

FOR CONTRACT NO.: 12-0H0294

# INFORMATION HANDOUT

## MATERIALS INFORMATION

LEAD INVESTIGATION REPORT

**ROUTE:** 12-Ora-91-R0.0/ R10.1

December 20, 2010  
Project No. 207384041

Mr. Hsin Chen  
State of California Department of Transportation  
District 12, Environmental Engineering  
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Subject: Aerially Deposited Lead Site Investigation  
State Route 91 from Post Mile 0.0 to 10.09  
Orange County, California  
Task Order No. 12-0H0291-41  
EA No. 0H0291  
Contract No. 12A1139

Dear Mr. Chen:

In accordance with the State of California Department of Transportation Contract No. 12A1139, Task Order No. 12-0H0291-41, Ninyo & Moore has conducted an aerially deposited lead investigation at selected locations along both directions of State Route 91 from post mile 0.0 to 10.09 in Orange County, California. The following report documents our methodologies, findings, conclusions, and recommendations.

We appreciate the opportunity to be of service to you on this project.

Sincerely,  
**NINYO & MOORE**



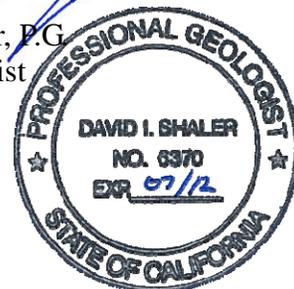
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**AERIALY DEPOSITED LEAD SITE INVESTIGATION  
STATE ROUTE 91 FROM POST MILE 0.0 TO 10.09  
ORANGE COUNTY, CALIFORNIA  
TASK ORDER NO. 12-0H0291-41  
EA NO. 0H0291, CONTRACT NO. 12A1139**

**PREPARED FOR:**

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December 20, 2010  
Project No. 207384041

**AERIALLY DEPOSITED LEAD INVESTIGATION REPORT**

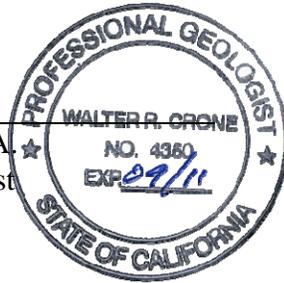
Task Order No. 12-0H0291-41  
E.A. 0H0291

This report was prepared by the staff of Ninyo & Moore Geotechnical and Environmental Sciences Consultants under the supervision of the Engineer and/or Geologist whose signature appears hereon.

The findings, recommendations, specifications, or professional opinions are presented within the limits described by the client, after being prepared in accordance with generally accepted professional engineering and geologic practice. No warranty is expressed or implied.



Walter R. Crone, P.G. 4350, R.E.A.  
Principal Environmental Geologist



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## TABLE OF CONTENTS

	<u>Page</u>
EXECUTIVE SUMMARY .....	1
1. INTRODUCTION .....	4
1.1. Project Description and Objective .....	4
1.2. Scope of Work .....	4
1.2.1. Prefield Activities .....	4
1.2.2. Soil Sampling .....	4
1.2.3. Laboratory Analysis .....	5
1.2.4. Global Positioning System (GPS) Surveying .....	5
1.2.5. Report Preparation .....	5
1.3. Previous Site Investigations.....	5
2. BACKGROUND .....	5
2.1. Aerially Deposited Lead in Soil .....	6
2.2. Hazardous Waste Classification Criteria .....	6
2.3. DTSC Variance.....	6
2.3.1. Reuse – Condition 1 .....	7
2.3.2. Reuse – Condition 2 .....	7
2.3.3. Reuse – Condition 3 .....	7
2.4. Criteria for Disposal of Soil Not Intended for Reuse On Site .....	7
3. INVESTIGATION METHODS .....	8
3.1. HSP .....	8
3.2. Utility Clearance .....	8
3.3. Hand-Auger Sampling .....	8
3.4. Investigative-Derived Wastes .....	9
3.5. Laboratory Analyses .....	9
4. ANALYTICAL RESULTS .....	9
4.1. Total Lead .....	10
4.2. Soluble Lead – Citric Acid .....	10
4.3. Soluble Lead – Deionized Water .....	10
4.4. Soluble Lead – TCLP .....	10
4.5. pH .....	10
5. STATISTICAL EVALUATION .....	11
5.1. Statistical Evaluation Methods .....	11
5.2. Population Distribution.....	11
5.3. Upper Confidence Limits .....	12
5.4. Regression Analysis.....	13
6. CONCLUSIONS .....	14
7. RECOMMENDATIONS.....	14

7.1. Recommendations for Soil for Reuse by the Department .....	15
7.2. Recommendations for Soil to be Disposed Off Site .....	15
8. HEALTH EFFECTS OF LEAD .....	16
9. LIMITATIONS .....	16
10. REFERENCES .....	18

**Table**

Table 1 – Soil Analytical Results – Aerially Deposited Lead, pH, and GPS Coordinates

**Figures**

Figure 1 – Site Location

Figures 2 through 12 – Boring Locations

Figures 13 through 33 – Boring Data

**Appendices**

Appendix A – Aerially Deposited Lead Soil Management Chart

Appendix B – Laboratory Reports and Chain-of-Custody Documentation

Appendix C – Statistical Analyses

Appendix D – Histogram

Appendix E – Correlation of Total Lead to Soluble Lead

Appendix F – Block Diagrams

## **EXECUTIVE SUMMARY**

The State of California Department of Transportation (Department) authorized Ninyo & Moore to conduct an aerially deposited lead (ADL) site investigation (SI) along both sides of State Route 91 (SR-91) from post mile 0.0 to 10.09 in Orange County, California (site). Work was conducted in general accordance with the Department Contract No. 12A1139, Task Order No. 12-0H0291-41 (TO 41), dated October 14, 2010. It is our understanding that the Department is planning to upgrade guard rails, cold planning asphalt concrete (AC), replace loop detectors, grind the Portland cement concrete (PCC) slabs, including thermoplastic yellow stripe, and replace broken slabs on both sides of SR-91.

This investigation was performed to evaluate the presence of lead in soil resulting from the combustion of leaded fuel from freeway traffic. Data collected during this investigation were used to develop recommendations for the potential reuse or disposal of soil excavated from the site and to inform the Department of potential health and safety issues concerning the presence of lead in soil for workers at the site during construction activities.

Ninyo & Moore collected 89 soil samples from 24 borings at the site. Twenty-three of the 89 samples contained a total lead concentration greater than or equal to 50 milligrams per kilogram (mg/kg) and less than 1,000 mg/kg and were subsequently analyzed for soluble lead in accordance with the Waste Extraction Test (WET) using citric acid as the extractant. Eight of the results were above 5.0 milligrams per liter (mg/l) and the eight samples were subsequently analyzed for soluble lead by the WET using deionized water as the extractant and in accordance with the Toxicity Characteristic Leaching Procedure (TCLP). The results of the soluble lead analyses using deionized water as the extractant were below 1.5 mg/l and the TCLP results were below 5.0 mg/l. Nine samples were analyzed for pH. The pH levels ranged from 9.0 to 7.6, which would not cause a waste to be classified as Resource Conservation and Recovery Act (RCRA) hazardous waste and is greater than the California Environmental Protection Agency (Cal-EPA) Department of Toxic Substances Control (DTSC) lower limit of 5.0.

Our recommendations for soil reuse on site are based on the guidelines set forth by the DTSC Lead Variance issued to the Department on June 30, 2009 (DTSC Variance). Laboratory analyti-

cal results for lead were compared to the guidelines of the DTSC Variance for potential reuse of the soil as fill within the Department right-of-way (ROW).

Our recommendations for off-site disposal were based on the comparison of lead concentrations in soil samples to the California Health and Safety Code thresholds and Title 40 Code of Federal Regulations (CFR) 261.24 thresholds.

Based on the analytical results, the on-site reuse and the off-site disposal recommendations are summarized below.

### **Recommendations for Soil for Reuse by the Department**

Soil at the site can be reused on site with the following restrictions:

- Scenario A, soil in the surface layer (surface to 0.5 feet below ground surface [bgs]) may be reused on site if it is placed a minimum of 5 feet above the maximum water table elevation and covered with at least 1 foot of non-hazardous soil. The remaining soil from the surface to 4 feet bgs has no restrictions based on total and soluble lead concentrations.
- Scenario B, soil in the surface to 1.5-foot layer (surface to 1.5 feet bgs) may be reused on site if it is placed a minimum of 5 feet above the maximum water table elevation and covered with at least 1 foot of non-hazardous soil. The remaining soil from the 1.5-foot layer to 4 feet bgs has no restrictions based on total and soluble lead concentrations.
- Scenario C, soil in the surface to 3-foot layer (surface to 3 feet bgs) has no restrictions based on total and soluble lead concentrations. The remaining soil from the 3-foot layer to 4 feet bgs has no restrictions based on total and soluble lead concentrations.
- Scenario D, soil in the surface to 4-foot layer (surface to 4 feet bgs) has no restrictions based on total and soluble lead concentrations.

### **Recommendations for Soil to be Disposed Off Site**

If the Department elects to dispose the soil off site, the following restrictions apply:

- Scenario A, soil in the surface layer (surface to 0.5 feet bgs) is classified as hazardous and should be disposed at a Class 1 disposal site in accordance with Title 22 California Code Regulations (CCR) requirements. The remaining soil from the surface to 4 feet bgs is classified as non-hazardous and may be disposed off site with no restrictions based on total and soluble lead.

- Scenario B, soil in the surface to 1.5-foot layer (surface to 1.5 feet bgs) is classified as hazardous and should be disposed at a Class 1 disposal site in accordance with Title 22 CCR requirements. The remaining soil from the 1.5-foot layer to 4 feet bgs is classified as non-hazardous and may be disposed off site with no restrictions based on total and soluble lead.
- Scenario C, soil in the surface to 3-foot layer (surface to 3 feet bgs) is classified as non-hazardous and may be disposed off site with no restrictions based on total and soluble lead. The remaining soil from the 3-foot layer to 4 feet bgs is classified as non-hazardous and may be disposed off site with no restrictions based on total and soluble lead.
- Scenario D, soil in the surface to 4-foot layer is classified as non-hazardous and may be disposed off site with no restrictions based on total and soluble lead.

The Department should notify the contractors performing the construction activities that hazardous concentrations of lead are present in on-site soil. Appropriate health and safety measures should be taken to minimize the potential exposure to lead.

## **1. INTRODUCTION**

The State of California Department of Transportation (Department) authorized Ninyo & Moore to conduct an aerially deposited lead (ADL) site investigation (SI) along both sides of State Route 91 (SR-91) from post mile 0.0 to 10.09 in Orange County, California (site; Figure 1). Work was conducted in general accordance with the Department Contract No. 12A1139, Task Order No. 12-0H0291-41 (TO 41), dated October 14, 2010.

### **1.1. Project Description and Objective**

It is our understanding that the Department is planning to upgrade guard rails, cold planning asphalt concrete (AC), replace loop detectors, grind the Portland cement concrete (PCC) slabs, including thermoplastic yellow stripe, and replace broken slabs along both sides of SR-91. This report has been prepared by Ninyo & Moore to document the results of a study to evaluate the potential presence of ADL along the unpaved shoulder and slope in the areas of the site. Twenty-four borings were hand augered at the site (Figure 2).

### **1.2. Scope of Work**

Ninyo & Moore performed the tasks described in the following sections.

#### **1.2.1. Prefield Activities**

Prefield activities included:

- Preparing a site specific health and safety plan (HSP).
- Marking boring locations at the site.
- Notifying Underground Service Alert (USA) that Ninyo & Moore would be advancing soil borings in the area (USA ticket number A03130-375, -365, -383, -387, -391, 407, -424, -427, -430, -455, -437, -483, and -490).
- Preparing a project schedule, and coordinating work with subcontractors.

#### **1.2.2. Soil Sampling**

Soil sampling was conducted on November 16 and 17, 2010. Twenty-four sampling locations (B1 to B24) were chosen, as shown on Figure 2. One boring at each sampling

location was advanced and sampled using a hand auger. Four soil samples were attempted for collection from depths of surface to ½ foot, 1 to 1½, 2½ to 3, and 3½ to 4 feet below ground surface (bgs) at each boring location.

### **1.2.3. Laboratory Analysis**

Ninyo & Moore submitted the soil samples under chain-of-custody protocol to Advanced Technology Laboratories (ATL) of Signal Hill, California; a laboratory certified by the State of California Department of Health Services Environmental Laboratory Accreditation Program.

### **1.2.4. Global Positioning System (GPS) Surveying**

Approximate latitude and longitude (North American Datum 83) of sampling locations were recorded with a handheld GPS unit (GeoXT, Trimble). The latitude and longitude data for each boring are presented on Table 1.

### **1.2.5. Report Preparation**

This report was prepared in general accordance with Department Contract No. 12A1139 and TO 41, dated October 14, 2010.

## **1.3. Previous Site Investigations**

Ninyo & Moore has not performed previous investigations at this site. In addition, the Department has not notified Ninyo & Moore of previous investigations performed at the site.

## **2. BACKGROUND**

The Department obtained a variance (V09 HQSCD006) from the California Environmental Protection Agency (Cal-EPA), Department of Toxic Substances Control (DTSC), on June 30, 2009 (DTSC Variance). The DTSC Variance allows for conditional reuse of lead-impacted soil within the Department right-of-way (ROW). Background information regarding the source of ADL and the reuse or disposal of lead-impacted soil is discussed in the following sections.

### **2.1. Aerially Deposited Lead in Soil**

Analyses for lead in soil along highways throughout the state of California have revealed that lead is commonly present along the shoulders of the highways as a result of automobile exhaust containing lead from the combustion of leaded gasoline. Elevated concentrations of lead are commonly found in the upper 2 feet of soil. Lead concentrations in soil are dependent on many variables; but in general, are a function of the age of the highway and the volume of traffic using the highway (DTSC, 2009).

### **2.2. Hazardous Waste Classification Criteria**

Soil that exceeds the following limitations may be classified as hazardous waste with respect to lead concentrations:

- The soil contains more than 1,000 milligrams per kilogram (mg/kg) total lead, exceeding the Total Threshold Limit Concentration (TTL) for California hazardous waste (Title 22 California Code of Regulations [CCR], Section 66261.24);
- The soil contains more than 5.0 milligrams per liter (mg/l) citric acid-extractable lead, exceeding the Soluble Threshold Limit Concentration (STLC) for California hazardous waste (Title 22 CCR, Section 66261.24);
- The soil contains more than 5.0 mg/l leachable lead using the Toxicity Characteristic Leaching Procedure (TCLP), exceeding the maximum concentration for the toxicity characteristic of the Resource, Conservation, and Recovery Act (RCRA; Title 40 Code of Federal Regulations [CFR] 261.24); or
- The soil pH is less than or equal to 2.0 or greater than or equal to 12.5, which exceeds the limits for the corrosivity characteristic of RCRA hazardous waste (40CFR 261.22) and California hazardous waste (Title 22 CCR, Section 66261.22).

### **2.3. DTSC Variance**

In accordance with the DTSC Variance, soil that is subject to the guidelines presented below may be reused within the Department ROW. A chart presenting the different ADL soil type classifications is included in Appendix A.

**2.3.1. Reuse – Condition 1**

Soil containing less than 1.5 mg/l extractable lead by the Waste Extraction Test (WET) using de-ionized water as the extractant (WET-DI) and less than or equal to 1,411 mg/kg total lead (United States Environmental Protection Agency [EPA] Method 6010B) may be used as fill in the Department ROW provided the soil is placed a minimum of 5 feet above the maximum level of the water table and covered with at least 1 foot of non-hazardous soil.

**2.3.2. Reuse – Condition 2**

Soil containing greater than or equal to 1.5 mg/l but less than 150 mg/l, extractable lead by WET-DI method, or more than 1,411 mg/kg total lead but less than 3,397 mg/kg total lead, may be used as fill in the Department ROW provided the soil is placed a minimum of 5 feet above the maximum level of the water table and protected from infiltration by a paved structure that will be maintained by the Department.

**2.3.3. Reuse – Condition 3**

Lead-contaminated soil with a pH less than 5.5 but greater than 5.0 shall only be used as fill material under the paved portion of the roadway. Lead-contaminated soil with a pH at or less than 5.0 shall be managed as a hazardous waste.

**2.4. Criteria for Disposal of Soil Not Intended for Reuse On Site**

If the Department elects to reuse soil within the Department ROW that has been excavated during construction activities, the soil may be classified either as hazardous waste or non-hazardous waste. The distinction is based on the total and soluble lead concentrations compared to the TTLC and STLC criteria. As mentioned in Section 2.2, the TTLC for total lead is 1,000 mg/kg and the STLC for citric acid extractable lead is 5.0 mg/l. Waste containing lead concentrations in excess of or equal to those listed must be disposed at a Class I hazardous waste disposal facility pursuant to State of California regulations.

### **3. INVESTIGATION METHODS**

The investigation activities are described in the following subsections and were conducted in general accordance with TO 41 that was approved by the Department prior to beginning the field activities.

#### **3.1. HSP**

A site-specific HSP dated November 8, 2010, was prepared by Ninyo & Moore and submitted to the Department for approval prior to commencing field work.

#### **3.2. Utility Clearance**

The boring locations were described to USA during the notification at least 48 hours prior to conducting the soil sampling. USA marked the member utilities known to be in the vicinity of the boring locations.

#### **3.3. Hand-Auger Sampling**

The field work was conducted on November 16 and 17, 2010. The boring locations were approved by the Department Task Order Manager and are shown on the attached Figure 2. Four samples were attempted for collection from each of the seven boreholes at depths of 0 to ½ foot, 1 to 1½, 2½ to 3, and 3½ to 4 feet bgs unless refusal was encountered. The depths reached for each boring are presented on Table 1.

Samples were placed into new, 4-ounce, glass jars; capped with Teflon-coated plastic lids; labeled; placed in a resealable plastic bag; and stored in a cooler. The sampling equipment was decontaminated between each boring. Soil samples were transferred under chain-of-custody (COC) protocol to ATL within 24 hours of collection. In accordance with TO 41, soil sample homogenization was performed in the laboratory.

Hand augering was conducted by Ninyo & Moore personnel.

### **3.4. Investigative-Derived Wastes**

Soil cuttings generated by hand-auger drilling were returned to their corresponding boreholes after collection of soil samples. Decontamination water was transported to Ninyo & Moore's Irvine office and placed in a drum pending chemical characterization. Based on the analytical result of the decontamination water sample (non-detect), the decontamination water was subsequently disposed in the sanitary sewer.

### **3.5. Laboratory Analyses**

Once the samples were received by ATL, the samples were homogenized and analyzed for the following:

- Eighty-nine soil samples were analyzed for total lead using EPA Method 6010B;
- Twenty-three of the soil samples contained a total lead concentration greater than or equal to 50 mg/kg and less than 1,000 mg/kg and were subsequently analyzed for soluble lead by the WET using citric acid for comparison to the STLC;
- Eight of the soil samples contained a soluble lead concentration greater than or equal to 5.0 mg/l and were therefore analyzed for soluble lead by the WET using de-ionized water for comparison to the STLC and soluble lead by TCLP.
- Approximately 10 percent of the soil samples (9 samples) were analyzed for pH using EPA Method 9045; and
- One sample of the decontamination water was analyzed for total lead using EPA Method 6010B.

## **4. ANALYTICAL RESULTS**

The results of this investigation are described in the following subsections. The analytical results of lead and pH are summarized in Table 1, and the sampling locations with their corresponding data are shown on Figures 13 through 33. Laboratory reports and COC records are included in Appendix B.

#### **4.1. Total Lead**

Eighty-nine samples were analyzed for total lead. The maximum total lead concentration was 640 mg/kg. The minimum total lead concentration was less than the laboratory practical quantitation limit of 5.0 mg/kg (Table 1).

The decontamination water sample did not contain a reportable concentration of lead.

#### **4.2. Soluble Lead – Citric Acid**

Twenty-three of the 89 samples contained total lead at a concentration greater than or equal to 50 mg/kg and less than 1,000 mg/kg and were subsequently analyzed for soluble lead using a citric acid extraction. The maximum reported concentration was 33 mg/l. The minimum reported concentration was 0.98 mg/l.

#### **4.3. Soluble Lead – Deionized Water**

Eight of the twenty-three samples analyzed using the WET contained soluble lead at a concentration greater than or equal to 5.0 mg/l and were subsequently analyzed for soluble lead using deionized water extraction. The reported concentrations were less than the laboratory practical quantitation limit of 0.25 mg/l.

#### **4.4. Soluble Lead – TCLP**

Eight of the twenty-three samples analyzed using the WET contained soluble lead at a concentration greater than or equal to 5.0 mg/l or contained a total lead concentration greater than 1,000 mg/kg and were subsequently analyzed for soluble lead by the TCLP Method. The maximum reported concentration was 1.1 mg/l. The minimum reported concentration was less than the laboratory practical quantitation limit of 0.25 mg/l.

#### **4.5. pH**

Approximately 10 percent of the samples collected (9 samples) were analyzed for pH. The maximum pH level was 9.0 and the minimum pH level was 7.6. The soil pH value is not

characteristic of RCRA hazardous waste and is above the lower limit of 5.0 specified in the DTSC Variance.

## **5. STATISTICAL EVALUATION**

The following subsections describe the statistical methods used to evaluate the lead data set for the site.

### **5.1. Statistical Evaluation Methods**

The analytical results were evaluated statistically to recommend the appropriate method of on-site reuse or off-site disposal of excavated soil. Prior to performing statistical calculations, concentrations below the laboratory reporting limit were assigned values equal to half the reporting limit. Statistical methods were applied to the data set to evaluate:

- The total lead data population distribution;
- The one-sided upper confidence limits (UCLs) of the means of the total lead concentrations; and
- If there is an acceptable correlation between total and soluble lead concentrations that would allow prediction of soluble lead concentrations based on calculated UCLs.

### **5.2. Population Distribution**

A test for population distribution is necessary in order to apply the appropriate evaluation methods when estimating the UCLs on the total lead means. When evaluating the distribution of total lead concentrations, total lead data are treated as one data set. Distribution was evaluated in accordance with EPA SW-846, Chapter Nine (1986) by comparing the mean to the variance of the total lead data sets. If the mean is greater than the variance, the data set is normally distributed and no transformation is performed. If the mean is less than the variance, the data set is transformed using an arcsine conversion. If the mean is approximately equal to the variance, the data set is transformed using a square-root conversion. A histogram of the data is presented in Appendix D.

### 5.3. Upper Confidence Limits

The UCLs are used to address the uncertainty associated with estimating the true mean concentration of a population. As more data become available for a given site, the uncertainty of the estimate of a true statistical mean decreases and the UCLs move closer to the true mean of the population.

For this project, a 90 percent UCL is calculated for soil to be reused on site, while a 95 percent UCL is calculated for soil to be disposed off site. As described in Section 2.3.2, the maximum 90 percent UCL allowed for soil reuse on site is 3,397 mg/kg. A total lead concentration above 1,000 mg/kg is classified as hazardous for soil not reused on site, corresponding to a 95 percent UCL greater than or equal to 1,000 mg/kg.

One-sided 90 and 95 percent UCLs of the true mean are defined as values that, when calculated repeated for randomly drawn subsets of data, equal or exceed the true mean 90 and 95 percent of the time, respectively. The following equation (EPA, 1986) was used to calculate the UCLs:

$$UCL = \bar{x} + t_p \frac{S}{\sqrt{n}}$$

Where:

$\bar{x}$  = sample mean

$t_p$  = student's t for a one-tailed confidence interval and a probability of p

S = standard deviation

N = number of samples

The samples in this study were collected using a systematic random sampling approach. SW-846 Chapter Nine indicates that statistical transformation should be used if the data set is not normally distributed and that statistical evaluations should be performed on the transformed scale. The data for this project are not normally distributed and therefore must be transformed using the arcsine function.

Transformation using the arcsine function is accomplished by calculating the arcsine of the concentration normalized to the maximum concentration in the population. That is:

$$y_i = \arcsine \frac{x_i}{x_{\max}}$$

Where:

$y_i$  = transformed value sample mean

$x_i$  = reported concentration

$x_{\max}$  = maximum concentration reported for the data set

The final result is transformed back to a concentration by multiplying the sine of the transformed number by the maximum concentration:

$$z_i = x_{\max} \sin y_i$$

In order to evaluate four of the possible soil excavation depth scenarios, several different UCLs for total lead concentrations were calculated:

- **Scenario A** – surface soil (0 to ½ foot) and underlying subsurface soil (½ foot to 4 feet bgs)
- **Scenario B** – the upper 1½ feet (0 to 1½ feet) and the underlying subsurface soil (1½ to 4 feet)
- **Scenario C** – the upper 3 feet (0 to 3 feet) and the underlying subsurface soil (3 to 4 feet)
- **Scenario D** – the entire 4-foot soil column

Results of this exercise are presented in Appendix C and are shown graphically on the block diagrams presented in Appendix F.

#### 5.4. Regression Analysis

A linear regression analysis is used to create a soluble lead prediction model for use with the 90 and 95 percent UCLs. A line fit to the data using the equation:

$$y = mx + b$$

Where:

y = soluble lead by WET-citric acid, mg/l

x = total lead concentration, mg/kg

b = y-intercept

m = slope

$$\text{slope} = \frac{r \times s_t}{s_s}$$

Where:

r = correlation coefficient

s<sub>t</sub> = standard deviation of the total lead concentrations

s<sub>s</sub> = standard deviation of the soluble lead concentrations

The linear equation from the regression is used to predict soluble lead concentrations for the statistical total lead UCLs. The integrity of the equation is directly related to 'r,' the correlation coefficient, which should be greater than or equal to 0.8.

A regression analysis was performed for this data set and the correlation coefficient was 0.9153. The regression analysis is included as Appendix E.

## 6. CONCLUSIONS

The analyses of the data indicate that the surface layer tends to have the highest concentrations of total lead, followed by the 1½-foot layer, then the 3-foot layer, and then the 4-foot layer. Assuming the soil has not been disturbed since construction of the routes in the site vicinities, concentrations of total lead would be expected to decrease with depth.

## 7. RECOMMENDATIONS

Based on the findings of this study, recommendations are summarized on block diagrams in Appendix F and discussed below.

### **7.1. Recommendations for Soil for Reuse by the Department**

Soil at the site can be reused on site with the following restrictions:

- Scenario A, soil in the surface layer (surface to 0.5 feet bgs) may be reused on site if it is placed a minimum of 5 feet above the maximum water table elevation and covered with at least 1 foot of non-hazardous soil. The remaining soil from the surface to 4 feet bgs has no restrictions based on total and soluble lead concentrations.
- Scenario B, soil in the surface to 1.5-foot layer (surface to 1.5 feet bgs) may be reused on site if it is placed a minimum of 5 feet above the maximum water table elevation and covered with at least 1 foot of non-hazardous soil. The remaining soil from the 1.5-foot layer to 4 feet bgs has no restrictions based on total and soluble lead concentrations.
- Scenario C, soil in the surface to 3-foot layer (surface to 3 feet bgs) has no restrictions based on total and soluble lead concentrations. The remaining soil from the 3-foot layer to 4 feet bgs has no restrictions based on total and soluble lead concentrations.
- Scenario D, soil in the surface to 4-foot layer (surface to 4 feet bgs) has no restrictions based on total and soluble lead concentrations.

### **7.2. Recommendations for Soil to be Disposed Off Site**

If the Department elects to dispose the soil off site, the following restrictions apply:

- Scenario A, soil in the surface layer (surface to 0.5 feet bgs) is classified as hazardous and should be disposed at a Class 1 disposal site in accordance with Title 22 CCR requirements. The remaining soil from the surface to 4 feet bgs is classified as non-hazardous and may be disposed off site with no restrictions based on total and soluble lead.
- Scenario B, soil in the surface to 1.5-foot layer (surface to 1.5 feet bgs) is classified as hazardous and should be disposed at a Class 1 disposal site in accordance with Title 22 CCR requirements. The remaining soil from the 1.5-foot layer to 4 feet bgs is classified as non-hazardous and may be disposed off site with no restrictions based on total and soluble lead.
- Scenario C, soil in the surface to 3-foot layer (surface to 3 feet bgs) is classified as non-hazardous and may be disposed off site with no restrictions based on total and soluble lead. The remaining soil from the 3-foot layer to 4 feet bgs is classified as non-hazardous and may be disposed off site with no restrictions based on total and soluble lead.
- Scenario D, soil in the surface to 4-foot layer is classified as non-hazardous and may be disposed off site with no restrictions based on total and soluble lead.

The Department should notify the contractors performing the construction activities that hazardous concentrations of lead are present in on-site soil. Appropriate health and safety measures should be taken to minimize the potential exposure to lead.

## **8. 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 for lead is 0.05 milligrams per cubic meter in air based on an eight-hour time-weighted average. The immediately dangerous to life and health exposure limit is 100 mg/m<sup>3</sup> as established by the National Institute of Occupational Safety and Health. 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 HSP 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/910.120 and 8 CCR 1532.1. The plan developed by the CIH should include a hazard analysis, dust control measures, air monitoring, signage, work practices, emergency response plans, personal protective equipment, decontamination, and documentation.

## **9. LIMITATIONS**

The services outlined in this report have been conducted in a manner generally consistent with current regulatory guidelines. No warranty, expressed or implied, is made regarding the professional opinions presented in this report. Ninyo & Moore's opinions are based on an analysis of

observed conditions and on information obtained from third parties. It is likely that variations in soil conditions may exist.

The samples collected and chemically analyzed and the observations made are believed to be representative of the general area evaluated; however, conditions can vary significantly between sampling locations. The interpretations and opinions contained in this report are based on the results of laboratory tests and analyses intended to detect the presence and measure the concentration of selected chemical or physical constituents in samples collected from the site. The analyses have been conducted by an independent laboratory certified by the State of California to conduct such analyses. Ninyo & Moore has no involvement in, or control over, such analyses and has no means of confirming the accuracy of laboratory results. Ninyo & Moore, therefore, disclaims any responsibility for inaccuracy in such laboratory results.

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 wants any additional information, or has questions regarding content, interpretations presented, or completeness of this document. Opinions and judgments expressed herein, which are based on our understanding and interpretation of current regulatory standards, should not be construed as legal opinions.

For individuals with sensory disabilities, this document is available in alternate formats upon request. For any questions regarding this document, please call or write Wayne Chiou, Environmental Engineering, 3347 Michelson Drive, Suite 100, Irvine, California 92612-1692. Phone Number (949) 724-2221.

## **10. REFERENCES**

Department of Toxic Substance Control (DTSC), 2009, Variance (V69HQSCD006), dated June 30.

**TABLE 1 – SOIL ANALYTICAL RESULTS – AERIALY DEPOSITED LEAD, pH,  
 AND GPS COORDINATES**

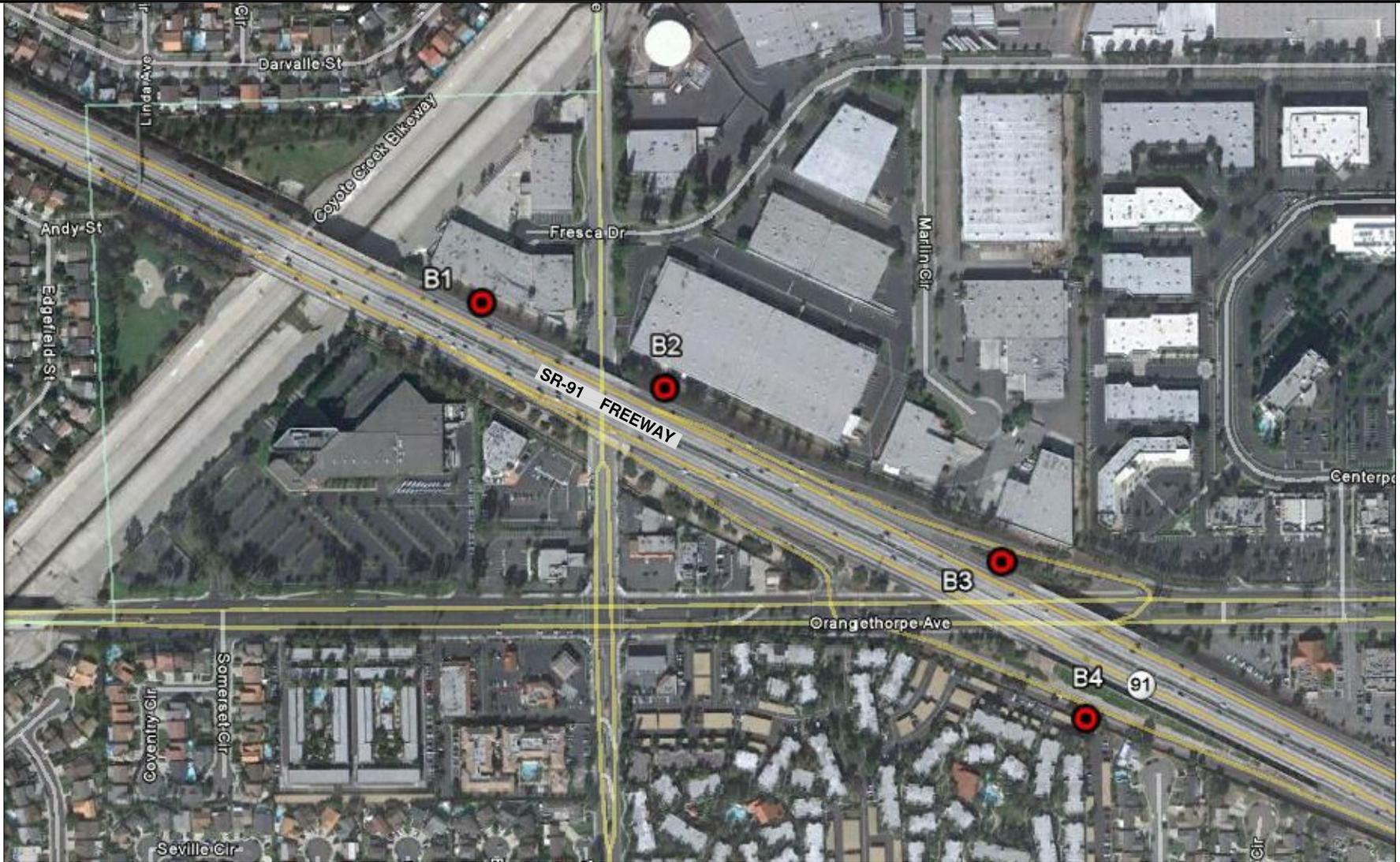
Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH	Latitude	Longitude
B1-0.5	0.5	11/16/2010	19					6018592.42991	2261617.53883
B1-1.5	1.5	11/16/2010	67	2.4					
B1-3	3	11/16/2010	100	7.5	ND<0.25	0.36			
B1-4	4	11/16/2010	97	4.8					
B2-0.5	0.5	11/16/2010	65	2.9			8.5	6019182.33809	2261320.78722
B2-1.5	1.5	11/16/2010	120	4.5					
B2-3	3	11/16/2010	62	4.5					
B2-4	4	11/16/2010	24						
B3-0.5	0.5	11/16/2010	24					6020057.64448	2260943.73123
B3-1.5	1.5	11/16/2010	12						
B3-3	3	11/16/2010	39						
B3-4	4	11/16/2010	26						
B4-0.5	0.5	11/16/2010	640	33	ND<0.25	0.82		6020357.87475	2260452.06437
B4-1.5	1.5	11/16/2010	17						
B4-3	3	11/16/2010	7.3						
B4-4	4	11/16/2010	13						
B5-0.5	0.5	11/16/2010	26					6021995.18975	2259952.22690
B5-1.5	1.5	11/16/2010	5.5						
B5-3	3	11/16/2010	5.6						
B5-4	4	11/16/2010	ND<5.0						
B6-0.5	0.5	11/16/2010	38					6022836.55826	2259774.37898
B6-1.5	1.5	11/16/2010	ND<5.0						
B6-3	3	11/16/2010	ND<5.0						
B6-4	4	11/16/2010	ND<5.0				9.0		
B7-0.5	0.5	11/16/2010	330	30	ND<0.25	1.1		6024510.69556	2259729.99089
B7-1.5	1.5	11/16/2010	64	3.0					
B7-3	3	11/16/2010	36						
B7-4	4	11/16/2010	23						
B8-0.5	0.5	11/16/2010	140	3.8				6027268.40299	2259473.40318
B8-1.5	1.5	11/16/2010	ND<5.0						
B8-3	3	11/16/2010	8.0				8.2		
B8-4	4	11/16/2010	ND<5.0						
B9-0.5	0.5	11/16/2010	34					6043083.30595	2258418.87984
B9-1.5	1.5	11/16/2010	6.0						
B9-3	3	11/16/2010	21						
B9-4	4	11/16/2010	ND<5.0						
B10-0.5	0.5	11/16/2010	190	16	ND<0.25	0.65		6048382.31893	2258381.50639
B10-1.5	1.5	11/16/2010	11				8.3		
B10-3	3	11/16/2010	ND<5.0						
B10-4	4	11/16/2010	5.7						
B11-0.5	0.5	11/16/2010	18					6052026.68134	2258379.85086
B11-1.5	1.5	11/16/2010	100	6.8	ND<0.25	0.63			
B11-3	3	11/16/2010	28						
B11-4	4	11/16/2010	9.8						
B12-0.5	0.5	11/16/2010	56	4.3				6052683.80081	2258233.01291
B12-1.5	1.5	11/16/2010	5.8						
B12-3	3	11/16/2010	53	2.1					
B12-4	4	11/16/2010	21				8.2		
B13-0.5	0.5	11/16/2010	17					6054925.55968	2258391.48448
B13-1.5	1.5	11/16/2010	46						
B13-3	3	11/16/2010	33						
B13-4	4	11/16/2010	40						
B14-0.5	0.5	11/16/2010	29					6055322.16400	2258315.49300
B14-1.5	1.5	11/16/2010	80	4.2					
B14-3	3	11/16/2010	140	5.2	ND<0.25	ND<0.25			
B14-4	4	11/16/2010	44						
B15-0.5	0.5	11/16/2010	67	2.4			7.6	6056675.66098	2258236.73773
B15-1.5	1.5	11/16/2010	51	2.7					
B15-3	3	11/16/2010	49						
B15-4	4	11/16/2010	33						

**TABLE 1 – SOIL ANALYTICAL RESULTS – AERIALY DEPOSITED LEAD, pH,  
 AND GPS COORDINATES**

Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH	Latitude	Longitude
B16-0.5	0.5	11/17/2010	33					6059060.61900	2258217.49300
B16-1.5	1.5	11/17/2010	21						
B17-0.5	0.5	11/17/2010	28					6059225.5538	2258203.5972
B18-0.5	0.5	11/17/2010	42					6064481.07400	2258178.39200
B18-1.5	1.5	11/17/2010	77	9.4	ND<0.25	ND<0.25	8.2		
B18-3	3	11/17/2010	ND<5.0						
B18-4	4	11/17/2010	6.5						
B19-0.5	0.5	11/17/2010	26					6067249.68200	2257009.80800
B19-1.5	1.5	11/17/2010	13						
B20-0.5	0.5	11/16/2010	69	4.2				6068967.04917	2256247.09678
B20-1.5	1.5	11/16/2010	53	1.7			8.4		
B20-3	3	11/16/2010	6.8						
B20-4	4	11/16/2010	ND<5.0						
B21-0.5	0.5	11/17/2010	14					6073572.8690	2255603.4770
B21-1.5	1.5	11/17/2010	55	0.98					
B21-3	3	11/17/2010	30				7.8		
B21-4	4	11/17/2010	ND<5.0						
B22-0.5	0.5	11/17/2010	85	8.4	ND<0.25	0.30		6078297.36300	2256972.62600
B22-1.5	1.5	11/17/2010	ND<5.0						
B22-3	3	11/17/2010	11						
B22-4	4	11/17/2010	ND<5.0						
B23-0.5	0.5	11/17/2010	29					6079200.63200	2256687.90600
B23-1.5	1.5	11/17/2010	ND<5.0						
B23-3	3	11/17/2010	ND<5.0						
B23-4	4	11/17/2010	ND<5.0						
B24-0.5	0.5	11/16/2010	15					6081840.81262	2255143.30752
B24-1.5	1.5	11/16/2010	7.5						
B24-3	3	11/16/2010	ND<5.0						
B24-4	4	11/16/2010	11						
<b>Maximum</b>			640	33	ND<0.25	1.1	9.0		
<b>Average</b>			43.5	7.2		0.5	8.2		
<b>Minimum</b>			ND<5.0	0.98	ND<0.25	ND<0.25	7.6		
<b>Regulatory Limits</b>			1411 <sup>(1)</sup>	5 <sup>(2)</sup>	1.5 <sup>(3)</sup>	5 <sup>(4)</sup>	5 <sup>(5)</sup>		
<b>Decontamination Water (mg/l)</b>									
Decon 41		11/17/2010	ND<0.25						
<b>Notes:</b>									
mg/kg – milligrams per kilogram									
mg/l – milligrams per liter									
TTLc – total lead for comparison to the Total Threshold Limit Concentration									
WET – Waste Extraction Test									
WET-citric – soluble lead by WET using citric acid for comparison to the Soluble Threshold Limit Concentration									
WET-DI – soluble lead by WET using deionized water for comparison to the Soluble Threshold Limit Concentration									
TCLP – soluble lead by the Toxicity Characteristic Leaching Procedure									
ND – not detected above reporting limits presented in Appendix B									
1 – Limit specified in addendum to Variance issued by the Department of Toxic Substance Control to Caltrans (DTSC) Variance, September 22, 2000; Addendum, December 2002; Addendum June 2008)									
2 – Soluble Threshold Limit Concentration for California Hazardous Waste (California Code of Regulations [CCR] Title 22, Section 66261.24)									
3 – Limit Specified by DTSC Variance									
4 – Maximum concentration for the TCLP of Resource, Conservation, and Recovery Act (RCRA) hazardous waste (CCR Title 22, Section 66216.24)									
5 – Minimum value specified by DTSC variance									



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SCALE IN FEET



NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2010.

