June 2, 2009
Project No. 207384020

Mr. Hsin Chen
State of California Department of Transportation
District 12, Environmental Engineering
3337 Michelson Drive, Suite 380
Irvine, California 92612-8894

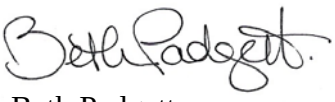
Subject: Aerially Deposited Lead Investigation Report
Pacific Coast Highway at Bolsa Chica
Huntington Beach, California
Task Order No. 12-0K0100-20
EA No. 0K0100
Contract No. 12A1139

Dear Mr. Chen:

In accordance with the State of California Department of Transportation (Department) Contract No. 12A1139, Task Order No. 12-0K0100-20, Ninyo & Moore has conducted an Aerially Deposited Lead Investigation at selected locations along Pacific Coast Highway at Bolsa Chica in Huntington Beach, 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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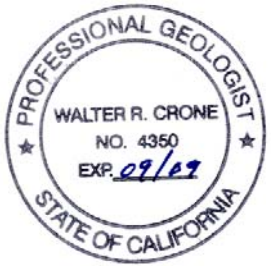

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Principal Environmental Geologist

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AERIALLY DEPOSITED LEAD INVESTIGATION REPORT PACIFIC COAST HIGHWAY AT BOLSA CHICA HUNTINGTON BEACH, CALIFORNIA TASK ORDER NO. 12-0K0100-20 EA NO. 0K0100, CONTRACT NO. 12A1139

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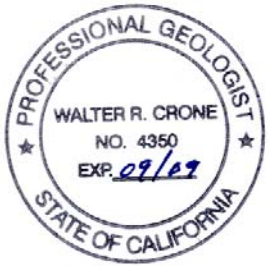
June 2, 2009
Project No. 207384020

AERIALLY DEPOSITED LEAD INVESTIGATION REPORT
Task Order No. 12-0K0100-20
E.A. No. 0K0100

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.



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EXECUTIVE SUMMARY

The State of California Department of Transportation (Department) authorized Ninyo & Moore to conduct an Aerially Deposited Lead (ADL) Site Investigation (SI) for embankment improvements at Pacific Coast Highway (PCH), also designated State Route 1, (SR-1) at Bolsa Chica in Huntington Beach, Orange County, California (site). Work was conducted in general accordance with the Department Contract No. 12A1139, Task Order No. 12-0K0100-20 (TO 20), dated February 10, 2009. It is our understanding that the Department is planning improvement to the embankments along PCH between Station Numbers 226+50 and 248+00.

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 28 soil samples from 7 borings at the site. Six of the 28 samples contained a total lead concentration greater than or equal to 50 milligrams per kilogram (mg/kg). Three samples were analyzed for pH. The pH levels ranged from 8.4 to 9.3, which would not 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 in October 2000 that was subsequently modified by Assembly Bill 414, a DTSC Variance modification letter dated December 13, 2002, and a subsequent extension dated June 17, 2008 (DTSC Variance). Laboratory analytical 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 are based on the comparison of lead concentrations in soil samples to the DTSC Variance thresholds, the California Health and Safety Code thresholds, and Title 40 Code of Federal Regulations (CFR) 261.24 thresholds.

Based on the analytical results and data evaluation, 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 from the layers combined or the separated surface layer may be reused on site if it is placed a minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure to be maintained by the Department.

Soil at the site from the separated 1.5 foot layer may be reused on site if it is placed a minimum of 5 feet above maximum water table elevation and covered with at least 1 foot of non-hazardous soil.

Soil from the separated or combined 3.0 and 4.0 foot layers may be reused on site with 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, soil at the site from the layers combined or the separated surface and 1.5 foot layers is classified as hazardous and should be disposed at a Class 1 disposal site in accordance with Title 22 CCR requirements. Soil from the separated or combined 3.0 and 4.0 foot layers is classified as non-hazardous and may be disposed off site with no restrictions based on total and soluble lead concentrations.

The Department should notify the contractors performing the construction activities that hazardous concentrations of lead could be present in isolated on-site locations, but as a whole the site would be considered non-hazardous. 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) for embankment improvements at Pacific Coast Highway (PCH) or State Route 1 (SR-1) at Bolsa Chica in the city of Huntington Beach, Orange County, California (site; Figure 1). Work was conducted in general accordance with the Department Contract No. 12A1139, Task Order No. 12-0K0100-20 (TO 20), dated February 10, 2009.

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 area of the site.

1.1. Project Description and Objective

It is our understanding that the Department is planning improvement to the embankments along PCH between Station Numbers 226+50 and 248+00. Seven borings were hand augered at the site (Figure 2).

This investigation was performed to evaluate the potential presence of ADL along the shoulder of the site before excavation of soil begins as part of the planting and restoration project.

1.2. Scope of Work

Ninyo & Moore performed the following tasks:

1.2.1. Pre-field Activities

Pre-field 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 A91130330).
- Preparing a project schedule, and coordinating work with subcontractors.

1.2.2. Soil Sampling

Soil sampling was conducted on April 28 and 30, 2009. Seven sampling locations (B1 to B7) were used as shown on Figure 2. The borings were advanced and sampled using a hand auger. Four soil samples were attempted for collection from depths of surface to ½ foot, 1½ feet to 2 feet, 2½ feet to 3 feet, and 3½ to 4 feet below ground surface (bgs).

1.2.3. Laboratory Analysis

Ninyo & Moore submitted the soil samples under chain of custody 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 (ELAP).

1.2.4. GPS Surveying

Approximate latitude and longitude (North American Datum [NAD] 83) of sampling locations were recorded with a handheld Global Positioning System (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 20, dated February 10, 2009.

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 (00-H-VAR-02) from the California Environmental Protection Agency (Cal-EPA), Department of Toxic Substances Control (DTSC), on October 2000 that was subsequently modified by Assembly Bill 414, a DTSC Variance modification letter dated

December 13, 2002, and a subsequent extension dated June 17, 2008 (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 found 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, 2000).

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 (TTLC) 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).

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.

2.3.1. Reuse – Condition 1

Soil containing less than 0.5 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 0.5 mg/l but less than 50 mg/l extractable lead by WET-DI method, and 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

Soil that has a pH value less than 5.0 may only be used as fill material under the paved portion of the roadway. This condition takes precedence over Conditions 1 and 2.

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 20 that was approved by the Department prior to beginning the field activities.

3.1. Health and Safety Plan (HSP)

A site-specific HSP dated April 21, 2009, 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 April 28 and 30, 2009. 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 seventeen boreholes at depths of 0 to ½ foot, 1½ to 2, 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 20, soil sample homogenization was performed in the laboratory.

Traffic control was provided by American Barricade. 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 bore-holes 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 result of analysis of the decontamination water sample for total lead (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:

- Twenty-eight soil samples were analyzed for total lead using EPA Method 6010B;
- Six of the soil samples contained a total lead concentration greater than or equal to 50 mg/kg and were subsequently analyzed for soluble lead by WET using citric acid.
- Five soil samples contained soluble lead concentrations greater than or equal to 5 mg/l and were analyzed for soluble lead by WET using de-ionized water and soluble lead by TCLP. Additionally, one soil sample contained total lead concentrations greater than or equal to 1,000 mg/kg and was analyzed for soluble lead by TCLP.
- Approximately 10 percent of the soil samples (3 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 Figure 3. Laboratory reports and COC records are included in Appendix A.

4.1. Total Lead

The maximum total lead concentration was 1,100 mg/kg. The minimum total lead concentration was equal to or less than the laboratory practical quantitation limit (PQL) 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

Six of the 28 samples contained total lead at a concentration greater than or equal to 50 mg/kg and were subsequently analyzed for soluble lead with citric acid. The maximum reported concentration was 31 mg/l. The minimum reported concentration was 1.6 mg/l.

4.3. Soluble Lead – Deionized Water

Five samples contained soluble lead at a concentration greater than or equal to 5 mg/l and were subsequently analyzed for soluble lead with deionized water. The maximum reported concentration was 0.6 mg/l. The minimum reported concentration was 0.3 mg/l.

4.4. Soluble Lead - TCLP

Five samples contained soluble lead at a concentration greater than or equal to 5 mg/l and were subsequently analyzed for soluble lead by the TCLP. Additionally, one soil sample contained total lead concentrations greater than or equal to 1,000 mg/kg and was analyzed for soluble lead by TCLP. The maximum reported concentration was 3.8 mg/l. The minimum concentration was equal to or less than the laboratory PQL of 0.25 mg/l.

4.5. pH

Approximately 10 percent of the samples collected (3 samples) were analyzed for pH. The pH levels ranged from 8.4 to 9.3. The soil pH value is not characteristic of RCRA hazardous waste and is greater than 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 calculations, concentrations less than 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 true 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 examining the UCLs of 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 versus 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 C.

5.3. Upper Confidence Limits

The UCLs are used to address the uncertainty associated with estimated the true mean concentration of a population. As more data become available for a given site, the uncertainty 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 greater than 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:

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

Where:

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:

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

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: the entire 4 foot soil column
- Scenario B: each layer separated: 0.0 to 0.5 (surface) layer; 0.5 to 1.5 (1.5 foot) layer; 1.5 to 3.0 (3.0 foot) layer; 3.0 to 4.0 (4.0 foot) layer

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

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_t = standard deviation of the total lead concentrations
s_s = 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 the '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 0.87. The regression analysis is included as Appendix D.

6. CONCLUSIONS

Based on the analytical results, the conclusions for the site are summarized below.

6.1. Conclusion for Soil for Reuse by the Department

Soil from the layers combined or the separated surface layer may be reused on site if it is placed a minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure to be maintained by the Department.

Soil from the 1.5 foot layer may be reused on site if it is placed a minimum of 5 feet above maximum water table elevation and covered with at least 1 foot of non-hazardous soil.

Soil from the separated or combined 3.0 and 4.0 foot layers may be reused on site with no restrictions based on total or soluble lead concentrations.

6.2. Conclusion for Soil to be Disposed Off Site

If the Department elects to dispose the soil off site, soil at the site from the layers combined or the separated surface and 1.5 foot layers is classified as hazardous and should be disposed at a Class 1 disposal site in accordance with Title 22 CCR requirements. Soil from the separated or combined 3.0 and 4.0 foot layers is classified as non-hazardous and may be disposed off site with no restrictions based on total and soluble lead concentrations.

The Department should notify the contractors performing the construction activities that hazardous concentrations of lead could be present in isolated on-site locations, but as a whole the site would be considered non-hazardous. Appropriate health and safety measures should be taken to minimize the potential exposure to lead.

