

INFORMATION HANDOUT

For Contract No. 11-275504

At 11-SD-67-R0.0/R5.9

Identified by

Project ID 1100000276

MATERIALS INFORMATION

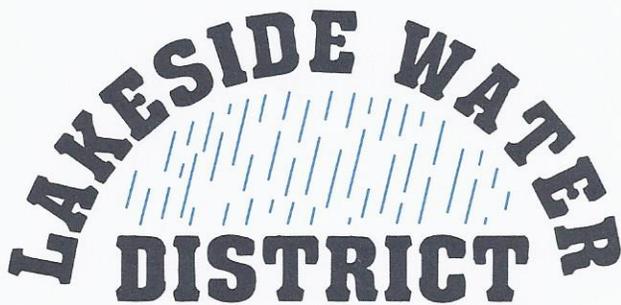
Water Source Information Letter, Dated July 22, 2014

SR-67 Aerially Deposited Lead Survey Report, Dated May 16, 2014

MAJOR COMMUNITY EVENTS

BOARD OF DIRECTORS:

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July 22, 2014

Barham Yazdani, PE
4050 Taylor Street, MS 340
San Diego, CA 92110

Mr. Yazdani,

Lakeside Water District can provide the water requested through meter's placed on fire hydrants. The preferred location for temporary meters on fire hydrants would be Industry Road, close to the Wintergardens Blvd., and Maplevue Street freeway interchanges. The cost for the water is \$7.64 per unit. Each unit is 748 gallons. The amount of units in 850,000 gallons is 1,136 units. The total anticipated cost would be \$8,682.00. Please let me know if you should have any questions.

Thank you,

A handwritten signature in blue ink that reads "Brett Sanders".

Brett Sanders
General Manager
Lakeside Water District
P 619-443-3805
F 619-443-3690

**SR-67 AERIALY DEPOSITED LEAD SURVEY REPORT,
PM 0.0 TO 5.8
CITIES OF EL CAJON, SANTEE, AND LAKESIDE
SAN DIEGO COUNTY, CA
CALTRANS DISTRICT 11, EA 275501
1100000276 88.47 FED/11.53 STATE
CONTRACT NO. 11A1996
TASK ORDER NO. 17**

Project: 20143326

May 16, 2014

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only for the specific project for which this report was prepared.**

A Report Prepared for:
Ms. Diane Vermeulen, P.E.
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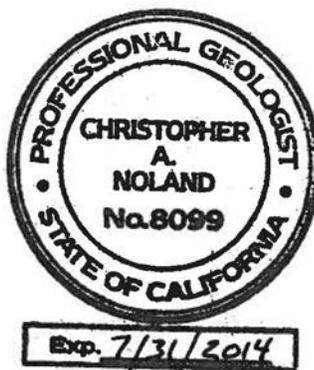
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CONTRACT NO. 11A1996
TASK ORDER NO. 17**

Kleinfelder Project No. 20143326

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May 16, 2014

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1 INTRODUCTION

1.1 PROJECT DESCRIPTION

This report has been prepared to summarize procedures and results of an Aerially Deposited Lead (ADL) survey conducted along State Route 67 (SR-67) between its inception at Interstate 8 and the intersection with Maplevue Drive, post mile (PM) 0.0 to 5.8 through the cities of El Cajon, Santee, and Lakeside (Project/Site) (Plate 1). The State of California Department of Transportation (Caltrans) is proposing a pavement rehabilitation project which also includes the widening the loop ramp at the southbound on-ramp from Wintergardens Boulevard, along with gore paving, two maintenance vehicle pullouts, and drainage improvements (Plates 2 through 5). This work was performed for Caltrans, consistent with Contract No. EA-11-177900, Task Order No. 17 (TO17). This report summarizes soil sampling for ADL conducted during March 2014 at specific locations in the unpaved shoulders and median at the Site.

1.2 PROJECT OBJECTIVES AND SCOPE OF WORK

Based on historical Site use (freeway), there is the potential that ADL is present within soil adjacent to the existing traveled ways; therefore, Caltrans needs to evaluate the presence, concentration, and distribution of lead in soil in anticipation of future grading/construction activities. The data will be used to evaluate soil within the proposed construction area to assess the potential for reuse on Site. It will also be used to evaluate disposal options for potentially lead-impacted soil, and to evaluate health and safety issues for future on-Site workers.

Based on the age of SR-67, there is a potential that ADL may be present within shallow exposed soil (i.e., upper 5 feet) adjacent to the existing traveled ways.

The objective of the ADL study was to provide data for evaluation to allow for management of ADL-impacted soils associated with a Caltrans project based on project design information known at this time. Samples were collected to provide information about lead containing soils along the unpaved shoulders and medians (Caltrans right-of-way) within the Project boundaries relative to the variance granted to Caltrans by the Department of Toxic Substance Control (DTSC) (DTSC, 2009).

This report describes the procedures, results, and recommendations from the ADL study performed within the project limits. The scope of work was provided to Kleinfelder

by Caltrans in the Task Order description. Consistent with the Task Order, and as described in the *SR-67 Aerially Deposited Lead Survey* (Kleinfelder, 2014a), Kleinfelder performed the tasks listed below:

- Provided project management and coordination.
- Prepared a Site-specific work plan and prepared a Site-specific health and safety plan (SSHSP) (Kleinfelder, 2014b).
- Coordinated traffic control for shoulder and median closure, as necessary.
- Advanced 17 borings using hand auger methods, to a depth of approximately 3 feet below ground surface (bgs) or until refusal. Up to three soil samples were collected from each hand auger boring that was advanced to 3 feet bgs. As planned, several borings were only advanced to 0.5 feet bgs and one sample was collected from each of these borings.
- Obtained global positioning system (GPS) location readings at each boring location.
- Submitted 37 soil samples, including 4 field duplicate samples, to Advanced Technology Laboratories, Inc. (ATL) of Signal Hill, a state-certified laboratory, for analysis of total lead by United States Environmental Protection Agency (USEPA) Method 6010B.
- Analyzed 33 soil samples, including 4 duplicate samples, for Soluble Threshold Limit Concentration (STLC), or leachable lead, using the California waste extraction test (CA-WET) method.
- Analyzed 8 soil samples for STLC by the modified California WET method using deionized (DI) water as the extractant.
- Analyzed 5 soil samples for Toxicity Characteristic Leaching Procedure (TCLP) using USEPA Method 1311.
- Analyzed 10 soil samples for hydrogen ion index (pH) by USEPA Method 9045C.
- Collected and analyzed 2 equipment blanks for total lead by USEPA Method 6010B. Equipment blanks were collected each day of soil sampling. One equipment blank was collected for each hand auger used during each day of sampling.

- ATL re-analyzed 6 soil samples for total lead by USEPA Method 6010B and the same soil samples for STLC using the CA-WET method due to concentrations that appeared to exceed theoretical maximum concentrations for STLC.
- Prepared this report, including a summary of the assessment methods and field observations, data evaluation and discussion, findings, conclusions and recommendations.

1.3 REPORT ORGANIZATION

This report is organized into the following sections and appendices. Tables are located behind a tab at the end of the report.

- Section 1 describes the Site, discusses the Project objectives and the purpose of the report, presents the scope of work, and discusses the organization of the report;
- Section 2 discusses pertinent Site background information;
- Section 3 describes sampling activities;
- Section 4 describes field observations and the investigation results, including laboratory analytical data;
- Section 5 presents the statistical analysis of the data;
- Section 6 presents the conclusions and recommendations;
- Section 7 presents the limitations of the report;
- Section 8 lists references;
- Plates;
- Tables;
- Appendix A includes a table with the coordinates of the samples;
- Appendix B includes the analytical reports from the laboratory; and,
- Appendix C presents the evaluation and results of the statistical analysis complete with tables.

2 BACKGROUND

2.1 SITE IMPROVEMENTS

Caltrans is proposing a pavement rehabilitation project which also includes the widening the loop ramp at the southbound on-ramp from Wintergardens Boulevard, along with gore paving, one maintenance vehicle pullout, and drainage improvements. These improvements will result in soil being disturbed and, depending on analytical results and project requirements, potentially re-used on Site.

2.2 WASTE CLASSIFICATION, ADL VARIANCE, AND SOIL REUSE CRITERIA

Due to the historic use of lead in gasoline formulations, lead contamination is common in surface soils found along roadways. ADL-impacted soils are regulated at both the federal and state levels for the following reasons:

- They may be classified as hazardous waste.
- They are subject to state regulations when not classified as hazardous waste.
- They may represent an occupational safety and health risk.

According to Title 22, California Code of Regulations (CCR), solid wastes with total lead concentrations equal to or exceeding 1,000 milligrams per kilogram (mg/kg), the Total Threshold Limit Concentration (TTLC), are classified as California hazardous waste. Assembly Bill 2784 (AB 2784), effective January 1, 1999, amended California Health and Safety Code (HSC) Section 25157.8 (a) and Title 22 CCR by reducing the practical disposal limit for non-hazardous solid waste to 350 mg/kg total lead until the California Regional Water Quality Control Board (RWQCB) amends a disposal facility's waste discharge requirements.

Solid wastes with soluble lead concentrations (assessed using California WET procedures) equal to or exceeding 5.0 milligrams per liter (mg/L), the STLC, are classified as California hazardous under California law. California hazardous materials must be transported under a hazardous waste manifest and disposed of at an appropriately permitted facility. Wastes with lead concentrations less than both the TTLC and the STLC are not a California hazardous waste, and may be disposed of at a Class II or III facility, provided that site-specific disposal facility requirements are satisfied. Furthermore, according to federal law, as stipulated in the Resource

Conservation and Recovery Act (RCRA), wastes that exceed 5.0 mg/L soluble lead, extracted using the federal TCLP, are classified as RCRA hazardous waste. This material must be disposed of as RCRA hazardous waste if transported off Site.

In September 2000, the DTSC issued a 5-year variance to Caltrans specifying that ADL-impacted soil within a highway right-of-way could be used as fill material within the right-of-way during earth moving and road construction activities provided that the waste met specific criteria (DTSC, 2000). The DTSC modified the variance for the second time in September 2003; which replaced and superseded the first modification. The variance, originally scheduled to expire on September 22, 2005, was granted extensions by DTSC that allowed Caltrans to keep working under the variance and its modifications until June 30, 2009 (DTSC, 2008). This extension was granted by the DTSC with the expectation that a good faith effort is shown by Caltrans to proceed with the variance renewal. In July 2009, the DTSC issued the current 5-year variance (DTSC, 2009). The following are the current DTSC variance conditions:

- For Variance Condition 9.c, “lead-contaminated” soil containing 1.5 mg/L or less soluble lead (using a modified CA-WET with DI [DI-WET] water as the extractant rather than an acidic, buffered sodium citrate solution) and 1,411 mg/kg or less total lead may be reused in a Caltrans right-of-way provided this soil is placed a minimum of five (5) feet above the maximum water table elevation and is covered by 1 foot of clean soil.
- For Variance Condition 9.d, “lead-contaminated” soil containing less than 150 mg/L soluble lead (DI-WET) and 3,397 mg/kg or less total lead may be reused as fill soil in a Caltrans right-of-way provided that it is placed a minimum of 5 feet above the maximum water table elevation and is covered by a pavement structure which will be maintained by Caltrans.
- For Variance Condition 9.e, “lead-contaminated” soil with a pH less than 5.5, but greater than 5.0 can only be used as fill material under the paved portion of the roadway. “Lead-contaminated” soil with a pH at or less than 5.0 shall be managed as hazardous waste.

Other reuse conditions, soil handling procedures, and notifications are specified in the variance. Soil that exceeds 3,397 mg/kg total lead or 150 mg/L soluble lead (DI-WET) cannot be reused within a Caltrans right-of-way and must be properly disposed of off at an approved facility. Solid wastes with lead concentrations less than both the TTLC and

the STLC may be disposed of at a Class II or III facility provided that site-specific disposal facility requirements are satisfied. Similarly, solid waste that exceeds 5.0 mg/L soluble lead by TCLP is considered to be a federal or RCRA-hazardous waste and cannot be reused within a Caltrans right-of-way.

The information described above is summarized in a soils management flow chart (Plate 6) to evaluate the applicability of the DTSC variance. The flow chart is an updated version of Figure 1 from the *2007 Caltrans ADL Guidance Document* (Caltrans, 2007). Based on information on the flow chart (Plate 6), soils with a 95 percent upper confidence limit (UCL) on the mean for total lead less than 1,000 mg/kg and with a 95 percent UCL for soluble lead by DI-WET less than 1.5 mg/L are considered non-hazardous and can be released to the contractor for use in accordance with project specifications.

3 SAMPLING ACTIVITIES

3.1 PRE-FIELD ACTIVITIES

An encroachment permit was prepared by Kleinfelder and submitted on February 27, 2014. The permit (11-12-NSV-0554) was approved March 17, 2014. Prior to the start of work, Caltrans was notified of the planned work on the unpaved shoulders and median of the Site.

Kleinfelder prepared and submitted a work plan (Kleinfelder, 2014a) and a SSHSP (Kleinfelder, 2014b). The health and safety plan was reviewed daily with field personnel for potential hazards, emergency contact information, and hospital routes.

Prior to ground-disturbance activities, Kleinfelder visited each sample point to mark excavation locations with 3-foot lathes and flagging material. Underground utilities were visually checked when marking sampling locations; sample locations with potential utility conflicts were modified. Underground Services Alert of Southern California (DigAlert) was notified at least 48 hours prior to ground-disturbance activities and Kleinfelder was issued the following ticket numbers: A40840253, A40840267, A40840271, A40840287, A40840294, and A40840314. Conflicts with potential utilities were not reported from any of the utilities notified.

3.2 ADL SAMPLING LOCATIONS AND GPS SURVEY

Seventeen (17) sampling locations were selected and placed in select locations at interchanges, along the unpaved shoulders in areas with proposed cuts or excavations are detailed in construction drawings provided by Caltrans. Up to three soil samples were collected from each boring location at depths of approximately 0 to 0.5 foot bgs, 1 to 1.5 feet bgs, and 2.5 to 3 feet bgs, or until refusal. Site conditions (i.e., refusal) dictated sample retrieval; therefore, the number and depth of samples collected at each location was occasionally modified. A discussion of the Site conditions encountered and refusal depths for borings is presented in Section 4.1.

Sample locations were recorded during utility identification using a Trimble GPS unit, capable of providing accuracy to approximately 3 feet. The sample location names, along with their respective latitude and longitude coordinates (x and y coordinates) are included in Table A-1 (Appendix A). The approximate locations of these borings are shown on Plates 2 through 5.

3.2.1 Hand Auger Drilling and Soil Sampling Methods

Hand auger borings were advanced on March 27 and 28, 2014 at locations shown on Plates 2 through 5. Borings were advanced using a manually operated, pre-cleaned, stainless steel hand auger. Kleinfelder retained the services of CO's Traffic Control to provide temporary closure of the freeway median and shoulder areas consistent with the Encroachment Permit requirements. Work was performed in the unpaved shoulder areas from 9:00 AM to 3:00 PM, as stipulated in the encroachment permit.

Soil samples were collected from the hand auger and placed into laboratory-supplied, 8-ounce jars with Teflon lids. The sample jars were labeled with a sample identification number and Z (depth) value, along with the date and time of the sample location, and placed in a secured, chilled ice chest. Standard chain-of-custody (COC) procedures were used during sampling and transportation to ATL (by courier), the State-certified laboratory subcontracted by Kleinfelder.

3.3 EQUIPMENT BLANKS

An equipment blank, consisting of distilled water poured over the sampling equipment that had been cleaned, was collected during each day of field sampling. The equipment blank was collected to document the condition of the sampling equipment following decontamination. Equipment blank samples were collected in a laboratory-supplied, nitric acid-preserved bottle. Sample bottles were labeled with a unique sample identifier, date, time, project number and samplers' initials. Equipment blank samples were placed in the chilled cooler along with the soil samples and transported to ATL (by courier) for analysis.

3.4 ANALYTICAL METHODS

A total of 33 soil samples, including 4 duplicate samples, were analyzed for total lead by U.S. EPA Method 6010B and for soluble lead by the CA-WET method (STLC). A modified CA-WET procedure, using DI water extraction (DI-WET), was performed on 8 soil samples, which included the samples with total lead concentrations above 50 mg/kg. Soluble lead was analyzed in 5 samples by TCLP based on total lead concentrations above 100 mg/kg and below 1000 mg/kg. Additionally, 10 samples were measured for pH using USEPA Method 9045D.

3.5 DECONTAMINATION AND BORING ABANDONMENT

Sampling equipment (i.e., hand auger cutter head, soil sampler, etc.) was washed with a solution of Liquinox® detergent and rinsed with tap water and DI water, in buckets, prior to each use. Generation of wash water was minimized. Wash water was contained in 5-gallon pails for disposal. At the end of each day, wash water was disposed at the surface in Caltrans right-of-way, in an area that did not cause runoff of fluid or sediment into receptors (i.e., storm drain, creek, or other surface water bodies), consistent with the work plan. Soil cuttings originating from each boring were placed back within the original borehole as described in the work plan (Kleinfelder, 2014a).

4 FIELD OBSERVATIONS AND INVESTIGATIVE RESULTS

This section includes a summary of the Site conditions observed during the field work, a summary of the analytical results, and a discussion of the data quality assessment. The summary of analytical results for the soil samples collected is presented in Table 1. Certified Level II laboratory reports from Calscience are included in Appendix B.

4.1 SITE CONDITIONS

Site conditions were favorable enough to collect the samples required from the work plan. Soil encountered was generally silty sand with minor amounts of gravel.

4.2 SOIL SAMPLE RESULTS

ATL re-analyzed 6 soil samples for total lead by USEPA Method 6010B and the same soil samples for STLC using the CA-WET method due to concentrations that appeared to exceed theoretical maximum concentrations for STLC.

Based on the exceedances of theoretical maximums in several of the samples submitted to ATL, Kleinfelder contracted Calscience Environmental Laboratories (Calscience) to re-analyze collected soil samples for both total lead by USEPA Method 6010B and STLC using the CA-WET method. Based on a comparative analysis performed on the analytical results from Calscience, the results generally coincide and agree with the results received from ATL; therefore, the analytical results from Calscience are only included in Appendix D of this report and only the results from ATL are discussed herein.

4.2.1 Total Lead

Total lead (TOTAL) was detected in the 37 soil samples and 6 re-run samples analyzed, including 4 of the duplicate samples (Table 1 and Plates 2 through 5). The maximum total lead concentration was 660 mg/kg, reported in the sample SR-67-DS-3B-1.5. In general, near surface samples generally contained higher concentrations of total lead compared to the deeper samples; however, the soil sample SR-67-DS-3B-1.5 contained lead concentrations significantly higher than the surface sample collected at the same location.

4.2.2 California WET Method Soluble Lead Results

CA-WET method soluble lead (citrate extraction) was reported at concentrations above 5.0 mg/L (the STLC action level) in 12 of the 37 samples and 6 re-run samples analyzed. The maximum CA-WET method soluble lead concentration was 92 mg/L, reported in the sample collected at SR-67-GP-1-0.5; however, this sample did not contain the highest total lead concentration or California DI-WET method soluble lead concentration.

4.2.3 California DI-WET Method Soluble Lead Results

California DI-WET method soluble lead was reported in one of the eight samples analyzed. One sample analyzed for California DI-WET method soluble lead was reported to contain concentrations greater than 1.5 mg/L, the maximum threshold concentration for DTSC Variance Condition 9.c. The maximum concentration for California DI-WET method soluble lead was 2.6 mg/L, reported in the sample collected at SR-67-GP-1-0.5, which corresponded to a total lead concentration of 560 mg/kg and a standard California WET method soluble lead concentration of 92 mg/L. This sample contained the second highest total lead and highest soluble lead concentrations using U.S. EPA 6010B and California DI-WET method, respectively, and the highest soluble lead concentration using California WET method.

4.2.4 TCLP Soluble Lead

Soluble lead was analyzed by TCLP using USEPA Method 1311 in five samples that had concentrations exceeding 100 mg/kg. TCLP values ranged from 1.0 mg/L to 3.6 mg/L. Per DTSC Variance, TCLP analysis is performed to evaluate if soils do not qualify for reuse due to designation as a RCRA hazardous waste. The values reported did not exceed 5.0 mg/L, the value at which soil is considered a RCRA hazardous waste.

4.2.5 Hydrogen Ion Concentration

The pH of the 10 soil samples analyzed ranged from 6.5 to 8.4 (Table 1 and Plates 2 through 6). All of the samples collected had reported pH concentrations greater than the criterion of 5.5 listed in the DTSC variance; therefore, soil in these locations is not limited to reuse in covered areas (DTSC, 2009).