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PROJECT NO.	DATE
207384041	12/10

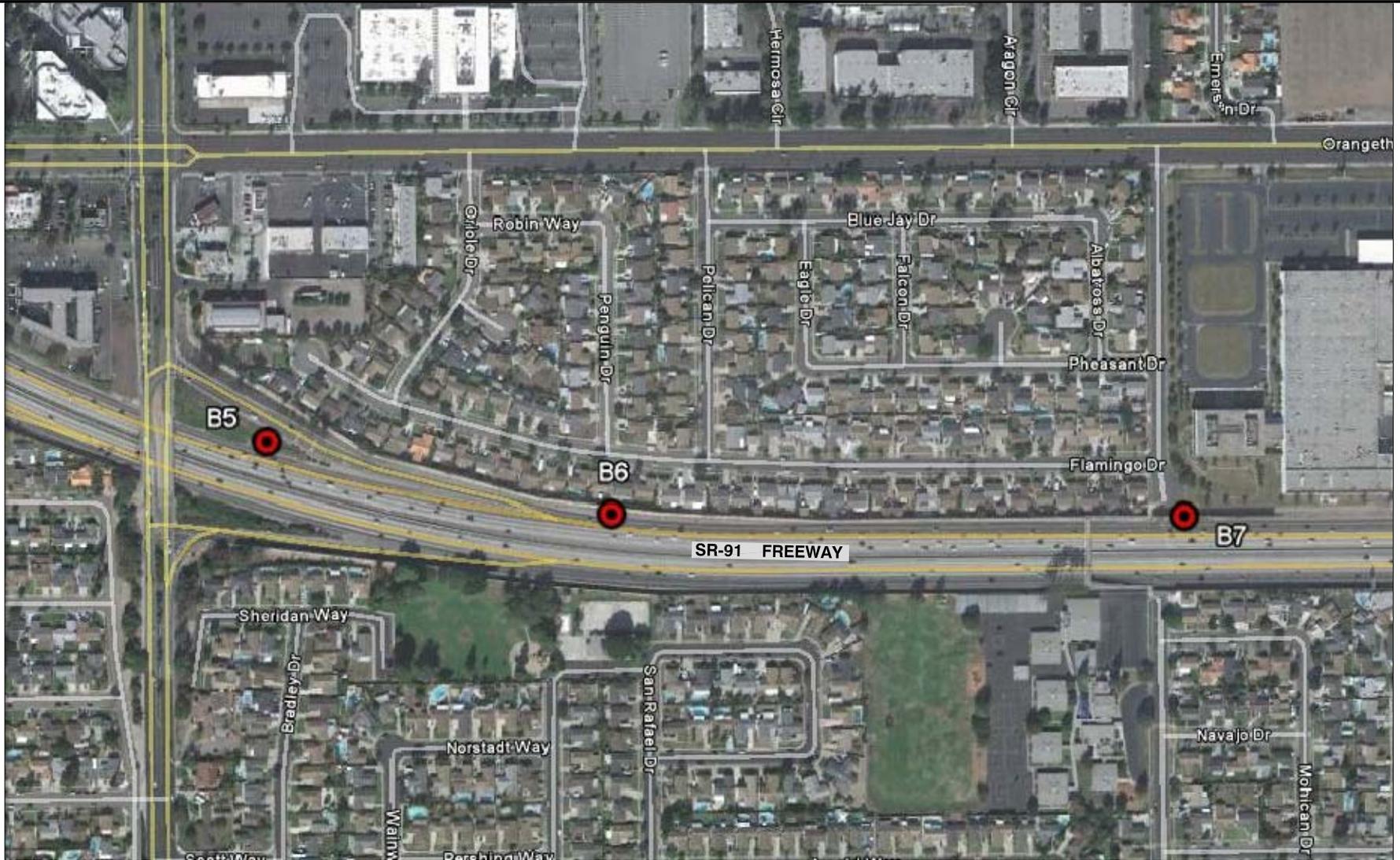
**BORING LOCATIONS**

STATE ROUTE 91 FROM  
POST MILE 0.0 TO 10.09  
ORANGE COUNTY, CALIFORNIA

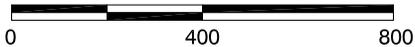
LEGEND	
<b>B1</b> 	BORING

FIGURE

**2**



SCALE IN FEET

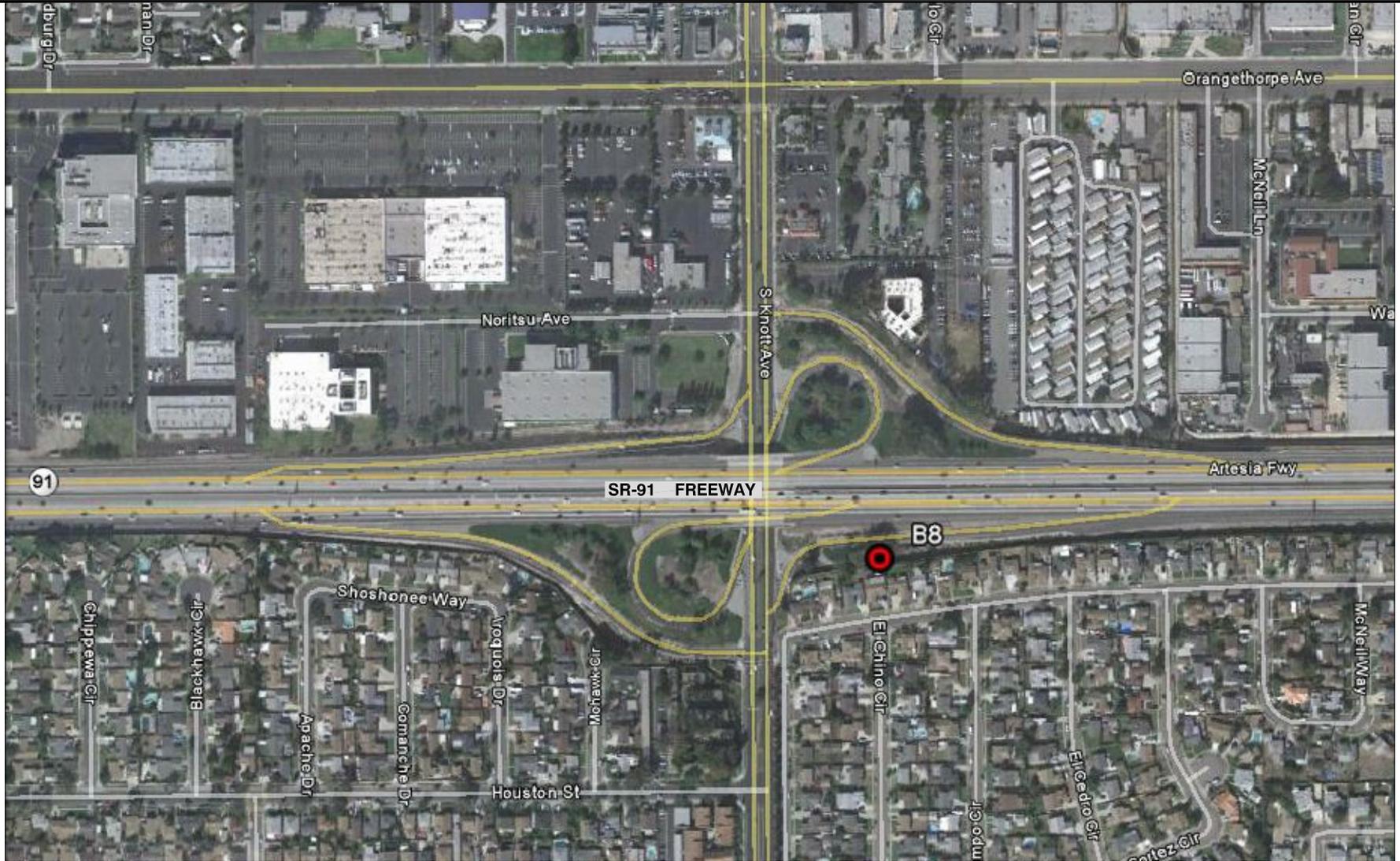


NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2010.

LEGEND	
<b>B1</b> 	BORING

<b><i>Ninyo &amp; Moore</i></b>		<b>BORING LOCATIONS</b>	FIGURE <b>3</b>
PROJECT NO. 207384041	DATE 12/10		



SCALE IN FEET

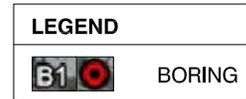
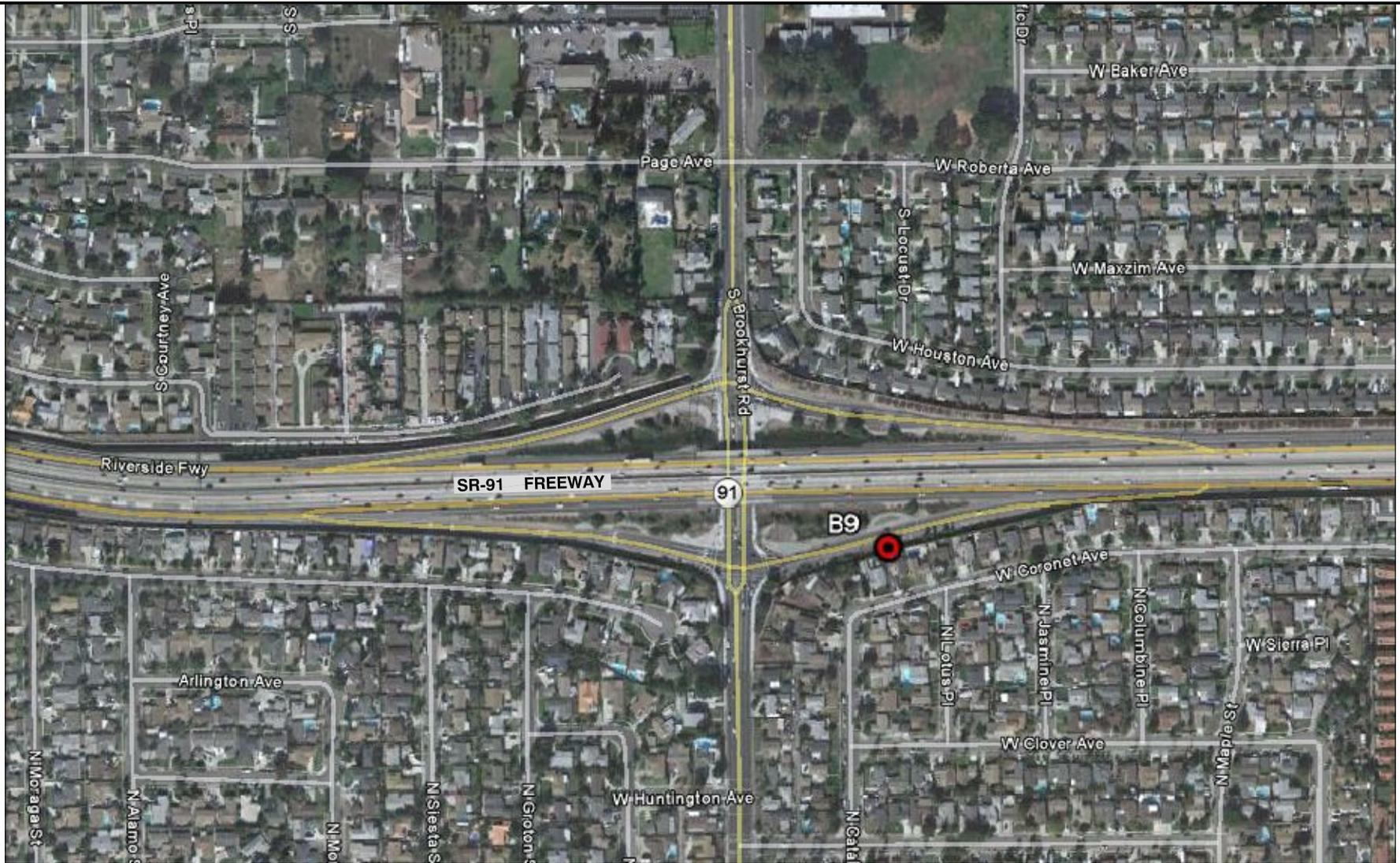


NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

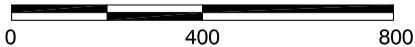
REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2010.

LEGEND	
<b>B1</b>	 BORING

		<b>BORING LOCATIONS</b>	FIGURE  <b>4</b>
PROJECT NO.	DATE		
207384041	12/10		



SCALE IN FEET

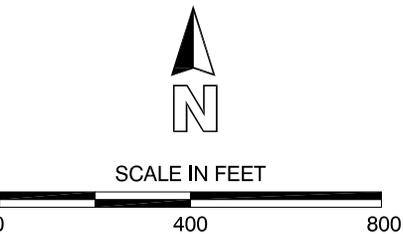
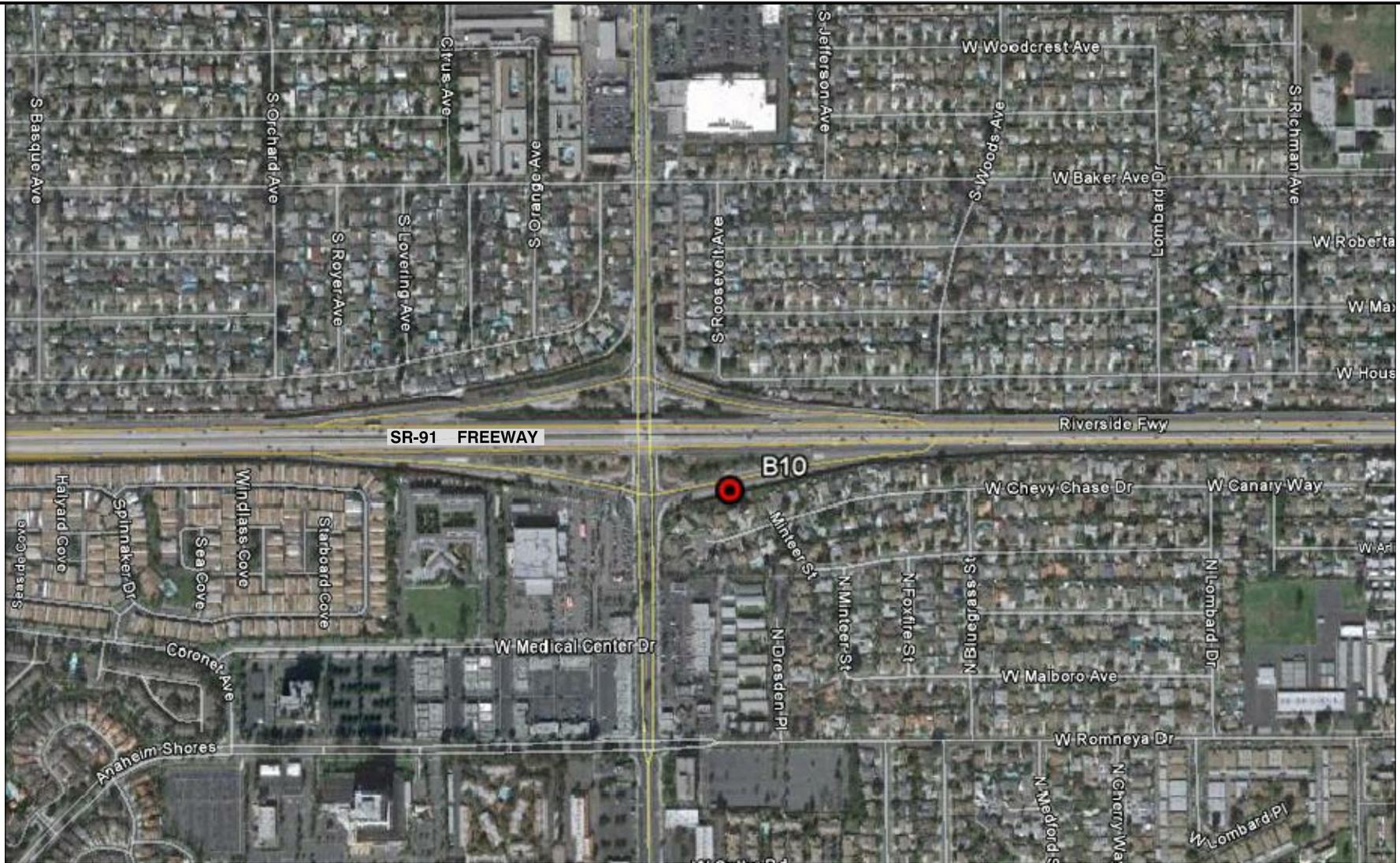


NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2010.

**Ninyo & Moore**

		<b>BORING LOCATIONS</b>	FIGURE <b>5</b>
PROJECT NO.	DATE		
207384041	12/10		

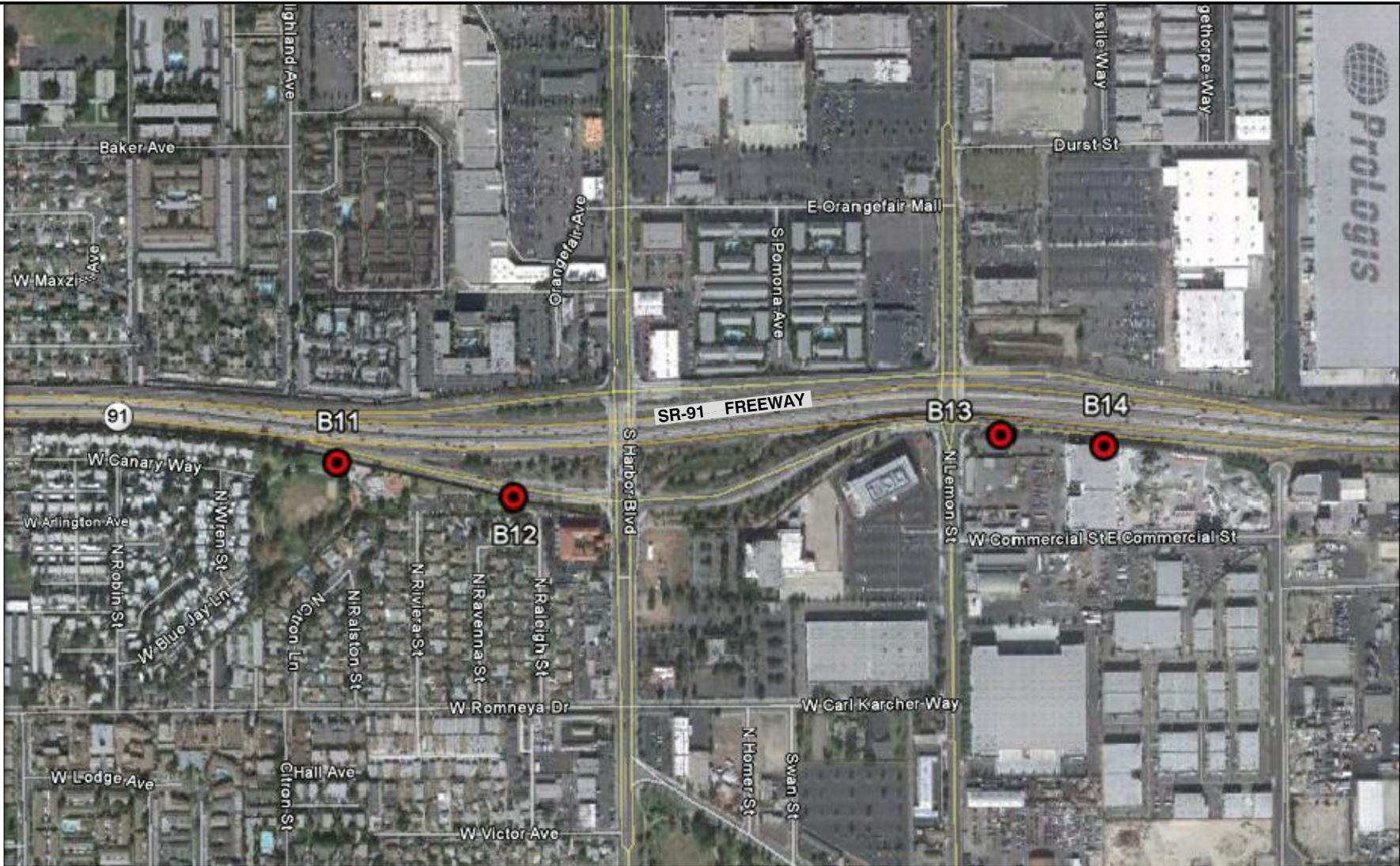


NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2010.

LEGEND	
<b>B1</b>	BORING

<b><i>Ninyo &amp; Moore</i></b>		<b>BORING LOCATIONS</b>	STATE ROUTE 91 FROM POST MILE 0.0 TO 10.09 ORANGE COUNTY, CALIFORNIA	<b>FIGURE</b>  <b>6</b>
PROJECT NO.	DATE			
207384041	12/10			



SCALE IN FEET



NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2010.

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PROJECT NO.	DATE
207384041	12/10

**BORING LOCATIONS**

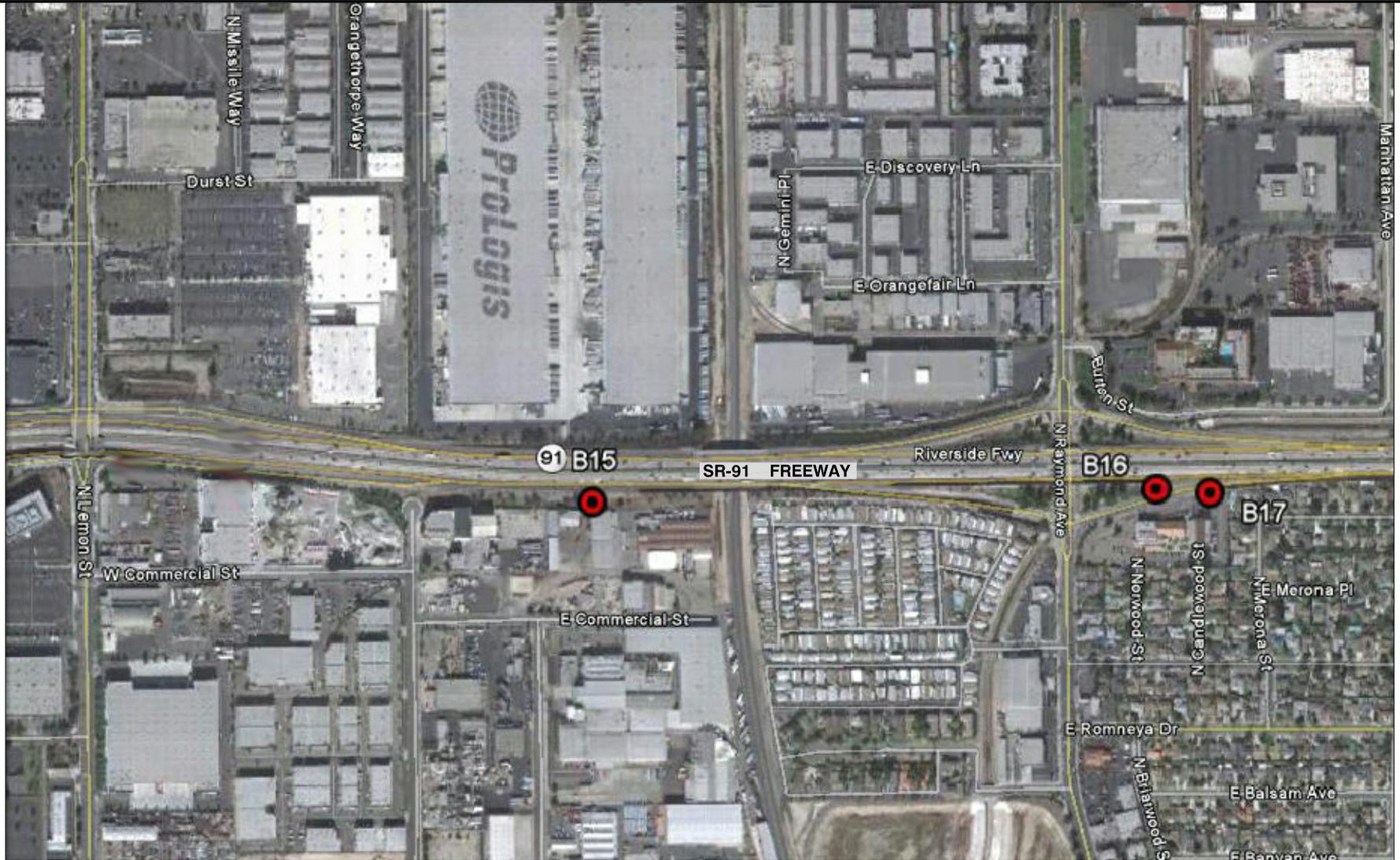
STATE ROUTE 91 FROM  
POST MILE 0.0 TO 10.09  
ORANGE COUNTY, CALIFORNIA

**LEGEND**

**B1**  BORING

FIGURE

**7**



SCALE IN FEET



NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2010.

**Ninyo & Moore**

PROJECT NO.	DATE
207384041	12/10

**BORING LOCATIONS**

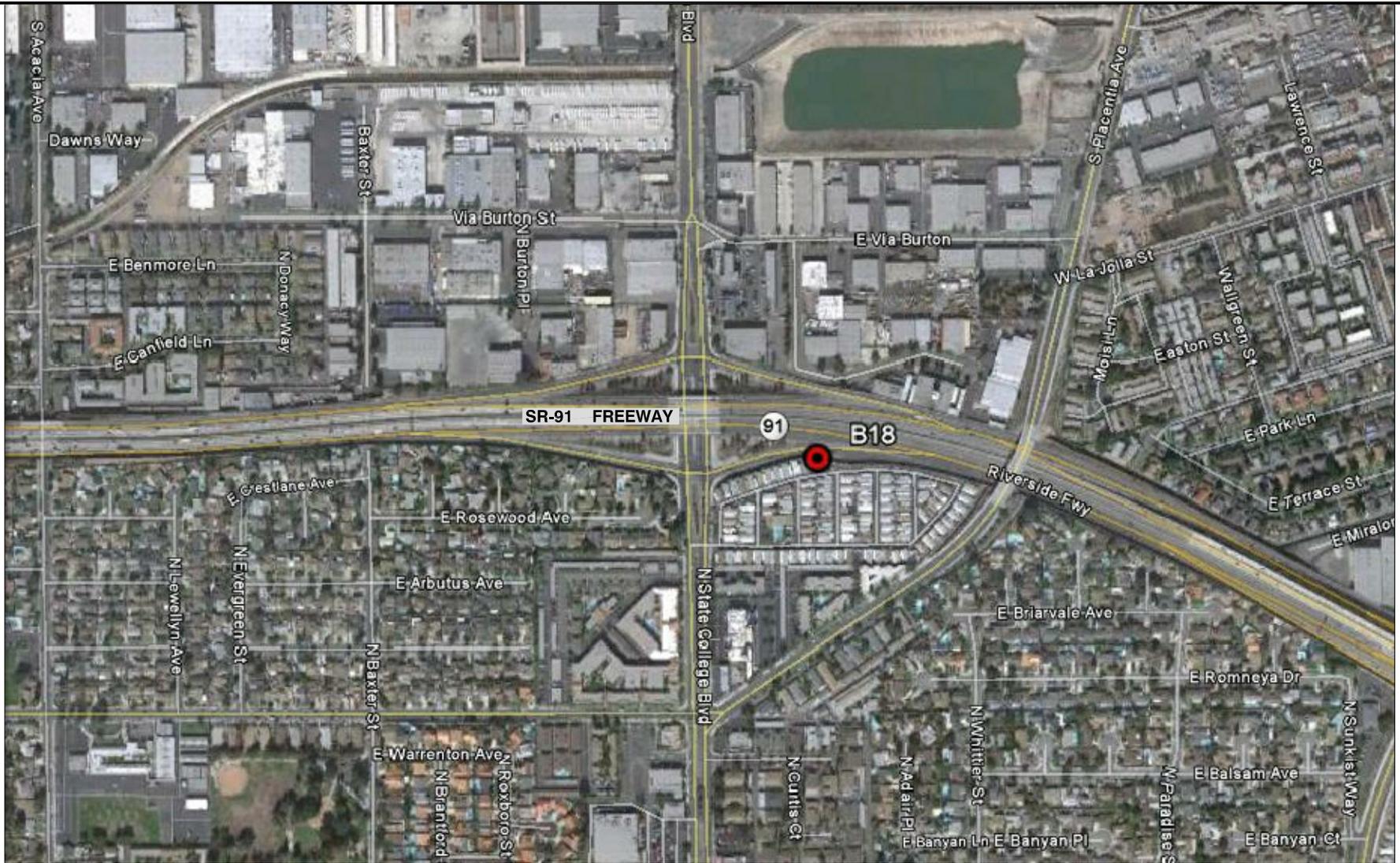
STATE ROUTE 91 FROM  
POST MILE 0.0 TO 10.09  
ORANGE COUNTY, CALIFORNIA

LEGEND	
<b>B1</b>	BORING

FIGURE

**8**

207384\_A8.DWG.....-G.K.



SCALE IN FEET



NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2010.

**Ninyo & Moore**

PROJECT NO.	DATE
207384041	12/10

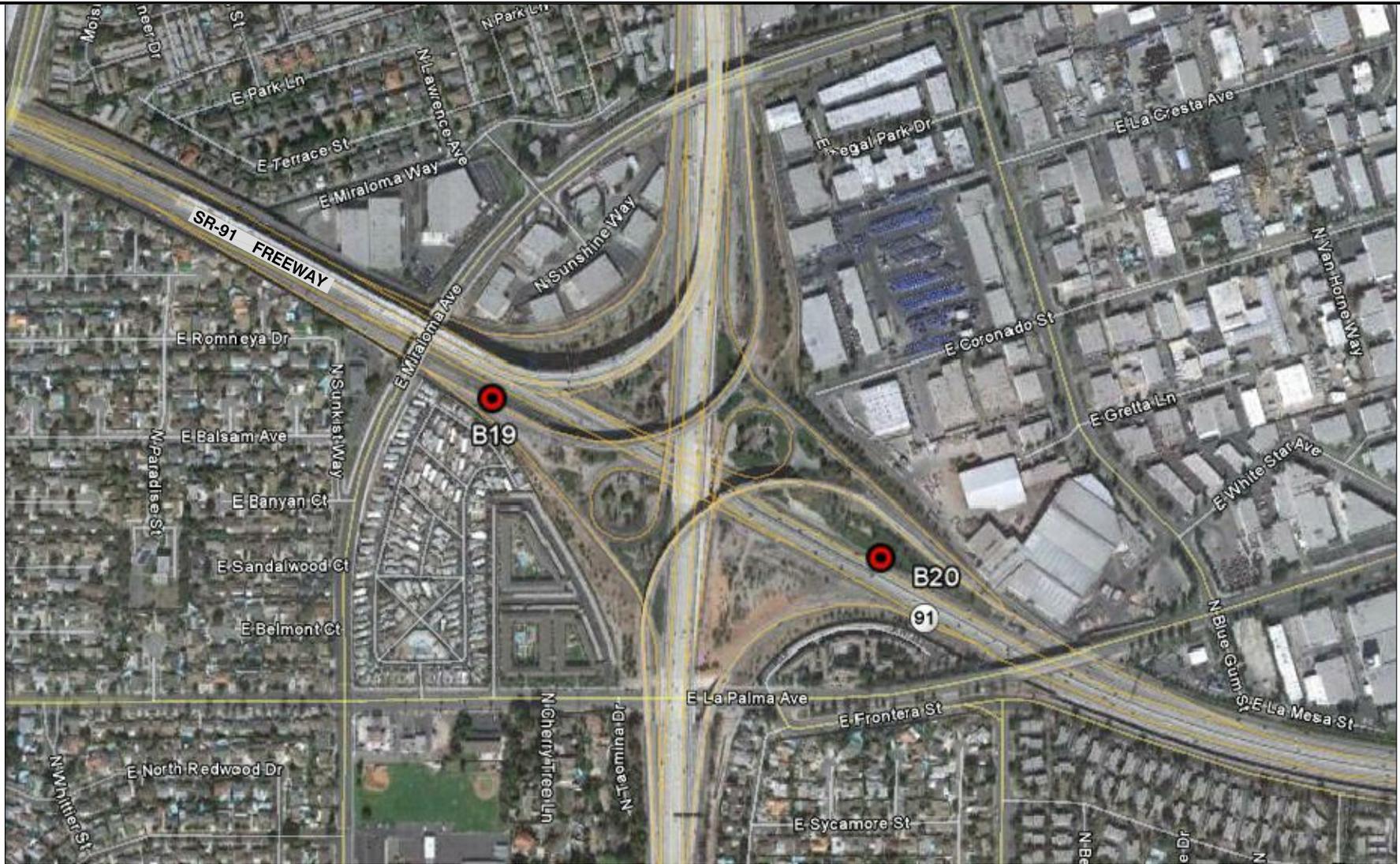
**BORING LOCATIONS**

STATE ROUTE 91 FROM  
POST MILE 0.0 TO 10.09  
ORANGE COUNTY, CALIFORNIA

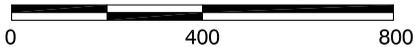
LEGEND	
<b>B1</b>	BORING

FIGURE

**9**



SCALE IN FEET



NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2010.

**Ninyo & Moore**

PROJECT NO.	DATE
207384041	12/10

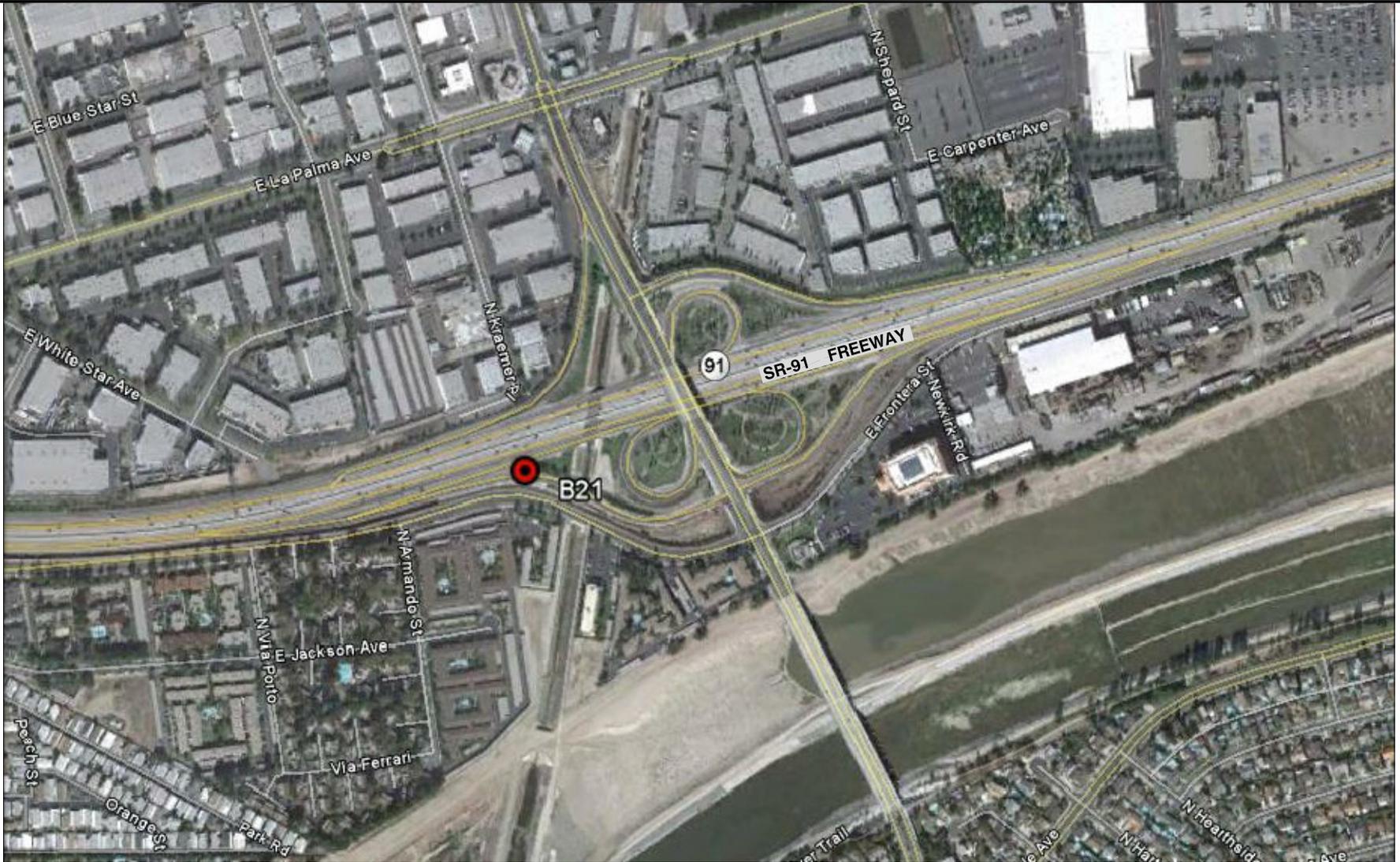
**BORING LOCATIONS**

STATE ROUTE 91 FROM  
POST MILE 0.0 TO 10.09  
ORANGE COUNTY, CALIFORNIA

LEGEND	
<b>B1</b>	BORING

FIGURE

**10**



SCALE IN FEET

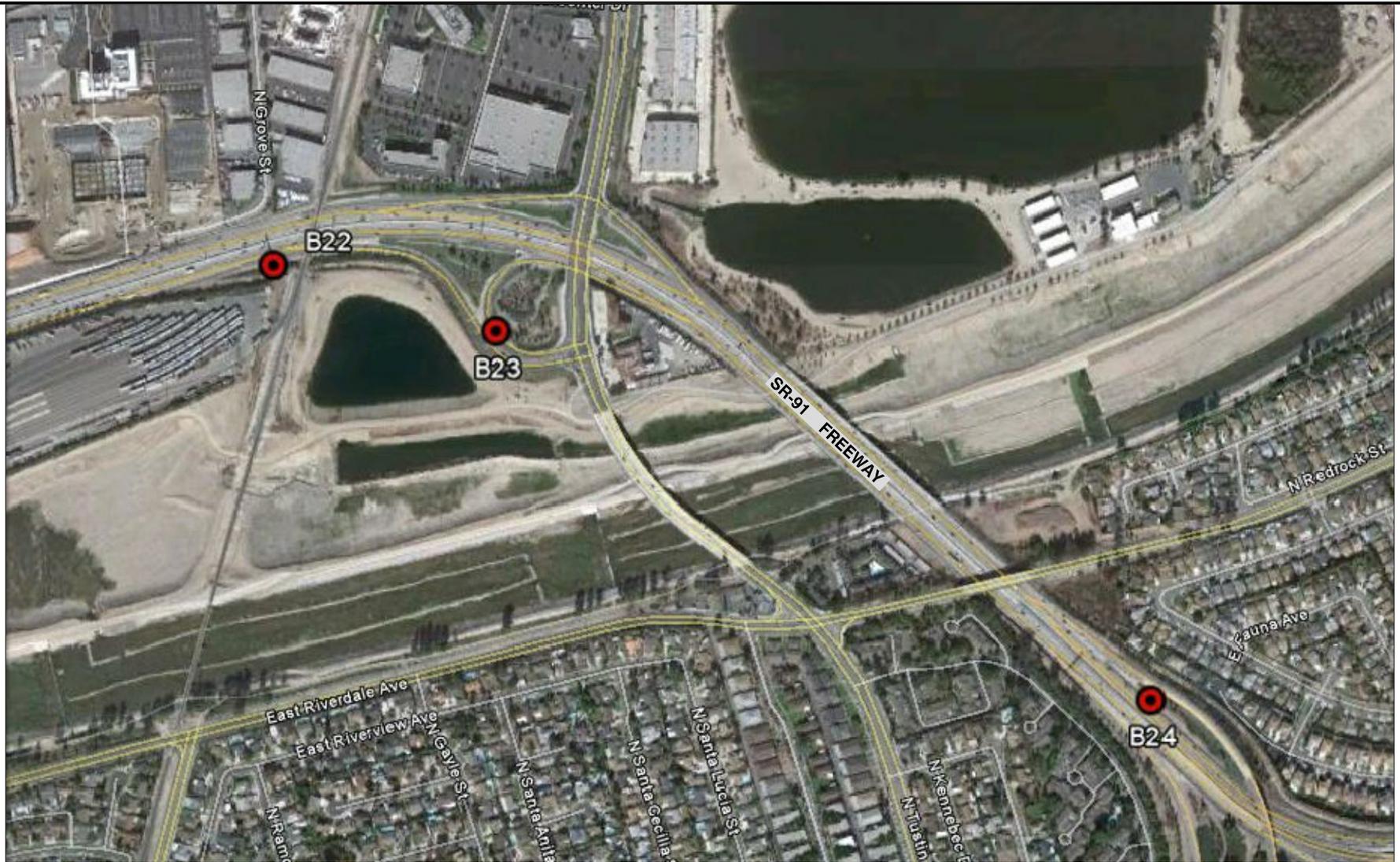


NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2010.

