AERIALLY DEPOSITED LEAD INVESTIGATION
CENTENNIAL/BELTWAY OPERATIONAL IMPROVEMENTS PROJECT
BAKERSFIELD, CALIFORNIA

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July 1, 2014
Group Delta Project No. EN024

GROUP DELTA

Parsons Transportation Group

3200 East Guasti Road, Suite 200
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July 1, 2014
Group Delta Project No. EN024

Attention: Mr. James Santos

Subject: Aerially Deposited Lead Investigation
Centennial/Beltway Operational Improvements Project
Bakersfield, California
Group Delta Project No. EN024

Dear Mr. Santos:

Group Delta Consultants, Inc. (GDC) is pleased to submit to Parsons Transportation Group (Parsons) this report on the results of an Aerially Deposited Lead (ADL) investigation for the Centennial/Beltway Operational Improvements Project. This project proposes to improve portions of State Route 99 (SR-99) and State Route 58 (SR-58). The project construction will involve disturbance of near surface soil along the existing freeways that has the potential to contain ADL. The purpose of the ADL investigation is to evaluate the lead content of unpaved soil along specified segments of the right shoulder of the SR-99 and SR-58 to assess the requirements for management of this soil. The ADL investigation included the submission of a Work Plan and approval of the Work Plan by Caltrans, the collection of soil samples, laboratory analysis, data evaluation, statistical analysis of the analytical results, and preparation of this report.

Should you have any questions regarding this report, please feel free to call us at:
(949) 450-2100.

Sincerely,
GROUP DELTA CONSULTANTS, INC.

Glenn Burks, Ph.D., P.E.
Director of Environmental Services

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Senior Project Manager

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1.0 INTRODUCTION

1.1 Project Description

This report has been prepared to present the procedures and results of an Aerially Deposited Lead (ADL) investigation performed for the Centennial/Beltway Operational Improvements Project in Bakersfield, California (Project). The State of California Department of Transportation (Caltrans), in cooperation with the City of Bakersfield, is proposing to construct improvements along portions of the State Route 99 (SR-99) and State Route 58 (SR-58) freeways at the Stockdale Freeway and SR-99 interchange. The project limit on the SR-99 is from Post Mile 22.1 to 22.7 and on the SR-58 from Post Mile R52.3 to R55.4 (Site). A vicinity map and aerial photograph of the project site are shown in Figure 1.

Proposed project construction will involve disturbance of near surface soils along the existing freeway that have the potential to contain ADL. Therefore, GDC performed ADL testing in these unpaved areas along the project alignment where future soil disturbance is anticipated. Results of the ADL tests were incorporated into an ADL statistical analysis and presented in this ADL investigation report.

1.2 Project Objectives and Scope of Work

The objective of this investigation is to evaluate unpaved soil in the freeway shoulders along the Project alignment for the presence of ADL. ADL is typically present at higher concentrations along unpaved areas adjacent to freeways and other roads with high traffic due to the historical use of leaded fuels. Soil samples were collected from unpaved areas along the project alignment where future soil disturbance is anticipated. The information obtained from this study will be used to identify health and safety issues due to the potential lead hazard and to determine proper handling and disposal options prior to Project construction.

The ADL testing followed the procedures presented in the "Aerially Deposited Lead Site Investigation Work Plan, Centennial/Beltway Operational Improvements Project, Bakersfield, California" dated April 8, 2014. The Work Plan was reviewed and approved by Caltrans.

This work was performed in accordance with Caltrans Aerially Deposited Lead Guidance (ADL Guidance), dated June 2007 and the DTSC Variance No. V09HQSCD006, effective July 1, 2009. The variance will expire on July 1, 2014.

The authorized scope of work was as follows:

- Preparation of a work plan;
- Field investigation and soil sampling;

- Laboratory analysis of soil samples;
- Review and analysis of laboratory results, and;
- Preparation of this ADL Investigation Report.

2.0 FIELD INVESTIGATION

Section 2.0 outlines the field procedures employed to collect samples and the laboratory analytical methods utilized.

2.1 Utility Clearance

Prior to conducting the investigation, an initial Site reconnaissance was conducted to ensure accessibility and safety of sampling locations. Boring locations were marked with white paint on the shoulder of the roadway and a wooden stake at the proposed sample location. The Underground Service Alert of Southern California was notified of the planned field work more than 48 hours prior to commencement of field activities to confirm the absence of subsurface utilities at the investigation locations. A Caltrans encroachment permit (Appendix A) was acquired for the Project prior to the Site visit, and the field work was coordinated with the Caltrans encroachment permit field inspector.

2.2 Soil Sampling

Soil sampling was performed on April 21, 22, and 23, 2014, in unpaved areas within the zone of the future soil disturbance. Sampling locations were positioned at 500 feet intervals along on both sides of SR-99 and at 1000 feet intervals staggering on both sides of SR-58 within the project's limits. Based upon information provided by Caltrans, sampling was previously performed along a segment of the SR-58; no samples were collected from this area. ADL sampling locations, or boring locations, are presented in Figure 2. GPS coordinates of all boring locations are presented in Table 1.

Soil samples were collected at approximate depths of 0-0.5 ft, 1.0-1.5 ft, and 2.0-2.5 ft below ground surface (bgs) from areas of proposed widening. These depth intervals are based on the expected depths of soil disturbance.

The field investigation consisted of performing 47 direct-push borings and collection of 141 primary soil samples. In addition, Group Delta collected 15 field duplicate quality control (QC) soil samples, more than one field duplicate collected per 10 primary samples. The amount of soil samples collected during the field investigation exceeded the minimum number of samples required and/or specified by the Caltrans ADL Guidance document (20 to 30 samples).

For borehole naming, GDC used the direction of traffic and freeway number followed by a dash and sequential boring numbers (e.g., N99-1, W58-2, etc.). For sample naming, GDC labeled each sample with the borehole from which it was collected followed by a dash and then the depth the sample was collected from in feet (e.g., W58-1-.05, N99-2-1.5, etc.). Duplicate

samples were labeled with the same sample name as the primary sample followed by a dash and then "dup" (e.g., N99-1-0.5-dup).

2.2.1 Field Sampling Equipment

The following equipment was used:

1. A direct-push drill rig;
2. A sufficient number of acetate liners with Teflon sheets and polyethylene end caps for direct-push sampling;
3. Personal Protective Equipment (PPE);
4. Three 5-gallon buckets;
5. Tap water;
6. Deionized water;
7. Liquinox;
8. Plastic sheeting;
9. Box cooler for storage of the collected samples; and,
10. Self-adhesive jar labels and chain-of-custody (COC) sheets;

2.2.2 Sampling Procedures

Presented below is the procedure followed in the field:

1. Initiate boring using the direct-push drill rig;
2. Advance the boring to the first sampling depth;
3. Collect samples in acetate liners driven by the drill rig and cut liners into segments representing the appropriate sample interval. Soil from each segment was homogenized by the laboratory;
4. Appropriately label all samples with the boring number, sample depth, and time and date of sample collection;
5. Place the samples on ice in a cooler box;
6. Repeat the procedure for the remaining sample depths;
7. Collect two separate samples from 10% of the samples as QA/QC field sample duplicates; both samples will undergo the same analyses;
8. Backfill borings with soil cuttings and native soil to meet the existing grade;
9. Fill out chain-of-custody form, and;
10. Transport the samples on ice to a chemical testing laboratory certified by the California Department of Health Services, Environmental Laboratory Accreditation Program (ELAP).

3.0 RESULTS OF LABORATORY TESTING

3.1 Laboratory Analysis

Soil samples collected during the investigation were transported to BC Laboratories, Inc. (BC Labs) in Bakersfield, California for laboratory analyses. BC Labs is a laboratory certified by the California Department of Public Health, Environmental Laboratory Accreditation Program (ELAP). The results of the laboratory analysis are presented in laboratory analytical reports provided as Appendix B and include copies of the completed COC forms, laboratory analytical results, the quality control sample (field and laboratory) results, and a narrative of any deviations and corrective actions taken.

ADL testing was performed in order to determine soil handling and disposal options as well as for health and safety/worker protection. A brief description of the analytical process is provided as follows:

- All soil samples were analyzed for total lead using Environmental Protection Agency (EPA) Method 6010B.
- Sixty-four of the samples including all samples that contain greater or equal to 50 milligrams per kilogram (mg/kg) total lead were analyzed for soluble lead using the California Waste Extraction Test (WET) (Citric acid extraction/EPA Method 3050A) and 6010B for extractable lead.
- Samples that contained greater than or equal to 5 milligrams per liter (mg/l) of extractable lead using WET (citric acid), were analyzed using the De-Ionized Water WET method (DI-WET) and EPA Method 6010B for DI-WET extractable lead.
- Samples that contained greater than or equal to 100 mg/kg of total lead were analyzed using the EPA Toxic Characteristic Leaching Procedure (TCLP) using EPA Method 1311 and EPA Method 6010B for leachable lead.
- Ten percent of all soil samples were analyzed for pH by EPA Method 9045C.

3.2 ADL Analytical Results

The analytical results of this investigation are described in the following subsections. The analytical results for total and soluble lead analyses are summarized in Table 2, and the sampling locations with corresponding analytical data are shown on Figure 2.

3.2.1 Total Lead

Total lead was detected in each of the 156 samples analyzed. Total lead concentrations ranged from 0.75 mg/kg to 3100 mg/kg with an average detected concentration of 89.94 mg/kg. Thirty-eight of the 156 samples contained total lead at concentrations that equaled or exceeded the 50 mg/kg criteria requiring the samples to be analyzed for STLC-WET (citric acid). Twenty-five of the 156 samples contained total lead concentrations greater than 100 mg/kg; these samples were further analyzed using the TCLP.

One sample, NB99-8-0.5, was detected with concentrations of total lead exceeding the California Total Threshold Limit Concentration (TTLC) of 1000 mg/kg. This threshold is used as criteria for non-Resource Conservation and Recovery Act (non-RCRA) California hazardous waste. This sample was designated as an outlier in the statistical analysis.

3.2.2 Soluble Lead STLC (WET-Citrate)

Sixty-four samples were analyzed for soluble lead using the California WET method using citric acid. Thirty-eight of those samples analyzed contained total lead at a concentration greater than or equal to 50 mg/kg. The remaining samples which contained total lead at concentrations less than 50 mg/kg were analyzed in accordance with the Project requirements and Caltrans Guidance to improve the statistical significance of the investigation.

Detected concentrations ranged between 0.22 mg/L and 209 mg/L with an average detected concentration of 19.72 mg/L. Thirty-two samples, including one duplicate sample, collected from 21 borings exceeded the STLC threshold of 5 mg/L. Soil represented by these samples meets the criteria for hazardous waste in California known as non-RCRA hazardous waste. Twenty-one samples were collected from the 0-0.5 ft depth interval, nine from the 1-1.5 ft depth interval, and two were collected from the 2-2.5 ft depth interval.

3.2.3 Toxicity Characteristic Leaching Procedure (TCLP)

The 25 samples containing total lead at concentrations greater than or equal to 100 mg/kg including the samples that contained soluble lead (WET-citric acid) at concentrations greater than or equal to 5.0 mg/l were analyzed for soluble lead by the TCLP Method. Lead was detected at concentrations up to 3.6 mg/L. The TCLP threshold of 5 mg/L was not exceeded; therefore soil represented by these samples would not meet the criteria for federal RCRA hazardous waste.

3.2.4 Soluble Lead (WET-DI)

The thirty-two samples that contained soluble lead (WET-citric acid) at concentrations greater than the STLC of 5.0 mg/L were analyzed for soluble lead with the WET-DI method using deionized water. Lead was detected at concentrations up to 1.1 mg/L. Per the Variance, California non-RCRA hazardous soil with WET-DI values below 1.5 mg/L can be reused in Caltrans right-of-way provided the soil is placed a minimum of five feet above the maximum water table elevation and is covered by 1 foot of clean soil.

3.2.5 pH

The hydrogen ion concentration (pH) of the 16 samples analyzed ranged from 6.71 to 8.36, within normal range.

3.3 Data Validation

Group Delta and Orange Coast use Quality Assurance/Quality Control (QA/QC) measures to minimize and control errors associated with field and laboratory methods. Field QA/QC measures consist of cleaning sampling equipment between each use with a detergent solution followed by tap and distilled/purified water rinses as necessary. Equipment blank samples were not collected since samples were all collected within disposable acetate sleeves.

Laboratory QA/QC measures include the use of matrix spikes, duplicates, and method blanks, in addition to calculation of percent recovery and relative percentage difference. A review of the laboratory QA/QC results indicates satisfactory data reporting, and the data are of sufficient quality for the purposes of this report.

3.4 Previous ADL Investigation

In June of 2006, Shaw Environmental conducted an ADL investigation along portions of the SR-58 that are included in the Project. Group Delta was instructed not to collect soil samples from this area. Samples were collected from depths of 0.5 ft, 1.0 ft, and 2.0 ft bgs along unpaved soil in the center median. The investigation was conducted in general accordance with the ADL Guidance. The previous report prepared by Shaw Environmental, as well as boring locations, and analytical data is provided as Appendix C of this report.

4.0 STATISTICAL DATA EVALUATION

The following section describes the statistical methods utilized to evaluate the available lead data set for the site. The purpose of the data evaluation is help determine the UCLs of lead concentrations at each sampling depth to better classify soil for hazardous waste management, and for Variance applicability. A table from the ADL Guidance, titled *ADL Soil Management,* modified by Group Delta to reflect the requirements of the revised DTSC ADL Variance (DTSC, 2009), is included as Table 3. Table 3 includes the classification criteria and management requirements for various Caltrans soil designations.

In order to properly classify soil along the entire Project alignment, a soluble lead concentration must be estimated (predicted) for every total lead soil concentration where a strong correlation exists. In order to obtain an estimated corresponding soluble lead concentration for every total soil lead concentration, the total and soluble lead concentration data must fit within a best-fit curve. This statistical analysis was conducted using the software program ProUCL (version 5.0). ProUCL is recommended by the ADL Guidance as the appropriate statistical software to be used to perform the ADL statistical analyses. The outputs for the ProUCL calculations are presented as Appendices D, E, and F.

For the statistical analyses conducted for the Project, the Site was divided into five segments including both Northbound and Southbound SR-99, both Eastbound and Westbound SR-58, and the Southbound SR-99 exit at SR-58 (SR-99 Exit).

4.1 Population Distribution

A histogram generated by ProUCL indicates that the total lead data does not follow a discernable distribution and is nonparametric. However, a test for population distribution was not necessary in order to apply the appropriate statistical methods when examining the Upper Confidence Limits (UCLs) on the total lead means. The appropriate statistical method is automatically suggested by ProUCL v.5.0 and is dependent on the distribution of the data set analyzed. The recommended statistical methods provided by ProUCL for calculating 95% UCLs are provided herein. A histogram for the data distribution is presented as Appendix D.

Data for total lead concentrations was analyzed by ProUCL to identify potential outliers in the data set. Identified potential outliers must be removed from the sample results prior to both the regression correlation and 95% UCL calculations discussed below. One outlier was identified as sample NB99-8-0.5 (0 to 0.5 ft bgs) collected on the Northbound SR-99. This sample had a total lead concentration of 3100 mg/kg.

4.2 Data Correlation

Total and corresponding WET lead concentrations are bivariate data possessing a linear structure. A linear regression analysis is used to create a soluble lead prediction model using total lead data for use in calculating potential UCLs. To utilize this method, it must be determined if there is a reliable correlation between total lead and soluble lead. If there is a reliable correlation between total and soluble lead, the prediction model can approximate soluble lead values that were not determined during the laboratory analysis. This creates a larger WET data set to provide a more sound statistical analysis.

A line is fit to the data using the equation:

$y = mx + b$

Where:

- y = soluble lead by WET-citric acid (mg/l)
- x = total lead concentration (mg/kg)
- b = y-intercept
- m = slope = $(r \times s_t)/s_s$

Where:

- r = correlation coefficient
- s_t = standard deviation of the total lead concentrations
- s_s = standard deviation of the soluble lead concentrations

4.2.1 Data Correlation

The linear regression correlating the analytical data was performed using ProUCL v.5.0. The results of the regression are presented in Appendix E. An ordinary least squares (OLS) regression was used to find the equation of a best-fit line (regression line).

The correlation coefficient (r) for this relationship is calculated as 0.9753. The integrity of the equation is directly related to ‘r’, which should be greater than or equal to 0.8. If ‘r’ is less than 0.8, then the analytical data should be reviewed and a determination of the 95% UCL on the mean for soluble lead may not be achievable by this method. In this case, ‘r’ is greater than 0.8, meaning there is a linear relationship between total and WET lead concentrations. Therefore the total lead data procured during the investigation can be correlated to predict STLC WET lead concentrations.

The equation of the regression line was determined to be $y = 0.0675(x) + 0.0976$, where x represents total lead concentrations and y represents predicted WET lead concentrations. This

equation was used to predict the expected WET lead concentrations and in turn calculate UCLs for predicted WET data. The linear regression analysis, including a scatter plot depicting the data points along with the regression line, is presented in Appendix E. Predicted STLC WET lead concentrations are provided in Table 2 and are displayed in red.

4.3 95% Upper Confidence Limit Analysis

The upper one-sided 95% UCL of the arithmetic mean is defined as the value that, when calculated repeatedly for randomly drawn subsets of site data, equals or exceeds the true mean 95% of the time. Statistical confidence limits are the classical tool for addressing uncertainties of a distribution mean. The UCLs of the arithmetic mean concentration are used as the mean concentrations because it is not possible to know the true mean due to the essentially infinite number of soil samples that could be collected from a site. The UCLs therefore account for uncertainties due to limited sampling data. The actual Site soil lead concentrations may vary from statistical projections as results are influenced by the limited number of samples collected within each segment analyzed.

Prior to calculations, samples without detectable concentrations of soluble lead were assigned values equal to half the laboratory reporting limit as instructed by the Caltrans ADL Guidance.

The 95% UCLs of the mean for use on the project are presented as results from the ProUCL analyses. Statistical analyses were completed for the project segments with the following depth interval considerations:

- Surface to 0.5 ft bgs
- 1.0 to 1.5 ft bgs
- 2.0 ft to 2.5 ft bgs
- Surface to 1.5 ft bgs
- Surface to 2.5 ft bgs

The Site was divided into five segments including both Northbound and Southbound SR-99, both Eastbound and Westbound SR-58, and the SR-99 Exit. The recommended UCL methods for use on the project are presented as results from the ProUCL analyses. The tables below provide data for specified depth intervals on the five segments including the results of the 95% UCL analyses, the waste class, the corresponding Caltrans Soil Type, and the UCL statistical method utilized per ProUCL. Significant figures vary based upon the ProUCL output. The ProUCL outputs for each UCL analysis are provided in Appendix F.

Analytical results and correlated soluble lead values ascertained during the June 2006 investigation conducted by Shaw Environmental were incorporated into UCL analyses conducted for the Eastbound and Westbound SR-58.

Diagrams were also developed for the five project segments showing the expected total and soluble lead concentrations under different excavation scenarios. The diagrams show the expected lead concentrations within these zones both for excavated layers and the soil underlying these excavated layers. These block diagrams are included as Appendix G.

4.3.1 UCL Analysis – Northbound SR-99

The 95% UCL analysis conducted for the Northbound SR-99 utilized both laboratory provided data and estimated WET data procured through data correlation using the best fit curve. UCL results are provided in the table below:

TABLE A
Northbound SR-99 – 95% Upper Confidence Limit

Depth (feet)	Total Lead Mean (mg/kg)	Total Lead UCL (mg/kg)	Soluble Lead Mean (mg/kg)	Soluble Lead UCL (mg/L)	Waste Class	Caltrans Designation	UCL Used
0.0-0.5	146.8	213.7	9.118	13.6	Hazardous	Y1 or Z2	95% Student's-t UCL
1.0-1.5	64.04	222	4.271	14	Hazardous	Y1 or Z2	95% Chebyshev (Mean, Sd) UCL
2.0-2.5	12.76	36.08	0.92	2.464	Non-hazardous	X	95% Chebyshev (Mean, Sd) UCL
0.0-1.5	103.1	220.3	6.559	14.03	Hazardous	Y1 or Z2	95% Chebyshev (Mean, Sd) UCL
0.0-2.5	73.02	155.2	4.68	9.913	Hazardous	Y1 or Z2	95% Chebyshev (Mean, Sd) UCL
1.0-2.5	39.1	122.1	2.641	7.77	Hazardous	Y1 or Z2	95% Chebyshev (Mean, Sd) UCL

All depth intervals along the Northbound SR-99, with the exception of the interval from 2.0-2.5 ft bgs, would be classified as California non-RCRA hazardous waste and Caltrans soil type 'Y1' material if reused or type 'Z2' material if disposed off-site. Soil at the interval from 2.0-2.5 ft bgs would be classified as non-hazardous waste and Caltrans soil type 'X' material if reused or disposed off-site.

4.3.2 UCL Analysis – Southbound SR-99

The 95% UCL analysis conducted for the Southbound SR-99 utilized both laboratory provided data and estimated WET data procured through data correlation using the best fit curve. UCL results are provided in the table below:

TABLE B
Southbound SR-99 – 95% Upper Confidence Limit

Depth (feet)	Total Lead Mean (mg/kg)	Total Lead UCL (mg/kg)	Soluble Lead Mean (mg/kg)	Soluble Lead UCL (mg/L)	Waste Class	Caltrans Designation	UCL Used
0.0-0.5	151	441.1	11.26	34.47	Hazardous	Y1 or Z2	95% Chebyshev (Mean, Sd) UCL
1.0-1.5	20.51	66.11	1.783	5.948	Hazardous	Y1 or Z2	95% Chebyshev (Mean, Sd) UCL
2.0-2.5	4.055	6.197	0.326	0.465	Non-hazardous	X	95% H-UCL
0.0-1.5	85.76	239	6.521	18.7	Hazardous	Y1 or Z2	95% H-UCL
0.0-2.5	60.89	169.8	4.636	13.27	Hazardous	Y1 or Z2	95% Chebyshev (Mean, Sd) UCL
1.0-2.5	12.83	37.94	1.103	3.382	Non-hazardous	X	95% Chebyshev (Mean, Sd) UCL

All depth intervals along the Southbound SR-99, with the exception of the intervals of 2.0-2.5 ft bgs and 1.0-2.5 ft bgs, would be classified as California non-RCRA hazardous waste and Caltrans soil type 'Y1' material if reused or type 'Z2' material if disposed off-site. Soil at the intervals from 2.0-2.5 and 1.0-2.5 ft bgs would be classified as non-hazardous waste and Caltrans soil type 'X' material if reused or disposed off-site.

4.3.3 UCL Analysis – Eastbound SR-58

The 95% UCL analysis conducted for the Eastbound SR-58 utilized laboratory provided data from both the 2006 and 2014 investigations and estimated WET data procured through data correlation using the best fit curve. UCL results are provided in the table below:

TABLE C
Eastbound SR-58 – 95% Upper Confidence Limit

Depth (feet)	Total Lead Mean (mg/kg)	Total Lead UCL (mg/kg)	Soluble Lead Mean (mg/kg)	Soluble Lead UCL (mg/L)	Waste Class	Caltrans Designation	UCL Used
0.0-0.5	54.26	144.8	3.694	10.06	Hazardous	Y1 or Z2	95% Chebyshev (Mean, Sd) UCL
1.0-1.5	4.366	5.706	0.377	0.614	Non-hazardous	X	95% Chebyshev (Mean, Sd) UCL
2.0-2.5	4.23	5.793	0.37	0.434	Non-hazardous	X	95% H-UCL

0.0-1.5	29.31	75.91	2.035	5.303	Hazardous	Y1 or Z2	95% Chebyshev (Mean, Sd) UCL
0.0-2.5	20.95	52.33	1.48	3.678	Non-hazardous	X	95% Chebyshev (Mean, Sd) UCL
1.0-2.5	4.298	5.323	0.374	0.549	Non-hazardous	X	95% Chebyshev (Mean, Sd) UCL

Soil along the Eastbound SR-58 from depth intervals of 0.0-0.5 and 0-1.5 ft bgs would be classified as California non-RCRA hazardous waste and Caltrans soil type 'Y1' material if reused or type 'Z2' material if disposed off-site. The remaining depth intervals would be classified as non-hazardous waste and Caltrans soil type 'X' material if reused or disposed off-site.

4.3.4 UCL Analysis – Westbound SR-58

The 95% UCL analysis conducted for the Westbound SR-58 utilized laboratory provided data from both the 2006 and 2014 investigations and estimated WET data procured through data correlation using the best fit curve. UCL results are provided in the table below:

TABLE D
Westbound SR-58 – 95% Upper Confidence Limit

Depth (feet)	Total Lead Mean (mg/kg)	Total Lead UCL (mg/kg)	Soluble Lead Mean (mg/kg)	Soluble Lead UCL (mg/L)	Waste Class	Caltrans Designation	UCL Used
0.0-0.5	35.32	98.04	1.998	5.765	Hazardous	Y1 or Z2	95% Chebyshev (Mean, Sd) UCL
1.0-1.5	4.372	6.505	0.393	0.7	Non-hazardous	X	95% Chebyshev (Mean, Sd) UCL
2.0-2.5	4.259	5.729	0.385	0.466	Non-hazardous	X	95% H-UCL
0.0-1.5	20.08	52.86	1.208	3.161	Non-hazardous	X	95% Chebyshev (Mean, Sd) UCL
0.0-2.5	14.86	37.05	0.936	2.256	Non-hazardous	X	95% Chebyshev (Mean, Sd) UCL
1.0-2.5	4.315	5.505	0.389	0.584	Non-hazardous	X	95% Chebyshev (Mean, Sd) UCL

Soil along the Westbound SR-58 from depth interval 0.0-0.5 ft bgs would be classified as California non-RCRA hazardous waste and Caltrans soil type 'Y1' material if reused or type 'Z2' material if disposed off-site. All other depth intervals considered would be classified as non-hazardous waste and Caltrans soil type 'X' material if reused or disposed off-site.

4.3.5 UCL Analysis – SR-99 Exit

The 95% UCL analysis conducted for the SR-99 Exit utilized both laboratory provided data and estimated WET data procured through data correlation using the best fit curve. UCL results are provided in the table below:

TABLE E
SR-99 Exit – 95% Upper Confidence Limit

Depth (feet)	Total Lead Mean (mg/kg)	Total Lead UCL (mg/kg)	Soluble Lead Mean (mg/kg)	Soluble Lead UCL (mg/L)	Waste Class	Caltrans Designation	UCL Used
0.0-0.5	230.6	586.7	13.06	33.26	Hazardous	Y1 or Z2	95% Student's-t UCL
1.0-1.5	257.8	655.6	18.89	44.83	Hazardous	Y1 or Z2	95% Student's-t UCL
2.0-2.5	87.2	193.4	6.946	15.09	Hazardous	Y1 or Z2	95% Student's-t UCL
0.0-1.5	244.2	759.2	15.97	61.66	Hazardous	Y1 or Z2	95% Adjusted Gamma UCL
0.0-2.5	191.9	546.3	12.96	35.08	Hazardous	Y1 or Z2	95% Chebyshev (Mean, Sd) UCL
1.0-2.5	172.5	588.3	12.92	40.53	Hazardous	Y1 or Z2	95% Chebyshev (Mean, Sd) UCL

The soil analyzed along the SR-99 Exit, including all depth intervals considered, would be classified as California non-RCRA hazardous waste and Caltrans soil type 'Y1' material if reused or type 'Z2' material if disposed off-site. These values, however, are statistically insignificant as the number of samples required to adequately perform ProUCL analysis was not met. Samples from the northern-most three locations are classified as non-hazardous waste, and Caltrans designation 'X', while the southern-most two locations would be classified as hazardous material and 'Y1 or 'Z2'. The statistical analyses were run in lieu of dividing the segment based upon lead concentrations detected in individual borings.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Under the DTSC Variance, the Caltrans Guidance, and federal and state hazardous waste classifications, soil can be categorized into specific ADL soil management types (Table 3). To classify the soil on the Project, Group Delta conducted statistical analyses after dividing the Site into five segments including both Northbound and Southbound SR-99, both Eastbound and Westbound SR-58, and the SR-99 Exit. Total lead values were below regulatory levels. However, soluble lead values generally exceeded the STLC value of 5 mg/L for the remaining segments.

- Soil from the Northbound and Southbound SR-99 shoulders to a depth of 1.5 ft bgs would be classified as non-RCRA hazardous waste and Caltrans soil type 'Y1' if reused or 'Z2' material if disposed offsite. Soil from the depth interval 2.0-2.5 ft bgs would be classified as non-hazardous waste and Caltrans soil type 'X' material if reused or disposed offsite.

- Soil from the Eastbound and Westbound SR-58 shoulders to a depth of 0.5 ft bgs would be classified as non-RCRA hazardous waste and Caltrans soil type 'Y1' if reused or 'Z2' material if disposed offsite. Soil represented by samples collected from lower depth intervals would be classified as non-hazardous waste and Caltrans soil type 'X' material if reused or disposed off-site.

- For the SR-99 and SR-58 segments discussed above, if hazardous soil at shallow intervals is mixed with underlying non-hazardous soil during excavation, this could potentially statistically render the excavated material as hazardous, thus generating additional hazardous soil. This is evidenced by the statistical analyses provided in Section 4.3 and the Block Diagrams provided as Appendix G.

- The SR-99 Exit contains soil classified as non-RCRA hazardous waste and Caltrans soil types 'Y1' if reused or Z2' material if disposed offsite for all depth intervals considered. The number of samples associated with the five boring locations in this segment was deemed insufficient for a statistical analysis using ProUCL. However, the statistical analyses was run in lieu of dividing the segment based upon lead concentrations detected in individual borings.

Based on the analytical results and conclusions drawn above, recommendations for the site are summarized below:

1. Project-specific special provisions should be included in the construction contract addressing proper soil management and the development and implementation of a Lead Compliance Plan. A Lead Compliance Plan, developed by a Certified Industrial

Hygienist (CIH) in accordance with the Caltrans Guidance, will identify health and safety requirements and best management practices for the handling of lead contaminated soil.

2. Excavated soil classified as 'Y1' that can be reused on the Project requires (at minimum) one foot of clean soil cover if reused on-site in addition to health and safety and soil management requirements in accordance with the Caltrans Guidance.

3. Excavated soil classified as 'X' is not restricted for on-site use. Surplus soil classified as 'X' can be disposed of as non-hazardous waste at a Class III landfill or exported for reuse elsewhere in accordance with the destination's waste acceptance policy and local environmental regulations.

4. If surplus 'Y1' soil is not resampled and characterized, it will be classified as 'Z2' and is to be disposed of as California non-RCRA hazardous waste at a Class I facility or permitted out of state facility in accordance with Title 22 California Code of Regulations (CCR).

5. When shallow 'Z2' soil is excavated and subject to export, the soil can be stockpiled and re-sampled to better characterize the soil and determine the appropriate waste classification. Re-sampling could serve to reduce the amount of hazardous waste soil generated on the Project and could increase the amount of soil that can be reused on-site.

6.0 HEALTH EFFECTS OF LEAD

Concentrations of lead in soil at the site represent a potential threat to the health of site workers performing earthwork activities. Lead in its element form is a heavy, ductile, soft, gray metal. The permissible exposure limit (PEL) for lead is 0.05 milligrams per cubic meter (mg/m3) in air based on an eight-hour time-weighted average (TWA); Immediately Dangerous to Life and Health (IDLH) exposure limit is 100 mg/m^3 as established by the National Institute of Occupational Safety and Health (NIOSH).

Exposure may produce several symptoms including weakness, eye irritation, facial pallor, pale eyes, lassitude, insomnia, anemia, tremors, malnutrition, constipation, paralysis of the wrists and ankles, abdominal pain, colic, nephropathy, encephalopathy, gingival lead line, hypertension, anorexia, and weight loss. Target organs are the central nervous system, kidneys, eyes, blood, gingival tissue, and the gastrointestinal tract. Because of the potential hazard from exposure to lead-contaminated soil, a Health and Safety Plan (HSP) and/or Lead Compliance Plan for site work should be prepared by a CIH. In addition, all site workers (earthwork) should have completed a training program meeting the requirements of 29 CFR/910.120 and 8 CCR 1532.1. The plan developed by the CIH should include a hazard analysis, dust control measures, air monitoring, signage, work practices, emergency response plans, personal protective equipment, decontamination, and documentation.

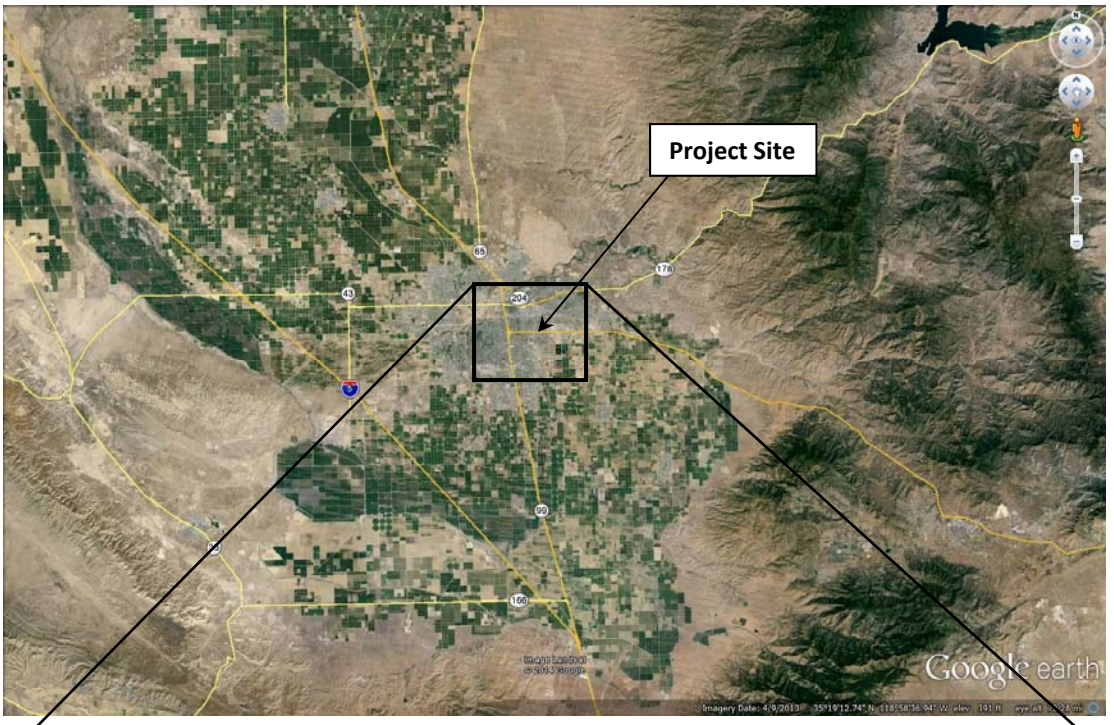
7.0 REFERENCES

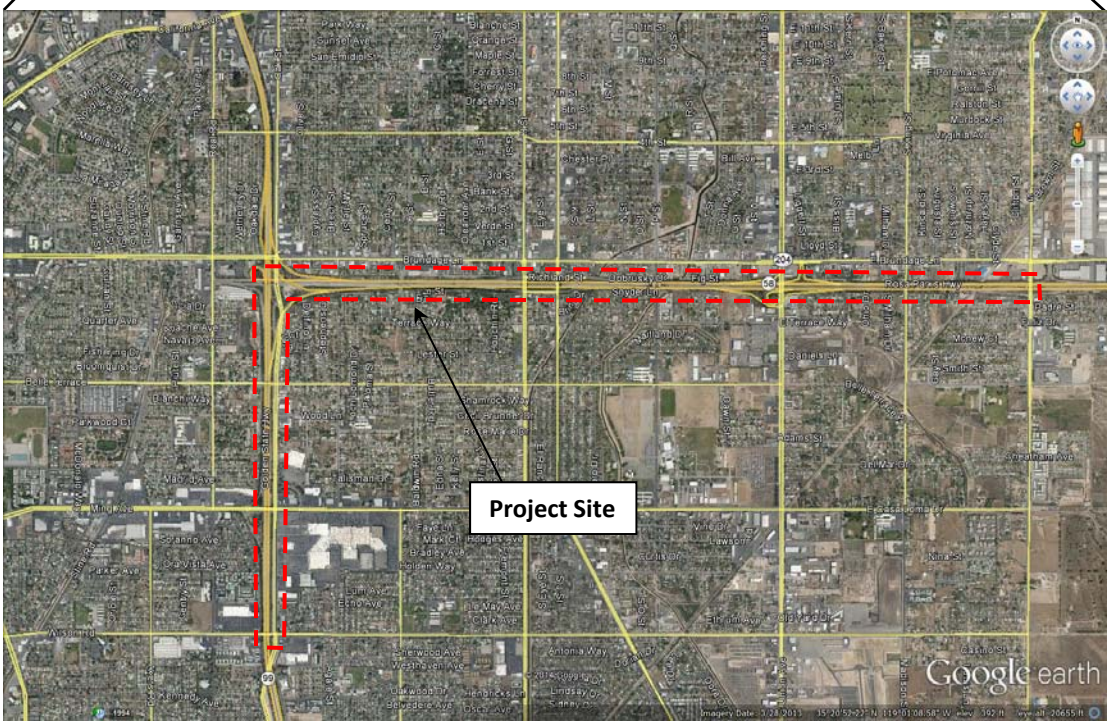
Group Delta Consultants, "Aerially Deposited Lead Site Investigation, Centennial/Beltway Operational Improvements Project, Bakersfield, California," dated April 8, 2014, prepared for Parsons Corporation.

California Department of Transportation (Caltrans), "Caltrans Aerially Deposited Lead Guidance," dated June 2007.

Shaw Environmental, Inc., "Site Investigation Report, Soils Investigation for Aerially Deposited Lead," dated June 9, 2006, prepared for California Department of Transportation.

Figures





EA: 06-48461
PN#: 06 1400 0064
SR#: 06-KER-58 PM R52.3/R55.4
06-KER-99 PM 22.1/22.7

N

Reference: ***Google Maps***

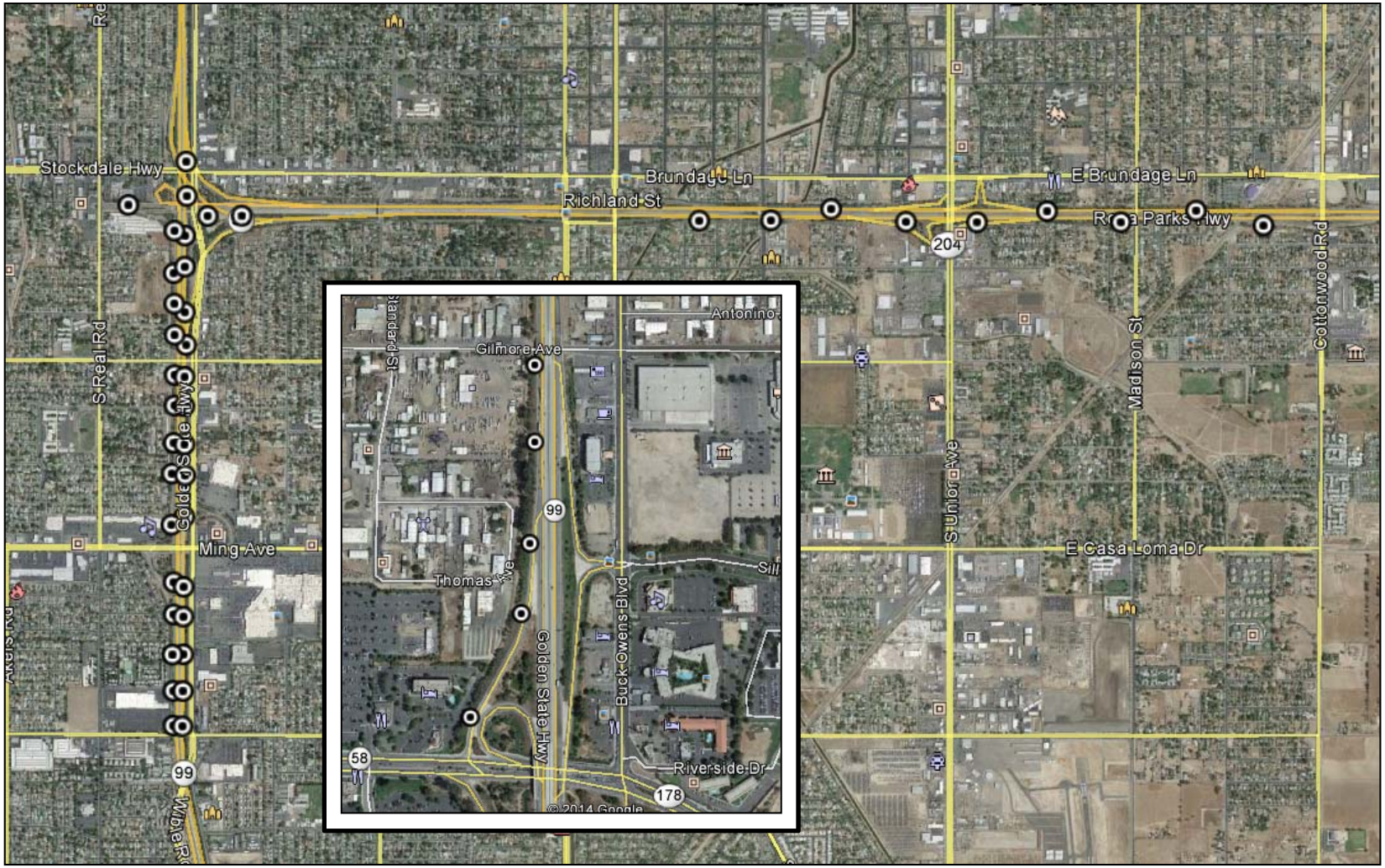
GROUP DELTA

GDC Project No. EN024

Aerially Deposited Lead Investigation
Centennial/Beltway Operational Improvements
Bakersfield, CA

Site Vicinity Map

Figure 1



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GROUP DELTA

GDC Project No. EN015

Aerially Deposited Lead Investigation
Centennial/Beltway Operational Improvements Project
Bakersfield, California

Sample Location Map

Figure 2a

Reference: ***Google Earth***

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
SB99-3-0.5	0	0.5	54	0.28	--	--	8.29
SB99-3-1	1	1.5	3.2	--	--	--	--
SB99-3-1-dup	1	1.5	1.4	ND>0.50	--	--	--
SB99-3-2	2	2.5	1.6	--	--	--	--

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
NB99-3-0.5	0	0.5	220	11	0.35	0.23	--
NB99-3-1	1	1.5	3.0	--	--	--	--
NB99-3-2	2	2.5	1.3	--	--	--	--

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
SB99-2-0.5	0	0.5	8.5	--	--	--	--
SB99-2-1	1	1.5	1.9	--	--	--	--
SB99-2-2	2	2.5	27	--	--	--	--

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
NB99-2-0.5	0	0.5	320	7.4	0.085	0.18	--
NB99-2-1	1	1.5	3.5	--	--	--	--
NB99-2-2	2	2.5	1.1	--	--	--	--

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
SB99-1-0.5	0	0.5	240	17	0.51	0.22	--
SB99-1-1	1	1.5	16	--	--	--	7.91
SB99-1-2	2	2.5	0.87	ND>0.50	--	--	--

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
NB99-1-0.5	0	0.5	72	3.5	--	--	--
NB99-1-1	1	1.5	0.75	--	--	--	7.78
NB99-1-2	2	2.5	0.86	ND>0.50	--	--	--

Notes:
- Denotes STLC concentrations equal to or exceeding 5.0 mg/L
- Denotes identified total lead outlier concentration
- Value — Correlated STLC WET Concentrations
- mg/kg — Milligrams per Kilogram
- mg/L — Milligrams per Liter
- STLC — Soluble Threshold Limit Concentration
- WET — Waste Extraction Test using Citric Acid
- TCLP — Toxicity Characteristic Leaching Procedure
- WET-DI — WET using DI-water
- pH — Hydrogen Ion Concentration
- -- — Not Analyzed

N

GROUP DELTA

Reference: ***Google Earth***

GDC Project No. EN024

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Centennial/Beltway Operational Improvements
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Sample Location Map

Figure 2b

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
SB99-5-0.5	0	0.5	210	8.6	0.032	0.087	--
SB99-5-1	1	1.5	79	6.2	0.033	--	--
SB99-5-2	2	2.5	3.1	ND>0.50	--	--	--

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
NB99-5-0.5	0	0.5	310	24	0.098	0.25	--
NB99-5-1	1	1.5	690	42	0.73	0.72	--
NB99-5-1-dup	1	1.5	4.7	--	--	--	--
NB99-5-2	2	2.5	2.3	--	--	--	--

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
SB99-4-0.5	0	0.5	4.2	--	--	--	--
SB99-4-1	1	1.5	3.0	--	--	--	--
SB99-4-2	2	2.5	1.8	--	--	--	--

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
NB99-4-0.5	0	0.5	330	23	0.36	0.25	--
NB99-4-1	1	1.5	3.8	ND>0.50	--	--	--
NB99-4-2	2	2.5	8.1	--	--	--	--

Notes:
- Denotes STLC concentrations equal to or exceeding 5.0 mg/L
- Denotes identified total lead outlier concentration
- Value — Correlated STLC WET Concentrations
- mg/kg — Miligrams per Kilogram
- mg/L — Miligrams per Liter
- STLC — Soluble Threshold Limit Concentration
- WET — Waste Extraction Test using Citric Acid
- TCLP — Toxicity Characteristic Leaching Procedure
- WET-DI — WET using DI-water
- pH — Hydrogen Ion Concentration
- -- — Not Analyzed

N

GROUP DELTA

GDC Project No. EN024

Aerially Deposited Lead Investigation
Centennial/Beltway Operational Improvements
Bakersfield, CA

Sample Location Map

Figure 2c

Reference: ***Google Earth***

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
SB99-7-0.5	0	0.5	4.4	ND>0.50	--	--	--
SB99-7-1	1	1.5	2.3	--	--	--	--
SB99-7-2	2	2.5	2.7	--	--	--	--

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
NB99-7-0.5	0	0.5	10	--	--	--	--
NB99-7-1	1	1.5	1.9	--	--	--	--
NB99-7-2	2	2.5	1.6	--	--	--	--
NB99-7-2-dup	2	2.5	2.7	ND>0.50	--	--	--

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
NB99-6-0.5	0	0.5	20	--	--	--	--
NB99-6-1	1	1.5	1.8	ND>0.50	--	--	--
NB99-6-2	2	2.5	1.4	--	--	--	--

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
SB99-6-0.5	0	0.5	3.0	--	--	--	--
SB99-6-0.5-dup	0	0.5	2.6	--	--	--	--
SB99-6-1	1	1.5	2.3	--	--	--	--
SB99-6-2	2	2.5	2.7	--	--	--	8.08

Notes:
- Denotes STLC concentrations equal to or exceeding 5.0 mg/L
- Denotes identified total lead outlier concentration
- Value — Correlated STLC WET Concentrations
- mg/kg — Milligrams per Kilogram
- mg/L — Milligrams per Liter
- STLC — Soluble Threshold Limit Concentration
- WET — Waste Extraction Test using Citric Acid
- TCLP — Toxicity Characteristic Leaching Procedure
- WET-DI — WET using DI-water
- pH — Hydrogen Ion Concentration
- -- — Not Analyzed

N

GROUP DELTA

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Centennial/Beltway Operational Improvements
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Sample Location Map

Figure 2d

Reference: ***Google Earth***

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
SB99-10-0.5	0	0.5	950	77	0.51	0.68	6.71
SB99-10-1	1	1.5	23	--	--	--	--
SB99-10-2	2	2.5	1.5	ND>0.50	--	--	--

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
NB99-10-0.5	0	0.5	530	36	0.32	0.93	--
NB99-10-0.5-dup	0	0.5	4.0	--	--	--	--
NB99-10-1	1	1.5	1.9	ND>0.50	--	--	--
NB99-10-2	2	2.5	2.1	--	--	--	--

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
SB99-9-0.5	0	0.5	610	46	1.1	0.20	--
SB99-9-1	1	1.5	14	--	--	--	--
SB99-9-2	2	2.5	1.8	--	--	--	--

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
NB99-9-0.5	0	0.5	4.5	--	--	--	--
NB99-9-1	1	1.5	1.2	--	--	--	7.43
NB99-9-2	2	2.5	1.4	--	--	--	--

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
SB99-8-0.5	0	0.5	5.1	0.23	--	--	--
SB99-8-0.5-dup	0	0.5	3.3	--	--	--	--
SB99-8-1	1	1.5	3.4	--	--	--	7.95
SB99-8-2	2	2.5	4.5	ND>0.50	--	--	--

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
NB99-8-0.5	0	0.5	2100	209	--	3.6	--
NB99-8-1	1	1.5	160	12	0.97	1.0	--
NB99-8-2	2	2.5	3.1	--	--	--	--

Notes:
- Denotes STLC concentrations equal to or exceeding 5.0 mg/L
- Denotes identified total lead outlier concentration
- Value — Correlated STLC WET Concentrations
- mg/kg — Milligrams per Kilogram
- mg/L — Milligrams per Liter
- STLC — Soluble Threshold Limit Concentration
- WET — Waste Extraction Test using Citric Acid
- TCLP — Toxicity Characteristic Leaching Procedure
- WET-DI — WET using DI-water
- pH — Hydrogen Ion Concentration
- -- — Not Analyzed

N

GROUP DELTA

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Aerially Deposited Lead Investigation
Centennial/Beltway Operational Improvements
Bakersfield, CA

Sample Location Map

Figure 2e

Reference: ***Google Earth***

Sample ID	Sampling Depth From	Sampling Depth To	Total Lead	STLC WET	WET-DI	TCLP	pH
	(feet)		mg/kg	mg/L			
SB99-13-0.5	0	0.5	25	--	--	--	--
SB99-13-1	1	1.5	1.9	--	--	--	--
SB99-13-2	2	2.5	1.2	--	--	--	7.97

Sample ID	Sampling Depth From	Sampling Depth To	Total Lead	STLC WET	WET-DI	TCLP	pH
	(feet)		mg/kg	mg/L			
NB99-13-0.5	0	0.5	210	12	0.12	0.25	--
NB99-13-0.5-dup	0	0.5	12	--	--	--	--
NB99-13-1	1	1.5	27	--	--	--	--
NB99-13-2	2	2.5	9.3	0.42	--	--	8.23

Sample ID	Sampling Depth From	Sampling Depth To	Total Lead	STLC WET	WET-DI	TCLP	pH
	(feet)		mg/kg	mg/L			
SB99-12-0.5	0	0.5	7.1	--	--	--	--
SB99-12-1	1	1.5	5.0	--	--	--	--
SB99-12-1-dup	1	1.5	2.1	--	--	--	--
SB99-12-2	2	2.5	1.5	ND>0.50	--	--	--

Sample ID	Sampling Depth From	Sampling Depth To	Total Lead	STLC WET	WET-DI	TCLP	pH
	(feet)		mg/kg	mg/L			
NB99-12-0.5	0	0.5	4.6	--	--	--	--
NB99-12-1	1	1.5	4.1	ND>0.50	--	--	--
NB99-12-2	2	2.5	4.7	--	--	--	8.36
NB99-12-2-dup	2	2.5	3.7	--	--	--	8.22

Sample ID	Sampling Depth From	Sampling Depth To	Total Lead	STLC WET	WET-DI	TCLP	pH
	(feet)		mg/kg	mg/L			
SB99-11-0.5	0	0.5	89	7.6	0.26	--	--
SB99-11-1	1	1.5	160	15	0.27	0.29	--
SB99-11-2	2	2.5	3.5	--	--	--	--

Sample ID	Sampling Depth From	Sampling Depth To	Total Lead	STLC WET	WET-DI	TCLP	pH
	(feet)		mg/kg	mg/L			
NB99-11-0.5	0	0.5	4.3	--	--	--	--
NB99-11-1	1	1.5	4.9	--	--	--	--
NB99-11-1-dup	1	1.5	3.3	--	--	--	--
NB99-11-2	2	2.5	2.1	--	--	--	--

Notes:
- Denotes STLC concentrations equal to or exceeding 5.0 mg/L
- Denotes identified total lead outlier concentration
- Value — Correlated STLC WET Concentrations
- mg/kg — Milligrams per Kilogram
- mg/L — Milligrams per Liter
- STLC — Soluble Threshold Limit Concentration
- WET — Waste Extraction Test using Citric Acid
- TCLP — Toxicity Characteristic Leaching Procedure
- WET-DI — WET using DI-water
- pH — Hydrogen Ion Concentration
- -- — Not Analyzed

N

GROUP DELTA

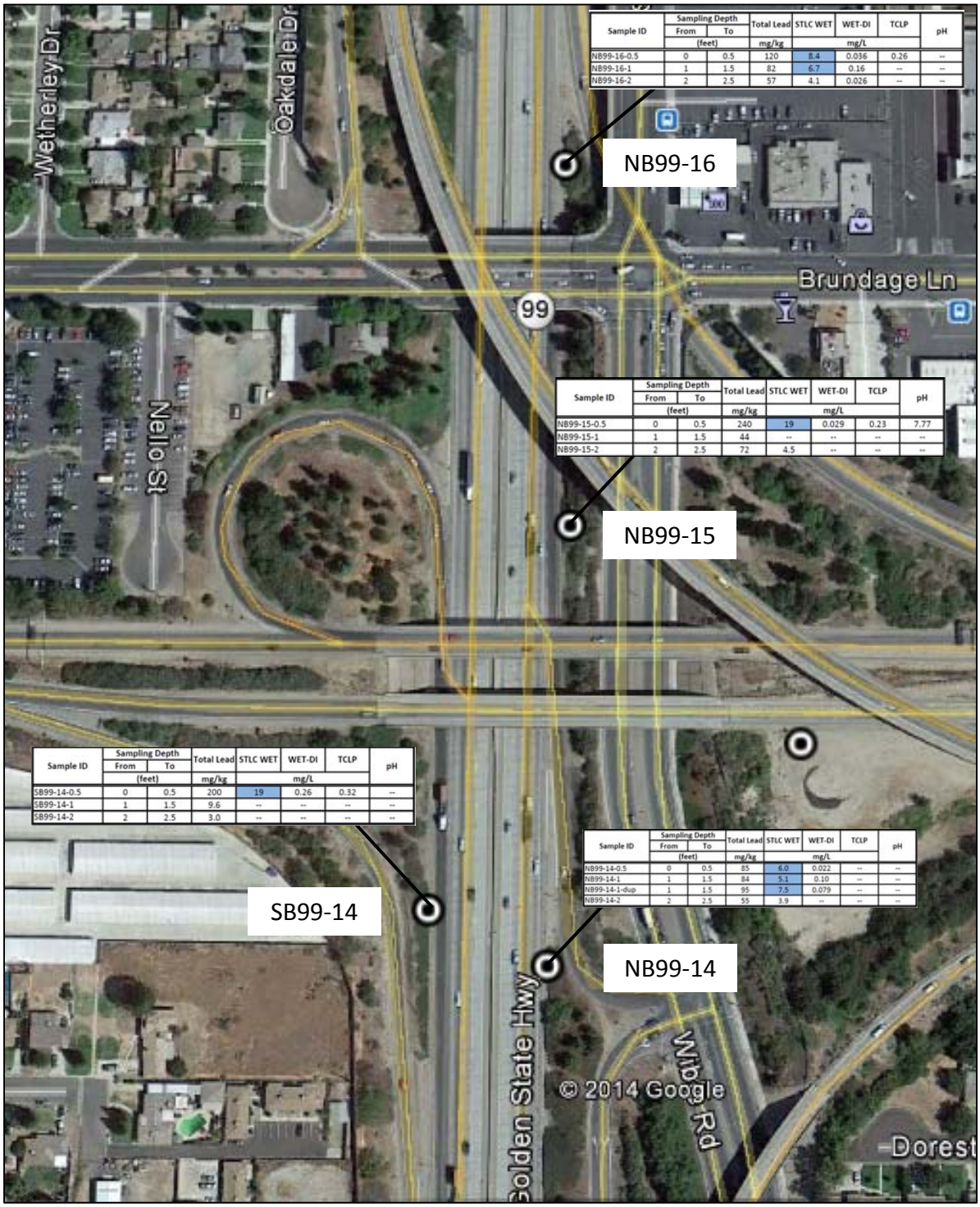
GDC Project No. EN024

Aerially Deposited Lead Investigation
Centennial/Beltway Operational Improvements
Bakersfield, CA

Sample Location Map

Figure 2f

Reference: ***Google Earth***



Sample ID	Sampling Depth From	Sampling Depth To	Total Lead	STLC WET	WET-DI	TCLP	pH
	(feet)		mg/kg	mg/L			
NB99-16-0.5	0	0.5	120	8.4	0.036	0.26	--
NB99-16-1	1	1.5	82	6.7	0.16	--	--
NB99-16-2	2	2.5	57	4.1	0.026	--	--

Sample ID	Sampling Depth From	Sampling Depth To	Total Lead	STLC WET	WET-DI	TCLP	pH
	(feet)		mg/kg	mg/L			
NB99-15-0.5	0	0.5	240	19	0.029	0.23	7.77
NB99-15-1	1	1.5	44	--	--	--	--
NB99-15-2	2	2.5	72	4.5	--	--	--

Sample ID	Sampling Depth From	Sampling Depth To	Total Lead	STLC WET	WET-DI	TCLP	pH
	(feet)		mg/kg	mg/L			
SB99-14-0.5	0	0.5	200	19	0.26	0.32	--
SB99-14-1	1	1.5	9.6	--	--	--	--
SB99-14-2	2	2.5	3.0	--	--	--	--

Sample ID	Sampling Depth From	Sampling Depth To	Total Lead	STLC WET	WET-DI	TCLP	pH
	(feet)		mg/kg	mg/L			
NB99-14-0.5	0	0.5	85	6.0	0.022	--	--
NB99-14-1	1	1.5	84	5.1	0.10	--	--
NB99-14-1-dup	1	1.5	95	7.5	0.079	--	--
NB99-14-2	2	2.5	55	3.9	--	--	--

Notes:
- Denotes STLC concentrations equal to or exceeding 5.0 mg/L
- Denotes identified total lead outlier concentration
- Value — Correlated STLC WET Concentrations
- mg/kg — Milligrams per Kilogram
- mg/L — Milligrams per Liter
- STLC — Soluble Threshold Limit Concentration
- WET — Waste Extraction Test using Citric Acid
- TCLP — Toxicity Characteristic Leaching Procedure
- WET-DI — WET using DI-water
- pH — Hydrogen Ion Concentration
- -- — Not Analyzed

N

GROUP DELTA

GDC Project No. EN024

Aerially Deposited Lead Investigation
Centennial/Beltway Operational Improvements
Bakersfield, CA

Sample Location Map

Figure 2g

Reference: ***Google Earth***

Sample ID	Sampling Depth From	Sampling Depth To	Total Lead	STLC WET	WET-DI	TCLP	pH
	(feet)		mg/kg	mg/L			
WB58-1-0.5	0	0.5	29	1.2	--	--	--
WB58-1-1	1	1.5	13	--	--	--	8.13
WB58-1-2	2	2.5	5.6	--	--	--	--

Sample ID	Sampling Depth From	Sampling Depth To	Total Lead	STLC WET	WET-DI	TCLP	pH
	(feet)		mg/kg	mg/L			
EB58-1-0.5	0	0.5	11	--	--	--	--
EB58-1-1	1	1.5	8.4	0.22	--	--	--
EB58-1-1-dup	1	1.5	5.9	--	--	--	--
EB58-1-2	2	2.5	3.9	--	--	--	--

Notes:

	Denotes STLC concentrations equal to or exceeding 5.0 mg/L
	Denotes identified total lead outlier concentration
Value	Correlated STLC WET Concentrations
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
STLC	Soluble Threshold Limit Concentration
WET	Waste Extraction Test using Citric Acid
TCLP	Toxicity Characteristic Leaching Procedure
WET-DI	WET using DI-water
pH	Hydrogen Ion Concentration
--	Not Analyzed

N

GROUP DELTA

GDC Project No. EN024

Aerially Deposited Lead Investigation
Centennial/Beltway Operational Improvements
Bakersfield, CA

Sample Location Map

Figure 2h

Reference: ***Google Earth***

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
EB58-2-0.5	0	0.5	4.7	--	--	--	--
EB58-2-1	1	1.5	7.0	--	--	--	--
EB58-2-2	2	2.5	5.6	--	--	--	--

Notes:
- Denotes STLC concentrations equal to or exceeding 5.0 mg/L
- Denotes identified total lead outlier concentration
- Value — Correlated STLC WET Concentrations
- mg/kg — Milligrams per Kilogram
- mg/L — Milligrams per Liter
- STLC — Soluble Threshold Limit Concentration
- WET — Waste Extraction Test using Citric Acid
- TCLP — Toxicity Characteristic Leaching Procedure
- WET-DI — WET using DI-water
- pH — Hydrogen Ion Concentration
- -- — Not Analyzed

N

GROUP DELTA

GDC Project No. EN024

Aerially Deposited Lead Investigation
Centennial/Beltway Operational Improvements
Bakersfield, CA

Sample Location Map

Figure 2i

Reference: ***Google Earth***

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
EB58-3-0.5	0	0.5	82	6.6	ND	--	--
EB58-3-1	1	1.5	3.1	ND>0.50	--	--	7.90
EB58-3-2	2	2.5	1.5	--	--	--	--

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
EB58-4-0.5	0	0.5	15	--	--	--	--
EB58-4-1	1	1.5	4.0	--	--	--	--
EB58-4-2	2	2.5	1.6	--	--	--	--

Notes:
- Denotes STLC concentrations equal to or exceeding 5.0 mg/L
- Denotes identified total lead outlier concentration
- Value — Correlated STLC WET Concentrations
- mg/kg — Milligrams per Kilogram
- mg/L — Milligrams per Liter
- STLC — Soluble Threshold Limit Concentration
- WET — Waste Extraction Test using Citric Acid
- TCLP — Toxicity Characteristic Leaching Procedure
- WET-DI — WET using DI-water
- pH — Hydrogen Ion Concentration
- -- — Not Analyzed

N

GROUP DELTA

GDC Project No. EN024

Aerially Deposited Lead Investigation
Centennial/Beltway Operational Improvements
Bakersfield, CA

Sample Location Map

Figure 2j

Reference: ***Google Earth***

Sample ID	Sampling Depth From	Sampling Depth To	Total Lead	STLC WET	WET-DI	TCLP	pH
	(feet)		mg/kg	mg/L			
WB58-2-0.5	0	0.5	13	--	--	--	--
WB58-2-1	1	1.5	3.3	--	--	--	--
WB58-2-2	2	2.5	2.5	--	--	--	--

Sample ID	Sampling Depth From	Sampling Depth To	Total Lead	STLC WET	WET-DI	TCLP	pH
	(feet)		mg/kg	mg/L			
EB58-5-0.5	0	0.5	48	3.8	--	--	--
EB58-5-1	1	1.5	7.6	--	--	--	--
EB58-5-2	2	2.5	4.0	ND>0.50	--	--	--
EB58-5-2-dup	2	2.5	1.6	--	--	--	--

Notes:
- Denotes STLC concentrations equal to or exceeding 5.0 mg/L
- Denotes identified total lead outlier concentration
- Value — Correlated STLC WET Concentrations
- mg/kg — Milligrams per Kilogram
- mg/L — Milligrams per Liter
- STLC — Soluble Threshold Limit Concentration
- WET — Waste Extraction Test using Citric Acid
- TCLP — Toxicity Characteristic Leaching Procedure
- WET-DI — WET using DI-water
- pH — Hydrogen Ion Concentration
- -- — Not Analyzed

N

GROUP DELTA

GDC Project No. EN024

Aerially Deposited Lead Investigation
Centennial/Beltway Operational Improvements
Bakersfield, CA

Sample Location Map

Figure 2k

Reference: ***Google Earth***

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
EB58-6-0.5	0	0.5	720	49	0.12	0.42	--
EB58-6-1	1	1.5	5.5	--	--	--	8.02
EB58-6-2	2	2.5	2.5	--	--	--	--

Notes:
- Denotes STLC concentrations equal to or exceeding 5.0 mg/L
- Denotes identified total lead outlier concentration
- Value — Correlated STLC WET Concentrations
- mg/kg — Milligrams per Kilogram
- mg/L — Milligrams per Liter
- STLC — Soluble Threshold Limit Concentration
- WET — Waste Extraction Test using Citric Acid
- TCLP — Toxicity Characteristic Leaching Procedure
- WET-DI — WET using DI-water
- pH — Hydrogen Ion Concentration
- -- — Not Analyzed

N

GROUP DELTA

GDC Project No. EN024

Aerially Deposited Lead Investigation
Centennial/Beltway Operational Improvements
Bakersfield, CA

Sample Location Map

Figure 2l

Reference: ***Google Earth***

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
WB58-3-0.5	0	0.5	170	12	0.066	0.21	--
WB58-3-0.5-dup	0	0.5	8.8	ND>0.50	--	--	--
WB58-3-1	1	1.5	6.8	--	--	--	--
WB58-3-2	2	2.5	7.6	--	--	--	--

Sample ID	Sampling Depth From (feet)	Sampling Depth To (feet)	Total Lead mg/kg	STLC WET mg/L	WET-DI mg/L	TCLP mg/L	pH
EB58-7-0.5	0	0.5	5.8	--	--	--	--
EB58-7-1	1	1.5	6.3	--	--	--	--
EB58-7-2	2	2.5	2.9	ND>0.50	--	--	--

Notes:
- Denotes STLC concentrations equal to or exceeding 5.0 mg/L
- Denotes identified total lead outlier concentration
- Value — Correlated STLC WET Concentrations
- mg/kg — Milligrams per Kilogram
- mg/L — Milligrams per Liter
- STLC — Soluble Threshold Limit Concentration
- WET — Waste Extraction Test using Citric Acid
- TCLP — Toxicity Characteristic Leaching Procedure
- WET-DI — WET using DI-water
- pH — Hydrogen Ion Concentration
- -- — Not Analyzed

N

GROUP DELTA

GDC Project No. EN024

Aerially Deposited Lead Investigation
Centennial/Beltway Operational Improvements
Bakersfield, CA

Sample Location Map

Figure 2m

Reference: ***Google Earth***

Sample ID	Sampling Depth From	Sampling Depth To	Total Lead	STLC WET	WET-DI	TCLP	pH
	(feet)		mg/kg	mg/L			
WB58-4-0.5	0	0.5	3.9	--	--	--	--
WB58-4-1	1	1.5	3.6	--	--	--	7.76
WB58-4-2	2	2.5	3.9	--	--	--	--

Sample ID	Sampling Depth From	Sampling Depth To	Total Lead	STLC WET	WET-DI	TCLP	pH
	(feet)		mg/kg	mg/L			
EB58-8-0.5	0	0.5	21	--	--	--	--
EB58-8-0.5-dup	0	0.5	51	4.1	--	--	--
EB58-8-1	1	1.5	4.8	--	--	--	--
EB58-8-2	2	2.5	2.3	ND>0.50	--	--	--