7. RECOMMENDATIONS

Based on the findings of this study, recommendations (based on the ADL sampling) are summarized on block diagrams in Appendix E and are discussed below:

7.1. Recommendations for Soil for Reuse by the Department

Soil from the layers combined or the separated surface layer may be reused on site if it is placed a minimum of 5 feet above maximum water table elevation and protected from infiltration by a pavement structure to be maintained by the Department.

Soil from the 1.5 foot layer may be reused on site if it is placed a minimum of 5 feet above maximum water table elevation and covered with at least 1 foot of non-hazardous soil.

Soil from the 3.0 and 4.0 foot layers may be reused on site with 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, soil at the site from the layers combined or the separated surface and 1.5 foot layers is classified as hazardous and should be disposed

at a Class 1 disposal site in accordance with Title 22 CCR requirements. Soil from the 3.0 and 4.0 foot layers is classified as non-hazardous and may be disposed off site with no restrictions based on total and soluble lead concentrations.

The Department should notify the contractors performing the construction activities that hazardous concentrations of lead could be present in isolated on-site locations, but as a whole the site would be considered non-hazardous. 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 (PEL) for lead is 0.05 milligrams per cubic meter (mg/m^3) in air based on an eight-hour time-weighted average (TWA); Immediately Dangerous to Life and Health (IDLH) exposure limit is 100 mg/m^3 as established by the National Institute of Occupational Safety and Health (NIOSH). Exposure may produce several symptoms including weakness, eye irritation, facial pallor, pale eyes, lassitude, insomnia, anemia, tremors, malnutrition, constipation, paralysis of the wrists and ankles, abdominal pain, colic, nephropathy, encephalopathy, gingival lead line, hypertension, anorexia, and weight loss. Target organs are the central nervous system, kidneys, eyes, blood, gingival tissue, and the gastrointestinal tract.

Because of the potential hazard from exposure to lead-contaminated soil, a lead 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.

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For individuals with sensory disabilities, this document is available in alternate formats upon request. For any questions regarding this document, please call or write Marta Halabi, Environmental Engineering, 3337 Michelson Drive, Suite 380, Irvine, California 92612-8894. Phone Number (949) 724-2739.

10. REFERENCES

Department of Toxic Substance Control (DTSC), 2000, Variance (no 00-H-VAR-02), dated September 22.

Department of Toxic Substance Control (DTSC), 2002, Lead Contaminated Soil Variance Modification, Caltrans District 12, dated December 13.

Department of Toxic Substance Control (DTSC), 2008, Lead Contaminated Soil Variance Modification, Caltrans District 12, dated June 17.

TABLE 1 – SOIL ANALYTICAL RESULTS – AERIALLY 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	4/28/09	32					6011668.97275	2205672.05494
B1-1.5	1.5	4/28/09	ND<5.0					6011668.97275	2205672.05494
B1-3	3.0	4/28/09	ND<5.0					6011668.97275	2205672.05494
B1-4	4.0	4/28/09	ND<5.0					6011668.97275	2205672.05494
B2-0.5	0.5	4/30/09	110	11	0.38	ND<0.25		6011854.11468	2205469.67066
B2-1.5	1.5	4/30/09	70	8.1	0.32	ND<0.25		6011854.11468	2205469.67066
B2-3	3.0	4/30/09	ND<5.0					6011854.11468	2205469.67066
B2-4	4.0	4/30/09	ND<5.0					6011854.11468	2205469.67066
B3-0.5	0.5	4/30/09	1100			3.8		6012084.33212	2205220.86120
B3-1.5	1.5	4/30/09	35				8.9	6012084.33212	2205220.86120
B3-3	3.0	4/30/09	9.8					6012084.33212	2205220.86120
B3-4	4.0	4/30/09	15					6012084.33212	2205220.86120
B4-0.5	0.5	4/30/09	130	29	0.57	1.2		6012303.32820	2204976.47593
B4-1.5	1.5	4/30/09	50	1.6				6012303.32820	2204976.47593
B4-3	3.0	4/30/09	ND<5.0					6012303.32820	2204976.47593
B4-4	4.0	4/30/09	ND<5.0					6012303.32820	2204976.47593
B5-0.5	0.5	4/30/09	270	31	0.63	1.6		6012521.79315	2204740.05978
B5-1.5	1.5	4/30/09	43					6012521.79315	2204740.05978
B5-3	3.0	4/30/09	ND<5.0				9.3	6012521.79315	2204740.05978
B5-4	4.0	4/30/09	ND<5.0					6012521.79315	2204740.05978
B6-0.5	0.5	4/30/09	230	29	0.48	1.6		6012739.47839	2204503.36333
B6-1.5	1.5	4/30/09	40					6012739.47839	2204503.36333
B6-3	3.0	4/30/09	ND<5.0					6012739.47839	2204503.36333
B6-4	4.0	4/30/09	ND<5.0					6012739.47839	2204503.36333
B7-0.5	0.5	4/30/09	26					6012959.43245	2204264.70246
B7-1.5	1.5	4/30/09	ND<5.0					6012959.43245	2204264.70246
B7-3	3.0	4/30/09	ND<5.0					6012959.43245	2204264.70246
B7-4	4.0	4/30/09	ND<5.0				8.4	6012959.43245	2204264.70246
Maximum			1100	31	0.63	3.8	9.3		
Average			154.3	18.3	0.48	2.05	8.9		
Minimum			ND<5.0	1.6	0.32	ND<0.25	8.4		
Regulatory Limits			1411(1)	5(2)	0.5(3)	5(4)	5(5)		
Decontamination Water (mg/l)									
Decon		4/28/09	ND<0.25						

Notes:
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 A
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 - STLC 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
* Data considered outliers and not used in statistics.

207384-A2.DWG

REFERENCE: 2007 THOMAS GUIDE FOR LOS ANGELES/ORANGE COUNTIES, STREET GUIDE AND DIRECTORY

APPROXIMATE SCALE IN FEET

0 2,400 4,800

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

Ninyo & Moore

PROJECT NO.	DATE
207384020	6/09

SITE LOCATION MAP

PACIFIC COAST HIGHWAY
HUNTINGTON BEACH, CALIFORNIA

FIGURE

1

GOOGLE EARTH 2007.

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

APPROXIMATE SCALE IN FEET

0 600 1200

Ninyo & Moore	SITE PLAN	FIGURE
PROJECT NO. 207384020 / DATE 6/09	PACIFIC COAST HIGHWAY HUNTINGTON BEACH, CALIFORNIA	2

207384-A4.DWG

Sample	Sample Depth (feet)	Sample Date	TTLC (mg/kg)	WET-citric (mg/l)	WET-DI (mg/l)	TCLP (mg/l)	pH
B1-0.5	0.5	4/28/09	32				
B1-1.5	1.5	4/28/09	ND<5.0				
B1-3	3.0	4/28/09	ND<5.0				
B1-4	4.0	4/28/09	ND<5.0				

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	4/30/09	1100			3.8	
B3-1.5	1.5	4/30/09	35				8.9
B3-3	3.0	4/30/09	9.8				
B3-4	4.0	4/30/09	15				

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	4/30/09	130	29	0.57	1.2	
B4-1.5	1.5	4/30/09	50	1.6			
B4-3	3.0	4/30/09	ND<5.0				
B4-4	4.0	4/30/09	ND<5.0				

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	4/30/09	110	11	0.38	ND<0.25	
B2-1.5	1.5	4/30/09	70	8.1	0.32	ND<0.25	
B2-3	3.0	4/30/09	ND<5.0				
B2-4	4.0	4/30/09	ND<5.0				

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	4/30/09	270	31	0.63	1.6	
B5-1.5	1.5	4/30/09	43				
B5-3	3.0	4/30/09	ND<5.0				9.3
B5-4	4.0	4/30/09	ND<5.0				

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	4/30/09	230	29	0.48	1.6	
B6-1.5	1.5	4/30/09	40				
B6-3	3.0	4/30/09	ND<5.0				
B6-4	4.0	4/30/09	ND<5.0				

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	4/30/09	26				
B7-1.5	1.5	4/30/09	ND<5.0				
B7-3	3.0	4/30/09	ND<5.0				
B7-4	4.0	4/30/09	ND<5.0				8.4

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
	Approximate location of exploratory boring

LEGEND

Remove 2' to 12' Raised Median and Install 0.5' AC (Hot Mix Asphalt)

Metal Beam Guard Railing (MBGR)

CURVE DATA

No.	R	Δ	T	L
(1)	5829.29	5°21'28"	272.75	545.10

APPROXIMATE SCALE IN FEET

0 100 80

NOTE: ALL DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE.

LEGEND

B-7 TD=16.5 APPROXIMATE LOCATION OF EXPLORATORY BORING TD=TOTAL DEPTH IN FEET

Ninyo & Moore	BORING LOCATION MAP	FIGURE
PROJECT NO. 207384020 / DATE 6/09	PACIFIC COAST HIGHWAY HUNTINGTON BEACH, CALIFORNIA	3

207384--B1.DWG

APPENDIX A

LABORATORY REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

May 08, 2009

Nancy Anglin
Ninyo & Moore
475 Goddard Suite 200
Irvine, CA 92618

TEL: (949) 753-7070
FAX: (949) 753-7071

ELAP No.: 1838
NELAP No.: 02107CA
NEVADA.: CA-401
CSDLAC No.: 10196

Workorder No.: 105269

RE: 207384020

Attention: Nancy Anglin

Enclosed are the results for sample(s) received on April 28, 2009 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,

Eddie F. Rodriguez
Laboratory Director

Advanced Technology Laboratories

Date: *08-May-09*

CLIENT: Ninyo & Moore
Project: 207384020
Lab Order: 105269
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
105269-005A	B1-0.5	Soil	4/28/2009 9:48:00 AM	4/28/2009	5/8/2009
105269-006A	B1-1.5	Soil	4/28/2009 9:52:00 AM	4/28/2009	5/8/2009
105269-007A	B1-3	Soil	4/28/2009 9:54:00 AM	4/28/2009	5/8/2009
105269-008A	B1-4	Soil	4/28/2009 9:56:00 AM	4/28/2009	5/8/2009

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

CLIENT: Ninyo & Moore
Project: 207384020
Lab Order: 105269

CASE NARRATIVE

Analytical Comments for EPA 6010B

Sample 105327-006ADUP, RPD for Sample Duplicate (DUP) is outside criteria; however, the Laboratory Control Sample (LCS) validated the analytical batch.