4.3 DATA QUALITY ASSESSMENT

The following section summarizes the data quality assessment, which consisted of a review, validation, and evaluation of the analytical data generated during this Project. The limited data quality assessment was performed using the USEPA analytical methods listed below and Contract Laboratory Program National B Functional Guidelines for Inorganic Superfund Data Review (USEPA, 2010) as guidance.

A total of 39 samples, including 33 primary samples, 4 field duplicate samples, and 2 equipment blank samples, were collected and submitted to ATL for one or more of the following analyses:

- Total lead by USEPA Method 6010B;
- pH by USEPA Method 9045D;
- TCLP Soluble lead by USEPA Method 1311/6010B; and
- Leachable (STLC) lead by CA-WET Method and DI-WET Method.

One hundred percent of the data generated for this project underwent a data quality review by a Kleinfelder project chemist, independent of project activities. Two Level II laboratory analytical reports (Work Orders) were evaluated during the data quality assessment, however, the second of these laboratory reports contained six of the same samples as the first report that were subsequently redigested/prepared and reanalyzed. The following parameters were evaluated:

- Technical holding times and sample receipt temperature(s);
- Chain-of-custody and sample receipt documentation;
- Sample results and analytical methods selected;
- Field and laboratory blanks;
- Laboratory duplicate sample results;
- Laboratory control sample (LCS) results; and
- Matrix spike (MS) and matrix spike duplicate (MSD) results.

During the soil sampling events, field personnel implemented appropriate QC procedures consistent with the QA criteria specified in the *SR-67 Aerially Deposited Lead Survey* (Kleinfelder, 2014a). Field QC consisted of performing field sampling

procedures consistently, collecting four sets of field duplicate samples, and collecting daily equipment rinsate blank samples. The two equipment rinsate blanks were analyzed for total lead by USEPA method 6010B. Lead concentrations were not reported above the laboratory reporting limit in the two equipment rinsate blank samples.

Duplicate Results

Four field duplicate sample sets were collected and the laboratory analyzed eleven laboratory duplicate samples, as shown below.

The four soil field duplicates collected and analyzed for total lead and STLC lead during this recent investigation, are as follows:

- SR-67-ADL-1-3.0 / 3.0D;
- SR-67-DS-3b-1.5 / 1.5D and redigest/analyze of SR-67-DS-3b-1.5;
- SR-67-DS-4-0.5 / 0.5D; and
- SR-67-GP-5-0.5 / 0.5D.

At Kleinfelder's request, six soil samples were redigested and reanalyzed by ATL. The samples that were reanalyzed for total lead and STLC lead are:

- SR-67-MVP-1-0.5;
- SR-67-GP-7-0.5;
- SR-67-GP-6-0.5;
- SR-67-GP-4-0.5;
- SR-67-GP-1-0.5;
- and SR-67-DS-3b-1.5.

ATL reanalyzed 6 soil samples for total lead by USEPA Method 6010B and the same soil samples for STLC using the CA-WET method due to concentrations that appeared to exceed theoretical maximum concentrations for STLC.

The laboratory sample duplicate samples are:

- SR-67-ADL-1-0.5 for total lead;
- SR-67-DS-2-0.5 for total lead;
- SR-67-DS-3b-1.5D for total lead (twice – first run and reanalysis) and STLC lead;
- SR-67-GP-7-0.5 for total lead;
- SR-67-GP-1-0.5 for TCLP lead;
- SR-67-DS-3b-1.5 for total lead, TCLP lead and STLC lead;
- SR-67-DS-1-1.5 for STLC lead;
- SR-67-3c-1.5 for STLC lead;
- SR-67-DS-3a-1.5 for STLC lead;
- SR-67-MVP-1-0.5 for STLC DI lead;
- and SR-67-DS-1-3.0 for pH.

For the four field duplicate samples and the six original and reanalyzed samples, the soil RPD criterion of 50% was used to evaluate field precision. For the laboratory duplicates, the laboratory's RPD criterion of 20% was used. Based on the duplicate results reported, duplicate precision met project objectives, with the exception of the following:

- the total lead and STLC lead results in duplicate pair and reanalyzed SR-67-DS-3b-1.5 / 1.5D;
- the total lead result in SR-67-DS-2-0.5;
- the total lead and STLC lead results in SR-67-GP-7-0.5 and its reanalysis;
- the STLC lead results in SR-67-GP-6-0.5 and its reanalysis;
- the STLC lead results in SR-67-GP-4-0.5 and its reanalysis; and
- the total lead results in SR-67-GP-1-0.5 and its reanalysis.

Each of the above results was qualified as estimated ("J" qualified when detected).

Preservation and Holding Time and Sample Results

Technical holding times and preservation of samples met the method-specific requirements. Additionally, the samples were analyzed for the correct analytical methods requested on the COC forms, except for pH. The COC requested method for pH analysis was Method 150.1, which is used to measure pH in water samples. The laboratory reported USEPA Method 9045C to measure pH in soil samples. Sample results have not been corrected for percent solids (%TS). Sample results in this data set are reported on a “wet weight” basis.

Method Blanks, MS/MSD and LCS

Laboratory QC samples (method blanks, MS/MSD, and LCS) were also analyzed consistent with the analytical method requirements. During the data quality assessment, the laboratory QC sample recoveries were within the laboratory’s acceptable QC criteria (i.e., control limits) as reported by ATL. It is assumed that the laboratory reported the analytical results, including QC samples correctly, completely, in compliance with project requirements.

Summary

As a result of the Level II data quality assessment, no analytical results have been rejected (“R” qualified). Several of the total lead and STLC lead results are estimated (“J” qualified) due to either poor precision between the primary and field duplicate sample results, and/or the differences between the primary result and the redigested/reanalyzed result, and/or due to poor precision between the laboratory duplicate sample results. A completeness goal of 100% was achieved for analytical data associated with this Project. The Project data are considered acceptable for the intended use of the project.

5 STATISTICAL EVALUATION

The data was analyzed to identify the appropriate handling of soil affected by ADL under the terms of the variance granted by DTSC to Caltrans District 11 for highway construction projects. During the course of construction, this soil is likely to be excavated, stockpiled, and relocated using methods that tend to homogenize soil constituent concentrations.

Caltrans has prepared an ADL guidance document to support the implementation of the DTSC variance (Caltrans, 2007). Kleinfelder has modified this table based upon the current DTSC ADL variance (DTSC, 2009), which is included in this report as Plate 6. The guidance document provides a flow chart/decision diagram to address DTSC variance applicability based on the various analyses. The decision points for evaluation of the lead data were as follows: If the 95 percent UCL on mean total lead is less than 1,000 mg/kg, and if the 95 percent UCL on mean soluble lead (DI-WET) is less than 1.5 mg/L, then the soil is considered non-hazardous and can be released to the contractor for reuse on Site in accordance with project specifications.

The USEPA statistical analysis package, ProUCL (version 4.1, July 2011) was used to complete the statistical evaluation (USEPA, 2011). ProUCL allows the computation of a reliable, stable, and conservative 95 percent UCL of the mean concentration in an environmental data set and offers 3 different methods of computing a 95 percent UCL depending on the distribution of a given data set.

Aggregated data, averaging lead concentrations over variable data sets within the project area to reflect the construction process, was used for the analysis. These data sets are summarized in Appendix C (The Bodhi Group, 2014). Results below laboratory detection limits were treated using the Kaplan-Meier method. The mean of both lead concentrations and pH values for the Site are also presented in Appendix C.

Appendix C also provides a summary of the 95 percent UCLs calculated for total lead and soluble lead concentrations reported for soil samples from the subject Site. Based on a comparison of the 95 percent UCL value generated by ProUCL, the data set variations run for total lead pass the first criterion established in the Caltrans ADL guidance: "Is the 95 percent UCL for total lead less than 1,000 mg/kg?"

A statistical analysis of soluble lead calculated using the results of the CA-WET procedure was also performed to address the second criterion from the Caltrans ADL flow chart/decision diagram (Plate 6, Appendix C).

Statistical analyses were performed on the 37 soil sample results and 6 reanalyzed results for soluble lead and compared to the STLC (Appendix C). Reanalyzed data was included and selected in some the statistical analyses where total lead and STLC concentrations appeared to satisfy theoretical values expected. Statistical analyses were performed on the higher of the two concentrations for field duplicate samples. The 95 percent UCL for comparison to the STLC procedure was below the Federal waste limit of 5.0 mg/L for all data sets. Composite material generated during grading and excavation would be expected to have soluble lead concentrations below the RCRA hazardous waste limit. One soil sample analyzed by the DI-WET method was above the variance criteria of 1.5 mg/L (SR-67-GP-1-0.5). Therefore the soil at this location is excluded for reuse at the Site under the DTSC variance and will be classified as California hazardous waste.

Under the DTSC variance and federal and state hazardous waste classifications, soil can be placed into specific ADL Soil Management Types. Based on the results of the analysis, the soil located at the gore paving areas on the southbound side of the SR-67 is excluded from soil re-use and should be disposed of as California hazardous waste. Table 2 shows the soil designation for each boring using the DTSC Variance Applicability Determination as it is shown in Plate 6.

In conclusion, based on Caltrans ADL guidance criteria, the soil addressed in this analysis is classified as non-hazardous and can be released to the contractor for use on the project Site in accordance with project specifications and the current DTSC variance. The basis for this conclusion is as follows:

- For these soils, the 95 percent UCL for total lead was less than 1,000 mg/kg for all data sets at all depths (Appendix C).
- The 95 percent UCL for California WET procedure is less than 5 mg/L for all data sets with the exception of the gore paving locations located on the south bound SR-67 which had a 95 percent UCL of 24.4 mg/L, and only one DI-WET concentration that was above 1.5 mg/L (Appendix C).

6 CONCLUSIONS AND RECOMMENDATIONS

6.1 VARIANCE CONCLUSIONS

Based on statistical analysis of the analytical results of this ADL Survey, soil tested within the south bound SR-67 in the gore paving locations of the Caltrans right-of-way contains concentrations of lead that are considered California hazardous waste (Appendix C). Other soil within the Site to a depth of 3 feet bgs may be released to the contractor as non-hazardous soil (STLC 95% UCL is below California hazardous levels) and reused on Site in accordance with project specifications.

The 10 soil samples had reported pH values above the variance criterion of 5.5; therefore, soil tested within the Caltrans right-of-way does not contain a pH value below that which would apply to the DTSC Variance conditions (Appendix C).

Since off-Site disposal be required, the soil should be handled based on the criteria described in Section 6.2.

6.2 WASTE CHARACTERIZATION CONCLUSIONS

Based on the analytical results of this ADL Survey, soil samples collected at the 17 sample locations along the unpaved shoulders and median did not contain total lead in excess of the California TTLC of 1,000 mg/kg. The standard CA-WET soluble lead test results indicate that soil concentrations are in excess of the California STLC of 5 mg/L in 13 of the 37 samples and 6 re-run samples analyzed for soluble lead by California WET at various locations along the Site. One sample (SR-67-GP-1-0.5) contained a DI-WET concentration in excess of regulatory guidance.

Based on the results of soil sampling (95% UCL for the gore paving locations on the south bound SR-67), soils from this area are considered California hazardous in comparison to California STLC limits for depths from the surface to 0.5 feet bgs.

Based on the results of soil sampling (95% UCL for all depths) at other locations along the Project in unpaved shoulders and medians, soils from this area are considered non-hazardous in comparison to California TTLC for depths from the surface to 3 feet bgs.

6.3 RECOMMENDATIONS

Based on the results of the soil sampling activities conducted, the soil located in the area adjacent to the sample locations SR-67-GP-1, -4, -5, and -7, should be disposed of as California hazardous waste. Based on the statistical evaluation of other locations, current and future uses of the Site, and anticipated general construction activities that may be associated with proposed construction along the unpaved shoulders and median of the Site, the soil can be reused on other areas of the Site without restriction regardless of the soil horizon that is excavated (up to a depth of 3 feet bgs).

7 LIMITATIONS

This work was performed in a manner consistent with that level of care and skill ordinarily exercised by other members of Kleinfelder's profession practicing in the same locality, under similar conditions and at the date the services are provided. Our conclusions, opinions and recommendations are based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no other representation, guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

This report may be used only by the Client and the registered design professional in responsible charge and only for the purposes stated for this specific engagement within a reasonable time from its issuance, but in no event later than two (2) years from the date of the report.

The work performed was based on project information provided by Client. If the Client does not retain Kleinfelder to review any plans and specifications, including any revisions or modifications to the plans and specifications, Kleinfelder assumes no responsibility for the suitability of our recommendations. In addition, if there are any changes in the field to the plans and specifications, the Client must obtain written approval from Kleinfelder's engineer that such changes do not affect our recommendations. Failure to do so will vitiate Kleinfelder's recommendations.

Kleinfelder offers various levels of investigative and engineering services to suit the varying needs of different clients. It should be recognized that definition and evaluation of geologic and environmental conditions are a difficult and inexact science. Judgments leading to conclusions and recommendations are generally made with incomplete knowledge of the subsurface conditions present due to the limitations of data from field studies. Although risk can never be eliminated, more-detailed and extensive studies yield more information, which may help understand and manage the level of risk. Since detailed study and analysis involves greater expense, our clients participate in determining levels of service that provide adequate information for their purposes at acceptable levels of risk. More extensive studies, including subsurface studies or field tests, should be performed to reduce uncertainties. Acceptance of this report will indicate that the Client has reviewed the document and determined that it does not need or want a greater level of service than provided.

During the course of the performance of Kleinfelder's services, hazardous materials may have been discovered. Kleinfelder assumes no responsibility or liability whatsoever for any claim, loss of property value, damage, or injury that results from pre-existing hazardous materials being encountered or present on the project site, or from the discovery of such hazardous materials. Nothing contained in this report should be construed or interpreted as requiring Kleinfelder to assume the status of an owner, operator, or generator, or person who arranges for disposal, transport, storage or treatment of hazardous materials within the meaning of any governmental statute, regulation or order. The Client is solely responsible for directing notification of all governmental agencies, and the public at large, of the existence, release, treatment or disposal of any hazardous materials observed at the project site, either before or during performance of Kleinfelder's services. The Client is responsible for directing all arrangements to lawfully store, treat, recycle, dispose, or otherwise handle hazardous materials, including cuttings and samples resulting from Kleinfelder's services.

8 REFERENCES

- California Department of Transportation (Caltrans), 2007. Caltrans Aerially Deposited Lead Guidance, June.
- Department of Toxic Substances Control (DTSC), 2000. Variance No. 00-H-VAR-06. Granted to State of California Department of Transportation, District 11. September 22.
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- Kleinfelder, 2014b. Site-Specific Health and Safety Plan, SR-67 Aerially Deposited Lead Survey, PM 0.0 to 5.8, Cities of El Cajon, Santee, and Lakeside, Caltrans EA 275501, San Diego County, CA. March 25.
- USEPA, 2010. National Functional Guidelines for Inorganic Data Review, January.
- USEPA, 2011. ProUCL version 4.1. July.

PLATES



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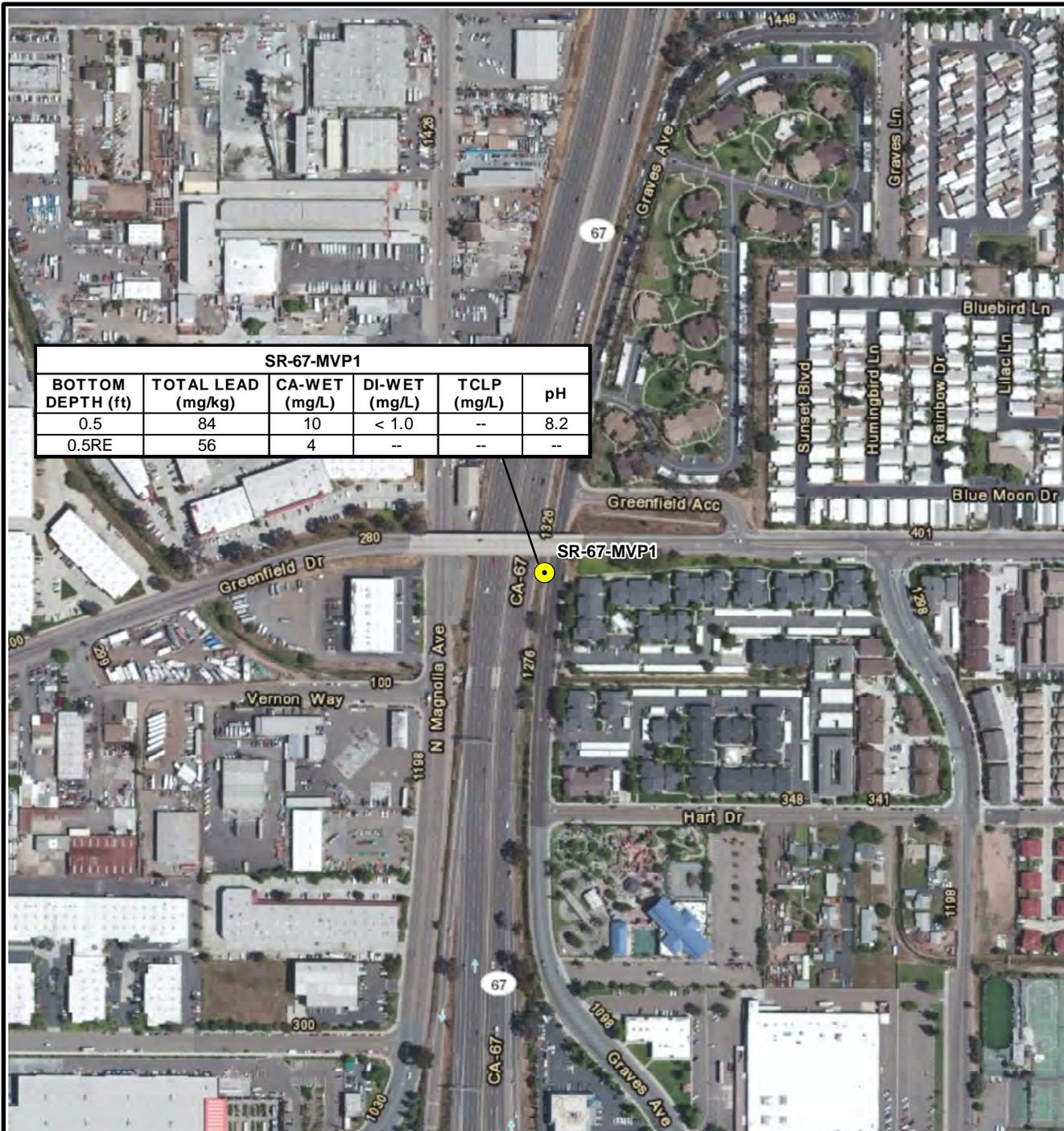
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 DATE: APRIL 2014




SITE LOCATION MAP

SR-67 AERIALLY DEPOSITED LEAD SURVEY, PM 0.0 TO 5.8
 CITIES OF EL CAJON, SANTEE, AND LAKESIDE
 SAN DIEGO COUNTY, CALIFORNIA
 CALTRANS DISTRICT 11, EA 275501

PLATE
1

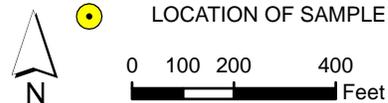


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NOTES:
 ft - feet
 mg/kg - milligrams per kilogram
 mg/L - milligrams per liter
 RE - indicates re-run sample