LEGEND	
<b>B1</b> 	BORING

		<b>BORING LOCATIONS</b>	FIGURE  <b>11</b>



SCALE IN FEET



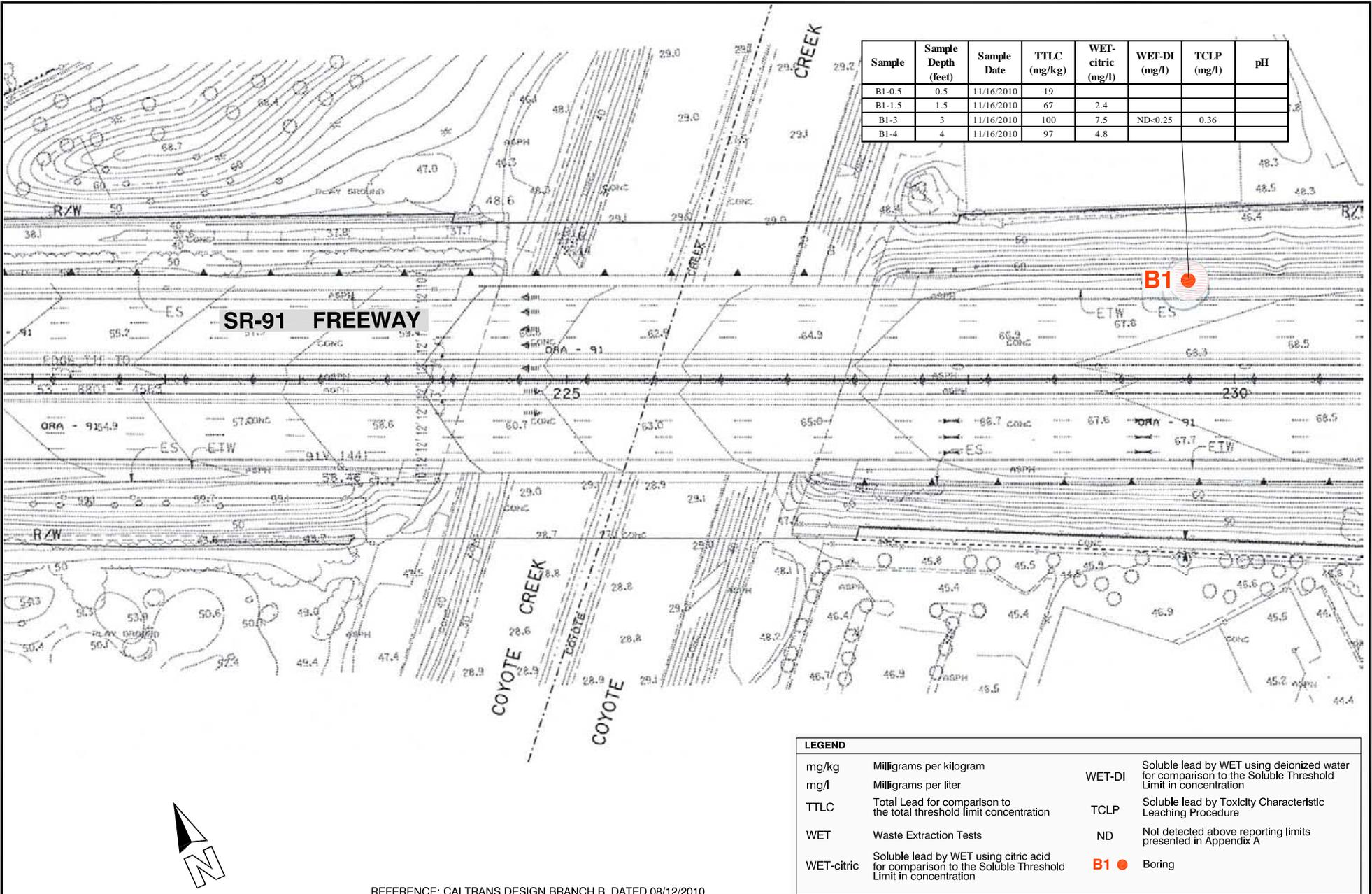
NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: GOOGLE EARTH AERIAL PHOTO, 2010.

LEGEND	
<b>B1</b>	 BORING

<i><b>Ninyo &amp; Moore</b></i>		<b>BORING LOCATIONS</b>	FIGURE
PROJECT NO.	DATE	STATE ROUTE 91 FROM POST MILE 0.0 TO 10.09 ORANGE COUNTY, CALIFORNIA	<b>12</b>
207384041	12/10		

207384\_A12.DWG.....G.K.



SCALE IN FEET



NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: CALTRANS DESIGN BRANCH B, DATED 08/12/2010.

**Ninyo & Moore**

PROJECT NO.	DATE
207384041	12/10

**BORING DATA**

STATE ROUTE 91 FROM  
POST MILE 0.0 TO 10.09  
ORANGE COUNTY, CALIFORNIA

FIGURE

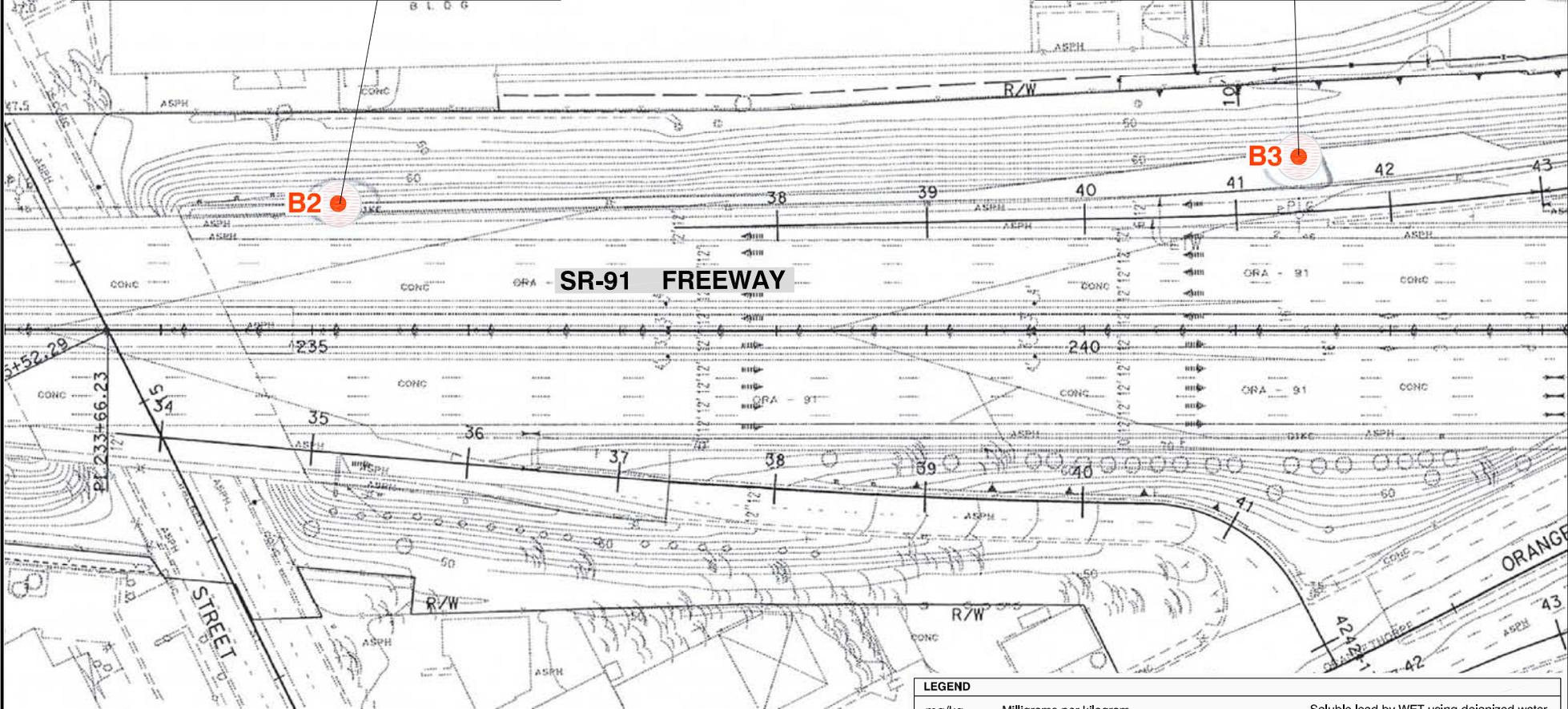
**13**

LEGEND	
mg/kg	Milligrams per kilogram
mg/l	Milligrams per liter
TTLc	Total Lead for comparison to the total threshold limit concentration
WET	Waste Extraction Tests
WET-citric	Soluble lead by WET using citric acid for comparison to the Soluble Threshold Limit in concentration
WET-DI	Soluble lead by WET using deionized water for comparison to the Soluble Threshold Limit in concentration
TCLP	Soluble lead by Toxicity Characteristic Leaching Procedure
ND	Not detected above reporting limits presented in Appendix A
<b>B1</b> ●	Boring

207384\_A13.DWG.....G.K.

Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B2-0.5	0.5	11/16/2010	65	2.9			8.5
B2-1.5	1.5	11/16/2010	120	4.5			
B2-3	3	11/16/2010	62	4.5			
B2-4	4	11/16/2010	24				

Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B3-0.5	0.5	11/16/2010	24				
B3-1.5	1.5	11/16/2010	12				
B3-3	3	11/16/2010	39				
B3-4	4	11/16/2010	26				

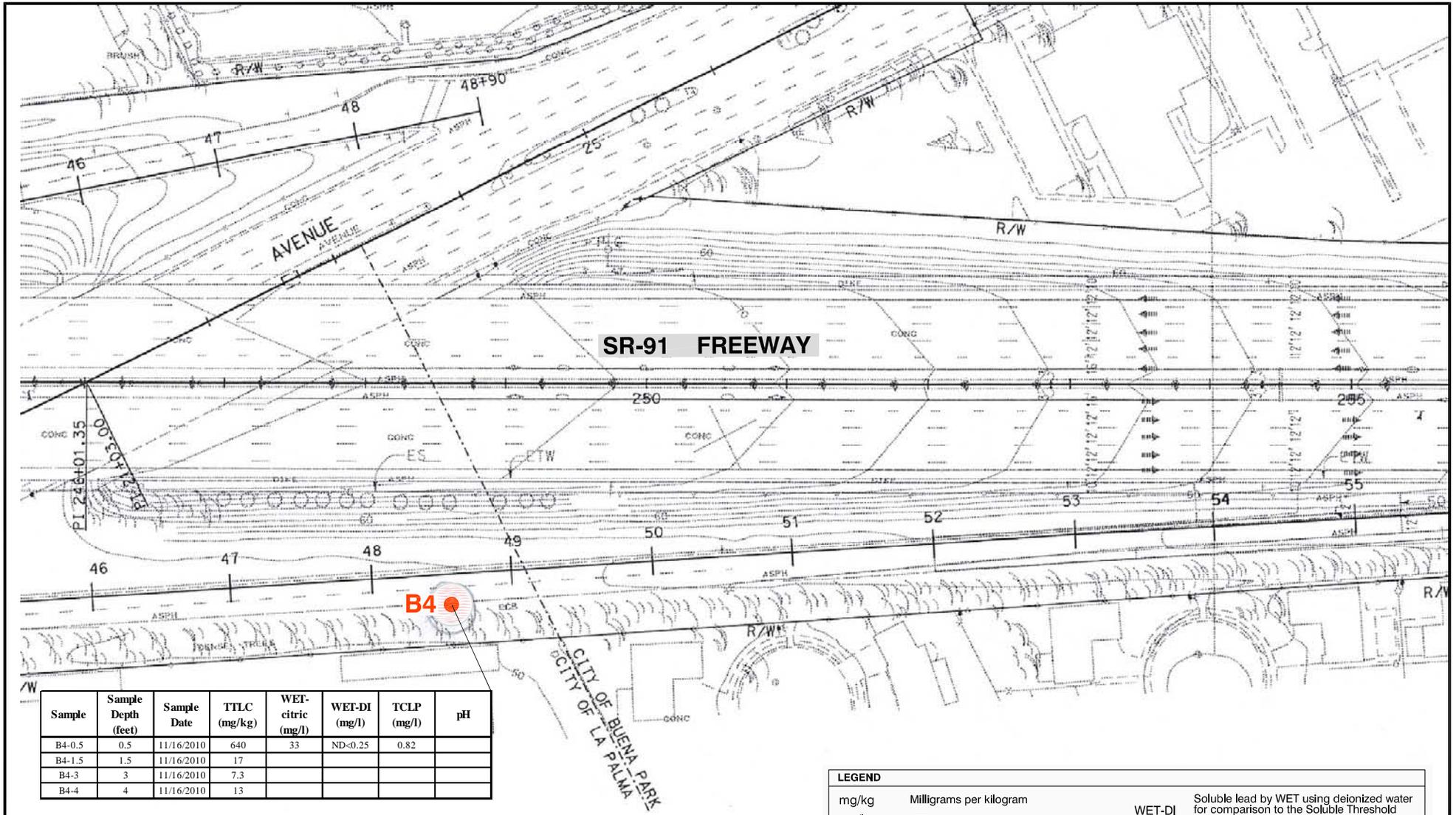


NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: CALTRANS DESIGN BRANCH B, DATED 08/12/2010.

LEGEND	
mg/kg	Milligrams per kilogram
mg/l	Milligrams per liter
TTLc	Total Lead for comparison to the total threshold limit concentration
WET	Waste Extraction Tests
WET-citric	Soluble lead by WET using citric acid for comparison to the Soluble Threshold Limit in concentration
WET-DI	Soluble lead by WET using deionized water for comparison to the Soluble Threshold Limit in concentration
TCLP	Soluble lead by Toxicity Characteristic Leaching Procedure
ND	Not detected above reporting limits presented in Appendix A
B3 ●	Boring

Ninyo & Moore		BORING DATA	FIGURE
PROJECT NO.	DATE	STATE ROUTE 91 FROM POST MILE 0.0 TO 10.09 ORANGE COUNTY, CALIFORNIA	14
207384041	12/10		



Sample	Sample Depth (feet)	Sample Date	TTLC (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B4-0.5	0.5	11/16/2010	640	33	ND-0.25	0.82	
B4-1.5	1.5	11/16/2010	17				
B4-3	3	11/16/2010	7.3				
B4-4	4	11/16/2010	13				

LEGEND			
mg/kg	Milligrams per kilogram		
mg/l	Milligrams per liter		
TTLC	Total Lead for comparison to the total threshold limit concentration	TCLP	Soluble lead by Toxicity Characteristic Leaching Procedure
WET	Waste Extraction Tests	ND	Not detected above reporting limits presented in Appendix A
WET-citric	Soluble lead by WET using citric acid for comparison to the Soluble Threshold Limit in concentration	B4 ●	Boring
		WET-DI	Soluble lead by WET using deionized water for comparison to the Soluble Threshold Limit in concentration

REFERENCE: CALTRANS DESIGN BRANCH B, DATED 08/12/2010.



### BORING DATA

FIGURE

STATE ROUTE 91 FROM  
POST MILE 0.0 TO 10.09  
ORANGE COUNTY, CALIFORNIA

**15**

PROJECT NO.	DATE
207384041	12/10

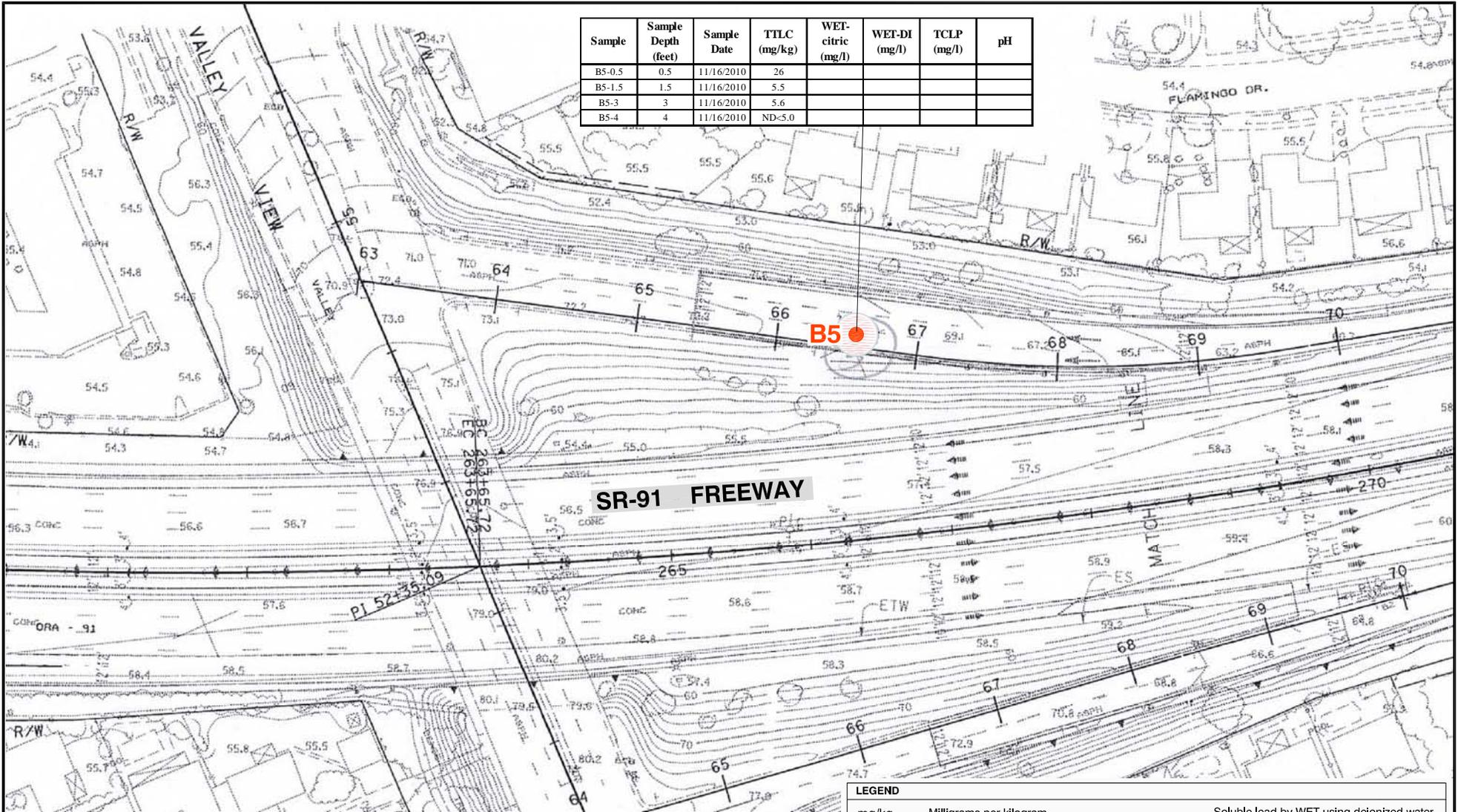
SCALE IN FEET



NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

207384\_A15.DWG.....G.K.

Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B5-0.5	0.5	11/16/2010	26				
B5-1.5	1.5	11/16/2010	5.5				
B5-3	3	11/16/2010	5.6				
B5-4	4	11/16/2010	ND<5.0				



SCALE IN FEET



NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: CALTRANS DESIGN BRANCH B, DATED 08/12/2010.

**Ninyo & Moore**

PROJECT NO.

207384041

DATE

12/10

**BORING DATA**

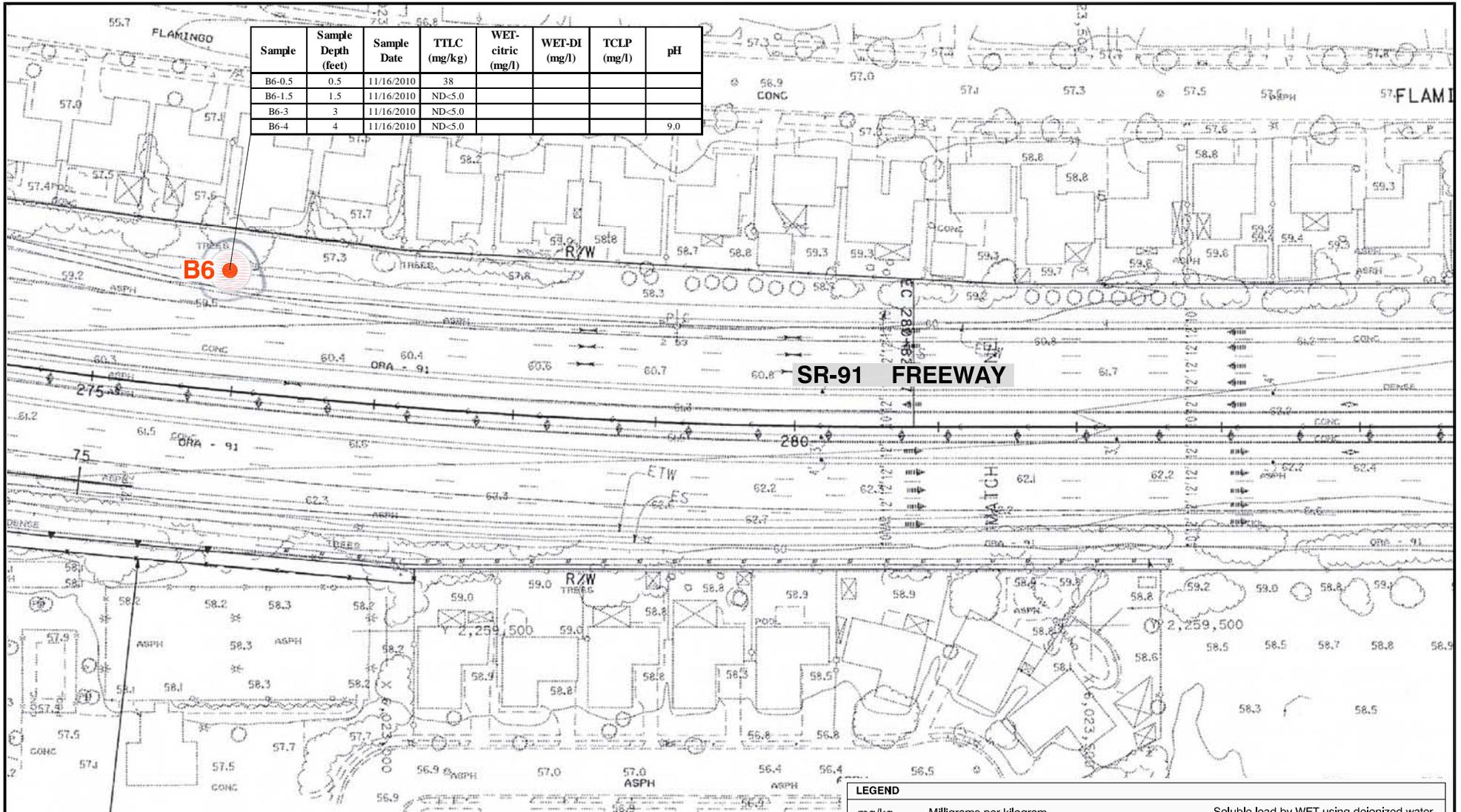
STATE ROUTE 91 FROM  
POST MILE 0.0 TO 10.09  
ORANGE COUNTY, CALIFORNIA

FIGURE

**16**

LEGEND	
mg/kg	Milligrams per kilogram
mg/l	Milligrams per liter
TTLc	Total Lead for comparison to the total threshold limit concentration
WET	Waste Extraction Tests
WET-citric	Soluble lead by WET using citric acid for comparison to the Soluble Threshold Limit in concentration
WET-DI	Soluble lead by WET using deionized water for comparison to the Soluble Threshold Limit in concentration
TCLP	Soluble lead by Toxicity Characteristic Leaching Procedure
ND	Not detected above reporting limits presented in Appendix A
B5 ●	Boring

207384\_A16.DWG.....G.K.



Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B6-0.5	0.5	11/16/2010	38				
B6-1.5	1.5	11/16/2010	ND<5.0				
B6-3	3	11/16/2010	ND<5.0				
B6-4	4	11/16/2010	ND<5.0				9.0

**SR-91 FREEWAY**

**B6**

LEGEND	
mg/kg	Milligrams per kilogram
mg/l	Milligrams per liter
TTLc	Total Lead for comparison to the total threshold limit concentration
WET	Waste Extraction Tests
WET-citric	Soluble lead by WET using citric acid for comparison to the Soluble Threshold Limit in concentration
WET-DI	Soluble lead by WET using deionized water for comparison to the Soluble Threshold Limit in concentration
TCLP	Soluble lead by Toxicity Characteristic Leaching Procedure
ND	Not detected above reporting limits presented in Appendix A
<b>B6</b>	Boring



SCALE IN FEET



NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: CALTRANS DESIGN BRANCH B, DATED 08/12/2010.



PROJECT NO.	DATE
207384041	12/10

**BORING DATA**

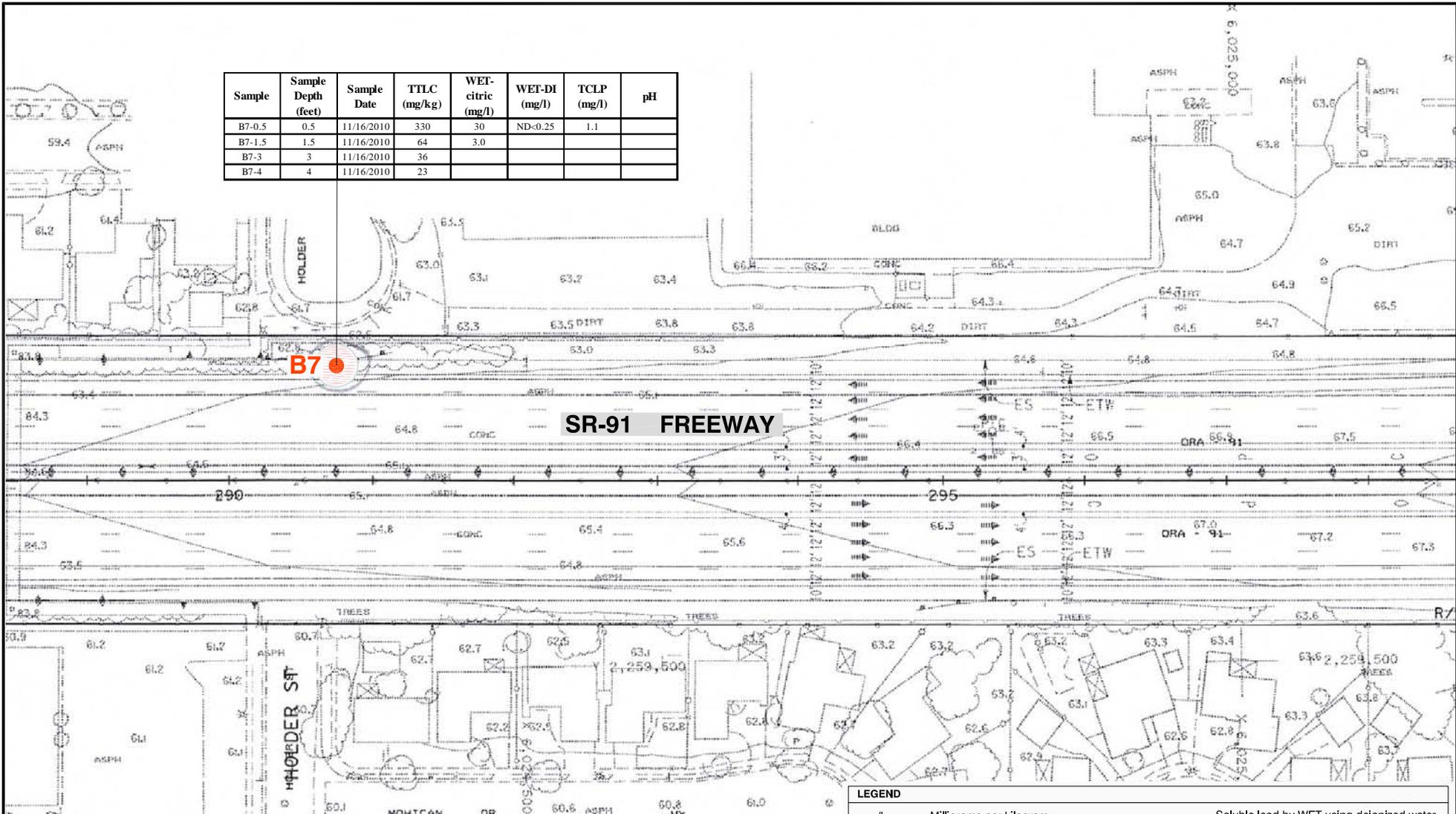
STATE ROUTE 91 FROM  
POST MILE 0.0 TO 10.09  
ORANGE COUNTY, CALIFORNIA

FIGURE

**17**

207384\_A17.DWG.....G.K.

Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B7-0.5	0.5	11/16/2010	330	30	ND<0.25	1.1	
B7-1.5	1.5	11/16/2010	64	3.0			
B7-3	3	11/16/2010	36				
B7-4	4	11/16/2010	23				



LEGEND	
mg/kg	Milligrams per kilogram
mg/l	Milligrams per liter
TTLc	Total Lead for comparison to the total threshold limit concentration
WET	Waste Extraction Tests
WET-citric	Soluble lead by WET using citric acid for comparison to the Soluble Threshold Limit in concentration
WET-DI	Soluble lead by WET using deionized water for comparison to the Soluble Threshold Limit in concentration
TCLP	Soluble lead by Toxicity Characteristic Leaching Procedure
ND	Not detected above reporting limits presented in Appendix A
B7 ●	Boring



NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: CALTRANS DESIGN BRANCH B, DATED 08/12/2010.



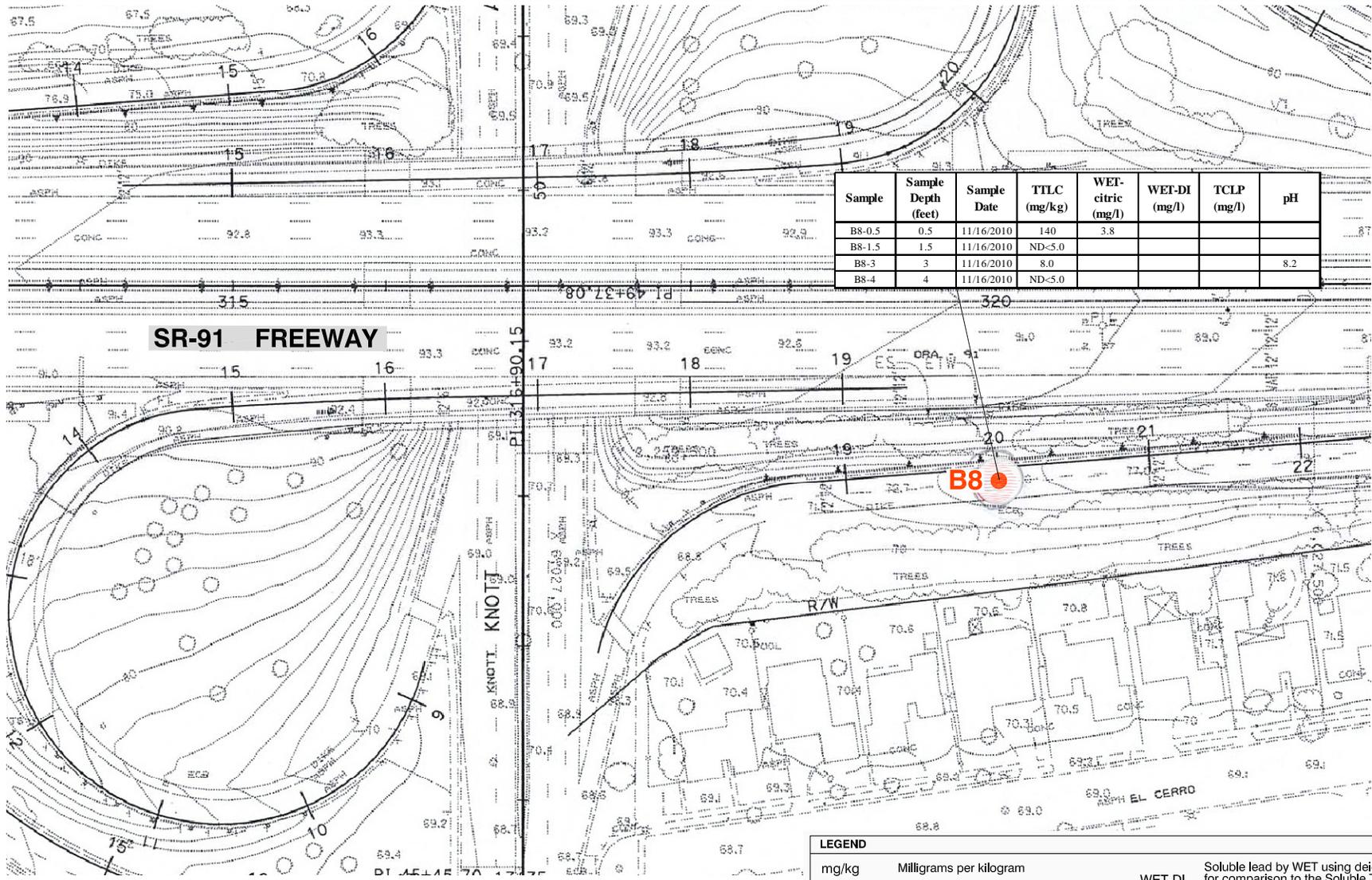
PROJECT NO.	DATE
207384041	12/10

### BORING DATA

STATE ROUTE 91 FROM  
POST MILE 0.0 TO 10.09  
ORANGE COUNTY, CALIFORNIA

FIGURE

**18**



Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B8-0.5	0.5	11/16/2010	140	3.8			
B8-1.5	1.5	11/16/2010	ND<5.0				
B8-3	3	11/16/2010	8.0				8.2
B8-4	4	11/16/2010	ND<5.0				

LEGEND			
mg/kg	Milligrams per kilogram	WET-DI	Soluble lead by WET using deionized water for comparison to the Soluble Threshold Limit in concentration
mg/l	Milligrams per liter	TCLP	Soluble lead by Toxicity Characteristic Leaching Procedure
TTLc	Total Lead for comparison to the total threshold limit concentration	ND	Not detected above reporting limits presented in Appendix A
WET	Waste Extraction Tests	<b>B8</b> ●	Boring
WET-citric	Soluble lead by WET using citric acid for comparison to the Soluble Threshold Limit in concentration		



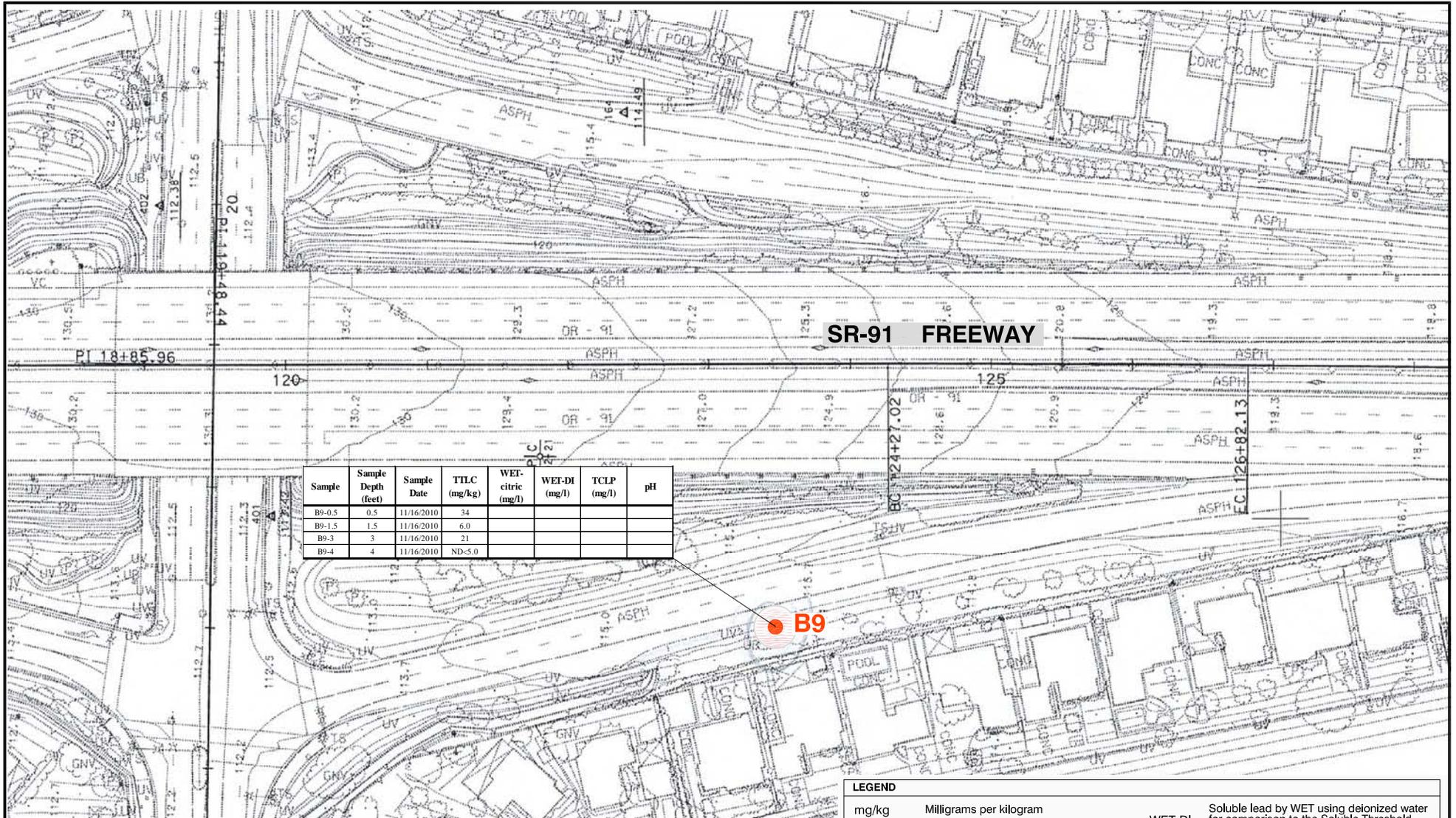
SCALE IN FEET



NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: CALTARNS DESIGN BRANCH B, DATED 08/12/2010.

		<p><b>BORING DATA</b></p> <p>STATE ROUTE 91 FROM POST MILE 0.0 TO 10.09 ORANGE COUNTY, CALIFORNIA</p>		<p>FIGURE</p> <p><b>19</b></p>
207384041	12/10			



Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B9-0.5	0.5	11/16/2010	34				
B9-1.5	1.5	11/16/2010	6.0				
B9-3	3	11/16/2010	21				
B9-4	4	11/16/2010	ND-5.0				

LEGEND	
mg/kg	Milligrams per kilogram
mg/l	Milligrams per liter
TTLc	Total Lead for comparison to the total threshold limit concentration
WET	Waste Extraction Tests
WET-citric	Soluble lead by WET using citric acid for comparison to the Soluble Threshold Limit in concentration
WET-DI	Soluble lead by WET using deionized water for comparison to the Soluble Threshold Limit in concentration
TCLP	Soluble lead by Toxicity Characteristic Leaching Procedure
ND	Not detected above reporting limits presented in Appendix A
B9 ●	Boring



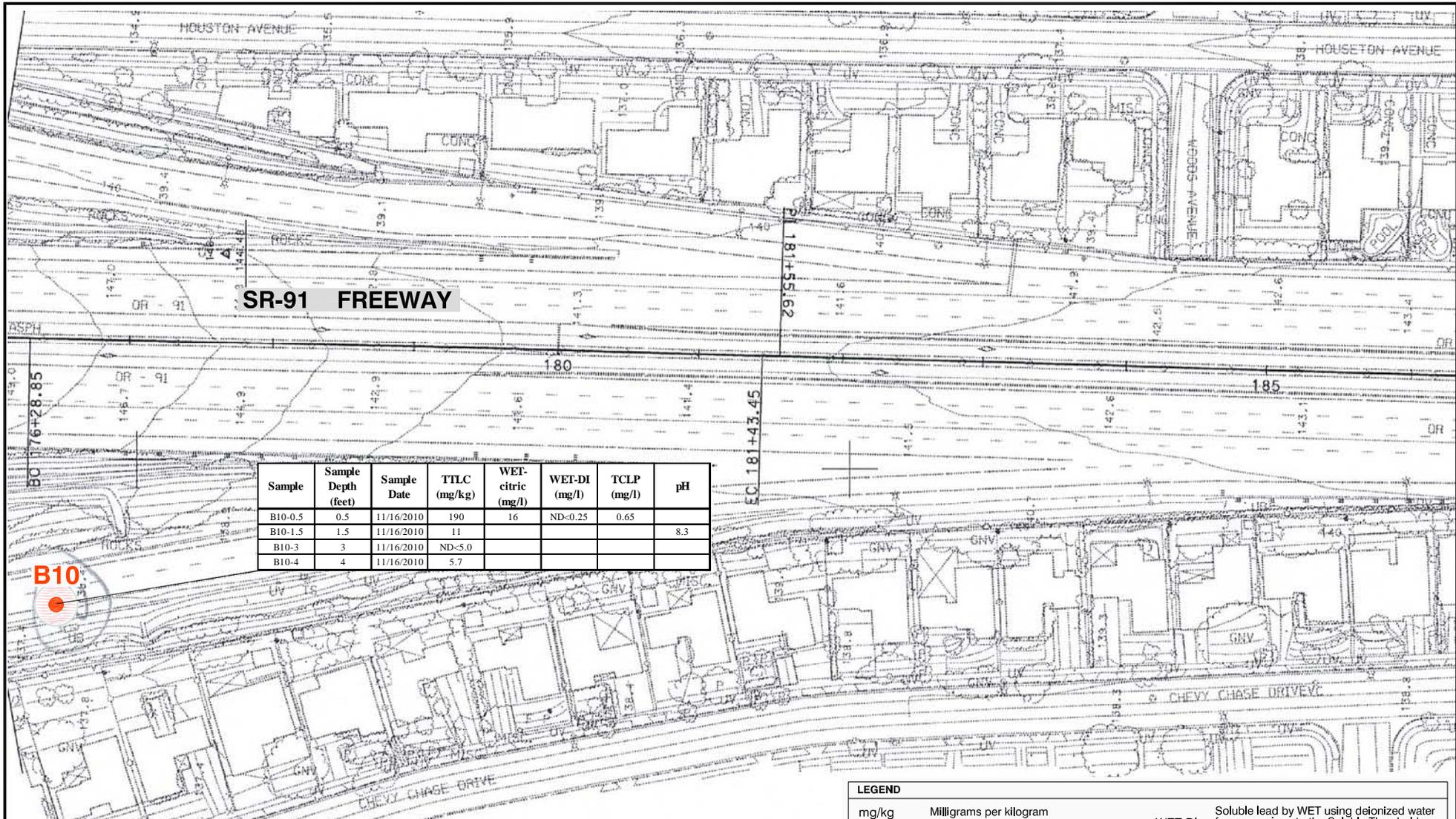
SCALE IN FEET



NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: CALTRANS DESIGN BRANCH B, DATED 08/12/2010.