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: *08-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B1-0.5
Lab Order:	105269	**Collection Date:**	4/28/2009 9:48:00 AM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105269-005A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP							
	EPA 3050M				**EPA 6010B**		
RunID: **ICP6_090507A**	QC Batch: **55144**				PrepDate:	**5/4/2009**	Analyst: **CL**
Lead	32	0.11	5.0		mg/Kg	1	5/7/2009 10:37 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

ANALYTICAL RESULTS

Print Date: *08-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B1-1.5
Lab Order:	105269	**Collection Date:**	4/28/2009 9:52:00 AM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105269-006A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP							
	EPA 3050M				**EPA 6010B**		
RunID: **ICP6_090507A**	QC Batch: **55144**				PrepDate:	**5/4/2009**	Analyst: **CL**
Lead	ND	0.11	5.0		mg/Kg	1	5/7/2009 10:38 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

ANALYTICAL RESULTS

Print Date: *08-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B1-3
Lab Order:	105269	**Collection Date:**	4/28/2009 9:54:00 AM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105269-007A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP							
	EPA 3050M				**EPA 6010B**		
RunID: **ICP6_090507A**	QC Batch: **55144**				PrepDate:	**5/4/2009**	Analyst: **CL**
Lead	ND	0.11	5.0		mg/Kg	1	5/7/2009 10:39 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

ANALYTICAL RESULTS

Print Date: *08-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B1-4
Lab Order:	105269	**Collection Date:**	4/28/2009 9:56:00 AM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105269-008A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP							
	EPA 3050M				**EPA 6010B**		
RunID: **ICP6_090507A**	QC Batch: **55144**				PrepDate:	**5/4/2009**	Analyst: **CL**
Lead	ND	0.11	5.0		mg/Kg	1	5/7/2009 10:41 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		

CLIENT: Ninyo & Moore
Work Order: 105269
Project: 207384020

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-55144A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **5/4/2009**	RunNo: **108823**
Client ID: **PBS**	Batch ID: **55144**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **5/7/2009**	SeqNo: **1707791**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: **LCS-55144**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **5/4/2009**	RunNo: **108823**
Client ID: **LCSS**	Batch ID: **55144**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **5/7/2009**	SeqNo: **1707792**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	270.540	5.0	250.0	0	108	80	120				

Sample ID: **105327-006ADUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **5/4/2009**	RunNo: **108823**
Client ID: **ZZZZZZ**	Batch ID: **55144**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **5/7/2009**	SeqNo: **1707803**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	65.240	5.0						40.20	47.5	20	R

Sample ID: **105327-006AMS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **5/4/2009**	RunNo: **108823**
Client ID: **ZZZZZZ**	Batch ID: **55144**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **5/7/2009**	SeqNo: **1707804**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	260.235	5.0	250.0	40.20	88.0	33	120				

Sample ID: **MB-55144B**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **5/4/2009**	RunNo: **108823**
Client ID: **PBS**	Batch ID: **55144**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **5/7/2009**	SeqNo: **1707805**

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: 105269
Project: 207384020

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **105327-016ADUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **5/4/2009**	RunNo: **108823**
Client ID: **ZZZZZZ**	Batch ID: **55144**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **5/7/2009**	SeqNo: **1707816**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.384	5.0						0.3446	0	20	

Sample ID: **105327-016AMS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **5/4/2009**	RunNo: **108823**
Client ID: **ZZZZZZ**	Batch ID: **55144**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **5/7/2009**	SeqNo: **1707817**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	169.031	5.0	250.0	0.3446	67.5	33	120				

Sample ID: **105327-016AMSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **5/4/2009**	RunNo: **108823**
Client ID: **ZZZZZZ**	Batch ID: **55144**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **5/7/2009**	SeqNo: **1707818**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	190.812	5.0	250.0	0.3446	76.2	33	120	169.0	12.1	20	

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

LABORATORY:	SITE:	CONSULTANT:
Advanced Technology Laboratories 3275 Walnut Avenue Signal Hill, CA 90807 (562) 989-4045 / fax (562) 989-4040	PCH at Bolsa Chica Huntington Beach, CA EA 0K0100 Project Number 207384020	Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 (949) 753-7070/fax (949) 753-7071

Special Instructions:
Sampler: Tommy Mutter
Homogonize the samples
If total lead is <1,000 mg/kg, but >/= 50 mg/kg, run STLC WET test (citric acid extraction EPA Method 7000 series)
If STLC WET >/= 5 mg/l, run STLC-DI (DI extraction EPA Method 7000 series)
If total lead is >/=1,000 mg/kg or STLC WET >/=5 mg/l, run TCLP (EPA Method 7000 series for leachable lead)

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):
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
	B7-0.5	4/28/09	9:25	X		Soil	Normal	Glass Jar	X
	B7-1.5		9:28		X	Soil	Normal	Glass Jar	X
	B7-3		9:30			Soil	Normal	Glass Jar	X
	B7-4		9:33			Soil	Normal	Glass Jar	X
	B6-0.5		9:48			Soil	Normal	Glass Jar	
B1	B6-1.5		9:52			Soil	Normal	Glass Jar	
	B6-3		9:54			Soil	Normal	Glass Jar	
	B6-4		9:56			Soil	Normal	Glass Jar	
	B5-0.5		10:10			Soil	Normal	Glass Jar	X
	B5-1.5		10:12			Soil	Normal	Glass Jar	X
	B5-3		10:15		X	Soil	Normal	Glass Jar	X
	B5-4		10:17			Soil	Normal	Glass Jar	X
	B4-0.5		10:22			Soil	Normal	Glass Jar	X
	B4-1.5		1025			Soil	Normal	Glass Jar	X
	B4-3		1027			Soil	Normal	Glass Jar	X
	B4-4		1029			Soil	Normal	Glass Jar	X
	B3-0.5		1035			Soil	Normal	Glass Jar	X
	B3-1.5		1038			Soil	Normal	Glass Jar	X
	B3-3		1040			Soil	Normal	Glass Jar	X
	B3-4		1042			Soil	Normal	Glass Jar	X
	B2-0.5		10:53			Soil	Normal	Glass Jar	X
	B2-1.5		10:55			Soil	Normal	Glass Jar	X
	B2-3		10:57			Soil	Normal	Glass Jar	X
	B2-4		1100		X	Soil	Normal	Glass Jar	X
	B1-0.5		11:10			Soil	Normal	Glass Jar	X
	B1-1.5		11:12			Soil	Normal	Glass Jar	X
	B1-3		11:15			Soil	Normal	Glass Jar	X
	B1-4	↓	11:17	↓		Soil	Normal	Glass Jar	X
	Decon	4/28/09	12:55	X		water	Normal	Plastic	

May 21, 2009

Nancy Anglin
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Irvine, CA 92618
TEL: (949) 753-7070
FAX: (949) 753-7071

ELAP No.: 1838
NELAP No.: 02107CA
NEVADA.: CA-401
CSDLAC No.: 10196

Workorder No.: 105327

RE: 207384020

Attention: Nancy Anglin

Enclosed are the results for sample(s) received on May 01, 2009 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,

Eddie F. Rodriguez
Laboratory Director

Advanced Technology Laboratories

Date: *21-May-09*

CLIENT: Ninyo & Moore
Project: 207384020
Lab Order: 105327
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
105327-001A	B7-0.5	Soil	4/30/2009 11:15:00 AM	5/1/2009	5/21/2009
105327-002A	B7-1.5	Soil	4/30/2009 11:17:00 AM	5/1/2009	5/21/2009
105327-003A	B7-3	Soil	4/30/2009 11:20:00 AM	5/1/2009	5/21/2009
105327-004A	B7-4	Soil	4/30/2009 11:22:00 AM	5/1/2009	5/21/2009
105327-005A	B6-0.5	Soil	4/30/2009 11:40:00 AM	5/1/2009	5/21/2009
105327-006A	B6-1.5	Soil	4/30/2009 11:42:00 AM	5/1/2009	5/21/2009
105327-007A	B6-3	Soil	4/30/2009 11:44:00 AM	5/1/2009	5/21/2009
105327-008A	B6-4	Soil	4/30/2009 11:46:00 AM	5/1/2009	5/21/2009
105327-009A	B5-0.5	Soil	4/30/2009 11:55:00 AM	5/1/2009	5/21/2009
105327-010A	B5-1.5	Soil	4/30/2009 11:57:00 AM	5/1/2009	5/21/2009
105327-011A	B5-3	Soil	4/30/2009 11:59:00 AM	5/1/2009	5/21/2009
105327-012A	B5-4	Soil	4/30/2009 12:01:00 PM	5/1/2009	5/21/2009
105327-013A	B4-0.5	Soil	4/30/2009 12:15:00 PM	5/1/2009	5/21/2009
105327-014A	B4-1.5	Soil	4/30/2009 12:17:00 PM	5/1/2009	5/21/2009
105327-015A	B4-3	Soil	4/30/2009 12:20:00 PM	5/1/2009	5/21/2009
105327-016A	B4-4	Soil	4/30/2009 12:22:00 PM	5/1/2009	5/21/2009
105327-017A	B3-0.5	Soil	4/30/2009 12:38:00 PM	5/1/2009	5/21/2009
105327-018A	B3-1.5	Soil	4/30/2009 12:40:00 PM	5/1/2009	5/21/2009
105327-019A	B3-3	Soil	4/30/2009 12:43:00 PM	5/1/2009	5/21/2009
105327-020A	B3-4	Soil	4/30/2009 12:45:00 PM	5/1/2009	5/21/2009
105327-021A	B2-0.5	Soil	4/30/2009 12:58:00 PM	5/1/2009	5/21/2009
105327-022A	B2-1.5	Soil	4/30/2009 1:00:00 PM	5/1/2009	5/21/2009
105327-023A	B2-3	Soil	4/30/2009 1:03:00 PM	5/1/2009	5/21/2009
105327-024A	B2-4	Soil	4/30/2009 1:05:00 PM	5/1/2009	5/21/2009

Advanced Technology Laboratories
3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040

CLIENT: Ninyo & Moore
Project: 207384020
Lab Order: 105327

CASE NARRATIVE

Analytical Comments for EPA 6010B

Sample 105327-006ADUP, RPD for Sample Duplicate (DUP) is outside criteria; however, the Laboratory Control Sample (LCS) validated the analytical batch.

