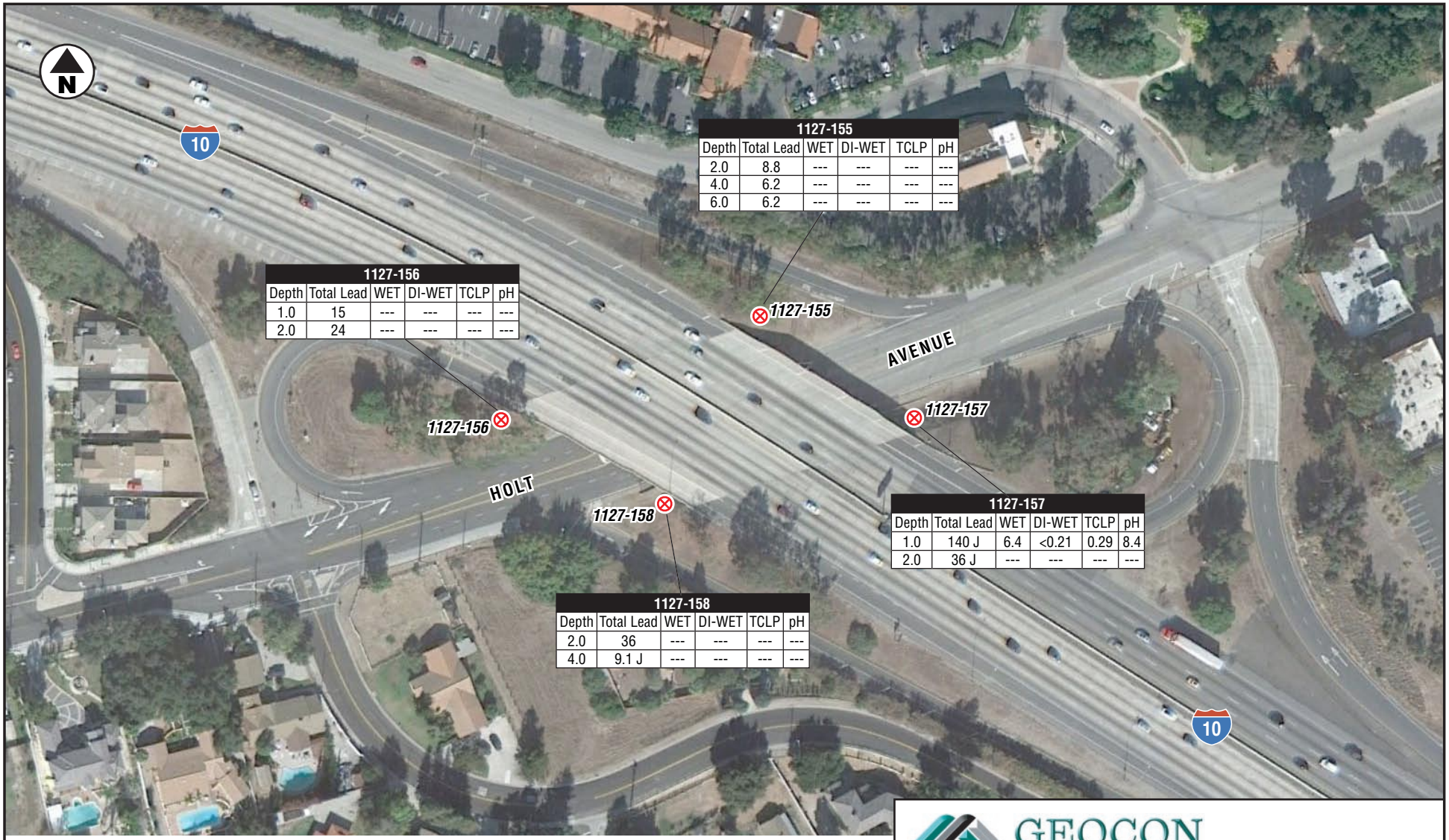
Task Order No. 11 | May 2011 | Figure 2-9



1127-155					
Depth	Total Lead	WET	DI-WET	TCLP	pH
2.0	8.8	---	---	---	---
4.0	6.2	---	---	---	---
6.0	6.2	---	---	---	---

1127-156					
Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	15	---	---	---	---
2.0	24	---	---	---	---

1127-157					
Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	140 J	6.4	<0.21	0.29	8.4
2.0	36 J	---	---	---	---

1127-158					
Depth	Total Lead	WET	DI-WET	TCLP	pH
2.0	36	---	---	---	---
4.0	9.1 J	---	---	---	---

LEGEND:

⊗ Approximate Boring Location

Total Lead Results in mg/kg
WET, DI-WET, TCLP Results in mg/l
Depth in Feet

<0.21 = Not Detected at or above laboratory detection limit indicated
--- = Analysis not performed
J = Result qualified as an estimated value due to analytical bias in precision or accuracy

0 150
Scale in Feet

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Task Order No. 11 | May 2011 | Figure 2-10

1127-209

Depth	Total Lead	WET	DI-WET	TCLP	pH
4.5	13	---	---	---	7.6
5.5	91	5.4	<0.21	<0.21	---
6.4	4.1	---	---	---	---
8.5	1.4	---	---	---	---
10.5	1.8	---	---	---	---

1127-211

Depth	Total Lead	WET	DI-WET	TCLP	pH
4.5	31	---	---	---	---
5.5	87	4.0	---	0.34	---
9.0	170 J	4.4	---	<0.21	---

1127-210

Depth	Total Lead	WET	DI-WET	TCLP	pH
4.5	7.9	---	---	---	---
5.5	86	5.5	<0.21	0.31	---
6.5	47	---	---	---	---
8.5	150	8.3	<0.21	0.21 J	8.0
10.0	64	6.4	<0.21	0.41	---

1127-212

Depth	Total Lead	WET	DI-WET	TCLP	pH
4.5	17 J	---	---	---	---
5.5	1.5 J	---	---	---	---
8.5	7.6 J	---	---	---	---
10.0	3.0 J	---	---	---	---

LEGEND:

⊗ Approximate Boring Location

Total Lead Results in mg/kg
WET, DI-WET, TCLP Results in mg/l
Depth in Feet

<0.21 = Not Detected at or above laboratory detection limit indicated
--- = Analysis not performed
J = Result qualified as an estimated value due to analytical bias in precision or accuracy

0 150
Scale in Feet

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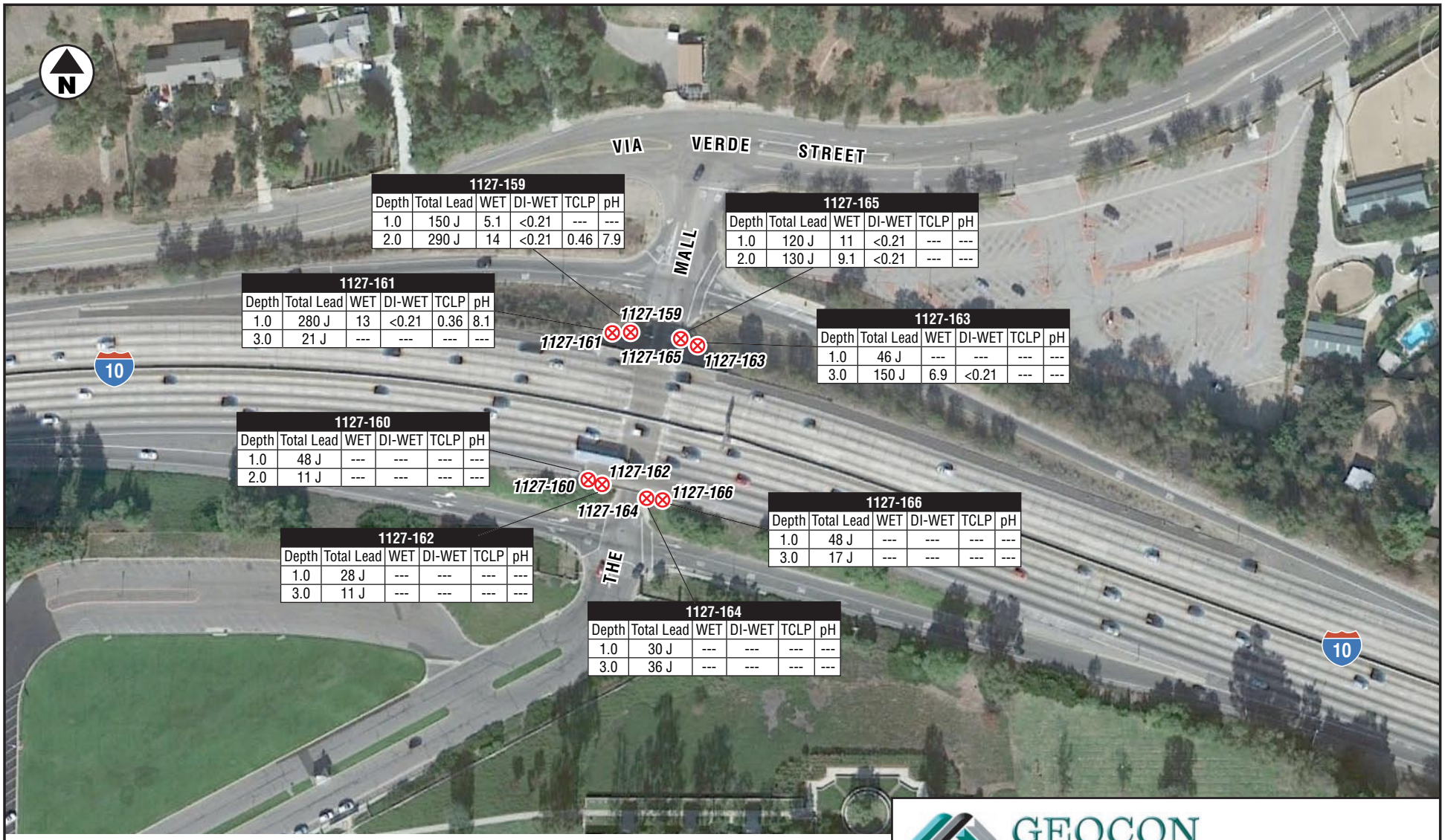
Interstate 10 HOV Lane Widening Project

Los Angeles County, California

SITE PLAN

GEOCON Proj. No. S9500-06-04

Task Order No. 11 | May 2011 | Figure 2-11



1127-159

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	150 J	5.1	<0.21	---	---
2.0	290 J	14	<0.21	0.46	7.9

1127-161

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	280 J	13	<0.21	0.36	8.1
3.0	21 J	---	---	---	---

1127-165

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	120 J	11	<0.21	---	---
2.0	130 J	9.1	<0.21	---	---

1127-163

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	46 J	---	---	---	---
3.0	150 J	6.9	<0.21	---	---

1127-160

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	48 J	---	---	---	---
2.0	11 J	---	---	---	---

1127-162

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	28 J	---	---	---	---
3.0	11 J	---	---	---	---

1127-164

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	30 J	---	---	---	---
3.0	36 J	---	---	---	---

1127-166

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	48 J	---	---	---	---
3.0	17 J	---	---	---	---

LEGEND:

⊗ Approximate Boring Location

Total Lead Results in mg/kg
WET, DI-WET, TCLP Results in mg/l
Depth in Feet

<0.21 = Not Detected at or above laboratory detection limit indicated
--- = Analysis not performed
J = Result qualified as an estimated value due to analytical bias in precision or accuracy

0 150
Scale in Feet

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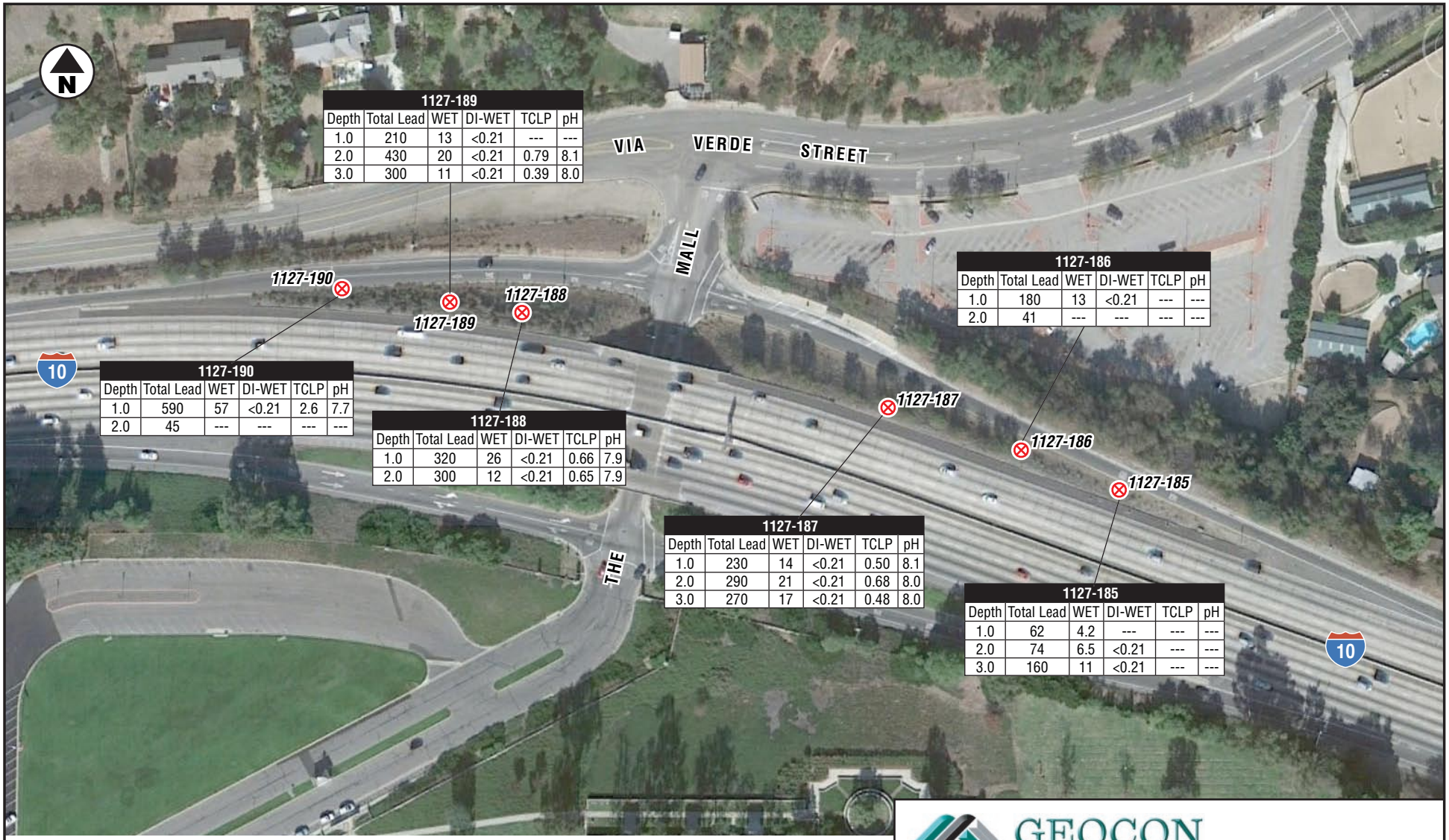
Interstate 10 HOV Lane Widening Project

Los Angeles County, California

SITE PLAN

GEOCON Proj. No. S9500-06-04

Task Order No. 11 | May 2011 | Figure 2-12a



1127-189					
Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	210	13	<0.21	---	---
2.0	430	20	<0.21	0.79	8.1
3.0	300	11	<0.21	0.39	8.0

1127-190					
Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	590	57	<0.21	2.6	7.7
2.0	45	---	---	---	---

1127-188					
Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	320	26	<0.21	0.66	7.9
2.0	300	12	<0.21	0.65	7.9

1127-187					
Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	230	14	<0.21	0.50	8.1
2.0	290	21	<0.21	0.68	8.0
3.0	270	17	<0.21	0.48	8.0

1127-186					
Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	180	13	<0.21	---	---
2.0	41	---	---	---	---

1127-185					
Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	62	4.2	---	---	---
2.0	74	6.5	<0.21	---	---
3.0	160	11	<0.21	---	---

LEGEND:

⊗ Approximate Boring Location

Total Lead Results in mg/kg
WET, DI-WET, TCLP Results in mg/l
Depth in Feet
<0.21 = Not Detected at or above laboratory detection limit indicated
--- = Analysis not performed
J = Result qualified as an estimated value due to analytical bias in precision or accuracy

0 150
Scale in Feet

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Interstate 10 HOV Lane Widening Project

Los Angeles County, California

SITE PLAN

GEOCON Proj. No. S9500-06-04

Task Order No. 11 | May 2011 | Figure 2-12b

1127-204

Depth	Total Lead	WET	DI-WET	TCLP	pH
3.5	0.87 J	---	---	---	---
4.5	0.57 J	---	---	---	---
5.5	1.2 J	---	---	---	7.8
6.0	1.3 J	---	---	---	---
6.5	1.3 J	---	---	---	---

1127-205

Depth	Total Lead	WET	DI-WET	TCLP	pH
2.5	0.64 J	---	---	---	---
3.0	0.88 J	---	---	---	---
3.5	1.6 J	---	---	---	8.2

1127-203

Depth	Total Lead	WET	DI-WET	TCLP	pH
3.5	1.1 J	---	---	---	---
4.5	1.4 J	---	---	---	---
5.5	0.69 J	---	---	---	---
6.5	0.79 J	---	---	---	---
7.5	0.79 J	---	---	---	---
10.5	0.37 J	---	---	---	---

1127-206

Depth	Total Lead	WET	DI-WET	TCLP	pH
2.5	0.39 J	---	---	---	8.2
3.0	0.72 J	---	---	---	---
3.5	0.61 J	---	---	---	---

1127-208

Depth	Total Lead	WET	DI-WET	TCLP	pH
3.4	1.4 J	---	---	---	7.6
4.5	1.5 J	---	---	---	---
5.5	0.9 J	---	---	---	---
6.5	0.48 J	---	---	---	---
7.5	0.42 J	---	---	---	---
10.5	0.70 J	---	---	---	---

1127-207

Depth	Total Lead	WET	DI-WET	TCLP	pH
4.5	1.0 J	---	---	---	---
5.5	0.52 J	---	---	---	---
6.5	2.0 J	---	---	---	---
7.0	3.2 J	---	---	---	---
10.5	0.25 J	---	---	---	7.6

1127-201

Depth	Total Lead	WET	DI-WET	TCLP	pH
3.5	0.9 J	---	---	---	---
4.5	0.44 J	---	---	---	---
5.5	0.80 J	---	---	---	---
6.5	0.81 J	---	---	---	---
7.5	1.4 J	---	---	---	---
10.5	0.60 J	---	---	---	---

1127-202

Depth	Total Lead	WET	DI-WET	TCLP	pH
3.5	1.2 J	---	---	---	8.3
4.5	1.1 J	---	---	---	---
5.0	0.91 J	---	---	---	---
5.5	1.4 J	---	---	---	---

LEGEND:

⊗ Approximate Boring Location

Total Lead Results in mg/kg
WET, DI-WET, TCLP Results in mg/l
Depth in Feet
<0.21 = Not Detected at or above laboratory detection limit indicated
--- = Analysis not performed
J = Result qualified as an estimated value due to analytical bias in precision or accuracy

0 150
Scale in Feet

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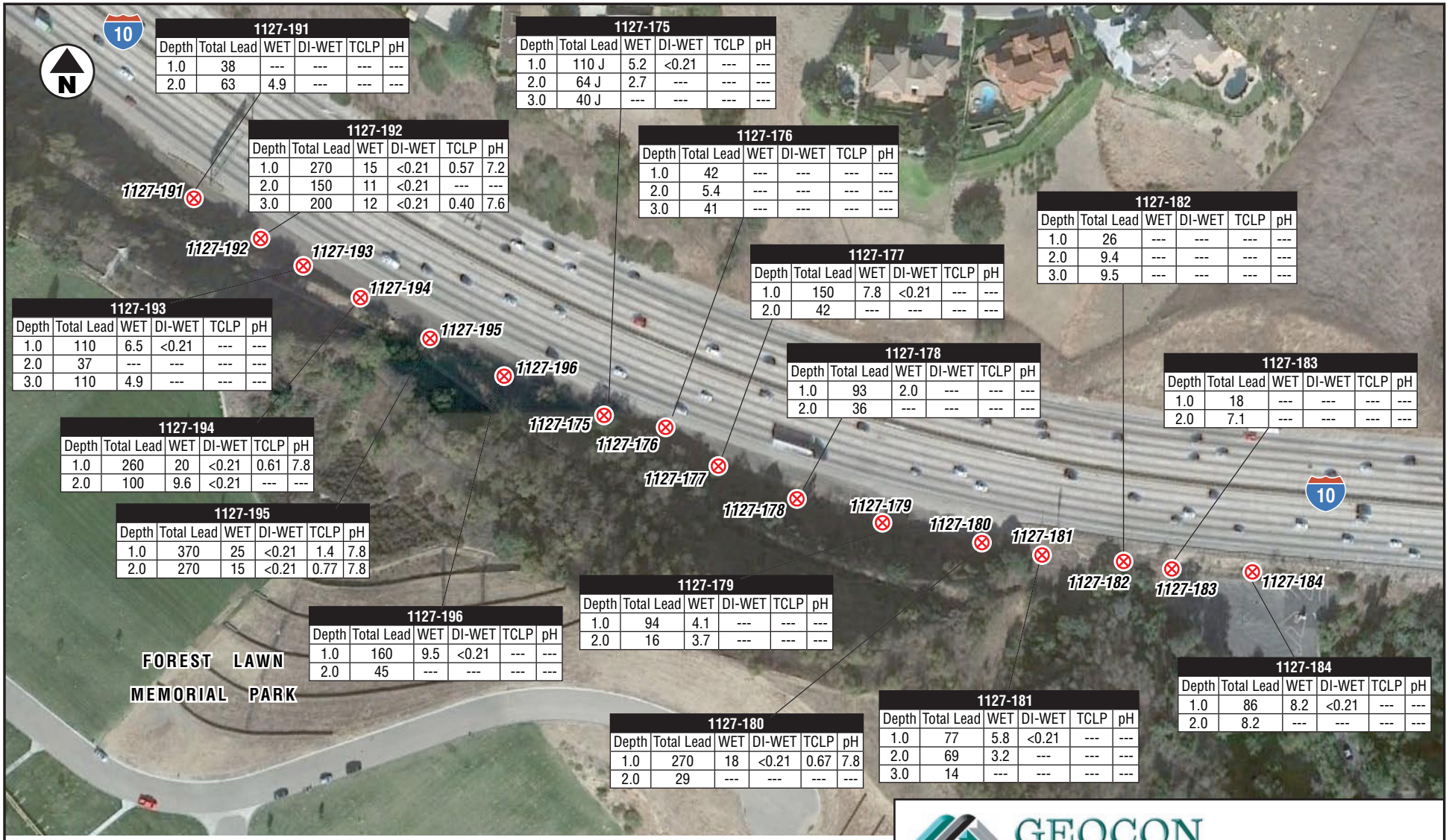
Interstate 10 HOV Lane Widening Project

Los Angeles County, California

SITE PLAN

GEOCON Proj. No. S9500-06-04

Task Order No. 11 | May 2011 | Figure 2-13a



1127-191

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	38	---	---	---	---
2.0	63	4.9	---	---	---

1127-192

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	270	15	<0.21	0.57	7.2
2.0	150	11	<0.21	---	---
3.0	200	12	<0.21	0.40	7.6

1127-193

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	110	6.5	<0.21	---	---
2.0	37	---	---	---	---
3.0	110	4.9	---	---	---

1127-194

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	260	20	<0.21	0.61	7.8
2.0	100	9.6	<0.21	---	---

1127-195

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	370	25	<0.21	1.4	7.8
2.0	270	15	<0.21	0.77	7.8

1127-196

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	160	9.5	<0.21	---	---
2.0	45	---	---	---	---

1127-175

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	110 J	5.2	<0.21	---	---
2.0	64 J	2.7	---	---	---
3.0	40 J	---	---	---	---

1127-176

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	42	---	---	---	---
2.0	5.4	---	---	---	---
3.0	41	---	---	---	---

1127-177

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	150	7.8	<0.21	---	---
2.0	42	---	---	---	---

1127-178

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	93	2.0	---	---	---
2.0	36	---	---	---	---

1127-179

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	94	4.1	---	---	---
2.0	16	3.7	---	---	---

1127-180

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	270	18	<0.21	0.67	7.8
2.0	29	---	---	---	---

1127-181

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	77	5.8	<0.21	---	---
2.0	69	3.2	---	---	---
3.0	14	---	---	---	---

1127-182

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	26	---	---	---	---
2.0	9.4	---	---	---	---
3.0	9.5	---	---	---	---

1127-183

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	18	---	---	---	---
2.0	7.1	---	---	---	---

1127-184

Depth	Total Lead	WET	DI-WET	TCLP	pH
1.0	86	8.2	<0.21	---	---
2.0	8.2	---	---	---	---

LEGEND:

⊗ Approximate Boring Location

Total Lead Results in mg/kg
WET, DI-WET, TCLP Results in mg/l
Depth in Feet
<0.21 = Not Detected at or above laboratory detection limit indicated
--- = Analysis not performed
J = Result qualified as an estimated value due to analytical bias in precision or accuracy

0 150
Scale in Feet

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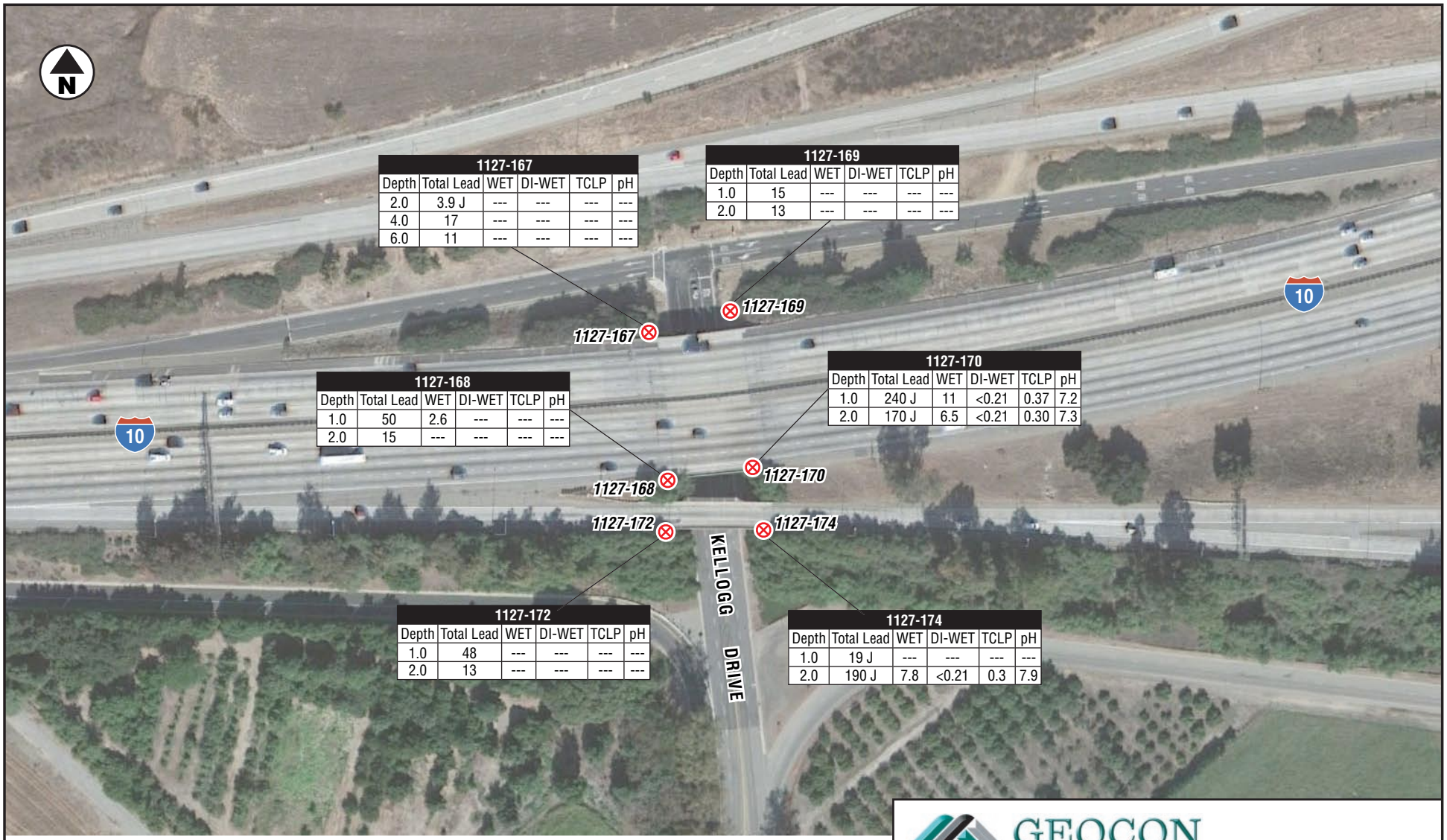
Interstate 10 HOV Lane Widening Project

Los Angeles County, California

SITE PLAN

GEOCON Proj. No. S9500-06-04

Task Order No. 11 | May 2011 | Figure 2-13b



LEGEND:

⊗ Approximate Boring Location

Total Lead Results in mg/kg
WET, DI-WET, TCLP Results in mg/l
Depth in Feet

<0.21 = Not Detected at or above laboratory detection limit indicated
--- = Analysis not performed
J = Result qualified as an estimated value due to analytical bias in precision or accuracy

0 150
Scale in Feet

GEOCON
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Interstate 10 HOV Lane Widening Project

Los Angeles County, California

SITE PLAN

GEOCON Proj. No. S9500-06-04

Task Order No. 11 | May 2011 | Figure 2-14

TABLE 1
BORING COORDINATES AND SUMMARY OF LEAD AND pH ANALYTICAL RESULTS
SEGMENT 2 - EA. 1170U1
ROUTE 10 HOV LANE WIDENING PROJECT FROM PUENTE AVENUE TO STATE ROUTE 57
LOS ANGELES, CALIFORNIA

Sample ID	LATITUDE	LONGITUDE	Sample Depth (feet)	Total Lead (mg/kg)	WET Lead (mg/l)	DI-WET Lead (mg/l)	TCLP Lead (mg/l)	pH
PUENTE AVENUE								
1127-101-1.5-2.0	34.07043351	-117.96157542	1.5-2.0	40				
1127-101-3.5-4.0			3.5-4.0	20				
1127-101-5.5-6.0			5.5-6.0	37				
1127-102-1.5-2.0	34.06985244	-117.96220889	1.5-2.0	47				
1127-102-3.5-4.0			3.5-4.0	38				
1127-102-5.5-6.0			5.5-6.0	28				
1127-103-0.5-1.0	34.07038427	-117.96203616	0.5-1.0	56	2.9			
1127-103-1.5-2.0			1.5-2.0	28				
1127-104-1.5-2.0	34.06983659	-117.96261951	1.5-2.0	26				
1127-104-3.5-4.0			3.5-4.0	31				
CAMERON AVENUE								
1127-105-1.5-2.0	34.07212923	-117.94599131	1.5-2.0	120	4.2		0.30	8.4
1127-105-3.5-4.0			3.5-4.0	11				
1127-106-1.5-2.0	34.07158722	-117.94569837	1.5-2.0	20				
1127-106-3.5-4.0			3.5-4.0	11				
1127-107-1.5-2.0	34.07207413	-117.94630322	1.5-2.0	9.7				
1127-107-3.5-4.0			3.5-4.0	8.1				
1127-107-5.5-6.0			5.5-6.0	12				
1127-107-8.5-9.0			8.5-9.0	4.8 J				
WEST COVINA PARKWAY								
1127-109-1.5-2.0	34.07241459	-117.94346664	1.5-2.0	4.6 J				
1127-109-3.5-4.0			3.5-4.0	2.5 J				
1127-109-5.5-6.0			5.5-6.0	2.4 J				
1127-110-0.5-1.0	34.07189971	-117.94276056	0.5-1.0	11				
1127-110-1.5-2.0			1.5-2.0	10				
1127-111-0.5-1.0	34.07245784	-117.94290573	0.5-1.0	14				
1127-111-1.5-2.0			1.5-2.0	4.2 J				
1127-112-0.5-1.0	34.07200082	-117.94218986	0.5-1.0	13				
1127-112-1.5-2.0			1.5-2.0	8.6				
VINCENT AVENUE								
1127-113-0.5-1.0	34.07260753	-117.92681268	0.5-1.0	71	1.5			
1127-113-1.5-2.0			1.5-2.0	21				
1127-114-0.5-1.0	34.07200204	-117.92694695	0.5-1.0	8.7				
1127-114-2.5-3.0			2.5-3.0	7.8				
1127-115-0.5-1.0	34.07258095	-117.92643252	0.5-1.0	29				
1127-115-2.5-3.0			2.5-3.0	5.3				
1127-116-0.5-1.0	34.07196660	-117.92646347	0.5-1.0	34				
1127-116-2.5-3.0			2.5-3.0	36				
1127-116-4.5-5.0			4.5-5.0	7.0				

TABLE 1
BORING COORDINATES AND SUMMARY OF LEAD AND pH ANALYTICAL RESULTS
SEGMENT 2 - EA. 1170U1
ROUTE 10 HOV LANE WIDENING PROJECT FROM PUENTE AVENUE TO STATE ROUTE 57
LOS ANGELES, CALIFORNIA

Sample ID	LATITUDE	LONGITUDE	Sample Depth (feet)	Total Lead (mg/kg)	WET Lead (mg/l)	DI-WET Lead (mg/l)	TCLP Lead (mg/l)	pH
LARK ELLEN AVENUE								
1127-117-1.5-2.0	34.07247576	-117.91680081	1.5-2.0	5.3				
1127-117-3.5-4.0			3.5-4.0	6.2				
1127-117-5.5-6.0			5.5-6.0	4.6 J				
1127-118-1.5-2.0	34.07197829	-117.91682134	1.5-2.0	8.1				
1127-118-3.5-4.0			3.5-4.0	6.7				
1127-119-1.5-2.0	34.07245157	-117.91668779	1.5-2.0	24				
1127-119-3.5-4.0			3.5-4.0	7.9				
1127-120-1.5-2.0	34.07204013	-117.91673468	1.5-2.0	8.4				
1127-120-3.5-4.0			3.5-4.0	14				
1127-121-1.5-2.0	34.07246650	-117.91639194	1.5-2.0	7.1				
1127-121-4.5-5.0			4.5-5.0	7.9				
1127-121-6.5-7.0			6.5-7.0	8.2				
1127-121-9.5-10.0			9.5-10.0	8.0				
1127-122-1.5-2.0	34.07201858	-117.91638699	1.5-2.0	8.5				
1127-122-4.5-5.0			4.5-5.0	14				
1127-123-1.5-2.0	34.07248389	-117.91630554	1.5-2.0	5.1				
1127-123-3.5-4.0			3.5-4.0	5.1				
1127-123-5.5-6.0			5.5-6.0	4.8 J				
1127-124-1.5-2.0	34.07194696	-117.91631381	1.5-2.0	180	8.4	0.46	0.28	7.5
1127-124-3.5-4.0			3.5-4.0	71	3.3			
1127-124-5.5-6.0			5.5-6.0	23				
AZUSA AVENUE								
1127-125-0.5-1.0	34.07242974	-117.90788611	0.5-1.0	60	3.1			
1127-125-1.5-2.0			1.5-2.0	51	1.8			
1127-126-0.5-1.0	34.07189209	-117.90788884	0.5-1.0	24				
1127-126-1.5-2.0			1.5-2.0	23				
1127-127-0.5-1.0	34.07245209	-117.90739508	0.5-1.0	85	3.0		<0.21	8.0
1127-127-1.5-2.0			1.5-2.0	22				
1127-128-0.5-1.0	34.07193039	-117.90739259	0.5-1.0	25				
1127-128-1.5-2.0			1.5-2.0	6.7				

TABLE 1
BORING COORDINATES AND SUMMARY OF LEAD AND pH ANALYTICAL RESULTS
SEGMENT 2 - EA. 1170U1
ROUTE 10 HOV LANE WIDENING PROJECT FROM PUENTE AVENUE TO STATE ROUTE 57
LOS ANGELES, CALIFORNIA

Sample ID	LATITUDE	LONGITUDE	Sample Depth (feet)	Total Lead (mg/kg)	WET Lead (mg/l)	DI-WET Lead (mg/l)	TCLP Lead (mg/l)	pH
HOLLENBECK STREET								
1127-129-0.5-1.0	34.07228588	-117.89912371	0.5-1.0	23				
1127-129-1.5-2.0			1.5-2.0	19				
1127-130-1.5-2.0	34.07183454	-117.89911138	1.5-2.0	7.3				
1127-130-4.5-5.0			4.5-5.0	7.0				
1127-130-6.5-7.0			6.5-7.0	6.2				
1127-130-9.5-10.0			9.5-10.0	9.0				
1127-131-0.5-1.0	34.07226661	-117.89905809	0.5-1.0	82	4.8			
1127-131-1.5-2.0			1.5-2.0	61	5.0	<0.21		
1127-132-1.5-2.0	34.07184939	-117.89906220	1.5-2.0	80	1.2			
1127-132-4.5-5.0			4.5-5.0	21				
1127-133-0.5-1.0	34.07233032	-117.89876540	0.5-1.0	21				
1127-133-1.5-2.0			1.5-2.0	20				
1127-134-1.5-2.0	34.07187059	-117.89877021	1.5-2.0	19				
1127-134-4.5-5.0			4.5-5.0	14				
1127-135-0.5-1.0	34.07233026	-117.89869009	0.5-1.0	19				
1127-135-1.5-2.0			1.5-2.0	26				
1127-136-1.5-2.0	34.07185078	-117.89870235	1.5-2.0	11				
1127-136-4.5-5.0			4.5-5.0	21				

Notes:

mg/kg = Milligram per kilogram
mg/l = Milligram per liter
WET = Waste Extraction Test using citric acid as the extraction fluid
DI-WET = Waste Extraction Test using water as the extraction fluid
TCLP = Toxicity Characteristic Leaching Procedure
< = Analyte was not detected above the laboratory reporting limit
J = Result qualified as an estimated value due to analytical bias in precision or accuracy

TABLE 2

SUMMARY OF TITLE 22 METALS ANALYTICAL RESULTS

SEGMENT 2 - EA. 1170U1

INTERSTATE 10 HOV LANE WIDENING PROJECT FROM PUENTE AVENUE TO STATE ROUTE 57

LOS ANGELES, CALIFORNIA

Sample ID	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
1127-105-1.5-2.0	0.33 J	<0.20	92	<0.042	0.48 J	13	8.1	17	120	0.042 J	<0.097	12	<0.28	<0.042	<0.098	30	61
1127-124-1.5-2.0	0.47 J	<0.20	96	<0.042	0.46 J	12	8.4	18	180	0.049 J	<0.097	10	<0.28	<0.042	<0.098	31	61 J
1127-127-1.0	1.4 J	<0.20	120	<0.042	0.68 J	15	9.3	29	85	0.080 J	<0.097	13	<0.28	<0.042	<0.098	34	200 J
TTLC	500	500	10,000	75	100	2,500	8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000
STLC	15	5.0	100	0.75	1.0	5	80	25	5.0	0.2	350	20	1.0	5	7.0	24	250
CHHSLs Ind/	380/	0.24/	6,300/	190/	7.5/	10,000/	3,200/	38,000/	320/	180/	4,800/	16,000/	4,800/	4,800/	63/	6,700/	100,000/
Res	30	0.07	5,200	16	1.7	10,000	600	3,000	80	18	380	1,600	380	380	5.0	530	23,000
Background Concentrations																	
Minimum	0.15	0.6	133	0.25	0.05	23	2.7	9.1	12.4	0.05	0.10	9	0.015	0.1	5.3	39	88
Maximum	1.95	12.0	1,400	2.70	1.7	1,579	46.9	96.4	97.1	0.90	9.6	509	0.43	8.3	36.2	288	236
Mean	0.60	3.5	509	1.28	0.36	122	14.9	28.7	23.9	0.26	1.3	57	0.058	0.8	15.7	112	149

Notes:

Results shown in milligrams per kilogram

< = Not detected above the laboratory reporting limit

J = Result qualified as an estimated value due to analytical bias in precision or accuracy

TTLC = Total Threshold Limit Concentration

STLC = Soluble Threshold Limit Concentration

CHHSLs = California Environmental Protection Agency, California Human Health Screening Levels for industrial (Ind) and residential (Res) use

TTLC, STLC, and CHHSLs shown for chromium are for chromium III.

Background Concentrations of Trace and Major Elements in California Soils

(Kearney Foundation of Soil Science, Division of Agriculture and Natural Resources, University of California, March 1996)

Maximum arsenic background concentration source -*Determination of a Southern California Regional Background Arsenic Concentration in Soil*, DTSC March 2008

TABLE 3

BORING COORDINATES AND SUMMARY OF LEAD AND pH ANALYTICAL RESULTS

SEGMENT 3 - EA. 119341

INTERSTATE 10 HOV LANE WIDENING PROJECT FROM PUENTE AVENUE TO STATE ROUTE 57

LOS ANGELES, CALIFORNIA

Sample ID	LATITUDE	LONGITUDE	Sample Depth (feet)	Total Lead (mg/kg)	WET Lead (mg/l)	DI-WET Lead (mg/l)	TCLP Lead (mg/l)	pH
CITRUS STREET								
1127-137-1.5-2.0	34.07224537	-117.89046474	1.5-2.0	15 J				
1127-137-3.5-4.0			3.5-4.0	11 J				
1127-137-5.5-6.0			5.5-6.0	7.7 J				
1127-137-8.5-9.0			8.5-9.0	9.5 J				
1127-138-1.5-2.0	34.07167381	-117.89046219	1.5-2.0	50	1.6			
1127-138-3.5-4.0			3.5-4.0	9.0				
1127-138-5.5-6.0			5.5-6.0	8.6 J				
1127-138-8.5-9.0			8.5-9.0	6.5 J				
1127-139-0.5-1.0	34.07227211	-117.88997471	0.5-1.0	37				
1127-139-1.5-2.0			1.5-2.0	35				
1127-140-0.5-1.0	34.07166253	-117.88995475	0.5-1.0	45				
1127-140-1.5-2.0			1.5-2.0	30				
BARRANCA STREET								
1127-141-0.5-1.0	34.07216165	-117.88165969	0.5-1.0	7.4 J				
1127-141-1.5-2.0			1.5-2.0	23				
1127-142-0.5-1.0	34.07165000	-117.88195628	0.5-1.0	47 J				
1127-142-1.5-2.0			1.5-2.0	38 J				
1127-143-0.5-1.0	34.07217502	-117.88149912	0.5-1.0	23				
1127-143-1.5-2.0			1.5-2.0	22				
1127-144-0.5-1.0	34.07163307	-117.88184895	0.5-1.0	47 J				
1127-144-1.5-2.0			1.5-2.0	76 J	5.0	<0.21		
1127-145-0.5-1.0	34.07216361	-117.88132163	0.5-1.0	15 J				
1127-145-1.5-2.0			1.5-2.0	11 J				
1127-146-0.5-1.0	34.07158124	-117.88156899	0.5-1.0	21 J				
1127-146-1.5-2.0			1.5-2.0	14 J				
1127-147-1.5-2.0	34.07218586	-117.88098479	1.5-2.0	27 J				
1127-147-3.5-4.0			3.5-4.0	4.8 J				
1127-147-5.5-6.0			5.5-6.0	6.8 J				
1127-148-0.5-1.0	34.07153264	-117.88125868	0.5-1.0	3.8 J				
1127-148-1.5-2.0			1.5-2.0	3.6 J				
1127-148-3.5-4.0			3.5-4.0	7.1				
1127-149-1.5-2.0	34.07217452	-117.88075675	1.5-2.0	3.9 J				
1127-149-3.5-4.0			3.5-4.0	4.9 J				
1127-149-5.5-6.0			5.5-6.0	4.9 J				
1127-150-1.5-2.0	34.07154365	-117.88105287	1.5-2.0	6.6				
1127-150-3.5-4.0			3.5-4.0	16				

TABLE 3
BORING COORDINATES AND SUMMARY OF LEAD AND pH ANALYTICAL RESULTS
SEGMENT 3 - EA. 119341
INTERSTATE 10 HOV LANE WIDENING PROJECT FROM PUENTE AVENUE TO STATE ROUTE 57
LOS ANGELES, CALIFORNIA

Sample ID	LATITUDE	LONGITUDE	Sample Depth (feet)	Total Lead (mg/kg)	WET Lead (mg/l)	DI-WET Lead (mg/l)	TCLP Lead (mg/l)	pH
GRAND AVENUE								
1127-152-1.5-2.0	34.07150495	-117.87251735	1.5-2.0	43 J				
1127-152-3.5-4.0			3.5-4.0	6.0 J				
1127-152-5.5-6.0			5.5-6.0	7.5 J				
1127-152-7.5-8.0			7.5-8.0	6.0 J				
1127-154-0.5-1.0	34.07149533	-117.87220476	0.5-1.0	27				
1127-154-1.5-2.0			1.5-2.0	8.2				
HOLT AVENUE								
1127-155-1.5-2.0	34.07056648	-117.86438898	1.5-2.0	8.8				
1127-155-3.5-4.0			3.5-4.0	6.2				
1127-155-5.5-6.0			5.5-6.0	6.2				
1127-156-0.5-1.0	34.07027745	-117.86526696	0.5-1.0	15				
1127-156-1.5-2.0			1.5-2.0	24				
1127-157-0.5-1.0	34.07028177	-117.86386958	0.5-1.0	140 J	6.4	<0.21	0.29	8.4
1127-157-1.5-2.0			1.5-2.0	36 J				
1127-158-1.5-2.0	34.07004134	-117.86471402	1.5-2.0	36				
1127-158-3.5-4.0			3.5-4.0	9.1 J				
VIA VERDE								
1127-159-0.5-1.0	34.06904014	-117.83961588	0.5-1.0	150 J	5.1	<0.21		
1127-159-1.5-2.0			1.5-2.0	290 J	14	<0.21	0.46	7.9
1127-160-0.5-1.0	34.06860756	-117.83968827	0.5-1.0	48 J				
1127-160-1.5-2.0			1.5-2.0	11 J				
1127-161-0.5-1.0	34.06904340	-117.83955396	0.5-1.0	280 J	13	<0.21	0.36	8.1
1127-161-2.5-3.0			2.5-3.0	21 J				
1127-162-0.5-1.0	34.06860158	-117.83966477	0.5-1.0	28 J				
1127-162-2.5-3.0			2.5-3.0	11 J				
1127-163-0.5-1.0	34.06902663	-117.83937391	0.5-1.0	46 J				
1127-163-2.5-3.0			2.5-3.0	150 J	6.9	<0.21		
1127-164-0.5-1.0	34.06855554	-117.83949296	0.5-1.0	30 J				
1127-164-2.5-3.0			2.5-3.0	36 J				
1127-165-0.5-1.0	34.06900468	-117.83931110	0.5-1.0	120 J	11	<0.21		
1127-165-1.5-2.0			1.5-2.0	130 J	9.1	<0.21		
1127-166-0.5-1.0	34.06855286	-117.83944079	0.5-1.0	48 J				
1127-166-2.5-3.0			2.5-3.0	17 J				
1127-185-0.5-1.0	34.06858141	-117.83784637	0.5-1.0	62	4.2			
1127-185-1.5-2.0			1.5-2.0	74	6.5	<0.21		
1127-185-2.5-3.0			2.5-3.0	160	11	<0.21		
1127-186-0.5-1.0	34.06869508	-117.83818517	0.5-1.0	180	13	<0.21		
1127-186-1.5-2.0			1.5-2.0	41				

TABLE 3
BORING COORDINATES AND SUMMARY OF LEAD AND pH ANALYTICAL RESULTS
SEGMENT 3 - EA. 119341
INTERSTATE 10 HOV LANE WIDENING PROJECT FROM PUENTE AVENUE TO STATE ROUTE 57
LOS ANGELES, CALIFORNIA

Sample ID	LATITUDE	LONGITUDE	Sample Depth (feet)	Total Lead (mg/kg)	WET Lead (mg/l)	DI-WET Lead (mg/l)	TCLP Lead (mg/l)	pH
1127-187-0.5-1.0	34.06881973	-117.83865186	0.5-1.0	230	14	<0.21	0.50	8.1
1127-187-1.5-2.0			1.5-2.0	290	21	<0.21	0.68	8.0
1127-187-2.5-3.0			2.5-3.0	270	17	<0.21	0.48	8.0
1127-188-0.5-1.0	34.06910086	-117.83993981	0.5-1.0	320	26	<0.21	0.66	7.9
1127-188-1.5-2.0			1.5-2.0	300	12	<0.21	0.65	7.9
1127-189-0.5-1.0	34.06913067	-117.84019567	0.5-1.0	210	13	<0.21		
1127-189-1.5-2.0			1.5-2.0	430	20	<0.21	0.79	8.1
1127-189-2.5-3.0			2.5-3.0	300	11	<0.21	0.39	8.0
1127-190-0.5-1.0	34.06917073	-117.84058001	0.5-1.0	590	57	<0.21	2.6	7.7
1127-190-1.5-2.0			1.5-2.0	45				
KELLOGG DRIVE								
1127-167-1.5-2.0	34.06413283	-117.81217674	1.5-2.0	3.9 J				
1127-167-3.5-4.0			3.5-4.0	17				
1127-167-5.5-6.0			5.5-6.0	11				
1127-168-0.5-1.0	34.06370577	-117.81211233	0.5-1.0	50	2.6			
1127-168-1.5-2.0			1.5-2.0	15				
1127-169-0.5-1.0	34.06419266	-117.81189208	0.5-1.0	15				
1127-169-1.5-2.0			1.5-2.0	13				
1127-170-0.5-1.0	34.06374087	-117.81181719	0.5-1.0	240 J	11	<0.21	0.37	7.2
1127-170-1.5-2.0			1.5-2.0	170 J	6.5	<0.21	0.30	7.3
1127-172-0.5-1.0	34.06355778	-117.81212048	0.5-1.0	48				
1127-172-1.5-2.0			1.5-2.0	13				
1127-174-0.5-1.0	34.06356137	-117.81177866	0.5-1.0	19 J				
1127-174-1.5-2.0			1.5-2.0	190 J	7.8	<0.21	0.31	7.9
EB RIGHT SHOULDER BETWEEN VIA VERDE AND KELLOGG DRIVE								
1127-175-0.5-1.0	34.06427491	-117.82824135	0.5-1.0	110 J	5.2	<0.21		
1127-175-1.5-2.0			1.5-2.0	64 J	2.7			
1127-175-2.5-3.0			2.5-3.0	40 J				
1127-176-0.5-1.0	34.06423474	-117.82800205	0.5-1.0	42				
1127-176-1.5-2.0			1.5-2.0	5.4				
1127-176-2.5-3.0			2.5-3.0	41				
1127-177-0.5-1.0	34.06411304	-117.82779966	0.5-1.0	150	7.8	<0.21		
1127-177-1.5-2.0			1.5-2.0	42				
1127-178-0.5-1.0	34.06400447	-117.82749039	0.5-1.0	93	2.0			
1127-178-1.5-2.0			1.5-2.0	36				
1127-179-0.5-1.0	34.06392454	-117.82715275	0.5-1.0	94	4.1			
1127-179-1.5-2.0			1.5-2.0	16	3.7			
1127-180-0.5-1.0	34.06385673	-117.82676057	0.5-1.0	270	18	<0.21	0.67	7.8
1127-180-1.5-2.0			1.5-2.0	29				

TABLE 3

BORING COORDINATES AND SUMMARY OF LEAD AND pH ANALYTICAL RESULTS

SEGMENT 3 - EA. 119341

INTERSTATE 10 HOV LANE WIDENING PROJECT FROM PUENTE AVENUE TO STATE ROUTE 57

LOS ANGELES, CALIFORNIA

Sample ID	LATITUDE	LONGITUDE	Sample Depth (feet)	Total Lead (mg/kg)	WET Lead (mg/l)	DI-WET Lead (mg/l)	TCLP Lead (mg/l)	pH
1127-181-0.5-1.0	34.06381608	-117.82652020	0.5-1.0	77	5.8	<0.21		
1127-181-1.5-2.0			1.5-2.0	69	3.2			
1127-181-2.5-3.0			2.5-3.0	14				
1127-182-0.5-1.0	34.06379531	-117.82618883	0.5-1.0	26				
1127-182-1.5-2.0			1.5-2.0	9.4				
1127-182-2.5-3.0			2.5-3.0	9.5				
1127-183-0.5-1.0	34.06376740	-117.82598569	0.5-1.0	18				
1127-183-1.5-2.0			1.5-2.0	7.1				
1127-184-0.5-1.0	34.06375367	-117.82565704	0.5-1.0	86	8.2	<0.21		
1127-184-1.5-2.0			1.5-2.0	8.2				
1127-191-0.5-1.0	34.06496433	-117.82981248	0.5-1.0	38				
1127-191-1.5-2.0			1.5-2.0	63	4.9			
1127-192-0.5-1.0	34.06484062	-117.82956101	0.5-1.0	270	15	<0.21	0.57	7.2
1127-192-1.5-2.0			1.5-2.0	150	11	<0.21		
1127-192-2.5-3.0			2.5-3.0	200	12	<0.21	0.40	7.6
1127-193-0.5-1.0	34.06475202	-117.82939692	0.5-1.0	110	6.5	<0.21		
1127-193-1.5-2.0			1.5-2.0	37				
1127-193-2.5-3.0			2.5-3.0	110	4.9			
1127-194-0.5-1.0	34.06464862	-117.82917764	0.5-1.0	260	20	<0.21	0.61	7.8
1127-194-1.5-2.0			1.5-2.0	100	9.6	<0.21		
1127-195-0.5-1.0	34.06451945	-117.82891012	0.5-1.0	370	25	<0.21	1.4	7.8
1127-195-1.5-2.0			1.5-2.0	270	15	<0.21	0.77	7.8
1127-196-0.5-1.0	34.06440001	-117.82862360	0.5-1.0	160	9.5	<0.21		
1127-196-1.5-2.0			1.5-2.0	45				
1127-201-3.5	34.06443262	-117.82882215	3.0-3.5	0.9 J				
1127-201-4.5			4.0-4.5	0.44 J				
1127-201-5.5			5.0-5.5	0.80 J				
1127-201-6.5			6.0-6.5	0.81 J				
1127-201-7.5			7.0-7.5	1.4 J				
1127-201-10.5			10.0-10.5	0.60 J				
1127-202-3.5	34.06446839	-117.82889283	3.0-3.5	1.2 J				8.3
1127-202-4.5			4.0-4.5	1.1 J				
1127-202-5.0			4.5-5.0	0.91 J				
1127-202-5.5			5.0-5.5	1.4 J				
1127-203-3.5	34.06449909	-117.82896304	3.0-3.5	1.1 J				
1127-203-4.5			4.0-4.5	1.4 J				
1127-203-5.5			5.0-5.5	0.69 J				
1127-203-6.0			5.5-6.0	0.79 J				
1127-203-6.5			6.0-6.5	0.79 J				
1127-203-7.0			6.5-7.0	0.37 J				

TABLE 3
BORING COORDINATES AND SUMMARY OF LEAD AND pH ANALYTICAL RESULTS
SEGMENT 3 - EA. 119341
INTERSTATE 10 HOV LANE WIDENING PROJECT FROM PUENTE AVENUE TO STATE ROUTE 57
LOS ANGELES, CALIFORNIA

Sample ID	LATITUDE	LONGITUDE	Sample Depth (feet)	Total Lead (mg/kg)	WET Lead (mg/l)	DI-WET Lead (mg/l)	TCLP Lead (mg/l)	pH
1127-204-3.5	34.06453905	-117.82902423	3.0-3.5	0.87 J				
1127-204-4.5			4.0-4.5	0.57 J				
1127-204-5.5			5.0-5.5	1.2 J				7.8
1127-204-6.0			5.5-6.0	1.3 J				
1127-204-6.5			6.0-6.5	1.3 J				
1127-205-2.5	34.06468776	-117.82935440	2.0-2.5	0.64 J				
1127-205-3.0			2.5-3.0	0.88 J				
1127-205-3.5			3.0-3.5	1.6 J				8.2
1127-206-2.5	34.06465356	-117.82927343	2.0-2.5	0.39 J				
1127-206-3.0			2.5-3.0	0.72 J				
1127-206-3.5			3.0-3.5	0.61 J				
1127-207-4.5	34.06463089	-117.82919963	4.0-4.5	1.0 J				
1127-207-5.5			5.0-5.5	0.52 J				
1127-207-6.5			6.0-6.5	2.0 J				
1127-207-7.0			6.5-7.0	3.2 J				
1127-207-10.5			10.0-10.5	0.25 J				7.6
1127-208-3.4	34.06459564	-117.82912649	3.0-3.4	1.4 J				
1127-208-4.5			4.0-4.5	1.5 J				
1127-208-5.5			5.0-5.5	0.9 J				
1127-208-6.5			6.0-6.5	0.48 J				
1127-208-7.5			7.0-7.5	0.42 J				
1127-208-10.5			10.0-10.5	0.70 J				
EB RIGHT SHOULDER BETWEEN HOLT AND VIA VERDE								
1127-209-4.5	34.06796514	-117.84763383	4.0-4.5	13				7.6
1127-209-5.5			5.0-5.5	91	5.4	<0.21	<0.21	
1127-209-6.4			6.0-6.4	4.1				
1127-209-8.5			8.0-8.5	1.4				
1127-209-10.5			10.0-10.5	1.8				
1127-210-4.5	34.06797785	-117.84748328	4.0-4.5	7.9				
1127-210-5.5			5.0-5.5	86	5.5	<0.21	0.31	
1127-210-6.5			6.0-6.5	47				
1127-210-8.5			8.0-8.5	150	8.3	<0.21	0.21 J	8.0
1127-210-10			9.5-10.0	64	6.4	<0.21	0.41	
1127-211-4.5	34.06795795	-117.84730599	4.0-4.5	31				
1127-211-5.5			5.0-5.5	87	4.0		0.34	
1127-211-9.0			8.5-9.0	170 J	4.4		<0.21	
1127-212-4.5	34.06793584	-117.84719995	4.0-4.5	17 J				
1127-212-5.5			5.0-5.5	1.5 J				
1127-212-8.5			8.0-8.5	7.6 J				
1127-212-10.0			9.5-10.0	3.0 J				

Notes:

mg/kg = Milligram per kilogram
mg/l = Milligram per liter
WET = Waste Extraction Test using citric acid as the extraction fluid
DI-WET = Waste Extraction Test using water as the extraction fluid
TCLP = Toxicity Characteristic Leaching Procedure
< = Analyte was not detected above the laboratory reporting limit
J = Result qualified as an estimated value due to analytical bias in precision or accuracy

TABLE 4

SUMMARY OF TITLE 22 METALS ANAYLTICAL RESULTS

SEGMENT 3 - EA. 119341

INTERSTATE 10 HOV LANE WIDENING PROJECT FROM PUENTE AVENUE TO STATE ROUTE 57

LOS ANGELES, CALIFORNIA

Sample ID	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
1127-157-1.0	0.52 J	1.6	85	<0.042	0.77 J	10	6.4	16	140 J	0.11	0.74 J	12	<0.28	<0.042	<0.098	22	51 J
1127-159-2.0	0.82 J	8.5 J	130	<0.042	2.8	15	8.2 J	26 J	290 J	0.056 J	4.2 J	32 J	<0.28	<0.042	<0.098	48	120 J
1127-161-1.0	0.28 J	3.2	270	<0.042	2.1	14	7.2	18	280 J	0.054 J	5.2	24	0.31 J	<0.042	<0.098	38	78 J
1127-170-1.0	0.75 J	4.3	170	<0.042	3.4	17	8.2	29	240 J	0.073 J	8.7	24	<0.28	<0.042	<0.098	34	130
1127-174-2.0	1.0 J	5.3	160	<0.042	6.8	20	6.9	28	190 J	0.080 J	19	31	3.3	<0.042	<0.098	41	130
1127-180-0.5-1.0	0.44 J	<0.20	130	<0.042	1.2	11	5.4	13	270 J	0.022 J	1.6	14	<0.28	<0.042	<0.098	22	100
1127-189-2.0	0.91 J	6.9	150	<0.042	3.8	18	6.6	32	430	0.047 J	7.0	31	<0.28	<0.042	<0.098	65	130
1127-190-1.0	1.3 J	2.7	120	<0.042	1.7	20	7.4	46	590	0.11	11	22	<0.28	<0.042	<0.098	24	360
1127-195-1.0	1.2 J	1.2	110	<0.042	1.3	39	5.9	17	370	0.037 J	1.7	13	<0.28	<0.042	<0.098	19	120
1127-195-2.0	0.51 J	2.3	120	<0.042	1.2	14	8.5	14	270	0.050 J	1.4	17	<0.28	<0.042	<0.098	18	98
1127-209-5.5	0.78 J	5.4 J	140	<0.042	3.5	20	5.8	23	91	0.045 J	9.6 J	37	<0.28	<0.042	<0.098	66	77
1127-210-8.5	0.71 J	4.2 J	160	<0.042	3.6	20	5.8	24	150	0.073 J	11 J	38	0.51J	<0.042	<0.098	56	77
1127-211-9.0	0.67 J	2.2 J	170	<0.042	3.2	22	6.7	25	170 J	0.047 J	6.6 J	39	<0.28	<0.042	<0.098	44	82
TTLC	500	500	10,000	75	100	2,500	8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000
STLC	15	5.0	100	0.75	1.0	5	80	25	5.0	0.2	350	20	1.0	5	7.0	24	250
CHHSLs Ind/	380/	0.24/	6,300/	190/	7.5/	10,000/	3,200/	38,000/	320/	180/	4,800/	16,000/	4,800/	4,800/	63/	6,700/	100,000/
Res	30	0.07	5,200	16	1.7	10,000	600	3,000	80	18	380	1,600	380	380	5.0	530	23,000
Background Concentrations																	
Minimum	0.15	0.6	133	0.25	0.05	23	2.7	9.1	12.4	0.05	0.10	9	0.015	0.1	5.3	39	88
Maximum	1.95	12.0	1,400	2.70	1.7	1,579	46.9	96.4	97.1	0.90	9.6	509	0.43	8.3	36.2	288	236
Mean	0.60	3.5	509	1.28	0.36	122	14.9	28.7	23.9	0.26	1.3	57	0.058	0.8	15.7	112	149

Notes:

Results shown in milligrams per kilogram

< = Not detected above the laboratory reporting limit

J = Result qualified as an estimated value due to analytical bias in precision or accuracy

TTLC = Total Threshold Limit Concentration

STLC = Soluble Threshold Limit Concentration

CHHSLs = California Environmental Protection Agency, California Human Health Screening Levels for industrial (Ind) and residential (Res) use

TTLC, STLC, and CHHSLs shown for chromium are for chromium III.

Background Concentrations of Trace and Major Elements in California Soils

(Kearney Foundation of Soil Science, Division of Agriculture and Natural Resources, University of California, March 1996)

Maximum arsenic background concentration source - *Determination of a Southern California Regional Background Arsenic Concentration in Soil,* DTSC March 2008

APPENDIX A

HEALTH AND SAFETY PLAN

AERIALLY DEPOSITED LEAD SITE INVESTIGATION

ROUTE 10 HOV LANE WIDENING PROJECT
SEGMENTS 2 AND 3
PUENTE AVENUE TO ROUTE 57
LOS ANGELES COUNTY, CALIFORNIA

GEOCON
CONSULTANTS, INC.

GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

PREPARED BY

GEOCON CONSULTANTS, INC.
3303 N. SAN FERNANDO BLVD., SUITE 100
BURBANK, CALIFORNIA 91504

PROJECT NO. S9500-06-04
TASK ORDER NO. 11
EA NOS. 07-117OU1 AND 07-119341

JANUARY 2011

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Figure 1, Vicinity Map

HEALTH AND SAFETY PLAN SUMMARY

Site Name/Location	**Route 10 HOV Lane Widening Project, Segments 2 and 3 Puente Avenue to State Route 57 Los Angeles County, California**

Project Representatives:

• Project Manager/Cell No.:	**Mike Conkle**	**(213) 503-7841**
• Site Safety Officer/Cell No.:	**Cesar Larios**	**(818) 298-5790**
	Geocon Office Number	**(818) 841-8388**
• Geocon Consulting CIH:	**Doug Krause**	**(530) 758-6397**
	Cell No.:	**(530) 848-9232**
• Caltrans Project Manager:	**Samuel Yang**	**(213) 897-4058**

Scope:

- General survey/non-intrusive activities
- Soil sampling (direct-push/hand-auger)

Hazard Summary:

- Mechanical - vehicle traffic, slip/trip, struck-by injuries
- Electrical Hazards – Underground
- Highway Traffic/Drill rig Noise
- Biological – bites or stings
- Chemical - aerially deposited lead (ADL)

Control Summary:

- Site Control - Isolation & PPE - traffic control; safety vests; hard hats; safety glasses
- Isolation - utility location; identification
- Hearing protection - plugs or muffs
- Site inspection; awareness; repellent
- Engineering Controls - PPE - wet methods & work practices; protective gloves

Hospital Reference: **Queen of the Valley Hospital
1115 South Sunset Avenue
West Covina, California 91790
626-962-4011**

Directions: **From Route 10, take Exit 34A Pacific Ave/West Covina Parkway and turn right. Continue on W. Covina Parkway. Turn right on S Sunset Ave. Hospital will be on right (see Vicinity Map, Figure 1).**

Emergency Assistance:

Fire/Police/Medical Assistance:	**911**
Poison Control:	**800-876-4766**

1.0 INTRODUCTION

This Health and Safety Plan (HSP) is a compilation of health and safety guidelines, policies and/or performance protocols that, when exercised, are intended to reduce or eliminate the potential for injury and exposure during the performance of the activities at the site described below. Conformance with its contents does not warrant that injuries or exposures will not occur.

This HSP is not a training tool and does not contain the degree of detail necessary to train an employee on the appropriate performance, approach and/or equipment-use protocols referenced, herein. It will be assumed that persons working on this project and referring to this HSP meet the minimum training requirements described later, herein.

This HSP has been prepared to specifically support the field activities described herein. The provisions described herein apply to employees of Geocon Consultants, Inc. (Geocon) and its subcontractors, only. Representatives of the Client, Client-retained subcontractors, and representatives of state or local government agencies are expected to observe the safety rules and requirements established by their respective organizations, provided they do not conflict with this HSP, but will not be responsible for enforcing the conditions of this HSP on these representatives.

The contents of this HSP are based on factors and conditions understood prior to the start of the field activities. If those factors and conditions change during the performance of the activities, including the service scope, or if conditions exist that were not considered in the preparation of this HSP, then such shall be brought to the immediate attention of the person approving this HSP, and the HSP shall be modified, accordingly.

All project personnel, including Caltrans field inspectors will review, and become familiar with the elements of the Plan prior to site work. A copy of the Plan will be provided to all subcontractors and the Caltrans Resident Engineer (RE) or designee involved with project activities.

A pre-job conference will be held to delineate roles and responsibilities, discuss key elements of the Plan, and coordinate activities. This Plan is a "working document" to be used by affected personnel. The Plan may be modified at any time in accordance with Section 1.4 to adequately address changing conditions or previously unrecognized exposure hazards which may be encountered during the project. The Plan will be updated at least every six months and a current copy of the Plan will be maintained at the project site and be available to all affected personnel. The date indicated in the lower right-hand corner of this document indicates the latest version of this Plan.