LEGEND

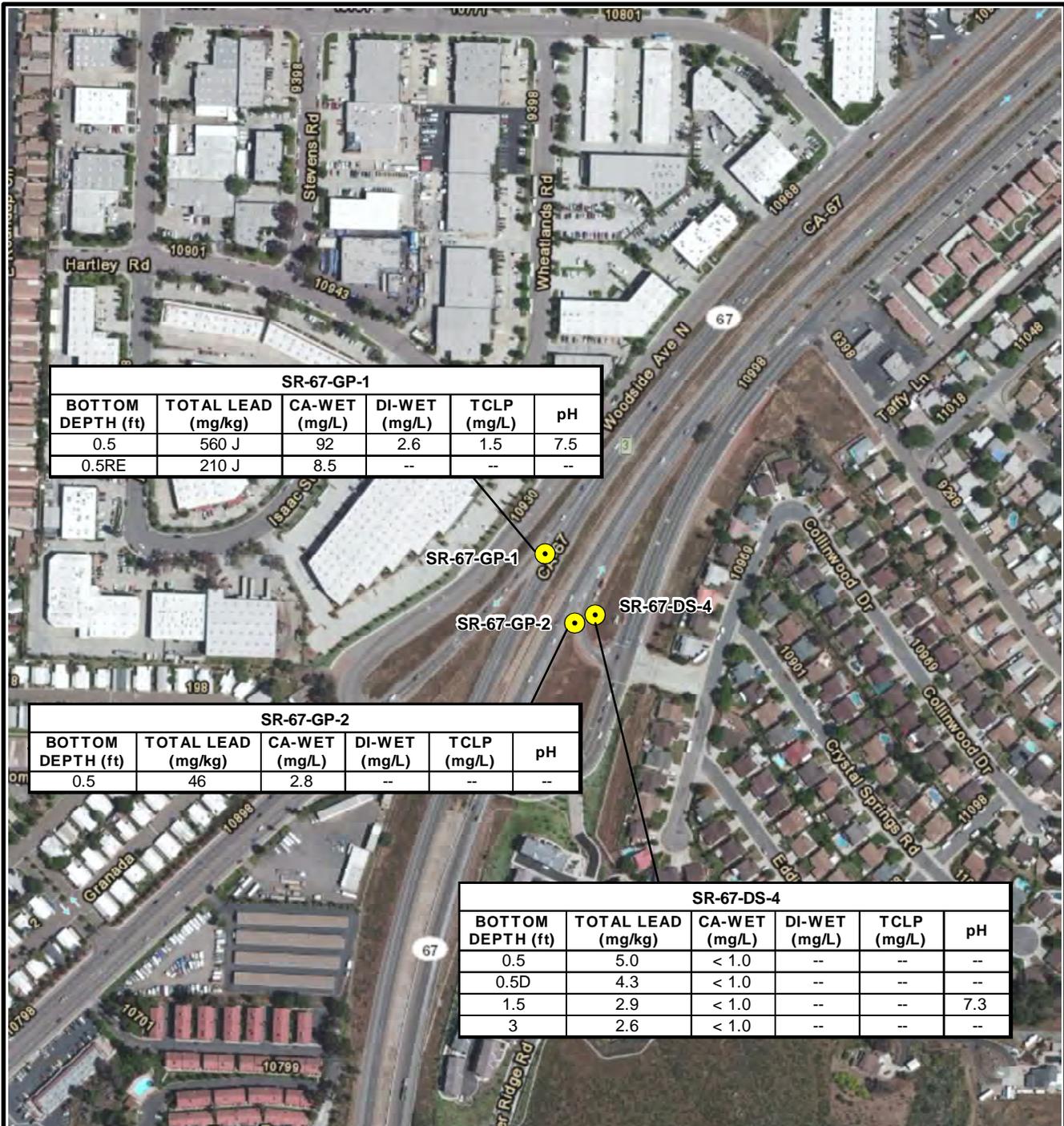


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SAMPLE LOCATION MAP

SR-67 AERIAL DEPOSITED LEAD SURVEY, PM 0.0 TO 5.8
 CITIES OF EL CAJON, SANTEE, AND LAKESIDE
 SAN DIEGO COUNTY, CALIFORNIA
 CALTRANS DISTRICT 11, EA 275501

PLATE
2



SR-67-GP-1					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	CA-WET (mg/L)	DI-WET (mg/L)	TCLP (mg/L)	pH
0.5	560 J	92	2.6	1.5	7.5
0.5RE	210 J	8.5	--	--	--

SR-67-GP-2					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	CA-WET (mg/L)	DI-WET (mg/L)	TCLP (mg/L)	pH
0.5	46	2.8	--	--	--

SR-67-DS-4					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	CA-WET (mg/L)	DI-WET (mg/L)	TCLP (mg/L)	pH
0.5	5.0	< 1.0	--	--	--
0.5D	4.3	< 1.0	--	--	--
1.5	2.9	< 1.0	--	--	7.3
3	2.6	< 1.0	--	--	--

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NOTES:

- ft - feet
- J - estimated value
- mg/kg - milligrams per kilogram
- mg/L - milligrams per liter
- D - indicates duplicate sample
- RE - indicates re-run sample

LEGEND

 LOCATION OF SAMPLE
 N
 0 100 200 400 Feet

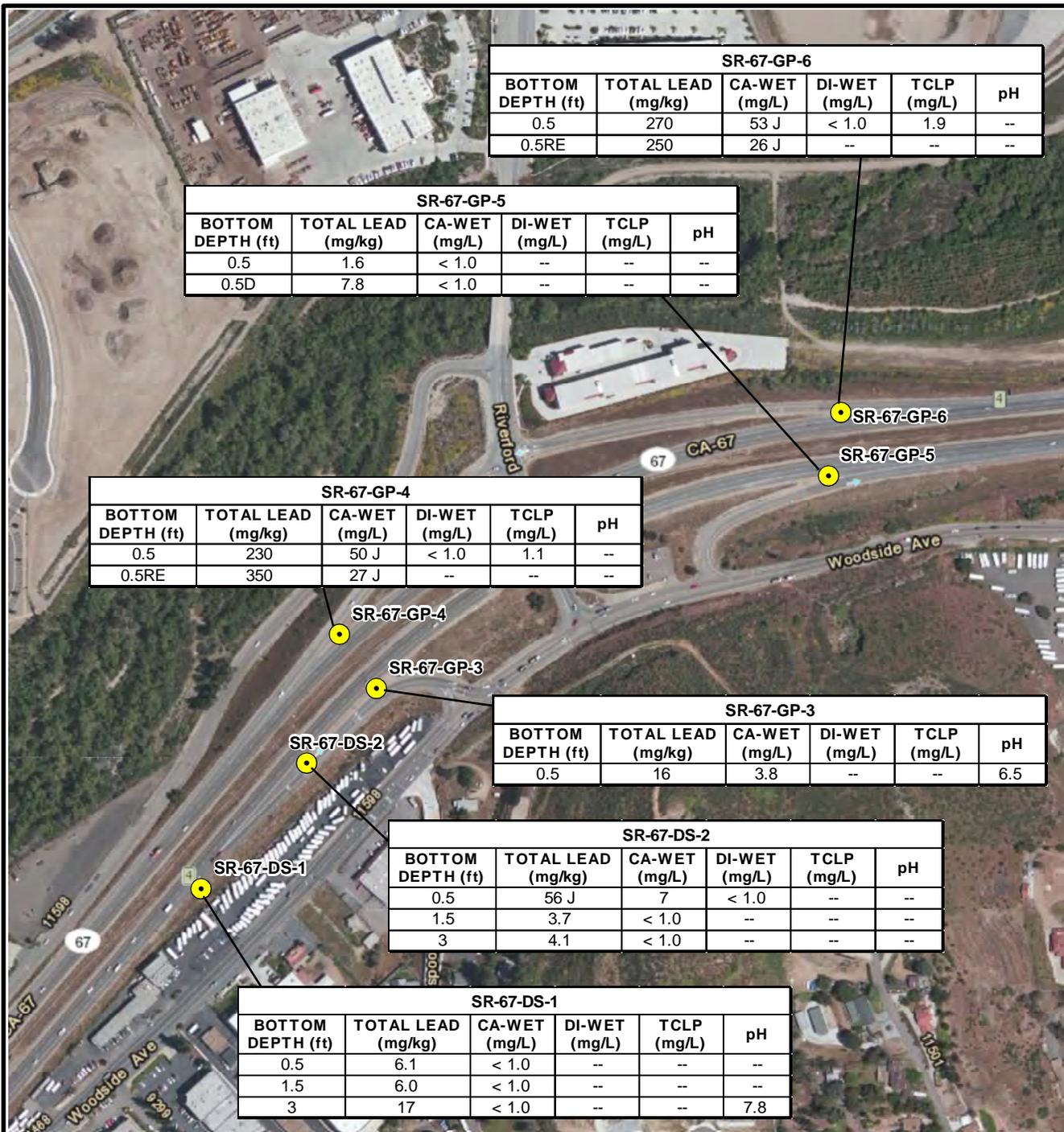
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 Bright People. Right Solutions.


SAMPLE LOCATION MAP

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 CITIES OF EL CAJON, SANTEE, AND LAKESIDE
 SAN DIEGO COUNTY, CALIFORNIA
 CALTRANS DISTRICT 11, EA 275501

PLATE
3



SR-67-GP-6					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	CA-WET (mg/L)	DI-WET (mg/L)	TCLP (mg/L)	pH
0.5	270	53 J	< 1.0	1.9	--
0.5RE	250	26 J	--	--	--

SR-67-GP-5					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	CA-WET (mg/L)	DI-WET (mg/L)	TCLP (mg/L)	pH
0.5	1.6	< 1.0	--	--	--
0.5D	7.8	< 1.0	--	--	--

SR-67-GP-4					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	CA-WET (mg/L)	DI-WET (mg/L)	TCLP (mg/L)	pH
0.5	230	50 J	< 1.0	1.1	--
0.5RE	350	27 J	--	--	--

SR-67-GP-3					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	CA-WET (mg/L)	DI-WET (mg/L)	TCLP (mg/L)	pH
0.5	16	3.8	--	--	6.5

SR-67-DS-2					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	CA-WET (mg/L)	DI-WET (mg/L)	TCLP (mg/L)	pH
0.5	56 J	7	< 1.0	--	--
1.5	3.7	< 1.0	--	--	--
3	4.1	< 1.0	--	--	--

SR-67-DS-1					
BOTTOM DEPTH (ft)	TOTAL LEAD (mg/kg)	CA-WET (mg/L)	DI-WET (mg/L)	TCLP (mg/L)	pH
0.5	6.1	< 1.0	--	--	--
1.5	6.0	< 1.0	--	--	--
3	17	< 1.0	--	--	7.8

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- mg/L - milligrams per liter
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LEGEND



LOCATION OF SAMPLE



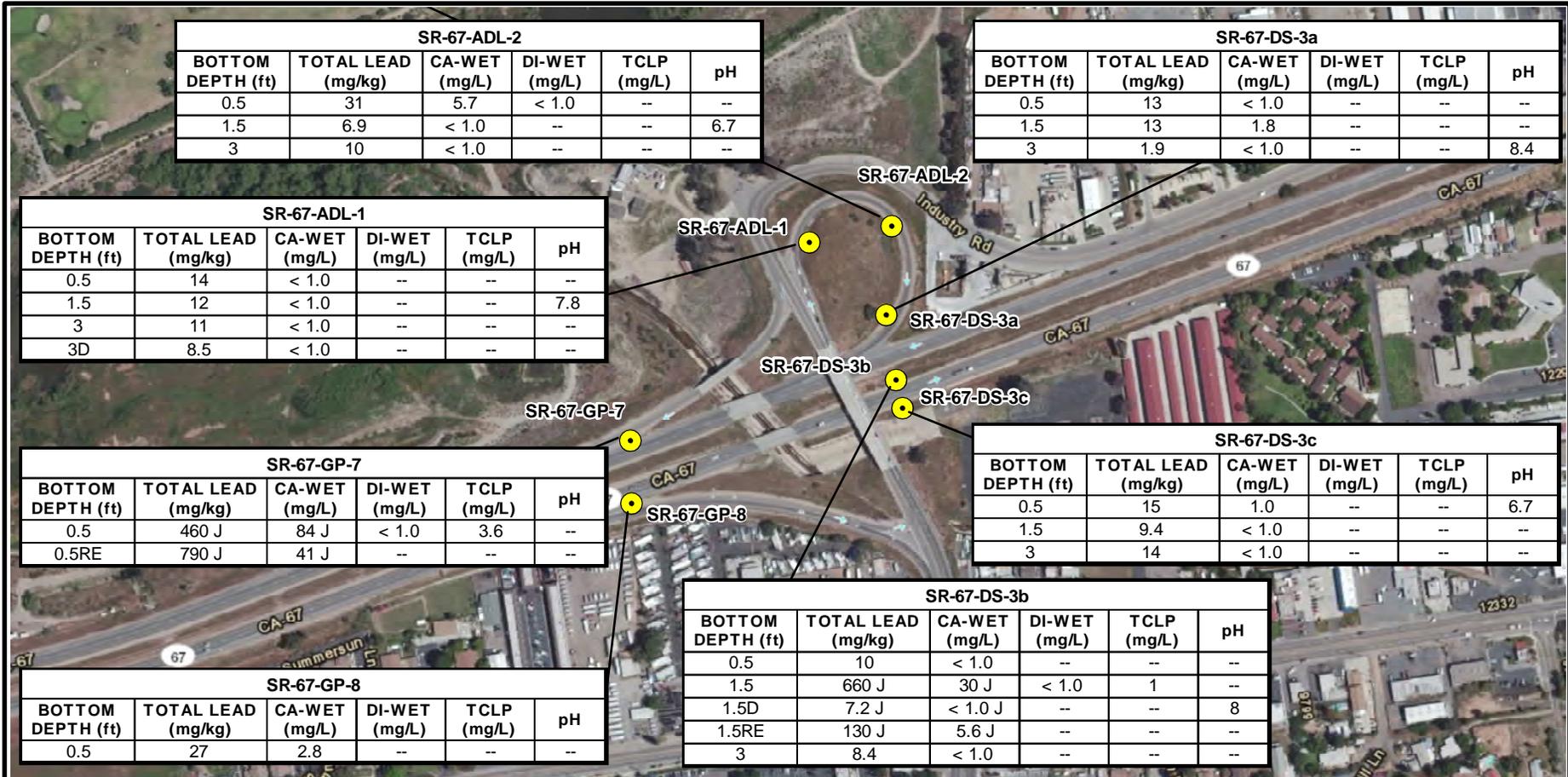
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SAMPLE LOCATION MAP

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 CITIES OF EL CAJON, SANTEE, AND LAKESIDE
 SAN DIEGO COUNTY, CALIFORNIA
 CALTRANS DISTRICT 11, EA 275501

PLATE
4



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 mg/L - milligrams per liter
 D - indicates duplicate sample
 RE - indicates re-run sample

LEGEND

● LOCATION OF SAMPLE
 0 100 200 400 Feet



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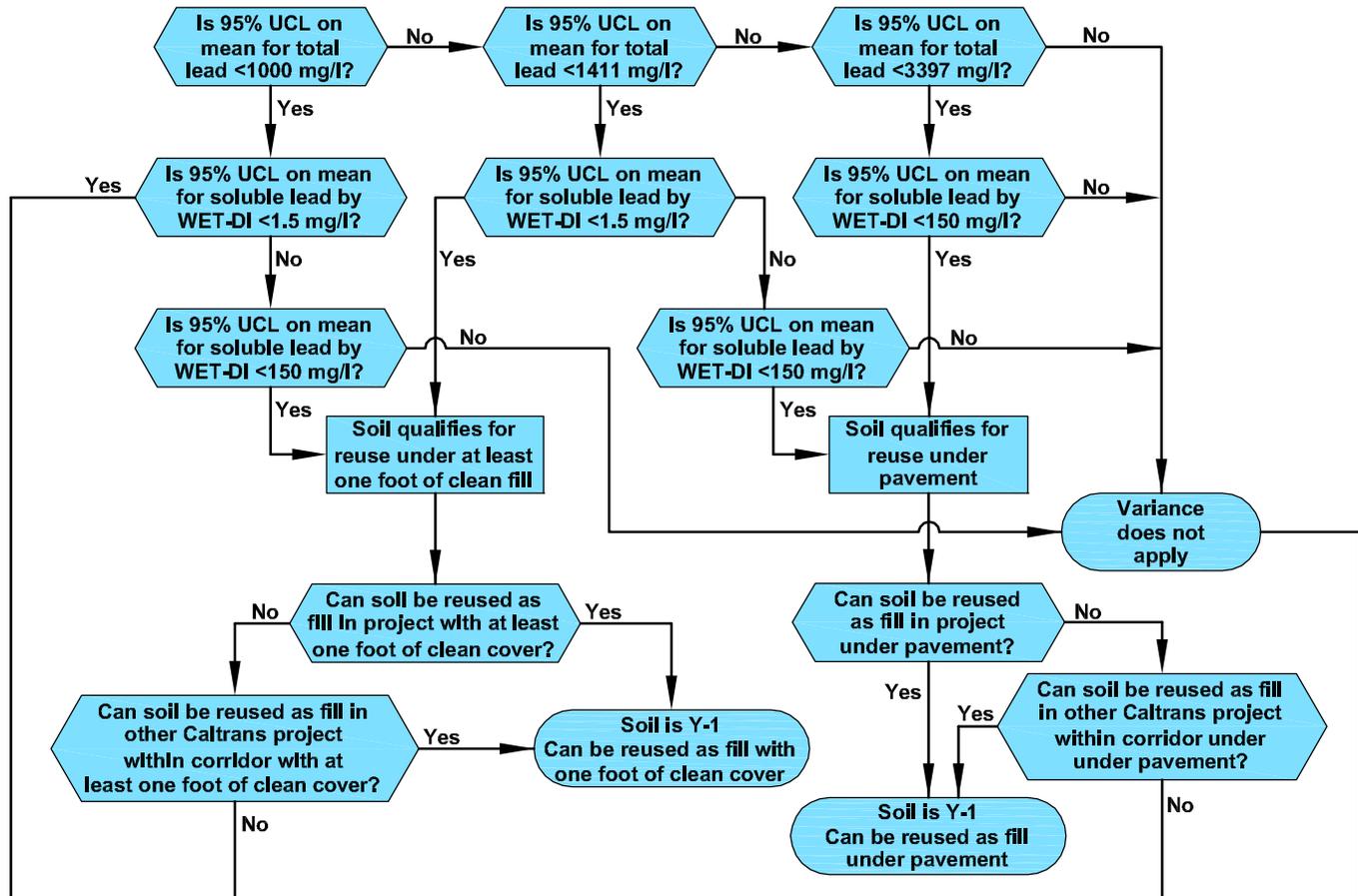
SAMPLE LOCATION MAP

SR-67 AERIALY DEPOSITED LEAD SURVEY, PM 0.0 TO 5.8
 CITIES OF EL CAJON, SANTEE, AND LAKESIDE
 SAN DIEGO COUNTY, CALIFORNIA
 CALTRANS DISTRICT 11, EA 275501

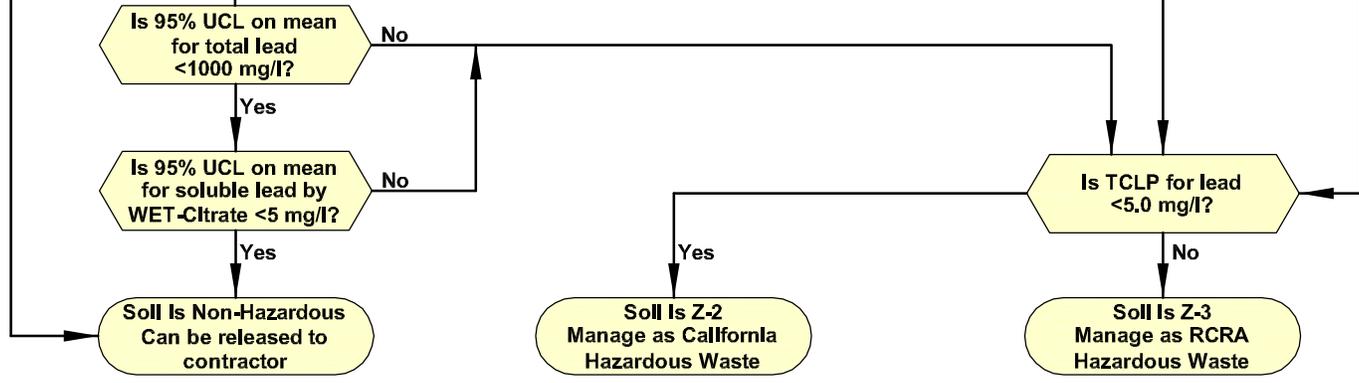
PLATE

5

DTSC Variance Applicability Determination



Waste Classification Determination



SOURCE:

CALTRANS AERIALLY DEPOSITED LEAD GUIDANCE, JUNE 2007. UPDATE BASED ON VARIANCE NUMBER V09HQSCD006 (DTSC, JULY 2009)

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FLOW CHART

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CITIES OF EL CAJON, SANTEE, AND LAKESIDE
SAN DIEGO COUNTY, CALIFORNIA
CALTRANS DISTRICT 11, EA 275501

