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REPORTS

Preliminary Site Investigation Report, I-80 Erosion Control PM 6.2/6.4, Berkeley, Alameda County, California, GEOCON, December 2013

PRELIMINARY SITE INVESTIGATION REPORT

I-80 EROSION CONTROL
PM 6.2/6.4
BERKELEY, ALAMEDA COUNTY, CALIFORNIA

PREPARED FOR:
CALIFORNIA DEPARTMENT OF TRANSPORTATION
DISTRICT 4
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GEOCON PROJECT NO. E8560-02-59
CALTRANS EA 04-4A8201
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REPORT LIMITATIONS

This report has been prepared exclusively for the State of California Department of Transportation (Caltrans) District 4. The information contained herein is only valid as of the date of the report and will require an update to reflect additional information obtained.

This report is not a comprehensive site characterization and should not be construed as such. The findings as presented in this report are predicated on the results of the limited sampling and laboratory testing performed. In addition, the information obtained is not intended to address potential impacts related to sources other than those specified herein. Therefore, the report should be deemed conclusive with respect to only the information obtained. We make no warranty, express or implied, with respect to the content of this report or any subsequent reports, correspondence or consultation. Geocon strived to perform the services summarized herein in accordance with the local standard of care in the geographic region at the time the services were rendered.

The contents of this report reflect the views of the author who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the State of California or the Federal Highway Administration. This report does not constitute a standard, specification, or regulation.

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PRELIMINARY SITE INVESTIGATION REPORT

1.0 INTRODUCTION

This Preliminary Site Investigation Report for the erosion control and slope stabilization project within the existing 15-foot-wide unplanted shoulder of eastbound Interstate 80 (I-80) from 0.4 mile north of University Avenue to 0.3 mile south of the Gilman Street overcrossing in Berkeley California was prepared by Geocon Consultants, Inc. under California Department of Transportation (Caltrans) Contract No. 04A3578 and Task Order No. 59 (TO-59), EA 04-4A8201.

1.1 Project Description and Proposed Improvements

The project proposes to plant native grass between the existing pavement and drainage ditch. Six inches of existing material will be excavated to accommodate the best practice management treatment needed for this project. Soil conditioning will be done with amendments to improve filtration, reduce surface runoff, and improve plant growth. Work will take place within Caltrans right-of-way. The project location is depicted on the attached Vicinity Map, Figure 1.

1.2 General Objectives

The purpose of the site investigation was to evaluate concentrations of California Assessment Manual 17 (CAM 17) metals, particularly aerially deposited lead (ADL), and organic contaminants in soil. The information obtained from this investigation will be used by Caltrans to evaluate soil handling practices, worker health and safety, and soil reuse and disposal options.

2.0 BACKGROUND

2.1 Hazardous Waste Determination Criteria

Regulatory criteria to classify a waste as California hazardous for handling and disposal purposes are contained in the CCR, Title 22, Division 4.5, Chapter 11, Article 3, §66261.24. Criteria to classify a waste as Resource, Conservation, and Recovery Act (RCRA) hazardous are contained in Chapter 40 of the Code of Federal Regulations (40 CFR), Section 261.

For waste containing metals, the waste is classified as California hazardous when: 1) the representative total metal content equals or exceeds the respective Total Threshold Limit Concentration (TTLC); or 2) the representative soluble metal content equals or exceeds the respective Soluble Threshold Limit Concentration (STLC) based on the standard Waste Extraction Test (WET). A waste has the potential of exceeding the STLC when the waste's total metal content is greater than or equal to ten times the respective STLC value since the WET uses a 1:10 dilution ratio. Hence, when a total metal is detected at a concentration greater than or equal to ten times the respective STLC, and assuming that 100 percent of the total metals are soluble, soluble metal analysis is required. A material is classified as RCRA hazardous, or

Federal hazardous, when the representative soluble metal content equals or exceeds the Federal regulatory level based on the Toxicity Characteristic Leaching Procedure (TCLP).

The above regulatory criteria are based on chemical concentrations. Wastes may also be classified as hazardous based on other criteria such as ignitability and corrosivity; however, for the purposes of this investigation, toxicity (i.e., representative lead concentrations) is the primary factor considered for waste classification since waste generated during the construction activities would not likely warrant testing for ignitability or other criteria. Waste that is classified as either California hazardous or RCRA hazardous requires management as a hazardous waste.