		<h3>BORING DATA</h3>	FIGURE  <b>20</b>



Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B10-0.5	0.5	11/16/2010	190	16	ND<0.25	0.65	
B10-1.5	1.5	11/16/2010	11				8.3
B10-3	3	11/16/2010	ND<5.0				
B10-4	4	11/16/2010	5.7				

**B10**

LEGEND		
mg/kg	Milligrams per kilogram	
mg/l	Milligrams per liter	WET-DI Soluble lead by WET using deionized water for comparison to the Soluble Threshold Limit in concentration
TTLc	Total Lead for comparison to the total threshold limit concentration	TCLP Soluble lead by Toxicity Characteristic Leaching Procedure
WET	Waste Extraction Tests	ND Not detected above reporting limits presented in Appendix A
WET-citric	Soluble lead by WET using citric acid for comparison to the Soluble Threshold Limit in concentration	<b>B10</b> Boring



SCALE IN FEET



NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: CALTRANS DESIGN BRANCH B, DATED 08/12/2010.



PROJECT NO.	DATE
207384041	12/10

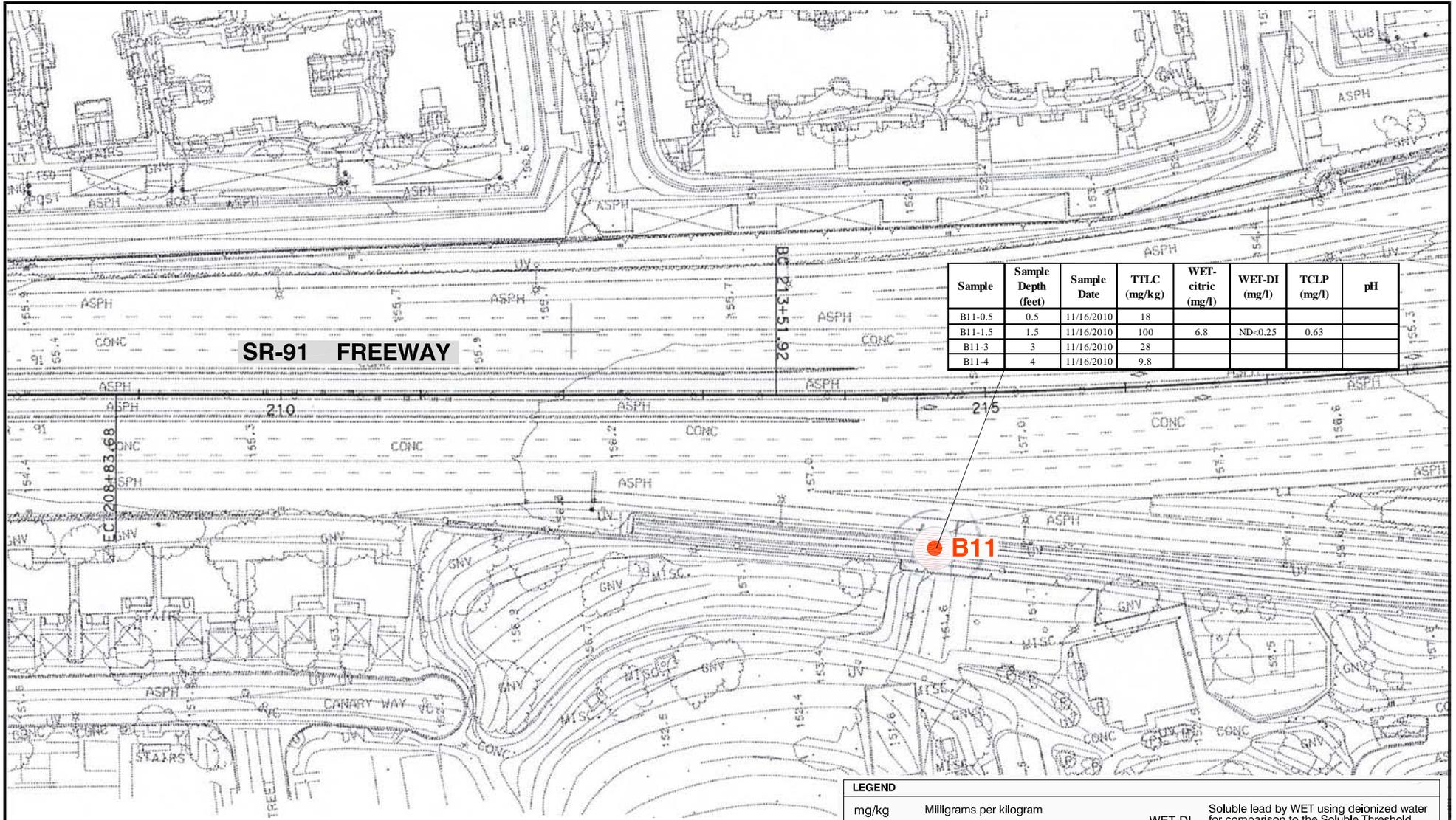
**BORING DATA**

STATE ROUTE 91 FROM  
POST MILE 0.0 TO 10.09  
ORANGE COUNTY, CALIFORNIA

FIGURE

**21**

207384\_A21.DWG.....G.K.



Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B11-0.5	0.5	11/16/2010	18				
B11-1.5	1.5	11/16/2010	100	6.8	ND<0.25	0.63	
B11-3	3	11/16/2010	28				
B11-4	4	11/16/2010	9.8				

LEGEND	
mg/kg	Milligrams per kilogram
mg/l	Milligrams per liter
TTLc	Total Lead for comparison to the total threshold limit concentration
WET	Waste Extraction Tests
WET-citric	Soluble lead by WET using citric acid for comparison to the Soluble Threshold Limit in concentration
WET-DI	Soluble lead by WET using deionized water for comparison to the Soluble Threshold Limit in concentration
TCLP	Soluble lead by Toxicity Characteristic Leaching Procedure
ND	Not detected above reporting limits presented in Appendix A
B11 ●	Boring



SCALE IN FEET



NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: CALTRANS DESIGN BRANCH B, DATED 08/12/2010.



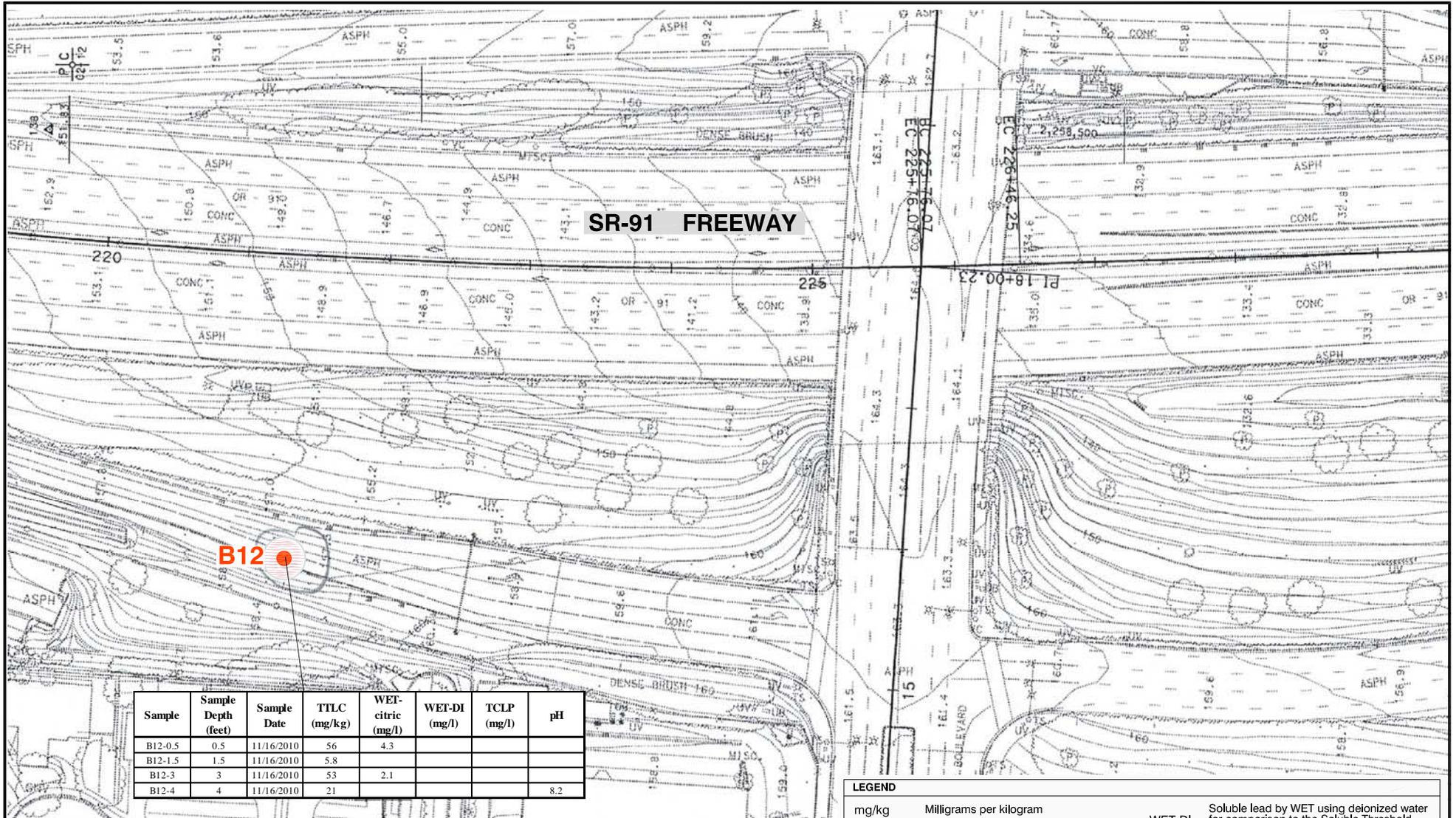
PROJECT NO.	DATE
207384041	12/10

### BORING DATA

STATE ROUTE 91 FROM  
POST MILE 0.0 TO 10.09  
ORANGE COUNTY, CALIFORNIA

FIGURE

**22**



Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B12-0.5	0.5	11/16/2010	56	4.3			
B12-1.5	1.5	11/16/2010	5.8				
B12-3	3	11/16/2010	53	2.1			
B12-4	4	11/16/2010	21				8.2

LEGEND	
mg/kg	Milligrams per kilogram
mg/l	Milligrams per liter
TTLc	Total Lead for comparison to the total threshold limit concentration
WET	Waste Extraction Tests
WET-citric	Soluble lead by WET using citric acid for comparison to the Soluble Threshold Limit in concentration
WET-DI	Soluble lead by WET using deionized water for comparison to the Soluble Threshold Limit in concentration
TCLP	Soluble lead by Toxicity Characteristic Leaching Procedure
ND	Not detected above reporting limits presented in Appendix A
<b>B12</b>	Boring



SCALE IN FEET

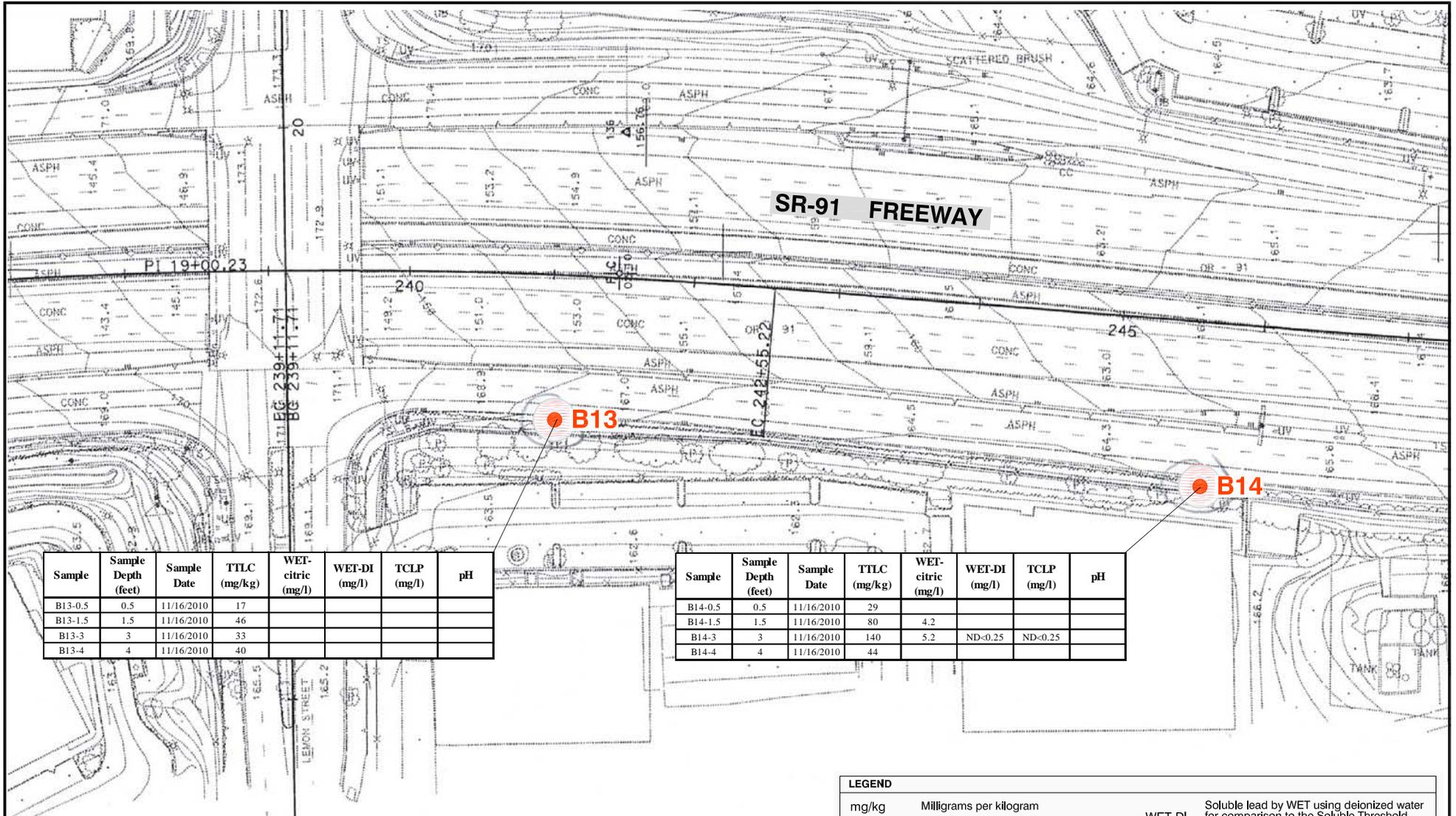


NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: CALTRANS DESIGN BRANCH B, DATED 08/12/2010.

**Ninyo & Moore**

PROJECT NO.		DATE	BORING DATA	FIGURE
207384041		12/10		



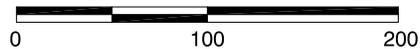
Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B13-0.5	0.5	11/16/2010	17				
B13-1.5	1.5	11/16/2010	46				
B13-3	3	11/16/2010	33				
B13-4	4	11/16/2010	40				

Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B14-0.5	0.5	11/16/2010	29				
B14-1.5	1.5	11/16/2010	80	4.2			
B14-3	3	11/16/2010	140	5.2	ND-0.25	ND-0.25	
B14-4	4	11/16/2010	44				

LEGEND			
mg/kg	Milligrams per kilogram	WET-DI	Soluble lead by WET using deionized water for comparison to the Soluble Threshold Limit in concentration
mg/l	Milligrams per liter	TCLP	Soluble lead by Toxicity Characteristic Leaching Procedure
TTLc	Total Lead for comparison to the total threshold limit concentration	ND	Not detected above reporting limits presented in Appendix A
WET	Waste Extraction Tests	B14 ●	Boring
WET-citric	Soluble lead by WET using citric acid for comparison to the Soluble Threshold Limit in concentration		



SCALE IN FEET



REFERENCE: CALTRANS DESIGN BRANCH B, DATED 08/12/2010.

**Ninyo & Moore**

**BORING DATA**

FIGURE

PROJECT NO.  
207384041

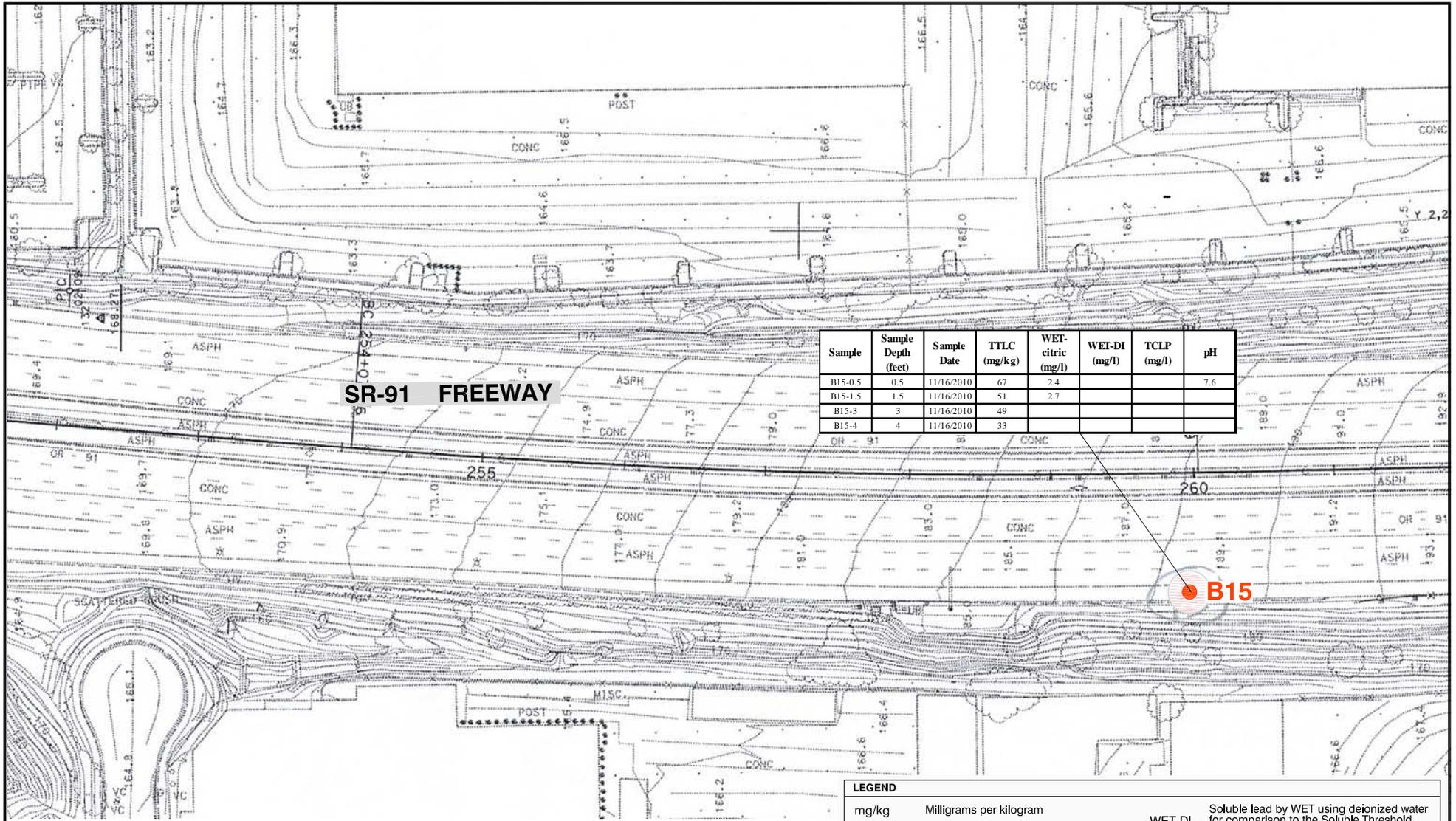
DATE  
12/10

STATE ROUTE 91 FROM  
POST MILE 0.0 TO 10.09  
ORANGE COUNTY, CALIFORNIA

**24**

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

207384\_A24-DWG.....-G.K.



**SR-91 FREEWAY**

Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B15-0.5	0.5	11/16/2010	67	2.4			7.6
B15-1.5	1.5	11/16/2010	51	2.7			
B15-3	3	11/16/2010	49				
B15-4	4	11/16/2010	33				

**B15**

LEGEND	
mg/kg	Milligrams per kilogram
mg/l	Milligrams per liter
TTLc	Total Lead for comparison to the total threshold limit concentration
WET	Waste Extraction Tests
WET-citric	Soluble lead by WET using citric acid for comparison to the Soluble Threshold Limit in concentration
WET-DI	Soluble lead by WET using deionized water for comparison to the Soluble Threshold Limit in concentration
TCLP	Soluble lead by Toxicity Characteristic Leaching Procedure
ND	Not detected above reporting limits presented in Appendix A
<b>B15 ●</b>	Boring



SCALE IN FEET



NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: CALTRANS DESIGN BRANCH B, DATED 08/12/2010.



PROJECT NO.	DATE
207384041	12/10

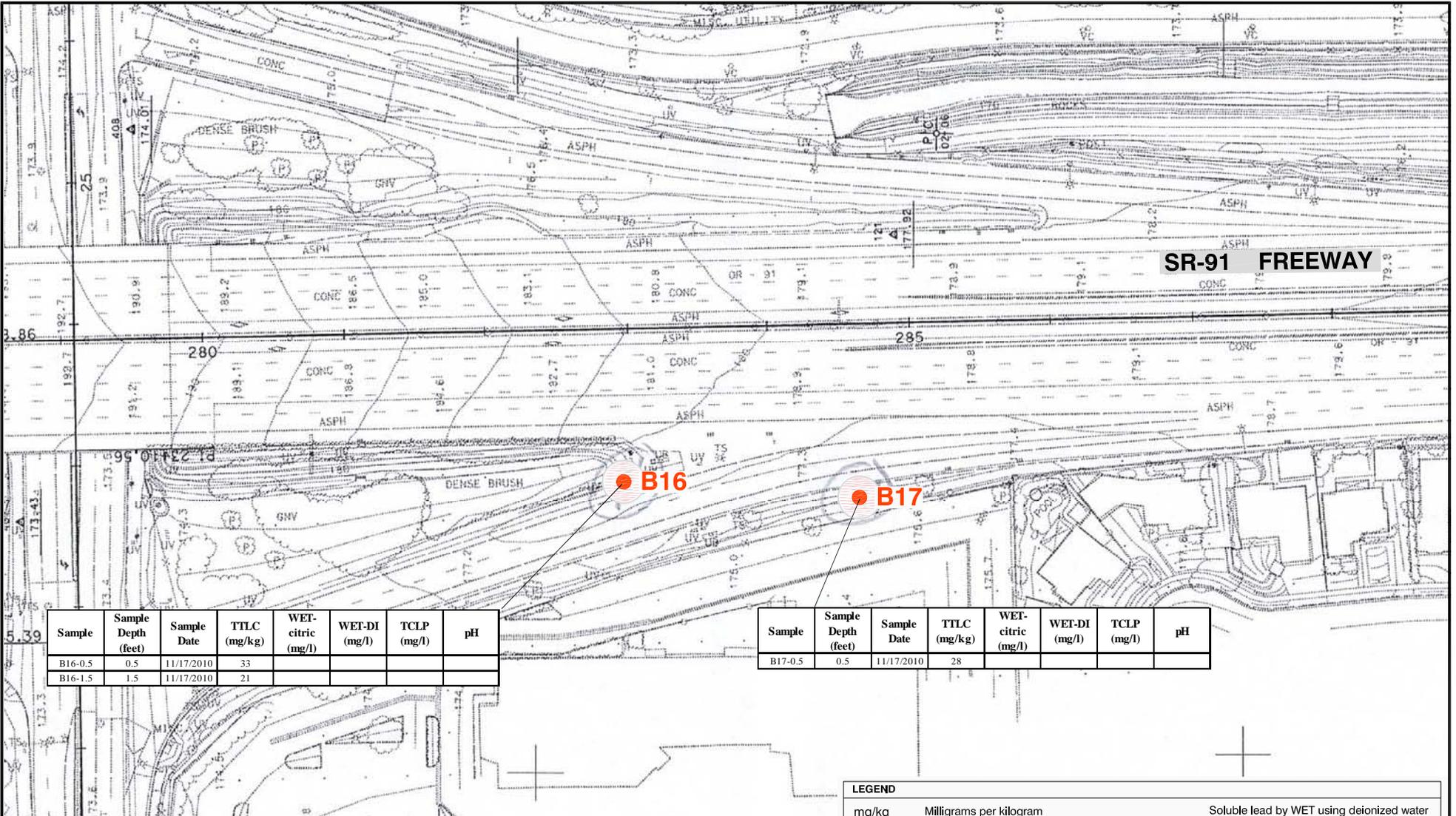
**BORING DATA**

STATE ROUTE 91 FROM  
POST MILE 0.0 TO 10.09  
ORANGE COUNTY, CALIFORNIA

FIGURE

**25**

207384\_A25.DWG.....G.K.



**SR-91 FREEWAY**

**B16**

**B17**

Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B16-0.5	0.5	11/17/2010	33				
B16-1.5	1.5	11/17/2010	21				

Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B17-0.5	0.5	11/17/2010	28				



SCALE IN FEET



NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: CALTRANS DESIGN BRANCH B, DATED 08/12/2010.



PROJECT NO.	DATE
207384041	12/10

LEGEND			
mg/kg	Milligrams per kilogram	WET-DI	Soluble lead by WET using deionized water for comparison to the Soluble Threshold Limit in concentration
mg/l	Milligrams per liter	TCLP	Soluble lead by Toxicity Characteristic Leaching Procedure
TTLc	Total Lead for comparison to the total threshold limit concentration	ND	Not detected above reporting limits presented in Appendix A
WET	Waste Extraction Tests	<b>B17</b>	Boring
WET-citric	Soluble lead by WET using citric acid for comparison to the Soluble Threshold Limit in concentration		

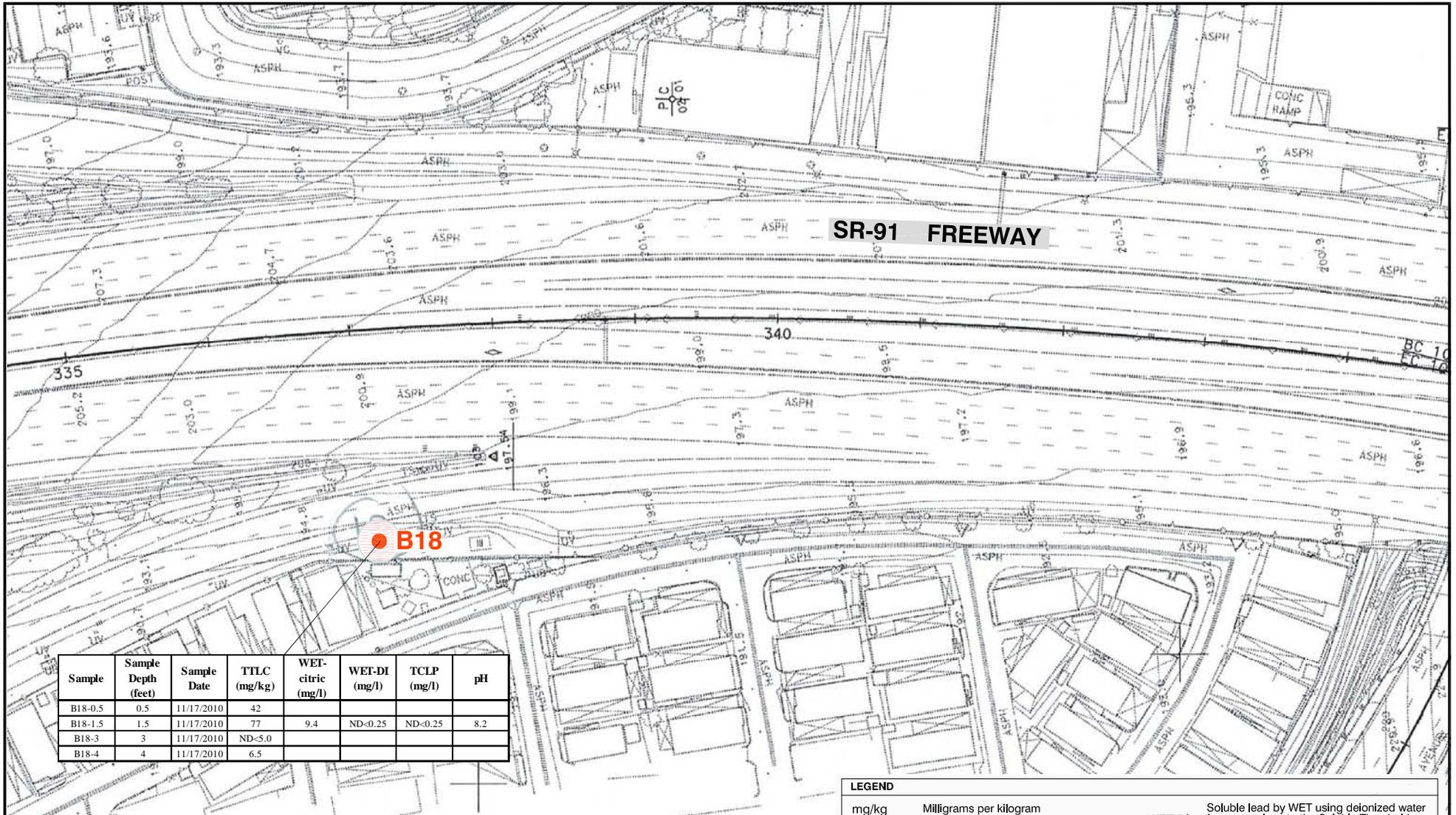
**BORING DATA**

STATE ROUTE 91 FROM  
POST MILE 0.0 TO 10.09  
ORANGE COUNTY, CALIFORNIA

FIGURE

**26**

207384\_A26.DWG.....-G.K.



Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B18-0.5	0.5	11/17/2010	42				
B18-1.5	1.5	11/17/2010	77	9.4	ND<0.25	ND<0.25	8.2
B18-3	3	11/17/2010	ND<5.0				
B18-4	4	11/17/2010	6.5				

LEGEND			
mg/kg	Milligrams per kilogram	WET-DI	Soluble lead by WET using deionized water for comparison to the Soluble Threshold Limit in concentration
mg/l	Milligrams per liter	TCLP	Soluble lead by Toxicity Characteristic Leaching Procedure
TTLc	Total Lead for comparison to the total threshold limit concentration	ND	Not detected above reporting limits presented in Appendix A
WET	Waste Extraction Tests	B18 ●	Boring
WET-citric	Soluble lead by WET using citric acid for comparison to the Soluble Threshold Limit in concentration		



SCALE IN FEET



REFERENCE: CALTRANS DESIGN BRANCH B, DATED 08/12/2010.



**BORING DATA**

FIGURE

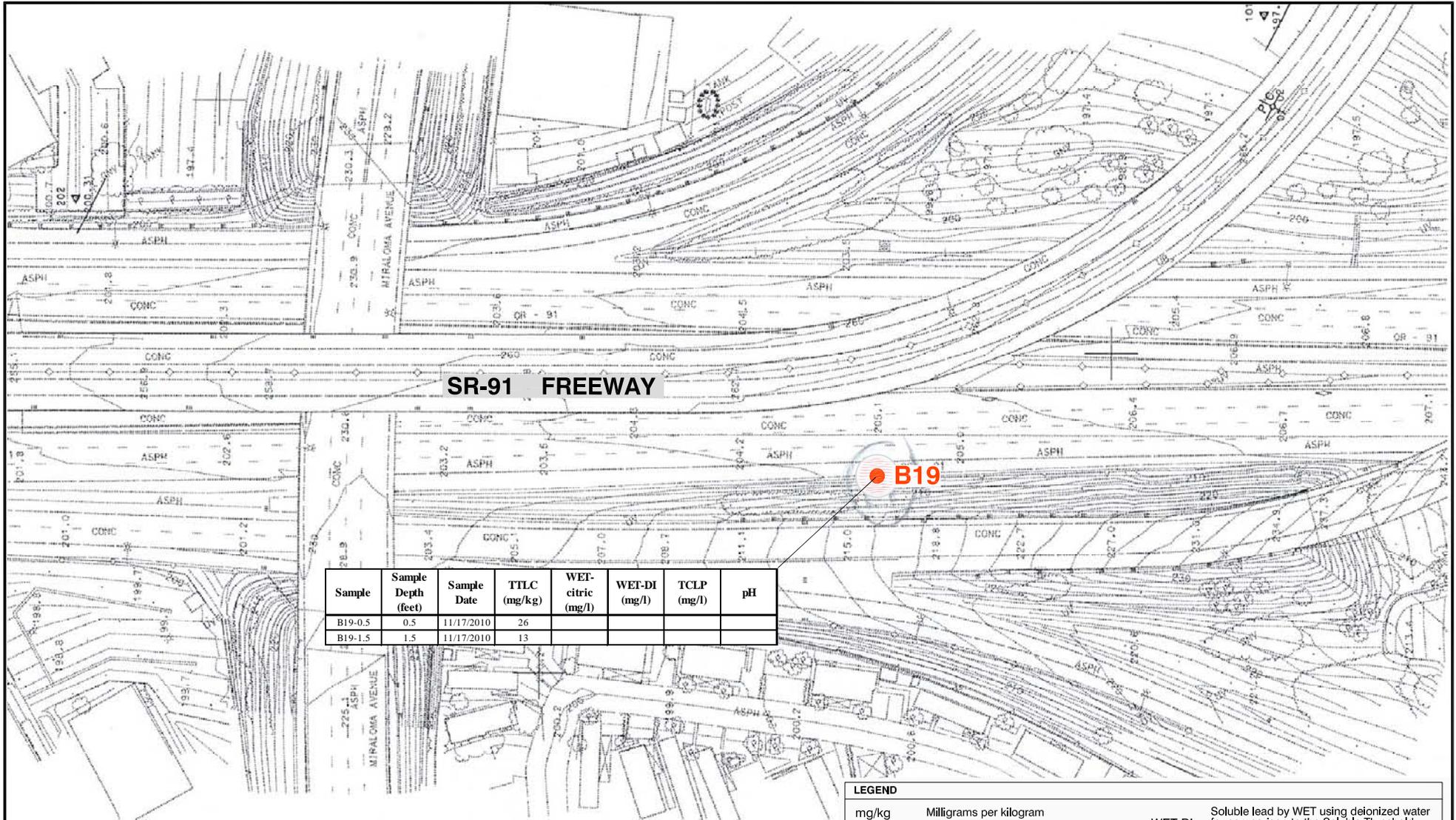
PROJECT NO.	DATE
207384041	12/10

STATE ROUTE 91 FROM  
POST MILE 0.0 TO 10.09  
ORANGE COUNTY, CALIFORNIA

**27**

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

207384\_A27.DWG.....G.K.

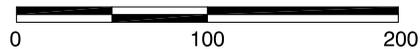


Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B19-0.5	0.5	11/17/2010	26				
B19-1.5	1.5	11/17/2010	13				

LEGEND	
mg/kg	Milligrams per kilogram
mg/l	Milligrams per liter
TTLc	Total Lead for comparison to the total threshold limit concentration
WET	Waste Extraction Tests
WET-citric	Soluble lead by WET using citric acid for comparison to the Soluble Threshold Limit in concentration
WET-DI	Soluble lead by WET using deionized water for comparison to the Soluble Threshold Limit in concentration
TCLP	Soluble lead by Toxicity Characteristic Leaching Procedure
ND	Not detected above reporting limits presented in Appendix A
B19 ●	Boring



SCALE IN FEET

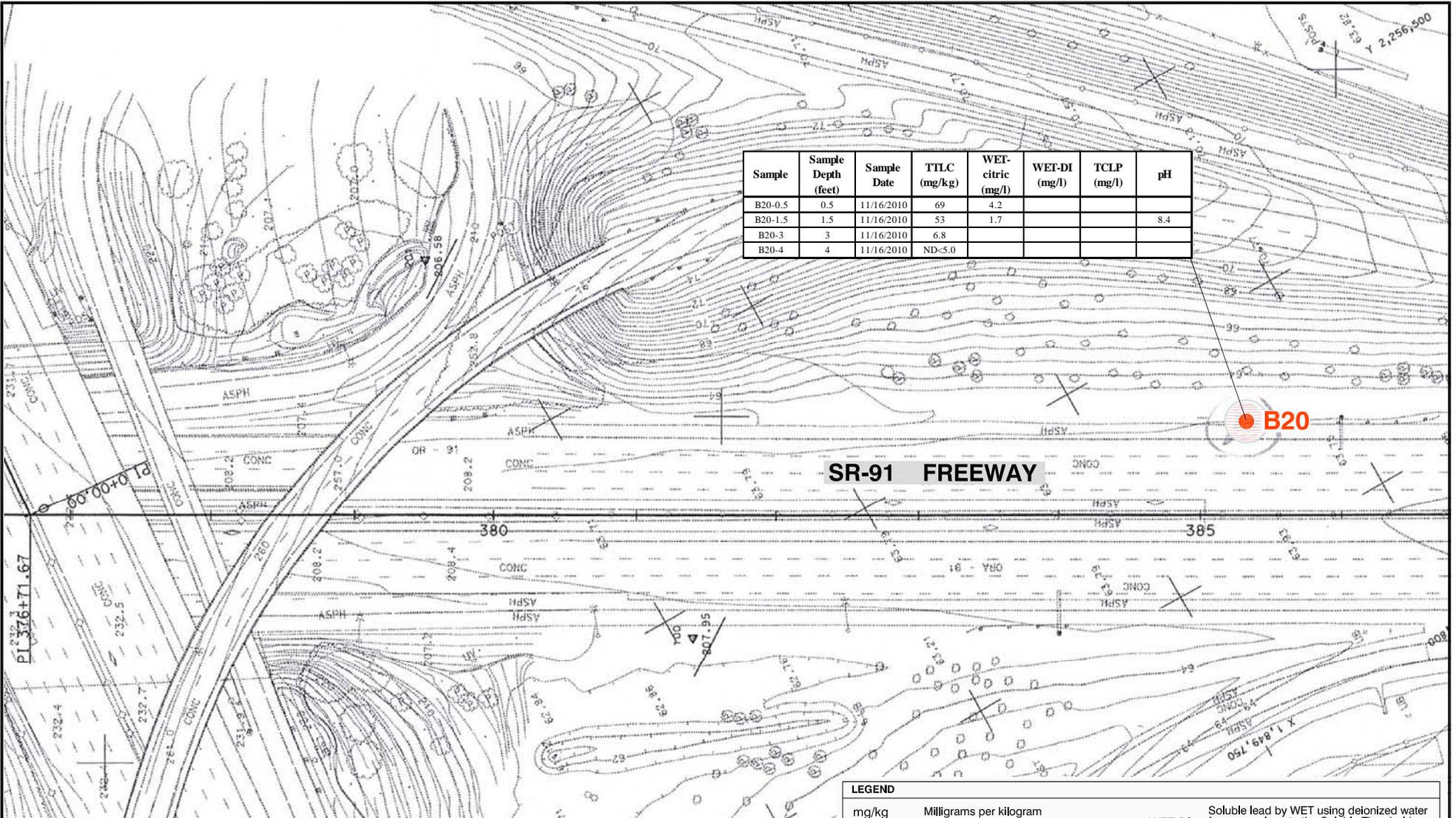


NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: CALTRANS DESIGN BRANCH B, DATED 08/12/2010.

<b>Ninyo &amp; Moore</b>		<b>BORING DATA</b>	FIGURE <b>28</b>
PROJECT NO. 207384041	DATE 12/10		

207384\_A28.DWG.....G.K.



LEGEND	
mg/kg	Milligrams per kilogram
mg/l	Milligrams per liter
TTLc	Total Lead for comparison to the total threshold limit concentration
WET	Waste Extraction Tests
WET-citric	Soluble lead by WET using citric acid for comparison to the Soluble Threshold Limit in concentration
WET-DI	Soluble lead by WET using deionized water for comparison to the Soluble Threshold Limit in concentration
TCLP	Soluble lead by Toxicity Characteristic Leaching Procedure
ND	Not detected above reporting limits presented in Appendix A
<b>B20</b>	Boring



SCALE IN FEET



NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: CALTRANS DESIGN BRANCH B, DATED 08/12/2010.