PLATE

6

TABLES

**Table 1
Soil Analytical Results**

Location Name	Sample Name	Sample Type	Date	Depth	Chemical Method Preparation Units	Lead SW6010B SW3550 mg/kg	Lead SW6010B CA-WET mg/L	Lead SW6010B DI-WET mg/L	Lead SW6010B TCLP mg/L	pH SW9045C -- pH units
SR-67-ADL-1	SR-67-ADL-1-0.5	N	03/27/2014	0.5		14	< 1.0	--	--	--
SR-67-ADL-1	SR-67-ADL-1-1.5	N	03/27/2014	1.5		12	< 1.0	--	--	7.8
SR-67-ADL-1	SR-67-ADL-1-3.0	N	03/27/2014	3		11	< 1.0	--	--	--
SR-67-ADL-1	SR-67-ADL-1-3.0D	FD	03/27/2014	3		8.5	< 1.0	--	--	--
SR-67-ADL-2	SR-67-ADL-2-0.5	N	03/27/2014	0.5		31	5.7	< 1.0	--	--
SR-67-ADL-2	SR-67-ADL-2-1.5	N	03/27/2014	1.5		6.9	< 1.0	--	--	6.7
SR-67-ADL-2	SR-67-ADL-2-3.0	N	03/27/2014	3		10	< 1.0	--	--	--
SR-67-DS-1	SR-67-DS-1-0.5	N	03/27/2014	0.5		6.1	< 1.0	--	--	--
SR-67-DS-1	SR-67-DS-1-1.5	N	03/27/2014	1.5		6	< 1.0	--	--	--
SR-67-DS-1	SR-67-DS-1-3.0	N	03/27/2014	3		17	< 1.0	--	--	7.8
SR-67-DS-2	SR-67-DS-2-0.5	N	03/27/2014	0.5		56 J	7.0	< 1.0	--	--
SR-67-DS-2	SR-67-DS-2-1.5	N	03/27/2014	1.5		3.7	< 1.0	--	--	--
SR-67-DS-2	SR-67-DS-2-3.0	N	03/27/2014	3		4.1	< 1.0	--	--	--
SR-67-DS-3A	SR-67-DS-3A-0.5	N	03/28/2014	0.5		13	< 1.0	--	--	--
SR-67-DS-3A	SR-67-DS-3A-1.5	N	03/28/2014	1.5		13	1.8	--	--	--
SR-67-DS-3A	SR-67-DS-3A-3.0	N	03/28/2014	3		1.9	< 1.0	--	--	8.4
SR-67-DS-3B	SR-67-DS-3B-0.5	N	03/28/2014	0.5		10	< 1.0	--	--	--
SR-67-DS-3B	SR-67-DS-3B-1.5	N	03/28/2014	1.5		660 J	30 J	< 1.0	1.0	--
SR-67-DS-3B	SR-67-DS-3B-1.5D	FD	03/28/2014	1.5		7.2 J	< 1.0 J	--	--	8
SR-67-DS-3B	SR-67-DS-3B-1.5RE	N	03/28/2014	1.5		130 J	5.6 J	--	--	--
SR-67-DS-3B	SR-67-DS-3B-3.0	N	03/28/2014	3		8.4	< 1.0	--	--	--
SR-67-DS-3C	SR-67-DS-3C-0.5	N	03/27/2014	0.5		15	1.0	--	--	6.7
SR-67-DS-3C	SR-67-DS-3C-1.5	N	03/27/2014	1.5		9.4	< 1.0	--	--	--
SR-67-DS-3C	SR-67-DS-3C-3.0	N	03/27/2014	3		14	< 1.0	--	--	--
SR-67-DS-4	SR-67-DS-4-0.5	N	03/27/2014	0.5		5	< 1.0	--	--	--
SR-67-DS-4	SR-67-DS-4-0.5D	FD	03/27/2014	0.5		4.3	< 1.0	--	--	--
SR-67-DS-4	SR-67-DS-4-1.5	N	03/27/2014	1.5		2.9	< 1.0	--	--	7.3
SR-67-DS-4	SR-67-DS-4-3.0	N	03/27/2014	3		2.6	< 1.0	--	--	--
SR-67-GP-1	SR-67-GP-1-0.5	N	03/28/2014	0.5		560 J	92	2.6	1.5	7.5
SR-67-GP-1	SR-67-GP-1-0.5RE	N	03/28/2014	0.5		210 J	8.5	--	--	--
SR-67-GP-2	SR-67-GP-2-0.5	N	03/27/2014	0.5		46	2.8	--	--	--
SR-67-GP-3	SR-67-GP-3-0.5	N	03/27/2014	0.5		16	3.8	--	--	6.5
SR-67-GP-4	SR-67-GP-4-0.5	N	03/28/2014	0.5		230	50 J	< 1.0	1.1	--
SR-67-GP-4	SR-67-GP-4-0.5RE	N	03/28/2014	0.5		350	27 J	--	--	--
SR-67-GP-5	SR-67-GP-5-0.5	N	03/27/2014	0.5		1.6	< 1.0	--	--	--
SR-67-GP-5	SR-67-GP-5-0.5D	FD	03/27/2014	0.5		7.8	< 1.0	--	--	--
SR-67-GP-6	SR-67-GP-6-0.5	N	03/28/2014	0.5		270	53 J	< 1.0	1.9	--
SR-67-GP-6	SR-67-GP-6-0.5RE	N	03/28/2014	0.5		250	26 J	--	--	--
SR-67-GP-7	SR-67-GP-7-0.5	N	03/28/2014	0.5		460 J	84 J	< 1.0	3.6	--
SR-67-GP-7	SR-67-GP-7-0.5RE	N	03/28/2014	0.5		790 J	41 J	--	--	--
SR-67-GP-8	SR-67-GP-8-0.5	N	03/27/2014	0.5		27	2.8	--	--	--
SR-67-MVP-1	SR-67-MVP-1-0.5	N	03/27/2014	0.5		84	10	< 1.0	--	8.2
SR-67-MVP-1	SR-67-MVP-1-0.5RE	N	03/27/2014	0.5		56	4	--	--	--

Notes
 FD - Field Duplicate
 J - Estimated Value
 mg/kg - milligrams per kilogram
 mg/L - milligrams per liter
 N - Normal
 pH - hydrogen ion potential
 RE - indicates re-run sample

Table 2
DTSC Variance Determination

Boring ID	Soil Designation
SR-67-ADL-1	X
SR-67-ADL-2	X
SR-67-DS-1	X
SR-67-DS-2	X
SR-67-DS-3a	X
SR-67-DS-3b	X
SR-67-DS-3c	X
SR-67-DS-4	X
SR-67-GP-1	Z-2
SR-67-GP-2	X
SR-67-GP-3	X
SR-67-GP-4	Z-2
SR-67-GP-5	Z-2
SR-67-GP-6	X
SR-67-GP-7	Z-2
SR-67-GP-8	X
SR-67-MVP1	X

Notes:

X - Soil can be released to contractor

Z-2 - Soil to be managed as California Hazardous Waste

APPENDIX A

Sample Location Coordinates (Table A-1)

Table 1A
SAMPLE LOCATION COORDINATES

GPS Date	Boring ID	Latitude	Longitude
3/27/2014	SR-67-MVP1	32.813139	-116.9615
3/27/2014	SR-67-GP-2	32.842664	-116.96052
3/27/2014	SR-67-DS-4	32.842719	-116.96036
3/27/2014	SR-67-DS-1	32.852508	-116.94969
3/27/2014	SR-67-DS-2	32.853353	-116.94887
3/27/2014	SR-67-GP-3	32.853857	-116.94831
3/27/2014	SR-67-GP-5	32.855305	-116.94474
3/27/2014	SR-67-GP-8	32.857446	-116.93389
3/27/2014	SR-67-DS-3c	32.858132	-116.93164
3/27/2014	SR-67-ADL-1	32.859295	-116.93242
3/27/2014	SR-67-ADL-2	32.859413	-116.93174
3/28/2014	SR-67-DS-3a	32.858783	-116.93177
3/28/2014	SR-67-GP-7	32.857893	-116.9339
3/28/2014	SR-67-GP-6	32.855731	-116.94464
3/28/2014	SR-67-GP-4	32.854218	-116.94861
3/28/2014	SR-67-GP-1	32.843128	-116.96076
3/28/2014	SR-67-DS-3b	32.85833	-116.93169

APPENDIX B

Laboratory Analytical Reports and Chain-of-Custody Documentation

April 15, 2014

Chris Noland & Gerald Kellar
Kleinfelder
5015 Shoreham Place
San Diego, CA 92122
Tel: (858) 320-2000
Fax:(858) 320-2001

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1400963
Client Reference : CALTRANS TO17, 20143326

Enclosed are the results for sample(s) received on March 28, 2014 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,



Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Kleinfelder
5015 Shoreham Place
San Diego , CA 92122

Project Number : CALTRANS TO17, 20143326

Report To : Chris Noland & Gerald Kellar

Reported : 04/15/2014

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SR-67-MVP-1-0.5	1400963-01	Soil	3/27/14 9:30	3/28/14 14:15
SR-67-GP-2-0.5	1400963-02	Soil	3/27/14 10:20	3/28/14 14:15
SR-67-DS-4-0.5	1400963-03	Soil	3/27/14 10:25	3/28/14 14:15
SR-67-DS-4-0.5D	1400963-04	Soil	3/27/14 10:25	3/28/14 14:15
SR-67-DS-4-1.5	1400963-05	Soil	3/27/14 10:30	3/28/14 14:15
SR-67-DS-4-3.0	1400963-06	Soil	3/27/14 10:35	3/28/14 14:15
SR-67-DS-1-0.5	1400963-07	Soil	3/27/14 11:45	3/28/14 14:15
SR-67-DS-1-1.5	1400963-08	Soil	3/27/14 11:50	3/28/14 14:15
SR-67-DS-1-3.0	1400963-09	Soil	3/27/14 11:55	3/28/14 14:15
SR-67-DS-2-0.5	1400963-10	Soil	3/27/14 12:00	3/28/14 14:15
SR-67-DS-2-1.5	1400963-11	Soil	3/27/14 12:04	3/28/14 14:15
SR-67-DS-2-3.0	1400963-12	Soil	3/27/14 12:08	3/28/14 14:15
SR-67-GP-3-0.5	1400963-13	Soil	3/27/14 12:10	3/28/14 14:15
SR-67-GP-5-0.5	1400963-14	Soil	3/27/14 12:20	3/28/14 14:15
SR-67-GP-5-0.5D	1400963-15	Soil	3/27/14 12:26	3/28/14 14:15
SR-67-GP-8-0.5	1400963-16	Soil	3/27/14 13:25	3/28/14 14:15
SR-67-DS-3C-0.5	1400963-17	Soil	3/27/14 13:38	3/28/14 14:15
SR-67-DS-3C-1.5	1400963-18	Soil	3/27/14 13:42	3/28/14 14:15
SR-67-DS-3C-3.0	1400963-19	Soil	3/27/14 13:46	3/28/14 14:15
SR-67-ADL-1-0.5	1400963-20	Soil	3/27/14 14:10	3/28/14 14:15
SR-67-ADL-1-1.5	1400963-21	Soil	3/27/14 14:13	3/28/14 14:15
SR-67-ADL-1-3.0	1400963-22	Soil	3/27/14 14:17	3/28/14 14:15
SR-67-ADL-1-3.0D	1400963-23	Soil	3/27/14 14:17	3/28/14 14:15
SR-67-ADL-2-0.5	1400963-24	Soil	3/27/14 14:29	3/28/14 14:15
SR-67-ADL-2-1.5	1400963-25	Soil	3/27/14 14:32	3/28/14 14:15
SR-67-ADL-2-3.0	1400963-26	Soil	3/27/14 14:35	3/28/14 14:15
QCEB-032714	1400963-27	Bottled Water (DI)	3/27/14 15:15	3/28/14 14:15
SR-67-DS-3a-0.5	1400963-28	Soil	3/28/14 9:22	3/28/14 14:15
SR-67-DS-3a-1.5	1400963-29	Soil	3/28/14 9:25	3/28/14 14:15
SR-67-DS-3a-3.0	1400963-30	Soil	3/28/14 9:28	3/28/14 14:15
SR-67-GP-7-0.5	1400963-31	Soil	3/28/14 9:50	3/28/14 14:15
SR-67-GP-6-0.5	1400963-32	Soil	3/28/14 10:30	3/28/14 14:15
SR-67-GP-4-0.5	1400963-33	Soil	3/28/14 10:40	3/28/14 14:15
SR-67-GP-1-0.5	1400963-34	Soil	3/28/14 11:30	3/28/14 14:15
SR-67-DS-3b-0.5	1400963-35	Soil	3/28/14 12:04	3/28/14 14:15
SR-67-DS-3b-1.5	1400963-36	Soil	3/28/14 12:11	3/28/14 14:15
SR-67-DS-3b-3.0	1400963-37	Soil	3/28/14 12:20	3/28/14 14:15



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Project Number : CALTRANS TO17, 20143326

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Reported : 04/15/2014

QCEB-032814	1400963-38	Bottled Water (DI)	3/28/14 14:00	3/28/14 14:15
SR-67-DS-3b-1.5D	1400963-39	Soil	3/28/14 12:11	3/28/14 14:15



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-MVP-1-0.5

Lab ID: 1400963-01

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	84	1.0	NA	1	B4D0014	04/01/2014	04/02/14 12:35	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	10	1.0	NA	20	B4D0032	04/02/2014	04/02/14 15:04	

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: CB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0177	04/10/2014	04/10/14 14:37	

pH by EPA 9045C

Analyst: PT

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	8.2	0.10	NA	1	B4D0008	04/01/2014	04/01/14 09:38	



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Reported : 04/15/2014

Client Sample ID SR-67-GP-2-0.5

Lab ID: 1400963-02

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	46	1.0	NA	1	B4D0014	04/01/2014	04/02/14 12:36	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	2.8	1.0	NA	20	B4D0032	04/02/2014	04/02/14 15:06	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-DS-4-0.5

Lab ID: 1400963-03

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	5.0	1.0	NA	1	B4D0014	04/01/2014	04/02/14 12:38	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0032	04/02/2014	04/02/14 15:08	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-DS-4-0.5D

Lab ID: 1400963-04

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	4.3	1.0	NA	1	B4D0014	04/01/2014	04/02/14 12:38	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0032	04/02/2014	04/02/14 15:10	



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Client Sample ID SR-67-DS-4-1.5

Lab ID: 1400963-05

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	2.9	1.0	NA	1	B4D0014	04/01/2014	04/02/14 12:39	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0032	04/02/2014	04/02/14 15:13	

pH by EPA 9045C

Analyst: PT

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.3	0.10	NA	1	B4D0008	04/01/2014	04/01/14 09:38	



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Client Sample ID SR-67-DS-4-3.0

Lab ID: 1400963-06

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	2.6	1.0	NA	1	B4D0014	04/01/2014	04/02/14 12:40	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0032	04/02/2014	04/02/14 15:15	



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Project Number : CALTRANS TO17, 20143326
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Reported : 04/15/2014

Client Sample ID SR-67-DS-1-0.5

Lab ID: 1400963-07

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	6.1	1.0	NA	1	B4D0014	04/01/2014	04/02/14 12:40	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0032	04/02/2014	04/02/14 15:17	



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Project Number : CALTRANS TO17, 20143326
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Reported : 04/15/2014

Client Sample ID SR-67-DS-1-1.5

Lab ID: 1400963-08

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	6.0	1.0	NA	1	B4D0014	04/01/2014	04/02/14 12:43	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0032	04/02/2014	04/02/14 15:23	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-DS-1-3.0

Lab ID: 1400963-09

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	17	1.0	NA	1	B4D0014	04/01/2014	04/02/14 12:43	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0032	04/02/2014	04/02/14 15:32	

pH by EPA 9045C

Analyst: PT

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.8	0.10	NA	1	B4D0009	04/01/2014	04/01/14 09:39	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-DS-2-0.5

Lab ID: 1400963-10

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	56	1.0	NA	1	B4D0014	04/01/2014	04/02/14 12:44	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	7.0	1.0	NA	20	B4D0032	04/02/2014	04/02/14 15:34	

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: CB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0177	04/10/2014	04/10/14 14:45	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-DS-2-1.5

Lab ID: 1400963-11

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	3.7	1.0	NA	1	B4D0014	04/01/2014	04/02/14 12:46	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0032	04/02/2014	04/02/14 15:36	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-DS-2-3.0

Lab ID: 1400963-12

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	4.1	1.0	NA	1	B4D0014	04/01/2014	04/02/14 12:47	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0032	04/02/2014	04/02/14 15:39	



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Project Number : CALTRANS TO17, 20143326

Report To : Chris Noland & Gerald Kellar

Reported : 04/15/2014

Client Sample ID SR-67-GP-3-0.5

Lab ID: 1400963-13

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	16	1.0	NA	1	B4D0014	04/01/2014	04/02/14 12:47	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	3.8	1.0	NA	20	B4D0032	04/02/2014	04/02/14 15:41	

pH by EPA 9045C

Analyst: PT

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	6.5	0.10	NA	1	B4D0009	04/01/2014	04/01/14 09:39	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-GP-5-0.5

Lab ID: 1400963-14

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	1.6	1.0	NA	1	B4D0014	04/01/2014	04/02/14 12:48	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0032	04/02/2014	04/02/14 15:43	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-GP-5-0.5D

Lab ID: 1400963-15

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	7.8	1.0	NA	1	B4D0014	04/01/2014	04/02/14 12:49	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0032	04/02/2014	04/02/14 15:49	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-GP-8-0.5

Lab ID: 1400963-16

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	27	1.0	NA	1	B4D0014	04/01/2014	04/02/14 12:51	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	2.8	1.0	NA	20	B4D0032	04/02/2014	04/02/14 15:51	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-DS-3C-0.5

Lab ID: 1400963-17

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	15	1.0	NA	1	B4D0014	04/01/2014	04/02/14 12:52	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	1.0	1.0	NA	20	B4D0032	04/02/2014	04/02/14 15:54	

pH by EPA 9045C

Analyst: PT

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	6.7	0.10	NA	1	B4D0009	04/01/2014	04/01/14 09:39	



Certificate of Analysis

Kleinfelder
5015 Shoreham Place
San Diego , CA 92122

Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-DS-3C-1.5

Lab ID: 1400963-18

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	9.4	1.0	NA	1	B4D0014	04/01/2014	04/02/14 12:53	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0032	04/02/2014	04/02/14 15:56	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-DS-3C-3.0

Lab ID: 1400963-19

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	14	1.0	NA	1	B4D0014	04/01/2014	04/02/14 12:54	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0033	04/02/2014	04/02/14 16:09	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-ADL-1-0.5

Lab ID: 1400963-20

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	14	1.0	NA	1	B4D0014	04/01/2014	04/02/14 12:54	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0033	04/02/2014	04/02/14 16:15	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-ADL-1-1.5

Lab ID: 1400963-21

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	12	1.0	NA	1	B4D0015	04/01/2014	04/02/14 13:03	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0033	04/02/2014	04/02/14 16:18	

pH by EPA 9045C

Analyst: PT

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.8	0.10	NA	1	B4D0009	04/01/2014	04/01/14 09:39	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-ADL-1-3.0

Lab ID: 1400963-22

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	11	1.0	NA	1	B4D0015	04/01/2014	04/02/14 13:03	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0033	04/02/2014	04/02/14 16:20	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-ADL-1-3.0D

Lab ID: 1400963-23

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	8.5	1.0	NA	1	B4D0015	04/01/2014	04/02/14 13:04	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0033	04/02/2014	04/02/14 16:23	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-ADL-2-0.5

Lab ID: 1400963-24

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	31	1.0	NA	1	B4D0015	04/01/2014	04/02/14 13:05	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	5.7	1.0	NA	20	B4D0033	04/02/2014	04/02/14 16:25	

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: CB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0177	04/10/2014	04/10/14 14:47	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-ADL-2-1.5

Lab ID: 1400963-25

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	6.9	1.0	NA	1	B4D0015	04/01/2014	04/02/14 13:05	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0033	04/02/2014	04/02/14 16:28	

pH by EPA 9045C

Analyst: PT

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	6.7	0.10	NA	1	B4D0009	04/01/2014	04/01/14 09:39	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-ADL-2-3.0

Lab ID: 1400963-26

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	10	1.0	NA	1	B4D0015	04/01/2014	04/02/14 13:06	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0033	04/02/2014	04/02/14 16:30	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID QCEB-032714

Lab ID: 1400963-27

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.0050	NA	1	B4D0012	04/01/2014	04/02/14 10:35	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-DS-3a-0.5

Lab ID: 1400963-28

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	13	1.0	NA	1	B4D0015	04/01/2014	04/02/14 13:07	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0033	04/02/2014	04/02/14 16:33	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-DS-3a-1.5

Lab ID: 1400963-29

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	13	1.0	NA	1	B4D0015	04/01/2014	04/02/14 13:07	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	1.8	1.0	NA	20	B4D0033	04/02/2014	04/02/14 16:35	



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Project Number : CALTRANS TO17, 20143326

Report To : Chris Noland & Gerald Kellar

Reported : 04/15/2014

Client Sample ID SR-67-DS-3a-3.0

Lab ID: 1400963-30

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	1.9	1.0	NA	1	B4D0015	04/01/2014	04/02/14 13:08	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0033	04/02/2014	04/02/14 16:49	

pH by EPA 9045C

Analyst: PT

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	8.4	0.10	NA	1	B4D0009	04/01/2014	04/01/14 09:39	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-GP-7-0.5

Lab ID: 1400963-31

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	460	1.0	NA	1	B4D0015	04/01/2014	04/02/14 13:10	