2.2 Environmental Screening Levels

The San Francisco Bay Regional Water Quality Control Board (SFRWQCB) has prepared a technical report entitled *User's Guide: Derivation and Application of Environmental Screening Levels, Interim Final 2013* (updated December 2013), which presents Environmental Screening Levels (ESLs) for over 100 commonly found contaminants in soil, groundwater, soil gas, and surface water, to assist in evaluating sites impacted by releases of hazardous chemicals. "The ESLs are considered to be protective for typical bay area sites. Under most circumstances, …the presence of a chemical is soil, soil gas, or groundwater at concentrations below the corresponding ESL can be assumed to not pose a significant threat to human health, water resources, or the environment." (SFRWQCB, December 2013). ESLs are risk assessment tools and are "not intended to serve as a rule to determine if a waste is hazardous under the state or federal regulations."

Residential and commercial/industrial land use ESLs are commonly used by contractors, soil trucking companies, and private and commercial land owners as default acceptance criteria to evaluate suitability of import soil material. The following ESL tables were used for this characterization:

- Table A. Shallow Soil (≤3m bgs), Groundwater is a Current or Potential Source of Drinking Water
- Table K-3. Direct Exposure Soil Screening Levels, Construction/Trench Worker Exposure Scenario

The respective ESLs are listed at the end of Tables 3 and 4 for comparative purposes.

3.0 SCOPE OF SERVICES

The scope of services performed under TO-59, EA 04-4A8201 included the following:

3.1 Pre-field Activities

- Prepared the *Soil Sampling Workplan* and *Health and Safety Plan*, dated November 2013.
- Retained the services of Lane Safety to provide shoulder closure services.
- Retained the services of Advanced Technology Laboratories, Las Vegas (ATL-LV), a Caltrans-approved and California-certified analytical laboratory, to perform the chemical analyses of soil and groundwater samples.

3.2 Field Activities

The field investigation was performed on November 26, 2013, by Geocon staff. The following field activities were performed during the sampling efforts:

- Advanced 16 soil borings at the project location using hands-auger methods. The borings were advanced to a maximum depth of 0.5 foot.
- Collected 16 soil samples for laboratory analysis as outlined in the Caltrans task order.

All samples were transported to California-certified environmental laboratories for analysis under standard chain-of-custody (COC) documentation.

4.0 INVESTIGATIVE METHODS

4.1 Sampling Procedures

Soil samples were collected from 16 boring locations identified by the Caltrans TO Manager using hand-auger sampling methods. Boring coordinates are presented on Table 1 and locations are shown on the Site Plan, Figure 2.

Soil samples collected using a hand-auger were placed in ziploc bags or in stainless steel tubes and sealed with Teflon tape and plastic lids prior to being stored in a chest cooled with ice. Sample containers were labeled and transported to a Caltrans-approved, certified environmental laboratory using standard COC documentation. Soil borings were back-filled with soil cuttings.

Geocon provided QA/QC procedures during the field activities. These procedures included washing the sampling equipment with a Liqui-Nox® solution followed by a double rinse with deionized water. The equipment rinse blank was collected by pouring deionized water over the cleaned sampling equipment and collecting it into a sample container for laboratory analysis. Decontamination water was disposed

of to the ground surface within Caltrans right-of-way in a manner not to create runoff and away from drain inlets or potential water bodies.

4.2 Laboratory Analyses

Initial laboratory analyses were performed by ATL-LV under standard turnaround-time (TAT) per the Task Order Manager. The laboratory reports and COC documentation are included in Appendix A.

The soil samples were analyzed as follows:

- 10 samples for total lead using EPA Test Method 6010B.
- 6 samples for CAM 17 metals using EPA Test Methods 6010B and 7471A.
- 14 samples with total lead concentrations equal to or exceeding 50 mg/kg (i.e. equal to or exceeding ten times the STLC of 5.0 mg/l) were further analyzed for WET lead.
- 1 sample with a total lead concentration exceeding 1,000 mg/kg was further analyzed for TCLP lead.
- 5 samples with WET lead concentrations exceeding 5.0 mg/l were further analyzed for TCLP lead.
- 1 sample with a total copper concentration exceeding 250 mg/kg (i.e. exceeding ten times the STLC of 25 mg/l) was further analyzed for WET copper.
- 5 samples for total petroleum hydrocarbons as diesel (TPHd) and as motor oil (TPHmo) using EPA Test Method 8015B.
- 5 samples for total petroleum hydrocarbons as gasoline (TPHg) using EPA Test Method 8015B.
- 4 samples for pH using EPA Test Method 9045C.