Advanced Technology Laboratories *3275 Walnut Avenue, Signal Hill, CA 90755 Tel: 562. 989.4045 Fax: 562.989.4040*

Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: *21-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B7-0.5
Lab Order:	105327	**Collection Date:**	4/30/2009 11:15:00 AM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-001A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507A	QC Batch: 55144			PrepDate:	5/4/2009	Analyst: **CL**
Lead	26	5.0		mg/Kg	1	5/7/2009 10:42 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

ANALYTICAL RESULTS

Print Date: *21-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B7-1.5
Lab Order:	105327	**Collection Date:**	4/30/2009 11:17:00 AM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-002A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507A	QC Batch: 55144			PrepDate:	5/4/2009	Analyst: **CL**
Lead	ND	5.0		mg/Kg	1	5/7/2009 10:43 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

ANALYTICAL RESULTS

Print Date: *21-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B7-3
Lab Order:	105327	**Collection Date:**	4/30/2009 11:20:00 AM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-003A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507A	QC Batch: 55144			PrepDate:	5/4/2009	Analyst: **CL**
Lead	ND	5.0		mg/Kg	1	5/7/2009 10:45 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

ANALYTICAL RESULTS

Print Date: *21-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B7-4
Lab Order:	105327	**Collection Date:**	4/30/2009 11:22:00 AM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-004A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507A	QC Batch: 55144			PrepDate:	5/4/2009	Analyst: **CL**
Lead	ND	5.0		mg/Kg	1	5/7/2009 10:46 AM
PH						
				EPA 9045C		
RunID: WETCHEM_090507A	QC Batch: R108817			PrepDate:		Analyst: **DDL**
pH	8.4	0.10		pH Units	1	5/7/2009

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		

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B6-0.5
Lab Order:	105327	**Collection Date:**	4/30/2009 11:40:00 AM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-005A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507A	QC Batch: 55144			PrepDate: 5/4/2009		Analyst: **CL**
Lead	230	5.0		mg/Kg	1	5/7/2009 10:50 AM
LEAD BY ATOMIC ABSORPTION						
	WET			**WET DI/ EPA 7420**		
RunID: AA2_090520A	QC Batch: 55386			PrepDate: 5/18/2009		Analyst: **VV**
Lead	0.48	0.25		mg/L	1	5/20/2009 11:41 AM
LEAD BY ATOMIC ABSORPTION (STLC)						
	WET			**WET/ EPA 7420**		
RunID: AA2_090511A	QC Batch: 55235			PrepDate: 5/8/2009		Analyst: **RQ**
Lead	29	2.5		mg/L	10	5/11/2009 11:13 AM
LEAD BY ATOMIC ABSORPTION (TCLP)						
	EPA3010A			**EPA 1311/ 7420**		
RunID: AA2_090520B	QC Batch: 55411			PrepDate: 5/19/2009		Analyst: **VV**
Lead	1.6	0.25		mg/L	1	5/20/2009 11:47 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

ANALYTICAL RESULTS

Print Date: *21-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B6-1.5
Lab Order:	105327	**Collection Date:**	4/30/2009 11:42:00 AM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-006A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507A	QC Batch: 55144			PrepDate:	5/4/2009	Analyst: **CL**
Lead	40	5.0		mg/Kg	1	5/7/2009 10:51 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

ANALYTICAL RESULTS

Print Date: *21-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B6-3
Lab Order:	105327	**Collection Date:**	4/30/2009 11:44:00 AM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-007A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507A	QC Batch: 55144			PrepDate:	5/4/2009	Analyst: **CL**
Lead	ND	5.0		mg/Kg	1	5/7/2009 10:55 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

ANALYTICAL RESULTS

Print Date: *21-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B6-4
Lab Order:	105327	**Collection Date:**	4/30/2009 11:46:00 AM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-008A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507A	QC Batch: 55144			PrepDate:	5/4/2009	Analyst: **CL**
Lead	ND	5.0		mg/Kg	1	5/7/2009 10:56 AM

Qualifiers:

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

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B5-0.5
Lab Order:	105327	**Collection Date:**	4/30/2009 11:55:00 AM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-009A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507A	QC Batch: 55144			PrepDate:	5/4/2009	Analyst: **CL**
Lead	270	5.0		mg/Kg	1	5/7/2009 10:57 AM
LEAD BY ATOMIC ABSORPTION						
	WET			**WET DI/ EPA 7420**		
RunID: AA2_090520A	QC Batch: 55386			PrepDate:	5/18/2009	Analyst: **VV**
Lead	0.63	0.25		mg/L	1	5/20/2009 11:42 AM
LEAD BY ATOMIC ABSORPTION (STLC)						
	WET			**WET/ EPA 7420**		
RunID: AA2_090511A	QC Batch: 55235			PrepDate:	5/8/2009	Analyst: **RQ**
Lead	31	2.5		mg/L	10	5/11/2009 11:14 AM
LEAD BY ATOMIC ABSORPTION (TCLP)						
	EPA3010A			**EPA 1311/ 7420**		
RunID: AA2_090520B	QC Batch: 55411			PrepDate:	5/19/2009	Analyst: **VV**
Lead	1.6	0.25		mg/L	1	5/20/2009 11:48 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

ANALYTICAL RESULTS

Print Date: *21-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B5-1.5
Lab Order:	105327	**Collection Date:**	4/30/2009 11:57:00 AM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-010A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507A	QC Batch: 55144			PrepDate:	5/4/2009	Analyst: **CL**
Lead	43	5.0		mg/Kg	1	5/7/2009 10:58 AM

Qualifiers:

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

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B5-3
Lab Order:	105327	**Collection Date:**	4/30/2009 11:59:00 AM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-011A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507A	QC Batch: 55144			PrepDate: 5/4/2009		Analyst: **CL**
Lead	ND	5.0		mg/Kg	1	5/7/2009 10:59 AM
PH						
				EPA 9045C		
RunID: WETCHEM_090507A	QC Batch: R108817			PrepDate:		Analyst: **DDL**
pH	9.3	0.10		pH Units	1	5/7/2009

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

ANALYTICAL RESULTS

Print Date: *21-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B5-4
Lab Order:	105327	**Collection Date:**	4/30/2009 12:01:00 PM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-012A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507A	QC Batch: 55144			PrepDate:	5/4/2009	Analyst: **CL**
Lead	ND	5.0		mg/Kg	1	5/7/2009 11:03 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

ANALYTICAL RESULTS

Print Date: *21-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B4-0.5
Lab Order:	105327	**Collection Date:**	4/30/2009 12:15:00 PM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-013A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507A	QC Batch: 55144			PrepDate:	5/4/2009	Analyst: **CL**
Lead	130	5.0		mg/Kg	1	5/7/2009 11:05 AM
LEAD BY ATOMIC ABSORPTION						
	WET			**WET DI/ EPA 7420**		
RunID: AA2_090520A	QC Batch: 55386			PrepDate:	5/18/2009	Analyst: **VV**
Lead	0.57	0.25		mg/L	1	5/20/2009 11:42 AM
LEAD BY ATOMIC ABSORPTION (STLC)						
	WET			**WET/ EPA 7420**		
RunID: AA2_090511A	QC Batch: 55235			PrepDate:	5/8/2009	Analyst: **RQ**
Lead	29	2.5		mg/L	10	5/11/2009 11:16 AM
LEAD BY ATOMIC ABSORPTION (TCLP)						
	EPA3010A			**EPA 1311/ 7420**		
RunID: AA2_090520B	QC Batch: 55411			PrepDate:	5/19/2009	Analyst: **VV**
Lead	1.2	0.25		mg/L	1	5/20/2009 11:49 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		

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B4-1.5
Lab Order:	105327	**Collection Date:**	4/30/2009 12:17:00 PM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-014A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507A	QC Batch: 55144			PrepDate:	5/4/2009	Analyst: **CL**
Lead	50	5.0		mg/Kg	1	5/7/2009 11:06 AM
LEAD BY ATOMIC ABSORPTION (STLC)						
	WET			**WET/ EPA 7420**		
RunID: AA2_090511A	QC Batch: 55235			PrepDate:	5/8/2009	Analyst: **RQ**
Lead	1.6	0.25		mg/L	1	5/11/2009 11:16 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

ANALYTICAL RESULTS

Print Date: *21-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B4-3
Lab Order:	105327	**Collection Date:**	4/30/2009 12:20:00 PM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-015A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507A	QC Batch: 55144			PrepDate:	5/4/2009	Analyst: **CL**
Lead	ND	5.0		mg/Kg	1	5/7/2009 11:07 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

ANALYTICAL RESULTS

Print Date: *21-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B4-4
Lab Order:	105327	**Collection Date:**	4/30/2009 12:22:00 PM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-016A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507A	QC Batch: 55144			PrepDate:	5/4/2009	Analyst: **CL**
Lead	ND	5.0		mg/Kg	1	5/7/2009 11:08 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

ANALYTICAL RESULTS

Print Date: *21-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B3-0.5
Lab Order:	105327	**Collection Date:**	4/30/2009 12:38:00 PM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-017A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507B	QC Batch: 55145			PrepDate:	5/4/2009	Analyst: **CL**
Lead	1100	5.0		mg/Kg	1	5/7/2009 11:17 AM
LEAD BY ATOMIC ABSORPTION (TCLP)						
	EPA3010A			**EPA 1311/ 7420**		
RunID: AA2_090513B	QC Batch: 55319			PrepDate:	5/13/2009	Analyst: **RQ**
Lead	3.8	0.25		mg/L	1	5/13/2009 12:04 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

ANALYTICAL RESULTS

Print Date: *21-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B3-1.5
Lab Order:	105327	**Collection Date:**	4/30/2009 12:40:00 PM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-018A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507B	QC Batch: 55145			PrepDate: 5/4/2009		Analyst: **CL**
Lead	35	5.0		mg/Kg	1	5/7/2009 11:18 AM
PH						
				EPA 9045C		
RunID: WETCHEM_090507A	QC Batch: R108817			PrepDate:		Analyst: **DDL**
pH	8.9	0.10		pH Units	1	5/7/2009

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

ANALYTICAL RESULTS

Print Date: *21-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B3-3
Lab Order:	105327	**Collection Date:**	4/30/2009 12:43:00 PM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-019A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507B	QC Batch: 55145			PrepDate:	5/4/2009	Analyst: **CL**
Lead	9.8	5.0		mg/Kg	1	5/7/2009 11:19 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

ANALYTICAL RESULTS

Print Date: *21-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B3-4
Lab Order:	105327	**Collection Date:**	4/30/2009 12:45:00 PM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-020A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507B	QC Batch: 55145			PrepDate:	5/4/2009	Analyst: **CL**
Lead	15	5.0		mg/Kg	1	5/7/2009 11:20 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		