Notes:
- Denotes STLC concentrations equal to or exceeding 5.0 mg/L
- Denotes identified total lead outlier concentration
- Value — Correlated STLC WET Concentrations
- mg/kg — Milligrams per Kilogram
- mg/L — Milligrams per Liter
- STLC — Soluble Threshold Limit Concentration
- WET — Waste Extraction Test using Citric Acid
- TCLP — Toxicity Characteristic Leaching Procedure
- WET-DI — WET using DI-water
- pH — Hydrogen Ion Concentration
- -- — Not Analyzed

N

GROUP DELTA

Reference: ***Google Earth***

GDC Project No. EN024

Aerially Deposited Lead Investigation
Centennial/Beltway Operational Improvements
Bakersfield, CA

Sample Location Map

Figure 2n

Sample ID	Sampling Depth From	Sampling Depth To	Total Lead	STLC WET	WET-DI	TCLP	pH
	(feet)		mg/kg	mg/L			
SBExit-2-0.5	0	0.5	11	--	--	--	--
SBExit-2-1	1	1.5	14	0.47	--	--	--
SBExit-2-2	2	2.5	13	--	--	--	--

Sample ID	Sampling Depth From	Sampling Depth To	Total Lead	STLC WET	WET-DI	TCLP	pH
	(feet)		mg/kg	mg/L			
SBExit-1-0.5	0	0.5	12	0.32	--	--	--
SBExit-1-1	1	1.5	14	--	--	--	--
SBExit-1-2	2	2.5	6.0	--	--	--	--

Notes:
- Denotes STLC concentrations equal to or exceeding 5.0 mg/L
- Denotes identified total lead outlier concentration
- Value — Correlated STLC WET Concentrations
- mg/kg — Milligrams per Kilogram
- mg/L — Milligrams per Liter
- STLC — Soluble Threshold Limit Concentration
- WET — Waste Extraction Test using Citric Acid
- TCLP — Toxicity Characteristic Leaching Procedure
- WET-DI — WET using DI-water
- pH — Hydrogen Ion Concentration
- -- — Not Analyzed

N

GROUP DELTA

GDC Project No. EN024

Aerially Deposited Lead Investigation
Centennial/Beltway Operational Improvements
Bakersfield, CA

Sample Location Map

Figure 2o

Reference: ***Google Earth***

Sample ID	Sampling Depth From	Sampling Depth To	Total Lead	STLC WET	WET-DI	TCLP	pH
	(feet)		mg/kg	mg/L			
SBExit-4-0.5	0	0.5	220	12	0.014	0.10	--
SBExit-4-1	1	1.5	260	30	0.062	0.33	--
SBExit-4-2	2	2.5	260	19	0.30	0.54	--

Sample ID	Sampling Depth From	Sampling Depth To	Total Lead	STLC WET	WET-DI	TCLP	pH
	(feet)		mg/kg	mg/L			
SBExit-3-0.5	0	0.5	30	--	--	--	--
SBExit-3-1	1	1.5	21	0.93	--	--	--
SBExit-3-2	2	2.5	17	--	--	--	--

Notes:
- Denotes STLC concentrations equal to or exceeding 5.0 mg/L
- Denotes identified total lead outlier concentration
- Value — Correlated STLC WET Concentrations
- mg/kg — Milligrams per Kilogram
- mg/L — Milligrams per Liter
- STLC — Soluble Threshold Limit Concentration
- WET — Waste Extraction Test using Citric Acid
- TCLP — Toxicity Characteristic Leaching Procedure
- WET-DI — WET using DI-water
- pH — Hydrogen Ion Concentration
- -- — Not Analyzed

N

GROUP DELTA

GDC Project No. EN024

Aerially Deposited Lead Investigation
Centennial/Beltway Operational Improvements
Bakersfield, CA

Sample Location Map

Figure 2p

Reference: ***Google Earth***

Sample ID	Sampling Depth From	Sampling Depth To	Total Lead	STLC WET	WET-DI	TCLP	pH
	(feet)		mg/kg	mg/L			
SBExit-5-0.5	0	0.5	880	50	0.33	0.98	--
SBExit-5-1	1	1.5	980	62	0.38	1.3	--
SBExit-5-2	2	2.5	140	13	0.024	0.66	--

Notes:
- Denotes STLC concentrations equal to or exceeding 5.0 mg/L
- Denotes identified total lead outlier concentration
- Value — Correlated STLC WET Concentrations
- mg/kg — Milligrams per Kilogram
- mg/L — Milligrams per Liter
- STLC — Soluble Threshold Limit Concentration
- WET — Waste Extraction Test using Citric Acid
- TCLP — Toxicity Characteristic Leaching Procedure
- WET-DI — WET using DI-water
- pH — Hydrogen Ion Concentration
- -- — Not Analyzed

N

GROUP DELTA

GDC Project No. EN024

Aerially Deposited Lead Investigation
Centennial/Beltway Operational Improvements
Bakersfield, CA

Sample Location Map

Figure 2q

Reference: ***Google Earth***

Tables

Table 1
GPS Coordinates of Boring Locations
Centennial/Beltway Operational Improvements Project
Bakersfield, California
Group Delta Project Number EN024

Sample ID	Latitude	Longitude	Elevation (feet)
WB58-1	35.352858°	-119.041986°	392.29
WB58-2	35.352697°	-119.008587°	398.13
WB58-3	35.352612°	-118.998329°	397.44
WB58-4	35.352632°	-118.991242°	394.98
EB58-1	35.352431°	-119.038215°	391.82
EB58-2	35.352439°	-119.036595°	391.08
EB58-3	35.352244°	-119.014854°	395.11
EB58-4	35.352257°	-119.011444°	398.30
EB58-5	35.352201°	-119.005032°	398.77
EB58-6	35.352182°	-119.001658°	398.91
EB58-7	35.352184°	-118.994819°	395.64
EB58-8	35.352059°	-118.988038°	393.09
NB99-1	35.332633°	-119.039425°	381.71
NB99-2	35.334002°	-119.039401°	382.24
NB99-3	35.335424°	-119.039382°	382.72
NB99-4	35.336886°	-119.039377°	383.26
NB99-5	35.338045°	-119.039363°	383.59
NB99-6	35.340761°	-119.039329°	384.19
NB99-7	35.342367°	-119.039291°	384.92
NB99-8	35.343572°	-119.039320°	385.37
NB99-9	35.345057°	-119.039327°	386.66
NB99-10	35.346190°	-119.039320°	386.96
NB99-11	35.347428°	-119.039241°	387.42
NB99-12	35.348694°	-119.039302°	387.88
NB99-13	35.350463°	-119.039301°	388.06
NB99-14	35.351668°	-119.039292°	389.17
NB99-15	35.353204°	-119.039205°	390.16
NB99-16	35.354538°	-119.039235°	390.33
SB99-1	35.332656°	-119.039855°	381.44
SB99-2	35.334006°	-119.039855°	382.31
SB99-3	35.335414°	-119.039895°	382.86
SB99-4	35.336972°	-119.039842°	383.56
SB99-5	35.338223°	-119.039839°	383.88
SB99-6	35.340453°	-119.039942°	384.34
SB99-7	35.342436°	-119.039919°	384.77
SB99-8	35.343628°	-119.039834°	385.12
SB99-9	35.345079°	-119.039796°	386.01
SB99-10	35.346261°	-119.039786°	386.68

Table 1
GPS Coordinates of Boring Locations
Centennial/Beltway Operational Improvements Project
Bakersfield, California
Group Delta Project Number EN024

Sample ID	Latitude	Longitude	Elevation (feet)
SB99-11	35.347817°	-119.039790°	387.71
SB99-12	35.349031°	-119.039806°	388.45
SB99-13	35.350213°	-119.039830°	389.67
SB99-14	35.351858°	-119.039796°	389.89
SB Exit-1	35.383882°	-119.045877°	401.34
SB Exit-2	35.385392°	-119.044985°	405.22
SB Exit-3	35.386439°	-119.044841°	408.11
SB Exit-4	35.387987°	-119.044766°	408.46
SB Exit-5	35.389192°	-119.044779°	408.77

Table 2
Summary of ADL Results
Centennial/Beltway Operational Improvements Project
Group Delta Consultants Project Number EN024

Sample ID	Sampling Depth		Total Lead	STLC WET	WET-DI	TCLP	pH
	From	To					
	(feet)		mg/kg	mg/L			
WB58-1-0.5	0	0.5	29	1.2	--	--	--
WB58-1-1	1	1.5	13	0.975	--	--	8.13
WB58-1-2	2	2.5	5.6	0.476	--	--	--
WB58-2-0.5	0	0.5	13	0.975	--	--	--
WB58-2-1	1	1.5	3.3	0.320	--	--	--
WB58-2-2	2	2.5	2.5	0.266	--	--	--
WB58-3-0.5	0	0.5	170	12	0.066	0.21	--
WB58-3-0.5-dup	0	0.5	8.8	ND>0.50	--	--	--
WB58-3-1	1	1.5	6.8	0.557	--	--	--
WB58-3-2	2	2.5	7.6	0.611	--	--	--
WB58-4-0.5	0	0.5	3.9	0.361	--	--	--
WB58-4-1	1	1.5	3.6	0.341	--	--	7.76
WB58-4-2	2	2.5	3.9	0.361	--	--	--
EB58-1-0.5	0	0.5	11	0.840	--	--	--
EB58-1-1	1	1.5	8.4	0.22	--	--	--
EB58-1-1-dup	1	1.5	5.9	0.496	--	--	--
EB58-1-2	2	2.5	3.9	0.361	--	--	--
EB58-2-0.5	0	0.5	4.7	0.415	--	--	--
EB58-2-1	1	1.5	7.0	0.570	--	--	--
EB58-2-2	2	2.5	5.6	0.476	--	--	--
EB58-3-0.5	0	0.5	82	6.6	ND	--	--
EB58-3-1	1	1.5	3.1	ND>0.50	--	--	7.90
EB58-3-2	2	2.5	1.5	0.199	--	--	--
EB58-4-0.5	0	0.5	15	1.110	--	--	--
EB58-4-1	1	1.5	4.0	0.368	--	--	--
EB58-4-2	2	2.5	1.6	0.206	--	--	--
EB58-5-0.5	0	0.5	48	3.8	--	--	--
EB58-5-1	1	1.5	7.6	0.611	--	--	--
EB58-5-2	2	2.5	4.0	ND>0.50	--	--	--
EB58-5-2-dup	2	2.5	1.6	0.206	--	--	--
EB58-6-0.5	0	0.5	720	49	0.12	0.42	--
EB58-6-1	1	1.5	5.5	0.469	--	--	8.02
EB58-6-2	2	2.5	2.5	0.266	--	--	--
EB58-7-0.5	0	0.5	5.8	0.489	--	--	--
EB58-7-1	1	1.5	6.3	0.523	--	--	--
EB58-7-2	2	2.5	2.9	ND>0.50	--	--	--
EB58-8-0.5	0	0.5	21	1.515	--	--	--
EB58-8-0.5-dup	0	0.5	51	4.1	--	--	--

Table 2
Summary of ADL Results
Centennial/Beltway Operational Improvements Project
Group Delta Consultants Project Number EN024

Sample ID	Sampling Depth		Total Lead	STLC WET	WET-DI	TCLP	pH
	From	To					
	(feet)		mg/kg	mg/L			
EB58-8-1	1	1.5	4.8	0.422	--	--	--
EB58-8-2	2	2.5	2.3	ND>0.50	--	--	--
NB99-1-0.5	0	0.5	72	3.5	--	--	--
NB99-1-1	1	1.5	0.75	0.148	--	--	7.78
NB99-1-2	2	2.5	0.86	ND>0.50	--	--	--
NB99-2-0.5	0	0.5	320	7.4	0.085	0.18	--
NB99-2-1	1	1.5	3.5	0.334	--	--	--
NB99-2-2	2	2.5	1.1	0.172	--	--	--
NB99-3-0.5	0	0.5	220	11	0.35	0.23	--
NB99-3-1	1	1.5	3.0	0.300	--	--	--
NB99-3-2	2	2.5	1.3	0.185	--	--	--
NB99-4-0.5	0	0.5	330	23	0.36	0.25	--
NB99-4-1	1	1.5	3.8	ND>0.50	--	--	--
NB99-4-2	2	2.5	8.1	0.644	--	--	--
NB99-5-0.5	0	0.5	310	24	0.098	0.25	--
NB99-5-1	1	1.5	690	42	0.73	0.72	--
NB99-5-1-dup	1	1.5	4.7	0.415	--	--	--
NB99-5-2	2	2.5	2.3	0.253	--	--	--
NB99-6-0.5	0	0.5	20	1.448	--	--	--
NB99-6-1	1	1.5	1.8	ND>0.50	--	--	--
NB99-6-2	2	2.5	1.4	0.192	--	--	--
NB99-7-0.5	0	0.5	10	0.773	--	--	--
NB99-7-1	1	1.5	1.9	0.226	--	--	--
NB99-7-2	2	2.5	1.6	0.206	--	--	--
NB99-7-2-dup	2	2.5	2.7	ND>0.50	--	--	--
NB99-8-0.5	0	0.5	3100	209	--	3.6	--
NB99-8-1	1	1.5	160	12	0.97	1.0	--
NB99-8-2	2	2.5	3.1	0.307	--	--	--
NB99-9-0.5	0	0.5	4.5	0.401	--	--	--
NB99-9-1	1	1.5	1.2	0.179	--	--	7.43
NB99-9-2	2	2.5	1.4	0.192	--	--	--
NB99-10-0.5	0	0.5	530	36	0.32	0.93	--
NB99-10-0.5-dup	0	0.5	4.0	0.368	--	--	--
NB99-10-1	1	1.5	1.9	ND>0.50	--	--	--
NB99-10-2	2	2.5	2.1	0.239	--	--	--
NB99-11-0.5	0	0.5	4.3	0.388	--	--	--
NB99-11-1	1	1.5	4.9	0.428	--	--	--
NB99-11-1-dup	1	1.5	3.3	0.320	--	--	--

Table 2
Summary of ADL Results
Centennial/Beltway Operational Improvements Project
Group Delta Consultants Project Number EN024

Sample ID	Sampling Depth		Total Lead	STLC WET	WET-DI	TCLP	pH
	From	To					
	(feet)		mg/kg	mg/L			
NB99-11-2	2	2.5	2.1	0.239	--	--	--
NB99-12-0.5	0	0.5	4.6	0.408	--	--	--
NB99-12-1	1	1.5	4.1	ND>0.50	--	--	--
NB99-12-2	2	2.5	4.7	0.415	--	--	8.36
NB99-12-2-dup	2	2.5	3.7	0.347	--	--	8.22
NB99-13-0.5	0	0.5	210	12	0.12	0.25	--
NB99-13-0.5-dup	0	0.5	12	0.908	--	--	--
NB99-13-1	1	1.5	27	1.920	--	--	--
NB99-13-2	2	2.5	9.3	0.42	--	--	8.23
NB99-14-0.5	0	0.5	85	6.0	0.022	--	--
NB99-14-1	1	1.5	84	5.1	0.10	--	--
NB99-14-1-dup	1	1.5	95	7.5	0.079	--	--
NB99-14-2	2	2.5	55	3.9	--	--	--
NB99-15-0.5	0	0.5	240	19	0.029	0.23	7.77
NB99-15-1	1	1.5	44	3.068	--	--	--
NB99-15-2	2	2.5	72	4.5	--	--	--
NB99-16-0.5	0	0.5	120	8.4	0.036	0.26	--
NB99-16-1	1	1.5	82	6.7	0.16	--	--
NB99-16-2	2	2.5	57	4.1	0.026	--	--
SB99-1-0.5	0	0.5	240	17	0.51	0.22	--
SB99-1-1	1	1.5	16	1.178	--	--	7.91
SB99-1-2	2	2.5	0.87	ND>0.50	--	--	--
SB99-2-0.5	0	0.5	8.5	0.671	--	--	--
SB99-2-1	1	1.5	1.9	0.226	--	--	--
SB99-2-2	2	2.5	27	1.920	--	--	--
SB99-3-0.5	0	0.5	54	0.28	--	--	8.29
SB99-3-1	1	1.5	3.2	0.314	--	--	--
SB99-3-1-dup	1	1.5	1.4	ND>0.50	--	--	--
SB99-3-2	2	2.5	1.6	0.206	--	--	--
SB99-4-0.5	0	0.5	4.2	0.381	--	--	--
SB99-4-1	1	1.5	3.0	0.300	--	--	--
SB99-4-2	2	2.5	1.8	0.219	--	--	--
SB99-5-0.5	0	0.5	210	8.6	0.032	0.087	--
SB99-5-1	1	1.5	79	6.2	0.033	--	--
SB99-5-2	2	2.5	3.1	ND>0.50	--	--	--
SB99-6-0.5	0	0.5	3.0	0.300	--	--	--
SB99-6-0.5-dup	0	0.5	2.6	0.273	--	--	--
SB99-6-1	1	1.5	2.3	0.253	--	--	--

Table 2
Summary of ADL Results
Centennial/Beltway Operational Improvements Project
Group Delta Consultants Project Number EN024

Sample ID	Sampling Depth		Total Lead	STLC WET	WET-DI	TCLP	pH
	From	To					
	(feet)		mg/kg	mg/L			
SB99-6-2	2	2.5	2.7	0.280	--	--	8.08
SB99-7-0.5	0	0.5	4.4	ND>0.50	--	--	--
SB99-7-1	1	1.5	2.3	0.253	--	--	--
SB99-7-2	2	2.5	2.7	0.280	--	--	--
SB99-8-0.5	0	0.5	5.1	0.23	--	--	--
SB99-8-0.5-dup	0	0.5	3.3	0.320	--	--	--
SB99-8-1	1	1.5	3.4	0.327	--	--	7.95
SB99-8-2	2	2.5	4.5	ND>0.50	--	--	--
SB99-9-0.5	0	0.5	610	46	1.1	0.20	--
SB99-9-1	1	1.5	14	1.043	--	--	--
SB99-9-2	2	2.5	1.8	0.219	--	--	--
SB99-10-0.5	0	0.5	950	77	0.51	0.68	6.71
SB99-10-1	1	1.5	23	1.650	--	--	--
SB99-10-2	2	2.5	1.5	ND>0.50	--	--	--
SB99-11-0.5	0	0.5	89	7.6	0.26	--	--
SB99-11-1	1	1.5	160	15	0.27	0.29	--
SB99-11-2	2	2.5	3.5	0.334	--	--	--
SB99-12-0.5	0	0.5	7.1	0.577	--	--	--
SB99-12-1	1	1.5	5.0	0.435	--	--	--
SB99-12-1-dup	1	1.5	2.1	0.239	--	--	--
SB99-12-2	2	2.5	1.5	ND>0.50	--	--	--
SB99-13-0.5	0	0.5	25	1.785	--	--	--
SB99-13-1	1	1.5	1.9	0.226	--	--	--
SB99-13-2	2	2.5	1.2	0.179	--	--	7.97
SB99-14-0.5	0	0.5	200	19	0.26	0.32	--
SB99-14-1	1	1.5	9.6	0.746	--	--	--
SB99-14-2	2	2.5	3.0	0.300	--	--	--
SBExit-1-0.5	0	0.5	12	0.32	--	--	--
SBExit-1-1	1	1.5	14	1.043	--	--	--
SBExit-1-2	2	2.5	6.0	0.503	--	--	--
SBExit-2-0.5	0	0.5	11	0.840	--	--	--
SBExit-2-1	1	1.5	14	0.47	--	--	--
SBExit-2-2	2	2.5	13	0.975	--	--	--
SBExit-3-0.5	0	0.5	30	2.123	--	--	--
SBExit-3-1	1	1.5	21	0.93	--	--	--
SBExit-3-2	2	2.5	17	1.245	--	--	--
SBExit-4-0.5	0	0.5	220	12	0.014	0.10	--
SBExit-4-1	1	1.5	260	30	0.062	0.33	--

Table 2
Summary of ADL Results
Centennial/Beltway Operational Improvements Project
Group Delta Consultants Project Number EN024

Sample ID	Sampling Depth		Total Lead	STLC WET	WET-DI	TCLP	pH
	From	To					
	(feet)		mg/kg	mg/L			
SBExit-4-2	2	2.5	260	19	0.30	0.54	--
SBExit-5-0.5	0	0.5	880	50	0.33	0.98	--
SBExit-5-1	1	1.5	980	62	0.38	1.3	--
SBExit-5-2	2	2.5	140	13	0.024	0.66	--

Notes:

	Denotes STLC concentrations equal to or exceeding 5.0 mg/L
	Denotes identified total lead outlier concentration
Value	Correlated STLC WET Concentrations
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
STLC	Soluble Threshold Limit Concentration
WET	Waste Extraction Test using Citric Acid
TCLP	Toxicity Characteristic Leaching Procedure
WET-DI	WET using DI-water
pH	Hydrogen Ion Concentration
--	Not Analyzed

Table 3
Aerially Deposited Lead Soil Management
Centennial/Beltway Operational Improvements Project
Bakersfield, California
Group Delta Project Number EN024

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

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

Appendix A

Caltrans Encroachment Permit

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

ENCROACHMENT PERMIT

TR-0120 (REV. 2/98)

Permit No.	0612-NSV-0972
Dist/Co/Rte/PM (KP)	06/KER/VAR/VAR
Date	December 6, 2012
Fee Paid	$ EXEMPT
Deposit	$ EXEMPT
Performance Bond Amount (1)	$ N/A
Payment Bond Amount (2)	$ N/A
Bond Company	
Bond Number (1)	
Bond Number (2)	

In compliance with (Check one):

- [x] Your application of **November 28, 2012**
- [ ] Utility Notice No. _____ of _____
- [ ] Agreement No. _____ of _____
- [ ] Your Reference No. _____

TO:

City of Bakersfield (TRIP)
900 Truxtun Avenue, Suite 200
Bakersfield, CA 93301

Attention: Luis Topete, Civil Engineer III
Phone: (661) 326-3700 Fax: (661) 852-2195

, PERMITTEE

And subject to the following, PERMISSION IS HEREBY GRANTED to:

Enter upon the State Highway Right-of-way on all State Routes in Kern County at various locations (Postmiles) to set up, maintain, and remove temporary traffic control necessary to conduct surveys, geotechnical investigations, preliminary and environmental work required to plan and design the City of Bakersfield Thomas Roads Improvement Program (TRIP) Projects.

All work shall be done in accordance with State Standard Plans and Specifications, all General, Utility, and Special Provisions.

NOTIFICATION: PERMITTEE shall **NOTIFY Caltrans Inspector, ZALDY ALORA at (661) 391-4778** at two (2) working days prior to the initial start of work or restart of work within State right-of-way. **PERMITTEE is required to have a pre-job meeting with the Caltrans inspector prior to start of work.** If any lane or shoulder closure is required, the PERMITTEE shall notify the Central Valley Traffic Management Center (CVTMC) as per instructions listed in the **TRAFFIC CONTROL AND LANE CLOSURES** section of this permit.

The following attachments are also included as part of this permit (Check applicable):

[x] Yes	[ ] No	General Provisions **TR-0045**	
[ ] Yes	[x] No	Utility Maintenance Provisions	
[x] Yes	[ ] No	Special Provisions, **TR-0157, TR-0163, TR-0400**	
[x] Yes	[ ] No	A Cal-OSHA permit required prior to beginning work; **If excavation(s) exceeds 5 feet in depth.**	

In addition to fee, the permittee will be billed actual costs for:

[ ] Yes	[x] No	Review
[ ] Yes	[x] No	Inspection
[x] Yes	[ ] No	Field Work

(If any Caltrans effort expended)

[ ] Yes [x] No The information in the environmental documentation has been reviewed and is considered prior to approval of this permit.

This permit is void unless the work is complete before **December 31, 2015**

This permit is to be strictly construed and no other work other than specifically mentioned is hereby authorized.

No project work shall be commenced until all other necessary permits and environmental clearances have been obtained.

MDR (12) (0)
cc: DO, RSA, SDF (2), MRodriquez, CLomax, KHobbs

Fred Garza (TRIP)

Attach: T-11, TA-5, T-13, TA-6, CRF
Contractors List

Permit Engineer: Manuel Ramirez (559) 445-6501

APPROVED:

Sharri Bender Ehlert, Director, District 6 – Central Region

BY: for

Joe O. Espinosa, Chief Permit Branch

FM 91 1436

REFERENCE TO STANDARD PLANS AND SPECIFICATIONS: The use of the wording "Standard Plans" and "Standard Specifications" in this permit refers to the most current editions of the following two publications: **"State of California, Department of Transportation, Standard Plans and Standard Specifications".** Access to these documents can be obtained by linking onto the Department's World Wide Web page: **(www.dot.ca.gov).**

REFERENCE TO STANDARD PLANS AND SPECIFICATIONS: The use of the wording "Standard Plans" and "Standard Specifications" in this permit refers to the most current editions of the following two publications: **"State of California, Department of Transportation, Standard Plans 2010 and Standard Specifications 2010".** Access to these documents can be obtained by linking onto the Department's World Wide Web page: **(www.dot.ca.gov).**

EXCEPTION: All references to the **"State of California, Department of Transportation, Standard Specifications 2010"** within this permit **excludes** all sections pertaining to Measurement and Payment.

CONTRACTOR(S)/SUBCONTRACTOR(S): The contractors/subcontractors that are authorized to work inside of State Right-of-way are shown in the attached list(s):

Any contractor(s)/subcontractor(s) not listed on the Contractor's Permit will be required to apply for and obtain a separate Caltrans Encroachment Permit (Double Permit) prior to start of work within the State Right-of-way. Prior to the issuance of the Double Permit, the subcontractor shall pay the permit processing review fee (currently at $82.00). The Standard Encroachment Permit Application can be sent to:

Fresno Permits Office, 1352 West Olive Avenue, Fresno, CA 93728.

TRAFFIC CONTROL AND LANE CLOSURES: The PERMITTEE shall provide at least one paved traffic lane open in each direction of travel. The maximum permitted length of closure is one (1) mile. No more than one closure shall be allowed within any five (5) miles segment per direction of closure. Lane closures are allowed only when Contractor operations are actively in progress. Lane closures are not permitted during non-working hours. No two consecutive intersections shall be completely closed at the same time. Whenever there is work within three (3) feet (35 MPH zone) or six (6) feet (over 45 MPH zone) of a traffic lane but not on a traffic lane, the PERMITTEE shall close the lane by placing appropriate advance signs, flag trees, reflective cones and furnish all necessary safety devices (including flagmen, changeable message signs, flashing arrow boards, etc.). At no time will the width of an existing lane be reduced to less than ten (10) feet.

Lane and shoulder closures shall be conducted in accordance with the applicable portions from the "**California Manual on Uniform Traffic Control Devices (California MUTCD) for Streets and Highways 2012 and the latest editions of the State of California Department of Transportation Standard Plans and Specifications**". The California MUTCD can be found at the following link:

http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/pdf/camutcd/CaliforniaMUTCD.pdf

Notification of temporary lane closures or traffic detours shall be faxed **WEEKLY** to the Central Valley Traffic Management Center (CVTMC), FAX (559) 445-5990 with a copy faxed to the District 6 Permit office, FAX (559) 243-8650. Notification shall be submitted using the attached **Closure Request Form (CRF)** with Permit No. **0612-NSV-0972** entered under Additional Remarks. Notification shall be made by 4:00 PM the Wednesday prior to the proposed closure or detour, but in no case shall the notification be given less than seven (7) days prior to these events. The CVTMC will fax back a Confirmation Number to the sender to confirm receipt of the LCDRF. The CVTMC can be reached at telephone number (559) 445-6166.

Work requiring traffic control shall be conducted as follows between the hours of **9:00 AM and 3:00 PM**, Monday through Friday or as otherwise authorized by the **Caltrans Inspector** or issuance of an Encroachment Rider Permit. The full width of the traveled way shall be opened for use by public traffic on Saturdays, Sundays and designated legal holidays, the day preceding designated legal holidays, and when construction operations are not actively in progress. Designated legal holidays are: January 1st, the third Monday in January, February 12th, the third Monday in February, March 31st, the last Monday in May, July 4th, the first Monday in September, the second Monday in October, November 11th, Thanksgiving Day and the day after, and December 25th. When a designated holiday falls on a Sunday, the following Monday shall be a designated legal holiday. When November 11th falls on a Saturday, the proceeding Friday shall be a designated legal holiday.

Any other holiday falling on a Saturday will be observed on that Saturday. Holiday work restrictions also apply to Fridays following Thursday holidays, Mondays preceding Tuesday holidays, and the days preceding and following extended holiday weekends.

NO WORK SHALL BE ACCOMPLISHED ON, OVER OR NEAR THE HIGHWAY TRAVELED WAYS OR SHOULDERS DURING INCLEMENT WEATHER CONDITIONS (Fog, Rain, etc.)

SURVEY MONUMENTS: In addition to the requirements of Section 7-1.11, Preservation of Property of the Caltrans Standard Specifications, and Section 8771 of the Business and Professions Code, the PERMITTEE shall physically inspect the work site and locate survey monuments prior to commencement of work. Monuments shall be referenced or reset in accordance with the requirements of the Business and Professions Code. If feasible, monuments should not be set within the traveled way.

All monuments that must be set or perpetuated in paved surfaces, shall be constructed in accordance with Section 81, MONUMENTS, of the Standard Specification and **Caltrans 2010 Standard Plan A74, Type A**, or equal with prior approval of the District Surveys Engineer." "Copies of Corners Record filed or Record of Surveys recorded in compliance with the Business and Professions Code shall be forwarded to the District Surveys Engineer."

PIPES, CONDUITS, AND UNDERGROUND PROVISIONS: Work associated with pipes, conduits, and underground facilities shall be done in accordance with applicable portions of the current Standard Plans and Specifications and the attached "State of California - Department of Transportation **Encroachment Permit Underground Utility Provisions TR-0163 (Rev 05/2006)**".

HIGH & LOW RISK UNDERGROUND FACILITIES: No machine excavation may be made within 4 feet of High and Low Risk Underground facilities unless those have been located to within 6 inches both vertically and horizontally by hand digging. Location of underground facilities may only be accomplished by hand excavation after obtaining written permission from the underground facility owner. The PERMITTEE shall provide the Caltrans Inspector with copies of such permission. The owner of a high or low risk underground facility shall be responsible for determining the adequacy of the field location of the underground facility by the PERMITTEE and the required clearances for machine excavation, or other requirement to expose, protect or relocate. The costs of such field location, exposure, protection or relocation shall be borne by PERMITTEE.

Special attention is directed to Section 7-1.11, PRESERVATION OF PROPERTY, and Section 8-1.10, UTILITY AND NON-HIGHWAY FACILITIES, of the Standard Specifications. It shall be the Contractor's responsibility, pursuant thereto, to ascertain the location of those underground improvements or facilities which may be subject to damage by reason of the Contractor's operations.

UTILITY RELOCATIONS: If existing public or private utilities conflict with the PERMITTEE's work, the PERMITTEE will make necessary arrangements with the owners of such utilities for their protection, relocation, or removal. The PERMITTEE shall inspect the protection, relocation or removal of such facilities. Total costs of such protection, relocation, or removal shall be borne by the PERMITTEE in compliance with the terms of the Highway Encroachment Permits, Case Law, Public Utility Regulations, and Property Rights. The PERMITTEE shall require any utility company performing relocation work in the State's right-of-way to obtain a State Encroachment Permit prior to the performance of said relocation work. Any relocated utilities shall be correctly located and identified on the **"AS-BUILT"** set of plans.

EARTHWORK: Earthwork within the State right-of-way shall comply with Sections 19-1 GENERAL, 19-2 ROADWAY EXCAVATION, 19-3 STRUCTURE EXCAVATION AND BACKFILL, 19-5 COMPACTION and 19-6 EMBANKMENT CONSTRUCTION of Section 19 in the latest edition of the Standard Specifications.

No excavation shall be left open after working hours. **At the end of each working day or if any excavation leaves a drop off of more than 45 millimeters (0.15 feet) in depth within 1.8 meters (6 feet) of the edge of pavement, the excavation or drop off shall be sloped at a maximum 4:1 (horizontal:vertical); backfilled; or covered with a steel plate** in accordance with the attached "State of California - Department of Transportation, **Encroachment Permit Steel Plate Bridging Utility Provisions TR-0157 (Rev 07/2009)**".

STORM WATER AND NON-STORM WATER: The PERMITTEE shall control the movement of sediments and pollutants within or leaving the State's right of way. Water pollution control shall conform to Standard Specification Section 7-1.01G "Water Pollution", the Caltrans "Construction Site Best Management Practices (BMPs) Manual", and the Caltrans "Storm Water Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual". The Manuals are available on the Internet at:

www.dot.ca.gov/hq/construc/stormwater/manuals.htm

Permittee shall be responsible for the costs and any liability imposed by law as a result of PERMITTEE's failure to comply with the requirements set forth in this section, including, but not limited to, compliance with the applicable provisions of the referenced Manuals and Federal, State and local regulations. For the purposes of this paragraph, costs and liabilities include, but are not limited, to fines, penalties and damages whether assessed against the State or Permittee, including those levied under the Federal Clean Water Act and the State Porter Cologne Water Quality Act.

The PERMITTEE shall comply with the attached "State of California - Department of Transportation **Storm Water Special Provisions for Minimal or No Impact TR-0400 (Rev 10/2011)**".

ACCEPTANCE OF CONDITIONS: Beginning work on this permit constitutes full agreement and acceptance of all conditions, terms and provisions contained herein, attached hereto, or incorporated by reference.

SPECIAL NOTES: Any change in the scope of work from the approved plans within Caltrans right-of-way will require an application for that change. The issuance of an Encroachment Permit Rider prior to commencing any changed work within State right-of-way will be required.

NOTICE OF COMPLETION: Immediately upon completion of the permitted work; described herein, the PERMITTEE shall fill out and mail the attached Notice of Completion card to:

Fresno Permits Office, 1352 West Olive Avenue, Fresno, CA 93728

1. **AUTHORITY:** The Department's authority to issue encroachment permits is provided under, Div. 1, Chpt. 3, Art. 1, Sect. 660 to 734 of the Streets and Highways Code.

2. **REVOCATION:** Encroachment permits are revocable on five days notice unless otherwise stated on the permit and except as provided by law for public corporations, franchise holders, and utilities. These General Provisions and the Encroachment Permit Utility Provisions are subject to modification or abrogation at any time. Permittees' joint use agreements, franchise rights, reserved rights or any other agreements for operating purposes in State highway right of way are exceptions to this revocation.

3. **DENIAL FOR NONPAYMENT OF FEES:** Failure to pay permit fees when due can result in rejection of future applications and denial of permits.

4. **ASSIGNMENT:** No party other than the permittee or permittee's authorized agent is allowed to work under this permit.

5. **ACCEPTANCE OF PROVISIONS:** Permittee understands and agrees to accept these General Provisions and all attachments to this permit, for any work to be performed under this permit.

6. **BEGINNING OF WORK:** When traffic is not impacted (see Number 35), the permittee shall notify the Department's representative, two (2) days before the intent to start permitted work. Permittee shall notify the Department's Representative if the work is to be interrupted for a period of five (5) days or more, unless otherwise agreed upon. All work shall be performed on weekdays during regular work hours, excluding holidays, unless otherwise specified in this permit.

7. **STANDARDS OF CONSTRUCTION:** All work performed within highway right of way shall conform to recognized construction standards and current Department Standard Specifications, Department Standard Plans High and Low Risk Facility Specifications, and Utility Special Provisions. Where reference is made to "Contractor and Engineer," these are amended to be read as "Permittee and Department representative."

8. **PLAN CHANGES:** Changes to plans, specifications, and permit provisions are not allowed without prior approval from the State representative.

9. **INSPECTION AND APPROVAL:** All work is subject to monitoring and inspection. Upon completion of work, permittee shall request a final inspection for acceptance and approval by the Department. The local agency permittee shall not give final construction approval to its contractor until final acceptance and approval by the Department is obtained.

10. **PERMIT AT WORKSITE:** Permittee shall keep the permit package or a copy thereof, at the work site and show it upon request to any Department representative or law enforcement officer. If the permit package is not kept and made available at the work site, the work shall be suspended.

11. **CONFLICTING ENCROACHMENTS:** Permittee shall yield start of work to ongoing, prior authorized, work adjacent to or within the limits of the project site. When existing encroachments conflict with new work, the permittee shall bear all cost for rearrangements, (e.g., relocation, alteration, removal, etc.).

12. **PERMITS FROM OTHER AGENCIES:** This permit is invalidated if the permittee has not obtained all permits necessary and required by law, from the Public Utilities Commission of the State of California (PUC), California Occupational Safety and Health Administration (Cal-OSHA), or any other public agency having jurisdiction.

13. **PEDESTRIAN AND BICYCLIST SAFETY:** A safe minimum passageway of 4' shall be maintained through the work area at existing pedestrian or bicycle facilities. At no time shall pedestrians be diverted onto a portion of the street used for vehicular traffic. At locations where safe alternate passageways cannot be provided, appropriate signs and barricades shall be installed at the limits of construction and in advance of the limits of construction at the nearest crosswalk or intersection to detour pedestrians to facilities across the street. Attention is directed to Section 7-1.09 Public Safety of the Department Standard Specifications.

14. **PUBLIC TRAFFIC CONTROL:** As required by law, the permittee shall provide traffic control protection warning signs, lights, safety devices, etc., and take all other measures necessary for traveling public's safety. While providing traffic control, the needs and control of all road users [motorists, bicyclists and pedestrians, including persons with disabilities in accordance with the Americans with Disabilities Act of 1990 (ADA)] shall be an essential part of the work activity.

    Day and night time lane closures shall comply with the California Manual on Uniform Traffic Control Devices (Part 6, Temporary Traffic Control), Standard Plans, and Standard Specifications for traffic control systems. These General Provisions are not intended to impose upon the permittee, by third parties, any duty or standard of care, greater than or different from, as required by law.

15. **MINIMUM INTERFERENCE WITH TRAFFIC:** Permittee shall plan and conduct work so as to create the least possible inconvenience to the traveling public; traffic shall not be unreasonably delayed. On conventional highways, permittee shall place properly attired flagger(s) to stop or warn the traveling public in compliance with the California Manual on Uniform Traffic Control Devices (Chapter 6E, Flagger Control).

16. **STORAGE OF EQUIPMENT AND MATERIALS:** The storage of equipment or materials **is not** allowed within State highway right-of-way, **unless specified** within the Special Provisions of this specific encroachment permit. If Encroachment Permit Special Provisions allow for the storage of equipment or materials within the State right of way, the equipment and material storage shall comply with Standard Specifications, Standard Plans, Special Provisions, and the Highway Design Manual. The clear recovery zone widths must be followed and are the minimum desirable for the type of facility indicated below: freeways and expressways - 30', conventional highways (no curbs) - 20', conventional highways (with curbs) – 1.5'. If a fixed object cannot be eliminated, moved outside the clear recovery zone, or modified to be made yielding, it should be shielded by a guardrail or a crash cushion.

17. **CARE OF DRAINAGE:** Permittee shall provide alternate drainage for any work interfering with an existing drainage facility in compliance with the Standard Specifications, Standard Plans and/or as directed by the Department's representative.

18. **RESTORATION AND REPAIRS IN RIGHT OF WAY:** Permittee is responsible for restoration and repair of State highway right of way resulting from permitted work (State Streets and Highways Code, Sections 670 et. seq.).

19. **RIGHT OF WAY CLEAN UP:** Upon completion of work, permittee shall remove and dispose of all scraps, brush, timber, materials, etc. off the right of way. The aesthetics of the highway shall be as it was before work started.

20. **COST OF WORK:** Unless stated in the permit, or a separate written agreement, the permittee shall bear all costs incurred for work within the State right of way and waives all claims for indemnification or contribution from the State.

21. **ACTUAL COST BILLING:** When specified in the permit, the Department will bill the permittee actual costs at the currently set hourly rate for encroachment permits.

22 **AS-BUILT PLANS:** When required, permittee shall submit one (1) set of folded as-built plans within thirty (30) days after completion and approval of work in compliance with requirements listed as follows:

1. Upon completion of the work provided herein, the permittee shall send one vellum or paper set of As-Built plans, to the State representative. Mylar or paper sepia plans are not acceptable.
2. All changes in the work will be shown on the plans, as issued with the permit, including changes approved by Encroachment Permit Rider.
3. The plans are to be stamped or otherwise noted AS-BUILT by the permittee's representative who was responsible for overseeing the work. Any original plan that was approved with a State stamp, or Caltrans representative signature, shall be used for producing the As-Built plans.
4. If As-Built plans include signing or striping, the dates of signing or striping removal, relocation, or installation shall be shown on the plans when required as a condition of the permit. When the construction plans show signing and striping for staged construction on separate sheets, the sheet for each stage shall show the removal, relocation or installation dates of the appropriate staged striping and signing.
5. As-Built plans shall contain the Permit Number, County, Route, and Post Mile on each sheet.
6. Disclaimer statement of any kind that differ from the obligations and protections provided by Sections 6735 through 6735.6 of the California Business and Professions Code, shall not be included on the As-Built plans. Such statements constitute non-compliance with Encroachment Permit requirements, and may result in the Department of Transportation retaining Performance Bonds or deposits until proper plans are submitted. Failure to comply may also result in denial of future permits, or a provision requiring a public agency to supply additional bonding.

23. **PERMITS FOR RECORD PURPOSES ONLY:** When work in the right of way is within an area under a Joint Use Agreement (JUA) or a Consent to Common Use Agreement (CCUA), a fee exempt permit is issued to the permittee for the purpose of providing a notice and record of work. The Permittee's prior rights shall be preserved without the intention of creating new or different rights or obligations. "Notice and Record Purposes Only" shall be stamped across the face of the permit.

24. **BONDING:** The permittee shall file bond(s), in advance, in the amount set by the Department. Failure to maintain bond(s) in full force and effect will result in the Department stopping of all work and revoking permit(s). Bonds are not required of public corporations or privately owned utilities, unless permittee failed to comply with the provision and conditions under a prior permit. The surety company is responsible for any latent defects as provided in California Code of Civil Procedures, Section 337.15. Local agency permittee shall comply with requirements established as follows: In recognition that project construction work done on State property will not be directly funded and paid by State, for the purpose of protecting stop notice claimants and the interests of State relative to successful project completion, the local agency permittee agrees to require the construction contractor furnish both a payment and performance bond in the local agency's name with both bonds complying with the requirements set forth in Section 3-1.02 of State's current Standard Specifications before performing any project construction work. The local agency permittee shall defend, indemnify, and hold harmless the State, its officers and employees from all project construction related claims by contractors and all stop notice or mechanic's lien claimants. The local agency also agrees to remedy, in a timely manner and to State's satisfaction, any latent defects occurring as a result of the project construction work.

25. **FUTURE MOVING OF INSTALLATIONS:** Permittee understands and agrees to relocate a permitted installation upon notice by the Department. Unless under prior property right or agreement, the permittee shall comply with said notice at his sole expense.

26. **ARCHAEOLOGICAL/HISTORICAL:** If any archaeological or historical resources are revealed in the work vicinity, the permittee shall immediately stop work, notify the Department's representative, retain a qualified archaeologist who shall evaluate the site, and make recommendations to the Department representative regarding the continuance of work.

27. **PREVAILING WAGES:** Work performed by or under a permit may require permittee's contractors and subcontractors to pay appropriate prevailing wages as set by the Department of Industrial Relations. Inquiries or requests for interpretations relative to enforcement of prevailing wage requirements are directed to State of California Department of Industrial Relations, 525 Golden Gate Avenue, San Francisco, California 94102.

28. **RESPONSIBILITY FOR DAMAGE:** The State of California and all officers and employees thereof, including but not limited to the Director of Transportation and the Deputy Director, shall not be answerable or accountable in any manner for injury to or death of any person, including but not limited to the permittee, persons employed by the permittee, persons acting in behalf of the permittee, or for damage to property from any cause. The permittee shall be responsible for any liability imposed by law and for injuries to or death of any person, including but not limited to the permittee, persons employed by the permittee, persons acting in behalf of the permittee, or for damage to property arising out of work, or other activity permitted and done by the permittee under a permit, or arising out of the failure on the permittee's part to perform his obligations under any permit in respect to maintenance or any other obligations, or resulting from defects or obstructions, or from any cause whatsoever during the progress of the work, or other activity or at any subsequent time, work or other activity is being performed under the obligations provided by and contemplated by the permit.

The permittee shall indemnify and save harmless the State of California, all officers, employees, and State's contractors, thereof, including but not limited to the Director of Transportation and the Deputy Director, from all claims, suits or actions of every name, kind and description brought for or on account of injuries to or death of any person, including but not limited to the permittee, persons employed by the permittee, persons acting in behalf of the permittee and the public, or damage to property resulting from the performance of work or other activity under the permit, or arising out of the failure on the permittee's part to perform his obligations under any permit in respect to maintenance or any other obligations, or resulting from defects or obstructions, or from any cause whatsoever during the progress of the work, or other activity or at any subsequent time, work or other activity is being performed under the obligations provided by and contemplated by the permit, except as otherwise provided by statute.

The duty of the permittee to indemnify and save harmless includes the duties to defend as set forth in Section 2778 of the Civil Code. The permittee waives any and all rights to any type of expressed or implied indemnity against the State, its officers, employees, and State contractors. It is the intent of the parties that the permittee will indemnify and hold harmless the State, its officers, employees, and State's contractors, from any and all claims, suits or actions as set forth above regardless of the existence or degree of fault or negligence, whether active or passive, primary or secondary, on the part of the State, the permittee, persons employed by the permittee, or acting on behalf of the permittee.

For the purpose of this section, "State's contractors" shall include contractors and their subcontractors under contract to the State of California performing work within the limits of this permit.

29. **NO PRECEDENT ESTABLISHED:** This permit is issued with the understanding that it does not establish a precedent.

30. **FEDERAL CIVIL RIGHTS REQUIREMENTS FOR PUBLIC ACCOMMODATION:**
A. The permittee, for himself, his personal representative, successors in interest, and assigns as part of the consideration hereof, does hereby covenant and agree that:
1. No person on the grounds of race, color, or national origin shall be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.
2. That in connection with the construction of any improvements on said lands and the furnishings of services thereon, no discrimination shall be practiced in the selection and retention of first-tier subcontractors in the selection of second-tier subcontractors.
3. That such discrimination shall not be practiced against the public in their access to and use of the facilities and services provided for public accommodations (such as eating, sleeping, rest, recreation), and operation on, over, or under the space of the right of way.
4. That the permittee shall use the premises in compliance with all other requirements imposed pursuant to Title 15, Code of Federal Regulations, Commerce and Foreign Trade, Subtitle A. Office of the Secretary of Commerce, Part 8 (15 C.F.R. Part 8) and as said Regulations may be amended.
5. That in the event of breach of any of the above nondiscrimination covenants, the State shall have the right to terminate the permit and to re-enter and repossess said land and the land and the facilities thereon, and hold the same as if said permit had never been made or issued.

31. **MAINTENANCE OF HIGHWAYS:** The permittee agrees, by acceptance of a permit, to properly maintain any encroachment. This assurance requires the permittee to provide inspection and repair any damage, at permittee's expense, to State facilities resulting from the encroachment.

32. **SPECIAL EVENTS:** In accordance with subdivision (a) of Streets and Highways Code Section 682.5, the Department of Transportation shall not be responsible for the conduct or operation of the permitted activity, and the applicant agrees to defend, indemnify, and hold harmless the State and the city or county against any and all claims arising out of any activity for which the permit is issued.

The permittee understands and agrees to comply with the obligations of Titles II and III of the Americans with Disabilities Act of 1990 in the conduct of the event, and further agrees to indemnify and save harmless the State of California, all officers and employees thereof, including but not limited to the Director of Transportation, from any claims or liability arising out of or by virtue of said Act.

33. **PRIVATE USE OF RIGHT OF WAY:** Highway right of way shall not be used for private purposes without compensation to the State. The gifting of public property use and therefore public funds is prohibited under the California Constitution, Article 16.

34. **FIELD WORK REIMBURSEMENT:** Permittee shall reimburse State for field work performed on permittee's behalf to correct or remedy hazards or damaged facilities, or clear debris not attended to by the permittee.

35. **NOTIFICATION OF DEPARTMENT AND TMC:** The permittee shall notify the Department's representative and the Transportation Management Center (TMC) at least 7 days before initiating a lane closure or conducting an activity that may cause a traffic impact. A confirmation notification should occur 3 days before closure or other potential traffic impacts. In emergency situations when the corrective work or the emergency itself may affect traffic, TMC and the Department's representative shall be notified as soon as possible.

36. **SUSPENSION OF TRAFFIC CONTROL OPERATION:** The permittee, upon notification by the Department's representative, shall immediately suspend all lane closure operations and any operation that impedes the flow of traffic. All costs associated with this suspension shall be borne by the permittee.

37. **UNDERGROUND SERVICE ALERT (USA) NOTIFICATION:** Any excavation requires compliance with the provisions of Government Code Section 4216 et. seq., including, but not limited to notice to a regional notification center, such as Underground Service Alert (USA). The permittee shall provide notification at least 48 hours before performing any excavation work within the right of way.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

ENCROACHMENT PERMIT STEEL PLATE BRIDGING UTILITY PROVISIONS

TR -0157 (Rev. 07/2009)

To accommodate excavation work, steel plate bridging may be necessary. All conditions for use of steel plate bridging should be set forth in the special provisions.

Consideration of steel plate bridging should take into account the following factors:

1. Traffic speed.
2. Traffic Volume and Composition.
3. Duration and dimensions (width & daily estimated lengths) of the proposed excavation.
4. Weather conditions.

When backfilling operations of an excavation in the traveled way, whether transverse or longitudinal, cannot be properly completed within a work day, steel plate bridging with a non-skid surface and shoring (see Trenching & Shoring) may be required to preserve unobstructed traffic flow. In such cases, the following conditions shall apply:

1. Steel plate bridging on freeways is not allowed.
2. Steel plates used for bridging must extend a minimum of 12" beyond the edges of the trench.
3. Steel plate bridging shall be installed to operate with minimum noise.
4. The trench shall be adequately shored, (as mentioned in Section 629 of the Encroachment Permits Manual) to support the bridging and traffic loads.
5. Temporary paving with cold asphalt concrete shall be used to feather the edges of the plates, if plate installation by Method (2) described below, is used.
6. Bridging shall be secured against displacement by using adjustable cleats, shims, or other devices.

As required by the district, steel plate bridging and shoring shall be installed using either Method (1) or (2):

Method 1 For speeds of 45 MPH or greater:

The pavement shall be cold planed to a depth equal to the thickness of the plate and to a width and length equal to the dimensions of the plate.

Approach plate(s) and ending plate (if longitudinal placement) shall be attached to the roadway by a minimum of 2 dowels pre-drilled into the corners of the plate and drilled 2" into the pavement. Subsequent plates are to be butted and tack welded to each other.

Method 2 For Speeds less than 45 mph:

Approach plate(s) and ending plate (if longitudinal placement) shall be attached to the roadway by a minimum of 2 dowels pre-drilled into the corners of the plate and drilled 2" into the pavement. Subsequent plates are to be butted and tack welded to each other. Fine graded asphalt concrete shall be compacted to form ramps, maximum slope 8.5 % with a minimum 12" taper to cover all edges of the steel plates. When steel plates are removed, the dowel holes in the pavement shall be backfilled with either graded fines of asphalt concrete mix, concrete slurry, epoxy or an equivalent that is satisfactory to the Caltrans' representative.

The permittee is responsible for maintenance of the steel plates, shoring, asphalt concrete ramps, and ensuring that they meet minimum specifications. Unless specifically noted or granted in the special provisions, or approved by the State representative, steel plate bridging shall not exceed 4 consecutive working days in any given week. Backfilling of excavations shall be covered with a minimum 3" temporary layer of cold asphalt concrete.

The following table shows the advisory minimal thickness of steel plate bridging required for a given trench width (A-36 grade steel, designed for HS20-44 truck loading per Caltrans Bridge Design Specifications Manual).

Trench Width	Minimum Plate Thickness
10"	One-half inch - 1/2"
1'-11"	Three-quarters inch - 3/4"
2'-7"	Seven-eights inch - 7/8"
3'-5"	One inch - 1"
5'-3"	One & three-quarter inch - 1 3/4"

NOTE: For spans greater than 5'-3", a structural design shall be prepared by a California registered civil engineer.

All steel plates within the right of way whether used in or out of the traveled way shall be without deformation. Inspectors can determine the trueness of steel plates by using a straight edge and should reject any plate that is permanently deformed.

Steel plates used in the traveled portion of the highway shall have a surface that was manufactured with a nominal Coefficient Of Friction (COF) of 0.35 as determined by California Test Method 342 (See Appendix H, Encroachment Permits Manual). If a different test method is used, the permittee may utilize standard test plates with known coefficients of friction available from each Caltrans District Materials Engineer to correlate skid resistance results to California Test Method 342. Based on the test data, the permittee shall determine what amount of surface wear is acceptable, and independently ascertain when to remove, test, or resurface an individual plate.

Caltrans Inspectors should not enforce plate removal unless it is permanently deformed or delivered without the required surfacing. However, an inspector should document in a diary all contacts with the contractor.

A Rough Road sign (W8-8) with black lettering on an orange background may be used in advance of steel plate bridging. This sign is used along with any other required construction signing.

Surfacing requirements are not necessary for steel plates used in parking strips, on shoulders not used for turning movements, or on connecting driveways, etc., not open to the public.

Highway and Freeway encasement requirements for Transverse crossings of Utility installations, installed by the following methods. The pavement or roadway shall not be open-cut unless specifically allowed under a "UT" permit. Utility installations shall not be installed inside of culverts or drainage structures.

The installation of Uncased High Pressure Natural Gas pipelines, on a case by case basis may be allowed, when in compliance with TR-0158 Special Provisions, "Exception to Policy" for Uncased High Pressure Natural Gas Pipelines.

Encasement Requirements based on: Installation Method, Type of Highway Facility and Material Transported in carrier.						
	Bore and Jack		Directional Drilling		Trenching	
Facility Type	**Frwy/Expwy**	**Conventional**	**Frwy/Expwy**	**Conventional**	**Frwy/Expwy**	**Conventional**
High Risk (Section 605)	Encase	Encase	Encase	Encase	Encase	Encase
Low Risk (Section 605)	Encase	Encase	Encase	Encase	Encase	Optional
Exempt Facilities (Section 605)	Encase	Encase	Optional	Optional	Optional	Optional
Pressurized Fluids	Encase	Encase	Encase	Encase	Encase	Encase
Natural Gas Lines Minimum 7.5' Depth (Appendix H)	Optional	Optional	Optional	Optional	Optional	Optional
Gravity Flows	Encase	Encase	Encase	Encase	Optional	Optional

Note: "Optional" means at the option of the District Permit Engineer. Transverse Crossings require encasement.

UG 1. CASINGS:

Casings should be steel conduit with a minimum inside diameter sufficiently larger than the outside diameter of the pipe or ducts to accommodate placement and removal. The casing can be either new or used steel pipe, or an approved connector system. Used pipe shall be pre-approved by the Department's engineer or representative before installation.

When the method of Horizontal Directional Drilling is used to place casing, the use of High Density Polyethylene Pipe (HDPE) as casing is acceptable. In specific instances the approval of Headquarters Office of Encroachment Permits, may be required.

Reinforced Concrete Pipe (RCP) in compliance of State Standard Specifications is an acceptable carrier for storm drain gravity flow or non-pressure flow. RCP when installed by Bore &Jack shall have rubber gaskets at the joints, and holes for grouting of voids left by jacking operations, see "E" below.

A. All pipes 6" or larger in diameter, or placement of multiple pipes or ducts, regardless of diameters, shall require encasement.

B. Minimum wall thickness for steel pipe casing for different lengths and diameters of pipes are as follows:

Minimum Wall Thickness		
Casing Pipe (Diameter)	**Up to 150 ft** (Length)	**Over 150 ft** (Length)
6" to 28"	1/4"	1/4"
30" to 38"	3/8"	1/2"
40" to 60"	1/2"	3/4"
62" to 72"	3/4"	3/4"

C. Spiral welded casing is authorized provided the casing is new and the weld is smooth.

D. The ends of the casing shall be plugged with ungrouted bricks or other suitable material approved by the Department's representative.

E. When required by the Department's representative, the permittee shall at his expense, pressure grout the area between the pavement and the casing from within the casing in order to fill any voids caused by the work covered under this permit. The increments for grout holes inside the pipe shall be 8' staggered and located 22-1/2 degrees from vertical axis of the casing. Pressure shall not exceed 5 psig for a duration sufficient to fill all voids.

F. The installation of multiple casings shall be installed with a minimum of 1-1/2 diameter clearance between casings, but not less than 18". The clearance between casings crossing freeways shall be two (2) diameters minimum, but not less than 24".

G. The casings placed within freeway right-of-way shall extend to the access control lines.

H. Wing cutters, if used, shall be a maximum of 1" larger than the casing. Voids caused by the use of wing cutters shall be grouted in accordance with "E" above.

I. A band welded to the leading edge of the casing should be placed square to the alignment. The band should not be placed on the bottom edge. Flaring the lead section on bores over 100' shall not be permitted.

J. All casing lengths shall equal to the auger length.

K. The casings within conventional highways shall extend 5' beyond the back of curb or edge of pavement, or to the right of way line if less. Where PCC cross-gutter exists, the casing shall extend at least 5' beyond the back of the cross-gutter, or to the right of way line if less.

Bore and receiving pits shall be:

A. Located at least 10' or more from the edge of pavement on conventional highways in rural areas.

B. Located 5' behind the concrete curb or AC dike on conventional highways in urban areas.

C. Located 5' outside the toe of slope of embankment areas.

D. Located outside freeway right of way.

E. Adequately fenced and/or have a Type-K barrier placed around them.

F. Adequately shored in accordance with Cal-OSHA requirements. Shoring for jacking and receiving pits located within 15' of traffic lanes on a State highway shall not extend more than 36" above the pavement grade unless otherwise authorized by Department's representative. Reflectors shall be affixed to the shoring on the sides facing traffic. A 6' chain link fence shall be installed around the perimeter of the pits during non-working hours.

G. All pits should have crushed-rock and sump areas to clear groundwater and water used to clean the casing. Where ground water is found and pumping is required, the pits shall be lined with filter fabric.

UG 2. DIRECTIONAL DRILLING: Bore and Receiving Pits

When directional drilling is the approved method for pipe installation, drilling plans shall contain information listed as follows:

1. Location of: entry and exit point, access pit, equipment, and pipe staging area.
2. Proposed drill path alignment (horizontal and vertical).
3. Location and clearances of all other facilities.
4. Depth of cover.
5. Soil analysis.*
6. Carrier pipe length, diameter, thickness, and material (HDPE/steel) and ream pipe diameter.
7. Detailed carrier pipe calculations confirming ability to withstand installation loads and long term operational loads including H20.
8. Proposed drilling fluid composition, viscosity, and density (based on soils analysis).
9. Drilling fluid pumping capacity, pressures, and flow rates
10. State right-of-way lines, property, and utility right of way or easement lines.
11. Elevations.
12. Type of tracking method/system and accuracy used.
13. A detailed plan for monitoring ground surface movement (settlement or heave) resulting from the drilling operation.

* May be waived by the District Permit Engineer for HDD jobs less than 6" in diameter and a traverse crossing less than 150'.

UG 3. LIMIT OF EXCAVATION:

No excavation is allowed within 10' from the edge of pavement except in curbed urban areas or as specified in the permit. Where no curb exists and excavations within 10' of the traveled way are to remain open, a temporary Type-K railing shall be placed at a 20:1 taper or as otherwise directed by the Department.

UG 4. TUNNELING:

Review, requirements of Section 623.6 of the Encroachment Permits Manual, if applicable. In addition to the requirements of "**UG1**" the following requirements apply:

A. For the purpose of this provision, a tunnel is defined as any pipe, 30" or larger in diameter placed.

B. When tunneling is authorized, the permittee shall provide full-time inspection of tunneling operations. The Department's representative shall monitor projects.

C. A survey grid shall be set and appropriately checked over the centerline of the pipe jacking or tunneling operation. Copies of the survey notes shall be submitted to the Department's representative.

D. Sand shields may be required as ground conditions change.

E. The method used to check the grade and alignment shall be approved by the Department's representative.

F. Pressure grouting for liner plates, rib and spiling, or rib and lagging tunnels shall be at every 8' section or at the end of work shift before the next section is excavated. All grouting shall be completed at the end of each workday.

G. A method for securing the headway at the end of each workday is required. Breastplates shall be installed during working hours for running sand or super-saturated soil.

UG 5. HIGH AND LOW RISK FACILITIES:

High and Low Risk Facilities, as defined in the Department's current Manual on High and Low Risk Underground Facilities, shall be installed with a minimum cover of 42".

UG 6. EXEMPT AND OTHER UNDERGROUND FACILITIES:

A. Exempt Facilities:

1. Gas service lines no larger than 2" in diameter or operating at 60 psig or less.
2. Underground electrical service conductors with a potential to ground of 300 volts or less.
3. Departmental owned electrical systems.

B. All facilities other than high and low risk shall have a minimum cover of 36" except for service connections, which shall have a minimum cover of 30".

UG 7. DETECTOR STRIP:

A continuous metallic detector strip shall be provided with non-metallic main installations. Service connections shall be installed at right angles to the centerline of the State highway where possible.

UG 8. BACKFILLING:

All backfilling shall conform to the applicable sections of the Department's Standard Specifications. Ponding or jetting methods of backfilling is prohibited.

Any required compaction tests shall be performed by a certified laboratory at no cost to the Department and the laboratory report furnished to the Department's representative.

UG 9. ROADWAY SURFACING AND BASE MATERIALS:

When the permit authorizes installation by the open cut method, surfacing and base materials and thickness thereof shall be as specified in the permit.

Temporary repairs to pavements shall be made and maintained upon completion of backfill until permanent repairs are made. Permanent repairs to pavements shall be made within thirty (30) days of completion of backfill unless otherwise specified by the Department. Temporary pavement patches shall be placed and maintained in a smooth riding plane free of humps and/or depressions.

UG 10. DAMAGE TO TREE ROOTS:

No tree roots over 3" will be cut within the tree drip line when trenching or other underground work is necessary adjacent to roadside trees. The roots that are 3" or more in diameter inside the tree drip line shall be tunneled under and wrapped in burlap and kept moist until the trench is refilled. Trenching machines may not be used under trees if the trunk or limbs will be damaged by their use.

If the trees involved are close together and of such size that it is impractical to protect all roots over 3" in diameter, or when roots are less than 4" in diameter, outside tree drip line, special arrangements may be made whereby pruning of the tree tops to balance the root loss can be done by the permittee under the close supervision of the District Landscape Specialist or District Tree Maintenance Supervisor. Manholes shall not be installed within 20' of any trunk.

UG 11. PIPES ALONG ROADWAY:

Pipes and conduits paralleling the pavement shall be located as shown on the plans or located outside of pavement as close as possible to the right-of-way line.

UG 12. BORROW AND WASTE:

Borrow and waste will be allowed within the work limits only as specified in the permit.

UG 13. MARKERS:

The permittee shall not place any markers that create a safety hazard for the traveling public or departmental employees.

UG 14. CATHODIC PROTECTION:

The permittee shall perform stray current interference tests on underground utilities under cathodic protection. The permittee shall notify the Department prior to the tests. The permittee shall perform any necessary corrective measures and advise the Department.

UG 15. TIE-BACKS:

A. Tie-backs shall be placed for the sole purpose of supporting shoring and/or soldier piles placed outside State highway rights-of-way to facilitate permittee's excavation.

B. Tiebacks shall be disconnected from the shoring and/or soldier piles one (1) year prior to releasing the bond.

UG 16. INSTALLATION BY OPEN CUT METHOD:

When the permit authorizes installation by the open cut method no more than one lane of the highway pavement shall be open-cut at any one time. Any exceptions shall be in writing by the Department's representative. After the pipe is placed in the open section, the trench is to be backfilled in accordance with specifications, temporary repairs made to the surfacing and that portion opened to traffic before the pavement is cut for the next section.

If, at the end of the working day, backfilling operations have not been properly completed, steel plate bridging shall be required to make the entire highway facility available to the traveling public in accordance with the Steel Plate Bridging Special Provisions (TR-0157)

UG 17. PAVEMENT REMOVAL:

PCC pavement to be removed shall be saw cut at a minimum depth of 4" to provide a neat and straight pavement break along both sides of the trench. AC pavement shall be saw cut to the full depth.

Where the edge of the trench is within 2' of existing curb and gutter or pavement edge, the asphalt concrete pavement between the trench and the curb or pavement edge shall be removed.

UG 18. MAINTAIN ACCESS:

Where facilities exist (sidewalks, bike paths), a minimum width of 4' shall be maintained at all times for safe pedestrian and bicyclist passage through the work area.

UG 19. SIDES OF OPEN-CUT TRENCHES:

Sides of open cut trenches in paved areas shall be kept as nearly vertical as possible. Trenches shall not be more the 2' wider than the outside diameter of the pipe to be laid therein, plus the necessary width to accommodate shoring.

UG 20. EXCAVATION UNDER FACILITIES:

Where it is necessary to excavate under existing curb and gutter, or underground facilities, the void shall be backfilled with two (2) sack cement-sand slurry.

UG 21. PERMANENT REPAIRS TO PCC PAVEMENT:

Repairs to PCC pavement shall be made of Portland Cement Concrete containing a minimum of 658 lbs. or 7 sack of cement per cubic yard. Replaced PCC pavement shall equal existing pavement thickness. The concrete shall be satisfactorily cured and protected from disturbance for not less than forty-eight (48) hours. Where necessary to open the area to traffic, no more than two (2%) percent by weight of calcium chloride may be added to the mix and the road opened to traffic after six (6) hours.

UG 22. REMOVAL OF PCC SIDEWALKS OR CURBS:

Concrete sidewalks or curbs shall be saw cut to the nearest score marks and replaced equal in dimension to that removed with score marks matching existing sidewalk or curb.

UG 23. SPOILS:

No earth or construction materials shall be dragged or scraped across the highway pavement, and no excavated earth shall be placed or allowed to remain at a location where it may be tracked on the highway traveled way, or any public or private approach by the permittee's construction equipment, or by traffic entering or leaving the highway traveled way. Any excavated earth or mud so tracked onto the highway pavement or public or private approach shall be immediately removed by the permittee.

STORM WATER SPECIAL PROVISIONS for MINIMAL or NO IMPACT

TR-0400 (Rev 09/2012)

1. GENERAL: The purpose of these Special Provisions is to provide the Permittee with specifications for water pollution control to minimize, prevent, or control the discharge of material into the air, surface waters, groundwater, and storm sewers owned by the State or local agencies. These provisions are not intended to take the place of the Caltrans Water Pollution Control Program (WPCP) for projects where soil disturbance from work activities less than one acre, or work activities of one acre or more subject to the preparation of the Caltrans Storm Water Pollution Prevention Plan (SWPPP) that would require a waste discharge identification number or coverage under the California Construction General Permit *(Order No. 2009-0009-DWQ, NPDES No CAS000002)*. The Permittee shall comply with the following Special Provisions and the direction of the State Representative.