PROJECT NO.	DATE
207384041	12/10

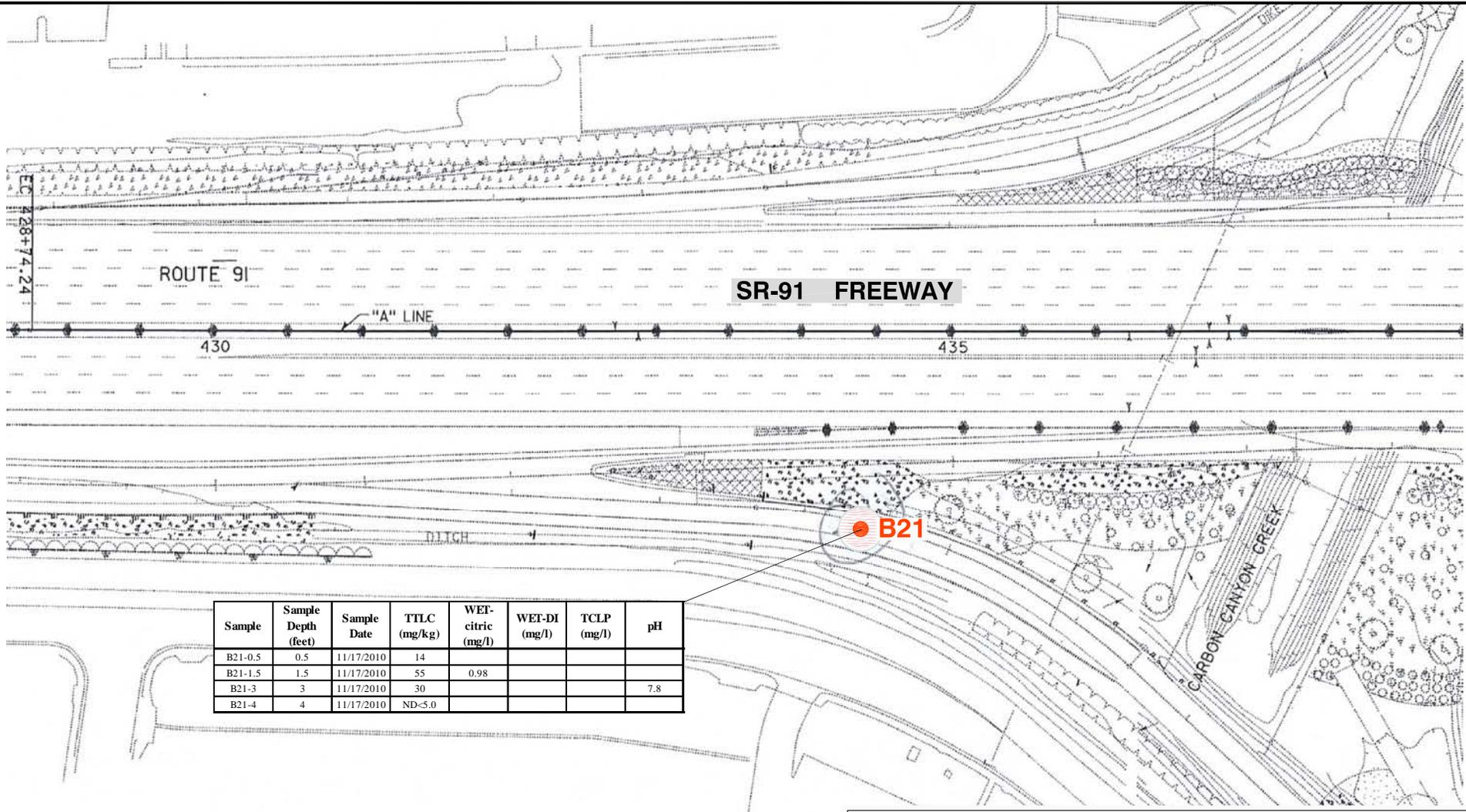
**BORING DATA**

STATE ROUTE 91 FROM  
POST MILE 0.0 TO 10.09  
ORANGE COUNTY, CALIFORNIA

FIGURE

**29**

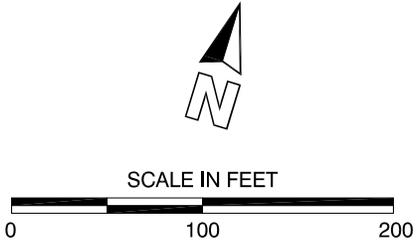
207384\_A29.DWG.....-G.K.



Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B21-0.5	0.5	11/17/2010	14				
B21-1.5	1.5	11/17/2010	55	0.98			
B21-3	3	11/17/2010	30				7.8
B21-4	4	11/17/2010	ND<5.0				

LEGEND			
mg/kg	Milligrams per kilogram	WET-DI	Soluble lead by WET using deionized water for comparison to the Soluble Threshold Limit in concentration
mg/l	Milligrams per liter	TCLP	Soluble lead by Toxicity Characteristic Leaching Procedure
TTLc	Total Lead for comparison to the total threshold limit concentration	ND	Not detected above reporting limits presented in Appendix A
WET	Waste Extraction Tests	B21 ●	Boring
WET-citric	Soluble lead by WET using citric acid for comparison to the Soluble Threshold Limit in concentration		

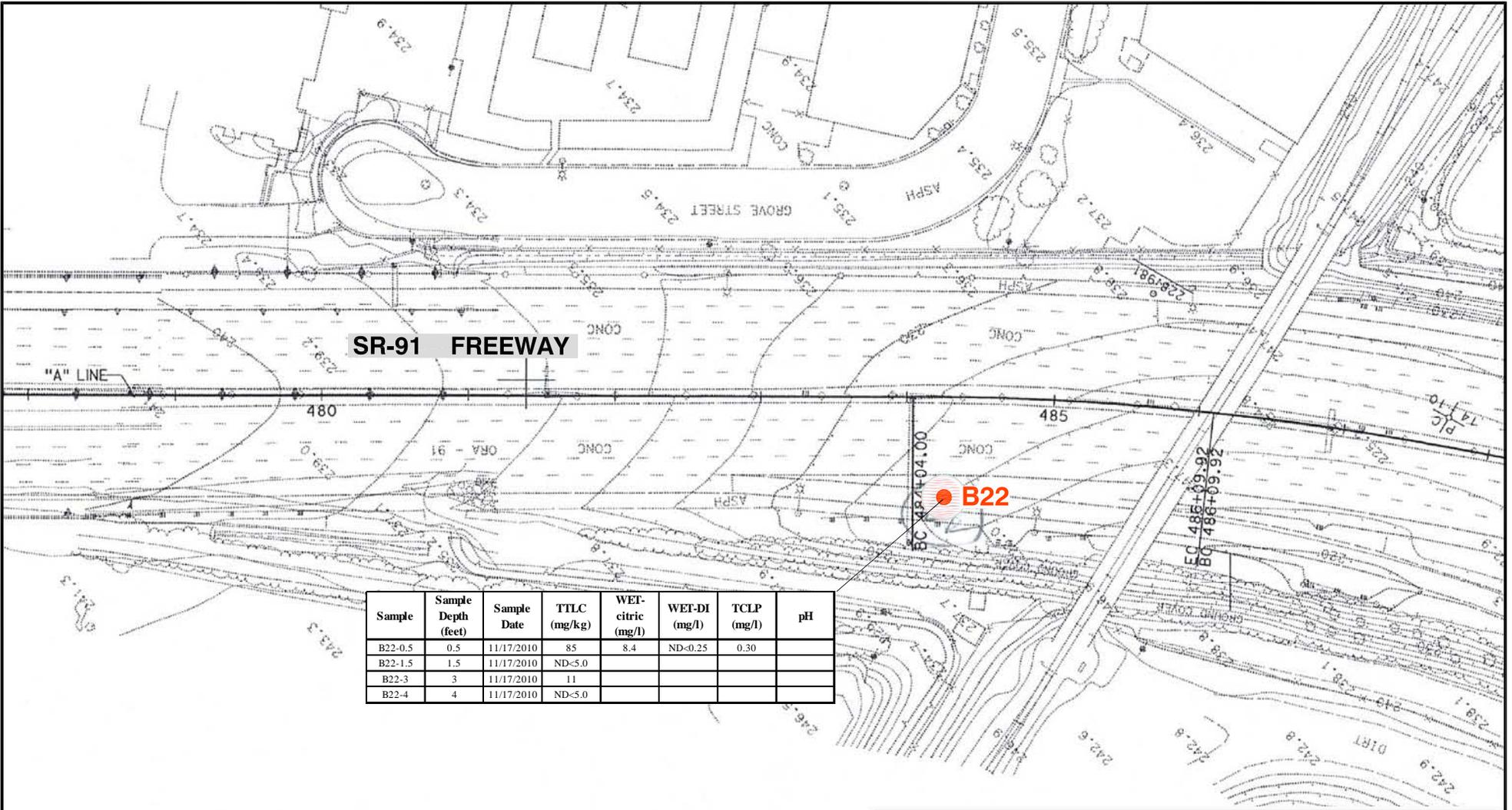
REFERENCE: CALTRANS DESIGN BRANCH B, DATED 08/12/2010.



NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

<b>Ninyo &amp; Moore</b>		<b>BORING DATA</b>	FIGURE
PROJECT NO.	DATE	STATE ROUTE 91 FROM POST MILE 0.0 TO 10.09 ORANGE COUNTY, CALIFORNIA	<b>30</b>
207384041	12/10		

207384\_A30.DWG.....-G.K.



Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B22-0.5	0.5	11/17/2010	85	8.4	ND<0.25	0.30	
B22-1.5	1.5	11/17/2010	ND<5.0				
B22-3	3	11/17/2010	11				
B22-4	4	11/17/2010	ND<5.0				

LEGEND		
mg/kg	Milligrams per kilogram	
mg/l	Milligrams per liter	WET-DI Soluble lead by WET using deionized water for comparison to the Soluble Threshold Limit in concentration
TTLc	Total Lead for comparison to the total threshold limit concentration	TCLP Soluble lead by Toxicity Characteristic Leaching Procedure
WET	Waste Extraction Tests	ND Not detected above reporting limits presented in Appendix A
WET-citric	Soluble lead by WET using citric acid for comparison to the Soluble Threshold Limit in concentration	<b>B22</b> Boring



SCALE IN FEET

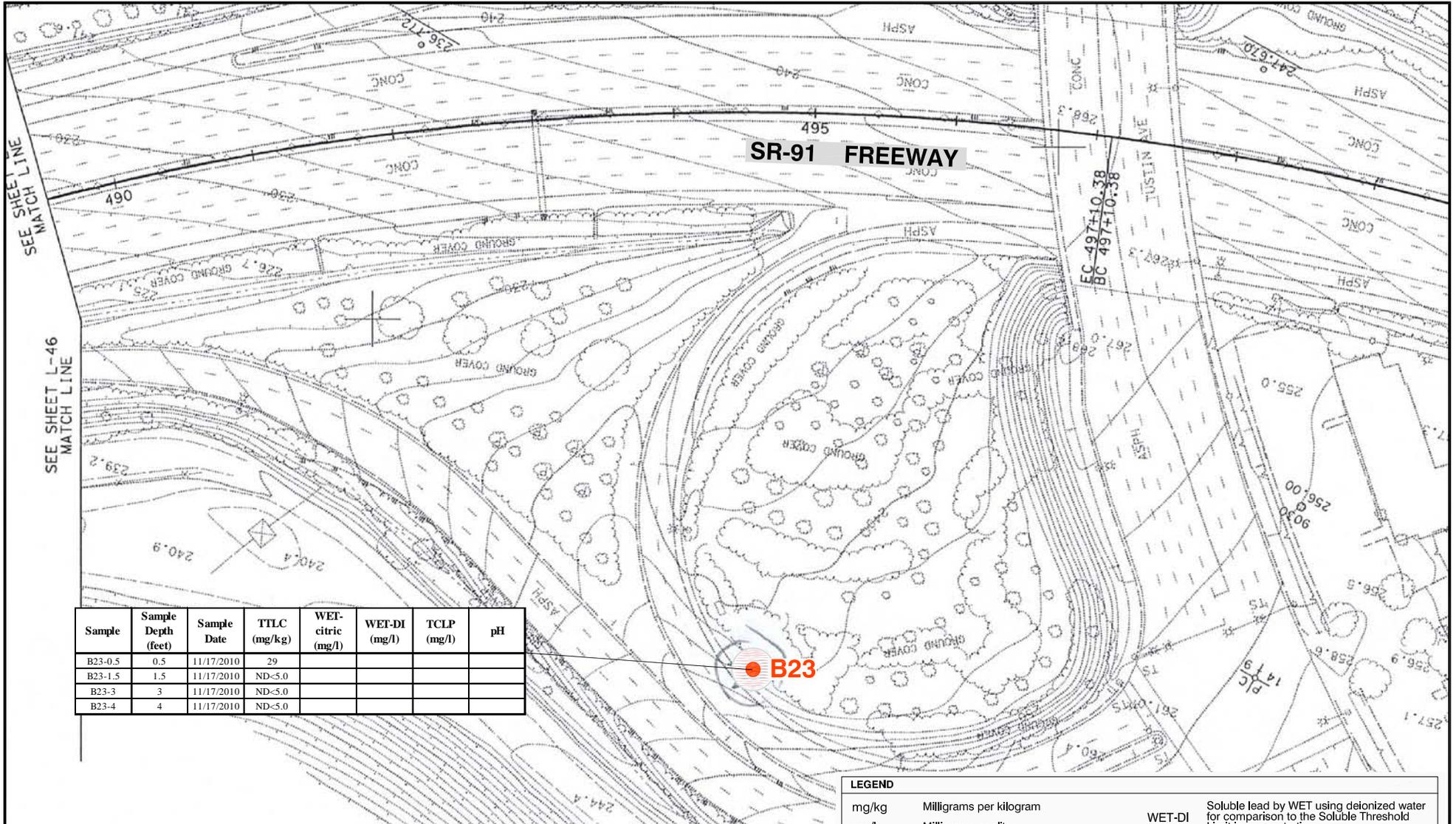


NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

REFERENCE: CALTRANS DESIGN BRANCH B, DATED 08/12/2010.

<b>Ninyo &amp; Moore</b>		<b>BORING DATA</b>	FIGURE <b>31</b>
PROJECT NO. 207384041	DATE 12/10		

207384\_A31.DWG.....G.K.



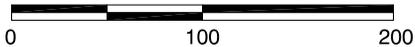
Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B23-0.5	0.5	11/17/2010	29				
B23-1.5	1.5	11/17/2010	ND<5.0				
B23-3	3	11/17/2010	ND<5.0				
B23-4	4	11/17/2010	ND<5.0				

LEGEND			
mg/kg	Milligrams per kilogram	WET-DI	Soluble lead by WET using deionized water for comparison to the Soluble Threshold Limit in concentration
mg/l	Milligrams per liter	TCLP	Soluble lead by Toxicity Characteristic Leaching Procedure
TTLc	Total Lead for comparison to the total threshold limit concentration	ND	Not detected above reporting limits presented in Appendix A
WET	Waste Extraction Tests	B23 ●	Boring
WET-citric	Soluble lead by WET using citric acid for comparison to the Soluble Threshold Limit in concentration		

REFERENCE: CALTRANS DESIGN BRANCH B, DATED 08/12/2010.



SCALE IN FEET

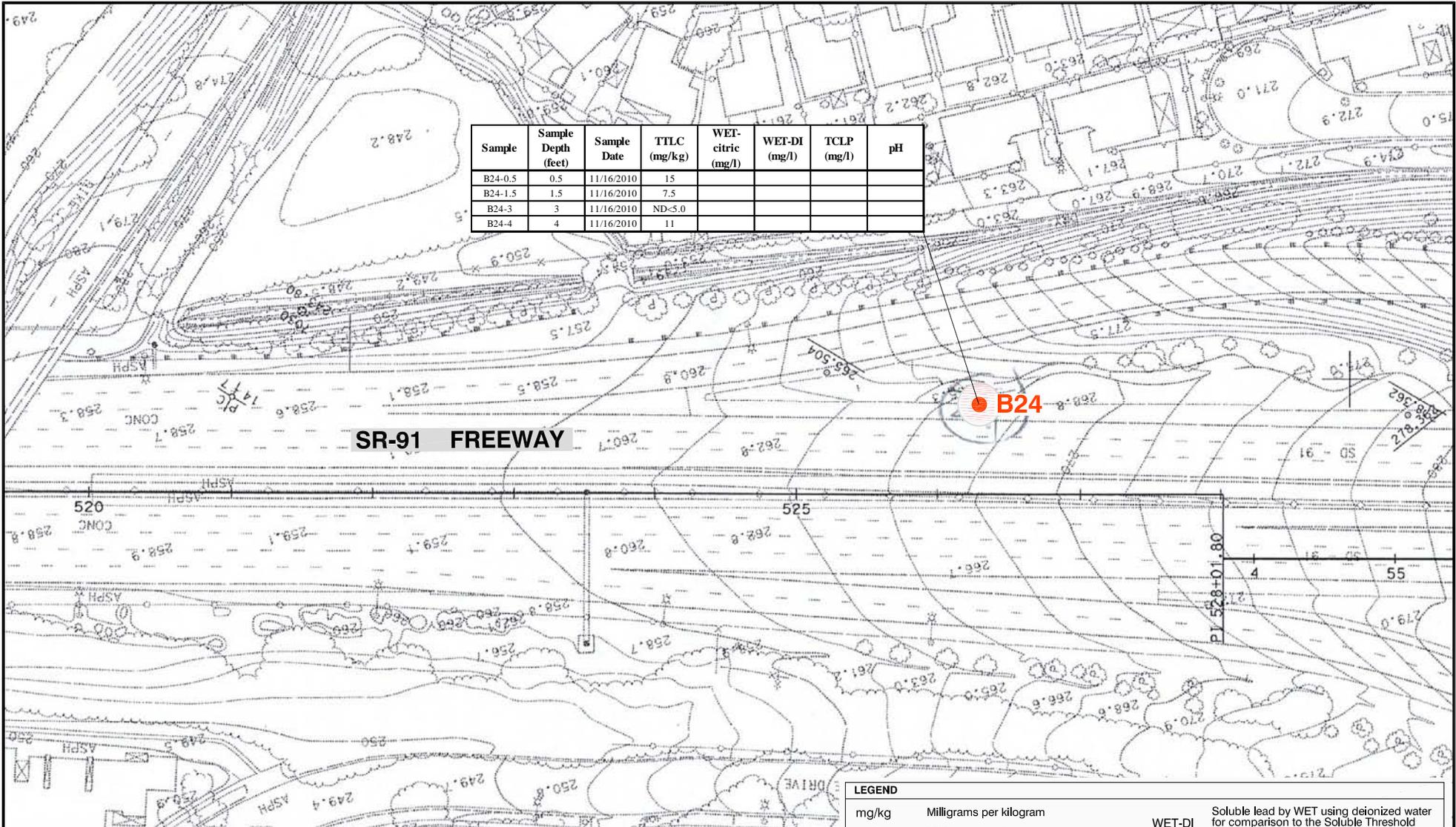


NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

<b>Ninyo &amp; Moore</b>		<b>BORING DATA</b>	<b>FIGURE</b>
PROJECT NO.	DATE	STATE ROUTE 91 FROM POST MILE 0.0 TO 10.09 ORANGE COUNTY, CALIFORNIA	<b>32</b>
207384041	12/10		

207384\_A32.DWG.....-G.K.

Sample	Sample Depth (feet)	Sample Date	TTLc (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B24-0.5	0.5	11/16/2010	15				
B24-1.5	1.5	11/16/2010	7.5				
B24-3	3	11/16/2010	ND-5.0				
B24-4	4	11/16/2010	11				



**SR-91 FREEWAY**

**B24**

LEGEND	
mg/kg	Milligrams per kilogram
mg/l	Milligrams per liter
TTLc	Total Lead for comparison to the total threshold limit concentration
WET	Waste Extraction Tests
WET-citric	Soluble lead by WET using citric acid for comparison to the Soluble Threshold Limit in concentration
WET-DI	Soluble lead by WET using deionized water for comparison to the Soluble Threshold Limit in concentration
TCLP	Soluble lead by Toxicity Characteristic Leaching Procedure
ND	Not detected above reporting limits presented in Appendix A
<b>B24</b> ●	Boring



SCALE IN FEET



REFERENCE: CALTRANS DESIGN BRANCH B, DATED 08/12/2010.

**Ninyo & Moore**

**BORING DATA**

FIGURE

PROJECT NO.	DATE
207384041	12/10

STATE ROUTE 91 FROM  
POST MILE 0.0 TO 10.09  
ORANGE COUNTY, CALIFORNIA

**33**

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

**APPENDIX A**

**AERIALLY DEPOSITED LEAD SOIL MANAGEMENT CHART**

## AERIALY DEPOSITED LEAD SOIL MANAGEMENT

SOLUBLE LEAD (mg/l)	TOTAL LEAD (mg/kg)	SOIL TYPE	HANDLING
<b>CALIFORNIA TESTING</b>			
STLC <5.0	TTLC <1000	X	<b>Non-hazardous Waste.</b> Notify and require Lead Compliance Plan for worker safety.
	1000 – 1411 and DI WET < 1.5 mg/l	Y1	<b>Hazardous Waste. Variance applies</b> – cover with minimum 1 foot of clean soil.*
	1411 – 3397 and DI WET < 150 mg/l	Y2	<b>Hazardous Waste. Variance applies</b> – cover with pavement structure. *
	1000 – 3397 but Surplus	Z2	<b>Hazardous Waste - Surplus.</b> Dispose at Class 1 disposal site.
	> 3397 or 1000 – 3397 & DI WET > 150 mg/l	Z2	<b>Hazardous Waste</b> – not reusable under Variance. Dispose at Class 1 disposal site.
STLC >5.0	TTLC < 1411 and DI WET < 1.5 mg/l	Y1	<b>Hazardous Waste. Variance applies</b> – cover with minimum of 1 foot of clean soil.*
	1411 – 3397 and DI WET < 150 mg/l	Y2	<b>Hazardous Waste. Variance applies</b> – cover with pavement structure.*
	< 3397 and DI WET < 150 mg/l but Surplus	Z2	<b>Hazardous Waste - Surplus.</b> Dispose at Class 1 disposal site.
	> 3397 or DI WET > 150 mg/l	Z2	<b>Hazardous Waste</b> – not reusable under Variance. Dispose at Class 1 disposal site.
<b>FEDERAL TESTING</b>			
TCLP > 5.0 mg/l	N/A	Z3	<b>RCRA Hazardous Waste</b> Dispose at Class 1 disposal site as a RCRA waste regardless of TTLC and STLC results.

\*Note: For hazardous waste levels of lead - if pH is less than 5.5 soil must be placed under a pavement structure. If pH is less than 5.0 variance can not be used and the soil must be disposed as Z-2 material.

**APPENDIX B**

**LABORATORY REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION**

December 08, 2010



Beth Padgett  
Ninyo & Moore  
475 Goddard Suite 200  
Irvine, CA 92618  
TEL: (949) 678-0842  
FAX: (949) 753-7071

ELAP No.: 1838  
NELAP No.: 02107CA  
CSDLAC No.: 10196

Workorder No.: 114762

RE: EA 0H0291, 207384041

Attention: Beth Padgett

Enclosed are the results for sample(s) received on November 16, 2010 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.

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,

A handwritten signature in black ink, appearing to read "E. Rodriguez".

Eddie F. Rodriguez  
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.



**Advanced Technology Laboratories**

Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Project:** EA 0H0291, 207384041  
**Lab Order:** 114762  
**Contract No:**

**Work Order Sample Summary**

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
114762-001A	B24-0.5	Soil	11/16/2010 8:35:00 AM	11/16/2010	12/8/2010
114762-002A	B24-1.5	Soil	11/16/2010 8:39:00 AM	11/16/2010	12/8/2010
114762-003A	B24-3	Soil	11/16/2010 8:43:00 AM	11/16/2010	12/8/2010
114762-004A	B24-4	Soil	11/16/2010 8:46:00 AM	11/16/2010	12/8/2010
114762-005A	B20-0.5	Soil	11/16/2010 9:01:00 AM	11/16/2010	12/8/2010
114762-006A	B20-1.5	Soil	11/16/2010 9:05:00 AM	11/16/2010	12/8/2010
114762-007A	B20-3	Soil	11/16/2010 9:10:00 AM	11/16/2010	12/8/2010
114762-008A	B20-4	Soil	11/16/2010 9:14:00 AM	11/16/2010	12/8/2010
114762-009A	B7-0.5	Soil	11/16/2010 9:38:00 AM	11/16/2010	12/8/2010
114762-010A	B7-1.5	Soil	11/16/2010 9:42:00 AM	11/16/2010	12/8/2010
114762-011A	B7-3	Soil	11/16/2010 9:47:00 AM	11/16/2010	12/8/2010
114762-012A	B7-4	Soil	11/16/2010 9:50:00 AM	11/16/2010	12/8/2010
114762-013A	B6-0.5	Soil	11/16/2010 10:00:00 AM	11/16/2010	12/8/2010
114762-014A	B6-1.5	Soil	11/16/2010 10:05:00 AM	11/16/2010	12/8/2010
114762-015A	B6-3	Soil	11/16/2010 10:08:00 AM	11/16/2010	12/8/2010
114762-016A	B6-4	Soil	11/16/2010 10:11:00 AM	11/16/2010	12/8/2010
114762-017A	B5-0.5	Soil	11/16/2010 10:15:00 AM	11/16/2010	12/8/2010
114762-018A	B5-1.5	Soil	11/16/2010 10:18:00 AM	11/16/2010	12/8/2010
114762-019A	B5-3	Soil	11/16/2010 10:21:00 AM	11/16/2010	12/8/2010
114762-020A	B5-4	Soil	11/16/2010 10:24:00 AM	11/16/2010	12/8/2010
114762-021A	B3-0.5	Soil	11/16/2010 10:40:00 AM	11/16/2010	12/8/2010
114762-022A	B3-1.5	Soil	11/16/2010 10:46:00 AM	11/16/2010	12/8/2010
114762-023A	B3-3	Soil	11/16/2010 10:51:00 AM	11/16/2010	12/8/2010
114762-024A	B3-4	Soil	11/16/2010 10:56:00 AM	11/16/2010	12/8/2010
114762-025A	B2-0.5	Soil	11/16/2010 11:05:00 AM	11/16/2010	12/8/2010
114762-026A	B2-1.5	Soil	11/16/2010 11:08:00 AM	11/16/2010	12/8/2010
114762-027A	B2-3	Soil	11/16/2010 11:13:00 AM	11/16/2010	12/8/2010
114762-028A	B2-4	Soil	11/16/2010 11:17:00 AM	11/16/2010	12/8/2010
114762-029A	B4-0.5	Soil	11/16/2010 12:15:00 PM	11/16/2010	12/8/2010



**CLIENT:** Ninyo & Moore  
**Project:** EA 0H0291, 207384041  
**Lab Order:** 114762  
**Contract No:**

## Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
114762-030A	B4-1.5	Soil	11/16/2010 12:19:00 PM	11/16/2010	12/8/2010
114762-031A	B4-3	Soil	11/16/2010 12:23:00 PM	11/16/2010	12/8/2010
114762-032A	B4-4	Soil	11/16/2010 12:27:00 PM	11/16/2010	12/8/2010
114762-033A	B8-0.5	Soil	11/16/2010 12:40:00 PM	11/16/2010	12/8/2010
114762-034A	B8-1.5	Soil	11/16/2010 12:45:00 PM	11/16/2010	12/8/2010
114762-035A	B8-3	Soil	11/16/2010 12:49:00 PM	11/16/2010	12/8/2010
114762-036A	B8-4	Soil	11/16/2010 12:54:00 PM	11/16/2010	12/8/2010
114762-037A	B9-0.5	Soil	11/16/2010 1:08:00 PM	11/16/2010	12/8/2010
114762-038A	B9-1.5	Soil	11/16/2010 1:13:00 PM	11/16/2010	12/8/2010
114762-039A	B9-3	Soil	11/16/2010 1:17:00 PM	11/16/2010	12/8/2010
114762-040A	B9-4	Soil	11/16/2010 1:21:00 PM	11/16/2010	12/8/2010
114762-041A	B10-0.5	Soil	11/16/2010 1:32:00 PM	11/16/2010	12/8/2010
114762-042A	B10-1.5	Soil	11/16/2010 1:36:00 PM	11/16/2010	12/8/2010
114762-043A	B10-3	Soil	11/16/2010 1:40:00 PM	11/16/2010	12/8/2010
114762-044A	B10-4	Soil	11/16/2010 1:44:00 PM	11/16/2010	12/8/2010
114762-045A	B1-0.5	Soil	11/16/2010 11:28:00 AM	11/16/2010	12/8/2010
114762-046A	B1-1.5	Soil	11/16/2010 11:32:00 AM	11/16/2010	12/8/2010
114762-047A	B1-3	Soil	11/16/2010 11:37:00 AM	11/16/2010	12/8/2010
114762-048A	B1-4	Soil	11/16/2010 11:40:00 AM	11/16/2010	12/8/2010
114762-049A	B11-0.5	Soil	11/16/2010 2:00:00 PM	11/16/2010	12/8/2010
114762-050A	B11-1.5	Soil	11/16/2010 2:05:00 PM	11/16/2010	12/8/2010
114762-051A	B11-3	Soil	11/16/2010 2:10:00 PM	11/16/2010	12/8/2010
114762-052A	B11-4	Soil	11/16/2010 2:14:00 PM	11/16/2010	12/8/2010
114762-053A	B12-0.5	Soil	11/16/2010 2:23:00 PM	11/16/2010	12/8/2010
114762-054A	B12-1.5	Soil	11/16/2010 2:30:00 PM	11/16/2010	12/8/2010
114762-055A	B12-3	Soil	11/16/2010 2:35:00 PM	11/16/2010	12/8/2010
114762-056A	B12-4	Soil	11/16/2010 2:38:00 PM	11/16/2010	12/8/2010
114762-057A	B13-0.5	Soil	11/16/2010 2:43:00 PM	11/16/2010	12/8/2010
114762-058A	B13-1.5	Soil	11/16/2010 2:47:00 PM	11/16/2010	12/8/2010
114762-059A	B13-3	Soil	11/16/2010 2:51:00 PM	11/16/2010	12/8/2010



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**CLIENT:** Ninyo & Moore  
**Project:** EA 0H0291, 207384041  
**Lab Order:** 114762  
**Contract No:**

## Work Order Sample Summary

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Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
114762-060A	B13-4	Soil	11/16/2010 2:54:00 PM	11/16/2010	12/8/2010
114762-061A	B14-0.5	Soil	11/16/2010 3:02:00 PM	11/16/2010	12/8/2010
114762-062A	B14-1.5	Soil	11/16/2010 3:06:00 PM	11/16/2010	12/8/2010
114762-063A	B14-3	Soil	11/16/2010 3:10:00 PM	11/16/2010	12/8/2010
114762-064A	B14-4	Soil	11/16/2010 3:13:00 PM	11/16/2010	12/8/2010
114762-065A	B15-0.5	Soil	11/16/2010 3:22:00 PM	11/16/2010	12/8/2010
114762-066A	B15-1.5	Soil	11/16/2010 3:26:00 PM	11/16/2010	12/8/2010
114762-067A	B15-3	Soil	11/16/2010 3:32:00 PM	11/16/2010	12/8/2010
114762-068A	B15-4	Soil	11/16/2010 3:36:00 PM	11/16/2010	12/8/2010



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**CLIENT:** Ninyo & Moore  
**Project:** EA 0H0291, 207384041  
**Lab Order:** 114762

**CASE NARRATIVE**

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Analytical Comments for EPA 6010B

Samples 114762-050A-DUP, 114762-060A-DUP and 114762-068A-DUP, RPD for Sample Duplicate (DUP) is outside criteria; however, the Laboratory Control Sample (LCS) validated the analytical batch.

Sample 114762-068A-MSD, Matrix Spike Duplicate (MSD) is outside recovery criteria; however, the analytical batch was validated by the Laboratory Control Sample (LCS).



**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-001A

**Client Sample ID:** B24-0.5  
**Collection Date:** 11/16/2010 8:35:00 AM  
**Matrix:** SOIL

---

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	-----	------	-------	----	---------------

---

**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119A</b>	QC Batch: <b>68242</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>
Lead	15	0.11	5.0	mg/Kg	1 11/19/2010 10:49 AM

---

**Qualifiers:** B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
S Spike/Surrogate outside of limits due to matrix interference  
DO Surrogate Diluted Out  
E Value above quantitation range  
ND Not Detected at the Reporting Limit  
Results are wet unless otherwise specified



*Advanced Technology  
Laboratories*

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-002A

**Client Sample ID:** B24-1.5  
**Collection Date:** 11/16/2010 8:39:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119A</b>	QC Batch: <b>68242</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>
Lead	7.5	0.11	5.0	mg/Kg	1 11/19/2010 10:50 AM

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**Qualifiers:** B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
S Spike/Surrogate outside of limits due to matrix interference  
DO Surrogate Diluted Out  
E Value above quantitation range  
ND Not Detected at the Reporting Limit  
Results are wet unless otherwise specified



**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-003A

**Client Sample ID:** B24-3  
**Collection Date:** 11/16/2010 8:43:00 AM  
**Matrix:** SOIL

---

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: **ICP6\_101119A**      QC Batch: **68242**      PrepDate: **11/18/2010**      Analyst: **SRB**  
Lead      ND      0.11      5.0      mg/Kg      1      11/19/2010 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      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

**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

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<b>CLIENT:</b>	Ninyo & Moore	<b>Client Sample ID:</b>	B24-4
<b>Lab Order:</b>	114762	<b>Collection Date:</b>	11/16/2010 8:46:00 AM
<b>Project:</b>	EA 0H0291, 207384041	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	114762-004A		

---

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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---

**LEAD BY ICP**

	EPA 3050M	EPA 6010B		
RunID: <b>ICP6_101119A</b>	QC Batch: <b>68242</b>	PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>	
Lead	11 0.11	5.0	mg/Kg	1 11/19/2010 10:51 AM

---

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	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**

**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-005A

**Client Sample ID:** B20-0.5  
**Collection Date:** 11/16/2010 9:01:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: ICP6_101119A	QC Batch: 68242			PrepDate: 11/18/2010	Analyst: SRB		
Lead	69	0.11	5.0	mg/Kg	1	11/19/2010 10:52 AM	

**LEAD BY ATOMIC ABSORPTION (STLC)**

**WET**

**WET/ EPA 7420**

RunID: AA2_101129A	QC Batch: 68452			PrepDate: 11/27/2010	Analyst: VV		
Lead	4.2	0.21	0.25	mg/L	1	11/29/2010 12:12 PM	

**Qualifiers:** B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 Results are wet unless otherwise specified



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3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-006A

**Client Sample ID:** B20-1.5  
**Collection Date:** 11/16/2010 9:05:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	-----	------	-------	----	---------------

**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119A</b>	QC Batch: <b>68242</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	53	0.11	5.0	mg/Kg	1	11/19/2010 10:52 AM	

**LEAD BY ATOMIC ABSORPTION (STLC)**

**WET**

**WET/ EPA 7420**

RunID: <b>AA2_101129B</b>	QC Batch: <b>68453</b>			PrepDate: <b>11/27/2010</b>	Analyst: <b>VV</b>		
Lead	1.7	0.21	0.25	mg/L	1	11/29/2010 12:34 PM	

**PH**

**EPA 9045C**

RunID: <b>WETCHEM_101119B</b>	QC Batch: <b>R126965</b>			PrepDate:	Analyst: <b>CBB</b>		
pH	8.4	0.10	0.10	pH Units	1	11/19/2010	

**Qualifiers:** B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 Results are wet unless otherwise specified



Advanced Technology  
Laboratories

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

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<b>CLIENT:</b>	Ninyo & Moore	<b>Client Sample ID:</b>	B20-3
<b>Lab Order:</b>	114762	<b>Collection Date:</b>	11/16/2010 9:10:00 AM
<b>Project:</b>	EA 0H0291, 207384041	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	114762-007A		

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

	EPA 3050M			EPA 6010B			
RunID: <b>ICP6_101119A</b>	QC Batch: <b>68242</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	6.8	0.11	5.0	mg/Kg	1	11/19/2010 10:53 AM	

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<b>Qualifiers:</b>	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	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		



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

<b>CLIENT:</b>	Ninyo & Moore	<b>Client Sample ID:</b>	B20-4
<b>Lab Order:</b>	114762	<b>Collection Date:</b>	11/16/2010 9:14:00 AM
<b>Project:</b>	EA 0H0291, 207384041	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	114762-008A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

	EPA 3050M			EPA 6010B			
RunID: <b>ICP6_101119A</b>	QC Batch: <b>68242</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	ND	0.11	5.0	mg/Kg	1	11/19/2010 10:54 AM	

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	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	



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-009A

**Client Sample ID:** B7-0.5  
**Collection Date:** 11/16/2010 9:38:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119A</b>	QC Batch: <b>68242</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	330	0.11	5.0	mg/Kg	1	11/19/2010 10:56 AM	

**LEAD BY ATOMIC ABSORPTION**

**WET**

**WET DI/ EPA 7420**

RunID: <b>AA2_101203A</b>	QC Batch: <b>68533</b>			PrepDate: <b>12/1/2010</b>	Analyst: <b>BB</b>		
Lead	ND	0.21	0.25	mg/L	1	12/3/2010 01:43 PM	

**LEAD BY ATOMIC ABSORPTION (STLC)**

**WET**

**WET/ EPA 7420**

RunID: <b>AA2_101129A</b>	QC Batch: <b>68452</b>			PrepDate: <b>11/27/2010</b>	Analyst: <b>VV</b>		
Lead	30	1.0	1.2	mg/L	5	11/29/2010 12:14 PM	

**LEAD BY ATOMIC ABSORPTION (TCLP)**

**EPA3010A**

**EPA 1311/ 7420**

RunID: <b>AA2_101203B</b>	QC Batch: <b>68563</b>			PrepDate: <b>12/2/2010</b>	Analyst: <b>BB</b>		
Lead	1.1	0.21	0.25	mg/L	1	12/3/2010 01:53 PM	

**Qualifiers:** B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-010A

**Client Sample ID:** B7-1.5  
**Collection Date:** 11/16/2010 9:42:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: ICP6_101119A	QC Batch: 68242			PrepDate: 11/18/2010	Analyst: SRB		
Lead	64	0.11	5.0	mg/Kg	1	11/19/2010 10:57 AM	

**LEAD BY ATOMIC ABSORPTION (STLC)**

**WET**

**WET/ EPA 7420**

RunID: AA2_101129A	QC Batch: 68452			PrepDate: 11/27/2010	Analyst: VV		
Lead	3.0	0.21	0.25	mg/L	1	11/29/2010 12:14 PM	

**Qualifiers:** B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

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<b>CLIENT:</b>	Ninyo & Moore	<b>Client Sample ID:</b>	B7-3
<b>Lab Order:</b>	114762	<b>Collection Date:</b>	11/16/2010 9:47:00 AM
<b>Project:</b>	EA 0H0291, 207384041	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	114762-011A		

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

	EPA 3050M			EPA 6010B			
RunID: <b>ICP6_101119A</b>	QC Batch: <b>68242</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	36	0.11	5.0	mg/Kg	1	11/19/2010 10:59 AM	

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<b>Qualifiers:</b>	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	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		



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

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<b>CLIENT:</b>	Ninyo & Moore	<b>Client Sample ID:</b>	B7-4
<b>Lab Order:</b>	114762	<b>Collection Date:</b>	11/16/2010 9:50:00 AM
<b>Project:</b>	EA 0H0291, 207384041	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	114762-012A		

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

	EPA 3050M			EPA 6010B			
RunID: <b>ICP6_101119A</b>	QC Batch: <b>68242</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	23	0.11	5.0	mg/Kg	1	11/19/2010 11:00 AM	

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<b>Qualifiers:</b>	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	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		



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-013A

**Client Sample ID:** B6-0.5  
**Collection Date:** 11/16/2010 10:00:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: **ICP6\_101119A**      QC Batch: **68242**      PrepDate: **11/18/2010**      Analyst: **SRB**  
Lead      38      0.11      5.0      mg/Kg      1      11/19/2010 11:01 AM

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**Qualifiers:**    B    Analyte detected in the associated Method Blank      E    Value above quantitation range  
                  H    Holding times for preparation or analysis exceeded      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



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-015A

**Client Sample ID:** B6-3  
**Collection Date:** 11/16/2010 10:08:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119A</b>	QC Batch: <b>68242</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>
Lead	ND	0.11	5.0	mg/Kg	1 11/19/2010 11:02 AM

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**Qualifiers:** B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
S Spike/Surrogate outside of limits due to matrix interference  
DO Surrogate Diluted Out  
E Value above quantitation range  
ND Not Detected at the Reporting Limit  
Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-017A

**Client Sample ID:** B5-0.5  
**Collection Date:** 11/16/2010 10:15:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119A</b>	QC Batch: <b>68242</b>	PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>
Lead	26 0.11	5.0	mg/Kg 1 11/19/2010 11:05 AM

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**Qualifiers:** B Analyte detected in the associated Method Blank E Value above quantitation range  
H Holding times for preparation or analysis exceeded 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



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-018A

**Client Sample ID:** B5-1.5  
**Collection Date:** 11/16/2010 10:18:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: **ICP6\_101119A**      QC Batch: **68242**      PrepDate: **11/18/2010**      Analyst: **SRB**  
Lead      5.5      0.11      5.0      mg/Kg      1      11/19/2010 11:06 AM

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**Qualifiers:**    B    Analyte detected in the associated Method Blank      E    Value above quantitation range  
                  H    Holding times for preparation or analysis exceeded      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



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-019A

**Client Sample ID:** B5-3  
**Collection Date:** 11/16/2010 10:21:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: **ICP6\_101119A**      QC Batch: **68242**      PrepDate: **11/18/2010**      Analyst: **SRB**  
Lead      5.6      0.11      5.0      mg/Kg      1      11/19/2010 11:07 AM