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B2-0.5
Lab Order:	105327	**Collection Date:**	4/30/2009 12:58:00 PM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-021A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507B	QC Batch: 55145			PrepDate:	5/4/2009	Analyst: **CL**
Lead	110	5.0		mg/Kg	1	5/7/2009 11:22 AM
LEAD BY ATOMIC ABSORPTION						
	WET			**WET DI/ EPA 7420**		
RunID: AA2_090520A	QC Batch: 55386			PrepDate:	5/18/2009	Analyst: **VV**
Lead	0.38	0.25		mg/L	1	5/20/2009 11:42 AM
LEAD BY ATOMIC ABSORPTION (STLC)						
	WET			**WET/ EPA 7420**		
RunID: AA2_090511A	QC Batch: 55235			PrepDate:	5/8/2009	Analyst: **RQ**
Lead	11	0.50		mg/L	2	5/11/2009 11:18 AM
LEAD BY ATOMIC ABSORPTION (TCLP)						
	EPA3010A			**EPA 1311/ 7420**		
RunID: AA2_090520B	QC Batch: 55411			PrepDate:	5/19/2009	Analyst: **VV**
Lead	ND	0.25		mg/L	1	5/20/2009 11:53 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

ANALYTICAL RESULTS

Print Date: *21-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B2-1.5
Lab Order:	105327	**Collection Date:**	4/30/2009 1:00:00 PM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-022A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507B	QC Batch: 55145			PrepDate:	5/4/2009	Analyst: **CL**
Lead	70	5.0		mg/Kg	1	5/7/2009 11:23 AM
LEAD BY ATOMIC ABSORPTION						
	WET			**WET DI/ EPA 7420**		
RunID: AA2_090520A	QC Batch: 55386			PrepDate:	5/18/2009	Analyst: **VV**
Lead	0.32	0.25		mg/L	1	5/20/2009 11:39 AM
LEAD BY ATOMIC ABSORPTION (STLC)						
	WET			**WET/ EPA 7420**		
RunID: AA2_090511A	QC Batch: 55235			PrepDate:	5/8/2009	Analyst: **RQ**
Lead	8.1	0.25		mg/L	1	5/11/2009 11:18 AM
LEAD BY ATOMIC ABSORPTION (TCLP)						
	EPA3010A			**EPA 1311/ 7420**		
RunID: AA2_090520B	QC Batch: 55411			PrepDate:	5/19/2009	Analyst: **VV**
Lead	ND	0.25		mg/L	1	5/20/2009 11:53 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

ANALYTICAL RESULTS

Print Date: *21-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B2-3
Lab Order:	105327	**Collection Date:**	4/30/2009 1:03:00 PM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-023A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507B	QC Batch: 55145			PrepDate:	5/4/2009	Analyst: **CL**
Lead	ND	5.0		mg/Kg	1	5/7/2009 11:23 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

ANALYTICAL RESULTS

Print Date: *21-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	B2-4
Lab Order:	105327	**Collection Date:**	4/30/2009 1:05:00 PM
Project:	207384020	**Matrix:**	SOIL
Lab ID:	105327-024A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050M			**EPA 6010B**		
RunID: ICP6_090507B	QC Batch: 55145			PrepDate:	5/4/2009	Analyst: **CL**
Lead	ND	5.0		mg/Kg	1	5/7/2009 11:25 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		

CLIENT: Ninyo & Moore
Work Order: 105327
Project: 207384020

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-55144A**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **5/4/2009**	RunNo: **108823**
Client ID: **PBS**	Batch ID: **55144**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **5/7/2009**	SeqNo: **1707791**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: **LCS-55144**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **5/4/2009**	RunNo: **108823**
Client ID: **LCSS**	Batch ID: **55144**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **5/7/2009**	SeqNo: **1707792**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	270.540	5.0	250.0	0	108	80	120				

Sample ID: **105327-006ADUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **5/4/2009**	RunNo: **108823**
Client ID: **B6-1.5**	Batch ID: **55144**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **5/7/2009**	SeqNo: **1707803**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	65.240	5.0						40.20	47.5	20	R

Sample ID: **105327-006AMS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **5/4/2009**	RunNo: **108823**
Client ID: **B6-1.5**	Batch ID: **55144**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **5/7/2009**	SeqNo: **1707804**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	260.235	5.0	250.0	40.20	88.0	33	120				

Sample ID: **MB-55144B**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **5/4/2009**	RunNo: **108823**
Client ID: **PBS**	Batch ID: **55144**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **5/7/2009**	SeqNo: **1707805**

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: 105327
Project: 207384020

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **105327-016ADUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **5/4/2009**	RunNo: **108823**
Client ID: **B4-4**	Batch ID: **55144**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **5/7/2009**	SeqNo: **1707816**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.384	5.0						0.3446	0	20	

Sample ID: **105327-016AMS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **5/4/2009**	RunNo: **108823**
Client ID: **B4-4**	Batch ID: **55144**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **5/7/2009**	SeqNo: **1707817**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	169.031	5.0	250.0	0.3446	67.5	33	120				

Sample ID: **105327-016AMSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **5/4/2009**	RunNo: **108823**
Client ID: **B4-4**	Batch ID: **55144**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **5/7/2009**	SeqNo: **1707818**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	190.812	5.0	250.0	0.3446	76.2	33	120	169.0	12.1	20	

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: 105327
Project: 207384020

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-55145**	SampType: **MBLK**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **5/4/2009**	RunNo: **108825**
Client ID: **PBS**	Batch ID: **55145**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **5/7/2009**	SeqNo: **1707827**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0									

Sample ID: **LCS-55145**	SampType: **LCS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **5/4/2009**	RunNo: **108825**
Client ID: **LCSS**	Batch ID: **55145**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **5/7/2009**	SeqNo: **1707828**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	264.935	5.0	250.0	0	106	80	120				

Sample ID: **105327-024ADUP**	SampType: **DUP**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **5/4/2009**	RunNo: **108825**
Client ID: **B2-4**	Batch ID: **55145**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **5/7/2009**	SeqNo: **1707837**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	5.0						0	0	20	

Sample ID: **105327-024AMS**	SampType: **MS**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **5/4/2009**	RunNo: **108825**
Client ID: **B2-4**	Batch ID: **55145**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **5/7/2009**	SeqNo: **1707838**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	144.656	5.0	250.0	0	57.9	33	120				

Sample ID: **105327-024AMSD**	SampType: **MSD**	TestCode: **6010_SPB**	Units: **mg/Kg**	Prep Date: **5/4/2009**	RunNo: **108825**
Client ID: **B2-4**	Batch ID: **55145**	TestNo: **EPA 6010B**	**EPA 3050M**	Analysis Date: **5/7/2009**	SeqNo: **1707839**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	145.228	5.0	250.0	0	58.1	33	120	144.7	0.395	20	

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: 105327
Project: 207384020

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_DI

Sample ID: **MB-55386**	SampType: **MBLK**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **5/18/2009**	RunNo: **109164**
Client ID: **PBS**	Batch ID: **55386**	TestNo: **WET DI/ EPA WET**		Analysis Date: **5/20/2009**	SeqNo: **1714169**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-55386**	SampType: **LCS**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **5/18/2009**	RunNo: **109164**
Client ID: **LCSS**	Batch ID: **55386**	TestNo: **WET DI/ EPA WET**		Analysis Date: **5/20/2009**	SeqNo: **1714170**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.807	0.25	5.000	0	96.1	80	120				

Sample ID: **105327-022A-DUP**	SampType: **DUP**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **5/18/2009**	RunNo: **109164**
Client ID: **B2-1.5**	Batch ID: **55386**	TestNo: **WET DI/ EPA WET**		Analysis Date: **5/20/2009**	SeqNo: **1714172**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.302	0.25						0.3226	6.72	20	

Sample ID: **105327-022A-MS**	SampType: **MS**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **5/18/2009**	RunNo: **109164**
Client ID: **B2-1.5**	Batch ID: **55386**	TestNo: **WET DI/ EPA WET**		Analysis Date: **5/20/2009**	SeqNo: **1714173**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.844	0.25	5.000	0.3226	110	70	130				

Sample ID: **105327-022A-MSD**	SampType: **MSD**	TestCode: **7420_DI**	Units: **mg/L**	Prep Date: **5/18/2009**	RunNo: **109164**
Client ID: **B2-1.5**	Batch ID: **55386**	TestNo: **WET DI/ EPA WET**		Analysis Date: **5/20/2009**	SeqNo: **1714174**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.678	0.25	5.000	0.3226	107	70	130	5.844	2.89	20	

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: 105327
Project: 207384020

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_ST

Sample ID: MB-55235A	SampType: MBLK	TestCode: 7420_ST	Units: mg/L	Prep Date: 5/8/2009	RunNo: 108889
Client ID: PBS	Batch ID: 55235	TestNo: WET/ EPA 74 WET		Analysis Date: 5/11/2009	SeqNo: 1708741

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: LCS-55235	SampType: LCS	TestCode: 7420_ST	Units: mg/L	Prep Date: 5/8/2009	RunNo: 108889
Client ID: LCSS	Batch ID: 55235	TestNo: WET/ EPA 74 WET		Analysis Date: 5/11/2009	SeqNo: 1708742

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.949	0.25	5.000	0	99.0	80	120				

Sample ID: 105390-023A-DUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 5/8/2009	RunNo: 108889
Client ID: ZZZZZZ	Batch ID: 55235	TestNo: WET/ EPA 74 WET		Analysis Date: 5/11/2009	SeqNo: 1708750

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.395	0.25						0.3349	16.6	20	

Sample ID: 105390-023A-MS	SampType: MS	TestCode: 7420_ST	Units: mg/L	Prep Date: 5/8/2009	RunNo: 108889
Client ID: ZZZZZZ	Batch ID: 55235	TestNo: WET/ EPA 74 WET		Analysis Date: 5/11/2009	SeqNo: 1708751

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.506	0.25	5.000	0.3349	103	80	120				

Sample ID: 105305-002A-DUP	SampType: DUP	TestCode: 7420_ST	Units: mg/L	Prep Date: 5/8/2009	RunNo: 108889
Client ID: ZZZZZZ	Batch ID: 55235	TestNo: WET/ EPA 74 WET		Analysis Date: 5/11/2009	SeqNo: 1708755

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.855	0.25						2.536	11.8	20	