1.1 Project Location and Description

Site Name/Location: Route 10 HOV Lane Widening Project Segments 2 and 3,
Puente Avenue to Route 57 Los Angeles County, California

The San Bernardino Freeway (I-10) is an east-west route classified as an interstate freeway that provides commuter access to the Los Angeles Central Business District from Riverside County, San Bernardino County and San Gabriel Valley. This project is a portion of the overall project that will extend the existing I-10 High Occupancy Vehicle (HOV) lanes to I-15 in San Bernardino County..

1.2 Background

Aerially deposited lead (ADL) may be present on the site, primarily due to historic leaded fuel emissions from automobile exhausts. Based on the preliminary hazardous waste site assessment, the contaminations may include naturally occurring petroleum hydrocarbons and chemicals and heavy metals in groundwater.

1.3 Project Objectives

The purpose of the scope of services is to evaluate whether ADL soil are present at the site at regulated levels. The site investigation can also be used for recommendations on appropriate handling procedures for handling and disposing of soil and groundwater generated during excavation activities.

1.4 Planned Scope of Services

- General survey/non-intrusive activities;
- Soil sampling (hand-auger) activities;

1.5 Schedule

Anticipated Period of Performance: January 2011

Anticipated Weather/Temperature: Weather conditions are anticipated to be cold to moderate.

2.0 ADMINISTRATIVE REQUIREMENTS/CONTROLS

2.1 Personnel

Personnel responsible for project safety include the Project Manager/ Site Safety Officer (SSO), the Consulting Certified Industrial Hygienist (CIH), and participating project personnel.

2.1.1 Project Manager

The Project Manager has ultimate authority and responsibility for project Health and Safety. Accordingly, he/she has the responsibility to develop the HSP (or assign its development); audit compliance with the provisions of this HSP; suspend project activities or modify service practices for health and safety reasons; and, to dismiss from a project site individuals whose onsite conduct either endangers the health and/or safety of others or is judged not to comply with the provisions of the HSP. The Project Manager is responsible for sharing/distributing the HSP to participating field personnel and

to an authorized representative of each project subcontractor. The Project Manager is also responsible for implementing all provisions of the HSP and any applicable addenda. Implementation includes:

- Reviewing the HSP requirements (if prepared by another project member);
- Presenting an overview of the provisions of the HSP with project participants;
- Providing the safety equipment specified herein;
- Collecting and submitting the requisite health and safety documentation (training rosters/certificates, air monitoring records (exposure assessments); site personnel logs, medical approvals), and copying them to the SSO, if appropriate;

  Note: Monitoring and exposure assessment records will be maintained in accordance with the provisions of T8 CCR §1532.1(n) Lead and §3204, Access to Employee Exposure and Medical Records.
- Designating/identifying a qualified project member as the SSO; and
- Reporting all Plan amendments to the Consulting CIH.

2.1.2 Site Safety Officer

The designated SSO is responsible for assisting the Project Manager with onsite implementation of the HSP. The SSO's responsibilities include:

- Maintaining project safety equipment supplies;
- Performing air monitoring, if and as specified herein (ref: T8 CCR § 1532.1(d) Exposure Assessment);
- Directing decontamination procedures, as appropriate;
- Enforcing the provisions of this HSP;
- Directing emergency response operations until public emergency personnel arrive;
- Setting up Site Controls, if and as specified herein; and
- Reporting all incidents and infractions to the Project Manager.

The SSO has the authority to suspend project activities any time he/she determines that the provisions of the HSP are inadequate to provide a service/project environment conducive to employee safety. Further, the SSO is to inform the Project Manager of any individuals whose onsite actions jeopardize either their health and safety or the health and safety of others.

2.1.3 Consulting Certified Industrial Hygienist

The Consulting CIH provides industrial hygiene and safety consultation. In this capacity, he:

- Reviews and approves HSPs, as requested;
- Provides training, as requested;
- Provides technical assistance on sampling strategies, methods and use of monitoring equipment;

- Provides technical support for the selection and use of Personal Protective Equipment (PPE); and,
- Provides arbitration on project health and safety issues.

2.1.4 Project Field Staff

All project personnel are responsible for:

- Complying with the provisions of this HSP;
- Performing services in a manner that is consistent with good health and safety practice; and
- Reading and being knowledgeable of the contents of this HSP.

2.2 Personnel Training

2.2.1 General Site Employees

Site employees will attend a project orientation prior to starting the project. The orientation will review all elements of the HSP, including: 1) the location of potential health and safety hazards on the site; and 2) requirements of the HSP. The training will also address other Cal/OSHA requirements such as the Geocon Hazard Communication Program (T8 CCR §5194), including the potential hazards of exposure to inorganic lead - T8 CCR § 1532.1(l), and the Injury and Illness Prevention Program (T8 CCR §3203; CSO §1509).

2.2.2 "Tailgate" Meetings

During the active field components of the project, the Project Manager or designee will conduct daily "tailgate" safety meetings. These meetings will include information on the following subjects, as applicable:

- Changes to project scope;
- Recognized changes to site conditions;
- Review of safe work practices;
- On or off the project safety practices;
- Feedback from employees on hazards, safety suggestions, or concerns; and
- Recognition for compliance, good safety performance or attitude.

Attendance at the tailgate meetings is a mandatory part of each employee's job responsibilities.

2.3 Medical Evaluation

Geocon and subcontractor employees required to wear respiratory protection shall have a current medical evaluation and approval by a physician or other licensed health care professional (PLHCP). Medical evaluations will be provided in accordance with the Geocon Respiratory Protective Equipment Program (ref. T8 CCR §5144(e) "Medical Evaluation"; §§1532.1(j) Lead – "Medical Surveillance").

Note: Based on Negative Exposure Assessments from industrial hygiene monitoring for airborne lead performed for representative tasks, using similar controls, and carried out within the past twelve months (ref. T8 CCR §§ 1532.1(d)(5)(A)), respiratory protective equipment will not be required for this project.

Project personnel are to arrive at the jobsite well rested and physically prepared to perform assigned tasks.

3.0 HAZARD AND CONTROL ANALYSIS

The following hazards were assessed to either exist, or have the potential to develop, during the performance of the project activities:

	HAZARDS					
TASKS	MECHANICAL	ELECTRICAL/UTILITY	NOISE	BIOLOGICAL	CHEMICAL	THERMAL
Work-Related Driving	**X**					
General Survey	**X**		**X**	**X**		
Soil Sampling Activities (direct-push/hand-auger)	**X**	**X**	**X**	**X**	**X**	

3.1 Safe Driving

Thousands of workers are injured or die in job-related motor vehicle accidents annually. Motor vehicle accidents are the number-one cause of employee injuries and deaths. Most accidents can be avoided by practicing defensive driving. Geocon policies mandate that employees:

- Prepare themselves and their vehicle for the road before travel;
- Drive according to posted speed limits unless adverse conditions necessitate slower speeds;
- Never tailgate, employ the three (3) second rule in following vehicles;
- Follow California State Law and other local laws and regulations regarding the use of cellular phones for communication while driving;

- Additionally, talking on a cell phone and/or texting is prohibited while operating sampling equipment; and,
- Use practical driving procedures in cities, on the freeway, and in rural areas.

3.2 Electrical Hazards

Type(s)/Source: Underground utilities

Qualified Exposure Risk: Moderate

Hazard Control: Isolation (Obtain utility clearance for all boring locations.)

Hazard: Contact with electrical current can cause shock, electrical burns, and/or be instantly fatal. If a hand-auger makes contact with electrical wires, it will not be insulated from the ground. The human body, if it simultaneously comes in contact with the auger and the ground, will provide a conductor of the electricity to the ground.

Control(s): Demarcate all drilling/digging locations, first. Contact Underground Service Alert (USA) (1-800-227-2600) and review as-built plans before performing any augering activity. It is advised that a private utility locator be contacted to supplement USA's demarcations, especially when the project is on private property. Soil intrusive work shall not proceed until all locating activities have been completed and fully documented in the site records. The initial site safety orientation meeting for all personnel on-site shall include a review of the underground utility locations and the location of the site map, showing the position of any underground utility lines. The site safety orientation shall include a site walkover of each marked utility or line.

Should a sub-surface condition be encountered that creates suspicion that there may be an unidentified underground line or utility, immediately cease work and secure the equipment. Work will not proceed until the potential risk or condition is resolved.

3.3 Mechanical Hazards

Type(s)/Source:

- Material handling/back injury
- Striking (slips/trips/falls)
- Struck-by injuries - vehicle traffic

Qualified Exposure Risk: Moderate

Hazard Control:

- Safe Lifting
- Isolation - traffic control/work methods/no work during inclement weather

- PPE - ANSI approved Class III safety vests & night (low visibility) ensemble, hardhats, safety glasses

3.3.1 Material Handling/Back Injury

Hazard: It is expected that field personnel will be required to lift heavy equipment and supplies and/or perform arduous tasks during this project. Accordingly, back injuries or physical strain may be caused by: routine lifting or one-time-only lifting; the weight of a lifted object; the frequency of lifting; bending, twisting, or rotating during lifting; prolonged sitting; exposure to vibrations; poor arch support in shoes; and, not stretching prior to physical activity. If the following "control" mechanisms are not exercised, debilitating back injury may occur.

Control(s): Before attempting to lift and carry an object, always test its weight, first. If it is too heavy, get help. If possible, use mechanical lifting aids. If manageable, the proper method for lifting is:

- Get a good footing.
- Place feet about shoulder width apart.
- Bend knees to pick up load. Never bend from the waist.
- Keep back straight.
- Get a firm hold. Grasp opposite corners of the load, if possible.
- Keep the back as upright as possible.
- Lift gradually by straightening the legs - don't jerk the load.
- Keep the weight as close to the body as possible.
- When changing directions, turn the entire body, including the feet. Don't twist the body.

If devices are used for handling materials manually (e.g., two-handed lifters, barrel ring clamps, hand trucks, wheelbarrows, etc.), wear protective equipment like gloves and safety shoes to minimize the potential of appendages becoming pinched or smashed between the load and stationary features. Also, avoid overloading the device.

3.3.2 "Striking" Injuries

Hazard: Injuries can, and often, result when a person (a kinetic mass) unexpectedly instigates contact with another kinetic mass. These occurrences typically result from inadvertent slips, trips and falls.

Control(s): To minimize risks of "slip/trip" hazards, personnel shall maintain a constant program of good housekeeping, keeping areas clear of trip hazards and wet and slippery surfaces. All hand tools shall be regularly secured and care shall be taken when entering areas where work is being performed above eye level.

In cases where “fall” hazards exist (i.e., personnel are required to work more than 6 feet above a work surface or platform, including the bottom of a trench, vault or tank), extra precautions shall be taken if guardrails or railings are absent. The precautions shall include the placement of a temporary guardrail and/or the use of either an "emergency" or "working" safety harness with lanyard or lifeline. A “buddy” (see 4.0) shall be provided to support such operations.

3.3.3 "Struck-by" Injuries

Hazard: Injuries can, and often, result when one becomes an unexpected receptor of contact with a moving vehicle or another kinetic mass. These occurrences typically result from the worker being struck by a dropped or collapsed mass or a moving piece of equipment or vehicle. Hazards with machines and heavy equipment are created when there are rotating, reciprocating, and transverse motions, or cutting, punching, shearing and bending actions.

Controls**:** Engage the vehicle’s warning light bar whenever planning to pull off or exit the highway. When stopped or parked, continue use of the light bar. Employees/workers shall not exit the vehicle until they have successfully pulled off of the highway. In those instances where it is not possible to clear the shoulder, workers shall exit the vehicle on the side opposite the adjacent traffic flow. Geocon employees will be required to wear hard hats and fluorescent vests and place safety cones at 10-yard intervals for a minimum of 30 yards (if achievable) from the left rear corner of the vehicle so they may be seen by adjacent traffic.

If necessary, Geocon may provide lane closures in conformance with Caltrans *Standard Provisions* for *Maintaining Traffic* as specified in *Standard Plans T-10, T-10A, T-11, T-12, T-13,* and *T-14*.

Workers shall maintain a constant awareness of traffic patterns/conditions throughout the duration of the field services.

3.4 Noise Hazards

Vehicle traffic or equipment operated at sampling sites may present a noise hazard to employees. In all cases where the sound pressure levels may exceed a time-weighted average noise dose of 85 decibels (the Action Level), the Project Manager will evaluate exposures according to the Geocon Hearing Conservation Program (ref. T8 CCR §§5095-5100). Selection of hearing protection will be made in accordance with the Geocon Safety Equipment Guide. Only hearing protectors (ear plugs or muffs) with a Noise Reduction Rating of 20 dB, or higher, will be used. When worn, earmuffs will be donned in the "over the head" position with the hair pulled back from the sealing surface.

Note: In general, noise levels in excess of 85 dBA interfere with communication between two individuals speaking in a normal tone of voice at a distance of 3 feet from one another.

3.5 Biological Hazards

Type(s)/Source: Vectors (insects, e.g., mosquitoes), animals

Qualified Exposure Risk: Low to moderate (mosquitoes)

Hazard Control:

- Isolation (Attention to detail – avoidance)
- PPE (Gloves/boots/long-sleeve shirts)
- Insect repellent, barrier creams

Hazard: Contact with insects and animals likely to be present at the site should be avoided. Stinging and biting insects, including bees, wasps, spiders, and ticks, can cause extreme discomfort and/or serious allergic responses. Insect bites are generally not dangerous, unless they are from a poisonous insect or mosquitoes potentially carrying West Nile virus. The primary concern with animal bites and scratches is the potential for infection and/or rabies. Snake or scorpion bites can also be dangerous, but more from infection or trauma than the toxins injected by the snake or scorpion.

Control(s): Before beginning fieldwork each day, inspect the work area for the potential presence of poisonous plants and inhabitant reptiles and take measures necessary to minimize the potential for contact. Specially prepared topical barriers, such as Teknu®, for protection against poison oak and insect repellent containing approximately 50% DEET for protecting exposed skin from biting insects; the more DEET a repellent contains the longer time it can provide protection from mosquito bites. Apply insect repellent sparingly to exposed skin; these products are commercially available and may minimize the potential for development of skin rashes and/or irritations due to such exposures. NOTE: Avoid contacting plastic zippers or other plastic closure mechanisms on clothing, equipment bags, etc., with DEET containing crème which will cause these materials to degrade.

If unprotected contact with potentially poisonous plants does exist, wash with soap and water as soon as possible. If irritation still develops, apply First Aid and/or seek medical attention, accordingly.

If you are allergic to bee or wasp stings, be sure to have the appropriate first aid available (e.g., an epi-pen) on the project. If you are stung, administer first aid and seek immediate medical attention.

Be sure a vector or animal bite victim obtains medical attention quickly if a bite or scratch occurs, especially if there is a potential that it was poisonous. In the meantime, administer First Aid by scrubbing the wound with soap and water, and rinsing thoroughly under running water. Dry off and place a clean bandage on the wound. Victims of these bites should lie down and remain calm and motionless; cold packs should be applied and medical attention sought immediately.

If bitten by a tick, remove it by grasping the head close to the skin using fine point tweezers and gently pull it out; DO NOT squeeze the tick body, which may cause it to bite harder and possible inject

infected blood into the wound. Place the tick in a plastic bag for identification. If it is identified as a deer tick, a physician may prescribe antibiotics to suppress potential Lyme disease.

3.6 Chemical Hazards – Inorganic Lead

The risk of significant exposure to inorganic lead is considered low while performing characterization tasks required on this project. Sampling methods and work practices to be employed will reduce the potential for airborne exposures above the 30 microgram per cubic meter ($\mu g/m^3$) Action Levels for lead; ref. T8 CCR §1532.1(d) Exposure Assessment.

Detailed information regarding the physical description of lead, including health hazards, routes of entry into the body, signs and symptoms of exposure, and target organs, published exposure limits (PEL-TWA and Action Limit); chemical and physical properties are available in Attachment A T8 CCR §1532.1 Lead – Appendix A.

Types/Source: Aerially deposited inorganic lead.

Exposure Routes: Inhalation & ingestion; ref. Attachment A T8 CCR §1532.1 Lead – Appendix A

Qualified Exposure Risk: Low, due to wet sampling methods and safe work practices

Exposure Controls:

- Wet methods and adherence to specific sampling methods and procedures

  Negative Exposure Assessment: Results of industrial hygiene monitoring of representative tasks and sampling procedures for lead performed within the past twelve months using these controls documented exposures consistently below 30 $\mu g/m^3$ Action Limit for airborne lead (ref. T8 CCR §1532.1(d)(5)(A))
- Avoid contact with, and inhalation of, airborne contaminated soil/dust.
- PPE – nitrile sampling gloves and safety glasses
- Follow good personal hygiene practices (see Section 4.2).

CHEMICAL NAME CAS #	ROUTES OF ENTRY	PUBLISHED EXPOSURE LIMITS		
		CATEGORY	CONCENTRATION	SOURCE
Lead, Elemental & Inorganic Compounds 7439-92-1	Inhalation Ingestion	TLV-TWA/PEL PEL-TWA	0.05 mg/m^3 0.05 mg/m^3	ACGIH/ OSHA

4.0 GENERAL HEALTH AND SAFETY REQUIREMENTS

4.1 Air Monitoring

Industrial hygiene monitoring will not be performed for the lead sampling tasks being carried out for this project. Previous Negative Exposure Assessments for representative tasks, using similar controls

and sampling practices document exposures consistently below the 30 µg/m^3 Action Level for airborne lead; ref. T8 CCR §1532.1(d)(5)(A).

4.2 Personal Hygiene

The SSO will establish hand-wash facilities, including clean water, hand soap, waterless hand cleaner, sanitary wipes and clean towels at the project site. All Geocon personnel, subcontractor employees, and Caltrans field inspectors and engineers leaving the project site (work zones) will clean potential impacted soils from their footwear and wash hands prior to leaving the project site (ref. T8 CCR §1527(a)(2)). In addition, the following procedures will be followed to ensure worker protection against potential exposure through ingestion:

- Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-in-mouth transfer and ingestion of material is prohibited in any area designated as being potentially impacted.
- Hands and face must be thoroughly washed upon leaving the work area, and before eating, drinking, or other non-project activities.
- Avoid unnecessary kneeling, sitting, leaning, or general contact with potentially impacted surfaces or with surfaces suspected of being potentially impacted by hazardous materials (i.e., puddles, mud, leachate, etc.).

4.3 Buddy System

Geocon personnel carrying out field activities are to work with another person at all times. The Caltrans representative can serve as the second person while the work is being conducted in the field. Under no circumstances, other than completion of paper work at the end of the day, are field personnel to work alone at the site while conducting field activities.

4.4 Work Zone Controls

With exception to the traffic controls discussed in Section 3.3.3, formal work, as referenced above, although airborne concentrations of lead are not anticipated to exceed the 30 µg/m^3 Action Level, nevertheless, work zones (Exclusion and Support) will be established for this project to minimize risk to non-project personnel and the public. Conventional construction signs, barricades and caution tape shall be utilized to control access and egress of project workers from potential lead impacted areas (zones), maintain security, and prevent access to the project site from the public.

Since negative exposure assessments are established by the low concentrations of lead in soil, "Regulated Areas" with warning signs required under T8 CCR §1532.1(i)(6) will not be established.

4.5 Code of Safe Practices

General safe work practices to be utilized by all project personnel are summarized below:

- All nonessential personnel will be kept clear of work areas.
- Adequate signs and safety devices will be installed on equipment.
- All site employees will wear assigned personal protective equipment and level of protection as designated by the Site Safety Officer.
- Eating, drinking, smoking, chewing gum or tobacco, or application of cosmetics is allowed in designated areas only.
- At a minimum, all personnel will wash with soap and water before lunch, using the restroom, and at the end of work. The face and hands shall be washed before eating, drinking, smoking, chewing gum, applying cosmetics, etc.
- Over-the-counter drugs and prescription medications must be reported to the Site Safety Officer for clearance before an employee is allowed to work near drill rig or other heavy equipment.
- When portable electric tools and equipment are used, three-wire extension cords are required.
- Employees will advise their supervisors of any malfunctioning equipment immediately.
- An ongoing safety maintenance program for tools and equipment will be instituted. Inspections will occur on a regular basis to ensure parts are secure and intact. Defective equipment will be repaired or replaced.
- Appropriate engineering controls and equipment guards will be installed on tools and equipment. This includes seat belts & backup warning lights and signals.
- A list of names of personnel who are trained in CPR and first aid shall be available.
- Labels shall be placed on containers of hazardous materials.
- No one will work alone; the "buddy system" shall be implemented for all field work.
- Employees shall be trained to identify effects and symptoms of toxic exposure and report them immediately.
- Under no circumstances are Geocon staff to enter a permit-required confined space.

5.0 PERSONAL PROTECTIVE EQUIPMENT

The employment of the aforementioned engineering controls is the preferred method of providing personal protection from hazards identified at this and any site. PPE provides acceptable secondary recourse, but only when engineering controls fail or cannot adequately eliminate exposure to the hazard. The use of PPE is intended to provide protection for onsite personnel from chemical, physical, and operational hazards that cannot be controlled through other safety procedures or work practices.

PPE required to be onsite for each worker during this project will include:

☒ Hard Hat (with/without face Shield)	☒ Safety Glasses/Goggles/Face Shield
☒ Leather Work Boots	☒ Disposable inner gloves (for sample handling)
☐ Chem. Resistant Boots	☐ Chem. Resistant gloves
☒ Leather Gloves	☐ Air-Purifying Respirator (Half-/Full-Face)
☒ Ear Plugs/Muffs	☐ APR Cartridges (P100)
☒ ANSI Safety Vest	☐ Tyvek coveralls

Only ANSI approved PPE and NIOSH approved respiratory protective equipment will be assigned or use. The use applications for this equipment are summarized in the following matrix. Specific procedures are further described below.

	PPE												
TASKS	Hard Hat	Safety Glasses	Leather Boots	Chemical Resistant Boots	Disposable Inner Gloves	Chemical Resistant Gloves	Leather Gloves	Ear Plugs/Muffs	Air-Purifying Respirator	APR Cartridges	ANSI Safety Vest	Tyvek Coveralls	Other
General Survey/Non-Intrusive Activities	**X**	**X**	**X**					**X**			**X**		
Soil Sampling Activities (direct push/hand auger)	**X**	**X**	**X**		**X**		**X**	**X**			**X**		

5.1 Personal Protective Equipment – Level D Protection

The protective equipment to be donned by personnel is listed as follows:

- Body Protection: Body protection shall include the use of "work clothing," including long pants and long- or short-sleeved shirts, and Class II ANSI approve safety vest.
- Head Protection: Non-metallic hard hats shall be worn by all personnel; ref. T8 CCR §§1514 & 3385 Head Protection.
- Hearing Protection: Hearing protection shall include the use of foam ear inserts or muffs; ref. T8 CCR §5098.
- Eye Protection: Protective eye wear (i.e., safety glasses) shall be worn by personnel working in direct proximity to operating heavy equipment and highway traffic; ref. T8 CCR §§1514 & 3385 Eye Protection.
- Hand Protection: Appropriate hand protection shall be required for employees whose work involves unusual and excessive exposure of hands to cuts capable of causing injury or impairments; ref. T8 CCR §§1514 & 3384 Hand Protection.
- Foot Protection: foot protection, such as steel toed shoes or boots shall be required for employees who are exposed to foot injuries from electrical hazards, falling objects, or crushing or penetrating actions; ref. T8 CCR §§1514 & 3385 Foot Protection.

5.2 Protective Clothing (Level C)

Level D Protection may be up-graded to Level C protection without justification if at any time the effectiveness of controls is a concern. However, Level C protection shall only be downgraded upon approval by the Project Manager in consultation with the Consulting CIH.

Respiratory protection will include full-face or half-mask air-purifying respirators fitted with P100 filter (HEPA; magenta) cartridges for personnel handling dry, dusty materials suspected of containing lead.

5.3 Miscellaneous Safety Equipment

Additional protective equipment to be available to personnel working at the site is either a portable radios/walkie talkies or cell phones.

6.0 DECONTAMINATION

The following decontamination (cleansing/disposal) procedures for equipment and PPE have been developed with the intent of reducing the potential for the transfer of lead-impacted soil from the project site. When feasible, decontamination should be performed in direct proximity to each work area.

6.1 Equipment Decontamination

Decontamination (cleansing/disposal) procedures for equipment and PPE have been developed with the intent of reducing the potential for the transfer of lead-impacted soil from the sites. Decontamination should be performed in direct proximity to each work area. The primary principle in consideration of decontamination procedures is: Avoid Unnecessary Contamination of PPE and Sampling Equipment.

Decontamination of sampling equipment shall include washing with a solution of TSP, Alconox®, or Liquinox® and water followed by a double rinse of deionized water between samples and before vacating the work area.

6.2 PPE Decontamination

The Project Manager will determine the necessity and arrange for appropriate decontamination of PPE on this project. Consumable PPE may be discarded as general refuse. Brush loose dust and soil from pants and shoes before entering vehicles. Respirator decontamination, if required, shall include a wash with soap and water followed by a clean water rinse. Respirators shall be thoroughly dried and wiped with a respirator wipe pad (disinfectant) prior to storage.

7.0 EMERGENCY RESPONSE PROCEDURES

7.1 Physical Injury

In the event of an accident resulting in physical injury, call emergency service personnel immediately and perform first aid commensurate with training and seriousness of the injury. Severely injured personnel are to be transported only by emergency service personnel and/or by ambulance personnel, unless a life-threatening condition is judged to exist that must be addressed immediately.

7.2 Catastrophic Event

The Project Manager is to be notified by the SSO as soon after the injury as practical, regarding the nature of the accident. The Project Manager or designee will prepare a written report within 24 hours of the accident.

In the event of a catastrophic event (e.g., severe personal injury, fire, explosion, and/or property damage), notify the fire/safety and rescue department immediately by dialing 911.

Any accident involving serious injury will require suspension of site activities until the Project Manager (or designee) has completed a review of the events and site conditions and authorized work to resume.

The Project Manager (or designee) will notify the nearest Cal/OSHA District Office immediately (within 8-hours) by phone or fax upon learning of a death or serious injury:

West Covina District Office
190 West Garvey Avenue South, Suite 200
West Covina, CA 91790

Tel: (626) 472-0046
Fax: (626) 472-7708

7.3 Emergency Telephone Numbers

Fire/Police/Medical Assistance:	**911**
Poison Control:	**(800) 876-4766**

Other phone numbers may be available or required for emergency response at specific sites. Check with onsite representatives before mobilizing to the job site.

7.4 Project Site Address

Site Name/Location Route 10 HOV Lane Widening Project
Segments 2 and 3, Puente Avenue to Route 57
Los Angeles County, California

7.5 Hospital Address and Route

Hospital Reference: Queen of the Valley Hospital
1115 South Sunset Avenue
West Covina, California 91790
626-962-4011

Directions: From Route 10, take Exit 34A Pacific Ave/West Covina Parkway and turn right. Continue on W. Covina Parkway. Turn right on S Sunset Ave. Hospital will be on right (see Vicinity Map, Figure 1).

8.0 PLAN APPROVAL

The undersigned has reviewed and approved this Health and Safety Plan prepared for the aerially deposited lead site investigation project along Route 10 in Los Angeles County, as described herein.

Douglas S. Krause, CIH - Krause & Associates
Geocon Consulting Certified Industrial Hygienist
ABIH Certification No. 2123, Exp. June 1, 2015

January 17, 2011
Date

Mike Conkle, PG
Geocon Project Manager

January 18, 2011
Date

The following personnel, including subcontractors involved with the project activities have reviewed, or received a copy of this Plan and Attachment A, and agree to follow the health and safety procedures described herein.

Print Name	Title	Signature	Date

I. SUBSTANCE IDENTIFICATION INORGANIC LEAD

A Substance: Pure lead (Pb) is a heavy metal at room temperature and pressure and is a basic chemical element. It can combine with various other substances to form numerous lead compounds.

B Compounds covered by the standard: The word "lead" when used in this standard means elemental lead, all inorganic lead compounds and a class of organic lead compounds called lead soaps. This standard does not apply to other organic lead compounds.

C Uses: Exposure to lead occurs in several different occupations in the construction industry, including demolition or salvage of structures where lead or lead-containing materials are present; removal or encapsulation of lead-containing materials, new construction, alteration, repair, or renovation of structures that contain lead or materials containing lead; installation of products containing lead. In addition, there are construction related activities where exposure to lead may occur, including transportation, disposal, storage, or containment of lead or materials containing lead on construction sites, and maintenance operations associated with construction activities.

D Permissible exposure: The permissible exposure limit (PEL) set by the standard is 50 micrograms of lead per cubic meter of air (50 µg/m3) averaged over an 8-hour workday.

E Action level: The standard establishes an action level of 30 micrograms of lead per cubic meter of air (30 µg/m3) averaged over an 8-hour workday. The action level triggers several ancillary provisions of the standard such as exposure monitoring, medical surveillance, and training.

II. HEALTH HAZARD DATA

A Ways in which lead enters your body. When absorbed into your body in certain doses, lead is a toxic substance. The object of the lead standard is to prevent absorption of harmful quantities of lead. The standard is intended to protect you not only from the immediate toxic effects of lead, but also from the serious toxic effects that may not become apparent until years of exposure have passed. Lead can be absorbed into your body by inhalation (breathing) and ingestion (eating). Lead (except for certain organic lead compounds not covered by the standard, such as tetraethyl lead) is not absorbed through your skin. When lead is scattered in the air as a dust, fume or mist it can be inhaled and absorbed through your lungs and upper respiratory tract. Inhalation of airborne lead is generally the most important source of occupational lead absorption. You can also absorb lead through your digestive system if lead gets into your mouth and is swallowed. If you handle food, cigarettes, chewing tobacco, or make-up which have lead on them or handle them with hands contaminated with lead, this will contribute to ingestion. A significant portion of the lead that you inhale or ingest gets into your blood stream. Once in your blood stream, lead is circulated throughout your body and stored in various organs and body tissues. Some of this lead is quickly filtered out of your body and excreted, but some remains in the blood and other tissues. As exposure to lead continues, the amount stored in your body will increase if you are absorbing more lead than your body is excreting. Even though you may not be aware of any immediate symptoms of disease, this lead stored in your tissues can be slowly causing irreversible damage, first to individual cells, then to your organs and whole body systems.

B Effects of overexposure to lead.

1. Short term (acute) overexposure. Lead is a potent, systemic poison that serves no known useful function once absorbed by your body. Taken in large enough doses, lead can kill you in a matter of days. A condition affecting the brain called acute encephalopathy may arise which develops quickly to seizures, coma, and death from cardiorespiratory arrest. A short term dose of lead can lead to acute encephalopathy. Short term occupational exposures of this magnitude are highly unusual, but not impossible. Similar forms of encephalopathy may, however, arise from extended, chronic exposure to lower doses of lead. There is no sharp dividing line between rapidly developing acute effects of lead, and chronic effects which take longer to acquire. Lead

adversely affects numerous body systems, and causes forms of health impairment and disease which arise after periods of exposure as short as days or as long as several years.

2. Long-term (chronic) overexposure. Chronic overexposure to lead may result in severe damage to your blood-forming, nervous, urinary and reproductive systems. Some common symptoms of chronic overexposure include loss of appetite, metallic taste in the mouth, anxiety, constipation, nausea, pallor, excessive tiredness, weakness, insomnia, headache, nervous irritability, muscle and joint pain or soreness, fine tremors, numbness, dizziness, hyperactivity and colic. In lead colic there may be severe abdominal pain. Damage to the central nervous system in general and the brain (encephalopathy) in particular is one of the most severe forms of lead poisoning. The most severe, often fatal, form of encephalopathy may be preceded by vomiting, a feeling of dullness progressing to drowsiness and stupor, poor memory, restlessness, irritability, tremor, and convulsions. It may arise suddenly with the onset of seizures, followed by coma, and death. There is a tendency for muscular weakness to develop at the same time. This weakness may progress to paralysis often observed as a characteristic "wrist drop" or "foot drop" and is a manifestation of a disease to the nervous system called peripheral neuropathy. Chronic overexposure to lead also results in kidney disease with few, if any, symptoms appearing until extensive and most likely permanent kidney damage has occurred. Routine laboratory tests reveal the presence of this kidney disease only after about two-thirds of kidney function is lost. When overt symptoms of urinary dysfunction arise, it is often too late to correct or prevent worsening conditions, and progression to kidney dialysis or death is possible. Chronic overexposure to lead impairs the reproductive systems of both men and women. Overexposure to lead may result in decreased sex drive, impotence and sterility in men. Lead can alter the structure of sperm cells raising the risk of birth defects. There is evidence of miscarriage and stillbirth in women whose husbands were exposed to lead or who were exposed to lead themselves. Lead exposure also may result in decreased fertility, and abnormal menstrual cycles in women. The course of pregnancy may be adversely affected by exposure to lead since lead crosses the placental barrier and poses risks to developing fetuses. Children born of parents either one of whom were exposed to excess lead levels are more likely to have birth defects, mental retardation, behavioral disorders or die during the first year of childhood. Overexposure to lead also disrupts the blood-forming system resulting in decreased hemoglobin (the substance in the blood that carries oxygen to the cells) and ultimately anemia. Anemia is characterized by weakness, pallor and fatigability as a result of decreased oxygen carrying capacity in the blood.

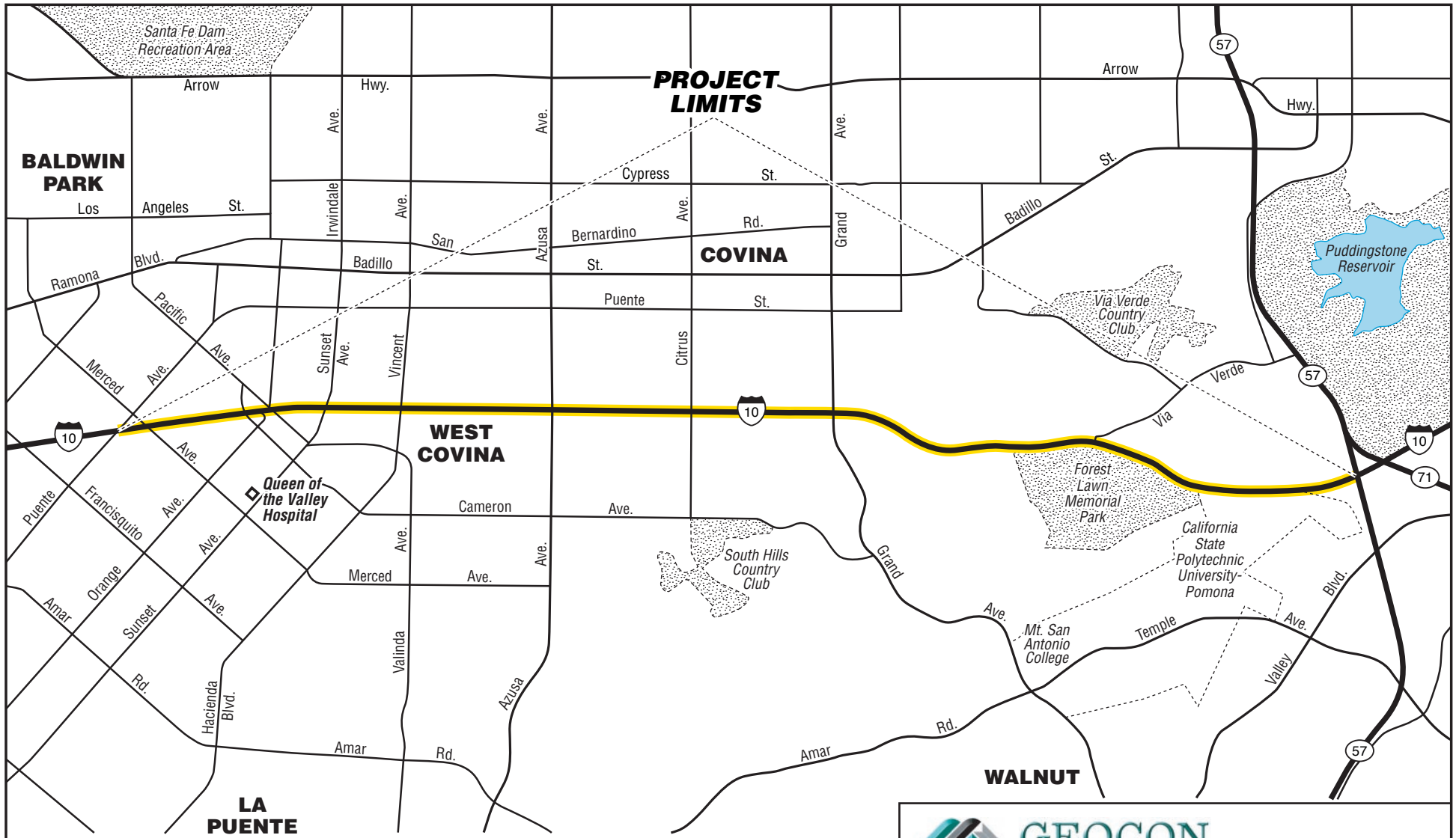
3. Exposure to lead throughout a working lifetime requires that a worker's blood lead level (BLL, also expressed as PbB) be maintained at or below forty micrograms per deciliter of whole blood (40 µg/dl). The blood lead levels of workers (both male and female workers) who intend to have children should be maintained below 30 µg/dl to minimize adverse reproductive health effects to the parents and to the developing fetus. The measurement of your blood lead level (BLL) is the most useful indicator of the amount of lead being absorbed by your body. Blood lead levels are most often reported in units of milligrams (mg) or micrograms (ug) of lead (1 mg=1000 mg) per 100 grams (100g), 100 milliliters (100 ml) or deciliter (dl) of blood. These three units are essentially the same. Sometime BLLs are expressed in the form of mg% or mg%. This is a shorthand notation for 100g, 100 ml, or dl. (Reference to BLL measurements in this standard are expressed in the form of µg/dl.)

   BLL measurements show the amount of lead circulating in your blood stream, but do not give any information about the amount of lead stored in your various tissues. BLL measurements merely show current absorption of lead, not the effect that lead is having on your body or the effects that past lead exposure may have already caused. Past research into lead-related diseases, however, has focused heavily on associations between BLLs and various diseases. As a result, your BLL is an important indicator of the likelihood that you will gradually acquire a lead-related health impairment or disease.

Once your blood lead level climbs about 40 µg/dl, your risk of disease increases. There is a wide variability of individual response to lead, thus it is difficult to say that a particular BLL in a given person will cause a particular effect. Studies have associated fatal encephalopathy with BLLs as low as 150 µg/dl. Other studies have shown other forms of diseases in some workers with BLLs well below 80 µg/dl. Your BLL is a crucial indicator of the risks to your health, but one other factor is also extremely important. This factor is the length of time you have had elevated BLLs. The longer you have an elevated BLL, the greater the risk that large quantities of lead are being gradually stored in your organs and tissues (body burden). The greater your overall body burden, the greater the chances of substantial permanent damage. The best way to prevent all forms of lead-related impairments and diseases -- both short term and long term -- is to maintain your BLL below 40 µg/dl. The provisions of the standard are designed with this end in mind.

Your employer has prime responsibility to assure that the provisions of the standard are complied with both by the company and by individual workers. You, as a worker, however, also have a responsibility to assist your employer in complying with the standard. You can play a key role in protecting your own health by learning about the lead hazards and their control, learning what the standard requires, following the standard where it governs your own actions, and seeing that your employer complies with provisions governing his or her actions.

4. Reporting signs and symptoms of health problems. You should immediately notify your employer if you develop signs or symptoms associated with lead poisoning or if you desire medical advice concerning the effects of current or past exposure to lead or your ability to have a healthy child. You should also notify your employer if you have difficulty breathing during a respirator fit test or while wearing a respirator. In each of these cases, your employer must make available to you appropriate medical examinations or consultations. These must be provided at no cost to you and at a reasonable time and place. The standard contains a procedure whereby you can obtain a second opinion by a physician of your choice if your employer selected the initial physician.



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Route 10 HOV Lane Widening Project

Los Angeles County, California

VICINITY MAP

GEOCON Proj. No. S9500-06-04

Task Order No. 11 | January 2011 | Figure 1

APPENDIX B

Photo 1 – View of boring 1127-101 location

Photo 2 – Vicinity of boring 1127-101 location

SITE PHOTOS 1 and 2		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
S9500-06-04		May 2011

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Photo 3 – View of boring 1127-102 location

Photo 4 – Vicinity of boring 1127-102 location

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SITE PHOTOS 3 & 4		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
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Photo 5 – View of boring 1127-103 location

Photo 6 – Vicinity of boring 1127-103 location

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SITE PHOTOS 5 & 6		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
S9500-06-04		May 2011

Photo 7 – View of boring 1127-104 location

Photo 8 – Vicinity of boring 1127-104 location

SITE PHOTOS 7 & 8		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
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Photo 9 – View of boring 1127-105 location

Photo 10 – Vicinity of boring 1127-105 location

SITE PHOTOS 9 & 10		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
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Photo 11 – View of boring 1127-106 location

Photo 12 – Vicinity of boring 1127-106 location

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SITE PHOTOS 11 & 12		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
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Photo 13 – View of boring 1127-107 location

Photo 14 – Vicinity of boring 1127-107 location

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SITE PHOTOS 13 & 14		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
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Photo 15 – View of boring 1127-109 location

Photo 16 – Vicinity of boring 1127-109 location

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SITE PHOTOS 15 & 16		
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Photo 17 – View of boring 1127-110 location

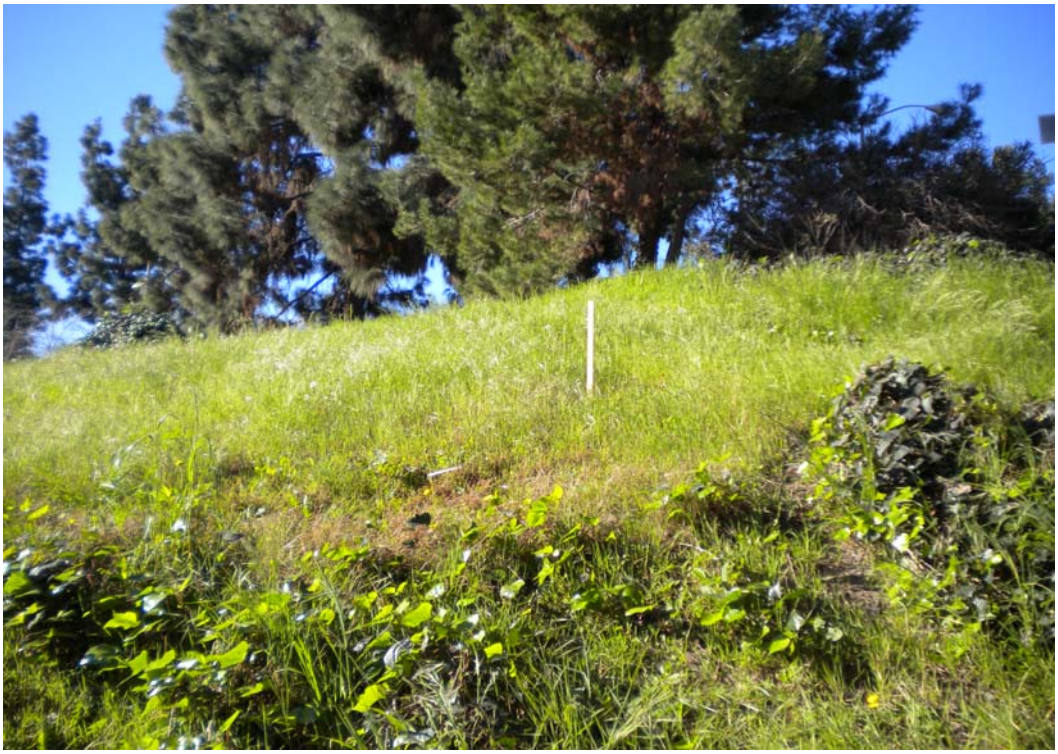

Photo 18 – Vicinity of boring 1127-110 location

SITE PHOTOS 17 & 18		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
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Photo 19 – View of boring 1127-111 location

Photo 20 – Vicinity of boring 1127-111 location

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SITE PHOTOS 19 & 20		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
S9500-06-04		May 2011

Photo 21 – View of boring 1127-112 location

Photo 22 – Vicinity of boring 1127-112 location

SITE PHOTOS 21 & 22		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
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Photo 23 – View of boring 1127-113 location

Photo 24 – Vicinity of boring 1127-113 location

SITE PHOTOS 23 & 24		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
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Photo 25 – View of boring 1127-114 location

Photo 26 – Vicinity of boring 1127-114 location

SITE PHOTOS 25 & 26

ADL Soil Investigation
Interstate 10 Freeway
Los Angeles County, California

S9500-06-04		May 2011

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Photo 27- View of boring 1127-115 location

Photo 28 – Vicinity of boring 1127-115 location

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SITE PHOTOS 27 & 28		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
S9500-06-04		May 2011

Photo 29- View of boring 1127-116 location

Photo 30 – Vicinity of boring 1127-116 location

SITE PHOTOS 29 & 30		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
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Photo 31- View of boring 1127-117 location

Photo 32 – Vicinity of boring 1127-117 location

SITE PHOTOS 31 & 32		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
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Photo 33- View of boring 1127-118 location

Photo 34 – Vicinity of boring 1127-118 location

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SITE PHOTOS 33 & 34		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
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Photo 35 - View of boring 1127-119 location

Photo 36 – Vicinity of boring 1127-119 location

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SITE PHOTOS 35 & 36		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
S9500-06-04		May 2011

Photo 37 - View of boring 1127-120 location

Photo 38 – Vicinity of boring 1127-120 location

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SITE PHOTOS 37 & 38		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
S9500-06-04		May 2011

Photo 39 - View of boring 1127-121 location

Photo 40 – Vicinity of boring 1127-121 location

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SITE PHOTOS 39 & 40		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
S9500-06-04		May 2011

Photo 41 - View of boring 1127-122 location

Photo 42 – Vicinity of boring 1127-122 location

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SITE PHOTOS 41 & 42		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
S9500-06-04		May 2011

Photo 43 - View of boring 1127-123 location

Photo 44 – Vicinity of boring 1127-123 location

SITE PHOTOS 43 & 44		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
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Photo 45 - View of boring 1127-124 location

Photo 46 – Vicinity of boring 1127-124 location

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SITE PHOTOS 45 & 46		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
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Photo 47 - View of boring 1127-125 location

Photo 48 – Vicinity of boring 1127-125 location

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SITE PHOTOS 47 & 48		
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Photo 49 - View of boring 1127-126 location

Photo 50 – Vicinity of boring 1127-126 location

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SITE PHOTOS 49 & 50		
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Photo 51 - View of boring 1127-127 location

Photo 52 – Vicinity of boring 1127-127 location

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SITE PHOTOS 51 & 52		
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Photo 53 - View of boring 1127-128 location

Photo 54 – Vicinity of boring 1127-128 location

SITE PHOTOS 53 & 54		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
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Photo 55 - View of boring 1127-129 location

Photo 56 – Vicinity of boring 1127-129 location

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SITE PHOTOS 55 & 56		
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Photo 57 - View of boring 1127-130 location

Photo 58 – Vicinity of boring 1127-130 location

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SITE PHOTOS 57 & 58		
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Photo 59 - View of boring 1127-131 location

Photo 60 – Vicinity of boring 1127-131 location

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SITE PHOTOS 59 & 60		
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Photo 61 - View of boring 1127-132 location

Photo 62 – Vicinity of boring 1127-132 location

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SITE PHOTOS 61 & 62		
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Photo 63 - View of boring 1127-133 location

Photo 64 – Vicinity of boring 1127-133 location

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SITE PHOTOS 63 & 64		
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Photo 65 - View of boring 1127-134 location

Photo 66 – Vicinity of boring 1127-134 location

SITE PHOTOS 65 & 66		
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Photo 67 - View of boring 1127-135 location

Photo 68 – Vicinity of boring 1127-135 location

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SITE PHOTOS 67 & 68		
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Photo 69 - View of boring 1127-136 location

Photo 70 – Vicinity of boring 1127-136 location

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SITE PHOTOS 69 & 70		
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Photo 71 - View of boring 1127-137 location

Photo 72 – Vicinity of boring 1127-137 location

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SITE PHOTOS 71 & 72		
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Photo 73 - View of boring 1127-138 location

Photo 74 – Vicinity of boring 1127-138 location

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SITE PHOTOS 73 & 74		
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Photo 75 - View of boring 1127-139 location

Photo 76 – Vicinity of boring 1127-139 location

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SITE PHOTOS 75 & 76		
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Photo 77 - View of boring 1127-140 location

Photo 78 – Vicinity of boring 1127-140 location

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SITE PHOTOS 77 & 78		
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Photo 79 - View of boring 1127-141 location

Photo 80 – Vicinity of boring 1127-141 location

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SITE PHOTOS 79 & 80		
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Photo 81 - View of boring 1127-142 location

Photo 82 – Vicinity of boring 1127-142 location

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SITE PHOTOS 81 & 82		
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Photo 83 - View of boring 1127-143 location

Photo 84 – Vicinity of boring 1127-143 location

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SITE PHOTOS 83 & 84		
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Photo 85 - View of boring 1127-144 location

Photo 86 – Vicinity of boring 1127-144 location

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SITE PHOTOS 85 & 86		
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Photo 87 - View of boring 1127-145 location

Photo 88 – Vicinity of boring 1127-145 location

SITE PHOTOS 87 & 88		
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Photo 89 - View of boring 1127-146 location

Photo 90 – Vicinity of boring 1127-146 location

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SITE PHOTOS 89 & 90		
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Photo 91 - View of boring 1127-147 location

Photo 92 – Vicinity of boring 1127-147 location

SITE PHOTOS 91 & 92		
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Photo 93 - View of boring 1127-148 location

Photo 94 – Vicinity of boring 1127-148 location

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SITE PHOTOS 93 & 94		
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Photo 95 - View of boring 1127-149 location

Photo 96 – Vicinity of boring 1127-149 location

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SITE PHOTOS 95 & 96		
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Photo 97 - View of boring 1127-150 location

Photo 98 – Vicinity of boring 1127-150 location

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SITE PHOTOS 97 & 98		
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Photo 99 - View of boring 1127-152 location

Photo 100 – Vicinity of boring 1127-152 location

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SITE PHOTOS 99 & 100		
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Photo 101 - View of boring 1127-154 location

Photo 102 – Vicinity of boring 1127-154 location

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SITE PHOTOS 101 & 102		
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Photo 103 - View of boring 1127-155 location

Photo 104 – Vicinity of boring 1127-155 location

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SITE PHOTOS 103 & 104		
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Photo 105 - View of boring 1127-156 location

Photo 106 – Vicinity of boring 1127-156 location

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SITE PHOTOS 105 & 106		
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Photo 107 - View of boring 1127-157 location

Photo 108 – Vicinity of boring 1127-157 location

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SITE PHOTOS 107 & 108		
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Photo 109 - View of boring 1127-158 location

Photo 110 – Vicinity of boring 1127-158 location

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SITE PHOTOS 109 & 110		
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Photo 111 - View of boring 1127-159 location

Photo 112 – Vicinity of boring 1127-159 location

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SITE PHOTOS 111 & 112		
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Photo 113 – Vicinity of boring 1127-160 location

Photo 114 – Vicinity of boring 1127-160 location

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SITE PHOTOS 113 & 114		
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Photo 115 - View of boring 1127-161 location

Photo 116 – Vicinity of boring 1127-161 location

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SITE PHOTOS 115 & 116		
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Photo 117 - View of boring 1127-162 location

Photo 118 – Vicinity of boring 1127-162 location

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SITE PHOTOS 117 & 118		
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Photo 119 - View of boring 1127-163 location

Photo 120 – Vicinity of boring 1127-163 location

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SITE PHOTOS 119 & 120		
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Photo 121 - View of boring 1127-164 location

Photo 122 – Vicinity of boring 1127-164 location

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SITE PHOTOS 121 & 122		
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Photo 123 - View of boring 1127-165 location

Photo 124 – Vicinity of boring 1127-165 location

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SITE PHOTOS 123 & 124		
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Photo 125 - View of boring 1127-166 location

Photo 126 – Vicinity of boring 1127-166 location

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SITE PHOTOS 125 & 126		
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Photo 127 - View of boring 1127-167 location

Photo 128 – Vicinity of boring 1127-167 location

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SITE PHOTOS 127 & 128		
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Photo 129 - View of boring 1127-168 location

Photo 130 – Vicinity of boring 1127-168 location

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SITE PHOTOS 129 & 130		
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Photo 131 - View of boring 1127-169 location

Photo 132 – Vicinity of boring 1127-169 location

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SITE PHOTOS 131 & 132		
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Photo 133 - View of boring 1127-170 location

Photo 134 – Vicinity of boring 1127-170 location

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SITE PHOTOS 133 & 134		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
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Photo 135 - View of boring 1127-172 location

Photo 136 – Vicinity of boring 1127-172 location

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SITE PHOTOS 135 & 136		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
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Photo 137 - View of boring 1127-174 location

Photo 138 – Vicinity of boring 1127-174 location

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SITE PHOTOS 137 & 138		
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Photo 139 - View of boring 1127-175 location

Photo 140 – Vicinity of boring 1127-170 location

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SITE PHOTOS 139 & 140		
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Photo 141 - View of boring 1127-176 location

Photo 142 – Vicinity of boring 1127-176 location

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SITE PHOTOS 141 & 142		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
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Photo 143 - View of boring 1127-177 location

Photo 144 – Vicinity of boring 1127-177 location

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SITE PHOTOS 143 & 144		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
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Photo 145 - View of boring 1127-178 location

Photo 146 – Vicinity of boring 1127-178 location

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SITE PHOTOS 145 & 146		
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Photo 147 - View of boring 1127-179 location

Photo 148 – Vicinity of boring 1127-179 location

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SITE PHOTOS 147 & 148		
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Photo 149 - View of boring 1127-180 location

Photo 150 – Vicinity of boring 1127-180 location

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SITE PHOTOS 149 & 150		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
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Photo 151 - View of boring 1127-181 location

Photo 152 – Vicinity of boring 1127-181 location

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SITE PHOTOS 151 & 152		
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Photo 153 - View of boring 1127-182 location

Photo 154 – Vicinity of boring 1127-182 location

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SITE PHOTOS 153 & 154		
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Photo 155 - View of boring 1127-183 location

Photo 156 – Vicinity of boring 1127-183 location

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SITE PHOTOS 155 & 156		
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Photo 157 - View of boring 1127-184 location

Photo 158 – Vicinity of boring 1127-184 location

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SITE PHOTOS 157 & 158		
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Photo 159 - View of boring 1127-185 location

Photo 160 – Vicinity of boring 1127-185 location

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SITE PHOTOS 159 & 160		
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Photo 161 - View of boring 1127-186 location

Photo 162 – Vicinity of boring 1127-186 location

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SITE PHOTOS 161 & 162		
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Photo 163 - View of boring 1127-187 location

Photo 164 – Vicinity of boring 1127-187 location

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Photo 165 - View of boring 1127-188 location

Photo 166 – Vicinity of boring 1127-188 location

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SITE PHOTOS 165 & 166		
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Photo 167 - View of boring 1127-189 location

Photo 168 – Vicinity of boring 1127-189 location

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SITE PHOTOS 167 & 168		
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Photo 169 - View of boring 1127-190 location

Photo 170 – Vicinity of boring 1127-190 location

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SITE PHOTOS 169 & 170		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
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Photo 171 - View of boring 1127-191 location

Photo 172 – Vicinity of boring 1127-191 location

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SITE PHOTOS 171 & 172		
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Photo 173 - View of boring 1127-192 location

Photo 174 – Vicinity of boring 1127-192 location

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SITE PHOTOS 173 & 174		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
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Photo 175 – View of boring 1127-193 location

Photo 176 – Vicinity of boring 1127-193 location

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SITE PHOTOS 175 & 176		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
S9500-06-04		May 2011

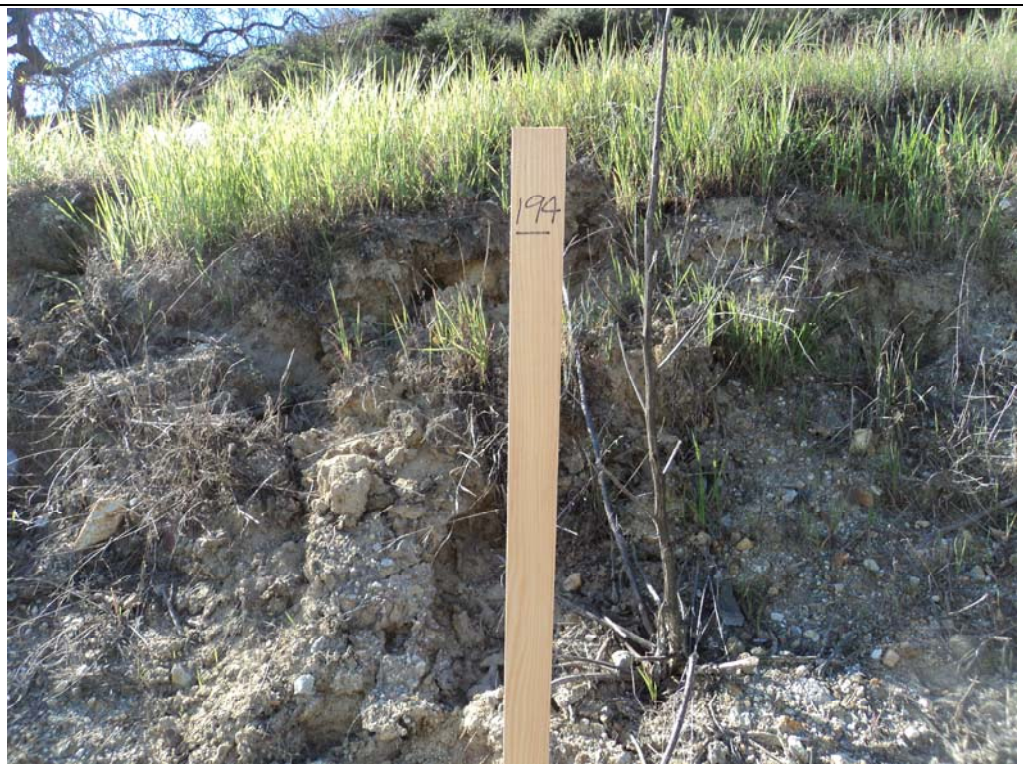

Photo 177 - View of boring 1127-194 location

Photo 178 – Vicinity of boring 1127-194 location

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SITE PHOTOS 177 & 178		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
S9500-06-04		May 2011

Photo 179 - View of boring 1127-195 location

Photo 180 – Vicinity of boring 1127-195 location

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SITE PHOTOS 179 & 180		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
S9500-06-04		May 2011

Photo 181 – View of boring 1127-196 location

Photo 182 – Vicinity of boring 1127-196 location

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SITE PHOTOS 181 & 182		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
S9500-06-04		May 2011

Photo 183 – View of boring 1127- 201 location

Photo 184 – View of boring 1127-202 location

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SITE PHOTOS 183 & 184		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
S9500-06-04		May 2011

Photo 185 – View of boring 1127-203 location

Photo 186 – View of boring 1127-204 location

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SITE PHOTOS 185 & 186		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
S9500-06-04		May 2011

Photo 187 – View of boring 1127-205 location

Photo 188 – View of boring 1127-206 location

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SITE PHOTOS 187 & 188		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
S9500-06-04		May 2011

Photo 189 – View of boring 1127-207 location

Photo 190 – View of boring 1127-208 location

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SITE PHOTOS 189 & 190		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
S9500-06-04		May 2011

Photo 191 – View of boring 1127-209 location

Photo 192 – View of boring 1127-210 location

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SITE PHOTOS 191 & 192		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
S9500-06-04		May 2011

Photo 193 – View of boring 1127-211 location

Photo 194 – View of boring 1127-212 location

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SITE PHOTOS 193 & 194		
ADL Soil Investigation Interstate 10 Freeway Los Angeles County, California		
S9500-06-04		May 2011

GEOCON CONSULTANTS, INC.
CALTRANS CONTRACT NO. 07A2730
TASK ORDER NO. 11
GEOCON PROJECT S9500-06-04
PROJECT FIELD LOG

Date: 1/19/11

PROJECT NAME: ROUTE 10 ADL	
CALTRANS ONSITE REP: SAM YANG	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY: Marking of boring/ utilities	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☑ NO	MILEAGE Start: _____ End: _____

0725 Mike Alcota arrived at the Site to Meet with Sam Yang, Caltrans representative.
0730 Began to walk/drive around to Survey Davis bridges along the 10 freeway.
0832 Received a phone-call from Sam Yang that he will be running a little late due to traffic.
0936 Sam and Oscar both of Caltrans arrived at the Site.
0938 Held a brief meeting at Site in the bay off Dalewood and a Short-health and Safety Meeting.
1008 Began marking boring locations and utilities starting from Puente Ave under existing slopes
1015 Completed marking boring locations at Puente Ave.
1018 Continued to Carmen Ave.
1125 Began marking boring location along Carmen Ave.
1130 Completed marking boring locations along Carmen Ave. U.S.A. markings for utilities were also done along with markings of borings.
1135 Began marking boring locations along West Covina Parkway / Valencia Ave.
1140 Completed marking boring, U.S.A. markings for utilities at West Covina Parkway.
1145 Began Marking boring locations along the Slope of Vincent Ave/ Under Carriage.
1150 Completed marking boring and U.S.A. markings at Vincent Ave.
1202 Continued to mark boring locations and utilities

Employee Name	Field Time	Employee Name	Field Time
Mike Alcota	8 hrs		

PREPARED BY:	APPROVED BY:

GEOCON CONSULTANTS, INC.
CALTRANS CONTRACT NO. 07A2730
TASK ORDER NO. 11
GEOCON PROJECT S9500-06-04
PROJECT FIELD LOG

Date: 7/19/11

PROJECT NAME: ROUTE 10 ADL	
CALTRANS ONSITE REP: SAM YANG	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY: Marking of borings/ utilities	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☑ NO	MILEAGE Start:_____ End:_____

at Lark Ellen Ave LC.
1205 Completed marking borings and USA marking for utilities at Lark Ellen Ave LC.
1210 Began marking borings and USA markings at Azusa Ave LC.
1215 Completed marking borings and USA markings at Azusa Ave.
1220 Began marking borings and USA markings at Hollenbeck St LC.
1228 Completed marking borings and USA marking at Hollenbeck St. LC.
1230 Took a short lunch break.
1305 Began marking borings at Citrus Ave Undercrossing.
1310 Completed marking borings and USA marking at Citrus Ave.
1320 Began marking borings, putting in stakes and marking USA at Grand Ave.
1325 Completed marking borings and USA markings at Grand Ave LC.
1335 Began Marking borings putting in stakes and USA markings at Holt Ave. LC.
1340 Completed marking borings, putting in stakes and USA markings at Holt Ave.
1345 Began marking marking borings putting in stakes and USA markings at Via Verde LC.
1402 Completed marking borings putting in stakes and marking for USA at Via Verde LC.

Employee Name	Field Time	Employee Name	Field Time
Mike Alcott	8 hrs		

PREPARED BY:	APPROVED BY:

GEOCON CONSULTANTS, INC.
CALTRANS CONTRACT NO. 07A2730
TASK ORDER NO. 11
GEOCON PROJECT S9500-06-04
PROJECT FIELD LOG

Date: 1/19/11

PROJECT NAME: ROUTE 10 ADL	
CALTRANS ONSITE REP: SAM YANG	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY: Marking & boring/utilities	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☑ NO	MILEAGE Start:_____ End:_____

1410 Began marking borings, putting in stakes and marking alignment at Kellogg Drive.
1415 Completed marking borings, putting in stakes and markings at utilities at Kellogg Drive.
1420 Left Geocon to Barranca on-ramp along the freeway to mark boring locations and utilities.
1430 Completed marking borings putting in stakes and USA markings at West side of the freeway.
1445 Began Marking borings along the east side of the freeway around Barranca exit ramp
1453 Completed marking borings, putting in stakes and markings for utilities.
1520 Completed work for the day and off site.

Employee Name	Field Time	Employee Name	Field Time
Mike Alcoto	8 hrs		

PREPARED BY:	APPROVED BY:

GEOCON CONSULTANTS, INC.
CALTRANS CONTRACT NO. 07A2730
TASK ORDER NO. 11
GEOCON PROJECT S9500-06-04
PROJECT FIELD LOG

Date: 1/24/2011

PROJECT NAME: ROUTE 10 ADL	
CALTRANS ONSITE REP: SAM YANG	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY: Soil Sampling 10 Freeway	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☑ NO	MILEAGE Start:_____ End:_____

0700 Mike Alcota, Jelisa Thomas, Cesar Lopez, and Matt Levin arrived at Talk in the box the Meeting Area at the Site. Sam Yang also arrived later.
0730 Held health and Safety Meeting. Discussed how the sampling was going to be done. Divided into Two groups.
0855 Set-off to their various locations to start sampling.
0900 Began sampling at boring 1127-102 at Puente Avenue.
0933 Completed sampling boring 1127-102. Logged the soil and took pictures of the boring location. Moved to the next boring location boring 1127-101
1004 Began sampling boring 1127-101.
1042 Completed sampling boring 1127-101, hit refusal at 6 feet. Took pictures of the boring location and logged the soil. Moved to the next boring 1127-103.
1112 Began sampling boring 1127-103. Hit refusal at 2 feet due to gravel. Took pictures and logged the soil. Moved to the next boring location boring 1127-104. Took a short lunch break.
1200 Moved to boring 1127-104 and continued sampling.
1211 Collected soil samples up to 4 feet and

Employee Name	Field Time	Employee Name	Field Time
Mike Alcota	9.00		
Jelisa Thomas	8.00		

PREPARED BY:	APPROVED BY:

GEOCON CONSULTANTS, INC.
CALTRANS CONTRACT NO. 07A2730
TASK ORDER NO. 11
GEOCON PROJECT S9500-06-04
PROJECT FIELD LOG

Date: 7/19/11

PROJECT NAME: ROUTE 10 ADL	
CALTRANS ONSITE REP: SAM YANG	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY: Marking of borings/ utilities	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☑ NO	MILEAGE Start:_____ End:_____

at Lark Ellen Ave LC.
1205 Completed marking borings and USA marking for utilities at Lark Ellen Ave LC.
1210 Began marking borings and USA markings at Azusa Ave LC.
1215 Completed marking borings and USA markings at Azusa Ave.
1220 Began marking borings and USA markings at Hollenbeck St LC.
1228 Completed marking borings and USA marking at Hollenbeck St. LC.
1230 Took a short lunch break.
1305 Began marking borings at Citrus Ave Undercrossing.
1310 Completed marking borings and USA marking at Citrus Ave.
1320 Began marking borings, putting in stakes and marking USA at Grand Ave.
1325 Completed marking borings and USA markings at Grand Ave LC.
1335 Began Marking borings putting in stakes and USA markings at Holt Ave. LC.
1340 Completed marking borings, putting in stakes and USA markings at Holt Ave.
1345 Began marking marking borings putting in stakes and USA markings at Via Verde LC.
1402 Completed marking borings putting in stakes and marking for USA at Via Verde LC.