TCLP Metals by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	3.6	0.050	NA	1	B4D0178	04/10/2014	04/10/14 15:32	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	84	1.0	NA	20	B4D0033	04/02/2014	04/02/14 16:51	

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: CB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0177	04/10/2014	04/10/14 14:49	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-GP-6-0.5

Lab ID: 1400963-32

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	270	1.0	NA	1	B4D0015	04/01/2014	04/02/14 13:12	

TCLP Metals by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	1.9	0.050	NA	1	B4D0178	04/10/2014	04/10/14 15:35	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	53	1.0	NA	20	B4D0033	04/02/2014	04/02/14 16:54	

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: CB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0177	04/10/2014	04/10/14 14:51	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-GP-4-0.5

Lab ID: 1400963-33

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	230	1.0	NA	1	B4D0015	04/01/2014	04/02/14 13:13	

TCLP Metals by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	1.1	0.050	NA	1	B4D0178	04/10/2014	04/10/14 15:37	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	50	1.0	NA	20	B4D0033	04/02/2014	04/02/14 16:56	

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: CB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0177	04/10/2014	04/10/14 14:57	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-GP-1-0.5

Lab ID: 1400963-34

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	560	1.0	NA	1	B4D0015	04/01/2014	04/02/14 13:14	

TCLP Metals by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	1.5	0.050	NA	1	B4D0178	04/10/2014	04/10/14 15:40	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	92	1.0	NA	20	B4D0033	04/02/2014	04/02/14 16:58	

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: CB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	2.6	1.0	NA	20	B4D0177	04/10/2014	04/10/14 15:00	

pH by EPA 9045C

Analyst: PT

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	7.5	0.10	NA	1	B4D0009	04/01/2014	04/01/14 09:39	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-DS-3b-0.5

Lab ID: 1400963-35

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	10	1.0	NA	1	B4D0015	04/01/2014	04/02/14 13:14	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0033	04/02/2014	04/02/14 17:00	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-DS-3b-1.5

Lab ID: 1400963-36

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	660	1.0	NA	1	B4D0015	04/01/2014	04/02/14 13:15	

TCLP Metals by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	1.0	0.050	NA	1	B4D0178	04/10/2014	04/10/14 15:53	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	30	1.0	NA	20	B4D0033	04/02/2014	04/02/14 17:02	

STLC DI Metals by ICP-AES by EPA 6010B

Analyst: CB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0177	04/10/2014	04/10/14 16:09	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-DS-3b-3.0

Lab ID: 1400963-37

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	8.4	1.0	NA	1	B4D0015	04/01/2014	04/02/14 13:16	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0033	04/02/2014	04/02/14 17:05	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID QCEB-032814

Lab ID: 1400963-38

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	0.0050	NA	1	B4D0012	04/01/2014	04/02/14 10:43	



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San Diego , CA 92122

Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-DS-3b-1.5D

Lab ID: 1400963-39

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	7.2	1.0	NA	1	B4D0015	04/01/2014	04/02/14 13:16	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	ND	1.0	NA	20	B4D0033	04/02/2014	04/02/14 17:11	

pH by EPA 9045C

Analyst: PT

Analyte	Result (pH Units)	PQL (pH Units)	MDL (pH Units)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
pH	8.0	0.10	NA	1	B4D0009	04/01/2014	04/01/14 09:39	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

QUALITY CONTROL SECTION

Lead by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4D0012 - EPA 3010A									
Blank (B4D0012-BLK1)				Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	ND	0.0050			NR				
LCS (B4D0012-BS1)				Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	1.03271	0.0050	1.00000		103	80 - 120			
Duplicate (B4D0012-DUP1)				Source: 1400963-27 Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	ND	0.0050		ND	NR			20	
Matrix Spike (B4D0012-MS1)				Source: 1400963-27 Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	2.59331	0.0050	2.50000	ND	104	81 - 105			
Matrix Spike Dup (B4D0012-MSD1)				Source: 1400963-27 Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	2.61869	0.0050	2.50000	ND	105	81 - 105	0.974	20	
Batch B4D0014 - EPA 3050 Modified									
Blank (B4D0014-BLK1)				Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	ND	1.0			NR				
Blank (B4D0014-BLK2)				Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	ND	1.0			NR				
LCS (B4D0014-BS1)				Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	52.6598	1.0	50.0000		105	80 - 120			
Duplicate (B4D0014-DUP1)				Source: 1400963-20 Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	14.2931	1.0		13.5148	NR		5.60	20	
Duplicate (B4D0014-DUP2)				Source: 1400963-10 Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	78.5186	1.0		55.7770	NR		33.9	20	R
Matrix Spike (B4D0014-MS1)				Source: 1400963-20 Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	231.087	1.0	250.000	13.5148	87.0	51 - 106			
Matrix Spike (B4D0014-MS2)				Source: 1400963-10 Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	271.438	1.0	250.000	55.7770	86.3	51 - 106			
Matrix Spike Dup (B4D0014-MSD1)				Source: 1400963-20 Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	223.150	1.0	250.000	13.5148	83.9	51 - 106	3.49	20	



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Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4D0015 - EPA 3050 Modified									
Blank (B4D0015-BLK1)				Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	ND	1.0			NR				
Blank (B4D0015-BLK2)				Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	ND	1.0			NR				
LCS (B4D0015-BS1)				Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	50.5648	1.0	50.0000		101	80 - 120			
Duplicate (B4D0015-DUP1)				Source: 1400963-39 Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	5.27816	1.0		7.19010	NR		30.7	20	R
Duplicate (B4D0015-DUP2)				Source: 1400963-31 Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	466.412	1.0		455.176	NR		2.44	20	
Matrix Spike (B4D0015-MS1)				Source: 1400963-39 Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	195.243	1.0	250.000	7.19010	75.2	51 - 106			
Matrix Spike (B4D0015-MS2)				Source: 1400963-31 Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	642.484	1.0	250.000	455.176	74.9	51 - 106			
Matrix Spike Dup (B4D0015-MSD1)				Source: 1400963-39 Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	164.055	1.0	250.000	7.19010	62.7	51 - 106	17.4	20	



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TCLP Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4D0178 - EPA 3010A_SOIL									
Blank (B4D0178-BLK1)				Prepared: 4/10/2014 Analyzed: 4/10/2014					
Lead	ND	0.050			NR				
Blank (B4D0178-BLK2)				Prepared: 4/10/2014 Analyzed: 4/10/2014					
Lead	ND	0.050			NR				
Blank (B4D0178-BLK3)				Prepared: 4/10/2014 Analyzed: 4/10/2014					
Lead	ND	0.050			NR				
Blank (B4D0178-BLK4)				Prepared: 4/10/2014 Analyzed: 4/10/2014					
Lead	ND	0.050			NR				
LCS (B4D0178-BS1)				Prepared: 4/10/2014 Analyzed: 4/10/2014					
Lead	1.05173	0.050	1.00000		105	80 - 120			
Duplicate (B4D0178-DUP1)				Prepared: 4/10/2014 Analyzed: 4/10/2014					
Lead	1.57457	0.050		1.52020	NR		3.51	20	
Duplicate (B4D0178-DUP2)				Prepared: 4/10/2014 Analyzed: 4/10/2014					
Lead	1.08458	0.050		1.02185	NR		5.96	20	



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TCLP Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0178 - EPA 3010A_SOIL (continued)

Matrix Spike (B4D0178-MS1)

Source: 1400963-34

Prepared: 4/10/2014 Analyzed: 4/10/2014

Lead	3.87333	0.050	2.50000	1.52020	94.1	81 - 105
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TCLP Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0178 - EPA 3010A_SOIL (continued)

Matrix Spike (B4D0178-MS2)

Source: 1400963-36

Prepared: 4/10/2014 Analyzed: 4/10/2014

Lead	3.26470	0.050	2.50000	1.02185	89.7	81 - 105			
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TCLP Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0178 - EPA 3010A_SOIL (continued)

Matrix Spike Dup (B4D0178-MSD1)

Source: 1400963-34

Prepared: 4/10/2014 Analyzed: 4/10/2014

Lead	3.79329	0.050	2.50000	1.52020	90.9	81 - 105	2.09	20	
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STLC Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0032 - STLC Extraction

Blank (B4D0032-BLK1)

Prepared: 4/2/2014 Analyzed: 4/2/2014

Lead	ND	1.0			NR				
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STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0032 - STLC Extraction (continued)

Blank (B4D0032-BLK2)

Prepared: 4/2/2014 Analyzed: 4/2/2014

Lead	ND	1.0			NR				
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STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0032 - STLC Extraction (continued)

LCS (B4D0032-BS1)

Prepared: 4/2/2014 Analyzed: 4/2/2014

Lead	1.95378	1.0	2.00000		97.7	80 - 120			
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STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0032 - STLC Extraction (continued)

Duplicate (B4D0032-DUP1)

Source: 1400963-08

Prepared: 4/2/2014 Analyzed: 4/2/2014

Lead	0.600720	1.0		0.662620	NR		9.80	20	
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STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0032 - STLC Extraction (continued)

Duplicate (B4D0032-DUP2)

Source: 1400963-18

Prepared: 4/2/2014 Analyzed: 4/2/2014

Lead	0.694125	1.0		0.662972	NR		4.59	20	
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STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0032 - STLC Extraction (continued)

Matrix Spike (B4D0032-MS1)

Source: 1400963-08

Prepared: 4/2/2014 Analyzed: 4/2/2014

Lead	2.92614	1.0	2.50000	0.662620	90.5	41 - 136
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STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0032 - STLC Extraction (continued)

Matrix Spike (B4D0032-MS2)

Source: 1400963-18

Prepared: 4/2/2014 Analyzed: 4/2/2014

Lead	3.16448	1.0	2.50000	0.662972	100	41 - 136
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STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0032 - STLC Extraction (continued)

Matrix Spike Dup (B4D0032-MSD1)

Source: 1400963-08

Prepared: 4/2/2014 Analyzed: 4/2/2014

Lead	2.93179	1.0	2.50000	0.662620	90.8	41 - 136	0.193	20	
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STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0033 - STLC Extraction

Blank (B4D0033-BLK1)

Prepared: 4/2/2014 Analyzed: 4/2/2014

Lead	ND	1.0			NR				
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STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0033 - STLC Extraction (continued)

Blank (B4D0033-BLK2)

Prepared: 4/2/2014 Analyzed: 4/2/2014

Lead	ND	1.0			NR				
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STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0033 - STLC Extraction (continued)

LCS (B4D0033-BS1)

Prepared: 4/2/2014 Analyzed: 4/2/2014

Lead	2.02495	1.0	2.00000		101	80 - 120			
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STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0033 - STLC Extraction (continued)

Duplicate (B4D0033-DUP1)

Source: 1400963-29

Prepared: 4/2/2014 Analyzed: 4/2/2014

Lead	1.03588	1.0		1.84044	NR		55.9	20	R
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STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0033 - STLC Extraction (continued)

Duplicate (B4D0033-DUP2)

Source: 1400963-39

Prepared: 4/2/2014 Analyzed: 4/2/2014

Lead	0.433435	1.0		0.223372	NR		64.0	20	R
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STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0033 - STLC Extraction (continued)

Matrix Spike (B4D0033-MS1)

Source: 1400963-29

Prepared: 4/2/2014 Analyzed: 4/2/2014

Lead	4.18421	1.0	2.50000	1.84044	93.8	41 - 136
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STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0033 - STLC Extraction (continued)

Matrix Spike (B4D0033-MS2)

Source: 1400963-39

Prepared: 4/2/2014 Analyzed: 4/2/2014

Lead	2.67280	1.0	2.50000	0.223372	98.0	41 - 136
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STLC Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0033 - STLC Extraction (continued)

Matrix Spike Dup (B4D0033-MSD1)

Source: 1400963-29

Prepared: 4/2/2014 Analyzed: 4/2/2014

Lead	4.23558	1.0	2.50000	1.84044	95.8	41 - 136	1.22	20	
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STLC DI Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0177 - STLC DI Extraction

Blank (B4D0177-BLK1)

Prepared: 4/10/2014 Analyzed: 4/10/2014

Lead	ND	1.0			NR				
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STLC DI Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0177 - STLC DI Extraction (continued)

LCS (B4D0177-BS1)

Prepared: 4/10/2014 Analyzed: 4/10/2014

Lead	2.25137	1.0	2.00000		113	80 - 120			
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STLC DI Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0177 - STLC DI Extraction (continued)

Duplicate (B4D0177-DUP1)

Source: 1400963-01

Prepared: 4/10/2014 Analyzed: 4/10/2014

Lead	ND	1.0		ND	NR			20	
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STLC DI Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0177 - STLC DI Extraction (continued)

Matrix Spike (B4D0177-MS1)

Source: 1400963-01

Prepared: 4/10/2014 Analyzed: 4/10/2014

Lead	2.69539	1.0	2.50000	ND	108	70 - 130			
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STLC DI Metals by ICP-AES by EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0177 - STLC DI Extraction (continued)

Matrix Spike Dup (B4D0177-MSD1)

Source: 1400963-01

Prepared: 4/10/2014 Analyzed: 4/10/2014

Lead	2.67240	1.0	2.50000	ND	107	70 - 130	0.857	20	
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pH by EPA 9045C - Quality Control

Analyte	Result (pH Units)	PQL (pH Units)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0008 - Prep_WC_1_S

Duplicate (B4D0008-DUP1)

Source: 1400923-07

Prepared: 4/1/2014 Analyzed: 4/1/2014

pH	7.47000	0.10		7.13000	NR		4.66	20	
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pH by EPA 9045C - Quality Control (cont'd)

Analyte	Result (pH Units)	PQL (pH Units)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
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Batch B4D0009 - Prep_WC_1_S

Duplicate (B4D0009-DUP1)

Source: 1400963-09

Prepared: 4/1/2014 Analyzed: 4/1/2014

pH	7.72000	0.10		7.76000	NR		0.517	20	
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Certificate of Analysis

Kleinfelder
5015 Shoreham Place
San Diego , CA 92122

Project Number : CALTRANS TO17, 20143326

Report To : Chris Noland & Gerald Kellar

Reported : 04/15/2014

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
- (3) Results are wet unless otherwise specified.

PROJECT NO. 20143326		PROJECT NAME CALTRANS T017		NO. OF CON- TAINERS	TYPE OF CON- TAINERS	ANALYSIS TOTAL LEAD 600B SOLUBLE LEAD 600B PH 150.1	RECEIVING LAB: ADVANCED TECHNOLOGY LABS 3275 WALNUT AVE SIGNAL HILL, CA 90755	
L.P. NO. (P.O. NO.)	SAMPLERS: (Signature/Number) <i>[Signature]</i>						INSTRUCTIONS/REMARKS	

1409C

DATE MM/DD/YY	SAMPLE I.D. TIME HH-MM-SS	SAMPLE I.D.	MATRIX	NO.	TYPE	ANALYSIS	INSTRUCTIONS/REMARKS
3/27/14	1413	SR-67-ADL-1-1.5	SOIL	1	80% jar	X X X	
"	1417	SR-67-ADL-1-3.0	"	1	"	X X X	*RUN DI WET IF
"	1417	SR-67-ADL-1-3.0D	"	1	"	X X X	CA WET >5mg/L and/or
"	1429	SR-67-ADL-2-0.5	"	1	"	X X X	if total lead >50mg/kg
"	1432	SR-67-ADL-2-1.5	"	1	"	X X X	
"	1435	SR-67-ADL-2-3.0	↓	1	↓	X X X	
"	1515	QCEB-032814	BW	1	Poly	X	
3/28/14	0922	SR-67-DS-3a-0.5	SOIL	1	80% jar	X X	*RUN TCLP if total
"	0925	SR-67-DS-3a-1.5	"	1	"	X X	lead is between 100mg/kg
"	0928	SR-67-DS-3a-1.5D	"	1	"	X X	and 1000 mg/kg
"	0928	SR-67-DS-3a-3.0	"	1	"	X X X	(N) 3-28-14
"	0950	SR-67-GP-7-0.5	"	1	"	X X X	
"	1030	SR-67-GP-6-0.5	"	1	"	X X X	
"	1040	SR-67-GP-4-0.5	"	1	"	X X X	
"	1130	SR-67-GP-1-0.5	"	1	"	X X X	
"	1204	SR-67-DS-3b-0.5	"	1	"	X X X	
"	1211	SR-67-DS-3b-1.5	"	1	"	X X X	
"	1220	SR-67-DS-3b-3.0	↓	1	↓	X X X	
"	1400	QCEB-032814	BW	1	Poly	X	
"	1211	SR-67-DS-3b-1.5D	"	1	80% jar	X X X	

Relinquished by: (Signature) <i>[Signature]</i>	Date/Time 3-28-14 1415	Received by: (Signature) <i>[Signature]</i>	Instructions/Remarks: BW = Bottled Water (DI)	Send Results To: cnoland@kleinfelder.com gkellar@ " "
Relinquished by: (Signature) <i>[Signature]</i>	Date/Time 3-28-14 1726	Received by: (Signature) <i>[Signature]</i>		
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)		

Page 74 of 75



ADVANCED TECHNOLOGY LABORATORIES

Sample Receipt Acknowledgement

Work Order # 1400963

Client: Kleinfelder
Project: CALTRANS TO17, 20143326

Project Manager: Rachelle Arada
Project Number: CALTRANS TO17, 20143326

Report To:
Kleinfelder
Chris Noland & Gerald Kellar
5015 Shoreham Place
San Diego, CA 92122
Phone: (858) 320-2000
Fax: (858) 320-2001

Invoice To:
Kleinfelder
Chris Noland & Gerald Kellar
5015 Shoreham Place
San Diego, CA 92122
Phone : (858) 320-2000
Fax: (858) 320-2001

Date Due: 04/04/14 17:00 (5 day TAT)
Received By: Ron Diwa
Logged In By: Ron Diwa

Date Received: 03/28/14 14:15
Date Logged In: 03/28/14 17:53
Shipped by: ATL

Please review the checklist below. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues. If you have any questions or further instructions, please contact your Project Manager at (526) 989-4045.

Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sample(s) received on blue ice?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Cooler temperature within acceptance limit?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Shipping container received in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Custody seals present on shipping container?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Custody seals intact on shipping container?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Custody seals present on sample bottles?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Chain of Custody (COC) present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sampler name present in COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
COC signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
COC agrees with sample labels?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sufficient sample amount for indicated tests?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
VOA vials for VOC meet headspace criteria?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Water samples meet preservation criteria?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

Cooler #1	Temp: 0.8 °C
Cooler #2	Temp: 1.2 °C

Sample Receipt Comments:

Time of collection for SR-67-DS-3b-0.5 marked on sample container as 1207.