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: 105327
Project: 207384020

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_ST

Sample ID: **105305-002A-MS**	SampType: **MS**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **5/8/2009**	RunNo: **108889**
Client ID: **ZZZZZZ**	Batch ID: **55235**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **5/11/2009**	SeqNo: **1708756**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.722	0.25	5.000	2.536	104	80	120				

Sample ID: **105305-002A-MSD**	SampType: **MSD**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **5/8/2009**	RunNo: **108889**
Client ID: **ZZZZZZ**	Batch ID: **55235**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **5/11/2009**	SeqNo: **1708757**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.668	0.25	5.000	2.536	103	80	120	7.722	0.696	20	

Sample ID: **MB-55235B**	SampType: **MBLK**	TestCode: **7420_ST**	Units: **mg/L**	Prep Date: **5/8/2009**	RunNo: **108889**
Client ID: **PBS**	Batch ID: **55235**	TestNo: **WET/ EPA 74 WET**		Analysis Date: **5/11/2009**	SeqNo: **1708758**

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
- 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: 105327
Project: 207384020

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **MB-55319**	SampType: **MBLK**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **5/13/2009**	RunNo: **108982**
Client ID: **PBS**	Batch ID: **55319**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **5/13/2009**	SeqNo: **1710621**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **MB-55275 TCLP**	SampType: **MBLK**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **5/13/2009**	RunNo: **108982**
Client ID: **PBS**	Batch ID: **55319**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **5/13/2009**	SeqNo: **1710622**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-55319**	SampType: **LCS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **5/13/2009**	RunNo: **108982**
Client ID: **LCSS**	Batch ID: **55319**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **5/13/2009**	SeqNo: **1710623**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.007	0.25	1.000	0	101	80	120				

Sample ID: **105327-017A-DUP**	SampType: **DUP**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **5/13/2009**	RunNo: **108982**
Client ID: **B3-0.5**	Batch ID: **55319**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **5/13/2009**	SeqNo: **1710625**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	3.687	0.25						3.803	3.11	20	

Sample ID: **105327-017A-MS**	SampType: **MS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **5/13/2009**	RunNo: **108982**
Client ID: **B3-0.5**	Batch ID: **55319**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **5/13/2009**	SeqNo: **1710626**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.652	0.25	1.000	3.803	84.9	70	130				

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: 105327
Project: 207384020

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **105327-017A-MSD**	SampType: **MSD**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **5/13/2009**	RunNo: **108982**
Client ID: **B3-0.5**	Batch ID: **55319**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **5/13/2009**	SeqNo: **1710627**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.537	0.25	1.000	3.803	73.3	70	130	4.652	2.52	20	

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: 105327
Project: 207384020

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **MB-55411A**	SampType: **MBLK**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **5/19/2009**	RunNo: **109165**
Client ID: **PBS**	Batch ID: **55411**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **5/20/2009**	SeqNo: **1714179**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **MB-55388A TCLP**	SampType: **MBLK**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **5/19/2009**	RunNo: **109165**
Client ID: **PBS**	Batch ID: **55411**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **5/20/2009**	SeqNo: **1714180**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-55411**	SampType: **LCS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **5/19/2009**	RunNo: **109165**
Client ID: **LCSS**	Batch ID: **55411**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **5/20/2009**	SeqNo: **1714181**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.030	0.25	1.000	0	103	80	120				

Sample ID: **105393-009A-DUP**	SampType: **DUP**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **5/19/2009**	RunNo: **109165**
Client ID: **ZZZZZZ**	Batch ID: **55411**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **5/20/2009**	SeqNo: **1714183**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.552	0.25						2.646	3.64	20	

Sample ID: **105393-009A-MS**	SampType: **MS**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **5/19/2009**	RunNo: **109165**
Client ID: **ZZZZZZ**	Batch ID: **55411**	TestNo: **EPA 1311/ 74**	**EPA3010A**	Analysis Date: **5/20/2009**	SeqNo: **1714184**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.708	0.25	2.500	2.646	122	70	130				

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: 105327
Project: 207384020

ANALYTICAL QC SUMMARY REPORT

TestCode: 7420_TC

Sample ID: **105393-009A-MSD**	SampType: **MSD**	TestCode: **7420_TC**	Units: **mg/L**	Prep Date: **5/19/2009**	RunNo: **109165**
Client ID: **ZZZZZZ**	Batch ID: **55411**	TestNo: **EPA 1311/ 74 EPA3010A**		Analysis Date: **5/20/2009**	SeqNo: **1714185**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	5.655	0.25	2.500	2.646	120	70	130	5.708	0.937	20	

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: 105327
Project: 207384020

ANALYTICAL QC SUMMARY REPORT

TestCode: 9045_S

Sample ID: **105327-004ADUP**	SampType: **DUP**	TestCode: **9045_S**	Units: **pH Units**	Prep Date:	RunNo: **108817**
Client ID: **B7-4**	Batch ID: **R108817**	TestNo: **EPA 9045C**		Analysis Date: **5/7/2009**	SeqNo: **1707729**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	8.360	0.10						8.350	0.120	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:	SITE:	CONSULTANT:
Advanced Technology Laboratories 3275 Walnut Avenue Signal Hill, CA 90807 (562) 989-4045 / fax (562) 989-4040	PCH at Bolsa Chica Huntington Beach, CA EA 0K0100 Project Number 207384020	Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 (949) 753-7070/fax (949) 753-7071

Special Instructions: Sampler (print/sign): Tommy M Utter

Homogonize the samples

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

If STLC WET >/= 5 mg/l, run STLC-DI (DI extraction EPA Method 7000 series)

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

Relinquished by (name/date and time):	Received by (name/date and time):
5/1/09 9:50	5/1/09 9:50
5/1/09 10:26	5/1/09 1030

Lab No.	Sample I. D.	Date	Time	Total Lead EPA Method 6010	pH EPA Method 9045	Sample Type	Turn-Around Time	Container Type
	B7-0.5	4/30/09	11:15	X		Soil	Normal	Glass Jar
	B7-1.5		11:17			Soil	Normal	Glass Jar
	B7-3		1120			Soil	Normal	Glass Jar
	B7-4		1122		X	Soil	Normal	Glass Jar
	B6-0.5		1140			Soil	Normal	Glass Jar
	B6-1.5		1142			Soil	Normal	Glass Jar
	B6-3		1144			Soil	Normal	Glass Jar
	B6-4		1146			Soil	Normal	Glass Jar
	B5-0.5		1155			Soil	Normal	Glass Jar
	B5-1.5		1157			Soil	Normal	Glass Jar
	B5-3		1159		X	Soil	Normal	Glass Jar
	B5-4		1201			Soil	Normal	Glass Jar
	B4-0.5		1215			Soil	Normal	Glass Jar
	B4-1.5		1217			Soil	Normal	Glass Jar
	B4-3		1220			Soil	Normal	Glass Jar
	B4-4		1222			Soil	Normal	Glass Jar
	B3-0.5		1238			Soil	Normal	Glass Jar
	B3-1.5		1240		X	Soil	Normal	Glass Jar
	B3-3		1243			Soil	Normal	Glass Jar
	B3-4		1245			Soil	Normal	Glass Jar
	B2-0.5		1258			Soil	Normal	Glass Jar
	B2-1.5		1300			Soil	Normal	Glass Jar
	B2-3		1303			Soil	Normal	Glass Jar
	B2-4		1305			Soil	Normal	Glass Jar
						~~Soil~~	~~Normal~~	~~Glass Jar~~
						~~Soil~~	~~Normal~~	~~Glass Jar~~
						~~Soil~~	~~Normal~~	~~Glass Jar~~
						~~Soil~~	~~Normal~~	~~Glass Jar~~
						~~water~~	~~Normal~~	~~Plastic~~

May 28, 2009

Nancy Anglin
Ninyo & Moore
475 Goddard Suite 200
Irvine, CA 92618

TEL: (949) 753-7070
FAX: (949) 753-7071

ELAP No.: 1838
NELAP No.: 02107CA
NEVADA.: CA-401
CSDLAC No.: 10196

Workorder No.: 105269

RE: 207384020

Attention: Nancy Anglin

Enclosed are the results for sample(s) received on April 28, 2009 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

This is an addendum report. Please incorporate with documentation previously submitted.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (562)989-4045 if I can be of further assistance to your company.

Sincerely,

Eddie F. Rodriguez
Laboratory Director

Advanced Technology Laboratories

Date: *28-May-09*

CLIENT: Ninyo & Moore
Project: 207384020
Lab Order: 105269
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
105269-005A	B1-0.5	Soil	4/28/2009 9:48:00 AM	4/28/2009	5/28/2009
105269-006A	B1-1.5	Soil	4/28/2009 9:52:00 AM	4/28/2009	5/28/2009
105269-007A	B1-3	Soil	4/28/2009 9:54:00 AM	4/28/2009	5/28/2009
105269-008A	B1-4	Soil	4/28/2009 9:56:00 AM	4/28/2009	5/28/2009
105269-029A	Decon	Water	4/28/2009 12:55:00 PM	4/28/2009	5/28/2009

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: *28-May-09*

CLIENT:	Ninyo & Moore	**Client Sample ID:**	Decon
Lab Order:	105269	**Collection Date:**	4/28/2009 12:55:00 PM
Project:	207384020	**Matrix:**	WATER
Lab ID:	105269-029A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **ICP8_090528D**	QC Batch: **55551**				PrepDate: **5/27/2009**	Analyst: **CL**	
Lead	ND	0.0046	0.25		mg/L	1	5/28/2009 12:21 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		

CLIENT: Ninyo & Moore
Work Order: 105269
Project: 207384020

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPB

Sample ID: **MB-55551**	SampType: **MBLK**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **5/27/2009**	RunNo: **109365**
Client ID: **PBW**	Batch ID: **55551**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **5/28/2009**	SeqNo: **1717549**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.25									

Sample ID: **LCS-55551**	SampType: **LCS**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **5/27/2009**	RunNo: **109365**
Client ID: **LCSW**	Batch ID: **55551**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **5/28/2009**	SeqNo: **1717550**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.007	0.25	1.000	0	101	85	115				

Sample ID: **105623-001BDUP**	SampType: **DUP**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **5/27/2009**	RunNo: **109365**
Client ID: **ZZZZZZ**	Batch ID: **55551**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **5/28/2009**	SeqNo: **1717553**

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: **105623-001BMS**	SampType: **MS**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **5/27/2009**	RunNo: **109365**
Client ID: **ZZZZZZ**	Batch ID: **55551**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **5/28/2009**	SeqNo: **1717554**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.511	0.25	2.500	0	100	71	121				