2. NPDES REQUIREMENTS: The Permittee shall be responsible for full compliance with the Caltrans Storm Water Program and the Caltrans National Pollutant Discharge Elimination System (NPDES) Permit requirements. It is the Permitte's responsibility to install, inspect, and repair or maintain facilities and devices used for water pollution control practices before performing daily work activities. Installation and maintenance responsibilities on the job site include: 1) soil stabilization materials in work areas that are inactive or prior to storm events, 2) water pollution control devices to control sediment and erosion, 3) implementation of spill and leak prevention procedures for chemical and hazardous substances stored on the job site. 4) material storage, 5) stockpile management, 6) waste management, 7) non-stormwater management, 8) water conservation, and 9) illicit connection, illegal discharge detection and reporting. The Permittee shall report to the state representative when discharges enter into receiving waters, adjacent property, drainage systems or when discharges could be a cause or a threat for water pollution. The Permittee shall also control illicit discharges or illegal dumping prior to start of daily work schedule. Copies of written notices or orders from the Regional Water Quality Control Board or other regulatory agency shall be provided to the State representative within 48 hours of reported activity. For additional information on storm water compliance, visit the State Water Resources Control Boards storm water Website at http://www.waterboards.ca.gov/water_issues/programs/stormwater

3. RESPONSIBILITY FOR DEBRIS REMOVAL: The Permittee shall be responsible for preventing sediment, trash, debris, and other construction waste from entering the street, the storm drains, local creeks, or any other bodies of water.

4. SPOILS AND RESIDUE: The Permittee shall vacuum any saw-cut concrete waste material, debris, residue, etc. No spoils, debris, residue, etc. shall be washed into a drainage system.

5. SWEEPING: Sweep paved roads at construction entrance and exit locations and surrounding paved areas daily within the job site during: 1) clearing and grubbing, 2) earthwork, 3) trenching, 4) soil disturbance, 5) pavement grinding and/or cutting, and 6) after observing tracking of material onto or off the State property. Keep dust to a minimum during sweeping activities. Use vacuum whenever dust generation is excessive or sediment pickup is ineffective. Roadways or work areas shall not be washed down with water. Street sweeping operations must conform to Section 13 Water Pollution Control of the State of California standard specifications for construction (most current version) http://www.dot.ca.gov/hq/esc/oe/specifications/SSPs/2010-SSPs/ .

6. VEHICLES AND EQUIPMENT: Permittee shall prevent all vehicles, equipment, etc. from leakage or mud tracking onto roadways. If leaks cannot be repaired immediately, remove the vehicle or equipment from the job site.

7. MAINTENANCE AND FUELING OF VEHICLES AND EQUIPMENT: Maintenance and fueling of equipment shall not result in any pollution at the job site. The Permittee shall immediately clean up spills/leaks, and properly dispose of contaminated soil and materials.

8. CLEANING VEHICLES AND EQUIPMENT: Limit vehicle and equipment cleaning or washing at the job site except what is necessary to control vehicle tracking or hazardous waste. The Permittee shall clean all equipment within a bermed area or over a drip pan large enough to prevent run-off. N o soaps, solvents, degreasers, etc shall be used in State right of way. Any water from this operation shall be collected and disposed of at an appropriate site. Containment berms or dikes shall be used for fueling, washing, maintaining and washing vehicles or equipment in outside areas. Containment must be performed at least 100 feet from concentrated flows of storm water, drainage courses, and storm drain inlets if within a flood plain, otherwise at least 50 feet if outside the floodplain. Keep adequate quantities of absorbent spill-cleanup material and spill kits in the fueling or maintenance area and on fueling trucks.

9. DIESEL FUELS: The use of diesel fuel from petroleum or other fossil fuel as a form-oil or solvent is not allowed.

10. WEATHER CONDITIONS AT WORKSITE: Any activity that would generate fine particles or dust that could be transported off site by stormwater shall be performed during dry weather.

11. HOT MIX ASPHALT: Runoff from washing hot mix asphalt shall not enter into any drainage conveyances.

12. PROTECTION OF DRAINAGE FACILITIES: The Permittee shall protect/cover gutters, ditches, drainage courses, and inlets with gravel bags, fiber rolls, State approved fabric filters, etc., to the satisfaction of the State representative during grading, paving, saw-cutting, etc. and materials must conform to Section 13-6.02 Materials for Water Pollution Control of the State of California standard specifications for construction (most current version). No such protection measures shall cause an obstruction to the traveling public. The Permittee shall implement spill and leak prevention procedures for chemicals and hazardous substances stored on the job site in accordance to section 13-4.03B(1-3) Spill Prevention and Control, Water Pollution Control, of the State of California standard specifications for construction (2010 version).

13. PAINT: Rinsing of painting equipment and materials is not permitted in state right-of-way. When thoroughly dry, dispose of the following as solid waste: dry latex paint, paint cans, used brushes, rags, gloves, absorbent materials, and drop cloths. Oil based paint sludge and unusable thinner shall be disposed of at an approved hazardous waste site.

14. CONSTRUCTION MATERIALS: Stockpile of all construction materials, including, but not limited to; pressure treated wood, asphalt concrete, cold mix asphalt concrete, concrete, grout, cement containing premixes, and mortar, shall conform to section 13-4.03C Material Management (Storage & Stockpiles), Water Pollution Control, of the State of California standard specifications for construction (2010 version).

15. CONCRETE EQUIPMENT: Concrete equipment shall be washed in a designated washing area in a way that does not contaminate soil, receiving waters, or storm drain systems.

16. EXISTING VEGETATION: Established existing vegetation is the best form of erosion control. Minimize disturbance to existing vegetation. Damaged or removed vegetation shall be replaced as directed by the State Representative.

17. SOIL DISTURBANCE: Soil disturbing activities shall be avoided during the wet weather season. If construction activities during wet weather are allowed in your permit, all necessary erosion control and soil stabilization measures shall be implemented in advance of soil disturbing activity.

18. SLOPE STABILIZATION AND SEDIMENT CONTROL: Consider a certified expert in Erosion and Sediment control in cases where slopes are disturbed during construction. The Permittee is directed to comply with Section 13.5 Temporary Soil Stabilization and Section 21 Erosion Control of the State of California (2010 version) standard specifications for construction during application of temporary soil stabilization measures to the soil surface. Fiber rolls or silt fences may be required down slope until permanent soil stabilization is established. Remove the accumulated sediment whenever the sediment accumulates to 1/3 of the linear sediment barrier height.

19. STOCKPILES: Stockpiles containing aggregate and/or soil shall be stored at least 100 feet from concentrated flows of storm water, drainage courses, and storm drain inlets if within a flood plain, otherwise at least 50 feet if outside the floodplain, and shall be covered and protected with a temporary perimeter sediment barrier. Cold mix stockpiles shall be stored on an impermeable surface and covered with 9mil plastic to prevent contact with water.

20. DISCOVERY OF CONTAMINATION: The State Representative shall be notified in case any unusual discoloration, odor, or texture of ground water, is found in excavated material or if abandoned, underground tanks, pipes, or buried debris are encountered.

21. SANITARY AND SEPTIC WASTE: Do not bury or discharge wastewater from a sanitary or septic system within the highway. Properly connected sewer facilities are free from leaks. With State Representative approval place portable sanitary facility at least 50 feet away from storm drains, receiving waters, and flow lines. Permittee must comply with local health agency provisions when using an on-site disposal system.

22. LIQUID WASTE: Prevent job site liquid waste from entering storm drain systems and receiving waters. Drilling slurries, grease or oil-free waste water or rinse water, dredging, wash water or rinse water running off a surface or other nonstorm water liquids not covered under separate waste water permits shall be held in structurally sound, leak-proof containers, such as portable bins or portable tanks. Store containers at least 50 feet away from moving vehicles and equipment. Liquid waste may require testing to determine hazardous material content prior to disposal

23. WATER CONTROL AND CONSERVATION: Manage water use in a way that will prevent erosion and the discharge of pollutants into storm drain systems and receiving waters. Direct runoff water, including water from water line repair from the job site to areas where it can infiltrate into the ground. Direct water from off-site sources around the job site or from contact with jobsite water.

24. PILE DRIVING: Keep spill kits and cleanup materials at pile driving locations. Park pile driving equipment over drip pans, absorbent pads, or plastic sheeting with absorbent material, and away from storm water run-on when not in use.

25. DEWATERING: Dewatering consists of discharging accumulated storm water, groundwater, or surface water from excavations or temporary containment facilities. All dewatering operations shall comply with the latest Caltrans guidelines. Contact State representative for approval of dewatering discharge by infiltration or evaporation, otherwise, any effluent discharged into a permitted storm water system requires approval from the Regional Water Quality Control Board. Prior to the start of dewatering, the Permittee shall provide the State Representative with a dewatering and discharge work plan that complies with section 13-4.01B Submittals, Water Pollution Control, of the State of California standard specifications for construction (2010 version). A copy of the Waste Discharge Permit and a copy of a valid WDID number issued by the Regional Board shall be provided to the State representative.

Permit No. 0612-NSV-0972
Reference: 06/KER/VAR/VAR
City of Bakersfield (TRIP)

Contractor(s)/Subcontractor(s) List

PRIME CONSULTANT:

PARSONS TRANSPORTATION GROUP, INC.
2201 Dupont Drive, Suite 200
Irvine, CA 92612
Phone: 949.333.4500
Fax: 949.263.1225
Contact: Girair Kotchian

LIST OF SUBS:

PSOMAS
555 South Flower Street, Suite 4400
Los Angeles, CA 90071
Phone: 951.787.8421
Fax: 714.545.8883
Contact: Cliff Simental

Diaz Yourman and Associates (DBE)
1616 East 17th Street
Santa Ana, CA 92705
Phone: 714.245.2920
Fax: 714.245.2950
Contact: Nadesh Nardeswaran

Underground Solutions, Inc.
6910 Mission Gorge Road
San Diego, CA 92120
Phone: 619.858.1401
Fax: 619.858.1406
Contact: Mike Arme

Earth Mechanics, Inc.
17800 Newhope Street, Suite B
Founatain Valley, Ca 92708
Phone: 714.751.3826
Fax:714.751.3928
Contact: Lino Cheang

T.Y. LIN International
404 Camino Del Rio South, Suite 700
San Diego, CA 92108
Phone: 619.908.3310
Fax:619.692.0634
Contact: Jason Lemons

Permit No. 0612-NSV-0972
Reference: 06/KER/VAR/VAR
City of Bakersfield (TRIP)

Contractor(s)/Subcontractor(s) List

Group Delta Consultants, Inc.
32 Mauchly, Suite B
Irvine, Ca 92618
Phone: 949. 450.2100
Fax: 949.450.2108
Contact: Mike Reader

V&A, Inc.
530 S. Hewitt Street, Suite 121
Los Angeles, CA 90013
Phone: 213.972.9700
Fax: 213.972.9707
Contact: Jose Valle

Overland, Pacific & Culter, Inc.
3750 Schaufele Ave., Suite 150
Long Beach, CA. 90808
Phone: 562.304.2000
Fax: 562.304.2020
Contact: John Cutler

Ruettgers & Schuler Civil Engineers
1800 30th Street
Bakersfield, CA. 93305
Phone: 661.327.1969
Fax: 661.327.1993
Contact: John Schuler

Cornerstone Engineering, Inc.
208 Oak Street
Bakersfield, CA 93304
Phone: 661.325.9474
Fax: Fax: 661.322.0129
Contact: Derrill G. Whitten

Permit No. 0612-NSV-0972
Reference: 06/KER/VAR/VAR
City of Bakersfield (TRIP)

Contractor(s)/Subcontractor(s) List

PRIME CONSULTANT:

Mark Thomas & Company, Inc.
16795 Von Karman Avenue, Suite 205
Irvine, CA 92606
Karen Chapman
949-477-9000 ext 110

LIST OF SUBS:

DesignLab252
Box 27616
Fresno, CA 93729
Patrick Boyd
559-472-9966 ext 102

H&H Surveying
4103 Buck Owens Boulevard
Bakersfield, CA 93308
Misha Georgevitch
661-834-8448

Kennedy-Jenks
200 New Stine Rd., Suite 205
Bakersfield, CA 93309
Pat Ostly
661-835-9785

Kleinfelder
5125 N. Gates Ave., Suite 102
Fresno, CA 93722
Justin Kempton
559-486-0750

LIN Consulting
21660 E. Copley Dr., Suite 270
Diamond Bar, CA 91765
William Sun
909-396-6850 ext 105

Safe Utility Exposure
14728 Biola Ave
La Mirada, CA
90638-4450
Ron Miller
562-715-1414

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER

May 1, 2006
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Greg W. Edwards — C36386 — 6-30-06 — CIVIL — STATE OF CALIFORNIA

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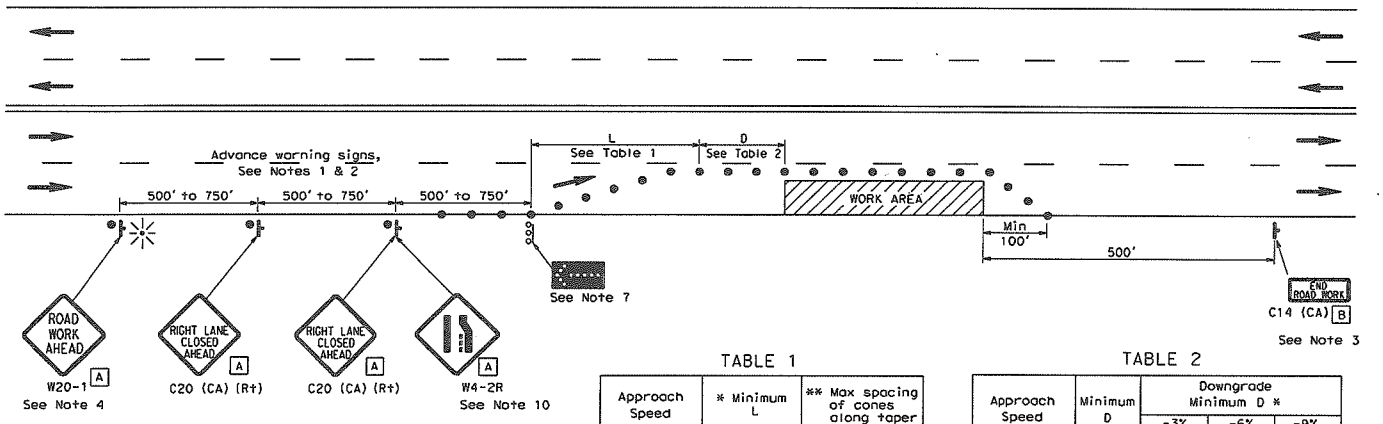
To get to the Caltrans web site, go to: http://www.dot.ca.gov

TYPICAL LANE CLOSURE



NOTES:

Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on orange background.

California code are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

TABLE 1

Approach Speed	* Minimum L	** Max spacing of cones along taper
mph	ft	ft
20 and below	80	20
25	125	25
30	180	30
35	245	35
40	320	40
45	540	45
50	600	50
Over 50	See Note 9	

* Use L for lane widths less than or equal to 12'.
** See Note 8.

TABLE 2

Approach Speed	Minimum D	Downgrade Minimum D *		
		-3%	-6%	-9%
mph	ft	ft	ft	ft
25 and below	155	158	165	173
30	200	205	215	227
35	250	257	271	287
40	305	315	333	354
45	360	378	400	427
50	425	446	474	507
Over 50	See Note 9			

* Use on sustained downgrade steeper than -3 percent and longer than 1 mile.

LEGEND

- Traffic Cone
- Temporary Sign
- Direction of Travel
- Flashing Arrow Sign (FAS)
- FAS Support or Trailer
- Portable Flashing Beacon

SIGN PANEL SIZE (Min)

A 36" x 36"

B 36" x 18"

NOTES:

1. Where approach speeds are low, advance warning signs may be placed at 300' spacing and placed closer in urban areas.
2. Each advance warning sign shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
3. A C14 (CA) "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane closure unless the end of work area is obvious, or ends within a larger project's limits.
4. If the W20-1 sign would follow within 2000' of a stationary W20-1 or C11 (CA) "ROAD WORK NEXT _____ MILES", use a C20 (CA) sign for the first advance warning sign.
5. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
6. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
7. Flashing arrow sign shall be either Type I or Type II.
8. The maximum spacing between cones along a tangent shall be 50' and along a taper shall be approximately as shown in Table 1.
9. For approach speeds over 50 mph, use the "Traffic Control System for Lane Closure On Freeways And Expressways" plan for lane closure details and requirements.
10. When specified in the special provisions, a W4-2 "LANE ENDS" symbol sign is to be used in place of the C20 (CA) "RIGHT LANE CLOSED AHEAD" sign.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON MULTILANE CONVENTIONAL HIGHWAYS

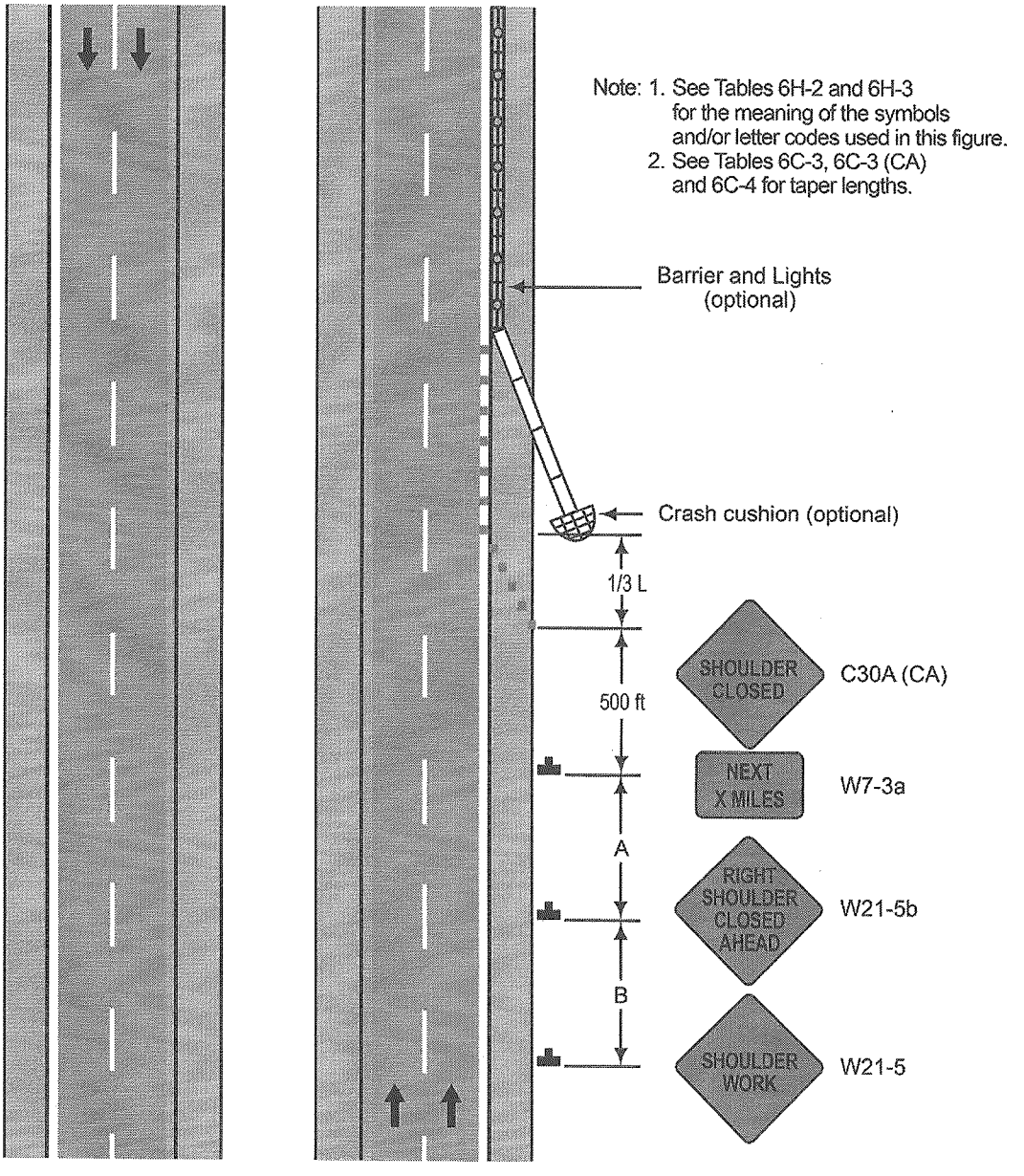
NO SCALE

T11

2006 STANDARD PLAN T11

9-28-05

Figure 6H-5 (CA). Shoulder Closure on Freeway (TA-5)



Typical Application 5

Notes for Figure ~~6H-5~~ 6H-5(CA) —Typical Application 5 Shoulder Closure on a Freeway

Guidance:

1. *SHOULDER CLOSED signs should be used on limited-access highways where there is no opportunity for disabled vehicles to pull off the roadway.*
2. *If drivers cannot see a pull-off area beyond the closed shoulder, information regarding the length of the shoulder closure should be provided in feet or miles, as appropriate.*
3. *The use of a temporary traffic barrier should be based on engineering judgment.*

Standard:

4. **Temporary traffic barriers, if used, shall comply with the provisions of Section 6F.85.**

Option:

5. The barrier shown in this typical application is an example of one method that may be used to close a shoulder of a long-term project.
6. The warning lights shown on the barrier may be used.

Standard:

7. **The minimum offset from the upstream end of the barrier to the edge of the traveled way shall be at least 15 feet unless shielded by a crash cushion.**
8. **Temporary traffic barriers, including their end treatments, shall be crashworthy. In order to mitigate the effect of striking the upstream end of a temporary traffic barrier, the end shall be installed in accordance with AASHTO's "Roadside Design Guide" (see Section 1A.11) by flaring until the end is outside the acceptable clear zone or by providing crashworthy end treatments. See Section 6F.85 for more details.**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER

May 1, 2006
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Greg W. Edwards C36386 6-30-06 EXP. CIVIL STATE OF CALIFORNIA

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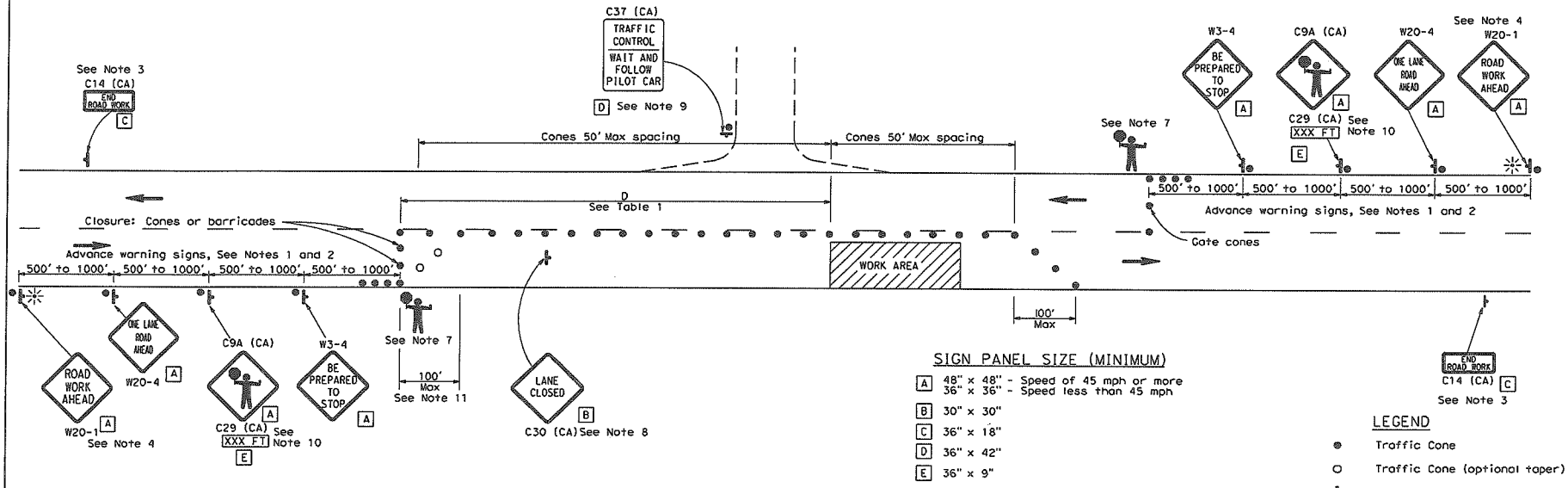
NOTES:

Unless otherwise specified in the special provisions, all temporary warning signs shall have black legend on orange background.

California code are designated by (CA). Otherwise, Federal (MUTCD) codes are shown.

TYPICAL LANE CLOSURE WITH REVERSIBLE CONTROL



SIGN PANEL SIZE (MINIMUM)

- A 48" x 48" - Speed of 45 mph or more
  36" x 36" - Speed less than 45 mph
- B 30" x 30"
- C 36" x 18"
- D 36" x 42"
- E 36" x 9"

LEGEND

- Traffic Cone
- Traffic Cone (optional taper)
- Temporary Sign
- Direction of Travel
- Portable Flashing Beacon
- Flagger

NOTES:

1. Where approach speeds are low, advance warning signs may be placed at 300' spacing, and closer in urban areas.
2. Each advance warning sign in each direction of travel shall be equipped with at least two flags for daytime closure. Each flag shall be at least 16" x 16" in size and shall be orange or fluorescent red-orange in color. Flashing beacons shall be placed at the locations indicated for lane closure during hours of darkness.
3. A C14 (CA) "END ROAD WORK" sign, as appropriate, shall be placed at the end of the lane control unless the end of work area is obvious, or ends within a larger project's limits.
4. If the W20-1 sign would follow within 2000' of a stationary W20-1 or C11 (CA) "ROAD WORK NEXT _____MILES", use a W20-4 sign for the first advance warning sign.
5. All cones used for lane closures during the hours of darkness shall be fitted with retroreflective bands (or sleeves) as specified in the specifications.
6. Portable delineators, placed at one-half the spacing indicated for traffic cones, may be used instead of cones for daytime closures only.
7. Additional advance flaggers may be required. Flagger should stand in a conspicuous place, be visible to approaching traffic as well as approaching vehicles after the first vehicle has stopped. During the hours of darkness, the flagging-station and flagger shall be illuminated and clearly visible to approaching traffic. The illumination footprint of the lighting on the ground shall be at least 20' in diameter. Place a minimum of four cones at 50' intervals in advance of flagger station as shown.
8. Place C30 (CA) "LANE CLOSED" sign at 500' to 1000' intervals throughout extended work areas. They are optional if the work area is visible from the flagger station.
9. When a pilot car is used, place a C37 (CA) "TRAFFIC CONTROL-WAIT AND FOLLOW PILOT CAR" sign at all intersections within traffic control area. Signs shall be clean and visible at all times.
10. An optional C29 (CA) sign may be placed below the C9A (CA) sign.
11. Traffic cones or barricades may be placed on the optional taper as shown, barricades shall be Type I, II, or III.

TABLE 1

Approach Speed	Minimum D	Downgrade Minimum D *		
		-3%	-6%	-9%
mph	ft	ft	ft	ft
25 and below	155	158	165	173
30	200	205	215	227
35	250	257	271	287
40	305	315	333	354
45	360	378	400	427
50	425	446	474	507
55	495	520	553	593
60	570	598	638	686
65	645	682	728	785

* Use on sustained downgrade steeper than -3 percent and longer than 1 mile.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE ON TWO LANE CONVENTIONAL HIGHWAYS

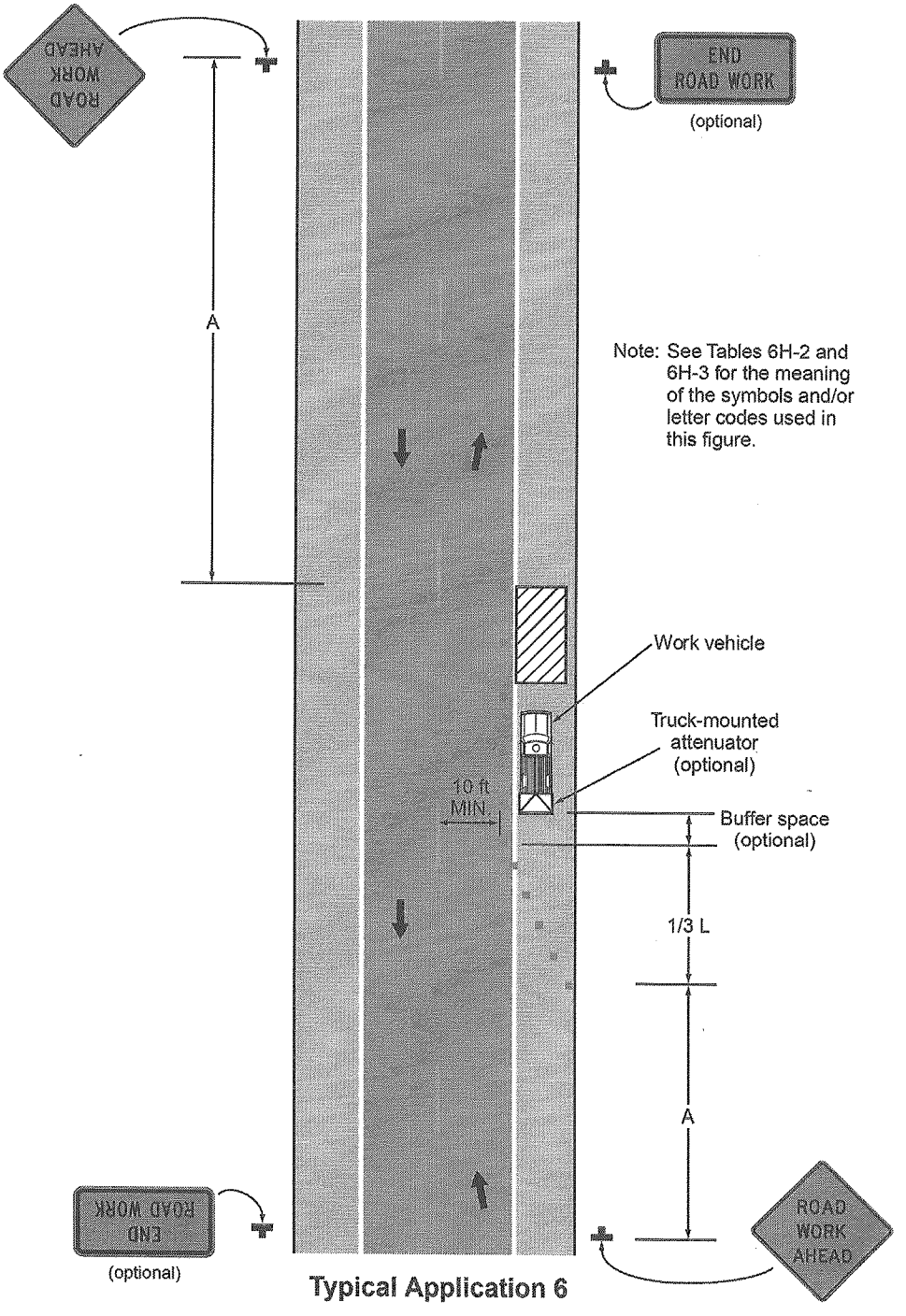
NO SCALE

T13

2006 STANDARD PLAN T13

9-28-05

Figure 6H-6. Shoulder Work with Minor Encroachment (TA-6)



Notes for Figure 6H-6—Typical Application 6
Shoulder Work with Minor Encroachment

Guidance:

1. *All lanes should be a minimum of 10 feet in width as measured to the near face of the channelizing devices.*
2. *The treatment shown should be used on a minor road having low speeds. For higher-speed traffic conditions, a lane closure should be used.*

Option:

3. For short-term use on low-volume, low-speed roadways with vehicular traffic that does not include longer and wider heavy commercial vehicles, a minimum lane width of 9 feet may be used.
4. Where the opposite shoulder is suitable for carrying vehicular traffic and of adequate width, lanes may be shifted by use of closely-spaced channelizing devices, provided that the minimum lane width of 10 feet is maintained.
5. Additional advance warning may be appropriate, such as a ROAD NARROWS sign.
6. Temporary traffic barriers may be used along the work space.
7. The shadow vehicle may be omitted if a taper and channelizing devices are used.
8. A truck-mounted attenuator may be used on the shadow vehicle.
9. For short-duration work, the taper and channelizing devices may be omitted if a shadow vehicle with activated high-intensity rotating, flashing, oscillating, or strobe lights is used.
10. Vehicle hazard warning signals may be used to supplement high-intensity rotating, flashing, oscillating, or strobe lights.

Standard:

11. **Vehicle-mounted signs shall be mounted in a manner such that they are not obscured by equipment or supplies. Sign legends on vehicle-mounted signs shall be covered or turned from view when work is not in progress.**
12. **Shadow and work vehicles shall display high-intensity rotating, flashing, oscillating, or strobe lights.**
13. **Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.**
14. **Note 3 shall not be applicable for State highways. Note #1 shall be used instead for State highways.**

District 6
Encroachment Permits
Office (559) 445-6169
FAX: (559) 445-5100
Email: D6LCS@dot.ca.gov

All requests are due to the Permit Office by Monday, 5PM for work starting the following week.

Caltrans District 6 Closure Request Form for Encroachment Permits

Permit # (06 XX-XXX-XXXX) _____ Caltrans Permit Inspector _____

Contact Name and Company _____ Office Phone _____ Cell Phone _____ Fax _____

Route _____ Direction _____

Begin County _____ Begin Location _____ Begin PM _____ Begin Date _____ Begin Time (HH:MM) : 24 Hr

End County _____ End Location _____ End PM _____ End Date _____ End Time (HH:MM) : 24 Hr

Facility (Check one)

- ☐ Connector
- ☐ C'nven Hwy
- ☐ Mainline (Hwy/Fwy)
- ☐ Off Ramp
- ☐ On Ramp
- ☐ Surface Street

Type of Closure (Check one)

- ☐ Lane / Shldr
- ☐ Full
- ☐ Moving
- ☐ One-way

Duration *(Check one)

- ☐ Stndrd
- ☐ Long-term
- ☐ Intermittent

# of Lane(s) in One Direction _____

Lane(s) to be Closed (Check All that Apply)

- ☐ Lane 1
- ☐ Lane 2
- ☐ Lane 3
- ☐ Lane 4
- ☐ Aux Ln
- ☐ Rt Shldr
- ☐ Lt Shldr
- ☐ Rt Turn Ln
- ☐ Lt Turn Ln

Description of Work _____

Additional Remarks

_____

* Standard is lasting less than 24 hours // Long-Term is lasting at least 24 hours // Intermittent is lasting no more than 10 minutes at a time

Updated 12/01/2010

Appendix B
Laboratory Analytical Reports

Date of Report: 05/12/2014

Jack Packwood

Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Client Project:	EN024 Beltway
BCL Project:	ADL Soil
BCL Work Order:	1409190
Invoice ID:	B172981, B173001

Enclosed are the results of analyses for samples received by the laboratory on 4/24/2014. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Christina Herndon
Client Service Rep

Authorized Signature

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Sample Results

1409190-01 - WB58-4-0.5
Total Concentrations (TTLC)..... 40
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Chemical Analysis..... 41
Total Concentrations (TTLC)..... 42
1409190-03 - WB58-4-2
Total Concentrations (TTLC)..... 43
1409190-04 - WB58-3-0.5
Modified WET Test (STLC)..... 44
WET Test (STLC)..... 45
TCLP Toxicity..... 46
Total Concentrations (TTLC)..... 47
1409190-05 - WB58-3-0.5-Dup
WET Test (STLC)..... 48
Total Concentrations (TTLC)..... 49
1409190-06 - WB58-3-1
Total Concentrations (TTLC)..... 50
1409190-07 - WB58-3-2
Total Concentrations (TTLC)..... 51
1409190-08 - WB58-2-0.5
Total Concentrations (TTLC)..... 52
1409190-09 - WB58-2-1
Total Concentrations (TTLC)..... 53
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Chain of Custody Form

Page 1 of 12

Report To:
Client: GDC (Group Delta Consultants)
Attn: Jack Packwood
Street Address: 32 Mauchly, Suite B
City, State, Zip: Irvine, CA, 92618
Phone: 949 450 2100 Fax: 949 450-2108
Email Address: kevin@groupdelta.com
Work Order #: 14-09190

Project #: EN024
Project Name: Beltway
Sampler(s): Kevin Garcia

Analysis Requested: Please refer to the back of this page for completion instructions and method legend.

Comments:

Are there any tests with holding times less than or equal to 48 hours? ☐ Yes ☐ No

* Standard Turnaround = 10 work days

Sample #	Description	Date Sampled	Time Sampled	Lead 6010B	Pb 6020SC	Sample Matrix: Soil	Sludge	Drinking Water	Ground Water	Waste Water	Other	Turnaround # of work days*	Notes
-1	WB58-4-0.5	4/21/14	9:56	X		X							
-2	WB58-4-1	4/21/14	9:57	X	X	X							
-3	WB58-4-2	4/21/14	9:58	X		X							
-4	WB58-3-0.5	4/21/14	10:23	X		X							
-5	WB58-3-0.5-dup	4/21/14	10:24	X		X							
-6	WB58-3-1	4/21/14	10:25	X		X							
-7	WB58-3-2	4/21/14	10:26	X		X							
-8	WB58-2-0.5	4/21/14	10:59	X		X							
-9	WB58-2-1	4/21/14	10:58	X		X							
-10	WB58-2-2	4/21/14	10:59	X		X							
-11	WB58-1-0.5	4/21/14	11:57	X		X							
-12	WB58-1-1	4/21/14	11:58	X	X	X							
-13	WB58-1-2	4/21/14	11:59	X		X							
-14	EB58-1-0.5	4/22/14	1:32	X		X							

CHK BY DISTRIBUTION
SUB OUT

Billing ☒ Same as above
Client:
Address:
City: State Zip
Attn:
PO#:

EDF Required? Geotracker ☐ Yes ☒ No
Send Copy to State of CA? (EDT) ☐ Yes ☒ No

Global ID (Needed for EDF)
System # (Needed for EDT)

	Date	Time		Date	Time
1. Relinquished By	4/24/14	0300	1. Received By	4/24/14	0300
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

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Chain of Custody Form

Page 2 of 12

Report To:
Client: GDC
Project #: EN024
Attn: Jack Packwood
Project Name: Beltway
Street Address:
City, State, Zip:
Sampler(s):
Phone: Fax:
Email Address:
Work Order #: 14-09190

Analysis Requested

Please refer to the back of this page for completion instructions and method legend.

Comments:

Are there any tests with holding times less than or equal to 48 hours? ☐ Yes ☐ No

* Standard Turnaround = 10 work days

Sample #	Description	Date Sampled	Time Sampled	Lead 6010B	pH 9045C	Sample Matrix: Soil	Sludge	Drinking Water	Ground Water	Waste Water	Other	Turnaround # of work days*	Notes
-15	EB58-1-1	4/22/14	1:33	X		X							
-16	EB58-1-1-dup	4/22/14	1:34	X		X							
-17	EB58-1-2	4/22/14	1:35	X		X							
-18	EB58-2-0.5	4/22/14	1:47	X		X							
-19	EB58-2-1	4/22/14	1:48	X		X							
-20	EB58-2-2	4/22/14	1:49	X		X							
-21	EB58-3-0.5	4/22/14	2:21	X		X							
-22	EB58-3-1	4/22/14	2:22	X	X	X							
-23	EB58-3-2	4/22/14	2:23	X		X							
-24	EB58-4-0.5	4/22/14	2:40	X		X							
-25	EB58-4-1	4/22/14	2:41	X		X							
-26	EB58-4-2	4/22/14	2:42	X		X							
-27	EB58-5-0.5	4/22/14	2:56	X		X							
-28	EB58-5-1	4/22/14	2:57	X		X							

Billing ☒ Same as above

Client:
Address:
City: State Zip
Attn:
PO#:

EDF Required? Geotracker ☐ Yes ☒ No

Send Copy to State of CA? (EDT) ☐ Yes ☒ No

Global ID (Needed for EDF)

System # (Needed for EDT)

	Date	Time		Date	Time
1. Relinquished By [signature]	4/24/14	0300	1. Received By M. Atanas	4/24/14	0300
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

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Chain of Custody Form

Page 3 of 12

Report To:
Client: GDC
Attn: Jack Packwood
Street Address:
City, State, Zip:
Phone: Fax:
Email Address:
Work Order #: 14-09190

Project #: EN024
Project Name: Beltway
Sampler(s):

Analysis Requested: Please refer to the back of this page for completion instructions and method legend.

Comments:

Sample #	Description	Date Sampled	Time Sampled	Lead 6010B	pH 9045C	Sample Matrix: Soil	Sludge	Drinking Water	Ground Water	Waste Water	Other	Turnaround # of work days*	Notes
-29	EB58-5-2	4/22/14	2:58	X		X							
-30	EB58-5-2-dup	4/22/14	2:59	X		X							
-31	EB58-6-0.5	4/22/14	3:20	X		X							
-32	EB58-6-1	4/22/14	3:26	X	X	X							
-33	EB58-6-2	4/22/14	3:28	X		X							
-34	EB58-7-0.5	4/22/14	3:45	X		X							
-35	EB58-7-1	4/22/14	3:46	X		X							
-36	EB58-7-2	4/22/14	3:48	X		X							
-37	EB58-8-0.5	4/22/14	4:40	X		X							
-38	EB58-8-0.5-dup	4/22/14	4:42	X		X							
-39	EB58-8-1	4/22/14	4:45	X		X							
-40	EB58-8-2	4/22/14	4:48	X		X							
-41	SB99-14-0.5	4/22/14	8:41	X		X							
-42	SB99-14-1	4/22/14	8:44	X		X							

Are there any tests with holding times less than or equal to 48 hours? ☐ Yes ☐ No

* Standard Turnaround = 10 work days

Billing ☒ Same as above

Client:
Address:
City: State Zip
Attn:
PO#:

EDF Required? Geotracker ☐ Yes ☒ No

Send Copy to State of CA? (EDT) ☐ Yes ☒ No

Global ID (Needed for EDF)

System # (Needed for EDT)

	Relinquished By	Date	Time	Received By	Date	Time
1.	[signature]	4/24/14	0300	M. Atonio	4/24/14	0300
2.						
3.						

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Chain of Custody Form

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Report To:
Client: GDC
Attn: Jack Packwood
Street Address:
City, State, Zip:
Phone: Fax:
Email Address:
Work Order #: 14-09190

Project #: EN024
Project Name: Beltway
Sampler(s):

Analysis Requested: Please refer to the back of this page for completion instructions and method legend.

Comments:

Are there any tests with holding times less than or equal to 48 hours? ☐ Yes ☐ No

* Standard Turnaround = 10 work days

Sample #	Description	Date Sampled	Time Sampled	Lead 6010B	pH 9045C	Sample Matrix: Soil	Sludge	Drinking Water	Ground Water	Waste Water	Other	Turnaround # of work days*	Notes
-43	SB99-14-2	4/22/14	8:48	X		X							
-44	SB99-13-0.5		9:01	X		X							
-45	SB99-13-1		9:04	X		X							
-46	SB99-13-2		9:06	X	X	X							
-47	SB99-12-0.5		9:10	X		X							
-48	SB99-12-1		9:11	X		X							
-49	SB99-12-1-dup		9:16	X		X							
-50	SB99-12-2		9:18	X		X							
-51	SB99-11-0.5		9:28	X		X							
-52	SB99-11-1		9:29	X		X							
-53	SB99-11-2		9:30	X		X							
-54	SB99-10-0.5		9:50	X	X	X							
-55	SB99-10-1		9:56	X		X							
-56	SB99-10-2		9:58	X		X							

Billing ☒ Same as above
Client:
Address:
City: State Zip
Attn:
PO#:

EDF Required? Geotracker ☐ Yes ☒ No
Send Copy to State of CA? (EDT) ☐ Yes ☒ No

Global ID (Needed for EDF)
System # (Needed for EDT)

	Relinquished By	Date	Time	Received By	Date	Time
1.	[signature]	4/24/14	0300	M. Antonio	4/24/14	0300
2.						
3.						

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Chain of Custody Form

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Report To:
Client: GDC
Attn: Jack Packwood
Street Address:
City, State, Zip:
Phone: Fax:
Email Address:
Work Order #: 14-09190

Project #: EN024
Project Name: Beltway
Sampler(s):

Analysis Requested: Please refer to the back of this page for completion instructions and method legend.

Comments:

Are there any tests with holding times less than or equal to 48 hours? ☐ Yes ☐ No

* Standard Turnaround = 10 work days

Sample #	Description	Date Sampled	Time Sampled	Lead 6010B	pH 9045C	Sample Matrix: Soil	Sludge	Drinking Water	Ground Water	Waste Water	Other	Turnaround # of work days*	Notes
-57	SB99-9-0.5	4/22/14	10:00	X		X							
-58	SB99-9-1		10:01	X		X							
-59	SB99-9-2		10:08	X		X							
-60	SB99-8-0.5		10:20	X		X							
-61	SB99-8-0.5-dup		10:21	X		X							
-62	SB99-8-1		10:28	X	X	X							
-63	SB99-8-2		10:29	X		X							
-64	SB99-7-0.5		10:36	X		X							
-65	SB99-7-1		10:38	X		X							
-66	SB99-7-2		10:39	X		X							
-67	SB99-6-0.5		10:50	X		X							
-68	SB99-6-0.5-dup		10:52	X		X							
-69	SB99-6-1		10:53	X		X							
-70	SB99-6-2		10:58	X	X	X							

Billing ☒ Same as above

Client:
Address:
City: State Zip
Attn:
PO#:

EDF Required? Geotracker ☐ Yes ☒ No

Send Copy to State of CA? (EDT) ☐ Yes ☒ No

Global ID (Needed for EDF)

System # (Needed for EDT)

Relinquished By	Date	Time	Received By	Date	Time
1. [signature]	4/24/14	0300	1. M. Atmaw	4/24/14	0300
2.			2.		
3.			3.		

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Chain of Custody Form

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Report To:
Client: GDC
Attn: Jack Packwood
Street Address:
City, State, Zip:
Phone: Fax:
Email Address:
Work Order #: 14-09190

Project #: EN024
Project Name: Beltway
Sampler(s):

Analysis Requested: Please refer to the back of this page for completion instructions and method legend.

Comments:

Sample #	Description	Date Sampled	Time Sampled	Lead 6010B	pH 9045C	Sample Matrix: Soil	Sludge	Drinking Water	Ground Water	Waste Water	Other	Turnaround # of work days*	Notes
-71	SB99-5-0.5	4/22/14	11:10	X		X							
-72	SB99-5-1		11:15	X		X							
-73	SB99-5-2		11:18	X		X							
-74	SB99-4-0.5		11:25	X		X							
-75	SB99-4-1		11:27	X		X							
-76	SB99-4-2		11:28	X		X							
-77	SB99-3-0.5		11:40	X	X	X							
-78	SB99-3-1		11:42	X		X							
-79	SB99-3-1-dup		11:43	X		X							
-80	SB99-3-2		11:48	X		X							
-81	SB99-2-0.5		11:52	X		X							
-82	SB99-2-1		11:56	X		X							
-83	SB99-2-2		11:58	X		X							
-84	SB99-1-0.5	4/23/14	12:10	X		X							

Are there any tests with holding times less than or equal to 48 hours? ☐ Yes ☐ No

* Standard Turnaround = 10 work days

Billing ☒ Same as above

Client:
Address:
City: State Zip
Attn:
PO#:

EDF Required? Geotracker ☐ Yes ☒ No

Send Copy to State of CA? (EDT) ☐ Yes ☒ No

Global ID (Needed for EDF)

System # (Needed for EDT)

Relinquished By	Date	Time	Received By	Date	Time
1. [signature]	4/24/14	0300	1. M. [signature]	4/24/14	0300
2.			2.		
3.			3.		

BC Laboratories, Inc. – 4100 Atlas Ct. – Bakersfield, CA 93308 – 661.327.4911 – Fax: 661.327.1918 – www.bclabs.com

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BC Laboratories, Inc.

Chain of Custody Form

Page 7 of 12

Report To:
Client: GDC
Attn: Jack Packwood
Street Address:
City, State, Zip:
Phone: Fax:
Email Address:
Work Order #: 14-09190

Project #: EN024
Project Name: Beltway
Sampler(s):

Analysis Requested: Please refer to the back of this page for completion instructions and method legend.

Comments:

Sample #	Description	Date Sampled	Time Sampled	Lead 6010B	pH 9045C	Sample Matrix: Soil	Sludge	Drinking Water	Ground Water	Waste Water	Other	Turnaround # of work days*	Notes
-85	SB99-1-1	4/23/14	12:12	X	X	X							
-86	SB99-1-2		12:13	X		X							
-87	NB99-1-0.5		2:10	X		X							
-88	NB99-1-1		2:16	X	X	X							
-89	NB99-1-2		2:18	X		X							
-90	NB99-2-0.5		2:40	X		X							
-91	NB99-2-1		2:41	X		X							
-92	NB99-2-2		2:44	X		X							
-93	NB99-3-0.5		2:50	X		X							
-94	NB99-3-1		2:56	X		X							
-95	NB99-3-2		2:58	X		X							
-96	NB99-4-0.5		3:02	X		X							
-97	NB99-4-1		3:03	X		X							
-98	NB99-4-2		3:08	X		X							

Are there any tests with holding times less than or equal to 48 hours? ☐ Yes ☐ No

* Standard Turnaround = 10 work days

Billing ☒ Same as above

Client:
Address:
City: State Zip
Attn:
PO#:

EDF Required? Geotracker ☐ Yes ☒ No

Send Copy to State of CA? (EDT) ☐ Yes ☒ No

Global ID (Needed for EDF)

System # (Needed for EDT)

	Relinquished By	Date	Time	Received By	Date	Time
1.	[signature]	4/24/14	0300	M. [signature]	4/24/14	0300
2.						
3.						

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Chain of Custody and Cooler Receipt Form for 1409190 Page 8 of 18

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 15 07/01/13 Page 1 Of 11

Submission #: 14-09190

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Federal Express ☐ UPS ☐ Hand Delivery ☑ BC Lab Field Service ☐ Other ☐ (Specify)_____	Ice Chest ☑ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☐

Refrigerant: ~~Ice ☐~~ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ ~~None ☐~~ Comments: INSUFF. ICE

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☑ YES ☐ NO

Emissivity: ____ Container: Soil Sleeve Thermometer ID: TH82 Date/Time 4/24/14 0300

Temperature: (A) 15.0 °C / (C) 15.5 °C 4/24/14 1750 Analyst Init MA

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE	A	A	A	A	A	A	A	A	A	A
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:

Sample Numbering Completed By: [signature] Date/Time: 4-24-14 1720

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Chain of Custody and Cooler Receipt Form for 1409190 Page 9 of 18

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 15 07/01/13 Page 2 Of 11

Submission #: 14-09190

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☑
BC Lab Field Service ☐ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☑ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☑ Comments: INSUFF. ICE

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☑ YES ☐ NO

Emissivity: ____ Container: Soil sleeve Thermometer ID: IH82 Date/Time 4/24/14 0300

Temperature: (A) 15.0 °C / (C) 15.5 °C 4/24/14 Analyst Init MA

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE	A	A	A	A	A	A	A	A	A	A
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:
Sample Numbering Completed By: MA Date/Time: 4-24-14 1720
A = Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1409190 Page 10 of 18

BC LABORATORIES INC. — COOLER RECEIPT FORM — Rev. No. 15 07/01/13 — Page 2 Of 11

Submission #: 14-09190

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☑
BC Lab Field Service ☐ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☑ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☑ Intact? Yes ☑ No ☐ Containers ☑ Intact? Yes ☑ No ☐ None ☐ Comments: INSUFF. ICE

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☑ YES ☐ NO

Emissivity: ____ Container: Soil Sleeve Thermometer ID: TH82 Date/Time 4/24/14 0300
Temperature: (A) 15.0 °C / (C) 15.5 °C 4/24/14 Analyst Init MA

SAMPLE CONTAINERS	SAMPLE NUMBERS 21	22	23	24	25	26	27	28	29	30
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE	A	A	A	A	A	A	A	A	A	A
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:
Sample Numbering Completed By: AT Date/Time: 4/24/14 1722
A = Actual / C = Corrected

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BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 15 07/01/13 Page 4 Of 11

Submission #: 14-09190

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☑
BC Lab Field Service ☐ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☑ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☑ Intact? Yes ☐ No ☐ None ☑ Comments: INSUFF. ICE

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☑ YES ☐ NO

Emissivity: _____ Container: Soil Sleeve Thermometer ID: IH82 Date/Time 4/24/14 0300

Temperature: (A) 15.0 °C / (C) 15.5 °C 4/24/14 Analyst Init MA

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	31	32	33	34	35	36	37	38	39	40
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE	A	A	A	A	A	A	A	A	A	A
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____
Sample Numbering Completed By: MA Date/Time: 4/24/14 1723

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Chain of Custody and Cooler Receipt Form for 1409190 Page 12 of 18

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 15 07/01/13 Page 5 Of 11

Submission #: 14-09190

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Federal Express ☐ UPS ☐ Hand Delivery ☑ BC Lab Field Service ☐ Other ☐ (Specify)_____	Ice Chest ☑ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☐

Refrigerant: ☑ Ice ☐ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☑ Comments: INSUFF. ICE

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☑ YES ☐ NO

Emissivity: ____ Container: Soil Sleeve Thermometer ID: TH82 Date/Time 4/24/14 0300

Temperature: (A) 15.0 °C / (C) 15.5 °C 4/24/14 1750 Analyst Init MA

SAMPLE CONTAINERS	SAMPLE NUMBERS 41	42	43	44	45	46	47	48	49	50
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE	A	A	A	A	A	A	A	A	A	A
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____

Sample Numbering Completed By: M Date/Time: 4-24-14 1724

A = Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1409190 Page 13 of 18

BC LABORATORIES INC. — COOLER RECEIPT FORM — Rev. No. 15 07/01/13 — Page 6 Of 11

Submission #: 14-09190

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☑
BC Lab Field Service ☐ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☑ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☑ Comments: INSUFF. ICE

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☑ YES ☐ NO

Emissivity: _____ Container: Soil Sleeve Thermometer ID: TH82 Date/Time 4/24/14 0300

Temperature: (A) 15.0 °C / (C) 15.5 °C 4/24/14 Analyst Init MAA

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	51	52	53	54	55	56	57	58	59	60
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE	A	A	A	A	A	A	A	A	A	A
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____
Sample Numbering Completed By: AT Date/Time: 4-24-14 1700

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Chain of Custody and Cooler Receipt Form for 1409190 Page 14 of 18

BC LABORATORIES INC. — COOLER RECEIPT FORM — Rev. No. 15 07/01/13 — Page 7 Of 11

Submission #: 14-09190

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☑
BC Lab Field Service ☐ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☑ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☑ Intact? Yes ☑ No ☐ Containers ☑ Intact? Yes ☑ No ☐ None ☐ Comments: INSUFF. ICE

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☑ YES ☐ NO

Emissivity: ____ Container: Soil Sleeve Thermometer ID: TH82 Date/Time 4/21/14 0300

Temperature: (A) 15.0 °C / (C) 15.5 °C 4/21/14 Analyst Init MA

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	61	62	63	64	65	66	67	68	69	70
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE	A	A	A	A	A	A	A	A	A	A
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:
Sample Numbering Completed By: AJ Date/Time: 4/21/14 1725
A = Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1409190 Page 15 of 18

BC LABORATORIES INC. — COOLER RECEIPT FORM — Rev. No. 15 07/01/13 — Page 8 Of 11

Submission #: 14-09190

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☑
BC Lab Field Service ☐ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☑ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☑ Intact? Yes ☑ No ☐ Containers ☑ Intact? Yes ☑ No ☐ None ☐ Comments: INSUFF. ICE

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☑ YES ☐ NO

Emissivity: ____ Container: Soil Sleeve Thermometer ID: TH82 Date/Time 4/24/14 0330

Temperature: (A) 15.0 °C / (C) 15.5 °C 4/24/14 Analyst Init MAA

SAMPLE CONTAINERS	SAMPLE NUMBERS 71	72	73	74	75	76	77	78	79	80
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE	A	A	A	A	A	A	A	A	A	A
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:
Sample Numbering Completed By: Date/Time: 4/24/14 1726

[S:\MyDOCS\WordPerfect\LAB DOCS\FORMS\SAMREC15]

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
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BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 15 07/01/13 Page 9 Of 11

Submission #: 14-09190

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Federal Express ☐ UPS ☐ Hand Delivery ☑ BC Lab Field Service ☐ Other ☐ (Specify)_____	Ice Chest ☑ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☐

Refrigerant: ~~Ice ☑~~ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ ~~None ☑~~ Comments: INSUFF. ICE

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☑ YES ☐ NO

Emissivity: ____ Container: Soil Sleeve Thermometer ID: TH82 Date/Time 4/24/14 0300

Temperature: (A) 15.0 °C / (C) 15.5 °C 4/24/14 1750 Analyst Init MA

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE	A	A	A	A	A	A	A	A	A	A
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____

Sample Numbering Completed By: MA Date/Time: 4-24-14 1725

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 15 07/01/13 Page 10 Of 11

Submission #: 14-09190

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Federal Express ☐ UPS ☐ Hand Delivery ☑ BC Lab Field Service ☐ Other ☐ (Specify)_____	Ice Chest ☑ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☐

Refrigerant: ~~Ice ☐~~ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ ~~None ☐~~ Comments: INSUFF. ICE

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: ____ Container: Soil Sleeve Thermometer ID: TH82 Date/Time 4/24/14 0300

Temperature: (A) 15.0 °C / (C) 15.5 °C 4/24/14 1250 Analyst Init MA

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE	A	A								
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____

Sample Numbering Completed By: M Date/Time: 4.24.14 1226

Chain of Custody and Cooler Receipt Form for 1409190 Page 18 of 18

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 15 07/01/13 Page 11 Of 11

Submission #: 1A-090 09190

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☑
BC Lab Field Service ☐ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☑ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: ~~Ice~~ ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☑ Comments: INSUFF. ice

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: — Container: Soil sleeve Thermometer ID: IR82 Date/Time 4/24/14 0300

Temperature: (A) 12.7 °C / (C) 13.2 °C 4/24/14 Analyst Ini NA

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE			A	A	A	A	A	A		
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:
Sample Numbering Completed By: M Date/Time: 4-24-14 1650
A = Actual / C = Corrected

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409190-01	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/21/2014 09:56
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	WB58-4-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-02	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/21/2014 09:57
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	WB58-4-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-03	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/21/2014 09:58
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	WB58-4-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-04	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/21/2014 10:23
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	WB58-3-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-05	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/21/2014 10:24
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	WB58-3-0.5-Dup	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-06	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/21/2014 10:25
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	WB58-3-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-07	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/21/2014 10:26
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	WB58-3-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409190-08	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/21/2014 10:57
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	WB58-2-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-09	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/21/2014 10:58
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	WB58-2-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-10	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/21/2014 10:59
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	WB58-2-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-11	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/21/2014 11:57
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	WB58-1-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-12	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/21/2014 11:58
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	WB58-1-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-13	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/21/2014 11:59
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	WB58-1-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-14	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 13:32
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-1-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409190-15	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 13:33
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-1-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-16	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 13:34
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-1-1-Dup	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-17	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 13:35
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-1-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-18	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 13:47
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-2-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-19	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 13:48
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-2-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-20	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 13:49
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-2-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-21	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 14:21
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-3-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409190-22	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 14:22
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-3-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-23	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 14:23
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-3-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-24	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 14:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-4-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-25	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 14:41
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-4-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-26	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 14:42
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-4-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-27	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 14:56
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-5-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-28	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 14:57
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-5-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409190-29	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 14:58
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-5-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-30	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 14:59
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-5-2-Dup	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-31	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 15:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-6-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-32	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 15:26
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-6-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-33	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 15:28
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-6-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-34	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 15:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-7-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-35	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 15:46
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-7-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409190-36	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 15:48
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-7-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-37	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 16:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-8-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-38	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 16:42
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-8-0.5-Dup	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-39	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 16:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-8-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-40	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 16:48
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EB58-8-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-41	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 20:41
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-14-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-42	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 20:44
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-14-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409190-43	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 20:48
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-14-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-44	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 21:01
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-13-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-45	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 21:04
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-13-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-46	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 21:06
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-13-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-47	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 21:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-12-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-48	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 21:11
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-12-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-49	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 21:16
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-12-1-Dup	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409190-50	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 21:18
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-12-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-51	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 21:28
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-11-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-52	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 21:29
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-11-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-53	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 21:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-11-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-54	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 21:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-10-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-55	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 21:56
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-10-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-56	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 21:58
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-10-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409190-57	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 22:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-9-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-58	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 22:01
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-9-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-59	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 22:08
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-9-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-60	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 22:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-8-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-61	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 22:21
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-8-0.5-Dup	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-62	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 22:28
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-8-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-63	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 22:29
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-8-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409190-64	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 22:36
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-7-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-65	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 22:38
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-7-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-66	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 22:39
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-7-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-67	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 22:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-6-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-68	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 22:52
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-6-0.5-Dup	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-69	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 22:53
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-6-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-70	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 22:58
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-6-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409190-71	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 23:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-5-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-72	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 23:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-5-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-73	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 23:18
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-5-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-74	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 23:25
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-4-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-75	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 23:27
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-4-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-76	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 23:28
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-4-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-77	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 23:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-3-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409190-78	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 23:42
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-3-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-79	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 23:43
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-3-1-Dup	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-80	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 23:48
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-3-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-81	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 23:52
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-2-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-82	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 23:56
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-2-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-83	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/22/2014 23:58
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-2-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-84	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 12:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-1-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409190-85	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 12:12
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-1-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-86	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 12:13
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB99-1-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-87	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 14:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-1-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-88	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 14:16
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-1-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-89	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 14:18
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-1-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-90	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 14:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-2-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-91	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 14:41
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-2-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409190-92	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 14:44
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-2-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-93	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 14:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-3-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-94	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 14:56
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-3-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-95	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 14:58
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-3-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-96	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 15:02
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-4-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-97	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 15:03
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-4-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409190-98	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 15:08
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-4-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-01 | **Client Sample Name:** WB58-4-0.5, 4/21/2014 9:56:00AM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.9**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 08:02	ARD	PE-OP1	0.971	BXD2259

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Chemical Analysis

BCL Sample ID: 1409190-02 | **Client Sample Name:** WB58-4-1, 4/21/2014 9:57:00AM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	**7.76**	**pH Units**	**0.05**	**0.05**	**EPA-9045**		**pH1:1**	1
pH Measurement Temperature	**22.8**	**C**	**0.1**	**0.1**	**EPA-9045**			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-9045	04/28/14	04/28/14 14:00	DIW	MANUAL	1	BXD2410

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-02 | **Client Sample Name:** WB58-4-1, 4/21/2014 9:57:00AM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.6**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 08:23	ARD	PE-OP1	0.943	BXD2259

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-03 | **Client Sample Name:** WB58-4-2, 4/21/2014 9:58:00AM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.9**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 08:40	ARD	PE-OP1	0.971	BXD2259

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409190-04 | **Client Sample Name:** WB58-3-0.5, 4/21/2014 10:23:00AM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.066**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/08/14	05/09/14 15:00	JRG	PE-OP2	1	BXE0801

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-04 | **Client Sample Name:** WB58-3-0.5, 4/21/2014 10:23:00AM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**12**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/14	05/05/14 09:44	ARD	PE-OP1	1	BXE0279

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409190-04 | **Client Sample Name:** WB58-3-0.5, 4/21/2014 10:23:00AM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.21**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 10:24	ARD	PE-OP1	1	BXE0343

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-04 | **Client Sample Name:** WB58-3-0.5, 4/21/2014 10:23:00AM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**170**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 08:59	ARD	PE-OP1	0.962	BXD2259

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-05 | **Client Sample Name:** WB58-3-0.5-Dup, 4/21/2014 10:24:00AM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	ND	mg/L	0.50	0.16	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 12:01	ARD	PE-OP1	1	BXE0376

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-05 | **Client Sample Name:** WB58-3-0.5-Dup, 4/21/2014 10:24:00AM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**8.8**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 09:00	ARD	PE-OP1	0.990	BXD2259

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-06 | **Client Sample Name:** WB58-3-1, 4/21/2014 10:25:00AM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**6.8**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 09:01	ARD	PE-OP1	0.980	BXD2259

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-07 | **Client Sample Name:** WB58-3-2, 4/21/2014 10:26:00AM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**7.6**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 09:03	ARD	PE-OP1	0.926	BXD2259

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-08 | **Client Sample Name:** WB58-2-0.5, 4/21/2014 10:57:00AM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**13**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 09:04	ARD	PE-OP1	0.952	BXD2259

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-09 | **Client Sample Name:** WB58-2-1, 4/21/2014 10:58:00AM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.3**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 09:06	ARD	PE-OP1	0.971	BXD2259

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-10 | **Client Sample Name:** WB58-2-2, 4/21/2014 10:59:00AM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**2.5**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 09:07	ARD	PE-OP1	0.962	BXD2259

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-11 | **Client Sample Name:** WB58-1-0.5, 4/21/2014 11:57:00AM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.2**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 12:03	ARD	PE-OP1	1	BXE0376

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-11 | **Client Sample Name:** WB58-1-0.5, 4/21/2014 11:57:00AM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**29**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 09:09	ARD	PE-OP1	0.943	BXD2259

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Chemical Analysis

BCL Sample ID: 1409190-12 | **Client Sample Name:** WB58-1-1, 4/21/2014 11:58:00AM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	**8.13**	**pH Units**	**0.05**	**0.05**	**EPA-9045**		**pH1:1**	1
pH Measurement Temperature	**22.6**	**C**	**0.1**	**0.1**	**EPA-9045**			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-9045	04/28/14	04/28/14 14:00	DIW	MANUAL	1	BXD2410

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-12 | **Client Sample Name:** WB58-1-1, 4/21/2014 11:58:00AM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**13**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 09:10	ARD	PE-OP1	0.935	BXD2259

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-13 | **Client Sample Name:** WB58-1-2, 4/21/2014 11:59:00AM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**5.6**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 09:12	ARD	PE-OP1	0.962	BXD2259

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-14 | **Client Sample Name:** EB58-1-0.5, 4/22/2014 1:32:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**11**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 09:25	ARD	PE-OP1	0.926	BXD2259

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-15 | **Client Sample Name:** EB58-1-1, 4/22/2014 1:33:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.22**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 12:04	ARD	PE-OP1	1	BXE0376

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-15 | **Client Sample Name:** EB58-1-1, 4/22/2014 1:33:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**8.4**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 09:26	ARD	PE-OP1	0.962	BXD2259