April 15, 2014

Chris Noland & Gerald Kellar
Kleinfelder
5015 Shoreham Place
San Diego, CA 92122
Tel: (858) 320-2000
Fax:(858) 320-2001

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1400963
Client Reference : CALTRANS TO17, 20143326

Enclosed are the results for sample(s) received on March 28, 2014 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,



Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Kleinfelder
5015 Shoreham Place
San Diego , CA 92122

Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SR-67-MVP-1-0.5	1400963-01	Soil	3/27/14 9:30	3/28/14 14:15
SR-67-GP-7-0.5	1400963-31	Soil	3/28/14 9:50	3/28/14 14:15
SR-67-GP-6-0.5	1400963-32	Soil	3/28/14 10:30	3/28/14 14:15
SR-67-GP-4-0.5	1400963-33	Soil	3/28/14 10:40	3/28/14 14:15
SR-67-GP-1-0.5	1400963-34	Soil	3/28/14 11:30	3/28/14 14:15
SR-67-DS-3b-1.5	1400963-36	Soil	3/28/14 12:11	3/28/14 14:15



Certificate of Analysis

Kleinfelder
5015 Shoreham Place
San Diego , CA 92122

Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-MVP-1-0.5

Lab ID: 1400963-01

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	56	1.0	NA	1	B4D0183	04/10/2014	04/11/14 10:59	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	4.0	1.0	NA	20	B4D0224	04/13/2014	04/14/14 13:20	



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San Diego , CA 92122

Project Number : CALTRANS TO17, 20143326

Report To : Chris Noland & Gerald Kellar

Reported : 04/15/2014

Client Sample ID SR-67-GP-7-0.5

Lab ID: 1400963-31

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	790	1.0	NA	1	B4D0183	04/10/2014	04/11/14 11:02	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	41	1.0	NA	20	B4D0224	04/13/2014	04/14/14 13:30	



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Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-GP-6-0.5

Lab ID: 1400963-32

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	250	1.0	NA	1	B4D0183	04/10/2014	04/11/14 11:03	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	26	1.0	NA	20	B4D0224	04/13/2014	04/14/14 13:34	



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San Diego , CA 92122

Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-GP-4-0.5

Lab ID: 1400963-33

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	350	1.0	NA	1	B4D0183	04/10/2014	04/11/14 11:05	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	27	1.0	NA	20	B4D0224	04/13/2014	04/14/14 13:38	



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San Diego , CA 92122

Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-GP-1-0.5

Lab ID: 1400963-34

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	210	1.0	NA	1	B4D0183	04/10/2014	04/11/14 11:07	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	8.5	1.0	NA	20	B4D0224	04/13/2014	04/14/14 13:41	



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5015 Shoreham Place
San Diego , CA 92122

Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Client Sample ID SR-67-DS-3b-1.5

Lab ID: 1400963-36

Lead by ICP-AES EPA 6010B

Analyst: CB

Analyte	Result (mg/kg)	PQL (mg/kg)	MDL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	130	1.0	NA	1	B4D0183	04/10/2014	04/11/14 11:10	

STLC Metals by ICP-AES by EPA 6010B

Analyst: LA

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Lead	5.6	1.0	NA	20	B4D0224	04/13/2014	04/14/14 13:45	



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Kleinfelder
5015 Shoreham Place
San Diego, CA 92122

Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

QUALITY CONTROL SECTION

Lead by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4D0014 - EPA 3050 Modified									
Blank (B4D0014-BLK1)				Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	ND	1.0			NR				
Blank (B4D0014-BLK2)				Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	ND	1.0			NR				
LCS (B4D0014-BS1)				Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	52.6598	1.0	50.0000		105	80 - 120			
Duplicate (B4D0014-DUP1)				Source: 1400963-20 Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	14.2931	1.0		13.5148	NR		5.60	20	
Duplicate (B4D0014-DUP2)				Source: 1400963-10 Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	78.5186	1.0		55.7770	NR		33.9	20	R
Matrix Spike (B4D0014-MS1)				Source: 1400963-20 Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	231.087	1.0	250.000	13.5148	87.0	51 - 106			
Matrix Spike (B4D0014-MS2)				Source: 1400963-10 Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	271.438	1.0	250.000	55.7770	86.3	51 - 106			
Matrix Spike Dup (B4D0014-MSD1)				Source: 1400963-20 Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	223.150	1.0	250.000	13.5148	83.9	51 - 106	3.49	20	
Batch B4D0015 - EPA 3050 Modified									
Blank (B4D0015-BLK1)				Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	ND	1.0			NR				
Blank (B4D0015-BLK2)				Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	ND	1.0			NR				
LCS (B4D0015-BS1)				Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	50.5648	1.0	50.0000		101	80 - 120			
Duplicate (B4D0015-DUP1)				Source: 1400963-39 Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	5.27816	1.0		7.19010	NR		30.7	20	R
Duplicate (B4D0015-DUP2)				Source: 1400963-31 Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	466.412	1.0		455.176	NR		2.44	20	
Matrix Spike (B4D0015-MS1)				Source: 1400963-39 Prepared: 4/1/2014 Analyzed: 4/2/2014					



Certificate of Analysis

Kleinfelder
 5015 Shoreham Place
 San Diego , CA 92122

Project Number : CALTRANS TO17, 20143326
 Report To : Chris Noland & Gerald Kellar
 Reported : 04/15/2014

Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B4D0015 - EPA 3050 Modified (continued)									
Matrix Spike (B4D0015-MS1) - Continued		Source: 1400963-39		Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	195.243	1.0	250.000	7.19010	75.2	51 - 106			
Matrix Spike (B4D0015-MS2)		Source: 1400963-31		Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	642.484	1.0	250.000	455.176	74.9	51 - 106			
Matrix Spike Dup (B4D0015-MSD1)		Source: 1400963-39		Prepared: 4/1/2014 Analyzed: 4/2/2014					
Lead	164.055	1.0	250.000	7.19010	62.7	51 - 106	17.4	20	
Batch B4D0183 - EPA 3050 Modified									
Blank (B4D0183-BLK1)				Prepared: 4/10/2014 Analyzed: 4/11/2014					
Lead	ND	1.0			NR				
LCS (B4D0183-BS1)				Prepared: 4/10/2014 Analyzed: 4/11/2014					
Lead	51.2078	1.0	50.0000		102	80 - 120			
Duplicate (B4D0183-DUP1)		Source: 1400963-36RE1		Prepared: 4/10/2014 Analyzed: 4/11/2014					
Lead	88.8944	1.0		126.498	NR		34.9	20	R
Duplicate (B4D0183-DUP2)		Source: 1400963-39RE1		Prepared: 4/10/2014 Analyzed: 4/11/2014					
Lead	5.47340	1.0		7.11771	NR		26.1	20	R
Matrix Spike (B4D0183-MS1)		Source: 1400963-36RE1		Prepared: 4/10/2014 Analyzed: 4/11/2014					
Lead	310.923	1.0	250.000	126.498	73.8	51 - 106			
Matrix Spike (B4D0183-MS2)		Source: 1400963-39RE1		Prepared: 4/10/2014 Analyzed: 4/11/2014					
Lead	223.048	1.0	250.000	7.11771	86.4	51 - 106			
Matrix Spike Dup (B4D0183-MSD1)		Source: 1400963-36RE1		Prepared: 4/10/2014 Analyzed: 4/11/2014					
Lead	312.692	1.0	250.000	126.498	74.5	51 - 106	0.567	20	



Certificate of Analysis

Kleinfelder
 5015 Shoreham Place
 San Diego , CA 92122

Project Number : CALTRANS TO17, 20143326
 Report To : Chris Noland & Gerald Kellar
 Reported : 04/15/2014

STLC Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec % Rec	% Rec Limits	RPD RPD	RPD Limit	Notes
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Batch B4D0224 - STLC Extraction

Blank (B4D0224-BLK1)				Prepared: 4/13/2014 Analyzed: 4/14/2014					
Lead	ND	1.0			NR				
LCS (B4D0224-BS1)				Prepared: 4/13/2014 Analyzed: 4/14/2014					
Lead	2.12584	1.0	2.00000		106	80 - 120			
Duplicate (B4D0224-DUP1)				Source: 1400963-36RE1 Prepared: 4/13/2014 Analyzed: 4/14/2014					
Lead	6.49390	1.0		5.64466	NR		14.0	20	
Matrix Spike (B4D0224-MS1)				Source: 1400963-36RE1 Prepared: 4/13/2014 Analyzed: 4/14/2014					
Lead	7.97514	1.0	2.50000	5.64466	93.2	41 - 136			
Matrix Spike Dup (B4D0224-MSD1)				Source: 1400963-36RE1 Prepared: 4/13/2014 Analyzed: 4/14/2014					
Lead	7.91610	1.0	2.50000	5.64466	90.9	41 - 136	0.743	20	



Certificate of Analysis

Kleinfelder
5015 Shoreham Place
San Diego , CA 92122

Project Number : CALTRANS TO17, 20143326
Report To : Chris Noland & Gerald Kellar
Reported : 04/15/2014

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
- (3) Results are wet unless otherwise specified.

Rachelle Arada

From: Chris Noland [CNoland@kleinfelder.com]
Sent: Thursday, April 10, 2014 2:28 PM
To: Rachelle Arada
Cc: Liz Velz Simmons; Vermeulen, Diane@DOT (diane.vermeulen@dot.ca.gov)
Subject: Re-analyze Samples

Rachelle,

As we discussed over the phone, please re-analyze samples for both total lead and STLC for the following samples:

LAB ID: 1400963-31

LAB ID: 1400963-32

LAB ID: 1400963-33

LAB ID: 1400963-34

LAB ID: 1400963-36 (the duplicate soil sample for this one was two orders of magnitude less)

LAB ID: 1400963-01

Additionally, please check QC and chromatographic data for the original analyses for these samples as well.

Thank you,

Chris Noland, PG
Project Geologist
Kleinfelder West, Inc.
5015 Shoreham Place
San Diego, CA 92122
o| 858.320.2000
d| 858.320.2201
c| 619.729.4907
f| 858.320.2001

APPENDIX C

**Statistical Data Evaluation
(The Bodhi Group, January 18, 2013)**



The Bodhi Group

April 21, 2014
Project No. 9061008

Mr. Mark Peabody
Project Manager
Kleinfelder, Inc.
5015 Shoreham Place
San Diego, California 92122

Subject: Statistical Analysis of Lead Concentrations in Soil
State Route 67 PM 0.0 to 5.8
Caltrans D11 TO17, Kleinfelder Project No. 20143326

Dear Mr. Peabody:

This technical memorandum summarizes the results of our statistical analysis of lead concentrations in soil reported by Kleinfelder during the ADL survey of the project site. The data were provided in Microsoft Excel format.

For questions pertaining to this analysis, please contact the undersigned at 858.513.1469 or by email at sree@thebodhigroup.com.

Sincerely,
The Bodhi Group, Inc.

Sree Gopinath, P.E.
Principal Engineer

1. INTRODUCTION

The California Department of Transportation (Caltrans) is proposing a pavement rehabilitation project (Project) along State Route (SR) 67, which also includes widening of the loop ramp at the southbound on-ramp from Wintergardens Boulevard, along with gore paving, one maintenance vehicle pullout, and drainage improvements. The Project extends along SR-67 between Interstate 8 and the intersection with Mapleview Drive, Post Mile 0.0 to 5.8 (Site), through the cities of El Cajon, Santee, and Lakeside. The construction will result in soil disturbance, excavation, and reuse of excavated soil.

In the more urbanized highway corridors, including the Site, shallow soil is typically contaminated with aurally-deposited lead (ADL) caused by historic emissions from vehicle exhausts. The lead concentrations in shallow soil may exceed State and Federal hazardous waste criteria or may be at concentrations that require special handling and placement.

The California Department of Toxic Substances Control (DTSC) issued a variance to Caltrans (Variance, No. V09HQSCD006) for the management of soil contaminated with ADL. The Variance requires the comparison of representative concentrations of lead (soluble and total) and pH with hazardous waste and other criteria for appropriate classification of soil. Based on the classification, soil could be managed for reuse within the project or removed for disposal at an off-site in-State permitted facility.

2. OBJECTIVE

Determine representative concentrations of lead and pH in soil that will be co-excavated during Project construction. For co-excavated soil with sufficient data, representative concentrations will be evaluated using statistical methods. Co-excavated soil refers to soil that is combined into one stockpile distinct from soil in other stockpiles. Representative concentrations of each co-excavated soil is compared with Variance criteria for proper classification and determination of reuse or proper disposal of the co-excavated soil.

3. ANALYSIS

Thirty-seven soil samples were collected from 17 locations at the Site. At some locations only a single surface soil sample was collected and at other locations, samples were collected from multiple depths – typically at the surface, 1-foot below ground surface (bgs), and 2.5-feet bgs.

The samples were analyzed for concentrations of total lead (TOTAL) and soluble lead extracted and analyzed by the waste extraction test (WET). Select samples were also analyzed for soil pH, soluble lead extracted with a modified WET using de-ionized water (WET-DI), and by the toxicity characteristic leaching procedure (TCLP). Field duplicate samples were also collected and analyzed. Any uncertainty in the difference between the field and field duplicate concentration was biased toward protecting the environment and human health by selecting the higher concentration.

For each co-excavated soil unit with sufficient data for statistical analysis, parametric procedures were used to evaluate if the true mean concentrations were below the criteria specified in the Variance. That is, the null hypothesis states that the mean concentration is less than the Variance criterion for a false positive rate (α) of 0.05 and a false negative rate (β) of 0.20.

Since the true mean concentration is not known, a value that would not be exceeded 95 percent of the time (95 percent upper confidence limit of the mean, or 95 UCL) was calculated for the selected α and β values. Non-detect concentrations were treated with the Kaplan-Meier method.

3.1. Drainage System Excavated Soil

The table below summarizes the results of the statistical analyses.

Total Concentrations (mg/kg)								
Depth (ft)	Number of Samples	% of Non Detect	Min. value	Max. value	Mean	Median	Standard Deviation	95% UCL
0-3	18	0%	1.9	130	17.7	8.9	30.6	31.4

WET Concentrations (mg/L)								
Depth (ft)	Number of Samples	% of Non Detect	Min. value	Max. value	Mean	Median	Standard Deviation	95% UCL
0-3	18	78	<1	7	3.9	3.7	2.9	2.4

Statistical analysis of TCLP data was not performed since only one sample was analyzed by TCLP with a detected concentration below 5 milligrams per liter (mg/L), indicating that soil excavated for the drainage structure, up to a depth of 3 feet bgs, will not be classified as hazardous waste under Title 40 of the Code of Federal Regulations, Part 261 et al. Two samples were analyzed for WET-DI; leaching lead was not detected in both analyses.

Soil pH								
Depth (ft)	Number of Samples	% of Non Detect	Min. value	Max. value	Mean	Median	Standard Deviation	95% UCL
0-3	4	0	6.7	8.4	7.6	7.6	0.7	NA

There were insufficient data to return a representative soil pH using statistical methods. However, the statistical summary indicates a likely normal distribution (if more data were available) with the same mean and median value. The representative pH for the soil is estimated as 7.6.

The representative values of TOTAL, WET, WET-DI, TCLP, and pH concentrations were compared with Variance criteria to evaluate soil classification. The resulting soil classification is "X." The Variance defines "X" as non-hazardous soil that has no restrictions for reuse within the Project.

Parameter	Site Value
Total 95% UCL	31.4 mg/kg
WET 95% UCL	2.4 mg/L
pH	7.6
TCLP	1 mg/L
WET_DI	Non Detect
Soil Type	X

3.2. Shoulder Widening Excavated Soil

The table below summarizes the results of the statistical analyses.

Total Concentrations (mg/kg)								
Depth (ft)	Number of Samples	% of Non Detect	Min. value	Max. value	Mean	Median	Standard Deviation	95% UCL
0-3	6	0%	6.9	31	14.2	11.5	8.6	21.2

WET Concentrations (mg/L)								
Depth (ft)	Number of Samples	% of Non Detect	Min. value	Max. value	Mean	Median	Standard Deviation	95% UCL
0-3	6	83.3	<1	5.7	N/A	N/A	N/A	N/A

There were insufficient distinct data for meaningful statistical analysis of the WET data; however, given that 83.3% of the values were non-detect, the representative WET concentration can be considered to be below 5 mg/L. TCLP analysis was not needed. Soil pH was measured in two samples and the results were 6.7 and 7.8. WET-DI analysis returned a value of non-detect.

The representative values of TOTAL, WET, WET-DI, and pH indicate a soil classification of "X;" i.e., non-hazardous soil that has no restrictions for reuse within the Project.

Parameter	Site Value
Total 95% UCL	21.2 mg/kg
WET 95% UCL	<5 mg/L
pH	6.7 – 7.8
TCLP	NA
WET-DI	Non Detect
Soil Type	X

3.3. Gore Pavement Areas and Maintenance Vehicle Pullout Area

Each sample represents a distinct soil excavation area and is considered representative of that area. The table below summarizes the Variance classification by sample (area).

Sample	Total Lead (mg/kg)	WET Lead (mg/L)	TCLP Lead (mg/L)	pH	Variance Classification
SR-67-GP-1-0.5	560	8.5	1.5	7.5	Hazardous Waste
SR-67-GP-2-0.5	46	2.8	Not Analyzed	Not Analyzed	X
SR-67-GP-3-0.5	16	3.8	Not Analyzed	6.5	X
SR-67-GP-4-0.5	350	27	1.1	Not Analyzed	Hazardous Waste
SR-67-GP-5-0.5D	7.8	<1.0	Not Analyzed	Not Analyzed	X
SR-67-GP-6-0.5	250	26	1.9	Not Analyzed	Hazardous Waste
SR-67-GP-7-0.5	790	41	3.6	Not Analyzed	Hazardous Waste
SR-67-GP-8-0.5	27	2.8	Not Analyzed	Not Analyzed	X
SR-67-MVP-1	84	4.0	Not Analyzed	8.2	X

“X” is non-hazardous soil that has no restrictions on reuse within the Project. Soil that is removed for off-Site disposal and characterized as hazardous waste shall be disposed of at a landfill permitted by the State to receive such waste.

It would be logistically impractical to combine excavated soil from all the “Gore Pavement” areas into one stockpile. However, if it were possible, the data were statistically analyzed to evaluate the resulting classification. The table below summarizes the results of the statistical analyses.

Total Concentrations (mg/kg)								
Depth (ft)	Number of Samples	% of Non Detect	Min. value	Max. value	Mean	Median	Standard Deviation	95% UCL
0-0.5	8	0%	7.8	790	255.9	148	293.3	452.3

WET Concentrations (mg/L)								
Depth (ft)	Number of Samples	% of Non Detect	Min. value	Max. value	Mean	Median	Standard Deviation	95% UCL
0-0.5	8	12.5	<1	41	16	8.5	15.3	24.4

Parameter	Site Value
Total 95% UCL	452.3 mg/kg
WET 95% UCL	24.4 mg/L
pH	6.5 – 7.5
TCLP	<3.6
Classification	Hazardous Waste

The resulting Variance classification does not provide any advantage by combining soil excavated from all Gore Pavement areas into one stockpile.

The north and south bound Gore Pavement soil excavation areas were considered as separate, co-excavation areas. That is, all soil excavated from the north bound Gore Pavement areas can be combined into one soil stockpile represented by four sample locations SR-67-GP-2, SR-67-GP-3, SR-67-GP-5, and SR-67-GP-8. Similarly, all soil excavated from the south bound Gore Pavement areas can be combined into one soil stockpile represented by sample locations SR-67-GP-1, SR-67-GP-4, SR-67-GP-6, and SR-67-GP-7. Four data points is not statistically significant to evaluate a 95% UCL of the mean; however, summary statistics were generated for each data set to estimate whether the representative concentration will likely exceed a Variance criteria based on the mean and maximum concentrations.

GP Northbound Total Concentrations (mg/kg)								
Depth (ft)	Number of Samples	% of Non Detect	Min. value	Max. value	Mean	Median	Standard Deviation	
0-0.5	4	0%	7.8	46	24.2	21.5	16.5	

GP Northbound WET Concentrations (mg/L)								
Depth (ft)	Number of Samples	% of Non Detect	Min. value	Max. value	Mean	Median	Standard Deviation	
0-0.5	4	25	<1	3.8	3.1	2.8	0.6	

TCLP analyses were not required based on the total concentrations not exceeding the 20X rule. Soil pH was measured in one sample at 6.5. The maximum concentrations do not exceed hazardous waste level criteria; therefore, the soil stockpile can be considered “X.” Soil excavated from the northbound lanes, whether considered individually from each excavation area or combined into one stockpile will be classified as “X” – non-hazardous soil that can be used within the Project without restriction.

GP Southbound Total Concentrations (mg/kg)								
Depth (ft)	Number of Samples	% of Non Detect	Min. value	Max. value	Mean	Median	Standard Deviation	
0-0.5	4	0%	250	790	487.5	455	239.5	

GP Southbound WET Concentrations (mg/L)								
Depth (ft)	Number of Samples	% of Non Detect	Min. value	Max. value	Mean	Median	Standard Deviation	
0-0.5	4	0%	8.5	41	25.6	26.5	13.3	

GP Southbound TCLP Concentrations (mg/L)								
Depth (ft)	Number of Samples	% of Non Detect	Min. value	Max. value	Mean	Median	Standard Deviation	
0-0.5	4	0%	1.1	3.6	2.0	1.7	1.1	

Soil pH was measured in one sample at 7.5.

The results indicate that the minimum, maximum, mean and median lead concentrations by WET for the four southbound samples exceed the State hazardous waste criteria (22 CCR 66261 et al) and the TCLP concentrations do not exceed the federal hazardous waste criteria. The data also indicates that whether the soil excavated from the southbound Gore Pavement areas are considered individually (each area) or combined into one stockpile, the resulting classification is hazardous waste.

3.4. All Soil Excavated from the Project

It would be logistically impractical to combine excavated soil from all areas into one stockpile. However, if it were possible, the data were statistically analyzed to evaluate the resulting classification. The table below summarizes the results of the statistical analyses.

Total Concentrations (mg/kg)								
Depth (ft)	Number of Samples	% of Non Detect	Min. value	Max. value	Mean	Median	Standard Deviation	95% UCL
0-3	33	0%	1.9	790	76.8	13	173.3	208.3

WET Concentrations (mg/L)								
Depth (ft)	Number of Samples	% of Non Detect	Min. value	Max. value	Mean	Median	Standard Deviation	95% UCL
0-3	33	60.6	<1	41	11	5.7	12.4	7.7

WET-DI Concentrations (mg/L)								
Depth (ft)	Number of Samples	% of Non Detect	Min. value	Max. value	Mean	Median	Standard Deviation	95% UCL
0-3	8	87.5	<1	2.6	NA	NA	NA	NA

There are insufficient WET-DI detected values to perform meaningful statistical analysis.