Sample ID: **105623-001BMSD**	SampType: **MSD**	TestCode: **6010_WPB**	Units: **mg/L**	Prep Date: **5/27/2009**	RunNo: **109365**
Client ID: **ZZZZZZ**	Batch ID: **55551**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **5/28/2009**	SeqNo: **1717555**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.597	0.25	2.500	0	104	71	121	2.511	3.35	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		

APPENDIX B

STATISTICAL ANALYSES

TABLE B-1
LEAD ANALYSES – COMBINED LAYERS

Sample ID	Depth (feet bgs)	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
B1-0.5	0.5	32	0.0291	0.029095014
B1-1.5	1.5	2.5	0.0023	0.002272729
B1-3	3.0	2.5	0.0023	0.002272729
B1-4	4.0	2.5	0.0023	0.002272729
B2-0.5	0.5	110	0.1000	0.100167421
B2-1.5	1.5	70	0.0636	0.063679392
B2-3	3.0	2.5	0.0023	0.002272729
B2-4	4.0	2.5	0.0023	0.002272729
B3-0.5	0.5	1100	1.0000	1.570796327
B3-1.5	1.5	35	0.0318	0.031823553
B3-3	3.0	9.8	0.0089	0.008909209
B3-4	4.0	15	0.0136	0.013636786
B4-0.5	0.5	130	0.1182	0.118458668
B4-1.5	1.5	50	0.0455	0.045470212
B4-3	3.0	2.5	0.0023	0.002272729
B4-4	4.0	2.5	0.0023	0.002272729
B5-0.5	0.5	270	0.2455	0.247988554
B5-1.5	1.5	43	0.0391	0.039100872
B5-3	3.0	2.5	0.0023	0.002272729
B5-4	4.0	2.5	0.0023	0.002272729
B6-0.5	0.5	230	0.2091	0.210645228
B6-1.5	1.5	40	0.0364	0.036371655
B6-3	3.0	2.5	0.0023	0.002272729
B6-4	4.0	2.5	0.0023	0.002272729
B7-0.5	0.5	26	0.0236	0.023638565
B7-1.5	1.5	2.5	0.0023	0.002272729
B7-3	3.0	2.5	0.0023	0.002272729
B7-4	4.0	2.5	0.0023	0.002272729

Total Lead	Max TTLC:	1100	**Transformed Data**	**Soluble Data**
Number of Samples:	28		28	
Sample Mean:	78		0.092	
Delta = RT - mean	922			
Appropriate Number of Samples:	0.09			
Standard Deviation of Sample:	211		0.296	
Standard Deviation of Mean:	40		0.056	
Sample Variance:	44696		0.088	
t-value for 90%:	1.314	Need to Transform Data	1.314	
Upper Confidence Limit for 90%:			0.165	
Reverse Transformation for 90%			181	mg/kg 23.1 mg/l
t-value for 95%:	1.703		1.703	
Upper Confidence Limit for 95%:			0.187	
Reverse Transformation for 95%			205	mg/kg 26.1 mg/l

TABLE B-2
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	32	0.0291	0.029095014
B2-0.5	0.5	110	0.1000	0.100167421
B3-0.5	0.5	1100	1.0000	1.570796327
B4-0.5	0.5	130	0.1182	0.118458668
B5-0.5	0.5	270	0.2455	0.247988554
B6-0.5	0.5	230	0.2091	0.210645228
B7-0.5	0.5	26	0.0236	0.023638565

Total Lead	Max TTLC:	1100	**Transformed Data**		**Soluble Data**
Number of Samples:	7		7		
Sample Mean:	271		0.329		
Delta = RT - mean	729				
Appropriate Number of Samples:	0.55				
Standard Deviation of Sample:	377		0.554		
Standard Deviation of Mean:	142		0.209		
Sample Variance:	141978		0.307		
t-value for 90%:	1.440	Need to Transform Data	1.440		
Upper Confidence Limit for 90%:			0.630		
Reverse Transformation for 90%			648	mg/kg	82.4 mg/l
t-value for 95%:	1.943		1.943		
Upper Confidence Limit for 95%:			0.736		
Reverse Transformation for 95%			738	mg/kg	93.8 mg/l

TABLE B-3
LEAD ANALYSES – 1.5 FOOT LAYER

Sample ID	Depth (feet bgs)	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
B1-1.5	1.5	2.5	0.0357	0.035721882
B2-1.5	1.5	70	1.0000	1.570796327
B3-1.5	1.5	35	0.5000	0.523598776
B4-1.5	1.5	50	0.7143	0.795602953
B5-1.5	1.5	43	0.6143	0.661480438
B6-1.5	1.5	40	0.5714	0.608245579
B7-1.5	1.5	2.5	0.0357	0.035721882

Total Lead	Max TTLC:	70	**Transformed Data**		**Soluble Data**
Number of Samples:	7		7		
Sample Mean:	35		0.604		
Delta = RT - mean	965				
Appropriate Number of Samples:	0.00				
Standard Deviation of Sample:	25		0.521		
Standard Deviation of Mean:	9		0.197		
Sample Variance:	608		0.271		
t-value for 90%:	1.440	Need to Transform Data	1.440		
Upper Confidence Limit for 90%:			0.888		
Reverse Transformation for 90%			54	mg/kg	7.0 mg/l
t-value for 95%:	1.943		1.943		
Upper Confidence Limit for 95%:			0.987		
Reverse Transformation for 95%			58	mg/kg	7.5 mg/l

TABLE B-4
LEAD ANALYSES – 3 FOOT LAYER

Sample ID	Depth (feet bgs)	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
B1-3	3.0	2.5	0.2551	0.257953234
B2-3	3.0	2.5	0.2551	0.257953234
B3-3	3.0	9.8	1.0000	1.570796327
B4-3	3.0	2.5	0.2551	0.257953234
B5-3	3.0	2.5	0.2551	0.257953234
B6-3	3.0	2.5	0.2551	0.257953234
B7-3	3.0	2.5	0.2551	0.257953234

Total Lead	Max TTLC:	10	**Transformed Data**		**Soluble Data**
Number of Samples:	7		7		
Sample Mean:	4		0.446		
Delta = RT - mean	996				
Appropriate Number of Samples:	0.00				
Standard Deviation of Sample:	3		0.496		
Standard Deviation of Mean:	1		0.188		
Sample Variance:	8		0.246		
t-value for 90%:	1.440	Need to Transform Data	1.440		
Upper Confidence Limit for 90%:			0.716		
Reverse Transformation for 90%			6	mg/kg	0.9 mg/l
t-value for 95%:	1.943		1.943		
Upper Confidence Limit for 95%:			0.810		
Reverse Transformation for 95%			7	mg/kg	1.0 mg/l

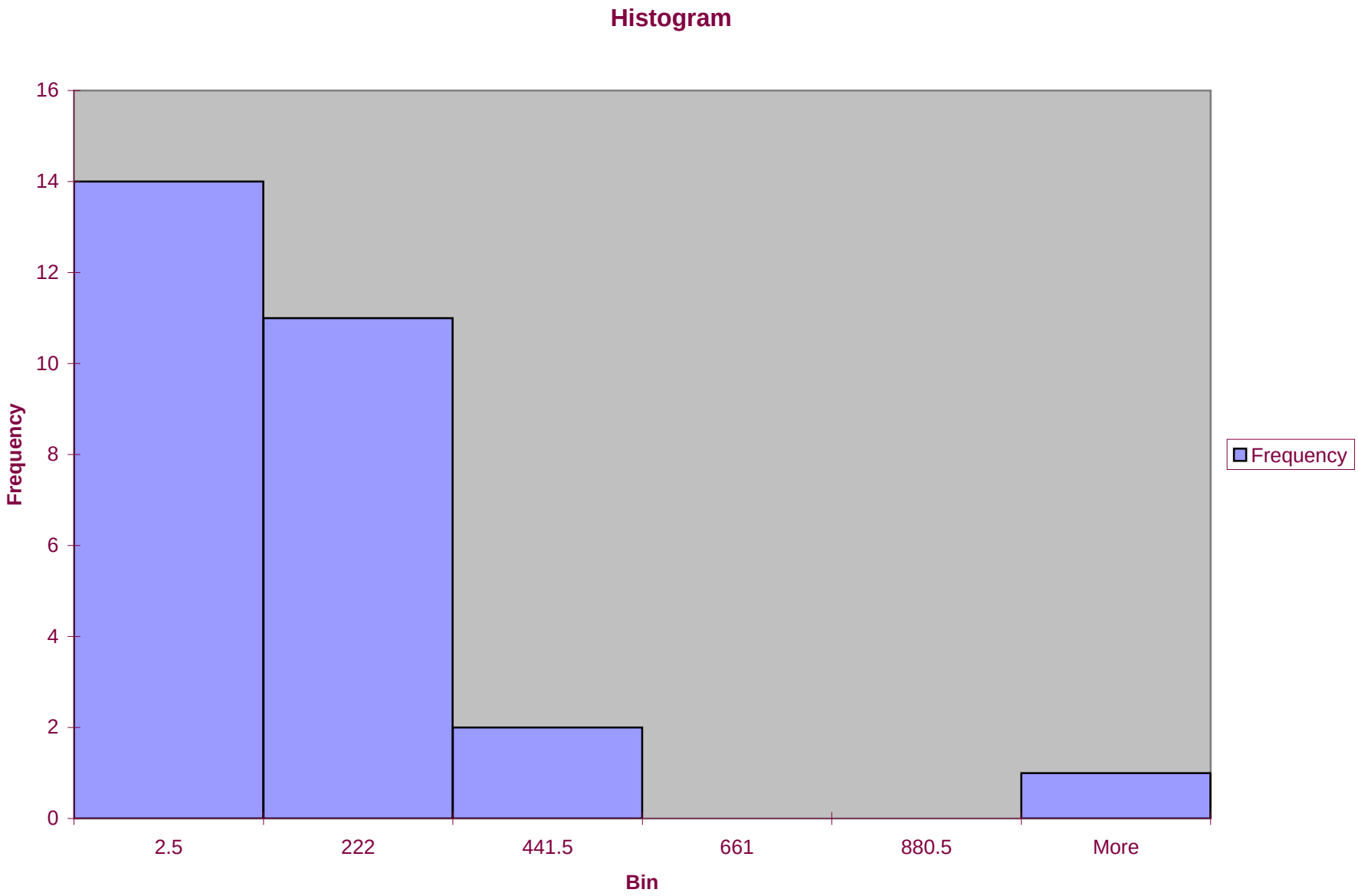
TABLE B-5
LEAD ANALYSES – 4 FOOT LAYER

Sample ID	Depth (feet bgs)	Total Lead (mg/kg)	Total Lead % of Maximum	Transformed Data Arcsine
B1-4	4.0	2.5	0.1667	0.167448079
B2-4	4.0	2.5	0.1667	0.167448079
B3-4	4.0	15	1.0000	1.570796327
B4-4	4.0	2.5	0.1667	0.167448079
B5-4	4.0	2.5	0.1667	0.167448079
B6-4	4.0	2.5	0.1667	0.167448079
B7-4	4.0	2.5	0.1667	0.167448079