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**Qualifiers:**    B    Analyte detected in the associated Method Blank      E    Value above quantitation range  
                  H    Holding times for preparation or analysis exceeded      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



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

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<b>CLIENT:</b>	Ninyo & Moore	<b>Client Sample ID:</b>	B5-4
<b>Lab Order:</b>	114762	<b>Collection Date:</b>	11/16/2010 10:24:00 AM
<b>Project:</b>	EA 0H0291, 207384041	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	114762-020A		

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

	EPA 3050M	EPA 6010B		
RunID: <b>ICP6_101119A</b>	QC Batch: <b>68242</b>	PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>	
Lead	ND 0.11	5.0	mg/Kg	1 11/19/2010 11:07 AM

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<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	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	



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-021A

**Client Sample ID:** B3-0.5  
**Collection Date:** 11/16/2010 10:40:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119B</b>	QC Batch: <b>68243</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>
Lead	24	0.11	5.0	mg/Kg	1 11/19/2010 11:17 AM

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**Qualifiers:** B Analyte detected in the associated Method Blank E Value above quantitation range  
H Holding times for preparation or analysis exceeded 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



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-022A

**Client Sample ID:** B3-1.5  
**Collection Date:** 11/16/2010 10:46:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119B</b>	QC Batch: <b>68243</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>
Lead	12	0.11	5.0	mg/Kg	1 11/19/2010 11:17 AM

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**Qualifiers:** B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
S Spike/Surrogate outside of limits due to matrix interference  
DO Surrogate Diluted Out  
E Value above quantitation range  
ND Not Detected at the Reporting Limit  
Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-023A

**Client Sample ID:** B3-3  
**Collection Date:** 11/16/2010 10:51:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119B</b>	QC Batch: <b>68243</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>
Lead	39	0.11	5.0	mg/Kg	1 11/19/2010 11:18 AM

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**Qualifiers:** B Analyte detected in the associated Method Blank E Value above quantitation range  
H Holding times for preparation or analysis exceeded 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



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-024A

**Client Sample ID:** B3-4  
**Collection Date:** 11/16/2010 10:56:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: **ICP6\_101119B**      QC Batch: **68243**      PrepDate: **11/18/2010**      Analyst: **SRB**  
Lead      26      0.11      5.0      mg/Kg      1      11/19/2010 11:19 AM

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**Qualifiers:**    B    Analyte detected in the associated Method Blank      E    Value above quantitation range  
                  H    Holding times for preparation or analysis exceeded      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



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-025A

**Client Sample ID:** B2-0.5  
**Collection Date:** 11/16/2010 11:05:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119B</b>	QC Batch: <b>68243</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	65	0.11	5.0	mg/Kg	1	11/19/2010 11:20 AM	

**LEAD BY ATOMIC ABSORPTION (STLC)**

**WET**

**WET/ EPA 7420**

RunID: <b>AA2_101129A</b>	QC Batch: <b>68452</b>			PrepDate: <b>11/27/2010</b>	Analyst: <b>VV</b>		
Lead	2.9	0.21	0.25	mg/L	1	11/29/2010 12:17 PM	

**PH**

**EPA 9045C**

RunID: <b>WETCHEM_101119B</b>	QC Batch: <b>R126965</b>			PrepDate:	Analyst: <b>CBB</b>		
pH	8.5	0.10	0.10	pH Units	1	11/19/2010	

**Qualifiers:** B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-026A

**Client Sample ID:** B2-1.5  
**Collection Date:** 11/16/2010 11:08:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119B</b>	QC Batch: <b>68243</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	120	0.11	5.0	mg/Kg	1	11/19/2010 11:20 AM	

**LEAD BY ATOMIC ABSORPTION (STLC)**

**WET**

**WET/ EPA 7420**

RunID: <b>AA2_101129A</b>	QC Batch: <b>68452</b>			PrepDate: <b>11/27/2010</b>	Analyst: <b>VV</b>		
Lead	4.5	0.21	0.25	mg/L	1	11/29/2010 12:17 PM	

**Qualifiers:** B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-027A

**Client Sample ID:** B2-3  
**Collection Date:** 11/16/2010 11:13:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: **ICP6\_101119B**      QC Batch: **68243**      PrepDate: **11/18/2010**      Analyst: **SRB**  
Lead      62      0.11      5.0      mg/Kg      1      11/19/2010 11:21 AM

**LEAD BY ATOMIC ABSORPTION (STLC)**

**WET**

**WET/ EPA 7420**

RunID: **AA2\_101129A**      QC Batch: **68452**      PrepDate: **11/27/2010**      Analyst: **VV**  
Lead      4.5      0.21      0.25      mg/L      1      11/29/2010 12:17 PM

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**Qualifiers:**    B    Analyte detected in the associated Method Blank      E    Value above quantitation range  
                  H    Holding times for preparation or analysis exceeded      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



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-028A

**Client Sample ID:** B2-4  
**Collection Date:** 11/16/2010 11:17:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119B</b>	QC Batch: <b>68243</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>
Lead	24	0.11	5.0	mg/Kg	1 11/19/2010 11:22 AM

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**Qualifiers:** B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
S Spike/Surrogate outside of limits due to matrix interference  
DO Surrogate Diluted Out  
E Value above quantitation range  
ND Not Detected at the Reporting Limit  
Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-029A

**Client Sample ID:** B4-0.5  
**Collection Date:** 11/16/2010 12:15:00 PM  
**Matrix:** SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119B</b>	QC Batch: <b>68243</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	640	0.11	5.0	mg/Kg	1	11/19/2010 11:22 AM	

**LEAD BY ATOMIC ABSORPTION**

**WET**

**WET DI/ EPA 7420**

RunID: <b>AA2_101203A</b>	QC Batch: <b>68533</b>			PrepDate: <b>12/1/2010</b>	Analyst: <b>BB</b>		
Lead	ND	0.21	0.25	mg/L	1	12/3/2010 01:44 PM	

**LEAD BY ATOMIC ABSORPTION (STLC)**

**WET**

**WET/ EPA 7420**

RunID: <b>AA2_101129A</b>	QC Batch: <b>68452</b>			PrepDate: <b>11/27/2010</b>	Analyst: <b>VV</b>		
Lead	33	1.0	1.2	mg/L	5	11/29/2010 12:19 PM	

**LEAD BY ATOMIC ABSORPTION (TCLP)**

**EPA3010A**

**EPA 1311/ 7420**

RunID: <b>AA2_101203B</b>	QC Batch: <b>68563</b>			PrepDate: <b>12/2/2010</b>	Analyst: <b>BB</b>		
Lead	0.82	0.21	0.25	mg/L	1	12/3/2010 01:54 PM	

**Qualifiers:** B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-030A

**Client Sample ID:** B4-1.5  
**Collection Date:** 11/16/2010 12:19:00 PM  
**Matrix:** SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119B</b>	QC Batch: <b>68243</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	17	0.11	5.0	mg/Kg	1	11/19/2010 11:23 AM	

**Qualifiers:** B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-031A

**Client Sample ID:** B4-3  
**Collection Date:** 11/16/2010 12:23:00 PM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: **ICP6\_101119B**      QC Batch: **68243**      PrepDate: **11/18/2010**      Analyst: **SRB**  
Lead      7.3      0.11      5.0      mg/Kg      1      11/19/2010 11:27 AM

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**Qualifiers:**    B    Analyte detected in the associated Method Blank      E    Value above quantitation range  
                  H    Holding times for preparation or analysis exceeded      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



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-032A

**Client Sample ID:** B4-4  
**Collection Date:** 11/16/2010 12:27:00 PM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119B</b>	QC Batch: <b>68243</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>	
Lead	13	0.11	5.0	mg/Kg	1	11/19/2010 11:28 AM

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**Qualifiers:** B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
S Spike/Surrogate outside of limits due to matrix interference  
DO Surrogate Diluted Out  
E Value above quantitation range  
ND Not Detected at the Reporting Limit  
Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-033A

**Client Sample ID:** B8-0.5  
**Collection Date:** 11/16/2010 12:40:00 PM  
**Matrix:** SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119B</b>	QC Batch: <b>68243</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	140	0.11	5.0	mg/Kg	1	11/19/2010 11:29 AM	

**LEAD BY ATOMIC ABSORPTION (STLC)**

**WET**

**WET/ EPA 7420**

RunID: <b>AA2_101129A</b>	QC Batch: <b>68452</b>			PrepDate: <b>11/27/2010</b>	Analyst: <b>VV</b>		
Lead	3.8	0.21	0.25	mg/L	1	11/29/2010 12:21 PM	

**Qualifiers:** B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-034A

**Client Sample ID:** B8-1.5  
**Collection Date:** 11/16/2010 12:45:00 PM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119B</b>	QC Batch: <b>68243</b>	PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>
Lead	ND 0.11	5.0	mg/Kg 1 11/19/2010 11:30 AM

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**Qualifiers:** B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
S Spike/Surrogate outside of limits due to matrix interference  
DO Surrogate Diluted Out  
E Value above quantitation range  
ND Not Detected at the Reporting Limit  
Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-035A

**Client Sample ID:** B8-3  
**Collection Date:** 11/16/2010 12:49:00 PM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: **ICP6\_101119B**      QC Batch: **68243**      PrepDate: **11/18/2010**      Analyst: **SRB**  
Lead      8.0    0.11      5.0      mg/Kg      1      11/19/2010 11:31 AM

**PH**

**EPA 9045C**

RunID: **WETCHEM\_101119B**      QC Batch: **R126965**      PrepDate:      Analyst: **CBB**  
pH      8.2    0.10      0.10      pH Units      1      11/19/2010

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**Qualifiers:**    B    Analyte detected in the associated Method Blank      E    Value above quantitation range  
                  H    Holding times for preparation or analysis exceeded      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



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-036A

**Client Sample ID:** B8-4  
**Collection Date:** 11/16/2010 12:54:00 PM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119B</b>	QC Batch: <b>68243</b>	PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>
Lead	ND 0.11	5.0	mg/Kg 1 11/19/2010 11:32 AM

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**Qualifiers:** B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
S Spike/Surrogate outside of limits due to matrix interference  
DO Surrogate Diluted Out  
E Value above quantitation range  
ND Not Detected at the Reporting Limit  
Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-037A

**Client Sample ID:** B9-0.5  
**Collection Date:** 11/16/2010 1:08:00 PM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

	EPA 3050M	EPA 6010B		
RunID: <b>ICP6_101119B</b>	QC Batch: <b>68243</b>	PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>	
Lead	34 0.11	5.0	mg/Kg	1 11/19/2010 11:32 AM

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**Qualifiers:** B Analyte detected in the associated Method Blank E Value above quantitation range  
H Holding times for preparation or analysis exceeded 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



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

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<b>CLIENT:</b>	Ninyo & Moore	<b>Client Sample ID:</b>	B9-1.5
<b>Lab Order:</b>	114762	<b>Collection Date:</b>	11/16/2010 1:13:00 PM
<b>Project:</b>	EA 0H0291, 207384041	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	114762-038A		

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

	EPA 3050M			EPA 6010B			
RunID: <b>ICP6_101119B</b>	QC Batch: <b>68243</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	6.0	0.11	5.0	mg/Kg	1	11/19/2010 11:34 AM	

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<b>Qualifiers:</b>	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	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		



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-039A

**Client Sample ID:** B9-3  
**Collection Date:** 11/16/2010 1:17:00 PM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: **ICP6\_101119B**      QC Batch: **68243**      PrepDate: **11/18/2010**      Analyst: **SRB**  
Lead      21      0.11      5.0      mg/Kg      1      11/19/2010 11:35 AM

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**Qualifiers:**    B    Analyte detected in the associated Method Blank      E    Value above quantitation range  
                  H    Holding times for preparation or analysis exceeded      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



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

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<b>CLIENT:</b>	Ninyo & Moore	<b>Client Sample ID:</b>	B9-4
<b>Lab Order:</b>	114762	<b>Collection Date:</b>	11/16/2010 1:21:00 PM
<b>Project:</b>	EA 0H0291, 207384041	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	114762-040A		

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

	EPA 3050M			EPA 6010B			
RunID: <b>ICP6_101119B</b>	QC Batch: <b>68243</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	ND	0.11	5.0	mg/Kg	1	11/19/2010 11:36 AM	

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<b>Qualifiers:</b>	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	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		



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-041A

**Client Sample ID:** B10-0.5  
**Collection Date:** 11/16/2010 1:32:00 PM  
**Matrix:** SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
<b>LEAD BY ICP</b>							
	<b>EPA 3050M</b>			<b>EPA 6010B</b>			
RunID: ICP6_101119C	QC Batch: 68244			PrepDate:	11/18/2010	Analyst: SRB	
Lead	190	0.11	5.0	mg/Kg	1	11/19/2010 11:40 AM	
<b>LEAD BY ATOMIC ABSORPTION</b>							
	<b>WET</b>			<b>WET DI/ EPA 7420</b>			
RunID: AA2_101203A	QC Batch: 68533			PrepDate:	12/1/2010	Analyst: BB	
Lead	ND	0.21	0.25	mg/L	1	12/3/2010 01:45 PM	
<b>LEAD BY ATOMIC ABSORPTION (STLC)</b>							
	<b>WET</b>			<b>WET/ EPA 7420</b>			
RunID: AA2_101129A	QC Batch: 68452			PrepDate:	11/27/2010	Analyst: VV	
Lead	16	0.41	0.50	mg/L	2	11/29/2010 12:22 PM	
<b>LEAD BY ATOMIC ABSORPTION (TCLP)</b>							
	<b>EPA3010A</b>			<b>EPA 1311/ 7420</b>			
RunID: AA2_101203B	QC Batch: 68563			PrepDate:	12/2/2010	Analyst: BB	
Lead	0.65	0.21	0.25	mg/L	1	12/3/2010 01:55 PM	

**Qualifiers:** B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

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<b>CLIENT:</b>	Ninyo & Moore	<b>Client Sample ID:</b>	B10-3
<b>Lab Order:</b>	114762	<b>Collection Date:</b>	11/16/2010 1:40:00 PM
<b>Project:</b>	EA 0H0291, 207384041	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	114762-043A		

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

	EPA 3050M			EPA 6010B			
RunID: <b>ICP6_101119C</b>	QC Batch: <b>68244</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	ND	0.11	5.0	mg/Kg	1	11/19/2010 11:43 AM	

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<b>Qualifiers:</b>	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	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		



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

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<b>CLIENT:</b>	Ninyo & Moore	<b>Client Sample ID:</b>	B10-4
<b>Lab Order:</b>	114762	<b>Collection Date:</b>	11/16/2010 1:44:00 PM
<b>Project:</b>	EA 0H0291, 207384041	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	114762-044A		

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

	EPA 3050M			EPA 6010B			
RunID: <b>ICP6_101119C</b>	QC Batch: <b>68244</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	5.7	0.11	5.0	mg/Kg	1	11/19/2010 11:44 AM	

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<b>Qualifiers:</b>	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	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		



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-045A

**Client Sample ID:** B1-0.5  
**Collection Date:** 11/16/2010 11:28:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119C</b>	QC Batch: <b>68244</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>
Lead	19	0.11	5.0	mg/Kg	1 11/19/2010 11:44 AM

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**Qualifiers:** B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
S Spike/Surrogate outside of limits due to matrix interference  
DO Surrogate Diluted Out  
E Value above quantitation range  
ND Not Detected at the Reporting Limit  
Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-046A

**Client Sample ID:** B1-1.5  
**Collection Date:** 11/16/2010 11:32:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119C</b>	QC Batch: <b>68244</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	67	0.11	5.0	mg/Kg	1	11/19/2010 11:45 AM	

**LEAD BY ATOMIC ABSORPTION (STLC)**

**WET**

**WET/ EPA 7420**

RunID: <b>AA2_101129A</b>	QC Batch: <b>68452</b>			PrepDate: <b>11/27/2010</b>	Analyst: <b>VV</b>		
Lead	2.4	0.21	0.25	mg/L	1	11/29/2010 12:23 PM	

**Qualifiers:** B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-047A

**Client Sample ID:** B1-3  
**Collection Date:** 11/16/2010 11:37:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119C</b>	QC Batch: <b>68244</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	100	0.11	5.0	mg/Kg	1	11/19/2010 11:46 AM	

**LEAD BY ATOMIC ABSORPTION**

**WET**

**WET DI/ EPA 7420**

RunID: <b>AA2_101203A</b>	QC Batch: <b>68533</b>			PrepDate: <b>12/1/2010</b>	Analyst: <b>BB</b>		
Lead	ND	0.21	0.25	mg/L	1	12/3/2010 01:45 PM	

**LEAD BY ATOMIC ABSORPTION (STLC)**

**WET**

**WET/ EPA 7420**

RunID: <b>AA2_101129A</b>	QC Batch: <b>68452</b>			PrepDate: <b>11/27/2010</b>	Analyst: <b>VV</b>		
Lead	7.5	0.21	0.25	mg/L	1	11/29/2010 12:23 PM	

**LEAD BY ATOMIC ABSORPTION (TCLP)**

**EPA3010A**

**EPA 1311/ 7420**

RunID: <b>AA2_101203B</b>	QC Batch: <b>68563</b>			PrepDate: <b>12/2/2010</b>	Analyst: <b>BB</b>		
Lead	0.36	0.21	0.25	mg/L	1	12/3/2010 01:55 PM	

**Qualifiers:** B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 Results are wet unless otherwise specified



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# ANALYTICAL RESULTS

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-048A

**Client Sample ID:** B1-4  
**Collection Date:** 11/16/2010 11:40:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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### LEAD BY ICP

#### EPA 3050M

#### EPA 6010B

RunID: ICP6_101119C	QC Batch: 68244			PrepDate: 11/18/2010	Analyst: SRB		
Lead	97	0.11	5.0	mg/Kg	1	11/19/2010 11:47 AM	

### LEAD BY ATOMIC ABSORPTION (STLC)

#### WET

#### WET/ EPA 7420

RunID: AA2_101129B	QC Batch: 68453			PrepDate: 11/27/2010	Analyst: VV		
Lead	4.8	0.21	0.25	mg/L	1	11/29/2010 12:27 PM	

**Qualifiers:** B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
S Spike/Surrogate outside of limits due to matrix interference  
DO Surrogate Diluted Out  
E Value above quantitation range  
ND Not Detected at the Reporting Limit  
Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-049A

**Client Sample ID:** B11-0.5  
**Collection Date:** 11/16/2010 2:00:00 PM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119C</b>	QC Batch: <b>68244</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>
Lead	18	0.11	5.0	mg/Kg	1 11/19/2010 11:47 AM

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**Qualifiers:** B Analyte detected in the associated Method Blank E Value above quantitation range  
H Holding times for preparation or analysis exceeded 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



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-050A

**Client Sample ID:** B11-1.5  
**Collection Date:** 11/16/2010 2:05:00 PM  
**Matrix:** SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119C</b>	QC Batch: <b>68244</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	100	0.11	5.0	mg/Kg	1	11/19/2010 11:48 AM	

**LEAD BY ATOMIC ABSORPTION**

**WET**

**WET DI/ EPA 7420**

RunID: <b>AA2_101203A</b>	QC Batch: <b>68533</b>			PrepDate: <b>12/1/2010</b>	Analyst: <b>BB</b>		
Lead	ND	0.21	0.25	mg/L	1	12/3/2010 01:46 PM	

**LEAD BY ATOMIC ABSORPTION (STLC)**

**WET**

**WET/ EPA 7420**

RunID: <b>AA2_101129B</b>	QC Batch: <b>68453</b>			PrepDate: <b>11/27/2010</b>	Analyst: <b>VV</b>		
Lead	6.8	0.21	0.25	mg/L	1	11/29/2010 12:27 PM	

**LEAD BY ATOMIC ABSORPTION (TCLP)**

**EPA3010A**

**EPA 1311/ 7420**

RunID: <b>AA2_101203B</b>	QC Batch: <b>68563</b>			PrepDate: <b>12/2/2010</b>	Analyst: <b>BB</b>		
Lead	0.63	0.21	0.25	mg/L	1	12/3/2010 01:56 PM	

**Qualifiers:** B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-051A

**Client Sample ID:** B11-3  
**Collection Date:** 11/16/2010 2:10:00 PM  
**Matrix:** SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119C</b>	QC Batch: <b>68244</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	28	0.11	5.0	mg/Kg	1	11/19/2010 11:53 AM	

**Qualifiers:** B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-053A

**Client Sample ID:** B12-0.5  
**Collection Date:** 11/16/2010 2:23:00 PM  
**Matrix:** SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119C</b>	QC Batch: <b>68244</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	56	0.11	5.0	mg/Kg	1	11/19/2010 11:54 AM	

**LEAD BY ATOMIC ABSORPTION (STLC)**

**WET**

**WET/ EPA 7420**

RunID: <b>AA2_101129B</b>	QC Batch: <b>68453</b>			PrepDate: <b>11/27/2010</b>	Analyst: <b>VV</b>		
Lead	4.3	0.21	0.25	mg/L	1	11/29/2010 12:27 PM	

**Qualifiers:** B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-054A

**Client Sample ID:** B12-1.5  
**Collection Date:** 11/16/2010 2:30:00 PM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: **ICP6\_101119C**      QC Batch: **68244**      PrepDate: **11/18/2010**      Analyst: **SRB**  
Lead      5.8      0.11      5.0      mg/Kg      1      11/19/2010 11:55 AM

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**Qualifiers:**    B    Analyte detected in the associated Method Blank      E    Value above quantitation range  
                  H    Holding times for preparation or analysis exceeded      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



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-055A

**Client Sample ID:** B12-3  
**Collection Date:** 11/16/2010 2:35:00 PM  
**Matrix:** SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119C</b>	QC Batch: <b>68244</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	53	0.11	5.0	mg/Kg	1	11/19/2010 11:56 AM	

**LEAD BY ATOMIC ABSORPTION (STLC)**

**WET**

**WET/ EPA 7420**

RunID: <b>AA2_101129B</b>	QC Batch: <b>68453</b>			PrepDate: <b>11/27/2010</b>	Analyst: <b>VV</b>		
Lead	2.1	0.21	0.25	mg/L	1	11/29/2010 12:28 PM	

**Qualifiers:** B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-056A

**Client Sample ID:** B12-4  
**Collection Date:** 11/16/2010 2:38:00 PM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: **ICP6\_101119C**      QC Batch: **68244**      PrepDate: **11/18/2010**      Analyst: **SRB**  
Lead      21      0.11      5.0      mg/Kg      1      11/19/2010 11:56 AM

**PH**

**EPA 9045C**

RunID: **WETCHEM\_101119B**      QC Batch: **R126965**      PrepDate:      Analyst: **CBB**  
pH      8.2      0.10      0.10      pH Units      1      11/19/2010

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**Qualifiers:**    B    Analyte detected in the associated Method Blank      E    Value above quantitation range  
                  H    Holding times for preparation or analysis exceeded      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



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

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<b>CLIENT:</b>	Ninyo & Moore	<b>Client Sample ID:</b>	B13-0.5
<b>Lab Order:</b>	114762	<b>Collection Date:</b>	11/16/2010 2:43:00 PM
<b>Project:</b>	EA 0H0291, 207384041	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	114762-057A		

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

	EPA 3050M			EPA 6010B			
RunID: <b>ICP6_101119C</b>	QC Batch: <b>68244</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	17	0.11	5.0	mg/Kg	1	11/19/2010 11:57 AM	

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<b>Qualifiers:</b>	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	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		



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-058A

**Client Sample ID:** B13-1.5  
**Collection Date:** 11/16/2010 2:47:00 PM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119C</b>	QC Batch: <b>68244</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>
Lead	46	0.11	5.0	mg/Kg	1 11/19/2010 11:58 AM

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**Qualifiers:** B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
S Spike/Surrogate outside of limits due to matrix interference  
DO Surrogate Diluted Out  
E Value above quantitation range  
ND Not Detected at the Reporting Limit  
Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-059A

**Client Sample ID:** B13-3  
**Collection Date:** 11/16/2010 2:51:00 PM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: **ICP6\_101119C**      QC Batch: **68244**      PrepDate: **11/18/2010**      Analyst: **SRB**  
Lead      33      0.11      5.0      mg/Kg      1      11/19/2010 11:58 AM

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**Qualifiers:**    B    Analyte detected in the associated Method Blank      E    Value above quantitation range  
                  H    Holding times for preparation or analysis exceeded      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



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

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<b>CLIENT:</b>	Ninyo & Moore	<b>Client Sample ID:</b>	B13-4
<b>Lab Order:</b>	114762	<b>Collection Date:</b>	11/16/2010 2:54:00 PM
<b>Project:</b>	EA 0H0291, 207384041	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	114762-060A		

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

	EPA 3050M			EPA 6010B			
RunID: <b>ICP6_101119C</b>	QC Batch: <b>68244</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	40	0.11	5.0	mg/Kg	1	11/19/2010 12:01 PM	

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<b>Qualifiers:</b>	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	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		



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-061A

**Client Sample ID:** B14-0.5  
**Collection Date:** 11/16/2010 3:02:00 PM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119D</b>	QC Batch: <b>68245</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>
Lead	29	0.11	5.0	mg/Kg	1 11/19/2010 12:05 PM

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**Qualifiers:** B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
S Spike/Surrogate outside of limits due to matrix interference  
DO Surrogate Diluted Out  
E Value above quantitation range  
ND Not Detected at the Reporting Limit  
Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-062A

**Client Sample ID:** B14-1.5  
**Collection Date:** 11/16/2010 3:06:00 PM  
**Matrix:** SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119D</b>	QC Batch: <b>68245</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	80	0.11	5.0	mg/Kg	1	11/19/2010 12:06 PM	

**LEAD BY ATOMIC ABSORPTION (STLC)**

**WET**

**WET/ EPA 7420**

RunID: <b>AA2_101129B</b>	QC Batch: <b>68453</b>			PrepDate: <b>11/27/2010</b>	Analyst: <b>VV</b>		
Lead	4.2	0.21	0.25	mg/L	1	11/29/2010 12:28 PM	

**Qualifiers:** B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-063A

**Client Sample ID:** B14-3  
**Collection Date:** 11/16/2010 3:10:00 PM  
**Matrix:** SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: ICP6_101119D	QC Batch: 68245			PrepDate: 11/18/2010	Analyst: SRB		
Lead	140	0.11	5.0	mg/Kg	1	11/19/2010 12:06 PM	

**LEAD BY ATOMIC ABSORPTION**

**WET**

**WET DI/ EPA 7420**

RunID: AA2_101203A	QC Batch: 68533			PrepDate: 12/1/2010	Analyst: BB		
Lead	ND	0.21	0.25	mg/L	1	12/3/2010 01:46 PM	

**LEAD BY ATOMIC ABSORPTION (STLC)**

**WET**

**WET/ EPA 7420**

RunID: AA2_101129B	QC Batch: 68453			PrepDate: 11/27/2010	Analyst: VV		
Lead	5.2	0.21	0.25	mg/L	1	11/29/2010 12:28 PM	

**LEAD BY ATOMIC ABSORPTION (TCLP)**

**EPA3010A**

**EPA 1311/ 7420**

RunID: AA2_101203B	QC Batch: 68563			PrepDate: 12/2/2010	Analyst: BB		
Lead	ND	0.21	0.25	mg/L	1	12/3/2010 01:56 PM	

**Qualifiers:** B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 Results are wet unless otherwise specified



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3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

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<b>CLIENT:</b>	Ninyo & Moore	<b>Client Sample ID:</b>	B14-4
<b>Lab Order:</b>	114762	<b>Collection Date:</b>	11/16/2010 3:13:00 PM
<b>Project:</b>	EA 0H0291, 207384041	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	114762-064A		

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

	EPA 3050M			EPA 6010B			
RunID: <b>ICP6_101119D</b>	QC Batch: <b>68245</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	44	0.11	5.0	mg/Kg	1	11/19/2010 12:07 PM	

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<b>Qualifiers:</b>	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	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		



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**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114762  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114762-065A

**Client Sample ID:** B15-0.5  
**Collection Date:** 11/16/2010 3:22:00 PM  
**Matrix:** SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP6_101119D</b>	QC Batch: <b>68245</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	67	0.11	5.0	mg/Kg	1	11/19/2010 12:09 PM	

**LEAD BY ATOMIC ABSORPTION (STLC)**

**WET**

**WET/ EPA 7420**

RunID: <b>AA2_101129B</b>	QC Batch: <b>68453</b>			PrepDate: <b>11/27/2010</b>	Analyst: <b>VV</b>		
Lead	2.4	0.21	0.25	mg/L	1	11/29/2010 12:29 PM	

**PH**

**EPA 9045C**

RunID: <b>WETCHEM_101119B</b>	QC Batch: <b>R126965</b>			PrepDate:	Analyst: <b>CBB</b>		
pH	7.6	0.10	0.10	pH Units	1	11/19/2010	

**Qualifiers:** B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 Results are wet unless otherwise specified



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**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

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<b>CLIENT:</b>	Ninyo & Moore	<b>Client Sample ID:</b>	B15-3
<b>Lab Order:</b>	114762	<b>Collection Date:</b>	11/16/2010 3:32:00 PM
<b>Project:</b>	EA 0H0291, 207384041	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	114762-067A		

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

	EPA 3050M			EPA 6010B			
RunID: <b>ICP6_101119D</b>	QC Batch: <b>68245</b>			PrepDate: <b>11/18/2010</b>	Analyst: <b>SRB</b>		
Lead	49	0.11	5.0	mg/Kg	1	11/19/2010 12:11 PM	

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<b>Qualifiers:</b>	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	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		



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**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 08-Dec-10

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<b>CLIENT:</b>	Ninyo & Moore	<b>Client Sample ID:</b>	B15-4
<b>Lab Order:</b>	114762	<b>Collection Date:</b>	11/16/2010 3:36:00 PM
<b>Project:</b>	EA 0H0291, 207384041	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	114762-068A		

---

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

		EPA 3050M		EPA 6010B			
RunID:	ICP6_101119D	QC Batch:	68245	PrepDate:	11/18/2010	Analyst:	SRB
Lead		33	0.11	5.0	mg/Kg	1	11/19/2010 12:11 PM

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<b>Qualifiers:</b>	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	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		



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3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**CLIENT:** Ninyo & Moore  
**Work Order:** 114762  
**Project:** EA OH0291, 207384041

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 6010\_SPB**

Sample ID: <b>MB-68242A</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>11/18/2010</b>	RunNo: <b>126936</b>
Client ID: <b>PBS</b>	Batch ID: <b>68242</b>	TestNo: <b>EPA 6010B EPA 3050M</b>		Analysis Date: <b>11/19/2010</b>	SeqNo: <b>2047749</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Lead ND 5.0

Sample ID: <b>LCS-68242</b>	SampType: <b>LCS</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>11/18/2010</b>	RunNo: <b>126936</b>
Client ID: <b>LCSS</b>	Batch ID: <b>68242</b>	TestNo: <b>EPA 6010B EPA 3050M</b>		Analysis Date: <b>11/19/2010</b>	SeqNo: <b>2047750</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Lead 266.693 5.0 250.0 0 107 80 120

Sample ID: <b>114762-010A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>11/18/2010</b>	RunNo: <b>126936</b>
Client ID: <b>B7-1.5</b>	Batch ID: <b>68242</b>	TestNo: <b>EPA 6010B EPA 3050M</b>		Analysis Date: <b>11/19/2010</b>	SeqNo: <b>2047761</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Lead 64.532 5.0 63.92 0.947 20

Sample ID: <b>114762-010A-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>11/18/2010</b>	RunNo: <b>126936</b>
Client ID: <b>B7-1.5</b>	Batch ID: <b>68242</b>	TestNo: <b>EPA 6010B EPA 3050M</b>		Analysis Date: <b>11/19/2010</b>	SeqNo: <b>2047762</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

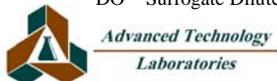
Lead 281.068 5.0 250.0 63.92 86.9 34 126

Sample ID: <b>MB-68242B</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>11/18/2010</b>	RunNo: <b>126936</b>
Client ID: <b>PBS</b>	Batch ID: <b>68242</b>	TestNo: <b>EPA 6010B EPA 3050M</b>		Analysis Date: <b>11/19/2010</b>	SeqNo: <b>2047763</b>
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
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



**CLIENT:** Ninyo & Moore  
**Work Order:** 114762  
**Project:** EA 0H0291, 207384041

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010\_SPB**

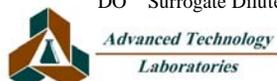
Sample ID: <b>114762-020A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>11/18/2010</b>	RunNo: <b>126936</b>						
Client ID: <b>B5-4</b>	Batch ID: <b>68242</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>11/19/2010</b>	SeqNo: <b>2047774</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.815	5.0						1.630	0	20	

Sample ID: <b>114762-020A-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>11/18/2010</b>	RunNo: <b>126936</b>						
Client ID: <b>B5-4</b>	Batch ID: <b>68242</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>11/19/2010</b>	SeqNo: <b>2047775</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	231.747	5.0	250.0	1.630	92.0	34	126				

Sample ID: <b>114762-020A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>11/18/2010</b>	RunNo: <b>126936</b>						
Client ID: <b>B5-4</b>	Batch ID: <b>68242</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>11/19/2010</b>	SeqNo: <b>2047776</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	244.616	5.0	250.0	1.630	97.2	34	126	231.7	5.40	20	

**Qualifiers:**

- |   |  |  |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range       | H Holding times for preparation or analysis exceeded           |
| 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:** Ninyo & Moore  
**Work Order:** 114762  
**Project:** EA 0H0291, 207384041

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010\_SPB**

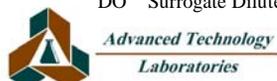
Sample ID: <b>114762-040A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>11/18/2010</b>	RunNo: <b>126937</b>						
Client ID: <b>B9-4</b>	Batch ID: <b>68243</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>11/19/2010</b>	SeqNo: <b>2047802</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.591	5.0						2.464	0	20	

Sample ID: <b>114762-040A-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>11/18/2010</b>	RunNo: <b>126937</b>						
Client ID: <b>B9-4</b>	Batch ID: <b>68243</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>11/19/2010</b>	SeqNo: <b>2047803</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	220.800	5.0	250.0	2.464	87.3	34	126				

Sample ID: <b>114762-040A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>11/18/2010</b>	RunNo: <b>126937</b>						
Client ID: <b>B9-4</b>	Batch ID: <b>68243</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>11/19/2010</b>	SeqNo: <b>2047804</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	238.365	5.0	250.0	2.464	94.4	34	126	220.8	7.65	20	

**Qualifiers:**

- |   |  |  |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range       | H Holding times for preparation or analysis exceeded           |
| 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:** Ninyo & Moore  
**Work Order:** 114762  
**Project:** EA 0H0291, 207384041

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010\_SPB**

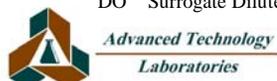
Sample ID: <b>114762-060A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>11/18/2010</b>	RunNo: <b>126938</b>						
Client ID: <b>B13-4</b>	Batch ID: <b>68244</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>11/19/2010</b>	SeqNo: <b>2047830</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	56.124	5.0						40.34	32.7	20	R

Sample ID: <b>114762-060A-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>11/18/2010</b>	RunNo: <b>126938</b>						
Client ID: <b>B13-4</b>	Batch ID: <b>68244</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>11/19/2010</b>	SeqNo: <b>2047831</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	278.549	5.0	250.0	40.34	95.3	34	126				

Sample ID: <b>114762-060A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>11/18/2010</b>	RunNo: <b>126938</b>						
Client ID: <b>B13-4</b>	Batch ID: <b>68244</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>11/19/2010</b>	SeqNo: <b>2047832</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	266.070	5.0	250.0	40.34	90.3	34	126	278.5	4.58	20	

**Qualifiers:**

- |   |  |  |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range       | H Holding times for preparation or analysis exceeded           |
| 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:** Ninyo & Moore  
**Work Order:** 114762  
**Project:** EA 0H0291, 207384041

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_DI**

Sample ID: <b>MB-68533A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_DI</b>	Units: <b>mg/L</b>	Prep Date: <b>12/1/2010</b>	RunNo: <b>127357</b>						
Client ID: <b>PBS</b>	Batch ID: <b>68533</b>	TestNo: <b>WET DI/ EPA WET</b>		Analysis Date: <b>12/3/2010</b>	SeqNo: <b>2056449</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: <b>LCS-68533</b>	SampType: <b>LCS</b>	TestCode: <b>7420_DI</b>	Units: <b>mg/L</b>	Prep Date: <b>12/1/2010</b>	RunNo: <b>127357</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>68533</b>	TestNo: <b>WET DI/ EPA WET</b>		Analysis Date: <b>12/3/2010</b>	SeqNo: <b>2056450</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.079	0.25	5.000	0	102	80	120				

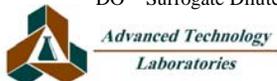
Sample ID: <b>114762-063A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_DI</b>	Units: <b>mg/L</b>	Prep Date: <b>12/1/2010</b>	RunNo: <b>127357</b>						
Client ID: <b>B14-3</b>	Batch ID: <b>68533</b>	TestNo: <b>WET DI/ EPA WET</b>		Analysis Date: <b>12/3/2010</b>	SeqNo: <b>2056457</b>						
Analyte	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: <b>114762-063A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_DI</b>	Units: <b>mg/L</b>	Prep Date: <b>12/1/2010</b>	RunNo: <b>127357</b>						
Client ID: <b>B14-3</b>	Batch ID: <b>68533</b>	TestNo: <b>WET DI/ EPA WET</b>		Analysis Date: <b>12/3/2010</b>	SeqNo: <b>2056458</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.852	0.25	5.000	0	97.0	70	130				

Sample ID: <b>114762-063A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_DI</b>	Units: <b>mg/L</b>	Prep Date: <b>12/1/2010</b>	RunNo: <b>127357</b>						
Client ID: <b>B14-3</b>	Batch ID: <b>68533</b>	TestNo: <b>WET DI/ EPA WET</b>		Analysis Date: <b>12/3/2010</b>	SeqNo: <b>2056459</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.815	0.25	5.000	0	96.3	70	130	4.852	0.758	20	

**Qualifiers:**

- |   |  |  |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range       | H Holding times for preparation or analysis exceeded           |
| 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:** Ninyo & Moore  
**Work Order:** 114762  
**Project:** EA 0H0291, 207384041

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_ST**

Sample ID: <b>MB-68452A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>11/27/2010</b>	RunNo: <b>127180</b>						
Client ID: <b>PBS</b>	Batch ID: <b>68452</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>11/29/2010</b>	SeqNo: <b>2053059</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: <b>LCS-68452</b>	SampType: <b>LCS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>11/27/2010</b>	RunNo: <b>127180</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>68452</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>11/29/2010</b>	SeqNo: <b>2053060</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.126	0.25	5.000	0	103	80	120				

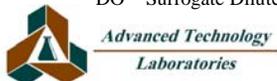
Sample ID: <b>114762-005A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>11/27/2010</b>	RunNo: <b>127180</b>						
Client ID: <b>B20-0.5</b>	Batch ID: <b>68452</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>11/29/2010</b>	SeqNo: <b>2053070</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.214	0.25						4.177	0.902	20	

Sample ID: <b>114762-005A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>11/27/2010</b>	RunNo: <b>127180</b>						
Client ID: <b>B20-0.5</b>	Batch ID: <b>68452</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>11/29/2010</b>	SeqNo: <b>2053071</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	8.971	0.25	5.000	4.177	95.9	80	120				

Sample ID: <b>MB-68452B</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>11/27/2010</b>	RunNo: <b>127180</b>						
Client ID: <b>PBS</b>	Batch ID: <b>68452</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>11/29/2010</b>	SeqNo: <b>2053072</b>						
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           |
| 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:** Ninyo & Moore  
**Work Order:** 114762  
**Project:** EA 0H0291, 207384041

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_ST**

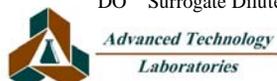
Sample ID: <b>114762-047A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>11/27/2010</b>	RunNo: <b>127180</b>						
Client ID: <b>B1-3</b>	Batch ID: <b>68452</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>11/29/2010</b>	SeqNo: <b>2053083</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.524	0.25						7.524	0.0105	20	

Sample ID: <b>114762-047A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>11/27/2010</b>	RunNo: <b>127180</b>						
Client ID: <b>B1-3</b>	Batch ID: <b>68452</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>11/29/2010</b>	SeqNo: <b>2053084</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	13.128	0.50	5.000	7.524	112	80	120				

Sample ID: <b>114762-047A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>11/27/2010</b>	RunNo: <b>127180</b>						
Client ID: <b>B1-3</b>	Batch ID: <b>68452</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>11/29/2010</b>	SeqNo: <b>2053085</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	13.076	0.50	5.000	7.524	111	80	120	13.13	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           |
| 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:** Ninyo & Moore  
**Work Order:** 114762  
**Project:** EA 0H0291, 207384041

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_ST**

Sample ID: <b>MB-68453A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>11/27/2010</b>	RunNo: <b>127182</b>						
Client ID: <b>PBS</b>	Batch ID: <b>68453</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>11/29/2010</b>	SeqNo: <b>2053090</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead ND 0.25

Sample ID: <b>LCS-68453</b>	SampType: <b>LCS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>11/27/2010</b>	RunNo: <b>127182</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>68453</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>11/29/2010</b>	SeqNo: <b>2053091</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 5.213 0.25 5.000 0 104 80 120

Sample ID: <b>114762-066A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>11/27/2010</b>	RunNo: <b>127182</b>						
Client ID: <b>B15-1.5</b>	Batch ID: <b>68453</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>11/29/2010</b>	SeqNo: <b>2053100</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 2.688 0.25 2.677 0.411 20