Employee Name	Field Time	Employee Name	Field Time
Mike Alcott	8 hrs		

PREPARED BY:	APPROVED BY:

GEOCON CONSULTANTS, INC.
CALTRANS CONTRACT NO. 07A2730
TASK ORDER NO. 11
GEOCON PROJECT S9500-06-04
PROJECT FIELD LOG

Date: 1/19/11

PROJECT NAME: ROUTE 10 ADL	
CALTRANS ONSITE REP: SAM YANG	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY: Marking & boring/utilities	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☑ NO	MILEAGE Start:_____ End:_____

1410 Began marking borings, putting in stakes and marking alignment at Kellogg Drive.
1415 Completed marking borings, putting in stakes and markings at utilities at Kellogg Drive.
1420 Left Geocon to Barranca on-ramp along the freeway to mark boring locations and utilities.
1430 Completed marking borings putting in stakes and USA markings at West side of the freeway.
1445 Began Marking borings along the east side of the freeway around Barranca exit ramp
1453 Completed marking borings, putting in stakes and markings for utilities.
1520 Completed work for the day and off site.

Employee Name	Field Time	Employee Name	Field Time
Mike Alcoto	8 hrs		

PREPARED BY:	APPROVED BY:

GEOCON CONSULTANTS, INC.
CALTRANS CONTRACT NO. 07A2730
TASK ORDER NO. 11
GEOCON PROJECT S9500-06-04
PROJECT FIELD LOG

Date: 1/24/11

PROJECT NAME: ROUTE 10 ADL	
CALTRANS ONSITE REP: SAM YANG	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY: Soil Sampling 10 Freeway	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☒ NO	MILEAGE Start:_____ End:_____

hit refusal
1227 Completed sampling boring 1127-104. Tr/C meters at the boring location. Loaded the soil and moved to the next boring, 1127-108
1250 T/C a short break for 20 mins and continued sampling.
1325 Continued to sample boring 1127-108.
1331 Completed sampling boring 1127-108 after hitting refusal at 4.0 feet. T/C meters at the boring location and loaded the soil. Moved to the next location 105.
1354 Continued to sample borng 1127-105.
1401 Completed sampling boring 1127-105 after hitting refusal at 4.0 feet. Moved to boring 1127-107.
1426 Began sampling boring 1127-107
1509 Completed sampling boring 1127-107 T/C meters, loaded soil.
1545 Completed sending off for the day. Jelisa Thomas finished for the day. Mike Alcoto began to double check the samples and waited for the cab guy to pick up the samples.
1655 Mike Alcoto offsite for the day.

One equipment blank sample was collected 100-EB-1 at 1530.

Employee Name	Field Time	Employee Name	Field Time
Mike Alcoto	9.0		
Jelisa Thomas	8.0		

PREPARED BY:	APPROVED BY:

GEOCON CONSULTANTS, INC.
CALTRANS CONTRACT NO. 07A2730
TASK ORDER NO. 11
GEOCON PROJECT S9500-06-04
PROJECT FIELD LOG

Date: 1/24/10

PROJECT NAME: ROUTE 10 ADL	
CALTRANS ONSITE REP: SAM YANG	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY: Soil Sample	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☑ NO	MILEAGE Start: 204592 End: 204616

08:00 Arrived at the designated meeting area. Began Health & Safety meeting
08:15 Finished H&S meeting, began setup for the day
08:30 Left for first location at Pacific Ave.
08:45 Arrived at location 109, began setup
08:55 Began sampling location 109 @ 2, 4, 6'
0925 Finished location 109, moved & set up on 110
10:00 Finished location 109, moved to & set up on 112
1038 Finished location 111, moved to & set up 111
1110 Finished location 111, moved to & set up 113
1200 Finished location 113, moved to & set up 114
1218 Finished location 114, moved to & set up 116
1250 Finished location 116, moved to & set up 115
1320 Finished location 115, moved to & set up 125
1342 Finished location 125, moved to & set up 126
~~1445~~ 1425 Finished location 126, moved to & set up 128
~~1510~~ 1445 Finished location 128, ~~moved to & set up~~ moved up to 127 & set
1515 Finished location 127. ~~We~~ Headed back to designated meeting area to drop off samples
1520 Arrived at meeting location dropped off samples with Mike Acosta
1530 Took Equipment Blank, had a meeting with Sam Yang w/ Calt
1645 left site

Employee Name	Field Time	Employee Name	Field Time
Cesar Larios	9		
Matt Lewin	8		

PREPARED BY:	APPROVED BY:

GEOCON CONSULTANTS, INC.
CALTRANS CONTRACT NO. 07A2730
TASK ORDER NO. 11
GEOCON PROJECT S9500-06-04
PROJECT FIELD LOG

Date: 4/25/11

PROJECT NAME: ROUTE 10 ADL	
CALTRANS ONSITE REP: SAM YANG	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY: Soil Sampling 10 freeway	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☑ NO	MILEAGE Start:_____ End:_____

0700 Mike Alcota, ~~and~~ Jelisa Thomas, Cesar Lanas and Matt Lenn with Sam Yang arrived at the site.

0730 Held health and safety meeting for the day. Sam wanted 2 soil samples from each location that was sampled. We had to go back and sample all locations that my ~~my~~ sample was collected. Mike Alcota and Jelisa Thomas ~~are~~ were working in one group.

0800 Mike Alcota and Jelisa Thomas went back to sample boring 1127-103 where only 2 out of sample was collected.

0805 Completed sampling boring 1127-103. logged soil, Moved to boring 1127-119.

0850 Began sampling boring 1127-119

0922 Completed sampling boring 1127-119 Continued to sample boring 1127-117.

0936 Completed sampling boring 1127-117. Took pictures, logged soil and moved to the next boring 1127-120.

1013 Continued to sample boring 1127-120 and 1127-118.

1040 Completed sampling borings 1127-120 and 1127-118. Took pictures of boring locations and logged soil.

1138 Continued to sample boring 1127-124 and 1127-122

1150 Completed sampling borings 1127-124 and 1127-122 took pictures and logged soil. Moved to the next boring location.

Employee Name	Field Time	Employee Name	Field Time
Mike Alcota	9.00		
Jelisa Thomas	8.00		

PREPARED BY:	APPROVED BY:

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CALTRANS CONTRACT NO. 07A2730
TASK ORDER NO. 11
GEOCON PROJECT S9500-06-04
PROJECT FIELD LOG

Date: 4/25/11

PROJECT NAME: ROUTE 10 ADL	
CALTRANS ONSITE REP: SAM YANG	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY: Soil Sampling 10 Freeway	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☑ NO	MILEAGE Start:_____ End:_____

1329. Continued to sample borings 1127-121 and 1127-123.
1400 Completed sampling boring 1127-129 and 1127-125. Took pictures and typed soil logs. Collected first equipment blank sample at 0820 and the second equipment blank sample at 1350
1445 Completed sampling, logging, and taking all pictures at all the borings / coring
1530 Jelisa Thomas left the site for the day. Mike Alcoba waited for the last guy to finish up sampling and double checked samples collected.

Employee Name	Field Time	Employee Name	Field Time
Mike Alcoba	9.00		
Jelisa Thomas	8.00		

PREPARED BY:	APPROVED BY:

GEOCON CONSULTANTS, INC.
CALTRANS CONTRACT NO. 07A2730
TASK ORDER NO. 11
GEOCON PROJECT S9500-06-04
PROJECT FIELD LOG

Date: 1/25/11

PROJECT NAME: ROUTE 10 ADL	
CALTRANS ONSITE REP: SAM YANG	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY: Soil Sampling	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☑ NO	MILEAGE Start: 204668 End: 204689

7:30 A Arrived on site, began set up for the days work
7:40 A Began Health & Safety meeting - conducted by Cesar Larios
7:50 A ~~Began~~ Finished H&S meeting, left to redo boring locations in which 1 sample was taken due to refusal. At the request of Sam at least 2 samples should be taken at each location, therefore an additional sample at 1 or 2 feet, depending on the sample schedual, will be taken at boring location with shallow refusal.
08:00 A Arrived at location 110 to get an additional sample, began set up.
08:34 A Moved to location 112 to get an additional sample
0846 A Moved to location 111 to get an additional sample
0856 A Moved to location 113 to get an additional sample
0916 A Moved to location 125 to get an additional sample
0955 A Moved to location 126 to get an additional sample
1005 A Moved to location 128 to get an additional sample
1025 A Moved to location 127 to get an additional sample
1040 A Finished resampleing borings excavated on 1/24/11, continued new boring on Holt St.
1055 A Arrived at location 155, began set up & excavation
1122 A Finished location 155, moved to & set up on location 156
1155 A Finished location 156, moved to & set up on location 158
1210 P Finished location 158, moved to & set up on location ~~157~~ 157
1240 Finished location 157, moved to Via Verde & set up on loc. 161
1350 Finished location 161, moved to & set up on location 159
1415 Finished location 159, moved to & set up on location 163
1435 Finished location 163, began Final clean up
1455 left location 163 1510: Arrived at Meeting site, relinquished samples 1620, Left Site

Employee Name	Field Time	Employee Name	Field Time
Cesar Larios	9		
Matt Lewin	8		

PREPARED BY:	APPROVED BY:

GEOCON CONSULTANTS, INC.
CALTRANS CONTRACT NO. 07A2730
TASK ORDER NO. 11
GEOCON PROJECT S9500-06-04
PROJECT FIELD LOG

Date: 1/26/11

PROJECT NAME: ROUTE 10 ADL	
CALTRANS ONSITE REP: SAM YANG	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY: Soil Sampling 10 Fwy	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☑ NO	MILEAGE Start:_____ End:_____

0700 Mike Alcott, Jelisa Thomas, Cesar Lares and Matt Leury arrived at the Site.
0720 Held Health and Safety meeting.
0800 Collected first equipment blank for the day.
0814 Began to sample borings 1127-127 and 1127-128.
0830 Mike Alcott and Jelisa Thomas completed sampling borings 1127-127 and 1127-128. Took pictures of boring location and logged soil.
0900 Began to sample borings 1127-130 and 1127-132.
0917 Completed sampling borings 1127-130 and 1127-132. Took pictures and logged soil.
1007 Began to sample borings 1127-134 and 1127-136.
1045 Completed sampling borings 1127-134 and 1127-136. Took pictures of boring location and logged soil collected. Moved to the next boring location.
1116 Began to sample borings 1127-133 and 1127-135.
1144 Completed sampling borings 1127-133 and 1127-135. Took pictures of the boring locations and logged soil collected.
1200 Took a short lunch break.
1329 Began to sample borings 1127-137 and 1127-138.

Employee Name	Field Time	Employee Name	Field Time
Mike Alcott	8.0		
Jelisa Thomas	8.0		

PREPARED BY:	APPROVED BY:

GEOCON CONSULTANTS, INC.
CALTRANS CONTRACT NO. 07A2730
TASK ORDER NO. 11
GEOCON PROJECT S9500-06-04
PROJECT FIELD LOG

Date: [illegible]/26/11

PROJECT NAME: ROUTE 10 ADL	
CALTRANS ONSITE REP: SAM YANG	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY:	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☑ NO	MILEAGE Start:________ End:________

1413 Completed sampling borings 1127-137 and 1127-138. Took pictures and ~~left the~~ logged the soil.

1520 Collected the second equipment blank sample for the day.

1530 Julisa Thomas offsite for the day.

1645 Mike Alcott offsite after samples were picked up at the site.

Employee Name	Field Time	Employee Name	Field Time
Mike Alcott	9.0		
Julisa Thomas	8.0		

PREPARED BY:

APPROVED BY:

GEOCON CONSULTANTS, INC.
CALTRANS CONTRACT NO. 07A2730
TASK ORDER NO. 11
GEOCON PROJECT S9500-06-04
PROJECT FIELD LOG

Date: 1/26/11

PROJECT NAME: ROUTE 10 ADL	
CALTRANS ONSITE REP: SAM YANG	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY:	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☑ NO	MILEAGE Start: 204741 End: 204767

07:30	Arrived at designated meeting area. Began the morning H & S meeting
07:40	Finished H&S meeting, left for the first location (165) at Via Verde
07:55	Arrived at Via Verde, began set up procedures for the day & got the first EB
0819	Began sampleing location 165
0835	Finished location 165, moved to & set up on location 166
0900	Finished location 166, moved to & set up on location 164
0912	Finished location 164, moved to & set up on location 162
0930	Finished location 162, moved to & set up on location 160
1005	Finished location 160, moved to & set up on location 174
1045	Finished location 174, moved to & set up on location 170
1100	Finished location 170, moved to & set up on location 169
1120	Finished location 169, moved to & set up on location 167
1130	GPS'd all the locations along Kellogg
1150	Cont. with location 167
1225	Finished location 167, moved to & set up on location 172
1250	Finished location 172, ~~moved to~~ Met w/ Mike Acosta to assist in their sampling
1335	Began sampling at location 140
1400	Finished location 140, moved to & set up on location 139
1430	Finished location 139, began final clean up procedures
1500	Met at designated meeting location, began to review samples
1615	Relinquished samples, left site

Employee Name	Field Time	Employee Name	Field Time
Cesar Larios	9		
Matt Lewin	8		

PREPARED BY:	APPROVED BY:

GEOCON CONSULTANTS, INC.
CALTRANS CONTRACT NO. 07A2730
TASK ORDER NO. 11
GEOCON PROJECT S9500-06-04
PROJECT FIELD LOG

Date: 1/27/11

PROJECT NAME: ROUTE 10 ADL	
CALTRANS ONSITE REP: SAM YANG	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY: Soil Sampling 10 ADL	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☑ NO	MILEAGE Start:_____ End:_____

0730 All arrived at the site.
0812 Collected 1st equipment blank for the day
0832 Collected, Sampled 1127-148-0.5-1.0
0837 Sampled 1127-148-1.5-2.0
0848 Sampled 1127-148-3.5-4.0
0905 Sampled 1127-150-1.5-2.0
0918 Sampled 1127-150-3.5-4.0
1004 Sampled 1127-149-1.5-2.0
1016 Sampled 1127-149-3.5-4.0
1026 Sampled 1127-149-5.5-6.0
1044 Sampled 1127-147-1.5-2.0
1054 Sampled 1127-147-3.5-4.0
1056 Sampled 1127-147-5.5-6.0
1129 Sampled 1127-145-0.5-6.0
1135 Sampled 1127-145-1.5-2.0
1232 Sampled 1127-152-1.5-2.0
1236 Sampled 1127-~~152~~-3.5-4.0
1243 Sampled 1127-152-5.5-6.0
1258 Sampled 1127-152-7.5-8.0
1342 Sampled 1127-~~0.5~~ 175-0.5-1.0
1345 Sampled 1127-175-1.5-2.0
1347 Sampled 1127-175-2.5-3.0
1403 Sampled 1127-177-0.5-1.0
1408 Sampled 1127-177-1.5-2.0
1420 Sampled 1127-179-0.5-1.0
1440 Sampled 1127-181-0.5-1.0
1442 Sampled 1127-181-1.5-2.0
1444 Sampled 1127-181-2.5-3.0

Employee Name	Field Time	Employee Name	Field Time
Mike Alcott	9.0		
Julia Howard	8.0		

PREPARED BY:	APPROVED BY:

GEOCON CONSULTANTS, INC.
CALTRANS CONTRACT NO. 07A2730
TASK ORDER NO. 11
GEOCON PROJECT S9500-06-04
PROJECT FIELD LOG

Date: 1/27/2011

PROJECT NAME: ROUTE 10 ADL	
CALTRANS ONSITE REP: SAM YANG	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY: Soil Sampling, 10 ADL	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☑ NO	MILEAGE Start:________ End:________

1402 Sampled 1127-8-5-6.0
1413 Sampled 1127-8-5-9.0
1500 Collected, secured equipment and ready for the lab. Jelisa Thomas offsite.
1600 Mike Alcoto waited at the site for the samples to be picked up.

Employee Name	Field Time	Employee Name	Field Time
Mike Alcoto	9.0		
Jelisa Thomas	8.0		

PREPARED BY:	APPROVED BY:

GEOCON CONSULTANTS, INC.
CALTRANS CONTRACT NO. 07A2730
TASK ORDER NO. 11
GEOCON PROJECT S9500-06-04
PROJECT FIELD LOG

Date: 1/27/11

PROJECT NAME: ROUTE 10 ADL	
CALTRANS ONSITE REP: SAM YANG	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY: Soil Sample	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☑ NO	MILEAGE Start: 204819 End: 204879

0730: Arrived on site, began the morning H&S meeting
0745: Finished the H&S meeting, discussed the ~~Exe~~ sampling schedule for the day
0800 Left designated meeting area & moved the Bernanca location along the SB -off ramp, Began morning set up.
0815 Began sampling at location 142
0901 Finished location 142, moved to & set up on location 144
0925 Finished location 144, moved to & set up on location 146
1000 Finished location 146, moved to & set up on location 141
1042 Finished location 141, moved to & set up on location 143
1130 Finished location 143, moved to & set up on location 154
1240 Finished location 154, waited for Sam with Caltrans for further instructions.
1300 It was decided by Sam Yang with Caltrans that additional borings / samples will be conducted along the 10 EB shoulder between Via Verde & Kellogg Dr. Moved to new work area
1315 Arrived at new work area and marked out an additional 10 borings, # 175 – 184
1350 Began ~~boring 176~~ sampling location 176
1415 Finished location ~~#~~ 176, moved to & set up on location 178
1430 Finished location 178, moved to & set up on location 180
1450 Finished location 180, began final cleanup procedures
1515 It was decided by Sam Yang with Caltrans to conduct 6 additional borings along Via Verde Ave/10WB on & off ramps. Moved to location to stake new locations, # 185 – 190
1530 Moved to the designated meeting area and began to wash Sampling Equ
1615 Relinquished samples & paperwork to Mike Acosta, Let's Go

Employee Name	Field Time	Employee Name	Field Time
Cesar Larios	9		
Matt Lewin	8		

PREPARED BY:	APPROVED BY:

GEOCON CONSULTANTS, INC.
CALTRANS CONTRACT NO. 07A2730
TASK ORDER NO. 11
GEOCON PROJECT S9500-06-04
PROJECT FIELD LOG

Date: 2/28/11

PROJECT NAME: ROUTE 10 ADL	
CALTRANS ONSITE REP: SAM YANG	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY: Soil Sampling to Frame	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☑ NO	MILEAGE Start: End:

0700 Mike Alcoto, Telisa Thomas, Matt Jenny, and Gregg Langs on site at the site.
0710 Held health and safety meeting.
0821 Collected first equipment blank samples for the day.
0835 Began to collect samples at bonny 1127-182.
0851 Completed sampling bonny 1127-182. Took pictures of the bonny location and logged the soil collected.
0913 Sampled bonny 1127-179 for a 2ft sample.
0929 Began to sample bonny 1127-191
0934 Completed sampling bonny 1127-191. Took pictures, and logged soil collected
0948 Began to sample bonny 1127-192
1001 Completed sampling bonny 1127-192 took pictures of the bonny location and logged soil collected.
1011 Began to sample bonny 1127-193
1028 Completed sampling bonny 1127-193. Took pictures of the bonny location and logged soil collected.
1038 Began to sample bonny 1127-194
1036 Completed sampling bonny 1127-194. Took pictures of the bonny location. and logged soil collected
1100 Took a short lunch break.

Employee Name	Field Time	Employee Name	Field Time
Mike Alcoto	8.0		
Telisa Thomas	8.0		

PREPARED BY:	APPROVED BY:

GEOCON CONSULTANTS, INC.
CALTRANS CONTRACT NO. 07A2730
TASK ORDER NO. 11
GEOCON PROJECT S9500-06-04
PROJECT FIELD LOG

Date: 1/28/11

PROJECT NAME: ROUTE 10 ADL	
CALTRANS ONSITE REP: SAM YANG	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY:	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☑ NO	MILEAGE Start:_____ End:_____

1210 Began to sample boring 1127-185
1218 Completed sampling boring 1127-185. Take photos of the boring location and logged the soil collected.
1232 Began to sample boring 1127-186.
1239 Completed sampling boring 1127-186. Take photos of the boring location and logged the soil collected.
1258 Began to sample boring 1127-187.
1310 Completed sampling boring 1127-187. Take photos of the boring location and logged the soil collected.
1316 Collected the decon equipment blank sample for the day and decon-ed equipment for pack-up for the day.
1480 Jeffrey Thakal and Matt Penn offsite for the day.
1500 Mike Alcott and ~~Cesar~~ offsite for the day.

Employee Name	Field Time	Employee Name	Field Time
Mike Alcott	8.00		
Jelisa Thomas	8.00		

PREPARED BY:	APPROVED BY:

GEOCON CONSULTANTS, INC.
CALTRANS CONTRACT NO. 07A2730
TASK ORDER NO. 11
GEOCON PROJECT S9500-06-04
PROJECT FIELD LOG

Date: 1/28/11

PROJECT NAME: ROUTE 10 ADL	
CALTRANS ONSITE REP: SAM YANG	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY: Soil Sampling	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☑ NO	MILEAGE Start: 204931 End: 204956

07:30 ~~Arrived~~ Met at designated meeting area, conducted the daily H & S meeting
07:55 Left morning meeting area & left to new locations on the 10EB between Via Verde Ave & Kellogg Ave
0820 Began morning set up.
0825 Began sampling location 184
0908 Finished location 184, moved to & set up on location 183
0930 Finished location 183, It was decided by Sam Yang w/ Caltrans that an additional 6 borings would be excavated along the 10EB shoulder, # 191 to 196 between Via Verde & Kellogg Ave. Moved to location 196
0935 Began location 196
1005 Finished location 196, moved to & set up on 195
1045 Finished location 195, GPS'd location; between 10EB Via Verde & Kellogs Ave
1200 Moved to & set up on location 188
1235 Finished location 188, Moved to & set up on 189
1301 Finished location 189, moved to & set up on location 190
1315 Finished location 190, GPS'd locations along 10EB along Via Verde.
1355 Moved to designated meeting area to relinquish samples
1435 Relinquished samples to Mike Acosta, left to GPS locate locations along Puente Ave, Cameron Ave, Cameron Ave EB offramp, Lake Ellen Ave & Hollenbeck St
1710 Finished GPS'ing due to low battery will continue on Monday 1/31/11
1715 Left site

Employee Name	Field Time	Employee Name	Field Time
César Larios	10		
Matt Lewin	8		

PREPARED BY:	APPROVED BY:

GEOCON CONSULTANTS, INC.
CALTRANS CONTRACT NO. 07A2730
TASK ORDER NO. 11
GEOCON PROJECT S9500-06-04
PROJECT FIELD LOG

Date: 1/31/11

PROJECT NAME: ROUTE 10 ADL	
CALTRANS ONSITE REP: SAM YANG	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY:	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☑ NO	MILEAGE Start: 205238 End: 205258

0800 Arrived at locations off of Hollenbeck St to continue GPS locating of site left off on Fri 1/28/11
0920 Finished GPS locating all locations left site for office
1030 Arrived at office

Employee Name	Field Time	Employee Name	Field Time
Cesar Larios	2.5		

PREPARED BY:	APPROVED BY:

GEOCON CONSULTANTS, INC.
CALTRANS CONTRACT NO. 07A2730
TASK ORDER NO. 11
GEOCON PROJECT S9500-06-04
PROJECT FIELD LOG

Date: 2/4/11

PROJECT NAME: ROUTE 10 ADL	
CALTRANS ONSITE REP: SAM YANG	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY: GPS Survey - Re-check	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☑ NO	MILEAGE Start: 205296 End: 205356

1420 Left for the subject area along the 10 fwy

1445 Arrived at first location along Puente Ave. Will conduct a recheck & re-GPS locations of ~~locations~~ Borings 101, 102, 103, 104, 105, 109, 110, 113, 115–119, 121–124. In addition, stakes were pulled from all boring locations

1730 Finished GPS surveying & pulling stakes. Left site.

Employee Name	Field Time	Employee Name	Field Time
Cesar Larios	3		

PREPARED BY:	APPROVED BY:

GEOCON CONSULTANTS, INC.
CALTRANS CONTRACT NO. 07A2729
TASK ORDER NO. 5
GEOCON PROJECT S9475-06-05
PROJECT FIELD LOG

Date: 2/4/11

PROJECT NAME: LA-101 PM 0.0-11.0 ADL	
CALTRANS ONSITE REP:	GEOCON PROJECT MANAGER: MIKE CONKLE
FIELD ACTIVITY: GPS survey	SUBCONTRACTOR:
PREVAILING WAGE ☐ YES ☑ NO	MILEAGE Start: 205271 End: 205296

1230 Left office for first location along Lankershim Blvd. to re-locate boring hole #18 (BH 18) as well as BH #15 due to anomalous reading in the GPS data.
1315 Re-GPS' located BH 18 moved to BH #15 along Cahuenga Blvd.
1355 Re GPS located BH 15. Reviewed final data.
1420 Left site

Employee Name	Field Time	Employee Name	Field Time
Cesar Larios	7		

PREPARED BY:	APPROVED BY:

8.0 PLAN APPROVAL

The undersigned has reviewed and approved this Health and Safety Plan prepared for the aerially deposited lead site investigation project along Route 10 in Los Angeles County, as described herein.

Douglas S. Krause, CIH - Krause & Associates
Geocon Consulting Certified Industrial Hygienist
ABIH Certification No. 2123, Exp. June 1, 2015

January 17, 2011
Date

Mike Conkle, PG
Geocon Project Manager

1/18/11
Date

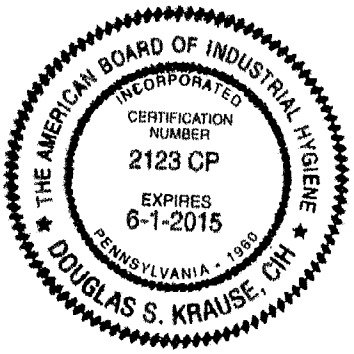
The following personnel, including subcontractors involved with the project activities have reviewed, or received a copy of this Plan and Attachment A, and agree to follow the health and safety procedures described herein.

Print Name	Title	Signature	Date
Mike Alcott	Staff Geologist		1/24/11
Sam Yang	Caltrans		1/24/11
Cesar Larios	Project Geologist		1/24/11
Elisa Thomas	Project Eng.		1/24/11
Matthew Lewin	Soil Insp.		1/24/11

8.0 PLAN APPROVAL

The undersigned has reviewed and approved this Health and Safety Plan prepared for the aerially deposited lead site investigation project along Route 10 in Los Angeles County, as described herein.

Douglas S. Krause, CIH - Krause & Associates
Geocon Consulting Certified Industrial Hygienist
ABIH Certification No. 2123, Exp. June 1, 2015



January 17, 2011
Date

Mike Conkle, PG
Geocon Project Manager

January 18, 2011
Date

The following personnel, including subcontractors involved with the project activities have reviewed, or received a copy of this Plan and Attachment A, and agree to follow the health and safety procedures described herein.

Print Name	Title	Signature	Date
Matthew Lewin	Soil insp.		1.25.11
César Larios	Project Geologist		1/25/11
Jessica Thomas	Project Eng		1/25/11
Mike Akoto	Staff Geologist		1/25/11
Sam Yang	~~Sr~~ Ct.		1/25/11

8.0 PLAN APPROVAL

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Douglas S. Krause, CIH - Krause & Associates
Geocon Consulting Certified Industrial Hygienist
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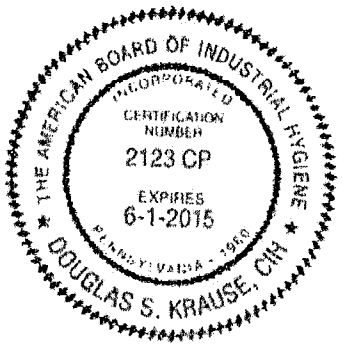

January 17, 2011
Date

Mike Conkle, PG
Geocon Project Manager

January 18, 2011
Date

The following personnel, including subcontractors involved with the project activities have reviewed, or received a copy of this Plan and Attachment A, and agree to follow the health and safety procedures described herein.

Print Name	Title	Signature	Date
Cesar Larios	Project Geologist		1/26/11
Matthew Legum	Soil insp.		1.26.11
Mike Atkins	Staff Geologist		1/26/11
Joshua Thomas	Piping		1/26/11
SAM YANG	QC		1/26/11

8.0 PLAN APPROVAL

The undersigned has reviewed and approved this Health and Safety Plan prepared for the aerially deposited lead site investigation project along Route 10 in Los Angeles County, as described herein.

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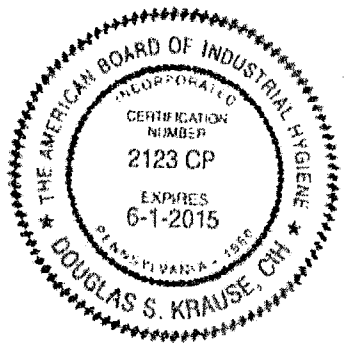

January 17, 2011
Date

Mike Conkle, PG
Geocon Project Manager

January 18, 2011
Date

The following personnel, including subcontractors involved with the project activities have reviewed, or received a copy of this Plan and Attachment A, and agree to follow the health and safety procedures described herein.

Print Name	Title	Signature	Date
Nils Hilch	Staff Geologist		1/27/11
[illegible] Larios	Staff Engr.		1-27-11
Cesar Larios	Proj Geologist		1-27-11
Jelisa Thomas	Geocon		1-27-11
Sean Young	GT.		1-27-11

8.0 PLAN APPROVAL

The undersigned has reviewed and approved this Health and Safety Plan prepared for the aerially deposited lead site investigation project along Route 10 in Los Angeles County, as described herein.

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Geocon Consulting Certified Industrial Hygienist
ABIH Certification No. 2123, Exp. June 1, 2015

January 17, 2011
Date

Mike Conkle, PG
Geocon Project Manager

January 18, 2011
Date

The following personnel, including subcontractors involved with the project activities have reviewed, or received a copy of this Plan and Attachment A, and agree to follow the health and safety procedures described herein.

Print Name	Title	Signature	Date
César Larios	Project Geologist		1/28/11
Mike Alcala	Staff Geologist		1/28/11
Matthew Lewin	Soils Insp.		1.28.11
SAM YANEZ	~~Staff~~ CIT		1.28.11
Jelisa Thomas			1/28/11

DAILY FIELD RECORD

AMEC Geomatrix

Project and Task Number: 015324011.0 A1	Date: 3/15/11
Project Name: Caltrans - TOLA 1	Field Activity: Soil Sampling ADL
Location: Area 1 & Area 2	Weather:

PERSONNEL: Name	Company	Time In	Time Out
V. Robino	AMEC Geomatrix (AMEC GMX)	0610	1600
Eric, Gilbert D.	Interphase	0610	1545
Sam Yang	Caltrans.	0630	1545

PERSONAL SAFETY CHECKLIST

x	Steel-toed Boots	x	Hard Hat	-	Tyvek Coveralls
x	Rubber Gloves	x	Safety Goggles	-	1/2-Face Respirator

DRUM I.D.	DESCRIPTION OF CONTENTS AND QUANTITY	LOCATION

TIME	DESCRIPTION OF WORK PERFORMED
0610	Robino at meeting location with Interphase - eastbound exit at Hart.
0630	Sam Yang arrives. HASP meeting & review scope for the day.
0700	Mobilize to drilling area (Area 2) and stake locations with Sam. Drillers unload track rig.
0750	Setup at first location 1127-201. Use "200" as "blank" placeholder.
0755	Start drilling 1127-201.
0830	End " 1127-201.
0850	~~Start~~ Start drilling at 1127-202.
0910	End drilling at 1127-202 Refusal at 7' bgs.
0915	Start drilling at 1127-203. Refusal at 2' bgs. Sam instructs AMEC/Interphase to step out to the west 2' and attempt again.
1000	Complete drilling/sampling on eastern bench. Mob. rig to west bench
1010	Drillers indicate track rig is having difficulties moving to west bench.
1015/1016	Collect 1st set of blanks (E. Blank and F. blank) - corresponds to borings 1127-201 through 1127-204 and on COC #16862 & part of 16863.

DAILY FIELD RECORD (continued)

AMEC Geomatrix

Project and Task Number: 015324011A | Date: 3/15/11

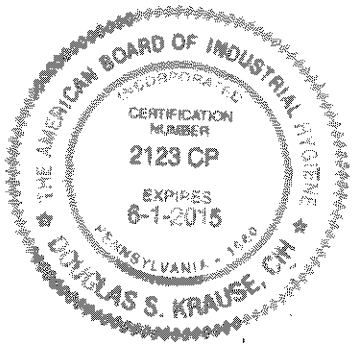
TIME	DESCRIPTION OF WORK PERFORMED
1030	Drillers mob track rig to western most location (west bench).
1040	Began drilling at 1127-205.
1050	First attempt at 1127-205 had refusal at 4' bgs. Sam requests moving out (stepout) ~2' and try again.
	Second attempt - refusal at 1.5' bgs.
1100	mob to 1127-206
1108	first two attempts at 1127-206 unsuccessful: (1st attempt = T.D. 2.5'.
	2nd attempt (stepout to the east) Refusal at T.D = 2'. Sam requests one
	more attempt.
1129	3rd attempt at 1127-206 Refusal @ 4' bgs.
1126	mob. to 1127-207. Refusal at 8' bgs. TD = 10.5'
1204/1205	Collect 2nd blank set (through boring 1127-207.)
1207	Begin drilling / Sampling at 1127-208.
1235	Complete " " at 1127-208. Mob. rig off of west bench.
	Destroy all 8 borings with granular bentonite + decon water.
	Cleanup work area. GPS (Survey) all 8 locations. Photodoc.
	completed borings.
1330	Mob. To Area 1. Unload track rig to remaining 3 boring locations.
1407	Complete drilling at 1127-210. 1127-209 also completed.
1435/1436	Collect 3rd blank set 1127-200-FB3 & 1127-206-FB3 (applies) through
	boring 1127-210.
1440	Begin drilling at 1127-211. AMEC P.Manager indicates Caltrans
	has requested one additional boring (12 total).
1510	Complete drilling / Sampling. Mob. track rig back to truck / trailer.
1520	Complete backfilling / destroying boreholes
1545	Complete recording GPS data points. Drillers offsite. Sam offsite. 2 of 4 blank set collected
1600	Robin offsite.

3/15/11

8.0 PLAN APPROVAL

The undersigned has reviewed and approved this Health and Safety Plan prepared for the aerially deposited lead site investigation project along Route 10 in Los Angeles County, as described herein.

Douglas S. Krause, CIH - Krause & Associates
Geocon Consulting Certified Industrial Hygienist
ABIH Certification No. 2123, Exp. June 1, 2015



January 17, 2011
Date

Mike Conkle, PG
Geocon Project Manager

January 18, 2011
Date

The following personnel, including subcontractors involved with the project activities have reviewed, or received a copy of this Plan and Attachment A, and agree to follow the health and safety procedures described herein.

Print Name	Title	Signature	Date
V. Robino	Geologist		3/15/11
Erik Alvarez	Driller		3/15/11
Gilbert Dickason	Driller		3/15/11
Sam Yowby	Caltrans		3/15/11

APPENDIX C

April 20, 2011

Mike Conkle
Geocon Consultants, Inc.
3303 N. San Fernando Blvd., Suite 100
Burbank, CA 91504

TEL: (818) 841-8388
FAX: (818) 841-1704

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003

Workorder No.: 115950

RE: State Route 10 ADL, S9500-06-04

Attention: Mike Conkle

Enclosed are the results for sample(s) received on January 24, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

This is an addendum report. Please incorporate with documentation previously submitted.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.

CLIENT: Geocon Consultants, Inc.
Project: State Route 10 ADL, S9500-06-04
Lab Order: 115950

CASE NARRATIVE

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	115950
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/24/2011 6:12:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	SRB

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
115950-001A	1127-107-1.5-2.0	9.7	mg/Kg	70017	0.11	5.0		1	1/24/2011	1/27/2011
115950-002A	1127-107-3.5-4.0	8.1	mg/Kg	70017	0.11	5.0		1	1/24/2011	1/27/2011
115950-003A	1127-107-5.5-6.0	12	mg/Kg	70017	0.11	5.0		1	1/24/2011	1/27/2011
115950-004A	1127-107-8.5-9.0	4.8	mg/Kg	70017	0.11	5.0	J	1	1/24/2011	1/27/2011
115950-005A	1127-106-1.5-2.0	20	mg/Kg	70017	0.11	5.0		1	1/24/2011	1/27/2011
115950-006A	1127-106-3.5-4.0	11	mg/Kg	70017	0.11	5.0		1	1/24/2011	1/27/2011
115950-007A	1127-105-1.5-2.0	120	mg/Kg	70017	0.11	5.0		1	1/24/2011	1/27/2011
115950-008A	1127-105-3.5-4.0	11	mg/Kg	70017	0.11	5.0		1	1/24/2011	1/27/2011
115950-009A	1127-101-1.5-2.0	40	mg/Kg	70017	0.11	5.0		1	1/24/2011	1/27/2011
115950-010A	1127-101-3.5-4.0	20	mg/Kg	70017	0.11	5.0		1	1/24/2011	1/27/2011
115950-011A	1127-101-5.5-6.0	37	mg/Kg	70017	0.11	5.0		1	1/24/2011	1/27/2011
115950-012A	1127-104-1.5-2.0	26	mg/Kg	70017	0.11	5.0		1	1/24/2011	1/27/2011
115950-013A	1127-104-3.5-4.0	31	mg/Kg	70017	0.11	5.0		1	1/24/2011	1/27/2011
115950-014A	1127-102-1.5-2.0	47	mg/Kg	70017	0.11	5.0		1	1/24/2011	1/27/2011
115950-015A	1127-102-3.5-4.0	38	mg/Kg	70017	0.11	5.0		1	1/24/2011	1/27/2011
115950-016A	1127-102-5.5-6.0	28	mg/Kg	70017	0.11	5.0		1	1/24/2011	1/27/2011
115950-017A	1127-103-1.5-2.0	28	mg/Kg	70017	0.11	5.0		1	1/24/2011	1/27/2011
115950-018A	1127-109-2.0	4.6	mg/Kg	70017	0.11	5.0	J	1	1/24/2011	1/27/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	115950
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/24/2011 6:12:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	SRB

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
115950-019A	1127-109-4.0	2.5	mg/Kg	70017	0.11	5.0	J	1	1/24/2011	1/27/2011
115950-020A	1127-109-6.0	2.4	mg/Kg	70017	0.11	5.0	J	1	1/24/2011	1/27/2011
115950-021A	1127-110-2.0	10	mg/Kg	70018	0.11	5.0		1	1/24/2011	1/27/2011
115950-022A	1127-112-2.0	8.6	mg/Kg	70018	0.11	5.0		1	1/24/2011	1/27/2011
115950-023A	1127-111-2.0	4.2	mg/Kg	70018	0.11	5.0	J	1	1/24/2011	1/27/2011
115950-024A	1127-113-1.0	71	mg/Kg	70018	0.11	5.0		1	1/24/2011	1/27/2011
115950-025A	1127-114-1.0	8.7	mg/Kg	70018	0.11	5.0		1	1/24/2011	1/27/2011
115950-026A	1127-114-3.0	7.8	mg/Kg	70018	0.11	5.0		1	1/24/2011	1/27/2011
115950-027A	1127-116-1.0	34	mg/Kg	70018	0.11	5.0		1	1/24/2011	1/27/2011
115950-028A	1127-116-3.0	36	mg/Kg	70018	0.11	5.0		1	1/24/2011	1/27/2011
115950-029A	1127-116-5.0	7.0	mg/Kg	70018	0.11	5.0		1	1/24/2011	1/27/2011
115950-030A	1127-115-1.0	29	mg/Kg	70018	0.11	5.0		1	1/24/2011	1/27/2011
115950-031A	1127-115-3.0	5.3	mg/Kg	70018	0.11	5.0		1	1/24/2011	1/27/2011
115950-032A	1127-125-2.0	51	mg/Kg	70018	0.11	5.0		1	1/24/2011	1/27/2011
115950-033A	1127-126-2.0	23	mg/Kg	70018	0.11	5.0		1	1/24/2011	1/27/2011
115950-034A	1127-128-2.0	6.7	mg/Kg	70018	0.11	5.0		1	1/24/2011	1/27/2011
115950-035A	1127-127-2.0	22	mg/Kg	70018	0.11	5.0		1	1/24/2011	1/27/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	115950
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/24/2011 6:12:00 PM
Project No:		**Matrix:**	Water
Analyte:	Lead	**Analyst:**	JSD

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
115950-036A	1127-EB-100-2	ND	mg/L	70066	0.0046	0.25		1	1/24/2011	1/28/2011
115950-037A	1127-EB-100-1	ND	mg/L	70066	0.0046	0.25		1	1/24/2011	1/28/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION (STLC)
WET/ EPA 7420

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	115950
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/24/2011 6:12:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	IL

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
115950-007A	1127-105-1.5-2.0	4.2	mg/L	70118	0.21	0.25		1	1/24/2011	2/3/2011
115950-024A	1127-113-1.0	1.5	mg/L	70118	0.21	0.25		1	1/24/2011	2/3/2011
115950-032A	1127-125-2.0	1.8	mg/L	70118	0.21	0.25		1	1/24/2011	2/3/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION (TCLP)
EPA 1311/ 7420

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	115950
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/24/2011 6:12:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	VV

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
115950-007A	1127-105-1.5-2.0	0.30	mg/L	70707	0.21	0.25		1	1/24/2011	2/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

pH
EPA 9045C

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	115950
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/24/2011 6:12:00 PM
Project No:		**Matrix:**	Soil
Analyte:	pH	**Analyst:**	CBB

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
115950-007A	1127-105-1.5-2.0	8.4	pH Units	R129967	0.10	0.10		1	1/24/2011	2/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	1127-105-1.5-2.0
Lab Order:	115950	**Collection Date:**	1/24/2011 1:54:00 PM
Project:	State Route 10 ADL, S9500-06-04	**Matrix:**	SOIL
Lab ID:	115950-007A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP METALS							
	EPA 3050B				**EPA 6010B**		
RunID: **ICP8_110215B**	QC Batch: **70696**				PrepDate: **2/15/2011**		Analyst: **JSD**
Antimony	0.33	0.16	2.0	J	mg/Kg	1	2/15/2011 02:08 PM
Arsenic	ND	0.20	1.0		mg/Kg	1	2/15/2011 02:08 PM
Barium	92	0.056	1.0		mg/Kg	1	2/15/2011 02:08 PM
Beryllium	ND	0.042	1.0		mg/Kg	1	2/15/2011 02:08 PM
Cadmium	0.48	0.043	1.0	J	mg/Kg	1	2/15/2011 02:08 PM
Chromium	13	0.13	1.0		mg/Kg	1	2/15/2011 02:08 PM
Cobalt	8.1	0.11	1.0		mg/Kg	1	2/15/2011 02:08 PM
Copper	17	0.18	2.0		mg/Kg	1	2/15/2011 02:08 PM
Molybdenum	ND	0.097	1.0		mg/Kg	1	2/15/2011 02:08 PM
Nickel	12	0.11	1.0		mg/Kg	1	2/15/2011 02:08 PM
Selenium	ND	0.28	1.0		mg/Kg	1	2/15/2011 02:08 PM
Silver	ND	0.042	1.0		mg/Kg	1	2/15/2011 02:08 PM
Thallium	ND	0.098	1.0		mg/Kg	1	2/15/2011 02:08 PM
Vanadium	30	0.088	1.0		mg/Kg	1	2/15/2011 02:08 PM
Zinc	61	0.13	1.0		mg/Kg	1	2/15/2011 02:08 PM
MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7471A				
RunID: **AA1_110215A**	QC Batch: **70695**				PrepDate: **2/15/2011**		Analyst: **VV**
Mercury	0.042	0.0076	0.10	J	mg/Kg	1	2/15/2011 01:19 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT: Geocon Consultants, Inc.
Work Order: 115950
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **MB-70696** SampType: **MBLK** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **PBS** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111640**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.171	2.0									J
Arsenic	ND	1.0									
Barium	ND	1.0									
Beryllium	ND	1.0									
Cadmium	ND	1.0									
Chromium	ND	1.0									
Cobalt	ND	1.0									
Copper	ND	2.0									
Molybdenum	ND	1.0									
Nickel	ND	1.0									
Selenium	ND	1.0									
Silver	ND	1.0									
Thallium	ND	1.0									
Vanadium	ND	1.0									
Zinc	0.220	1.0									J

Sample ID: **LCS-70696** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **LCSS** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111641**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	49.670	2.0	50.00	0.1712	99.0	80	120				
Arsenic	49.827	1.0	50.00	0	99.7	80	120				
Barium	51.901	1.0	50.00	0	104	80	120				
Beryllium	51.067	1.0	50.00	0	102	80	120				
Cadmium	49.784	1.0	50.00	0	99.6	80	120				
Chromium	47.473	1.0	50.00	0	94.9	80	120				
Cobalt	51.031	1.0	50.00	0	102	80	120				
Copper	51.387	2.0	50.00	0	103	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115950
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **LCS-70696**	SampType: **LCS**	TestCode: **6010_S**	Units: **mg/Kg**	Prep Date: **2/15/2011**	RunNo: **129987**
Client ID: **LCSS**	Batch ID: **70696**	TestNo: **EPA 6010B**	**EPA 3050B**	Analysis Date: **2/15/2011**	SeqNo: **2111641**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	52.935	1.0	50.00	0	106	80	120				
Nickel	50.522	1.0	50.00	0	101	80	120				
Selenium	48.054	1.0	50.00	0	96.1	80	120				
Silver	48.722	1.0	50.00	0	97.4	80	120				
Thallium	49.730	1.0	50.00	0	99.5	80	120				
Vanadium	52.583	1.0	50.00	0	105	80	120				
Zinc	50.103	1.0	50.00	0.2199	99.8	80	120				

Sample ID: **115950-007A-DUP**	SampType: **DUP**	TestCode: **6010_S**	Units: **mg/Kg**	Prep Date: **2/15/2011**	RunNo: **129987**
Client ID: **1127-105-1.5-2.0**	Batch ID: **70696**	TestNo: **EPA 6010B**	**EPA 3050B**	Analysis Date: **2/15/2011**	SeqNo: **2111643**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.503	2.0						0.3335	0	20	J
Arsenic	ND	1.0						0	0	20	
Barium	87.920	1.0						92.48	5.06	20	
Beryllium	ND	1.0						0	0	20	
Cadmium	0.484	1.0						0.4796	0	20	J
Chromium	11.976	1.0						13.01	8.31	20	
Cobalt	7.806	1.0						8.123	3.97	20	
Copper	16.945	2.0						17.21	1.57	20	
Lead	119.364	1.0						115.6	3.22	20	
Molybdenum	ND	1.0						0	0	20	
Nickel	10.425	1.0						11.69	11.5	20	
Selenium	ND	1.0						0	0	20	
Silver	ND	1.0						0	0	20	
Thallium	ND	1.0						0	0	20	
Vanadium	29.441	1.0						30.04	2.02	20	
Zinc	63.084	1.0						61.20	3.03	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115950
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **115950-007A-MS** SampType: **MS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **1127-105-1.5-2.0** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111644**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	99.412	2.0	125.0	0.3335	79.3	32	105				
Arsenic	105.642	1.0	125.0	0	84.5	49	106				
Barium	205.619	1.0	125.0	92.48	90.5	31	133				
Beryllium	108.341	1.0	125.0	0	86.7	56	106				
Cadmium	104.937	1.0	125.0	0.4796	83.6	51	103				
Chromium	115.561	1.0	125.0	13.01	82.0	45	114				
Cobalt	115.696	1.0	125.0	8.123	86.1	52	106				
Copper	136.054	2.0	125.0	17.21	95.1	54	125				
Lead	223.864	1.0	125.0	115.6	86.6	34	126				
Molybdenum	108.027	1.0	125.0	0	86.4	54	106				
Nickel	117.827	1.0	125.0	11.69	84.9	45	111				
Selenium	105.711	1.0	125.0	0	84.6	47	104				
Silver	112.685	1.0	125.0	0	90.1	56	112				
Thallium	87.971	1.0	125.0	0	70.4	46	101				
Vanadium	142.992	1.0	125.0	30.04	90.4	54	114				
Zinc	170.373	1.0	125.0	61.20	87.3	28	125				

Sample ID: **115950-007A-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **1127-105-1.5-2.0** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111645**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	95.522	2.0	125.0	0.3335	76.2	32	105	99.41	3.99	20	
Arsenic	101.141	1.0	125.0	0	80.9	49	106	105.6	4.35	20	
Barium	200.985	1.0	125.0	92.48	86.8	31	133	205.6	2.28	20	
Beryllium	103.888	1.0	125.0	0	83.1	56	106	108.3	4.20	20	
Cadmium	100.464	1.0	125.0	0.4796	80.0	51	103	104.9	4.36	20	
Chromium	111.613	1.0	125.0	13.01	78.9	45	114	115.6	3.48	20	
Cobalt	111.870	1.0	125.0	8.123	83.0	52	106	115.7	3.36	20	
Copper	131.149	2.0	125.0	17.21	91.1	54	125	136.1	3.67	20	
Lead	218.194	1.0	125.0	115.6	82.1	34	126	223.9	2.57	20	

Qualifiers:

B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
E Value above quantitation range
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115950
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **115950-007A-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **1127-105-1.5-2.0** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111645**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	103.377	1.0	125.0	0	82.7	54	106	108.0	4.40	20	
Nickel	113.534	1.0	125.0	11.69	81.5	45	111	117.8	3.71	20	
Selenium	101.064	1.0	125.0	0	80.9	47	104	105.7	4.49	20	
Silver	108.446	1.0	125.0	0	86.8	56	112	112.7	3.83	20	
Thallium	83.224	1.0	125.0	0	66.6	46	101	87.97	5.55	20	
Vanadium	140.087	1.0	125.0	30.04	88.0	54	114	143.0	2.05	20	
Zinc	168.089	1.0	125.0	61.20	85.5	28	125	170.4	1.35	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected below quantitation limits
- S Spike/Surrogate outside of limits due to matrix interference
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115950
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-70017A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/26/2011**	RunNo: **129248**
Client ID: **PBS**	Batch ID: **70017**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/27/2011**	SeqNo: **2095668**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.263	5.0									J

Sample ID: **LCS-70017**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/26/2011**	RunNo: **129248**
Client ID: **LCSS**	Batch ID: **70017**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/27/2011**	SeqNo: **2095669**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	228.901	5.0	250.0	0.2625	91.5	80	120				

Sample ID: **115950-010A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/26/2011**	RunNo: **129248**
Client ID: **1127-101-3.5-4.0**	Batch ID: **70017**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/27/2011**	SeqNo: **2095680**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	20.273	5.0						20.38	0.543	20	

Sample ID: **115950-010A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/26/2011**	RunNo: **129248**
Client ID: **1127-101-3.5-4.0**	Batch ID: **70017**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/27/2011**	SeqNo: **2095681**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	242.449	5.0	250.0	20.38	88.8	34	126				

Sample ID: **MB-70017B**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/26/2011**	RunNo: **129248**
Client ID: **PBS**	Batch ID: **70017**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/27/2011**	SeqNo: **2095682**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115950
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **115950-020A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/26/2011**	RunNo: **129248**
Client ID: **1127-109-6.0**	Batch ID: **70017**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/27/2011**	SeqNo: **2095693**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.122	5.0						2.365	0	20	J

Sample ID: **115950-020A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/26/2011**	RunNo: **129248**
Client ID: **1127-109-6.0**	Batch ID: **70017**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/27/2011**	SeqNo: **2095694**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	230.173	5.0	250.0	2.365	91.1	34	126				

Sample ID: **115950-020A-MSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/26/2011**	RunNo: **129248**
Client ID: **1127-109-6.0**	Batch ID: **70017**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/27/2011**	SeqNo: **2095695**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	216.718	5.0	250.0	2.365	85.7	34	126	230.2	6.02	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115950
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-70018A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/26/2011**	RunNo: **129249**
Client ID: **PBS**	Batch ID: **70018**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/27/2011**	SeqNo: **2095696**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: **LCS-70018**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/26/2011**	RunNo: **129249**
Client ID: **LCSS**	Batch ID: **70018**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/27/2011**	SeqNo: **2095697**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	230.311	5.0	250.0	0	92.1	80	120				

Sample ID: **115950-030A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/26/2011**	RunNo: **129249**
Client ID: **1127-115-1.0**	Batch ID: **70018**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/27/2011**	SeqNo: **2095708**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	24.462	5.0						28.96	16.8	20	

Sample ID: **115950-030A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/26/2011**	RunNo: **129249**
Client ID: **1127-115-1.0**	Batch ID: **70018**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/27/2011**	SeqNo: **2095709**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	230.353	5.0	250.0	28.96	80.6	34	126				

Sample ID: **MB-70018B**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/26/2011**	RunNo: **129249**
Client ID: **PBS**	Batch ID: **70018**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/27/2011**	SeqNo: **2095710**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115950
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **115950-035A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/26/2011**	RunNo: **129249**
Client ID: **1127-127-2.0**	Batch ID: **70018**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/27/2011**	SeqNo: **2095716**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	19.022	5.0						21.99	14.5	20	

Sample ID: **115950-035A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/26/2011**	RunNo: **129249**
Client ID: **1127-127-2.0**	Batch ID: **70018**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/27/2011**	SeqNo: **2095717**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	238.417	5.0	250.0	21.99	86.6	34	126				

Sample ID: **115950-035A-MSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/26/2011**	RunNo: **129249**
Client ID: **1127-127-2.0**	Batch ID: **70018**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/27/2011**	SeqNo: **2095718**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	232.585	5.0	250.0	21.99	84.2	34	126	238.4	2.48	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115950
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPB

Sample ID: **MB-70066**	SampType: **MBLK**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **1/27/2011**	RunNo: **129299**
Client ID: **PBW**	Batch ID: **70066**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **1/28/2011**	SeqNo: **2096895**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70066**	SampType: **LCS**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **1/27/2011**	RunNo: **129299**
Client ID: **LCSW**	Batch ID: **70066**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **1/28/2011**	SeqNo: **2096896**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.944	0.25	1.000	0	94.4	85	115				

Sample ID: **115959-046B-DUP**	SampType: **DUP**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **1/27/2011**	RunNo: **129299**
Client ID: **ZZZZZZ**	Batch ID: **70066**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **1/28/2011**	SeqNo: **2096900**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.013	0.25						0.01195	0	20	J

Sample ID: **115959-046B-MS**	SampType: **MS**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **1/27/2011**	RunNo: **129299**
Client ID: **ZZZZZZ**	Batch ID: **70066**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **1/28/2011**	SeqNo: **2096901**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.209	0.25	2.500	0.01195	87.9	80	118				

Sample ID: **115959-046B-MSD**	SampType: **MSD**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **1/27/2011**	RunNo: **129299**
Client ID: **ZZZZZZ**	Batch ID: **70066**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **1/28/2011**	SeqNo: **2096902**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.178	0.25	2.500	0.01195	86.7	80	118	2.209	1.40	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115950
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_ST

Sample ID: **MB-70118A**	SampType: **MBLK**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **1/29/2011**	RunNo: **129523**
Client ID: **PBS**	Batch ID: **70118**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **2/3/2011**	SeqNo: **2101758**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70118**	SampType: **LCS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **1/29/2011**	RunNo: **129523**
Client ID: **LCSS**	Batch ID: **70118**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **2/3/2011**	SeqNo: **2101759**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.085	0.25	5.000	0	102	80	120				

Sample ID: **115998-001A-DUP**	SampType: **DUP**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **1/29/2011**	RunNo: **129523**
Client ID: **ZZZZZZ**	Batch ID: **70118**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **2/3/2011**	SeqNo: **2101771**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.470	0.25						0.4861	3.44	20	

Sample ID: **115998-001A-MS**	SampType: **MS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **1/29/2011**	RunNo: **129523**
Client ID: **ZZZZZZ**	Batch ID: **70118**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **2/3/2011**	SeqNo: **2101772**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.265	0.25	5.000	0.4861	95.6	80	120				

Sample ID: **115998-001A-MSD**	SampType: **MSD**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **1/29/2011**	RunNo: **129523**
Client ID: **ZZZZZZ**	Batch ID: **70118**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **2/3/2011**	SeqNo: **2101773**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.379	0.25	5.000	0.4861	97.9	80	120	5.265	2.15	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115950
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **MB-70707A**	SampType: **MBLK**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129996**
Client ID: **PBS**	Batch ID: **70707**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112017**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **MB-70685A TCLP**	SampType: **MBLK**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129996**
Client ID: **PBS**	Batch ID: **70707**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112018**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70707**	SampType: **LCS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129996**
Client ID: **LCSS**	Batch ID: **70707**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.963	0.25	1.000	0	96.3	80	120				

Sample ID: **116042-038A-DUP**	SampType: **DUP**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129996**
Client ID: **ZZZZZZ**	Batch ID: **70707**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112025**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.682	0.25						0.6682	2.04	20	

Sample ID: **116042-038A-MS**	SampType: **MS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129996**
Client ID: **ZZZZZZ**	Batch ID: **70707**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112026**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.240	0.25	2.500	0.6682	103	70	130				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115950
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **MB-70707B**	SampType: **MBLK**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129996**
Client ID: **PBS**	Batch ID: **70707**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112027**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **MB-70685B TCLP**	SampType: **MBLK**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129996**
Client ID: **PBS**	Batch ID: **70707**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112028**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **116069-032A-DUP**	SampType: **DUP**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129996**
Client ID: **ZZZZZZ**	Batch ID: **70707**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112039**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.656	0.25						0.6450	1.68	20	

Sample ID: **116069-032A-MS**	SampType: **MS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129996**
Client ID: **ZZZZZZ**	Batch ID: **70707**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112040**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.017	0.25	2.500	0.6450	94.9	70	130				

Sample ID: **116069-032A-MSD**	SampType: **MSD**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129996**
Client ID: **ZZZZZZ**	Batch ID: **70707**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112041**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.039	0.25	2.500	0.6450	95.8	70	130	3.017	0.748	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115950
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7471_S

Sample ID: **MB-70695** SampType: **MBLK** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129990**
Client ID: **PBS** Batch ID: **70695** TestNo: **EPA 7471A** Analysis Date: **2/15/2011** SeqNo: **2111727**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: **LCS-70695** SampType: **LCS** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129990**
Client ID: **LCSS** Batch ID: **70695** TestNo: **EPA 7471A** Analysis Date: **2/15/2011** SeqNo: **2111728**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.825	0.10	0.8300	0	99.4	80	120				

Sample ID: **115950-007A-MS** SampType: **MS** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129990**
Client ID: **1127-105-1.5-2.0** Batch ID: **70695** TestNo: **EPA 7471A** Analysis Date: **2/15/2011** SeqNo: **2111729**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.983	0.10	0.8300	0.04249	113	70	130				

Sample ID: **115950-007A-MSD** SampType: **MSD** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129990**
Client ID: **1127-105-1.5-2.0** Batch ID: **70695** TestNo: **EPA 7471A** Analysis Date: **2/15/2011** SeqNo: **2111730**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.982	0.10	0.8300	0.04249	113	70	130	0.9829	0.0679	20	

Sample ID: **115950-007A-DUP** SampType: **DUP** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129990**
Client ID: **1127-105-1.5-2.0** Batch ID: **70695** TestNo: **EPA 7471A** Analysis Date: **2/15/2011** SeqNo: **2111732**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.044	0.10						0.04249	0	20	J

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115950
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 9045_S

Sample ID: **116006-038ADUP** SampType: **DUP** TestCode: **9045_S** Units: **pH Units** Prep Date: RunNo: **129967**
Client ID: **ZZZZZZ** Batch ID: **R129967** TestNo: **EPA 9045C** Analysis Date: **2/15/2011** SeqNo: **2111248**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.820	0.10						7.860	0.510	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

April 20, 2011

Mike Conkle
Geocon Consultants, Inc.
3303 N. San Fernando Blvd., Suite 100
Burbank, CA 91504

TEL: (818) 841-8388
FAX: (818) 841-1704

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003

Workorder No.: 115974

RE: State Route 10 ADL, S9500-06-04

Attention: Mike Conkle

Enclosed are the results for sample(s) received on January 25, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

This is an addendum report. Please incorporate with documentation previously submitted.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Geocon Consultants, Inc.
Project: State Route 10 ADL, S9500-06-04
Lab Order: 115974

CASE NARRATIVE

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	115974
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/25/2011 6:03:00 PM
Project No:		**Matrix:**	Water
Analyte:	Lead	**Analyst:**	JSD

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
115974-001A	EB-100-3	ND	mg/L	70066	0.0046	0.25		1	1/25/2011	1/28/2011
115974-002A	EB-100-4	ND	mg/L	70066	0.0046	0.25		1	1/25/2011	1/28/2011
115974-003A	EB-100-5	ND	mg/L	70066	0.0046	0.25		1	1/25/2011	1/28/2011
115974-004A	EB-100-6	ND	mg/L	70066	0.0046	0.25		1	1/25/2011	1/28/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

CLIENT: Geocon Consultants, Inc.
Work Order: 115974
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPB

Sample ID: **MB-70066**	SampType: **MBLK**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **1/27/2011**	RunNo: **129299**
Client ID: **PBW**	Batch ID: **70066**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **1/28/2011**	SeqNo: **2096895**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70066**	SampType: **LCS**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **1/27/2011**	RunNo: **129299**
Client ID: **LCSW**	Batch ID: **70066**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **1/28/2011**	SeqNo: **2096896**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.944	0.25	1.000	0	94.4	85	115				

Sample ID: **115959-046B-DUP**	SampType: **DUP**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **1/27/2011**	RunNo: **129299**
Client ID: **ZZZZZZ**	Batch ID: **70066**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **1/28/2011**	SeqNo: **2096900**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.013	0.25						0.01195	0	20	J

Sample ID: **115959-046B-MS**	SampType: **MS**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **1/27/2011**	RunNo: **129299**
Client ID: **ZZZZZZ**	Batch ID: **70066**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **1/28/2011**	SeqNo: **2096901**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.209	0.25	2.500	0.01195	87.9	80	118				

Sample ID: **115959-046B-MSD**	SampType: **MSD**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **1/27/2011**	RunNo: **129299**
Client ID: **ZZZZZZ**	Batch ID: **70066**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **1/28/2011**	SeqNo: **2096902**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.178	0.25	2.500	0.01195	86.7	80	118	2.209	1.40	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

April 20, 2011

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ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003

Workorder No.: 115975

RE: State Route 10 ADL, S9500-06-04

Attention: Mike Conkle

Enclosed are the results for sample(s) received on January 25, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

This is an addendum report. Please incorporate with documentation previously submitted.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

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Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Analytical Comments for Method 6010

RPD for Duplicate (DUP) is outside criteria for samples 115975-006ADUP, 115975-026ADUP and 115975-045ADUP; however, the Laboratory Control Sample (LCS) validated the analytical batch.

Analytical Comments for Method 7420

Dilution was necessary for samples 115975-040A and 115975-043A, due to sample matrix.