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-16 | **Client Sample Name:** EB58-1-1-Dup, 4/22/2014 1:34:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**5.9**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 09:27	ARD	PE-OP1	0.943	BXD2259

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-17 | **Client Sample Name:** EB58-1-2, 4/22/2014 1:35:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.9**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 09:29	ARD	PE-OP1	0.990	BXD2259

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-18 | **Client Sample Name:** EB58-2-0.5, 4/22/2014 1:47:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**4.7**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 09:30	ARD	PE-OP1	0.980	BXD2259

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-19 | **Client Sample Name:** EB58-2-1, 4/22/2014 1:48:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**7.0**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 09:32	ARD	PE-OP1	0.962	BXD2259

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-20 | **Client Sample Name:** EB58-2-2, 4/22/2014 1:49:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**5.6**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 09:33	ARD	PE-OP1	0.971	BXD2259

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409190-21 | **Client Sample Name:** EB58-3-0.5, 4/22/2014 2:21:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	ND	mg/L	0.050	0.0035	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/08/14	05/09/14 15:01	JRG	PE-OP2	1	BXE0801

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-21 | **Client Sample Name:** EB58-3-0.5, 4/22/2014 2:21:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**6.6**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/14	05/05/14 10:06	ARD	PE-OP1	1	BXE0279

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-21 | **Client Sample Name:** EB58-3-0.5, 4/22/2014 2:21:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**82**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 09:45	ARD	PE-OP1	0.980	BXD2260

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Chemical Analysis

BCL Sample ID: 1409190-22 | **Client Sample Name:** EB58-3-1, 4/22/2014 2:22:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	**7.90**	**pH Units**	**0.05**	**0.05**	**EPA-9045**		**pH1:1**	1
pH Measurement Temperature	**22.4**	**C**	**0.1**	**0.1**	**EPA-9045**			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-9045	04/28/14	04/28/14 14:00	DIW	MANUAL	1	BXD2410

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-22 | **Client Sample Name:** EB58-3-1, 4/22/2014 2:22:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	ND	mg/L	0.50	0.16	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 12:11	ARD	PE-OP1	1	BXE0376

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-22 | **Client Sample Name:** EB58-3-1, 4/22/2014 2:22:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.1**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 09:38	ARD	PE-OP1	0.926	BXD2260

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-23 | **Client Sample Name:** EB58-3-2, 4/22/2014 2:23:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.5**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 09:54	ARD	PE-OP1	0.971	BXD2260

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-24 | **Client Sample Name:** EB58-4-0.5, 4/22/2014 2:40:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**15**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 09:56	ARD	PE-OP1	0.980	BXD2260

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-25 | **Client Sample Name:** EB58-4-1, 4/22/2014 2:41:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**4.0**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 09:57	ARD	PE-OP1	0.990	BXD2260

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-26 | **Client Sample Name:** EB58-4-2, 4/22/2014 2:42:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.6**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 09:59	ARD	PE-OP1	0.943	BXD2260

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-27 | **Client Sample Name:** EB58-5-0.5, 4/22/2014 2:56:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.8**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/14	05/05/14 10:08	ARD	PE-OP1	1	BXE0279

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-27 | **Client Sample Name:** EB58-5-0.5, 4/22/2014 2:56:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**48**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:04	ARD	PE-OP1	0.980	BXD2260

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-28 | **Client Sample Name:** EB58-5-1, 4/22/2014 2:57:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**7.6**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:05	ARD	PE-OP1	0.952	BXD2260

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-29 | **Client Sample Name:** EB58-5-2, 4/22/2014 2:58:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	ND	mg/L	0.50	0.16	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 12:12	ARD	PE-OP1	1	BXE0376

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-29 | **Client Sample Name:** EB58-5-2, 4/22/2014 2:58:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**4.0**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:07	ARD	PE-OP1	0.926	BXD2260

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-30 | **Client Sample Name:** EB58-5-2-Dup, 4/22/2014 2:59:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.8**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:08	ARD	PE-OP1	0.971	BXD2260

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409190-31 | **Client Sample Name:** EB58-6-0.5, 4/22/2014 3:20:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.12**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/08/14	05/09/14 15:28	JRG	PE-OP2	1	BXE0801

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-31 | **Client Sample Name:** EB58-6-0.5, 4/22/2014 3:20:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**49**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/14	05/05/14 10:10	ARD	PE-OP1	1	BXE0279

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409190-31 | **Client Sample Name:** EB58-6-0.5, 4/22/2014 3:20:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.42**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 10:26	ARD	PE-OP1	1	BXE0343

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-31 | **Client Sample Name:** EB58-6-0.5, 4/22/2014 3:20:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**720**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:10	ARD	PE-OP1	0.990	BXD2260

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
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Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Chemical Analysis

BCL Sample ID: 1409190-32 | **Client Sample Name:** EB58-6-1, 4/22/2014 3:26:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	**8.02**	**pH Units**	**0.05**	**0.05**	**EPA-9045**		**pH1:1**	1
pH Measurement Temperature	**22.1**	**C**	**0.1**	**0.1**	**EPA-9045**			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-9045	04/28/14	04/28/14 14:00	DIW	MANUAL	1	BXD2410

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-32 | **Client Sample Name:** EB58-6-1, 4/22/2014 3:26:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**5.5**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:11	ARD	PE-OP1	0.935	BXD2260

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-33 | **Client Sample Name:** EB58-6-2, 4/22/2014 3:28:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**2.5**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:13	ARD	PE-OP1	0.943	BXD2260

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-34 | **Client Sample Name:** EB58-7-0.5, 4/22/2014 3:45:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**5.8**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:14	ARD	PE-OP1	0.962	BXD2260

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-35 | **Client Sample Name:** EB58-7-1, 4/22/2014 3:46:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**6.3**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:16	ARD	PE-OP1	0.990	BXD2260

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-36 | **Client Sample Name:** EB58-7-2, 4/22/2014 3:48:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	ND	mg/L	0.50	0.16	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 12:14	ARD	PE-OP1	1	BXE0376

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-36 | **Client Sample Name:** EB58-7-2, 4/22/2014 3:48:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**2.9**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:17	ARD	PE-OP1	0.952	BXD2260

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-37 | **Client Sample Name:** EB58-8-0.5, 4/22/2014 4:40:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**21**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:24	ARD	PE-OP1	0.926	BXD2260

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-38 | **Client Sample Name:** EB58-8-0.5-Dup, 4/22/2014 4:42:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**4.1**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/14	05/05/14 10:11	ARD	PE-OP1	1	BXE0279

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-38 | **Client Sample Name:** EB58-8-0.5-Dup, 4/22/2014 4:42:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**51**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:26	ARD	PE-OP1	0.990	BXD2260

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-39 | **Client Sample Name:** EB58-8-1, 4/22/2014 4:45:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**4.8**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:27	ARD	PE-OP1	0.962	BXD2260

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-40 | **Client Sample Name:** EB58-8-2, 4/22/2014 4:48:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	ND	mg/L	0.50	0.16	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 12:15	ARD	PE-OP1	1	BXE0376

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-40 | **Client Sample Name:** EB58-8-2, 4/22/2014 4:48:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**2.3**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:29	ARD	PE-OP1	0.980	BXD2260

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409190-41 | **Client Sample Name:** SB99-14-0.5, 4/22/2014 8:41:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.26**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/08/14	05/09/14 15:30	JRG	PE-OP2	1	BXE0801

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-41 | **Client Sample Name:** SB99-14-0.5, 4/22/2014 8:41:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**19**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/14	05/05/14 10:13	ARD	PE-OP1	1	BXE0279

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409190-41 | **Client Sample Name:** SB99-14-0.5, 4/22/2014 8:41:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.32**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 10:33	ARD	PE-OP1	1	BXE0343

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-41 | **Client Sample Name:** SB99-14-0.5, 4/22/2014 8:41:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**200**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:31	ARD	PE-OP1	0.990	BXD2261

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-42 | **Client Sample Name:** SB99-14-1, 4/22/2014 8:44:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**9.6**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:48	ARD	PE-OP1	0.962	BXD2261

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-43 | **Client Sample Name:** SB99-14-2, 4/22/2014 8:48:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.0**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:50	ARD	PE-OP1	0.990	BXD2261

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-44 | **Client Sample Name:** SB99-13-0.5, 4/22/2014 9:01:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**25**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:51	ARD	PE-OP1	0.952	BXD2261

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-45 | **Client Sample Name:** SB99-13-1, 4/22/2014 9:04:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.9**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:53	ARD	PE-OP1	0.926	BXD2261

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Chemical Analysis

BCL Sample ID: 1409190-46 | **Client Sample Name:** SB99-13-2, 4/22/2014 9:06:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	**7.97**	**pH Units**	**0.05**	**0.05**	**EPA-9045**		**pH1:1**	1
pH Measurement Temperature	**22.1**	**C**	**0.1**	**0.1**	**EPA-9045**			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-9045	04/28/14	04/28/14 14:00	DIW	MANUAL	1	BXD2410

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-46 | **Client Sample Name:** SB99-13-2, 4/22/2014 9:06:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.2**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:54	ARD	PE-OP1	0.980	BXD2261

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-47 | **Client Sample Name:** SB99-12-0.5, 4/22/2014 9:10:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**7.1**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:56	ARD	PE-OP1	0.971	BXD2261

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-48 | **Client Sample Name:** SB99-12-1, 4/22/2014 9:11:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**5.0**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:57	ARD	PE-OP1	0.917	BXD2261

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-49 | **Client Sample Name:** SB99-12-1-Dup, 4/22/2014 9:16:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**2.1**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 10:59	ARD	PE-OP1	0.943	BXD2261

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-50 | **Client Sample Name:** SB99-12-2, 4/22/2014 9:18:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	ND	mg/L	0.50	0.16	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 11:53	ARD	PE-OP1	1	BXE0376

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-50 | **Client Sample Name:** SB99-12-2, 4/22/2014 9:18:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.5**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 11:04	ARD	PE-OP1	0.952	BXD2261

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409190-51 | **Client Sample Name:** SB99-11-0.5, 4/22/2014 9:28:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.26**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/08/14	05/09/14 15:31	JRG	PE-OP2	1	BXE0801

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-51 | **Client Sample Name:** SB99-11-0.5, 4/22/2014 9:28:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**7.6**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/14	05/05/14 10:20	ARD	PE-OP1	1	BXE0279

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-51 | **Client Sample Name:** SB99-11-0.5, 4/22/2014 9:28:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**89**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 11:05	ARD	PE-OP1	0.935	BXD2261

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409190-52 | **Client Sample Name:** SB99-11-1, 4/22/2014 9:29:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.27**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/08/14	05/09/14 15:33	JRG	PE-OP2	1	BXE0801

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-52 | **Client Sample Name:** SB99-11-1, 4/22/2014 9:29:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**15**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/14	05/05/14 10:22	ARD	PE-OP1	1	BXE0279

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409190-52 | **Client Sample Name:** SB99-11-1, 4/22/2014 9:29:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.29**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 10:35	ARD	PE-OP1	1	BXE0343

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-52 | **Client Sample Name:** SB99-11-1, 4/22/2014 9:29:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**160**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 11:07	ARD	PE-OP1	0.980	BXD2261

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-53 | **Client Sample Name:** SB99-11-2, 4/22/2014 9:30:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.5**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 11:08	ARD	PE-OP1	0.971	BXD2261

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Chemical Analysis

BCL Sample ID: 1409190-54 | **Client Sample Name:** SB99-10-0.5, 4/22/2014 9:50:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	**6.71**	**pH Units**	**0.05**	**0.05**	**EPA-9045**		**pH1:1**	1
pH Measurement Temperature	**22.3**	**C**	**0.1**	**0.1**	**EPA-9045**			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-9045	04/28/14	04/28/14 14:00	DIW	MANUAL	1	BXD2410

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409190-54 | **Client Sample Name:** SB99-10-0.5, 4/22/2014 9:50:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.51**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/08/14	05/09/14 15:35	JRG	PE-OP2	1	BXE0801

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-54 | **Client Sample Name:** SB99-10-0.5, 4/22/2014 9:50:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**77**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/14	05/05/14 10:23	ARD	PE-OP1	1	BXE0279

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409190-54 | **Client Sample Name:** SB99-10-0.5, 4/22/2014 9:50:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.68**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 10:36	ARD	PE-OP1	1	BXE0343

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-54 | **Client Sample Name:** SB99-10-0.5, 4/22/2014 9:50:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**950**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 11:10	ARD	PE-OP1	0.971	BXD2261

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-55 | **Client Sample Name:** SB99-10-1, 4/22/2014 9:56:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**23**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 11:11	ARD	PE-OP1	0.980	BXD2261

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-56 | **Client Sample Name:** SB99-10-2, 4/22/2014 9:58:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	ND	mg/L	0.50	0.16	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 12:17	ARD	PE-OP1	1	BXE0376

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-56 | **Client Sample Name:** SB99-10-2, 4/22/2014 9:58:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.5**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 11:13	ARD	PE-OP1	0.952	BXD2261

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409190-57 | **Client Sample Name:** SB99-9-0.5, 4/22/2014 10:00:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.1**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/08/14	05/09/14 14:36	JRG	PE-OP2	1	BXE0801

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-57 | **Client Sample Name:** SB99-9-0.5, 4/22/2014 10:00:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**46**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/14	05/05/14 10:25	ARD	PE-OP1	1	BXE0279

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409190-57 | **Client Sample Name:** SB99-9-0.5, 4/22/2014 10:00:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.20**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 10:38	ARD	PE-OP1	1	BXE0343

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-57 | **Client Sample Name:** SB99-9-0.5, 4/22/2014 10:00:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**610**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 11:14	ARD	PE-OP1	0.935	BXD2261

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-58 | **Client Sample Name:** SB99-9-1, 4/22/2014 10:01:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**14**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 11:16	ARD	PE-OP1	0.926	BXD2261

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-59 | **Client Sample Name:** SB99-9-2, 4/22/2014 10:08:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.8**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 11:17	ARD	PE-OP1	0.990	BXD2261

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-60 | **Client Sample Name:** SB99-8-0.5, 4/22/2014 10:20:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.23**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 12:19	ARD	PE-OP1	1	BXE0376

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-60 | **Client Sample Name:** SB99-8-0.5, 4/22/2014 10:20:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**5.1**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 11:40	ARD	PE-OP1	0.943	BXD2261

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-61 | **Client Sample Name:** SB99-8-0.5-Dup, 4/22/2014 10:21:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.3**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 11:45	ARD	PE-OP1	0.980	BXD2262

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Chemical Analysis

BCL Sample ID: 1409190-62 | **Client Sample Name:** SB99-8-1, 4/22/2014 10:28:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	**7.95**	**pH Units**	**0.05**	**0.05**	**EPA-9045**		**pH1:1**	1
pH Measurement Temperature	**22.7**	**C**	**0.1**	**0.1**	**EPA-9045**			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-9045	04/28/14	04/28/14 14:00	DIW	MANUAL	1	BXD2410

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-62 | **Client Sample Name:** SB99-8-1, 4/22/2014 10:28:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.4**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 11:54	ARD	PE-OP1	0.926	BXD2262

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-63 | **Client Sample Name:** SB99-8-2, 4/22/2014 10:29:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	ND	mg/L	0.50	0.16	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 12:26	ARD	PE-OP1	1	BXE0376

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-63 | **Client Sample Name:** SB99-8-2, 4/22/2014 10:29:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**4.5**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 11:59	ARD	PE-OP1	0.943	BXD2262

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-64 | **Client Sample Name:** SB99-7-0.5, 4/22/2014 10:36:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	ND	mg/L	0.50	0.16	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 12:28	ARD	PE-OP1	1	BXE0376

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-64 | **Client Sample Name:** SB99-7-0.5, 4/22/2014 10:36:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**4.4**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 12:00	ARD	PE-OP1	0.962	BXD2262

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-65 | **Client Sample Name:** SB99-7-1, 4/22/2014 10:38:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**2.3**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 12:02	ARD	PE-OP1	0.971	BXD2262

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-66 | **Client Sample Name:** SB99-7-2, 4/22/2014 10:39:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**2.7**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 12:03	ARD	PE-OP1	0.952	BXD2262

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-67 | **Client Sample Name:** SB99-6-0.5, 4/22/2014 10:50:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.0**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 12:05	ARD	PE-OP1	0.990	BXD2262

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-68 | **Client Sample Name:** SB99-6-0.5-Dup, 4/22/2014 10:52:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**2.6**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 12:07	ARD	PE-OP1	0.980	BXD2262

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-69 | **Client Sample Name:** SB99-6-1, 4/22/2014 10:53:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**2.3**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 12:08	ARD	PE-OP1	0.935	BXD2262

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Chemical Analysis

BCL Sample ID: 1409190-70 | **Client Sample Name:** SB99-6-2, 4/22/2014 10:58:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	**8.08**	**pH Units**	**0.05**	**0.05**	**EPA-9045**		**pH1:1**	1
pH Measurement Temperature	**22.7**	**C**	**0.1**	**0.1**	**EPA-9045**			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-9045	04/28/14	04/28/14 14:00	DIW	MANUAL	1	BXD2410

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-70 | **Client Sample Name:** SB99-6-2, 4/22/2014 10:58:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**2.7**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 12:10	ARD	PE-OP1	0.990	BXD2262

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409190-71 | **Client Sample Name:** SB99-5-0.5, 4/22/2014 11:10:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.032**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/08/14	05/09/14 15:36	JRG	PE-OP2	1	BXE0801

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-71 | **Client Sample Name:** SB99-5-0.5, 4/22/2014 11:10:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**8.6**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/14	05/05/14 10:27	ARD	PE-OP1	1	BXE0279

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409190-71 | **Client Sample Name:** SB99-5-0.5, 4/22/2014 11:10:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.087**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 10:14	ARD	PE-OP1	1	BXE0343

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-71 | **Client Sample Name:** SB99-5-0.5, 4/22/2014 11:10:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**210**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 12:11	ARD	PE-OP1	0.962	BXD2262

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409190-72 | **Client Sample Name:** SB99-5-1, 4/22/2014 11:15:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.033**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/08/14	05/09/14 15:38	JRG	PE-OP2	1	BXE0801

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-72 | **Client Sample Name:** SB99-5-1, 4/22/2014 11:15:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**6.2**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/14	05/05/14 10:28	ARD	PE-OP1	1	BXE0279

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-72 | **Client Sample Name:** SB99-5-1, 4/22/2014 11:15:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**79**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 12:13	ARD	PE-OP1	0.952	BXD2262

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-73 | **Client Sample Name:** SB99-5-2, 4/22/2014 11:18:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	ND	mg/L	0.50	0.16	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 12:29	ARD	PE-OP1	1	BXE0376

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-73 | **Client Sample Name:** SB99-5-2, 4/22/2014 11:18:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.1**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 12:19	ARD	PE-OP1	0.926	BXD2262

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-74 | **Client Sample Name:** SB99-4-0.5, 4/22/2014 11:25:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**4.2**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 12:21	ARD	PE-OP1	0.935	BXD2262

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-75 | **Client Sample Name:** SB99-4-1, 4/22/2014 11:27:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.0**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 12:23	ARD	PE-OP1	0.962	BXD2262

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-76 | **Client Sample Name:** SB99-4-2, 4/22/2014 11:28:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.8**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 12:25	ARD	PE-OP1	0.962	BXD2262

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Chemical Analysis

BCL Sample ID: 1409190-77 | **Client Sample Name:** SB99-3-0.5, 4/22/2014 11:40:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	**8.29**	**pH Units**	**0.05**	**0.05**	**EPA-9045**		**pH1:1**	1
pH Measurement Temperature	**22.3**	**C**	**0.1**	**0.1**	**EPA-9045**			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-9045	04/28/14	04/28/14 14:00	DIW	MANUAL	1	BXD2410

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-77 | **Client Sample Name:** SB99-3-0.5, 4/22/2014 11:40:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**2.8**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/14	05/05/14 10:30	ARD	PE-OP1	1	BXE0279

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-77 | **Client Sample Name:** SB99-3-0.5, 4/22/2014 11:40:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**54**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 12:26	ARD	PE-OP1	0.990	BXD2262

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-78 | **Client Sample Name:** SB99-3-1, 4/22/2014 11:42:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.2**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 12:28	ARD	PE-OP1	0.971	BXD2262

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-79 | **Client Sample Name:** SB99-3-1-Dup, 4/22/2014 11:43:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	ND	mg/L	0.50	0.16	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 12:34	ARD	PE-OP1	1	BXE0376

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-79 | **Client Sample Name:** SB99-3-1-Dup, 4/22/2014 11:43:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.4**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 12:29	ARD	PE-OP1	0.971	BXD2262

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-80 | **Client Sample Name:** SB99-3-2, 4/22/2014 11:48:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.6**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/26/14	04/28/14 12:31	ARD	PE-OP1	0.952	BXD2262

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-81 | **Client Sample Name:** SB99-2-0.5, 4/22/2014 11:52:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**8.5**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/29/14 13:29	ARD	PE-OP1	0.971	BXD2357

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-82 | **Client Sample Name:** SB99-2-1, 4/22/2014 11:56:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.9**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/29/14 13:20	ARD	PE-OP1	0.980	BXD2357

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-83 | **Client Sample Name:** SB99-2-2, 4/22/2014 11:58:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**27**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/29/14 13:31	ARD	PE-OP1	0.990	BXD2357

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409190-84 | **Client Sample Name:** SB99-1-0.5, 4/23/2014 12:10:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.51**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/08/14	05/09/14 15:39	JRG	PE-OP2	1	BXE0801

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-84 | **Client Sample Name:** SB99-1-0.5, 4/23/2014 12:10:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**17**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/14	05/05/14 10:31	ARD	PE-OP1	1	BXE0279

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409190-84 | **Client Sample Name:** SB99-1-0.5, 4/23/2014 12:10:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.22**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 10:42	ARD	PE-OP1	1	BXE0343

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-84 | **Client Sample Name:** SB99-1-0.5, 4/23/2014 12:10:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**240**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/29/14 13:38	ARD	PE-OP1	0.962	BXD2357

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Chemical Analysis

BCL Sample ID: 1409190-85 | **Client Sample Name:** SB99-1-1, 4/23/2014 12:12:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	**7.91**	**pH Units**	**0.05**	**0.05**	**EPA-9045**		**pH1:1**	1
pH Measurement Temperature	**22.4**	**C**	**0.1**	**0.1**	**EPA-9045**			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-9045	04/28/14	04/28/14 14:00	DIW	MANUAL	1	BXD2410

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-85 | **Client Sample Name:** SB99-1-1, 4/23/2014 12:12:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**16**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/29/14 13:40	ARD	PE-OP1	0.935	BXD2357

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-86 | **Client Sample Name:** SB99-1-2, 4/23/2014 12:13:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	ND	mg/L	0.50	0.16	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 12:36	ARD	PE-OP1	1	BXE0376

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-86 | **Client Sample Name:** SB99-1-2, 4/23/2014 12:13:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.87**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/29/14 13:42	ARD	PE-OP1	0.926	BXD2357

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-87 | **Client Sample Name:** NB99-1-0.5, 4/23/2014 2:10:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.5**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/14	05/05/14 09:58	ARD	PE-OP1	1	BXE0279

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-87 | **Client Sample Name:** NB99-1-0.5, 4/23/2014 2:10:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**72**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/29/14 13:43	ARD	PE-OP1	0.980	BXD2357

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Chemical Analysis

BCL Sample ID: 1409190-88 | **Client Sample Name:** NB99-1-1, 4/23/2014 2:16:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	**7.78**	**pH Units**	**0.05**	**0.05**	**EPA-9045**		**pH1:1**	1
pH Measurement Temperature	**22.4**	**C**	**0.1**	**0.1**	**EPA-9045**			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-9045	04/28/14	04/28/14 14:00	DIW	MANUAL	1	BXD2410

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-88 | **Client Sample Name:** NB99-1-1, 4/23/2014 2:16:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.75**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/29/14 13:45	ARD	PE-OP1	0.971	BXD2357

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-89 | **Client Sample Name:** NB99-1-2, 4/23/2014 2:18:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	ND	mg/L	0.50	0.16	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 12:38	ARD	PE-OP1	1	BXE0376

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-89 | **Client Sample Name:** NB99-1-2, 4/23/2014 2:18:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.86**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/29/14 13:46	ARD	PE-OP1	0.952	BXD2357

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409190-90 | **Client Sample Name:** NB99-2-0.5, 4/23/2014 2:40:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.085**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/08/14	05/09/14 15:41	JRG	PE-OP2	1	BXE0801

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-90 | **Client Sample Name:** NB99-2-0.5, 4/23/2014 2:40:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**7.4**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/14	05/05/14 10:33	ARD	PE-OP1	1	BXE0279

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409190-90 | **Client Sample Name:** NB99-2-0.5, 4/23/2014 2:40:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.18**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 10:43	ARD	PE-OP1	1	BXE0343

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-90 | **Client Sample Name:** NB99-2-0.5, 4/23/2014 2:40:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**320**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/29/14 13:48	ARD	PE-OP1	0.935	BXD2357

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-91 | **Client Sample Name:** NB99-2-1, 4/23/2014 2:41:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.5**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/29/14 13:50	ARD	PE-OP1	0.943	BXD2357

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-92 | **Client Sample Name:** NB99-2-2, 4/23/2014 2:44:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.1**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/29/14 13:51	ARD	PE-OP1	0.952	BXD2357

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409190-93 | **Client Sample Name:** NB99-3-0.5, 4/23/2014 2:50:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.35**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/08/14	05/09/14 15:48	JRG	PE-OP2	1	BXE0801

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-93 | **Client Sample Name:** NB99-3-0.5, 4/23/2014 2:50:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**11**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/14	05/05/14 10:35	ARD	PE-OP1	1	BXE0279

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409190-93 | **Client Sample Name:** NB99-3-0.5, 4/23/2014 2:50:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.23**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 10:45	ARD	PE-OP1	1	BXE0343

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-93 | **Client Sample Name:** NB99-3-0.5, 4/23/2014 2:50:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**220**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/29/14 13:53	ARD	PE-OP1	0.926	BXD2357

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-94 | **Client Sample Name:** NB99-3-1, 4/23/2014 2:56:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.0**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/29/14 14:02	ARD	PE-OP1	0.980	BXD2357

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-95 | **Client Sample Name:** NB99-3-2, 4/23/2014 2:58:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.3**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/29/14 14:03	ARD	PE-OP1	0.943	BXD2357

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409190-96 | **Client Sample Name:** NB99-4-0.5, 4/23/2014 3:02:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.36**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/08/14	05/09/14 15:49	JRG	PE-OP2	1	BXE0801

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-96 | **Client Sample Name:** NB99-4-0.5, 4/23/2014 3:02:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**23**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/14	05/05/14 10:42	ARD	PE-OP1	1	BXE0279

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409190-96 | **Client Sample Name:** NB99-4-0.5, 4/23/2014 3:02:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.25**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 10:47	ARD	PE-OP1	1	BXE0343

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-96 | **Client Sample Name:** NB99-4-0.5, 4/23/2014 3:02:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**330**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/29/14 14:05	ARD	PE-OP1	0.962	BXD2357

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409190-97 | **Client Sample Name:** NB99-4-1, 4/23/2014 3:03:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	ND	mg/L	0.50	0.16	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 12:40	ARD	PE-OP1	1	BXE0376

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-97 | **Client Sample Name:** NB99-4-1, 4/23/2014 3:03:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.8**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/29/14 14:07	ARD	PE-OP1	0.926	BXD2357

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409190-98 | **Client Sample Name:** NB99-4-2, 4/23/2014 3:08:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**8.1**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/29/14 14:08	ARD	PE-OP1	0.971	BXD2357

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Chemical Analysis

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BXD2410										
pH	BXD2410-BS1	LCS	3.9650	4.0000	pH Units	99.1		95 - 105		

Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Chemical Analysis

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BXD2410	Used client sample: Y - Description: WB58-4-1, 04/21/2014 09:57										
pH	DUP	1409190-02	7.7590	7.7790		pH Units	0.3		20		

Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Modified WET Test (STLC)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BXE0801						
Lead	BXE0801-BLK1	ND	mg/L	0.050	0.0035	

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Modified WET Test (STLC)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BXE0801										
Lead	BXE0801-BS1	LCS	2.1622	2.0000	mg/L	108		85 - 115		

Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Modified WET Test (STLC)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BXE0801	Used client sample: Y - Description: SB99-9-0.5, 04/22/2014 22:00										
Lead	DUP	1409190-57	1.1295	1.1383		mg/L	0.8		20		
	MS	1409190-57	1.1295	3.3613	2.0408	mg/L		109		75 - 125	
	MSD	1409190-57	1.1295	3.3882	2.0408	mg/L	0.8	111	20	75 - 125	

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

WET Test (STLC)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BXE0279						
Lead	BXE0279-BLK1	ND	mg/L	0.50	0.16	
QC Batch ID: BXE0376						
Lead	BXE0376-BLK1	ND	mg/L	0.50	0.16	

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

WET Test (STLC)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BXE0279										
Lead	BXE0279-BS1	LCS	17.848	20.000	mg/L	89.2		85 - 115		
QC Batch ID: BXE0376										
Lead	BXE0376-BS1	LCS	18.693	20.000	mg/L	93.5		85 - 115		

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

WET Test (STLC)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BXE0279	Used client sample: Y - Description: NB99-1-0.5, 04/23/2014 14:10										
Lead	DUP	1409190-87	3.5404	3.7457		mg/L	5.6		20		
	MS	1409190-87	3.5404	25.736	20.408	mg/L		109		75 - 125	
	MSD	1409190-87	3.5404	25.955	20.408	mg/L	0.8	110	20	75 - 125	
QC Batch ID: BXE0376	Used client sample: Y - Description: SB99-12-2, 04/22/2014 21:18										
Lead	DUP	1409190-50	ND	ND		mg/L			20		
	MS	1409190-50	ND	19.378	20.408	mg/L		95.0		75 - 125	
	MSD	1409190-50	ND	19.015	20.408	mg/L	1.9	93.2	20	75 - 125	

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

TCLP Toxicity

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BXE0343						
Lead	BXE0343-BLK1	ND	mg/L	0.50	0.030	

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

TCLP Toxicity

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BXE0343										
Lead	BXE0343-BS1	LCS	20.631	20.000	mg/L	103		85 - 115		

Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

TCLP Toxicity

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BXE0343	Used client sample: Y - Description: SB99-5-0.5, 04/22/2014 23:10										
Lead	DUP	**1409190-71**	**0.087483**	**0.10857**		**mg/L**	**21.5**		**20**		**J,A02**
	MS	**1409190-71**	**0.087483**	**20.328**	**20.000**	**mg/L**		**101**		**75 - 125**	
	MSD	**1409190-71**	**0.087483**	**19.967**	**20.000**	**mg/L**	**1.8**	**99.4**	**20**	**75 - 125**	

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Total Concentrations (TTLC)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BXD2259						
Lead	BXD2259-BLK1	ND	mg/kg	2.5	0.28	
QC Batch ID: BXD2260						
Lead	BXD2260-BLK1	ND	mg/kg	2.5	0.28	
QC Batch ID: BXD2261						
Lead	BXD2261-BLK1	ND	mg/kg	2.5	0.28	
QC Batch ID: BXD2262						
Lead	BXD2262-BLK1	ND	mg/kg	2.5	0.28	
QC Batch ID: BXD2357						
Lead	BXD2357-BLK1	ND	mg/kg	2.5	0.28	

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BXD2259										
Lead	BXD2259-BS1	LCS	102.77	100.00	mg/kg	103		75 - 125		
QC Batch ID: BXD2260										
Lead	BXD2260-BS1	LCS	101.21	100.00	mg/kg	101		75 - 125		
QC Batch ID: BXD2261										
Lead	BXD2261-BS1	LCS	95.585	100.00	mg/kg	95.6		75 - 125		
QC Batch ID: BXD2262										
Lead	BXD2262-BS1	LCS	108.63	100.00	mg/kg	109		75 - 125		
QC Batch ID: BXD2357										
Lead	BXD2357-BS1	LCS	101.12	100.00	mg/kg	101		75 - 125		

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 14:56
Project: ADL Soil
Project Number: EN024 Beltway
Project Manager: Jack Packwood

Total Concentrations (TTLC)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BXD2259	Used client sample: Y - Description: WB58-4-0.5, 04/21/2014 09:56										
Lead	DUP	1409190-01	3.9330	3.4462		mg/kg	13.2		20		
	MS	1409190-01	3.9330	92.383	97.087	mg/kg		91.1		75 - 125	
	MSD	1409190-01	3.9330	95.149	97.087	mg/kg	2.9	94.0	20	75 - 125	
QC Batch ID: BXD2260	Used client sample: Y - Description: EB58-3-0.5, 04/22/2014 14:21										
Lead	DUP	**1409190-21**	**81.937**	**86.072**		**mg/kg**	**4.9**		**20**		
	MS	**1409190-21**	**81.937**	**147.31**	**98.039**	**mg/kg**		**66.7**		**75 - 125**	**Q03**
	MSD	**1409190-21**	**81.937**	**165.83**	**98.039**	**mg/kg**	**11.8**	**85.6**	**20**	**75 - 125**	
QC Batch ID: BXD2261	Used client sample: Y - Description: SB99-14-0.5, 04/22/2014 20:41										
Lead	DUP	**1409190-41**	**200.72**	**194.57**		**mg/kg**	**3.1**		**20**		
	MS	**1409190-41**	**200.72**	**268.44**	**99.010**	**mg/kg**		**68.4**		**75 - 125**	**Q03**
	MSD	**1409190-41**	**200.72**	**282.43**	**99.010**	**mg/kg**	**5.1**	**82.5**	**20**	**75 - 125**	
QC Batch ID: BXD2262	Used client sample: Y - Description: SB99-8-0.5-Dup, 04/22/2014 22:21										
Lead	DUP	1409190-61	3.3108	2.9667		mg/kg	11.0		20		
	MS	1409190-61	3.3108	98.271	98.039	mg/kg		96.9		75 - 125	
	MSD	1409190-61	3.3108	97.349	98.039	mg/kg	0.9	95.9	20	75 - 125	
QC Batch ID: BXD2357	Used client sample: Y - Description: SB99-2-1, 04/22/2014 23:56										
Lead	DUP	1409190-82	1.9408	2.0464		mg/kg	5.3		20		J
	MS	1409190-82	1.9408	94.753	98.039	mg/kg		94.7		75 - 125	
	MSD	1409190-82	1.9408	91.648	98.039	mg/kg	3.3	91.5	20	75 - 125	

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 14:56 Project: ADL Soil Project Number: EN024 Beltway Project Manager: Jack Packwood

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A02	The difference between duplicate readings is less than the PQL.
pH1:1	pH result reported on a 1:1 dilution of sample
Q03	Matrix spike recovery(s) is(are) not within the control limits.

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Date of Report: 05/12/2014

Jack Packwood

Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Client Project:	EN024
BCL Project:	ADL Soil
BCL Work Order:	1409191
Invoice ID:	B172981, B173017

Enclosed are the results of analyses for samples received by the laboratory on 4/24/2014. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Christina Herndon
Client Service Rep

Authorized Signature

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BC Laboratories, Inc.

Chain of Custody Form

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Report To:
Client: GDC
Attn: Jack Packwood
Street Address:
City, State, Zip:
Phone: Fax:
Email Address:
Work Order #: 14-09191

Project #: EN024
Project Name: Beltway
Sampler(s):

Analysis Requested: Please refer to the back of this page for completion instructions and method legend.

Comments:

Sample #	Description	Date Sampled	Time Sampled	Lead 6010B	pH 9045C	Sample Matrix: Soil	Sludge	Drinking Water	Ground Water	Waste Water	Other	Turnaround # of work days*	Notes
-1	NB99-5-0.5	4/23/14	3:10	X		X							
-2	NB99-5-1		3:15	X		X							
-3	NB99-5-1-dup		3:16	X		X							
-4	NB99-5-2		3:18	X		X							
-5	NB99-6-0.5		3:28	X		X							
-6	NB99-6-1		3:29	X		X							
-7	NB99-6-2		3:30	X		X							
-8	NB99-7-0.5		3:37	X		X							
-9	NB99-7-1		3:38	X		X							
-10	NB99-7-2		3:39	X		X							
-11	NB99-7-2-dup		3:40	X		X							
-12	NB99-8-0.5		3:50	X		X							
-13	NB99-8-1		3:57	X		X							
-14	NB99-8-2		3:58	X		X							

Are there any tests with holding times less than or equal to 48 hours? ☐ Yes ☐ No

* Standard Turnaround = 10 work days

CHK BY M 4/24/14
DISTRIBUTION
SUB-OUT

Billing ☒ Same as above
Client:
Address:
City: State Zip
Attn:
PO#:

EDF Required? Geotracker ☐ Yes ☒ No
Send Copy to State of CA? (EDT) ☐ Yes ☒ No

Global ID (Needed for EDF)
System # (Needed for EDT)

	Date	Time		Date	Time
1. Relinquished By	4/24/14	0300	1. Received By	4/24/14	0300
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

BC Laboratories, Inc. – 4100 Atlas Ct. – Bakersfield, CA 93308 – 661.327.4911 – Fax: 661.327.1918 – www.bclabs.com

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Chain of Custody Form

Page 9 of 12

Report To:
Client: GDC
Attn: Jack Packwood
Street Address:
City, State, Zip:
Phone: Fax:
Email Address:
Work Order #: 14-09191

Project #: EN024
Project Name: Beltway
Sampler(s):

Analysis Requested: Please refer to the back of this page for completion instructions and method legend.

Comments:

Sample #	Description	Date Sampled	Time Sampled	Lead 6010B	pH 9045C	Sample Matrix: Soil	Sludge	Drinking Water	Ground Water	Waste Water	Other	Turnaround # of work days*	Notes
-15	NB99-9-0.5	4/23/14	4:06	X		X							
-16	NB99-9-1		4:08	X	X	X							
-17	NB99-9-2		4:09	X		X							
-18	NB99-10-0.5		4:15	X		X							
-19	NB99-10-0.5-dup		4:17	X		X							
-20	NB99-10-1		4:18	X		X							
-21	NB99-10-2		4:19	X		X							
-22	NB99-11-0.5		4:40	X		X							
-23	NB99-11-1		4:43	X		X							
-24	NB99-11-1-dup		4:46	X		X							
-25	NB99-11-2		4:48	X		X							
-26	NB99-12-0.5		4:52	X		X							
-27	NB99-12-1		4:53	X		X							
-28	NB99-12-2		4:56	X	X	X							

Are there any tests with holding times less than or equal to 48 hours? ☐ Yes ☐ No

* Standard Turnaround = 10 work days

Billing ☒ Same as above
Client:
Address:
City: State Zip
Attn:
PO#:

EDF Required? Geotracker ☐ Yes ☒ No
Send Copy to State of CA? (EDT) ☐ Yes ☒ No

Global ID (Needed for EDF)
System # (Needed for EDT)

	Relinquished By	Date	Time	Received By	Date	Time
1.	[signature]	4/24/14	0300	M. Ottmer	4/24/14	0300
2.						
3.						

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Chain of Custody Form

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Report To: Client: GDC	Project #: EN024
Attn: Jack Packwood	Project Name: Beltway
Street Address:	
City, State, Zip:	Sampler(s):
Phone: Fax:	
Email Address:	
Work Order #: 14-09191	

Analysis Requested

Please refer to the back of this page for completion instructions and method legend.

Comments:

Are there any tests with holding times less than or equal to 48 hours? ☐ Yes ☐ No

* Standard Turnaround = 10 work days

Sample #	Description	Date Sampled	Time Sampled	Lead 6010B	pH 9045C	Sample Matrix: Soil	Sludge	Drinking Water	Ground Water	Waste Water	Other	Turnaround # of work days*	Notes
-29	NB99-12-2-dup	4 23 14	4:58	X	X	X							
-30	NB99-13-0.5		5:00	X		X							
-31	NB99-13-0.5-dup		5:06	X		X							
-32	NB99-13-1		5:08	X		X							
-33	NB99-13-2		5:09	X	X	X							
-34	NB99-14-0.5		5:12	X		X							
-35	NB99-14-1		5:13	X		X							
-36	NB99-14-1-dup		5:14	X		X							
-37	NB99-14-2		5:16	X		X							
-38	NB99-15-0.5		5:22	X	X	X							
-39	NB99-15-1		5:24	X		X							
-40	NB99-15-2		5:26	X		X							
-41	NB99-16-0.5		5:30	X		X							
-42	NB99-16-1		5:34	X		X							

Billing ☒ Same as above

Client:
Address:
City: State Zip
Attn:
PO#:

EDF Required? Geotracker ☐ Yes ☒ No

Send Copy to State of CA? (EDT) ☐ Yes ☒ No

Global ID (Needed for EDF)

System # (Needed for EDT)

	Date	Time		Date	Time
1. Relinquished By: [signature]	4/24/14	0300	1. Received By: M. Atonio	4/24/14	0300
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

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Chain of Custody Form

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Report To:
Client: GDC
Attn: Jack Packwood
Street Address:
City, State, Zip:
Phone: Fax:
Email Address:
Work Order #: 14-09191

Project #: EN024
Project Name: Beltway
Sampler(s):

Analysis Requested

Please refer to the back of this page for completion instructions and method legend.

Comments:

Are there any tests with holding times less than or equal to 48 hours? ☐ Yes ☐ No

* Standard Turnaround = 10 work days

Sample #	Description	Date Sampled	Time Sampled	Lead 6010B	pH 9045C	Sample Matrix: Soil	Sludge	Drinking Water	Ground Water	Waste Water	Other	Turnaround # of work days*	Notes
-43	NB99-16-2	4/23/14	5:38	X		X							
-44	SBExit-5-0.5		9:00	X		X							
-45	SBExit-5-1		9:01	X		X							
-46	SBExit-5-2		9:02	X		X							
-47	SBExit-4-0.5		9:10	X		X							
-48	SBExit-4-1		9:20	X		X							
-49	SBExit-4-2		9:30	X		X							
-50	SBExit-3-0.5		9:45	X		X							
-51	SBExit-3-1		9:48	X		X							
-52	SBExit-3-2		10:00	X		X							
-53	SBExit-2-0.5		10:26	X		X							
-54	SBExit-2-1		10:30	X		X							
-55	SBExit-2-2		10:36	X		X							
-56	SBExit-1-0.5		10:42	X		X							

Billing ☒ Same as above

Client:
Address:
City: State Zip
Attn:
PO#:

EDF Required? Geotracker ☐ Yes ☒ No

Send Copy to State of CA? (EDT) ☐ Yes ☒ No

Global ID (Needed for EDF)

System # (Needed for EDT)

	Relinquished By	Date	Time	Received By	Date	Time
1.	[signature]	4/24/14	0300	M. Atoneu	4/24/14	0300
2.						
3.						

BC Laboratories, Inc. – 4100 Atlas Ct. – Bakersfield, CA 93308 – 661.327.4911 – Fax: 661.327.1918 – www.bclabs.com

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Chain of Custody Form

Page 12 of 12

Report To:
Client: GDC
Attn: Jack Packwood
Street Address:
City, State, Zip:
Phone: Fax:
Email Address:
Work Order #: 14-09191

Project #: EN024
Project Name: Beltway
Sampler(s):

Analysis Requested: Please refer to the back of this page for completion instructions and method legend.

Comments:

Sample #	Description	Date Sampled	Time Sampled	Lead 6010B	pH 9045C	Sample Matrix: Soil	Sludge	Drinking Water	Ground Water	Waste Water	Other	Turnaround # of work days*	Notes
-57	SBExit-1-1	4/23/14	11:00	X		X							
-58	SBExit-1-2	4/23/14	11:26	X		X							

Are there any tests with holding times less than or equal to 48 hours? ☐ Yes ☐ No

* Standard Turnaround = 10 work days

Billing ☒ Same as above
Client:
Address:
City: State Zip
Attn:
PO#:

EDF Required? Geotracker ☐ Yes ☒ No
Send Copy to State of CA? (EDT) ☐ Yes ☒ No

Global ID (Needed for EDF)
System # (Needed for EDT)

Relinquished By	Date	Time	Received By	Date	Time
1. [signature]	4/24/14	0300	1. M. Ortona	4/24/14	0300
2.			2.		
3.			3.		

BC Laboratories, Inc. – 4100 Atlas Ct. – Bakersfield, CA 93308 – 661.327.4911 – Fax: 661.327.1918 – www.bclabs.com

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BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 15 07/01/13 Page 1 Of 6

Submission #: 14-09191

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☑
BC Lab Field Service ☐ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☑ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☑ Comments: INSUFF. ICE

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: — Container: Soil sleeve Thermometer ID: LH82 Date/Time 4/24/14 0300
Temperature: (A) 12.7 °C / (C) 13.7 °C 4/24/14 Analyst Ini MM

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE	A	A	A	A	A	A	A	A	A	A
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:
Sample Numbering Completed By: TSP Date/Time: 4/24/14 1646
A = Actual / C = Corrected

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Chain of Custody and Cooler Receipt Form for 1409191 Page 7 of 11

BC LABORATORIES INC. **COOLER RECEIPT FORM** Rev. No. 15 07/01/13 Page 2 Of 6

Submission #: 14-09191

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☑
BC Lab Field Service ☐ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☑ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☑ Comments: INSUFF. ice

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: — Container: Soil sleeve Thermometer ID: THO2 Date/Time 4/24/14 0300
Temperature: (A) 12.7 °C / (C) 13.2 °C 4/24/14 KSV Analyst Init MA

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE	A	A	A	A	A	A	A	A	A	A
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:
Sample Numbering Completed By: BP Date/Time: 4-24-14 1646
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Chain of Custody and Cooler Receipt Form for 1409191 Page 8 of 11

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 15 07/01/13 Page 3 Of 6

Submission #: 14-09191

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☑
BC Lab Field Service ☐ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☑ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☑ Comments: INSUFF. ice

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: — Container: Soil sleeve Thermometer ID: TH02 Date/Time 4/24/14 0300
Temperature: (A) 12.7 °C / (C) 13.2 °C Analyst Init MA

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	21	22	23	24	25	26	27	28	29	30
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE	A	A	A	A	A	A	A	A	A	A
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:
Sample Numbering Completed By: BP Date/Time: 4/24/14 1646
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Chain of Custody and Cooler Receipt Form for 1409191 Page 9 of 11

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 15 07/01/13 Page 4 Of 6

Submission #: 1409191

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Federal Express ☐ UPS ☐ Hand Delivery ☑ BC Lab Field Service ☐ Other ☐ (Specify)_____	Ice Chest ☑ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☐

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☑ Intact? Yes ☐ No ☐ None ☑ Comments: INSUFF. ICE

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: — Container: Sil sleeve Thermometer ID: THX2 Date/Time 4/24/14 0300

Temperature: (A) 12.7 °C / (C) 13.2 °C 4/24/14 Analyst Ini NA

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	31	32	33	34	35	36	37	38	39	40
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE	A	A	A	A	A	A	A	A	A	A
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:

Sample Numbering Completed By: BP Date/Time: 4/24/14 1646

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Chain of Custody and Cooler Receipt Form for 1409191 Page 10 of 11

BC LABORATORIES INC. **COOLER RECEIPT FORM** Rev. No. 15 07/01/13 Page 5 Of 6

Submission #: 14-09191

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Federal Express ☐ UPS ☐ Hand Delivery ☑ BC Lab Field Service ☐ Other ☐ (Specify)_____	Ice Chest ☑ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☐

Refrigerant: ~~Ice~~ ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☑ Comments: INSUFF. ice

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: — Container: Soil sleeve Thermometer ID: THO2 Date/Time 4/24/14 0300

Temperature: (A) 12.7 °C / (C) 13.2 °C 4/24/14 KSV Analyst Ini MM

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	41	42	43	44	45	46	47	48	49	50
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE	A	A	A	A	A	A	A	A	A	A
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:

Sample Numbering Completed By: BP Date/Time: 4/24/14 1646

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Chain of Custody and Cooler Receipt Form for 1409191 Page 11 of 11

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 15 07/01/13 Page 6 Of 6

Submission #: 14-09191

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☑
BC Lab Field Service ☐ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☑ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☑ Intact? Yes ☐ No ☐ None ☑ Comments: INSUFF. ICE

All samples received? Yes ☐ No ☑ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: — Container: Sil sleeve Thermometer ID: THB2 Date/Time 4/24/14 0300
Temperature: (A) 12.7 °C / (C) 13.7 °C 4/24/14 KSV Analyst Ini NA

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	51	52	53	54	55	56	57	58	~~59~~	~~60~~
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE	A	A	A	A	A	A	A	A		
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:
Sample Numbering Completed By: BP Date/Time: 4/24/14 1646
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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409191-01	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 15:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-5-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-02	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 15:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-5-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-03	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 15:16
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-5-1-dup	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-04	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 15:18
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-5-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-05	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 15:28
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-6-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-06	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 15:29
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-6-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-07	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 15:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-6-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409191-08	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 15:37
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-7-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-09	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 15:38
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-7-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-10	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 15:39
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-7-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-11	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 15:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-7-2-dup	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-12	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 15:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-8-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-13	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 15:57
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-8-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-14	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 15:58
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-8-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409191-15	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 16:06
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-9-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-16	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 16:08
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-9-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-17	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 16:09
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-9-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-18	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 16:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-10-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-19	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 16:17
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-10-0.5-dup	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-20	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 16:18
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-10-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-21	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 16:19
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-10-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409191-22	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 16:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-11-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-23	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 16:43
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-11-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-24	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 16:46
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-11-1-dup	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-25	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 16:48
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-11-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-26	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 16:52
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-12-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-27	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 16:53
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-12-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-28	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 16:56
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-12-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409191-29	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 16:58
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-12-2-dup	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-30	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 17:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-13-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-31	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 17:06
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-13-0.5-dup	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-32	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 17:08
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-13-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-33	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 17:09
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-13-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-34	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 17:12
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-14-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-35	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 17:13
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-14-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409191-36	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 17:14
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-14-1-dup	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-37	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 17:16
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-14-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-38	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 17:22
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-15-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-39	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 17:24
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-15-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-40	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 17:26
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-15-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-41	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 17:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-16-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-42	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 17:34
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-16-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409191-43	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 17:38
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	NB99-16-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-44	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 21:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB Exit-5-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-45	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 21:01
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB Exit-5-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-46	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 21:02
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB Exit-5-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-47	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 21:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB Exit-4-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-48	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 21:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB Exit-4-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-49	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 21:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB Exit-4-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409191-50	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 21:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB Exit-3-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-51	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 21:48
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB Exit-3-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-52	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 22:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB Exit-3-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-53	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 22:26
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB Exit-2-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-54	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 22:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB Exit-2-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-55	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 22:36
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB Exit-2-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-56	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 22:42
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB Exit-1-0.5	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1409191-57	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 23:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB Exit-1-1	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil
1409191-58	**COC Number:**	---	**Receive Date:**	04/24/2014 03:00
	Project Number:	---	**Sampling Date:**	04/23/2014 23:26
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SB Exit-1-2	**Lab Matrix:**	Solids
	Sampled By:	Kevin Garcia	**Sample Type:**	Soil

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409191-01 | **Client Sample Name:** NB99-5-0.5, 4/23/2014 3:10:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.098**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/08/14	05/09/14 15:51	JRG	PE-OP2	1	BXE0801

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-01 | **Client Sample Name:** NB99-5-0.5, 4/23/2014 3:10:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**24**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/14	05/05/14 10:43	ARD	PE-OP1	1	BXE0279

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409191-01 | **Client Sample Name:** NB99-5-0.5, 4/23/2014 3:10:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.25**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 10:48	ARD	PE-OP1	1	BXE0343

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-01 | **Client Sample Name:** NB99-5-0.5, 4/23/2014 3:10:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**310**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/29/14 14:10	ARD	PE-OP1	0.952	BXD2357

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409191-02 | **Client Sample Name:** NB99-5-1, 4/23/2014 3:15:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.73**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/08/14	05/09/14 15:53	JRG	PE-OP2	1	BXE0801

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-02 | **Client Sample Name:** NB99-5-1, 4/23/2014 3:15:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**42**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/02/14	05/05/14 10:45	ARD	PE-OP1	1	BXE0279

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409191-02 | **Client Sample Name:** NB99-5-1, 4/23/2014 3:15:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.72**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 10:53	ARD	PE-OP1	1	BXE0343

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-02 | **Client Sample Name:** NB99-5-1, 4/23/2014 3:15:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**690**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/29/14 14:11	ARD	PE-OP1	0.990	BXD2357

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-03 | **Client Sample Name:** NB99-5-1-dup, 4/23/2014 3:16:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**4.7**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 08:26	ARD	PE-OP1	0.990	BXD2358

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-04 | **Client Sample Name:** NB99-5-2, 4/23/2014 3:18:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**2.3**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 08:36	ARD	PE-OP1	0.926	BXD2358

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-05 | **Client Sample Name:** NB99-6-0.5, 4/23/2014 3:28:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**20**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 08:38	ARD	PE-OP1	0.971	BXD2358

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-06 | **Client Sample Name:** NB99-6-1, 4/23/2014 3:29:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	ND	mg/L	0.50	0.16	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 12:41	ARD	PE-OP1	1	BXE0376

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-06 | **Client Sample Name:** NB99-6-1, 4/23/2014 3:29:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.8**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 08:45	ARD	PE-OP1	0.943	BXD2358

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-07 | **Client Sample Name:** NB99-6-2, 4/23/2014 3:30:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.4**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 08:46	ARD	PE-OP1	0.952	BXD2358

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-08 | **Client Sample Name:** NB99-7-0.5, 4/23/2014 3:37:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**10**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 08:48	ARD	PE-OP1	0.926	BXD2358

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-09 | **Client Sample Name:** NB99-7-1, 4/23/2014 3:38:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.9**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 08:50	ARD	PE-OP1	0.990	BXD2358

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-10 | **Client Sample Name:** NB99-7-2, 4/23/2014 3:39:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.6**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 08:51	ARD	PE-OP1	0.935	BXD2358

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Group Delta Consultants, Inc.
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Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-11 | **Client Sample Name:** NB99-7-2-dup, 4/23/2014 3:40:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	ND	mg/L	0.50	0.16	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 12:43	ARD	PE-OP1	1	BXE0376

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-11 | **Client Sample Name:** NB99-7-2-dup, 4/23/2014 3:40:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**2.7**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 08:53	ARD	PE-OP1	0.980	BXD2358

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409191-12 | **Client Sample Name:** NB99-8-0.5, 4/23/2014 3:50:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.6**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 10:55	ARD	PE-OP1	1	BXE0343

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-12 | **Client Sample Name:** NB99-8-0.5, 4/23/2014 3:50:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3100**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 08:54	ARD	PE-OP1	0.962	BXD2358

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409191-13 | **Client Sample Name:** NB99-8-1, 4/23/2014 3:57:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.97**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	0.0035		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/09/14	05/12/14 11:01	ARD	PE-OP1	1	BXE0897

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Group Delta Consultants, Inc.
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Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-13 | **Client Sample Name:** NB99-8-1, 4/23/2014 3:57:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**12**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 12:48	ARD	PE-OP1	1	BXE0377

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409191-13 | **Client Sample Name:** NB99-8-1, 4/23/2014 3:57:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.0**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 10:57	ARD	PE-OP1	1	BXE0343

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-13 | **Client Sample Name:** NB99-8-1, 4/23/2014 3:57:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**160**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 08:56	ARD	PE-OP1	0.971	BXD2358

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-14 | **Client Sample Name:** NB99-8-2, 4/23/2014 3:58:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.1**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 08:58	ARD	PE-OP1	0.962	BXD2358

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-15 | **Client Sample Name:** NB99-9-0.5, 4/23/2014 4:06:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**4.5**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 08:59	ARD	PE-OP1	0.980	BXD2358

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
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Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Chemical Analysis

BCL Sample ID: 1409191-16 | **Client Sample Name:** NB99-9-1, 4/23/2014 4:08:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	**7.43**	**pH Units**	**0.05**	**0.05**	**EPA-9045**		**pH1:1**	1
pH Measurement Temperature	**24.0**	**C**	**0.1**	**0.1**	**EPA-9045**			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-9045	04/30/14	04/30/14 14:45	DIW	MANUAL	1	BXD2600

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
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Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-16 | **Client Sample Name:** NB99-9-1, 4/23/2014 4:08:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.2**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:04	ARD	PE-OP1	0.952	BXD2358

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Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-17 | **Client Sample Name:** NB99-9-2, 4/23/2014 4:09:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.4**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:06	ARD	PE-OP1	0.935	BXD2358

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409191-18 | **Client Sample Name:** NB99-10-0.5, 4/23/2014 4:15:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.32**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	0.0035		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/09/14	05/12/14 11:03	ARD	PE-OP1	1	BXE0897

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-18 | **Client Sample Name:** NB99-10-0.5, 4/23/2014 4:15:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**36**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 12:50	ARD	PE-OP1	1	BXE0377

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409191-18 | **Client Sample Name:** NB99-10-0.5, 4/23/2014 4:15:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.93**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 10:59	ARD	PE-OP1	1	BXE0343

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-18 | **Client Sample Name:** NB99-10-0.5, 4/23/2014 4:15:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**530**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:08	ARD	PE-OP1	0.952	BXD2358

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-19 | **Client Sample Name:** NB99-10-0.5-dup, 4/23/2014 4:17:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**4.0**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:09	ARD	PE-OP1	0.926	BXD2358

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-20 | **Client Sample Name:** NB99-10-1, 4/23/2014 4:18:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	ND	mg/L	0.50	0.16	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 12:55	ARD	PE-OP1	1	BXE0377

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-20 | **Client Sample Name:** NB99-10-1, 4/23/2014 4:18:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.9**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:11	ARD	PE-OP1	0.980	BXD2358

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-21 | **Client Sample Name:** NB99-10-2, 4/23/2014 4:19:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**2.1**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:12	ARD	PE-OP1	0.943	BXD2358

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-22 | **Client Sample Name:** NB99-11-0.5, 4/23/2014 4:40:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**4.3**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:14	ARD	PE-OP1	0.971	BXD2358

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-23 | **Client Sample Name:** NB99-11-1, 4/23/2014 4:43:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**4.9**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:24	ARD	PE-OP1	0.971	BXD2359

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-24 | **Client Sample Name:** NB99-11-1-dup, 4/23/2014 4:46:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.3**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:19	ARD	PE-OP1	0.971	BXD2359

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-25 | **Client Sample Name:** NB99-11-2, 4/23/2014 4:48:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**2.1**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:33	ARD	PE-OP1	0.980	BXD2359

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-26 | **Client Sample Name:** NB99-12-0.5, 4/23/2014 4:52:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**4.6**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:35	ARD	PE-OP1	0.943	BXD2359

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-27 | **Client Sample Name:** NB99-12-1, 4/23/2014 4:53:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	ND	mg/L	0.50	0.16	EPA-6010B	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 13:03	ARD	PE-OP1	1	BXE0377

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-27 | **Client Sample Name:** NB99-12-1, 4/23/2014 4:53:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**4.1**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:37	ARD	PE-OP1	0.926	BXD2359

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Chemical Analysis

BCL Sample ID: 1409191-28 | **Client Sample Name:** NB99-12-2, 4/23/2014 4:56:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	**8.36**	**pH Units**	**0.05**	**0.05**	**EPA-9045**		**pH1:1**	1
pH Measurement Temperature	**24.0**	**C**	**0.1**	**0.1**	**EPA-9045**			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-9045	04/30/14	04/30/14 14:45	DIW	MANUAL	1	BXD2600

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-28 | **Client Sample Name:** NB99-12-2, 4/23/2014 4:56:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**4.7**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:38	ARD	PE-OP1	0.990	BXD2359

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Chemical Analysis

BCL Sample ID: 1409191-29 | **Client Sample Name:** NB99-12-2-dup, 4/23/2014 4:58:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	**8.22**	**pH Units**	**0.05**	**0.05**	**EPA-9045**		**pH1:1**	1
pH Measurement Temperature	**23.5**	**C**	**0.1**	**0.1**	**EPA-9045**			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-9045	04/30/14	04/30/14 14:45	DIW	MANUAL	1	BXD2600

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-29 | **Client Sample Name:** NB99-12-2-dup, 4/23/2014 4:58:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.7**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:44	ARD	PE-OP1	0.962	BXD2359

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409191-30 | **Client Sample Name:** NB99-13-0.5, 4/23/2014 5:00:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.12**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	0.0035		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/09/14	05/12/14 11:05	ARD	PE-OP1	1	BXE0897

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-30 | **Client Sample Name:** NB99-13-0.5, 4/23/2014 5:00:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**12**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 13:05	ARD	PE-OP1	1	BXE0377

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409191-30 | **Client Sample Name:** NB99-13-0.5, 4/23/2014 5:00:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.25**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 11:00	ARD	PE-OP1	1	BXE0343

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-30 | **Client Sample Name:** NB99-13-0.5, 4/23/2014 5:00:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**210**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:45	ARD	PE-OP1	0.952	BXD2359

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-31 | **Client Sample Name:** NB99-13-0.5-dup, 4/23/2014 5:06:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**12**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:47	ARD	PE-OP1	0.935	BXD2359

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-32 | **Client Sample Name:** NB99-13-1, 4/23/2014 5:08:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**27**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:49	ARD	PE-OP1	0.962	BXD2359

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Chemical Analysis

BCL Sample ID: 1409191-33 | **Client Sample Name:** NB99-13-2, 4/23/2014 5:09:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	**8.23**	**pH Units**	**0.05**	**0.05**	**EPA-9045**		**pH1:1**	1
pH Measurement Temperature	**23.4**	**C**	**0.1**	**0.1**	**EPA-9045**			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-9045	04/30/14	04/30/14 14:45	DIW	MANUAL	1	BXD2600

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-33 | **Client Sample Name:** NB99-13-2, 4/23/2014 5:09:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.42**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 13:07	ARD	PE-OP1	1	BXE0377

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-33 | **Client Sample Name:** NB99-13-2, 4/23/2014 5:09:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**9.3**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:50	ARD	PE-OP1	0.980	BXD2359

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409191-34 | **Client Sample Name:** NB99-14-0.5, 4/23/2014 5:12:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.022**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	0.0035	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/09/14	05/12/14 11:12	ARD	PE-OP1	1	BXE0897

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-34 | **Client Sample Name:** NB99-14-0.5, 4/23/2014 5:12:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**6.0**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 13:08	ARD	PE-OP1	1	BXE0377

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-34 | **Client Sample Name:** NB99-14-0.5, 4/23/2014 5:12:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**85**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:52	ARD	PE-OP1	0.952	BXD2359

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409191-35 | **Client Sample Name:** NB99-14-1, 4/23/2014 5:13:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.10**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	0.0035		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/09/14	05/12/14 11:14	ARD	PE-OP1	1	BXE0897

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-35 | **Client Sample Name:** NB99-14-1, 4/23/2014 5:13:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**5.1**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 13:10	ARD	PE-OP1	1	BXE0377

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-35 | **Client Sample Name:** NB99-14-1, 4/23/2014 5:13:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**84**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:53	ARD	PE-OP1	0.962	BXD2359

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409191-36 | **Client Sample Name:** NB99-14-1-dup, 4/23/2014 5:14:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.079**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	0.0035		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/09/14	05/12/14 11:15	ARD	PE-OP1	1	BXE0897

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-36 | **Client Sample Name:** NB99-14-1-dup, 4/23/2014 5:14:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**7.5**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 13:15	ARD	PE-OP1	1	BXE0377

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-36 | **Client Sample Name:** NB99-14-1-dup, 4/23/2014 5:14:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**95**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:55	ARD	PE-OP1	0.943	BXD2359

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-37 | **Client Sample Name:** NB99-14-2, 4/23/2014 5:16:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**3.9**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 13:17	ARD	PE-OP1	1	BXE0377

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-37 | **Client Sample Name:** NB99-14-2, 4/23/2014 5:16:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**55**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:57	ARD	PE-OP1	0.990	BXD2359

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Chemical Analysis

BCL Sample ID: 1409191-38 | **Client Sample Name:** NB99-15-0.5, 4/23/2014 5:22:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
pH	**7.77**	**pH Units**	**0.05**	**0.05**	**EPA-9045**		**pH1:1**	1
pH Measurement Temperature	**23.8**	**C**	**0.1**	**0.1**	**EPA-9045**			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-9045	04/30/14	04/30/14 14:45	DIW	MANUAL	1	BXD2600

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409191-38 | **Client Sample Name:** NB99-15-0.5, 4/23/2014 5:22:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.029**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	0.0035	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/09/14	05/12/14 11:17	ARD	PE-OP1	1	BXE0897

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-38 | **Client Sample Name:** NB99-15-0.5, 4/23/2014 5:22:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**19**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 13:18	ARD	PE-OP1	1	BXE0377

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409191-38 | **Client Sample Name:** NB99-15-0.5, 4/23/2014 5:22:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.23**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 11:02	ARD	PE-OP1	1	BXE0343

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-38 | **Client Sample Name:** NB99-15-0.5, 4/23/2014 5:22:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**240**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 09:58	ARD	PE-OP1	0.980	BXD2359

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-39 | **Client Sample Name:** NB99-15-1, 4/23/2014 5:24:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**44**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 10:03	ARD	PE-OP1	0.952	BXD2359

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-40 | **Client Sample Name:** NB99-15-2, 4/23/2014 5:26:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**4.5**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 13:20	ARD	PE-OP1	1	BXE0377

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-40 | **Client Sample Name:** NB99-15-2, 4/23/2014 5:26:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**72**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 10:05	ARD	PE-OP1	0.943	BXD2359

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409191-41 | **Client Sample Name:** NB99-16-0.5, 4/23/2014 5:30:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.036**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	0.0035	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/09/14	05/12/14 11:19	ARD	PE-OP1	1	BXE0897

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-41 | **Client Sample Name:** NB99-16-0.5, 4/23/2014 5:30:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**8.4**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 13:22	ARD	PE-OP1	1	BXE0377

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409191-41 | **Client Sample Name:** NB99-16-0.5, 4/23/2014 5:30:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.26**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 11:04	ARD	PE-OP1	1	BXE0343

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-41 | **Client Sample Name:** NB99-16-0.5, 4/23/2014 5:30:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**120**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 10:07	ARD	PE-OP1	0.971	BXD2359

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409191-42 | **Client Sample Name:** NB99-16-1, 4/23/2014 5:34:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.16**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	0.0035		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/09/14	05/12/14 10:53	ARD	PE-OP1	1	BXE0897

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-42 | **Client Sample Name:** NB99-16-1, 4/23/2014 5:34:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**6.7**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 13:23	ARD	PE-OP1	1	BXE0377

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-42 | **Client Sample Name:** NB99-16-1, 4/23/2014 5:34:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**82**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 10:08	ARD	PE-OP1	0.935	BXD2359

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409191-43 | **Client Sample Name:** NB99-16-2, 4/23/2014 5:38:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.026**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	0.0035	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/09/14	05/12/14 11:21	ARD	PE-OP1	1	BXE0897

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-43 | **Client Sample Name:** NB99-16-2, 4/23/2014 5:38:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**4.1**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 13:25	ARD	PE-OP1	1	BXE0377