Parameter	Site Value
Total 95% UCL	208.3 mg/kg
WET 95% UCL	7.7 mg/L
pH	6.5 – 8.4
TCLP	<3.6
WET-DI	<2.6
Classification	Hazardous Waste

The resulting Variance classification does not provide any advantage by combining soil excavated from all areas into one stockpile.

APPENDIX D

Laboratory Analytical Reports - Calscience



CALSCIENCE

WORK ORDER NUMBER: 14-04-1917

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Kleinfelder, Inc.

Client Project Name: Caltrans T017 / 20143326

Attention: Chris Noland
5015 Shoreham Place
San Diego, CA 92122-5993

Approved for release on 05/06/2014 by:
Richard Villafania
Project Manager

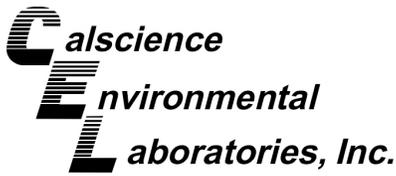
ResultLink ▶

Email your PM ▶



Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.





Contents

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Work Order Number: 14-04-1917

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Condition Upon Receipt:

Samples were received under Chain of Custody (COC) on 04/25/14. They were assigned to Work Order 14-04-1917.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Additional Comments:

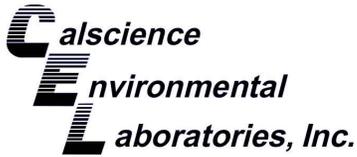
Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: http://www.calscience.com/PDF/New_York.pdf

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.



Analytical Report

Kleinfelder, Inc.
5015 Shoreham Place
San Diego, CA 92122-5993

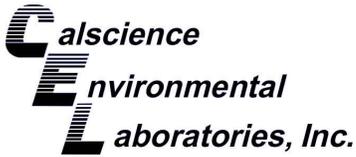
Date Received: 04/25/14
Work Order: 14-04-1917
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Caltrans T017 / 20143326

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SR-67-ADL-1-1.5	14-04-1917-1-A	03/27/14 14:13	Solid	ICP 7300	04/29/14	04/29/14 18:48	140429L03
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		14.3		0.500		1.00	
SR-67-ADL-1-3.0	14-04-1917-2-A	03/27/14 14:17	Solid	ICP 7300	04/29/14	04/29/14 18:51	140429L03
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		13.4		0.490		0.980	
SR-67-ADL-1-3.0D	14-04-1917-3-A	03/27/14 14:17	Solid	ICP 7300	04/29/14	04/29/14 18:57	140429L03
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		11.8		0.503		1.01	
SR-67-ADL-2-0.5	14-04-1917-4-A	03/27/14 14:29	Solid	ICP 7300	04/29/14	04/29/14 18:58	140429L03
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		35.5		0.476		0.952	
SR-67-ADL-2-1.5	14-04-1917-5-A	03/27/14 14:32	Solid	ICP 7300	04/29/14	04/29/14 18:59	140429L03
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		4.74		0.503		1.01	
SR-67-ADL-2-3.0	14-04-1917-6-A	03/27/14 14:35	Solid	ICP 7300	04/29/14	04/29/14 19:00	140429L03
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		14.0		0.503		1.01	
SR-67-DS-3a-0.5	14-04-1917-8-A	03/28/14 09:22	Solid	ICP 7300	04/29/14	04/29/14 19:02	140429L03
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		13.4		0.503		1.01	
SR-67-DS-3a-1.5	14-04-1917-9-A	03/28/14 09:25	Solid	ICP 7300	04/29/14	04/29/14 19:03	140429L03
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		15.7		0.505		1.01	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Analytical Report

Kleinfelder, Inc.
5015 Shoreham Place
San Diego, CA 92122-5993

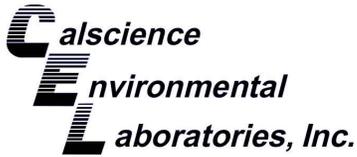
Date Received: 04/25/14
Work Order: 14-04-1917
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Caltrans T017 / 20143326

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SR-67-DS-3a-3.0	14-04-1917-10-A	03/28/14 09:28	Solid	ICP 7300	04/29/14	04/29/14 19:04	140429L03
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		0.833		0.485		0.971	
SR-67-GP-7-0.5	14-04-1917-11-A	03/28/14 09:50	Solid	ICP 7300	04/29/14	04/29/14 19:05	140429L03
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		644		0.505		1.01	
SR-67-GP-6-0.5	14-04-1917-12-A	03/28/14 10:30	Solid	ICP 7300	04/29/14	04/29/14 19:06	140429L03
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		328		0.476		0.952	
SR-67-GP-4-0.5	14-04-1917-13-A	03/28/14 10:40	Solid	ICP 7300	04/29/14	04/29/14 19:08	140429L03
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		410		0.505		1.01	
SR-67-GP-1-0.5	14-04-1917-14-A	03/28/14 11:30	Solid	ICP 7300	04/29/14	04/29/14 19:13	140429L03
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		195		0.503		1.01	
SR-67-DS-3b-0.5	14-04-1917-15-A	03/28/14 12:04	Solid	ICP 7300	04/29/14	04/29/14 19:14	140429L03
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		46.2		0.500		1.00	
SR-67-DS-3b-1.5	14-04-1917-16-A	03/28/14 12:11	Solid	ICP 7300	04/29/14	04/29/14 19:15	140429L03
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		78.6		0.476		0.952	
SR-67-DS-3b-3.0	14-04-1917-17-A	03/28/14 12:20	Solid	ICP 7300	04/29/14	04/29/14 19:17	140429L03
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		12.2		0.490		0.980	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Analytical Report

Kleinfelder, Inc.
5015 Shoreham Place
San Diego, CA 92122-5993

Date Received: 04/25/14
Work Order: 14-04-1917
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Caltrans T017 / 20143326

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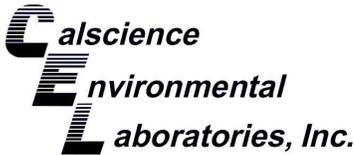
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SR-67-DS-3b-1.5D	14-04-1917-19-A	03/28/14 12:11	Solid	ICP 7300	04/29/14	04/29/14 19:18	140429L03

Parameter	Result	RL	DF	Qualifiers
Lead	6.67	0.498	0.995	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	097-01-002-18331	N/A	Solid	ICP 7300	04/29/14	04/29/14 18:45	140429L03

Parameter	Result	RL	DF	Qualifiers
Lead	ND	0.500	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Analytical Report

Kleinfelder, Inc.
5015 Shoreham Place
San Diego, CA 92122-5993

Date Received: 04/25/14
Work Order: 14-04-1917
Preparation: T22.11.5. All
Method: EPA 6010B
Units: mg/L

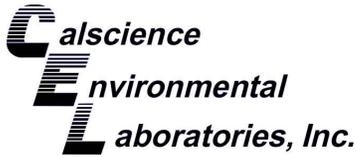
Project: Caltrans T017 / 20143326

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SR-67-ADL-1-1.5	14-04-1917-1-A	03/27/14 14:13	Solid	ICP 7300	04/29/14	05/01/14 16:00	140501LA2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		0.320		0.100		1.00	
SR-67-ADL-1-3.0	14-04-1917-2-A	03/27/14 14:17	Solid	ICP 7300	04/29/14	05/01/14 16:09	140501LA2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		0.376		0.100		1.00	
SR-67-ADL-1-3.0D	14-04-1917-3-A	03/27/14 14:17	Solid	ICP 7300	04/29/14	05/01/14 16:11	140501LA2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		0.296		0.100		1.00	
SR-67-ADL-2-0.5	14-04-1917-4-A	03/27/14 14:29	Solid	ICP 7300	04/29/14	05/01/14 16:13	140501LA2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		1.93		0.100		1.00	
SR-67-ADL-2-1.5	14-04-1917-5-A	03/27/14 14:32	Solid	ICP 7300	04/29/14	05/01/14 16:15	140501LA2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		ND		0.100		1.00	
SR-67-ADL-2-3.0	14-04-1917-6-A	03/27/14 14:35	Solid	ICP 7300	04/29/14	05/01/14 16:16	140501LA2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		0.410		0.100		1.00	
SR-67-DS-3a-0.5	14-04-1917-8-A	03/28/14 09:22	Solid	ICP 7300	04/29/14	05/01/14 16:18	140501LA2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		0.291		0.100		1.00	
SR-67-DS-3a-1.5	14-04-1917-9-A	03/28/14 09:25	Solid	ICP 7300	04/29/14	05/01/14 16:20	140501LA2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		0.301		0.100		1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Analytical Report

Kleinfelder, Inc.
5015 Shoreham Place
San Diego, CA 92122-5993

Date Received: 04/25/14
Work Order: 14-04-1917
Preparation: T22.11.5. All
Method: EPA 6010B
Units: mg/L

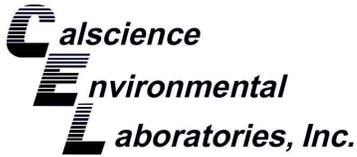
Project: Caltrans T017 / 20143326

Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SR-67-DS-3a-3.0	14-04-1917-10-A	03/28/14 09:28	Solid	ICP 7300	04/29/14	05/01/14 16:22	140501LA2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		ND		0.100		1.00	
SR-67-GP-7-0.5	14-04-1917-11-A	03/28/14 09:50	Solid	ICP 7300	04/29/14	05/01/14 16:23	140501LA2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		46.2		0.100		1.00	
SR-67-GP-6-0.5	14-04-1917-12-A	03/28/14 10:30	Solid	ICP 7300	04/29/14	05/01/14 16:30	140501LA2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		24.2		0.100		1.00	
SR-67-GP-4-0.5	14-04-1917-13-A	03/28/14 10:40	Solid	ICP 7300	04/29/14	05/01/14 16:32	140501LA2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		35.9		0.100		1.00	
SR-67-GP-1-0.5	14-04-1917-14-A	03/28/14 11:30	Solid	ICP 7300	04/29/14	05/01/14 16:33	140501LA2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		11.6		0.100		1.00	
SR-67-DS-3b-0.5	14-04-1917-15-A	03/28/14 12:04	Solid	ICP 7300	04/29/14	05/01/14 16:35	140501LA2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		0.263		0.100		1.00	
SR-67-DS-3b-1.5	14-04-1917-16-A	03/28/14 12:11	Solid	ICP 7300	04/29/14	05/01/14 16:37	140501LA2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		8.27		0.100		1.00	
SR-67-DS-3b-3.0	14-04-1917-17-A	03/28/14 12:20	Solid	ICP 7300	04/29/14	05/01/14 16:39	140501LA2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		0.194		0.100		1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Analytical Report

Kleinfelder, Inc.
5015 Shoreham Place
San Diego, CA 92122-5993

Date Received: 04/25/14
Work Order: 14-04-1917
Preparation: T22.11.5. All
Method: EPA 6010B
Units: mg/L

Project: Caltrans T017 / 20143326

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SR-67-DS-3b-1.5D	14-04-1917-19-A	03/28/14 12:11	Solid	ICP 7300	04/29/14	05/01/14 16:40	140501LA2

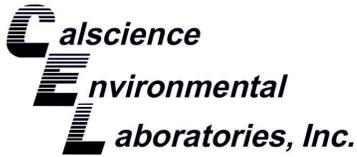
Parameter	Result	RL	DF	Qualifiers
Lead	0.232	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	097-05-006-7244	N/A	Aqueous	ICP 7300	04/29/14	05/01/14 15:47	140501LA2

Parameter	Result	RL	DF	Qualifiers
Lead	ND	0.100	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Quality Control - Spike/Spike Duplicate

Kleinfelder, Inc.
5015 Shoreham Place
San Diego, CA 92122-5993

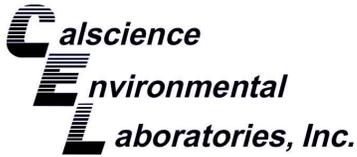
Date Received: 04/25/14
Work Order: 14-04-1917
Preparation: EPA 3050B
Method: EPA 6010B

Project: Caltrans T017 / 20143326

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SR-67-ADL-1-1.5	Sample	Solid	ICP 7300	04/29/14	04/29/14 18:48	140429S03
SR-67-ADL-1-1.5	Matrix Spike	Solid	ICP 7300	04/29/14	04/29/14 18:49	140429S03
SR-67-ADL-1-1.5	Matrix Spike Duplicate	Solid	ICP 7300	04/29/14	04/29/14 18:50	140429S03

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Lead	14.29	25.00	37.58	93	39.25	100	75-125	4	0-20	



Quality Control - Spike/Spike Duplicate

Kleinfelder, Inc.
5015 Shoreham Place
San Diego, CA 92122-5993

Date Received: 04/25/14
Work Order: 14-04-1917
Preparation: T22.11.5. All
Method: EPA 6010B

Project: Caltrans T017 / 20143326

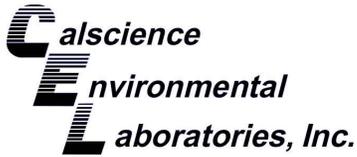
Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SR-67-ADL-1-1.5	Sample	Solid	ICP 7300	04/29/14	05/01/14 16:00	140501SA2
SR-67-ADL-1-1.5	Matrix Spike	Solid	ICP 7300	04/29/14	05/01/14 16:02	140501SA2
SR-67-ADL-1-1.5	Matrix Spike Duplicate	Solid	ICP 7300	04/29/14	05/01/14 16:08	140501SA2

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Lead	0.3204	5.000	4.926	92	5.526	104	75-125	11	0-20	

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RPD: Relative Percent Difference. CL: Control Limits



Quality Control - LCS

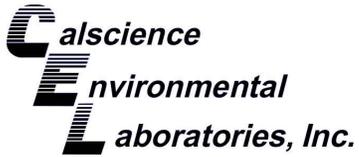
Kleinfelder, Inc.
5015 Shoreham Place
San Diego, CA 92122-5993

Date Received: 04/25/14
Work Order: 14-04-1917
Preparation: EPA 3050B
Method: EPA 6010B

Project: Caltrans T017 / 20143326

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-002-18331	LCS	Solid	ICP 7300	04/29/14	04/29/14 18:46	140429L03
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Lead		25.00	26.90	108	80-120	



Quality Control - LCS

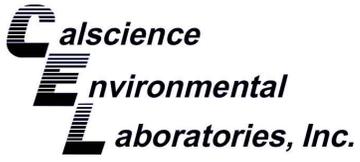
Kleinfelder, Inc.
5015 Shoreham Place
San Diego, CA 92122-5993

Date Received: 04/25/14
Work Order: 14-04-1917
Preparation: T22.11.5. All
Method: EPA 6010B

Project: Caltrans T017 / 20143326

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-05-006-7244	LCS	Aqueous	ICP 7300	04/29/14	05/01/14 15:51	140501LA2
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Lead		5.000	5.401	108	80-120	



Sample Analysis Summary Report

Work Order: 14-04-1917

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<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 6010B	EPA 3050B	598	ICP 7300	1
EPA 6010B	T22.11.5. All	469	ICP 7300	1


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Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 14-04-1917

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<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSO or PES/PESO associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



Calscience Environmental Laboratories, Inc.

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
 Other locations: Concord, San Luis Obispo, Houston, and Corpus Christi
 For courier service / sample drop off information,
 contact sales@calscience.com or call us.

CHAIN OF CUSTODY RECORD

WO # / LAB-USE ONLY
14-04-1917

DATE: 04/25/14
 PAGE: 1 OF 2

LABORATORY CLIENT: KLEINFELDER, INC.		CLIENT PROJECT NAME / NUMBER: CALTRANS T017 / 20143326		P.O. NO.:
ADDRESS: 5015 SHOREHAM PLACE		PROJECT CONTACT: CHRIS NOLAND		SAMPLER(S): (PRINT)
CITY: SAN DIEGO	STATE: CA	ZIP: 92122		
TEL: (858) 320-2000	E-MAIL: CNoland@kleinfelder.com			

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

SAME DAY
 24 HR
 48 HR
 72 HR
 5 DAYS
 STANDARD

GLOBAL ID: _____ LOG CODE: _____

COELT EDF

SPECIAL INSTRUCTIONS:

Unpreserved Preserved Field Filtered

TPH(g) GRO
 TPH(d) DRO
 TPH C6-C36 C6-C44
 BTEX / MTBE 8260
 VOCs (8260)
 Oxygenates (8260)
 Prep (5035) En Core Terra Core
 SVOCs (8270)
 Pesticides (8081)
 PCBs (8082)
 PAHs 8270 8270 SIM
 T22 Metals 6010/747X 6020/747Y
 Cr(VI) 7196 7199 218.6
 Total Lead (6010B)

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	<input type="checkbox"/> TPH(g) <input type="checkbox"/> GRO	<input type="checkbox"/> TPH(d) <input type="checkbox"/> DRO	TPH <input type="checkbox"/> C6-C36 <input type="checkbox"/> C6-C44	BTEX / MTBE <input type="checkbox"/> 8260 <input type="checkbox"/>	VOCs (8260)	Oxygenates (8260)	Prep (5035) <input type="checkbox"/> En Core <input type="checkbox"/> Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs <input type="checkbox"/> 8270 <input type="checkbox"/> 8270 SIM	T22 Metals <input type="checkbox"/> 6010/747X <input type="checkbox"/> 6020/747Y	Cr(VI) <input type="checkbox"/> 7196 <input type="checkbox"/> 7199 <input type="checkbox"/> 218.6	Total Lead (6010B)	COMMENT		
		DATE	TIME																						
1	SR-67-ADL-1-1.5 ✓	03/27/14	14:13	S	1	X																		HOLD	
2	SR-67-ADL-1-3.0 ✓	03/27/14	14:17	S	1	X																			HOLD
3	SR-67-ADL-1-3.0D ✓	03/27/14	14:17	S	1	X																			HOLD
4	SR-67-ADL-2-0.5 ✓	03/27/14	14:29	S	1	X																			HOLD
5	SR-67-ADL-2-1.5 ✓	03/27/14	14:32	S	1	X																			HOLD
6	SR-67-ADL-2-3.0 ✓	03/27/14	14:35	S	1	X																			HOLD
7	QCEB-032714 ✓	03/27/14	15:15	W	1	X																			HOLD
8	SR-67-DS-3a-0.5 ✓	03/28/14	9:22	S	1	X																			HOLD
9	SR-67-DS-3a-1.5 ✓	03/28/14	9:25	S	1	X																			HOLD
10	SR-67-DS-3a-3.0 ✓	03/28/14	9:28	S	1	X																			HOLD

Relinquished by: (Signature) <i>C. Azpik</i>	Received by: (Signature/Affiliation) <i>Rudy Flynn</i>	Date: <u>4/25/14</u>	Time: <u>12:02</u>
Relinquished by: (Signature) <i>Rudy Flynn</i>	Received by: (Signature/Affiliation) <i>[Signature]</i>	Date: <u>4/25/14</u>	Time: <u>13:20</u>
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

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 contact sales@calscience.com or call us.

CHAIN OF CUSTODY RECORD

WO # / LAB-USE ONLY
 04-1917

DATE: 04/25/14
 PAGE: 2 OF 2

LABORATORY CLIENT: KLEINFELDER, INC.		CLIENT PROJECT NAME / NUMBER: CALTRANS T017 / 20143326		P.O. NO.:
ADDRESS: 5015 SHOREHAM PLACE		PROJECT CONTACT: CHRIS NOLAND		SAMPLER(S): (PRINT)
CITY: SAN DIEGO	STATE: CA	ZIP: 92122		
TEL: (858) 320-2000	E-MAIL: CNoland@kleinfelder.com			

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
 SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

GLOBAL ID: _____ LOG CODE: _____
 COELT EDF

SPECIAL INSTRUCTIONS:

Please check box or fill in blank as needed.