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	115975
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/25/2011 6:03:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	JSD

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
115975-001A	1127-103-0.5-1.0	56	mg/Kg	70097	0.11	5.0		1	1/25/2011	1/31/2011
115975-002A	1127-119-1.5-2.0	24	mg/Kg	70097	0.11	5.0		1	1/25/2011	1/31/2011
115975-003A	1127-119-3.5-4.0	7.9	mg/Kg	70097	0.11	5.0		1	1/25/2011	1/31/2011
115975-004A	1127-117-1.5-2.0	5.3	mg/Kg	70097	0.11	5.0		1	1/25/2011	1/31/2011
115975-005A	1127-117-3.5-4.0	6.2	mg/Kg	70097	0.11	5.0		1	1/25/2011	1/31/2011
115975-006A	1127-117-5.5-6.0	4.6	mg/Kg	70097	0.11	5.0	J	1	1/25/2011	1/31/2011
115975-007A	1127-120-1.5-2.0	8.4	mg/Kg	70097	0.11	5.0		1	1/25/2011	1/31/2011
115975-008A	1127-120-3.5-4.0	14	mg/Kg	70097	0.11	5.0		1	1/25/2011	1/31/2011
115975-009A	1127-118-1.5-2.0	8.1	mg/Kg	70097	0.11	5.0		1	1/25/2011	1/31/2011
115975-010A	1127-118-3.5-4.0	6.7	mg/Kg	70097	0.11	5.0		1	1/25/2011	1/31/2011
115975-011A	1127-124-1.5-2.0	180	mg/Kg	70097	0.11	5.0		1	1/25/2011	1/31/2011
115975-012A	1127-124-3.5-4.0	71	mg/Kg	70097	0.11	5.0		1	1/25/2011	1/31/2011
115975-013A	1127-124-5.5-6.0	23	mg/Kg	70097	0.11	5.0		1	1/25/2011	1/31/2011
115975-014A	1127-122-1.5-2.0	8.5	mg/Kg	70097	0.11	5.0		1	1/25/2011	1/31/2011
115975-015A	1127-122-4.5-5.0	14	mg/Kg	70097	0.11	5.0		1	1/25/2011	1/31/2011
115975-016A	1127-121-1.5-2.0	7.1	mg/Kg	70097	0.11	5.0		1	1/25/2011	1/31/2011
115975-017A	1127-121-4.5-5.0	7.9	mg/Kg	70098	0.11	5.0		1	1/25/2011	1/31/2011
115975-018A	1127-121-6.5-7.0	8.2	mg/Kg	70098	0.11	5.0		1	1/25/2011	1/31/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	115975
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/25/2011 6:03:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	JSD

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
115975-019A	1127-121-9.5-10.0	8.0	mg/Kg	70098	0.11	5.0		1	1/25/2011	1/31/2011
115975-020A	1127-123-1.5-2.0	5.1	mg/Kg	70098	0.11	5.0		1	1/25/2011	1/31/2011
115975-021A	1127-123-3.5-4.0	5.1	mg/Kg	70098	0.11	5.0		1	1/25/2011	1/31/2011
115975-022A	1127-123-5.5-6.0	4.8	mg/Kg	70098	0.11	5.0	J	1	1/25/2011	1/31/2011
115975-023A	1127-110-1.0	11	mg/Kg	70098	0.11	5.0		1	1/25/2011	1/31/2011
115975-024A	1127-112-1.0	13	mg/Kg	70098	0.11	5.0		1	1/25/2011	1/31/2011
115975-025A	1127-111-1.0	14	mg/Kg	70098	0.11	5.0		1	1/25/2011	1/31/2011
115975-026A	1127-113-2.0	21	mg/Kg	70098	0.11	5.0		1	1/25/2011	1/31/2011
115975-027A	1127-125-1.0	60	mg/Kg	70098	0.11	5.0		1	1/25/2011	1/31/2011
115975-028A	1127-126-1.0	24	mg/Kg	70098	0.11	5.0		1	1/25/2011	1/31/2011
115975-029A	1127-128-1.0	25	mg/Kg	70098	0.11	5.0		1	1/25/2011	1/31/2011
115975-030A	1127-127-1.0	85	mg/Kg	70098	0.11	5.0		1	1/25/2011	1/31/2011
115975-031A	1127-155-2.0	8.8	mg/Kg	70098	0.11	5.0		1	1/25/2011	1/31/2011
115975-032A	1127-155-4.0	6.2	mg/Kg	70098	0.11	5.0		1	1/25/2011	1/31/2011
115975-033A	1127-155-6.0	6.2	mg/Kg	70098	0.11	5.0		1	1/25/2011	1/31/2011
115975-034A	1127-156-1.0	15	mg/Kg	70098	0.11	5.0		1	1/25/2011	1/31/2011
115975-035A	1127-156-2.0	24	mg/Kg	70098	0.11	5.0		1	1/25/2011	1/31/2011
115975-036A	1127-158-2.0	36	mg/Kg	70098	0.11	5.0		1	1/25/2011	1/31/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	115975
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/25/2011 6:03:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	JSD

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
115975-037A	1127-158-4.0	9.1	mg/Kg	70099	0.11	5.0		1	1/25/2011	1/31/2011
115975-038A	1127-157-1.0	140	mg/Kg	70099	0.11	5.0		1	1/25/2011	1/31/2011
115975-039A	1127-157-2.0	36	mg/Kg	70099	0.11	5.0		1	1/25/2011	1/31/2011
115975-040A	1127-161-1.0	280	mg/Kg	70099	0.11	5.0		1	1/25/2011	1/31/2011
115975-041A	1127-161-3.0	21	mg/Kg	70099	0.11	5.0		1	1/25/2011	1/31/2011
115975-042A	1127-159-1.0	150	mg/Kg	70099	0.11	5.0		1	1/25/2011	1/31/2011
115975-043A	1127-159-2.0	290	mg/Kg	70099	0.11	5.0		1	1/25/2011	1/31/2011
115975-044A	1127-163-1.0	46	mg/Kg	70099	0.11	5.0		1	1/25/2011	1/31/2011
115975-045A	1127-163-3.0	150	mg/Kg	70099	0.11	5.0		1	1/25/2011	1/31/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	115975
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/25/2011 6:03:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	VV

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
115975-011A	1127-124-1.5-2.0	0.46	mg/L	R129816	0.21	0.25		1	1/25/2011	2/10/2011
115975-038A	1127-157-1.0	ND	mg/L	70837	0.21	0.25		1	1/25/2011	2/21/2011
115975-040A	1127-161-1.0	ND	mg/L	70837	0.21	0.25		1	1/25/2011	2/21/2011
115975-042A	1127-159-1.0	ND	mg/L	70837	0.21	0.25		1	1/25/2011	2/21/2011
115975-043A	1127-159-2.0	ND	mg/L	70837	0.21	0.25		1	1/25/2011	2/21/2011
115975-045A	1127-163-3.0	ND	mg/L	70837	0.21	0.25		1	1/25/2011	2/21/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION (STLC)
WET/ EPA 7420

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	115975
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/25/2011 6:03:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	VV

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
115975-001A	1127-103-0.5-1.0	2.9	mg/L	70237	0.21	0.25		1	1/25/2011	2/4/2011
115975-011A	1127-124-1.5-2.0	8.4	mg/L	70237	0.21	0.25		1	1/25/2011	2/4/2011
115975-012A	1127-124-3.5-4.0	3.3	mg/L	70237	0.21	0.25		1	1/25/2011	2/4/2011
115975-027A	1127-125-1.0	3.1	mg/L	70237	0.21	0.25		1	1/25/2011	2/4/2011
115975-030A	1127-127-1.0	3.0	mg/L	70237	0.21	0.25		1	1/25/2011	2/4/2011
115975-038A	1127-157-1.0	6.4	mg/L	70713	0.21	0.25		1	1/25/2011	2/17/2011
115975-040A	1127-161-1.0	13	mg/L	70713	0.41	0.50		2	1/25/2011	2/17/2011
115975-042A	1127-159-1.0	5.1	mg/L	70713	0.21	0.25		1	1/25/2011	2/17/2011
115975-043A	1127-159-2.0	14	mg/L	70713	0.41	0.50		2	1/25/2011	2/17/2011
115975-045A	1127-163-3.0	6.9	mg/L	70713	0.21	0.25		1	1/25/2011	2/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
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Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION (STLC)
WET/ EPA 7420

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	115975
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/25/2011 6:03:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	IL

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
115975-001A	1127-103-0.5-1.0	2.9	mg/L	70237	0.21	0.25		1	1/25/2011	2/4/2011
115975-011A	1127-124-1.5-2.0	8.4	mg/L	70237	0.21	0.25		1	1/25/2011	2/4/2011
115975-012A	1127-124-3.5-4.0	3.3	mg/L	70237	0.21	0.25		1	1/25/2011	2/4/2011
115975-027A	1127-125-1.0	3.1	mg/L	70237	0.21	0.25		1	1/25/2011	2/4/2011
115975-030A	1127-127-1.0	3.0	mg/L	70237	0.21	0.25		1	1/25/2011	2/4/2011
115975-038A	1127-157-1.0	6.4	mg/L	70713	0.21	0.25		1	1/25/2011	2/17/2011
115975-040A	1127-161-1.0	13	mg/L	70713	0.41	0.50		2	1/25/2011	2/17/2011
115975-042A	1127-159-1.0	5.1	mg/L	70713	0.21	0.25		1	1/25/2011	2/17/2011
115975-043A	1127-159-2.0	14	mg/L	70713	0.41	0.50		2	1/25/2011	2/17/2011
115975-045A	1127-163-3.0	6.9	mg/L	70713	0.21	0.25		1	1/25/2011	2/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
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Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION (TCLP)
EPA 1311/ 7420

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	115975
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/25/2011 6:03:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	VV

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
115975-011A	1127-124-1.5-2.0	0.28	mg/L	70798	0.21	0.25		1	1/25/2011	2/17/2011
115975-030A	1127-127-1.0	ND	mg/L	70798	0.21	0.25		1	1/25/2011	2/17/2011
115975-038A	1127-157-1.0	0.29	mg/L	70798	0.21	0.25		1	1/25/2011	2/17/2011
115975-040A	1127-161-1.0	0.36	mg/L	70798	0.21	0.25		1	1/25/2011	2/17/2011
115975-043A	1127-159-2.0	0.46	mg/L	70798	0.21	0.25		1	1/25/2011	2/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

pH
EPA 9045C

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	115975
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/25/2011 6:03:00 PM
Project No:		**Matrix:**	Soil
Analyte:	pH	**Analyst:**	CBB

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
115975-011A	1127-124-1.5-2.0	7.5	pH Units	R129967	0.10	0.10		1	1/25/2011	2/15/2011
115975-030A	1127-127-1.0	8.0	pH Units	R129968	0.10	0.10		1	1/25/2011	2/15/2011
115975-038A	1127-157-1.0	8.4	pH Units	R129968	0.10	0.10		1	1/25/2011	2/15/2011
115975-040A	1127-161-1.0	8.1	pH Units	R129968	0.10	0.10		1	1/25/2011	2/15/2011
115975-043A	1127-159-2.0	7.9	pH Units	R129968	0.10	0.10		1	1/25/2011	2/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	1127-124-1.5-2.0
Lab Order:	115975	**Collection Date:**	1/25/2011 11:38:00 AM
Project:	State Route 10 ADL, S9500-06-04	**Matrix:**	SOIL
Lab ID:	115975-011A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP METALS							
	EPA 3050B				**EPA 6010B**		
RunID: **ICP8_110216D**	QC Batch: **70741**				PrepDate:	**2/16/2011**	Analyst: **JSD**
Antimony	0.47	0.16	2.0	J	mg/Kg	1	2/16/2011 01:51 PM
Arsenic	ND	0.20	1.0		mg/Kg	1	2/16/2011 01:51 PM
Barium	96	0.056	1.0		mg/Kg	1	2/16/2011 01:51 PM
Beryllium	ND	0.042	1.0		mg/Kg	1	2/16/2011 01:51 PM
Cadmium	0.46	0.043	1.0	J	mg/Kg	1	2/16/2011 01:51 PM
Chromium	12	0.13	1.0		mg/Kg	1	2/16/2011 01:51 PM
Cobalt	8.4	0.11	1.0		mg/Kg	1	2/16/2011 01:51 PM
Copper	18	0.18	2.0		mg/Kg	1	2/16/2011 01:51 PM
Molybdenum	ND	0.097	1.0		mg/Kg	1	2/16/2011 01:51 PM
Nickel	10	0.11	1.0		mg/Kg	1	2/16/2011 01:51 PM
Selenium	ND	0.28	1.0		mg/Kg	1	2/16/2011 01:51 PM
Silver	ND	0.042	1.0		mg/Kg	1	2/16/2011 01:51 PM
Thallium	ND	0.098	1.0		mg/Kg	1	2/16/2011 01:51 PM
Vanadium	31	0.088	1.0		mg/Kg	1	2/16/2011 01:51 PM
Zinc	61	0.13	1.0		mg/Kg	1	2/16/2011 01:51 PM
MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7471A				
RunID: **AA1_110216B**	QC Batch: **70740**				PrepDate:	**2/16/2011**	Analyst: **VV**
Mercury	0.049	0.0076	0.10	J	mg/Kg	1	2/16/2011 12:14 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	1127-127-1.0
Lab Order:	115975	**Collection Date:**	1/25/2011 10:30:00 AM
Project:	State Route 10 ADL, S9500-06-04	**Matrix:**	SOIL
Lab ID:	115975-030A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP METALS							
	EPA 3050B				**EPA 6010B**		
RunID: **ICP8_110216D**	QC Batch: **70741**				PrepDate: **2/16/2011**		Analyst: **JSD**
Antimony	1.4	0.16	2.0	J	mg/Kg	1	2/16/2011 02:04 PM
Arsenic	ND	0.20	1.0		mg/Kg	1	2/16/2011 02:04 PM
Barium	120	0.056	1.0		mg/Kg	1	2/16/2011 02:04 PM
Beryllium	ND	0.042	1.0		mg/Kg	1	2/16/2011 02:04 PM
Cadmium	0.68	0.043	1.0	J	mg/Kg	1	2/16/2011 02:04 PM
Chromium	15	0.13	1.0		mg/Kg	1	2/16/2011 02:04 PM
Cobalt	9.3	0.11	1.0		mg/Kg	1	2/16/2011 02:04 PM
Copper	29	0.18	2.0		mg/Kg	1	2/16/2011 02:04 PM
Molybdenum	ND	0.097	1.0		mg/Kg	1	2/16/2011 02:04 PM
Nickel	13	0.11	1.0		mg/Kg	1	2/16/2011 02:04 PM
Selenium	ND	0.28	1.0		mg/Kg	1	2/16/2011 02:04 PM
Silver	ND	0.042	1.0		mg/Kg	1	2/16/2011 02:04 PM
Thallium	ND	0.098	1.0		mg/Kg	1	2/16/2011 02:04 PM
Vanadium	34	0.088	1.0		mg/Kg	1	2/16/2011 02:04 PM
Zinc	200	0.13	1.0		mg/Kg	1	2/16/2011 02:04 PM
MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7471A				
RunID: **AA1_110216B**	QC Batch: **70740**				PrepDate: **2/16/2011**		Analyst: **VV**
Mercury	0.080	0.0076	0.10	J	mg/Kg	1	2/16/2011 12:18 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	1127-157-1.0
Lab Order:	115975	**Collection Date:**	1/25/2011 12:17:00 PM
Project:	State Route 10 ADL, S9500-06-04	**Matrix:**	SOIL
Lab ID:	115975-038A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP METALS							
	EPA 3050B				**EPA 6010B**		
RunID: **ICP8_110216D**	QC Batch: **70741**				PrepDate:	**2/16/2011**	Analyst: **JSD**
Antimony	0.52	0.16	2.0	J	mg/Kg	1	2/16/2011 02:14 PM
Arsenic	1.6	0.20	1.0		mg/Kg	1	2/16/2011 02:14 PM
Barium	85	0.056	1.0		mg/Kg	1	2/16/2011 02:14 PM
Beryllium	ND	0.042	1.0		mg/Kg	1	2/16/2011 02:14 PM
Cadmium	0.77	0.043	1.0	J	mg/Kg	1	2/16/2011 02:14 PM
Chromium	10	0.13	1.0		mg/Kg	1	2/16/2011 02:14 PM
Cobalt	6.4	0.11	1.0		mg/Kg	1	2/16/2011 02:14 PM
Copper	16	0.18	2.0		mg/Kg	1	2/16/2011 02:14 PM
Molybdenum	0.74	0.097	1.0	J	mg/Kg	1	2/16/2011 02:14 PM
Nickel	12	0.11	1.0		mg/Kg	1	2/16/2011 02:14 PM
Selenium	ND	0.28	1.0		mg/Kg	1	2/16/2011 02:14 PM
Silver	ND	0.042	1.0		mg/Kg	1	2/16/2011 02:14 PM
Thallium	ND	0.098	1.0		mg/Kg	1	2/16/2011 02:14 PM
Vanadium	22	0.088	1.0		mg/Kg	1	2/16/2011 02:14 PM
Zinc	51	0.13	1.0		mg/Kg	1	2/16/2011 02:14 PM
MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7471A				
RunID: **AA1_110216B**	QC Batch: **70740**				PrepDate:	**2/16/2011**	Analyst: **VV**
Mercury	0.11	0.0076	0.10		mg/Kg	1	2/16/2011 12:20 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	1127-161-1.0
Lab Order:	115975	**Collection Date:**	1/25/2011 1:30:00 PM
Project:	State Route 10 ADL, S9500-06-04	**Matrix:**	SOIL
Lab ID:	115975-040A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP METALS							
	EPA 3050B				**EPA 6010B**		
RunID: **ICP8_110216D**	QC Batch: **70741**				PrepDate: **2/16/2011**		Analyst: **JSD**
Antimony	0.28	0.16	2.0	J	mg/Kg	1	2/16/2011 02:17 PM
Arsenic	3.2	0.20	1.0		mg/Kg	1	2/16/2011 02:17 PM
Barium	270	0.056	1.0		mg/Kg	1	2/16/2011 02:17 PM
Beryllium	ND	0.042	1.0		mg/Kg	1	2/16/2011 02:17 PM
Cadmium	2.1	0.043	1.0		mg/Kg	1	2/16/2011 02:17 PM
Chromium	14	0.13	1.0		mg/Kg	1	2/16/2011 02:17 PM
Cobalt	7.2	0.11	1.0		mg/Kg	1	2/16/2011 02:17 PM
Copper	18	0.18	2.0		mg/Kg	1	2/16/2011 02:17 PM
Molybdenum	5.2	0.097	1.0		mg/Kg	1	2/16/2011 02:17 PM
Nickel	24	0.11	1.0		mg/Kg	1	2/16/2011 02:17 PM
Selenium	0.31	0.28	1.0	J	mg/Kg	1	2/16/2011 02:17 PM
Silver	ND	0.042	1.0		mg/Kg	1	2/16/2011 02:17 PM
Thallium	ND	0.098	1.0		mg/Kg	1	2/16/2011 02:17 PM
Vanadium	38	0.088	1.0		mg/Kg	1	2/16/2011 02:17 PM
Zinc	78	0.13	1.0		mg/Kg	1	2/16/2011 02:17 PM
MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7471A				
RunID: **AA1_110216B**	QC Batch: **70740**				PrepDate: **2/16/2011**		Analyst: **VV**
Mercury	0.054	0.0076	0.10	J	mg/Kg	1	2/16/2011 12:22 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	1127-159-2.0
Lab Order:	115975	**Collection Date:**	1/25/2011 2:12:00 PM
Project:	State Route 10 ADL, S9500-06-04	**Matrix:**	SOIL
Lab ID:	115975-043A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP METALS							
	EPA 3050B				**EPA 6010B**		
RunID: **ICP8_110217B**	QC Batch: **70748**				PrepDate: **2/16/2011**		Analyst: **JSD**
Antimony	0.82	0.16	2.0	J	mg/Kg	1	2/17/2011 10:39 AM
Arsenic	8.5	0.20	1.0		mg/Kg	1	2/17/2011 10:39 AM
Barium	130	0.056	1.0		mg/Kg	1	2/17/2011 10:39 AM
Beryllium	ND	0.042	1.0		mg/Kg	1	2/17/2011 10:39 AM
Cadmium	2.8	0.043	1.0		mg/Kg	1	2/17/2011 10:39 AM
Chromium	15	0.13	1.0		mg/Kg	1	2/17/2011 10:39 AM
Cobalt	8.2	0.11	1.0		mg/Kg	1	2/17/2011 10:39 AM
Copper	26	0.18	2.0		mg/Kg	1	2/17/2011 10:39 AM
Molybdenum	4.2	0.097	1.0		mg/Kg	1	2/17/2011 10:39 AM
Nickel	32	0.11	1.0		mg/Kg	1	2/17/2011 10:39 AM
Selenium	ND	0.28	1.0		mg/Kg	1	2/17/2011 10:39 AM
Silver	ND	0.042	1.0		mg/Kg	1	2/17/2011 10:39 AM
Thallium	ND	0.098	1.0		mg/Kg	1	2/17/2011 10:39 AM
Vanadium	48	0.088	1.0		mg/Kg	1	2/17/2011 10:39 AM
Zinc	120	0.13	1.0		mg/Kg	1	2/17/2011 10:39 AM
MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7471A				
RunID: **AA1_110216B**	QC Batch: **70740**				PrepDate: **2/16/2011**		Analyst: **VV**
Mercury	0.056	0.0076	0.10	J	mg/Kg	1	2/16/2011 12:24 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **MB-70741** SampType: **MBLK** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130035**
Client ID: **PBS** Batch ID: **70741** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/16/2011** SeqNo: **2112900**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.230	2.0									J
Arsenic	ND	1.0									
Barium	ND	1.0									
Beryllium	ND	1.0									
Cadmium	ND	1.0									
Chromium	ND	1.0									
Cobalt	ND	1.0									
Copper	ND	2.0									
Lead	ND	1.0									
Molybdenum	ND	1.0									
Nickel	ND	1.0									
Selenium	ND	1.0									
Silver	ND	1.0									
Thallium	ND	1.0									
Vanadium	ND	1.0									
Zinc	0.182	1.0									J

Sample ID: **LCS-70741** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130035**
Client ID: **LCSS** Batch ID: **70741** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/16/2011** SeqNo: **2112901**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	46.654	2.0	50.00	0.2304	92.8	80	120				
Arsenic	45.093	1.0	50.00	0	90.2	80	120				
Barium	49.554	1.0	50.00	0	99.1	80	120				
Beryllium	48.956	1.0	50.00	0	97.9	80	120				
Cadmium	45.858	1.0	50.00	0	91.7	80	120				
Chromium	45.309	1.0	50.00	0	90.6	80	120				
Cobalt	48.168	1.0	50.00	0	96.3	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **LCS-70741** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130035**
Client ID: **LCSS** Batch ID: **70741** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/16/2011** SeqNo: **2112901**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	50.007	2.0	50.00	0	100	80	120				
Lead	47.124	1.0	50.00	0	94.2	80	120				
Molybdenum	49.220	1.0	50.00	0	98.4	80	120				
Nickel	46.335	1.0	50.00	0	92.7	80	120				
Selenium	42.382	1.0	50.00	0	84.8	80	120				
Silver	47.166	1.0	50.00	0	94.3	80	120				
Thallium	46.803	1.0	50.00	0	93.6	80	120				
Vanadium	50.481	1.0	50.00	0	101	80	120				
Zinc	45.614	1.0	50.00	0.1817	90.9	80	120				

Sample ID: **115975-011A-DUP** SampType: **DUP** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130035**
Client ID: **1127-124-1.5-2.0** Batch ID: **70741** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/16/2011** SeqNo: **2112906**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.415	2.0						0.4690	0	20	J
Arsenic	ND	1.0						0	0	20	
Barium	101.683	1.0						96.38	5.35	20	
Beryllium	ND	1.0						0	0	20	
Cadmium	0.458	1.0						0.4621	0	20	J
Chromium	12.400	1.0						11.94	3.81	20	
Cobalt	8.476	1.0						8.361	1.36	20	
Copper	21.523	2.0						18.06	17.5	20	
Lead	133.968	1.0						129.9	3.06	20	
Molybdenum	ND	1.0						0	0	20	
Nickel	10.649	1.0						10.38	2.54	20	
Selenium	ND	1.0						0	0	20	
Silver	ND	1.0						0	0	20	
Thallium	ND	1.0						0	0	20	
Vanadium	30.550	1.0						30.60	0.171	20	
Zinc	61.160	1.0						60.78	0.619	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **115975-011A-MS** SampType: **MS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130035**
Client ID: **1127-124-1.5-2.0** Batch ID: **70741** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/16/2011** SeqNo: **2112907**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	93.361	2.0	125.0	0.4690	74.3	32	105				
Arsenic	92.363	1.0	125.0	0	73.9	49	106				
Barium	232.927	1.0	125.0	96.38	109	31	133				
Beryllium	104.410	1.0	125.0	0	83.5	56	106				
Cadmium	94.939	1.0	125.0	0.4621	75.6	51	103				
Chromium	110.254	1.0	125.0	11.94	78.7	45	114				
Cobalt	106.809	1.0	125.0	8.361	78.8	52	106				
Copper	132.628	2.0	125.0	18.06	91.7	54	125				
Lead	237.887	1.0	125.0	129.9	86.4	34	126				
Molybdenum	103.186	1.0	125.0	0	82.5	54	106				
Nickel	108.153	1.0	125.0	10.38	78.2	45	111				
Selenium	91.097	1.0	125.0	0	72.9	47	104				
Silver	109.045	1.0	125.0	0	87.2	56	112				
Thallium	84.185	1.0	125.0	0	67.3	46	101				
Vanadium	138.071	1.0	125.0	30.60	86.0	54	114				
Zinc	226.603	1.0	125.0	60.78	133	28	125				S

Sample ID: **115975-011A-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130035**
Client ID: **1127-124-1.5-2.0** Batch ID: **70741** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/16/2011** SeqNo: **2112908**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	94.964	2.0	125.0	0.4690	75.6	32	105	93.36	1.70	20	
Arsenic	97.250	1.0	125.0	0	77.8	49	106	92.36	5.15	20	
Barium	191.079	1.0	125.0	96.38	75.8	31	133	232.9	19.7	20	
Beryllium	105.422	1.0	125.0	0	84.3	56	106	104.4	0.964	20	
Cadmium	99.729	1.0	125.0	0.4621	79.4	51	103	94.94	4.92	20	
Chromium	110.104	1.0	125.0	11.94	78.5	45	114	110.3	0.136	20	
Cobalt	109.200	1.0	125.0	8.361	80.7	52	106	106.8	2.21	20	
Copper	130.488	2.0	125.0	18.06	89.9	54	125	132.6	1.63	20	
Lead	229.087	1.0	125.0	129.9	79.3	34	126	237.9	3.77	20	

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **115975-011A-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130035**
Client ID: **1127-124-1.5-2.0** Batch ID: **70741** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/16/2011** SeqNo: **2112908**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	104.601	1.0	125.0	0	83.7	54	106	103.2	1.36	20	
Nickel	107.784	1.0	125.0	10.38	77.9	45	111	108.2	0.342	20	
Selenium	96.503	1.0	125.0	0	77.2	47	104	91.10	5.76	20	
Silver	109.305	1.0	125.0	0	87.4	56	112	109.0	0.238	20	
Thallium	87.415	1.0	125.0	0	69.9	46	101	84.19	3.76	20	
Vanadium	135.472	1.0	125.0	30.60	83.9	54	114	138.1	1.90	20	
Zinc	155.385	1.0	125.0	60.78	75.7	28	125	226.6	37.3	20	R

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **MB-70748** SampType: **MBLK** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130059**
Client ID: **PBS** Batch ID: **70748** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/17/2011** SeqNo: **2113419**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.626	2.0									J
Arsenic	ND	1.0									
Barium	ND	1.0									
Beryllium	ND	1.0									
Cadmium	ND	1.0									
Chromium	ND	1.0									
Cobalt	ND	1.0									
Copper	ND	2.0									
Lead	ND	1.0									
Molybdenum	ND	1.0									
Nickel	ND	1.0									
Selenium	ND	1.0									
Silver	ND	1.0									
Thallium	ND	1.0									
Vanadium	ND	1.0									
Zinc	0.343	1.0									J

Sample ID: **LCS-70748** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130059**
Client ID: **LCSS** Batch ID: **70748** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/17/2011** SeqNo: **2113420**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	46.685	2.0	50.00	0.6262	92.1	80	120				
Arsenic	46.475	1.0	50.00	0	93.0	80	120				
Barium	48.192	1.0	50.00	0	96.4	80	120				
Beryllium	47.796	1.0	50.00	0	95.6	80	120				
Cadmium	46.980	1.0	50.00	0	94.0	80	120				
Chromium	44.201	1.0	50.00	0	88.4	80	120				
Cobalt	47.820	1.0	50.00	0	95.6	80	120				
Copper	47.445	2.0	50.00	0	94.9	80	120				
Lead	47.986	1.0	50.00	0	96.0	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **LCS-70748** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130059**
Client ID: **LCSS** Batch ID: **70748** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/17/2011** SeqNo: **2113420**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	49.000	1.0	50.00	0	98.0	80	120				
Nickel	47.389	1.0	50.00	0	94.8	80	120				
Selenium	44.946	1.0	50.00	0	89.9	80	120				
Silver	45.020	1.0	50.00	0	90.0	80	120				
Thallium	45.931	1.0	50.00	0	91.9	80	120				
Vanadium	48.769	1.0	50.00	0	97.5	80	120				
Zinc	47.112	1.0	50.00	0.3433	93.5	80	120				

Sample ID: **115975-043A-DUP** SampType: **DUP** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130059**
Client ID: **1127-159-2.0** Batch ID: **70748** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/17/2011** SeqNo: **2113422**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.465	2.0						0.8179	0	20	J
Arsenic	5.517	1.0						8.495	42.5	20	R
Barium	119.558	1.0						133.8	11.3	20	
Beryllium	ND	1.0						0	0	20	
Cadmium	2.463	1.0						2.787	12.3	20	
Chromium	13.428	1.0						15.22	12.5	20	
Cobalt	5.716	1.0						8.220	35.9	20	R
Copper	21.156	2.0						25.87	20.0	20	R
Lead	168.281	1.0						241.3	35.6	20	R
Molybdenum	3.328	1.0						4.170	22.4	20	R
Nickel	23.827	1.0						32.07	29.5	20	R
Selenium	ND	1.0						0	0	20	
Silver	ND	1.0						0	0	20	
Thallium	ND	1.0						0	0	20	
Vanadium	39.408	1.0						47.73	19.1	20	
Zinc	92.347	1.0						124.9	30.0	20	R

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **115975-043A-MS** SampType: **MS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130059**
Client ID: **1127-159-2.0** Batch ID: **70748** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/17/2011** SeqNo: **2113423**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	84.313	2.0	125.0	0.8179	66.8	32	105				
Arsenic	104.524	1.0	125.0	8.495	76.8	49	106				
Barium	230.347	1.0	125.0	133.8	77.2	31	133				
Beryllium	102.117	1.0	125.0	0	81.7	56	106				
Cadmium	98.530	1.0	125.0	2.787	76.6	51	103				
Chromium	111.488	1.0	125.0	15.22	77.0	45	114				
Cobalt	105.075	1.0	125.0	8.220	77.5	52	106				
Copper	136.687	2.0	125.0	25.87	88.7	54	125				
Lead	363.189	1.0	125.0	241.3	97.5	34	126				
Molybdenum	103.717	1.0	125.0	4.170	79.6	54	106				
Nickel	125.779	1.0	125.0	32.07	75.0	45	111				
Selenium	97.651	1.0	125.0	0	78.1	47	104				
Silver	104.528	1.0	125.0	0	83.6	56	112				
Thallium	87.035	1.0	125.0	0	69.6	46	101				
Vanadium	150.349	1.0	125.0	47.73	82.1	54	114				
Zinc	208.968	1.0	125.0	124.9	67.2	28	125				

Sample ID: **115975-043A-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130059**
Client ID: **1127-159-2.0** Batch ID: **70748** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/17/2011** SeqNo: **2113424**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	85.758	2.0	125.0	0.8179	68.0	32	105	84.31	1.70	20	
Arsenic	105.729	1.0	125.0	8.495	77.8	49	106	104.5	1.15	20	
Barium	224.780	1.0	125.0	133.8	72.8	31	133	230.3	2.45	20	
Beryllium	102.680	1.0	125.0	0	82.1	56	106	102.1	0.550	20	
Cadmium	98.990	1.0	125.0	2.787	77.0	51	103	98.53	0.465	20	
Chromium	112.043	1.0	125.0	15.22	77.5	45	114	111.5	0.496	20	
Cobalt	105.637	1.0	125.0	8.220	77.9	52	106	105.1	0.533	20	
Copper	135.831	2.0	125.0	25.87	88.0	54	125	136.7	0.628	20	
Lead	319.588	1.0	125.0	241.3	62.6	34	126	363.2	12.8	20	

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **115975-043A-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130059**
Client ID: **1127-159-2.0** Batch ID: **70748** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/17/2011** SeqNo: **2113424**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	105.097	1.0	125.0	4.170	80.7	54	106	103.7	1.32	20	
Nickel	126.793	1.0	125.0	32.07	75.8	45	111	125.8	0.803	20	
Selenium	98.785	1.0	125.0	0	79.0	47	104	97.65	1.15	20	
Silver	105.590	1.0	125.0	0	84.5	56	112	104.5	1.01	20	
Thallium	88.731	1.0	125.0	0	71.0	46	101	87.04	1.93	20	
Vanadium	149.637	1.0	125.0	47.73	81.5	54	114	150.3	0.474	20	
Zinc	208.227	1.0	125.0	124.9	66.6	28	125	209.0	0.355	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-70097A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/28/2011**	RunNo: **129341**
Client ID: **PBS**	Batch ID: **70097**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/31/2011**	SeqNo: **2097754**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.247	5.0									J

Sample ID: **LCS-70097**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/28/2011**	RunNo: **129341**
Client ID: **LCSS**	Batch ID: **70097**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/31/2011**	SeqNo: **2097755**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	283.892	5.0	250.0	0.2469	113	80	120				

Sample ID: **115975-006A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/28/2011**	RunNo: **129341**
Client ID: **1127-117-5.5-6.0**	Batch ID: **70097**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/31/2011**	SeqNo: **2097766**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.063	5.0						4.616	27.1	20	R

Sample ID: **115975-006A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/28/2011**	RunNo: **129341**
Client ID: **1127-117-5.5-6.0**	Batch ID: **70097**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/31/2011**	SeqNo: **2097767**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	233.172	5.0	250.0	4.616	91.4	34	126				

Sample ID: **MB-70097B**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/28/2011**	RunNo: **129341**
Client ID: **PBS**	Batch ID: **70097**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/31/2011**	SeqNo: **2097768**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.193	5.0									J

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **115975-016A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/28/2011**	RunNo: **129341**
Client ID: **1127-121-1.5-2.0**	Batch ID: **70097**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/31/2011**	SeqNo: **2097779**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.574	5.0						7.099	6.48	20	

Sample ID: **115975-016A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/28/2011**	RunNo: **129341**
Client ID: **1127-121-1.5-2.0**	Batch ID: **70097**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/31/2011**	SeqNo: **2097780**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	211.017	5.0	250.0	7.099	81.6	34	126				

Sample ID: **115975-016A-MSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/28/2011**	RunNo: **129341**
Client ID: **1127-121-1.5-2.0**	Batch ID: **70097**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/31/2011**	SeqNo: **2097781**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	227.394	5.0	250.0	7.099	88.1	34	126	211.0	7.47	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-70098A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/28/2011**	RunNo: **129342**
Client ID: **PBS**	Batch ID: **70098**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/31/2011**	SeqNo: **2097782**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.200	5.0									J

Sample ID: **LCS-70098**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/28/2011**	RunNo: **129342**
Client ID: **LCSS**	Batch ID: **70098**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/31/2011**	SeqNo: **2097783**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	256.737	5.0	250.0	0.1996	103	80	120				

Sample ID: **115975-026A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/28/2011**	RunNo: **129342**
Client ID: **1127-113-2.0**	Batch ID: **70098**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/31/2011**	SeqNo: **2097794**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	51.465	5.0						21.46	82.3	20	R

Sample ID: **115975-026A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/28/2011**	RunNo: **129342**
Client ID: **1127-113-2.0**	Batch ID: **70098**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/31/2011**	SeqNo: **2097795**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	263.621	5.0	250.0	21.46	96.9	34	126				

Sample ID: **MB-70098A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/28/2011**	RunNo: **129342**
Client ID: **PBS**	Batch ID: **70098**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/31/2011**	SeqNo: **2097796**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.138	5.0									J

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **115975-036A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/28/2011**	RunNo: **129342**
Client ID: **1127-158-2.0**	Batch ID: **70098**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/31/2011**	SeqNo: **2097807**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	31.663	5.0						35.98	12.8	20	

Sample ID: **115975-036A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/28/2011**	RunNo: **129342**
Client ID: **1127-158-2.0**	Batch ID: **70098**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/31/2011**	SeqNo: **2097808**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	248.291	5.0	250.0	35.98	84.9	34	126				

Sample ID: **115975-036A-MSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/28/2011**	RunNo: **129342**
Client ID: **1127-158-2.0**	Batch ID: **70098**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/31/2011**	SeqNo: **2097809**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	268.912	5.0	250.0	35.98	93.2	34	126	248.3	7.97	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-70099A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/28/2011**	RunNo: **129343**
Client ID: **PBS**	Batch ID: **70099**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/31/2011**	SeqNo: **2097810**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.239	5.0									J

Sample ID: **LCS-70099**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/28/2011**	RunNo: **129343**
Client ID: **LCSS**	Batch ID: **70099**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/31/2011**	SeqNo: **2097811**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	288.430	5.0	250.0	0.2386	115	80	120				

Sample ID: **115975-045A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/28/2011**	RunNo: **129343**
Client ID: **1127-163-3.0**	Batch ID: **70099**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/31/2011**	SeqNo: **2097821**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	107.481	5.0						147.0	31.1	20	R

Sample ID: **115975-045A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/28/2011**	RunNo: **129343**
Client ID: **1127-163-3.0**	Batch ID: **70099**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/31/2011**	SeqNo: **2097822**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	255.099	5.0	250.0	147.0	43.2	34	126				

Sample ID: **115975-045A-MSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/28/2011**	RunNo: **129343**
Client ID: **1127-163-3.0**	Batch ID: **70099**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **1/31/2011**	SeqNo: **2097823**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	302.159	5.0	250.0	147.0	62.1	34	126	255.1	16.9	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI_GEOCON

Sample ID: **MB-70713A** SampType: **MBLK** TestCode: **7420_DI_GEO** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **130072**
Client ID: **PBS** Batch ID: **70713** TestNo: **WET DI/ EPA WET** Analysis Date: **2/17/2011** SeqNo: **2113685**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70713** SampType: **LCS** TestCode: **7420_DI_GEO** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **130072**
Client ID: **LCSS** Batch ID: **70713** TestNo: **WET DI/ EPA WET** Analysis Date: **2/17/2011** SeqNo: **2113686**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.849	0.25	5.000	0	97.0	80	120				

Sample ID: **116098-002A-DUP** SampType: **DUP** TestCode: **7420_DI_GEO** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **130072**
Client ID: **ZZZZZZ** Batch ID: **70713** TestNo: **WET DI/ EPA WET** Analysis Date: **2/17/2011** SeqNo: **2113690**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25						0	0	20	

Sample ID: **116098-002A-MS** SampType: **MS** TestCode: **7420_DI_GEO** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **130072**
Client ID: **ZZZZZZ** Batch ID: **70713** TestNo: **WET DI/ EPA WET** Analysis Date: **2/17/2011** SeqNo: **2113691**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.006	0.25	5.000	0	100	70	130				

Sample ID: **116098-002A-MSD** SampType: **MSD** TestCode: **7420_DI_GEO** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **130072**
Client ID: **ZZZZZZ** Batch ID: **70713** TestNo: **WET DI/ EPA WET** Analysis Date: **2/17/2011** SeqNo: **2113692**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.069	0.25	5.000	0	101	70	130	5.006	1.25	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI_GEOCON

Sample ID: **MB-70837A**	SampType: **MBLK**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/18/2011**	RunNo: **130159**
Client ID: **PBS**	Batch ID: **70837**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/21/2011**	SeqNo: **2115896**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70837**	SampType: **LCS**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/18/2011**	RunNo: **130159**
Client ID: **LCSS**	Batch ID: **70837**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/21/2011**	SeqNo: **2115897**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.748	0.25	5.000	0	95.0	80	120				

Sample ID: **115975-045A-DUP**	SampType: **DUP**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/18/2011**	RunNo: **130159**
Client ID: **1127-163-3.0**	Batch ID: **70837**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/21/2011**	SeqNo: **2115903**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25						0	0	20	

Sample ID: **115975-045A-MS**	SampType: **MS**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/18/2011**	RunNo: **130159**
Client ID: **1127-163-3.0**	Batch ID: **70837**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/21/2011**	SeqNo: **2115904**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.025	0.25	5.000	0	101	70	130				

Sample ID: **115975-045A-MSD**	SampType: **MSD**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/18/2011**	RunNo: **130159**
Client ID: **1127-163-3.0**	Batch ID: **70837**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/21/2011**	SeqNo: **2115905**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.088	0.25	5.000	0	102	70	130	5.025	1.23	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI_GEOCON

Sample ID: **MB-70503A** SampType: **MBLK** TestCode: **7420_DI_GEO** Units: **mg/L** Prep Date: RunNo: **129816**
Client ID: **PBS** Batch ID: **R129816** TestNo: **WET DI/ EPA** Analysis Date: **2/10/2011** SeqNo: **2107813**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70503** SampType: **LCS** TestCode: **7420_DI_GEO** Units: **mg/L** Prep Date: RunNo: **129816**
Client ID: **LCSS** Batch ID: **R129816** TestNo: **WET DI/ EPA** Analysis Date: **2/10/2011** SeqNo: **2107814**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.943	0.25	5.000	0	98.9	80	120				

Sample ID: **115975-011A-DUP** SampType: **DUP** TestCode: **7420_DI_GEO** Units: **mg/L** Prep Date: RunNo: **129816**
Client ID: **1127-124-1.5-2.0** Batch ID: **R129816** TestNo: **WET DI/ EPA** Analysis Date: **2/10/2011** SeqNo: **2107820**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.454	0.25						0.4641	2.21	20	

Sample ID: **115975-011A-MS** SampType: **MS** TestCode: **7420_DI_GEO** Units: **mg/L** Prep Date: RunNo: **129816**
Client ID: **1127-124-1.5-2.0** Batch ID: **R129816** TestNo: **WET DI/ EPA** Analysis Date: **2/10/2011** SeqNo: **2107821**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.135	0.25	5.000	0.4641	93.4	70	130				

Sample ID: **115975-011A-MSD** SampType: **MSD** TestCode: **7420_DI_GEO** Units: **mg/L** Prep Date: RunNo: **129816**
Client ID: **1127-124-1.5-2.0** Batch ID: **R129816** TestNo: **WET DI/ EPA** Analysis Date: **2/10/2011** SeqNo: **2107822**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.565	0.25	5.000	0.4641	102	70	130	5.135	8.05	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_ST

Sample ID: **MB-70237A**	SampType: **MBLK**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/2/2011**	RunNo: **129591**
Client ID: **PBS**	Batch ID: **70237**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/4/2011**	SeqNo: **2103152**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70237**	SampType: **LCS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/2/2011**	RunNo: **129591**
Client ID: **LCSS**	Batch ID: **70237**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/4/2011**	SeqNo: **2103153**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.128	0.25	5.000	0	103	80	120				

Sample ID: **115934-020A-DUP**	SampType: **DUP**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/2/2011**	RunNo: **129591**
Client ID: **ZZZZZZ**	Batch ID: **70237**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/4/2011**	SeqNo: **2103157**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	11.847	0.50						11.73	1.01	20	

Sample ID: **115934-020A-MS**	SampType: **MS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/2/2011**	RunNo: **129591**
Client ID: **ZZZZZZ**	Batch ID: **70237**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/4/2011**	SeqNo: **2103158**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	16.575	0.50	5.000	11.73	96.9	80	120				

Sample ID: **MB-70237B**	SampType: **MBLK**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/2/2011**	RunNo: **129591**
Client ID: **PBS**	Batch ID: **70237**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/4/2011**	SeqNo: **2103159**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_ST

Sample ID: **115975-030A-DUP**	SampType: **DUP**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/2/2011**	RunNo: **129591**
Client ID: **1127-127-1.0**	Batch ID: **70237**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **2/4/2011**	SeqNo: **2103166**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.937	0.25						2.955	0.617	20	

Sample ID: **115975-030A-MS**	SampType: **MS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/2/2011**	RunNo: **129591**
Client ID: **1127-127-1.0**	Batch ID: **70237**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **2/4/2011**	SeqNo: **2103167**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.593	0.25	5.000	2.955	92.8	80	120				

Sample ID: **115975-030A-MSD**	SampType: **MSD**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/2/2011**	RunNo: **129591**
Client ID: **1127-127-1.0**	Batch ID: **70237**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **2/4/2011**	SeqNo: **2103168**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.701	0.25	5.000	2.955	94.9	80	120	7.593	1.41	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_ST

Sample ID: **MB-70713A**	SampType: **MBLK**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130066**
Client ID: **PBS**	Batch ID: **70713**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/17/2011**	SeqNo: **2113592**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70713**	SampType: **LCS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130066**
Client ID: **LCSS**	Batch ID: **70713**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/17/2011**	SeqNo: **2113593**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.952	0.25	5.000	0	99.0	80	120				

Sample ID: **115975-045A-DUP**	SampType: **DUP**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130066**
Client ID: **1127-163-3.0**	Batch ID: **70713**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/17/2011**	SeqNo: **2113599**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.859	0.25						6.913	0.785	20	

Sample ID: **115975-045A-MS**	SampType: **MS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130066**
Client ID: **1127-163-3.0**	Batch ID: **70713**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/17/2011**	SeqNo: **2113600**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	11.922	0.50	5.000	6.913	100	80	120				

Sample ID: **115975-045A-MSD**	SampType: **MSD**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130066**
Client ID: **1127-163-3.0**	Batch ID: **70713**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/17/2011**	SeqNo: **2113601**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	11.970	0.50	5.000	6.913	101	80	120	11.92	0.397	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **MB-70798A** SampType: **MBLK** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/17/2011** RunNo: **130084**
Client ID: **PBS** Batch ID: **70798** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/17/2011** SeqNo: **2113909**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **MB-70767A TCLP** SampType: **MBLK** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/17/2011** RunNo: **130084**
Client ID: **PBS** Batch ID: **70798** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/17/2011** SeqNo: **2113910**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70798** SampType: **LCS** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/17/2011** RunNo: **130084**
Client ID: **LCSS** Batch ID: **70798** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/17/2011** SeqNo: **2113911**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.067	0.25	1.000	0	107	80	120				

Sample ID: **115975-043A-DUP** SampType: **DUP** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/17/2011** RunNo: **130084**
Client ID: **1127-159-2.0** Batch ID: **70798** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/17/2011** SeqNo: **2113917**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.449	0.25						0.4571	1.82	20	

Sample ID: **115975-043A-MS** SampType: **MS** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/17/2011** RunNo: **130084**
Client ID: **1127-159-2.0** Batch ID: **70798** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/17/2011** SeqNo: **2113918**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.014	0.25	2.500	0.4571	102	70	130				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **115975-043A-MSD** SampType: **MSD** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/17/2011** RunNo: **130084**
Client ID: **1127-159-2.0** Batch ID: **70798** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/17/2011** SeqNo: **2113919**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.030	0.25	2.500	0.4571	103	70	130	3.014	0.530	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7471_S

Sample ID: **MB-70740** SampType: **MBLK** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130021**
Client ID: **PBS** Batch ID: **70740** TestNo: **EPA 7471A** Analysis Date: **2/16/2011** SeqNo: **2112532**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: **LCS-70740** SampType: **LCS** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130021**
Client ID: **LCSS** Batch ID: **70740** TestNo: **EPA 7471A** Analysis Date: **2/16/2011** SeqNo: **2112533**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.810	0.10	0.8300	0	97.6	80	120				

Sample ID: **115975-011A-MS** SampType: **MS** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130021**
Client ID: **1127-124-1.5-2.0** Batch ID: **70740** TestNo: **EPA 7471A** Analysis Date: **2/16/2011** SeqNo: **2112534**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.041	0.10	0.8300	0.04931	119	70	130				

Sample ID: **115975-011A-MSD** SampType: **MSD** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130021**
Client ID: **1127-124-1.5-2.0** Batch ID: **70740** TestNo: **EPA 7471A** Analysis Date: **2/16/2011** SeqNo: **2112535**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.037	0.10	0.8300	0.04931	119	70	130	1.041	0.371	20	

Sample ID: **115975-011A-DUP** SampType: **DUP** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130021**
Client ID: **1127-124-1.5-2.0** Batch ID: **70740** TestNo: **EPA 7471A** Analysis Date: **2/16/2011** SeqNo: **2112537**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.048	0.10						0.04931	0	20	J

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 9045_S

Sample ID: **116006-038ADUP** SampType: **DUP** TestCode: **9045_S** Units: **pH Units** Prep Date: RunNo: **129967**
Client ID: **ZZZZZZ** Batch ID: **R129967** TestNo: **EPA 9045C** Analysis Date: **2/15/2011** SeqNo: **2111248**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.820	0.10						7.860	0.510	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 115975
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 9045_S

Sample ID: **116069-022ADUP** SampType: **DUP** TestCode: **9045_S** Units: **pH Units** Prep Date: RunNo: **129968**
Client ID: **ZZZZZZ** Batch ID: **R129968** TestNo: **EPA 9045C** Analysis Date: **2/15/2011** SeqNo: **2111271**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.860	0.10						7.950	1.14	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

April 20, 2011

Mike Conkle
Geocon Consultants, Inc.
3303 N. San Fernando Blvd., Suite 100
Burbank, CA 91504
TEL: (818) 841-8388
FAX: (818) 841-1704

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003

Workorder No.: 116006

RE: State Route 10 ADL, S9500-06-04

Attention: Mike Conkle

Enclosed are the results for sample(s) received on January 26, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

This is an addendum report. Please incorporate with documentation previously submitted.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Analytical Comments for Method 6010

RPD for Duplicate (DUP) is outside criteria for samples 116006-010ADUP, 116006-030ADUP, 116006-040ADUP and 116006-050ADUP; however, the Laboratory Control Sample (LCS) validated the analytical batch.

Analytical Comments for Method 7420

Dilution was necessary for samples 116006-027A, 116006-028A and 116006-039A, due to sample matrix.

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116006
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/26/2011 6:16:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	SRB

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116006-001A	1127-127-0.5-1.0	40	mg/Kg	70170	0.11	5.0		1	1/26/2011	2/1/2011
116006-002A	1127-127-1.5-2.0	14	mg/Kg	70170	0.11	5.0		1	1/26/2011	2/1/2011
116006-003A	1127-129-0.5-1.0	23	mg/Kg	70170	0.11	5.0		1	1/26/2011	2/1/2011
116006-004A	1127-129-1.5-2.0	19	mg/Kg	70170	0.11	5.0		1	1/26/2011	2/1/2011
116006-005A	1127-130-1.5-2.0	7.3	mg/Kg	70170	0.11	5.0		1	1/26/2011	2/1/2011
116006-006A	1127-130-4.5-5.0	7.0	mg/Kg	70170	0.11	5.0		1	1/26/2011	2/1/2011
116006-007A	1127-130-6.5-7.0	6.2	mg/Kg	70170	0.11	5.0		1	1/26/2011	2/1/2011
116006-008A	1127-130-9.5-10.0	9.0	mg/Kg	70170	0.11	5.0		1	1/26/2011	2/1/2011
116006-009A	1127-132-1.5-2.0	80	mg/Kg	70170	0.11	5.0		1	1/26/2011	2/1/2011
116006-010A	1127-132-4.5-5.0	21	mg/Kg	70170	0.11	5.0		1	1/26/2011	2/1/2011
116006-011A	1127-134-1.5-2.0	19	mg/Kg	70170	0.11	5.0		1	1/26/2011	2/1/2011
116006-012A	1127-134-4.5-5.0	14	mg/Kg	70170	0.11	5.0		1	1/26/2011	2/1/2011
116006-013A	1127-136-1.5-2.0	11	mg/Kg	70170	0.11	5.0		1	1/26/2011	2/1/2011
116006-014A	1127-136-4.5-5.0	21	mg/Kg	70170	0.11	5.0		1	1/26/2011	2/1/2011
116006-015A	1127-135-0.5-1.0	19	mg/Kg	70170	0.11	5.0		1	1/26/2011	2/1/2011
116006-016A	1127-135-1.5-2.0	26	mg/Kg	70170	0.11	5.0		1	1/26/2011	2/1/2011
116006-017A	1127-133-0.5-1.0	21	mg/Kg	70170	0.11	5.0		1	1/26/2011	2/1/2011
116006-018A	1127-133-1.5-2.0	20	mg/Kg	70170	0.11	5.0		1	1/26/2011	2/1/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116006
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/26/2011 6:16:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	SRB

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116006-019A	1127-138-1.5-2.0	50	mg/Kg	70170	0.11	5.0		1	1/26/2011	2/1/2011
116006-020A	1127-138-3.5-4.0	9.0	mg/Kg	70170	0.11	5.0		1	1/26/2011	2/1/2011
116006-021A	1127-138-5.5-6.0	8.6	mg/Kg	70171	0.11	5.0		1	1/26/2011	2/1/2011
116006-022A	1127-138-8.5-9.0	6.5	mg/Kg	70171	0.11	5.0		1	1/26/2011	2/1/2011
116006-023A	1127-137-1.5-2.0	15	mg/Kg	70171	0.11	5.0		1	1/26/2011	2/1/2011
116006-024A	1127-137-3.5-4.0	11	mg/Kg	70171	0.11	5.0		1	1/26/2011	2/1/2011
116006-025A	1127-137-5.5-6.0	7.7	mg/Kg	70171	0.11	5.0		1	1/26/2011	2/1/2011
116006-026A	1127-137-8.5-9.0	9.5	mg/Kg	70171	0.11	5.0		1	1/26/2011	2/1/2011
116006-027A	1127-165-1.0	120	mg/Kg	70171	0.11	5.0		1	1/26/2011	2/1/2011
116006-028A	1127-165-2.0	130	mg/Kg	70171	0.11	5.0		1	1/26/2011	2/1/2011
116006-029A	1127-166-1.0	48	mg/Kg	70171	0.11	5.0		1	1/26/2011	2/1/2011
116006-030A	1127-166-3.0	17	mg/Kg	70171	0.11	5.0		1	1/26/2011	2/1/2011
116006-031A	1127-164-1.0	30	mg/Kg	70171	0.11	5.0		1	1/26/2011	2/1/2011
116006-032A	1127-164-3.0	36	mg/Kg	70171	0.11	5.0		1	1/26/2011	2/1/2011
116006-033A	1127-162-1.0	28	mg/Kg	70171	0.11	5.0		1	1/26/2011	2/1/2011
116006-034A	1127-162-3.0	11	mg/Kg	70171	0.11	5.0		1	1/26/2011	2/1/2011
116006-035A	1127-160-1.0	48	mg/Kg	70171	0.11	5.0		1	1/26/2011	2/1/2011
116006-036A	1127-160-2.0	11	mg/Kg	70171	0.11	5.0		1	1/26/2011	2/1/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116006
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/26/2011 6:16:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	SRB

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116006-037A	1127-174-1.0	19	mg/Kg	70171	0.11	5.0		1	1/26/2011	2/1/2011
116006-038A	1127-174-2.0	190	mg/Kg	70171	0.11	5.0		1	1/26/2011	2/1/2011
116006-039A	1127-170-1.0	240	mg/Kg	70171	0.11	5.0		1	1/26/2011	2/1/2011
116006-040A	1127-170-2.0	170	mg/Kg	70171	0.11	5.0		1	1/26/2011	2/1/2011
116006-041A	1127-169-1.0	15	mg/Kg	70172	0.11	5.0		1	1/26/2011	2/2/2011
116006-042A	1127-169-2.0	13	mg/Kg	70172	0.11	5.0		1	1/26/2011	2/2/2011
116006-043A	1127-167-2.0	3.9	mg/Kg	70172	0.11	5.0	J	1	1/26/2011	2/2/2011
116006-044A	1127-167-4.0	17	mg/Kg	70172	0.11	5.0		1	1/26/2011	2/2/2011
116006-045A	1127-167-6.0	11	mg/Kg	70172	0.11	5.0		1	1/26/2011	2/2/2011
116006-046A	1127-168-1.0	50	mg/Kg	70172	0.11	5.0		1	1/26/2011	2/2/2011
116006-047A	1127-168-2.0	15	mg/Kg	70172	0.11	5.0		1	1/26/2011	2/2/2011
116006-048A	1127-172-1.0	48	mg/Kg	70172	0.11	5.0		1	1/26/2011	2/2/2011
116006-049A	1127-172-2.0	13	mg/Kg	70172	0.11	5.0		1	1/26/2011	2/2/2011
116006-050A	1127-140-1.0	45	mg/Kg	70172	0.11	5.0		1	1/26/2011	2/2/2011
116006-051A	1127-140-2.0	30	mg/Kg	70172	0.11	5.0		1	1/26/2011	2/2/2011
116006-052A	1127-139-1.0	37	mg/Kg	70172	0.11	5.0		1	1/26/2011	2/2/2011
116006-053A	1127-139-2.0	35	mg/Kg	70172	0.11	5.0		1	1/26/2011	2/2/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116006
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/26/2011 6:16:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	VV

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116006-027A	1127-165-1.0	ND	mg/L	70561	0.21	0.25		1	1/26/2011	2/11/2011
116006-028A	1127-165-2.0	ND	mg/L	70561	0.21	0.25		1	1/26/2011	2/11/2011
116006-038A	1127-174-2.0	ND	mg/L	70561	0.21	0.25		1	1/26/2011	2/11/2011
116006-039A	1127-170-1.0	ND	mg/L	70561	0.21	0.25		1	1/26/2011	2/11/2011
116006-040A	1127-170-2.0	ND	mg/L	70561	0.21	0.25		1	1/26/2011	2/11/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION (STLC)
WET/ EPA 7420

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116006
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/26/2011 6:16:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	VV

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116006-009A	1127-132-1.5-2.0	1.2	mg/L	70403	0.21	0.25		1	1/26/2011	2/8/2011
116006-019A	1127-138-1.5-2.0	1.6	mg/L	70403	0.21	0.25		1	1/26/2011	2/8/2011
116006-027A	1127-165-1.0	11	mg/L	70403	0.41	0.50		2	1/26/2011	2/8/2011
116006-028A	1127-165-2.0	9.1	mg/L	70403	0.41	0.50		2	1/26/2011	2/8/2011
116006-038A	1127-174-2.0	7.8	mg/L	70403	0.21	0.25		1	1/26/2011	2/8/2011
116006-039A	1127-170-1.0	11	mg/L	70403	0.41	0.50		2	1/26/2011	2/8/2011
116006-040A	1127-170-2.0	6.5	mg/L	70403	0.21	0.25		1	1/26/2011	2/8/2011
116006-046A	1127-168-1.0	2.6	mg/L	70403	0.21	0.25		1	1/26/2011	2/8/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION (TCLP)
EPA 1311/ 7420

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116006
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/26/2011 6:16:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	VV

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116006-038A	1127-174-2.0	0.31	mg/L	70707	0.21	0.25		1	1/26/2011	2/15/2011
116006-039A	1127-170-1.0	0.37	mg/L	70707	0.21	0.25		1	1/26/2011	2/15/2011
116006-040A	1127-170-2.0	0.30	mg/L	70707	0.21	0.25		1	1/26/2011	2/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

pH
EPA 9045C

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116006
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/26/2011 6:16:00 PM
Project No:		**Matrix:**	Soil
Analyte:	pH	**Analyst:**	CBB

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116006-038A	1127-174-2.0	7.9	pH Units	R129967	0.10	0.10		1	1/26/2011	2/15/2011
116006-039A	1127-170-1.0	7.2	pH Units	R129968	0.10	0.10		1	1/26/2011	2/15/2011
116006-040A	1127-170-2.0	7.3	pH Units	R129968	0.10	0.10		1	1/26/2011	2/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	1127-174-2.0
Lab Order:	116006	**Collection Date:**	1/26/2011 10:40:00 AM
Project:	State Route 10 ADL, S9500-06-04	**Matrix:**	SOIL
Lab ID:	116006-038A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP METALS							
	EPA 3050B				**EPA 6010B**		
RunID: **ICP8_110215B**	QC Batch: **70696**				PrepDate: **2/15/2011**		Analyst: **JSD**
Antimony	1.0	0.16	2.0	J	mg/Kg	1	2/15/2011 02:21 PM
Arsenic	5.3	0.20	1.0		mg/Kg	1	2/15/2011 02:21 PM
Barium	160	0.056	1.0		mg/Kg	1	2/15/2011 02:21 PM
Beryllium	ND	0.042	1.0		mg/Kg	1	2/15/2011 02:21 PM
Cadmium	6.8	0.043	1.0		mg/Kg	1	2/15/2011 02:21 PM
Chromium	20	0.13	1.0		mg/Kg	1	2/15/2011 02:21 PM
Cobalt	6.9	0.11	1.0		mg/Kg	1	2/15/2011 02:21 PM
Copper	28	0.18	2.0		mg/Kg	1	2/15/2011 02:21 PM
Molybdenum	19	0.097	1.0		mg/Kg	1	2/15/2011 02:21 PM
Nickel	31	0.11	1.0		mg/Kg	1	2/15/2011 02:21 PM
Selenium	3.3	0.28	1.0		mg/Kg	1	2/15/2011 02:21 PM
Silver	ND	0.042	1.0		mg/Kg	1	2/15/2011 02:21 PM
Thallium	ND	0.098	1.0		mg/Kg	1	2/15/2011 02:21 PM
Vanadium	41	0.088	1.0		mg/Kg	1	2/15/2011 02:21 PM
Zinc	130	0.13	1.0		mg/Kg	1	2/15/2011 02:21 PM
MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7471A				
RunID: **AA1_110215A**	QC Batch: **70695**				PrepDate: **2/15/2011**		Analyst: **VV**
Mercury	0.080	0.0076	0.10	J	mg/Kg	1	2/15/2011 01:25 PM

Qualifiers:

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	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	1127-170-1.0
Lab Order:	116006	**Collection Date:**	1/26/2011 10:50:00 AM
Project:	State Route 10 ADL, S9500-06-04	**Matrix:**	SOIL
Lab ID:	116006-039A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP METALS							
	EPA 3050B				**EPA 6010B**		
RunID: **ICP8_110215B**	QC Batch: **70696**				PrepDate: **2/15/2011**		Analyst: **JSD**
Antimony	0.75	0.16	2.0	J	mg/Kg	1	2/15/2011 02:24 PM
Arsenic	4.3	0.20	1.0		mg/Kg	1	2/15/2011 02:24 PM
Barium	170	0.056	1.0		mg/Kg	1	2/15/2011 02:24 PM
Beryllium	ND	0.042	1.0		mg/Kg	1	2/15/2011 02:24 PM
Cadmium	3.4	0.043	1.0		mg/Kg	1	2/15/2011 02:24 PM
Chromium	17	0.13	1.0		mg/Kg	1	2/15/2011 02:24 PM
Cobalt	8.2	0.11	1.0		mg/Kg	1	2/15/2011 02:24 PM
Copper	29	0.18	2.0		mg/Kg	1	2/15/2011 02:24 PM
Molybdenum	8.7	0.097	1.0		mg/Kg	1	2/15/2011 02:24 PM
Nickel	24	0.11	1.0		mg/Kg	1	2/15/2011 02:24 PM
Selenium	1.0	0.28	1.0		mg/Kg	1	2/15/2011 02:24 PM
Silver	ND	0.042	1.0		mg/Kg	1	2/15/2011 02:24 PM
Thallium	ND	0.098	1.0		mg/Kg	1	2/15/2011 02:24 PM
Vanadium	34	0.088	1.0		mg/Kg	1	2/15/2011 02:24 PM
Zinc	130	0.13	1.0		mg/Kg	1	2/15/2011 02:24 PM
MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7471A				
RunID: **AA1_110215A**	QC Batch: **70695**				PrepDate: **2/15/2011**		Analyst: **VV**
Mercury	0.073	0.0076	0.10	J	mg/Kg	1	2/15/2011 01:27 PM

Qualifiers:

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	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT: Geocon Consultants, Inc.
Work Order: 116006
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **MB-70696** SampType: **MBLK** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **PBS** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111640**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.171	2.0									J
Arsenic	ND	1.0									
Barium	ND	1.0									
Beryllium	ND	1.0									
Cadmium	ND	1.0									
Chromium	ND	1.0									
Cobalt	ND	1.0									
Copper	ND	2.0									
Molybdenum	ND	1.0									
Nickel	ND	1.0									
Selenium	ND	1.0									
Silver	ND	1.0									
Thallium	ND	1.0									
Vanadium	ND	1.0									
Zinc	0.220	1.0									J

Sample ID: **LCS-70696** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **LCSS** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111641**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	49.670	2.0	50.00	0.1712	99.0	80	120				
Arsenic	49.827	1.0	50.00	0	99.7	80	120				
Barium	51.901	1.0	50.00	0	104	80	120				
Beryllium	51.067	1.0	50.00	0	102	80	120				
Cadmium	49.784	1.0	50.00	0	99.6	80	120				
Chromium	47.473	1.0	50.00	0	94.9	80	120				
Cobalt	51.031	1.0	50.00	0	102	80	120				
Copper	51.387	2.0	50.00	0	103	80	120				

Qualifiers:

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E Value above quantitation range
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116006
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **LCS-70696** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **LCSS** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111641**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	52.935	1.0	50.00	0	106	80	120				
Nickel	50.522	1.0	50.00	0	101	80	120				
Selenium	48.054	1.0	50.00	0	96.1	80	120				
Silver	48.722	1.0	50.00	0	97.4	80	120				
Thallium	49.730	1.0	50.00	0	99.5	80	120				
Vanadium	52.583	1.0	50.00	0	105	80	120				
Zinc	50.103	1.0	50.00	0.2199	99.8	80	120				

Sample ID: **115950-007A-DUP** SampType: **DUP** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **ZZZZZZ** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111643**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.503	2.0						0.3335	0	20	J
Arsenic	ND	1.0						0	0	20	
Barium	87.920	1.0						92.48	5.06	20	
Beryllium	ND	1.0						0	0	20	
Cadmium	0.484	1.0						0.4796	0	20	J
Chromium	11.976	1.0						13.01	8.31	20	
Cobalt	7.806	1.0						8.123	3.97	20	
Copper	16.945	2.0						17.21	1.57	20	
Lead	119.364	1.0						115.6	3.22	20	
Molybdenum	ND	1.0						0	0	20	
Nickel	10.425	1.0						11.69	11.5	20	
Selenium	ND	1.0						0	0	20	
Silver	ND	1.0						0	0	20	
Thallium	ND	1.0						0	0	20	
Vanadium	29.441	1.0						30.04	2.02	20	
Zinc	63.084	1.0						61.20	3.03	20	

Qualifiers:

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- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116006
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **115950-007A-MS** SampType: **MS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **ZZZZZZ** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111644**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	99.412	2.0	125.0	0.3335	79.3	32	105				
Arsenic	105.642	1.0	125.0	0	84.5	49	106				
Barium	205.619	1.0	125.0	92.48	90.5	31	133				
Beryllium	108.341	1.0	125.0	0	86.7	56	106				
Cadmium	104.937	1.0	125.0	0.4796	83.6	51	103				
Chromium	115.561	1.0	125.0	13.01	82.0	45	114				
Cobalt	115.696	1.0	125.0	8.123	86.1	52	106				
Copper	136.054	2.0	125.0	17.21	95.1	54	125				
Lead	223.864	1.0	125.0	115.6	86.6	34	126				
Molybdenum	108.027	1.0	125.0	0	86.4	54	106				
Nickel	117.827	1.0	125.0	11.69	84.9	45	111				
Selenium	105.711	1.0	125.0	0	84.6	47	104				
Silver	112.685	1.0	125.0	0	90.1	56	112				
Thallium	87.971	1.0	125.0	0	70.4	46	101				
Vanadium	142.992	1.0	125.0	30.04	90.4	54	114				
Zinc	170.373	1.0	125.0	61.20	87.3	28	125				

Sample ID: **115950-007A-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **ZZZZZZ** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111645**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	95.522	2.0	125.0	0.3335	76.2	32	105	99.41	3.99	20	
Arsenic	101.141	1.0	125.0	0	80.9	49	106	105.6	4.35	20	
Barium	200.985	1.0	125.0	92.48	86.8	31	133	205.6	2.28	20	
Beryllium	103.888	1.0	125.0	0	83.1	56	106	108.3	4.20	20	
Cadmium	100.464	1.0	125.0	0.4796	80.0	51	103	104.9	4.36	20	
Chromium	111.613	1.0	125.0	13.01	78.9	45	114	115.6	3.48	20	
Cobalt	111.870	1.0	125.0	8.123	83.0	52	106	115.7	3.36	20	
Copper	131.149	2.0	125.0	17.21	91.1	54	125	136.1	3.67	20	
Lead	218.194	1.0	125.0	115.6	82.1	34	126	223.9	2.57	20	

Qualifiers:

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H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116006
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **115950-007A-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **ZZZZZZ** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111645**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	103.377	1.0	125.0	0	82.7	54	106	108.0	4.40	20	
Nickel	113.534	1.0	125.0	11.69	81.5	45	111	117.8	3.71	20	
Selenium	101.064	1.0	125.0	0	80.9	47	104	105.7	4.49	20	
Silver	108.446	1.0	125.0	0	86.8	56	112	112.7	3.83	20	
Thallium	83.224	1.0	125.0	0	66.6	46	101	87.97	5.55	20	
Vanadium	140.087	1.0	125.0	30.04	88.0	54	114	143.0	2.05	20	
Zinc	168.089	1.0	125.0	61.20	85.5	28	125	170.4	1.35	20	

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CLIENT: Geocon Consultants, Inc.
Work Order: 116006
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-70170A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129415**
Client ID: **PBS**	Batch ID: **70170**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/1/2011**	SeqNo: **2099441**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: **LCS-70170**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129415**
Client ID: **LCSS**	Batch ID: **70170**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/1/2011**	SeqNo: **2099442**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	256.279	5.0	250.0	0	103	80	120				

Sample ID: **116006-010A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129415**
Client ID: **1127-132-4.5-5.0**	Batch ID: **70170**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/1/2011**	SeqNo: **2099453**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	29.660	5.0						20.58	36.2	20	R

Sample ID: **116006-010A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129415**
Client ID: **1127-132-4.5-5.0**	Batch ID: **70170**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/1/2011**	SeqNo: **2099454**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	243.531	5.0	250.0	20.58	89.2	34	126				

Sample ID: **MB-70170B**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129415**
Client ID: **PBS**	Batch ID: **70170**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/1/2011**	SeqNo: **2099455**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

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- H Holding times for preparation or analysis exceeded
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Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116006
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **116006-020-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129415**
Client ID: **ZZZZZZ**	Batch ID: **70170**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/1/2011**	SeqNo: **2099466**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	9.056	5.0						8.976	0.886	20	

Sample ID: **116006-020A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129415**
Client ID: **1127-138-3.5-4.0**	Batch ID: **70170**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/1/2011**	SeqNo: **2099467**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	227.579	5.0	250.0	8.976	87.4	34	126				