Sample ID: <b>114762-066A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>11/27/2010</b>	RunNo: <b>127182</b>						
Client ID: <b>B15-1.5</b>	Batch ID: <b>68453</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>11/29/2010</b>	SeqNo: <b>2053101</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

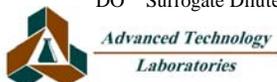
Lead 7.383 0.25 5.000 2.677 94.1 80 120

Sample ID: <b>114762-066A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>11/27/2010</b>	RunNo: <b>127182</b>						
Client ID: <b>B15-1.5</b>	Batch ID: <b>68453</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>11/29/2010</b>	SeqNo: <b>2053102</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 7.372 0.25 5.000 2.677 93.9 80 120 7.383 0.149 20

**Qualifiers:**

- |   |  |  |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range       | H Holding times for preparation or analysis exceeded           |
| 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:** Ninyo & Moore  
**Work Order:** 114762  
**Project:** EA 0H0291, 207384041

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_TC**

Sample ID: <b>MB-68563</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>12/2/2010</b>	RunNo: <b>127358</b>						
Client ID: <b>PBS</b>	Batch ID: <b>68563</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>12/3/2010</b>	SeqNo: <b>2056460</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: <b>MB-68514A TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>12/2/2010</b>	RunNo: <b>127358</b>						
Client ID: <b>PBS</b>	Batch ID: <b>68563</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>12/3/2010</b>	SeqNo: <b>2056461</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

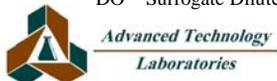
Sample ID: <b>LCS-68563</b>	SampType: <b>LCS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>12/2/2010</b>	RunNo: <b>127358</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>68563</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>12/3/2010</b>	SeqNo: <b>2056462</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.105	0.25	1.000	0	111	80	120				

Sample ID: <b>114942-001A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>12/2/2010</b>	RunNo: <b>127358</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>68563</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>12/3/2010</b>	SeqNo: <b>2056470</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.246	0.25						1.289	3.36	20	

Sample ID: <b>114942-001A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>12/2/2010</b>	RunNo: <b>127358</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>68563</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>12/3/2010</b>	SeqNo: <b>2056471</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.898	0.25	2.500	1.289	104	70	130				

**Qualifiers:**

- |   |  |  |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range       | H Holding times for preparation or analysis exceeded           |
| 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:** Ninyo & Moore  
**Work Order:** 114762  
**Project:** EA 0H0291, 207384041

## ANALYTICAL QC SUMMARY REPORT

**TestCode:** 7420\_TC

Sample ID: <b>114942-001A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>12/2/2010</b>	RunNo: <b>127358</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>68563</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>12/3/2010</b>	SeqNo: <b>2056472</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.918	0.25	2.500	1.289	105	70	130	3.898	0.526	20	

**Qualifiers:**

- |   |  |  |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range       | H Holding times for preparation or analysis exceeded           |
| 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   |  |



*Advanced Technology  
Laboratories*

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**CLIENT:** Ninyo & Moore  
**Work Order:** 114762  
**Project:** EA 0H0291, 207384041

## ANALYTICAL QC SUMMARY REPORT

**TestCode:** 9045\_S

Sample ID: <b>114762-065ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>9045_S</b>	Units: <b>pH Units</b>	Prep Date:	RunNo: <b>126965</b>						
Client ID: <b>B15-0.5</b>	Batch ID: <b>R126965</b>	TestNo: <b>EPA 9045C</b>	Analysis Date: <b>11/19/2010</b>	SeqNo: <b>2048370</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.610	0.10						7.580	0.395	20	

**Qualifiers:**

- |   |  |  |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range       | H Holding times for preparation or analysis exceeded           |
| 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   |  |



*Advanced Technology  
Laboratories*

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

LABORATORY:  
Advanced Technology Laboratories  
3275 Walnut Avenue  
Signal Hill, CA 90807  
(562) 989-4045 / fax (562) 989-4040

SITE:  
State Route 91 from Post Mile  
0.0 to 10.09  
Orange County, California  
EA 0H0291  
Project Number 207384041

CONSULTANT:  
Ninyo & Moore  
475 Goddard, Suite 200  
Irvine, CA 92618  
(949) 753-7070/fax (949) 753-7071

Special Instructions:

Homogenize the samples

If total lead is <1,000 mg/kg, but  $\geq$  50 mg/kg, run STLC WET test (citric acid extraction EPA Method 7000 series)

If STLC WET  $\geq$  5 mg/l, run STLC-DI (DI extraction EPA Method 7000 series)

If total lead is  $\geq$  1,000 mg/kg or STLC WET  $\geq$  5 mg/l, run TCLP (EPA Method 7000 series for leachable lead)

Relinquished by (name/date and time):

*Jenny Martin*

11/16/10 16:53

Received by (name/date and time):

*FPD*

11/16/10 16:53

Relinquished by (name/date and time):

Received by (name/date and time):

Relinquished by (name/date and time):

Received by (name/date and time):

Relinquished by (name/date and time):

Received by (name/date and time):

Lab No.	Sample I. D.	Date	Time	Total Lead EPA Method 6010	pH EPA Method 9045	Sample Type	Turn-Around Time	Container Type	HOLD
	B24-0.5	11/16/10	8:35	X		Soil	Normal	Glass Jar	
	B24-1.5		8:39			Soil	Normal	Glass Jar	
	B24-3		8:43			Soil	Normal	Glass Jar	
	B24-4		8:46			Soil	Normal	Glass Jar	
	B20-0.5		9:01			Soil	Normal	Glass Jar	
	B20-1.5		9:05		X	Soil	Normal	Glass Jar	
	B20-3		9:10			Soil	Normal	Glass Jar	
	B20-4		9:14			Soil	Normal	Glass Jar	
	B7-0.5		9:38			Soil	Normal	Glass Jar	
	B7-1.5		9:42			Soil	Normal	Glass Jar	
	B7-3		9:47			Soil	Normal	Glass Jar	
	B7-4		9:50			Soil	Normal	Glass Jar	
	B6-6.5		10:06			Soil	Normal	Glass Jar	
	B6-1.5		10:05			Soil	Normal	Glass Jar	
	B6-3		10:08			Soil	Normal	Glass Jar	
	B6-4		10:11		X	Soil	Normal	Glass Jar	
	B5-0.5		10:15			Soil	Normal	Glass Jar	
	B5-1.5		10:18			Soil	Normal	Glass Jar	
	B5-3		10:21			Soil	Normal	Glass Jar	
	B5-4		10:24			Soil	Normal	Glass Jar	
	B3-0.5		10:40			Soil	Normal	Glass Jar	
	B3-1.5		10:46			Soil	Normal	Glass Jar	
	B3-3		10:51			Soil	Normal	Glass Jar	
	B3-4		10:56			Soil	Normal	Glass Jar	
	B2-0.5		11:05		X	Soil	Normal	Glass Jar	
	B2-1.5		11:08			Soil	Normal	Glass Jar	
	B2-3		11:13			Soil	Normal	Glass Jar	
	B2-4		11:17			Soil	Normal	Glass Jar	
	B4-0.5		12:15			Soil	Normal	Glass Jar	
	B4-1.5		12:19			Soil	Normal	Glass Jar	
	B4-3		12:23			Soil	Normal	Glass Jar	
	B4-4		12:27			Soil	Normal	Glass Jar	
	B8-0.5		12:40			Soil	Normal	Glass Jar	
	B8-1.5		12:45			Soil	Normal	Glass Jar	
	B8-3		12:49		X	Soil	Normal	Glass Jar	
	B8-4		12:54			Soil	Normal	Glass Jar	
	B9-0.5		13:08			Soil	Normal	Glass Jar	
	B9-1.5		13:13			Soil	Normal	Glass Jar	
	B9-3		13:17			Soil	Normal	Glass Jar	
	B9-4		13:21			Soil	Normal	Glass Jar	
	B10-0.5		13:32			Soil	Normal	Glass Jar	
	B10-1.5		13:36		X	Soil	Normal	Glass Jar	
	B10-3		13:40			Soil	Normal	Glass Jar	
	B10-4		13:44			Soil	Normal	Glass Jar	
						Soil	Normal	Glass Jar	
						water	Normal	Plastic	

sampler =

*Jenny Martin*



December 09, 2010



Beth Padgett  
Ninyo & Moore  
475 Goddard Suite 200  
Irvine, CA 92618  
TEL: (949) 678-0842  
FAX: (949) 753-7071

ELAP No.: 1838  
NELAP No.: 02107CA  
CSDLAC No.: 10196

Workorder No.: 114782

RE: EA 0H0291, 207384041

Attention: Beth Padgett

Enclosed are the results for sample(s) received on November 17, 2010 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.

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,

A handwritten signature in black ink, appearing to read "E. Rodriguez".

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:** Ninyo & Moore  
**Project:** EA 0H0291, 207384041  
**Lab Order:** 114782  
**Contract No:**

**Work Order Sample Summary**

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
114782-001A	B16-0.5	Soil	11/17/2010 8:48:00 AM	11/17/2010	12/9/2010
114782-002A	B16-1.5	Soil	11/17/2010 8:54:00 AM	11/17/2010	12/9/2010
114782-003A	B17-0.5	Soil	11/17/2010 9:10:00 AM	11/17/2010	12/9/2010
114782-004A	B18-0.5	Soil	11/17/2010 9:50:00 AM	11/17/2010	12/9/2010
114782-005A	B18-1.5	Soil	11/17/2010 9:55:00 AM	11/17/2010	12/9/2010
114782-006A	B18-3	Soil	11/17/2010 9:59:00 AM	11/17/2010	12/9/2010
114782-007A	B18-4	Soil	11/17/2010 10:02:00 AM	11/17/2010	12/9/2010
114782-008A	B19-0.5	Soil	11/17/2010 10:20:00 AM	11/17/2010	12/9/2010
114782-009A	B19-1.5	Soil	11/17/2010 10:26:00 AM	11/17/2010	12/9/2010
114782-010A	B21-0.5	Soil	11/17/2010 10:40:00 AM	11/17/2010	12/9/2010
114782-011A	B21-1.5	Soil	11/17/2010 10:45:00 AM	11/17/2010	12/9/2010
114782-012A	B21-3	Soil	11/17/2010 10:50:00 AM	11/17/2010	12/9/2010
114782-013A	B21-4	Soil	11/17/2010 10:54:00 AM	11/17/2010	12/9/2010
114782-014A	B22-0.5	Soil	11/17/2010 11:08:00 AM	11/17/2010	12/9/2010
114782-015A	B22-1.5	Soil	11/17/2010 11:12:00 AM	11/17/2010	12/9/2010
114782-016A	B22-3	Soil	11/17/2010 11:16:00 AM	11/17/2010	12/9/2010
114782-017A	B22-4	Soil	11/17/2010 11:20:00 AM	11/17/2010	12/9/2010
114782-018A	B23-0.5	Soil	11/17/2010 11:33:00 AM	11/17/2010	12/9/2010
114782-019A	B23-1.5	Soil	11/17/2010 11:38:00 AM	11/17/2010	12/9/2010
114782-020A	B23-3	Soil	11/17/2010 11:44:00 AM	11/17/2010	12/9/2010
114782-021A	B23-4	Soil	11/17/2010 11:48:00 AM	11/17/2010	12/9/2010
114782-022A	DECON TO-41	Water	11/17/2010 12:40:00 PM	11/17/2010	12/9/2010



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**ANALYTICAL RESULTS**

Print Date: 09-Dec-10

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<b>CLIENT:</b>	Ninyo & Moore	<b>Client Sample ID:</b>	B16-0.5
<b>Lab Order:</b>	114782	<b>Collection Date:</b>	11/17/2010 8:48:00 AM
<b>Project:</b>	EA 0H0291, 207384041	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	114782-001A		

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

	EPA 3050M			EPA 6010B			
RunID: <b>ICP8_101122D</b>	QC Batch: <b>68273</b>			PrepDate: <b>11/19/2010</b>	Analyst: <b>SRB</b>		
Lead	33	0.11	5.0	mg/Kg	1	11/22/2010 02:29 PM	

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<b>Qualifiers:</b>	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	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		



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<b>CLIENT:</b>	Ninyo & Moore	<b>Client Sample ID:</b>	B16-1.5
<b>Lab Order:</b>	114782	<b>Collection Date:</b>	11/17/2010 8:54:00 AM
<b>Project:</b>	EA 0H0291, 207384041	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	114782-002A		

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

	EPA 3050M			EPA 6010B			
RunID: <b>ICP8_101122D</b>	QC Batch:	<b>68273</b>		PrepDate:	<b>11/19/2010</b>	Analyst:	<b>SRB</b>
Lead		21	0.11	5.0	mg/Kg	1	11/22/2010 02:31 PM

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<b>Qualifiers:</b>	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	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		



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**ANALYTICAL RESULTS**

Print Date: 09-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114782  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114782-003A

**Client Sample ID:** B17-0.5  
**Collection Date:** 11/17/2010 9:10:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP8_101122D</b>	QC Batch: <b>68273</b>			PrepDate: <b>11/19/2010</b>	Analyst: <b>SRB</b>
Lead	28	0.11	5.0	mg/Kg	1 11/22/2010 02:33 PM

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**Qualifiers:** B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
S Spike/Surrogate outside of limits due to matrix interference  
DO Surrogate Diluted Out  
E Value above quantitation range  
ND Not Detected at the Reporting Limit  
Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 09-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114782  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114782-004A

**Client Sample ID:** B18-0.5  
**Collection Date:** 11/17/2010 9:50:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP8_101122D</b>	QC Batch: <b>68273</b>			PrepDate: <b>11/19/2010</b>	Analyst: <b>SRB</b>
Lead	42	0.11	5.0	mg/Kg	1 11/22/2010 02:35 PM

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**Qualifiers:** B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
S Spike/Surrogate outside of limits due to matrix interference  
DO Surrogate Diluted Out  
E Value above quantitation range  
ND Not Detected at the Reporting Limit  
Results are wet unless otherwise specified



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Print Date: 09-Dec-10

<b>CLIENT:</b> Ninyo & Moore	<b>Client Sample ID:</b> B18-1.5
<b>Lab Order:</b> 114782	<b>Collection Date:</b> 11/17/2010 9:55:00 AM
<b>Project:</b> EA 0H0291, 207384041	<b>Matrix:</b> SOIL
<b>Lab ID:</b> 114782-005A	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

	<b>EPA 3050M</b>						
RunID: <b>ICP8_101122D</b>	QC Batch: <b>68273</b>			PrepDate: <b>11/19/2010</b>		Analyst: <b>SRB</b>	
Lead	77	0.11	5.0	mg/Kg	1	11/22/2010 02:37 PM	

**LEAD BY ATOMIC ABSORPTION**

	<b>WET</b>						
RunID: <b>AA2_101209B</b>	QC Batch: <b>68644</b>			PrepDate: <b>12/6/2010</b>		Analyst: <b>IL</b>	
Lead	ND	0.21	0.25	mg/L	1	12/9/2010 12:25 PM	

**LEAD BY ATOMIC ABSORPTION (STLC)**

	<b>WET</b>						
RunID: <b>AA2_101201A</b>	QC Batch: <b>68479</b>			PrepDate: <b>11/29/2010</b>		Analyst: <b>VV</b>	
Lead	9.4	0.41	0.50	mg/L	2	12/1/2010 11:42 AM	

**LEAD BY ATOMIC ABSORPTION (TCLP)**

	<b>EPA3010A</b>						
RunID: <b>AA2_101209A</b>	QC Batch: <b>68678</b>			PrepDate: <b>12/7/2010</b>		Analyst: <b>IL</b>	
Lead	ND	0.21	0.25	mg/L	1	12/9/2010 12:22 PM	

**PH**

	<b>EPA 9045C</b>						
RunID: <b>WETCHEM_101119C</b>	QC Batch: <b>R126966</b>			PrepDate:		Analyst: <b>CBB</b>	
pH	8.2	0.10	0.10	pH Units	1	11/19/2010	

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	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	



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**ANALYTICAL RESULTS**

Print Date: 09-Dec-10

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<b>CLIENT:</b>	Ninyo & Moore	<b>Client Sample ID:</b>	B18-3
<b>Lab Order:</b>	114782	<b>Collection Date:</b>	11/17/2010 9:59:00 AM
<b>Project:</b>	EA 0H0291, 207384041	<b>Matrix:</b>	SOIL
<b>Lab ID:</b>	114782-006A		

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

	EPA 3050M			EPA 6010B			
RunID: <b>ICP8_101122D</b>	QC Batch: <b>68273</b>			PrepDate: <b>11/19/2010</b>	Analyst: <b>SRB</b>		
Lead	ND	0.11	5.0	mg/Kg	1	11/22/2010 02:39 PM	

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<b>Qualifiers:</b>	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	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		



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**ANALYTICAL RESULTS**

Print Date: 09-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114782  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114782-007A

**Client Sample ID:** B18-4  
**Collection Date:** 11/17/2010 10:02:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP8_101122D</b>	QC Batch: <b>68273</b>			PrepDate: <b>11/19/2010</b>	Analyst: <b>SRB</b>
Lead	6.5	0.11	5.0	mg/Kg	1 11/22/2010 02:41 PM

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**Qualifiers:** B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
S Spike/Surrogate outside of limits due to matrix interference  
DO Surrogate Diluted Out  
E Value above quantitation range  
ND Not Detected at the Reporting Limit  
Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 09-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114782  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114782-008A

**Client Sample ID:** B19-0.5  
**Collection Date:** 11/17/2010 10:20:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP8_101122D</b>	QC Batch: <b>68273</b>			PrepDate: <b>11/19/2010</b>	Analyst: <b>SRB</b>
Lead	26	0.11	5.0	mg/Kg	1 11/22/2010 02:43 PM

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**Qualifiers:** B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
S Spike/Surrogate outside of limits due to matrix interference  
DO Surrogate Diluted Out  
E Value above quantitation range  
ND Not Detected at the Reporting Limit  
Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 09-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114782  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114782-009A

**Client Sample ID:** B19-1.5  
**Collection Date:** 11/17/2010 10:26:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP8_101122D</b>	QC Batch: <b>68273</b>			PrepDate: <b>11/19/2010</b>	Analyst: <b>SRB</b>
Lead	13	0.11	5.0	mg/Kg	1 11/22/2010 02:50 PM

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**Qualifiers:** B Analyte detected in the associated Method Blank E Value above quantitation range  
H Holding times for preparation or analysis exceeded 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



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**ANALYTICAL RESULTS**

Print Date: 09-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114782  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114782-010A

**Client Sample ID:** B21-0.5  
**Collection Date:** 11/17/2010 10:40:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP8_101122D</b>	QC Batch: <b>68273</b>			PrepDate: <b>11/19/2010</b>	Analyst: <b>SRB</b>
Lead	14	0.11	5.0	mg/Kg	1 11/22/2010 02:52 PM

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**Qualifiers:** B Analyte detected in the associated Method Blank E Value above quantitation range  
H Holding times for preparation or analysis exceeded 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



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**ANALYTICAL RESULTS**

Print Date: 09-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114782  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114782-011A

**Client Sample ID:** B21-1.5  
**Collection Date:** 11/17/2010 10:45:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: ICP8_101122D	QC Batch: 68273			PrepDate: 11/19/2010	Analyst: SRB		
Lead	55	0.11	5.0	mg/Kg	1	11/22/2010 03:01 PM	

**LEAD BY ATOMIC ABSORPTION (STLC)**

**WET**

**WET/ EPA 7420**

RunID: AA2_101201A	QC Batch: 68479			PrepDate: 11/29/2010	Analyst: VV		
Lead	0.98	0.21	0.25	mg/L	1	12/1/2010 11:43 AM	

**Qualifiers:** B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 09-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114782  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114782-013A

**Client Sample ID:** B21-4  
**Collection Date:** 11/17/2010 10:54:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: **ICP8\_101122D**      QC Batch: **68273**      PrepDate: **11/19/2010**      Analyst: **SRB**  
Lead      ND      0.11      5.0      mg/Kg      1      11/22/2010 03:05 PM

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**Qualifiers:**    B    Analyte detected in the associated Method Blank      E    Value above quantitation range  
                  H    Holding times for preparation or analysis exceeded      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



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Print Date: 09-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114782  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114782-014A

**Client Sample ID:** B22-0.5  
**Collection Date:** 11/17/2010 11:08:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
<b>LEAD BY ICP</b>							
	<b>EPA 3050M</b>			<b>EPA 6010B</b>			
RunID: ICP8_101122D	QC Batch: 68273			PrepDate:	11/19/2010	Analyst: SRB	
Lead	85	0.11	5.0	mg/Kg	1	11/22/2010 03:07 PM	
<b>LEAD BY ATOMIC ABSORPTION</b>							
	<b>WET</b>			<b>WET DI/ EPA 7420</b>			
RunID: AA2_101209B	QC Batch: 68644			PrepDate:	12/6/2010	Analyst: IL	
Lead	ND	0.21	0.25	mg/L	1	12/9/2010 12:25 PM	
<b>LEAD BY ATOMIC ABSORPTION (STLC)</b>							
	<b>WET</b>			<b>WET/ EPA 7420</b>			
RunID: AA2_101201A	QC Batch: 68479			PrepDate:	11/29/2010	Analyst: VV	
Lead	8.4	0.21	0.25	mg/L	1	12/1/2010 11:43 AM	
<b>LEAD BY ATOMIC ABSORPTION (TCLP)</b>							
	<b>EPA3010A</b>			<b>EPA 1311/ 7420</b>			
RunID: AA2_101209A	QC Batch: 68678			PrepDate:	12/7/2010	Analyst: IL	
Lead	0.30	0.21	0.25	mg/L	1	12/9/2010 12:22 PM	

**Qualifiers:** B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 09-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114782  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114782-015A

**Client Sample ID:** B22-1.5  
**Collection Date:** 11/17/2010 11:12:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP8_101122D</b>	QC Batch: <b>68273</b>			PrepDate: <b>11/19/2010</b>	Analyst: <b>SRB</b>
Lead	ND	0.11	5.0	mg/Kg	1 11/22/2010 03:09 PM

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**Qualifiers:** B Analyte detected in the associated Method Blank E Value above quantitation range  
H Holding times for preparation or analysis exceeded 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



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**ANALYTICAL RESULTS**

Print Date: 09-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114782  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114782-016A

**Client Sample ID:** B22-3  
**Collection Date:** 11/17/2010 11:16:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP8_101122D</b>	QC Batch: <b>68273</b>			PrepDate: <b>11/19/2010</b>	Analyst: <b>SRB</b>	
Lead	11	0.11	5.0	mg/Kg	1	11/22/2010 03:15 PM

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**Qualifiers:** B Analyte detected in the associated Method Blank E Value above quantitation range  
H Holding times for preparation or analysis exceeded 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



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**ANALYTICAL RESULTS**

Print Date: 09-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114782  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114782-017A

**Client Sample ID:** B22-4  
**Collection Date:** 11/17/2010 11:20:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP8_101122D</b>	QC Batch: <b>68273</b>	PrepDate: <b>11/19/2010</b>	Analyst: <b>SRB</b>
Lead	ND 0.11	5.0	mg/Kg 1 11/22/2010 03:18 PM

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**Qualifiers:** B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
S Spike/Surrogate outside of limits due to matrix interference  
DO Surrogate Diluted Out  
E Value above quantitation range  
ND Not Detected at the Reporting Limit  
Results are wet unless otherwise specified



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**ANALYTICAL RESULTS**

Print Date: 09-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114782  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114782-018A

**Client Sample ID:** B23-0.5  
**Collection Date:** 11/17/2010 11:33:00 AM  
**Matrix:** SOIL

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Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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**LEAD BY ICP**

	EPA 3050M	EPA 6010B		
RunID: <b>ICP8_101122D</b>	QC Batch: <b>68273</b>	PrepDate: <b>11/19/2010</b>	Analyst: <b>SRB</b>	
Lead	29 0.11	5.0	mg/Kg	1 11/22/2010 03:20 PM

---

**Qualifiers:** B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
S Spike/Surrogate outside of limits due to matrix interference  
DO Surrogate Diluted Out  
E Value above quantitation range  
ND Not Detected at the Reporting Limit  
Results are wet unless otherwise specified



*Advanced Technology  
Laboratories*

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 09-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114782  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114782-019A

**Client Sample ID:** B23-1.5  
**Collection Date:** 11/17/2010 11:38:00 AM  
**Matrix:** SOIL

---

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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---

**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP8_101122D</b>	QC Batch: <b>68273</b>			PrepDate: <b>11/19/2010</b>	Analyst: <b>SRB</b>
Lead	ND	0.11	5.0	mg/Kg	1 11/22/2010 03:22 PM

---

**Qualifiers:** B Analyte detected in the associated Method Blank E Value above quantitation range  
H Holding times for preparation or analysis exceeded 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

**Advanced Technology Laboratories**

**ANALYTICAL RESULTS**

Print Date: 09-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114782  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114782-020A

**Client Sample ID:** B23-3  
**Collection Date:** 11/17/2010 11:44:00 AM  
**Matrix:** SOIL

---

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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---

**LEAD BY ICP**

**EPA 3050M**

**EPA 6010B**

RunID: <b>ICP8_101122D</b>	QC Batch: <b>68273</b>			PrepDate: <b>11/19/2010</b>	Analyst: <b>SRB</b>
Lead	ND	0.11	5.0	mg/Kg	1 11/22/2010 03:24 PM

---

**Qualifiers:** B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
S Spike/Surrogate outside of limits due to matrix interference  
DO Surrogate Diluted Out  
E Value above quantitation range  
ND Not Detected at the Reporting Limit  
Results are wet unless otherwise specified



*Advanced Technology  
Laboratories*

3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

# Advanced Technology Laboratories

# ANALYTICAL RESULTS

Print Date: 09-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114782  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114782-021A

**Client Sample ID:** B23-4  
**Collection Date:** 11/17/2010 11:48:00 AM  
**Matrix:** SOIL

---

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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---

## LEAD BY ICP

### EPA 3050M

### EPA 6010B

RunID: <b>ICP8_101122E</b>	QC Batch: <b>68274</b>	PrepDate: <b>11/19/2010</b>	Analyst: <b>SRB</b>
Lead	ND 0.11	5.0	mg/Kg 1 11/22/2010 03:41 PM

---

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	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	



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# Advanced Technology Laboratories

# ANALYTICAL RESULTS

Print Date: 09-Dec-10

**CLIENT:** Ninyo & Moore  
**Lab Order:** 114782  
**Project:** EA 0H0291, 207384041  
**Lab ID:** 114782-022A

**Client Sample ID:** DECON TO-41  
**Collection Date:** 11/17/2010 12:40:00 PM  
**Matrix:** WATER

---

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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## LEAD BY ICP

### EPA 3010A

### EPA 6010B

RunID: ICP8\_101122B

QC Batch: 68302

PrepDate: 11/19/2010 Analyst: SRB

Lead

ND 0.0046

0.25

mg/L

1 11/22/2010 11:09 AM

---

### Qualifiers:

B Analyte detected in the associated Method Blank

E Value above quantitation range

H Holding times for preparation or analysis exceeded

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



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3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562.989.4045 Fax: 562.989.4040

**CLIENT:** Ninyo & Moore  
**Work Order:** 114782  
**Project:** EA OH0291, 207384041

**ANALYTICAL QC SUMMARY REPORT**

**TestCode: 6010\_SPB**

Sample ID: <b>MB-68273A</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>11/19/2010</b>	RunNo: <b>127014</b>
Client ID: <b>PBS</b>	Batch ID: <b>68273</b>	TestNo: <b>EPA 6010B EPA 3050M</b>		Analysis Date: <b>11/22/2010</b>	SeqNo: <b>2049218</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Lead 0.162 5.0

Sample ID: <b>LCS-68273</b>	SampType: <b>LCS</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>11/19/2010</b>	RunNo: <b>127014</b>
Client ID: <b>LCSS</b>	Batch ID: <b>68273</b>	TestNo: <b>EPA 6010B EPA 3050M</b>		Analysis Date: <b>11/22/2010</b>	SeqNo: <b>2049219</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Lead 279.398 5.0 250.0 0.1623 112 80 120

Sample ID: <b>114782-010A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>11/19/2010</b>	RunNo: <b>127014</b>
Client ID: <b>B21-0.5</b>	Batch ID: <b>68273</b>	TestNo: <b>EPA 6010B EPA 3050M</b>		Analysis Date: <b>11/22/2010</b>	SeqNo: <b>2049230</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Lead ND 5.0 13.82 0 20

Sample ID: <b>114782-010A-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>11/19/2010</b>	RunNo: <b>127014</b>
Client ID: <b>B21-0.5</b>	Batch ID: <b>68273</b>	TestNo: <b>EPA 6010B EPA 3050M</b>		Analysis Date: <b>11/22/2010</b>	SeqNo: <b>2049231</b>
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

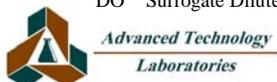
Lead 195.168 5.0 250.0 13.82 72.5 34 126

Sample ID: <b>MB-68273B</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>11/19/2010</b>	RunNo: <b>127014</b>
Client ID: <b>PBS</b>	Batch ID: <b>68273</b>	TestNo: <b>EPA 6010B EPA 3050M</b>		Analysis Date: <b>11/22/2010</b>	SeqNo: <b>2049232</b>
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
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



**CLIENT:** Ninyo & Moore  
**Work Order:** 114782  
**Project:** EA 0H0291, 207384041

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010\_SPB**

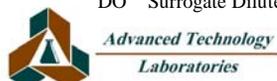
Sample ID: <b>114782-020A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>11/19/2010</b>	RunNo: <b>127014</b>						
Client ID: <b>B23-3</b>	Batch ID: <b>68273</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>11/22/2010</b>	SeqNo: <b>2049243</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.060	5.0						0	0	20	

Sample ID: <b>114782-020A-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>11/19/2010</b>	RunNo: <b>127014</b>						
Client ID: <b>B23-3</b>	Batch ID: <b>68273</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>11/22/2010</b>	SeqNo: <b>2049244</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	228.035	5.0	250.0	0	91.2	34	126				

Sample ID: <b>114782-020A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_SPB</b>	Units: <b>mg/Kg</b>	Prep Date: <b>11/19/2010</b>	RunNo: <b>127014</b>						
Client ID: <b>B23-3</b>	Batch ID: <b>68273</b>	TestNo: <b>EPA 6010B</b>	<b>EPA 3050M</b>	Analysis Date: <b>11/22/2010</b>	SeqNo: <b>2049245</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	224.297	5.0	250.0	0	89.7	34	126	228.0	1.65	20	

**Qualifiers:**

- |   |  |  |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range       | H Holding times for preparation or analysis exceeded           |
| 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:** Ninyo & Moore  
**Work Order:** 114782  
**Project:** EA 0H0291, 207384041

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010\_WPB**

Sample ID: <b>MB-68302</b>	SampType: <b>MBLK</b>	TestCode: <b>6010_WPB</b>	Units: <b>mg/L</b>	Prep Date: <b>11/19/2010</b>	RunNo: <b>126994</b>						
Client ID: <b>PBW</b>	Batch ID: <b>68302</b>	TestNo: <b>EPA 6010B EPA 3010A</b>		Analysis Date: <b>11/22/2010</b>	SeqNo: <b>2048880</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead ND 0.25

Sample ID: <b>LCS-68302</b>	SampType: <b>LCS</b>	TestCode: <b>6010_WPB</b>	Units: <b>mg/L</b>	Prep Date: <b>11/19/2010</b>	RunNo: <b>126994</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>68302</b>	TestNo: <b>EPA 6010B EPA 3010A</b>		Analysis Date: <b>11/22/2010</b>	SeqNo: <b>2048881</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 0.932 0.25 1.000 0 93.2 85 115

Sample ID: <b>114791-001C-MS</b>	SampType: <b>MS</b>	TestCode: <b>6010_WPB</b>	Units: <b>mg/L</b>	Prep Date: <b>11/19/2010</b>	RunNo: <b>126994</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>68302</b>	TestNo: <b>EPA 6010B EPA 3010A</b>		Analysis Date: <b>11/22/2010</b>	SeqNo: <b>2048884</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

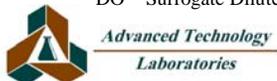
Lead 2.252 0.25 2.500 0.02813 88.9 80 118

Sample ID: <b>114791-001C-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>6010_WPB</b>	Units: <b>mg/L</b>	Prep Date: <b>11/19/2010</b>	RunNo: <b>126994</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>68302</b>	TestNo: <b>EPA 6010B EPA 3010A</b>		Analysis Date: <b>11/22/2010</b>	SeqNo: <b>2048885</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 2.226 0.25 2.500 0.02813 87.9 80 118 2.252 1.15 20

**Qualifiers:**

- |   |  |  |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range       | H Holding times for preparation or analysis exceeded           |
| 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:** Ninyo & Moore  
**Work Order:** 114782  
**Project:** EA 0H0291, 207384041

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_DI**

Sample ID: <b>MB-68644A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_DI</b>	Units: <b>mg/L</b>	Prep Date: <b>12/6/2010</b>	RunNo: <b>127559</b>						
Client ID: <b>PBS</b>	Batch ID: <b>68644</b>	TestNo: <b>WET DI/ EPA WET</b>		Analysis Date: <b>12/9/2010</b>	SeqNo: <b>2061337</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: <b>LCS-68644</b>	SampType: <b>LCS</b>	TestCode: <b>7420_DI</b>	Units: <b>mg/L</b>	Prep Date: <b>12/6/2010</b>	RunNo: <b>127559</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>68644</b>	TestNo: <b>WET DI/ EPA WET</b>		Analysis Date: <b>12/9/2010</b>	SeqNo: <b>2061338</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.929	0.25	5.000	0	98.6	80	120				

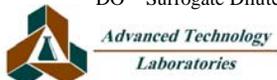
Sample ID: <b>114782-014A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_DI</b>	Units: <b>mg/L</b>	Prep Date: <b>12/6/2010</b>	RunNo: <b>127559</b>						
Client ID: <b>B22-0.5</b>	Batch ID: <b>68644</b>	TestNo: <b>WET DI/ EPA WET</b>		Analysis Date: <b>12/9/2010</b>	SeqNo: <b>2061341</b>						
Analyte	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: <b>114782-014A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_DI</b>	Units: <b>mg/L</b>	Prep Date: <b>12/6/2010</b>	RunNo: <b>127559</b>						
Client ID: <b>B22-0.5</b>	Batch ID: <b>68644</b>	TestNo: <b>WET DI/ EPA WET</b>		Analysis Date: <b>12/9/2010</b>	SeqNo: <b>2061342</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.977	0.25	5.000	0	99.5	70	130				

Sample ID: <b>114782-014A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_DI</b>	Units: <b>mg/L</b>	Prep Date: <b>12/6/2010</b>	RunNo: <b>127559</b>						
Client ID: <b>B22-0.5</b>	Batch ID: <b>68644</b>	TestNo: <b>WET DI/ EPA WET</b>		Analysis Date: <b>12/9/2010</b>	SeqNo: <b>2061343</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.978	0.25	5.000	0	99.6	70	130	4.977	0.0265	20	

**Qualifiers:**

- |   |  |  |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range       | H Holding times for preparation or analysis exceeded           |
| 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:** Ninyo & Moore  
**Work Order:** 114782  
**Project:** EA 0H0291, 207384041

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_ST**

Sample ID: <b>MB-68479A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>11/29/2010</b>	RunNo: <b>127259</b>						
Client ID: <b>PBS</b>	Batch ID: <b>68479</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>12/1/2010</b>	SeqNo: <b>2054568</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	ND	0.25									
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Sample ID: <b>LCS-68479</b>	SampType: <b>LCS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>11/29/2010</b>	RunNo: <b>127259</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>68479</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>12/1/2010</b>	SeqNo: <b>2054569</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	4.917	0.25	5.000	0	98.3	80	120				
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Sample ID: <b>114919-001A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>11/29/2010</b>	RunNo: <b>127259</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>68479</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>12/1/2010</b>	SeqNo: <b>2054574</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	ND	0.25						0	0	20	
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Sample ID: <b>114919-001A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>11/29/2010</b>	RunNo: <b>127259</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>68479</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>12/1/2010</b>	SeqNo: <b>2054575</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

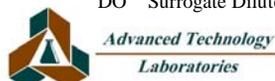
Lead	5.097	0.25	5.000	0	102	80	120				
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Sample ID: <b>114919-001A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_ST</b>	Units: <b>mg/L</b>	Prep Date: <b>11/29/2010</b>	RunNo: <b>127259</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>68479</b>	TestNo: <b>WET/ EPA 74 WET</b>		Analysis Date: <b>12/1/2010</b>	SeqNo: <b>2054576</b>						
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	80	120	5.097	0.0307	20	
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**Qualifiers:**

- |   |  |  |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range       | H Holding times for preparation or analysis exceeded           |
| 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:** Ninyo & Moore  
**Work Order:** 114782  
**Project:** EA 0H0291, 207384041

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_TC**

Sample ID: <b>MB-68678A</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>12/7/2010</b>	RunNo: <b>127558</b>						
Client ID: <b>PBS</b>	Batch ID: <b>68678</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>12/9/2010</b>	SeqNo: <b>2061294</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: <b>MB-68655A TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>12/7/2010</b>	RunNo: <b>127558</b>						
Client ID: <b>PBS</b>	Batch ID: <b>68678</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>12/9/2010</b>	SeqNo: <b>2061295</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

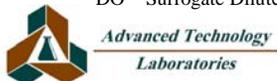
Sample ID: <b>LCS-68678</b>	SampType: <b>LCS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>12/7/2010</b>	RunNo: <b>127558</b>						
Client ID: <b>LCSS</b>	Batch ID: <b>68678</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>12/9/2010</b>	SeqNo: <b>2061296</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.075	0.25	1.000	0	107	80	120				

Sample ID: <b>114768-031A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>12/7/2010</b>	RunNo: <b>127558</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>68678</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>12/9/2010</b>	SeqNo: <b>2061298</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.264	0.25						0.2770	4.63	20	

Sample ID: <b>114768-031A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>12/7/2010</b>	RunNo: <b>127558</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>68678</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>12/9/2010</b>	SeqNo: <b>2061299</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.958	0.25	2.500	0.2770	107	70	130				

**Qualifiers:**

- |   |  |  |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range       | H Holding times for preparation or analysis exceeded           |
| 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:** Ninyo & Moore  
**Work Order:** 114782  
**Project:** EA 0H0291, 207384041

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 7420\_TC**

Sample ID: <b>MB-68678B</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>12/7/2010</b>	RunNo: <b>127558</b>						
Client ID: <b>PBS</b>	Batch ID: <b>68678</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>12/9/2010</b>	SeqNo: <b>2061300</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead ND 0.25

Sample ID: <b>MB-68655B TCLP</b>	SampType: <b>MBLK</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>12/7/2010</b>	RunNo: <b>127558</b>						
Client ID: <b>PBS</b>	Batch ID: <b>68678</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>12/9/2010</b>	SeqNo: <b>2061301</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead ND 0.25

Sample ID: <b>114848-028A-DUP</b>	SampType: <b>DUP</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>12/7/2010</b>	RunNo: <b>127558</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>68678</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>12/9/2010</b>	SeqNo: <b>2061305</b>						
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: <b>114848-028A-MS</b>	SampType: <b>MS</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>12/7/2010</b>	RunNo: <b>127558</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>68678</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>12/9/2010</b>	SeqNo: <b>2061306</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

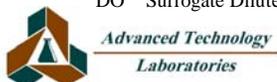
Lead 2.784 0.25 2.500 0 111 70 130

Sample ID: <b>114848-028A-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>7420_TC</b>	Units: <b>mg/L</b>	Prep Date: <b>12/7/2010</b>	RunNo: <b>127558</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>68678</b>	TestNo: <b>EPA 1311/ 74 EPA3010A</b>		Analysis Date: <b>12/9/2010</b>	SeqNo: <b>2061307</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 2.843 0.25 2.500 0 114 70 130 2.784 2.11 20

**Qualifiers:**

- |   |  |  |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range       | H Holding times for preparation or analysis exceeded           |
| 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:** Ninyo & Moore  
**Work Order:** 114782  
**Project:** EA 0H0291, 207384041

## ANALYTICAL QC SUMMARY REPORT

**TestCode: 9045\_S**

Sample ID: <b>114782-012ADUP</b>	SampType: <b>DUP</b>	TestCode: <b>9045_S</b>	Units: <b>pH Units</b>	Prep Date:	RunNo: <b>126966</b>						
Client ID: <b>B21-3</b>	Batch ID: <b>R126966</b>	TestNo: <b>EPA 9045C</b>	Analysis Date: <b>11/19/2010</b>	SeqNo: <b>2048379</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.660	0.10						7.780	1.55	20	

**Qualifiers:**

- |    |   |   |                                      |   |  |
|----|---|---|--------------------------------------|---|--|
| B  | Analyte detected in the associated Method Blank | E | Value above quantitation range       | H | Holding times for preparation or analysis exceeded           |
| 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 |   |  |



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**APPENDIX C**  
**STATISTICAL ANALYSES**

**TABLE C-1  
 LEAD ANALYSES – SURFACE LAYER**

Sample ID	Depth (feet bgs)	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
B1-0.5	0.5	19	0.0297	0.029691863
B2-0.5	0.5	65	0.1016	0.101737917
B3-0.5	0.5	24	0.0375	0.037508795
B4-0.5	0.5	640	1.0000	1.570796327
B5-0.5	0.5	26	0.0406	0.040636183
B6-0.5	0.5	38	0.0594	0.059409942
B7-0.5	0.5	330	0.5156	0.541736935
B8-0.5	0.5	140	0.2188	0.220533261
B9-0.5	0.5	34	0.0531	0.053150021
B10-0.5	0.5	190	0.2969	0.301418444
B11-0.5	0.5	18	0.0281	0.028128709
B12-0.5	0.5	56	0.0875	0.087612040
B13-0.5	0.5	17	0.0266	0.026565625
B14-0.5	0.5	29	0.0453	0.045328020
B15-0.5	0.5	67	0.1047	0.104879669
B16-0.5	0.5	33	0.0516	0.051585376
B17-0.5	0.5	28	0.0438	0.043763969
B18-0.5	0.5	42	0.0656	0.065672195
B19-0.5	0.5	26	0.0406	0.040636183
B20-0.5	0.5	69	0.1078	0.108022460
B21-0.5	0.5	14	0.0219	0.021876745
B22-0.5	0.5	85	0.1328	0.133206082
B23-0.5	0.5	29	0.0453	0.045328020
B24-0.5	0.5	15	0.0234	0.023439646