Total Lead	Max TTLC:	15	**Transformed Data**	**Soluble Data**
Number of Samples:	7		7	
Sample Mean:	4		0.368	
Delta = RT - mean	996			
Appropriate Number of Samples:	0.00			
Standard Deviation of Sample:	5		0.530	
Standard Deviation of Mean:	2		0.200	
Sample Variance:	22		0.281	
t-value for 90%:	1.440	Need to Transform Data	1.440	
Upper Confidence Limit for 90%:			0.657	
Reverse Transformation for 90%			9	mg/kg 1.2 mg/l
t-value for 95%:	1.943		1.943	
Upper Confidence Limit for 95%:			0.757	
Reverse Transformation for 95%			10	mg/kg 1.4 mg/l

APPENDIX C

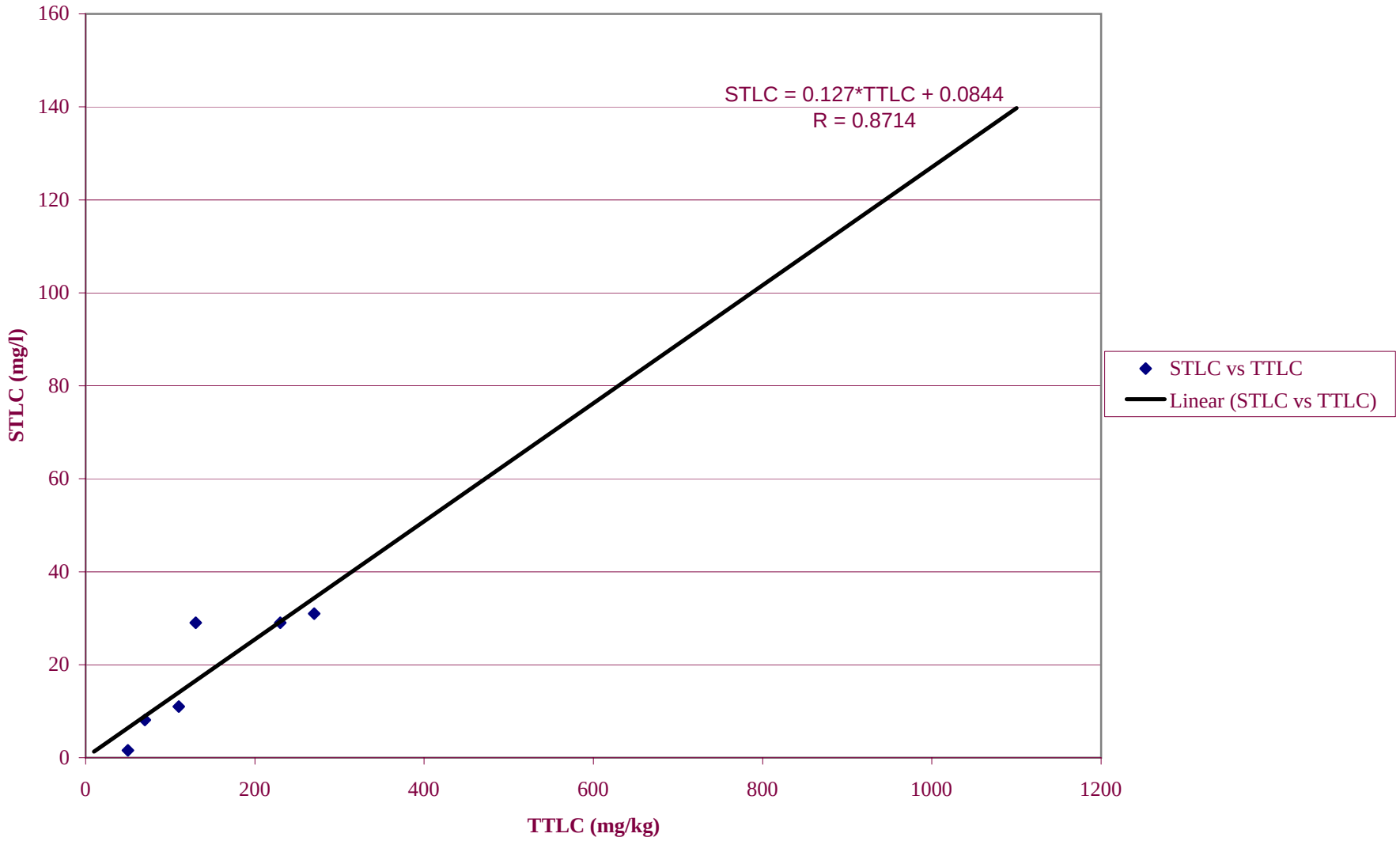
HISTOGRAM


Histogram
16
14
12
10
8
6
4
2
0
Frequency
2.5
222
441.5
661
880.5
More
Bin
Frequency

APPENDIX D

CORRELATION OF TOTAL LEAD TO SOLUBLE LEAD

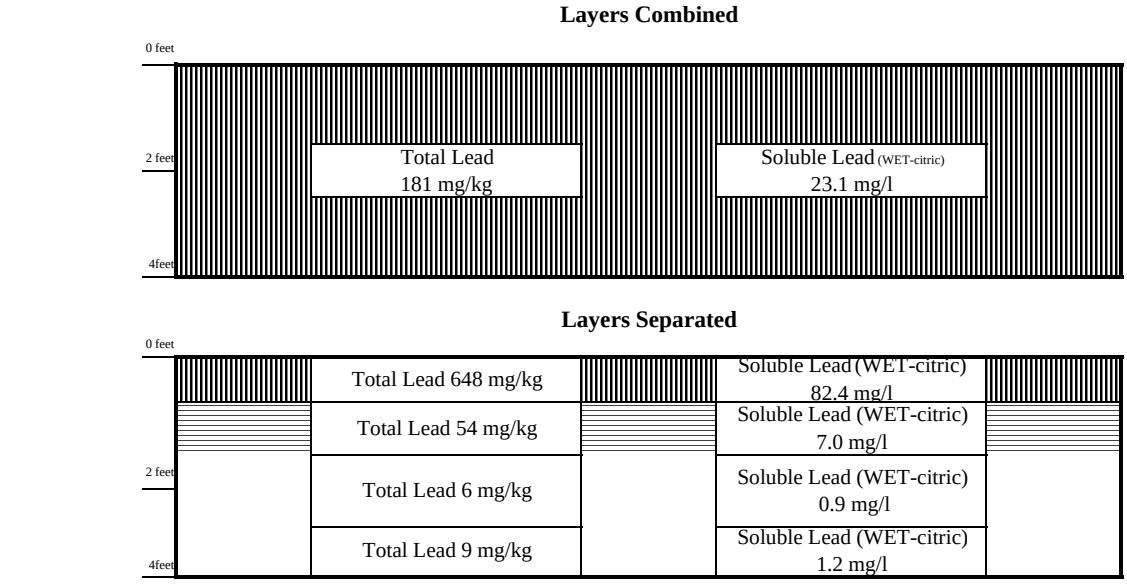
CORRELATION OF TOTAL LEAD TO SOLUBLE LEAD



APPENDIX E

BLOCK DIAGRAMS

FIGURE E1 – BLOCK DIAGRAM FOR POTENTIAL CALTRANS 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]

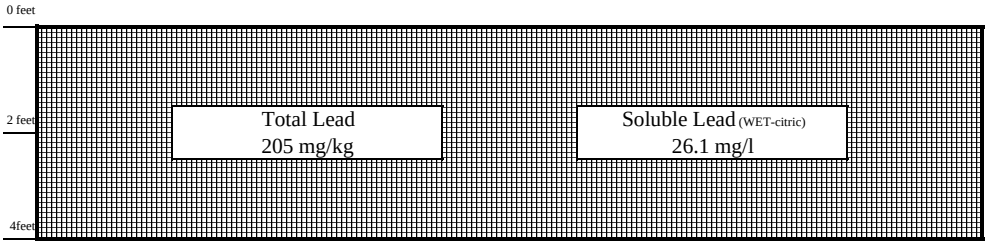
– Hazardous. Class 1 disposal site, all other Title 22 CCR requirements apply

– Hazardous. Class 1 disposal site RCRA based on the layer having a TCLP value $\geq$ 5 mg/l

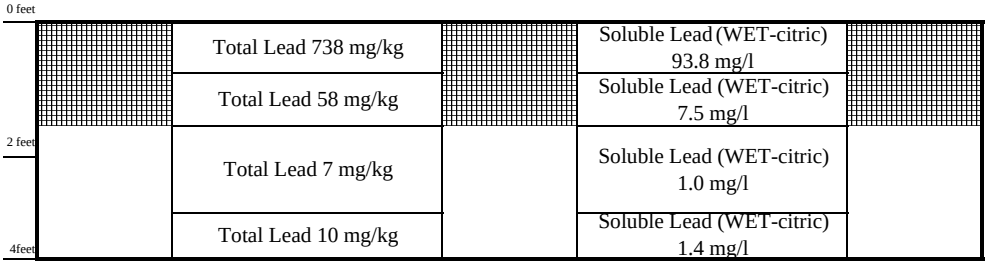
UCL – upper confidence limit
WET-DI – soluble lead using the Waste Extraction Test with deionized water
WET-citric acid – soluble lead using the Waste Extraction Test with citric acid
TCLP – Toxicity Characteristic Leaching Procedure
mg/kg – milligrams per kilogram
mg/l – milligrams per liter
CCR – California Code of Regulations
RCRA – Resource, Conservation, and Recovery Act

FIGURE E2 – BLOCK DIAGRAM FOR POTENTIAL CALTRANS OFF SITE DISPOSAL
ONE-TAILED 95 PERCENT UCLs FOR ARCSINE TRANSFORMATION

Layers Combined



Layers Separated



– 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
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