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-43 | **Client Sample Name:** NB99-16-2, 4/23/2014 5:38:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**57**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 10:29	ARD	PE-OP1	0.943	BXD2360

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409191-44 | **Client Sample Name:** SB Exit-5-0.5, 4/23/2014 9:00:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.33**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	0.0035		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/09/14	05/12/14 11:23	ARD	PE-OP1	1	BXE0897

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-44 | **Client Sample Name:** SB Exit-5-0.5, 4/23/2014 9:00:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**50**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 13:27	ARD	PE-OP1	1	BXE0377

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409191-44 | **Client Sample Name:** SB Exit-5-0.5, 4/23/2014 9:00:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.98**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 11:09	ARD	PE-OP1	1	BXE0344

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-44 | **Client Sample Name:** SB Exit-5-0.5, 4/23/2014 9:00:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**880**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 10:10	ARD	PE-OP1	0.990	BXD2360

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409191-45 | **Client Sample Name:** SB Exit-5-1, 4/23/2014 9:01:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.38**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	0.0035		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/09/14	05/12/14 11:24	ARD	PE-OP1	1	BXE0897

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-45 | **Client Sample Name:** SB Exit-5-1, 4/23/2014 9:01:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**62**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 13:28	ARD	PE-OP1	1	BXE0377

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409191-45 | **Client Sample Name:** SB Exit-5-1, 4/23/2014 9:01:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**1.3**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 11:14	ARD	PE-OP1	1	BXE0344

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-45 | **Client Sample Name:** SB Exit-5-1, 4/23/2014 9:01:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**980**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 10:30	ARD	PE-OP1	0.980	BXD2360

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409191-46 | **Client Sample Name:** SB Exit-5-2, 4/23/2014 9:02:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.024**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	0.0035	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/09/14	05/12/14 11:26	ARD	PE-OP1	1	BXE0897

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-46 | **Client Sample Name:** SB Exit-5-2, 4/23/2014 9:02:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**13**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 13:30	ARD	PE-OP1	1	BXE0377

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409191-46 | **Client Sample Name:** SB Exit-5-2, 4/23/2014 9:02:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.66**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 11:24	ARD	PE-OP1	1	BXE0344

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-46 | **Client Sample Name:** SB Exit-5-2, 4/23/2014 9:02:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**140**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 10:32	ARD	PE-OP1	0.971	BXD2360

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409191-47 | **Client Sample Name:** SB Exit-4-0.5, 4/23/2014 9:10:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.014**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	0.0035	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/09/14	05/12/14 11:28	ARD	PE-OP1	1	BXE0897

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-47 | **Client Sample Name:** SB Exit-4-0.5, 4/23/2014 9:10:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**12**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 13:35	ARD	PE-OP1	1	BXE0377

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409191-47 | **Client Sample Name:** SB Exit-4-0.5, 4/23/2014 9:10:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.10**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 11:26	ARD	PE-OP1	1	BXE0344

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-47 | **Client Sample Name:** SB Exit-4-0.5, 4/23/2014 9:10:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**220**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 10:33	ARD	PE-OP1	0.990	BXD2360

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409191-48 | **Client Sample Name:** SB Exit-4-1, 4/23/2014 9:20:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.062**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	0.0035		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/09/14	05/12/14 11:35	ARD	PE-OP1	1	BXE0897

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-48 | **Client Sample Name:** SB Exit-4-1, 4/23/2014 9:20:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**30**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 13:37	ARD	PE-OP1	1	BXE0377

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409191-48 | **Client Sample Name:** SB Exit-4-1, 4/23/2014 9:20:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.33**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 11:27	ARD	PE-OP1	1	BXE0344

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-48 | **Client Sample Name:** SB Exit-4-1, 4/23/2014 9:20:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**320**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/07/14	05/08/14 08:41	ARD	PE-OP1	0.952	BXE0618

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Modified WET Test (STLC)

BCL Sample ID: 1409191-49 | **Client Sample Name:** SB Exit-4-2, 4/23/2014 9:30:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.30**	**mg/L**	**0.050**	**0.0035**	**EPA-6010B**	0.0035		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/09/14	05/12/14 11:37	ARD	PE-OP1	1	BXE0897

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-49 | **Client Sample Name:** SB Exit-4-2, 4/23/2014 9:30:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**19**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/06/14 13:50	ARD	PE-OP1	1	BXE0378

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

TCLP Toxicity

BCL Sample ID: 1409191-49 | **Client Sample Name:** SB Exit-4-2, 4/23/2014 9:30:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.54**	**mg/L**	**0.50**	**0.030**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/05/14	05/06/14 11:29	ARD	PE-OP1	1	BXE0344

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-49 | **Client Sample Name:** SB Exit-4-2, 4/23/2014 9:30:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**260**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 10:37	ARD	PE-OP1	0.980	BXD2360

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-50 | **Client Sample Name:** SB Exit-3-0.5, 4/23/2014 9:45:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**30**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 10:38	ARD	PE-OP1	0.952	BXD2360

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-51 | **Client Sample Name:** SB Exit-3-1, 4/23/2014 9:48:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.93**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/07/14 08:46	ARD	PE-OP1	1	BXE0378

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-51 | **Client Sample Name:** SB Exit-3-1, 4/23/2014 9:48:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**21**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 10:40	ARD	PE-OP1	0.926	BXD2360

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-52 | **Client Sample Name:** SB Exit-3-2, 4/23/2014 10:00:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**17**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 10:58	ARD	PE-OP1	0.971	BXD2360

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-53 | **Client Sample Name:** SB Exit-2-0.5, 4/23/2014 10:26:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**11**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 11:00	ARD	PE-OP1	0.990	BXD2360

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Group Delta Consultants, Inc.
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Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-54 | **Client Sample Name:** SB Exit-2-1, 4/23/2014 10:30:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.47**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/07/14 08:48	ARD	PE-OP1	1	BXE0378

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-54 | **Client Sample Name:** SB Exit-2-1, 4/23/2014 10:30:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**14**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 11:01	ARD	PE-OP1	0.943	BXD2360

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-55 | **Client Sample Name:** SB Exit-2-2, 4/23/2014 10:36:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**13**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 11:03	ARD	PE-OP1	0.935	BXD2360

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

BCL Sample ID: 1409191-56 | **Client Sample Name:** SB Exit-1-0.5, 4/23/2014 10:42:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**0.32**	**mg/L**	**0.50**	**0.16**	**EPA-6010B**	ND	**J**	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	05/04/14	05/07/14 08:49	ARD	PE-OP1	1	BXE0378

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-56 | **Client Sample Name:** SB Exit-1-0.5, 4/23/2014 10:42:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**12**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 11:04	ARD	PE-OP1	0.990	BXD2360

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-57 | **Client Sample Name:** SB Exit-1-1, 4/23/2014 11:00:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**14**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 11:06	ARD	PE-OP1	0.943	BXD2360

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

BCL Sample ID: 1409191-58 | **Client Sample Name:** SB Exit-1-2, 4/23/2014 11:26:00PM, Kevin Garcia

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Lead	**6.0**	**mg/kg**	**2.5**	**0.28**	**EPA-6010B**	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	04/28/14	04/30/14 11:08	ARD	PE-OP1	0.980	BXD2360

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Group Delta Consultants, Inc.
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Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Chemical Analysis

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BXD2600										
pH	BXD2600-BS1	LCS	6.9750	7.0000	pH Units	99.6		95 - 105		

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Chemical Analysis

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BXD2600	Used client sample: Y - Description: NB99-9-1, 04/23/2014 16:08										
pH	DUP	1409191-16	7.4290	7.4210		pH Units	0.1		20		

Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Modified WET Test (STLC)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BXE0801						
Lead	BXE0801-BLK1	ND	mg/L	0.050	0.0035	
QC Batch ID: BXE0897						
Lead	**BXE0897-BLK1**	**0.0035072**	**mg/L**	**0.050**	**0.0035**	**J**

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Modified WET Test (STLC)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BXE0801										
Lead	BXE0801-BS1	LCS	2.1622	2.0000	mg/L	108		85 - 115		
QC Batch ID: BXE0897										
Lead	BXE0897-BS1	LCS	1.9521	2.0000	mg/L	97.6		85 - 115		

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Modified WET Test (STLC)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BXE0801	Used client sample: Y - Description: SB99-9-0.5, 04/22/2014 22:00										
Lead	DUP	1409190-57	1.1295	1.1383		mg/L	0.8		20		
	MS	1409190-57	1.1295	3.3613	2.0408	mg/L		109		75 - 125	
	MSD	1409190-57	1.1295	3.3882	2.0408	mg/L	0.8	111	20	75 - 125	
QC Batch ID: BXE0897	Used client sample: Y - Description: NB99-16-1, 04/23/2014 17:34										
Lead	DUP	1409191-42	0.15916	0.18067		mg/L	12.7		20		
	MS	1409191-42	0.15916	2.1547	2.0408	mg/L		97.8		75 - 125	
	MSD	1409191-42	0.15916	2.1128	2.0408	mg/L	2.0	95.7	20	75 - 125	

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

WET Test (STLC)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BXE0279						
Lead	BXE0279-BLK1	ND	mg/L	0.50	0.16	
QC Batch ID: BXE0376						
Lead	BXE0376-BLK1	ND	mg/L	0.50	0.16	
QC Batch ID: BXE0377						
Lead	BXE0377-BLK1	ND	mg/L	0.50	0.16	
QC Batch ID: BXE0378						
Lead	BXE0378-BLK1	ND	mg/L	0.50	0.16	

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BXE0279										
Lead	BXE0279-BS1	LCS	17.848	20.000	mg/L	89.2		85 - 115		
QC Batch ID: BXE0376										
Lead	BXE0376-BS1	LCS	18.693	20.000	mg/L	93.5		85 - 115		
QC Batch ID: BXE0377										
Lead	BXE0377-BS1	LCS	17.707	20.000	mg/L	88.5		85 - 115		
QC Batch ID: BXE0378										
Lead	BXE0378-BS1	LCS	18.480	20.000	mg/L	92.4		85 - 115		

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

WET Test (STLC)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BXE0279	Used client sample: Y - Description: NB99-1-0.5, 04/23/2014 14:10										
Lead	DUP	1409190-87	3.5404	3.7457		mg/L	5.6		20		
	MS	1409190-87	3.5404	25.736	20.408	mg/L		109		75 - 125	
	MSD	1409190-87	3.5404	25.955	20.408	mg/L	0.8	110	20	75 - 125	
QC Batch ID: BXE0376	Used client sample: Y - Description: SB99-12-2, 04/22/2014 21:18										
Lead	DUP	1409190-50	ND	ND		mg/L			20		
	MS	1409190-50	ND	19.378	20.408	mg/L		95.0		75 - 125	
	MSD	1409190-50	ND	19.015	20.408	mg/L	1.9	93.2	20	75 - 125	
QC Batch ID: BXE0377	Used client sample: Y - Description: NB99-10-1, 04/23/2014 16:18										
Lead	DUP	1409191-20	ND	ND		mg/L			20		
	MS	1409191-20	ND	20.070	20.408	mg/L		98.3		75 - 125	
	MSD	1409191-20	ND	20.419	20.408	mg/L	1.7	100	20	75 - 125	
QC Batch ID: BXE0378	Used client sample: N										
Lead	DUP	1409469-03	0.26768	0.22775		mg/L	16.1		20		J
	MS	1409469-03	0.26768	19.068	20.408	mg/L		92.1		75 - 125	
	MSD	1409469-03	0.26768	19.760	20.408	mg/L	3.6	95.5	20	75 - 125	

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

TCLP Toxicity

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BXE0343						
Lead	BXE0343-BLK1	ND	mg/L	0.50	0.030	
QC Batch ID: BXE0344						
Lead	BXE0344-BLK1	ND	mg/L	0.50	0.030	

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

TCLP Toxicity

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BXE0343										
Lead	BXE0343-BS1	LCS	20.631	20.000	mg/L	103		85 - 115		
QC Batch ID: BXE0344										
Lead	BXE0344-BS1	LCS	20.225	20.000	mg/L	101		85 - 115		

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

TCLP Toxicity

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BXE0343	Used client sample: Y - Description: SB99-5-0.5, 04/22/2014 23:10										
Lead	DUP	**1409190-71**	**0.087483**	**0.10857**		**mg/L**	**21.5**		**20**		**J,A02**
	MS	**1409190-71**	**0.087483**	**20.328**	**20.000**	**mg/L**		**101**		**75 - 125**	
	MSD	**1409190-71**	**0.087483**	**19.967**	**20.000**	**mg/L**	**1.8**	**99.4**	**20**	**75 - 125**	
QC Batch ID: BXE0344	Used client sample: Y - Description: SB Exit-5-1, 04/23/2014 21:01										
Lead	DUP	1409191-45	1.2845	1.2613		mg/L	1.8		20		
	MS	1409191-45	1.2845	21.980	20.000	mg/L		103		75 - 125	
	MSD	1409191-45	1.2845	22.078	20.000	mg/L	0.4	104	20	75 - 125	

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Total Concentrations (TTLC)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BXD2357						
Lead	BXD2357-BLK1	ND	mg/kg	2.5	0.28	
QC Batch ID: BXD2358						
Lead	BXD2358-BLK1	ND	mg/kg	2.5	0.28	
QC Batch ID: BXD2359						
Lead	BXD2359-BLK1	ND	mg/kg	2.5	0.28	
QC Batch ID: BXD2360						
Lead	BXD2360-BLK1	ND	mg/kg	2.5	0.28	
QC Batch ID: BXE0618						
Lead	BXE0618-BLK1	ND	mg/kg	2.5	0.28	

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BXD2357										
Lead	BXD2357-BS1	LCS	101.12	100.00	mg/kg	101		75 - 125		
QC Batch ID: BXD2358										
Lead	BXD2358-BS1	LCS	98.718	100.00	mg/kg	98.7		75 - 125		
QC Batch ID: BXD2359										
Lead	BXD2359-BS1	LCS	97.764	100.00	mg/kg	97.8		75 - 125		
QC Batch ID: BXD2360										
Lead	BXD2360-BS1	LCS	109.57	100.00	mg/kg	110		75 - 125		
QC Batch ID: BXE0618										
Lead	BXE0618-BS1	LCS	100.04	100.00	mg/kg	100		75 - 125		

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Group Delta Consultants, Inc.
4201 Santa Ana Street, Suite F
Ontario, CA 91761

Reported: 05/12/2014 15:58
Project: ADL Soil
Project Number: EN024
Project Manager: Jack Packwood

Total Concentrations (TTLC)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BXD2357	Used client sample: Y - Description: SB99-2-1, 04/22/2014 23:56										
Lead	DUP	1409190-82	1.9408	2.0464		mg/kg	5.3		20		J
	MS	1409190-82	1.9408	94.753	98.039	mg/kg		94.7		75 - 125	
	MSD	1409190-82	1.9408	91.648	98.039	mg/kg	3.3	91.5	20	75 - 125	
QC Batch ID: BXD2358	Used client sample: Y - Description: NB99-5-1-dup, 04/23/2014 15:16										
Lead	DUP	1409191-03	4.6695	4.3535		mg/kg	7.0		20		
	MS	1409191-03	4.6695	97.524	99.010	mg/kg		93.8		75 - 125	
	MSD	1409191-03	4.6695	97.991	99.010	mg/kg	0.5	94.3	20	75 - 125	
QC Batch ID: BXD2359	Used client sample: Y - Description: NB99-11-1, 04/23/2014 16:43										
Lead	DUP	1409191-23	4.9427	4.3689		mg/kg	12.3		20		
	MS	1409191-23	4.9427	88.921	97.087	mg/kg		86.5		75 - 125	
	MSD	1409191-23	4.9427	92.400	97.087	mg/kg	3.8	90.1	20	75 - 125	
QC Batch ID: BXD2360	Used client sample: Y - Description: SB Exit-5-0.5, 04/23/2014 21:00										
Lead	DUP	**1409191-44**	**878.78**	**920.85**		**mg/kg**	**4.7**		**20**		
	MS	**1409191-44**	**878.78**	**798.59**	**99.010**	**mg/kg**		**-81.0**		**75 - 125**	**A03**
	MSD	**1409191-44**	**878.78**	**765.95**	**99.010**	**mg/kg**	**4.2**	**-114**	**20**	**75 - 125**	**A03**
QC Batch ID: BXE0618	Used client sample: N										
Lead	DUP	1410115-02	13.616	13.806		mg/kg	1.4		20		
	MS	1410115-02	13.616	105.45	98.039	mg/kg		93.7		75 - 125	
	MSD	1410115-02	13.616	99.416	98.039	mg/kg	5.9	87.5	20	75 - 125	

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Group Delta Consultants, Inc. 4201 Santa Ana Street, Suite F Ontario, CA 91761	**Reported:** 05/12/2014 15:58 Project: ADL Soil Project Number: EN024 Project Manager: Jack Packwood

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A02	The difference between duplicate readings is less than the PQL.
A03	The sample concentration is more than 4 times the spike level.
pH1:1	pH result reported on a 1:1 dilution of sample

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Appendix C

Site Investigation Report, prepared by Shaw Environmental (June 2006)

Data

SITE INVESTIGATION REPORT
SOILS INVESTIGATION FOR AERIALLY DEPOSITED LEAD

State Route 58, KP 84.5-86.2 (PM 52.5-53.6)
Kern County, California

June 9, 2006

Prepared for:

California Department of Transportation
2015 E. Shields Ave., Suite 100
Fresno, California 93726

Prepared by:

Shaw Environmental, Inc.
1326 North Market Boulevard
Sacramento, California 95834

Task Order No.: 40
E.A. No. 06-0F3800
Contract No.: 06A0752

Project No.: 120928

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SHAW ENVIRONMENTAL, INC.

Martha Adams

Martha Adams, P.E.
Task Order Manager

REGISTERED PROFESSIONAL ENGINEER
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STATE OF CALIFORNIA

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Executive Summary

This report presents the results of the soil investigation performed by Shaw Environmental, Inc. (Shaw) along State Route (SR) 58 between Kilo Post 84.5-86.2 (Post Mile 52.5-53.6), Kern County (Figure 1). This investigation is associated with a California Department of Transportation (Caltrans) project of installing an additional eastbound lane in the existing median on SR 58 from west of SR 99 connector ramp to east of H Street interchange. This investigation was conducted at the request and authorization of Mr. Shawn Ogletree of Caltrans under Contract No. 06A0752, Task Order No. 40.

The objective of this investigation is to evaluate the presence of hazardous concentrations of lead in shallow soil prior to soil excavation. The analytical data obtained from this investigation will be used to estimate removal and disposal costs, and to provide for worker and public safety.

A total of 96 soil samples were collected from 32 boring locations to analyze for lead.

Lead was reported in soil samples collected from the site. The source for the lead is not known. However, studies along the transportation corridors have attributed elevated lead concentrations within soil to accumulation of dust and debris containing lead from leaded gasoline emissions.

Lead concentrations were compared to the respective Total Threshold Limit Concentration (TTLC) and the Soluble Threshold Limit Concentration (STLC) values to evaluate whether the soil would, should it become a waste, be considered a hazardous waste. All results were below the TTLC value.

Lead was reported in soil samples at concentrations that exceeded the ten-times the STLC value. Six soil samples were further analyzed for soluble lead concentrations by the WET Method. Three soil samples from boring locations EB02, EB05, and EB27 were reported to contain soluble lead at concentrations that exceeded the STLC value of 5 mg/l for lead. These were further analyzed for soluble lead concentrations by DI-WET. The results did not exceed the STLC value of 5 mg/l for lead.

The statistical evaluation resulted in the following data.

Sample Population	Total Lead Mean Concentration (mg/kg)	Total Lead 95% UCL (mg/kg)	Expected Soluble Lead (WET) (mg/l)
All Samples	16.04	25.07	1.72

The arithmetic mean and 95% UCL were below the TTLC of 1,000 mg/kg.

Based on the statistical analysis, if the soil is treated as a whole, it is unlikely that the waste soil would be considered a California-hazardous waste. However, if the construction work is staged in a manner that segregates the excavated soil, waste soil from the area of borings EB02, EB05, and EB27 may be considered a California-hazardous waste.

Soil pH ranged from 6.87 to 8.97 Standard Units.

1.0 Introduction

This report presents the results of the soil investigation performed by Shaw Environmental, Inc. (Shaw) along State Route (SR) 58 between Kilo Post (KP) 84.5-86.2 (Post Mile [PM] 52.5-53.6), Kern County, California (Figure 1).

1.1 Project Description

The California Department of Transportation (Caltrans) is proposing construction work consisting of installing an additional eastbound lane in the existing median on SR 58 from west of SR 99 connector ramp to east of H Street interchange in Bakersfield, Kern County. The proposed construction would provide a two-lane ramp entrance and a total of three lanes in the eastbound direction. The three lanes on SR 58 would continue beyond the H Street interchange. The new added median lane would then be dropped, reducing the eastbound lanes back to two lanes. The scope of work also includes widening to the inside of the connector ramp from the merge point of SR 99 northbound and southbound connectors to the ramp entrance at SR 58 mainline.

This investigation was conducted at the request and authorization of Mr. Shawn Ogletree of Caltrans under Contract No. 06A0752, Task Order No. 40. All work was performed within Caltrans right-of-way.

1.2 Project Objectives

The objective of this investigation is to evaluate the presence of hazardous concentrations of lead in shallow soil prior to soil excavation.

The analytical data obtained from this investigation will be used to estimate removal and disposal costs, and to provide for worker and public safety.

2.0 Scope of Work

The investigation scope of work was presented in Shaw's workplan dated April 19, 2006, which was approved for implementation by Caltrans (Shaw, 2006a). The following scope of work was conducted:

1. Permitting and Mobilization
2. Field Investigation
3. Laboratory Analyses
4. Site Investigation Report Preparation

2.1 Planning and Permitting

Planning and permitting included preparation of a workplan and health and safety plan (HSP).

A site-specific HSP (Shaw, 2006b) was prepared for the site in general accordance with 29 Code of Federal Regulations 1910.120 and Title 8, California Code of Regulations, Section 5192. The HSP included safety procedures for work to be performed at the site, chemical hazard information, identification of site safety officers, and preferred medical emergency locations.

Underground Service Alert (USA) was notified at least 48 hours prior to drilling. A drilling permit was not required.

2.2 Field Investigation

The field investigation was conducted on April 24 and 25, 2006. Soil sampling included the collection of 96 soil samples from 32 shallow soil borings. The sampling locations were selected in accordance with Caltrans' Task Order No. 40 (Figure 2). Work was conducted in the unpaved portion of the shoulder where it is wide enough to minimize impacts to traffic flow.

The borings were located either adjacent to the pavement edge or 6 m (20 ft) from the pavement edge inside the connector ramp or in a staggered pattern for the length of the project limits within the median of SR 58. The borings were advanced utilizing hand auger tools and were located approximately every 50 m (164 ft).

For all the borings, the maximum depth was 0.6 m (2.0 ft) below ground surface (bgs). Three soil samples were collected from these soil borings at the following depths:

- 0 – 0.15 m (0 – 0.5 ft) bgs

- 0.15 – 0.3 m (0.5 – 1.0 ft) bgs
- 0.45 – 0.6 m (1.5 – 2.0 ft) bgs

Soil samples were collected from the hand auger in stainless steel sleeves. Each soil sample was labeled, packaged, and stored on ice in an insulated chest for transport under chain-of-custody manifest to a California-certified analytical laboratory. Samples were shipped to the laboratory via overnight courier. Drilling and sampling procedures are included in Appendix A.

All hand auger sampling equipment was washed prior to use and between borings. Wash water generated during the field investigation was poured onto the ground in a manner to minimize run-off. Following soil sample collection, the borings were backfilled and compacted with excess soil cuttings taken from the hole during the boring process.

The horizontal and vertical locations of the borings were established using a Trimble GPS Pathfinder™ Pro XRS global positioning system (GPS). The GPS utilized a GPS receiver and MSK radio beacon differential receiver. The GPS is reported to have sub-meter accuracy for horizontal location of the borings. The vertical accuracy is reported to be two to five times that of the horizontal precision. The GPS data was downloaded in the office and Trimble software was utilized to provide differential corrections to the coordinates. The horizontal and vertical datums used for this investigation was the California Coordinate System of 1983, Zone 5, and the North American Vertical Datum of 1988, respectively. The standard unit of measurement for both of these data was the meter. The boring positions are presented in Table 1.

2.3 Laboratory Analysis

The soil samples were submitted to Sparger Technology, Inc. (Sparger), of Sacramento, California, a California-certified analytical laboratory.

Chain of custody procedures, including the use of chain of custody forms, were used to document sample handling and transport from the time of collection to delivery to the laboratory for analysis. The chain of custody forms and laboratory analytical reports are included in Appendix B.

The analysis was conducted on a 48-hour turn-around basis in general accordance with U.S. Environmental Protection Agency (EPA) specified holding times. Analysis was performed in accordance with the following methods, for the analytes listed:

Analyte	Samples	Method
Total Lead	All soil samples	USEPA Method 6010

Analyte	Samples	Method
Soluble Lead	6 samples (WET) 3 samples (DI-WET)	USEPA Method 3050A WET USEPA Method 3050A DI-WET
pH	10 samples	USEPA Method 9045

Samples were selected for analysis of soluble lead based on their results for total lead in soil, as follows:

- A total of 6 soil samples were reported to contain concentrations greater than or equal to ten times the Soluble Threshold Limit Concentration (STLC) for lead. These samples were further analyzed for soluble lead using the Waste Extraction Test (WET) Method.
- After WET analysis, a total of 3 soil samples were reported to contain concentrations greater than or equal to the lead STLC of 5.0 milligrams per liter (mg/L) and were further analyzed for soluble lead by the WET using a deionized water extraction solution (DI-WET).

3.0 Site Investigation Results

3.1 Soil Results

A total of 96 soil samples were collected from 32 boring locations to analyze for lead. A summary of soil analytical results for lead and pH are presented in Table 1. Certified analytical laboratory reports are presented in Appendix B.

3.1.1 Lead

Lead was reported in soil samples at concentrations that exceeded 50 milligrams per kilogram (mg/kg), which is a value equal to ten-times the STLC. None of the lead results exceeded the applicable Total Threshold Limit Concentration (TTLC).

A summary of these lead concentrations reported during this investigation is summarized below:

Total Lead Concentration Range (mg/kg)	No. Samples Exceeding 10 Times STLC of 50 mg/kg	No. Samples Exceeding TTLC of 1,000 mg/kg
<1 to 371	6	0

Six soil samples were further analyzed for soluble lead concentrations by WET. A summary of soluble lead results is presented below.

STLC (mg/L)	No. Samples Exceeding STLC	WET Concentration Range (mg/L)
5.0	3 of 6	0.405 to 28.2

Three soil samples were further analyzed for soluble lead concentrations by DI-WET. A summary of the soluble lead result is presented below.

STLC (mg/L)	No. Samples Exceeding STLC	DI-WET Concentration Range (mg/L)
5.0	0 of 3	0.042 to 0.216

3.1.2 pH

Soil pH ranged from 6.87 to 8.97 Standard Units in the 10 soil samples tested (Table 1).

4.0 ADL Data Evaluation

4.1 Lead Concentration and Distribution

Soil samples collected from the site were reported to contain lead (Table 1). The source for the lead is not known. However, studies along the transportation corridors have attributed elevated lead concentrations within soil to accumulation of dust and debris containing lead from leaded gasoline emissions (Coltrin, et al., 1993).

The majority of the soil samples reported to contain elevated lead concentrations were collected from shallower depths. A summary of the distribution of the elevated lead concentrations is presented below. The data set is restricted to those samples reported to contain greater than or equal to 50 mg/kg lead, a level selected because it is ten times the STLC.

	Distribution of Samples from Total Sample Population with Lead Greater Than 50 mg/kg		Distribution of Samples from Interval with Lead Greater Than 50 mg/kg		Distribution of Samples from All Samples with Lead Greater Than 50 mg/kg	
Depth Interval (meters)	Number	Percentage	Number	Percentage	Number	Percentage
0.0	6 of 96	6.25	6 of 32	18.8	6 of 6	100.0
0.3	0 of 96	0.0	0 of 32	0.0	0 of 6	0.0
0.6	0 of 96	0.0	0 of 32	0.0	0 of 6	0.0

The number of samples reported to contain elevated lead concentrations decreased with depth. This is typical of accumulations of aerially deposited lead, as reported by Coltrin and others (1993), where concentrations of lead were observed to decrease with depth.

Lead concentrations were compared to TTLC and STLC values to evaluate whether the soil would be considered a California-hazardous waste, should it become a waste. Generally, TTLC and STLC values for lead are used to judge whether a waste is a California-hazardous waste based on the total and soluble concentration of lead within the waste. The TCLP values are used to judge whether a waste is a Resource Conservation and Recovery Act (RCRA)-hazardous waste (also known as a Federal hazardous waste) based on the soluble concentration of lead within the waste.

A list of borings with soil samples reported to contain lead concentrations in excess of regulatory values is presented below.

Total Lead Greater Than TTLC (1,000 mg/kg)	Soluble Lead By WET Greater Than STLC (5 mg/l)	Soluble Lead By DI-WET Greater Than STLC (5 mg/l)	Soluble Lead By TCLP Greater Than TCLP (5 mg/l)
None	EB02, EB05, EB27	None	Not Applicable

Soil samples reported to contain total lead exceeding the TTLC and soluble lead (by WET) exceeding the STLC would be considered a California-hazardous waste, should the soil become a waste. Soil samples reported to contain soluble lead (by TCLP) at concentrations in excess of the TCLP value would be considered a RCRA-hazardous waste, should the soil become a waste.

4.2 Lead Data Statistical Analysis

A statistical evaluation was conducted to further evaluate the concentration of lead within soil at the site. The statistical evaluation addressed the following items:

- Calculation of mean;
- Determination of the distribution of the sample data; and
- Calculation of the 95% Upper Confidence Level (UCL), interpreted as a 0.95 probability that the true mean for a given population is no higher than the calculated UCL.

Evaluation of the soil data resulted in an arithmetic mean (average) concentration of total lead of 16.04 mg/kg (Appendix C).

A histogram of the total lead results was constructed for each sampling area to evaluate the distribution of the total lead concentrations within the data set. The data were found to be skewed to lower concentrations (Appendix C). Therefore, statistical analysis was conducted using non-parametric techniques, which do not require that the data be drawn from a specific distribution (Gilbert, 1987).

The statistical analysis for the total lead data was conducted using the bootstrap method (EPA, 1997) to estimate the 95% UCL for the mean of the total lead data. Bootstrap methods are non-parametric techniques to infer the distribution of a statistic derived from a data set. Bootstrap methods construct a "distribution" for a statistic (in this case the mean) by re-sampling with replacement from the data set. A large number (B) of data subsets of size n (where n is the size of the data subset) are selected. The statistic is computed for each of the B data subsets of size n. This gives a sample of values of the statistic, rather than one value. Confidence limits for the population parameter that is estimated by the bootstrapped statistic are then constructed using

percentiles of the sampled distribution of the statistic. Non-detects would be set at one-half the detection limit, if applicable.

The nonparametric bootstrap was used to compute the 95% UCL for the mean. There are several variations on the nonparametric bootstrap. The standard bootstrap method (EPA, 1997) was applied to the mean to estimate the 95% UCL for the mean for this data set. The 95% UCL calculated for total lead data is 25.07 mg/kg (Appendix C).

Pearson (product moment) correlation coefficients (Pearson values) were obtained from regression analysis for regression lines (model forced through the origin) (Appendix C). Scatter plots were generated for the total/soluble lead data pairs (Appendix C).

The correlation coefficient for the total/WET lead data was 0.94. The correlation coefficient is above the desired correlation value of 0.8, per Caltrans contract 06A0752.

A predicted soluble WET lead concentration was obtained from regression analysis (model forced through the origin) developed from the total/WET soluble lead data. The coefficient for the dependant variables (slope of regression lines) used in the regression analyses and the total lead versus soluble lead concentration plot is presented in Appendix C. The soluble lead concentration for WET data corresponding to the total lead 95% UCL calculated using the bootstrap method is 1.72 mg/l.

4.3 Summary

Shaw conducted a statistical analysis on the total and soluble lead for the entire data set of samples. The statistical analysis assumes that the soil will be handled as one waste stream.

The arithmetic mean and 95% UCL were below the TTLC of 1,000 mg/kg. The expected soluble (WET) lead concentration was calculated by regression analysis and found to be less than the STLC for lead. Based on the statistical analysis, if the soil is treated as a whole, it is unlikely that the waste soil would be considered a California-hazardous waste. However, if the construction work is staged in a manner that segregates the excavated soil, waste soil from the area of borings EB02, EB05, and EB27 may be considered a California-hazardous waste.

5.0 Conclusions

Based on the laboratory results, current regulatory guidelines, and the judgment of Shaw, the following conclusions are offered.

- Lead was reported in soil samples collected from the site. The source for the lead is not known. However, studies along the transportation corridors have attributed elevated lead concentrations within soil to accumulation of dust and debris containing lead from leaded gasoline emissions (Coltrin, et al., 1993).
- Lead concentrations were compared to TTLC and STLC values to evaluate whether the soil would, should it become a waste, be considered a hazardous waste. All results were below the TTLC value.
- Lead was reported in soil samples at concentrations that exceeded the ten-times the STLC value. Six soil samples were further analyzed for soluble lead concentrations by the WET Method.
- Three soil samples from boring locations EB02, EB05, and EB27 were reported to contain soluble lead at concentrations that exceeded the STLC value of 5 mg/l for lead. These were further analyzed for soluble lead concentrations by DI-WET. The results did not exceed the STLC value of 5 mg/l for lead.
- The statistical evaluation resulted in the following data.

Sample Population	Total Lead Mean Concentration (mg/kg)	Total Lead 95% UCL (mg/kg)	Expected Soluble Lead (WET) (mg/l)
All Samples	16.04	25.07	1.72

- The arithmetic mean and 95% UCL were below the TTLC of 1,000 mg/kg.
- Based on the statistical analysis, if the soil is treated as a whole, it is unlikely that the waste soil would be considered a California-hazardous waste. However, if the construction work is staged in a manner that segregates the excavated soil, waste soil from the area of borings EB02, EB05, and EB27 may be considered a California-hazardous waste.
- Soil pH ranged from 6.87 to 8.97 Standard Units.

6.0 References

Caltrans (California Department of Transportation), 2006, Contract No. 06A0752, Task Order No. 40, dated April 10, 2006.

Shaw Environmental, Inc. (Shaw), 2005a, Work plan, investigation for aerially deposited lead, State Route 58 KP 84.5-86.2 (PM 52.5-53.6), Kern County, California: dated April 19, 2006.

Shaw Environmental, Inc. (Shaw), 2005b, Health and safety plan, investigation for aerially deposited lead, State Route 58 KP 84.5-86.2 (PM 52.5-53.6), Kern County, California: dated April 19, 2006.

STLCs, California Code of Regulations, Title 22, Section 66261

Tables

Table 1
Summary of Lead and pH Results
State Route 58, Post Mile 52.5 - 53.6
Kern County, California
Task Order No. 40

Boring	Sample Description (site-boring-depth)	Longitude	Latitude	Surface Elevation MSL	Sample Depth	Sample Depth	Total Lead	Soluble Lead WET	Soluble Lead DI-WET	pH
			Units	m	ft	m	mg/kg	mg/L	mg/L	SU
SR58-EB01	SR58-EB01-0.0	-119.0340873	35.352321099	118.728	0.0	0	2.69	--	--	--
SR58-EB01	SR58-EB01-0.3	-	-	-	1.0	0.3	3.84	--	--	7.52
SR58-EB01	SR58-EB01-0.6	-	-	-	2.0	0.6	2.71	--	--	--
SR58-EB02	SR58-EB02-0.0	-119.0335536	35.352333589	116.462	0.0	0	249	28.2	0.115	--
SR58-EB02	SR58-EB02-0.3	-	-	-	1.0	0.3	6	--	--	--
SR58-EB02	SR58-EB02-0.6	-	-	-	2.0	0.6	27.1	--	--	--
SR58-EB03	SR58-EB03-0.0	-119.0330118	35.352383195	115.004	0.0	0	2.68	--	--	--
SR58-EB03	SR58-EB03-0.3	-	-	-	1.0	0.3	2.92	--	--	--
SR58-EB03	SR58-EB03-0.6	-	-	-	2.0	0.6	ND	--	--	--
SR58-EB04	SR58-EB04-0.0	-119.0324683	35.352409478	113.923	0.0	0	70.9	3.53	--	--
SR58-EB04	SR58-EB04-0.3	-	-	-	1.0	0.3	ND	--	--	--
SR58-EB04	SR58-EB04-0.6	-	-	-	2.0	0.6	ND	--	--	7.14
SR58-EB05	SR58-EB05-0.0	-119.030267	35.352572832	113.99	0.0	0	371	23.5	0.216	--
SR58-EB05	SR58-EB05-0.3	-	-	-	1.0	0.3	1.41	--	--	--
SR58-EB05	SR58-EB05-0.6	-	-	-	2.0	0.6	4.01	--	--	--
SR58-EB06	SR58-EB06-0.0	-119.0296844	35.352550431	112.386	0.0	0	2.44	--	--	--
SR58-EB06	SR58-EB06-0.3	-	-	-	1.0	0.3	2.86	--	--	--
SR58-EB06	SR58-EB06-0.6	-	-	-	2.0	0.6	1.2	--	--	--
SR58-EB07	SR58-EB07-0.0	-119.0291330	35.352586042	112.225	0.0	0	72.4	0.405	--	--
SR58-EB07	SR58-EB07-0.3	-	-	-	1.0	0.3	2.09	--	--	--
SR58-EB07	SR58-EB07-0.6	-	-	-	2.0	0.6	ND	--	--	--
SR58-EB08	SR58-EB08-0.0	-119.0285867	35.352553425	112.077	0.0	0	2.26	--	--	8.97
SR58-EB08	SR58-EB08-0.3	-	-	-	1.0	0.3	1.14	--	--	--
SR58-EB08	SR58-EB08-0.6	-	-	-	2.0	0.6	2.51	--	--	--
SR58-EB09	SR58-EB09-0.0	-119.0280293	35.352571145	111.484	0.0	0	1.44	--	--	--
SR58-EB09	SR58-EB09-0.3	-	-	-	1.0	0.3	28	--	--	--
SR58-EB09	SR58-EB09-0.6	-	-	-	2.0	0.6	ND	--	--	--
SR58-EB10	SR58-EB10-0.0	-119.0274834	35.352512148	111.724	0.0	0	1.74	--	--	--
SR58-EB10	SR58-EB10-0.3	-	-	-	1.0	0.3	1.13	--	--	--
SR58-EB10	SR58-EB10-0.6	-	-	-	2.0	0.6	7.9	--	--	--

Table 1
Summary of Lead and pH Results
State Route 58, Post Mile 52.5 - 53.6
Kern County, California
Task Order No. 40

Boring	Sample Description (site-boring-depth)	Longitude	Latitude	Surface Elevation MSL	Sample Depth	Sample Depth	Total Lead	Soluble Lead WET	Soluble Lead DI-WET	pH
			Units	m	ft	m	mg/kg	mg/L	mg/L	SU
SR58-EB11	SR58-EB11-0.0	-119.0269232	35.352541587	111.677	0.0	0	1.03	--	--	--
SR58-EB11	SR58-EB11-0.3	-	-	-	1.0	0.3	2.84	--	--	7.93
SR58-EB11	SR58-EB11-0.6	-	-	-	2.0	0.6	1.54	--	--	--
SR58-EB12	SR58-EB12-0.0	-119.0263769	35.352506882	111.805	0.0	0	1.17	--	--	--
SR58-EB12	SR58-EB12-0.3	-	-	-	1.0	0.3	3.37	--	--	--
SR58-EB12	SR58-EB12-0.6	-	-	-	2.0	0.6	2.89	--	--	7.29
SR58-EB13	SR58-EB13-0.0	-119.0258165	35.352532693	111.62	0.0	0	1.78	--	--	--
SR58-EB13	SR58-EB13-0.3	-	-	-	1.0	0.3	2.38	--	--	--
SR58-EB13	SR58-EB13-0.6	-	-	-	2.0	0.6	8.07	--	--	--
SR58-EB14	SR58-EB14-0.0	-119.0252715	35.352494561	110.43	0.0	0	4.65	--	--	--
SR58-EB14	SR58-EB14-0.3	-	-	-	1.0	0.3	ND	--	--	--
SR58-EB14	SR58-EB14-0.6	-	-	-	2.0	0.6	1.25	--	--	--
SR58-EB15	SR58-EB15-0.0	-119.0247072	35.352525286	110.503	0.0	0	2.08	--	--	--
SR58-EB15	SR58-EB15-0.3	-	-	-	1.0	0.3	16.5	--	--	--
SR58-EB15	SR58-EB15-0.6	-	-	-	2.0	0.6	1.7	--	--	--
SR58-EB16	SR58-EB16-0.0	-119.0241718	35.352488511	111.189	0.0	0	2.47	--	--	7.64
SR58-EB16	SR58-EB16-0.3	-	-	-	1.0	0.3	1.36	--	--	--
SR58-EB16	SR58-EB16-0.6	-	-	-	2.0	0.6	1.7	--	--	--
SR58-EB17	SR58-EB17-0.0	-119.0236098	35.352523602	111.301	0.0	0	2.92	--	--	--
SR58-EB17	SR58-EB17-0.3	-	-	-	1.0	0.3	1.36	--	--	--
SR58-EB17	SR58-EB17-0.6	-	-	-	2.0	0.6	1.33	--	--	--
SR58-EB18	SR58-EB18-0.0	-119.0230653	35.352480958	110.308	0.0	0	2.16	--	--	--
SR58-EB18	SR58-EB18-0.3	-	-	-	1.0	0.3	4.68	--	--	--
SR58-EB18	SR58-EB18-0.6	-	-	-	2.0	0.6	3.95	--	--	--
SR58-EB19	SR58-EB19-0.0	-119.0225	35.352513843	111.375	0.0	0	1.15	--	--	--
SR58-EB19	SR58-EB19-0.3	-	-	-	1.0	0.3	3.97	--	--	8.11
SR58-EB19	SR58-EB19-0.6	-	-	-	2.0	0.6	23.2	--	--	--
SR58-EB20	SR58-EB20-0.0	-119.0219505	35.352476224	112.306	0.0	0	2.38	--	--	--
SR58-EB20	SR58-EB20-0.3	-	-	-	1.0	0.3	1.03	--	--	--
SR58-EB20	SR58-EB20-0.6	-	-	-	2.0	0.6	2.49	--	--	--

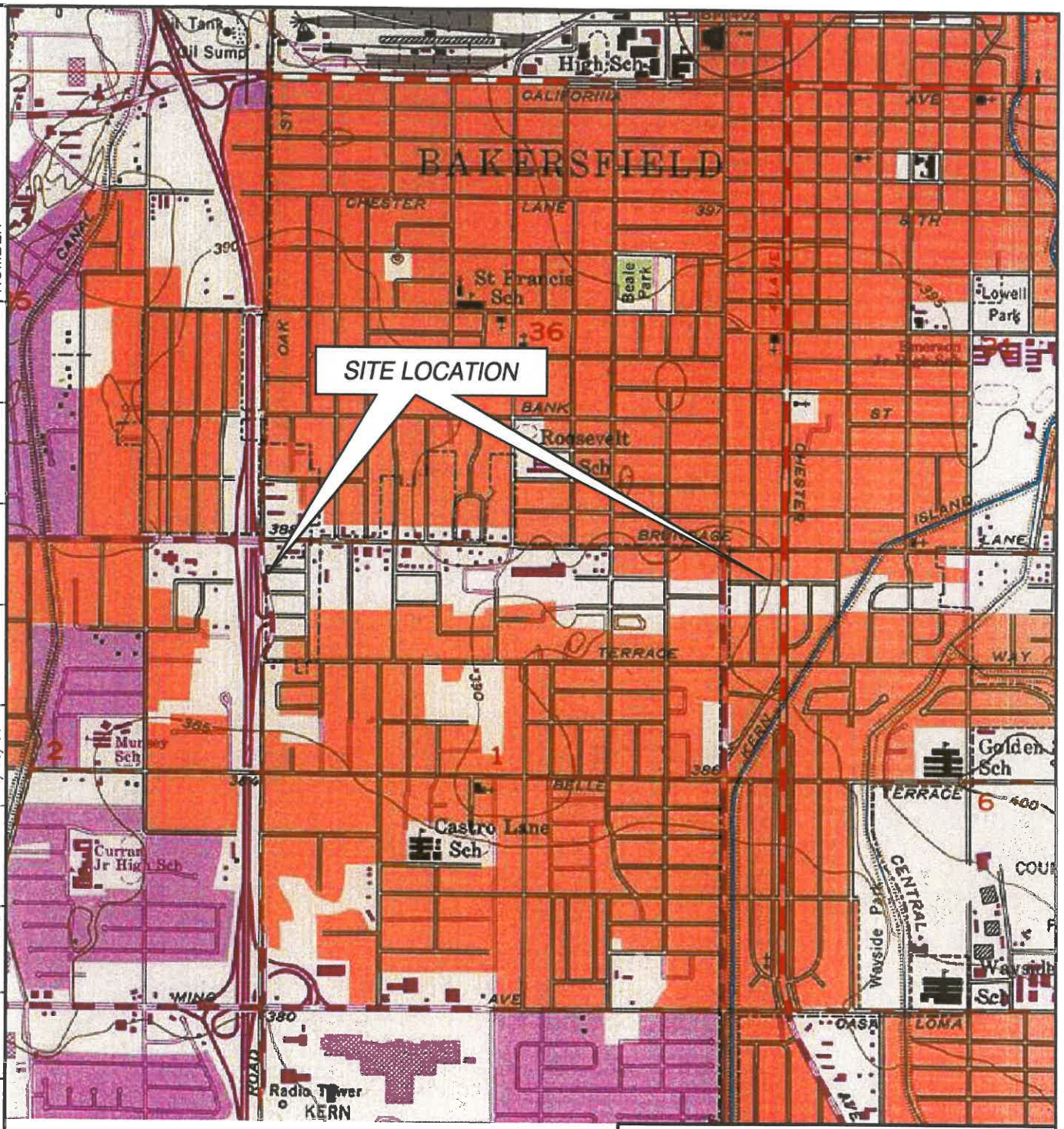
Table 1
Summary of Lead and pH Results
State Route 58, Post Mile 52.5 - 53.6
Kern County, California
Task Order No. 40

Boring	Sample Description (site-boring-depth)	Longitude	Latitude	Surface Elevation MSL	Sample Depth	Sample Depth	Total Lead	Soluble Lead WET	Soluble Lead DI-WET	pH
			Units	m	ft	m	mg/kg	mg/L	mg/L	SU
SR58-EB21	SR58-EB21-0.0	-119.021525	35.352518588	110.239	0.0	0	1.01	--	--	--
SR58-EB21	SR58-EB21-0.3	-	-	-	1.0	0.3	1.3	--	--	--
SR58-EB21	SR58-EB21-0.6	-	-	-	2.0	0.6	1.96	--	--	--
SR58-EB22	SR58-EB22-0.0	-119.0208482	35.352472354	111.077	0.0	0	2.27	--	--	7.29
SR58-EB22	SR58-EB22-0.3	-	-	-	1.0	0.3	1.31	--	--	--
SR58-EB22	SR58-EB22-0.6	-	-	-	2.0	0.6	3.28	--	--	--
SR58-EB23	SR58-EB23-0.0	-119.0202845	35.3525056	110.812	0.0	0	2.13	--	--	--
SR58-EB23	SR58-EB23-0.3	-	-	-	1.0	0.3	1.38	--	--	--
SR58-EB23	SR58-EB23-0.6	-	-	-	2.0	0.6	1.21	--	--	--
SR58-EB24	SR58-EB24-0.0	-119.0197461	35.352471286	108.734	0.0	0	83.6	1.58	--	--
SR58-EB24	SR58-EB24-0.3	-	-	-	1.0	0.3	ND	--	--	--
SR58-EB24	SR58-EB24-0.6	-	-	-	2.0	0.6	ND	--	--	--
SR58-EB25	SR58-EB25-0.0	-119.0191900	35.352496723	112.189	0.0	0	2.7	--	--	--
SR58-EB25	SR58-EB25-0.3	-	-	-	1.0	0.3	1.03	--	--	6.87
SR58-EB25	SR58-EB25-0.6	-	-	-	2.0	0.6	1.99	--	--	--
SR58-EB26	SR58-EB26-0.0	-119.0186419	35.352452437	112.306	0.0	0	30.6	--	--	--
SR58-EB26	SR58-EB26-0.3	-	-	-	1.0	0.3	ND	--	--	--
SR58-EB26	SR58-EB26-0.6	-	-	-	2.0	0.6	3.76	--	--	--
SR58-EB27	SR58-EB27-0.0	-119.0180815	35.35249073	114.369	0.0	0	278	14.3	0.042	--
SR58-EB27	SR58-EB27-0.3	-	-	-	1.0	0.3	2.76	--	--	--
SR58-EB27	SR58-EB27-0.6	-	-	-	2.0	0.6	5.72	--	--	--
SR58-EB28	SR58-EB28-0.0	-119.0175283	35.352444756	116.583	0.0	0	3.07	--	--	--
SR58-EB28	SR58-EB28-0.3	-	-	-	1.0	0.3	1.34	--	--	--
SR58-EB28	SR58-EB28-0.6	-	-	-	2.0	0.6	2.5	--	--	8.07
SR58-EB29	SR58-EB29-0.0	-119.0169726	35.352481212	117.515	0.0	0	5.8	--	--	--
SR58-EB29	SR58-EB29-0.3	-	-	-	1.0	0.3	14.8	--	--	--
SR58-EB29	SR58-EB29-0.6	-	-	-	2.0	0.6	3.29	--	--	--
SR58-EB30	SR58-EB30-0.0	-119.0164152	35.352437895	119.385	0.0	0	21.9	--	--	--
SR58-EB30	SR58-EB30-0.3	-	-	-	1.0	0.3	7.04	--	--	--
SR58-EB30	SR58-EB30-0.6	-	-	-	2.0	0.6	6.56	--	--	--

Table 1
Summary of Lead and pH Results
State Route 58, Post Mile 52.5 - 53.6
Kern County, California
Task Order No. 40

Boring	Sample Description (site-boring-depth)	Longitude	Latitude	Surface Elevation MSL	Sample Depth	Sample Depth	Total Lead	Soluble Lead WET	Soluble Lead DI-WET	pH
			Units	m	ft	m	mg/kg	mg/L	mg/L	SU
SR58-EB31	SR58-EB31-0.0	-119.0158577	35.352485964	120.084	0.0	0	33.2	--	--	--
SR58-EB31	SR58-EB31-0.3	-	-	-	1.0	0.3	3.49	--	--	--
SR58-EB31	SR58-EB31-0.6	-	-	-	2.0	0.6	4.39	--	--	--
SR58-EB32	SR58-EB32-0.0	-119.0153093	35.352436339	122.525	0.0	0	3.35	--	--	--
SR58-EB32	SR58-EB32-0.3	-	-	-	1.0	0.3	3.12	--	--	--
SR58-EB32	SR58-EB32-0.6	-	-	-	2.0	0.6	16.8	--	--	--
						Reporting Limit	**1**	**0.05**	**0.05**	**0.1**
						TTLC (mg/kg)	**1,000**			
						STLC (mg/L)		**5**		
						DI-WET (mg/L)			**5**	

Notes:
Analyses conducted in general accordance with EPA Method 6010 for lead.
WET = Waste Extraction Test
DI-WET = Deionized water Waste Extraction Test
TTLC = Total Threshold Limit Concentration
STLC = soluble threshold limit concentration
MSL = Mean Sea Level
< = Not detected at specified detection limit
-- = Not analyzed
m = meter
ft = feet
mg/kg = milligrams per kilogram
mg/L = milligrams per liter
SU = standard units



DRAWING NUMBER	APPROVED BY	CHECKED BY	DRAWN BY	OFFICE	X-REF	IMAGE
120928-A1			SCHAEFFER 4/18/06	Concord	---	SR99SR58

REFERENCE:
7.5' USGS TOPOGRAPHIC QUADRANGLE OF "GOSFORD, CALIFORNIA"; DATED: 1973, SCALE=1:24000

SCALE

0 500 1000 METERS

Shaw™ Shaw Environmental, Inc.

CALIFORNIA DEPARTMENT OF TRANSPORTATION
STATE ROUTE 58, PM 52.5/53.6 (KP 84.5/86.2)
KERN COUNTY, CALIFORNIA
TASK ORDER 40

FIGURE 1

SITE VICINITY MAP

Figures

BORING LOCATION

SCALE
0 100 200 METERS
0 400 800 FEET

Shaw® Shaw Environmental, Inc.

CALIFORNIA DEPARTMENT OF TRANSPORTATION
STATE ROUTE 58, PM 52.2/53.6 (KP 84.5/86.2)
KERN COUNTY, CALIFORNIA
TASK ORDER 40

FIGURE 2

BORING LOCATION MAP

DRAWING NUMBER	APPROVED BY	CHECKED BY	DRAWN BY	OFFICE	X-REF	IMAGE
120928-B1			SCHAEFFER 5/25/06	CONCORD	---	KER58

FORMAT REVISION 2/26/99

Appendix A
Drilling and Sampling Procedures

Appendix A
Drilling and Sampling Procedures

The procedures used for drilling the borings and collecting soil samples are presented below.

A drilling permit was not required.

Drilling and Soil Sample Collection

- Soil sampling included the collection of 96 soil samples from 32 shallow soil borings.
- Borings were located either adjacent to the pavement edge or 6 m (20 ft) from the pavement edge inside the connector ramp or in a staggered pattern for the length of the project limits within the median of SR 58. The borings were advanced utilizing hand auger tools and were located approximately every 50 m (164 ft).
- For the borings, the maximum depth was 0.6 m (2.0 ft) below ground surface (bgs). Three soil samples were collected from these soil borings at the following depths:
  - 0 – 0.15 m (0 – 0.5 ft) bgs
  - 0.15 – 0.3 m (0.5 – 1.0 ft) bgs
  - 0.5 – 0.6 m (1.5 – 2.0 ft) bgs
- Soil samples were collected in stainless steel sleeves.
- Soil boring samples were labeled as follows: (SR58–EB01–0.0), where "SR58" represents State Route 58; "EB01" represents Eastbound Boring 1; and "0.0" represents the 0.0 meter (0.0 feet) sample interval.
- The drilling and sampling equipment was washed in a detergent rinse, a clear water rinse, and a final deionized/distilled water rinse prior to drilling, between sample collection, and between borings.
- Wash water generated during the field investigation was poured onto the ground and be allowed to soak into the soil. Solutions were poured onto the ground in such a way as to avoid runoff.
- The borings were backfilled and compacted with excess soil cuttings taken from the hole during the boring process.

Sample Retention and Analysis

- Chain-of-custody procedures, including the use of chain-of-custody forms, were used to document sample handling and transport from collection to delivery to the laboratory for analyses.
- The samples were placed in insulated chests in the custody of a Shaw employee. The samples were shipped to the laboratory within approximately 24 hours of completion of fieldwork via an overnight courier.

- Laboratory quality assurance/quality control procedures are summarized below:
  - Method Blank Frequency = one per 10 samples
  - Matrix Spike/Matrix Spike Duplicate = one per 10 samples
  - Laboratory Control Sample/Laboratory Control Sample Duplicate = one per 10 samples

Appendix B
Laboratory Analytical Reports and Chain-of-Custody Forms

Sparger Technology, Inc.
Environmental Laboratories

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

Martha Adams
Shaw E & I
1326 North Market Blvd.
Sacramento, CA 95834

Client	Shaw E & I
Workorder	17381 Caltrans TO-40 Bakersfield
Received	04/26/06

The samples were received in EPA specified containers. The samples were transported and received under documented chain of custody and stored at four (4) degrees C until analysis was performed.

Sparger Technology, Inc. ID Suffix Keys - These descriptors will follow the Sparger Technology, Inc. ID numbers and help identify the specific sample and clarify the report.

DUP - Matrix Duplicate
MS - Matrix Spike
MSD - Matrix Spike Duplicate
LCS - Lab Control Sample
LCSD - Lab Control Sample Duplicate
RPD - Relative Percent Difference
QC - Additional Quality Control
DIL - Results from a diluted sample
ND - None Detected
RL - Reporting Limit

Note: In an effort to conserve paper, the results are printed on both sides of the paper.

Ray James
Laboratory Director

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Sparger Technology, Inc.
Environmental Laboratories

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

Test Certificate of Analysis

Client ID Shaw E & I
Workorder # 17381 **Workorder ID** Caltrans TO-40 Bakersfield

Parameter Lead
Method 6010B

Lab ID	Sample ID	Result	RL	Units	Collected	Analyzed	Matrix	Dilution
17381001	SR58E-B01-0.0	2.69	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381002	SR58E-B01-0.3	3.84	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381003	SR58E-B01-0.6	2.71	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381004	SR58E-B02-0.0	249	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381005	SR58E-B02-0.3	6.00	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381006	SR58E-B02-0.6	27.1	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381007	SR58E-B03-0.0	2.68	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381008	SR58E-B03-0.3	2.92	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381009	SR58E-B03-0.6	ND	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381010	SR58E-B04-0.0	70.9	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381011	SR58E-B04-0.3	ND	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381012	SR58E-B04-0.6	ND	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381013	SR58E-B05-0.0	371	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381014	SR58E-B05-0.3	1.41	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381015	SR58E-B05-0.6	4.01	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381016	SR58E-B06-0.0	2.44	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381017	SR58E-B06-0.3	2.86	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381018	SR58E-B06-0.6	1.20	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381019	SR58E-B07-0.0	72.4	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381020	SR58E-B07-0.3	2.09	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381021	SR58E-B07-0.6	ND	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381022	SR58E-B08-0.0	2.26	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381023	SR58E-B08-0.3	1.14	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381024	SR58E-B08-0.6	2.51	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381025	SR58E-B09-0.0	1.44	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381026	SR58E-B09-0.3	28.0	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381027	SR58E-B09-0.6	ND	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381028	SR58E-B10-0.0	1.74	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381029	SR58E-B10-0.3	1.13	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381030	SR58E-B10-0.6	7.90	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381031	SR58E-B11-0.0	1.03	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381032	SR58E-B11-0.3	2.84	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17381033	SR58E-B11-0.6	1.54	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1

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Sparger Technology, Inc.
Environmental Laboratories

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

Test Certificate of Analysis

Client ID Shaw E & I
Workorder # 17381

Workorder ID Caltrans TO-40 Bakersfield

Parameter pH
Method 9045 PH

Lab ID	Sample ID	Result	RL	Units	Collected	Analyzed	Matrix	Dilution
17381002	SR58E-B01-0.3	7.52	0.100	SU	04/24/06	05/03/06	Soil	1:1
17381012	SR58E-B04-0.6	7.14	0.100	SU	04/24/06	05/03/06	Soil	1:1
17381022	SR58E-B08-0.0	8.97	0.100	SU	04/24/06	05/03/06	Soil	1:1
17381032	SR58E-B11-0.3	7.93	0.100	SU	04/24/06	05/03/06	Soil	1:1

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Duplicate Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74420
Sample ID	DUP for HBN 291554 [PHV/1590]
Matrix	Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
pH	9045 PH	05/03/06	05/03/06	7.52	0.100	SU	1:1

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Method Blank Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74427
Sample ID	MB for HBN 291558 [ICPV/5462]
Matrix	Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	ND	1.0	mg/Kg	1:1

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Mobile Laboratory Division
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Lab Control Sample Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74428
Sample ID LCS for HBN 291558 [ICPV/5462]
Matrix Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	50.4	1.0	mg/Kg	1:1

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Lab Control Sample Duplicate Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74429
Sample ID LCSD for HBN 291558 [ICPV/5462
Matrix Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	51.4	1.0	mg/Kg	1:1

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Matrix Spike Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74430
Sample ID MS for HBN 291558 [ICPV/5462]
Matrix Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	52.3	1.0	mg/Kg	1:1

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Matrix Spike Duplicate Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74431
Sample ID MSD for HBN 291558 [ICPV/5462]
Matrix Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	52.5	1.0	mg/Kg	1:1

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Duplicate Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74432
Sample ID	DUP for HBN 291558 [ICPV/5462]
Matrix	Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	2.94	1.0	mg/Kg	1:1

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Method Blank Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74433
Sample ID	MB for HBN 291561 [ICPV/5463]
Matrix	Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	ND	1.0	mg/Kg	1:1

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Lab Control Sample Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74434
Sample ID LCS for HBN 291561 [ICPV/5463]
Matrix Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	51.6	1.0	mg/Kg	1:1

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Lab Control Sample Duplicate Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74435
Sample ID LCSD for HBN 291561 [ICPV/5463
Matrix Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	52.4	1.0	mg/Kg	1:1

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Matrix Spike Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74436
Sample ID MS for HBN 291561 [ICPV/5463]
Matrix Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	51.6	1.0	mg/Kg	1:1

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Matrix Spike Duplicate Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74437
Sample ID	MSD for HBN 291561 [ICPV/5463]
Matrix	Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	52.1	1.0	mg/Kg	1:1

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Duplicate Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74438
Sample ID	DUP for HBN 291561 [ICPV/5463]
Matrix	Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	ND	1.0	mg/Kg	1:1

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QC SUMMARY

Client ID	Shaw E & I		
Workorder ID	Caltrans TO-40 Bakersfield		
QC Batch	PHX 1543	**Original**	17381002
Matrix	Soil	**Sample**	Duplicate [74420]

Parameter	RPD	RPD Limits
pH	0	(35)

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QC SUMMARY

Client ID	Shaw E & I		
Workorder ID	Caltrans TO-40 Bakersfield		
QC Batch	ICPP 5488	**Original**	17381001
Matrix	Soil	**Sample**	Duplicate [74432]

Parameter	RPD	RPD Limits
Lead	8.88	(35)

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QC SUMMARY

Client ID	Shaw E & I		
Workorder ID	Caltrans TO-40 Bakersfield		
QC Batch	ICPP 5489	**Original**	17381021
Matrix	Soil	**Sample**	Duplicate [74438]

Parameter	RPD	RPD Limits
Lead	0000	(35)

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QC SUMMARY

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
QC Batch ICPP 5488
Matrix Soil

Original Samples 17381001
Matrix Spike [74430]
Matrix Spike Duplicate [74431]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
Lead	99.2	99.6	(75-125)	0.4020	(35 MAX)

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QC SUMMARY

Client ID	Shaw E & I		
Workorder ID	Caltrans TO-40 Bakersfield		
QC Batch	ICPP 5489	**Original**	17381021
Matrix	Soil	**Samples**	Matrix Spike [74436] Matrix Spike Duplicate [74437]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
Lead	103	104	(75-125)	0.9660	(35 MAX)

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QC SUMMARY

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
QC Batch ICPP 5488
Matrix Soil

Samples Lab Control Sample [74428]
Lab Control Sample Duplicate [74429]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
Lead	101	103	(80-120)	1.96	(20 MAX)

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QC SUMMARY

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
QC Batch ICPP 5489
Matrix Soil

Samples Lab Control Sample [74434]
Lab Control Sample Duplicate [74435]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
Lead	103	105	(80-120)	1.92	(20 MAX)

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CHAIN OF CUSTODY

17381

Ref. Document # TO40- 042406A

Shaw
Shaw Environmental Inc.
4005 Port Chicago Hwy
Concord, CA, 94520

Project Number: 120928
Project Name / Location: Caltrans - TO-40 Bakersfield

Project Manager: Martha Adams 916-565-4183 (Name & phone #)

Shipment Date: 4/25/2006
Waybill Number: A 327 212 807 2
Lab Destination: Sparger, 3738 Bradview Dr. Sacto, 95827
Lab Contact Name / ph. #: Ray James 916-369-7688

Send Report To:	Martha Adams
Phone/Fax Number:	916-565-4183
Address:	1326 North Market Blvd
City:	Sacramento, CA 95834

Sampler's Name(s): J. Strack, D.Delgado

Analyses Requested

	Sample ID Number	Sample Description	Collection Information: Date	Time	Method	Matrix	# of containers	Container Type	Lead (EPA 6010B)	pH (EPA 9045)	Title 22 - 17 Metals 6010B/7471A	NOA (ARB method 435)
								Preservative (soil)	None	None	Ice	
								Container Type	6" stainless steel sleeve / acetate sleeves			
1	SR58E-B01-0.0	SOIL	4/24/2006	1422	G	So	1	SLEEVE	X			
2	SR58E-B01-0.3		4/24/2006	1428	G	So	1		X	X		
3	SR58E-B01-0.6		4/24/2006	1435	G	So	1		X			
4	SR58E-B02-0.0		4/24/2006	1440	G	So	1		X			
5	SR58E-B02-0.3		4/24/2006	1441	G	So	1		X			
6	SR58E-B02-0.6		4/24/2006	1449	G	So	1		X			
7	SR58E-B03-0.0		4/24/2006	1455	G	So	1		X			
8	SR58E-B03-0.3		4/24/2006	1457	G	So	1		X			
9	SR58E-B03-0.6		4/24/2006	1500	G	So	1		X			
10	SR58E-B04-0.0		4/24/2006	1508	G	So	1		X			
11	SR58E-B04-0.3		4/24/2006	1510	G	So	1		X			
12	SR58E-B04-0.6		4/24/2006	1514	G	So	1		X	X		
13	SR58E-B05-0.0		4/24/2006	0841	G	So	1		X			
14	SR58E-B05-0.3		4/24/2006	0847	G	So	1		X			
15	SR58E-B05-0.6		4/24/2006	0858	G	So	1		X			

Special Instructions: Homogenize entire 6 inch sleeve before analysis -

Turnaround Time: ☐ 24-hr ☐ 48-hr ☒ Standard - 10 day ☐ 3-day ☐ 5-day

Level Of QC Required: I II III

Project Specific: Caltrans Requirements

Relinquished By: Joe Strack SHAW E+I	Date: 4-25-06 Time: 1230	Received By: UPS	Date: 4/25/06 Time:
Relinquished By: UPS	Date: 4/26/06 Time: 1015	Received By: [signature]	Date: 4/26/06 Time: 1015

Method Codes
C = Composite
G = Grab

Matrix Codes
DW = Drinking Water
GW = Ground Water
WW = Waste Water
SO = Soil
SL = Sludge
CP = Chip Samples

Shaw

Shaw Environmental Inc.