Sample ID: **116006-020A-MSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129415**
Client ID: **1127-138-3.5-4.0**	Batch ID: **70170**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/1/2011**	SeqNo: **2099468**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	257.659	5.0	250.0	8.976	99.5	34	126	227.6	12.4	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116006
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-70171A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129416**
Client ID: **PBS**	Batch ID: **70171**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/1/2011**	SeqNo: **2099497**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: **LCS-70171**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129416**
Client ID: **LCSS**	Batch ID: **70171**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/1/2011**	SeqNo: **2099498**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	285.789	5.0	250.0	0	114	80	120				

Sample ID: **116006-030A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129416**
Client ID: **1127-166-3.0**	Batch ID: **70171**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/1/2011**	SeqNo: **2099509**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	13.122	5.0						17.16	26.7	20	R

Sample ID: **116006-030A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129416**
Client ID: **1127-166-3.0**	Batch ID: **70171**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/1/2011**	SeqNo: **2099510**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	254.509	5.0	250.0	17.16	94.9	34	126				

Sample ID: **MB-70171B**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129416**
Client ID: **PBS**	Batch ID: **70171**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/1/2011**	SeqNo: **2099511**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116006
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **116006-040A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129416**
Client ID: **1127-170-2.0**	Batch ID: **70171**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/1/2011**	SeqNo: **2099522**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	126.715	5.0						166.7	27.3	20	R

Sample ID: **116006-040A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129416**
Client ID: **1127-170-2.0**	Batch ID: **70171**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/1/2011**	SeqNo: **2099523**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	317.054	5.0	250.0	166.7	60.1	34	126				

Sample ID: **116006-040A-MSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129416**
Client ID: **1127-170-2.0**	Batch ID: **70171**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/1/2011**	SeqNo: **2099524**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	328.832	5.0	250.0	166.7	64.8	34	126	317.1	3.65	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116006
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-70172A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129443**
Client ID: **PBS**	Batch ID: **70172**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100119**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: **LCS-70172**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129443**
Client ID: **LCSS**	Batch ID: **70172**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100120**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	253.703	5.0	250.0	0	101	80	120				

Sample ID: **116006-050A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129443**
Client ID: **1127-140-1.0**	Batch ID: **70172**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100131**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	58.739	5.0						44.81	26.9	20	R

Sample ID: **116006-050A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129443**
Client ID: **1127-140-1.0**	Batch ID: **70172**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100132**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	261.965	5.0	250.0	44.81	86.9	34	126				

Sample ID: **MB-70172B**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129443**
Client ID: **PBS**	Batch ID: **70172**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100133**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116006
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **116042-007A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129443**
Client ID: **ZZZZZZ**	Batch ID: **70172**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100144**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.073	5.0						4.886	3.76	20	

Sample ID: **116042-007A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129443**
Client ID: **ZZZZZZ**	Batch ID: **70172**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100145**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	235.353	5.0	250.0	4.886	92.2	34	126				

Sample ID: **116042-007A-MSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129443**
Client ID: **ZZZZZZ**	Batch ID: **70172**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100146**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	229.154	5.0	250.0	4.886	89.7	34	126	235.4	2.67	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116006
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI_GEOCON

Sample ID: **MB-70561A**	SampType: **MBLK**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/9/2011**	RunNo: **129867**
Client ID: **PBS**	Batch ID: **70561**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/11/2011**	SeqNo: **2108786**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70561**	SampType: **LCS**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/9/2011**	RunNo: **129867**
Client ID: **LCSS**	Batch ID: **70561**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/11/2011**	SeqNo: **2108787**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.000	0.25	5.000	0	100	80	120				

Sample ID: **116042-024A-DUP**	SampType: **DUP**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/9/2011**	RunNo: **129867**
Client ID: **ZZZZZZ**	Batch ID: **70561**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/11/2011**	SeqNo: **2108798**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25						0	0	20	

Sample ID: **116042-024A-MS**	SampType: **MS**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/9/2011**	RunNo: **129867**
Client ID: **ZZZZZZ**	Batch ID: **70561**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/11/2011**	SeqNo: **2108799**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.982	0.25	5.000	0	99.6	70	130				

Sample ID: **MB-70561B**	SampType: **MBLK**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/9/2011**	RunNo: **129867**
Client ID: **PBS**	Batch ID: **70561**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/11/2011**	SeqNo: **2108800**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116006
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI_GEOCON

Sample ID: **116135-019A-DUP**	SampType: **DUP**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/9/2011**	RunNo: **129867**
Client ID: **ZZZZZZ**	Batch ID: **70561**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/11/2011**	SeqNo: **2108811**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25						0	0	20	

Sample ID: **116135-019A-MS**	SampType: **MS**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/9/2011**	RunNo: **129867**
Client ID: **ZZZZZZ**	Batch ID: **70561**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/11/2011**	SeqNo: **2108812**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.057	0.25	5.000	0	101	70	130				

Sample ID: **116135-019A-MSD**	SampType: **MSD**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/9/2011**	RunNo: **129867**
Client ID: **ZZZZZZ**	Batch ID: **70561**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/11/2011**	SeqNo: **2108813**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.098	0.25	5.000	0	102	70	130	5.057	0.818	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116006
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_ST

Sample ID: **MB-70403A**	SampType: **MBLK**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/4/2011**	RunNo: **129716**
Client ID: **PBS**	Batch ID: **70403**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/8/2011**	SeqNo: **2105840**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70403**	SampType: **LCS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/4/2011**	RunNo: **129716**
Client ID: **LCSS**	Batch ID: **70403**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/8/2011**	SeqNo: **2105841**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.061	0.25	5.000	0	101	80	120				

Sample ID: **116006-046A-DUP**	SampType: **DUP**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/4/2011**	RunNo: **129716**
Client ID: **1127-168-1.0**	Batch ID: **70403**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/8/2011**	SeqNo: **2105854**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.545	0.25						2.582	1.46	20	

Sample ID: **116006-046A-MS**	SampType: **MS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/4/2011**	RunNo: **129716**
Client ID: **1127-168-1.0**	Batch ID: **70403**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/8/2011**	SeqNo: **2105855**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.129	0.25	5.000	2.582	90.9	80	120				

Sample ID: **MB-70403B**	SampType: **MBLK**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/4/2011**	RunNo: **129716**
Client ID: **PBS**	Batch ID: **70403**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/8/2011**	SeqNo: **2105856**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116006
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_ST

Sample ID: **116042-046A-DUP**	SampType: **DUP**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/4/2011**	RunNo: **129716**
Client ID: **ZZZZZZ**	Batch ID: **70403**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **2/8/2011**	SeqNo: **2105867**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.691	0.25						3.696	0.140	20	

Sample ID: **116042-046A-MS**	SampType: **MS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/4/2011**	RunNo: **129716**
Client ID: **ZZZZZZ**	Batch ID: **70403**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **2/8/2011**	SeqNo: **2105868**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.770	0.50	5.000	3.696	101	80	120				

Sample ID: **116042-046A-MSD**	SampType: **MSD**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/4/2011**	RunNo: **129716**
Client ID: **ZZZZZZ**	Batch ID: **70403**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **2/8/2011**	SeqNo: **2105869**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.896	0.50	5.000	3.696	104	80	120	8.770	1.42	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116006
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **MB-70707A**	SampType: **MBLK**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129996**
Client ID: **PBS**	Batch ID: **70707**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112017**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **MB-70685A TCLP**	SampType: **MBLK**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129996**
Client ID: **PBS**	Batch ID: **70707**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112018**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70707**	SampType: **LCS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129996**
Client ID: **LCSS**	Batch ID: **70707**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.963	0.25	1.000	0	96.3	80	120				

Sample ID: **116042-038A-DUP**	SampType: **DUP**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129996**
Client ID: **ZZZZZZ**	Batch ID: **70707**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112025**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.682	0.25						0.6682	2.04	20	

Sample ID: **116042-038A-MS**	SampType: **MS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129996**
Client ID: **ZZZZZZ**	Batch ID: **70707**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112026**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.240	0.25	2.500	0.6682	103	70	130				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116006
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **MB-70707B**	SampType: **MBLK**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129996**
Client ID: **PBS**	Batch ID: **70707**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112027**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **MB-70685B TCLP**	SampType: **MBLK**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129996**
Client ID: **PBS**	Batch ID: **70707**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112028**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **116069-032A-DUP**	SampType: **DUP**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129996**
Client ID: **ZZZZZZ**	Batch ID: **70707**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112039**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.656	0.25						0.6450	1.68	20	

Sample ID: **116069-032A-MS**	SampType: **MS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129996**
Client ID: **ZZZZZZ**	Batch ID: **70707**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112040**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.017	0.25	2.500	0.6450	94.9	70	130				

Sample ID: **116069-032A-MSD**	SampType: **MSD**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129996**
Client ID: **ZZZZZZ**	Batch ID: **70707**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112041**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.039	0.25	2.500	0.6450	95.8	70	130	3.017	0.748	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected below quantitation limits
- S Spike/Surrogate outside of limits due to matrix interference
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116006
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7471_S

Sample ID: **MB-70695** SampType: **MBLK** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129990**
Client ID: **PBS** Batch ID: **70695** TestNo: **EPA 7471A** Analysis Date: **2/15/2011** SeqNo: **2111727**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: **LCS-70695** SampType: **LCS** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129990**
Client ID: **LCSS** Batch ID: **70695** TestNo: **EPA 7471A** Analysis Date: **2/15/2011** SeqNo: **2111728**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.825	0.10	0.8300	0	99.4	80	120				

Sample ID: **115950-007A-MS** SampType: **MS** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129990**
Client ID: **ZZZZZZ** Batch ID: **70695** TestNo: **EPA 7471A** Analysis Date: **2/15/2011** SeqNo: **2111729**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.983	0.10	0.8300	0.04249	113	70	130				

Sample ID: **115950-007A-MSD** SampType: **MSD** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129990**
Client ID: **ZZZZZZ** Batch ID: **70695** TestNo: **EPA 7471A** Analysis Date: **2/15/2011** SeqNo: **2111730**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.982	0.10	0.8300	0.04249	113	70	130	0.9829	0.0679	20	

Sample ID: **115950-007A-DUP** SampType: **DUP** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129990**
Client ID: **ZZZZZZ** Batch ID: **70695** TestNo: **EPA 7471A** Analysis Date: **2/15/2011** SeqNo: **2111732**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.044	0.10						0.04249	0	20	J

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116006
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 9045_S

Sample ID: **116006-038ADUP** SampType: **DUP** TestCode: **9045_S** Units: **pH Units** Prep Date: RunNo: **129967**
Client ID: **1127-174-2.0** Batch ID: **R129967** TestNo: **EPA 9045C** Analysis Date: **2/15/2011** SeqNo: **2111248**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.820	0.10						7.860	0.510	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116006
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 9045_S

Sample ID: **116069-022ADUP** SampType: **DUP** TestCode: **9045_S** Units: **pH Units** Prep Date: RunNo: **129968**
Client ID: **ZZZZZZ** Batch ID: **R129968** TestNo: **EPA 9045C** Analysis Date: **2/15/2011** SeqNo: **2111271**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.860	0.10						7.950	1.14	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

April 20, 2011

Mike Conkle
Geocon Consultants, Inc.
3303 N. San Fernando Blvd., Suite 100
Burbank, CA 91504
TEL: (818) 841-8388
FAX: (818) 841-1704

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003

Workorder No.: 116007

RE: State Route 10 ADL, S9500-06-04

Attention: Mike Conkle

Enclosed are the results for sample(s) received on January 26, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

This is an addendum report. Please incorporate with documentation previously submitted.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Geocon Consultants, Inc.
Project: State Route 10 ADL, S9500-06-04
Lab Order: 116007

CASE NARRATIVE

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116007
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/26/2011 6:16:00 PM
Project No:		**Matrix:**	Water
Analyte:	Lead	**Analyst:**	JSD

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116007-001A	EB-100-7	ND	mg/L	70135	0.0046	0.25		1	1/26/2011	1/31/2011
116007-002A	EB-100-8	ND	mg/L	70135	0.0046	0.25		1	1/26/2011	1/31/2011
116007-003A	EB-100-9	ND	mg/L	70135	0.0046	0.25		1	1/26/2011	1/31/2011
116007-004A	EB-100-10	ND	mg/L	70135	0.0046	0.25		1	1/26/2011	1/31/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT: Geocon Consultants, Inc.
Work Order: 116007
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPB

Sample ID: **MB-70135**	SampType: **MBLK**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **1/31/2011**	RunNo: **129353**
Client ID: **PBW**	Batch ID: **70135**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **1/31/2011**	SeqNo: **2098007**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70135**	SampType: **LCS**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **1/31/2011**	RunNo: **129353**
Client ID: **LCSW**	Batch ID: **70135**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **1/31/2011**	SeqNo: **2098008**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.038	0.25	1.000	0	104	85	115				

Sample ID: **116007-004A-DUP**	SampType: **DUP**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **1/31/2011**	RunNo: **129353**
Client ID: **EB-100-10**	Batch ID: **70135**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **1/31/2011**	SeqNo: **2098013**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25						0	0	20	

Sample ID: **116007-004A-MS**	SampType: **MS**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **1/31/2011**	RunNo: **129353**
Client ID: **EB-100-10**	Batch ID: **70135**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **1/31/2011**	SeqNo: **2098014**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.508	0.25	2.500	0	100	80	118				

Sample ID: **116007-004A-MSD**	SampType: **MSD**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **1/31/2011**	RunNo: **129353**
Client ID: **EB-100-10**	Batch ID: **70135**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **1/31/2011**	SeqNo: **2098015**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.375	0.25	2.500	0	95.0	80	118	2.508	5.46	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

April 20, 2011

Mike Conkle
Geocon Consultants, Inc.
3303 N. San Fernando Blvd., Suite 100
Burbank, CA 91504

TEL: (818) 841-8388
FAX: (818) 841-1704

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003

Workorder No.: 116042

RE: State Route 10 ADL, S9500-06-04

Attention: Mike Conkle

Enclosed are the results for sample(s) received on January 27, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

This is an addendum report. Please incorporate with documentation previously submitted.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Analytical Comments for Method 6010

RPD for Duplicate (DUP) is outside criteria for samples 116006-050ADUP, 116042-017ADUP, 116042-027ADUP and 116042-046ADUP; however, the Laboratory Control Sample (LCS) validated the analytical batch.

Analytical Comments for Method 7420

Dilution was necessary for sample 116042-038A, due to sample matrix.

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116042
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/27/2011 7:00:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	SRB

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116042-001A	1127-148-0.5-1	3.8	mg/Kg	70172	0.11	5.0	J	1	1/27/2011	2/2/2011
116042-002A	1127-148-1.5-2.0	3.6	mg/Kg	70172	0.11	5.0	J	1	1/27/2011	2/2/2011
116042-003A	1127-148-3.5-4.0	7.1	mg/Kg	70172	0.11	5.0		1	1/27/2011	2/2/2011
116042-004A	1127-150-1.5-2.0	6.6	mg/Kg	70172	0.11	5.0		1	1/27/2011	2/2/2011
116042-005A	1127-150-3.5-4.0	16	mg/Kg	70172	0.11	5.0		1	1/27/2011	2/2/2011
116042-006A	1127-149-1.5-2.0	3.9	mg/Kg	70172	0.11	5.0	J	1	1/27/2011	2/2/2011
116042-007A	1127-149-3.5-4.0	4.9	mg/Kg	70172	0.11	5.0	J	1	1/27/2011	2/2/2011
116042-008A	1127-149-5.5-6.0	4.9	mg/Kg	70173	0.11	5.0	J	1	1/27/2011	2/2/2011
116042-009A	1127-147-1.5-2.0	27	mg/Kg	70173	0.11	5.0		1	1/27/2011	2/2/2011
116042-010A	1127-147-3.5-4.0	4.8	mg/Kg	70173	0.11	5.0	J	1	1/27/2011	2/2/2011
116042-011A	1127-147-5.5-6.0	6.8	mg/Kg	70173	0.11	5.0		1	1/27/2011	2/2/2011
116042-012A	1127-145-0.5-1.0	15	mg/Kg	70173	0.11	5.0		1	1/27/2011	2/2/2011
116042-013A	1127-145-1.5-2.0	11	mg/Kg	70173	0.11	5.0		1	1/27/2011	2/2/2011
116042-014A	1127-152-1.5-2.0	43	mg/Kg	70173	0.11	5.0		1	1/27/2011	2/2/2011
116042-015A	1127-152-3.5-4.0	6.0	mg/Kg	70173	0.11	5.0		1	1/27/2011	2/2/2011
116042-016A	1127-152-5.5-6.0	7.5	mg/Kg	70173	0.11	5.0		1	1/27/2011	2/2/2011
116042-017A	1127-152-7.5-8.0	6.0	mg/Kg	70173	0.11	5.0		1	1/27/2011	2/2/2011
116042-018A	1127-175-0.5-1.0	110	mg/Kg	70173	0.11	5.0		1	1/27/2011	2/2/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116042
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/27/2011 7:00:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	SRB

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116042-019A	1127-175-1.5-2.0	64	mg/Kg	70173	0.11	5.0		1	1/27/2011	2/2/2011
116042-020A	1127-175-2.5-3.0	40	mg/Kg	70173	0.11	5.0		1	1/27/2011	2/2/2011
116042-021A	1127-142-1.0	47	mg/Kg	70173	0.11	5.0		1	1/27/2011	2/2/2011
116042-022A	1127-142-2.0	38	mg/Kg	70173	0.11	5.0		1	1/27/2011	2/2/2011
116042-023A	1127-144-1.0	47	mg/Kg	70173	0.11	5.0		1	1/27/2011	2/2/2011
116042-024A	1127-144-2.0	76	mg/Kg	70173	0.11	5.0		1	1/27/2011	2/2/2011
116042-025A	1127-146-1.0	21	mg/Kg	70173	0.11	5.0		1	1/27/2011	2/2/2011
116042-026A	1127-146-2.0	14	mg/Kg	70173	0.11	5.0		1	1/27/2011	2/2/2011
116042-027A	1127-141-1.0	7.4	mg/Kg	70173	0.11	5.0		1	1/27/2011	2/2/2011
116042-028A	1127-141-2.0	23	mg/Kg	70174	0.11	5.0		1	1/27/2011	2/2/2011
116042-029A	1127-143-1.0	23	mg/Kg	70174	0.11	5.0		1	1/27/2011	2/2/2011
116042-030A	1127-143-2.0	22	mg/Kg	70174	0.11	5.0		1	1/27/2011	2/2/2011
116042-031A	1127-154-1.0	27	mg/Kg	70174	0.11	5.0		1	1/27/2011	2/2/2011
116042-032A	1127-154-2.0	8.2	mg/Kg	70174	0.11	5.0		1	1/27/2011	2/2/2011
116042-033A	1127-176-1.0	42	mg/Kg	70174	0.11	5.0		1	1/27/2011	2/2/2011
116042-034A	1127-176-2.0	5.4	mg/Kg	70174	0.11	5.0		1	1/27/2011	2/2/2011
116042-035A	1127-176-3.0	41	mg/Kg	70174	0.11	5.0		1	1/27/2011	2/2/2011
116042-036A	1127-178-1.0	93	mg/Kg	70174	0.11	5.0		1	1/27/2011	2/2/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116042
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/27/2011 7:00:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	SRB

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116042-037A	1127-178-2.0	36	mg/Kg	70174	0.11	5.0		1	1/27/2011	2/2/2011
116042-038A	1127-180-0.5-1.0	270	mg/Kg	70174	0.11	5.0		1	1/27/2011	2/2/2011
116042-039A	1127-180-2.0	29	mg/Kg	70174	0.11	5.0		1	1/27/2011	2/2/2011
116042-040A	1127-177-0.5-1.0	150	mg/Kg	70174	0.11	5.0		1	1/27/2011	2/2/2011
116042-041A	1127-177-1.5-2.0	42	mg/Kg	70174	0.11	5.0		1	1/27/2011	2/2/2011
116042-042A	1127-179-0.5-1.0	94	mg/Kg	70174	0.11	5.0		1	1/27/2011	2/2/2011
116042-043A	1127-181-0.5-1.0	77	mg/Kg	70174	0.11	5.0		1	1/27/2011	2/2/2011
116042-044A	1127-181-1.5-2.0	69	mg/Kg	70174	0.11	5.0		1	1/27/2011	2/2/2011
116042-045A	1127-181-2.5-3.0	14	mg/Kg	70174	0.11	5.0		1	1/27/2011	2/2/2011
116042-046A	1127-179-2.0	50	mg/Kg	70174	0.11	5.0		1	1/27/2011	2/2/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116042
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/27/2011 7:00:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	VV

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116042-018A	1127-175-0.5-1.0	ND	mg/L	70561	0.21	0.25		1	1/27/2011	2/11/2011
116042-024A	1127-144-2.0	ND	mg/L	70561	0.21	0.25		1	1/27/2011	2/11/2011
116042-038A	1127-180-0.5-1.0	ND	mg/L	70561	0.21	0.25		1	1/27/2011	2/11/2011
116042-040A	1127-177-0.5-1.0	ND	mg/L	70561	0.21	0.25		1	1/27/2011	2/11/2011
116042-043A	1127-181-0.5-1.0	ND	mg/L	70561	0.21	0.25		1	1/27/2011	2/11/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION (STLC)
WET/ EPA 7420

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116042
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/27/2011 7:00:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	VV

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116042-018A	1127-175-0.5-1.0	5.2	mg/L	70403	0.21	0.25		1	1/27/2011	2/8/2011
116042-019A	1127-175-1.5-2.0	2.7	mg/L	70403	0.21	0.25		1	1/27/2011	2/8/2011
116042-024A	1127-144-2.0	5.0	mg/L	70403	0.21	0.25		1	1/27/2011	2/8/2011
116042-036A	1127-178-1.0	2.0	mg/L	70403	0.21	0.25		1	1/27/2011	2/8/2011
116042-038A	1127-180-0.5-1.0	18	mg/L	70403	0.41	0.50		2	1/27/2011	2/8/2011
116042-040A	1127-177-0.5-1.0	7.8	mg/L	70403	0.21	0.25		1	1/27/2011	2/8/2011
116042-042A	1127-179-0.5-1.0	4.1	mg/L	70403	0.21	0.25		1	1/27/2011	2/8/2011
116042-043A	1127-181-0.5-1.0	5.8	mg/L	70403	0.21	0.25		1	1/27/2011	2/8/2011
116042-044A	1127-181-1.5-2.0	3.2	mg/L	70403	0.21	0.25		1	1/27/2011	2/8/2011
116042-046A	1127-179-2.0	3.7	mg/L	70403	0.21	0.25		1	1/27/2011	2/8/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION (TCLP)
EPA 1311/ 7420

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116042
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/27/2011 7:00:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	VV

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116042-038A	1127-180-0.5-1.0	0.67	mg/L	70707	0.21	0.25		1	1/27/2011	2/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

pH
EPA 9045C

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116042
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/27/2011 7:00:00 PM
Project No:		**Matrix:**	Soil
Analyte:	pH	**Analyst:**	CBB

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116042-038A	1127-180-0.5-1.0	7.8	pH Units	R129968	0.10	0.10		1	1/27/2011	2/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	1127-180-0.5-1.0
Lab Order:	116042	**Collection Date:**	1/27/2011 2:38:00 PM
Project:	State Route 10 ADL, S9500-06-04	**Matrix:**	SOIL
Lab ID:	116042-038A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP METALS							
	EPA 3050B				**EPA 6010B**		
RunID: **ICP8_110215B**	QC Batch: **70696**				PrepDate: **2/15/2011**		Analyst: **JSD**
Antimony	0.44	0.16	2.0	J	mg/Kg	1	2/15/2011 02:28 PM
Arsenic	ND	0.20	1.0		mg/Kg	1	2/15/2011 02:28 PM
Barium	130	0.056	1.0		mg/Kg	1	2/15/2011 02:28 PM
Beryllium	ND	0.042	1.0		mg/Kg	1	2/15/2011 02:28 PM
Cadmium	1.2	0.043	1.0		mg/Kg	1	2/15/2011 02:28 PM
Chromium	11	0.13	1.0		mg/Kg	1	2/15/2011 02:28 PM
Cobalt	5.4	0.11	1.0		mg/Kg	1	2/15/2011 02:28 PM
Copper	13	0.18	2.0		mg/Kg	1	2/15/2011 02:28 PM
Molybdenum	1.6	0.097	1.0		mg/Kg	1	2/15/2011 02:28 PM
Nickel	14	0.11	1.0		mg/Kg	1	2/15/2011 02:28 PM
Selenium	ND	0.28	1.0		mg/Kg	1	2/15/2011 02:28 PM
Silver	ND	0.042	1.0		mg/Kg	1	2/15/2011 02:28 PM
Thallium	ND	0.098	1.0		mg/Kg	1	2/15/2011 02:28 PM
Vanadium	22	0.088	1.0		mg/Kg	1	2/15/2011 02:28 PM
Zinc	100	0.13	1.0		mg/Kg	1	2/15/2011 02:28 PM
MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7471A				
RunID: **AA1_110215A**	QC Batch: **70695**				PrepDate: **2/15/2011**		Analyst: **VV**
Mercury	0.022	0.0076	0.10	J	mg/Kg	1	2/15/2011 01:41 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT: Geocon Consultants, Inc.
Work Order: 116042
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **MB-70696** SampType: **MBLK** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **PBS** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111640**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.171	2.0									J
Arsenic	ND	1.0									
Barium	ND	1.0									
Beryllium	ND	1.0									
Cadmium	ND	1.0									
Chromium	ND	1.0									
Cobalt	ND	1.0									
Copper	ND	2.0									
Molybdenum	ND	1.0									
Nickel	ND	1.0									
Selenium	ND	1.0									
Silver	ND	1.0									
Thallium	ND	1.0									
Vanadium	ND	1.0									
Zinc	0.220	1.0									J

Sample ID: **LCS-70696** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **LCSS** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111641**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	49.670	2.0	50.00	0.1712	99.0	80	120				
Arsenic	49.827	1.0	50.00	0	99.7	80	120				
Barium	51.901	1.0	50.00	0	104	80	120				
Beryllium	51.067	1.0	50.00	0	102	80	120				
Cadmium	49.784	1.0	50.00	0	99.6	80	120				
Chromium	47.473	1.0	50.00	0	94.9	80	120				
Cobalt	51.031	1.0	50.00	0	102	80	120				
Copper	51.387	2.0	50.00	0	103	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116042
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **LCS-70696** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **LCSS** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111641**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	52.935	1.0	50.00	0	106	80	120				
Nickel	50.522	1.0	50.00	0	101	80	120				
Selenium	48.054	1.0	50.00	0	96.1	80	120				
Silver	48.722	1.0	50.00	0	97.4	80	120				
Thallium	49.730	1.0	50.00	0	99.5	80	120				
Vanadium	52.583	1.0	50.00	0	105	80	120				
Zinc	50.103	1.0	50.00	0.2199	99.8	80	120				

Sample ID: **115950-007A-DUP** SampType: **DUP** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **ZZZZZZ** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111643**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.503	2.0						0.3335	0	20	J
Arsenic	ND	1.0						0	0	20	
Barium	87.920	1.0						92.48	5.06	20	
Beryllium	ND	1.0						0	0	20	
Cadmium	0.484	1.0						0.4796	0	20	J
Chromium	11.976	1.0						13.01	8.31	20	
Cobalt	7.806	1.0						8.123	3.97	20	
Copper	16.945	2.0						17.21	1.57	20	
Lead	119.364	1.0						115.6	3.22	20	
Molybdenum	ND	1.0						0	0	20	
Nickel	10.425	1.0						11.69	11.5	20	
Selenium	ND	1.0						0	0	20	
Silver	ND	1.0						0	0	20	
Thallium	ND	1.0						0	0	20	
Vanadium	29.441	1.0						30.04	2.02	20	
Zinc	63.084	1.0						61.20	3.03	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected below quantitation limits
- S Spike/Surrogate outside of limits due to matrix interference
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116042
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **115950-007A-MS** SampType: **MS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **ZZZZZZ** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111644**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	99.412	2.0	125.0	0.3335	79.3	32	105				
Arsenic	105.642	1.0	125.0	0	84.5	49	106				
Barium	205.619	1.0	125.0	92.48	90.5	31	133				
Beryllium	108.341	1.0	125.0	0	86.7	56	106				
Cadmium	104.937	1.0	125.0	0.4796	83.6	51	103				
Chromium	115.561	1.0	125.0	13.01	82.0	45	114				
Cobalt	115.696	1.0	125.0	8.123	86.1	52	106				
Copper	136.054	2.0	125.0	17.21	95.1	54	125				
Lead	223.864	1.0	125.0	115.6	86.6	34	126				
Molybdenum	108.027	1.0	125.0	0	86.4	54	106				
Nickel	117.827	1.0	125.0	11.69	84.9	45	111				
Selenium	105.711	1.0	125.0	0	84.6	47	104				
Silver	112.685	1.0	125.0	0	90.1	56	112				
Thallium	87.971	1.0	125.0	0	70.4	46	101				
Vanadium	142.992	1.0	125.0	30.04	90.4	54	114				
Zinc	170.373	1.0	125.0	61.20	87.3	28	125				

Sample ID: **115950-007A-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **ZZZZZZ** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111645**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	95.522	2.0	125.0	0.3335	76.2	32	105	99.41	3.99	20	
Arsenic	101.141	1.0	125.0	0	80.9	49	106	105.6	4.35	20	
Barium	200.985	1.0	125.0	92.48	86.8	31	133	205.6	2.28	20	
Beryllium	103.888	1.0	125.0	0	83.1	56	106	108.3	4.20	20	
Cadmium	100.464	1.0	125.0	0.4796	80.0	51	103	104.9	4.36	20	
Chromium	111.613	1.0	125.0	13.01	78.9	45	114	115.6	3.48	20	
Cobalt	111.870	1.0	125.0	8.123	83.0	52	106	115.7	3.36	20	
Copper	131.149	2.0	125.0	17.21	91.1	54	125	136.1	3.67	20	
Lead	218.194	1.0	125.0	115.6	82.1	34	126	223.9	2.57	20	

Qualifiers:

B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
E Value above quantitation range
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116042
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **115950-007A-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **ZZZZZZ** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111645**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	103.377	1.0	125.0	0	82.7	54	106	108.0	4.40	20	
Nickel	113.534	1.0	125.0	11.69	81.5	45	111	117.8	3.71	20	
Selenium	101.064	1.0	125.0	0	80.9	47	104	105.7	4.49	20	
Silver	108.446	1.0	125.0	0	86.8	56	112	112.7	3.83	20	
Thallium	83.224	1.0	125.0	0	66.6	46	101	87.97	5.55	20	
Vanadium	140.087	1.0	125.0	30.04	88.0	54	114	143.0	2.05	20	
Zinc	168.089	1.0	125.0	61.20	85.5	28	125	170.4	1.35	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116042
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-70172A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129443**
Client ID: **PBS**	Batch ID: **70172**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100119**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: **LCS-70172**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129443**
Client ID: **LCSS**	Batch ID: **70172**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100120**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	253.703	5.0	250.0	0	101	80	120				

Sample ID: **116006-050A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129443**
Client ID: **ZZZZZZ**	Batch ID: **70172**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100131**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	58.739	5.0						44.81	26.9	20	R

Sample ID: **116006-050A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129443**
Client ID: **ZZZZZZ**	Batch ID: **70172**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100132**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	261.965	5.0	250.0	44.81	86.9	34	126				

Sample ID: **MB-70172B**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129443**
Client ID: **PBS**	Batch ID: **70172**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100133**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116042
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **116042-007A-DUP** SampType: **DUP** TestCode: **6010_SPB** Units: **mg/Kg** Prep Date: **2/1/2011** RunNo: **129443**
Client ID: **1127-149-3.5-4.0** Batch ID: **70172** TestNo: **EPA 6010B** **EPA 3050M** Analysis Date: **2/2/2011** SeqNo: **2100144**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.073	5.0						4.886	3.76	20	

Sample ID: **116042-007A-MS** SampType: **MS** TestCode: **6010_SPB** Units: **mg/Kg** Prep Date: **2/1/2011** RunNo: **129443**
Client ID: **1127-149-3.5-4.0** Batch ID: **70172** TestNo: **EPA 6010B** **EPA 3050M** Analysis Date: **2/2/2011** SeqNo: **2100145**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	235.353	5.0	250.0	4.886	92.2	34	126				

Sample ID: **116042-007A-MSD** SampType: **MSD** TestCode: **6010_SPB** Units: **mg/Kg** Prep Date: **2/1/2011** RunNo: **129443**
Client ID: **1127-149-3.5-4.0** Batch ID: **70172** TestNo: **EPA 6010B** **EPA 3050M** Analysis Date: **2/2/2011** SeqNo: **2100146**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	229.154	5.0	250.0	4.886	89.7	34	126	235.4	2.67	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116042
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-70173A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129447**
Client ID: **PBS**	Batch ID: **70173**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100292**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.153	5.0									J

Sample ID: **LCS-70173**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129447**
Client ID: **LCSS**	Batch ID: **70173**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100293**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	258.600	5.0	250.0	0.1525	103	80	120				

Sample ID: **116042-017A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129447**
Client ID: **1127-152-7.5-8.0**	Batch ID: **70173**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100304**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	18.138	5.0						6.026	100	20	R

Sample ID: **116042-017A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129447**
Client ID: **1127-152-7.5-8.0**	Batch ID: **70173**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100305**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	203.663	5.0	250.0	6.026	79.1	34	126				

Sample ID: **MB-70173B**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129447**
Client ID: **PBS**	Batch ID: **70173**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100306**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.126	5.0									J

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116042
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **116042-027A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129447**
Client ID: **1127-141-1.0**	Batch ID: **70173**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100317**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	15.042	5.0						7.412	68.0	20	R

Sample ID: **116042-027A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129447**
Client ID: **1127-141-1.0**	Batch ID: **70173**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100318**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	226.140	5.0	250.0	7.412	87.5	34	126				

Sample ID: **116042-027A-MSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/1/2011**	RunNo: **129447**
Client ID: **1127-141-1.0**	Batch ID: **70173**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100319**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	228.232	5.0	250.0	7.412	88.3	34	126	226.1	0.921	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116042
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-70174A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/31/2011**	RunNo: **129448**
Client ID: **PBS**	Batch ID: **70174**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100222**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.173	5.0									J

Sample ID: **LCS-70174**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/31/2011**	RunNo: **129448**
Client ID: **LCSS**	Batch ID: **70174**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100223**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	256.598	5.0	250.0	0.1732	103	80	120				

Sample ID: **116042-037A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/31/2011**	RunNo: **129448**
Client ID: **1127-178-2.0**	Batch ID: **70174**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100234**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	38.438	5.0						36.16	6.11	20	

Sample ID: **116042-037A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/31/2011**	RunNo: **129448**
Client ID: **1127-178-2.0**	Batch ID: **70174**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100235**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	244.303	5.0	250.0	36.16	83.3	34	126				

Sample ID: **MB-70174B**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/31/2011**	RunNo: **129448**
Client ID: **PBS**	Batch ID: **70174**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100236**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116042
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **116042-046A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/31/2011**	RunNo: **129448**
Client ID: **1127-179-2.0**	Batch ID: **70174**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100246**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	63.286	5.0						49.71	24.0	20	R

Sample ID: **116042-046A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/31/2011**	RunNo: **129448**
Client ID: **1127-179-2.0**	Batch ID: **70174**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100247**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	287.582	5.0	250.0	49.71	95.1	34	126				

Sample ID: **116042-046A-MSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **1/31/2011**	RunNo: **129448**
Client ID: **1127-179-2.0**	Batch ID: **70174**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/2/2011**	SeqNo: **2100248**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	274.155	5.0	250.0	49.71	89.8	34	126	287.6	4.78	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116042
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI_GEOCON

Sample ID: **MB-70561A** SampType: **MBLK** TestCode: **7420_DI_GEO** Units: **mg/L** Prep Date: **2/9/2011** RunNo: **129867**
Client ID: **PBS** Batch ID: **70561** TestNo: **WET DI/ EPA WET** Analysis Date: **2/11/2011** SeqNo: **2108786**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70561** SampType: **LCS** TestCode: **7420_DI_GEO** Units: **mg/L** Prep Date: **2/9/2011** RunNo: **129867**
Client ID: **LCSS** Batch ID: **70561** TestNo: **WET DI/ EPA WET** Analysis Date: **2/11/2011** SeqNo: **2108787**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.000	0.25	5.000	0	100	80	120				

Sample ID: **116042-024A-DUP** SampType: **DUP** TestCode: **7420_DI_GEO** Units: **mg/L** Prep Date: **2/9/2011** RunNo: **129867**
Client ID: **1127-144-2.0** Batch ID: **70561** TestNo: **WET DI/ EPA WET** Analysis Date: **2/11/2011** SeqNo: **2108798**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25						0	0	20	

Sample ID: **116042-024A-MS** SampType: **MS** TestCode: **7420_DI_GEO** Units: **mg/L** Prep Date: **2/9/2011** RunNo: **129867**
Client ID: **1127-144-2.0** Batch ID: **70561** TestNo: **WET DI/ EPA WET** Analysis Date: **2/11/2011** SeqNo: **2108799**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.982	0.25	5.000	0	99.6	70	130				

Sample ID: **MB-70561B** SampType: **MBLK** TestCode: **7420_DI_GEO** Units: **mg/L** Prep Date: **2/9/2011** RunNo: **129867**
Client ID: **PBS** Batch ID: **70561** TestNo: **WET DI/ EPA WET** Analysis Date: **2/11/2011** SeqNo: **2108800**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected below quantitation limits
- S Spike/Surrogate outside of limits due to matrix interference
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116042
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI_GEOCON

Sample ID: **116135-019A-DUP**	SampType: **DUP**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/9/2011**	RunNo: **129867**
Client ID: **ZZZZZZ**	Batch ID: **70561**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/11/2011**	SeqNo: **2108811**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25						0	0	20	

Sample ID: **116135-019A-MS**	SampType: **MS**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/9/2011**	RunNo: **129867**
Client ID: **ZZZZZZ**	Batch ID: **70561**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/11/2011**	SeqNo: **2108812**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.057	0.25	5.000	0	101	70	130				

Sample ID: **116135-019A-MSD**	SampType: **MSD**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/9/2011**	RunNo: **129867**
Client ID: **ZZZZZZ**	Batch ID: **70561**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/11/2011**	SeqNo: **2108813**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.098	0.25	5.000	0	102	70	130	5.057	0.818	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116042
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_ST

Sample ID: **MB-70403A**	SampType: **MBLK**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/4/2011**	RunNo: **129716**
Client ID: **PBS**	Batch ID: **70403**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/8/2011**	SeqNo: **2105840**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70403**	SampType: **LCS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/4/2011**	RunNo: **129716**
Client ID: **LCSS**	Batch ID: **70403**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/8/2011**	SeqNo: **2105841**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.061	0.25	5.000	0	101	80	120				

Sample ID: **116006-046A-DUP**	SampType: **DUP**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/4/2011**	RunNo: **129716**
Client ID: **ZZZZZZ**	Batch ID: **70403**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/8/2011**	SeqNo: **2105854**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.545	0.25						2.582	1.46	20	

Sample ID: **116006-046A-MS**	SampType: **MS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/4/2011**	RunNo: **129716**
Client ID: **ZZZZZZ**	Batch ID: **70403**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/8/2011**	SeqNo: **2105855**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.129	0.25	5.000	2.582	90.9	80	120				

Sample ID: **MB-70403B**	SampType: **MBLK**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/4/2011**	RunNo: **129716**
Client ID: **PBS**	Batch ID: **70403**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/8/2011**	SeqNo: **2105856**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116042
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_ST

Sample ID: **116042-046A-DUP**	SampType: **DUP**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/4/2011**	RunNo: **129716**
Client ID: **1127-179-2.0**	Batch ID: **70403**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **2/8/2011**	SeqNo: **2105867**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.691	0.25						3.696	0.140	20	

Sample ID: **116042-046A-MS**	SampType: **MS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/4/2011**	RunNo: **129716**
Client ID: **1127-179-2.0**	Batch ID: **70403**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **2/8/2011**	SeqNo: **2105868**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.770	0.50	5.000	3.696	101	80	120				

Sample ID: **116042-046A-MSD**	SampType: **MSD**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/4/2011**	RunNo: **129716**
Client ID: **1127-179-2.0**	Batch ID: **70403**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **2/8/2011**	SeqNo: **2105869**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.896	0.50	5.000	3.696	104	80	120	8.770	1.42	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116042
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **MB-70707A** SampType: **MBLK** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **129996**
Client ID: **PBS** Batch ID: **70707** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/15/2011** SeqNo: **2112017**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **MB-70685A TCLP** SampType: **MBLK** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **129996**
Client ID: **PBS** Batch ID: **70707** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/15/2011** SeqNo: **2112018**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70707** SampType: **LCS** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **129996**
Client ID: **LCSS** Batch ID: **70707** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/15/2011** SeqNo: **2112019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.963	0.25	1.000	0	96.3	80	120				

Sample ID: **116042-038A-DUP** SampType: **DUP** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **129996**
Client ID: **1127-180-0.5-1.0** Batch ID: **70707** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/15/2011** SeqNo: **2112025**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.682	0.25						0.6682	2.04	20	

Sample ID: **116042-038A-MS** SampType: **MS** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **129996**
Client ID: **1127-180-0.5-1.0** Batch ID: **70707** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/15/2011** SeqNo: **2112026**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.240	0.25	2.500	0.6682	103	70	130				

Qualifiers:

B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
E Value above quantitation range
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits
Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116042
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **MB-70707B** SampType: **MBLK** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **129996**
Client ID: **PBS** Batch ID: **70707** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/15/2011** SeqNo: **2112027**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **MB-70685B TCLP** SampType: **MBLK** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **129996**
Client ID: **PBS** Batch ID: **70707** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/15/2011** SeqNo: **2112028**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **116069-032A-DUP** SampType: **DUP** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **129996**
Client ID: **ZZZZZZ** Batch ID: **70707** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/15/2011** SeqNo: **2112039**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.656	0.25						0.6450	1.68	20	

Sample ID: **116069-032A-MS** SampType: **MS** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **129996**
Client ID: **ZZZZZZ** Batch ID: **70707** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/15/2011** SeqNo: **2112040**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.017	0.25	2.500	0.6450	94.9	70	130				

Sample ID: **116069-032A-MSD** SampType: **MSD** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **129996**
Client ID: **ZZZZZZ** Batch ID: **70707** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/15/2011** SeqNo: **2112041**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.039	0.25	2.500	0.6450	95.8	70	130	3.017	0.748	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116042
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7471_S

Sample ID: **MB-70695** SampType: **MBLK** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129990**
Client ID: **PBS** Batch ID: **70695** TestNo: **EPA 7471A** Analysis Date: **2/15/2011** SeqNo: **2111727**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: **LCS-70695** SampType: **LCS** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129990**
Client ID: **LCSS** Batch ID: **70695** TestNo: **EPA 7471A** Analysis Date: **2/15/2011** SeqNo: **2111728**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.825	0.10	0.8300	0	99.4	80	120				

Sample ID: **115950-007A-MS** SampType: **MS** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129990**
Client ID: **ZZZZZZ** Batch ID: **70695** TestNo: **EPA 7471A** Analysis Date: **2/15/2011** SeqNo: **2111729**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.983	0.10	0.8300	0.04249	113	70	130				

Sample ID: **115950-007A-MSD** SampType: **MSD** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129990**
Client ID: **ZZZZZZ** Batch ID: **70695** TestNo: **EPA 7471A** Analysis Date: **2/15/2011** SeqNo: **2111730**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.982	0.10	0.8300	0.04249	113	70	130	0.9829	0.0679	20	

Sample ID: **115950-007A-DUP** SampType: **DUP** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129990**
Client ID: **ZZZZZZ** Batch ID: **70695** TestNo: **EPA 7471A** Analysis Date: **2/15/2011** SeqNo: **2111732**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.044	0.10						0.04249	0	20	J

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116042
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 9045_S

Sample ID: **116069-022ADUP** SampType: **DUP** TestCode: **9045_S** Units: **pH Units** Prep Date: RunNo: **129968**
Client ID: **ZZZZZZ** Batch ID: **R129968** TestNo: **EPA 9045C** Analysis Date: **2/15/2011** SeqNo: **2111271**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.860	0.10						7.950	1.14	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

April 20, 2011

Mike Conkle
Geocon Consultants, Inc.
3303 N. San Fernando Blvd., Suite 100
Burbank, CA 91504

TEL: (818) 841-8388
FAX: (818) 841-1704

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003

Workorder No.: 116043

RE: State Route 10 ADL, S9500-06-04

Attention: Mike Conkle

Enclosed are the results for sample(s) received on January 27, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

This is an addendum report. Please incorporate with documentation previously submitted.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Geocon Consultants, Inc.
Project: State Route 10 ADL, S9500-06-04
Lab Order: 116043

CASE NARRATIVE

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	EB-100-11
Lab Order:	116043	**Collection Date:**	1/27/2011 8:12:00 AM
Project:	State Route 10 ADL, S9500-06-04	**Matrix:**	WATER
Lab ID:	116043-001A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **ICP10_110204B**	QC Batch: **70366**				PrepDate:	**2/3/2011**	Analyst: **JSD**
Lead	ND	0.0046	0.25		mg/L	1	2/4/2011 09:16 AM

Qualifiers:			
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	EB-100-12
Lab Order:	116043	**Collection Date:**	1/27/2011 2:54:00 PM
Project:	State Route 10 ADL, S9500-06-04	**Matrix:**	WATER
Lab ID:	116043-002A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **ICP10_110204B**	QC Batch: **70366**				PrepDate:	**2/3/2011**	Analyst: **JSD**
Lead	ND	0.0046	0.25		mg/L	1	2/4/2011 09:18 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
		Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	EB-100-13
Lab Order:	116043	**Collection Date:**	1/27/2011 8:10:00 AM
Project:	State Route 10 ADL, S9500-06-04	**Matrix:**	WATER
Lab ID:	116043-003A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **ICP10_110204B**	QC Batch: **70366**				PrepDate:	**2/3/2011**	Analyst: **JSD**
Lead	ND	0.0046	0.25		mg/L	1	2/4/2011 09:20 AM

Qualifiers:			
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT: Geocon Consultants, Inc.
Work Order: 116043
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPB

Sample ID: **MB-70366**	SampType: **MBLK**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **2/3/2011**	RunNo: **129585**
Client ID: **PBW**	Batch ID: **70366**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/4/2011**	SeqNo: **2103095**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70366**	SampType: **LCS**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **2/3/2011**	RunNo: **129585**
Client ID: **LCSW**	Batch ID: **70366**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/4/2011**	SeqNo: **2103096**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.000	0.25	1.000	0	100	85	115				

Sample ID: **116070-003A-DUP**	SampType: **DUP**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **2/3/2011**	RunNo: **129585**
Client ID: **ZZZZZZ**	Batch ID: **70366**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/4/2011**	SeqNo: **2103103**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25						0	0	20	

Sample ID: **116070-003A-MS**	SampType: **MS**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **2/3/2011**	RunNo: **129585**
Client ID: **ZZZZZZ**	Batch ID: **70366**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/4/2011**	SeqNo: **2103104**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.483	0.25	2.500	0	99.3	80	118				

Sample ID: **116070-003A-MSD**	SampType: **MSD**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **2/3/2011**	RunNo: **129585**
Client ID: **ZZZZZZ**	Batch ID: **70366**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/4/2011**	SeqNo: **2103105**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.489	0.25	2.500	0	99.6	80	118	2.483	0.231	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

April 20, 2011

Mike Conkle
Geocon Consultants, Inc.
3303 N. San Fernando Blvd., Suite 100
Burbank, CA 91504
TEL: (818) 841-8388
FAX: (818) 841-1704

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003

Workorder No.: 116069

RE: State Route 10 ADL, S9500-06-04

Attention: Mike Conkle

Enclosed are the results for sample(s) received on January 28, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

This is an addendum report. Please incorporate with documentation previously submitted.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Analytical Comments for Method 6010

RPD for Matrix Spike (MS)/Matrix Spike Duplicate (MSD) is outside criteria for sample 116069-020AMSD; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Analytical Comments for Method 7420

Dilution was necessary for samples 116069-007A, 116069-008A, 116069-009A, 116069-013A, 116069-014A, 116069-017A, 116069-018A, 116069-019A, 116069-021A, 116069-022A, 116069-027A, 116069-029A, 116069-030A, 116069-031A, 116069-032A, 116069-033A, 116069-034A, 116069-035A and 116069-036A, due to sample matrix.

Matrix Spike (MS) and /or Matrix Spike Duplicate (MSD) are/is outside recovery criteria for sample 116069-036AMS; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116069
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/28/2011 8:05:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	JSD

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116069-001A	1127-182-0.5-1.0	26	mg/Kg	70274	0.11	5.0		1	1/28/2011	2/3/2011
116069-002A	1127-182-1.5-2.0	9.4	mg/Kg	70274	0.11	5.0		1	1/28/2011	2/3/2011
116069-003A	1127-182-2.5-3.0	9.5	mg/Kg	70274	0.11	5.0		1	1/28/2011	2/3/2011
116069-004A	1127-179-1.5-2.0	16	mg/Kg	70274	0.11	5.0		1	1/28/2011	2/3/2011
116069-005A	1127-191-0.5-1.0	38	mg/Kg	70274	0.11	5.0		1	1/28/2011	2/3/2011
116069-006A	1127-191-1.5-2.0	63	mg/Kg	70274	0.11	5.0		1	1/28/2011	2/3/2011
116069-007A	1127-192-0.5-1.0	270	mg/Kg	70274	0.11	5.0		1	1/28/2011	2/3/2011
116069-008A	1127-192-1.5-2.0	150	mg/Kg	70274	0.11	5.0		1	1/28/2011	2/3/2011
116069-009A	1127-192-2.5-3.0	200	mg/Kg	70274	0.11	5.0		1	1/28/2011	2/3/2011
116069-010A	1127-193-0.5-1.0	110	mg/Kg	70274	0.11	5.0		1	1/28/2011	2/3/2011
116069-011A	1127-193-1.5-2.0	37	mg/Kg	70274	0.11	5.0		1	1/28/2011	2/3/2011
116069-012A	1127-193-2.5-3.0	110	mg/Kg	70274	0.11	5.0		1	1/28/2011	2/3/2011
116069-013A	1127-194-0.5-1.0	260	mg/Kg	70274	0.11	5.0		1	1/28/2011	2/3/2011
116069-014A	1127-194-1.5-2.0	100	mg/Kg	70274	0.11	5.0		1	1/28/2011	2/3/2011
116069-015A	1127-185-0.5-1.0	62	mg/Kg	70274	0.11	5.0		1	1/28/2011	2/3/2011
116069-016A	1127-185-1.5-2.0	74	mg/Kg	70274	0.11	5.0		1	1/28/2011	2/3/2011
116069-017A	1127-185-2.5-3.0	160	mg/Kg	70274	0.11	5.0		1	1/28/2011	2/3/2011
116069-018A	1127-186-0.5-1.0	180	mg/Kg	70274	0.11	5.0		1	1/28/2011	2/3/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116069
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/28/2011 8:05:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	JSD

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116069-019A	1127-187-0.5-1.0	230	mg/Kg	70274	0.11	5.0		1	1/28/2011	2/3/2011
116069-020A	1127-186-1.5-2.0	41	mg/Kg	70274	0.11	5.0		1	1/28/2011	2/3/2011
116069-021A	1127-187-1.5-2.0	290	mg/Kg	70277	0.11	5.0		1	1/27/2011	2/3/2011
116069-022A	1127-187-2.5-3.0	270	mg/Kg	70277	0.11	5.0		1	1/27/2011	2/3/2011
116069-023A	1127-184-1.0	86	mg/Kg	70277	0.11	5.0		1	1/28/2011	2/3/2011
116069-024A	1127-184-2.0	8.2	mg/Kg	70277	0.11	5.0		1	1/28/2011	2/3/2011
116069-025A	1127-183-1.0	18	mg/Kg	70277	0.11	5.0		1	1/28/2011	2/3/2011
116069-026A	1127-183-2.0	7.1	mg/Kg	70277	0.11	5.0		1	1/28/2011	2/3/2011
116069-027A	1127-196-1.0	160	mg/Kg	70277	0.11	5.0		1	1/28/2011	2/3/2011
116069-028A	1127-196-2.0	45	mg/Kg	70277	0.11	5.0		1	1/28/2011	2/3/2011
116069-029A	1127-195-1.0	370	mg/Kg	70277	0.11	5.0		1	1/28/2011	2/3/2011
116069-030A	1127-195-2.0	270	mg/Kg	70277	0.11	5.0		1	1/28/2011	2/3/2011
116069-031A	1127-188-1.0	320	mg/Kg	70277	0.11	5.0		1	1/28/2011	2/3/2011
116069-032A	1127-188-2.0	300	mg/Kg	70277	0.11	5.0		1	1/28/2011	2/3/2011
116069-033A	1127-189-1.0	210	mg/Kg	70277	0.11	5.0		1	1/28/2011	2/3/2011
116069-034A	1127-189-2.0	430	mg/Kg	70277	0.11	5.0		1	1/28/2011	2/3/2011
116069-035A	1127-189-3.0	300	mg/Kg	70277	0.11	5.0		1	1/28/2011	2/3/2011
116069-036A	1127-190-1.0	590	mg/Kg	70277	0.11	5.0		1	1/28/2011	2/3/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116069
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/28/2011 8:05:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	JSD

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116069-037A	1127-190-2.0	45	mg/Kg	70277	0.11	5.0		1	1/28/2011	2/3/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116069
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/28/2011 8:05:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	VV

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116069-007A	1127-192-0.5-1.0	ND	mg/L	70712	0.21	0.25		1	1/28/2011	2/17/2011
116069-008A	1127-192-1.5-2.0	ND	mg/L	70712	0.21	0.25		1	1/28/2011	2/17/2011
116069-009A	1127-192-2.5-3.0	ND	mg/L	70712	0.21	0.25		1	1/28/2011	2/17/2011
116069-010A	1127-193-0.5-1.0	ND	mg/L	70712	0.21	0.25		1	1/28/2011	2/17/2011
116069-013A	1127-194-0.5-1.0	ND	mg/L	70712	0.21	0.25		1	1/28/2011	2/17/2011
116069-014A	1127-194-1.5-2.0	ND	mg/L	70712	0.21	0.25		1	1/28/2011	2/17/2011
116069-016A	1127-185-1.5-2.0	ND	mg/L	70712	0.21	0.25		1	1/28/2011	2/17/2011
116069-017A	1127-185-2.5-3.0	ND	mg/L	70712	0.21	0.25		1	1/28/2011	2/17/2011
116069-018A	1127-186-0.5-1.0	ND	mg/L	70712	0.21	0.25		1	1/28/2011	2/17/2011
116069-019A	1127-187-0.5-1.0	ND	mg/L	70712	0.21	0.25		1	1/28/2011	2/17/2011
116069-021A	1127-187-1.5-2.0	ND	mg/L	70712	0.21	0.25		1	1/27/2011	2/17/2011
116069-022A	1127-187-2.5-3.0	ND	mg/L	70712	0.21	0.25		1	1/27/2011	2/17/2011
116069-023A	1127-184-1.0	ND	mg/L	70712	0.21	0.25		1	1/28/2011	2/17/2011
116069-027A	1127-196-1.0	ND	mg/L	70712	0.21	0.25		1	1/28/2011	2/17/2011
116069-029A	1127-195-1.0	ND	mg/L	70712	0.21	0.25		1	1/28/2011	2/17/2011
116069-030A	1127-195-2.0	ND	mg/L	70712	0.21	0.25		1	1/28/2011	2/17/2011
116069-031A	1127-188-1.0	ND	mg/L	70712	0.21	0.25		1	1/28/2011	2/17/2011
116069-032A	1127-188-2.0	ND	mg/L	70712	0.21	0.25		1	1/28/2011	2/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116069
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/28/2011 8:05:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	VV

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116069-033A	1127-189-1.0	ND	mg/L	70712	0.21	0.25		1	1/28/2011	2/17/2011
116069-034A	1127-189-2.0	ND	mg/L	70712	0.21	0.25		1	1/28/2011	2/17/2011
116069-035A	1127-189-3.0	ND	mg/L	70713	0.21	0.25		1	1/28/2011	2/17/2011
116069-036A	1127-190-1.0	ND	mg/L	70713	0.21	0.25		1	1/28/2011	2/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION (STLC)
WET/ EPA 7420

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116069
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/28/2011 8:05:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	VV

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116069-006A	1127-191-1.5-2.0	4.9	mg/L	70501	0.21	0.25		1	1/28/2011	2/10/2011
116069-007A	1127-192-0.5-1.0	15	mg/L	70501	0.41	0.50		2	1/28/2011	2/10/2011
116069-008A	1127-192-1.5-2.0	11	mg/L	70501	0.41	0.50		2	1/28/2011	2/10/2011
116069-009A	1127-192-2.5-3.0	12	mg/L	70501	0.41	0.50		2	1/28/2011	2/10/2011
116069-010A	1127-193-0.5-1.0	6.5	mg/L	70501	0.21	0.25		1	1/28/2011	2/10/2011
116069-012A	1127-193-2.5-3.0	4.9	mg/L	70501	0.21	0.25		1	1/28/2011	2/10/2011
116069-013A	1127-194-0.5-1.0	20	mg/L	70501	0.83	1.0		4	1/28/2011	2/10/2011
116069-014A	1127-194-1.5-2.0	9.6	mg/L	70501	0.41	0.50		2	1/28/2011	2/10/2011
116069-015A	1127-185-0.5-1.0	4.2	mg/L	70501	0.21	0.25		1	1/28/2011	2/10/2011
116069-016A	1127-185-1.5-2.0	6.5	mg/L	70501	0.21	0.25		1	1/28/2011	2/10/2011
116069-017A	1127-185-2.5-3.0	11	mg/L	70501	0.41	0.50		2	1/28/2011	2/10/2011
116069-018A	1127-186-0.5-1.0	13	mg/L	70501	0.41	0.50		2	1/28/2011	2/10/2011
116069-019A	1127-187-0.5-1.0	14	mg/L	70501	0.41	0.50		2	1/28/2011	2/10/2011
116069-021A	1127-187-1.5-2.0	21	mg/L	70501	0.83	1.0		4	1/27/2011	2/10/2011
116069-022A	1127-187-2.5-3.0	17	mg/L	70501	0.41	0.50		2	1/27/2011	2/10/2011
116069-023A	1127-184-1.0	8.2	mg/L	70501	0.21	0.25		1	1/28/2011	2/10/2011
116069-027A	1127-196-1.0	9.5	mg/L	70501	0.41	0.50		2	1/28/2011	2/10/2011
116069-029A	1127-195-1.0	25	mg/L	70502	0.83	1.0		4	1/28/2011	2/10/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION (STLC)
WET/ EPA 7420

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116069
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/28/2011 8:05:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	VV

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116069-030A	1127-195-2.0	15	mg/L	70502	0.41	0.50		2	1/28/2011	2/10/2011
116069-031A	1127-188-1.0	26	mg/L	70502	1.0	1.2		5	1/28/2011	2/10/2011
116069-032A	1127-188-2.0	12	mg/L	70502	0.41	0.50		2	1/28/2011	2/10/2011
116069-033A	1127-189-1.0	13	mg/L	70502	0.41	0.50		2	1/28/2011	2/10/2011
116069-034A	1127-189-2.0	20	mg/L	70502	0.83	1.0		4	1/28/2011	2/10/2011
116069-035A	1127-189-3.0	11	mg/L	70502	0.41	0.50		2	1/28/2011	2/10/2011
116069-036A	1127-190-1.0	57	mg/L	70502	2.1	2.5		10	1/28/2011	2/10/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION (STLC)
WET/ EPA 7420

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116069
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/28/2011 8:05:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	admin

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116069-006A	1127-191-1.5-2.0	4.9	mg/L	70501	0.21	0.25		1	1/28/2011	2/10/2011
116069-007A	1127-192-0.5-1.0	15	mg/L	70501	0.41	0.50		2	1/28/2011	2/10/2011
116069-008A	1127-192-1.5-2.0	11	mg/L	70501	0.41	0.50		2	1/28/2011	2/10/2011
116069-009A	1127-192-2.5-3.0	12	mg/L	70501	0.41	0.50		2	1/28/2011	2/10/2011
116069-010A	1127-193-0.5-1.0	6.5	mg/L	70501	0.21	0.25		1	1/28/2011	2/10/2011
116069-012A	1127-193-2.5-3.0	4.9	mg/L	70501	0.21	0.25		1	1/28/2011	2/10/2011
116069-013A	1127-194-0.5-1.0	20	mg/L	70501	0.83	1.0		4	1/28/2011	2/10/2011
116069-014A	1127-194-1.5-2.0	9.6	mg/L	70501	0.41	0.50		2	1/28/2011	2/10/2011
116069-015A	1127-185-0.5-1.0	4.2	mg/L	70501	0.21	0.25		1	1/28/2011	2/10/2011
116069-016A	1127-185-1.5-2.0	6.5	mg/L	70501	0.21	0.25		1	1/28/2011	2/10/2011
116069-017A	1127-185-2.5-3.0	11	mg/L	70501	0.41	0.50		2	1/28/2011	2/10/2011
116069-018A	1127-186-0.5-1.0	13	mg/L	70501	0.41	0.50		2	1/28/2011	2/10/2011
116069-019A	1127-187-0.5-1.0	14	mg/L	70501	0.41	0.50		2	1/28/2011	2/10/2011
116069-021A	1127-187-1.5-2.0	21	mg/L	70501	0.83	1.0		4	1/27/2011	2/10/2011
116069-022A	1127-187-2.5-3.0	17	mg/L	70501	0.41	0.50		2	1/27/2011	2/10/2011
116069-023A	1127-184-1.0	8.2	mg/L	70501	0.21	0.25		1	1/28/2011	2/10/2011
116069-027A	1127-196-1.0	9.5	mg/L	70501	0.41	0.50		2	1/28/2011	2/10/2011
116069-029A	1127-195-1.0	25	mg/L	70502	0.83	1.0		4	1/28/2011	2/10/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION (STLC)
WET/ EPA 7420

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116069
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/28/2011 8:05:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	admin

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116069-030A	1127-195-2.0	15	mg/L	70502	0.41	0.50		2	1/28/2011	2/10/2011
116069-031A	1127-188-1.0	26	mg/L	70502	1.0	1.2		5	1/28/2011	2/10/2011
116069-032A	1127-188-2.0	12	mg/L	70502	0.41	0.50		2	1/28/2011	2/10/2011
116069-033A	1127-189-1.0	13	mg/L	70502	0.41	0.50		2	1/28/2011	2/10/2011
116069-034A	1127-189-2.0	20	mg/L	70502	0.83	1.0		4	1/28/2011	2/10/2011
116069-035A	1127-189-3.0	11	mg/L	70502	0.41	0.50		2	1/28/2011	2/10/2011
116069-036A	1127-190-1.0	57	mg/L	70502	2.1	2.5		10	1/28/2011	2/10/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION (TCLP)
EPA 1311/ 7420

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116069
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/28/2011 8:05:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	VV

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116069-007A	1127-192-0.5-1.0	0.57	mg/L	70707	0.21	0.25		1	1/28/2011	2/15/2011
116069-009A	1127-192-2.5-3.0	0.40	mg/L	70707	0.21	0.25		1	1/28/2011	2/15/2011
116069-013A	1127-194-0.5-1.0	0.61	mg/L	70707	0.21	0.25		1	1/28/2011	2/15/2011
116069-019A	1127-187-0.5-1.0	0.50	mg/L	70707	0.21	0.25		1	1/28/2011	2/15/2011
116069-021A	1127-187-1.5-2.0	0.68	mg/L	70707	0.21	0.25		1	1/27/2011	2/15/2011
116069-022A	1127-187-2.5-3.0	0.48	mg/L	70707	0.21	0.25		1	1/27/2011	2/15/2011
116069-029A	1127-195-1.0	1.4	mg/L	70707	0.21	0.25		1	1/28/2011	2/15/2011
116069-030A	1127-195-2.0	0.77	mg/L	70707	0.21	0.25		1	1/28/2011	2/15/2011
116069-031A	1127-188-1.0	0.66	mg/L	70707	0.21	0.25		1	1/28/2011	2/15/2011
116069-032A	1127-188-2.0	0.65	mg/L	70707	0.21	0.25		1	1/28/2011	2/15/2011
116069-034A	1127-189-2.0	0.79	mg/L	70708	0.21	0.25		1	1/28/2011	2/15/2011
116069-035A	1127-189-3.0	0.39	mg/L	70708	0.21	0.25		1	1/28/2011	2/15/2011
116069-036A	1127-190-1.0	2.6	mg/L	70708	0.21	0.25		1	1/28/2011	2/15/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

pH
EPA 9045C

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116069
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/28/2011 8:05:00 PM
Project No:		**Matrix:**	Soil
Analyte:	pH	**Analyst:**	CBB