<input type="checkbox"/> Unpreserved	<input type="checkbox"/> Preserved	<input type="checkbox"/> Field Filtered	<input type="checkbox"/> TPH(g) <input type="checkbox"/> GRO	<input type="checkbox"/> TPH(d) <input type="checkbox"/> DRO	TPH <input type="checkbox"/> C6-C36 <input type="checkbox"/> C6-C44	BTEX / MTBE <input type="checkbox"/> 8260 <input type="checkbox"/>	VOCs (8260)	Oxygenates (8260)	Prep (5035) <input type="checkbox"/> En Core <input type="checkbox"/> Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs <input type="checkbox"/> 8270 <input type="checkbox"/> 8270 SIM	T22 Metals <input type="checkbox"/> 6010/747X <input type="checkbox"/> 6020/747	Cr(VI) <input type="checkbox"/> 7196 <input type="checkbox"/> 7199 <input type="checkbox"/> 218.6	Total Lead (6010B)	
--------------------------------------	------------------------------------	---	--	--	---	--	-------------	-------------------	--	--------------	-------------------	-------------	--	---	---	--------------------	--

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	<input type="checkbox"/> TPH(g) <input type="checkbox"/> GRO	<input type="checkbox"/> TPH(d) <input type="checkbox"/> DRO	TPH <input type="checkbox"/> C6-C36 <input type="checkbox"/> C6-C44	BTEX / MTBE <input type="checkbox"/> 8260 <input type="checkbox"/>	VOCs (8260)	Oxygenates (8260)	Prep (5035) <input type="checkbox"/> En Core <input type="checkbox"/> Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs <input type="checkbox"/> 8270 <input type="checkbox"/> 8270 SIM	T22 Metals <input type="checkbox"/> 6010/747X <input type="checkbox"/> 6020/747	Cr(VI) <input type="checkbox"/> 7196 <input type="checkbox"/> 7199 <input type="checkbox"/> 218.6	Total Lead (6010B)	COMMENT		
		DATE	TIME																						
11	SR-67-GP-7-0.5	03/28/14	9:50	S	1	X																		HOLD	
12	SR-67-GP-6-0.5	03/28/14	10:30	S	1	X																			HOLD
13	SR-67-GP-4-0.5	03/28/14	10:40	S	1	X																			HOLD
14	SR-67-GP-1-0.5	03/28/14	11:30	S	1	X																			HOLD
15	SR-67-DS-3b-0.5	03/28/14	12:04	S	1	X																			HOLD
16	SR-67-DS-3b-1.5	03/28/14	12:11	S	1	X																			HOLD
17	SR-67-DS-3b-3.0	03/28/14	12:20	S	1	X																			HOLD
18	QCEB-032814	03/28/14	14:00	W	1	X																			HOLD
19	SR-67-DS-3b-1.5D	03/28/14	12:11	S	1	X																			HOLD

Relinquished by: (Signature) <i>C. Azinik</i>	Received by: (Signature/Affiliation) <i>R.M. N. CBL</i>	Date: <i>4/25/14</i>	Time: <i>12:02</i>
Relinquished by: (Signature) <i>Rudy Flynn</i>	Received by: (Signature/Affiliation) <i>J. P. [Signature]</i>	Date: <i>4/25/14</i>	Time: <i>13:20</i>
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

Richard Villafania

From: Chris Noland [CNoland@kleinfelder.com]
Sent: Tuesday, April 29, 2014 2:43 PM
To: Richard Villafania
Cc: Mark Peabody
Subject: RE: sample volumes

Richard,
We have decided to change the analyses - Please run all samples - including the ones picked up today for Total Lead by 6010B and CA-Wet (STLC) (do not run aqueous QCEB sample). Please run them all on a regular turn around (disregard rush from previous email). Please let me know what samples that do not have sufficient volume.

Thanks,

Chris Noland, PG
Project Geologist
Kleinfelder West, Inc.
5015 Shoreham Place
San Diego, CA 92122

- o| 858.320.2000 
- d| 858.320.2201 
- c| 619.729.4907 
- f| 858.320.2001 

[Return to Contents](#)

From: Richard Villafania <rvillafania@calscience.com>
Sent: Tuesday, April 29, 2014 2:33 PM
To: Chris Noland
Subject: RE: sample volumes

Chris,

I will have the chemist check when they test for the total lead analysis. The STLC/TCLP analyses will require 150 gms of sample.

Thanks.

Richard Villafania
Project Manager
(714) 895-5494 





CALSCIENCE

WORK ORDER NUMBER: 14-04-2228

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Kleinfelder, Inc.

Client Project Name: Caltrans T017 / 20143326

Attention: Chris Noland
5015 Shoreham Place
San Diego, CA 92122-5993

Approved for release on 05/07/2014 by:
Richard Villafania
Project Manager

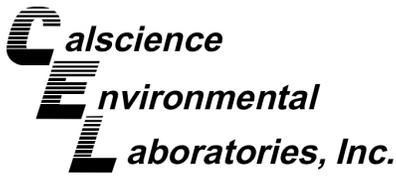
ResultLink ▶

Email your PM ▶



Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.





Contents

Client Project Name: Caltrans T017 / 20143326
Work Order Number: 14-04-2228

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Work Order Narrative

Work Order: 14-04-2228

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Condition Upon Receipt:

Samples were received under Chain of Custody (COC) on 04/30/14. They were assigned to Work Order 14-04-2228.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Additional Comments:

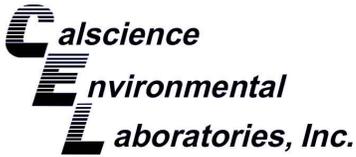
Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: http://www.calscience.com/PDF/New_York.pdf

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.



Analytical Report

Kleinfelder, Inc.
5015 Shoreham Place
San Diego, CA 92122-5993

Date Received: 04/30/14
Work Order: 14-04-2228
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

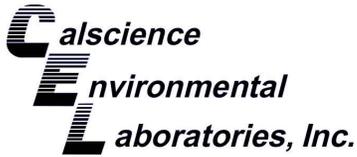
Project: Caltrans T017 / 20143326

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SR-67-MVP-1-0.5	14-04-2228-1-B	03/27/14 09:30	Solid	ICP 7300	05/01/14	05/01/14 18:43	140501L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		72.4		0.505		1.01	
SR-67-GP-2-0.5	14-04-2228-2-B	03/27/14 10:20	Solid	ICP 7300	05/01/14	05/01/14 18:44	140501L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		47.1		0.493		0.985	
SR-67-DS-4-0.5	14-04-2228-3-B	03/27/14 10:25	Solid	ICP 7300	05/01/14	05/01/14 18:45	140501L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		7.36		0.503		1.01	
SR-67-DS-4-0.5D	14-04-2228-4-B	03/27/14 10:25	Solid	ICP 7300	05/01/14	05/01/14 18:46	140501L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		3.15		0.490		0.980	
SR-67-DS-4-1.5	14-04-2228-5-B	03/27/14 10:30	Solid	ICP 7300	05/01/14	05/01/14 18:51	140501L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		2.15		0.495		0.990	
SR-67-DS-4-3.0	14-04-2228-6-B	03/27/14 10:35	Solid	ICP 7300	05/01/14	05/01/14 18:52	140501L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		1.10		0.493		0.985	
SR-67-DS-1-0.5	14-04-2228-7-B	03/27/14 11:45	Solid	ICP 7300	05/01/14	05/01/14 18:54	140501L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		6.63		0.488		0.976	
SR-67-DS-1-1.5	14-04-2228-8-B	03/27/14 11:50	Solid	ICP 7300	05/01/14	05/01/14 18:55	140501L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		16.6		0.485		0.971	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Analytical Report

Kleinfelder, Inc.
5015 Shoreham Place
San Diego, CA 92122-5993

Date Received: 04/30/14
Work Order: 14-04-2228
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

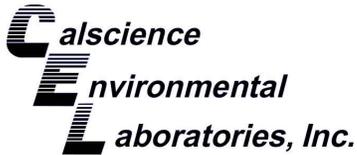
Project: Caltrans T017 / 20143326

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SR-67-DS-1-3.0	14-04-2228-9-B	03/27/14 11:55	Solid	ICP 7300	05/01/14	05/01/14 18:56	140501L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		18.8		0.490		0.980	
SR-67-DS-2-0.5	14-04-2228-10-B	03/27/14 12:00	Solid	ICP 7300	05/01/14	05/01/14 18:57	140501L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		90.0		0.485		0.971	
SR-67-DS-2-1.5	14-04-2228-11-B	03/27/14 12:04	Solid	ICP 7300	05/01/14	05/01/14 18:58	140501L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		8.18		0.493		0.985	
SR-67-DS-2-3.0	14-04-2228-12-B	03/27/14 12:08	Solid	ICP 7300	05/01/14	05/01/14 18:59	140501L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		3.77		0.495		0.990	
SR-67-GP-3-0.5	14-04-2228-13-B	03/27/14 12:10	Solid	ICP 7300	05/01/14	05/01/14 19:01	140501L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		16.8		0.490		0.980	
SR-67-GP-5-0.5	14-04-2228-14-B	03/27/14 12:20	Solid	ICP 7300	05/01/14	05/01/14 19:02	140501L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		0.899		0.505		1.01	
SR-67-GP-5-0.5D	14-04-2228-15-B	03/27/14 12:20	Solid	ICP 7300	05/01/14	05/01/14 19:07	140501L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		7.00		0.490		0.980	
SR-67-GP-8-0.5	14-04-2228-16-B	03/27/14 13:25	Solid	ICP 7300	05/01/14	05/01/14 19:08	140501L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		22.5		0.495		0.990	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Analytical Report

Kleinfelder, Inc.
5015 Shoreham Place
San Diego, CA 92122-5993

Date Received: 04/30/14
Work Order: 14-04-2228
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

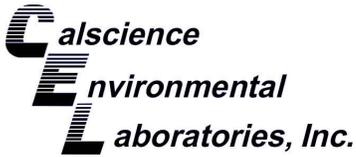
Project: Caltrans T017 / 20143326

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SR-67-DS-3C-0.5	14-04-2228-17-B	03/27/14 13:38	Solid	ICP 7300	05/01/14	05/01/14 19:10	140501L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		18.8		0.505		1.01	
SR-67-DS-3C-1.5	14-04-2228-18-B	03/27/14 13:42	Solid	ICP 7300	05/01/14	05/01/14 19:11	140501L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		12.0		0.490		0.980	
SR-67-DS-3C-3.0	14-04-2228-19-B	03/27/14 13:46	Solid	ICP 7300	05/01/14	05/01/14 19:12	140501L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		16.5		0.508		1.02	
SR-67-ADL-1-0.5	14-04-2228-20-B	03/27/14 14:10	Solid	ICP 7300	05/01/14	05/01/14 19:13	140501L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		13.5		0.503		1.01	
Method Blank	097-01-002-18340	N/A	Solid	ICP 7300	05/01/14	05/01/14 17:49	140501L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		ND		0.500		1.00	

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Analytical Report

Kleinfelder, Inc.
5015 Shoreham Place
San Diego, CA 92122-5993

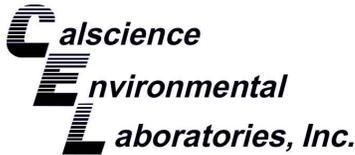
Date Received: 04/30/14
Work Order: 14-04-2228
Preparation: T22.11.5. All
Method: EPA 6010B
Units: mg/L

Project: Caltrans T017 / 20143326

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SR-67-MVP-1-0.5	14-04-2228-1-B	03/27/14 09:30	Solid	ICP 7300	04/30/14	05/02/14 18:01	140502LA3
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		4.40		0.100		1.00	
SR-67-GP-2-0.5	14-04-2228-2-B	03/27/14 10:20	Solid	ICP 7300	04/30/14	05/02/14 18:03	140502LA3
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		1.48		0.100		1.00	
SR-67-DS-4-0.5	14-04-2228-3-B	03/27/14 10:25	Solid	ICP 7300	04/30/14	05/02/14 18:04	140502LA3
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		ND		0.100		1.00	
SR-67-DS-4-0.5D	14-04-2228-4-B	03/27/14 10:25	Solid	ICP 7300	04/30/14	05/02/14 18:06	140502LA3
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		ND		0.100		1.00	
SR-67-DS-4-1.5	14-04-2228-5-B	03/27/14 10:30	Solid	ICP 7300	04/30/14	05/02/14 18:08	140502LA3
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		ND		0.100		1.00	
SR-67-DS-4-3.0	14-04-2228-6-B	03/27/14 10:35	Solid	ICP 7300	04/30/14	05/02/14 18:09	140502LA3
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		ND		0.100		1.00	
SR-67-DS-1-0.5	14-04-2228-7-B	03/27/14 11:45	Solid	ICP 7300	04/30/14	05/02/14 18:16	140502LA3
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		0.351		0.100		1.00	
SR-67-DS-1-1.5	14-04-2228-8-B	03/27/14 11:50	Solid	ICP 7300	04/30/14	05/02/14 18:18	140502LA3
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		0.366		0.100		1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Analytical Report

Kleinfelder, Inc.
5015 Shoreham Place
San Diego, CA 92122-5993

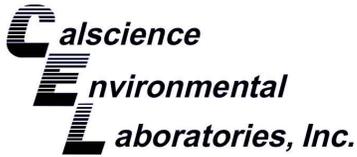
Date Received: 04/30/14
Work Order: 14-04-2228
Preparation: T22.11.5. All
Method: EPA 6010B
Units: mg/L

Project: Caltrans T017 / 20143326

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SR-67-DS-1-3.0	14-04-2228-9-B	03/27/14 11:55	Solid	ICP 7300	04/30/14	05/02/14 18:19	140502LA3
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		0.898		0.100		1.00	
SR-67-DS-2-0.5	14-04-2228-10-B	03/27/14 12:00	Solid	ICP 7300	04/30/14	05/02/14 18:21	140502LA3
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		4.09		0.100		1.00	
SR-67-DS-2-1.5	14-04-2228-11-B	03/27/14 12:04	Solid	ICP 7300	04/30/14	05/02/14 18:23	140502LA3
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		ND		0.100		1.00	
SR-67-DS-2-3.0	14-04-2228-12-B	03/27/14 12:08	Solid	ICP 7300	04/30/14	05/02/14 18:26	140502LA3
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		ND		0.100		1.00	
SR-67-GP-3-0.5	14-04-2228-13-B	03/27/14 12:10	Solid	ICP 7300	04/30/14	05/02/14 18:27	140502LA3
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		0.602		0.100		1.00	
SR-67-GP-5-0.5	14-04-2228-14-B	03/27/14 12:20	Solid	ICP 7300	04/30/14	05/02/14 18:29	140502LA3
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		ND		0.100		1.00	
SR-67-GP-5-0.5D	14-04-2228-15-B	03/27/14 12:20	Solid	ICP 7300	04/30/14	05/02/14 18:30	140502LA3
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		0.263		0.100		1.00	
SR-67-GP-8-0.5	14-04-2228-16-B	03/27/14 13:25	Solid	ICP 7300	04/30/14	05/02/14 18:32	140502LA3
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		1.08		0.100		1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Analytical Report

Kleinfelder, Inc.
5015 Shoreham Place
San Diego, CA 92122-5993

Date Received: 04/30/14
Work Order: 14-04-2228
Preparation: T22.11.5. All
Method: EPA 6010B
Units: mg/L

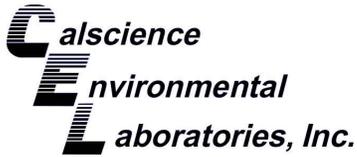
Project: Caltrans T017 / 20143326

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SR-67-DS-3C-0.5	14-04-2228-17-B	03/27/14 13:38	Solid	ICP 7300	04/30/14	05/02/14 18:39	140502LA3
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		0.633		0.100		1.00	
SR-67-DS-3C-1.5	14-04-2228-18-B	03/27/14 13:42	Solid	ICP 7300	04/30/14	05/02/14 18:40	140502LA3
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		0.390		0.100		1.00	
SR-67-DS-3C-3.0	14-04-2228-19-B	03/27/14 13:46	Solid	ICP 7300	04/30/14	05/02/14 18:42	140502LA3
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		0.579		0.100		1.00	
SR-67-ADL-1-0.5	14-04-2228-20-B	03/27/14 14:10	Solid	ICP 7300	04/30/14	05/02/14 18:44	140502LA3
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		0.349		0.100		1.00	
Method Blank	097-05-006-7248	N/A	Aqueous	ICP 7300	04/30/14	05/02/14 17:54	140502LA3
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Lead		ND		0.100		1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Quality Control - Spike/Spike Duplicate

Kleinfelder, Inc.
5015 Shoreham Place
San Diego, CA 92122-5993

Date Received: 04/30/14
Work Order: 14-04-2228
Preparation: EPA 3050B
Method: EPA 6010B

Project: Caltrans T017 / 20143326

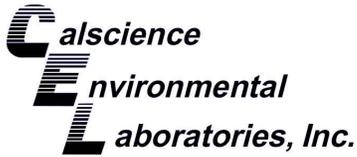
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SR-67-DS-4-1.5	Sample	Solid	ICP 7300	05/01/14	05/01/14 18:51	140501S01
SR-67-DS-4-1.5	Matrix Spike	Solid	ICP 7300	05/01/14	05/01/14 18:41	140501S01
SR-67-DS-4-1.5	Matrix Spike Duplicate	Solid	ICP 7300	05/01/14	05/01/14 18:42	140501S01

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Lead	2.149	25.00	26.18	96	27.77	102	75-125	6	0-20	

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RPD: Relative Percent Difference. CL: Control Limits



Quality Control - Spike/Spike Duplicate

Kleinfelder, Inc.
5015 Shoreham Place
San Diego, CA 92122-5993

Date Received: 04/30/14
Work Order: 14-04-2228
Preparation: T22.11.5. All
Method: EPA 6010B

Project: Caltrans T017 / 20143326

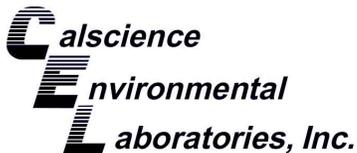
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SR-67-MVP-1-0.5	Sample	Solid	ICP 7300	04/30/14	05/02/14 18:01	140502SA3
SR-67-MVP-1-0.5	Matrix Spike	Solid	ICP 7300	04/30/14	05/02/14 17:58	140502SA3
SR-67-MVP-1-0.5	Matrix Spike Duplicate	Solid	ICP 7300	04/30/14	05/02/14 18:00	140502SA3

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Lead	4.400	5.000	8.600	84	9.440	101	75-125	9	0-20	

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RPD: Relative Percent Difference. CL: Control Limits



Quality Control - LCS

Kleinfelder, Inc.
 5015 Shoreham Place
 San Diego, CA 92122-5993

Date Received: 04/30/14
 Work Order: 14-04-2228
 Preparation: EPA 3050B
 Method: EPA 6010B

Project: Caltrans T017 / 20143326

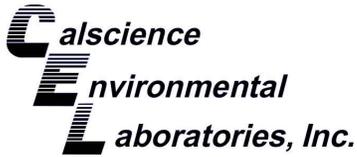
Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-002-18340	LCS	Solid	ICP 7300	05/01/14	05/01/14 17:53	140501L01

<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Lead	25.00	26.70	107	80-120	



RPD: Relative Percent Difference. CL: Control Limits



Quality Control - LCS

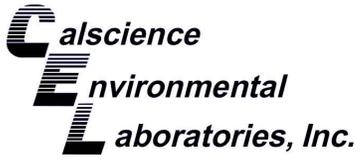
Kleinfelder, Inc.
5015 Shoreham Place
San Diego, CA 92122-5993

Date Received: 04/30/14
Work Order: 14-04-2228
Preparation: T22.11.5. All
Method: EPA 6010B

Project: Caltrans T017 / 20143326

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-05-006-7248	LCS	Aqueous	ICP 7300	04/30/14	05/02/14 17:56	140502LA3
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Lead		5.000	5.297	106	80-120	



Sample Analysis Summary Report

Work Order: 14-04-2228

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<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 6010B	EPA 3050B	469	ICP 7300	1
EPA 6010B	T22.11.5. All	469	ICP 7300	1


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Glossary of Terms and Qualifiers

Work Order: 14-04-2228

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<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of \leq 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Kleinfelder (ATL)

DATE: 04/30/14

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 1.8 °C - 0.3 °C (CF) = 1.5 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter Checked by: 828

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Checked by: 828

Sample _____ No (Not Intact) Not Present Checked by: 862

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....			
Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® TerraCores® _____

Aqueous: VOA VOA_h VOA_{na2} 125AGB 125AGB_h 125AGB_p 1AGB 1AGB_{na2} 1AGB_s

500AGB 500AGJ 500AGJ_s 250AGB 250CGB 250CGB_s 1PB 1PB_{na} 500PB

250PB 250PB_n 125PB 125PB_{z_{na}} 100PJ 100PJ_{na2} _____ _____ _____

Air: Tedlar® Canister **Other:** _____ **Trip Blank Lot#:** _____ **Labeled/Checked by:** 862

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** 778

Preservative: h: HCL n: HNO₃ na₂: Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure z_{na}: ZnAc₂+NaOH f: Filtered **Scanned by:** 778

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Major Community Events

Major Lakeside Community Events

October – Lakeside Chamber Beans, Beer & Business Fair, KSON CountryFest, El Cajon Ford Car Sale

Nov – The Lakeside Optimist – Rodeo

Dec. – Lakeside Chamber, Spirit of Christmas on Maine Ave, Breakfast with Santa

April – Lakeside Rodeo and Parade

May – Lakeside Jr. Fair – FFA program

July – The Lakeside Optimist Rodeo

El Capitan Friday high school football games

Major Ramona Events

Ramona Rodeo - May 2015

Ramona Main Street Parade - May 2015

Ramona Fair – first weekend of August 2015

Ramona Main Street Trick or Trick - Oct 31st.