4005 Port Chicago Hwy
Concord, CA, 94520

CHAIN OF CUSTODY

19381

Ref. Document # TO40- 042406A

Project Number: 120 928

Project Name / Location: Caltrans - TO-4 Bakersfield

Project Manager: Martha Adams 916-565-4183 (Name & phone #)

Send Report To:	Martha Adams
Phone/Fax Number:	916-565-4183
Address:	1326 North Market Blvd
City:	Sacramento, CA 95834

Lab Destination: Sparger, 3738 Bradview Dr. Sacto, 95827

Lab Contact Name / ph. #: Ray James 916-369-7688

Analyses Requested

	Sample ID Number	Sample Description	Collection Information: Date	Time	Method	Matrix	# of containers	Preservative (soil)	Lead (EPA 6010B)	pH (EPA 9045)	Title 22 - 17 Metals 6010B/7471A	NOA (ARB method 435)						
								Container Type	None	None	Ice							
									6" stainless steel sleeve / acetate sleeve									
16	SR58E - B06 - 0.0	SOIL	4/24/2006	0912	G	So	1	SLEEVE	X									
17	SR58E - B06 - 0.3		4/24/2006	0916	G	So	1		X									
18	SR58E - B06 - 0.6		4/24/2006	0923	G	So	1		X									
19	SR58E - B07 - 0.0		4/24/2006	0942	G	So	1		X									
20	SR58E - B07 - 0.3		4/24/2006	0945	G	So	1		X									
21	SR58E - B07 - 0.6		4/24/2006	0950	G	So	1		X									
22	SR58E - B08 - 0.0		4/24/2006	0959	G	So	1		X	X								
23	SR58E - B08 - 0.3		4/24/2006	1005	G	So	1		X									
24	SR58E - B08 - 0.6		4/24/2006	1006	G	So	1		X									
25	SR58E - B09 - 0.0		4/24/2006	1017	G	So	1		X									
26	SR58E - B09 - 0.3		4/24/2006	1020	G	So	1		X									
27	SR58E - B09 - 0.6		4/24/2006	1024	G	So	1		X									
28	SR58E - B10 - 0.0		4/24/2007	1007	G	So	1		X									
29	SR58E - B10 - 0.3		4/24/2008	1011	G	So	1		X									
30	SR58E - B10 - 0.6		4/24/2009	1015	G	So	1		X									
31	SR58E - B11 - 0.0		4/24/2010	1120	G	So	1		X									
32	SR58E - B11 - 0.3		4/24/2011	1128	G	So	1		X	X								
33	SR58E - B11 - 0.6		4/24/2012	1132	G	So	1		X									
34	SR58E - B11		4/ /2013		G	So	1											
35	SR58-		4/ /2014		G	So	1											

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Scientific Division

Martha Adams
Shaw E & I
1326 North Market Blvd.
Sacramento, CA 95834

Client	Shaw E & I
Workorder	17382 Caltrans TO-40 Bakersfield
Received	04/26/06

The samples were received in EPA specified containers. The samples were transported and received under documented chain of custody and stored at four (4) degrees C until analysis was performed.

Sparger Technology, Inc. ID Suffix Keys - These descriptors will follow the Sparger Technology, Inc. ID numbers and help identify the specific sample and clarify the report.

- DUP - Matrix Duplicate
- MS - Matrix Spike
- MSD - Matrix Spike Duplicate
- LCS - Lab Control Sample
- LCSD - Lab Control Sample Duplicate
- RPD - Relative Percent Difference
- QC - Additional Quality Control
- DIL - Results from a diluted sample
- ND - None Detected
- RL - Reporting Limit

Note: In an effort to conserve paper, the results are printed on both sides of the paper.

Ray James
Laboratory Director

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Test Certificate of Analysis

Client ID Shaw E & I
Workorder # 17382

Workorder ID Caltrans TO-40 Bakersfield

Parameter Lead
Method 6010B

Lab ID	Sample ID	Result	RL	Units	Collected	Analyzed	Matrix	Dilution
17382001	SR58E-B12-0.0	1.17	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382002	SR58E-B12-0.3	3.37	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382003	SR58E-B12-0.6	2.89	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382004	SR58E-B13-0.0	1.78	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382005	SR58E-B13-0.3	2.38	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382006	SR58E-B13-0.6	8.07	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382007	SR58E-B14-0.0	4.65	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382008	SR58E-B14-0.3	ND	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382009	SR58E-B14-0.6	1.25	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382010	SR58E-B15-0.0	2.08	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382011	SR58E-B15-0.3	16.5	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382012	SR58E-B15-0.6	1.70	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382013	SR58E-B16-0.0	2.47	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382014	SR58E-B16-0.3	1.36	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382015	SR58E-B16-0.6	1.70	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382016	SR58E-B17-0.0	2.92	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382017	SR58E-B17-0.3	1.36	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382018	SR58E-B17-0.6	1.33	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382019	SR58E-B18-0.0	2.16	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382020	SR58E-B18-0.3	4.68	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382021	SR58E-B18-0.6	3.95	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382022	SR58E-B19-0.0	1.15	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382023	SR58E-B19-0.3	3.97	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382024	SR58E-B19-0.6	23.2	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382025	SR58E-B20-0.0	2.38	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382026	SR58E-B20-0.3	1.03	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382027	SR58E-B20-0.6	2.49	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382028	SR58E-B21-0.0	1.01	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382029	SR58E-B21-0.3	1.30	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382030	SR58E-B21-0.6	1.96	1.0	mg/Kg	04/24/06	05/03/06	Soil	1:1
17382031	SR58E-ER1	ND	0.010	mg/L	04/24/06	05/03/06	Water	1:1

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Test Certificate of Analysis

Client ID Shaw E & I
Workorder # 17382

Workorder ID Caltrans TO-40 Bakersfield

Parameter pH
Method 9045 PH

Lab ID	Sample ID	Result	RL	Units	Collected	Analyzed	Matrix	Dilution
17382003	SR58E-B12-0.6	7.29	0.100	SU	04/24/06	05/03/06	Soil	1:1
17382013	SR58E-B16-0.0	7.64	0.100	SU	04/24/06	05/03/06	Soil	1:1
17382023	SR58E-B19-0.3	8.11	0.100	SU	04/24/06	05/03/06	Soil	1:1

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Duplicate Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74420
Sample ID DUP for HBN 291554 [PHV/1590]
Matrix Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
pH	9045 PH	05/03/06	05/03/06	7.52	0.100	SU	1:1

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Method Blank Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74439
Sample ID	MB for HBN 291564 [ICPV/5464]
Matrix	Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	ND	1.0	mg/Kg	1:1

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Lab Control Sample Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74440
Sample ID	LCS for HBN 291564 [ICPV/5464]
Matrix	Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	52.2	1.0	mg/Kg	1:1

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Lab Control Sample Duplicate Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74441
Sample ID LCSD for HBN 291564 [ICPV/5464
Matrix Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	52.0	1.0	mg/Kg	1:1

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Matrix Spike Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74442
Sample ID MS for HBN 291564 [ICPV/5464]
Matrix Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	52.3	1.0	mg/Kg	1:1

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Sparger Technology, Inc.
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Mobile Laboratory Division
Scientific Division

Matrix Spike Duplicate Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74443
Sample ID	MSD for HBN 291564 [ICPV/5464]
Matrix	Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	52.2	1.0	mg/Kg	1:1

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Duplicate Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74444
Sample ID DUP for HBN 291564 [ICPV/5464]
Matrix Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	1.14	1.0	mg/Kg	1:1

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Method Blank Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74445
Sample ID	MB for HBN 291566 [ICPV/5465]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	ND	0.010	mg/L	1:1

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Lab Control Sample Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74446
Sample ID LCS for HBN 291566 [ICPV/5465]
Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	0.485	0.010	mg/L	1:1

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Lab Control Sample Duplicate Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74447
Sample ID	LCSD for HBN 291566 [ICPV/5465
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	0.496	0.010	mg/L	1:1

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Duplicate Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74448
Sample ID DUP for HBN 291566 [ICPV/5465]
Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	ND	0.010	mg/L	1:1

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Matrix Spike Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74449
Sample ID MS for HBN 291566 [ICPV/5465]
Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	0.495	0.010	mg/L	1:1

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Matrix Spike Duplicate Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74450
Sample ID MSD for HBN 291566 [ICPV/5465]
Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	0.500	0.010	mg/L	1:1

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Method Blank Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74451
Sample ID	MB for HBN 291570 [ICPV/5466]
Matrix	Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	ND	1.0	mg/Kg	1:1

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Lab Control Sample Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74452
Sample ID LCS for HBN 291570 [ICPV/5466]
Matrix Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	52.3	1.0	mg/Kg	1:1

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Lab Control Sample Duplicate Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74453
Sample ID LCSD for HBN 291570 [ICPV/5466
Matrix Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	52.2	1.0	mg/Kg	1:1

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Matrix Spike Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74454
Sample ID	MS for HBN 291570 [ICPV/5466]
Matrix	Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	52.8	1.0	mg/Kg	1:1

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Matrix Spike Duplicate Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74455
Sample ID MSD for HBN 291570 [ICPV/5466]
Matrix Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	52.7	1.0	mg/Kg	1:1

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Duplicate Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74456
Sample ID	DUP for HBN 291570 [ICPV/5466]
Matrix	Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	3.76	1.0	mg/Kg	1:1

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QC SUMMARY

Client ID	Shaw E & I		
Workorder ID	Caltrans TO-40 Bakersfield		
QC Batch	PHX 1543	**Original**	17381002
Matrix	Soil	**Sample**	Duplicate [74420]

Parameter	RPD	RPD Limits
pH	0	(35)

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QC SUMMARY

Client ID	Shaw E & I		
Workorder ID	Caltrans TO-40 Bakersfield		
QC Batch	ICPP 5490	**Original**	17382001
Matrix	Soil	**Sample**	Duplicate [74444]

Parameter	RPD	RPD Limits
Lead	2.60	(35)

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QC SUMMARY

Client ID	Shaw E & I		
Workorder ID	Caltrans TO-40 Bakersfield		
QC Batch	ICPP 5491	**Original**	17382031
Matrix	Water	**Sample**	Duplicate [74448]

Parameter	RPD	RPD Limits
Lead	0000	(35)

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QC SUMMARY

Client ID	Shaw E & I		
Workorder ID	Caltrans TO-40 Bakersfield		
QC Batch	ICPP 5492	**Original**	17382021
Matrix	Soil	**Sample**	Duplicate [74456]

Parameter	RPD	RPD Limits
Lead	4.93	(35)

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QC SUMMARY

Client ID	Shaw E & I		
Workorder ID	Caltrans TO-40 Bakersfield		
QC Batch	ICPP 5490	**Original**	17382001
Matrix	Soil	**Samples**	Matrix Spike [74442] Matrix Spike Duplicate [74443]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
Lead	102	102	(75-125)	0000	(35 MAX)

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QC SUMMARY

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
QC Batch ICPP 5491
Matrix Water

Original Samples 17382031
Matrix Spike [74449]
Matrix Spike Duplicate [74450]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
Lead	99.0	100	(75-125)	1.01	(35 MAX)

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QC SUMMARY

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
QC Batch ICPP 5492
Matrix Soil

Original Samples 17382021
Matrix Spike [74454]
Matrix Spike Duplicate [74455]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
Lead	97.7	97.5	(75-125)	0.2050	(35 MAX)

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QC SUMMARY

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
QC Batch ICPP 5490
Matrix Soil

Samples Lab Control Sample [74440]
Lab Control Sample Duplicate [74441]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
Lead	104	104	(80-120)	0000	(20 MAX)

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QC SUMMARY

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
QC Batch ICPP 5491
Matrix Water

Samples Lab Control Sample [74446]
Lab Control Sample Duplicate [74447]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
Lead	97.0	99.2	(80-120)	2.24	(20 MAX)

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QC SUMMARY

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
QC Batch ICPP 5492
Matrix Soil

Samples Lab Control Sample [74452]
Lab Control Sample Duplicate [74453]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
Lead	105	104	(80-120)	0.9570	(20 MAX)

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CHAIN OF CUSTODY

Shaw Environmental Inc.
4005 Port Chicago Hwy
Concord, CA, 94520

Document # TO40-042406B
Page 1 of 2

Project Number: 120928
Project Name / Location: Caltrans - TO-40 Bakersfield

Project Manager: Martha Adams 916-565-4183 (Name & phone #)

Shipment Date: 4/25/2006
Waybill Number: A327 212 8107
Lab Destination: Sparger, 3738 Bradview Dr. Sacto, 95827
Lab Contact Name / ph. #: Ray James 916-369-7688

Send Report To:	Martha Adams
Phone/Fax Number:	916-565-4183
Address:	1326 North Market Blvd
City:	Sacramento, CA 95834

Sampler's Name(s): J. Strack, D.Delgado

	Sample ID Number	Sample Description	Collection Information Date	Time	Method	Matrix	# of containers	Preservative (soil)	Lead (EPA 6010B)	pH (EPA 9045)	Title 22 - 17 Metals 6010B/7471A	NOA (ARB method 435)
								Container Type	None	None	Ice	
									6" stainless steel sleeve / acetate sleeves			
36	1 SR58E-B12-0.0	SOIL	4/24/2006	1142	G	So	1	SLEEVE	X			
37	2 SR58E-B12-0.3		4/24/2006	1143	G	So	1		X			
38	3 SR58E-B12-0.6		4/24/2006	1150	G	So	1		X	X		
39	4 SR58E-B13-0.0		4/24/2006	1156	G	So	1		X			
40	5 SR58E-B13-0.3		4/24/2006	1202	G	So	1		X			
41	6 SR58E-B13-0.6		4/24/2006	1207	G	So	1		X			
42	7 SR58E-B14-0.0		4/24/2006	1210	G	So	1		X			
43	8 SR58E-B14-0.3		4/24/2006	1215	G	So	1		X			
44	9 SR58E-B14-0.6		4/24/2006	1220	G	So	1		X			
45	10 SR58E-B15-0.0		4/24/2006	1233	G	So	1		X			
46	11 SR58E-B15-0.3		4/24/2006	1240	G	So	1		X			
47	12 SR58E-B15-0.6		4/24/2006	1242	G	So	1		X			
48	13 SR58E-B16-0.0		4/24/2006	1528	G	So	1		X	X		
49	14 SR58E-B16-0.3		4/24/2006	1534	G	So	1		X			
50	15 SR58E-B16-0.6		4/24/2006	1536	G	So	1		X			

Special Instructions: Homogenize entire 6 inch sleeve before analysis -

Turnaround Time: ☐ 24-hr ☐ 48-hr ☒ Standard - 10 day ☐ 3-day ☐ 5-day

Level Of QC Required: I II III Project Specific: Caltrans Requirements

Relinquished By: Joe Strack Date: 4-25-06 Time: 1230	Received By: UPS Date: 4/25/06 Time:
Relinquished By: UPS Date: 4/26/06 Time: 10:15	Received By: [illegible] Date: 4/26/06 Time: 10:15

Method Codes
C = Composite
G = Grab

Matrix Codes
DW = Drinking Water
GW = Ground Water
WW = Waste Water
SO = Soil
SL = Sludge
CP = Chip Samples

Shaw

Shaw Environmental Inc.

4005 Port Chicago Hwy
Concord, CA, 94520

CHAIN OF CUSTODY

17382

Document # TO40- 042406B

Project Number: 120 928

Project Name / Location: Caltrans - TO-4 Bakersfield

Project Manager: Martha Adams 916-565-4183 (Name & phone #)

Send Report To:	Martha Adams
Phone/Fax Number:	916-565-4183
Address:	1326 North Market Blvd
City:	Sacramento, CA 95834

Lab Destination: Sparger, 3738 Bradview Dr. Sacto, 95827

Lab Contact Name / ph. #: Ray James 916-369-7688

	Sample ID Number	Sample Description	Collection Information: Date	Time	Method	Matrix	# of containers	Preservative (soil) / Container Type	Analyses Requested: Lead (EPA 6010B)	pH (EPA 9045)	Title 22 - 17 Metals 6010B/7471A	NOA (ARB method 435)
									None	None	Ice	
									6" stainless steel sleeve / acetate sleeve			
16	SR58E-B17-0.0	SOIL	4/24/2006	1543	G	So	1	SLEEVE	X			
17	SR58E-B17-0.3		4/24/2006	1545	G	So	1		X			
18	SR58E-B17-0.6		4/24/2006	1549	G	So	1		X			
19	SR58E-B18-0.0		4/24/2006	1557	G	So	1		X			
20	SR58E-B18-0.3		4/24/2006	1605	G	So	1		X			
21	SR58E-B18-0.6		4/24/2006	1610	G	So	1		X			
22	SR58E-B19-0.0		4/24/2006	1615	G	So	1		X			
23	SR58E-B19-0.3		4/24/2006	1625	G	So	1		X	X		
24	SR58E-B19-0.6		4/24/2006	1629	G	So	1		X			
25	SR58E-B20-0.0		4/24/2006	1633	G	So	1		X			
26	SR58E-B20-0.3		4/24/2006	1638	G	So	1		X			
27	SR58E-B20-0.6		4/24/2006	1640	G	So	1		X			
28	SR58E-B21-0.0		4/24/2007	1644	G	So	1		X			
29	SR58E-B21-0.3		4/24/2008	1648	G	So	1		X			
30	SR58E-B21-0.6		4/24/2009	1652	G	So	1		X			
31	SR58E-ER1	WATER	4/24/2010	1700	G	So	1	1 l POLY HNO3 PRES.	X			
NO	~~SR58-~~		~~4/ /2011~~		~~G~~	~~So~~	~~1~~					
NO	~~SR58-~~		~~4/ /2012~~		~~G~~	~~So~~	~~1~~					
NO	~~SR58-~~		~~4/ /2013~~		~~G~~	~~So~~	~~1~~					
NO	~~SR58-~~		~~4/ /2014~~		~~G~~	~~So~~	~~1~~					

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Martha Adams
Shaw E & I
1326 North Market Blvd.
Sacramento, CA 95834

Client	Shaw E & I
Workorder	17380 Caltrans TO-40 Bakersfield
Received	04/26/06

The samples were received in EPA specified containers. The samples were transported and received under documented chain of custody and stored at four (4) degrees C until analysis was performed.

Sparger Technology, Inc. ID Suffix Keys - These descriptors will follow the Sparger Technology, Inc. ID numbers and help identify the specific sample and clarify the report.

- DUP - Matrix Duplicate
- MS - Matrix Spike
- MSD - Matrix Spike Duplicate
- LCS - Lab Control Sample
- LCSD - Lab Control Sample Duplicate
- RPD - Relative Percent Difference
- QC - Additional Quality Control
- DIL - Results from a diluted sample
- ND - None Detected
- RL - Reporting Limit

Note: In an effort to conserve paper, the results are printed on both sides of the paper.

Ray James
Laboratory Director

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Test Certificate of Analysis

Client ID Shaw E & I
Workorder # 17380

Workorder ID Caltrans TO-40 Bakersfield

Parameter pH
Method 9045 PH

Lab ID	Sample ID	Result	RL	Units	Collected	Analyzed	Matrix	Dilution
17380001	SR58E-B22-0.0	7.29	0.100	SU	04/25/06	05/03/06	Soil	1:1
17380011	SR58E-B25-0.3	6.87	0.100	SU	04/25/06	05/03/06	Soil	1:1
17380021	SR58E-B28-0.6	8.07	0.100	SU	04/25/06	05/03/06	Soil	1:1

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Test Certificate of Analysis

Client ID Shaw E & I
Workorder # 17380

Workorder ID Caltrans TO-40 Bakersfield

Parameter Lead
Method 6010B

Lab ID	Sample ID	Result	RL	Units	Collected	Analyzed	Matrix	Dilution
17380001	SR58E-B22-0.0	2.27	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380002	SR58E-B22-0.3	1.31	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380003	SR58E-B22-0.6	3.28	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380004	SR58E-B23-0.0	2.13	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380005	SR58E-B23-0.3	1.38	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380006	SR58E-B23-0.6	1.21	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380007	SR58E-B24-0.0	83.6	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380008	SR58E-B24-0.3	ND	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380009	SR58E-B24-0.6	ND	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380010	SR58E-B25-0.0	2.70	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380011	SR58E-B25-0.3	1.03	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380012	SR58E-B25-0.6	1.99	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380013	SR58E-B26-0.0	30.6	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380014	SR58E-B26-0.3	ND	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380015	SR58E-B26-0.6	3.76	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380016	SR58E-B27-0.0	278	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380017	SR58E-B27-0.3	2.76	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380018	SR58E-B27-0.6	5.72	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380019	SR58E-B28-0.0	3.07	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380020	SR58E-B28-0.3	1.34	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380021	SR58E-B28-0.6	2.50	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380022	SR58E-B29-0.0	5.80	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380023	SR58E-B29-0.3	14.8	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380024	SR58E-B29-0.6	3.29	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380025	SR58E-B30-0.0	21.9	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380026	SR58E-B30-0.3	7.04	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380027	SR58E-B30-0.6	6.56	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380028	SR58E-B31-0.0	33.2	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380029	SR58E-B31-0.3	3.49	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380030	SR58E-B31-0.6	4.39	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380031	SR58E-B32-0.0	3.35	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380032	SR58E-B32-0.3	3.12	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1
17380033	SR58E-B32-0.6	16.8	1.0	mg/Kg	04/25/06	05/03/06	Soil	1:1

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Method Blank Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74414
Sample ID MB for HBN 291460 [ICPV/5460]
Matrix Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	ND	1.0	mg/Kg	1:1

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Lab Control Sample Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74415
Sample ID	LCS for HBN 291460 [ICPV/5460]
Matrix	Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	49.7	1.0	mg/Kg	1:1

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Lab Control Sample Duplicate Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74416
Sample ID LCSD for HBN 291460 [ICPV/5460
Matrix Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	50.5	1.0	mg/Kg	1:1

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Matrix Spike Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74417
Sample ID	MS for HBN 291460 [ICPV/5460]
Matrix	Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	50.7	1.0	mg/Kg	1:1

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Matrix Spike Duplicate Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74418
Sample ID MSD for HBN 291460 [ICPV/5460]
Matrix Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	50.8	1.0	mg/Kg	1:1

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Duplicate Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74419
Sample ID	DUP for HBN 291460 [ICPV/5460]
Matrix	Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	1.71	1.0	mg/Kg	1:1

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Duplicate Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74420
Sample ID	DUP for HBN 291554 [PHV/1590]
Matrix	Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
pH	9045 PH	05/03/06	05/03/06	7.52	0.100	SU	1:1

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Method Blank Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74421
Sample ID	MB for HBN 291552 [ICPV/5461]
Matrix	Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	ND	1.0	mg/Kg	1:1

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Lab Control Sample Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74422
Sample ID	LCS for HBN 291552 [ICPV/5461]
Matrix	Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	50.2	1.0	mg/Kg	1:1

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Lab Control Sample Duplicate Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74423
Sample ID LCSD for HBN 291552 [ICPV/5461
Matrix Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	51.4	1.0	mg/Kg	1:1

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Matrix Spike Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74424
Sample ID MS for HBN 291552 [ICPV/5461]
Matrix Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	52.3	1.0	mg/Kg	1:1

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Matrix Spike Duplicate Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74425
Sample ID MSD for HBN 291552 [ICPV/5461]
Matrix Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	52.1	1.0	mg/Kg	1:1

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Duplicate Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74426
Sample ID	DUP for HBN 291552 [ICPV/5461]
Matrix	Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B	05/02/06	05/03/06	1.86	1.0	mg/Kg	1:1

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QC SUMMARY

Client ID	Shaw E & I		
Workorder ID	Caltrans TO-40 Bakersfield		
QC Batch	ICPP 5486	**Original**	17380001
Matrix	Soil	**Sample**	Duplicate [74419]

Parameter	RPD	RPD Limits
Lead	28.1	(35)

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QC SUMMARY

Client ID	Shaw E & I		
Workorder ID	Caltrans TO-40 Bakersfield		
QC Batch	PHX 1543	**Original**	17381002
Matrix	Soil	**Sample**	Duplicate [74420]

Parameter	RPD	RPD Limits
pH	0	(35)

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QC SUMMARY

Client ID	Shaw E & I		
Workorder ID	Caltrans TO-40 Bakersfield		
QC Batch	ICPP 5487	**Original**	17380021
Matrix	Soil	**Sample**	Duplicate [74426]

Parameter	RPD	RPD Limits
Lead	29.4	(35)

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QC SUMMARY

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
QC Batch ICPP 5486
Matrix Soil

Original Samples 17380001
Matrix Spike [74417]
Matrix Spike Duplicate [74418]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
Lead	96.9	97.1	(75-125)	0.2060	(35 MAX)

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QC SUMMARY

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
QC Batch ICPP 5487
Matrix Soil

Original Samples 17380021
Matrix Spike [74424]
Matrix Spike Duplicate [74425]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
Lead	99.6	99.2	(75-125)	0.4020	(35 MAX)

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QC SUMMARY

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
QC Batch ICPP 5486
Matrix Soil

Samples Lab Control Sample [74415]
Lab Control Sample Duplicate [74416]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
Lead	99.4	101	(80-120)	1.60	(20 MAX)

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QC SUMMARY

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
QC Batch ICPP 5487
Matrix Soil

Samples Lab Control Sample [74422]
Lab Control Sample Duplicate [74423]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
Lead	100	103	(80-120)	2.96	(20 MAX)

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Shaw

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Concord, CA, 94520

CHAIN OF CUSTODY

17380

Ref. Document # TO40-042506

Page 1 of 2

Project Number: 120928

Project Name / Location: Caltrans - TO-40 Bakersfield

Project Manager: Martha Adams 916-565-4183 (Name & phone #)

Shipment Date: 4/25/2006

Waybill Number: A 327 212 811 6

Lab Destination: Sparger, 3738 Bradview Dr. Sacto, 95827

Lab Contact Name / ph. #: Ray James 916-369-7688

Send Report To:	Martha Adams
Phone/Fax Number:	916-565-4183
Address:	1326 North Market Blvd
City:	Sacramento, CA 95834

Sampler's Name(s): J. Strack, D.Delgado

Analyses Requested

	Sample ID Number	Sample Description	Collection Information: Date	Time	Method	Matrix	# of containers	Preservative (soil) / Container Type	Lead (EPA 6010B)	pH (EPA 9045)	Title 22 - 17 Metals 6010B/7471A	NOA (ARB method 435)
								Preservative (soil)	None	None	Ice	
								Container Type	6" stainless steel sleeve / acetate sleeves			
1	SR58E-B22-0.0	SOIL	4/25/2006	0811	G	So	1		X	X		
2	SR58E-B22-0.3	↓	4/25/2006	0813	G	So	1		X			
3	SR58E-B22-0.6		4/25/2006	0815	G	So	1		X			
4	SR58E-B23-0.0		4/25/2006	0823	G	So	1		X			
5	SR58E-B23-0.3		4/25/2006	0826	G	So	1		X			
6	SR58E-B23-0.6		4/25/2006	0830	G	So	1		X			
7	SR58E-B24-0.0		4/25/2006	0833	G	So	1		X			
8	SR58E-B24-0.3		4/25/2006	0836	G	So	1		X			
9	SR58E-B24-0.6		4/25/2006	0840	G	So	1		X			
10	SR58E-B25-0.0		4/25/2006	0845	G	So	1		X			
11	SR58E-B25-0.3		4/25/2006	0850	G	So	1		X	X		
12	SR58E-B25-0.6		4/25/2006	0853	G	So	1		X			
13	SR58E-B26-0.0		4/25/2006	0855	G	So	1		X			
14	SR58E-B26-0.3		4/25/2006	0858	G	So	1		X			
15	SR58E-B26-0.6	↓	4/25/2006	0902	G	So	1		X			

Special Instructions: Homogenize entire 6 inch sleeve before analysis -

Turnaround Time: ☒ Standard - 10 day ☐ 24-hr ☐ 48-hr ☐ 3-day ☐ 5-day

Level Of QC Required: I II III Project Specific: Caltrans Requirements

Relinquished By: Joe Strack SHAW E+I	Date: 4-25-06 Time: 1230	Received By: UPS	Date: 4/25/06 Time:
Relinquished By: UPS	Date: 4/26/06 Time: 10:15	Received By: [signature]	Date: 4/26/06 Time: 10:15

Method Codes

C = Composite G = Grab

Matrix Codes

DW = Drinking Water SO = Soil

GW = Ground Water SL = Sludge

WW = Waste Water CP = Chip Samples

Shaw

Shaw Environmental Inc.

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Concord, CA, 94520

CHAIN OF CUSTODY

14500

Ref. Document # TO40- 042506

Project Number: 120

Project Name / Location: Caltrans - TO-4 Bakersfield

Project Manager: Martha Adams 916-565-4183 (Name & phone #)

Send Report To:	Martha Adams
Phone/Fax Number:	916-565-4183
Address:	1326 North Market Blvd
City:	Sacramento, CA 95834

Lab Destination: Sparger, 3738 Bradview Dr. Sacto, 95827

Lab Contact Name / ph. #: Ray James 916-369-7688

	Sample ID Number	Sample Description	Collection Information: Date	Time	Method	Matrix	# of containers	Preservative (soil)	Analyses Requested: Lead (EPA 6010B)	pH (EPA 9045)	Title 22 - 17 Metals 6010B/7471A	NOA (ARB method 435)
								Preservative (soil)	None	None	Ice	
								Container Type	6" stainless steel sleeve / acetate sleeve			
16	SR58E-B27-0.0	SOIL	4/25/2006	0908	G	So	1	SLEEVE	X			
17	SR58E-B27-0.3		4/25/2006	0909	G	So	1		X			
18	SR58E-B27-0.6		4/25/2006	0915	G	So	1		X			
19	SR58E-B28-0.0		4/25/2006	0922	G	So	1		X			
20	SR58E-B28-0.3		4/25/2006	0925	G	So	1		X			
21	SR58E-B28-0.6		4/25/2006	0930	G	So	1		X	X		
22	SR58E-B29-0.0		4/25/2006	0941	G	So	1		X			
23	SR58E-B29-0.3		4/25/2006	0945	G	So	1		X			
24	SR58E-B29-0.6		4/25/2006	0958	G	So	1		X			
25	SR58E-B30-0.0		4/25/2006	1003	G	So	1		X			
26	SR58E-B30-0.3		4/25/2006	1009	G	So	1		X			
27	SR58E-B30-0.6		4/25/2006	1013	G	So	1		X			
28	SR58E-B31-0.0		4/25/2007	1016	G	So	1		X			
29	SR58E-B31-0.3		4/25/2008	1020	G	So	1		X			
30	SR58E-B31-0.6		4/25/2009	1025	G	So	1		X			
31	SR58E-B32-0.0		4/25/2010	1029	G	So	1		X			
32	SR58E-B32-0.3		4/25/2011	1033	G	So	1		X			
33	SR58E-B32-0.6		4/25/2012	1036	G	So	1		X			
	~~SR58-~~		~~4/ /2013~~		~~G~~	~~So~~	~~1~~					
	~~SR58-~~		~~4/ /2014~~		~~G~~	~~So~~	~~1~~					

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Martha Adams
Shaw E & I
1326 North Market Blvd.
Sacramento, CA 95834

Client	Shaw E & I
Workorder	17431 Caltrans TO-40 Bakersfield
Received	05/18/06

The samples were received in EPA specified containers. The samples were transported and received under documented chain of custody and stored at four (4) degrees C until analysis was performed.

Sparger Technology, Inc. ID Suffix Keys - These descriptors will follow the Sparger Technology, Inc. ID numbers and help identify the specific sample and clarify the report.

- DUP - Matrix Duplicate
- MS - Matrix Spike
- MSD - Matrix Spike Duplicate
- LCS - Lab Control Sample
- LCSD - Lab Control Sample Duplicate
- RPD - Relative Percent Difference
- QC - Additional Quality Control
- DIL - Results from a diluted sample
- ND - None Detected
- RL - Reporting Limit

Note: In an effort to conserve paper, the results are printed on both sides of the paper.

Ray James
Laboratory Director

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Test Certificate of Analysis

Client ID Shaw E & I
Workorder # 17431

Workorder ID Caltrans TO-40 Bakersfield

Parameter Lead
Method 6010B STLC Pb

Lab ID	Sample ID	Result	RL	Units	Collected	Analyzed	Matrix	Dilution
17431001	SR58-E-B24-0.0	1.58	0.050	mg/L	04/25/06	05/22/06	Soil	1:1

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Method Blank Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74993
Sample ID	MB for HBN 293295 [ICPV/5521]
Matrix	STLC Leachate

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B STLC Pb	05/21/06	05/22/06	ND	0.050	mg/L	1:1

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Lab Control Sample Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74994
Sample ID LCS for HBN 293295 [ICPV/5521]
Matrix STLC Leachate

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B STLC Pb	05/21/06	05/22/06	2.50	0.050	mg/L	1:1

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Lab Control Sample Duplicate Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74995
Sample ID	LCSD for HBN 293295 [ICPV/5521
Matrix	STLC Leachate

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B STLC Pb	05/21/06	05/22/06	2.51	0.050	mg/L	1:1

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Duplicate Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74996
Sample ID	DUP for HBN 293295 [ICPV/5521]
Matrix	Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B STLC Pb	05/21/06	05/22/06	1.58	0.050	mg/L	1:1

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Matrix Spike Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74997
Sample ID	MS for HBN 293295 [ICPV/5521]
Matrix	Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B STLC Pb	05/21/06	05/22/06	3.53	0.050	mg/L	1:1

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Matrix Spike Duplicate Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74998
Sample ID MSD for HBN 293295 [ICPV/5521]
Matrix Soil

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B STLC Pb	05/21/06	05/22/06	3.57	0.050	mg/L	1:1

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QC SUMMARY

Client ID	Shaw E & I		
Workorder ID	Caltrans TO-40 Bakersfield		
QC Batch	ICPP 5547	**Original**	17431001
Matrix	Soil	**Sample**	Duplicate [74996]

Parameter	RPD	RPD Limits
Lead	00	(35)

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QC SUMMARY

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
QC Batch ICPP 5547
Matrix Soil

Original Samples 17431001
Matrix Spike [74997]
Matrix Spike Duplicate [74998]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
Lead	78	80	(60-125)	2.5	(35 MAX)

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QC SUMMARY

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
QC Batch ICPP 5547
Matrix STLC Leachate

Samples Lab Control Sample [74994]
Lab Control Sample Duplicate [74995]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
Lead	100	100	(80-120)	00	(20 MAX)

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17431

Lab Request No. 3 for Caltrans Task Order 40
Shaw Project No. 120928
Contact: Martha Adams
5/17/2006

Please analyze the 1 sample listed below for soluble analytes indicated, by the WET on a 48-hour turn around time. These samples were submitted under separate COC. Please report the results on separate reports.

Field Sample ID	Date Collected	Laboratory Sample ID	Analysis Parameter	Test Result
SR58-E-B24-0.0	4/25/2006	17380007	Lead	83.6

48 HOUR
Rush!

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Martha Adams
Shaw E & I
1326 North Market Blvd.
Sacramento, CA 95834

Client	Shaw E & I
Workorder	17400 Caltrans TO-40 Bakersfield
Received	05/08/06

The samples were received in EPA specified containers. The samples were transported and received under documented chain of custody and stored at four (4) degrees C until analysis was performed.

Sparger Technology, Inc. ID Suffix Keys - These descriptors will follow the Sparger Technology, Inc. ID numbers and help identify the specific sample and clarify the report.

- DUP - Matrix Duplicate
- MS - Matrix Spike
- MSD - Matrix Spike Duplicate
- LCS - Lab Control Sample
- LCSD - Lab Control Sample Duplicate
- RPD - Relative Percent Difference
- QC - Additional Quality Control
- DIL - Results from a diluted sample
- ND - None Detected
- RL - Reporting Limit

Note: In an effort to conserve paper, the results are printed on both sides of the paper.

Ray James
Laboratory Director

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Test Certificate of Analysis

Client ID Shaw E & I
Workorder # 17400

Workorder ID Caltrans TO-40 Bakersfield

Parameter Lead
Method 6010B STLC Pb

Lab ID	Sample ID	Result	RL	Units	Collected	Analyzed	Matrix	Dilution
17400001	SR58-E-B27-0.0	14.3	0.050	mg/L	04/25/06	05/11/06	Soil	1:1
17400002	SR58-E-B02-0.0	28.2	0.050	mg/L	04/24/06	05/11/06	Soil	1:1
17400003	SR58-E-B04-0.0	3.53	0.050	mg/L	04/24/06	05/11/06	Soil	1:1
17400004	SR58-E-B05-0.0	23.5	0.050	mg/L	04/24/06	05/11/06	Soil	1:1
17400005	SR58-E-B07-0.0	0.405	0.050	mg/L	04/24/06	05/11/06	Soil	1:1

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Method Blank Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74681
Sample ID	MB for HBN 292353 [ICPV/5494]
Matrix	STLC Leachate

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B STLC Pb	05/08/06	05/11/06	ND	0.050	mg/L	1:1

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Lab Control Sample Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74682
Sample ID	LCS for HBN 292353 [ICPV/5494]
Matrix	STLC Leachate

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B STLC Pb	05/08/06	05/11/06	2.50	0.050	mg/L	1:1

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Lab Control Sample Duplicate Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74683
Sample ID	LCSD for HBN 292353 [ICPV/5494
Matrix	STLC Leachate

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B STLC Pb	05/08/06	05/11/06	2.53	0.050	mg/L	1:1

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Duplicate Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74684
Sample ID	DUP for HBN 292353 [ICPV/5494]
Matrix	STLC Leachate

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B STLC Pb	05/08/06	05/11/06	0.836	0.050	mg/L	1:1

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Matrix Spike Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74685
Sample ID MS for HBN 292353 [ICPV/5494]
Matrix STLC Leachate

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B STLC Pb	05/08/06	05/11/06	2.86	0.050	mg/L	1:1

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Matrix Spike Duplicate Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74686
Sample ID MSD for HBN 292353 [ICPV/5494]
Matrix STLC Leachate

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B STLC Pb	05/08/06	05/11/06	2.86	0.050	mg/L	1:1

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QC SUMMARY

Client ID	Shaw E & I		
Workorder ID	Caltrans TO-40 Bakersfield		
QC Batch	ICPP 5520		
Matrix	STLC Leachate	**Original Sample**	17399001 Duplicate [74684]

Parameter	RPD	RPD Limits
Lead	2.4	(35)

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QC SUMMARY

Client ID	Shaw E & I		
Workorder ID	Caltrans TO-40 Bakersfield		
QC Batch	ICPP 5520	**Original**	17399001
Matrix	STLC Leachate	**Samples**	Matrix Spike [74685] Matrix Spike Duplicate [74686]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
Lead	80	80	(60-125)	00	(35 MAX)

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QC SUMMARY

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
QC Batch ICPP 5520
Matrix STLC Leachate

Samples Lab Control Sample [74682]
Lab Control Sample Duplicate [74683]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
Lead	100	101	(80-120)	1.0	(20 MAX)

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48 Hour

Rush!

17400

Lab Request No. 1 for Caltrans Task Order 40
Shaw Project No. 120928
Contact: Martha Adams
5/8/2006

Please analyze the 5 samples listed below for soluble analytes indicated, by the WET on a 48-hour turn around time. These samples were submitted under separate COC. Please report the results on separate reports.

Field Sample ID	Date Collected	Laboratory Sample ID	Analysis Parameter	Test Result
SR58-E-B27-0.0	4/25/2006	17380016	Lead	278
SR58-E-B02-0.0	4/24/2006	17381004	Lead	249
SR58-E-B04-0.0	4/24/2006	17381010	Lead	70.9
SR58-E-B05-0.0	4/24/2006	17381013	Lead	371
SR58-E-B07-0.0	4/24/2006	17381019	Lead	72.4

48 Hour

Rush!

[illegible] - Rec'd 5/8/06 - 1400 hrs

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Martha Adams
Shaw E & I
1326 North Market Blvd.
Sacramento, CA 95834

Client	Shaw E & I
Workorder	17420 Caltrans TO-40 Bakersfield
Received	05/16/06

The samples were received in EPA specified containers. The samples were transported and received under documented chain of custody and stored at four (4) degrees C until analysis was performed.

Sparger Technology, Inc. ID Suffix Keys - These descriptors will follow the Sparger Technology, Inc. ID numbers and help identify the specific sample and clarify the report.

- DUP - Matrix Duplicate
- MS - Matrix Spike
- MSD - Matrix Spike Duplicate
- LCS - Lab Control Sample
- LCSD - Lab Control Sample Duplicate
- RPD - Relative Percent Difference
- QC - Additional Quality Control
- DIL - Results from a diluted sample
- ND - None Detected
- RL - Reporting Limit

Note: In an effort to conserve paper, the results are printed on both sides of the paper.

Ray James
Laboratory Director

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Test Certificate of Analysis

Client ID Shaw E & I
Workorder # 17420

Workorder ID Caltrans TO-40 Bakersfield

Parameter Lead
Method 6010B STLC-DI

Lab ID	Sample ID	Result	RL	Units	Collected	Analyzed	Matrix	Dilution
17420001	SR58-E-B27-0.0	0.0420	0.010	mg/L	04/25/06	05/15/06	Soil	1:1
17420002	SR58-E-B02-0.0	0.115	0.010	mg/L	04/24/06	05/15/06	Soil	1:1
17420003	SR58-E-B05-0.0	0.216	0.010	mg/L	04/24/06	05/15/06	Soil	1:1

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Method Blank Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74831
Sample ID	MB for HBN 292959 [ICPV/5510]
Matrix	STLC-DI Leachate

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B STLC-DI	05/12/06	05/15/06	ND	0.010	mg/L	1:1

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Duplicate Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74834
Sample ID	DUP for HBN 292959 [ICPV/5510]
Matrix	STLC-DI Leachate

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B STLC-DI	05/12/06	05/15/06	0.0684	0.010	mg/L	1:1

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Matrix Spike Report

Client ID	Shaw E & I
Workorder ID	Caltrans TO-40 Bakersfield
Laboratory ID	74835
Sample ID	MS for HBN 292959 [ICPV/5510]
Matrix	STLC-DI Leachate

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B STLC-DI	05/12/06	05/15/06	0.597	0.010	mg/L	1:1

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Matrix Spike Duplicate Report

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
Laboratory ID 74836
Sample ID MSD for HBN 292959 [ICPV/5510]
Matrix STLC-DI Leachate

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Lead	6010B STLC-DI	05/12/06	05/15/06	0.576	0.010	mg/L	1:1

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QC SUMMARY

Client ID	Shaw E & I		
Workorder ID	Caltrans TO-40 Bakersfield		
QC Batch	ICPP 5536		
Matrix	STLC-DI Leachate	**Original Sample**	17419001 Duplicate [74834]

Parameter	RPD	RPD Limits
Lead	13	(35)

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QC SUMMARY

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
QC Batch ICPP 5536
Matrix STLC-DI Leachate

Original Samples 17419001
Matrix Spike [74835]
Matrix Spike Duplicate [74836]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
Lead	107	103	(75-125)	3.8	(35 MAX)

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QC SUMMARY

Client ID Shaw E & I
Workorder ID Caltrans TO-40 Bakersfield
QC Batch ICPP 5536
Matrix STLC-DI Leachate

Samples Lab Control Sample [74832]
Lab Control Sample Duplicate [74833]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
Lead	102	102	(80-120)	00	(20 MAX)

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17420

Lab Request No. 2 for Caltrans Task Order 40
Shaw Project No. 120928
Contact: Martha Adams
5/12/2006

Please analyze the 3 samples listed below for soluble analytes indicated, by the DIWET on a 48-hour turn around time.
These samples were submitted under separate COC.
Please report the results on separate reports.

Field Sample ID	Date Collected	Laboratory Sample ID	Analysis Parameter	Test Result
SR58-E-B27-0.0	4/25/2006	17400001	Lead	14.3
SR58-E-B02-0.0	4/24/2006	17400002	Lead	28.2
SR58-E-B05-0.0	4/24/2006	17400004	Lead	23.5

RECEIVED
5/12/06 -MU-

Appendix C
Statistical Analysis Spreadsheets

TO 40 Statistics Summary

STATISTIX 7.0 5/24/2006, 10:52:58 AM

DESCRIPTIVE STATISTICS

VARIABLE	N	MEAN	SD	MINIMUM	MAXIMUM
TOTAL	96	16.041	53.859	0.5000	371.00
WET	6	11.920	11.955	0.4100	28.200

STATISTIX 7.0 5/24/2006, 10:54:25 AM

CORRELATIONS (PEARSON)
ZERO INTERCEPT OPTION SELECTED: CORRELATIONS = COSINES

	TOTAL
WET	0.9374

CASES INCLUDED 6 MISSING CASES 90

STATISTIX 7.0 5/24/2006, 10:54:56 AM

UNWEIGHTED LEAST SQUARES LINEAR REGRESSION OF WET

NOTE: MODEL FORCED THROUGH ORIGIN

PREDICTOR VARIABLES	COEFFICIENT	STD ERROR	STUDENT'S T	P
TOTAL	0.06842	0.01136	6.02	0.0018

R-SQUARED	0.8788	RESID. MEAN SQUARE (MSE)	37.9969
ADJUSTED R-SQUARED	0.8545	STANDARD DEVIATION	6.16416

SOURCE	DF	SS	MS	F	P
REGRESSION	1	1377.12	1377.12	36.24	0.0018
RESIDUAL	5	189.985	37.9969		
TOTAL	6	1567.11			

CASES INCLUDED 6 MISSING CASES 90

STATISTIX 7.0 5/24/2006, 10:56:53 AM

PREDICTED/FITTED VALUES OF WET

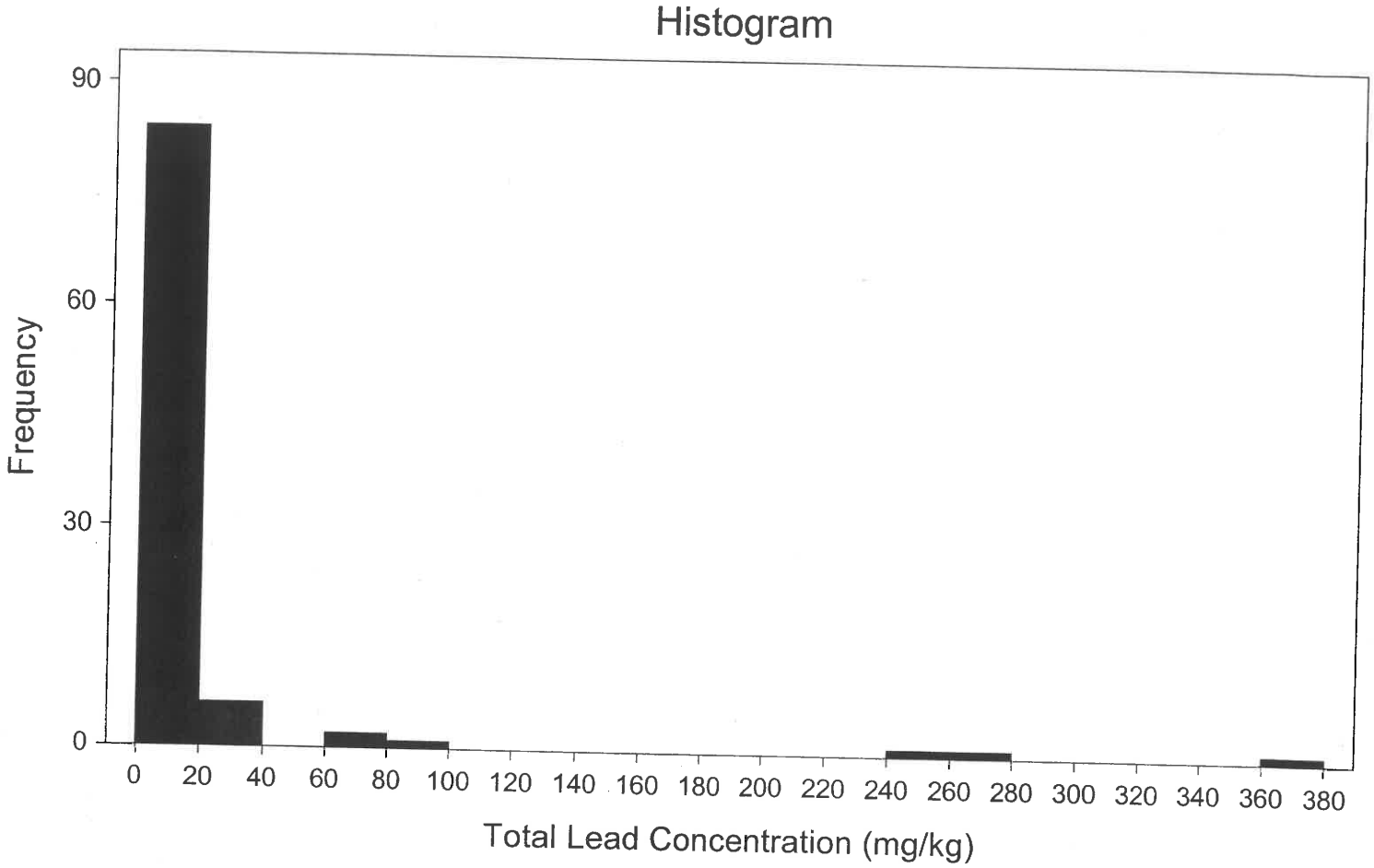
LOWER PREDICTED BOUND	-14.147	LOWER FITTED BOUND	0.9829
PREDICTED VALUE	1.7153	FITTED VALUE	1.7153
UPPER PREDICTED BOUND	17.578	UPPER FITTED BOUND	2.4477
SE (PREDICTED VALUE)	6.1707	SE (FITTED VALUE)	0.2849

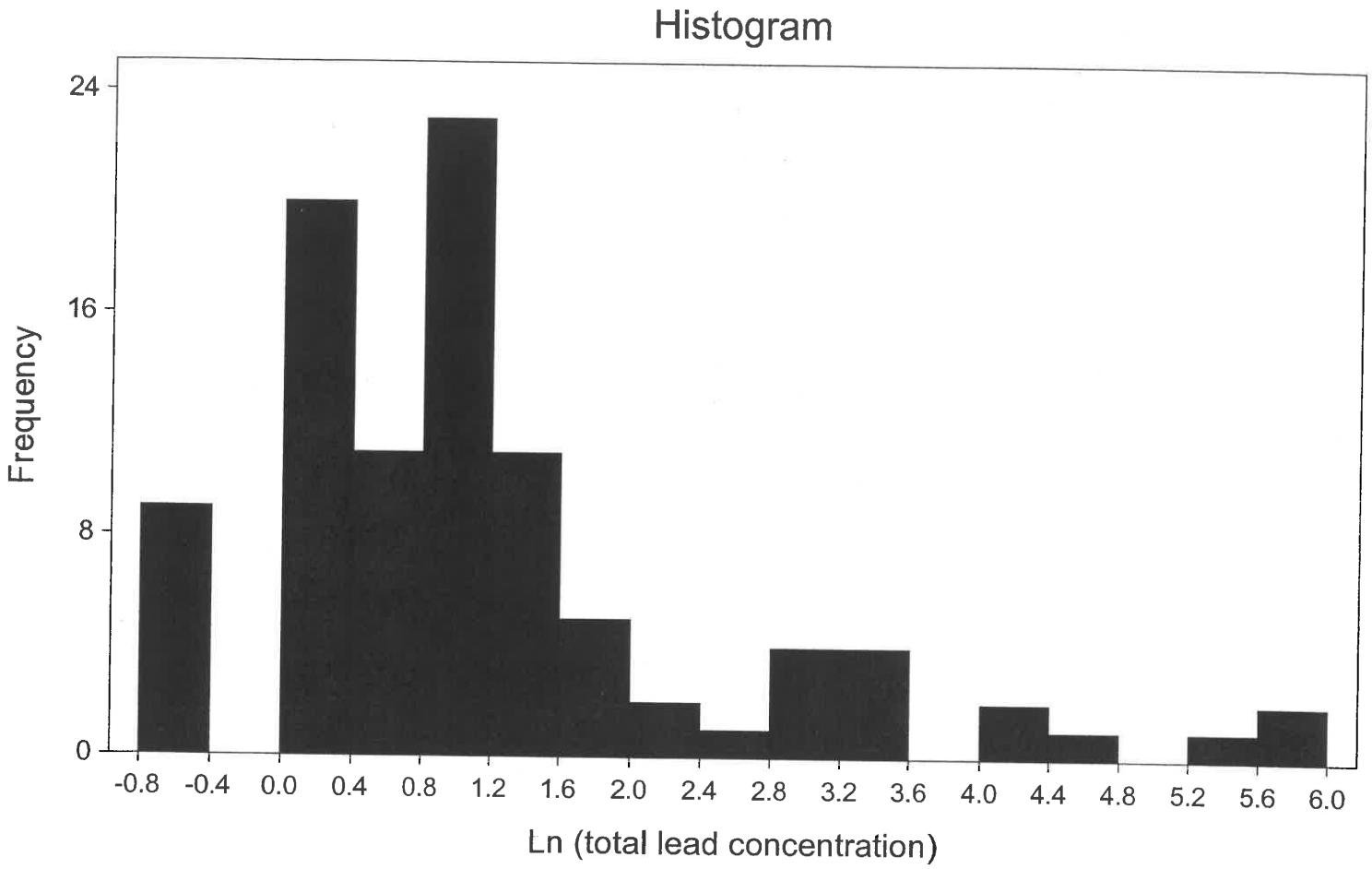
UNUSUALNESS (LEVERAGE)	0.0021
PERCENT COVERAGE	95.0
CORRESPONDING T	2.57

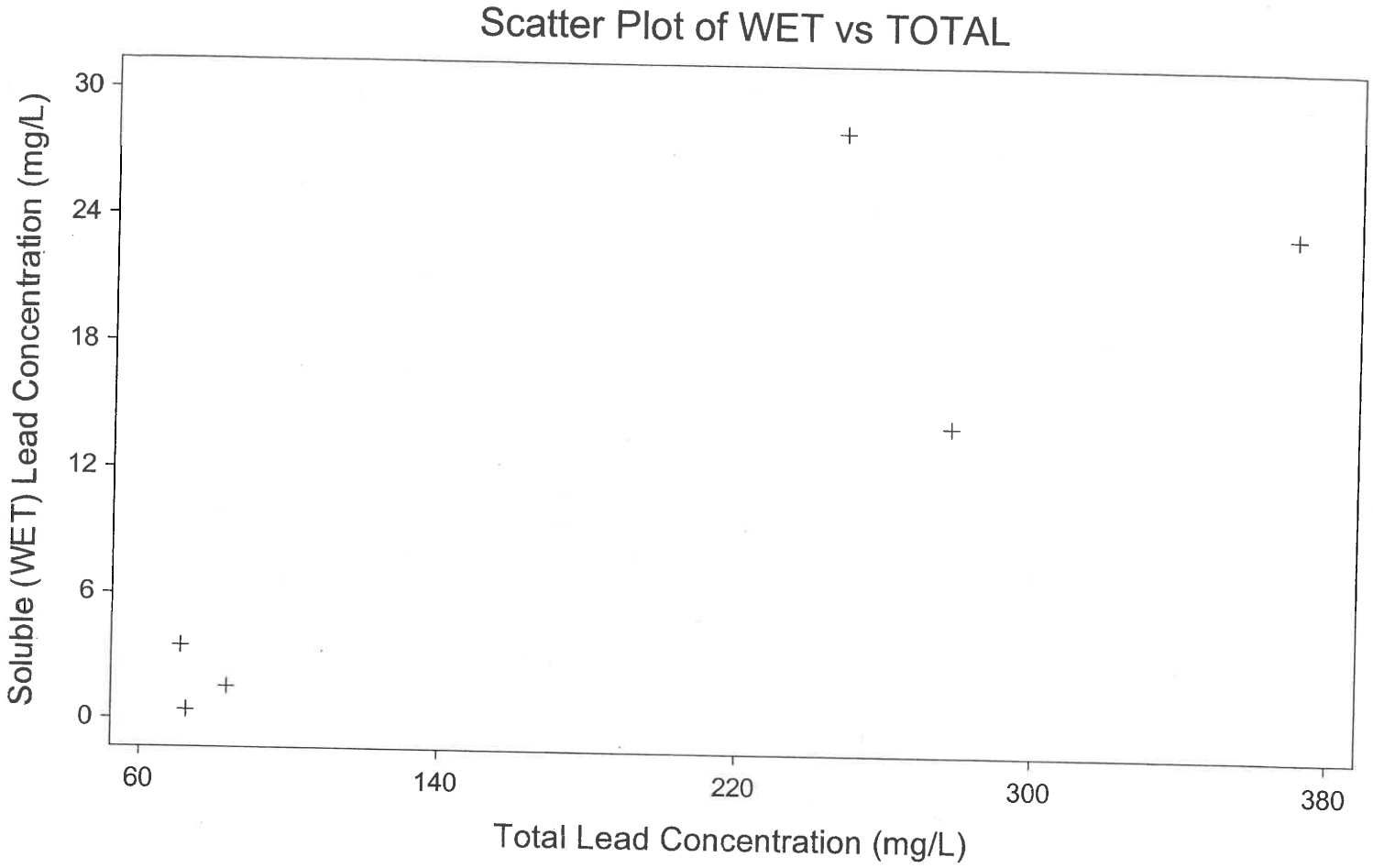
PREDICTOR VALUES: TOTAL = 25.071

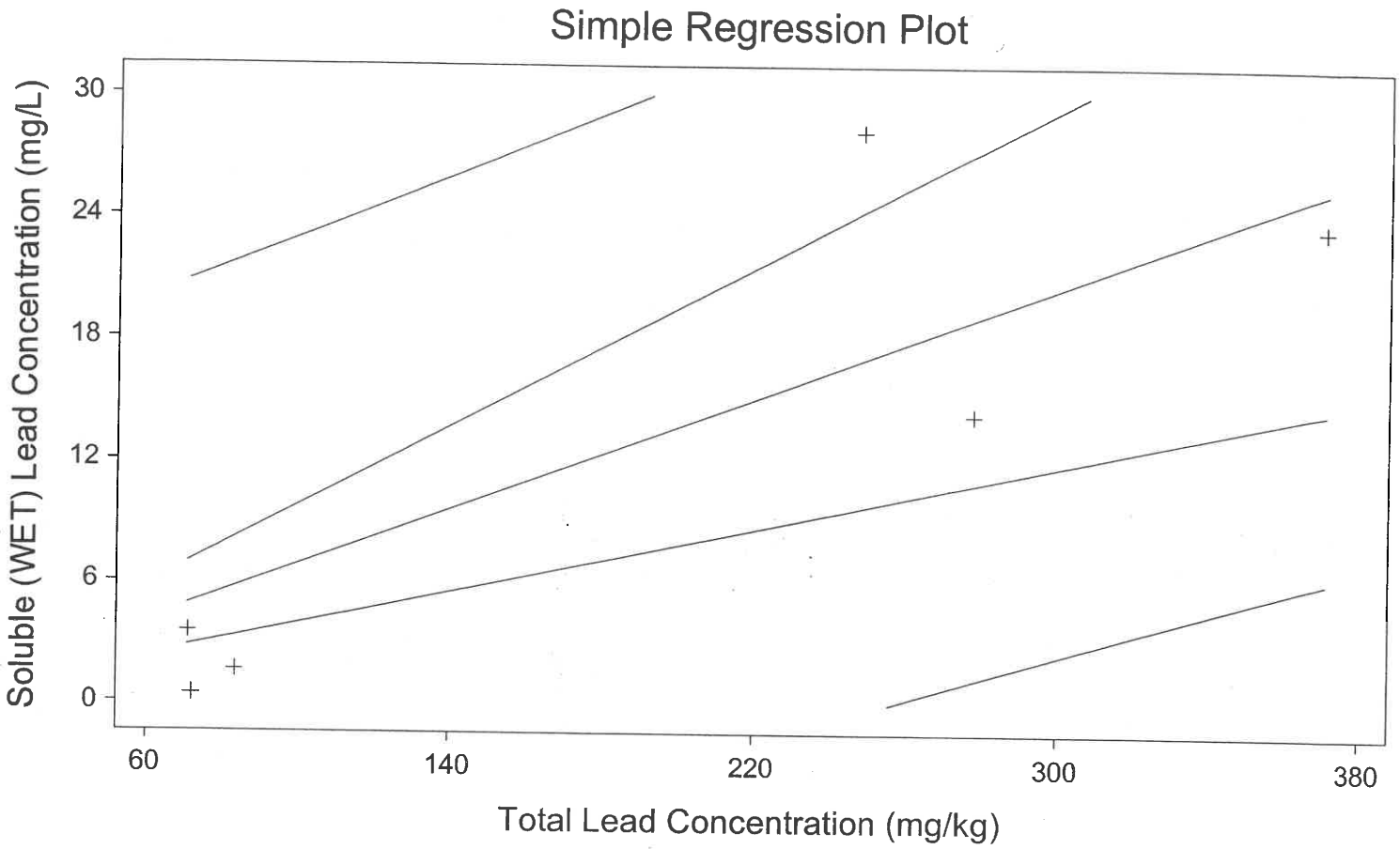
Non-parametric Statistics

TO 40	
Number of Valid Samples	96
Number of Unique Samples	82
Minimum	0.5
Maximum	371
Mean	16.04094
Median	2.505
Standard Deviation	53.85856
Variance	2900.744
Coefficient of Variation	3.357569
Skewness	5.215629
Mean of log data	1.18788
Standard Deviation of log data	1.395836
95% Non-parametric UCLs	
Standard Bootstrap UCL	25.07052


Histogram
Frequency
90
60
30
0
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
380
Total Lead Concentration (mg/kg)

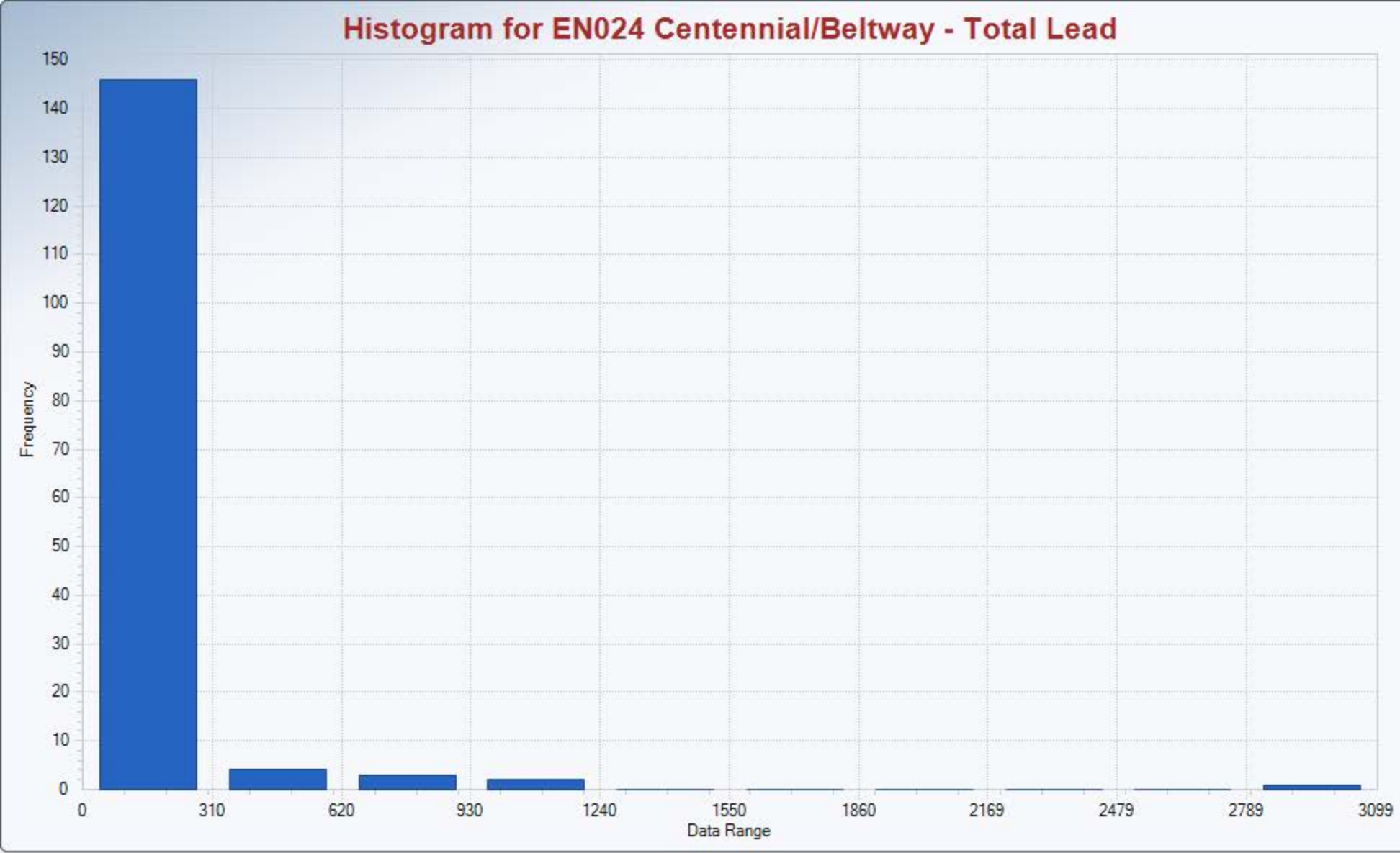

Histogram
Frequency
24
16
8
0
-0.8
-0.4
0.0
0.4
0.8
1.2
1.6
2.0
2.4
2.8
3.2
3.6
4.0
4.4
4.8
5.2
5.6
6.0
Ln (total lead concentration)


Scatter Plot of WET vs TOTAL
Soluble (WET) Lead Concentration (mg/L)
30
24
18
12
6
0
60
140
220
300
380
Total Lead Concentration (mg/L)



WET = + 0.0684 * TOTAL 95% conf and pred intervals

Appendix D
Data Distribution Histogram



EN024 Centennial/Beltway - Total Lead

Number of Values	156
Minimum	0.75
Maximum	3,100.00
SD	296.40
Skewness	7.48
Kurtosis	69.99
☐ Mean	89.94
☐ Median	5.70
☐ Normal Distribution	