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116069-007A	1127-192-0.5-1.0	7.2	pH Units	R129968	0.10	0.10		1	1/28/2011	2/15/2011
116069-009A	1127-192-2.5-3.0	7.6	pH Units	R130063	0.10	0.10		1	1/28/2011	2/17/2011
116069-013A	1127-194-0.5-1.0	7.8	pH Units	R130063	0.10	0.10		1	1/28/2011	2/17/2011
116069-019A	1127-187-0.5-1.0	8.1	pH Units	R130063	0.10	0.10		1	1/28/2011	2/17/2011
116069-021A	1127-187-1.5-2.0	8.0	pH Units	R129968	0.10	0.10		1	1/27/2011	2/15/2011
116069-022A	1127-187-2.5-3.0	8.0	pH Units	R129968	0.10	0.10		1	1/27/2011	2/15/2011
116069-029A	1127-195-1.0	7.8	pH Units	R130063	0.10	0.10		1	1/28/2011	2/17/2011
116069-030A	1127-195-2.0	7.8	pH Units	R130063	0.10	0.10		1	1/28/2011	2/17/2011
116069-031A	1127-188-1.0	7.9	pH Units	R130063	0.10	0.10		1	1/28/2011	2/17/2011
116069-032A	1127-188-2.0	7.9	pH Units	R130063	0.10	0.10		1	1/28/2011	2/17/2011
116069-034A	1127-189-2.0	8.1	pH Units	R130063	0.10	0.10		1	1/28/2011	2/17/2011
116069-035A	1127-189-3.0	8.0	pH Units	R130063	0.10	0.10		1	1/28/2011	2/17/2011
116069-036A	1127-190-1.0	7.7	pH Units	R130063	0.10	0.10		1	1/28/2011	2/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	1127-195-1.0
Lab Order:	116069	**Collection Date:**	1/28/2011 10:13:00 AM
Project:	State Route 10 ADL, S9500-06-04	**Matrix:**	SOIL
Lab ID:	116069-029A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP METALS							
	EPA 3050B				**EPA 6010B**		
RunID: **ICP8_110215B**	QC Batch: **70696**				PrepDate: **2/15/2011**		Analyst: **JSD**
Antimony	1.2	0.16	2.0	J	mg/Kg	1	2/15/2011 02:31 PM
Arsenic	1.2	0.20	1.0		mg/Kg	1	2/15/2011 02:31 PM
Barium	110	0.056	1.0		mg/Kg	1	2/15/2011 02:31 PM
Beryllium	ND	0.042	1.0		mg/Kg	1	2/15/2011 02:31 PM
Cadmium	1.3	0.043	1.0		mg/Kg	1	2/15/2011 02:31 PM
Chromium	39	0.13	1.0		mg/Kg	1	2/15/2011 02:31 PM
Cobalt	5.9	0.11	1.0		mg/Kg	1	2/15/2011 02:31 PM
Copper	17	0.18	2.0		mg/Kg	1	2/15/2011 02:31 PM
Molybdenum	1.7	0.097	1.0		mg/Kg	1	2/15/2011 02:31 PM
Nickel	13	0.11	1.0		mg/Kg	1	2/15/2011 02:31 PM
Selenium	ND	0.28	1.0		mg/Kg	1	2/15/2011 02:31 PM
Silver	ND	0.042	1.0		mg/Kg	1	2/15/2011 02:31 PM
Thallium	ND	0.098	1.0		mg/Kg	1	2/15/2011 02:31 PM
Vanadium	19	0.088	1.0		mg/Kg	1	2/15/2011 02:31 PM
Zinc	120	0.13	1.0		mg/Kg	1	2/15/2011 02:31 PM
MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7471A				
RunID: **AA1_110217B**	QC Batch: **70746**				PrepDate: **2/16/2011**		Analyst: **VV**
Mercury	0.037	0.0076	0.10	J	mg/Kg	1	2/17/2011 10:46 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	1127-195-2.0
Lab Order:	116069	**Collection Date:**	1/28/2011 10:37:00 AM
Project:	State Route 10 ADL, S9500-06-04	**Matrix:**	SOIL
Lab ID:	116069-030A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP METALS							
	EPA 3050B				**EPA 6010B**		
RunID: **ICP8_110215B**	QC Batch: **70696**				PrepDate: **2/15/2011**		Analyst: **JSD**
Antimony	0.51	0.16	2.0	J	mg/Kg	1	2/15/2011 02:41 PM
Arsenic	2.3	0.20	1.0		mg/Kg	1	2/15/2011 02:41 PM
Barium	120	0.056	1.0		mg/Kg	1	2/15/2011 02:41 PM
Beryllium	ND	0.042	1.0		mg/Kg	1	2/15/2011 02:41 PM
Cadmium	1.2	0.043	1.0		mg/Kg	1	2/15/2011 02:41 PM
Chromium	14	0.13	1.0		mg/Kg	1	2/15/2011 02:41 PM
Cobalt	8.5	0.11	1.0		mg/Kg	1	2/15/2011 02:41 PM
Copper	14	0.18	2.0		mg/Kg	1	2/15/2011 02:41 PM
Molybdenum	1.4	0.097	1.0		mg/Kg	1	2/15/2011 02:41 PM
Nickel	17	0.11	1.0		mg/Kg	1	2/15/2011 02:41 PM
Selenium	ND	0.28	1.0		mg/Kg	1	2/15/2011 02:41 PM
Silver	ND	0.042	1.0		mg/Kg	1	2/15/2011 02:41 PM
Thallium	ND	0.098	1.0		mg/Kg	1	2/15/2011 02:41 PM
Vanadium	18	0.088	1.0		mg/Kg	1	2/15/2011 02:41 PM
Zinc	98	0.13	1.0		mg/Kg	1	2/15/2011 02:41 PM
MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7471A				
RunID: **AA1_110217B**	QC Batch: **70746**				PrepDate: **2/16/2011**		Analyst: **VV**
Mercury	0.050	0.0076	0.10	J	mg/Kg	1	2/17/2011 10:50 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	1127-189-2.0
Lab Order:	116069	**Collection Date:**	1/28/2011 12:52:00 PM
Project:	State Route 10 ADL, S9500-06-04	**Matrix:**	SOIL
Lab ID:	116069-034A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP METALS							
	EPA 3050B				**EPA 6010B**		
RunID: **ICP8_110215B**	QC Batch: **70696**				PrepDate: **2/15/2011**		Analyst: **JSD**
Antimony	0.91	0.16	2.0	J	mg/Kg	1	2/15/2011 02:44 PM
Arsenic	6.9	0.20	1.0		mg/Kg	1	2/15/2011 02:44 PM
Barium	150	0.056	1.0		mg/Kg	1	2/15/2011 02:44 PM
Beryllium	ND	0.042	1.0		mg/Kg	1	2/15/2011 02:44 PM
Cadmium	3.8	0.043	1.0		mg/Kg	1	2/15/2011 02:44 PM
Chromium	18	0.13	1.0		mg/Kg	1	2/15/2011 02:44 PM
Cobalt	6.6	0.11	1.0		mg/Kg	1	2/15/2011 02:44 PM
Copper	32	0.18	2.0		mg/Kg	1	2/15/2011 02:44 PM
Molybdenum	7.0	0.097	1.0		mg/Kg	1	2/15/2011 02:44 PM
Nickel	31	0.11	1.0		mg/Kg	1	2/15/2011 02:44 PM
Selenium	ND	0.28	1.0		mg/Kg	1	2/15/2011 02:44 PM
Silver	ND	0.042	1.0		mg/Kg	1	2/15/2011 02:44 PM
Thallium	ND	0.098	1.0		mg/Kg	1	2/15/2011 02:44 PM
Vanadium	65	0.088	1.0		mg/Kg	1	2/15/2011 02:44 PM
Zinc	130	0.13	1.0		mg/Kg	1	2/15/2011 02:44 PM
MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7471A				
RunID: **AA1_110217B**	QC Batch: **70746**				PrepDate: **2/16/2011**		Analyst: **VV**
Mercury	0.047	0.0076	0.10	J	mg/Kg	1	2/17/2011 10:56 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	1127-190-1.0
Lab Order:	116069	**Collection Date:**	1/28/2011 1:07:00 PM
Project:	State Route 10 ADL, S9500-06-04	**Matrix:**	SOIL
Lab ID:	116069-036A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP METALS							
	EPA 3050B				**EPA 6010B**		
RunID: **ICP8_110215B**	QC Batch: **70696**				PrepDate:	**2/15/2011**	Analyst: **JSD**
Antimony	1.3	0.16	2.0	J	mg/Kg	1	2/15/2011 02:47 PM
Arsenic	2.7	0.20	1.0		mg/Kg	1	2/15/2011 02:47 PM
Barium	120	0.056	1.0		mg/Kg	1	2/15/2011 02:47 PM
Beryllium	ND	0.042	1.0		mg/Kg	1	2/15/2011 02:47 PM
Cadmium	1.7	0.043	1.0		mg/Kg	1	2/15/2011 02:47 PM
Chromium	20	0.13	1.0		mg/Kg	1	2/15/2011 02:47 PM
Cobalt	7.4	0.11	1.0		mg/Kg	1	2/15/2011 02:47 PM
Copper	46	0.18	2.0		mg/Kg	1	2/15/2011 02:47 PM
Molybdenum	11	0.097	1.0		mg/Kg	1	2/15/2011 02:47 PM
Nickel	22	0.11	1.0		mg/Kg	1	2/15/2011 02:47 PM
Selenium	ND	0.28	1.0		mg/Kg	1	2/15/2011 02:47 PM
Silver	ND	0.042	1.0		mg/Kg	1	2/15/2011 02:47 PM
Thallium	ND	0.098	1.0		mg/Kg	1	2/15/2011 02:47 PM
Vanadium	24	0.088	1.0		mg/Kg	1	2/15/2011 02:47 PM
Zinc	360	0.13	1.0		mg/Kg	1	2/15/2011 02:47 PM
MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7471A				
RunID: **AA1_110217B**	QC Batch: **70746**				PrepDate:	**2/16/2011**	Analyst: **VV**
Mercury	0.11	0.0076	0.10		mg/Kg	1	2/17/2011 10:58 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT: Geocon Consultants, Inc.
Work Order: 116069
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **MB-70696** SampType: **MBLK** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **PBS** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111640**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.171	2.0									J
Arsenic	ND	1.0									
Barium	ND	1.0									
Beryllium	ND	1.0									
Cadmium	ND	1.0									
Chromium	ND	1.0									
Cobalt	ND	1.0									
Copper	ND	2.0									
Molybdenum	ND	1.0									
Nickel	ND	1.0									
Selenium	ND	1.0									
Silver	ND	1.0									
Thallium	ND	1.0									
Vanadium	ND	1.0									
Zinc	0.220	1.0									J

Sample ID: **LCS-70696** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **LCSS** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111641**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	49.670	2.0	50.00	0.1712	99.0	80	120				
Arsenic	49.827	1.0	50.00	0	99.7	80	120				
Barium	51.901	1.0	50.00	0	104	80	120				
Beryllium	51.067	1.0	50.00	0	102	80	120				
Cadmium	49.784	1.0	50.00	0	99.6	80	120				
Chromium	47.473	1.0	50.00	0	94.9	80	120				
Cobalt	51.031	1.0	50.00	0	102	80	120				
Copper	51.387	2.0	50.00	0	103	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116069
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **LCS-70696** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **LCSS** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111641**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	52.935	1.0	50.00	0	106	80	120				
Nickel	50.522	1.0	50.00	0	101	80	120				
Selenium	48.054	1.0	50.00	0	96.1	80	120				
Silver	48.722	1.0	50.00	0	97.4	80	120				
Thallium	49.730	1.0	50.00	0	99.5	80	120				
Vanadium	52.583	1.0	50.00	0	105	80	120				
Zinc	50.103	1.0	50.00	0.2199	99.8	80	120				

Sample ID: **115950-007A-DUP** SampType: **DUP** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **ZZZZZZ** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111643**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.503	2.0						0.3335	0	20	J
Arsenic	ND	1.0						0	0	20	
Barium	87.920	1.0						92.48	5.06	20	
Beryllium	ND	1.0						0	0	20	
Cadmium	0.484	1.0						0.4796	0	20	J
Chromium	11.976	1.0						13.01	8.31	20	
Cobalt	7.806	1.0						8.123	3.97	20	
Copper	16.945	2.0						17.21	1.57	20	
Lead	119.364	1.0						115.6	3.22	20	
Molybdenum	ND	1.0						0	0	20	
Nickel	10.425	1.0						11.69	11.5	20	
Selenium	ND	1.0						0	0	20	
Silver	ND	1.0						0	0	20	
Thallium	ND	1.0						0	0	20	
Vanadium	29.441	1.0						30.04	2.02	20	
Zinc	63.084	1.0						61.20	3.03	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected below quantitation limits
- S Spike/Surrogate outside of limits due to matrix interference
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116069
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **115950-007A-MS** SampType: **MS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **ZZZZZZ** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111644**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	99.412	2.0	125.0	0.3335	79.3	32	105				
Arsenic	105.642	1.0	125.0	0	84.5	49	106				
Barium	205.619	1.0	125.0	92.48	90.5	31	133				
Beryllium	108.341	1.0	125.0	0	86.7	56	106				
Cadmium	104.937	1.0	125.0	0.4796	83.6	51	103				
Chromium	115.561	1.0	125.0	13.01	82.0	45	114				
Cobalt	115.696	1.0	125.0	8.123	86.1	52	106				
Copper	136.054	2.0	125.0	17.21	95.1	54	125				
Lead	223.864	1.0	125.0	115.6	86.6	34	126				
Molybdenum	108.027	1.0	125.0	0	86.4	54	106				
Nickel	117.827	1.0	125.0	11.69	84.9	45	111				
Selenium	105.711	1.0	125.0	0	84.6	47	104				
Silver	112.685	1.0	125.0	0	90.1	56	112				
Thallium	87.971	1.0	125.0	0	70.4	46	101				
Vanadium	142.992	1.0	125.0	30.04	90.4	54	114				
Zinc	170.373	1.0	125.0	61.20	87.3	28	125				

Sample ID: **115950-007A-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **ZZZZZZ** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111645**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	95.522	2.0	125.0	0.3335	76.2	32	105	99.41	3.99	20	
Arsenic	101.141	1.0	125.0	0	80.9	49	106	105.6	4.35	20	
Barium	200.985	1.0	125.0	92.48	86.8	31	133	205.6	2.28	20	
Beryllium	103.888	1.0	125.0	0	83.1	56	106	108.3	4.20	20	
Cadmium	100.464	1.0	125.0	0.4796	80.0	51	103	104.9	4.36	20	
Chromium	111.613	1.0	125.0	13.01	78.9	45	114	115.6	3.48	20	
Cobalt	111.870	1.0	125.0	8.123	83.0	52	106	115.7	3.36	20	
Copper	131.149	2.0	125.0	17.21	91.1	54	125	136.1	3.67	20	
Lead	218.194	1.0	125.0	115.6	82.1	34	126	223.9	2.57	20	

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116069
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **115950-007A-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/15/2011** RunNo: **129987**
Client ID: **ZZZZZZ** Batch ID: **70696** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/15/2011** SeqNo: **2111645**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	103.377	1.0	125.0	0	82.7	54	106	108.0	4.40	20	
Nickel	113.534	1.0	125.0	11.69	81.5	45	111	117.8	3.71	20	
Selenium	101.064	1.0	125.0	0	80.9	47	104	105.7	4.49	20	
Silver	108.446	1.0	125.0	0	86.8	56	112	112.7	3.83	20	
Thallium	83.224	1.0	125.0	0	66.6	46	101	87.97	5.55	20	
Vanadium	140.087	1.0	125.0	30.04	88.0	54	114	143.0	2.05	20	
Zinc	168.089	1.0	125.0	61.20	85.5	28	125	170.4	1.35	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected below quantitation limits
- S Spike/Surrogate outside of limits due to matrix interference
- E Value above quantitation range
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116069
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-70274A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/2/2011**	RunNo: **129532**
Client ID: **PBS**	Batch ID: **70274**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/3/2011**	SeqNo: **2101878**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: **LCS-70274**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/2/2011**	RunNo: **129532**
Client ID: **LCSS**	Batch ID: **70274**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/3/2011**	SeqNo: **2101879**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	267.373	5.0	250.0	0	107	80	120				

Sample ID: **116069-010A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/2/2011**	RunNo: **129532**
Client ID: **1127-193-0.5-1.0**	Batch ID: **70274**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/3/2011**	SeqNo: **2101890**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	114.523	5.0						111.1	3.03	20	

Sample ID: **116069-010A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/2/2011**	RunNo: **129532**
Client ID: **1127-193-0.5-1.0**	Batch ID: **70274**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/3/2011**	SeqNo: **2101891**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	316.449	5.0	250.0	111.1	82.1	34	126				

Sample ID: **MB-70274B**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/2/2011**	RunNo: **129532**
Client ID: **PBS**	Batch ID: **70274**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/3/2011**	SeqNo: **2101892**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116069
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **116069-020A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/2/2011**	RunNo: **129532**
Client ID: **1127-186-1.5-2.0**	Batch ID: **70274**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/3/2011**	SeqNo: **2101903**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	46.513	5.0						41.07	12.4	20	

Sample ID: **116069-020A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/2/2011**	RunNo: **129532**
Client ID: **1127-186-1.5-2.0**	Batch ID: **70274**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/3/2011**	SeqNo: **2101904**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	253.675	5.0	250.0	41.07	85.0	34	126				

Sample ID: **116069-020A-MSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/2/2011**	RunNo: **129532**
Client ID: **1127-186-1.5-2.0**	Batch ID: **70274**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/3/2011**	SeqNo: **2101905**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	178.909	5.0	250.0	41.07	55.1	34	126	253.7	34.6	20	R

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116069
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-70277A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/2/2011**	RunNo: **129533**
Client ID: **PBS**	Batch ID: **70277**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/3/2011**	SeqNo: **2101916**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: **LCS-70277**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/2/2011**	RunNo: **129533**
Client ID: **LCSS**	Batch ID: **70277**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/3/2011**	SeqNo: **2101917**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	227.928	5.0	250.0	0	91.2	80	120				

Sample ID: **116069-030A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/2/2011**	RunNo: **129533**
Client ID: **1127-195-2.0**	Batch ID: **70277**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/3/2011**	SeqNo: **2101928**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	238.400	5.0						272.9	13.5	20	

Sample ID: **116069-030A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/2/2011**	RunNo: **129533**
Client ID: **1127-195-2.0**	Batch ID: **70277**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/3/2011**	SeqNo: **2101929**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	503.367	5.0	250.0	272.9	92.2	34	126				

Sample ID: **MB-70277B**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/2/2011**	RunNo: **129533**
Client ID: **PBS**	Batch ID: **70277**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/3/2011**	SeqNo: **2101930**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116069
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **116069-037A**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/2/2011**	RunNo: **129533**
Client ID: **1127-190-2.0**	Batch ID: **70277**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/3/2011**	SeqNo: **2101988**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	42.351	5.0						45.37	6.89	20	

Sample ID: **116069-037A**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/2/2011**	RunNo: **129533**
Client ID: **1127-190-2.0**	Batch ID: **70277**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/3/2011**	SeqNo: **2101989**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	274.887	5.0	250.0	45.37	91.8	34	126				

Sample ID: **116069-037A**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/2/2011**	RunNo: **129533**
Client ID: **1127-190-2.0**	Batch ID: **70277**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/3/2011**	SeqNo: **2101990**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	280.561	5.0	250.0	45.37	94.1	34	126	274.9	2.04	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116069
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI_GEOCON

Sample ID: **MB-70712A** SampType: **MBLK** TestCode: **7420_DI_GEO** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **130070**
Client ID: **PBS** Batch ID: **70712** TestNo: **WET DI/ EPA WET** Analysis Date: **2/17/2011** SeqNo: **2113647**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70712** SampType: **LCS** TestCode: **7420_DI_GEO** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **130070**
Client ID: **LCSS** Batch ID: **70712** TestNo: **WET DI/ EPA WET** Analysis Date: **2/17/2011** SeqNo: **2113648**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.923	0.25	5.000	0	98.5	80	120				

Sample ID: **116069-019A-DUP** SampType: **DUP** TestCode: **7420_DI_GEO** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **130070**
Client ID: **1127-187-0.5-1.0** Batch ID: **70712** TestNo: **WET DI/ EPA WET** Analysis Date: **2/17/2011** SeqNo: **2113659**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25						0	0	20	

Sample ID: **116069-019A-MS** SampType: **MS** TestCode: **7420_DI_GEO** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **130070**
Client ID: **1127-187-0.5-1.0** Batch ID: **70712** TestNo: **WET DI/ EPA WET** Analysis Date: **2/17/2011** SeqNo: **2113660**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.944	0.25	5.000	0	98.9	70	130				

Sample ID: **MB-70712B** SampType: **MBLK** TestCode: **7420_DI_GEO** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **130070**
Client ID: **PBS** Batch ID: **70712** TestNo: **WET DI/ EPA WET** Analysis Date: **2/17/2011** SeqNo: **2113661**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116069
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI_GEOCON

Sample ID: **116069-034A-DUP**	SampType: **DUP**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130070**
Client ID: **1127-189-2.0**	Batch ID: **70712**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/17/2011**	SeqNo: **2113672**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25						0	0	20	

Sample ID: **116069-034A-MS**	SampType: **MS**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130070**
Client ID: **1127-189-2.0**	Batch ID: **70712**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/17/2011**	SeqNo: **2113673**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.021	0.25	5.000	0	100	70	130				

Sample ID: **116069-034A-MSD**	SampType: **MSD**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130070**
Client ID: **1127-189-2.0**	Batch ID: **70712**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/17/2011**	SeqNo: **2113674**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.039	0.25	5.000	0	101	70	130	5.021	0.359	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116069
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI_GEOCON

Sample ID: **MB-70713A**	SampType: **MBLK**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130072**
Client ID: **PBS**	Batch ID: **70713**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/17/2011**	SeqNo: **2113685**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70713**	SampType: **LCS**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130072**
Client ID: **LCSS**	Batch ID: **70713**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/17/2011**	SeqNo: **2113686**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.849	0.25	5.000	0	97.0	80	120				

Sample ID: **116098-002A-DUP**	SampType: **DUP**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130072**
Client ID: **ZZZZZZ**	Batch ID: **70713**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/17/2011**	SeqNo: **2113690**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25						0	0	20	

Sample ID: **116098-002A-MS**	SampType: **MS**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130072**
Client ID: **ZZZZZZ**	Batch ID: **70713**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/17/2011**	SeqNo: **2113691**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.006	0.25	5.000	0	100	70	130				

Sample ID: **116098-002A-MSD**	SampType: **MSD**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130072**
Client ID: **ZZZZZZ**	Batch ID: **70713**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/17/2011**	SeqNo: **2113692**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.069	0.25	5.000	0	101	70	130	5.006	1.25	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116069
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_ST

Sample ID: **MB-70501A**	SampType: **MBLK**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/8/2011**	RunNo: **129833**
Client ID: **PBS**	Batch ID: **70501**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/10/2011**	SeqNo: **2108181**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70501**	SampType: **LCS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/8/2011**	RunNo: **129833**
Client ID: **LCSS**	Batch ID: **70501**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/10/2011**	SeqNo: **2108182**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.067	0.25	5.000	0	101	80	120				

Sample ID: **116069-013A-DUP**	SampType: **DUP**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/8/2011**	RunNo: **129833**
Client ID: **1127-194-0.5-1.0**	Batch ID: **70501**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/10/2011**	SeqNo: **2108190**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	20.209	1.0						20.14	0.344	20	

Sample ID: **116069-013A-MS**	SampType: **MS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/8/2011**	RunNo: **129833**
Client ID: **1127-194-0.5-1.0**	Batch ID: **70501**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/10/2011**	SeqNo: **2108191**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	25.707	1.0	5.000	20.14	111	80	120				

Sample ID: **MB-70501B**	SampType: **MBLK**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/8/2011**	RunNo: **129833**
Client ID: **PBS**	Batch ID: **70501**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/10/2011**	SeqNo: **2108192**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116069
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_ST

Sample ID: **116069-027A-DUP**	SampType: **DUP**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/8/2011**	RunNo: **129833**
Client ID: **1127-196-1.0**	Batch ID: **70501**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **2/10/2011**	SeqNo: **2108203**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	9.533	0.50						9.496	0.394	20	

Sample ID: **116069-027A-MS**	SampType: **MS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/8/2011**	RunNo: **129833**
Client ID: **1127-196-1.0**	Batch ID: **70501**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **2/10/2011**	SeqNo: **2108204**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	14.752	1.0	5.000	9.496	105	80	120				

Sample ID: **116069-027A-MSD**	SampType: **MSD**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/8/2011**	RunNo: **129833**
Client ID: **1127-196-1.0**	Batch ID: **70501**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **2/10/2011**	SeqNo: **2108205**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	14.804	1.0	5.000	9.496	106	80	120	14.75	0.352	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116069
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_ST

Sample ID: **MB-70502A** SampType: **MBLK** TestCode: **7420_ST** Units: **mg/L** Prep Date: **2/8/2011** RunNo: **129834**
Client ID: **PBS** Batch ID: **70502** TestNo: **WET/ EPA 74 WET** Analysis Date: **2/10/2011** SeqNo: **2108206**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70502** SampType: **LCS** TestCode: **7420_ST** Units: **mg/L** Prep Date: **2/8/2011** RunNo: **129834**
Client ID: **LCSS** Batch ID: **70502** TestNo: **WET/ EPA 74 WET** Analysis Date: **2/10/2011** SeqNo: **2108207**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.107	0.25	5.000	0	102	80	120				

Sample ID: **116069-036A-DUP** SampType: **DUP** TestCode: **7420_ST** Units: **mg/L** Prep Date: **2/8/2011** RunNo: **129834**
Client ID: **1127-190-1.0** Batch ID: **70502** TestNo: **WET/ EPA 74 WET** Analysis Date: **2/10/2011** SeqNo: **2108216**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	56.336	2.5						57.41	1.89	20	

Sample ID: **116069-036A-MS** SampType: **MS** TestCode: **7420_ST** Units: **mg/L** Prep Date: **2/8/2011** RunNo: **129834**
Client ID: **1127-190-1.0** Batch ID: **70502** TestNo: **WET/ EPA 74 WET** Analysis Date: **2/10/2011** SeqNo: **2108217**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	61.144	2.5	5.000	57.41	74.7	80	120				S

Sample ID: **116069-036A-MSD** SampType: **MSD** TestCode: **7420_ST** Units: **mg/L** Prep Date: **2/8/2011** RunNo: **129834**
Client ID: **1127-190-1.0** Batch ID: **70502** TestNo: **WET/ EPA 74 WET** Analysis Date: **2/10/2011** SeqNo: **2108218**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	61.899	2.5	5.000	57.41	89.8	80	120	61.14	1.23	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116069
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_ST

Sample ID: **MB-70713A**	SampType: **MBLK**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130066**
Client ID: **PBS**	Batch ID: **70713**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **2/17/2011**	SeqNo: **2113592**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70713**	SampType: **LCS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130066**
Client ID: **LCSS**	Batch ID: **70713**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **2/17/2011**	SeqNo: **2113593**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.952	0.25	5.000	0	99.0	80	120				

Sample ID: **115975-045A-DUP**	SampType: **DUP**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130066**
Client ID: **ZZZZZZ**	Batch ID: **70713**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **2/17/2011**	SeqNo: **2113599**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.859	0.25						6.913	0.785	20	

Sample ID: **115975-045A-MS**	SampType: **MS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130066**
Client ID: **ZZZZZZ**	Batch ID: **70713**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **2/17/2011**	SeqNo: **2113600**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	11.922	0.50	5.000	6.913	100	80	120				

Sample ID: **115975-045A-MSD**	SampType: **MSD**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130066**
Client ID: **ZZZZZZ**	Batch ID: **70713**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **2/17/2011**	SeqNo: **2113601**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	11.970	0.50	5.000	6.913	101	80	120	11.92	0.397	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116069
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **MB-70707A** SampType: **MBLK** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **129996**
Client ID: **PBS** Batch ID: **70707** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/15/2011** SeqNo: **2112017**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **MB-70685A TCLP** SampType: **MBLK** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **129996**
Client ID: **PBS** Batch ID: **70707** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/15/2011** SeqNo: **2112018**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70707** SampType: **LCS** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **129996**
Client ID: **LCSS** Batch ID: **70707** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/15/2011** SeqNo: **2112019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.963	0.25	1.000	0	96.3	80	120				

Sample ID: **116042-038A-DUP** SampType: **DUP** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **129996**
Client ID: **ZZZZZZ** Batch ID: **70707** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/15/2011** SeqNo: **2112025**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.682	0.25						0.6682	2.04	20	

Sample ID: **116042-038A-MS** SampType: **MS** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **129996**
Client ID: **ZZZZZZ** Batch ID: **70707** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/15/2011** SeqNo: **2112026**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.240	0.25	2.500	0.6682	103	70	130				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116069
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **MB-70707B** SampType: **MBLK** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **129996**
Client ID: **PBS** Batch ID: **70707** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/15/2011** SeqNo: **2112027**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **MB-70685B TCLP** SampType: **MBLK** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **129996**
Client ID: **PBS** Batch ID: **70707** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/15/2011** SeqNo: **2112028**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **116069-032A-DUP** SampType: **DUP** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **129996**
Client ID: **1127-188-2.0** Batch ID: **70707** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/15/2011** SeqNo: **2112039**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.656	0.25						0.6450	1.68	20	

Sample ID: **116069-032A-MS** SampType: **MS** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **129996**
Client ID: **1127-188-2.0** Batch ID: **70707** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/15/2011** SeqNo: **2112040**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.017	0.25	2.500	0.6450	94.9	70	130				

Sample ID: **116069-032A-MSD** SampType: **MSD** TestCode: **7420_TC** Units: **mg/L** Prep Date: **2/15/2011** RunNo: **129996**
Client ID: **1127-188-2.0** Batch ID: **70707** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **2/15/2011** SeqNo: **2112041**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.039	0.25	2.500	0.6450	95.8	70	130	3.017	0.748	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116069
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **MB-70686A TCLP**	SampType: **MBLK**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129997**
Client ID: **PBS**	Batch ID: **70708**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112047**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70708**	SampType: **LCS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129997**
Client ID: **LCSS**	Batch ID: **70708**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112048**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.953	0.25	1.000	0	95.3	80	120				

Sample ID: **116135-024A-DUP**	SampType: **DUP**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129997**
Client ID: **ZZZZZZ**	Batch ID: **70708**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112059**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.512	0.25						0.5725	11.2	20	

Sample ID: **116135-024A-MS**	SampType: **MS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129997**
Client ID: **ZZZZZZ**	Batch ID: **70708**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112060**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.108	0.25	2.500	0.5725	101	70	130				

Sample ID: **MB-70708B**	SampType: **MBLK**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129997**
Client ID: **PBS**	Batch ID: **70708**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112061**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.244	0.25									J

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116069
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **MB-70686B TCLP**	SampType: **MBLK**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129997**
Client ID: **PBS**	Batch ID: **70708**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112062**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.215	0.25									J

Sample ID: **116136-018A-DUP**	SampType: **DUP**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129997**
Client ID: **ZZZZZZ**	Batch ID: **70708**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112073**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.381	0.25						1.349	2.34	20	

Sample ID: **116136-018A-MS**	SampType: **MS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129997**
Client ID: **ZZZZZZ**	Batch ID: **70708**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112074**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.449	0.25	2.500	1.349	84.0	70	130				

Sample ID: **116136-018A-MSD**	SampType: **MSD**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129997**
Client ID: **ZZZZZZ**	Batch ID: **70708**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112075**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.505	0.25	2.500	1.349	86.2	70	130	3.449	1.60	20	

Sample ID: **MB-70708A**	SampType: **MBLK**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **129999**
Client ID: **PBS**	Batch ID: **70708**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **2/15/2011**	SeqNo: **2112076**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116069
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7471_S

Sample ID: **MB-70746** SampType: **MBLK** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130056**
Client ID: **PBS** Batch ID: **70746** TestNo: **EPA 7471A** Analysis Date: **2/17/2011** SeqNo: **2113500**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: **LCS-70746** SampType: **LCS** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130056**
Client ID: **LCSS** Batch ID: **70746** TestNo: **EPA 7471A** Analysis Date: **2/17/2011** SeqNo: **2113501**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.811	0.10	0.8300	0	97.7	80	120				

Sample ID: **116069-029A-MS** SampType: **MS** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130056**
Client ID: **1127-195-1.0** Batch ID: **70746** TestNo: **EPA 7471A** Analysis Date: **2/17/2011** SeqNo: **2113503**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.963	0.10	0.8300	0.03672	112	70	130				

Sample ID: **116069-029A-MSD** SampType: **MSD** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130056**
Client ID: **1127-195-1.0** Batch ID: **70746** TestNo: **EPA 7471A** Analysis Date: **2/17/2011** SeqNo: **2113504**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.965	0.10	0.8300	0.03672	112	70	130	0.9625	0.256	20	

Sample ID: **116069-029A-DUP** SampType: **DUP** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/16/2011** RunNo: **130056**
Client ID: **1127-195-1.0** Batch ID: **70746** TestNo: **EPA 7471A** Analysis Date: **2/17/2011** SeqNo: **2113506**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.036	0.10						0.03672	0	20	J

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116069
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 9045_S

Sample ID: **116069-022ADUP** SampType: **DUP** TestCode: **9045_S** Units: **pH Units** Prep Date: RunNo: **129968**
Client ID: **1127-187-2.5-3.0** Batch ID: **R129968** TestNo: **EPA 9045C** Analysis Date: **2/15/2011** SeqNo: **2111271**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.860	0.10						7.950	1.14	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116069
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 9045_S

Sample ID: **116069-009ADUP** SampType: **DUP** TestCode: **9045_S** Units: **pH Units** Prep Date: RunNo: **130063**
Client ID: **1127-192-2.5-3.0** Batch ID: **R130063** TestNo: **EPA 9045C** Analysis Date: **2/17/2011** SeqNo: **2113450**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.560	0.10						7.570	0.132	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

April 20, 2011

Mike Conkle
Geocon Consultants, Inc.
3303 N. San Fernando Blvd., Suite 100
Burbank, CA 91504

TEL: (818) 841-8388
FAX: (818) 841-1704

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003

Workorder No.: 116070

RE: State Route 10 ADL, S9500-06-04

Attention: Mike Conkle

Enclosed are the results for sample(s) received on January 28, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

This is an addendum report. Please incorporate with documentation previously submitted.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.

CLIENT: Geocon Consultants, Inc.
Project: State Route 10 ADL, S9500-06-04
Lab Order: 116070

CASE NARRATIVE

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116070
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	1/28/2011 8:05:00 PM
Project No:		**Matrix:**	Water
Analyte:	Lead	**Analyst:**	JSD

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116070-001A	EB-100-14	ND	mg/L	70366	0.0046	0.25		1	1/28/2011	2/4/2011
116070-002A	EB-100-15	ND	mg/L	70366	0.0046	0.25		1	1/28/2011	2/4/2011
116070-003A	EB-100-16	ND	mg/L	70366	0.0046	0.25		1	1/28/2011	2/4/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

CLIENT: Geocon Consultants, Inc.
Work Order: 116070
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPB

Sample ID: **MB-70366**	SampType: **MBLK**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **2/3/2011**	RunNo: **129585**
Client ID: **PBW**	Batch ID: **70366**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/4/2011**	SeqNo: **2103095**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70366**	SampType: **LCS**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **2/3/2011**	RunNo: **129585**
Client ID: **LCSW**	Batch ID: **70366**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/4/2011**	SeqNo: **2103096**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.000	0.25	1.000	0	100	85	115				

Sample ID: **116070-003A-DUP**	SampType: **DUP**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **2/3/2011**	RunNo: **129585**
Client ID: **EB-100-16**	Batch ID: **70366**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/4/2011**	SeqNo: **2103103**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25						0	0	20	

Sample ID: **116070-003A-MS**	SampType: **MS**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **2/3/2011**	RunNo: **129585**
Client ID: **EB-100-16**	Batch ID: **70366**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/4/2011**	SeqNo: **2103104**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.483	0.25	2.500	0	99.3	80	118				

Sample ID: **116070-003A-MSD**	SampType: **MSD**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **2/3/2011**	RunNo: **129585**
Client ID: **EB-100-16**	Batch ID: **70366**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/4/2011**	SeqNo: **2103105**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.489	0.25	2.500	0	99.6	80	118	2.483	0.231	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

April 20, 2011

Mike Conkle
Geocon Consultants, Inc.
3303 N. San Fernando Blvd., Suite 100
Burbank, CA 91504

TEL: (818) 841-8388
FAX: (818) 841-1704

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003

Workorder No.: 116098

RE: State Route 10 ADL, S9500-06-04

Attention: Mike Conkle

Enclosed are the results for sample(s) received on February 01, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

This is an addendum report. Please incorporate with documentation previously submitted.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Geocon Consultants, Inc.
Project: State Route 10 ADL, S9500-06-04
Lab Order: 116098

CASE NARRATIVE

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116098
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	2/1/2011 6:50:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	JSD

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116098-001A	1127-131-0.5-1.0	82	mg/Kg	70398	0.11	5.0		1	1/31/2011	2/8/2011
116098-002A	1127-131-1.5-2.0	61	mg/Kg	70398	0.11	5.0		1	1/31/2011	2/8/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116098
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	2/1/2011 6:50:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	VV

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116098-002A	1127-131-1.5-2.0	ND	mg/L	70713	0.21	0.25		1	1/31/2011	2/17/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/20/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION (STLC)
WET/ EPA 7420

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	116098
Project:	State Route 10 ADL, S9500-06-04	**Date Received**	2/1/2011 6:50:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	VV

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116098-001A	1127-131-0.5-1.0	4.8	mg/L	70564	0.21	0.25		1	1/31/2011	2/14/2011
116098-002A	1127-131-1.5-2.0	5.0	mg/L	70564	0.21	0.25		1	1/31/2011	2/14/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT: Geocon Consultants, Inc.
Work Order: 116098
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-70398**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/4/2011**	RunNo: **129711**
Client ID: **PBS**	Batch ID: **70398**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/8/2011**	SeqNo: **2105779**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: **LCS-70398**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/4/2011**	RunNo: **129711**
Client ID: **LCSS**	Batch ID: **70398**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/8/2011**	SeqNo: **2105780**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	272.099	5.0	250.0	0	109	80	120				

Sample ID: **116098-002A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/4/2011**	RunNo: **129711**
Client ID: **1127-131-1.5-2.0**	Batch ID: **70398**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/8/2011**	SeqNo: **2105783**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	62.380	5.0						60.60	2.89	20	

Sample ID: **116098-002A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/4/2011**	RunNo: **129711**
Client ID: **1127-131-1.5-2.0**	Batch ID: **70398**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/8/2011**	SeqNo: **2105784**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	274.450	5.0	250.0	60.60	85.5	34	126				

Sample ID: **116098-002A-MSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **2/4/2011**	RunNo: **129711**
Client ID: **1127-131-1.5-2.0**	Batch ID: **70398**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **2/8/2011**	SeqNo: **2105785**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	281.513	5.0	250.0	60.60	88.4	34	126	274.4	2.54	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116098
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI_GEOCON

Sample ID: **MB-70713A**	SampType: **MBLK**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130072**
Client ID: **PBS**	Batch ID: **70713**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/17/2011**	SeqNo: **2113685**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70713**	SampType: **LCS**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130072**
Client ID: **LCSS**	Batch ID: **70713**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/17/2011**	SeqNo: **2113686**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.849	0.25	5.000	0	97.0	80	120				

Sample ID: **116098-002A-DUP**	SampType: **DUP**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130072**
Client ID: **1127-131-1.5-2.0**	Batch ID: **70713**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/17/2011**	SeqNo: **2113690**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25						0	0	20	

Sample ID: **116098-002A-MS**	SampType: **MS**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130072**
Client ID: **1127-131-1.5-2.0**	Batch ID: **70713**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/17/2011**	SeqNo: **2113691**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.006	0.25	5.000	0	100	70	130				

Sample ID: **116098-002A-MSD**	SampType: **MSD**	TestCode: **7420_DI_GEO**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130072**
Client ID: **1127-131-1.5-2.0**	Batch ID: **70713**	TestNo: **WET DI/ EPA WET**		Analysis Date: **2/17/2011**	SeqNo: **2113692**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.069	0.25	5.000	0	101	70	130	5.006	1.25	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116098
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_ST

Sample ID: **MB-70564A** SampType: **MBLK** TestCode: **7420_ST** Units: **mg/L** Prep Date: **2/9/2011** RunNo: **129941**
Client ID: **PBS** Batch ID: **70564** TestNo: **WET/ EPA 74 WET** Analysis Date: **2/14/2011** SeqNo: **2110507**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70564** SampType: **LCS** TestCode: **7420_ST** Units: **mg/L** Prep Date: **2/9/2011** RunNo: **129941**
Client ID: **LCSS** Batch ID: **70564** TestNo: **WET/ EPA 74 WET** Analysis Date: **2/14/2011** SeqNo: **2110508**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.964	0.25	5.000	0	99.3	80	120				

Sample ID: **116098-002A-DUP** SampType: **DUP** TestCode: **7420_ST** Units: **mg/L** Prep Date: **2/9/2011** RunNo: **129941**
Client ID: **1127-131-1.5-2.0** Batch ID: **70564** TestNo: **WET/ EPA 74 WET** Analysis Date: **2/14/2011** SeqNo: **2110512**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.036	0.25						4.997	0.780	20	

Sample ID: **116098-002A-MS** SampType: **MS** TestCode: **7420_ST** Units: **mg/L** Prep Date: **2/9/2011** RunNo: **129941**
Client ID: **1127-131-1.5-2.0** Batch ID: **70564** TestNo: **WET/ EPA 74 WET** Analysis Date: **2/14/2011** SeqNo: **2110513**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	10.506	0.50	5.000	4.997	110	80	120				

Sample ID: **116098-002A-MSD** SampType: **MSD** TestCode: **7420_ST** Units: **mg/L** Prep Date: **2/9/2011** RunNo: **129941**
Client ID: **1127-131-1.5-2.0** Batch ID: **70564** TestNo: **WET/ EPA 74 WET** Analysis Date: **2/14/2011** SeqNo: **2110514**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	10.574	0.50	5.000	4.997	112	80	120	10.51	0.650	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: Geocon Consultants, Inc.
Work Order: 116098
Project: State Route 10 ADL, S9500-06-04

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_ST

Sample ID: **MB-70713A**	SampType: **MBLK**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130066**
Client ID: **PBS**	Batch ID: **70713**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/17/2011**	SeqNo: **2113592**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-70713**	SampType: **LCS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130066**
Client ID: **LCSS**	Batch ID: **70713**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/17/2011**	SeqNo: **2113593**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.952	0.25	5.000	0	99.0	80	120				

Sample ID: **115975-045A-DUP**	SampType: **DUP**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130066**
Client ID: **ZZZZZZ**	Batch ID: **70713**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/17/2011**	SeqNo: **2113599**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.859	0.25						6.913	0.785	20	

Sample ID: **115975-045A-MS**	SampType: **MS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130066**
Client ID: **ZZZZZZ**	Batch ID: **70713**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/17/2011**	SeqNo: **2113600**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	11.922	0.50	5.000	6.913	100	80	120				

Sample ID: **115975-045A-MSD**	SampType: **MSD**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **2/15/2011**	RunNo: **130066**
Client ID: **ZZZZZZ**	Batch ID: **70713**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **2/17/2011**	SeqNo: **2113601**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	11.970	0.50	5.000	6.913	101	80	120	11.92	0.397	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

April 26, 2011

Vinnie Robino
AMEC Geomatrix
510 Superior Avenue, Suite 200
Newport Beach, CA 92663-3627

TEL: (949) 274-6516
FAX: (949) 642-4474

ELAP No.: 1838
NELAP No.: 02107CA
CSDLAC No.: 10196
ORELAP No.: CA300003

Workorder No.: 116888

RE: Caltrans-TO11A1, 0153240110

Attention: Vinnie Robino

Enclosed are the results for sample(s) received on March 16, 2011 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

This is an addendum report. Please incorporate with documentation previously submitted.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

CASE NARRATIVE

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Analytical Comments for Method 6010

Matrix Spike (MS) and /or Matrix Spike Duplicate (MSD) are/is outside recovery criteria for samples 116892-009AMS and 116892-009AMSD; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

RPD for Duplicate (DUP) is outside criteria for samples 116888-050ADUP, 116888-051ADUP and 116892-003ADUP; however, the Laboratory Control Sample (LCS) validated the analytical batch.

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

Date: 4/26/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	AMEC Geomatrix	**Lab Order:**	116888
Project:	Caltrans-TO11A1, 0153240110	**Date Received:**	3/16/2011 5:38:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	IL

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116888-001A	1127-201-3.5	0.90	mg/Kg	71695	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-002A	1127-201-4.5	0.44	mg/Kg	71695	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-003A	1127-201-5.5	0.80	mg/Kg	71695	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-004A	1127-201-6.5	0.81	mg/Kg	71695	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-005A	1127-201-7.5	1.4	mg/Kg	71695	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-006A	1127-201-10.5	0.60	mg/Kg	71695	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-007A	1127-202-3.5	1.2	mg/Kg	71695	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-008A	1127-202-4.5	1.1	mg/Kg	71695	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-009A	1127-202-5.0	0.91	mg/Kg	71695	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-010A	1127-202-5.5	1.4	mg/Kg	71695	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-011A	1127-203-3.5	1.1	mg/Kg	71697	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-012A	1127-203-4.5	1.4	mg/Kg	71697	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-013A	1127-203-5.5	0.69	mg/Kg	71697	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-014A	1127-203-6.0	0.79	mg/Kg	71697	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-015A	1127-203-6.5	0.79	mg/Kg	71697	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-016A	1127-203-7.0	0.37	mg/Kg	71697	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-017A	1127-204-3.5	0.87	mg/Kg	71697	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-018A	1127-204-4.5	0.57	mg/Kg	71697	0.13	5.0	J	1	3/15/2011	3/22/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/26/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	AMEC Geomatrix	**Lab Order:**	116888
Project:	Caltrans-TO11A1, 0153240110	**Date Received:**	3/16/2011 5:38:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	IL

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116888-019A	1127-204-5.5	1.2	mg/Kg	71697	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-020A	1127-204-6.0	1.3	mg/Kg	71697	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-021A	1127-204-6.5	1.3	mg/Kg	71697	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-022A	1127-205-2.5	0.64	mg/Kg	71697	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-023A	1127-205-3.0	0.88	mg/Kg	71697	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-024A	1127-205-3.5	1.6	mg/Kg	71697	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-025A	1127-206-2.5	0.39	mg/Kg	71697	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-026A	1127-206-3.0	0.72	mg/Kg	71697	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-027A	1127-206-3.5	0.61	mg/Kg	71697	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-028A	1127-207-4.5	1.0	mg/Kg	71697	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-029A	1127-207-5.5	0.52	mg/Kg	71697	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-030A	1127-207-6.5	2.0	mg/Kg	71697	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-031A	1127-207-7.0	3.2	mg/Kg	71698	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-032A	1127-207-10.5	0.25	mg/Kg	71698	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-033A	1127-208-3.4	1.4	mg/Kg	71698	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-034A	1127-208-4.5	1.5	mg/Kg	71698	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-035A	1127-208-5.5	0.90	mg/Kg	71698	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-036A	1127-208-6.5	0.48	mg/Kg	71698	0.13	5.0	J	1	3/15/2011	3/22/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/26/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	AMEC Geomatrix	**Lab Order:**	116888
Project:	Caltrans-TO11A1, 0153240110	**Date Received:**	3/16/2011 5:38:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	IL

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116888-037A	1127-208-7.5	0.42	mg/Kg	71698	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-038A	1127-208-10.5	0.70	mg/Kg	71698	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-039A	1127-209-4.5	13	mg/Kg	71698	0.13	5.0		1	3/15/2011	3/22/2011
116888-040A	1127-209-5.5	91	mg/Kg	71698	0.13	5.0		1	3/15/2011	3/22/2011
116888-041A	1127-209-6.4	4.1	mg/Kg	71698	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-042A	1127-209-8.5	1.4	mg/Kg	71698	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-043A	1127-209-10.5	1.8	mg/Kg	71698	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-044A	1127-210-4.5	7.9	mg/Kg	71698	0.13	5.0		1	3/15/2011	3/22/2011
116888-045A	1127-210-5.5	86	mg/Kg	71698	0.13	5.0		1	3/15/2011	3/22/2011
116888-046A	1127-210-6.5	47	mg/Kg	71698	0.13	5.0		1	3/15/2011	3/22/2011
116888-047A	1127-210-8.5	150	mg/Kg	71698	0.13	5.0		1	3/15/2011	3/22/2011
116888-048A	1127-210-10.0	64	mg/Kg	71698	0.13	5.0		1	3/15/2011	3/22/2011
116888-049A	1127-211-4.5	31	mg/Kg	71698	0.13	5.0		1	3/15/2011	3/22/2011
116888-050A	1127-211-5.5	87	mg/Kg	71698	0.13	5.0		1	3/15/2011	3/22/2011
116888-051A	1127-211-9.0	170	mg/Kg	71699	0.13	5.0		1	3/15/2011	3/22/2011
116888-052A	1127-212-4.5	17	mg/Kg	71699	0.13	5.0		1	3/15/2011	3/22/2011
116888-053A	1127-212-5.5	1.5	mg/Kg	71699	0.13	5.0	J	1	3/15/2011	3/22/2011
116888-054A	1127-212-8.5	7.6	mg/Kg	71699	0.13	5.0		1	3/15/2011	3/22/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/26/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	AMEC Geomatrix	**Lab Order:**	116888
Project:	Caltrans-TO11A1, 0153240110	**Date Received:**	3/16/2011 5:38:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	IL

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116888-055A	1127-212-10.0	3.0	mg/Kg	71699	0.13	5.0	J	1	3/15/2011	3/22/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/26/2011

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	AMEC Geomatrix	**Lab Order:**	116888
Project:	Caltrans-TO11A1, 0153240110	**Date Received:**	3/16/2011 5:38:00 PM
Project No:		**Matrix:**	Water
Analyte:	Lead	**Analyst:**	IL

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116888-056A	1127-200-EB1	ND	mg/L	71683	0.00081	0.25		1	3/15/2011	3/21/2011
116888-057A	1127-200-FB1	0.00090	mg/L	71683	0.00081	0.25	J	1	3/15/2011	3/21/2011
116888-058A	1127-200-EB2	ND	mg/L	71683	0.00081	0.25		1	3/15/2011	3/21/2011
116888-059A	1127-200-FB2	0.0018	mg/L	71683	0.00081	0.25	J	1	3/15/2011	3/21/2011
116888-060A	1127-200-EB3	0.0015	mg/L	71683	0.00081	0.25	J	1	3/15/2011	3/21/2011
116888-061A	1127-200-FB3	ND	mg/L	71683	0.00081	0.25		1	3/15/2011	3/21/2011
116888-062A	1127-200-EB4	ND	mg/L	71683	0.00081	0.25		1	3/15/2011	3/21/2011
116888-063A	1127-200-FB4	ND	mg/L	71683	0.00081	0.25		1	3/15/2011	3/21/2011
116888-064A	1127-200-SW	ND	mg/L	71683	0.00081	0.25		1	3/15/2011	3/21/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/26/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION
WET DI/ EPA 7420

CLIENT:	AMEC Geomatrix	**Lab Order:**	116888
Project:	Caltrans-TO11A1, 0153240110	**Date Received:**	3/16/2011 5:38:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	IL

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116888-040A	1127-209-5.5	ND	mg/L	71893	0.21	0.25		1	3/15/2011	4/4/2011
116888-045A	1127-210-5.5	ND	mg/L	71893	0.21	0.25		1	3/15/2011	4/4/2011
116888-047A	1127-210-8.5	ND	mg/L	71893	0.21	0.25		1	3/15/2011	4/4/2011
116888-048A	1127-210-10.0	ND	mg/L	71893	0.21	0.25		1	3/15/2011	4/4/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/26/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION (STLC)
WET/ EPA 7420

CLIENT:	AMEC Geomatrix	**Lab Order:**	116888
Project:	Caltrans-TO11A1, 0153240110	**Date Received:**	3/16/2011 5:38:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	VV

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116888-040A	1127-209-5.5	5.4	mg/L	71747	0.21	0.25		1	3/15/2011	3/25/2011
116888-045A	1127-210-5.5	5.5	mg/L	71747	0.21	0.25		1	3/15/2011	3/25/2011
116888-047A	1127-210-8.5	8.3	mg/L	71747	0.21	0.25		1	3/15/2011	3/25/2011
116888-048A	1127-210-10.0	6.4	mg/L	71747	0.21	0.25		1	3/15/2011	3/25/2011
116888-050A	1127-211-5.5	4.0	mg/L	71747	0.21	0.25		1	3/15/2011	3/25/2011
116888-051A	1127-211-9.0	4.4	mg/L	71747	0.21	0.25		1	3/15/2011	3/25/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/26/2011

ANALYTICAL RESULTS

LEAD BY ATOMIC ABSORPTION (TCLP)
EPA 1311/ 7420

CLIENT:	AMEC Geomatrix	**Lab Order:**	116888
Project:	Caltrans-TO11A1, 0153240110	**Date Received:**	3/16/2011 5:38:00 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	VV

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116888-040A	1127-209-5.5	ND	mg/L	72200	0.21	0.25		1	3/15/2011	4/13/2011
116888-045A	1127-210-5.5	0.31	mg/L	72258	0.21	0.25		1	3/15/2011	4/15/2011
116888-047A	1127-210-8.5	0.21	mg/L	72200	0.21	0.25	J	1	3/15/2011	4/13/2011
116888-048A	1127-210-10.0	0.41	mg/L	72258	0.21	0.25		1	3/15/2011	4/15/2011
116888-050A	1127-211-5.5	0.34	mg/L	72258	0.21	0.25		1	3/15/2011	4/15/2011
116888-051A	1127-211-9.0	ND	mg/L	72200	0.21	0.25		1	3/15/2011	4/13/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

Advanced Technology Laboratories

Date: 4/26/2011

ANALYTICAL RESULTS

pH
EPA 9045C

CLIENT:	AMEC Geomatrix	**Lab Order:**	116888
Project:	Caltrans-TO11A1, 0153240110	**Date Received:**	3/16/2011 5:38:00 PM
Project No:		**Matrix:**	Soil
Analyte:	pH	**Analyst:**	CBB

Laboratory ID	Client Sample ID	Results	Units	QC Batch	MDL	PQL	Qual	DF	Date Collected	Date Analyzed
116888-007A	1127-202-3.5	8.3	pH Units	R131200	0.10	0.10		1	3/15/2011	3/18/2011
116888-019A	1127-204-5.5	7.8	pH Units	R131200	0.10	0.10		1	3/15/2011	3/18/2011
116888-024A	1127-205-3.5	8.2	pH Units	R131200	0.10	0.10		1	3/15/2011	3/18/2011
116888-032A	1127-207-10.5	7.6	pH Units	R131200	0.10	0.10		1	3/15/2011	3/18/2011
116888-039A	1127-209-4.5	7.6	pH Units	R131200	0.10	0.10		1	3/15/2011	3/18/2011
116888-047A	1127-210-8.5	8.0	pH Units	R131200	0.10	0.10		1	3/15/2011	3/18/2011

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT:	AMEC Geomatrix	**Client Sample ID:**	1127-209-5.5
Lab Order:	116888	**Collection Date:**	3/15/2011 1:51:00 PM
Project:	Caltrans-TO11A1, 0153240110	**Matrix:**	SOIL
Lab ID:	116888-040A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP METALS							
	EPA 3050B				**EPA 6010B**		
RunID: **ICP8_110412D**	QC Batch: **72172**				PrepDate: **4/12/2011**	Analyst: **IL**	
Antimony	0.78	0.16	2.0	J	mg/Kg	1	4/12/2011 05:37 PM
Arsenic	5.4	0.20	1.0		mg/Kg	1	4/12/2011 05:37 PM
Barium	140	0.056	1.0		mg/Kg	1	4/12/2011 05:37 PM
Beryllium	ND	0.042	1.0		mg/Kg	1	4/12/2011 05:37 PM
Cadmium	3.5	0.043	1.0		mg/Kg	1	4/12/2011 05:37 PM
Chromium	20	0.13	1.0		mg/Kg	1	4/12/2011 05:37 PM
Cobalt	5.8	0.11	1.0		mg/Kg	1	4/12/2011 05:37 PM
Copper	23	0.18	2.0		mg/Kg	1	4/12/2011 05:37 PM
Molybdenum	9.6	0.097	1.0		mg/Kg	1	4/12/2011 05:37 PM
Nickel	37	0.11	1.0		mg/Kg	1	4/12/2011 05:37 PM
Selenium	ND	0.28	1.0		mg/Kg	1	4/12/2011 05:37 PM
Silver	ND	0.042	1.0		mg/Kg	1	4/12/2011 05:37 PM
Thallium	ND	0.098	1.0		mg/Kg	1	4/12/2011 05:37 PM
Vanadium	66	0.088	1.0		mg/Kg	1	4/12/2011 05:37 PM
Zinc	77	0.13	1.0		mg/Kg	1	4/12/2011 05:37 PM
MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7471A				
RunID: **AA1_110412D**	QC Batch: **72176**				PrepDate: **4/12/2011**	Analyst: **VV**	
Mercury	0.045	0.0076	0.10	J	mg/Kg	1	4/12/2011 05:36 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT:	AMEC Geomatrix	**Client Sample ID:**	1127-210-5.5
Lab Order:	116888	**Collection Date:**	3/15/2011 2:11:00 PM
Project:	Caltrans-TO11A1, 0153240110	**Matrix:**	SOIL
Lab ID:	116888-045A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP METALS							
	EPA 3050B				**EPA 6010B**		
RunID: **ICP8_110412D**	QC Batch: **72172**				PrepDate: **4/12/2011**	Analyst: **IL**	
Antimony	0.65	0.16	2.0	J	mg/Kg	1	4/12/2011 05:47 PM
Arsenic	3.8	0.20	1.0		mg/Kg	1	4/12/2011 05:47 PM
Barium	160	0.056	1.0		mg/Kg	1	4/12/2011 05:47 PM
Beryllium	ND	0.042	1.0		mg/Kg	1	4/12/2011 05:47 PM
Cadmium	2.8	0.043	1.0		mg/Kg	1	4/12/2011 05:47 PM
Chromium	20	0.13	1.0		mg/Kg	1	4/12/2011 05:47 PM
Cobalt	6.3	0.11	1.0		mg/Kg	1	4/12/2011 05:47 PM
Copper	22	0.18	2.0		mg/Kg	1	4/12/2011 05:47 PM
Molybdenum	8.0	0.097	1.0		mg/Kg	1	4/12/2011 05:47 PM
Nickel	33	0.11	1.0		mg/Kg	1	4/12/2011 05:47 PM
Selenium	ND	0.28	1.0		mg/Kg	1	4/12/2011 05:47 PM
Silver	ND	0.042	1.0		mg/Kg	1	4/12/2011 05:47 PM
Thallium	ND	0.098	1.0		mg/Kg	1	4/12/2011 05:47 PM
Vanadium	58	0.088	1.0		mg/Kg	1	4/12/2011 05:47 PM
Zinc	78	0.13	1.0		mg/Kg	1	4/12/2011 05:47 PM
MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7471A				
RunID: **AA1_110412D**	QC Batch: **72176**				PrepDate: **4/12/2011**	Analyst: **VV**	
Mercury	0.029	0.0076	0.10	J	mg/Kg	1	4/12/2011 05:38 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT:	AMEC Geomatrix	**Client Sample ID:**	1127-210-8.5
Lab Order:	116888	**Collection Date:**	3/15/2011 2:15:00 PM
Project:	Caltrans-TO11A1, 0153240110	**Matrix:**	SOIL
Lab ID:	116888-047A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP METALS							
	EPA 3050B				**EPA 6010B**		
RunID: **ICP8_110412D**	QC Batch: **72172**				PrepDate: **4/12/2011**		Analyst: **IL**
Antimony	0.71	0.16	2.0	J	mg/Kg	1	4/12/2011 05:50 PM
Arsenic	4.2	0.20	1.0		mg/Kg	1	4/12/2011 05:50 PM
Barium	160	0.056	1.0		mg/Kg	1	4/12/2011 05:50 PM
Beryllium	ND	0.042	1.0		mg/Kg	1	4/12/2011 05:50 PM
Cadmium	3.6	0.043	1.0		mg/Kg	1	4/12/2011 05:50 PM
Chromium	20	0.13	1.0		mg/Kg	1	4/12/2011 05:50 PM
Cobalt	5.8	0.11	1.0		mg/Kg	1	4/12/2011 05:50 PM
Copper	24	0.18	2.0		mg/Kg	1	4/12/2011 05:50 PM
Molybdenum	11	0.097	1.0		mg/Kg	1	4/12/2011 05:50 PM
Nickel	38	0.11	1.0		mg/Kg	1	4/12/2011 05:50 PM
Selenium	0.51	0.28	1.0	J	mg/Kg	1	4/12/2011 05:50 PM
Silver	ND	0.042	1.0		mg/Kg	1	4/12/2011 05:50 PM
Thallium	ND	0.098	1.0		mg/Kg	1	4/12/2011 05:50 PM
Vanadium	56	0.088	1.0		mg/Kg	1	4/12/2011 05:50 PM
Zinc	77	0.13	1.0		mg/Kg	1	4/12/2011 05:50 PM
MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7471A				
RunID: **AA1_110412D**	QC Batch: **72176**				PrepDate: **4/12/2011**		Analyst: **VV**
Mercury	0.073	0.0076	0.10	J	mg/Kg	1	4/12/2011 05:40 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT:	AMEC Geomatrix	**Client Sample ID:**	1127-210-10.0
Lab Order:	116888	**Collection Date:**	3/15/2011 2:16:00 PM
Project:	Caltrans-TO11A1, 0153240110	**Matrix:**	SOIL
Lab ID:	116888-048A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP METALS							
	EPA 3050B				**EPA 6010B**		
RunID: **ICP8_110412D**	QC Batch: **72172**				PrepDate: **4/12/2011**	Analyst: **IL**	
Antimony	0.67	0.16	2.0	J	mg/Kg	1	4/12/2011 05:53 PM
Arsenic	6.6	0.20	1.0		mg/Kg	1	4/12/2011 05:53 PM
Barium	160	0.056	1.0		mg/Kg	1	4/12/2011 05:53 PM
Beryllium	ND	0.042	1.0		mg/Kg	1	4/12/2011 05:53 PM
Cadmium	3.6	0.043	1.0		mg/Kg	1	4/12/2011 05:53 PM
Chromium	17	0.13	1.0		mg/Kg	1	4/12/2011 05:53 PM
Cobalt	5.7	0.11	1.0		mg/Kg	1	4/12/2011 05:53 PM
Copper	25	0.18	2.0		mg/Kg	1	4/12/2011 05:53 PM
Molybdenum	7.3	0.097	1.0		mg/Kg	1	4/12/2011 05:53 PM
Nickel	37	0.11	1.0		mg/Kg	1	4/12/2011 05:53 PM
Selenium	2.6	0.28	1.0		mg/Kg	1	4/12/2011 05:53 PM
Silver	ND	0.042	1.0		mg/Kg	1	4/12/2011 05:53 PM
Thallium	ND	0.098	1.0		mg/Kg	1	4/12/2011 05:53 PM
Vanadium	54	0.088	1.0		mg/Kg	1	4/12/2011 05:53 PM
Zinc	62	0.13	1.0		mg/Kg	1	4/12/2011 05:53 PM
MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7471A				
RunID: **AA1_110412D**	QC Batch: **72176**				PrepDate: **4/12/2011**	Analyst: **VV**	
Mercury	0.078	0.0076	0.10	J	mg/Kg	1	4/12/2011 05:42 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT:	AMEC Geomatrix	**Client Sample ID:**	1127-211-5.5
Lab Order:	116888	**Collection Date:**	3/15/2011 2:43:00 PM
Project:	Caltrans-TO11A1, 0153240110	**Matrix:**	SOIL
Lab ID:	116888-050A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP METALS							
	EPA 3050B				**EPA 6010B**		
RunID: **ICP8_110412D**	QC Batch: **72172**				PrepDate: **4/12/2011**	Analyst: **IL**	
Antimony	0.71	0.16	2.0	J	mg/Kg	1	4/12/2011 05:56 PM
Arsenic	4.8	0.20	1.0		mg/Kg	1	4/12/2011 05:56 PM
Barium	170	0.056	1.0		mg/Kg	1	4/12/2011 05:56 PM
Beryllium	ND	0.042	1.0		mg/Kg	1	4/12/2011 05:56 PM
Cadmium	3.6	0.043	1.0		mg/Kg	1	4/12/2011 05:56 PM
Chromium	20	0.13	1.0		mg/Kg	1	4/12/2011 05:56 PM
Cobalt	6.0	0.11	1.0		mg/Kg	1	4/12/2011 05:56 PM
Copper	25	0.18	2.0		mg/Kg	1	4/12/2011 05:56 PM
Molybdenum	12	0.097	1.0		mg/Kg	1	4/12/2011 05:56 PM
Nickel	40	0.11	1.0		mg/Kg	1	4/12/2011 05:56 PM
Selenium	0.66	0.28	1.0	J	mg/Kg	1	4/12/2011 05:56 PM
Silver	ND	0.042	1.0		mg/Kg	1	4/12/2011 05:56 PM
Thallium	ND	0.098	1.0		mg/Kg	1	4/12/2011 05:56 PM
Vanadium	48	0.088	1.0		mg/Kg	1	4/12/2011 05:56 PM
Zinc	73	0.13	1.0		mg/Kg	1	4/12/2011 05:56 PM
MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7471A				
RunID: **AA1_110412D**	QC Batch: **72176**				PrepDate: **4/12/2011**	Analyst: **VV**	
Mercury	0.076	0.0076	0.10	J	mg/Kg	1	4/12/2011 05:44 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT:	AMEC Geomatrix	**Client Sample ID:**	1127-211-9.0
Lab Order:	116888	**Collection Date:**	3/15/2011 2:50:00 PM
Project:	Caltrans-TO11A1, 0153240110	**Matrix:**	SOIL
Lab ID:	116888-051A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ICP METALS							
	EPA 3050B				**EPA 6010B**		
RunID: **ICP8_110412D**	QC Batch: **72172**				PrepDate: **4/12/2011**		Analyst: **IL**
Antimony	0.67	0.16	2.0	J	mg/Kg	1	4/12/2011 06:00 PM
Arsenic	2.2	0.20	1.0		mg/Kg	1	4/12/2011 06:00 PM
Barium	170	0.056	1.0		mg/Kg	1	4/12/2011 06:00 PM
Beryllium	ND	0.042	1.0		mg/Kg	1	4/12/2011 06:00 PM
Cadmium	3.2	0.043	1.0		mg/Kg	1	4/12/2011 06:00 PM
Chromium	22	0.13	1.0		mg/Kg	1	4/12/2011 06:00 PM
Cobalt	6.7	0.11	1.0		mg/Kg	1	4/12/2011 06:00 PM
Copper	25	0.18	2.0		mg/Kg	1	4/12/2011 06:00 PM
Molybdenum	6.6	0.097	1.0		mg/Kg	1	4/12/2011 06:00 PM
Nickel	39	0.11	1.0		mg/Kg	1	4/12/2011 06:00 PM
Selenium	ND	0.28	1.0		mg/Kg	1	4/12/2011 06:00 PM
Silver	ND	0.042	1.0		mg/Kg	1	4/12/2011 06:00 PM
Thallium	ND	0.098	1.0		mg/Kg	1	4/12/2011 06:00 PM
Vanadium	44	0.088	1.0		mg/Kg	1	4/12/2011 06:00 PM
Zinc	82	0.13	1.0		mg/Kg	1	4/12/2011 06:00 PM
MERCURY BY COLD VAPOR TECHNIQUE							
			EPA 7471A				
RunID: **AA1_110412D**	QC Batch: **72176**				PrepDate: **4/12/2011**		Analyst: **VV**
Mercury	0.047	0.0076	0.10	J	mg/Kg	1	4/12/2011 05:32 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified	DO	Surrogate Diluted Out

CLIENT: AMEC Geomatrix
Work Order: 116888
Project: Caltrans-TO11A1, 0153240110

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **MB-72172** SampType: **MBLK** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **4/12/2011** RunNo: **131976**
Client ID: **PBS** Batch ID: **72172** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **4/12/2011** SeqNo: **2149789**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.400	2.0									J
Arsenic	ND	1.0									
Barium	ND	1.0									
Beryllium	ND	1.0									
Cadmium	ND	1.0									
Chromium	ND	1.0									
Cobalt	ND	1.0									
Copper	ND	2.0									
Molybdenum	ND	1.0									
Nickel	ND	1.0									
Selenium	ND	1.0									
Silver	ND	1.0									
Thallium	ND	1.0									
Vanadium	ND	1.0									
Zinc	0.164	1.0									J

Sample ID: **LCS-72172** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **4/12/2011** RunNo: **131976**
Client ID: **LCSS** Batch ID: **72172** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **4/12/2011** SeqNo: **2149790**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	49.470	2.0	50.00	0.4004	98.1	80	120				
Arsenic	48.231	1.0	50.00	0	96.5	80	120				
Barium	52.340	1.0	50.00	0	105	80	120				
Beryllium	52.957	1.0	50.00	0	106	80	120				
Cadmium	49.010	1.0	50.00	0	98.0	80	120				
Chromium	47.664	1.0	50.00	0	95.3	80	120				
Cobalt	50.161	1.0	50.00	0	100	80	120				
Copper	51.666	2.0	50.00	0	103	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: AMEC Geomatrix
Work Order: 116888
Project: Caltrans-TO11A1, 0153240110