<b>Total Lead</b>	Max TTLC:	640	<b>Transformed Data</b>	<b>Soluble Data</b>
Number of Samples:	24		24	
Sample Mean:	85		0.158	
Delta = RT - mean	915			
Appropriate Number of Samples:	0.04			
Standard Deviation of Sample:	138		0.322	
Standard Deviation of Mean:	28		0.066	
Sample Variance:	18996		0.104	
t-value for 90%:	1.319	Need to Transform Data	1.319	
Upper Confidence Limit for 90%:			0.244	
Reverse Transformation for 90%			155	9.2 mg/l
t-value for 95%:	1.714		1.714	
Upper Confidence Limit for 95%:			0.270	
Reverse Transformation for 95%			171	10.2 mg/l

**TABLE C-2**  
**LEAD ANALYSES – 1<sup>1</sup>/<sub>2</sub> TO 4 FOOT LAYER**

Sample ID	Depth (feet bgs)	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
B1-1.5	1.5	67	0.4786	0.499027005
B1-3	3	100	0.7143	0.795602953
B1-4	4	97	0.6929	0.765443887
B2-1.5	1.5	120	0.8571	1.029696801
B2-3	3	62	0.4429	0.458782844
B2-4	4	24	0.1714	0.172279524
B3-1.5	1.5	12	0.0857	0.085819591
B3-3	3	39	0.2786	0.282306336
B3-4	4	26	0.1857	0.186798744
B4-1.5	1.5	17	0.1214	0.121728978
B4-3	3	7.3	0.0521	0.052166514
B4-4	4	13	0.0929	0.092991106
B5-1.5	1.5	5.5	0.0393	0.039295827
B5-3	3	5.6	0.0400	0.040010674
B5-4	4	2.5	0.0179	0.017858092
B6-1.5	1.5	2.5	0.0179	0.017858092
B6-3	3	2.5	0.0179	0.017858092
B6-4	4	2.5	0.0179	0.017858092
B7-1.5	1.5	64	0.4571	0.474780074
B7-3	3	36	0.2571	0.260064473
B7-4	4	23	0.1643	0.165033843
B8-1.5	1.5	2.5	0.0179	0.017858092
B8-3	3	8.0	0.0571	0.057174001
B8-4	4	2.5	0.0179	0.017858092
B9-1.5	1.5	6.0	0.0429	0.042870273
B9-3	3	21	0.1500	0.150568273
B9-4	4	2.5	0.0179	0.017858092
B10-1.5	1.5	11	0.0786	0.078652497
B10-3	3	2.5	0.0179	0.017858092
B10-4	4	5.7	0.0407	0.040725542
B11-1.5	1.5	100	0.7143	0.795602953
B11-3	3	28	0.2000	0.201357921
B11-4	4	9.8	0.0700	0.070057293
B12-1.5	1.5	5.8	0.0414	0.041440431
B12-3	3	53	0.3786	0.388252361
B12-4	4	21	0.1500	0.150568273
B13-1.5	1.5	46	0.3286	0.334790627
B13-3	3	33	0.2357	0.237953499
B13-4	4	40	0.2857	0.289751701
B14-1.5	1.5	80	0.5714	0.608245579
B14-3	3	140	1.0000	1.570796327
B14-4	4	44	0.3143	0.319704149
B15-1.5	1.5	51	0.3643	0.372865700
B15-3	3	49	0.3500	0.357571104
B15-4	4	33	0.2357	0.237953499
B16-1.5	1.5	21	0.1500	0.150568273
B18-1.5	1.5	77	0.5500	0.582364238
B18-3	3	2.5	0.0179	0.017858092
B18-4	4	6.5	0.0464	0.046445268
B19-1.5	1.5	13	0.0929	0.092991106

**TABLE C-2**  
**LEAD ANALYSES – 1<sup>1</sup>/<sub>2</sub> TO 4 FOOT LAYER**

Sample ID	Depth (feet bgs)	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
B20-1.5	1.5	53	0.3786	0.388252361
B20-3	3	6.8	0.0486	0.048590547
B20-4	4	2.5	0.0179	0.017858092
B21-1.5	1.5	55	0.3929	0.403736481
B21-3	3	30	0.2143	0.215960499
B21-4	4	2.5	0.0179	0.017858092
B22-1.5	1.5	2.5	0.0179	0.017858092
B22-3	3	11	0.0786	0.078652497
B22-4	4	2.5	0.0179	0.017858092
B23-1.5	1.5	2.5	0.0179	0.017858092
B23-3	3	2.5	0.0179	0.017858092
B23-4	4	2.5	0.0179	0.017858092
B24-1.5	1.5	7.5	0.0536	0.053597086
B24-3	3	2.5	0.0179	0.017858092
B24-4	4	11	0.0786	0.078652497

Total Lead	Max TTLC:	140	Transformed Data	Soluble Data
Number of Samples:	65		65	
Sample Mean:	28		0.220	
Delta = RT - mean	972			
Appropriate Number of Samples:	0.00			
Standard Deviation of Sample:	32		0.286	
Standard Deviation of Mean:	4		0.036	
Sample Variance:	1047		0.082	
t-value for 90%:	1.296	Need to Transform Data	1.296	
Upper Confidence Limit for 90%:			0.266	
Reverse Transformation for 90%			37	mg/kg 2.2 mg/l
t-value for 95%:	1.670		1.670	
Upper Confidence Limit for 95%:			0.280	
Reverse Transformation for 95%			39	mg/kg 2.3 mg/l

**TABLE C-3**  
**LEAD ANALYSES – SURFACE TO 1<sup>1</sup>/<sub>2</sub> FOOT LAYER**

Sample ID	Depth (feet bgs)	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
B1-0.5	0.5	19	0.0297	0.029691863
B1-1.5	1.5	67	0.1047	0.104879669
B2-0.5	0.5	65	0.1016	0.101737917
B2-1.5	1.5	120	0.1875	0.188616386
B3-0.5	0.5	24	0.0375	0.037508795
B3-1.5	1.5	12	0.0188	0.018751099
B4-0.5	0.5	640	1.0000	1.570796327
B4-1.5	1.5	17	0.0266	0.026565625
B5-0.5	0.5	26	0.0406	0.040636183
B5-1.5	1.5	5.5	0.0086	0.008593856
B6-0.5	0.5	38	0.0594	0.059409942
B6-1.5	1.5	2.5	0.0039	0.003906260
B7-0.5	0.5	330	0.5156	0.541736935
B7-1.5	1.5	64	0.1000	0.100167421
B8-0.5	0.5	140	0.2188	0.220533261
B8-1.5	1.5	2.5	0.0039	0.003906260
B9-0.5	0.5	34	0.0531	0.053150021
B9-1.5	1.5	6.0	0.0094	0.009375137
B10-0.5	0.5	190	0.2969	0.301418444
B10-1.5	1.5	11	0.0172	0.017188346
B11-0.5	0.5	18	0.0281	0.028128709
B11-1.5	1.5	100	0.1563	0.156892871
B12-0.5	0.5	56	0.0875	0.087612040
B12-1.5	1.5	5.8	0.0091	0.009062624
B13-0.5	0.5	17	0.0266	0.026565625
B13-1.5	1.5	46	0.0719	0.071937029
B14-0.5	0.5	29	0.0453	0.045328020
B14-1.5	1.5	80	0.1250	0.125327831
B15-0.5	0.5	67	0.1047	0.104879669
B15-1.5	1.5	51	0.0797	0.079772079
B16-0.5	0.5	33	0.0516	0.051585376
B16-1.5	1.5	21	0.0328	0.032818391
B17-0.5	0.5	28	0.0438	0.043763969
B18-0.5	0.5	42	0.0656	0.065672195
B18-1.5	1.5	77	0.1203	0.120604663
B19-0.5	0.5	26	0.0406	0.040636183
B19-1.5	1.5	13	0.0203	0.020313897
B20-0.5	0.5	69	0.1078	0.108022460
B20-1.5	1.5	53	0.0828	0.082907447
B21-0.5	0.5	14	0.0219	0.021876745
B21-1.5	1.5	55	0.0859	0.086043631
B22-0.5	0.5	85	0.1328	0.133206082
B22-1.5	1.5	2.5	0.0039	0.003906260
B23-0.5	0.5	29	0.0453	0.045328020
B23-1.5	1.5	2.5	0.0039	0.003906260
B24-0.5	0.5	15	0.0234	0.023439646
B24-1.5	1.5	7.5	0.0117	0.011719018

**TABLE C-3**  
**LEAD ANALYSES – SURFACE TO 1<sup>1</sup>/<sub>2</sub> FOOT LAYER**

Sample ID	Depth (feet bgs)	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
<b>Total Lead</b>	Max TTLC:	640	<b>Transformed Data</b>	<b>Soluble Data</b>
Number of Samples:	47		47	
Sample Mean:	61		0.108	
Delta = RT - mean	939			
Appropriate Number of Samples:	0.02			
Standard Deviation of Sample:	104		0.237	
Standard Deviation of Mean:	15		0.035	
Sample Variance:	10717		0.056	
t-value for 90%:	1.301	Need to Transform Data	1.301	
Upper Confidence Limit for 90%:			0.153	
Reverse Transformation for 90%			97	mg/kg 5.8 mg/l
t-value for 95%:	1.680		1.680	
Upper Confidence Limit for 95%:			0.166	
Reverse Transformation for 95%			106	mg/kg 6.3 mg/l

**TABLE C-4  
 LEAD ANALYSES – 3 TO 4 FOOT LAYER**

Sample ID	Depth (feet bgs)	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
B1-3	3	100	0.7143	0.795602953
B1-4	4	97	0.6929	0.765443887
B2-3	3	62	0.4429	0.458782844
B2-4	4	24	0.1714	0.172279524
B3-3	3	39	0.2786	0.282306336
B3-4	4	26	0.1857	0.186798744
B4-3	3	7.3	0.0521	0.052166514
B4-4	4	13	0.0929	0.092991106
B5-3	3	5.6	0.0400	0.040010674
B5-4	4	2.5	0.0179	0.017858092
B6-3	3	2.5	0.0179	0.017858092
B6-4	4	2.5	0.0179	0.017858092
B7-3	3	36	0.2571	0.260064473
B7-4	4	23	0.1643	0.165033843
B8-3	3	8.0	0.0571	0.057174001
B8-4	4	2.5	0.0179	0.017858092
B9-3	3	21	0.1500	0.150568273
B9-4	4	2.5	0.0179	0.017858092
B10-3	3	2.5	0.0179	0.017858092
B10-4	4	5.7	0.0407	0.040725542
B11-3	3	28	0.2000	0.201357921
B11-4	4	9.8	0.0700	0.070057293
B12-3	3	53	0.3786	0.388252361
B12-4	4	21	0.1500	0.150568273
B13-3	3	33	0.2357	0.237953499
B13-4	4	40	0.2857	0.289751701
B14-3	3	140	1.0000	1.570796327
B14-4	4	44	0.3143	0.319704149
B15-3	3	49	0.3500	0.357571104
B15-4	4	33	0.2357	0.237953499
B18-3	3	2.5	0.0179	0.017858092
B18-4	4	6.5	0.0464	0.046445268
B20-3	3	6.8	0.0486	0.048590547
B20-4	4	2.5	0.0179	0.017858092
B21-3	3	30	0.2143	0.215960499
B21-4	4	2.5	0.0179	0.017858092
B22-3	3	11	0.0786	0.078652497
B22-4	4	2.5	0.0179	0.017858092
B23-3	3	2.5	0.0179	0.017858092
B23-4	4	2.5	0.0179	0.017858092
B24-3	3	2.5	0.0179	0.017858092
B24-4	4	11	0.0786	0.078652497

<b>Total Lead</b>	Max TTLC:	140	<b>Transformed Data</b>	<b>Soluble Data</b>
Number of Samples:	42		42	
Sample Mean:	24		0.192	
Delta = RT - mean	976			
Appropriate Number of Samples:	0.00			
Standard Deviation of Sample:	30		0.286	
Standard Deviation of Mean:	5		0.044	

**TABLE C-4**  
**LEAD ANALYSES – 3 TO 4 FOOT LAYER**

Sample ID	Depth (feet bgs)	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
Sample Variance:	908		0.082	
t-value for 90%:	1.303	Need to Transform Data	1.303	
Upper Confidence Limit for 90%:			0.249	
Reverse Transformation for 90%			34	mg/kg 2.1 mg/l
t-value for 95%:	1.683		1.683	
Upper Confidence Limit for 95%:			0.266	
Reverse Transformation for 95%			37	mg/kg 2.2 mg/l

**TABLE C-5  
 LEAD ANALYSES – SURFACE TO 3 FOOT LAYER**

Sample ID	Depth (feet bgs)	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
B1-0.5	0.5	19	0.0297	0.029691863
B1-1.5	1.5	67	0.1047	0.104879669
B1-3	3	100	0.1563	0.156892871
B2-0.5	0.5	65	0.1016	0.101737917
B2-1.5	1.5	120	0.1875	0.188616386
B2-3	3	62	0.0969	0.097027168
B3-0.5	0.5	24	0.0375	0.037508795
B3-1.5	1.5	12	0.0188	0.018751099
B3-3	3	39	0.0609	0.060975277
B4-0.5	0.5	640	1.0000	1.570796327
B4-1.5	1.5	17	0.0266	0.026565625
B4-3	3	7.3	0.0114	0.011406497
B5-0.5	0.5	26	0.0406	0.040636183
B5-1.5	1.5	5.5	0.0086	0.008593856
B5-3	3	5.6	0.0088	0.008750112
B6-0.5	0.5	38	0.0594	0.059409942
B6-1.5	1.5	2.5	0.0039	0.003906260
B6-3	3	2.5	0.0039	0.003906260
B7-0.5	0.5	330	0.5156	0.541736935
B7-1.5	1.5	64	0.1000	0.100167421
B7-3	3	36	0.0563	0.056279705
B8-0.5	0.5	140	0.2188	0.220533261
B8-1.5	1.5	2.5	0.0039	0.003906260
B8-3	3	8.0	0.0125	0.012500326
B9-0.5	0.5	34	0.0531	0.053150021
B9-1.5	1.5	6.0	0.0094	0.009375137
B9-3	3	21	0.0328	0.032818391
B10-0.5	0.5	190	0.2969	0.301418444
B10-1.5	1.5	11	0.0172	0.017188346
B10-3	3	2.5	0.0039	0.003906260
B11-0.5	0.5	18	0.0281	0.028128709
B11-1.5	1.5	100	0.1563	0.156892871
B11-3	3	28	0.0438	0.043763969
B12-0.5	0.5	56	0.0875	0.087612040
B12-1.5	1.5	5.8	0.0091	0.009062624
B12-3	3	53	0.0828	0.082907447
B13-0.5	0.5	17	0.0266	0.026565625
B13-1.5	1.5	46	0.0719	0.071937029
B13-3	3	33	0.0516	0.051585376
B14-0.5	0.5	29	0.0453	0.045328020
B14-1.5	1.5	80	0.1250	0.125327831
B14-3	3	140	0.2188	0.220533261
B15-0.5	0.5	67	0.1047	0.104879669
B15-1.5	1.5	51	0.0797	0.079772079
B15-3	3	49	0.0766	0.076637497
B16-0.5	0.5	33	0.0516	0.051585376
B16-1.5	1.5	21	0.0328	0.032818391
B17-0.5	0.5	28	0.0438	0.043763969
B18-0.5	0.5	42	0.0656	0.065672195
B18-1.5	1.5	77	0.1203	0.120604663

**TABLE C-5  
 LEAD ANALYSES – SURFACE TO 3 FOOT LAYER**

Sample ID	Depth (feet bgs)	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
B18-3	3	2.5	0.0039	0.003906260
B19-0.5	0.5	26	0.0406	0.040636183
B19-1.5	1.5	13	0.0203	0.020313897
B20-0.5	0.5	69	0.1078	0.108022460
B20-1.5	1.5	53	0.0828	0.082907447
B20-3	3	6.8	0.0106	0.010625200
B21-0.5	0.5	14	0.0219	0.021876745
B21-1.5	1.5	55	0.0859	0.086043631
B21-3	3	30	0.0469	0.046892183
B22-0.5	0.5	85	0.1328	0.133206082
B22-1.5	1.5	2.5	0.0039	0.003906260
B22-3	3	11	0.0172	0.017188346
B23-0.5	0.5	29	0.0453	0.045328020
B23-1.5	1.5	2.5	0.0039	0.003906260
B23-3	3	2.5	0.0039	0.003906260
B24-0.5	0.5	15	0.0234	0.023439646
B24-1.5	1.5	7.5	0.0117	0.011719018
B24-3	3	2.5	0.0039	0.003906260

Total Lead	Max TTLC:	640	Transformed Data	Soluble Data
Number of Samples:	68		68	
Sample Mean:	51		0.089	
Delta = RT - mean	949			
Appropriate Number of Samples:	0.01			
Standard Deviation of Sample:	89		0.201	
Standard Deviation of Mean:	11		0.024	
Sample Variance:	7934		0.040	
t-value for 90%:	1.295	Need to Transform Data	1.295	
Upper Confidence Limit for 90%:			0.121	
Reverse Transformation for 90%			77	mg/kg 4.6 mg/l
t-value for 95%:	1.669		1.669	
Upper Confidence Limit for 95%:			0.130	
Reverse Transformation for 95%			83	mg/kg 4.97 mg/l

**TABLE C-6  
 LEAD ANALYSES – 4 FOOT LAYER**

Sample ID	Depth (feet bgs)	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
B1-4	4	97	1.0000	1.570796327
B2-4	4	24	0.2474	0.250019322
B3-4	4	26	0.2680	0.271359293
B4-4	4	13	0.1340	0.134425099
B5-4	4	2.5	0.0258	0.025776050
B6-4	4	2.5	0.0258	0.025776050
B7-4	4	23	0.2371	0.239393434
B8-4	4	2.5	0.0258	0.025776050
B9-4	4	2.5	0.0258	0.025776050
B10-4	4	5.7	0.0588	0.058796758
B11-4	4	9.8	0.1010	0.101203597
B12-4	4	21	0.2165	0.218222729
B13-4	4	40	0.4124	0.425055270
B14-4	4	44	0.4536	0.470809933
B15-4	4	33	0.3402	0.347136153
B18-4	4	6.5	0.0670	0.067060561
B20-4	4	2.5	0.0258	0.025776050
B21-4	4	2.5	0.0258	0.025776050
B22-4	4	2.5	0.0258	0.025776050
B23-4	4	2.5	0.0258	0.025776050
B24-4	4	11	0.1134	0.113646538

<b>Total Lead</b>	Max TTLC:	97	<b>Transformed Data</b>	<b>Soluble Data</b>
Number of Samples:	21		21	
Sample Mean:	18		0.213	
Delta = RT - mean	982			
Appropriate Number of Samples:	0.00			
Standard Deviation of Sample:	22		0.342	
Standard Deviation of Mean:	5		0.075	
Sample Variance:	505		0.117	
t-value for 90%:	1.325	Need to Transform Data	1.325	
Upper Confidence Limit for 90%:			0.312	
Reverse Transformation for 90%			30	mg/kg 1.8 mg/l
t-value for 95%:	1.725		1.725	
Upper Confidence Limit for 95%:			0.342	
Reverse Transformation for 95%			32	mg/kg 2.0 mg/l

**TABLE C-7  
 LEAD ANALYSES – SURFACE TO 4 FOOT LAYER**

Sample ID	Depth (feet bgs)	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
B1-0.5	0.5	19	0.0297	0.029691863
B1-1.5	1.5	67	0.1047	0.104879669
B1-3	3	100	0.1563	0.156892871
B1-4	4	97	0.1516	0.152148843
B2-0.5	0.5	65	0.1016	0.101737917
B2-1.5	1.5	120	0.1875	0.188616386
B2-3	3	62	0.0969	0.097027168
B2-4	4	24	0.0375	0.037508795
B3-0.5	0.5	24	0.0375	0.037508795
B3-1.5	1.5	12	0.0188	0.018751099
B3-3	3	39	0.0609	0.060975277
B3-4	4	26	0.0406	0.040636183
B4-0.5	0.5	640	1.0000	1.570796327
B4-1.5	1.5	17	0.0266	0.026565625
B4-3	3	7.3	0.0114	0.011406497
B4-4	4	13	0.0203	0.020313897
B5-0.5	0.5	26	0.0406	0.040636183
B5-1.5	1.5	5.5	0.0086	0.008593856
B5-3	3	5.6	0.0088	0.008750112
B5-4	4	2.5	0.0039	0.003906260
B6-0.5	0.5	38	0.0594	0.059409942
B6-1.5	1.5	2.5	0.0039	0.003906260
B6-3	3	2.5	0.0039	0.003906260
B6-4	4	2.5	0.0039	0.003906260
B7-0.5	0.5	330	0.5156	0.541736935
B7-1.5	1.5	64	0.1000	0.100167421
B7-3	3	36	0.0563	0.056279705
B7-4	4	23	0.0359	0.035945240
B8-0.5	0.5	140	0.2188	0.220533261
B8-1.5	1.5	2.5	0.0039	0.003906260
B8-3	3	8.0	0.0125	0.012500326
B8-4	4	2.5	0.0039	0.003906260
B9-0.5	0.5	34	0.0531	0.053150021
B9-1.5	1.5	6.0	0.0094	0.009375137
B9-3	3	21	0.0328	0.032818391
B9-4	4	2.5	0.0039	0.003906260
B10-0.5	0.5	190	0.2969	0.301418444
B10-1.5	1.5	11	0.0172	0.017188346
B10-3	3	2.5	0.0039	0.003906260
B10-4	4	5.7	0.0089	0.008906368
B11-0.5	0.5	18	0.0281	0.028128709
B11-1.5	1.5	100	0.1563	0.156892871
B11-3	3	28	0.0438	0.043763969
B11-4	4	9.8	0.0153	0.015313098
B12-0.5	0.5	56	0.0875	0.087612040
B12-1.5	1.5	5.8	0.0091	0.009062624
B12-3	3	53	0.0828	0.082907447
B12-4	4	21	0.0328	0.032818391
B13-0.5	0.5	17	0.0266	0.026565625
B13-1.5	1.5	46	0.0719	0.071937029
B13-3	3	33	0.0516	0.051585376

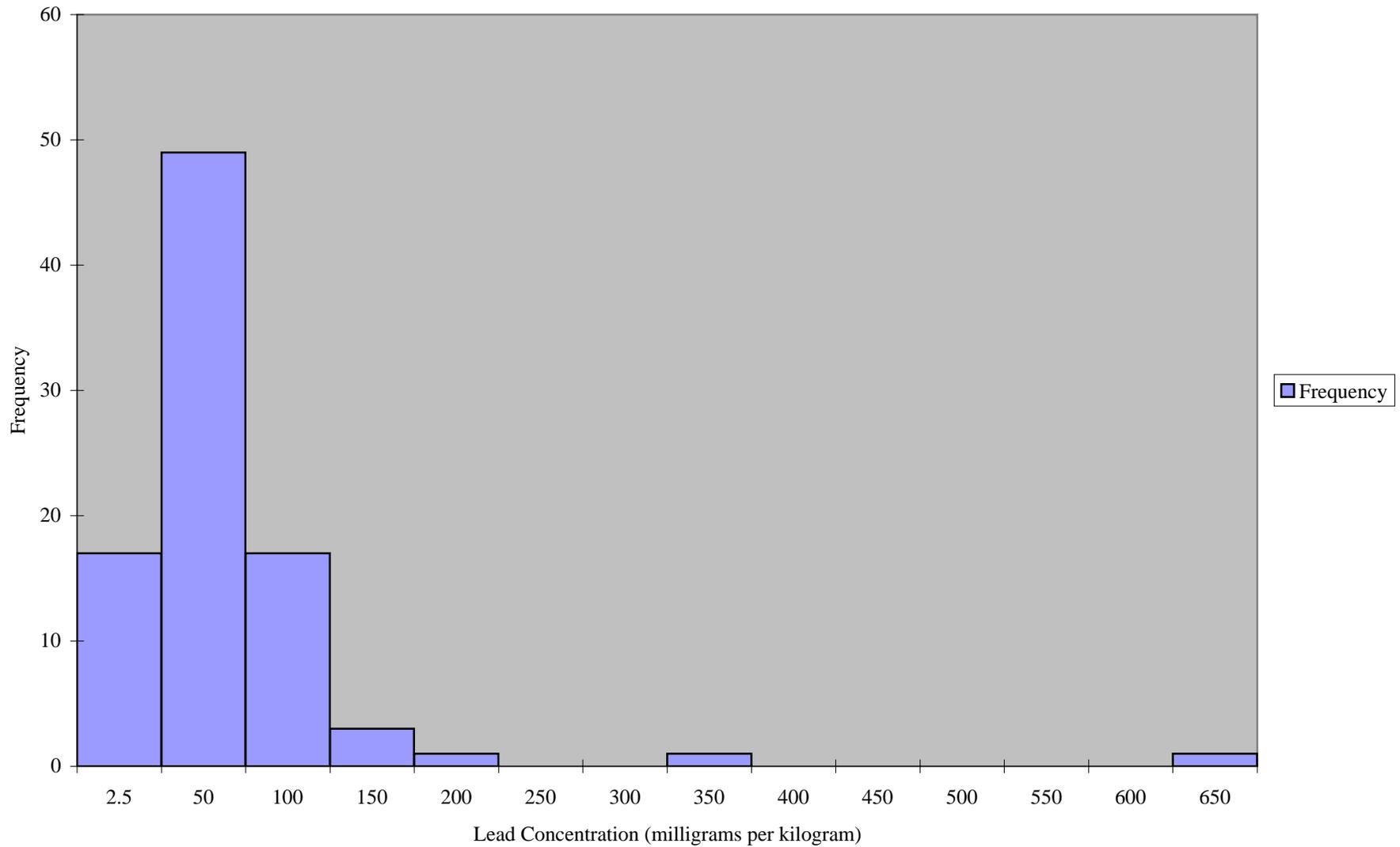
**TABLE C-7  
 LEAD ANALYSES – SURFACE TO 4 FOOT LAYER**

Sample ID	Depth (feet bgs)	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
B13-4	4	40	0.0625	0.062540762
B14-0.5	0.5	29	0.0453	0.045328020
B14-1.5	1.5	80	0.1250	0.125327831
B14-3	3	140	0.2188	0.220533261
B14-4	4	44	0.0688	0.068804274
B15-0.5	0.5	67	0.1047	0.104879669
B15-1.5	1.5	51	0.0797	0.079772079
B15-3	3	49	0.0766	0.076637497
B15-4	4	33	0.0516	0.051585376
B16-0.5	0.5	33	0.0516	0.051585376
B16-1.5	1.5	21	0.0328	0.032818391
B17-0.5	0.5	28	0.0438	0.043763969
B18-0.5	0.5	42	0.0656	0.065672195
B18-1.5	1.5	77	0.1203	0.120604663
B18-3	3	2.5	0.0039	0.003906260
B18-4	4	6.5	0.0102	0.010156425
B19-0.5	0.5	26	0.0406	0.040636183
B19-1.5	1.5	13	0.0203	0.020313897
B20-0.5	0.5	69	0.1078	0.108022460
B20-1.5	1.5	53	0.0828	0.082907447
B20-3	3	6.8	0.0106	0.010625200
B20-4	4	2.5	0.0039	0.003906260
B21-0.5	0.5	14	0.0219	0.021876745
B21-1.5	1.5	55	0.0859	0.086043631
B21-3	3	30	0.0469	0.046892183
B21-4	4	2.5	0.0039	0.003906260
B22-0.5	0.5	85	0.1328	0.133206082
B22-1.5	1.5	2.5	0.0039	0.003906260
B22-3	3	11	0.0172	0.017188346
B22-4	4	2.5	0.0039	0.003906260
B23-0.5	0.5	29	0.0453	0.045328020
B23-1.5	1.5	2.5	0.0039	0.003906260
B23-3	3	2.5	0.0039	0.003906260
B23-4	4	2.5	0.0039	0.003906260
B24-0.5	0.5	15	0.0234	0.023439646
B24-1.5	1.5	7.5	0.0117	0.011719018
B24-3	3	2.5	0.0039	0.003906260
B24-4	4	11	0.0172	0.017188346

<b>Total Lead</b>	Max TTLC:	640	<b>Transformed Data</b>	<b>Soluble Data</b>
Number of Samples:	89		89	
Sample Mean:	44		0.075	
Delta = RT - mean	956			
Appropriate Number of Samples:	0.01			
Standard Deviation of Sample:	80		0.178	
Standard Deviation of Mean:	8		0.019	
Sample Variance:	6362		0.032	
t-value for 90%:	1.293	Need to Transform Data	1.293	
Upper Confidence Limit for 90%:			0.099	
Reverse Transformation for 90%:			63	3.8 mg/l
t-value for 95%:	1.665		1.665	
Upper Confidence Limit for 95%:			0.106	
Reverse Transformation for 95%:			68	4.1 mg/l

**APPENDIX D**  
**HISTOGRAM**

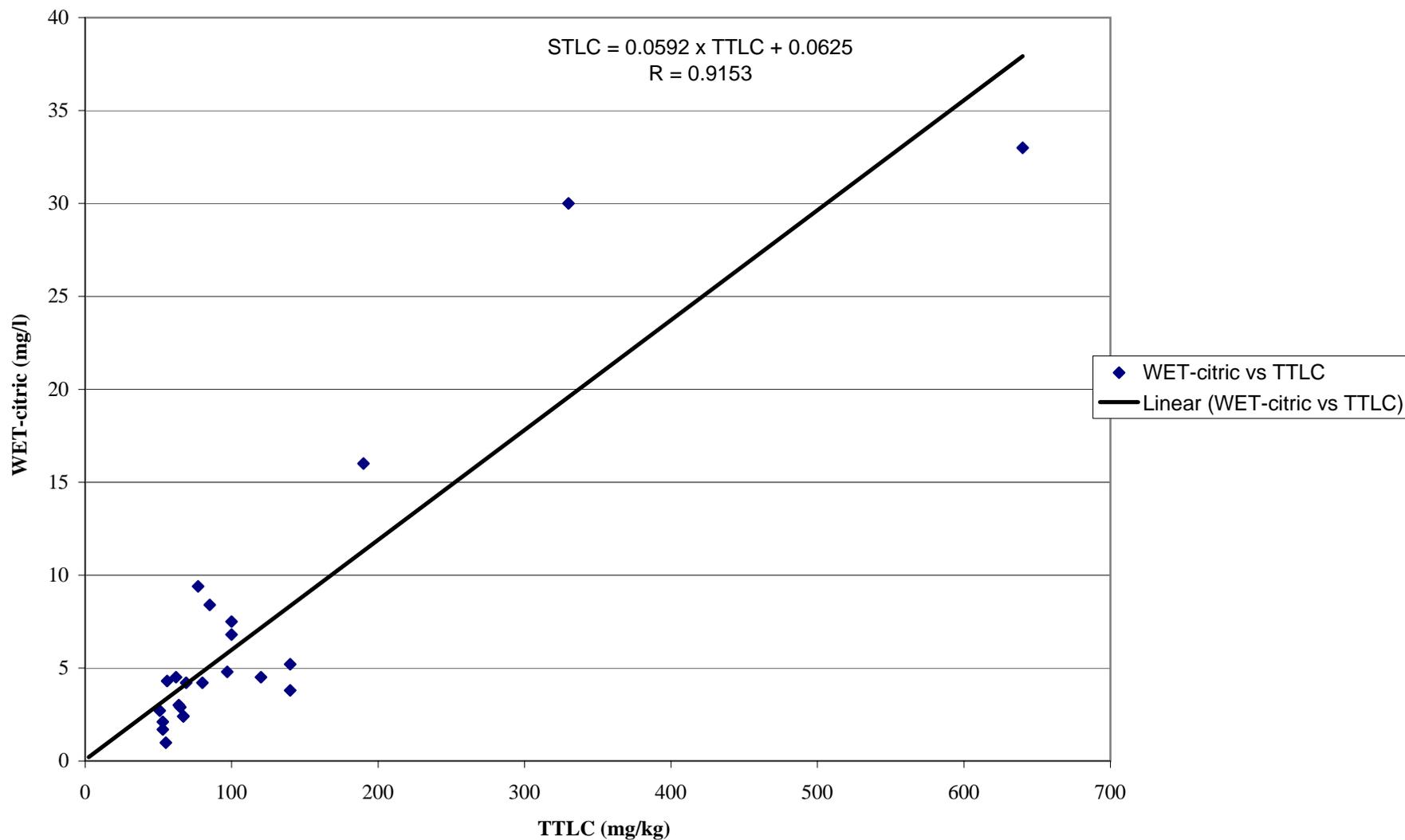
**HISTOGRAM OF TOTAL LEAD**



**APPENDIX E**

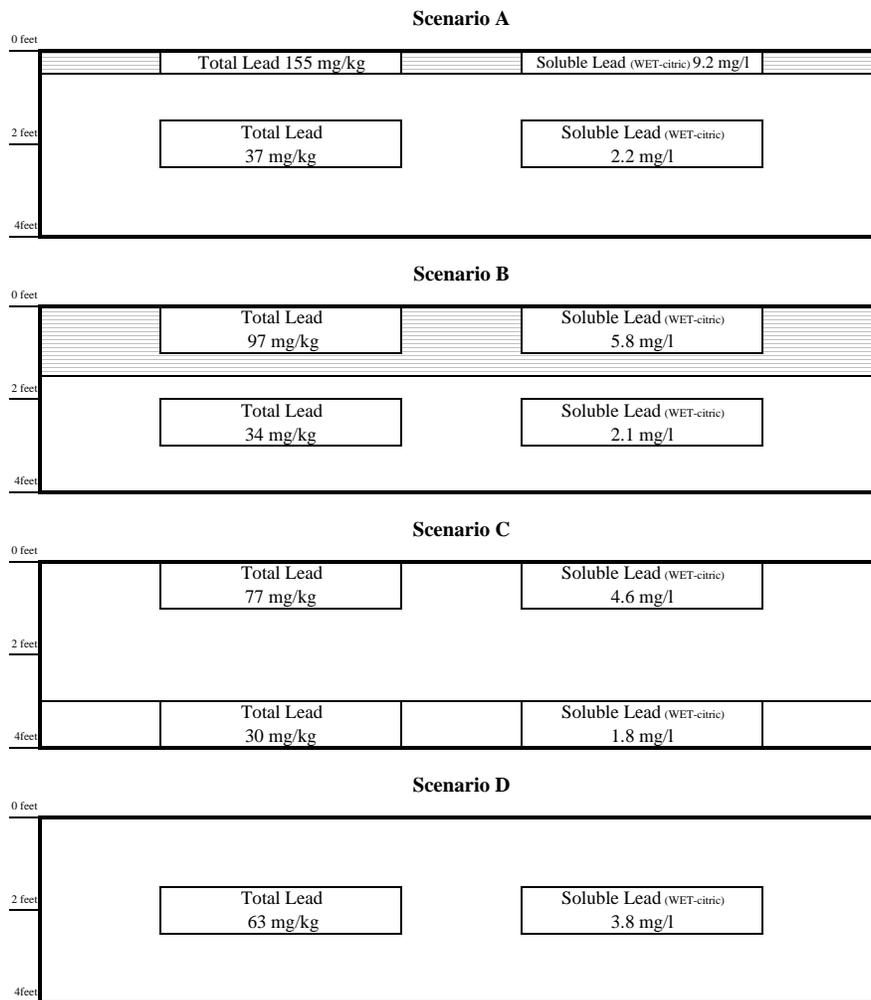
**CORRELATION OF TOTAL LEAD TO SOLUBLE LEAD**

### CORRELATION OF TOTAL LEAD TO SOLUBLE LEAD



**APPENDIX F**  
**BLOCK DIAGRAMS**

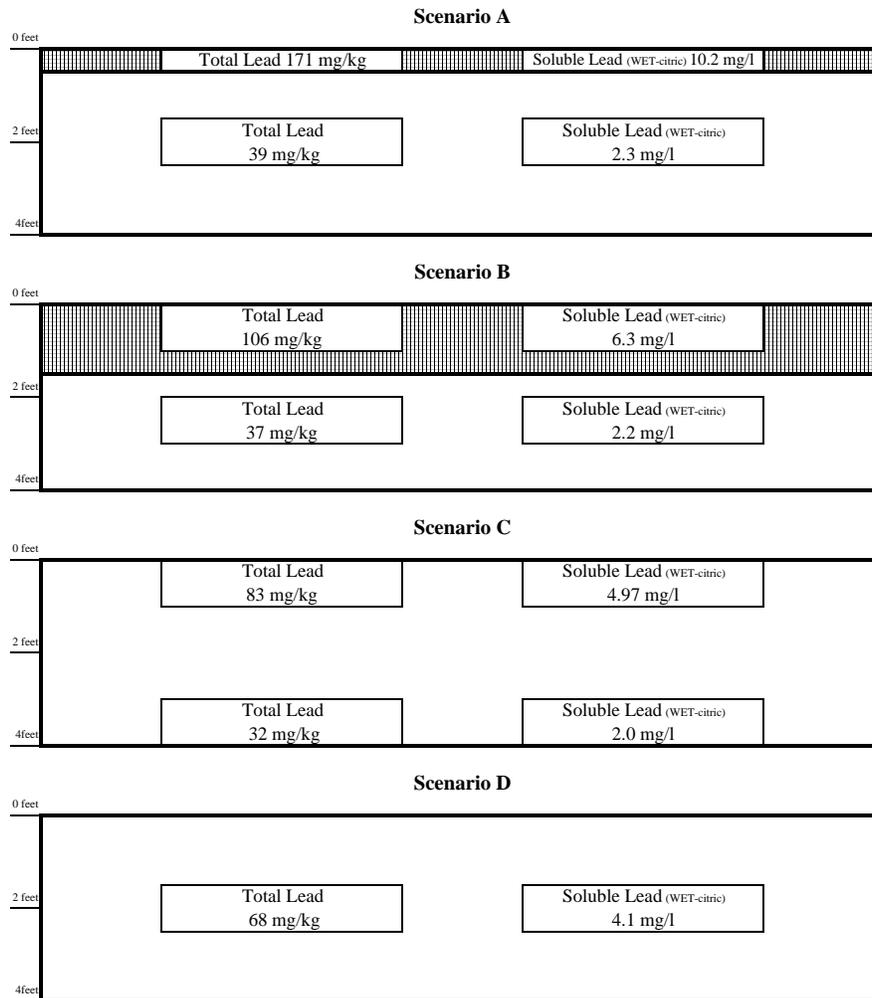
**FIGURE F1 – BLOCK DIAGRAM FOR POTENTIAL DEPARTMENT RIGHT-OF-WAY RE-USE ONE-TAILED 90 PERCENT UCLs FOR ARCSINE TRANSFORMATION**



-  – Non-hazardous soil with respect to total and soluble lead
-  – Reuse Condition 1 [Hazardous. Variance applies. Use material on job site. Place a minimum of 5 feet above maximum water table elevation and cover with at least 1 foot of non-hazardous soil]
-  – Reuse Condition 2 [Hazardous. Variance applies. Use material on job site. Place a minimum of 5 feet above maximum water table elevation and protect from infiltration with a pavement structure which will be maintained by the Department]
-  – Hazardous. Class 1 disposal site, all other Title 22 CCR requirements apply
-  – Hazardous. Class 1 disposal site RCRA based on the layer having a TCLP value  $\geq$  5 mg/l

- UCL – upper confidence limit
- WET-DI – soluble lead using the Waste Extraction Test with deionized water
- WET-citric acid – soluble lead using the Waste Extraction Test with citric acid
- TCLP – Toxicity Characteristic Leaching Procedure
- mg/kg – milligrams per kilogram
- mg/l – milligrams per liter
- CCR – California Code of Regulations
- RCRA – Resource, Conservation, and Recovery Act

**FIGURE F2 – BLOCK DIAGRAM FOR POTENTIAL DEPARTMENT OFF SITE DISPOSAL ONE-TAILED 95 PERCENT UCLs FOR ARCSINE TRANSFORMATION**



-  – Non-hazardous soil with respect to total and soluble lead
-  – Reuse Condition 1 [Hazardous. Variance applies. Use material on job site. Place a minimum of 5 feet above maximum water table elevation and cover with at least 1 foot of non-hazardous soil]
-  – Reuse Condition 2 [Hazardous. Variance applies. Use material on job site. Place a minimum of 5 feet above maximum water table elevation and protect from infiltration with a pavement structure which will be maintained by the Department]
-  – Hazardous. Class 1 disposal site, all other Title 22 CCR requirements apply
-  – Hazardous. Class 1 disposal site RCRA based on the layer having a TCLP value  $\geq$  5 mg/l

- UCL – upper confidence limit
- WET-DI – soluble lead using the Waste Extraction Test with deionized water
- WET-citric acid – soluble lead using the Waste Extraction Test with citric acid
- TCLP – Toxicity Characteristic Leaching Procedure
- mg/kg – milligrams per kilogram
- mg/l – milligrams per liter
- CCR – California Code of Regulations
- RCRA – Resource, Conservation, and Recovery Act