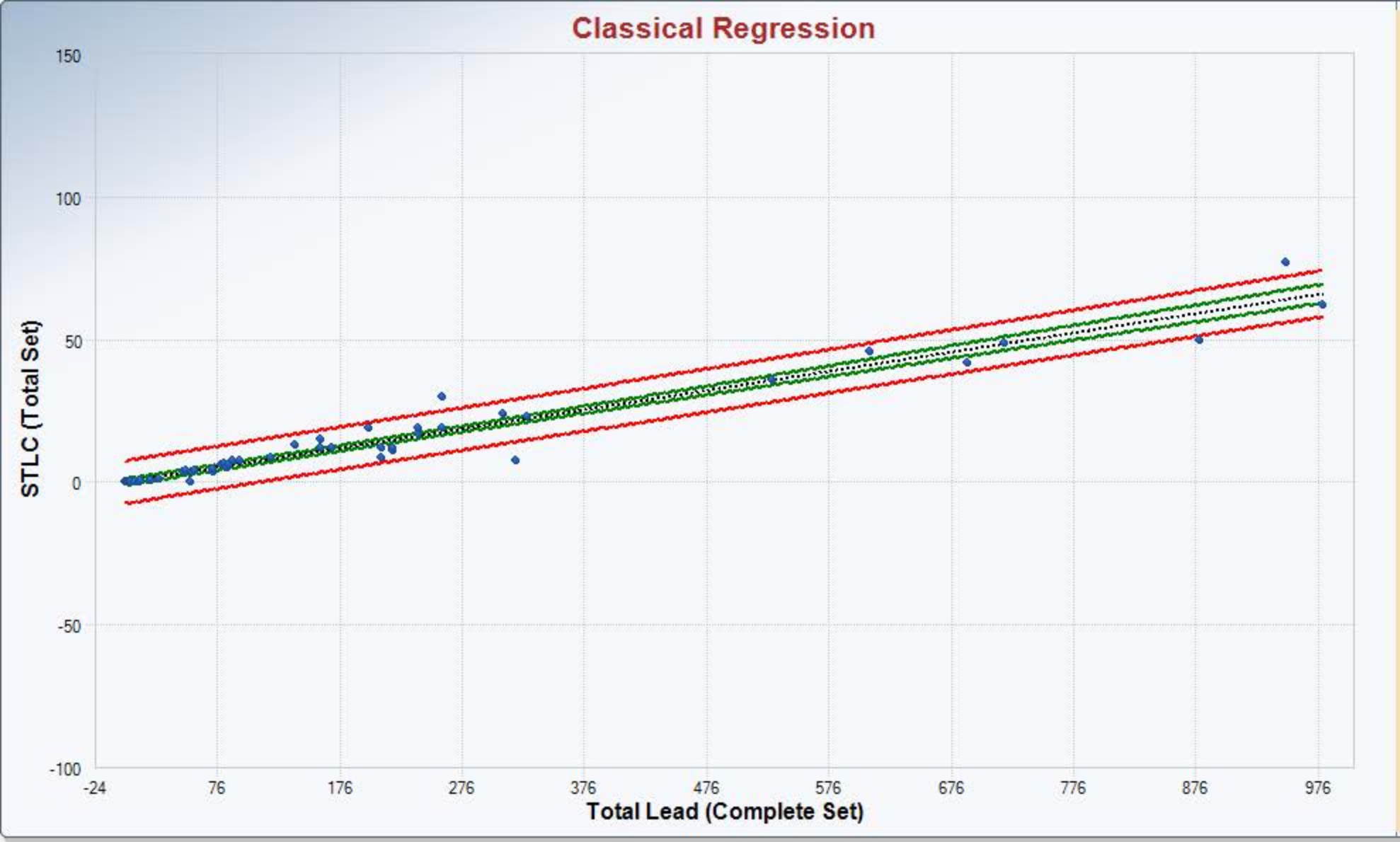
☐ Less Bins
☐ More Bins

Appendix D

	A	B	C	D	E	F	G	H	I	J	K	L
1				Total Lead -	Outlier Tests for Selected Uncensored Variables							
2				User Selected Options								
3			Date/Time of Computation	5/16/2014 8:07:21 AM								
4				From File	WorkSheet.xls							
5				Full Precision	OFF							
6												
7												
8				Rosner's Outlier Test for EN024 Centennial/Beltway - Total Lead								
9												
10												
11				Mean	89.94							
12				Standard Deviation	296.4							
13				Number of data	156							
14				Number of suspected outliers	1							
15												
16				Potential	Obs.	Test	Critical	Critical				
17	#	Mean	sd	outlier	Number	value	value (5%)	value (1%)				
18	1	89.94	295.4	3100	64	10.19	3.531	3.901				
19												
20	For 5% Significance Level, there is 1 Potential Outlier											
21	Potential outliers is: 3100											
22												
23	For 1% Significance Level, there is 1 Potential Outlier											
24	Potential outliers is: 3100											
25												

Appendix D

Appendix E
Linear Regression Analysis



OLS

n	63
Slope	0.0675
Intercept	0.0976
R-sq	0.9512
R	0.9753
Scale Estimate	3.7038
P-value (Reg)	0.0000
P-value (Slope)	0.0000

Mann-Kendall

S	1,658.0000
SD of S	166.4832
Standardized S	9.9530
Approximate p-value	0.0000
Confidence Coefficient	0.9500

Red = Prediction Interval

Green = Confidence Interval

Appendix E

	A	B	C	D	E	F	G	H	I	J	K	L
1				**Ordinary Least Squares Linear Regression Output Sheet**								
2			User Selected Options									
3			Date/Time of Computation	5/14/2014 3:40:58 PM								
4			From File	WorkSheet.xls								
5			Full Precision	OFF								
6												
7			Display Limits	False								
8			Display Regresion Diagnostics	False								
9			Display Regresion Tables	True								
10			Title For Y vs X Plots	Classical Regression								
11			nfidence Level for Regression Line	0.95								
12			Display Confidence Band	True								
13			Display Prediction Band	True								
14												
15												
16			Dependendant Variable (Y-Data)		STLC (Total							
17			Number Reported (Y values)		63							
18			Independent Variable (x-data)		Total Lead (							
19			Number Reported (x-values)		63							
20												
21												
22			**Regression Estimates and Inference Table**									
23	Paramater	Estimates	Std. Error	T-values	p-values							
24	intercept	0.0976	0.566	0.173	0.864							
25	ead (Comple	0.0675	0.00196	34.47	1.060E-41							
26												
27			**OLS ANOVA Table**									
28			**Source of Variation**	**SS**	**DOF**	**MS**	**F-Value**	**P-Value**				
29			**Regression**	16298	1	16298	1188	0.0000				
30			**Error**	836.8	61	13.72						
31			**Total**	17134	62							
32												
33				R Square	0.951							
34				Adjusted R Square	0.95							
35				Sqrt(MSE) = Scale	3.704							
36												
37			**Regression Table**									
38	Obs	Y Vector	Yhat	Residuals	Res/Scale							
39	1	0.125	0.156	-0.0306	-0.00827							
40	2	0.125	0.156	-0.0313	-0.00846							
41	3	0.125	0.192	-0.0671	-0.0181							
42	4	0.125	0.199	-0.0738	-0.0199							
43	5	0.125	0.199	-0.0738	-0.0199							
44	6	0.125	0.219	-0.0941	-0.0254							
45	7	0.125	0.226	-0.101	-0.0272							
46	8	0.125	0.253	-0.128	-0.0345							
47	9	0.125	0.28	-0.155	-0.0418							
48	10	0.125	0.293	-0.168	-0.0454							
49	11	0.125	0.307	-0.182	-0.0491							
50	12	0.125	0.307	-0.182	-0.0491							
51	13	0.125	0.354	-0.229	-0.0618						**Appendix E**	
52	14	0.125	0.368	-0.243	-0.0655							

	A	B	C	D	E	F	G	H	I	J	K	L
53	15	0.125	0.374	-0.249	-0.0673							
54	16	0.125	0.395	-0.27	-0.0728							
55	17	0.125	0.401	-0.276	-0.0746							
56	18	0.23	0.442	-0.212	-0.0572							
57	19	0.22	0.664	-0.444	-0.12							
58	20	0.125	0.691	-0.566	-0.153							
59	21	0.42	0.725	-0.305	-0.0824							
60	22	0.32	0.907	-0.587	-0.159							
61	23	0.47	1.042	-0.572	-0.155							
62	24	0.93	1.515	-0.585	-0.158							
63	25	1.2	2.054	-0.854	-0.231							
64	26	3.8	3.337	0.463	0.125							
65	27	4.1	3.539	0.561	0.151							
66	28	0.28	3.741	-3.461	-0.935							
67	29	3.9	3.809	0.0911	0.0246							
68	30	4.1	3.944	0.156	0.0422							
69	31	3.5	4.956	-1.456	-0.393							
70	32	4.5	4.956	-0.456	-0.123							
71	33	6.2	5.428	0.772	0.208							
72	34	6.6	5.631	0.969	0.262							
73	35	6.7	5.631	1.069	0.289							
74	36	5.1	5.766	-0.666	-0.18							
75	37	6	5.833	0.167	0.045							
76	38	7.6	6.103	1.497	0.404							
77	39	7.5	6.508	0.992	0.268							
78	40	8.4	8.195	0.205	0.0553							
79	41	13	9.545	3.455	0.933							
80	42	12	10.89	1.106	0.299							
81	43	15	10.89	4.106	1.109							
82	44	12	11.57	0.431	0.116							
83	45	19	13.59	5.407	1.46							
84	46	8.6	14.27	-5.668	-1.53							
85	47	12	14.27	-2.268	-0.612							
86	48	11	14.94	-3.943	-1.065							
87	49	12	14.94	-2.943	-0.795							
88	50	17	16.29	0.708	0.191							
89	51	19	16.29	2.708	0.731							
90	52	19	17.64	1.358	0.367							
91	53	30	17.64	12.36	3.337							
92	54	24	21.02	2.984	0.806							
93	55	7.4	21.69	-14.29	-3.858							
94	56	23	22.37	0.635	0.171							
95	57	36	35.86	0.139	0.0375							
96	58	46	41.26	4.741	1.28							
97	59	42	46.66	-4.658	-1.258							
98	60	49	48.68	0.318	0.0859							
99	61	50	59.48	-9.478	-2.559							
100	62	77	64.2	12.8	3.455							
101	63	62	66.23	-4.226	-1.141							
102												

Appendix E

Appendix F
Statistical Analyses of Lead Results

	A	B	C	D	E	F	G	H	I	J	K	L
1	**NB-99 Total Lead (0.0-0.5 ft) - Normal UCL Statistics for Uncensored Full Data Sets**											
2												
3				User Selected Options								
4				Date/Time of Computation	5/15/2014 11:23:55 AM							
5				From File	WorkSheet.xls							
6				Full Precision	OFF							
7				Confidence Coefficient	95%							
8												
9												
10	**NB-99 Total Lead (0.0-0.5 ft)**											
11												
12						**General Statistics**						
13						Total Number of Observations	17		Number of Distinct Observations			17
14									Number of Missing Observations			0
15						Minimum	4		Mean			146.8
16						Maximum	530		Median			85
17						SD	158		SD of logged Data			1.823
18						Coefficient of Variation	1.076		Skewness			0.971
19												
20						**Normal GOF Test**						
21						Shapiro Wilk Test Statistic	0.849		**Shapiro Wilk GOF Test**			
22						5% Shapiro Wilk Critical Value	0.892		Data Not Normal at 5% Significance Level			
23						Lilliefors Test Statistic	0.201		**Lilliefors GOF Test**			
24						5% Lilliefors Critical Value	0.215		Data appear Normal at 5% Significance Level			
25						**Data appear Approximate Normal at 5% Significance Level**						
26												
27						**Assuming Normal Distribution**						
28						**95% Normal UCL**			**95% UCLs (Adjusted for Skewness)**			
29						95% Student's-t UCL	213.7		95% Adjusted-CLT UCL (Chen-1995)			219.5
30									95% Modified-t UCL (Johnson-1978)			215.2
31												
32						**Suggested UCL to Use**						
33						95% Student's-t UCL	213.7					
34												
35	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
36	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
37	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
38	For additional insight the user may want to consult a statistician.											
39												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**NB-99 STLC WET (0.0-0.5 ft) - Normal UCL Statistics for Uncensored Full Data Sets**											
2												
3				User Selected Options								
4				Date/Time of Computation	5/15/2014 11:25:16 AM							
5				From File	WorkSheet.xls							
6				Full Precision	OFF							
7				Confidence Coefficient	95%							
8												
9												
10	**NB-99 STLC WET (0.0-0.5 ft)**											
11												
12	**General Statistics**											
13				Total Number of Observations		17			Number of Distinct Observations			17
14									Number of Missing Observations			0
15				Minimum		0.37			Mean			9.118
16				Maximum		36			Median			6
17				SD		10.58			SD of logged Data			1.659
18				Coefficient of Variation		1.161			Skewness			1.312
19												
20	**Normal GOF Test**											
21				Shapiro Wilk Test Statistic		0.82			**Shapiro Wilk GOF Test**			
22				5% Shapiro Wilk Critical Value		0.892			Data Not Normal at 5% Significance Level			
23				Lilliefors Test Statistic		0.204			**Lilliefors GOF Test**			
24				5% Lilliefors Critical Value		0.215			Data appear Normal at 5% Significance Level			
25	**Data appear Approximate Normal at 5% Significance Level**											
26												
27	**Assuming Normal Distribution**											
28				**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**			
29				95% Student's-t UCL		13.6			95% Adjusted-CLT UCL (Chen-1995)			14.21
30									95% Modified-t UCL (Johnson-1978)			13.73
31												
32	**Suggested UCL to Use**											
33				95% Student's-t UCL		13.6						
34												
35	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
36	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
37	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
38	For additional insight the user may want to consult a statistician.											
39												

	A	B	C	D	E	F	G	H	I	J	K	L
1	NB-99 Total Lead (1.0-1.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3				User Selected Options								
4				Date/Time of Computation	5/15/2014 11:35:24 AM							
5				From File	WorkSheet.xls							
6				Full Precision	OFF							
7				Confidence Coefficient	95%							
8				Number of Bootstrap Operations	2000							
9												
10												
11	NB-99 Total Lead (1.0-1.5 ft)											
12												
13	General Statistics											
14				Total Number of Observations		19			Number of Distinct Observations			18
15									Number of Missing Observations			0
16				Minimum		0.75			Mean			64.04
17				Maximum		690			Median			4.1
18				SD		158			Std. Error of Mean			36.25
19				Coefficient of Variation		2.467			Skewness			3.831
20				Mean of logged Data		2.278			SD of logged Data			1.959
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27				95% Student's-t UCL		126.9			95% Adjusted-CLT UCL (Chen-1995)			157.7
28									95% Modified-t UCL (Johnson-1978)			132.2
29												
30	Nonparametric Distribution Free UCLs											
31				95% CLT UCL		123.7			95% Jackknife UCL			126.9
32				95% Standard Bootstrap UCL		122.5			95% Bootstrap-t UCL			289
33				95% Hall's Bootstrap UCL		333			95% Percentile Bootstrap UCL			128.8
34				95% BCA Bootstrap UCL		163.1						
35				90% Chebyshev(Mean, Sd) UCL		172.8			95% Chebyshev(Mean, Sd) UCL			222
36				97.5% Chebyshev(Mean, Sd) UCL		290.4			99% Chebyshev(Mean, Sd) UCL			424.7
37												
38	Suggested UCL to Use											
39				99% Chebyshev (Mean, Sd) UCL		424.7						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	NB-99 STLC WET (1.0-1.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 11:36:19 AM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	NB-99 STLC WET (1.0-1.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					19	Number of Distinct Observations					16
15							Number of Missing Observations					0
16	Minimum					0.125	Mean					4.271
17	Maximum					42	Median					0.33
18	SD					9.726	Std. Error of Mean					2.231
19	Coefficient of Variation					2.277	Skewness					3.605
20	Mean of logged Data					-0.265	SD of logged Data					1.86
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					8.14	95% Adjusted-CLT UCL (Chen-1995)					9.912
28							95% Modified-t UCL (Johnson-1978)					8.447
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					7.941	95% Jackknife UCL					8.14
32	95% Standard Bootstrap UCL					7.705	95% Bootstrap-t UCL					17.05
33	95% Hall's Bootstrap UCL					20.77	95% Percentile Bootstrap UCL					8.244
34	95% BCA Bootstrap UCL					10.68						
35	90% Chebyshev(Mean, Sd) UCL					10.96	95% Chebyshev(Mean, Sd) UCL					14
36	97.5% Chebyshev(Mean, Sd) UCL					18.2	99% Chebyshev(Mean, Sd) UCL					26.47
37												
38	Suggested UCL to Use											
39	99% Chebyshev (Mean, Sd) UCL					26.47						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**NB-99 Total Lead (2.0-2.5 ft) - Lognormal UCL Statistics for Uncensored Full Data Sets**											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 11:32:24 AM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	**NB-99 Total Lead (2.0-2.5 ft)**											
12												
13	**General Statistics**											
14	Total Number of Observations					18	Number of Distinct Observations					16
15							Number of Missing Observations					0
16	Minimum					0.86	Mean					12.76
17	Maximum					72	Median					2.5
18	SD					22.69	Std. Error of Mean					5.349
19	Coefficient of Variation					1.778	Skewness					2.003
20												
21	**Lognormal GOF Test**											
22	Shapiro Wilk Test Statistic					0.834	**Shapiro Wilk Lognormal GOF Test**					
23	5% Shapiro Wilk Critical Value					0.897	Data Not Lognormal at 5% Significance Level					
24	Lilliefors Test Statistic					0.194	**Lilliefors Lognormal GOF Test**					
25	5% Lilliefors Critical Value					0.209	Data appear Lognormal at 5% Significance Level					
26	**Data appear Approximate Lognormal at 5% Significance Level**											
27												
28	**Lognormal Statistics**											
29	Minimum of Logged Data					-0.151	Mean of logged Data					1.405
30	Maximum of Logged Data					4.277	SD of logged Data					1.398
31												
32	**Assuming Lognormal Distribution**											
33	95% H-UCL					32.71	90% Chebyshev (MVUE) UCL					21.2
34	95% Chebyshev (MVUE) UCL					26.34	97.5% Chebyshev (MVUE) UCL					33.47
35	99% Chebyshev (MVUE) UCL					47.48						
36												
37	**Nonparametric Distribution Free UCLs**											
38	95% CLT UCL					21.56	95% Jackknife UCL					22.07
39	95% Standard Bootstrap UCL					21.29	95% Bootstrap-t UCL					25.9
40	95% Hall's Bootstrap UCL					19.01	95% Percentile Bootstrap UCL					21.88
41	95% BCA Bootstrap UCL					23.91						
42	90% Chebyshev(Mean, Sd) UCL					28.81	95% Chebyshev(Mean, Sd) UCL					36.08
43	97.5% Chebyshev(Mean, Sd) UCL					46.17	99% Chebyshev(Mean, Sd) UCL					65.98
44												
45	**Suggested UCL to Use**											
46	95% Chebyshev (Mean, Sd) UCL					36.08						
47												
48	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
49	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
50	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
51	For additional insight the user may want to consult a statistician.											
52												

	A	B	C	D	E	F	G	H	I	J	K	L
1	NB-99 STLC WET (2.0-2.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 11:33:25 AM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	NB-99 STLC WET (2.0-2.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					18	Number of Distinct Observations					14
15							Number of Missing Observations					0
16	Minimum					0.125	Mean					0.92
17	Maximum					4.5	Median					0.245
18	SD					1.503	Std. Error of Mean					0.354
19	Coefficient of Variation					1.634	Skewness					1.948
20	Mean of logged Data					-0.937	SD of logged Data					1.164
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					1.536	95% Adjusted-CLT UCL (Chen-1995)					1.676
28							95% Modified-t UCL (Johnson-1978)					1.563
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					1.503	95% Jackknife UCL					1.536
32	95% Standard Bootstrap UCL					1.486	95% Bootstrap-t UCL					1.745
33	95% Hall's Bootstrap UCL					1.314	95% Percentile Bootstrap UCL					1.553
34	95% BCA Bootstrap UCL					1.646						
35	90% Chebyshev(Mean, Sd) UCL					1.983	95% Chebyshev(Mean, Sd) UCL					2.464
36	97.5% Chebyshev(Mean, Sd) UCL					3.132	99% Chebyshev(Mean, Sd) UCL					4.445
37												
38	Suggested UCL to Use											
39	95% Chebyshev (Mean, Sd) UCL					2.464						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	NB-99 Total Lead (0.0-1.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 11:30:12 AM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	NB-99 Total Lead (0.0-1.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					36	Number of Distinct Observations					35
15							Number of Missing Observations					0
16	Minimum					0.75	Mean					103.1
17	Maximum					690	Median					16
18	SD					161.3	Std. Error of Mean					26.88
19	Coefficient of Variation					1.563	Skewness					2.145
20	Mean of logged Data					3.062	SD of logged Data					2.049
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					148.6	95% Adjusted-CLT UCL (Chen-1995)					157.6
28							95% Modified-t UCL (Johnson-1978)					150.2
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					147.4	95% Jackknife UCL					148.6
32	95% Standard Bootstrap UCL					147.2	95% Bootstrap-t UCL					165.7
33	95% Hall's Bootstrap UCL					170	95% Percentile Bootstrap UCL					150.2
34	95% BCA Bootstrap UCL					161						
35	90% Chebyshev(Mean, Sd) UCL					183.8	95% Chebyshev(Mean, Sd) UCL					220.3
36	97.5% Chebyshev(Mean, Sd) UCL					271	99% Chebyshev(Mean, Sd) UCL					370.6
37												
38	Suggested UCL to Use											
39	97.5% Chebyshev (Mean, Sd) UCL					271						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	NB-99 STLC WET (0.0-1.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 11:31:13 AM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	NB-99 STLC WET (0.0-1.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					36	Number of Distinct Observations					31
15							Number of Missing Observations					0
16	Minimum					0.125	Mean					6.559
17	Maximum					42	Median					1.18
18	SD					10.29	Std. Error of Mean					1.715
19	Coefficient of Variation					1.568	Skewness					2.152
20	Mean of logged Data					0.448	SD of logged Data					1.904
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					9.457	95% Adjusted-CLT UCL (Chen-1995)					10.04
28							95% Modified-t UCL (Johnson-1978)					9.559
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					9.38	95% Jackknife UCL					9.457
32	95% Standard Bootstrap UCL					9.415	95% Bootstrap-t UCL					10.59
33	95% Hall's Bootstrap UCL					10.76	95% Percentile Bootstrap UCL					9.45
34	95% BCA Bootstrap UCL					10.03						
35	90% Chebyshev(Mean, Sd) UCL					11.7	95% Chebyshev(Mean, Sd) UCL					14.03
36	97.5% Chebyshev(Mean, Sd) UCL					17.27	99% Chebyshev(Mean, Sd) UCL					23.62
37												
38	Suggested UCL to Use											
39	95% Chebyshev (Mean, Sd) UCL					14.03						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	NB-99 Total Lead (0.0-2.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 11:34:11 AM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	NB-99 Total Lead (0.0-2.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					54	Number of Distinct Observations					49
15							Number of Missing Observations					0
16	Minimum					0.75	Mean					73.02
17	Maximum					690	Median					4.7
18	SD					138.5	Std. Error of Mean					18.85
19	Coefficient of Variation					1.897	Skewness					2.768
20	Mean of logged Data					2.51	SD of logged Data					2.005
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					104.6	95% Adjusted-CLT UCL (Chen-1995)					111.6
28							95% Modified-t UCL (Johnson-1978)					105.8
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					104	95% Jackknife UCL					104.6
32	95% Standard Bootstrap UCL					103.7	95% Bootstrap-t UCL					115.7
33	95% Hall's Bootstrap UCL					116.8	95% Percentile Bootstrap UCL					104.5
34	95% BCA Bootstrap UCL					113.2						
35	90% Chebyshev(Mean, Sd) UCL					129.6	95% Chebyshev(Mean, Sd) UCL					155.2
36	97.5% Chebyshev(Mean, Sd) UCL					190.7	99% Chebyshev(Mean, Sd) UCL					260.6
37												
38	Suggested UCL to Use											
39	95% Chebyshev (Mean, Sd) UCL					155.2						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	NB-99 STLC WET (0.0-2.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 11:35:01 AM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	NB-99 STLC WET (0.0-2.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					54	Number of Distinct Observations					43
15							Number of Missing Observations					0
16	Minimum					0.125	Mean					4.68
17	Maximum					42	Median					0.41
18	SD					8.822	Std. Error of Mean					1.201
19	Coefficient of Variation					1.885	Skewness					2.777
20	Mean of logged Data					-0.0137	SD of logged Data					1.806
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					6.689	95% Adjusted-CLT UCL (Chen-1995)					7.139
28							95% Modified-t UCL (Johnson-1978)					6.765
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					6.654	95% Jackknife UCL					6.689
32	95% Standard Bootstrap UCL					6.626	95% Bootstrap-t UCL					7.724
33	95% Hall's Bootstrap UCL					7.429	95% Percentile Bootstrap UCL					6.823
34	95% BCA Bootstrap UCL					7.441						
35	90% Chebyshev(Mean, Sd) UCL					8.281	95% Chebyshev(Mean, Sd) UCL					9.913
36	97.5% Chebyshev(Mean, Sd) UCL					12.18	99% Chebyshev(Mean, Sd) UCL					16.62
37												
38	Suggested UCL to Use											
39	95% Chebyshev (Mean, Sd) UCL					9.913						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	NB-99 Total Lead (1.0-2.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3			User Selected Options									
4			Date/Time of Computation	5/15/2014 11:27:15 AM								
5			From File	WorkSheet.xls								
6			Full Precision	OFF								
7			Confidence Coefficient	95%								
8			Number of Bootstrap Operations	2000								
9												
10												
11	NB-99 Total Lead (1.0-2.5 ft)											
12												
13	General Statistics											
14			Total Number of Observations			37		Number of Distinct Observations				33
15								Number of Missing Observations				0
16			Minimum			0.75		Mean				39.1
17			Maximum			690		Median				3.5
18			SD			115.8		Std. Error of Mean				19.03
19			Coefficient of Variation			2.961		Skewness				5.237
20			Mean of logged Data			1.853		SD of logged Data				1.743
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27			95% Student's-t UCL			71.23		95% Adjusted-CLT UCL (Chen-1995)				87.91
28								95% Modified-t UCL (Johnson-1978)				73.96
29												
30	Nonparametric Distribution Free UCLs											
31			95% CLT UCL			70.4		95% Jackknife UCL				71.23
32			95% Standard Bootstrap UCL			71.09		95% Bootstrap-t UCL				143.5
33			95% Hall's Bootstrap UCL			181.4		95% Percentile Bootstrap UCL				74.17
34			95% BCA Bootstrap UCL			92.78						
35			90% Chebyshev(Mean, Sd) UCL			96.19		95% Chebyshev(Mean, Sd) UCL				122.1
36			97.5% Chebyshev(Mean, Sd) UCL			157.9		99% Chebyshev(Mean, Sd) UCL				228.5
37												
38	Suggested UCL to Use											
39			95% Chebyshev (Mean, Sd) UCL			122.1						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	NB-99 STLC WET (1.0-2.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 11:27:44 AM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	NB-99 STLC WET (1.0-2.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					37	Number of Distinct Observations					28
15							Number of Missing Observations					0
16	Minimum					0.125	Mean					2.641
17	Maximum					42	Median					0.31
18	SD					7.158	Std. Error of Mean					1.177
19	Coefficient of Variation					2.711	Skewness					4.934
20	Mean of logged Data					-0.592	SD of logged Data					1.577
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					4.627	95% Adjusted-CLT UCL (Chen-1995)					5.596
28							95% Modified-t UCL (Johnson-1978)					4.786
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					4.576	95% Jackknife UCL					4.627
32	95% Standard Bootstrap UCL					4.567	95% Bootstrap-t UCL					8.606
33	95% Hall's Bootstrap UCL					11.56	95% Percentile Bootstrap UCL					4.756
34	95% BCA Bootstrap UCL					5.953						
35	90% Chebyshev(Mean, Sd) UCL					6.171	95% Chebyshev(Mean, Sd) UCL					7.77
36	97.5% Chebyshev(Mean, Sd) UCL					9.99	99% Chebyshev(Mean, Sd) UCL					14.35
37												
38	Suggested UCL to Use											
39	95% Chebyshev (Mean, Sd) UCL					7.77						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	SB SR-99 Total Lead (0.0-0.5 ft) - Lognormal UCL Statistics for Uncensored Full Data Sets											
2												
3			User Selected Options									
4			Date/Time of Computation	5/15/2014 11:42:00 AM								
5			From File	WorkSheet.xls								
6			Full Precision	OFF								
7			Confidence Coefficient	95%								
8			Number of Bootstrap Operations	2000								
9												
10												
11	SB SR-99 Total Lead (0.0-0.5 ft)											
12												
13	General Statistics											
14			Total Number of Observations			16	Number of Distinct Observations					16
15							Number of Missing Observations					0
16			Minimum			2.6	Mean					151
17			Maximum			950	Median					16.75
18			SD			266.2	Std. Error of Mean					66.56
19			Coefficient of Variation			1.763	Skewness					2.34
20												
21	Lognormal GOF Test											
22			Shapiro Wilk Test Statistic			0.882	Shapiro Wilk Lognormal GOF Test					
23			5% Shapiro Wilk Critical Value			0.887	Data Not Lognormal at 5% Significance Level					
24			Lilliefors Test Statistic			0.214	Lilliefors Lognormal GOF Test					
25			5% Lilliefors Critical Value			0.222	Data appear Lognormal at 5% Significance Level					
26	Data appear Approximate Lognormal at 5% Significance Level											
27												
28	Lognormal Statistics											
29			Minimum of Logged Data			0.956	Mean of logged Data					3.312
30			Maximum of Logged Data			6.856	SD of logged Data					2.076
31												
32	Assuming Lognormal Distribution											
33			95% H-UCL			2812	90% Chebyshev (MVUE) UCL					482.4
34			95% Chebyshev (MVUE) UCL			623.3	97.5% Chebyshev (MVUE) UCL					819
35			99% Chebyshev (MVUE) UCL			1203						
36												
37	Nonparametric Distribution Free UCLs											
38			95% CLT UCL			260.5	95% Jackknife UCL					267.7
39			95% Standard Bootstrap UCL			257.5	95% Bootstrap-t UCL					465.9
40			95% Hall's Bootstrap UCL			750.7	95% Percentile Bootstrap UCL					269
41			95% BCA Bootstrap UCL			295.5						
42			90% Chebyshev(Mean, Sd) UCL			350.7	95% Chebyshev(Mean, Sd) UCL					441.1
43			97.5% Chebyshev(Mean, Sd) UCL			566.6	99% Chebyshev(Mean, Sd) UCL					813.2
44												
45	Suggested UCL to Use											
46			99% Chebyshev (Mean, Sd) UCL			813.2						
47												
48	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
49	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
50	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
51	For additional insight the user may want to consult a statistician.											
52												

	A	B	C	D	E	F	G	H	I	J	K	L
1	SB SR-99 STLC-WET (0.0-0.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 11:42:57 AM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	SB SR-99 STLC-WET (0.0-0.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					16	Number of Distinct Observations					16
15							Number of Missing Observations					0
16	Minimum					0.125	Mean					11.26
17	Maximum					77	Median					0.625
18	SD					21.3	Std. Error of Mean					5.324
19	Coefficient of Variation					1.891	Skewness					2.478
20	Mean of logged Data					0.52	SD of logged Data					2.144
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					20.59	95% Adjusted-CLT UCL (Chen-1995)					23.54
28							95% Modified-t UCL (Johnson-1978)					21.14
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					20.02	95% Jackknife UCL					20.59
32	95% Standard Bootstrap UCL					19.49	95% Bootstrap-t UCL					37.38
33	95% Hall's Bootstrap UCL					56.73	95% Percentile Bootstrap UCL					20.91
34	95% BCA Bootstrap UCL					23.84						
35	90% Chebyshev(Mean, Sd) UCL					27.23	95% Chebyshev(Mean, Sd) UCL					34.47
36	97.5% Chebyshev(Mean, Sd) UCL					44.51	99% Chebyshev(Mean, Sd) UCL					64.23
37												
38	Suggested UCL to Use											
39	99% Chebyshev (Mean, Sd) UCL					64.23						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	SB SR-99 Total Lead (1.0-1.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 11:50:49 AM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	SB SR-99 Total Lead (1.0-1.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					16	Number of Distinct Observations					14
15							Number of Missing Observations					0
16	Minimum					1.4	Mean					20.51
17	Maximum					160	Median					3.3
18	SD					41.85	Std. Error of Mean					10.46
19	Coefficient of Variation					2.041	Skewness					2.969
20	Mean of logged Data					1.836	SD of logged Data					1.415
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					38.85	95% Adjusted-CLT UCL (Chen-1995)					46.01
28							95% Modified-t UCL (Johnson-1978)					40.14
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					37.71	95% Jackknife UCL					38.85
32	95% Standard Bootstrap UCL					36.84	95% Bootstrap-t UCL					117.9
33	95% Hall's Bootstrap UCL					114.2	95% Percentile Bootstrap UCL					39.99
34	95% BCA Bootstrap UCL					46.85						
35	90% Chebyshev(Mean, Sd) UCL					51.89	95% Chebyshev(Mean, Sd) UCL					66.11
36	97.5% Chebyshev(Mean, Sd) UCL					85.84	99% Chebyshev(Mean, Sd) UCL					124.6
37												
38	Suggested UCL to Use											
39	95% Chebyshev (Mean, Sd) UCL					66.11						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	SB SR-99 STLC-WET (1.0-1.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 11:51:18 AM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	SB SR-99 STLC-WET (1.0-1.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					16	Number of Distinct Observations					14
15							Number of Missing Observations					0
16	Minimum					0.125	Mean					1.783
17	Maximum					15	Median					0.32
18	SD					3.822	Std. Error of Mean					0.956
19	Coefficient of Variation					2.144	Skewness					3.218
20	Mean of logged Data					-0.536	SD of logged Data					1.308
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					3.458	95% Adjusted-CLT UCL (Chen-1995)					4.176
28							95% Modified-t UCL (Johnson-1978)					3.586
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					3.355	95% Jackknife UCL					3.458
32	95% Standard Bootstrap UCL					3.319	95% Bootstrap-t UCL					13.83
33	95% Hall's Bootstrap UCL					10.27	95% Percentile Bootstrap UCL					3.526
34	95% BCA Bootstrap UCL					4.476						
35	90% Chebyshev(Mean, Sd) UCL					4.649	95% Chebyshev(Mean, Sd) UCL					5.948
36	97.5% Chebyshev(Mean, Sd) UCL					7.75	99% Chebyshev(Mean, Sd) UCL					11.29
37												
38	Suggested UCL to Use											
39	95% Chebyshev (Mean, Sd) UCL					5.948						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	SB SR-99 Total Lead (2.0-2.5 ft) - Lognormal UCL Statistics for Uncensored Full Data Sets											
2												
3			User Selected Options									
4			Date/Time of Computation	5/15/2014 11:46:04 AM								
5			From File	WorkSheet.xls								
6			Full Precision	OFF								
7			Confidence Coefficient	95%								
8			Number of Bootstrap Operations	2000								
9												
10												
11	SB SR-99 Total Lead (2.0-2.5 ft)											
12												
13	General Statistics											
14			Total Number of Observations			14	Number of Distinct Observations					11
15							Number of Missing Observations					0
16			Minimum			0.87	Mean					4.055
17			Maximum			27	Median					2.25
18			SD			6.681	Std. Error of Mean					1.786
19			Coefficient of Variation			1.648	Skewness					3.595
20												
21	Lognormal GOF Test											
22			Shapiro Wilk Test Statistic			0.827	Shapiro Wilk Lognormal GOF Test					
23			5% Shapiro Wilk Critical Value			0.874	Data Not Lognormal at 5% Significance Level					
24			Lilliefors Test Statistic			0.197	Lilliefors Lognormal GOF Test					
25			5% Lilliefors Critical Value			0.237	Data appear Lognormal at 5% Significance Level					
26	Data appear Approximate Lognormal at 5% Significance Level											
27												
28	Lognormal Statistics											
29			Minimum of Logged Data			-0.139	Mean of logged Data					0.912
30			Maximum of Logged Data			3.296	SD of logged Data					0.823
31												
32	Assuming Lognormal Distribution											
33			95% H-UCL			6.197	90% Chebyshev (MVUE) UCL					5.768
34			95% Chebyshev (MVUE) UCL			6.846	97.5% Chebyshev (MVUE) UCL					8.343
35			99% Chebyshev (MVUE) UCL			11.28						
36												
37	Nonparametric Distribution Free UCLs											
38			95% CLT UCL			6.992	95% Jackknife UCL					7.217
39			95% Standard Bootstrap UCL			6.839	95% Bootstrap-t UCL					20.69
40			95% Hall's Bootstrap UCL			19.79	95% Percentile Bootstrap UCL					7.439
41			95% BCA Bootstrap UCL			9.721						
42			90% Chebyshev(Mean, Sd) UCL			9.412	95% Chebyshev(Mean, Sd) UCL					11.84
43			97.5% Chebyshev(Mean, Sd) UCL			15.21	99% Chebyshev(Mean, Sd) UCL					21.82
44												
45	Suggested UCL to Use											
46			95% H-UCL			6.197						
47												
48	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
49	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
50	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
51	For additional insight the user may want to consult a statistician.											
52												

	A	B	C	D	E	F	G	H	I	J	K	L
53	ProUCL computes and outputs H-statistic based UCLs for historical reasons only.											
54	H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.											
55	It is therefore recommended to avoid the use of H-statistic based 95% UCLs.											
56	Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.											
57												

	A	B	C	D	E	F	G	H	I	J	K	L
1	SB SR-99 STLC-WET (2.0-2.5 ft) - Lognormal UCL Statistics for Uncensored Full Data Sets											
2												
3				User Selected Options								
4				Date/Time of Computation	5/15/2014 11:48:56 AM							
5				From File	WorkSheet.xls							
6				Full Precision	OFF							
7				Confidence Coefficient	95%							
8				Number of Bootstrap Operations	2000							
9												
10												
11	SB SR-99 STLC-WET (2.0-2.5 ft)											
12												
13	General Statistics											
14				Total Number of Observations		14			Number of Distinct Observations			8
15									Number of Missing Observations			0
16				Minimum		0.125			Mean			0.326
17				Maximum		1.92			Median			0.215
18				SD		0.465			Std. Error of Mean			0.124
19				Coefficient of Variation		1.425			Skewness			3.583
20												
21	Lognormal GOF Test											
22				Shapiro Wilk Test Statistic		0.744			Shapiro Wilk Lognormal GOF Test			
23				5% Shapiro Wilk Critical Value		0.874			Data Not Lognormal at 5% Significance Level			
24				Lilliefors Test Statistic		0.225			Lilliefors Lognormal GOF Test			
25				5% Lilliefors Critical Value		0.237			Data appear Lognormal at 5% Significance Level			
26	Data appear Approximate Lognormal at 5% Significance Level											
27												
28	Lognormal Statistics											
29				Minimum of Logged Data		-2.079			Mean of logged Data			-1.493
30				Maximum of Logged Data		0.652			SD of logged Data			0.718
31												
32	Assuming Lognormal Distribution											
33				95% H-UCL		0.465			90% Chebyshev (MVUE) UCL			0.457
34				95% Chebyshev (MVUE) UCL		0.535			97.5% Chebyshev (MVUE) UCL			0.643
35				99% Chebyshev (MVUE) UCL		0.856						
36												
37	Nonparametric Distribution Free UCLs											
38				95% CLT UCL		0.53			95% Jackknife UCL			0.546
39				95% Standard Bootstrap UCL		0.523			95% Bootstrap-t UCL			1.328
40				95% Hall's Bootstrap UCL		1.385			95% Percentile Bootstrap UCL			0.557
41				95% BCA Bootstrap UCL		0.708						
42				90% Chebyshev(Mean, Sd) UCL		0.699			95% Chebyshev(Mean, Sd) UCL			0.867
43				97.5% Chebyshev(Mean, Sd) UCL		1.101			99% Chebyshev(Mean, Sd) UCL			1.561
44												
45	Suggested UCL to Use											
46				95% H-UCL		0.465						
47												
48	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
49	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
50	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
51	For additional insight the user may want to consult a statistician.											
52												

	A	B	C	D	E	F	G	H	I	J	K	L
53	ProUCL computes and outputs H-statistic based UCLs for historical reasons only.											
54	H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.											
55	It is therefore recommended to avoid the use of H-statistic based 95% UCLs.											
56	Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.											
57												

	A	B	C	D	E	F	G	H	I	J	K	L
1	SB SR-99 Total Lead (0.0-1.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 11:44:39 AM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	SB SR-99 Total Lead (0.0-1.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					32	Number of Distinct Observations					29
15							Number of Missing Observations					0
16	Minimum					1.4	Mean					85.76
17	Maximum					950	Median					6.1
18	SD					198.8	Std. Error of Mean					35.15
19	Coefficient of Variation					2.319	Skewness					3.438
20	Mean of logged Data					2.574	SD of logged Data					1.902
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					145.4	95% Adjusted-CLT UCL (Chen-1995)					166.4
28							95% Modified-t UCL (Johnson-1978)					148.9
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					143.6	95% Jackknife UCL					145.4
32	95% Standard Bootstrap UCL					142.9	95% Bootstrap-t UCL					236
33	95% Hall's Bootstrap UCL					389.6	95% Percentile Bootstrap UCL					151.7
34	95% BCA Bootstrap UCL					176.1						
35	90% Chebyshev(Mean, Sd) UCL					191.2	95% Chebyshev(Mean, Sd) UCL					239
36	97.5% Chebyshev(Mean, Sd) UCL					305.3	99% Chebyshev(Mean, Sd) UCL					435.5
37												
38	Suggested UCL to Use											
39	95% Chebyshev (Mean, Sd) UCL					239						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	SB SR-99 STLC-WET (0.0-1.5) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			6/12/2014 6:21:35 AM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	SB SR-99 STLC-WET (0.0-1.5)											
12												
13	General Statistics											
14	Total Number of Observations					32	Number of Distinct Observations					27
15							Number of Missing Observations					0
16	Minimum					0.125	Mean					6.521
17	Maximum					77	Median					0.41
18	SD					15.8	Std. Error of Mean					2.793
19	Coefficient of Variation					2.423	Skewness					3.576
20	Mean of logged Data					-0.00776	SD of logged Data					1.828
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					11.26	95% Adjusted-CLT UCL (Chen-1995)					13
28							95% Modified-t UCL (Johnson-1978)					11.55
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					11.12	95% Jackknife UCL					11.26
32	95% Standard Bootstrap UCL					11.05	95% Bootstrap-t UCL					18.67
33	95% Hall's Bootstrap UCL					29.66	95% Percentile Bootstrap UCL					11.72
34	95% BCA Bootstrap UCL					13.39						
35	90% Chebyshev(Mean, Sd) UCL					14.9	95% Chebyshev(Mean, Sd) UCL					18.7
36	97.5% Chebyshev(Mean, Sd) UCL					23.97	99% Chebyshev(Mean, Sd) UCL					34.31
37												
38	Suggested UCL to Use											
39	95% Chebyshev (Mean, Sd) UCL					18.7						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	SB SR-99 Total Lead (0.0-2.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 11:49:47 AM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	SB SR-99 Total Lead (0.0-2.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					46	Number of Distinct Observations					39
15							Number of Missing Observations					0
16	Minimum					0.87	Mean					60.89
17	Maximum					950	Median					3.45
18	SD					169.4	Std. Error of Mean					24.98
19	Coefficient of Variation					2.782	Skewness					4.181
20	Mean of logged Data					2.068	SD of logged Data					1.812
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					102.8	95% Adjusted-CLT UCL (Chen-1995)					118.4
28							95% Modified-t UCL (Johnson-1978)					105.4
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					102	95% Jackknife UCL					102.8
32	95% Standard Bootstrap UCL					101.1	95% Bootstrap-t UCL					171.5
33	95% Hall's Bootstrap UCL					268.3	95% Percentile Bootstrap UCL					108
34	95% BCA Bootstrap UCL					118.5						
35	90% Chebyshev(Mean, Sd) UCL					135.8	95% Chebyshev(Mean, Sd) UCL					169.8
36	97.5% Chebyshev(Mean, Sd) UCL					216.9	99% Chebyshev(Mean, Sd) UCL					309.4
37												
38	Suggested UCL to Use											
39	95% Chebyshev (Mean, Sd) UCL					169.8						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	SB SR-99 STLC-WET (0.0-2.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 11:50:20 AM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	SB SR-99 STLC-WET (0.0-2.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					46	Number of Distinct Observations					31
15							Number of Missing Observations					0
16	Minimum					0.125	Mean					4.636
17	Maximum					77	Median					0.3
18	SD					13.43	Std. Error of Mean					1.98
19	Coefficient of Variation					2.897	Skewness					4.343
20	Mean of logged Data					-0.46	SD of logged Data					1.711
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					7.961	95% Adjusted-CLT UCL (Chen-1995)					9.248
28							95% Modified-t UCL (Johnson-1978)					8.173
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					7.893	95% Jackknife UCL					7.961
32	95% Standard Bootstrap UCL					7.88	95% Bootstrap-t UCL					13.61
33	95% Hall's Bootstrap UCL					20.53	95% Percentile Bootstrap UCL					8.049
34	95% BCA Bootstrap UCL					9.682						
35	90% Chebyshev(Mean, Sd) UCL					10.58	95% Chebyshev(Mean, Sd) UCL					13.27
36	97.5% Chebyshev(Mean, Sd) UCL					17	99% Chebyshev(Mean, Sd) UCL					24.34
37												
38	Suggested UCL to Use											
39	95% Chebyshev (Mean, Sd) UCL					13.27						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	SB SR-99 Total Lead (1.0-2.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 11:43:34 AM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	SB SR-99 Total Lead (1.0-2.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					30	Number of Distinct Observations					24
15							Number of Missing Observations					0
16	Minimum					0.87	Mean					12.83
17	Maximum					160	Median					2.85
18	SD					31.55	Std. Error of Mean					5.76
19	Coefficient of Variation					2.459	Skewness					4.064
20	Mean of logged Data					1.405	SD of logged Data					1.249
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					22.62	95% Adjusted-CLT UCL (Chen-1995)					26.87
28							95% Modified-t UCL (Johnson-1978)					23.33
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					22.3	95% Jackknife UCL					22.62
32	95% Standard Bootstrap UCL					22.29	95% Bootstrap-t UCL					53.05
33	95% Hall's Bootstrap UCL					59.4	95% Percentile Bootstrap UCL					23.87
34	95% BCA Bootstrap UCL					29.69						
35	90% Chebyshev(Mean, Sd) UCL					30.11	95% Chebyshev(Mean, Sd) UCL					37.94
36	97.5% Chebyshev(Mean, Sd) UCL					48.8	99% Chebyshev(Mean, Sd) UCL					70.14
37												
38	Suggested UCL to Use											
39	95% Chebyshev (Mean, Sd) UCL					37.94						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	SB SR-99 STLC-WET (1.0-2.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 11:44:04 AM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	SB SR-99 STLC-WET (1.0-2.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					30	Number of Distinct Observations					19
15							Number of Missing Observations					0
16	Minimum					0.125	Mean					1.103
17	Maximum					15	Median					0.265
18	SD					2.863	Std. Error of Mean					0.523
19	Coefficient of Variation					2.596	Skewness					4.408
20	Mean of logged Data					-0.983	SD of logged Data					1.163
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					1.991	95% Adjusted-CLT UCL (Chen-1995)					2.413
28							95% Modified-t UCL (Johnson-1978)					2.061
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					1.963	95% Jackknife UCL					1.991
32	95% Standard Bootstrap UCL					1.968	95% Bootstrap-t UCL					5.737
33	95% Hall's Bootstrap UCL					5.323	95% Percentile Bootstrap UCL					2.008
34	95% BCA Bootstrap UCL					2.745						
35	90% Chebyshev(Mean, Sd) UCL					2.671	95% Chebyshev(Mean, Sd) UCL					3.382
36	97.5% Chebyshev(Mean, Sd) UCL					4.368	99% Chebyshev(Mean, Sd) UCL					6.305
37												
38	Suggested UCL to Use											
39	95% Chebyshev (Mean, Sd) UCL					3.382						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	EB SR-58 Total Lead (0.0-0.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 11:57:43 AM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	EB SR-58 Total Lead (0.0-0.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					41	Number of Distinct Observations					40
15							Number of Missing Observations					0
16	Minimum					1.01	Mean					54.26
17	Maximum					720	Median					3.35
18	SD					133	Std. Error of Mean					20.76
19	Coefficient of Variation					2.45	Skewness					3.823
20	Mean of logged Data					2.155	SD of logged Data					1.843
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					89.22	95% Adjusted-CLT UCL (Chen-1995)					101.7
28							95% Modified-t UCL (Johnson-1978)					91.28
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					88.41	95% Jackknife UCL					89.22
32	95% Standard Bootstrap UCL					86.65	95% Bootstrap-t UCL					131.4
33	95% Hall's Bootstrap UCL					120	95% Percentile Bootstrap UCL					89.78
34	95% BCA Bootstrap UCL					104.7						
35	90% Chebyshev(Mean, Sd) UCL					116.5	95% Chebyshev(Mean, Sd) UCL					144.8
36	97.5% Chebyshev(Mean, Sd) UCL					183.9	99% Chebyshev(Mean, Sd) UCL					260.9
37												
38	Suggested UCL to Use											
39	95% Chebyshev (Mean, Sd) UCL					144.8						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	EB SR-58 STLC-WET (0.0-0.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 11:58:36 AM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	EB SR-58 STLC-WET (0.0-0.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					41	Number of Distinct Observations					28
15							Number of Missing Observations					0
16	Minimum					0.17	Mean					3.694
17	Maximum					49	Median					0.32
18	SD					9.357	Std. Error of Mean					1.461
19	Coefficient of Variation					2.533	Skewness					3.708
20	Mean of logged Data					-0.304	SD of logged Data					1.565
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					6.155	95% Adjusted-CLT UCL (Chen-1995)					7.002
28							95% Modified-t UCL (Johnson-1978)					6.296
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					6.098	95% Jackknife UCL					6.155
32	95% Standard Bootstrap UCL					6.094	95% Bootstrap-t UCL					9.258
33	95% Hall's Bootstrap UCL					7.149	95% Percentile Bootstrap UCL					6.19
34	95% BCA Bootstrap UCL					7.628						
35	90% Chebyshev(Mean, Sd) UCL					8.078	95% Chebyshev(Mean, Sd) UCL					10.06
36	97.5% Chebyshev(Mean, Sd) UCL					12.82	99% Chebyshev(Mean, Sd) UCL					18.23
37												
38	Suggested UCL to Use											
39	95% Chebyshev (Mean, Sd) UCL					10.06						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**EB SR-58 Total Lead (1.0-1.5 ft) - Gamma UCL Statistics for Uncensored Full Data Sets**											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 12:04:24 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	**EB SR-58 Total Lead (1.0-1.5 ft)**											
12												
13	**General Statistics**											
14	Total Number of Observations					41	Number of Distinct Observations					36
15							Number of Missing Observations					0
16	Minimum					0.5	Mean					4.366
17	Maximum					28	Median					2.92
18	SD					5.139	SD of logged Data					0.971
19	Coefficient of Variation					1.177	Skewness					3.035
20												
21	**Gamma GOF Test**											
22	A-D Test Statistic					0.752	**Anderson-Darling Gamma GOF Test**					
23	5% A-D Critical Value					0.773	Data appear Gamma Distributed at 5% Significance Level					
24	K-S Test Statistic					0.132	**Kolmogrov-Smirnoff Gamma GOF Test**					
25	5% K-S Critical Value					0.141	Data appear Gamma Distributed at 5% Significance Level					
26	**Data appear Gamma Distributed at 5% Significance Level**											
27												
28	**Gamma Statistics**											
29	k hat (MLE)					1.215	k star (bias corrected MLE)					1.143
30	Theta hat (MLE)					3.592	Theta star (bias corrected MLE)					3.821
31	nu hat (MLE)					99.66	nu star (bias corrected)					93.7
32	MLE Mean (bias corrected)					4.366	MLE Sd (bias corrected)					4.084
33							Approximate Chi Square Value (0.05)					72.38
34	Adjusted Level of Significance					0.0441	Adjusted Chi Square Value					71.7
35												
36	**Assuming Gamma Distribution**											
37	95% Approximate Gamma UCL (use when n>=50)					5.652	95% Adjusted Gamma UCL (use when n<50)					5.706
38												
39	**Suggested UCL to Use**											
40	95% Adjusted Gamma UCL					5.706						
41												
42	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
43	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
44	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
45	For additional insight the user may want to consult a statistician.											
46												

	A	B	C	D	E	F	G	H	I	J	K	L
1	EB SR-58 STLC-WET (1.0-1.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3				User Selected Options								
4				Date/Time of Computation	5/15/2014 12:05:02 PM							
5				From File	WorkSheet.xls							
6				Full Precision	OFF							
7				Confidence Coefficient	95%							
8				Number of Bootstrap Operations	2000							
9												
10												
11	EB SR-58 STLC-WET (1.0-1.5 ft)											
12												
13	General Statistics											
14				Total Number of Observations		41			Number of Distinct Observations			23
15									Number of Missing Observations			0
16				Minimum		0.125			Mean			0.377
17				Maximum		1.99			Median			0.29
18				SD		0.348			Std. Error of Mean			0.0543
19				Coefficient of Variation		0.921			Skewness			3.14
20				Mean of logged Data		-1.215			SD of logged Data			0.64
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27				95% Student's-t UCL		0.469			95% Adjusted-CLT UCL (Chen-1995)			0.495
28									95% Modified-t UCL (Johnson-1978)			0.473
29												
30	Nonparametric Distribution Free UCLs											
31				95% CLT UCL		0.466			95% Jackknife UCL			0.469
32				95% Standard Bootstrap UCL		0.465			95% Bootstrap-t UCL			0.529
33				95% Hall's Bootstrap UCL		0.917			95% Percentile Bootstrap UCL			0.47
34				95% BCA Bootstrap UCL		0.506						
35				90% Chebyshev(Mean, Sd) UCL		0.54			95% Chebyshev(Mean, Sd) UCL			0.614
36				97.5% Chebyshev(Mean, Sd) UCL		0.716			99% Chebyshev(Mean, Sd) UCL			0.917
37												
38	Suggested UCL to Use											
39				95% Chebyshev (Mean, Sd) UCL		0.614						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	EB SR-58 Total Lead (2.0-2.5 ft) - Lognormal UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 12:01:49 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	EB SR-58 Total Lead (2.0-2.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					41	Number of Distinct Observations					34
15							Number of Missing Observations					0
16	Minimum					0.5	Mean					4.23
17	Maximum					27.1	Median					2.5
18	SD					5.611	Std. Error of Mean					0.876
19	Coefficient of Variation					1.327	Skewness					3.03
20												
21	Lognormal GOF Test											
22	Shapiro Wilk Test Statistic					0.949	Shapiro Wilk Lognormal GOF Test					
23	5% Shapiro Wilk Critical Value					0.941	Data appear Lognormal at 5% Significance Level					
24	Lilliefors Test Statistic					0.102	Lilliefors Lognormal GOF Test					
25	5% Lilliefors Critical Value					0.138	Data appear Lognormal at 5% Significance Level					
26	Data appear Lognormal at 5% Significance Level											
27												
28	Lognormal Statistics											
29	Minimum of Logged Data					-0.693	Mean of logged Data					0.944
30	Maximum of Logged Data					3.3	SD of logged Data					0.961
31												
32	Assuming Lognormal Distribution											
33	95% H-UCL					5.793	90% Chebyshev (MVUE) UCL					6.103
34	95% Chebyshev (MVUE) UCL					7.049	97.5% Chebyshev (MVUE) UCL					8.363
35	99% Chebyshev (MVUE) UCL					10.94						
36												
37	Nonparametric Distribution Free UCLs											
38	95% CLT UCL					5.671	95% Jackknife UCL					5.705
39	95% Standard Bootstrap UCL					5.645	95% Bootstrap-t UCL					6.674
40	95% Hall's Bootstrap UCL					6.828	95% Percentile Bootstrap UCL					5.726
41	95% BCA Bootstrap UCL					6.099						
42	90% Chebyshev(Mean, Sd) UCL					6.858	95% Chebyshev(Mean, Sd) UCL					8.049
43	97.5% Chebyshev(Mean, Sd) UCL					9.702	99% Chebyshev(Mean, Sd) UCL					12.95
44												
45	Suggested UCL to Use											
46	95% H-UCL					5.793						
47												
48	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
49	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
50	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
51	For additional insight the user may want to consult a statistician.											
52												

	A	B	C	D	E	F	G	H	I	J	K	L
53	ProUCL computes and outputs H-statistic based UCLs for historical reasons only.											
54	H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.											
55	It is therefore recommended to avoid the use of H-statistic based 95% UCLs.											
56	Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.											
57												

	A	B	C	D	E	F	G	H	I	J	K	L
1	EB SR-58 STLC-WET (2.0-2.5 ft) - Lognormal UCL Statistics for Uncensored Full Data Sets											
2												
3				User Selected Options								
4				Date/Time of Computation	5/15/2014 12:02:24 PM							
5				From File	WorkSheet.xls							
6				Full Precision	OFF							
7				Confidence Coefficient	95%							
8				Number of Bootstrap Operations	2000							
9												
10												
11	EB SR-58 STLC-WET (2.0-2.5 ft)											
12												
13	General Statistics											
14				Total Number of Observations		41	Number of Distinct Observations					22
15							Number of Missing Observations					0
16				Minimum		0.125	Mean					0.37
17				Maximum		1.93	Median					0.27
18				SD		0.384	Std. Error of Mean					0.06
19				Coefficient of Variation		1.038	Skewness					2.992
20												
21	Lognormal GOF Test											
22				Shapiro Wilk Test Statistic		0.889	Shapiro Wilk Lognormal GOF Test					
23				5% Shapiro Wilk Critical Value		0.941	Data Not Lognormal at 5% Significance Level					
24				Lilliefors Test Statistic		0.118	Lilliefors Lognormal GOF Test					
25				5% Lilliefors Critical Value		0.138	Data appear Lognormal at 5% Significance Level					
26	Data appear Approximate Lognormal at 5% Significance Level											
27												
28	Lognormal Statistics											
29				Minimum of Logged Data		-2.079	Mean of logged Data					-1.276
30				Maximum of Logged Data		0.658	SD of logged Data					0.673
31												
32	Assuming Lognormal Distribution											
33				95% H-UCL		0.434	90% Chebyshev (MVUE) UCL					0.466
34				95% Chebyshev (MVUE) UCL		0.52	97.5% Chebyshev (MVUE) UCL					0.595
35				99% Chebyshev (MVUE) UCL		0.742						
36												
37	Nonparametric Distribution Free UCLs											
38				95% CLT UCL		0.469	95% Jackknife UCL					0.471
39				95% Standard Bootstrap UCL		0.467	95% Bootstrap-t UCL					0.556
40				95% Hall's Bootstrap UCL		0.517	95% Percentile Bootstrap UCL					0.474
41				95% BCA Bootstrap UCL		0.5						
42				90% Chebyshev(Mean, Sd) UCL		0.55	95% Chebyshev(Mean, Sd) UCL					0.631
43				97.5% Chebyshev(Mean, Sd) UCL		0.744	99% Chebyshev(Mean, Sd) UCL					0.967
44												
45	Suggested UCL to Use											
46				95% H-UCL		0.434						
47												
48	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
49	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
50	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
51	For additional insight the user may want to consult a statistician.											
52												

	A	B	C	D	E	F	G	H	I	J	K	L
53	ProUCL computes and outputs H-statistic based UCLs for historical reasons only.											
54	H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.											
55	It is therefore recommended to avoid the use of H-statistic based 95% UCLs.											
56	Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.											
57												

	A	B	C	D	E	F	G	H	I	J	K	L
1	EB SR-58 Total Lead (0.0-1.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 12:00:40 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	EB SR-58 Total Lead (0.0-1.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					82	Number of Distinct Observations					73
15							Number of Missing Observations					0
16	Minimum					0.5	Mean					29.31
17	Maximum					720	Median					3.085
18	SD					96.81	Std. Error of Mean					10.69
19	Coefficient of Variation					3.303	Skewness					5.505
20	Mean of logged Data					1.582	SD of logged Data					1.573
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					47.1	95% Adjusted-CLT UCL (Chen-1995)					53.84
28							95% Modified-t UCL (Johnson-1978)					48.18
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					46.9	95% Jackknife UCL					47.1
32	95% Standard Bootstrap UCL					46.68	95% Bootstrap-t UCL					67.47
33	95% Hall's Bootstrap UCL					65.74	95% Percentile Bootstrap UCL					48.72
34	95% BCA Bootstrap UCL					55.24						
35	90% Chebyshev(Mean, Sd) UCL					61.38	95% Chebyshev(Mean, Sd) UCL					75.91
36	97.5% Chebyshev(Mean, Sd) UCL					96.07	99% Chebyshev(Mean, Sd) UCL					135.7
37												
38	Suggested UCL to Use											
39	95% Chebyshev (Mean, Sd) UCL					75.91						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	EB SR-58 STLC-WET (0.0-1.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 12:01:10 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	EB SR-58 STLC-WET (0.0-1.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					82	Number of Distinct Observations					43
15							Number of Missing Observations					0
16	Minimum					0.125	Mean					2.035
17	Maximum					49	Median					0.29
18	SD					6.789	Std. Error of Mean					0.75
19	Coefficient of Variation					3.335	Skewness					5.38
20	Mean of logged Data					-0.759	SD of logged Data					1.273
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					3.283	95% Adjusted-CLT UCL (Chen-1995)					3.744
28							95% Modified-t UCL (Johnson-1978)					3.357
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					3.269	95% Jackknife UCL					3.283
32	95% Standard Bootstrap UCL					3.263	95% Bootstrap-t UCL					4.833
33	95% Hall's Bootstrap UCL					3.767	95% Percentile Bootstrap UCL					3.335
34	95% BCA Bootstrap UCL					3.835						
35	90% Chebyshev(Mean, Sd) UCL					4.284	95% Chebyshev(Mean, Sd) UCL					5.303
36	97.5% Chebyshev(Mean, Sd) UCL					6.717	99% Chebyshev(Mean, Sd) UCL					9.495
37												
38	Suggested UCL to Use											
39	95% Chebyshev (Mean, Sd) UCL					5.303						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	EB SR-58 Total Lead (0.0-2.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 12:02:58 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	EB SR-58 Total Lead (0.0-2.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					123	Number of Distinct Observations					105
15							Number of Missing Observations					0
16	Minimum					0.5	Mean					20.95
17	Maximum					720	Median					2.89
18	SD					79.83	Std. Error of Mean					7.198
19	Coefficient of Variation					3.811	Skewness					6.771
20	Mean of logged Data					1.369	SD of logged Data					1.427
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					32.88	95% Adjusted-CLT UCL (Chen-1995)					37.49
28							95% Modified-t UCL (Johnson-1978)					33.61
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					32.79	95% Jackknife UCL					32.88
32	95% Standard Bootstrap UCL					32.84	95% Bootstrap-t UCL					44.94
33	95% Hall's Bootstrap UCL					46.18	95% Percentile Bootstrap UCL					33.86
34	95% BCA Bootstrap UCL					38.33						
35	90% Chebyshev(Mean, Sd) UCL					42.55	95% Chebyshev(Mean, Sd) UCL					52.33
36	97.5% Chebyshev(Mean, Sd) UCL					65.9	99% Chebyshev(Mean, Sd) UCL					92.57
37												
38	Suggested UCL to Use											
39	95% Chebyshev (Mean, Sd) UCL					52.33						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	EB SR-58 STLC-WET (0.0-2.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 12:03:27 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	EB SR-58 STLC-WET (0.0-2.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					123	Number of Distinct Observations					56
15							Number of Missing Observations					0
16	Minimum					0.125	Mean					1.48
17	Maximum					49	Median					0.28
18	SD					5.592	Std. Error of Mean					0.504
19	Coefficient of Variation					3.777	Skewness					6.632
20	Mean of logged Data					-0.932	SD of logged Data					1.134
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					2.316	95% Adjusted-CLT UCL (Chen-1995)					2.632
28							95% Modified-t UCL (Johnson-1978)					2.366
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					2.31	95% Jackknife UCL					2.316
32	95% Standard Bootstrap UCL					2.302	95% Bootstrap-t UCL					3.509
33	95% Hall's Bootstrap UCL					2.753	95% Percentile Bootstrap UCL					2.41
34	95% BCA Bootstrap UCL					2.734						
35	90% Chebyshev(Mean, Sd) UCL					2.993	95% Chebyshev(Mean, Sd) UCL					3.678
36	97.5% Chebyshev(Mean, Sd) UCL					4.629	99% Chebyshev(Mean, Sd) UCL					6.497
37												
38	Suggested UCL to Use											
39	95% Chebyshev (Mean, Sd) UCL					3.678						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	EB SR-58 Total Lead (1.0-2.5 ft) - Lognormal UCL Statistics for Uncensored Full Data Sets											
2												
3				User Selected Options								
4				Date/Time of Computation	5/15/2014 11:59:30 AM							
5				From File	WorkSheet.xls							
6				Full Precision	OFF							
7				Confidence Coefficient	95%							
8				Number of Bootstrap Operations	2000							
9												
10												
11	EB SR-58 Total Lead (1.0-2.5 ft)											
12												
13	General Statistics											
14				Total Number of Observations		82	Number of Distinct Observations					68
15							Number of Missing Observations					0
16				Minimum		0.5	Mean					4.298
17				Maximum		28	Median					2.8
18				SD		5.347	Std. Error of Mean					0.59
19				Coefficient of Variation		1.244	Skewness					2.98
20												
21	Lognormal GOF Test											
22				Shapiro Wilk Test Statistic		0.954	Shapiro Wilk Lognormal GOF Test					
23				5% Shapiro Wilk P Value		0.017	Data Not Lognormal at 5% Significance Level					
24				Lilliefors Test Statistic		0.0687	Lilliefors Lognormal GOF Test					
25				5% Lilliefors Critical Value		0.0978	Data appear Lognormal at 5% Significance Level					
26	Data appear Approximate Lognormal at 5% Significance Level											
27												
28	Lognormal Statistics											
29				Minimum of Logged Data		-0.693	Mean of logged Data					0.976
30				Maximum of Logged Data		3.332	SD of logged Data					0.96
31												
32	Assuming Lognormal Distribution											
33				95% H-UCL		5.323	90% Chebyshev (MVUE) UCL					5.746
34				95% Chebyshev (MVUE) UCL		6.457	97.5% Chebyshev (MVUE) UCL					7.444
35				99% Chebyshev (MVUE) UCL		9.382						
36												
37	Nonparametric Distribution Free UCLs											
38				95% CLT UCL		5.269	95% Jackknife UCL					5.28
39				95% Standard Bootstrap UCL		5.28	95% Bootstrap-t UCL					5.574
40				95% Hall's Bootstrap UCL		5.503	95% Percentile Bootstrap UCL					5.238
41				95% BCA Bootstrap UCL		5.508						
42				90% Chebyshev(Mean, Sd) UCL		6.069	95% Chebyshev(Mean, Sd) UCL					6.872
43				97.5% Chebyshev(Mean, Sd) UCL		7.985	99% Chebyshev(Mean, Sd) UCL					10.17
44												
45	Suggested UCL to Use											
46				95% H-UCL		5.323						
47												
48	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
49	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
50	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
51	For additional insight the user may want to consult a statistician.											
52												

	A	B	C	D	E	F	G	H	I	J	K	L
53	ProUCL computes and outputs H-statistic based UCLs for historical reasons only.											
54	H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.											
55	It is therefore recommended to avoid the use of H-statistic based 95% UCLs.											
56	Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.											
57												