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **LCS-72172** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **4/12/2011** RunNo: **131976**
Client ID: **LCSS** Batch ID: **72172** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **4/12/2011** SeqNo: **2149790**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	52.839	1.0	50.00	0	106	80	120				
Nickel	49.846	1.0	50.00	0	99.7	80	120				
Selenium	45.152	1.0	50.00	0	90.3	80	120				
Silver	46.093	1.0	50.00	0	92.2	80	120				
Thallium	48.605	1.0	50.00	0	97.2	80	120				
Vanadium	52.762	1.0	50.00	0	106	80	120				
Zinc	48.598	1.0	50.00	0.1638	96.9	80	120				

Sample ID: **116888-051A-DUP** SampType: **DUP** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **4/12/2011** RunNo: **131976**
Client ID: **1127-211-9.0** Batch ID: **72172** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **4/12/2011** SeqNo: **2149797**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.692	2.0						0.6708	0	20	J
Arsenic	1.561	1.0						2.192	33.7	20	R
Barium	158.156	1.0						172.6	8.75	20	
Beryllium	ND	1.0						0	0	20	
Cadmium	2.683	1.0						3.169	16.6	20	
Chromium	19.819	1.0						21.58	8.51	20	
Cobalt	5.831	1.0						6.699	13.9	20	
Copper	23.082	2.0						25.15	8.59	20	
Molybdenum	5.371	1.0						6.570	20.1	20	R
Nickel	33.357	1.0						38.76	15.0	20	
Selenium	ND	1.0						0	0	20	
Silver	ND	1.0						0	0	20	
Thallium	ND	1.0						0	0	20	
Vanadium	38.010	1.0						43.89	14.4	20	
Zinc	73.626	1.0						81.64	10.3	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: AMEC Geomatrix
Work Order: 116888
Project: Caltrans-TO11A1, 0153240110

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **116888-051A-MS** SampType: **MS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **4/12/2011** RunNo: **131976**
Client ID: **1127-211-9.0** Batch ID: **72172** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **4/12/2011** SeqNo: **2149798**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	76.443	2.0	125.0	0.6708	60.6	32	105				
Arsenic	82.267	1.0	125.0	2.192	64.1	49	106				
Barium	231.186	1.0	125.0	172.6	46.9	31	133				
Beryllium	88.819	1.0	125.0	0	71.1	56	106				
Cadmium	84.535	1.0	125.0	3.169	65.1	51	103				
Chromium	101.749	1.0	125.0	21.58	64.1	45	114				
Cobalt	90.799	1.0	125.0	6.699	67.3	52	106				
Copper	117.981	2.0	125.0	25.15	74.3	54	125				
Molybdenum	90.428	1.0	125.0	6.570	67.1	54	106				
Nickel	116.540	1.0	125.0	38.76	62.2	45	111				
Selenium	78.541	1.0	125.0	0	62.8	47	104				
Silver	89.707	1.0	125.0	0	71.8	56	112				
Thallium	71.799	1.0	125.0	0	57.4	46	101				
Vanadium	127.300	1.0	125.0	43.89	66.7	54	114				
Zinc	150.203	1.0	125.0	81.64	54.9	28	125				

Sample ID: **116888-051A-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **4/12/2011** RunNo: **131976**
Client ID: **1127-211-9.0** Batch ID: **72172** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **4/12/2011** SeqNo: **2149799**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	75.969	2.0	125.0	0.6708	60.2	32	105	76.44	0.622	20	
Arsenic	83.150	1.0	125.0	2.192	64.8	49	106	82.27	1.07	20	
Barium	235.803	1.0	125.0	172.6	50.5	31	133	231.2	1.98	20	
Beryllium	89.862	1.0	125.0	0	71.9	56	106	88.82	1.17	20	
Cadmium	84.634	1.0	125.0	3.169	65.2	51	103	84.54	0.117	20	
Chromium	102.054	1.0	125.0	21.58	64.4	45	114	101.7	0.299	20	
Cobalt	91.566	1.0	125.0	6.699	67.9	52	106	90.80	0.840	20	
Copper	118.245	2.0	125.0	25.15	74.5	54	125	118.0	0.224	20	
Molybdenum	91.171	1.0	125.0	6.570	67.7	54	106	90.43	0.818	20	
Nickel	117.562	1.0	125.0	38.76	63.0	45	111	116.5	0.874	20	

Qualifiers:

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
Calculations are based on raw values

CLIENT: AMEC Geomatrix
Work Order: 116888
Project: Caltrans-TO11A1, 0153240110

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **116888-051A-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **4/12/2011** RunNo: **131976**
Client ID: **1127-211-9.0** Batch ID: **72172** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **4/12/2011** SeqNo: **2149799**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	80.016	1.0	125.0	0	64.0	47	104	78.54	1.86	20	
Silver	90.038	1.0	125.0	0	72.0	56	112	89.71	0.369	20	
Thallium	73.085	1.0	125.0	0	58.5	46	101	71.80	1.77	20	
Vanadium	127.720	1.0	125.0	43.89	67.1	54	114	127.3	0.330	20	
Zinc	151.122	1.0	125.0	81.64	55.6	28	125	150.2	0.610	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: AMEC Geomatrix
Work Order: 116888
Project: Caltrans-TO11A1, 0153240110

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-71695A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131276**
Client ID: **PBS**	Batch ID: **71695**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137168**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: **LCS-71695**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131276**
Client ID: **LCSS**	Batch ID: **71695**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137169**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	288.904	5.0	250.0	0	116	80	120				

Sample ID: **116072-039A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131276**
Client ID: **ZZZZZZ**	Batch ID: **71695**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137180**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.782	5.0						2.174	0	20	J

Sample ID: **116072-039A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131276**
Client ID: **ZZZZZZ**	Batch ID: **71695**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137181**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	232.482	5.0	250.0	2.174	92.1	34	126				

Sample ID: **MB-71695B**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131276**
Client ID: **PBS**	Batch ID: **71695**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137182**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: AMEC Geomatrix
Work Order: 116888
Project: Caltrans-TO11A1, 0153240110

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **116888-010A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131276**
Client ID: **1127-202-5.5**	Batch ID: **71695**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137193**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.416	5.0						1.436	0	20	J

Sample ID: **116888-010A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131276**
Client ID: **1127-202-5.5**	Batch ID: **71695**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137194**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	194.771	5.0	250.0	1.436	77.3	34	126				

Sample ID: **116888-010A-MSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131276**
Client ID: **1127-202-5.5**	Batch ID: **71695**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137195**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	159.799	5.0	250.0	1.436	63.3	34	126	194.8	19.7	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: AMEC Geomatrix
Work Order: 116888
Project: Caltrans-TO11A1, 0153240110

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-71697A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131281**
Client ID: **PBS**	Batch ID: **71697**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137223**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: **LCS-71697**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131281**
Client ID: **LCSS**	Batch ID: **71697**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137224**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	254.874	5.0	250.0	0	102	80	120				

Sample ID: **116888-020A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131281**
Client ID: **1127-204-6.0**	Batch ID: **71697**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137235**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.043	5.0						1.309	0	20	J

Sample ID: **116888-020A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131281**
Client ID: **1127-204-6.0**	Batch ID: **71697**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137236**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	224.410	5.0	250.0	1.309	89.2	34	126				

Sample ID: **MB-71697B**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131281**
Client ID: **PBS**	Batch ID: **71697**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137237**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: AMEC Geomatrix
Work Order: 116888
Project: Caltrans-TO11A1, 0153240110

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **116888-030A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131281**
Client ID: **1127-207-6.5**	Batch ID: **71697**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137248**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.840	5.0						2.044	0	20	J

Sample ID: **116888-030A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131281**
Client ID: **1127-207-6.5**	Batch ID: **71697**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137249**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	223.177	5.0	250.0	2.044	88.5	34	126				

Sample ID: **116888-030A-MSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131281**
Client ID: **1127-207-6.5**	Batch ID: **71697**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137250**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	213.314	5.0	250.0	2.044	84.5	34	126	223.2	4.52	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: AMEC Geomatrix
Work Order: 116888
Project: Caltrans-TO11A1, 0153240110

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-71698A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131284**
Client ID: **PBS**	Batch ID: **71698**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137280**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: **LCS-71698**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131284**
Client ID: **LCSS**	Batch ID: **71698**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137281**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	260.169	5.0	250.0	0	104	80	120				

Sample ID: **116888-040A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131284**
Client ID: **1127-209-5.5**	Batch ID: **71698**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137292**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	94.991	5.0						90.89	4.42	20	

Sample ID: **116888-040A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131284**
Client ID: **1127-209-5.5**	Batch ID: **71698**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137293**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	306.847	5.0	250.0	90.89	86.4	34	126				

Sample ID: **MB-71698B**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131284**
Client ID: **PBS**	Batch ID: **71698**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137294**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: AMEC Geomatrix
Work Order: 116888
Project: Caltrans-TO11A1, 0153240110

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **116888-050A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131284**
Client ID: **1127-211-5.5**	Batch ID: **71698**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137305**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	61.691	5.0						87.19	34.2	20	R

Sample ID: **116888-050A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131284**
Client ID: **1127-211-5.5**	Batch ID: **71698**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137306**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	256.853	5.0	250.0	87.19	67.9	34	126				

Sample ID: **116888-050A-MSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131284**
Client ID: **1127-211-5.5**	Batch ID: **71698**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137307**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	258.779	5.0	250.0	87.19	68.6	34	126	256.9	0.747	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: AMEC Geomatrix
Work Order: 116888
Project: Caltrans-TO11A1, 0153240110

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-71699A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131286**
Client ID: **PBS**	Batch ID: **71699**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137322**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: **LCS-71699**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131286**
Client ID: **LCSS**	Batch ID: **71699**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137323**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	268.318	5.0	250.0	0	107	80	120				

Sample ID: **116892-009A-DUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131286**
Client ID: **ZZZZZZ**	Batch ID: **71699**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137333**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1061.965	5.0						550.1	63.5	20	R

Sample ID: **116892-009A-MS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131286**
Client ID: **ZZZZZZ**	Batch ID: **71699**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137334**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1522.873	5.0	250.0	550.1	389	34	126				S

Sample ID: **116892-009A-MSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **3/21/2011**	RunNo: **131286**
Client ID: **ZZZZZZ**	Batch ID: **71699**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **3/22/2011**	SeqNo: **2137335**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1305.591	5.0	250.0	550.1	302	34	126	1523	15.4	20	S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: AMEC Geomatrix
Work Order: 116888
Project: Caltrans-TO11A1, 0153240110

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPB

Sample ID: **MB-71683**	SampType: **MBLK**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **3/21/2011**	RunNo: **131260**
Client ID: **PBW**	Batch ID: **71683**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/21/2011**	SeqNo: **2136797**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-71683**	SampType: **LCS**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **3/21/2011**	RunNo: **131260**
Client ID: **LCSW**	Batch ID: **71683**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/21/2011**	SeqNo: **2136798**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.046	0.25	1.000	0	105	85	115				

Sample ID: **116888-056A-MS**	SampType: **MS**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date:	RunNo: **131260**
Client ID: **1127-200-EB1**	Batch ID: **71683**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/21/2011**	SeqNo: **2136800**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.384	0.25	2.500	0	95.4	80	118				

Sample ID: **116888-056A-MSD**	SampType: **MSD**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date:	RunNo: **131260**
Client ID: **1127-200-EB1**	Batch ID: **71683**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/21/2011**	SeqNo: **2136801**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.553	0.25	2.500	0	102	80	118	2.384	6.83	20	

Sample ID: **116888-064A-DUP**	SampType: **DUP**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date:	RunNo: **131260**
Client ID: **1127-200-SW**	Batch ID: **71683**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/21/2011**	SeqNo: **2136810**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25						0	0	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: AMEC Geomatrix
Work Order: 116888
Project: Caltrans-TO11A1, 0153240110

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI

Sample ID: **MB-71893A**	SampType: **MBLK**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **4/1/2011**	RunNo: **131675**
Client ID: **PBS**	Batch ID: **71893**	TestNo: **WET DI/ EPA WET**		Analysis Date: **4/4/2011**	SeqNo: **2144008**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-71893**	SampType: **LCS**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **4/1/2011**	RunNo: **131675**
Client ID: **LCSS**	Batch ID: **71893**	TestNo: **WET DI/ EPA WET**		Analysis Date: **4/4/2011**	SeqNo: **2144009**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.100	0.25	5.000	0	102	80	120				

Sample ID: **116888-048A-DUP**	SampType: **DUP**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **4/1/2011**	RunNo: **131675**
Client ID: **1127-210-10.0**	Batch ID: **71893**	TestNo: **WET DI/ EPA WET**		Analysis Date: **4/4/2011**	SeqNo: **2144014**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25						0	0	20	

Sample ID: **116888-048A-MS**	SampType: **MS**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **4/1/2011**	RunNo: **131675**
Client ID: **1127-210-10.0**	Batch ID: **71893**	TestNo: **WET DI/ EPA WET**		Analysis Date: **4/4/2011**	SeqNo: **2144015**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.117	0.25	5.000	0	102	70	130				

Sample ID: **116888-048A-MSD**	SampType: **MSD**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **4/1/2011**	RunNo: **131675**
Client ID: **1127-210-10.0**	Batch ID: **71893**	TestNo: **WET DI/ EPA WET**		Analysis Date: **4/4/2011**	SeqNo: **2144016**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.172	0.25	5.000	0	103	70	130	5.117	1.08	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: AMEC Geomatrix
Work Order: 116888
Project: Caltrans-TO11A1, 0153240110

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_ST

Sample ID: **MB-71747A**	SampType: **MBLK**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **3/23/2011**	RunNo: **131439**
Client ID: **PBS**	Batch ID: **71747**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **3/25/2011**	SeqNo: **2139749**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-71747**	SampType: **LCS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **3/23/2011**	RunNo: **131439**
Client ID: **LCSS**	Batch ID: **71747**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **3/25/2011**	SeqNo: **2139750**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.689	0.25	5.000	0	93.8	80	120				

Sample ID: **116888-051A-DUP**	SampType: **DUP**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **3/23/2011**	RunNo: **131439**
Client ID: **1127-211-9.0**	Batch ID: **71747**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **3/25/2011**	SeqNo: **2139757**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.383	0.25						4.413	0.673	20	

Sample ID: **116888-051A-MS**	SampType: **MS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **3/23/2011**	RunNo: **131439**
Client ID: **1127-211-9.0**	Batch ID: **71747**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **3/25/2011**	SeqNo: **2139758**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	9.628	0.50	5.000	4.413	104	80	120				

Sample ID: **116888-051A-MSD**	SampType: **MSD**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **3/23/2011**	RunNo: **131439**
Client ID: **1127-211-9.0**	Batch ID: **71747**	TestNo: **WET/ EPA 74**	**WET**	Analysis Date: **3/25/2011**	SeqNo: **2139759**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	9.652	0.50	5.000	4.413	105	80	120	9.628	0.242	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: AMEC Geomatrix
Work Order: 116888
Project: Caltrans-TO11A1, 0153240110

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **MB-72200**	SampType: **MBLK**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **4/13/2011**	RunNo: **132002**
Client ID: **PBS**	Batch ID: **72200**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **4/13/2011**	SeqNo: **2150242**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **MB-72187A TCLP**	SampType: **MBLK**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **4/13/2011**	RunNo: **132002**
Client ID: **PBS**	Batch ID: **72200**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **4/13/2011**	SeqNo: **2150243**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-72200**	SampType: **LCS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **4/13/2011**	RunNo: **132002**
Client ID: **LCSS**	Batch ID: **72200**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **4/13/2011**	SeqNo: **2150244**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.152	0.25	1.000	0	115	80	120				

Sample ID: **116888-040A-DUP**	SampType: **DUP**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **4/13/2011**	RunNo: **132002**
Client ID: **1127-209-5.5**	Batch ID: **72200**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **4/13/2011**	SeqNo: **2150246**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25						0	0	20	

Sample ID: **116888-040A-MS**	SampType: **MS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **4/13/2011**	RunNo: **132002**
Client ID: **1127-209-5.5**	Batch ID: **72200**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **4/13/2011**	SeqNo: **2150247**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.443	0.25	2.500	0	97.7	70	130				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: AMEC Geomatrix
Work Order: 116888
Project: Caltrans-TO11A1, 0153240110

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **116888-040A-MSD** SampType: **MSD** TestCode: **7420_TC** Units: **mg/L** Prep Date: **4/13/2011** RunNo: **132002**
Client ID: **1127-209-5.5** Batch ID: **72200** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **4/13/2011** SeqNo: **2150248**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.441	0.25	2.500	0	97.6	70	130	2.443	0.0693	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: AMEC Geomatrix
Work Order: 116888
Project: Caltrans-TO11A1, 0153240110

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **MB-72258**	SampType: **MBLK**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **4/15/2011**	RunNo: **132071**
Client ID: **PBS**	Batch ID: **72258**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **4/15/2011**	SeqNo: **2151248**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **MB-72244A TCLP**	SampType: **MBLK**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **4/15/2011**	RunNo: **132071**
Client ID: **PBS**	Batch ID: **72258**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **4/15/2011**	SeqNo: **2151249**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-72258**	SampType: **LCS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **4/15/2011**	RunNo: **132071**
Client ID: **LCSS**	Batch ID: **72258**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **4/15/2011**	SeqNo: **2151250**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.957	0.25	1.000	0	95.7	80	120				

Sample ID: **116888-045A-DUP**	SampType: **DUP**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **4/15/2011**	RunNo: **132071**
Client ID: **1127-210-5.5**	Batch ID: **72258**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **4/15/2011**	SeqNo: **2151252**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.346	0.25						0.3085	11.5	20	

Sample ID: **116888-045A-MS**	SampType: **MS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **4/15/2011**	RunNo: **132071**
Client ID: **1127-210-5.5**	Batch ID: **72258**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **4/15/2011**	SeqNo: **2151253**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.179	0.25	2.500	0.3085	115	70	130				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: AMEC Geomatrix
Work Order: 116888
Project: Caltrans-TO11A1, 0153240110

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **116888-045A-MSD** SampType: **MSD** TestCode: **7420_TC** Units: **mg/L** Prep Date: **4/15/2011** RunNo: **132071**
Client ID: **1127-210-5.5** Batch ID: **72258** TestNo: **EPA 1311/ 74** **EPA3010A** Analysis Date: **4/15/2011** SeqNo: **2151254**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.240	0.25	2.500	0.3085	117	70	130	3.179	1.92	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: AMEC Geomatrix
Work Order: 116888
Project: Caltrans-TO11A1, 0153240110

ANALYTICAL QC SUMMARY REPORT

TestCode: 7471_S

Sample ID: **MB-72176**	SampType: **MBLK**	TestCode: **7471_S**	Units: **mg/Kg**	Prep Date: **4/12/2011**	RunNo: **131987**
Client ID: **PBS**	Batch ID: **72176**	TestNo: **EPA 7471A**		Analysis Date: **4/12/2011**	SeqNo: **2150088**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: **LCS-72176**	SampType: **LCS**	TestCode: **7471_S**	Units: **mg/Kg**	Prep Date: **4/12/2011**	RunNo: **131987**
Client ID: **LCSS**	Batch ID: **72176**	TestNo: **EPA 7471A**		Analysis Date: **4/12/2011**	SeqNo: **2150089**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.837	0.10	0.8300	0	101	80	120				

Sample ID: **116888-051A-MS**	SampType: **MS**	TestCode: **7471_S**	Units: **mg/Kg**	Prep Date: **4/12/2011**	RunNo: **131987**
Client ID: **1127-211-9.0**	Batch ID: **72176**	TestNo: **EPA 7471A**		Analysis Date: **4/12/2011**	SeqNo: **2150090**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.875	0.10	0.8300	0.04660	99.9	70	130				

Sample ID: **116888-051A-MSD**	SampType: **MSD**	TestCode: **7471_S**	Units: **mg/Kg**	Prep Date: **4/12/2011**	RunNo: **131987**
Client ID: **1127-211-9.0**	Batch ID: **72176**	TestNo: **EPA 7471A**		Analysis Date: **4/12/2011**	SeqNo: **2150091**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.874	0.10	0.8300	0.04660	99.7	70	130	0.8755	0.180	20	

Sample ID: **116888-051A-DUP**	SampType: **DUP**	TestCode: **7471_S**	Units: **mg/Kg**	Prep Date: **4/12/2011**	RunNo: **131987**
Client ID: **1127-211-9.0**	Batch ID: **72176**	TestNo: **EPA 7471A**		Analysis Date: **4/12/2011**	SeqNo: **2150093**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.046	0.10						0.04660	0	20	J

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

CLIENT: AMEC Geomatrix
Work Order: 116888
Project: Caltrans-TO11A1, 0153240110

ANALYTICAL QC SUMMARY REPORT

TestCode: 9045_S

Sample ID: **116778-054ADUP** SampType: **DUP** TestCode: **9045_S** Units: **pH Units** Prep Date: RunNo: **131200**
Client ID: **ZZZZZZ** Batch ID: **R131200** TestNo: **EPA 9045C** Analysis Date: **3/18/2011** SeqNo: **2135856**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	8.300	0.10						8.240	0.726	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits
S	Spike/Surrogate outside of limits due to matrix interference	DO	Surrogate Diluted Out		Calculations are based on raw values

APPENDIX D

BORING 1127-101

Project No. S9500-06-04
Client: Caltrans
Location: Puente Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 24, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground with grass **Description**
			0 -- - **1** -- -	**SP**	Sand with Gravel, dark brown (10YR 3/3), slightly moist, fine-grained, fine-gravel, 15% fines, no plasticity.
G	1127-101-2.0	1004	**2** -- - **3** -- -		
G	1127-101-4.0	1021	**4** -- - **5** -- -	**SP**	Sand, dark brown (10YR 3/3), slightly moist, fine-grained, 10% fines, some fine-gravel, no plasticity.
G	1127-101-6.0	1042	**6** -- - **7** -- -	**SP**	Sand with Gravel, dark brown (10YR 3/3), slightly moist, fine-grained, 10% fines, fine-gravel, no plasticity.
			8 -- - **9** -- - **10** -- - **11** -- - **12** -- - **13** -- - **14** -- - **15** -- - **16** -- - **17** -- - **18** -- - **19** -- - **20** --		Refusal at 7.5 feet on gravel.

G - Grab Sample

BORING 1127-102

Project No. S9500-06-04
Client: Caltrans
Location: Puente Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 24, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground with grass **Description**
			0 -- -	**SM**	Silty Sand, very dark gray (10YR 3/1), slightly moist, fine-grained, 15% fines, some fine-gravel, no plasticity.
			1 -- -		
G	1127-102-2.0	0909	**2** -- -		
			3 -- -		
G	1127-102-4.0	0916	**4** -- -	**SM**	Silty Sand, very dark gray (10YR 3/1), slightly moist, fine-grained, 15% fines, some fine-gravel, no plasticity.
			5 -- -		
G	1127-102-6.0	0933	**6** -- -	**SM**	Silty Sand, very dark gray (10YR 3/1), slightly moist, fine-grained, 15% fines, some fine-gravel, no plasticity.
			7 -- -		Refusal at 6 feet on gravel.
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-103

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Puente Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 24, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Grass and shrubs **Description**
			0 --	**ML**	Sandy Silt, very dark gray (10YR 3/1), slightly moist, fine-grained, 20% fines, no plasticity.
G	1127-103-1.0	0805	1 --		
G	1127-103-2.0	1112	2 --	**SP-SM**	Sand with Silt and Gravel, very dark gray (10YR 3/1), slightly moist, fine- to coarse-gravel, 10% fines, few cobbles, no plasticity.
			3 --		Refusal at 2 feet on gravel.
			4 --		Sample at 1 foot was collected on 1/25/2011.
					Sample at 2 feet was collected on 1/24/2011.
			5 --		
			6 --		
			7 --		
			8 --		
			9 --		
			10 --		
			11 --		
			12 --		
			13 --		
			14 --		
			15 --		
			16 --		
			17 --		
			18 --		
			19 --		
			20 --		

G - Grab Sample

BORING 1127-104

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Puente Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 24, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground and grass **Description**
			0 -- - 1 -- -	**SM**	Silty Sand, dark gray (10YR 4/1), slightly moist, fine-grained, some gravel, 30% fines, no plasticity.
G	1127-104-2.0	1211	2 -- - 3 -- -		
G	1127-104-4.0	1227	4 -- - 5 -- - 6 -- - 7 -- - 8 -- - 9 -- - 10 -- - 11 -- - 12 -- - 13 -- - 14 -- - 15 -- - 16 -- - 17 -- - 18 -- - 19 -- - 20 --	**SP**	Sand, poorly graded, dark brown (10YR 3/4), slightly moist, fine-grained, some gravel, 10% fines, no plasticity. Refusal at 4 feet on gravel.

G - Grab Sample

BORING 1127-105

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Cameron Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 24, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 --	**ML**	Sandy Silt, dark gray (7.5YR 4/1), slightly moist, fine-grained, some gravel, 15% fines, few cobbles, no plasticity.
			1 --		
G	1127-105-2.0	1354	2 --		
			3 --		
G	1127-105-4.0	1400	4 --	**ML**	Sandy Silt with Gravel, very dark gray (7.5YR 3/1), slightly moist, fine- to coarse-grained, 20% fines, few cobbles, no plasticity.
			5 --		Refusal at 4.5 feet on gravel.
			6 --		
			7 --		
			8 --		
			9 --		
			10 --		
			11 --		
			12 --		
			13 --		
			14 --		
			15 --		
			16 --		
			17 --		
			18 --		
			19 --		
			20 --		

G - Grab Sample

BORING 1127-106

Project No. S9500-06-04
Client: Caltrans
Location: Cameron Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 24, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground with grass **Description**
			0 -- - **1** -- -	**SM**	Silty Sand, dark brown (7.5YR 3/2), slightly moist, fine- to medium-grained, some gravel, 15% fines, no plasticity.
G	1127-106-2.0	1327	**2** -- - **3** -- -		
G	1127-106-4.0	1331	**4** -- - **5** -- -	**SM**	Silty Sand, dark brown (7.5/YR 3/2), slightly moist, fine-grained, 15% fines, some gravel, no plasticity.
			6 -- - **7** -- - **8** -- - **9** -- - **10** -- - **11** -- - **12** -- - **13** -- - **14** -- - **15** -- - **16** -- - **17** -- - **18** -- - **19** -- - **20** --		Refusal at 4 feet on gravel.

G - Grab Sample

BORING 1127-107

Project No. S9500-06-04
Client: Caltrans
Location: Cameron Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 24, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground/Grass **Description**
			0 -- - 1 -- -	**SP**	Sand, dark brown (7.5YR 3/3), slightly moist, fine- to coarse-grained, some fine-gravel, 10% fines, no plasticity.
G	1127-107-2.0	1426	2 -- - 3 -- -		
G	1127-107-4.0	1430	4 -- - 5 -- -	**ML**	Sandy Silt, dark brown (7.5YR 3/2), slightly moist, fine-grained, some fine-gravel, 20% fines, no plasticity.
G	1127-107-6.0	1450	6 -- - 7 -- - 8 -- -	**SP**	Sand, poorly graded, very dark gray (7.5 YR 3/1), slightly moist, fine-grained, some fine-gravel, 5% fines, few cobbles, no plasticity.
G	1127-107-9.0	1509	9 -- - 10 -- - 11 -- - 12 -- - 13 -- - 14 -- - 15 -- - 16 -- - 17 -- - 18 -- - 19 -- - 20 --	**SP**	Sand, poorly graded, brown (7.5YR 5/3), slightly moist, fine- to coarse-grained, 5% fines, no plasticity. End at 9 feet.

G - Grab Sample

BORING 1127-109

Project No. S9500-06-04
Client: Caltrans
Location: Pacific Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 24, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SP**	Sand, poorly graded, brown (10YR 4/3), loose, moist, fine- to medium-grained, trace fine-gravel, 5% fines, no plasticity.
			1 -- -		
G	1127-109-2.0	0905	**2** -- -		
			3 -- -		
G	1127-109-4.0	0910	**4** -- -	**SP**	Sand, poorly graded, brown (10YR 4/3), loose, moist, fine- to medium-grained, trace fine-gravel, 5% fines, no plasticity.
			5 -- -		
G	1127-109-6.0	0915	**6** -- -	**SP**	Sand, poorly graded, brown (10YR 4/3), loose, moist, fine-grained, trace fine-gravel, 5% fines, no plasticity.
			7 -- -		End at 6 feet.
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-110

Project No. S9500-06-04
Client: Caltrans
Location: Pacific Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 24, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, brown (10YR 4/3), loose, moist, fine- to medium-grained with trace coarse-grained, 30% fines, trace fine- to coarse-gravel.
G	1127-110-1.0	0818	**1** -- -		
G	1127-110-2.0	0945	**2** -- -	**SM**	Silty Sand, brown (10YR 4/3), loose, moist, fine- to medium-grained, 30% fines, some fine- to coarse-gravel.
			3 -- -		Refusal at 3 feet on gravel.
			4 -- -		Sample at 1 foot was collected on 1/25/2011.
			5 -- -		Sample at 2 feet was collected on 1/24/2011.
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-111

Project No. S9500-06-04
Client: Caltrans
Location: Pacific Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 24, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, brown (10YR 5/3), loose, moist, fine- to medium-grained with trace coarse-grained, some fine- to coarse-gravel, 30% fines, trace rootlets,
G	1127-111-1.0	0850	**1** -- -		no plasticity.
G	1127-111-2.0	1046	**2** -- -	**SM**	Silty Sand, brown (10YR 5/3), loose, moist, fine- to medium-grained, abundant fine-gravel, 20% fines, no plasticity.
			3 -- -		Refusal at 3 feet on gravel.
			4 -- -		Sample at 1 foot was collected on 1/25/2011.
			5 -- -		Sample at 2 feet was collected on 1/24/2011.
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-112

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Pacific Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 24, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, brown (10YR 4/3), loose, moist, fine- to medium-grained, 30% fines, some fine- to coarse-gravel, some roots and rootlets.
G	1127-112-1.0	0840	**1** -- -		
G	1127-112-2.0	1027	**2** -- -	**SM**	Silty Sand, brown (10YR 4/3), loose, moist, fine- to medium-grained, 30% fines, some fine- to coarse-gravel.
			3 -- -		Refusal at 3 feet on gravel.
			4 -- -		Sample at 1 foot was collected on 1/25/2011.
			5 -- -		Sample at 2 feet was collected on 1/24/2011.
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-113

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Vincent Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 24, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, brown (10YR 4/3), loose, moist, fine-grained with trace medium- to coarse-grained, 20% fines, some fine- to coarse-gravel, no plasticity.
G	1127-113-1.0	1155	**1** -- -		
G	1127-113-2.0	0908	**2** -- -	**SM**	Silty Sand, brown (2.5YR 4/4), loose, moist, fine- to medium-grained with trace coarse-grained, 30% fines, some fine- to coarse-gravel, no plasticity.
			3 -- -		Refusal at 2.5 feet on gravel.
			4 -- -		Sample at 1 foot was collected on 1/24/2011.
			5 -- -		Sample at 2 feet was collected on 1/25/2011.
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-114

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Vincent Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 24, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, brown (10YR 4/3), loose, moist, fine-grained with trace coarse-grained, 20% fines, trace fine-gravel, no plasticity.
G	1127-114-1.0	1207	**1** -- -		
			2 -- -		
G	1127-114-3.0	1211	**3** -- -	**SM**	Silty Sand, brown (10YR 4/3), loose, moist, fine-grained with trace coarse-grained, 30% fines, trace fine-gravel, trace clay content, low plasticity.
			4 -- -		Refusal at 4 feet on gravel.
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-115

Project No. S9500-06-04
Client: Caltrans
Location: Vincent Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 24, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, yellowish brown (10YR 5/6), loose, moist, fine-grained, 20% fines, no plasticity.
G	1127-115-1.0	1256	**1** -- -		
			2 -- -		
G	1127-115-3.0	1258	**3** -- -	**SM**	Silty Sand, yellowish brown (10YR 5/6), loose, moist, fine-grained, 20% fines, no plasticity.
			4 -- -		Refusal at 4 feet on gravel.
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-116

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Vincent Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 24, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	SC	Sandy Clay, brown, (10YR 5/3), firm, moist, fine-grained, 30% fines, fine- to coarse-gravel, moderate plasticity.
G	1127-116-1.0	1230	1 -- -		
			2 -- -		
G	1127-116-3.0	1232	3 -- -	ML	Sandy Silt, yellowish brown, (10YR 5/6), loose, moist, fine-grained, 60% fines, fine- to coarse-gravel, low plasticity.
			4 -- -		
G	1127-116-5.0	1236	5 -- -	SM	Silty Sand, yellowish brown, (10YR 5/6), loose, moist, fine-grained, fine- to coarse-gravel, 30 % fines, no plasticity.
			6 -- -		End at 5 feet.
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-117

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Lark Ellen (10 Fwy) Los Angeles County, California

Excavation Date: January 25, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Grass and shrubs **Description**
			0 -- -	**ML**	Sandy Silt, dark reddish brown (5YR 3/3), slightly moist, fine-grained, 60% fines, trace fine-gravel, no plasticity.
			1 -- -		
G	1127-117-2.0	0920	**2** -- -		
			3 -- -		
G	1127-117-4.0	0928	**4** -- -	**ML**	Sandy Silt, dark reddish brown (5YR 3/4), slightly moist, fine-grained, 60% fines, trace fine-gravel, no plasticity.
			5 -- -		
G	1127-117-6.0	0936	**6** -- -	**ML**	Sandy Silt, dark reddish brown, (5YR 3/4), slightly moist, fine-grained, 60% fines, some fine-gravel, no plasticity.
			7 -- -		End at 6 feet.
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-118

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Lark Ellen (10 Fwy) Los Angeles County, California

Excavation Date: January 25, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**ML**	Sandy Silt with Gravel, dark brown (7.5YR 3/3), slightly moist, fine- to coarse-grained, 65% fines, few cobbles, no plasticity.
			1 -- -		
G	1127-118-2.0	1015	**2** -- -		
			3 -- -		
G	1127-118-4.0	1024	**4** -- -	**ML**	Sandy Silt, dark brown (7.5YR 3/3), slightly moist, fine- to coarse-grained, some fine-gravel, 60% fines, no plasticity.
			5 -- -		Refusal at 4.5 feet on gravel.
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-119

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Lark Ellen (10 Fwy) Los Angeles County, California

Excavation Date: January 25, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Grass and shrubs **Description**
			0 --	**ML**	Sandy Silt, very dark gray (5YR 3/1), slightly moist, fine-grained, some gravel, 70% fines, no plasticity.
			1 --		
G	1127-119-2.0	0850	2 --		
			3 --		
G	1127-119-4.0	0922	4 --	**SP**	Sand with Gravel, poorly graded, dark gray (5YR 4/1), slightly moist, fine-grained, 5% fines, fine- to coarse-gravel, no plasticity.
			5 --		Refusal at 4 feet on gravel.
			6 --		
			7 --		
			8 --		
			9 --		
			10 --		
			11 --		
			12 --		
			13 --		
			14 --		
			15 --		
			16 --		
			17 --		
			18 --		
			19 --		
			20 --		

G - Grab Sample

BORING 1127-120

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Lark Ellen (10 Fwy) Los Angeles County, California

Excavation Date: January 25, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 --	**ML**	Sandy Silt, strong brown (7.5YR 5/8), slightly moist, fine-grained, 60% fines, some fine-gravel, no plasticity.
			1 --		
G	1127-120-2.0	1013	2 --		
			3 --		
G	1127-120-4.0	1040	4 --	**ML**	Sandy Silt with Gravel, strong brown (7.5YR 5/6), slightly moist, fine-grained, 55% fines, fine- to coarse-gravel, no plasticity.
			5 --		Refusal at 4.5 feet on gravel.
			6 --		
			7 --		
			8 --		
			9 --		
			10 --		
			11 --		
			12 --		
			13 --		
			14 --		
			15 --		
			16 --		
			17 --		
			18 --		
			19 --		
			20 --		

G - Grab Sample

BORING 1127-121

Project No. S9500-06-04
Client: Caltrans
Location: Lark Ellen (10 Fwy)
Los Angeles County,
California

Excavation Date: January 25, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**ML**	Sandy Silt, dark brown (7.5YR 3/3), slightly moist, fine-grained, 60% fines, no plasticity.
			1 -- -		
G	1127-121-2.0	1331	**2** -- -		
			3 -- -		
			4 -- -		
G	1127-121-5.0	1335	**5** -- -	**ML**	Sandy Silt, dark brown (7.5YR 3/4), slightly moist, fine-grained, some gravel, 70% fines, no plasticity.
			6 -- -		
G	1127-121-7.0	1355	**7** -- -	**ML**	Sandy Silt, dark brown (7.5YR 3/4), slightly moist, fine-grained, 60% fines, no plasticity.
			8 -- -		
			9 -- -		
G	1127-121-10.0	1400	**10** -- -	**ML**	Sandy Silt, brown (7.5YR 5/4), slightly moist, fine-grained, 70% fines, no plasticity.
			11 -- -		Ends at 10 feet.
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-122

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Lark Ellen (10 Fwy) Los Angeles County, California

Excavation Date: January 25, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**ML**	Sandy Silt, dark brown (7.5YR 3/3), slightly moist, fine-grained, 60% fines, some rootlets, no plasticity.
			1 -- -		
G	1127-122-2.0	1137	**2** -- -		
			3 -- -		
			4 -- -		
G	1127-122-5.0	1150	**5** -- -	**ML**	Sandy Silt, brown (7.5YR 5/4), slightly moist, fine-grained, some gravel, 60% fines, no plasticity.
			6 -- -		Refusal at 6 feet on gravel.
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-123

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Lark Ellen (10 Fwy)
Los Angeles County,
California

Excavation Date: January 25, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- - **1** -- -	**ML**	Sandy Silt, very dark gray (7.5YR 3/1), slightly moist, fine-grained, 60% fines, no plasticity.
G	1127-123-2.0	1329	**2** -- - **3** -- -		
G	1127-123-4.0	1335	**4** -- - **5** -- -	**ML**	Sandy Silt, strong brown (7.5YR 5/8), slightly moist, fine-grained, 60% fines, no plasticity.
G	1127-123-6.0	1340	**6** -- - **7** -- -	**ML**	Sandy Silt, strong brown (7.5YR 5/6), slightly moist, fine-grained, 65% fines, some fine-gravel, no plasticity.
			8 -- - **9** -- - **10** -- - **11** -- - **12** -- - **13** -- - **14** -- - **15** -- - **16** -- - **17** -- - **18** -- - **19** -- - **20** --		End at 6 feet.

G - Grab Sample

BORING 1127-124

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Lark Ellen (10 Fwy) Los Angeles County, California

Excavation Date: January 25, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- - **1** -- -	**SM**	Silty Sand, dark brown (7.5YR 3/3), slightly moist, fine-grained, 15% fines, trace fine-gravel, no plasticity.
G	1127-124-2.0	1138	**2** -- - **3** -- -		
G	1127-124-4.0	1145	**4** -- - **5** -- -	**SM**	Silty Sand with Gravel, dark brown (7.5YR 3/3), slightly moist, fine-grained, fine-gravel, 15% fines, no plasticity.
G	1127-124-6.0	1154	**6** -- - **7** -- -	**ML**	Sandy Silt, dark brown (7.5YR 3/3), slightly moist, fine-grained, 15% fines, some fine-gravel, few cobbles, no plasticity.
			8 -- - **9** -- - **10** -- - **11** -- - **12** -- - **13** -- - **14** -- - **15** -- - **16** -- - **17** -- - **18** -- - **19** -- - **20** --		End at 6 feet.

G - Grab Sample

BORING 1127-125

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Azusa Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 24, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand with Gravel, reddish brown (2.5YR 4/4), loose, moist, fine- to medium-grained, 30% fines, fine- to coarse-gravel, no plasticity.
G	1127-125-1.0	0945	**1** -- -		
G	1127-125-2.0	1330	**2** -- -	**SM**	Silty Sand with Gravel, reddish brown (2.5YR 4/4), loose, moist, fine- to medium-grained, 30% fines, fine- to coarse-gravel, no plasticity.
			3 -- -		Refusal at 2.5 feet on gravel.
			4 -- -		Sample at 1 foot was collected on 1/25/2011.
			5 -- -		Sample at 2 feet was collected on 1/24/2011.
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-126

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Azusa Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 24, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	SM	Silty Sand, brown (10YR 5/3), loose, moist, fine- to medium-grained, 20% fines, abundant fine- to coarse-gravel, some concrete fragments, no plasticity.
G	1127-126-1.0	0958	1 -- -		
G	1127-126-2.0	1348	2 -- -	SM	Silty Sand, brown (10YR 5/3), loose, moist, fine- to medium-grained, 20% fines, abundant fine- to coarse-gravel, some concrete fragments, no plasticity.
			3 -- -		Refusal at 3.0 feet on coarse gravel.
			4 -- -		Sample at 1 foot was collected on 1/25/2011.
			5 -- -		Sample at 2 feet was collected on 1/24/2011.
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-127

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Azusa Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 24, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, brown (10YR 5/3), loose, moist, fine- to medium-grained, 30% fines some fine- to coarse-gravel, some rootlets, no plasticity.
G	1127-127-1.0	1030	**1** -- -		
G	1127-127-2.0	1450	**2** -- -	**SM**	Silty Sand, brown (10YR 5/3), loose, moist, fine- to medium-grained, 30% fines, abundant fine- to coarse-gravel, no plasticity, some concrete and asphalt fragments.
			3 -- -		Refusal at 2.5 feet on gravel.
			4 -- -		Sample at 1 foot was collected on 1/25/2011.
			5 -- -		Sample at 2 feet was collected on 1/24/2011.
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-128

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Azusa Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 24, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, dark brown (10YR 3/3), loose, moist, fine- to medium-grained, 30% fines, trace fine-gravel, some root and rootlets, no plasticity.
G	1127-128-1.0	1017	**1** -- -		
G	1127-128-2.0	1403	**2** -- -	**SM**	Silty Sand, reddish brown (2.5YR 4/4), loose, moist, fine-grained, 20% fines, trace fine-gravel, no plasticity.
			3 -- -		Refusal at 2.5 feet on gravel.
			4 -- -		Sample at 1 foot was collected on 1/25/2011.
			5 -- -		Sample at 2 feet was collected on 1/24/2011.
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-129

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Hollenbeck Street (10 Fwy) Los Angeles County, California

Excavation Date: January 26, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	ML	Sandy Silt, dark brown (10YR 3/3), slightly moist, fine-grained, 60% fines, some fine-gravel, some rootlets, no plasticity.
G	1127-129-1.0	0830	1 -- -		
G	1127-129-2.0	0814	2 -- -	ML	Sandy Silt, dark yellowish brown (10YR 4/4), slightly moist, fine-grained, 60% fines, some fine-gravel, some rootlets, no plasticity.
			3 -- -		
			4 -- -		Refusal at 4.0 feet on gravel.
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-130

Project No. S9500-06-04
Client: Caltrans
Location: Hollenbeck Street (10 Fwy) Los Angeles County, California

Excavation Date: January 26, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- - **1** -- -	**ML**	Sandy Silt, dark brown (7.5YR 3/3), slightly moist, fine-grained, 60% fines, no plasticity.
G	1127-130-2.0	0900	**2** -- - **3** -- - **4** -- -		
G	1127-130-5.0	0906	**5** -- - **6** -- -	**ML**	Sandy Silt, dark brown (7.5YR 3/3), slightly moist, fine-grained, 60% fines, no plasticity.
G	1127-130-7.0	0918	**7** -- - **8** -- - **9** -- -	**ML**	Sandy Silt, brown (7.5YR 4/3), slightly moist, fine-grained, 60 % fines, some fine-gravel, no plasticity.
G	1127-130-10.0	0925	**10** -- - **11** -- - **12** -- - **13** -- - **14** -- - **15** -- - **16** -- - **17** -- - **18** -- - **19** -- - **20** --	**SP**	Sand, poorly graded, brown (7.5YR 5/2), slightly moist, fine-grained, 5% fines, some gravel, few cobbles, no plasticity. Ends at 10 feet.

G - Grab Sample

BORING 1127-131

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Hollenbeck Street (10 Fwy) Los Angeles County, California

Excavation Date: January 31, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, dark grayish brown (10YR 4/2), slightly moist, fine-grained, some fine-gravel, 20% fines, no plasticity, some rootlets.
G	1127-131-1.0	1719	**1** -- -		
G	1127-131-2.0	1724	**2** -- -	**SM**	Silty Sand with Gravel, dark gray (10YR 4/1), slightly moist, fine-grained, fine-gravel, 10% fines, few cobbles, no plasticity.
			3 -- -		
			4 -- -		
			5 -- -		Refusal at 4.5 feet on gravel.
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-132

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Hollenbeck Street (10 Fwy) Los Angeles County, California

Excavation Date: January 26, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, very dark gray (7.5YR 3/1), slightly moist, fine- to coarse-grained, 20% fines, some gravel, few cobbles, no plasticity.
			1 -- -		
G	1127-132-2.0	0905	**2** -- -		
			3 -- -		
			4 -- -		
G	1127-132-5.0	0917	**5** -- -	**SM**	Silty Sand, very dark gray (7.5YR 3/1), slightly moist, fine-grained, 20% fines, some gravel, few cobbles, no plasticity.
			6 -- -		Refusal at 5.5 feet on gravel.
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-133

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Hollenbeck Street (10 Fwy) Los Angeles County, California

Excavation Date: January 26, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, dark grayish brown (10YR 3/1), slightly moist, fine-grained, 20% fines, some gravel, some root and rootlets, no plasticity.
G	1127-133-1.0	1150	**1** -- -		
G	1127-133-2.0	1144	**2** -- -	**SM**	Silty Sand with Gravel, dark brown (10YR 4/1), slightly moist, fine- to coarse-grained, 20% fines, few cobbles, no plasticity.
			3 -- -		Refusal at 2.5 feet on gravel.
			4 -- -		
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-134

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Hollenbeck Street (10 Fwy) Los Angeles County, California

Excavation Date: January 26, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- - **1** -- -	**SM**	Silty Sand, very dark gray (7.5YR 3/1), slightly moist, fine-grained, some fine-gravel, 10% fines, no plasticity.
G	1127-134-2.0	1007	**2** -- - **3** -- - **4** -- -		
G	1127-134-5.0	1033	**5** -- - **6** -- -	**SM**	Silty Sand, brown (7.5YR 4/2), slightly moist, fine- to coarse-grained, 10% fines, some fine-gravel, no plasticity.
			7 -- - **8** -- - **9** -- - **10** -- - **11** -- - **12** -- - **13** -- - **14** -- - **15** -- - **16** -- - **17** -- - **18** -- - **19** -- - **20** --		Refusal at 5.5 feet on gravel.

G - Grab Sample

BORING 1127-135

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Hollenbeck Street (10 Fwy) Los Angeles County, California

Excavation Date: January 26, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, very dark gray (10YR 3/1), slightly moist, fine- to coarse-grained, some fine-gravel, 20% fines, no plasticity.
G	1127-135-1.0	1142	**1** -- -		
G	1127-135-2.0	1116	**2** -- -	**ML**	Sandy Silt with Gravel, very dark grayish brown (10YR 3/2), slightly moist, fine- to coarse-grained, some fine-gravel, 60% fines, some rootlets, no plasticity.
			3 -- -		Refusal at 3 feet on gravel.
			4 -- -		
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-136

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Hollenbeck Street (10 Fwy) Los Angeles County, California

Excavation Date: January 26, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- - **1** -- -	**SM**	Silty Sand with Gravel, very dark gray (7.5YR 3/1), slightly moist, fine-grained, 20% fines, fine-gravel, some rootlets, no plasticity.
G	1127-136-2.0	1012	**2** -- - **3** -- - **4** -- -		
G	1127-136-5.0	1045	**5** -- - **6** -- -	**ML**	Sandy Silt with Gravel, very dark gray (7.5YR 3/1), slightly moist, fine- to medium-grained, 60% fines, no plasticity.
			7 -- - **8** -- - **9** -- - **10** -- - **11** -- - **12** -- - **13** -- - **14** -- - **15** -- - **16** -- - **17** -- - **18** -- - **19** -- - **20** --		Refusal at 5.5 feet on gravel.

G - Grab Sample

BORING 1127-137

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Citrus Street (10 Fwy) Los Angeles County, California

Excavation Date: January 26, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 --	**ML**	Clayey Silt, brown (10YR 4/3), slightly moist, fine-grained, 90% fines, low to moderate plasticity.
			1 --		
G	1127-137-2.0	1320	2 --		
			3 --		
G	1127-137-4.0	1329	4 --	**ML**	Clayey Silt, dark brown (10YR 3/2), slightly moist, fine-grained, 90% fines, some organics, low plasticity.
			5 --		
G	1127-137-6.0	1402	6 --	**SP**	Sand, poorly graded, brown (10YR 4/4), slightly moist, fine-grained, some gravel, 5% fines, no plasticity.
			7 --		
			8 --		
G	1127-137-9.0	1413	9 --	**ML**	Sandy Silt, brown (10YR 4/3), slightly moist, fine-grained, 60% fines, no plasticity.
			10 --		Ends at 9 feet.
			11 --		
			12 --		
			13 --		
			14 --		
			15 --		
			16 --		
			17 --		
			18 --		
			19 --		
			20 --		

G - Grab Sample

BORING 1127-138

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Citrus Street (10 Fwy) Los Angeles County, California

Excavation Date: January 26, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**ML**	Sandy Silt, very dark gray (10YR 3/1), slightly moist, fine-grained, some gravel, 60% fines, some rootlets, no plasticity.
			1 -- -		
G	1127-138-2.0	1311	**2** -- -		
			3 -- -		
G	1127-138-4.0	1329	**4** -- -	**ML**	Sandy Silt, very dark gray (10YR 3/1), slightly moist, fine-grained, 70% fines, some rootlets, no plasticity.
			5 -- -		
G	1127-138-6.0	1339	**6** -- -	**ML**	Sandy Silt, very dark gray (10YR 3/1), slightly moist, fine-grained, organic matter, 70% fines, some rootlets, no plasticity.
			7 -- -		
			8 -- -		
G	1127-138-9.0	1355	**9** -- -	**ML**	Sandy Silt, brown (10YR 4/3), slightly moist, fine-grained, some rootlets, 80% fines, no plasticity.
			10 -- -		Ends at 9 feet.
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-139

Project No. S9500-06-04
Client: Caltrans
Location: Citrus Street (10 Fwy) Los Angeles County, California

Excavation Date: January 26, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, brown (10YR 5/3), loose, moist, fine-grained, some fine- to coarse-gravel, 30% fines, some tree roots, trace clay, low plasticity.
G	1127-139-1.0	1410	**1** -- -		
G	1127-139-2.0	1418	**2** -- -	**SM**	Silty Sand, brown (10YR 5/3), loose, moist, fine-grained, some fine- to coarse-gravel, 30% fines, trace clay, low plasticity.
			3 -- -		Refusal at 2 feet on gravel.
			4 -- -		
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-140

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Citrus Street (10 Fwy) Los Angeles County, California

Excavation Date: January 26, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, brown (10YR 5/3), loose, moist, fine-grained, some fine-gravel, 30% fines, some root and rootlets.
G	1127-141-1.0	1348	**1** -- -		
G	1127-141-2.0	1355	**2** -- -	**SM**	Silty Sand, brown (10YR 5/4), loose, moist, fine- to coarse-grained, some fine- to coarse-gravel, 30% fines, some root and rootlets.
			3 -- -		Refusal at 2.5 feet on gravel.
			4 -- -		
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-141

Project No. S9500-06-04
Client: Caltrans
Location: Barrance Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 27, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand with Clay, reddish brown (2.5YR 4/4), loose, slightly moist, fine-grained, some fine- to coarse-gravel, 30% fines, trace rootlets, no plasticity.
G	1127-141-1.0	1025	**1** -- -		
G	1127-141-2.0	1035	**2** -- -	**SM**	Silty Sand with Clay, reddish brown (2.5YR 4/4), loose, slightly moist, fine-grained, some fine- to coarse-gravel, 30% fines, trace rootlets, no plasticity.
			3 -- -		Refusal at 2.5 feet on gravel.
			4 -- -		
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-142

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Barrance Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 27, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand with Clay, brown (10YR 4/3), loose, moist, fine- to coarse-grained, some fine- to coarse-gravel, 30% fines, some asphalt and concrete fragment, moderate plasticity.
G	1127-142-1.0	0850	**1** -- -		
G	1127-142-2.0	0858	**2** -- -	**SM**	Silty Sand with Clay, brown (10YR 4/3), loose, moist, fine- to coarse-grained, abundant fine- to coarse-gravel, 30% fines, moderate plasticity.
			3 -- -		Refusal at 2 feet on gravel.
			4 -- -		
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-143

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Barrance Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 27, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, brown (10YR 5/3), loose, moist, fine- to medium-grained with trace coarse-grained, some fine- to coarse-gravel, 20% fines, low plasticity.
G	1127-143-1.0	1048	**1** -- -		
G	1127-143-2.0	1055	**2** -- -	**SM**	Silty Sand, brown (10YR 5/3), loose, moist, fine- to medium-grained, some fine- to coarse-gravel, 30% fines, low plasticity.
			3 -- -		Refusal at 3 feet on gravel.
			4 -- -		
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-144

Project No. S9500-06-04
Client: Caltrans
Location: Barrance Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 27, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, brown (10YR 5/3), loose, moist, fine- to coarse-grained, abundant fine- to coarse-gravel, 20% fines, low plasticity.
G	1127-144-1.0	0906	**1** -- -		
G	1127-144-2.0	0916	**2** -- -	**SM**	Silty Sand, brown (10YR 5/3), loose, moist, fine- to coarse-grained, abundant fine- to coarse-gravel, 20% fines, low plasticity.
			3 -- -		Refusal at 2 feet on gravel.
			4 -- -		
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-145

Project No. S9500-06-04
Client: Caltrans
Location: Barrance Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 27, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SP**	Sand, poorly graded, very dark gray (10YR 3/1), dry, fine-grained, some fine-gravel, 5% fines, no plasticity.
G	1127-145-1.0	1129	**1** -- -		
G	1127-145-2.0	1135	**2** -- -	**SP**	Sand, poorly graded, very dark gray (10YR 3/1), dry, fine-grained, some fine-gravel, 5% fines, no plasticity.
			3 -- -		Refusal at 2 feet on gravel.
			4 -- -		
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-146

Project No. S9500-06-04
Client: Caltrans
Location: Barrance Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 27, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Matt Lewin
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, brown (10YR 5/3), loose, moist, fine- to coarse-grained, some fine- to coarse-gravel, 30% fines, low plasticity.
G	1127-146-1.0	0932	**1** -- -		
G	1127-146-2.0	0937	**2** -- -	**SM**	Silty Sand, brown (10YR 5/3), loose, moist, fine to coarse-grained, some fine- to coarse-gravel, 30% fines, low plasticity.
			3 -- -		Refusal at 2 feet on gravel.
			4 -- -		
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-147

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Barrance Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 27, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Jelisa Thomas
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 --	**SC**	Clayey Sand, dark brown (10YR 3/3), medium dense, moist, fine-to medium-grained with some coarse-grained, some fine-gravel, no plasticity.
			1 --		
G	1127-147-2.0	1044	**2** --		
			3 --		
G	1127-147-4.0	1049	**4** --	**SC**	Clayey Sand, dark yellowish brown (10YR 4/4), medium dense, moist, medium-grained with some fine- and coarse-grained, some fine-gravel, no plasticity.
			5 --		
G	1127-147-6.0	1056	**6** --	**SC**	Clayey Sand, dark yellowish brown (10YR 4/4), medium dense, moist, medium-grained with some fine- and coarse-grained, some fine-gravel, no plasticity.
			7 --		Refusal at 7 feet on gravel.
			8 --		
			9 --		
			10 --		
			11 --		
			12 --		
			13 --		
			14 --		
			15 --		
			16 --		
			17 --		
			18 --		
			19 --		
			20 --		

G - Grab Sample

BORING 1127-148

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Barrance Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 27, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SP**	Sand, poorly graded, brown (10YR 4/3), dry, fine-grained, 5% fines, no plasticity.
G	1127-148-1.0	0832	**1** -- -		
G	1127-148-2.0	0837	**2** -- -	**SM**	Silty Sand with Gravel, brown (10YR 4/3), slightly moist, fine-grained, fine-gravel, 20% fines, no plasticity.
			3 -- -		
G	1127-148-4.0	0848	**4** -- -	**ML**	Sandy Silt, very dark gray (10YR 3/1), slightly moist, fine-grained, some fine-gravel, 60% fines, no plasticity.
			5 -- -		Refusal at 5 feet on gravel.
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-149

Project No. S9500-06-04
Client: Caltrans
Location: Barrance Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 27, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SP**	Sand, poorly graded, very grayish brown (10YR 3/2), moist, fine-grained, some fine-gravel, 5% fines, no plasticity.
			1 -- -		
G	1127-149-2.0	1004	**2** -- -		
			3 -- -		
G	1127-149-4.0	1016	**4** -- -	**SP**	Sand, poorly graded, dark brown (10YR 3/3), slightly moist, fine-grained, some fine-gravel, 5% fines, no plasticity.
			5 -- -		
G	1127-149-6.0	1026	**6** -- -	**SP**	Sand, poorly graded, dark grayish brown (10YR 3/2), moist, fine-grained, some fine-gravel, 5% fines, no plasticity.
			7 -- -		Refusal at 6.5 feet on gravel.
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-150

Project No. S9500-06-04
Client: Caltrans
Location: Barrance Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 27, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Jelisa Thomas
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**ML**	Sandy Silt, dark yellowish brown (10YR 4/4), firm, moist, fine- to medium-grained, trace fine-gravel, 70% fines, no plasticity.
			1 -- -		
G	1127-150-2.0	0905	**2** -- -		
			3 -- -		
G	1127-150-4.0	0918	**4** -- -	**ML**	Sandy Silt, dark brown (10YR 3/3), firm, moist, fine-grained with some medium-grained, trace fine- to coarse-gravel, 70% fines, no plasticity.
			5 -- -		Refusal at 4.5 feet on gravel.
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-152

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Grand Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 27, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- - **1** -- -	**SP**	Sand, poorly graded, very dark gray (10YR 3/1), moist, fine-grained, some coarse-gravel, 5% fines, no plasticity.
G	1127-152-2.0	1232	**2** -- - **3** -- -		
G	1127-152-4.0	1236	**4** -- - **5** -- -	**ML**	Sandy Silt, very dark grayish brown (10YR 3/1), moist, fine-grained, 70% fines, no plasticity.
G	1127-152-6.0	1243	**6** -- - **7** -- -	**ML**	Sandy Silt, very dark grayish brown (10YR 3/2), moist, fine-grained, 70% fines, some root and rootlets, no plasticity.
G	1127-152-8.0	1258	**8** -- - **9** -- -	**ML**	Sandy Silt, dark brown (10YR 3/3), moist, fine-grained, some coarse-gravel 60% fines, no plasticity.
			10 -- - **11** -- - **12** -- - **13** -- - **14** -- - **15** -- - **16** -- - **17** -- - **18** -- - **19** -- - **20** --		End at 8 feet.

G - Grab Sample

BORING 1127-154

Project No. S9500-06-04
Client: Caltrans
Location: Grand Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 27, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Matt Lewin
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, brown (10YR 4/3), loose, moist, fine- to coarse-grained, fine- to coarse-gravel, 30% fines, no plasticity.
G	1127-154-1.0	1229	**1** -- -		
G	1127-154-2.0	1232	**2** -- -	**SM**	Silty Sand, brown (10YR 4/3), loose, moist, fine- to coarse-grained, fine- to coarse-gravel, 30% fines, no plasticity.
			3 -- -		Refusal at 2.5 feet.
			4 -- -		
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-155

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Holt Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 27, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Matt Lewin
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 --	**CL.**	Sandy Clay with Silt, reddish brown (2.5 YR 5/4), firm, moist, fine- to coarse-grained, trace fine-gravel, 80% fines, moderate plasticity.
			1 --		
G	1127-155-2.0	1108	2 --		
			3 --		
G	1127-155-4.0	1113	4 --	**CL.**	Sandy Clay with Silt, reddish brown (2.5 YR 5/4), firm, moist, fine- to coarse-grained, trace fine-gravel, 80% fines, moderate plasticity.
			5 --		
G	1127-155-6.0	1117	6 --	**CL.**	Sandy Clay, reddish brown (2.5YR 5/4), firm, moist, fine- to medium-grained with trace coarse-grained, trace fine-gravel, 70% fines, low plasticity.
			7 --		End at 6 feet.
			8 --		
			9 --		
			10 --		
			11 --		
			12 --		
			13 --		
			14 --		
			15 --		
			16 --		
			17 --		
			18 --		
			19 --		
			20 --		

G - Grab Sample

BORING 1127-156

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Holt Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 25, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0	**SM**	Silty Sand with Clay, brown (10YR 4/3), firm, moist, fine-grained with trace medium- and coarse-grained, trace fine-gravel, 30% fines, trace asphalt fragment, low plasticity.
G	1127-156-1.0	1140	**1**		
G	1127-156-2.0	1142	**2**	**SM**	Silty Sand with Clay, brown (10YR 4/3), firm, moist, fine- to medium-grained with trace coarse-grained, some fine-gravel, 30% fines, low plasticity.
			3		Refusal at 3 feet on gravel.
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		
			16		
			17		
			18		
			19		
			20		

G - Grab Sample

BORING 1127-157

Project No. S9500-06-04
Client: Caltrans
Location: Holt Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 25, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0	**SM**	Silty Sand with Gravel, brown (10YR 4/3), loose, moist, fine- to coarse-grained, fine- to coarse-gravel, 30% fines, low plasticity.
G	1127-157-1.0	1217	**1**		
G	1127-157-2.0	1231	**2**	**SM**	Silty Sand with Gravel, brown (10YR 4/3), loose, moist, fine- to coarse-grained, fine- to coarse-gravel, 30% fines, low plasticity.
			3		Refusal at 2.5 feet on gravel.
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		
			16		
			17		
			18		
			19		
			20		

G - Grab Sample

BORING 1127-158

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Holt Avenue (10 Fwy) Los Angeles County, California

Excavation Date: January 25, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0	**CL**	Silty Clay, brown (10YR 5/3), firm, moist, fine-grained, fine- to coarse-gravel, 80% fines, low plasticity.
			1		
G	1127-158-2.0	1158	**2**		
			3		
G	1127-158-4.0	1202	**4**	**CL**	Silty Clay, brown (10YR 5/3), firm, moist, fine-grained, fine- to coarse-gravel, 80% fines, low plasticity.
			5		Refusal at 4.5 feet on gravel.
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		
			16		
			17		
			18		
			19		
			20		

G - Grab Sample

BORING 1127-159

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Via Verde (10 Fwy) Los Angeles County, California

Excavation Date: January 25, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**CL**	Sandy Clay with Silt, dark brown to dark yellowish brown (10YR 3/3 -10YR 4/6), firm, moist, fine- to medium-grained, trace fine- to coarse-gravel, 80% fines, some roots, some concrete fragment.
G	1127-159-1.0	1408	**1** -- -		
G	1127-159-2.0	1412	**2** -- -	**CL**	Sandy Clay with Silt, dark brown to dark yellowish brown (10YR 3/3 -10YR 4/6), firm, moist, fine- to medium-grained, trace fine- to coarse-gravel, 80% fines, some roots, some concrete fragment.
			3 -- -		
			4 -- -		Refusal at 2.0 feet on gravel.
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

GEOCON
CONSULTANTS, INC.

BORING 1127-160

Project No. S9500-06-04
Client: Caltrans
Location: Via Verde (10 Fwy)
Los Angeles County,
California

Excavation Date: January 26, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SP-SM**	Sand with Silt, brown (7.5YR 6/4), loose, moist, fine-grained, abundant fine- to coarse-gravel.
G	1127-160-1.0	0939	**1** -- -		
G	1127-160-2.0	0948	**2** -- -	**SP-SM**	Sand with Silt, brown (7.5YR 6/4), loose, moist, fine-grained, abundant fine- to coarse-gravel.
			3 -- -		Refusal at 2 feet on gravel.
			4 -- -		
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-161

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Via Verde (10 Fwy) Los Angeles County, California

Excavation Date: January 25, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
G	1127-161-1.0	1330	0 -- 1 -- 2 -- 3	CL	Sandy Clay with Silt, brown (10YR 5/3), firm, moist, fine- to medium-grained, trace fine- to coarse-gravel, 70% fines, low plasticity, some root and rootlets, some asphalt and concrete fragment.
G	1127-161-3.0	1345	3 -- 4	CL	Clay, dark yellowish brown (10YR 4/6), stiff, moist, trace fine- to coarse-sand, trace fine-gravel, 90% fines, medium plasticity.
			4 -- 5 -- 6 -- 7 -- 8 -- 9 -- 10 -- 11 -- 12 -- 13 -- 14 -- 15 -- 16 -- 17 -- 18 -- 19 -- 20 --		Refusal at 4.0 feet on gravel.

G - Grab Sample

BORING 1127-162

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Via Verde (10 Fwy) Los Angeles County, California

Excavation Date: January 26, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Matt Lewin
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**ML**	Clayey Silt with Sand, brown (10YR 4/3), firm, moist, fine-grained, abundant fine- to coarse-gravel, 80% fines, moderate plasticity.
G	1127-162-1.0	0917	**1** -- -		
			2 -- -		
G	1127-162-3.0	0924	**3** -- -	**ML**	Clayey Silt with Sand, brown (10YR 4/3), firm, moist, fine-grained, abundant fine- to coarse-gravel, 80% fines, moderate plasticity.
			4 -- -		Refusal at 3.5 feet on gravel.
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-163

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Via Verde (10 Fwy) Los Angeles County, California

Excavation Date: January 25, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Matt Lewin
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 --	**CL**	Sandy Clay with Gravel, brown (10YR 4/3), firm, moist, fine-grained, fine- to coarse-gravel, 70% fines, moderate plasticity.
G	1127-163-1.0	1424	**1** --		
			2 --		
G	1127-163-3.0	1428	**3** --	**CL**	Sandy Clay with Gravel, brown (10YR 4/3), firm, moist, fine-grained, fine- to coarse-gravel, 70% fines, moderate plasticity.
			4 --		Refusal at 4 feet on gravel.
			5 --		
			6 --		
			7 --		
			8 --		
			9 --		
			10 --		
			11 --		
			12 --		
			13 --		
			14 --		
			15 --		
			16 --		
			17 --		
			18 --		
			19 --		
			20 --		

G - Grab Sample

BORING 1127-164

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Via Verde (10 Fwy) Los Angeles County, California

Excavation Date: January 26, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**ML**	Clayey Silt with Sand, brown (10YR 5/3), firm, moist, fine-grained with trace medium- and coarse-grained, trace fine-gravel, 80% fines, moderate plasticity,
G	1127-164-1.0	0905	**1** -- -		some concrete fragment, trace roots.
			2 -- -		
G	1127-164-3.0	0909	**3** -- -	**CL**	Silty Clay with Sand, brown (10YR 4/3), firm, moist, fine- to medium-grained with trace coarse-grained, some fine-to coarse-gravel, 70% fines, moderate to high
			4 -- -		plasticity, trace roots and rootlets.
			5 -- -		Refusal at 3 feet on gravel.
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-165

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Via Verde (10 Fwy) Los Angeles County, California

Excavation Date: January 26, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Matt Lewin
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**CL**	Sandy Clay with Gravel, brown (10YR 5/3), loose, moist, fine-grained, fine- to coarse-gravel, 70% fines, low plasticity.
G	1127-165-1.0	0822	**1** -- -		
G	1127-165-2.0	0830	**2** -- -	**CL**	Sandy Clay with Gravel, yellowish brown (10YR 5/6), loose, moist, fine- to coarse-grained, fine- to coarse-gravel, 70% fines, low plasticity.
			3 -- -		Refusal at 2.0 feet on gravel.
			4 -- -		
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-166

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Via Verde (10 Fwy) Los Angeles County, California

Excavation Date: January 26, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Matt Lewin
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0	**SM**	Silty Sand with Clay, brown (10YR 5/3), loose, moist, fine- to medium-grained with trace coarse-grained, some fine-gravel, 40% fines, low to moderate plasticity.
G	1127-166-1.0	0850	**1**		
			2		
G	1127-166-3.0	0856	**3**	**CL**	Silty Clay with Sand and Gravel, brown (10YR 5/3), firm, moist, fine- to coarse-grained, fine- to coarse-gravel, 80% fines, moderate plasticity.
			4		Refusal at 3.5 feet on gravel.
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		
			16		
			17		
			18		
			19		
			20		

G - Grab Sample

BORING 1127-167

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Kellogg Drive (10 Fwy) Los Angeles County, California

Excavation Date: January 26, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Matt Lewin
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand with Gravel, yellowish brown (10YR 5/6), loose, moist, fine- to medium-grained, fine- to coarse-gravel, 20% fines.
			1 -- -		
G	1127-167-2.0	1207	**2** -- -		
			3 -- -		
G	1127-167-4.0	1209	**4** -- -	**SM**	Silty Sand with Gravel, yellowish brown (10YR 5/6), loose, moist, fine- to medium-grained, fine- to coarse-gravel, 20% fines.
			5 -- -		
G	1127-167-6.0	1213	**6** -- -	**SM**	Silty Sand with Gravel, yellowish brown (10YR 5/6), loose, moist, fine- to medium-grained, fine- to coarse-gravel, 20% fines.
			7 -- -		End at 6 feet.
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-168

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Kellogg Drive (10 Fwy) Los Angeles County, California

Excavation Date: January 26, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Matt Lewin
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, brown (10YR 5/3), firm, moist, fine- to coarse-grained, fine- to coarse-gravel, 20% fines, no plasticity.
G	1127-168-1.0	1226	**1** -- -		
G	1127-168-2.0	1228	**2** -- -	**SM**	Silty Sand, brown (10YR 5/3), firm, moist, fine- to coarse-grained, fine- to coarse-gravel, 20% fines, no plasticity.
			3 -- -		Refusal at 2.5 feet on gravel.
			4 -- -		
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

GEOCON
CONSULTANTS, INC.

BORING 1127-169

Project No. S9500-06-04
Client: Caltrans
Location: Kellogg Drive (10 Fwy)
Los Angeles County,
California

Excavation Date: January 26, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 --	**CL**	Silty Clay with Sand, yellowish brown (10YR 5/8), firm, moist, fine- to coarse-grained, abundant fine-gravel, 80% fines, moderate plasticity.
G	1127-169-1.0	1106	**1** --		
G	1127-169-2.0	1109	**2** --	**CL**	Silty Clay with Sand, yellowish brown (10YR 5/8), firm, moist, fine- to coarse-grained, abundant fine-gravel, 80% fines, moderate plasticity.
			3 --		Refusal at 3 feet on gravel.
			4 --		
			5 --		
			6 --		
			7 --		
			8 --		
			9 --		
			10 --		
			11 --		
			12 --		
			13 --		
			14 --		
			15 --		
			16 --		
			17 --		
			18 --		
			19 --		
			20 --		

G - Grab Sample

BORING 1127-170

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Kellogg Drive (10 Fwy) Los Angeles County, California

Excavation Date: January 26, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 --	**ML**	Sandy Silt with Clay, brown (10YR 5/3), loose, dry, fine- to medium-grained with trace coarse-grained, some fine-gravel, 70% fines, moderate plasticity.
G	1127-170-1.0	1050	**1** --		
G	1127-170-2.0	1055	**2** --	**ML**	Sandy Silt with Clay, reddish brown (10YR 5/3), loose, dry, fine- to medium-grained with trace coarse-grained, some fine-gravel, 70% fines, moderate plasticity.
			3 --		Refusal at 3 feet on gravel.
			4 --		
			5 --		
			6 --		
			7 --		
			8 --		
			9 --		
			10 --		
			11 --		
			12 --		
			13 --		
			14 --		
			15 --		
			16 --		
			17 --		
			18 --		
			19 --		
			20 --		

G - Grab Sample

BORING 1127-172

Project No. S9500-06-04
Client: Caltrans
Location: Kellogg Drive (10 Fwy) Los Angeles County, California

Excavation Date: January 26, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Matt Lewin
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0	**CL**	Silty Clay with Sand, brown (10YR 5/3), firm, moist, fine-grained, fine- to coarse-gravel, 80% fines, moderate plasticity.
G	1127-172-1.0	1236	**1**		
G	1127-172-2.0	1238	**2**	**CL**	Silty Clay with Sand, brown (10YR 5/3), firm, moist, fine-grained, fine- to coarse-gravel, 80% fines, moderate plasticity.
			3		Refusal at 3 feet on gravel.
			4		
			5		
			6		
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		
			16		
			17		
			18		
			19		
			20		

G - Grab Sample

BORING 1127-174

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Kellogg Drive (10 Fwy) Los Angeles County, California

Excavation Date: January 26, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**ML**	Sandy Silt, brown (10YR 5/3), soft, dry, fine-grained, trace fine-gravel, 70% fines, low plasticity.
G	1127-174-1.0	1037	**1** -- -		
G	1127-174-2.0	1040	**2** -- -	**ML**	Sandy Silt with Clay, brown (10YR 5/3), soft, moist, fine- to medium-grained, some fine- to coarse-gravel, 70% fines, moderate plasticity.
			3 -- -		Refusal at 2.5 feet on gravel.
			4 -- -		
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-175

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: 10 Fwy EB between Via Verde and Kellogg Drive Los Angeles County, California

Excavation Date: January 27, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Jelisa Thomas
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 --	**SC**	Clayey Sand, very dark grayish brown, (10YR 3/2), fine- to medium-grained with some coarse-grained, trace fine-gravel, 20% fines, no plasticity.
G	1127-175-1.0	1342	**1** --		
G	1127-175-2.0	1345	**2** --	**SC**	Clayey Sand, brown, (7.5YR 5/3), fine- to medium-grained with some coarse-grained, trace fine-gravel, 20% fines, trace bedrock fragment, no plasticity.
G	1127-175-3.0	1347	**3** --	**SC**	Clayey Sand, brown, (7.5YR 5/3), fine- to medium-grained with some coarse-grained, trace fine-gravel, 20% fines, trace bedrock fragment, no plasticity.
			4 --		End at 3 feet.
			5 --		
			6 --		
			7 --		
			8 --		
			9 --		
			10 --		
			11 --		
			12 --		
			13 --		
			14 --		
			15 --		
			16 --		
			17 --		
			18 --		
			19 --		
			20 --		

G - Grab Sample

BORING 1127-176

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: 10 Fwy EB between Via Verde and Kellogg Drive Los Angeles County, California

Excavation Date: January 27, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Jelisa Thomas
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 --	**ML/CL**	Clayey Silt to Silty Clay with Sand, yellowish brown (10YR 5/8), firm, moist, fine- to medium-grained, some fine- to coarse-gravel, 80% fines, moderate plasticity.
G	1127-176-1.0	1358	**1** --		
G	1127-176-2.0	1405	**2** --	**ML/CL**	Clayey Silt to Silty Clay with Sand, olive brown (2.5YR 4/3), firm, moist, fine- to medium-grained, some fine- to coarse-gravel, 80% fines, moderate plasticity.
G	1127-176-3.0	1410	**3** --	**CL**	Silty Clay, yellowish brown (2.5YR 4/3), firm, moist, some fine- to coarse-gravel, 90% fines, medium plasticity.
			4 --		End at 3 feet.
			5 --		
			6 --		
			7 --		
			8 --		
			9 --		
			10 --		
			11 --		
			12 --		
			13 --		
			14 --		
			15 --		
			16 --		
			17 --		
			18 --		
			19 --		
			20 --		

G - Grab Sample

BORING 1127-177

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: 10 Fwy EB between Via Verde and Kellogg Drive Los Angeles County, California

Excavation Date: January 27, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Jelisa Thomas
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SC**	Sandy Clay, dark brown, (10YR 3/3), fine-grained with some medium- to coarse-grained, some fine-gravel, 80% fines, no plasticity.
G	1127-177-1.0	1403	**1** -- -		
G	1127-177-2.0	1408	**2** -- -	**SC**	Sandy Clay, dark brown, (10YR 3/3), fine-grained with some medium- to coarse-grained, some fine-gravel, 80% fines, no plasticity.
			3 -- -		End at 2 feet.
			4 -- -		
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-178

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: 10 Fwy EB between Via Verde and Kellogg Drive Los Angeles County, California

Excavation Date: January 27, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 --	**ML**	Sandy Silt with Clay, brown (10YR 5/3), firm, moist, fine- to medium-grained with some coarse-grained, some fine-gravel, 60% fines, low plasticity.
G	1127-178-1.0	1420	**1** --		
G	1127-178-2.0	1427	**2** --	**CL**	Silty Clay with Sand, yellowish brown (10YR 5/8), firm, moist, fine- to medium-grained, some fine- to coarse-gravel, 80% fines, moderate plasticity.
			3 --		Refusal at 2.5 feet on gravel.
			4 --		
			5 --		
			6 --		
			7 --		
			8 --		
			9 --		
			10 --		
			11 --		
			12 --		
			13 --		
			14 --		
			15 --		
			16 --		
			17 --		
			18 --		
			19 --		
			20 --		

G - Grab Sample

BORING 1127-179

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: 10 Fwy EB between Via Verde and Kellogg Drive Los Angeles County, California

Excavation Date: January 27, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Matt Lewin
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 --	**SM**	Silty Sand, brown (10YR 5/3), loose, moist, fine- to coarse-grained, some fine- to coarse-gravel, 30% fines, no plasticity.
G	1127-179-1.0	1420	**1** --		
G	1127-179-2.0	0913	**2** --	**SC**	Sandy Clay, olive (5YR 4/3), stiff, moist, fine- to medium-grained, some fine-gravel, 70% fines, some bedrock fragment, low plasticity.
			3 --		Refusal at 2.5 feet on gravel.
			4 --		Sample at 1 foot was collected on 1/27/2011.
					Sample at 2 feet was collected on 1/28/2011.
			5 --		
			6 --		
			7 --		
			8 --		
			9 --		
			10 --		
			11 --		
			12 --		
			13 --		
			14 --		
			15 --		
			16 --		
			17 --		
			18 --		
			19 --		
			20 --		

G - Grab Sample

GEOCON
CONSULTANTS, INC.

BORING 1127-180

Project No. S9500-06-04
Client: Caltrans
Location: 10 Fwy EB between Via Verde and Kellogg Drive Los Angeles County, California

Excavation Date: January 27, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 --	**SM**	Silty Sand, very dark gray (7.5YR 3/1), dry, fine-grained, some fine-gravel, 20% fines, no plasticity.
G	1127-180-1.0	1438	**1** --		
G	1127-180-2.0	1440	**2** --	**SP**	Sand with Gravel, poorly graded, brown (7.5YR 4/3), slightly moist, fine-grained, fine- to coarse-gravel, 5% fines, no plasticity.
			3 --		Refusal at 2.5 feet on gravel.
			4 --		
			5 --		
			6 --		
			7 --		
			8 --		
			9 --		
			10 --		
			11 --		
			12 --		
			13 --		
			14 --		
			15 --		
			16 --		
			17 --		
			18 --		
			19 --		
			20 --		

G - Grab Sample

BORING 1127-181

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: 10 Fwy EB between Via Verde and Kellogg Drive Los Angeles County, California

Excavation Date: January 27, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Jelisa Thomas
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 --	**SC**	Sandy Clay, brown (10YR 4/3), firm, moist, fine- to medium-grained with some coarse-grained, some fine-gravel, some bedrock fragment, 60% fines, no plasticity.
G	1127-181-1.0	1440	**1** --		
G	1127-181-2.0	1442	**2** --	**SC**	Sandy Clay, brown (10YR 4/3), firm, moist, fine- to medium-grained with some coarse-grained, some fine-gravel, some bedrock fragment, 60% fines, no plasticity.
G	1127-181-3.0	1444	**3** --	**SC**	Sandy Clay, brown (10YR 4/3), firm, moist, fine- to medium-grained with some coarse-grained, some fine-gravel, increase in bedrock fragment, 60% fines, no plasticity.
			4 --		
			5 --		End at 3 feet.
			6 --		
			7 --		
			8 --		
			9 --		
			10 --		
			11 --		
			12 --		
			13 --		
			14 --		
			15 --		
			16 --		
			17 --		
			18 --		
			19 --		
			20 --		

G - Grab Sample

BORING 1127-182

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: 10 Fwy EB between Via Verde and Kellogg Drive Los Angeles County, California

Excavation Date: January 28, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Jelisa Thomas
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SC**	Clay with Sand, olive (5YR 4/4), firm, moist, fine-grained, some fine-gravel, 80% fines, moderate plasticity.
G	1127-182-1.0	0835	**1** -- -		
G	1127-182-2.0	0848	**2** -- -	**SC**	Clay with Sand, olive (5YR 4/4), firm, moist, fine-grained, some fine-gravel, 80% fines, moderate plasticity.
G	1127-182-3.0	0851	**3** -- -	**SC**	Clay with Sand, olive (5YR 4/4), firm, moist, fine-grained, some fine-gravel, 80% fines, moderate plasticity.
			4 -- -		End at 3 feet.
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

GEOCON
CONSULTANTS, INC.

BORING 1127-183

Project No. S9500-06-04
Client: Caltrans
Location: 10 Fwy EB between Via Verde and Kellogg Drive Los Angeles County, California

Excavation Date: January 28, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**CL**	Silty Clay with Sand, yellowish brown to very dark grayish brown (10YR 5/6 - 2.5YR 3/2), fine- to medium-grained, some fine-gravel, 80% fines, low plasticity.
G	1127-183-1.0	0912	**1** -- -		
G	1127-183-2.0	0920	**2** -- -	**CL**	Silty Clay with Sand, yellowish brown to very dark grayish brown (10YR 5/6 - 2.5YR 3/2), fine- to medium-grained, some fine-gravel, 80% fines, low plasticity.
			3 -- -		Refusal at 2.5 feet on gravel.
			4 -- -		
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-184

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: 10 Fwy EB between Via Verde and Kellogg Drive Los Angeles County, California

Excavation Date: January 28, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 --	**SM**	Silty Sand with Clay, olive brown (2.5YR 4/4), loose, moist, fine- to medium-grained with trace coarse-grained, some fine- to coarse-gravel, some concrete
G	1127-184-1.0	0900	**1** --		and asphalt fragment, 30% fines, moderate plasticity.
G	1127-184-2.0	0905	**2** --	**CL**	Sandy Clay, light olive brown (2.5YR 5/4), firm, moist, fine- to medium-grained, some fine- to coarse-gravel, 70% fines, moderate plasticity.
			3 --		
			4 --		Refusal at 2.5 feet on gravel.
			5 --		
			6 --		
			7 --		
			8 --		
			9 --		
			10 --		
			11 --		
			12 --		
			13 --		
			14 --		
			15 --		
			16 --		
			17 --		
			18 --		
			19 --		
			20 --		

G - Grab Sample

BORING 1127-185

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Via Verde (10 Fwy WB) Los Angeles County, California

Excavation Date: January 28, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Jelisa Thomas
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**CL**	Sandy Clay, dark yellowish brown (10YR 4/4), stiff, moist, fine- to medium-grained, 70% fines, some fine-gravel, low plasticity.
G	1127-185-1.0	1210	**1** -- -		
G	1127-185-2.0	1213	**2** -- -	**CL**	Sandy Clay, dark yellowish brown (10YR 4/4), stiff, moist, fine- to medium-grained, 70% fines, some fine-gravel, low plasticity.
G	1127-185-3.0	1218	**3** -- -	**CL**	Sandy Clay, dark yellowish brown (10YR 4/4), stiff, moist, fine- to medium-grained, 70% fines, some fine-gravel, low plasticity.
			4 -- -		End at 3.0 feet.
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-186

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Via Verde (10 Fwy WB) Los Angeles County, California

Excavation Date: January 28, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**ML**	Clayey Silt with Gravel, dark grayish brown (10YR 4/2), dry, fine-grained, some coarse-gravel, 80% fines, no plasticity.
G	1127-186-1.0	1232	**1** -- -		
G	1127-186-2.0	1239	**2** -- -	**SP**	Sand with Gravel, poorly graded, dark yellowish brown (10YR 4/6), slightly moist, fine- to coarse-grained, fine- to coarse-gravel, 5% fines, no plasticity.
			3 -- -		Refusal at 2.5 feet on gravel.
			4 -- -		
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-187

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Via Verde (10 Fwy WB) Los Angeles County, California

Excavation Date: January 28, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Jelisa Thomas
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SC**	Clayey Sand, yellowish brown (10YR 5/6), medium dense, moist, fine- to medium-grained with some coarse-grained, some fine-gravel, 30% fines, no plasticity.
G	1127-187-1.0	1258	**1** -- -		
G	1127-187-2.0	1305	**2** -- -	**SC**	Clayey Sand, dark yellowish brown (10YR 4/4), medium dense, moist, fine- to medium-grained with some coarse-grained, some fine-gravel, 30% fines, no plasticity.
G	1127-187-3.0	1310	**3** -- -	**SC**	Clayey Sand, dark yellowish brown (10YR 4/4), medium dense, moist, fine- to medium-grained with some coarse-grained, some fine-gravel, 30% fines, no plasticity.
			4 -- -		End at 3.0 feet.
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

GEOCON
CONSULTANTS, INC.

BORING 1127-188

Project No. S9500-06-04
Client: Caltrans
Location: Via Verde (10 Fwy WB)
Los Angeles County,
California

Excavation Date: January 28, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**ML**	Clayey Silt with Sand, olive brown (2.5YR 4/4), firm, moist, fine- to medium-grained, some fine- to coarse-gravel, 80% fines, low plasticity.
G	1127-188-1.0	1220	**1** -- -		
G	1127-188-2.0	1228	**2** -- -	**CL**	Silty Clay, brown (10YR 5/3), firm, moist, fine- to medium-grained, some fine- to coarse-gravel, 90% fines, moderate plasticity.
			3 -- -		Refusal at 2 feet on gravel.
			4 -- -		
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-189

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Via Verde (10 Fwy WB) Los Angeles County, California

Excavation Date: January 28, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**ML**	Sandy Silt with Clay, olive (5YR 5/3), firm, moist, fine-grained with trace medium- and coarse-grained, fine- to coarse-gravel, 70% fines, moderate plasticity.
G	1127-189-1.0	1249	**1** -- -		
G	1127-189-2.0	1252	**2** -- -	**CL**	Sandy Clay, brown (7.5YR 4/2), fine- to medium-grained, some fine- to coarse-gravel, 70% fines, low plasticity.
G	1127-189-3.0	1257	**3** -- -	**CL**	Sandy Clay, brown (7.5YR 4/2), fine- to medium-grained, some fine- to coarse-gravel, 70% fines, low plasticity.
			4 -- -		End at 3.0 feet.
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-190

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: Via Verde (10 Fwy WB) Los Angeles County, California

Excavation Date: January 28, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Cesar Larios
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, brown (10YR 4/3), loose, dry, fine-grained with some medium- and coarse-grained, trace fine-gravel, 30% fines, no plasticity.
G	1127-190-1.0	1307	**1** -- -		
G	1127-190-2.0	1309	**2** -- -	**CL**	Silty Clay, olive (5YR 5/3), firm, moist, trace fine- to medium-grained sand, some fine- to coarse-gravel, 90% fines, moderate plasticity.
			3 -- -		Refusal at 2.5 feet on gravel.
			4 -- -		
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-191

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: 10 Fwy EB between Via Verde and Kellogg Drive Los Angeles County, California

Excavation Date: January 28, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Jelisa Thomas
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 --	**SP-SC**	Sand with Clay, poorly graded, yellowish brown (10YR 5/6), loose, moist, fine- to medium-grained with some coarse-grained, some fine-gravel, 10% fines, no plasticity.
G	1127-191-1.0	0929	**1** --		
G	1127-191-2.0	0934	**2** --	**SP-SC**	Sand with Clay, poorly graded, yellowish brown (10YR 5/6), loose, moist, fine- to medium-grained with some coarse-grained, some fine-gravel, 10% fines, no plasticity.
			3 --		Refusal at 2.5 feet on gravel.
			4 --		
			5 --		
			6 --		
			7 --		
			8 --		
			9 --		
			10 --		
			11 --		
			12 --		
			13 --		
			14 --		
			15 --		
			16 --		
			17 --		
			18 --		
			19 --		
			20 --		

G - Grab Sample

BORING 1127-192

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: 10 Fwy EB between Via Verde and Kellogg Drive Los Angeles County, California

Excavation Date: January 28, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand with Gravel, very dark gray (10YR 3/1), slightly moist, fine-grained, some coarse-gravel, 30% fines, no plasticity.
G	1127-192-1.0	0948	**1** -- -		
G	1127-192-2.0	0953	**2** -- -	**SP**	Sand with Gravel, poorly graded, very dark grayish brown (10YR 3/2), slightly moist, fine-grained, fine-gravel, 5% fines, no plasticity.
G	1127-192-3.0	1001	**3** -- -	**SP**	Sand with Gravel, poorly graded, very dark grayish brown (10YR 3/2), slightly moist, fine-grained, fine-gravel, 5% fines, no plasticity.
			4 -- -		End at 3.0 feet.
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-193

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: 10 Fwy EB between Via Verde and Kellogg Drive Los Angeles County, California

Excavation Date: January 28, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SC**	Clayey Sand, yellowish brown (10YR 5/4), loose, slightly moist to moist, fine- to medium-grained with some coarse-grained, some fine-gravel, no plasticity.
G	1127-193-1.0	1011	**1** -- -		
G	1127-193-2.0	1021	**2** -- -	**SC**	Clayey Sand, yellowish brown (10YR 5/4), loose, slightly moist to moist, fine- to medium-grained with some coarse-grained, some fine-gravel, no plasticity.
G	1127-193-3.0	1028	**3** -- -	**SC**	Clayey Sand, yellowish brown (10YR 5/6), loose, moist, fine- to medium-grained with some-coarse-grained, some fine-gravel, no plasticity.
			4 -- -		Ends at 3.0 feet.
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

GEOCON
CONSULTANTS, INC.

BORING 1127-194

Project No. S9500-06-04
Client: Caltrans
Location: 10 Fwy EB between Via Verde and Kellogg Drive Los Angeles County, California

Excavation Date: January 28, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Mike Akoto
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SC**	Sand with Clay and Gravel, dark brown (10YR 3/3), slightly moist, fine-grained, some coarse-gravel, 10% fines, low plasticity.
G	1127-194-1.0	1033	**1** -- -		
G	1127-194-2.0	1036	**2** -- -	**SC**	Sand with Clay and Gravel, dark brown (10YR 3/3), slightly moist, fine-grained, some coarse-gravel, 10% fines, low plasticity.
			3 -- -		Refusal at 2 feet on gravel.
			4 -- -		
			5 -- -		
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-195

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: 10 Fwy EB between Via Verde and Kellogg Drive Los Angeles County, California

Excavation Date: January 28, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Matt Lewin
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 --	**SM**	Sand with Silt, poorly graded, strong brown (7.5YR 5/8), loose, moist, fine- to coarse-grained, some fine- to coarse-gravel, 5% fines, no plasticity.
G	1127-195-1.0	1013	**1** --		
G	1127-195-2.0	1037	**2** --	**SM**	Sand with Silt, poorly graded, strong brown (7.5YR 5/8), loose, moist, fine- to coarse-grained, abundant fine- to coarse-gravel, 5% fines, no plasticity.
			3 --		Refusal at 2.0 on gravel.
			4 --		
			5 --		
			6 --		
			7 --		
			8 --		
			9 --		
			10 --		
			11 --		
			12 --		
			13 --		
			14 --		
			15 --		
			16 --		
			17 --		
			18 --		
			19 --		
			20 --		

G - Grab Sample

BORING 1127-196

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans
Location: 10 Fwy EB between Via Verde and Kellogg Drive Los Angeles County, California

Excavation Date: January 28, 2011
Excavation Method: Hand Auger
Excavation Size: 3-inch diameter
Logged By: Matt Lewin
Reviewed By: Cesar Larios

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 --	**SP-SM**	Sand with Silt, poorly graded, yellow (2.5YR 8/8), loose, moist, fine- to coarse-grained, some fine- to coarse-gravel, 5% fines, no plasticity.
G	1127-195-1.0	0940	**1** --		
G	1127-195-2.0	1002	**2** --	**SP-SM**	Sand with Silt, poorly graded, yellow (2.5YR 8/8), loose, moist, fine- to coarse-grained, some fine- to coarse-gravel, 5% fines, no plasticity.
			3 --		Refusal at 2 on gravel.
			4 --		
			5 --		
			6 --		
			7 --		
			8 --		
			9 --		
			10 --		
			11 --		
			12 --		
			13 --		
			14 --		
			15 --		
			16 --		
			17 --		
			18 --		
			19 --		
			20 --		

G - Grab Sample

GEOCON
CONSULTANTS, INC.

BORING 1127-201

Project No. S9500-06-04
Client: Caltrans TO11A1
Location: Area 2 - Eastern Bench

Sampling Method: Dual Tube

Excavation Date: March 15, 2011
Drilling Method: Direct Push
Drilling Equipment: Geoprobe track 6600
Logged By: V. Robino
Reviewed by D. Paul
Drilling Contractor: Interphase

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, light olive brown (2.5Y 5/6), moist, approximately 80% fine to medium sand, approximately 20% low plasticity fines, roots approximately 1/32 inch diameter.
			1 -- -		weathered sandstone (bedrock)
			2 -- -		
			3 -- -		
G	1127-201-3.5	0800	**4** -- -		
G	1127-201-4.5	0825	**5** -- -		
G	1127-201-5.5	0830	**6** -- -		
G	1127-201-6.5	0832	**7** -- -		
G	1127-201-7.5	0835	**8** -- -		
			9 -- -		
			10 -- -		
G	1127-201-10.5	0836	**11** -- -		Bottom of boring at 10.5 feet below ground surface (bgs).
			12 -- -		Boring destroyed by placing granular bentonite from total depth to ground surface, hydrated in 2-foot lifts.
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

GEOCON
CONSULTANTS, INC.

BORING 1127-202

Project No. S9500-06-04
Client: Caltrans TO11A1
Location: Area 2 - Eastern Bench

Sampling Method: Dual Tube

Excavation Date: March 15, 2011
Drilling Method: Direct Push
Drilling Equipment: Geoprobe track 6600
Logged By: V. Robino
Reviewed by D. Paul
Drilling Contractor: Interphase

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 --	**SM**	Silty Sand, light olive brown (2.5Y 5/6), moist, approximately 80% fine to medium
			-		sand, approximately 20% low plasticity fines, trace fine gravel, roots.
			1 --		weathered sandstone (bedrock)
			-		
			2 --		
			-		
			3 --		
G	1127-202-3.5	0850	-		
			4 --		
G	1127-202-4.5	0904	-		
G	1127-202-5.0	0906	**5** --		
G	1127-201-5.5	0908	-		
			6 --		
			-		
			7 --		
			-		Bottom of boring at 7.0 feet bgs, refusal.
			8 --		
			-		Boring destroyed by placing granular bentonite from total depth to ground surface, hydrated
			9 --		in 2-foot lifts.
			-		
			10 --		
			-		
			11 --		
			-		
			12 --		
			-		
			13 --		
			-		
			14 --		
			-		
			15 --		
			-		
			16 --		
			-		
			17 --		
			-		
			18 --		
			-		
			19 --		
			-		
			20 --		

G - Grab Sample

GEOCON
CONSULTANTS, INC.

BORING 1127-203

Project No. S9500-06-04
Client: Caltrans TO11A1
Location: Area 2 - Eastern Bench

Sampling Method: Dual Tube

Excavation Date: March 15, 2011
Drilling Method: Direct Push
Drilling Equipment: Geoprobe track 6600
Logged By: V. Robino
Reviewed by D. Paul
Drilling Contractor: Interphase

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 --	**SM**	Silty Sand, light olive brown (2.5Y 5/6), moist, approximately 80% fine to medium sand, approximately 20% low plasticity fines, trace fine gravel, roots.
			-		
			1 --		weathered sandstone (bedrock)
			-		
			2 --		
			-		
			3 --		
G	1127-203-3.5	0930	-		
			4 --		
G	1127-203-4.5	0931	-		
			5 --		
G	1127-203-5.5	0933	-		
G	1127-203-6.0	0934	**6** --		
G	1127-203-6.5	0936	-		
G	1127-203-7.0	0938	**7** --		
			-		
			8 --		Bottom of boring at 7.5 feet bgs, refusal.
			-		Boring destroyed by placing granular bentonite from total depth to ground surface, hydrated
			9 --		in 2-foot lifts.
			-		
			10 --		
			-		
			11 --		
			-		
			12 --		
			-		
			13 --		
			-		
			14 --		
			-		
			15 --		
			-		
			16 --		
			-		
			17 --		
			-		
			18 --		
			-		
			19 --		
			-		
			20 --		

G - Grab Sample

BORING 1127-204

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans TO11A1
Location: Area 2 - Eastern Bench

Sampling Method: Dual Tube

Excavation Date: March 15, 2011
Drilling Method: Direct Push
Drilling Equipment: Geoprobe track 6600
Logged By: V. Robino
Reviewed by D. Paul
Drilling Contractor: Interphase

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**ML**	Sandy Silt light olive brown (2.5Y 5/6), moist, approximately 60% fines, approximately 40% fine to medium sand, low plasticity, rapid delatency, low toughness, medium dry strength.
			1 -- -		weathered sandstone (bedrock)
			2 -- -		
			3 -- -		
G	1127-204-3.5	0955	**4** -- -		
G	1127-204-4.5	0957	**5** -- -		
G	1127-204-5.5	0958	**6** -- -		
G	1127-204-6.0	0959	**7** -- -		Bottom of boring at 6.5 feet, bgs, refusal.
G	1127-204-6.5	1001	**8** -- -		Boring destroyed by placing granular bentonite from total depth to ground surface, hydrated in 2-foot lifts.
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-205

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans TO11A1
Location: Area 2 - Western Bench

Sampling Method: Dual Tube

Excavation Date: March 15, 2011
Drilling Method: Direct Push
Drilling Equipment: Geoprobe track 6600
Logged By: V. Robino
Reviewed by D. Paul
Drilling Contractor: Interphase

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, light olive brown (2.5Y 5/6), moist, approximately 80% fine to coarse sand, approximately 20% low plasticity fines, trace fine gravel, roots.
			1 -- -		weathered sandstone (bedrock)
			2 -- -		
G	1127-205-2.5	1100			
G	1127-205-3.0	1101	**3** -- -		
G	1127-205-3.5	1104			
			4 -- -		Bottom of boring at 4 feet bgs.
			5 -- -		Boring destroyed by placing granular bentonite from total depth to ground surface, hydrated in 2-foot lifts.
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-206

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans TO11A1
Location: Area 2 - Western Bench

Sampling Method: Dual Tube

Excavation Date: March 15, 2011
Drilling Method: Direct Push
Drilling Equipment: Geoprobe track 6600
Logged By: V. Robino
Reviewed by D. Paul
Drilling Contractor: Interphase

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, light olive brown (2.5Y 5/6), moist, approximately 80% fine to coarse sand, approximately 20% low plasticity fines, trace fine to coarse gravel, roots.
			1 -- -		weathered sandstone (bedrock)
			2 -- -		
G	1127-206-2.5	1120			
G	1127-206-3.0	1121	**3** -- -		
G	1127-206-3.5	1122			
			4 -- -		Bottom of boring at 4 feet bgs, refusal.
			5 -- -		Boring destroyed by placing granular bentonite from total depth to ground surface, hydrated in 2-foot lifts.
			6 -- -		
			7 -- -		
			8 -- -		
			9 -- -		
			10 -- -		
			11 -- -		
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-207

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans TO11A1
Location: Area 2 - Western Bench

Sampling Method: Dual Tube

Excavation Date: March 15, 2011
Drilling Method: Direct Push
Drilling Equipment: Geoprobe track 6600
Logged By: V. Robino
Reviewed by D. Paul
Drilling Contractor: Interphase

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	**SM**	Silty Sand, light olive brown (2.5Y 5/6), moist, approximately 70% fine to coarse sand, approximately 20% low plasticity fines, approximately 10% fine gravel, roots.
			1 -- -		weathered sandstone (bedrock)
			2 -- -		
			3 -- -		
			4 -- -		
G	1127-207-4.5	1140	**5** -- -		
G	1127-207-5.5	1142	**6** -- -		
G	1127-207-6.5	1143	**7** -- -		
G	1127-207-7.0	1144	**8** -- -		
			9 -- -		
			10 -- -		
G	1127-207-10.5	1150	**11** -- -		Bottom of boring at 10.5 feet bgs.
			12 -- -		Boring destroyed by placing granular bentonite from total depth to ground surface, hydrated in 2-foot lifts.
			13 -- -		Sample from 7-7.5 No reccovery. Analyze soil sample from 6.5 - 7.0 instead.
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-208

Project No. S9500-06-04
Client: Caltrans TO11A1
Location: Area 2 - Western Bench

Sampling Method: Dual Tube

Excavation Date: March 15, 2011
Drilling Method: Direct Push
Drilling Equipment: Geoprobe track 6600
Logged By: V. Robino
Reviewed by D. Paul
Drilling Contractor: Interphase

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0 -- -	SM	Silty Sand, light olive brown (2.5Y 5/6), moist, approximately 70% fine to medium sand, approximately 20% low plasticity fines, approximately 10% fine gravel.
			1 -- -		weathered sandstone (bedrock)
			2 -- -		
			3 -- -		
G	1127-208-3.4	1210	4 -- -		
G	1127-208-4.5	1211	5 -- -		
G	1127-208-5.5	1212	6 -- -		
G	1127-208-6.5	1213	7 -- -		
G	1127-208-7.5	1214	8 -- -		
			9 -- -		
			10 -- -		
G	1127-208-10.5	1222	11 -- -		Bottom of boring at 10.5 feet bgs. Boring destroyed by placing granular bentonite from total depth to ground surface, hydrated in 2-foot lifts.
			12 -- -		
			13 -- -		
			14 -- -		
			15 -- -		
			16 -- -		
			17 -- -		
			18 -- -		
			19 -- -		
			20 --		

G - Grab Sample

BORING 1127-209

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans TO11A1
Location: Area 1

Sampling Method: Dual Tube

Excavation Date: March 15, 2011
Drilling Method: Direct Push
Drilling Equipment: Geoprobe track 6600
Logged By: V. Robino
Reviewed by D. Paul
Drilling Contractor: Interphase

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0	SC	Clayey Sand, Olive brown (2.5YR 4/4), moist, approximately 60% fine to medium sand, approximately 40% medium plasticity fines.
			1	CL	Lean Clay with Sand, very dark gray (2.5Y 3/1), moist, approximately 85% fines, approximately 15% fine to coarse sand, medium plasticity, no dilatancy, low toughness, high dry soft, strength.
			2		
			3		
			4		
G	1127-209-4.5	1350			
			5		
G	1127-209-5.5	1351			
			6		
G	1127-209-6.4	1353			
			7		
			8		
G	1127-209-8.5	1400			
			9		
			10		
G	1127-209-10.5	1402			
			11		Bottom of boring at 10.5 feet bgs.
			12		Boring destroyed by placing granular bentonite from total depth to ground surface, hydrated in 2-foot lifts.
			13		
			14		
			15		
			16		
			17		
			18		
			19		
			20		

G - Grab Sample

BORING 1127-210

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans TO11A1
Location: Area 1

Sampling Method: Dual Tube

Excavation Date: March 15, 2011
Drilling Method: Direct Push
Drilling Equipment: Geoprobe track 6600
Logged By: V. Robino
Reviewed by D. Paul
Drilling Contractor: Interphase

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0	**SC**	Clayey Sand, dark brown (7.5YR 3/4), moist, approximately 80% fine to medium sand, approximately 20% medium plasticity fines.
			1		
			2		
			3		
			4	**SM**	Silty Sand, dark brown (7.5YR 3/4), moist, approximately 60% fine sand, approximately 40% non plastic fines.
G	1127-210-4.5	1410	5		
G	1127-210-5.5	1411	6	**CC**	Sandy Lean Clay, very dark grayish brown (10YR 3/2), moist, approximately 70% fines, approximately 30% fine to coarse sand, trace fine gravel, medium plasticity, no dilatancy, low toughness, soft, high dry strength.
G	1127-210-6.5	1412	7		
			8		
G	1127-210-8.5	1415	9		
G	1127-210-10.0	1416	10		
			11		Bottom of boring at 10.5 feet bgs.
			12		Boring destroyed by placing granular bentonite from total depth to ground surface, hydrated in 2-foot lifts.
			13		
			14		
			15		
			16		
			17		
			18		
			19		
			20		

G - Grab Sample

BORING 1127-211

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans TO11A1
Location: Area 1

Sampling Method: Dual Tube

Excavation Date: March 15, 2011
Drilling Method: Direct Push
Drilling Equipment: Geoprobe track 6600
Logged By: V. Robino
Reviewed by D. Paul
Drilling Contractor: Interphase

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0	SC	Clayey Sand, Olive brown (2.5Y 4/4), moist, approximately 80% fine to coarse sand, approximately 20% medium plasticity fines, trace fine to coarse gravel, roots.
			1		
			2		
			3		
			4	CL	Lean Clay with Sand, dark olive brown (2.5Y 3/2), moist, approximately 75% fines, approximately 25% fine to medium sand, medium plasticity, no dilatancy, low toughness, soft, high dry strength.
G	1127-211-4.5	1441	5		
G	1127-211-5.5	1443	6		
			7		
			8	CL	Lean Clay, dark Olive brown (2.5Y 3/2), moist, approximately 95% fines, approximately 5% sand, medium plasticity, no dilatancy, low toughness, soft, high dry strength.
G	1127-211-9.0	1450	9		
			10		
			11		Bottom of boring at 10.5 feet bgs.
			12		Boring destroyed by placing granular bentonite from total depth to ground surface, hydrated in 2-foot lifts.
			13		
			14		
			15		
			16		
			17		
			18		
			19		
			20		

G - Grab Sample

BORING 1127-212

GEOCON CONSULTANTS, INC.

Project No. S9500-06-04
Client: Caltrans TO11A1
Location: Area 1

Sampling Method: Dual Tube

Excavation Date: March 15, 2011
Drilling Method: Direct Push
Drilling Equipment: Geoprobe track 6600
Logged By: V. Robino
Reviewed by D. Paul
Drilling Contractor: Interphase

Sample Type	Sample Number	Time	Depth (in feet)	USCS Class.	**Surface Conditions:** Bare ground **Description**
			0	SC	Clayey Sand, dark olive brown (2.5Y 3/3), moist, approximately 75% fine to medium sand, approximately 25% medium plasticity fines.
			1		
			2		
			3		
			4	CL	Lean Clay, very dark grayish brown (2.5Y 3/2), moist, approximately 90% fines, approximately 10% sand, medium plasticity, no dilatancy, low toughness, soft, high dry strength.
G	1127-212-4.5	1505	5		
G	1127-212-5.5	1507	6		
			7		
			8	ML	Silt, dark grayish brown (2.5Y 4/2), moist, approximately 95% fines, approximately 5% sand, low plasticity, rapid dilatancy, low toughness, soft.
G	1127-212-8.5	1509	9		
G	1127-212-10.0	1510	10		
			11		Bottom of boring at 10.5 feet bgs.
			12		Boring destroyed by placing granular bentonite from total depth to ground surface, hydrated in 2-foot lifts.
			13		
			14		
			15		
			16		
			17		
			18		
			19		
			20		

G - Grab Sample

APPENDIX E

APPENDIX E

DATA VALIDATION REPORT
AERIALLY DEPOSITED LEAD (ADL) INVESTIGATION REPORT
INTERSTATE 10 HOV LANE WIDENING PROJECT FROM PUENTE AVENUE TO STATE ROUTE 57
07-LA-10 PM 13.6/42.4
Caltrans Contract Number 07A2730, Task Order # 11
EA 07-117OU1 and 07-119341
Los Angeles County, California

INTRODUCTION

This report summarizes the finding of the data validation for soil samples collected by Geocon Consultants, Inc. (Geocon), on behalf of the California Department of Transportation (Caltrans), for the State Route 10 HOV Lane Widening Project (Project) located in Los Angeles County, California. Samples were submitted to Advanced Technology Laboratories in Signal Hill, California (ATL) for laboratory analysis; a State of California laboratory certified by the National Environmental Laboratory Accreditation Program (NELAP).

Field Quality Assurance and Quality Control (QA/QC) samples for soil samples collected within the Project area consisted of equipment blanks and field blanks. Laboratory QA/QC samples consisted of method blanks, matrix spike / matrix spike duplicate (MS/MSDs) recoveries, and laboratory control samples (LCS).

The field quality control samples were submitted to the laboratory for analyses along with the primary soil samples collected in the Project area. Data verification was performed in accordance with the United States Environmental Protection Agency (U.S. EPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (U.S. EPA, 2010). The data quality evaluation for the soil samples analyzed is described below.

Data qualified as estimated (J, J+, and J-) are likely to be quantitatively biased to some degree. Such data provide only an approximate measure of the respective analyte concentration(s). These data qualifiers have been appended to the respective data and are reflected in the data summary tables. The data, as qualified, are acceptable and can be used for decision-making purposes; however, the limitations identified by the applied qualifiers should be considered when using the data.

1.1 DATA COMPLETENESS

A total of 295 samples (including field QC samples) were submitted to ATL for analysis. Results for all samples were reported by ATL. The project goal of a minimum of 90% completeness for collected data was achieved. A total of 295 soil samples (including field QC samples) listed on the chain-of-custody were analyzed and reported by ATL. Shallow soil samples were collected at depths of approximately 0.5-1.0 feet, 1.5-2.0 feet, 2.5-3.0 feet, 3.5-4.0 feet, 5.5-6.0 feet, 7.5-8.0 feet, and 9.5-10.0 feet using a hand auger. Soil samples were placed into laboratory-provided 4 ounce glass sample jars.

1.2 SAMPLE HOLD TIMES

All samples submitted to the laboratory for analysis were properly preserved according to guidelines established by the appropriate methods as verified by the laboratory. Recommended hold times were achieved for all analyses performed.

1.3 BLANK SAMPLES

Equipment Blank Samples

Equipment blank samples are used to evaluate for potential residual contamination on sampling equipment. The equipment blank samples were obtained by collecting de-ionized water passed over the hand-augers into unpreserved, laboratory-provided containers. A total of 20 equipment blank samples were collected over seven days of field work. The field blanks were analyzed for total lead using EPA Method 6010B. The Project met the frequency of collection requirements as specified in the Caltrans Contract #07A2730, Task Order #11 (Task Order) (Caltrans, 2010). Target analytes were not detected in the equipment blanks with the exception of: lead detected in one equipment blank (1127-200-EB3) collected on March 15, 2011 (laboratory work order #116888) at a concentration slightly above or at the method detection limit (MDL) and below the practical quantitation limits (PQL) at estimated concentration of 0.0015J milligrams per liter (mg/l). Lead was detected in the associated project samples above their MDLs; therefore, data qualification for these samples was not required.

Field Blank and Source Water Samples

Preparing blank samples in the field identifies ambient atmospheric contamination that could potentially become entrained in the samples during collection. A total of four field blank samples were collected in the sampling area by directly filling the laboratory-provided sample containers with distilled or purified water. Field blank samples were collected at a frequency of one field blank for every two hours during Geoprope sample collection. One source water (SW) sample was collected. The field blanks and source water sample were analyzed for total lead using EPA Method 6010B. Lead was detected in three of the field blanks at “J” concentrations. Target

analytes (lead) was detected in two of the field blanks (1127-200-FB1 and 1127-200-FB3) collected on March 15, 2011 (laboratory work order #116888) at concentrations slightly above or at the MDL and below the PQL at estimated concentrations of 0.00090J and 0.0018 mg/l, respectively. Lead was detected in the associated project samples above their MDLs; therefore, data qualification for these samples was not required. Lead was not detected in the source water sample.

Method Blank Samples

The laboratory also analyzed method blanks to provide an additional measure of internal quality control. Method blank results for all analytes were less than the reported PQLs, however some were detected above the MDL. Analytes detected in the method blanks include: antimony, zinc, and lead as follows.

- Laboratory work order 116888 – Method 6010B antimony analysis, the method blank result was 0.400 mg/kg for sample MB-72172 which exceeded the expected non-detect result however, the result is less than the 2.0 mg/kg PQL value. Analytical antimony results associated with this batch were qualified as estimated "J."

- Laboratory work order 116888 – Method 6010B zinc analysis, the method blank result was 0.164 mg/kg for sample MB-72172 which exceeded the expected non-detect result however, the result is less than the PQL value of 1.0 mg/kg. Zinc was detected in the associated project samples above the PQLs; therefore, data qualification for these samples was not required.

- Laboratory work order 115950 – Method 6010B lead analysis, the method blank result was 0.263 mg/kg for sample MB-70017A which exceeded the expected non-detect result. Lead was detected in the associated project samples above the PQLs; therefore, data qualification for these samples was not required.

- Laboratory work order 116042 – Method 6010B lead analysis, the method blank results were 0.153 and 0.126 mg/kg for samples MB-70173A and MB-70173B which exceeded the expected non-detect result however, the method blank result is less than the PQL of 5.0 mg/kg. Lead was detected in the associated project samples above the PQLs; therefore, data qualification for these samples was not required.

- Laboratory work order 116042 – Method 6010B lead analysis, the method blank result was 0.173 mg/kg for sample MB-70174A exceeded the expected non-detect however, the method blank result is less than the PQL of 5.0 mg/kg. Lead was detected in the associated project samples above the PQLs; therefore, data qualification for these samples was not required.

- Laboratory work order 115950 – Method 6010B antimony analysis, the method blank result was 0.171 mg/kg for sample MB-70696 which exceeded the expected non-detect result however, the result is less than the PQL value of 2.0 mg/kg. Analytical antimony results associated with this batch were qualified as estimated "J."

- Laboratory work order 115950 – Method 6010B zinc analysis, the method blank result was 0.220 mg/kg for sample MB-70696 which exceeded the expected non-detect result however, the result is less than the PQL value of 1.0 mg/kg. Zinc was detected in the associated project samples above the PQLs; therefore, data qualification for these samples was not required.

- Laboratory work order 115975 – Method 6010B antimony analysis, the method blank results was 0.230 mg/kg for sample MB-70741 which exceeded the expected non-detect result however, the result is less than the 2.0 mg/kg PQL value. Analytical antimony results associated with this batch were qualified as estimated "J."

- Laboratory work order 115975 – Method 6010B zinc analysis, the method blank result was 0.182 mg/kg for sample MB-70741 which exceeded the expected non-detect result however, the result is less than the PQL value of 1.0 mg/kg. Zinc was detected in the associated project samples above the PQLs; therefore, data qualification for these samples was not required.

- Laboratory work order 115975 – Method 6010B antimony analysis, the method blank result was 0.626 mg/kg for sample MB-70748 which exceeded the expected non-detect result however, the result is less than the 2.0 mg/kg PQL value. Analytical antimony results associated with this batch were qualified as estimated "J."

- Laboratory work order 115975 – Method 6010B zinc analysis, the method blank result was 0.343 mg/kg for sample MB-70748 which exceeded the expected

non-detect result however, the result is less than the PQL value of 1.0 mg/kg. Zinc was detected in the associated project samples above the PQLs; therefore, data qualification for these samples was not required.

- Laboratory work order 115975 – Method 6010B lead analysis, the method blank results were 0.247 and 0.193 mg/kg for samples MB-70097A and MB-70097B which exceeds the expected non-detect result however, the results are less than the PQL of 5.0 mg/kg. Lead was detected in the associated project samples above the PQLs; therefore, data qualification for these samples was not required.

- Laboratory work order 115975 – Method 6010B lead analysis, the method blank results were 0.200 and 0.138 mg/kg for samples MB-70098A and MB-70098A which exceeds the expected non-detect result however, the results are less than the PQL of 5.0 mg/kg. Lead was detected in the associated project samples above the PQLs; therefore, data qualification for these samples was not required

- Laboratory work order 115975 – Method 6010 lead analysis, the method blank result was 0.239 mg/kg for sample MB-70099A which exceeded the expected non-detect result, however the result is less than the PQL value of 5.0 mg/kg. Lead was detected in the associated project samples above the PQLs; therefore, data qualification for these samples was not required.

1.4 LABORATORY CONTROL SAMPLES

LCSs were analyzed as a measure of data accuracy. Internal laboratory QA/QC data associated with these analyses met criteria, including percent recoveries (%Rs). The Project laboratory met the frequency requirements for LCS analyses established by U.S. EPA National Functional Guidelines.

1.5 LABORATORY DUPLICATE SAMPLES

As another estimate of precision, the laboratory performed duplicate analyses of unspiked project samples at the frequency of collection requirements established by U.S. EPA National Functional Guidelines. The relative percent differences (RPDs) did not exceed the control limit of 20% established by the National Functional Guidelines (U.S. EPA, 2004) for the technical review of non-homogenous soil samples, with the following exceptions.

- Laboratory batch ID 70097 – Method 6010B lead analysis; RPD for lead result in the laboratory duplicate sample 115975-006A-DUP was 27.1%, and the RPD for lead result in the laboratory duplicate sample 115975-016A-DUP was 6.48%. Only one of the sample RPD values in this batch exceeded the control limit of 20%. Therefore, based on professional judgment results in soil samples associated with this QA/QC batch were not qualified as estimated "J."

- Laboratory batch ID 70098 – Method 6010B lead analysis; RPD for lead result in the laboratory duplicate sample 115975-026A-DUP was 82.3%, and the RPD for lead result in the laboratory duplicate sample 115975-036A-DUP was 12.8%. Only one of the sample RPD values in this batch exceeded the control limit of 20%. Therefore, based on professional judgment results in soil samples associated with this QA/QC batch were not qualified as estimated "J."

- Laboratory batch ID 70099 – Method 6010B lead analysis; the RPD for the lead result in the laboratory duplicate sample 115975-045A-DUP was 31.1%. The RPD value in this batch exceeded the control limit of 20%, therefore, lead results in soil samples associated with this QA/QC batch were qualified as estimated "J."

- Laboratory batch ID 70748 – Method 6010B arsenic analysis; the RPD for the arsenic result in the laboratory duplicate sample 115975-043A-DUP was 42.5%. The RPD value exceeded the control limit of 20%, therefore, arsenic results in soil samples associated with this QA/QC batch were qualified as estimated "J."

- Laboratory batch ID 70748 – Method 6010B cobalt analysis; the RPD for cobalt result in the laboratory duplicate sample 115975-043A-DUP was 35.9% The RPD value exceeds the control limit of 20%, therefore, cobalt results in soil samples associated with this QA/QC batch were qualified as estimated "J."

- Laboratory batch ID 70748 – Method 6010B copper analysis; the RPD for copper results in the laboratory duplicate sample 115975-043A-DUP was 20.0%. The RPD value equaled the control limit of 20%, therefore, therefore copper results in soil samples associated with this QA/QC batch were qualified as estimated "J."

- Laboratory batch ID 70748 – Method 6010B molybdenum analysis; the RPD for molybdenum result in the laboratory duplicate sample 115975-043A-DUP was

22.4%. The RPD value exceeded the control limit of 20%, therefore, molybdenum results in soil samples associated with this QA/QC batch were qualified as estimated “J.”

- Laboratory batch ID 70748 – Method 6010B nickel analysis; the RPD for nickel results in the laboratory duplicate sample 115975-043A-DUP was 29.5%. The RPD value exceeded the control limit of 20%, therefore, nickel results in soil samples associated with this QA/QC batch were qualified as estimated “J.”

- Laboratory batch ID 70748 – Method 6010B zinc analysis; the RPD for zinc result in the laboratory duplicate sample 115975-043A-DUP was 30.0%. The RPD value exceeded the control limit of 20%, therefore, zinc results in soil samples associated with this QA/QC batch were qualified as estimated “J.”

- Laboratory batch ID 72172 – Method 6010B arsenic analysis; the RPD result in the laboratory duplicate sample 116888-051A-DUP was 33.7%, which exceeded the control limit of 20%. Therefore, the arsenic results associated with this batch were qualified as estimated “J.”

- Laboratory batch ID 72172 – Method 6010B molybdenum analysis; the RPD result in the laboratory duplicate sample 116888-051A-DUP was 20.1%, which exceeded the control limit of 20%. Therefore, the molybdenum results associated with this batch were qualified as estimated “J.”

- Laboratory batch ID 71698 – Method 6010B lead analysis; the RPD result in the laboratory duplicate sample 116888-050A-DUP was 34.2%, which exceeded the control limit of 20%. However, the RPD result for laboratory duplicate sample 116888-040A-DUP, which is also associated with this batch, was within the control limit at 4.42%. Therefore, based on professional judgment the lead results associated with this batch were not qualified.

- Laboratory batch ID 71699 – Method 6010B lead analysis; the RPD result in the laboratory duplicate sample 116888-009A-DUP was 63.5%, the analyte detected above the control range of 0 to 20%. Therefore, based on professional judgment the lead results associated with this batch were qualified as estimated “J.”

- Laboratory batch ID 70170 – Method 6010B lead analysis; the RPD result in the laboratory duplicate sample 116006-010A-DUP was 36.2%, the RPD result in the second laboratory duplicate sample 116006-020-DUP was 0.886%. The analyte detected above the control limit of 20% in the first sample and within control limit in the second method sample. Therefore, based on professional judgment the lead results associated with this batch were not qualified.

- Laboratory batch ID 70171 – Method 6010B lead analysis; RPD result in the laboratory duplicate sample 116006-040A-DUP and 116006-030A-DUP were 27.3% and 26.7%, which exceeded the control limit of 20%. Therefore, based on professional judgment the lead results associated with this batch were qualified as estimated "J."

- Laboratory batch ID 70172 – Method 6010B lead analysis; the RPD results in the laboratory duplicate sample 116006-050A-DUP was 26.9%, the RPD result in the second laboratory duplicate sample 116042-007A-DUP was 3.76%. The analyte detected above the limit of 20% in the first sample and within the control limit in the second method sample. Therefore, based on professional judgment the lead results associated with this batch were not qualified.

- Laboratory batch ID 70173 – Method 6010B lead analysis; the RPD results in the laboratory duplicate sample 116042-017A-DUP and 116042-027A-DUP were 100% and 68.0%, which exceeded the control limit of 20%. Therefore, based on professional judgment the lead results associated with this batch were qualified as estimated "J."

- Laboratory batch ID 70174 – Method 6010B lead analysis; RPD result in the laboratory duplicate sample 116042-037A-DUP and 116042-046A-DUP was 6.11% and 24.0%, the RPD result in the second laboratory duplicate sample was detected above the control limit of 20%, however the first sample was within limits. Therefore, based on professional judgment the lead results associated with this batch were not qualified.

1.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE SAMPLES

The laboratory also analyzed MS/MSD samples to assess data accuracy. The purpose of spiked samples is to evaluate the effect of the matrix on a method's recovery efficiency (percent recovery). A sample prepared by adding a known concentration of a target analyte to an aliquot of a specific homogenized environmental sample for which an independent estimate of the target analyte concentration is available. The matrix spike is accompanied by an independent analysis of the unspiked aliquot of the environmental sample. Only MS/MSD samples collected on site are considered appropriate for assessing matrix conditions. When recoveries from MS/MSD samples exceeded acceptance limits for both the primary and duplicate samples, the detections are qualified as estimated biased high (J+), and the non-detects are not qualified. When recoveries from MS/MSD samples were less than compound-specific acceptance limits, the detections are qualified as estimated biased low (J–) and non-detects are qualified as estimated (UJ).

The purpose of matrix spike duplicate (MSD) samples is to evaluate the precision of the intralaboratory analytical process for specific analytes in a sample matrix. The duplicate sample is prepared simultaneously as a split with the matrix spike sample, and each is spiked with identical, known concentrations of targeted analyte(s). The precision is measured by the RPD between the spiked results. The percent recoveries and RPDs of target analytes were within the laboratory determined control limits with the following exception:

- Laboratory work order 115975 – Method 6010 zinc analysis; the %R for zinc results in the matrix spike sample 115975-011A-MS was 133%, which exceeded the control limit of 125%. The RPD for zinc results in the matrix spike duplicate sample 115975-011A-MSD was 37.3%, which exceeds the control limit of 20%. The analytical results associated with the analyte within the batch were qualified as estimated "J."

- Laboratory work order 116069 – Method 6010 lead analysis; the %R for lead results in matrix spike sample 116069-020A-MS was 34.6%, which exceeded the control limit of 20%. The %R for 116069-010A-MS was 82.1%, which is within the control range of 34-126%. Therefore, based on professional judgment results in soil samples associated with this QA/QC batch were not.

- Laboratory work order 116069 – Method Wet/EPA 74 lead analysis; the %R for lead results in the matrix spike sample 116069-036A-MS was 74.7%, which is below the control range of 80-120%. The %R for lead in the matrix spike

duplicate sample 116069-036A-MSD was 89.8%, which is within the control range of 80-120%. And the RPD for the MSD sample was 1.23% within the control limit of 20%. Therefore, based on professional judgment results in soil samples associated with this QA/QC batch were not qualified as estimated "J."

1.7 Summary of Qualified Data

All other quality assurance data met the acceptance criteria for soil samples. Except for the qualified data discussed above, the results of field and laboratory quality control indicate that the sampling and analysis were performed consistent with the analytical methods. Overall, the results of the QA/QC review indicate that the test results are valid and usable. The following table summarizes the sample data warranting qualification based on the data review elements discussed above.

Sample ID	Compound	Laboratory Work Order Number	Analytical Method	Qualified Result	Units
116888-051A	Antimony	116888	USEPA Method 6010B	0.67 J	mg/kg
116888-047A	Antimony	116888	USEPA Method 6010B	0.71 J	mg/kg
116888-040A	Antimony	116888	USEPA Method 6010B	0.78 J	mg/kg
116888-040A	Mercury	116888	USEPA Method 7471A	0.045 J	mg/kg
116888-047A	Mercury	116888	USEPA Method 7471A	0.073 J	mg/kg
116888-051A	Mercury	116888	USEPA Method 7471A	0.047 J	mg/kg
116888-040A	Arsenic	116888	USEPA Method 6010B	5.4 J	mg/kg
116888-047A	Arsenic	116888	USEPA Method 6010B	4.2 J	mg/kg
116888-051A	Arsenic	116888	USEPA Method 6010B	2.2 J	mg/kg
116888-040A	Molybdenum	116888	USEPA Method 6010B	9.6 J	mg/kg
116888-047A	Molybdenum	116888	USEPA Method 6010B	11 J	mg/kg
116888-051A	Molybdenum	116888	USEPA Method 6010B	6.6 J	mg/kg
116888-001A	Lead	116888	USEPA Method 6010B	0.90 J	mg/kg
116888-002A	Lead	116888	USEPA Method 6010B	0.44 J	mg/kg
116888-003A	Lead	116888	USEPA Method 6010B	0.80 J	mg/kg
116888-004A	Lead	116888	USEPA Method 6010B	0.81 J	mg/kg
116888-005A	Lead	116888	USEPA Method 6010B	1.4 J	mg/kg
116888-006A	Lead	116888	USEPA Method 6010B	0.60 J	mg/kg
116888-007A	Lead	116888	USEPA Method 6010B	1.2 J	mg/kg
116888-008A	Lead	116888	USEPA Method 6010B	1.1 J	mg/kg
116888-009A	Lead	116888	USEPA Method 6010B	0.91 J	mg/kg
116888-010A	Lead	116888	USEPA Method 6010B	1.4 J	mg/kg
116888-011A	Lead	116888	USEPA Method 6010B	1.1 J	mg/kg
116888-012A	Lead	116888	USEPA Method 6010B	1.4 J	mg/kg
116888-013A	Lead	116888	USEPA Method 6010B	0.69 J	mg/kg

116888-014A	Lead	116888	USEPA Method 6010B	0.79 J	mg/kg
116888-015A	Lead	116888	USEPA Method 6010B	0.79 J	mg/kg
116888-016A	Lead	116888	USEPA Method 6010B	0.37 J	mg/kg
116888-017A	Lead	116888	USEPA Method 6010B	0.87 J	mg/kg
116888-018A	Lead	116888	USEPA Method 6010B	0.57 J	mg/kg
116888-019A	Lead	116888	USEPA Method 6010B	1.2 J	mg/kg
116888-020A	Lead	116888	USEPA Method 6010B	1.3 J	mg/kg
116888-021A	Lead	116888	USEPA Method 6010B	1.3 J	mg/kg
116888-022A	Lead	116888	USEPA Method 6010B	0.64 J	mg/kg
116888-023A	Lead	116888	USEPA Method 6010B	0.88 J	mg/kg
116888-024A	Lead	116888	USEPA Method 6010B	1.6 J	mg/kg
116888-025A	Lead	116888	USEPA Method 6010B	0.39 J	mg/kg
116888-026A	Lead	116888	USEPA Method 6010B	0.72 J	mg/kg
116888-027A	Lead	116888	USEPA Method 6010B	0.61 J	mg/kg
116888-028A	Lead	116888	USEPA Method 6010B	1.0 J	mg/kg
116888-029A	Lead	116888	USEPA Method 6010B	0.52 J	mg/kg
116888-030A	Lead	116888	USEPA Method 6010B	2.0 J	mg/kg
116888-051A	Lead	116888	USEPA Method 6010B	170 J	mg/kg
116888-052A	Lead	116888	USEPA Method 6010B	17 J	mg/kg
116888-053A	Lead	116888	USEPA Method 6010B	1.5 J	mg/kg
116888-054A	Lead	116888	USEPA Method 6010B	7.6 J	mg/kg
116888-055A	Lead	116888	USEPA Method 6010B	3.0 J	mg/kg
116006-021A	Lead	116006	USEPA Method 6010B	8.6 J	mg/kg
116006-022A	Lead	116006	USEPA Method 6010B	6.5 J	mg/kg
116006-023A	Lead	116006	USEPA Method 6010B	15 J	mg/kg
116006-024A	Lead	116006	USEPA Method 6010B	11 J	mg/kg
116006-025A	Lead	116006	USEPA Method 6010B	7.7 J	mg/kg
116006-026A	Lead	116006	USEPA Method 6010B	9.5 J	mg/kg
116006-027A	Lead	116006	USEPA Method 6010B	120 J	mg/kg
116006-028A	Lead	116006	USEPA Method 6010B	130 J	mg/kg
116006-029A	Lead	116006	USEPA Method 6010B	48 J	mg/kg
116006-030A	Lead	116006	USEPA Method 6010B	17 J	mg/kg
116006-031A	Lead	116006	USEPA Method 6010B	30 J	mg/kg
116006-032A	Lead	116006	USEPA Method 6010B	36 J	mg/kg
116006-033A	Lead	116006	USEPA Method 6010B	28 J	mg/kg
116006-034A	Lead	116006	USEPA Method 6010B	11 J	mg/kg
116006-035A	Lead	116006	USEPA Method 6010B	48 J	mg/kg
116006-036A	Lead	116006	USEPA Method 6010B	11 J	mg/kg
116006-037A	Lead	116006	USEPA Method 6010B	19 J	mg/kg
116006-038A	Lead	116006	USEPA Method 6010B	190 J	mg/kg
116006-039A	Lead	116006	USEPA Method 6010B	240 J	mg/kg
116006-040A	Lead	116006	USEPA Method 6010B	170 J	mg/kg

116042-008A	Lead	116042	USEPA Method 6010B	4.9 J	mg/kg
116042-009A	Lead	116042	USEPA Method 6010B	27 J	mg/kg
116042-010A	Lead	116042	USEPA Method 6010B	4.8 J	mg/kg
116042-011A	Lead	116042	USEPA Method 6010B	6.8 J	mg/kg
116042-012A	Lead	116042	USEPA Method 6010B	15 J	mg/kg
116042-013A	Lead	116042	USEPA Method 6010B	11 J	mg/kg
116042-014A	Lead	116042	USEPA Method 6010B	43 J	mg/kg
116042-015A	Lead	116042	USEPA Method 6010B	6.0 J	mg/kg
116042-016A	Lead	116042	USEPA Method 6010B	7.5 J	mg/kg
116042-017A	Lead	116042	USEPA Method 6010B	6.0 J	mg/kg
116042-018A	Lead	116042	USEPA Method 6010B	110 J	mg/kg
116042-019A	Lead	116042	USEPA Method 6010B	64 J	mg/kg
116042-020A	Lead	116042	USEPA Method 6010B	40 J	mg/kg
116042-021A	Lead	116042	USEPA Method 6010B	47 J	mg/kg
116042-022A	Lead	116042	USEPA Method 6010B	38 J	mg/kg
116042-023A	Lead	116042	USEPA Method 6010B	47 J	mg/kg
116042-024A	Lead	116042	USEPA Method 6010B	76 J	mg/kg
116042-025A	Lead	116042	USEPA Method 6010B	21 J	mg/kg
116042-026A	Lead	116042	USEPA Method 6010B	14 J	mg/kg
116042-027A	Lead	116042	USEPA Method 6010B	7.4 J	mg/kg
115975-037A	Lead	115975	USEPA Method 6010B	9.1 J	mg/kg
115975-038A	Lead	115975	USEPA Method 6010B	140 J	mg/kg
115975-039A	Lead	115975	USEPA Method 6010B	36 J	mg/kg
115975-040A	Lead	115975	USEPA Method 7471A	280 J	mg/kg
115975-041A	Lead	115975	USEPA Method 6010B	21 J	mg/kg
115975-042A	Lead	115975	USEPA Method 6010B	150 J	mg/kg
115975-043A	Lead	115975	USEPA Method 6010B	290 J	mg/kg
115975-044A	Lead	115975	USEPA Method 6010B	46 J	mg/kg
115975-045A	Lead	115975	USEPA Method 6010B	150 J	mg/kg
115975-011A	Zinc	115975	USEPA Method 6010B	61 J	mg/kg
115975-030A	Zinc	115975	USEPA Method 6010B	200 J	mg/kg
115975-038A	Zinc	115975	USEPA Method 6010B	51 J	mg/kg
115975-040A	Zinc	115975	USEPA Method 6010B	78 J	mg/kg
115975-043A	Arsenic	115975	USEPA Method 6010B	8.5 J	mg/kg
115975-043A	Cobalt	115975	USEPA Method 6010B	8.2 J	mg/kg
115975-043A	Copper	115975	USEPA Method 6010B	26 J	mg/kg
115975-043A	Molybdenum	115975	USEPA Method 6010B	4.2 J	mg/kg
115975-043A	Nickel	115975	USEPA Method 6010B	32 J	mg/kg
115975-043A	Zinc	115975	USEPA Method 6010B	120 J	mg/kg

2.0 REFERENCES

U.S. EPA, 2010, USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, Final, Office of Superfund Remediation and Technology Innovation, Washington, D.C., January.