	A	B	C	D	E	F	G	H	I	J	K	L
1	EB SR-58 STLC-WET (1.0-2.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 12:00:08 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	EB SR-58 STLC-WET (1.0-2.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					82	Number of Distinct Observations					38
15							Number of Missing Observations					0
16	Minimum					0.125	Mean					0.374
17	Maximum					1.99	Median					0.27
18	SD					0.364	Std. Error of Mean					0.0402
19	Coefficient of Variation					0.974	Skewness					3.005
20	Mean of logged Data					-1.246	SD of logged Data					0.653
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					0.44	95% Adjusted-CLT UCL (Chen-1995)					0.454
28							95% Modified-t UCL (Johnson-1978)					0.443
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					0.44	95% Jackknife UCL					0.44
32	95% Standard Bootstrap UCL					0.44	95% Bootstrap-t UCL					0.462
33	95% Hall's Bootstrap UCL					0.454	95% Percentile Bootstrap UCL					0.443
34	95% BCA Bootstrap UCL					0.461						
35	90% Chebyshev(Mean, Sd) UCL					0.494	95% Chebyshev(Mean, Sd) UCL					0.549
36	97.5% Chebyshev(Mean, Sd) UCL					0.625	99% Chebyshev(Mean, Sd) UCL					0.773
37												
38	Suggested UCL to Use											
39	95% Chebyshev (Mean, Sd) UCL					0.549						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**WB SR-58 Total Lead (0.0-0.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets**											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 12:10:33 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	**WB SR-58 Total Lead (0.0-0.5 ft)**											
12												
13	**General Statistics**											
14	Total Number of Observations					33	Number of Distinct Observations					33
15							Number of Missing Observations					0
16	Minimum					1.01	Mean					35.32
17	Maximum					371	Median					2.92
18	SD					82.66	Std. Error of Mean					14.39
19	Coefficient of Variation					2.341	Skewness					3.175
20	Mean of logged Data					1.847	SD of logged Data					1.704
21												
22	**Nonparametric Distribution Free UCL Statistics**											
23	**Data do not follow a Discernible Distribution (0.05)**											
24												
25	**Assuming Normal Distribution**											
26	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
27	95% Student's-t UCL					59.69	95% Adjusted-CLT UCL (Chen-1995)					67.48
28							95% Modified-t UCL (Johnson-1978)					61.02
29												
30	**Nonparametric Distribution Free UCLs**											
31	95% CLT UCL					58.98	95% Jackknife UCL					59.69
32	95% Standard Bootstrap UCL					58.66	95% Bootstrap-t UCL					93.88
33	95% Hall's Bootstrap UCL					75.78	95% Percentile Bootstrap UCL					61.3
34	95% BCA Bootstrap UCL					69.89						
35	90% Chebyshev(Mean, Sd) UCL					78.48	95% Chebyshev(Mean, Sd) UCL					98.04
36	97.5% Chebyshev(Mean, Sd) UCL					125.2	99% Chebyshev(Mean, Sd) UCL					178.5
37												
38	**Suggested UCL to Use**											
39	95% Chebyshev (Mean, Sd) UCL					98.04						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	WB SR-58 STLC-WET (0.0-0.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 12:11:08 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	WB SR-58 STLC-WET (0.0-0.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					33	Number of Distinct Observations					24
15							Number of Missing Observations					0
16	Minimum					0.125	Mean					1.998
17	Maximum					23.5	Median					0.28
18	SD					4.963	Std. Error of Mean					0.864
19	Coefficient of Variation					2.484	Skewness					3.448
20	Mean of logged Data					-0.673	SD of logged Data					1.35
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					3.462	95% Adjusted-CLT UCL (Chen-1995)					3.974
28							95% Modified-t UCL (Johnson-1978)					3.548
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					3.42	95% Jackknife UCL					3.462
32	95% Standard Bootstrap UCL					3.387	95% Bootstrap-t UCL					4.887
33	95% Hall's Bootstrap UCL					3.434	95% Percentile Bootstrap UCL					3.514
34	95% BCA Bootstrap UCL					4.181						
35	90% Chebyshev(Mean, Sd) UCL					4.59	95% Chebyshev(Mean, Sd) UCL					5.765
36	97.5% Chebyshev(Mean, Sd) UCL					7.394	99% Chebyshev(Mean, Sd) UCL					10.6
37												
38	Suggested UCL to Use											
39	95% Chebyshev (Mean, Sd) UCL					5.765						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	WB SR-58 Total Lead (1.0-1.5 ft) - Lognormal UCL Statistics for Uncensored Full Data Sets											
2												
3			User Selected Options									
4			Date/Time of Computation	5/15/2014 12:21:24 PM								
5			From File	WorkSheet.xls								
6			Full Precision	OFF								
7			Confidence Coefficient	95%								
8			Number of Bootstrap Operations	2000								
9												
10												
11	WB SR-58 Total Lead (1.0-1.5 ft)											
12												
13	General Statistics											
14			Total Number of Observations			32	Number of Distinct Observations					28
15							Number of Missing Observations					0
16			Minimum			0.5	Mean					4.372
17			Maximum			28	Median					2.57
18			SD			5.89	Std. Error of Mean					1.041
19			Coefficient of Variation			1.347	Skewness					2.735
20												
21	Lognormal GOF Test											
22			Shapiro Wilk Test Statistic			0.945	Shapiro Wilk Lognormal GOF Test					
23			5% Shapiro Wilk Critical Value			0.93	Data appear Lognormal at 5% Significance Level					
24			Lilliefors Test Statistic			0.152	Lilliefors Lognormal GOF Test					
25			5% Lilliefors Critical Value			0.157	Data appear Lognormal at 5% Significance Level					
26	Data appear Lognormal at 5% Significance Level											
27												
28	Lognormal Statistics											
29			Minimum of Logged Data			-0.693	Mean of logged Data					0.916
30			Maximum of Logged Data			3.332	SD of logged Data					1.012
31												
32	Assuming Lognormal Distribution											
33			95% H-UCL			6.505	90% Chebyshev (MVUE) UCL					6.603
34			95% Chebyshev (MVUE) UCL			7.748	97.5% Chebyshev (MVUE) UCL					9.337
35			99% Chebyshev (MVUE) UCL			12.46						
36												
37	Nonparametric Distribution Free UCLs											
38			95% CLT UCL			6.084	95% Jackknife UCL					6.137
39			95% Standard Bootstrap UCL			6.023	95% Bootstrap-t UCL					7.452
40			95% Hall's Bootstrap UCL			6.914	95% Percentile Bootstrap UCL					6.112
41			95% BCA Bootstrap UCL			6.686						
42			90% Chebyshev(Mean, Sd) UCL			7.495	95% Chebyshev(Mean, Sd) UCL					8.91
43			97.5% Chebyshev(Mean, Sd) UCL			10.87	99% Chebyshev(Mean, Sd) UCL					14.73
44												
45	Suggested UCL to Use											
46			95% H-UCL			6.505						
47												
48	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
49	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
50	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
51	For additional insight the user may want to consult a statistician.											
52												

	A	B	C	D	E	F	G	H	I	J	K	L
53	ProUCL computes and outputs H-statistic based UCLs for historical reasons only.											
54	H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.											
55	It is therefore recommended to avoid the use of H-statistic based 95% UCLs.											
56	Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.											
57												

	A	B	C	D	E	F	G	H	I	J	K	L
1	WB SR-58 STLC-WET (1.0-1.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 12:22:16 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	WB SR-58 STLC-WET (1.0-1.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					32	Number of Distinct Observations					19
15							Number of Missing Observations					0
16	Minimum					0.13	Mean					0.393
17	Maximum					1.99	Median					0.27
18	SD					0.398	Std. Error of Mean					0.0704
19	Coefficient of Variation					1.013	Skewness					2.732
20	Mean of logged Data					-1.22	SD of logged Data					0.684
21												
22	Nonparametric Distribution Free UCL Statistics											
23	Data do not follow a Discernible Distribution (0.05)											
24												
25	Assuming Normal Distribution											
26	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
27	95% Student's-t UCL					0.512	95% Adjusted-CLT UCL (Chen-1995)					0.545
28							95% Modified-t UCL (Johnson-1978)					0.518
29												
30	Nonparametric Distribution Free UCLs											
31	95% CLT UCL					0.509	95% Jackknife UCL					0.512
32	95% Standard Bootstrap UCL					0.509	95% Bootstrap-t UCL					0.606
33	95% Hall's Bootstrap UCL					0.57	95% Percentile Bootstrap UCL					0.516
34	95% BCA Bootstrap UCL					0.563						
35	90% Chebyshev(Mean, Sd) UCL					0.604	95% Chebyshev(Mean, Sd) UCL					0.7
36	97.5% Chebyshev(Mean, Sd) UCL					0.833	99% Chebyshev(Mean, Sd) UCL					1.094
37												
38	Suggested UCL to Use											
39	95% Chebyshev (Mean, Sd) UCL					0.7						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**WB SR-58 Total Lead (2.0-2.5 ft) - Gamma UCL Statistics for Uncensored Full Data Sets**											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 12:14:07 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	**WB SR-58 Total Lead (2.0-2.5 ft)**											
12												
13	**General Statistics**											
14	Total Number of Observations					32	Number of Distinct Observations					28
15							Number of Missing Observations					0
16	Minimum					0.5	Mean					4.259
17	Maximum					23.2	Median					2.7
18	SD					4.72	SD of logged Data					0.915
19	Coefficient of Variation					1.108	Skewness					2.799
20												
21	**Gamma GOF Test**											
22	A-D Test Statistic					0.621	**Anderson-Darling Gamma GOF Test**					
23	5% A-D Critical Value					0.768	Data appear Gamma Distributed at 5% Significance Level					
24	K-S Test Statistic					0.131	**Kolmogrov-Smirnoff Gamma GOF Test**					
25	5% K-S Critical Value					0.159	Data appear Gamma Distributed at 5% Significance Level					
26	**Data appear Gamma Distributed at 5% Significance Level**											
27												
28	**Gamma Statistics**											
29	k hat (MLE)					1.356	k star (bias corrected MLE)					1.25
30	Theta hat (MLE)					3.142	Theta star (bias corrected MLE)					3.409
31	nu hat (MLE)					86.77	nu star (bias corrected)					79.97
32	MLE Mean (bias corrected)					4.259	MLE Sd (bias corrected)					3.81
33							Approximate Chi Square Value (0.05)					60.36
34	Adjusted Level of Significance					0.0416	Adjusted Chi Square Value					59.45
35												
36	**Assuming Gamma Distribution**											
37	95% Approximate Gamma UCL (use when n>=50)					5.643	95% Adjusted Gamma UCL (use when n<50)					5.729
38												
39	**Suggested UCL to Use**											
40	95% Adjusted Gamma UCL					5.729						
41												
42	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
43	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
44	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
45	For additional insight the user may want to consult a statistician.											
46												

	A	B	C	D	E	F	G	H	I	J	K	L
1	WB SR-58 STLC-WET (2.0-2.5 ft) - Lognormal UCL Statistics for Uncensored Full Data Sets											
2												
3				User Selected Options								
4				Date/Time of Computation	5/15/2014 12:14:53 PM							
5				From File	WorkSheet.xls							
6				Full Precision	OFF							
7				Confidence Coefficient	95%							
8				Number of Bootstrap Operations	2000							
9												
10												
11	WB SR-58 STLC-WET (2.0-2.5 ft)											
12												
13	General Statistics											
14				Total Number of Observations		32	Number of Distinct Observations					20
15							Number of Missing Observations					0
16				Minimum		0.13	Mean					0.385
17				Maximum		1.66	Median					0.28
18				SD		0.318	Std. Error of Mean					0.0562
19				Coefficient of Variation		0.826	Skewness					2.797
20												
21	Lognormal GOF Test											
22				Shapiro Wilk Test Statistic		0.939	Shapiro Wilk Lognormal GOF Test					
23				5% Shapiro Wilk Critical Value		0.93	Data appear Lognormal at 5% Significance Level					
24				Lilliefors Test Statistic		0.109	Lilliefors Lognormal GOF Test					
25				5% Lilliefors Critical Value		0.157	Data appear Lognormal at 5% Significance Level					
26	Data appear Lognormal at 5% Significance Level											
27												
28	Lognormal Statistics											
29				Minimum of Logged Data		-2.04	Mean of logged Data					-1.161
30				Maximum of Logged Data		0.507	SD of logged Data					0.601
31												
32	Assuming Lognormal Distribution											
33				95% H-UCL		0.466	90% Chebyshev (MVUE) UCL					0.499
34				95% Chebyshev (MVUE) UCL		0.556	97.5% Chebyshev (MVUE) UCL					0.635
35				99% Chebyshev (MVUE) UCL		0.791						
36												
37	Nonparametric Distribution Free UCLs											
38				95% CLT UCL		0.477	95% Jackknife UCL					0.48
39				95% Standard Bootstrap UCL		0.477	95% Bootstrap-t UCL					0.557
40				95% Hall's Bootstrap UCL		0.936	95% Percentile Bootstrap UCL					0.483
41				95% BCA Bootstrap UCL		0.504						
42				90% Chebyshev(Mean, Sd) UCL		0.553	95% Chebyshev(Mean, Sd) UCL					0.63
43				97.5% Chebyshev(Mean, Sd) UCL		0.736	99% Chebyshev(Mean, Sd) UCL					0.944
44												
45	Suggested UCL to Use											
46				95% H-UCL		0.466						
47												
48	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
49	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
50	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
51	For additional insight the user may want to consult a statistician.											
52												

	A	B	C	D	E	F	G	H	I	J	K	L
53	ProUCL computes and outputs H-statistic based UCLs for historical reasons only.											
54	H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.											
55	It is therefore recommended to avoid the use of H-statistic based 95% UCLs.											
56	Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.											
57												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**WB SR-58 Total Lead (0.0-1.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets**											
2												
3				User Selected Options								
4				Date/Time of Computation	5/15/2014 12:12:59 PM							
5				From File	WorkSheet.xls							
6				Full Precision	OFF							
7				Confidence Coefficient	95%							
8				Number of Bootstrap Operations	2000							
9												
10												
11	**WB SR-58 Total Lead (0.0-1.5 ft)**											
12												
13						**General Statistics**						
14						Total Number of Observations	65		Number of Distinct Observations		58	
15									Number of Missing Observations		0	
16						Minimum	0.5		Mean		20.08	
17						Maximum	371		Median		2.76	
18						SD	60.63		Std. Error of Mean		7.521	
19						Coefficient of Variation	3.019		Skewness		4.618	
20						Mean of logged Data	1.389		SD of logged Data		1.472	
21												
22						**Nonparametric Distribution Free UCL Statistics**						
23						**Data do not follow a Discernible Distribution (0.05)**						
24												
25						**Assuming Normal Distribution**						
26						**95% Normal UCL**			**95% UCLs (Adjusted for Skewness)**			
27						95% Student's-t UCL	32.63		95% Adjusted-CLT UCL (Chen-1995)		37.06	
28									95% Modified-t UCL (Johnson-1978)		33.35	
29												
30						**Nonparametric Distribution Free UCLs**						
31						95% CLT UCL	32.45		95% Jackknife UCL		32.63	
32						95% Standard Bootstrap UCL	32.8		95% Bootstrap-t UCL		52.67	
33						95% Hall's Bootstrap UCL	42.81		95% Percentile Bootstrap UCL		32.91	
34						95% BCA Bootstrap UCL	37.69					
35						90% Chebyshev(Mean, Sd) UCL	42.64		95% Chebyshev(Mean, Sd) UCL		52.86	
36						97.5% Chebyshev(Mean, Sd) UCL	67.05		99% Chebyshev(Mean, Sd) UCL		94.91	
37												
38						**Suggested UCL to Use**						
39						95% Chebyshev (Mean, Sd) UCL	52.86					
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**WB SR-58 STLC-WET (0.0-1.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets**											
2												
3				User Selected Options								
4				Date/Time of Computation	5/15/2014 12:13:27 PM							
5				From File	WorkSheet.xls							
6				Full Precision	OFF							
7				Confidence Coefficient	95%							
8				Number of Bootstrap Operations	2000							
9												
10												
11	**WB SR-58 STLC-WET (0.0-1.5 ft)**											
12												
13						**General Statistics**						
14						Total Number of Observations	65		Number of Distinct Observations		34	
15									Number of Missing Observations		0	
16						Minimum	0.125		Mean		1.208	
17						Maximum	23.5		Median		0.28	
18						SD	3.612		Std. Error of Mean		0.448	
19						Coefficient of Variation	2.99		Skewness		4.972	
20						Mean of logged Data	-0.942		SD of logged Data		1.102	
21												
22						**Nonparametric Distribution Free UCL Statistics**						
23						**Data do not follow a Discernible Distribution (0.05)**						
24												
25						**Assuming Normal Distribution**						
26						**95% Normal UCL**			**95% UCLs (Adjusted for Skewness)**			
27						95% Student's-t UCL	1.956		95% Adjusted-CLT UCL (Chen-1995)		2.24	
28									95% Modified-t UCL (Johnson-1978)		2.002	
29												
30						**Nonparametric Distribution Free UCLs**						
31						95% CLT UCL	1.945		95% Jackknife UCL		1.956	
32						95% Standard Bootstrap UCL	1.937		95% Bootstrap-t UCL		2.824	
33						95% Hall's Bootstrap UCL	2.007		95% Percentile Bootstrap UCL		2.02	
34						95% BCA Bootstrap UCL	2.312					
35						90% Chebyshev(Mean, Sd) UCL	2.552		95% Chebyshev(Mean, Sd) UCL		3.161	
36						97.5% Chebyshev(Mean, Sd) UCL	4.006		99% Chebyshev(Mean, Sd) UCL		5.666	
37												
38						**Suggested UCL to Use**						
39						95% Chebyshev (Mean, Sd) UCL	3.161					
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**WB SR-58 Total Lead (0.0-2.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets**											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 12:19:57 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	**WB SR-58 Total Lead (0.0-2.5 ft)**											
12												
13	**General Statistics**											
14	Total Number of Observations					97	Number of Distinct Observations					84
15							Number of Missing Observations					0
16	Minimum					0.5	Mean					14.86
17	Maximum					371	Median					2.76
18	SD					50.14	Std. Error of Mean					5.091
19	Coefficient of Variation					3.374	Skewness					5.695
20	Mean of logged Data					1.273	SD of logged Data					1.32
21												
22	**Nonparametric Distribution Free UCL Statistics**											
23	**Data do not follow a Discernible Distribution (0.05)**											
24												
25	**Assuming Normal Distribution**											
26	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
27	95% Student's-t UCL					23.32	95% Adjusted-CLT UCL (Chen-1995)					26.38
28							95% Modified-t UCL (Johnson-1978)					23.81
29												
30	**Nonparametric Distribution Free UCLs**											
31	95% CLT UCL					23.24	95% Jackknife UCL					23.32
32	95% Standard Bootstrap UCL					23.3	95% Bootstrap-t UCL					35.52
33	95% Hall's Bootstrap UCL					55.43	95% Percentile Bootstrap UCL					23.91
34	95% BCA Bootstrap UCL					26.63						
35	90% Chebyshev(Mean, Sd) UCL					30.13	95% Chebyshev(Mean, Sd) UCL					37.05
36	97.5% Chebyshev(Mean, Sd) UCL					46.66	99% Chebyshev(Mean, Sd) UCL					65.52
37												
38	**Suggested UCL to Use**											
39	95% Chebyshev (Mean, Sd) UCL					37.05						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**WB SR-58 STLC-WET (0.0-2.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets**											
2												
3				User Selected Options								
4				Date/Time of Computation	5/15/2014 12:20:45 PM							
5				From File	WorkSheet.xls							
6				Full Precision	OFF							
7				Confidence Coefficient	95%							
8				Number of Bootstrap Operations	2000							
9												
10												
11	**WB SR-58 STLC-WET (0.0-2.5 ft)**											
12												
13						**General Statistics**						
14						Total Number of Observations	97		Number of Distinct Observations		47	
15									Number of Missing Observations		0	
16						Minimum	0.125		Mean		0.936	
17						Maximum	23.5		Median		0.28	
18						SD	2.98		Std. Error of Mean		0.303	
19						Coefficient of Variation	3.183		Skewness		6.11	
20						Mean of logged Data	-1.015		SD of logged Data		0.968	
21												
22						**Nonparametric Distribution Free UCL Statistics**						
23						**Data do not follow a Discernible Distribution (0.05)**						
24												
25						**Assuming Normal Distribution**						
26						**95% Normal UCL**			**95% UCLs (Adjusted for Skewness)**			
27						95% Student's-t UCL	1.439		95% Adjusted-CLT UCL (Chen-1995)		1.635	
28									95% Modified-t UCL (Johnson-1978)		1.47	
29												
30						**Nonparametric Distribution Free UCLs**						
31						95% CLT UCL	1.434		95% Jackknife UCL		1.439	
32						95% Standard Bootstrap UCL	1.426		95% Bootstrap-t UCL		3.424	
33						95% Hall's Bootstrap UCL	1.501		95% Percentile Bootstrap UCL		1.499	
34						95% BCA Bootstrap UCL	1.683					
35						90% Chebyshev(Mean, Sd) UCL	1.844		95% Chebyshev(Mean, Sd) UCL		2.256	
36						97.5% Chebyshev(Mean, Sd) UCL	2.826		99% Chebyshev(Mean, Sd) UCL		3.947	
37												
38						**Suggested UCL to Use**						
39						95% Chebyshev (Mean, Sd) UCL	2.256					
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	WB SR-58 Total Lead (1.0-2.5 ft) - Lognormal UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 12:11:46 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	WB SR-58 Total Lead (1.0-2.5 ft)											
12												
13	General Statistics											
14	Total Number of Observations					64	Number of Distinct Observations					55
15							Number of Missing Observations					0
16	Minimum					0.5	Mean					4.315
17	Maximum					28	Median					2.635
18	SD					5.295	Std. Error of Mean					0.662
19	Coefficient of Variation					1.227	Skewness					2.744
20												
21	Lognormal GOF Test											
22	Shapiro Wilk Test Statistic					0.958	Shapiro Wilk Lognormal GOF Test					
23	5% Shapiro Wilk P Value					0.0673	Data appear Lognormal at 5% Significance Level					
24	Lilliefors Test Statistic					0.0837	Lilliefors Lognormal GOF Test					
25	5% Lilliefors Critical Value					0.111	Data appear Lognormal at 5% Significance Level					
26	Data appear Lognormal at 5% Significance Level											
27												
28	Lognormal Statistics											
29	Minimum of Logged Data					-0.693	Mean of logged Data					0.977
30	Maximum of Logged Data					3.332	SD of logged Data					0.959
31												
32	Assuming Lognormal Distribution											
33	95% H-UCL					5.505	90% Chebyshev (MVUE) UCL					5.919
34	95% Chebyshev (MVUE) UCL					6.715	97.5% Chebyshev (MVUE) UCL					7.819
35	99% Chebyshev (MVUE) UCL					9.988						
36												
37	Nonparametric Distribution Free UCLs											
38	95% CLT UCL					5.404	95% Jackknife UCL					5.42
39	95% Standard Bootstrap UCL					5.41	95% Bootstrap-t UCL					5.857
40	95% Hall's Bootstrap UCL					5.781	95% Percentile Bootstrap UCL					5.488
41	95% BCA Bootstrap UCL					5.835						
42	90% Chebyshev(Mean, Sd) UCL					6.301	95% Chebyshev(Mean, Sd) UCL					7.2
43	97.5% Chebyshev(Mean, Sd) UCL					8.449	99% Chebyshev(Mean, Sd) UCL					10.9
44												
45	Suggested UCL to Use											
46	95% H-UCL					5.505						
47												
48	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
49	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
50	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
51	For additional insight the user may want to consult a statistician.											
52												

	A	B	C	D	E	F	G	H	I	J	K	L
53	ProUCL computes and outputs H-statistic based UCLs for historical reasons only.											
54	H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.											
55	It is therefore recommended to avoid the use of H-statistic based 95% UCLs.											
56	Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.											
57												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**WB SR-58 STLC-WET (1.0-2.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets**											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 12:12:28 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	**WB SR-58 STLC-WET (1.0-2.5 ft)**											
12												
13	**General Statistics**											
14	Total Number of Observations					64	Number of Distinct Observations					34
15							Number of Missing Observations					0
16	Minimum					0.13	Mean					0.389
17	Maximum					1.99	Median					0.275
18	SD					0.357	Std. Error of Mean					0.0447
19	Coefficient of Variation					0.919	Skewness					2.744
20	Mean of logged Data					-1.19	SD of logged Data					0.639
21												
22	**Nonparametric Distribution Free UCL Statistics**											
23	**Data do not follow a Discernible Distribution (0.05)**											
24												
25	**Assuming Normal Distribution**											
26	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
27	95% Student's-t UCL					0.463	95% Adjusted-CLT UCL (Chen-1995)					0.479
28							95% Modified-t UCL (Johnson-1978)					0.466
29												
30	**Nonparametric Distribution Free UCLs**											
31	95% CLT UCL					0.462	95% Jackknife UCL					0.463
32	95% Standard Bootstrap UCL					0.462	95% Bootstrap-t UCL					0.488
33	95% Hall's Bootstrap UCL					0.489	95% Percentile Bootstrap UCL					0.467
34	95% BCA Bootstrap UCL					0.485						
35	90% Chebyshev(Mean, Sd) UCL					0.523	95% Chebyshev(Mean, Sd) UCL					0.584
36	97.5% Chebyshev(Mean, Sd) UCL					0.668	99% Chebyshev(Mean, Sd) UCL					0.833
37												
38	**Suggested UCL to Use**											
39	95% Chebyshev (Mean, Sd) UCL					0.584						
40												
41	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
42	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
43	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
44	For additional insight the user may want to consult a statistician.											
45												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**Exit SB SR-99 Total Lead (0.0-0.5 ft) - Normal UCL Statistics for Uncensored Full Data Sets**											
2												
3			User Selected Options									
4			Date/Time of Computation	5/15/2014 12:36:56 PM								
5			From File	WorkSheet.xls								
6			Full Precision	OFF								
7			Confidence Coefficient	95%								
8												
9												
10	**Exit SB SR-99 Total Lead (0.0-0.5 ft)**											
11												
12	**General Statistics**											
13			Total Number of Observations			5	Number of Distinct Observations					5
14							Number of Missing Observations					0
15			Minimum			11	Mean					230.6
16			Maximum			880	Median					30
17			SD			373.5	SD of logged Data					1.927
18			Coefficient of Variation			1.62	Skewness					1.957
19												
20	**Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use**											
21	**guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.**											
22	**For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).**											
23	**Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0**											
24												
25	**Normal GOF Test**											
26			Shapiro Wilk Test Statistic			0.706	**Shapiro Wilk GOF Test**					
27			5% Shapiro Wilk Critical Value			0.762	Data Not Normal at 5% Significance Level					
28			Lilliefors Test Statistic			0.311	**Lilliefors GOF Test**					
29			5% Lilliefors Critical Value			0.396	Data appear Normal at 5% Significance Level					
30	**Data appear Approximate Normal at 5% Significance Level**											
31												
32	**Assuming Normal Distribution**											
33			**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**					
34			95% Student's-t UCL			586.7	95% Adjusted-CLT UCL (Chen-1995)					661.6
35							95% Modified-t UCL (Johnson-1978)					611.1
36												
37	**Suggested UCL to Use**											
38			95% Student's-t UCL			586.7						
39												
40	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
41	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
42	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
43	For additional insight the user may want to consult a statistician.											
44												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**Exit SB SR-99 STLC-WET (0.0-0.5 ft) - Normal UCL Statistics for Uncensored Full Data Sets**											
2												
3				User Selected Options								
4				Date/Time of Computation		5/15/2014 12:38:11 PM						
5				From File		WorkSheet.xls						
6				Full Precision		OFF						
7				Confidence Coefficient		95%						
8												
9												
10	**Exit SB SR-99 STLC-WET (0.0-0.5 ft)**											
11												
12	**General Statistics**											
13				Total Number of Observations		5		Number of Distinct Observations				5
14								Number of Missing Observations				0
15				Minimum		0.32		Mean				13.06
16				Maximum		50		Median				2.12
17				SD		21.2		SD of logged Data				2.035
18				Coefficient of Variation		1.623		Skewness				1.979
19												
20	**Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use**											
21	**guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.**											
22	**For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).**											
23	**Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0**											
24												
25	**Normal GOF Test**											
26				Shapiro Wilk Test Statistic		0.71		**Shapiro Wilk GOF Test**				
27				5% Shapiro Wilk Critical Value		0.762		Data Not Normal at 5% Significance Level				
28				Lilliefors Test Statistic		0.32		**Lilliefors GOF Test**				
29				5% Lilliefors Critical Value		0.396		Data appear Normal at 5% Significance Level				
30	**Data appear Approximate Normal at 5% Significance Level**											
31												
32	**Assuming Normal Distribution**											
33				**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**				
34				95% Student's-t UCL		33.26		95% Adjusted-CLT UCL (Chen-1995)				37.61
35								95% Modified-t UCL (Johnson-1978)				34.66
36												
37	**Suggested UCL to Use**											
38				95% Student's-t UCL		33.26						
39												
40	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
41	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
42	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
43	For additional insight the user may want to consult a statistician.											
44												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**Exit SB SR-99 Total Lead (1.0-1.5 ft) - Normal UCL Statistics for Uncensored Full Data Sets**											
2												
3				User Selected Options								
4				Date/Time of Computation	5/15/2014 12:45:38 PM							
5				From File	WorkSheet.xls							
6				Full Precision	OFF							
7				Confidence Coefficient	95%							
8												
9												
10	**Exit SB SR-99 Total Lead (1.0-1.5 ft)**											
11												
12	**General Statistics**											
13				Total Number of Observations		5			Number of Distinct Observations			4
14									Number of Missing Observations			0
15				Minimum		14			Mean			257.8
16				Maximum		980			Median			21
17				SD		417.3			SD of logged Data			1.954
18				Coefficient of Variation		1.619			Skewness			1.918
19												
20	**Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use**											
21	**guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.**											
22	**For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).**											
23	**Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0**											
24												
25	**Normal GOF Test**											
26				Shapiro Wilk Test Statistic		0.706			**Shapiro Wilk GOF Test**			
27				5% Shapiro Wilk Critical Value		0.762			Data Not Normal at 5% Significance Level			
28				Lilliefors Test Statistic		0.315			**Lilliefors GOF Test**			
29				5% Lilliefors Critical Value		0.396			Data appear Normal at 5% Significance Level			
30	**Data appear Approximate Normal at 5% Significance Level**											
31												
32	**Assuming Normal Distribution**											
33				**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**			
34				95% Student's-t UCL		655.6			95% Adjusted-CLT UCL (Chen-1995)			735.8
35									95% Modified-t UCL (Johnson-1978)			682.3
36												
37	**Suggested UCL to Use**											
38				95% Student's-t UCL		655.6						
39												
40	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
41	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
42	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
43	For additional insight the user may want to consult a statistician.											
44												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**Exit SB SR-99 STLC-WET (1.0-1.5 ft) - Normal UCL Statistics for Uncensored Full Data Sets**											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 12:46:11 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8												
9												
10	**Exit SB SR-99 STLC-WET (1.0-1.5 ft)**											
11												
12	**General Statistics**											
13	Total Number of Observations					5	Number of Distinct Observations					5
14							Number of Missing Observations					0
15	Minimum					0.47	Mean					18.89
16	Maximum					62	Median					1.04
17	SD					27.21	SD of logged Data					2.241
18	Coefficient of Variation					1.441	Skewness					1.319
19												
20	**Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use**											
21	**guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.**											
22	**For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).**											
23	**Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0**											
24												
25	**Normal GOF Test**											
26	Shapiro Wilk Test Statistic					0.775	**Shapiro Wilk GOF Test**					
27	5% Shapiro Wilk Critical Value					0.762	Data appear Normal at 5% Significance Level					
28	Lilliefors Test Statistic					0.344	**Lilliefors GOF Test**					
29	5% Lilliefors Critical Value					0.396	Data appear Normal at 5% Significance Level					
30	**Data appear Normal at 5% Significance Level**											
31												
32	**Assuming Normal Distribution**											
33	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
34	95% Student's-t UCL					44.83	95% Adjusted-CLT UCL (Chen-1995)					46.57
35							95% Modified-t UCL (Johnson-1978)					46.03
36												
37	**Suggested UCL to Use**											
38	95% Student's-t UCL					44.83						
39												
40	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
41	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
42	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
43	For additional insight the user may want to consult a statistician.											
44												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**Exit SB SR-99 Total Lead (2.0-2.5 ft) - Normal UCL Statistics for Uncensored Full Data Sets**											
2												
3				User Selected Options								
4				Date/Time of Computation	5/15/2014 12:43:04 PM							
5				From File	WorkSheet.xls							
6				Full Precision	OFF							
7				Confidence Coefficient	95%							
8												
9												
10	**Exit SB SR-99 Total Lead (2.0-2.5 ft)**											
11												
12	**General Statistics**											
13				Total Number of Observations		5			Number of Distinct Observations			5
14									Number of Missing Observations			0
15				Minimum		6			Mean			87.2
16				Maximum		260			Median			17
17				SD		111.4			SD of logged Data			1.624
18				Coefficient of Variation		1.278			Skewness			1.209
19												
20	**Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use**											
21	**guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.**											
22	**For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).**											
23	**Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0**											
24												
25	**Normal GOF Test**											
26				Shapiro Wilk Test Statistic		0.801			**Shapiro Wilk GOF Test**			
27				5% Shapiro Wilk Critical Value		0.762			Data appear Normal at 5% Significance Level			
28				Lilliefors Test Statistic		0.336			**Lilliefors GOF Test**			
29				5% Lilliefors Critical Value		0.396			Data appear Normal at 5% Significance Level			
30	**Data appear Normal at 5% Significance Level**											
31												
32	**Assuming Normal Distribution**											
33				**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**			
34				95% Student's-t UCL		193.4			95% Adjusted-CLT UCL (Chen-1995)			198
35									95% Modified-t UCL (Johnson-1978)			197.9
36												
37	**Suggested UCL to Use**											
38				95% Student's-t UCL		193.4						
39												
40	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
41	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
42	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
43	For additional insight the user may want to consult a statistician.											
44												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**Exit SB SR-99 STLC-WET (2.0-2.5 ft) - Normal UCL Statistics for Uncensored Full Data Sets**											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 12:43:42 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8												
9												
10	**Exit SB SR-99 STLC-WET (2.0-2.5 ft)**											
11												
12	**General Statistics**											
13	Total Number of Observations					5	Number of Distinct Observations					5
14							Number of Missing Observations					0
15	Minimum					0.5	Mean					6.946
16	Maximum					19	Median					1.25
17	SD					8.537	SD of logged Data					1.639
18	Coefficient of Variation					1.229	Skewness					0.876
19												
20	**Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use**											
21	**guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.**											
22	**For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).**											
23	**Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0**											
24												
25	**Normal GOF Test**											
26	Shapiro Wilk Test Statistic					0.792	**Shapiro Wilk GOF Test**					
27	5% Shapiro Wilk Critical Value					0.762	Data appear Normal at 5% Significance Level					
28	Lilliefors Test Statistic					0.348	**Lilliefors GOF Test**					
29	5% Lilliefors Critical Value					0.396	Data appear Normal at 5% Significance Level					
30	**Data appear Normal at 5% Significance Level**											
31												
32	**Assuming Normal Distribution**											
33	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
34	95% Student's-t UCL					15.09	95% Adjusted-CLT UCL (Chen-1995)					14.82
35							95% Modified-t UCL (Johnson-1978)					15.33
36												
37	**Suggested UCL to Use**											
38	95% Student's-t UCL					15.09						
39												
40	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
41	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
42	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
43	For additional insight the user may want to consult a statistician.											
44												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**Exit SB SR-99 Total Lead (0.0-1.5 ft) - Lognormal UCL Statistics for Uncensored Full Data Sets**											
2												
3				User Selected Options								
4				Date/Time of Computation	5/15/2014 12:40:50 PM							
5				From File	WorkSheet.xls							
6				Full Precision	OFF							
7				Confidence Coefficient	95%							
8				Number of Bootstrap Operations	2000							
9												
10												
11	**Exit SB SR-99 Total Lead (0.0-1.5 ft)**											
12												
13						**General Statistics**						
14						Total Number of Observations	10			Number of Distinct Observations		9
15										Number of Missing Observations		0
16						Minimum	11			Mean		244.2
17						Maximum	980			Median		25.5
18						SD	373.6			Std. Error of Mean		118.2
19						Coefficient of Variation	1.53			Skewness		1.557
20												
21						**Lognormal GOF Test**						
22						Shapiro Wilk Test Statistic	0.819			**Shapiro Wilk Lognormal GOF Test**		
23						5% Shapiro Wilk Critical Value	0.842			Data Not Lognormal at 5% Significance Level		
24						Lilliefors Test Statistic	0.253			**Lilliefors Lognormal GOF Test**		
25						5% Lilliefors Critical Value	0.28			Data appear Lognormal at 5% Significance Level		
26						**Data appear Approximate Lognormal at 5% Significance Level**						
27												
28						**Lognormal Statistics**						
29						Minimum of Logged Data	2.398			Mean of logged Data		4.123
30						Maximum of Logged Data	6.888			SD of logged Data		1.83
31												
32						**Assuming Lognormal Distribution**						
33						95% H-UCL	6887			90% Chebyshev (MVUE) UCL		666.2
34						95% Chebyshev (MVUE) UCL	860.4			97.5% Chebyshev (MVUE) UCL		1130
35						99% Chebyshev (MVUE) UCL	1660					
36												
37						**Nonparametric Distribution Free UCLs**						
38						95% CLT UCL	438.5			95% Jackknife UCL		460.8
39						95% Standard Bootstrap UCL	434.1			95% Bootstrap-t UCL		875.7
40						95% Hall's Bootstrap UCL	1515			95% Percentile Bootstrap UCL		442.8
41						95% BCA Bootstrap UCL	486.8					
42						90% Chebyshev(Mean, Sd) UCL	598.7			95% Chebyshev(Mean, Sd) UCL		759.2
43						97.5% Chebyshev(Mean, Sd) UCL	982.1			99% Chebyshev(Mean, Sd) UCL		1420
44												
45						**Suggested UCL to Use**						
46						99% Chebyshev (Mean, Sd) UCL	1420					
47												
48						**Recommended UCL exceeds the maximum observation**						
49												
50	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
51	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
52	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											

	A	B	C	D	E	F	G	H	I	J	K	L
53	For additional insight the user may want to consult a statistician.											
54												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**Exit SB SR-99 STLC-WET (0.0-1.5 ft) - Gamma UCL Statistics for Uncensored Full Data Sets**											
2												
3	User Selected Options											
4	Date/Time of Computation			5/15/2014 2:51:59 PM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	**Exit SB SR-99 STLC-WET (0.0-1.5 ft)**											
12												
13	**General Statistics**											
14	Total Number of Observations					10	Number of Distinct Observations					10
15							Number of Missing Observations					0
16	Minimum					0.32	Mean					15.97
17	Maximum					62	Median					1.58
18	SD					23.2	SD of logged Data					2.02
19	Coefficient of Variation					1.453	Skewness					1.326
20												
21	**Gamma GOF Test**											
22	A-D Test Statistic					0.77	**Anderson-Darling Gamma GOF Test**					
23	5% A-D Critical Value					0.79	Data appear Gamma Distributed at 5% Significance Level					
24	K-S Test Statistic					0.276	**Kolmogrov-Smirnoff Gamma GOF Test**					
25	5% K-S Critical Value					0.283	Data appear Gamma Distributed at 5% Significance Level					
26	**Data appear Gamma Distributed at 5% Significance Level**											
27												
28	**Gamma Statistics**											
29	k hat (MLE)					0.43	k star (bias corrected MLE)					0.368
30	Theta hat (MLE)					37.16	Theta star (bias corrected MLE)					43.46
31	nu hat (MLE)					8.597	nu star (bias corrected)					7.351
32	MLE Mean (bias corrected)					15.97	MLE Sd (bias corrected)					26.35
33							Approximate Chi Square Value (0.05)					2.365
34	Adjusted Level of Significance					0.0267	Adjusted Chi Square Value					1.904
35												
36	**Assuming Gamma Distribution**											
37	95% Approximate Gamma UCL (use when n>=50)					49.64	95% Adjusted Gamma UCL (use when n<50)					61.66
38												
39	**Suggested UCL to Use**											
40	95% Adjusted Gamma UCL					61.66						
41												
42	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
43	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
44	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
45	For additional insight the user may want to consult a statistician.											
46												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**Exit SB SR-99 Total Lead (0.0-2.5 ft) - Lognormal UCL Statistics for Uncensored Full Data Sets**											
2												
3				User Selected Options								
4				Date/Time of Computation	5/15/2014 12:44:23 PM							
5				From File	WorkSheet.xls							
6				Full Precision	OFF							
7				Confidence Coefficient	95%							
8				Number of Bootstrap Operations	2000							
9												
10												
11	**Exit SB SR-99 Total Lead (0.0-2.5 ft)**											
12												
13	**General Statistics**											
14						Total Number of Observations	15			Number of Distinct Observations		13
15										Number of Missing Observations		0
16						Minimum	6			Mean		191.9
17						Maximum	980			Median		21
18						SD	314.9			Std. Error of Mean		81.31
19						Coefficient of Variation	1.641			Skewness		2.022
20												
21	**Lognormal GOF Test**											
22						Shapiro Wilk Test Statistic	0.862			**Shapiro Wilk Lognormal GOF Test**		
23						5% Shapiro Wilk Critical Value	0.881			Data Not Lognormal at 5% Significance Level		
24						Lilliefors Test Statistic	0.229			**Lilliefors Lognormal GOF Test**		
25						5% Lilliefors Critical Value	0.229			Data appear Lognormal at 5% Significance Level		
26	**Data appear Approximate Lognormal at 5% Significance Level**											
27												
28	**Lognormal Statistics**											
29						Minimum of Logged Data	1.792			Mean of logged Data		3.928
30						Maximum of Logged Data	6.888			SD of logged Data		1.728
31												
32	**Assuming Lognormal Distribution**											
33						95% H-UCL	1462			90% Chebyshev (MVUE) UCL		470.1
34						95% Chebyshev (MVUE) UCL	599.2			97.5% Chebyshev (MVUE) UCL		778.4
35						99% Chebyshev (MVUE) UCL	1130					
36												
37	**Nonparametric Distribution Free UCLs**											
38						95% CLT UCL	325.6			95% Jackknife UCL		335.1
39						95% Standard Bootstrap UCL	318.6			95% Bootstrap-t UCL		583.2
40						95% Hall's Bootstrap UCL	1007			95% Percentile Bootstrap UCL		332.1
41						95% BCA Bootstrap UCL	367.8					
42						90% Chebyshev(Mean, Sd) UCL	435.8			95% Chebyshev(Mean, Sd) UCL		546.3
43						97.5% Chebyshev(Mean, Sd) UCL	699.6			99% Chebyshev(Mean, Sd) UCL		1001
44												
45	**Suggested UCL to Use**											
46						99% Chebyshev (Mean, Sd) UCL	1001					
47												
48	**Recommended UCL exceeds the maximum observation**											
49												
50	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
51	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
52	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											

	A	B	C	D	E	F	G	H	I	J	K	L
53	For additional insight the user may want to consult a statistician.											
54												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**Exit SB SR-99 STLC-WET (0.0-2.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets**											
2												
3				User Selected Options								
4				Date/Time of Computation	5/15/2014 2:53:17 PM							
5				From File	WorkSheet.xls							
6				Full Precision	OFF							
7				Confidence Coefficient	95%							
8				Number of Bootstrap Operations	2000							
9												
10												
11	**Exit SB SR-99 STLC-WET (0.0-2.5 ft)**											
12												
13						**General Statistics**						
14						Total Number of Observations	15			Number of Distinct Observations	15	
15										Number of Missing Observations	0	
16						Minimum	0.32			Mean	12.96	
17						Maximum	62			Median	1.25	
18						SD	19.65			Std. Error of Mean	5.074	
19						Coefficient of Variation	1.516			Skewness	1.717	
20						Mean of logged Data	1.173			SD of logged Data	1.846	
21												
22						**Nonparametric Distribution Free UCL Statistics**						
23						**Data do not follow a Discernible Distribution (0.05)**						
24												
25						**Assuming Normal Distribution**						
26						**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**		
27						95% Student's-t UCL	21.9			95% Adjusted-CLT UCL (Chen-1995)	23.71	
28										95% Modified-t UCL (Johnson-1978)	22.28	
29												
30						**Nonparametric Distribution Free UCLs**						
31						95% CLT UCL	21.31			95% Jackknife UCL	21.9	
32						95% Standard Bootstrap UCL	20.94			95% Bootstrap-t UCL	29.11	
33						95% Hall's Bootstrap UCL	27.81			95% Percentile Bootstrap UCL	21.51	
34						95% BCA Bootstrap UCL	23.36					
35						90% Chebyshev(Mean, Sd) UCL	28.19			95% Chebyshev(Mean, Sd) UCL	35.08	
36						97.5% Chebyshev(Mean, Sd) UCL	44.65			99% Chebyshev(Mean, Sd) UCL	63.45	
37												
38						**Suggested UCL to Use**						
39						99% Chebyshev (Mean, Sd) UCL	63.45					
40												
41						**Recommended UCL exceeds the maximum observation**						
42												
43	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
44	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
45	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
46	For additional insight the user may want to consult a statistician.											
47												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**Exit SB SR-99 Total Lead (1.0-2.5 ft) - Lognormal UCL Statistics for Uncensored Full Data Sets**											
2												
3				User Selected Options								
4				Date/Time of Computation	5/15/2014 12:39:19 PM							
5				From File	WorkSheet.xls							
6				Full Precision	OFF							
7				Confidence Coefficient	95%							
8				Number of Bootstrap Operations	2000							
9												
10												
11	**Exit SB SR-99 Total Lead (1.0-2.5 ft)**											
12												
13	**General Statistics**											
14						Total Number of Observations	10		Number of Distinct Observations			8
15									Number of Missing Observations			0
16						Minimum	6		Mean			172.5
17						Maximum	980		Median			19
18						SD	301.7		Std. Error of Mean			95.39
19						Coefficient of Variation	1.749		Skewness			2.55
20												
21	**Lognormal GOF Test**											
22						Shapiro Wilk Test Statistic	0.87		**Shapiro Wilk Lognormal GOF Test**			
23						5% Shapiro Wilk Critical Value	0.842		Data appear Lognormal at 5% Significance Level			
24						Lilliefors Test Statistic	0.279		**Lilliefors Lognormal GOF Test**			
25						5% Lilliefors Critical Value	0.28		Data appear Lognormal at 5% Significance Level			
26	**Data appear Lognormal at 5% Significance Level**											
27												
28	**Lognormal Statistics**											
29						Minimum of Logged Data	1.792		Mean of logged Data			3.846
30						Maximum of Logged Data	6.888		SD of logged Data			1.725
31												
32	**Assuming Lognormal Distribution**											
33						95% H-UCL	3153		90% Chebyshev (MVUE) UCL			425.8
34						95% Chebyshev (MVUE) UCL	547.6		97.5% Chebyshev (MVUE) UCL			716.7
35						99% Chebyshev (MVUE) UCL	1049					
36												
37	**Nonparametric Distribution Free UCLs**											
38						95% CLT UCL	329.4		95% Jackknife UCL			347.4
39						95% Standard Bootstrap UCL	321		95% Bootstrap-t UCL			612.8
40						95% Hall's Bootstrap UCL	831.9		95% Percentile Bootstrap UCL			341.6
41						95% BCA Bootstrap UCL	414.6					
42						90% Chebyshev(Mean, Sd) UCL	458.7		95% Chebyshev(Mean, Sd) UCL			588.3
43						97.5% Chebyshev(Mean, Sd) UCL	768.2		99% Chebyshev(Mean, Sd) UCL			1122
44												
45	**Suggested UCL to Use**											
46						99% Chebyshev (Mean, Sd) UCL	1122					
47												
48	**Recommended UCL exceeds the maximum observation**											
49												
50	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
51	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
52	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											

	A	B	C	D	E	F	G	H	I	J	K	L
53	For additional insight the user may want to consult a statistician.											
54												

	A	B	C	D	E	F	G	H	I	J	K	L
1	**Exit SB SR-99 STLC-WET (1.0-2.5 ft) - Nonparametric UCL Statistics for Uncensored Full Data Sets**											
2												
3				User Selected Options								
4				Date/Time of Computation	5/15/2014 12:40:06 PM							
5				From File	WorkSheet.xls							
6				Full Precision	OFF							
7				Confidence Coefficient	95%							
8				Number of Bootstrap Operations	2000							
9												
10												
11	**Exit SB SR-99 STLC-WET (1.0-2.5 ft)**											
12												
13						**General Statistics**						
14						Total Number of Observations	10			Number of Distinct Observations	10	
15										Number of Missing Observations	0	
16						Minimum	0.47			Mean	12.92	
17						Maximum	62			Median	1.145	
18						SD	20.03			Std. Error of Mean	6.334	
19						Coefficient of Variation	1.551			Skewness	1.952	
20						Mean of logged Data	1.176			SD of logged Data	1.86	
21												
22						**Nonparametric Distribution Free UCL Statistics**						
23						**Data do not follow a Discernible Distribution (0.05)**						
24												
25						**Assuming Normal Distribution**						
26						**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**		
27						95% Student's-t UCL	24.53			95% Adjusted-CLT UCL (Chen-1995)	27.51	
28										95% Modified-t UCL (Johnson-1978)	25.18	
29												
30						**Nonparametric Distribution Free UCLs**						
31						95% CLT UCL	23.34			95% Jackknife UCL	24.53	
32						95% Standard Bootstrap UCL	22.87			95% Bootstrap-t UCL	35.91	
33						95% Hall's Bootstrap UCL	60.68			95% Percentile Bootstrap UCL	23.26	
34						95% BCA Bootstrap UCL	28.22					
35						90% Chebyshev(Mean, Sd) UCL	31.92			95% Chebyshev(Mean, Sd) UCL	40.53	
36						97.5% Chebyshev(Mean, Sd) UCL	52.47			99% Chebyshev(Mean, Sd) UCL	75.94	
37												
38						**Suggested UCL to Use**						
39						99% Chebyshev (Mean, Sd) UCL	75.94					
40												
41						**Recommended UCL exceeds the maximum observation**						
42												
43	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
44	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
45	and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.											
46	For additional insight the user may want to consult a statistician.											
47												

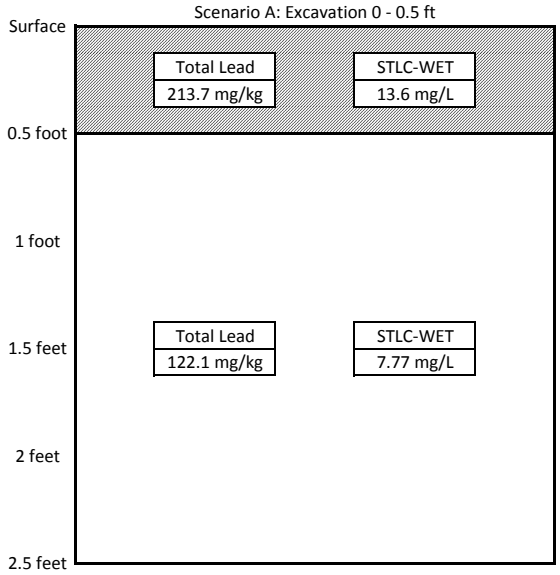
Appendix G
Block Diagrams

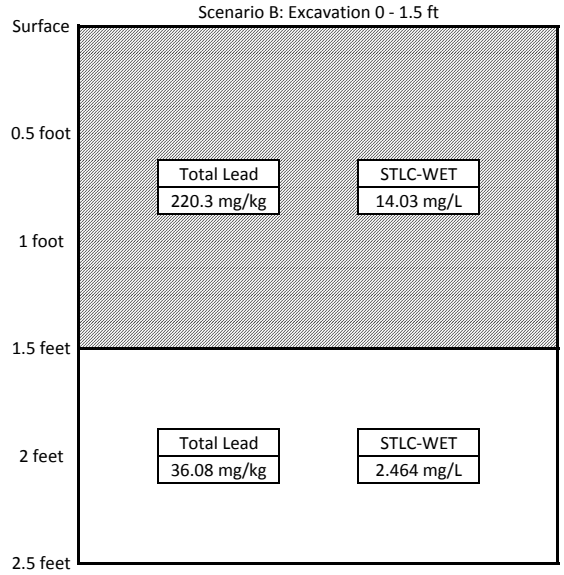
APPENDIX G

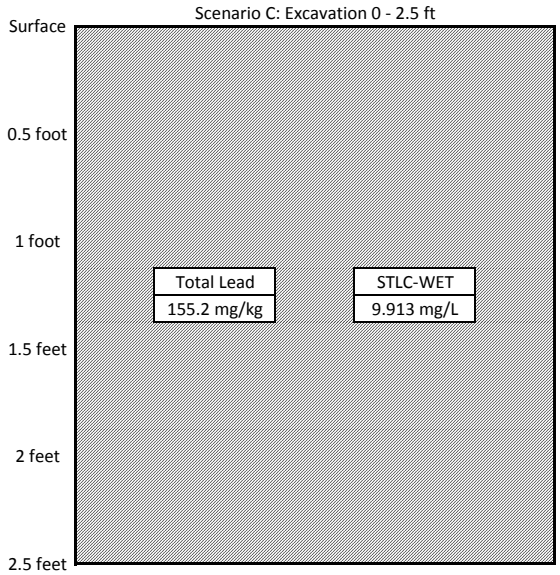
The block diagrams show the expected total and soluble lead concentrations under different excavation scenarios. Expected concentrations are provided for excavated layers that might be removed and for the soil underlying these excavated layers.

For example, in Scenario A for the Northbound SR-99, if the upper half foot of soil is excavated this soil will have an estimated total lead concentration of 213.7 milligrams per kilogram (mg/kg) and an estimated soluble lead concentration of 13.6 milligrams per liter (mg/L). The soil left in place down to 2.5 feet below the original ground surface will have an estimated total lead concentration of 122.1 mg/kg and estimated soluble lead concentration of 7.77 mg/L.

APPENDIX G
BLOCK DIAGRAMS - 95% UCL
Northbound SR-99





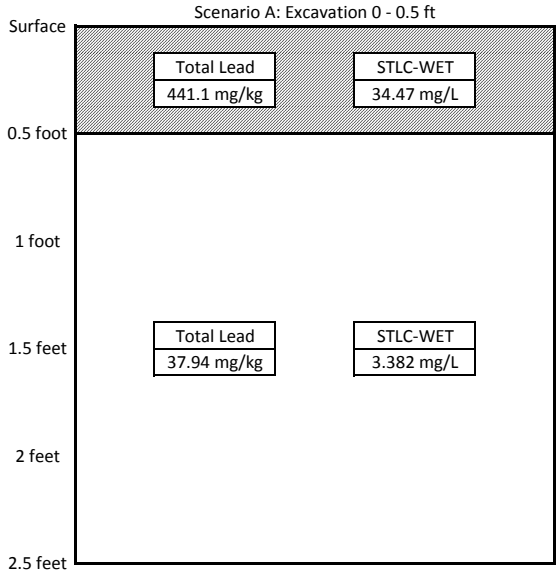


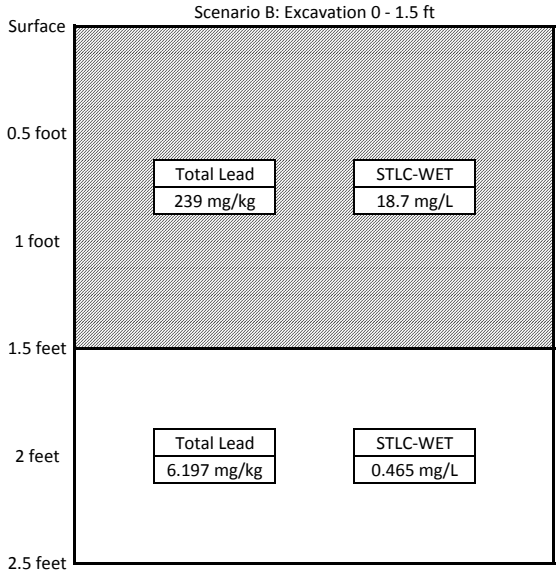
LEGEND

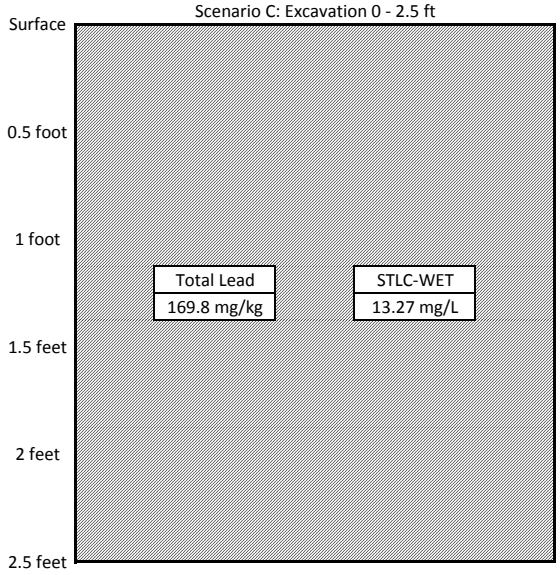
Excavated Soil Layer

STLC-WET — Soluble Threshold Limit Concentration - Waste Extraction Test (Citric Acid)

APPENDIX G
BLOCK DIAGRAMS - 95% UCL
Southbound SR-99





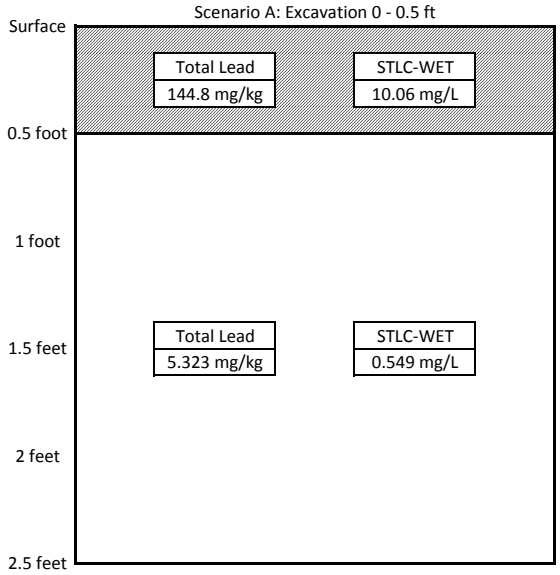


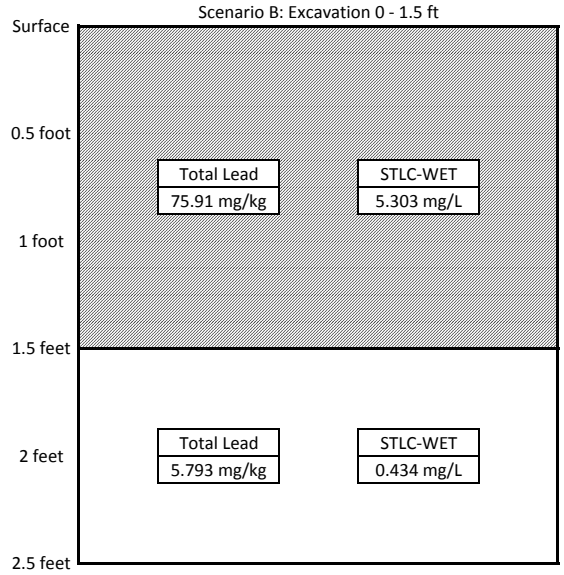
LEGEND

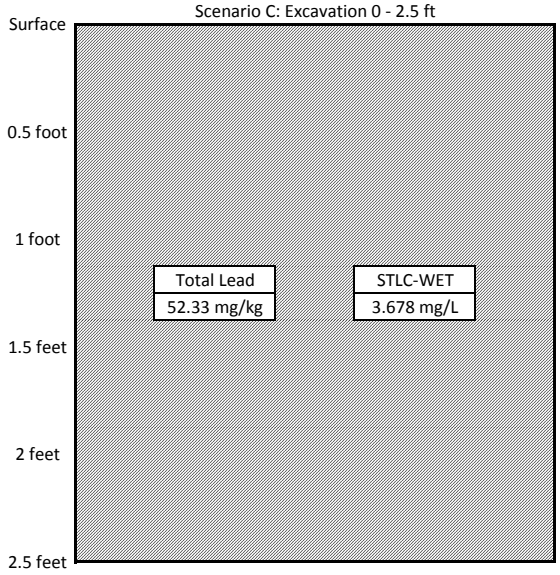
Excavated Soil Layer

STLC-WET — Soluble Threshold Limit Concentration - Waste Extraction Test (Citric Acid)

APPENDIX G
BLOCK DIAGRAMS - 95% UCL
Eastbound SR-58





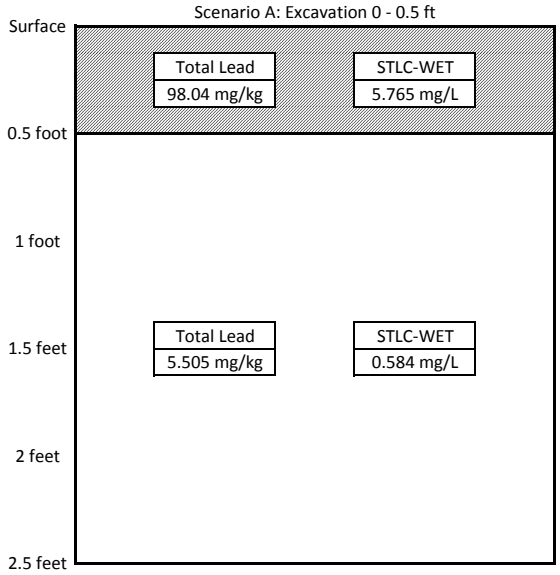


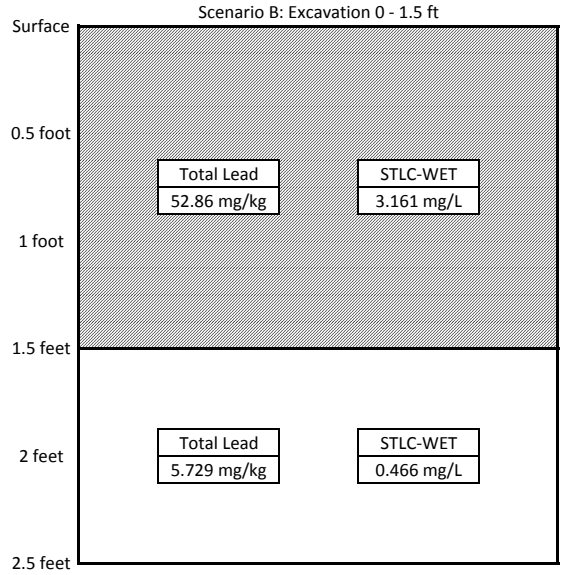
LEGEND

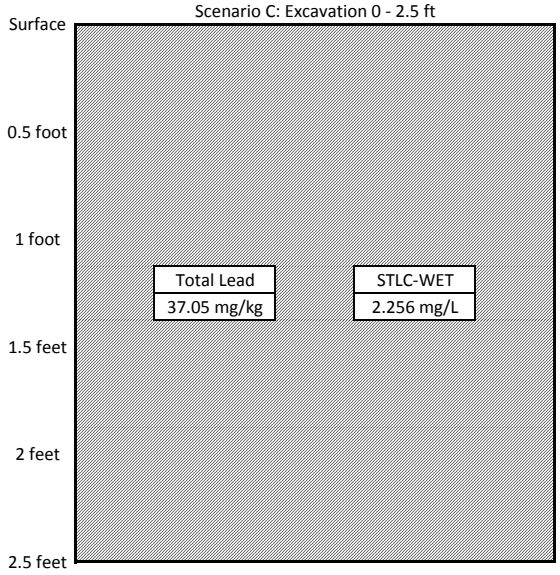
Excavated Soil Layer

STLC-WET — Soluble Threshold Limit Concentration - Waste Extraction Test (Citric Acid)

APPENDIX G
BLOCK DIAGRAMS - 95% UCL
Westbound SR-58





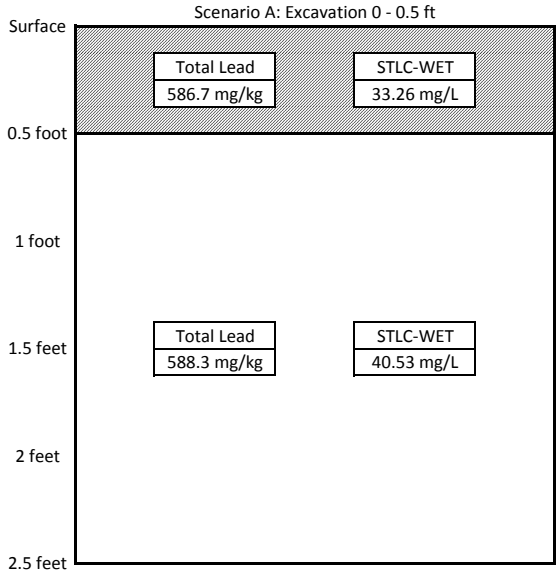


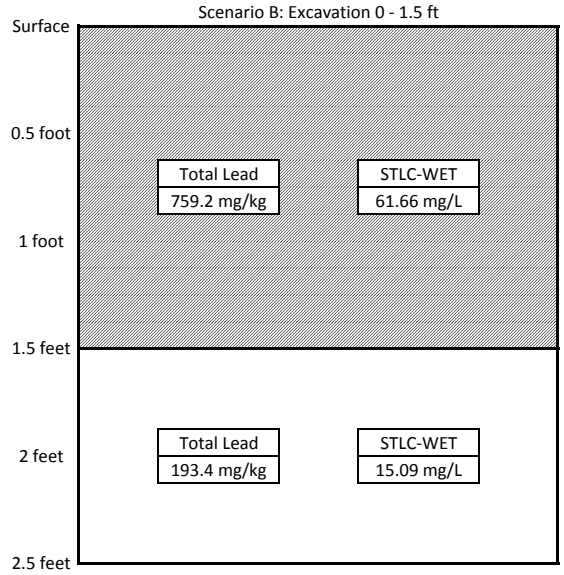
LEGEND

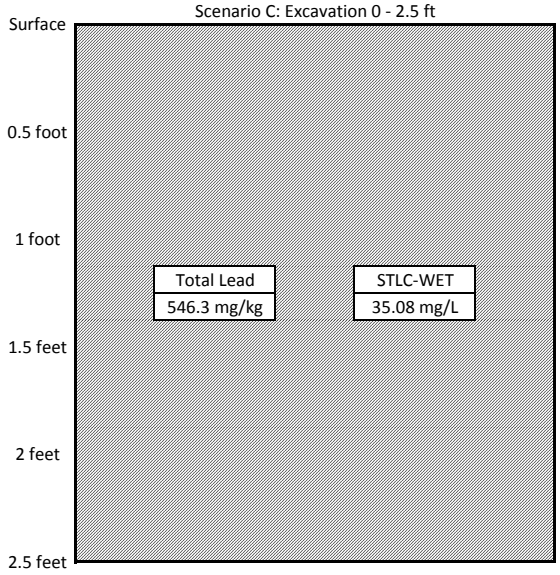
Excavated Soil Layer

STLC-WET — Soluble Threshold Limit Concentration - Waste Extraction Test (Citric Acid)

APPENDIX G
BLOCK DIAGRAMS - 95% UCL
Exit Southbound SR-99







LEGEND

Excavated Soil Layer

STLC-WET — Soluble Threshold Limit Concentration - Waste Extraction Test (Citric Acid)