4.3 Laboratory QA/QC

QA/QC procedures were performed for each method of analysis with specificity for each analyte listed in the test method's QA/QC. The laboratory QA/QC procedures included the following:

- One method blank for every ten samples, batch of samples or type of matrix, whichever was more frequent.
- One sample analyzed in duplicate for every ten samples, batch of samples or type of matrix, whichever was more frequent.
- One spiked sample for every ten samples, batch of samples or type of matrix; whichever was more frequent, with spike made at ten times the detection limit or at the analyte level.

Prior to submitting the samples to the laboratory, the COC documentation was reviewed for accuracy and completeness.

5.0 INVESTIGATIVE RESULTS

5.1 Subsurface Conditions

Observations during field activities indicated that soil in the areas consisted of light brown silt with surface gravel. Groundwater was not encountered.

5.2 Laboratory Analytical Results

The analytical results are summarized in Tables 2 through 4 and are summarized below:

Soil Sample Results:

- The following metals were not detected above their respective laboratory reporting limits: antimony, beryllium, silver, and thallium.
- Total lead was reported at concentrations ranging from 32 mg/kg to 1,200 mg/kg.
- WET lead was reported at concentrations ranging from 6.8 mg/l to 60 mg/l.
- TCLP lead was reported at concentrations ranging from <0.25 mg/l to 2.5 mg/l.
- Copper and zinc were reported in sample B12-0 at 8,000 mg/kg and 2,900 mg/kg, respectively. Due to these anomalous results, sample B12-0 was re-analyzed, and copper and zinc were reported at 310 mg/kg and 440 mg/kg, respectively.
- WET copper was reported at 9.1 mg/l.
- pH was reported at 8.9 to 9.2.
- TPHd was reported at concentrations ranging from 5.4 mg/kg to 95 mg/kg.
- TPHmo was reported at concentrations ranging from 11 mg/kg to 230 mg/kg.
- TPHg was not detected at or above the laboratory reporting limit of 1.0 mg/kg.
- VOCs were not detected at or above laboratory reporting limits.

5.3 Laboratory Quality Assurance/Quality Control

We reviewed the QA/QC results provided with the laboratory analytical reports. The Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) were outside recovery criteria for several samples, possibly due to matrix interference, however the associated laboratory control sample recoveries were acceptable. The relative percent differences (RPD) for MS/MSD were outside of recovery limits for several samples. Dilution was necessary for the samples analyzed for TPHd and TPHmo due to the sample matrix. Remaining samples and internal laboratory QA/QC samples showed acceptable recoveries and relative percent differences (RPDs). Based on this limited data review, no additional qualifications of the soil data are necessary, and the data are of sufficient quality for the purposes of this report.

5.4 Statistical Evaluation for Lead Detected in Soil Samples

Statistical methods were applied to the total lead data to evaluate: 1) the upper confidence limits (UCLs) of the arithmetic mean of the total lead concentrations; and 2) if an acceptable correlation between total and WET lead concentrations exists that would allow the prediction of WET lead concentrations based on calculated UCLs.

5.4.1 Calculating the UCLs for the Arithmetic Mean

The upper one-sided 90% and 95% UCLs of the arithmetic mean are defined as the values that, when calculated repeatedly for randomly drawn subsets of site data, equal or exceed the true mean 90% and 95% of the time, respectively. 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. As data become less limited at a site, uncertainties decrease, and the UCLs move closer to the true mean.

Non-parametric bootstrap techniques were used to calculate the UCLs. The bootstrap test results are included in Appendix B. The following tables present the calculated UCLs and statistics.

Samples B1 to B16

SAMPLE INTERVAL (feet)	TOTAL LEAD 90% UCL (mg/kg)	TOTAL LEAD 95% UCL (mg/kg)	TOTAL LEAD MEAN (mg/kg)	TOTAL LEAD MINIMUM (mg/kg)	TOTAL LEAD MAXIMUM (mg/kg)
0 to 0.5	501.8	526	412	32	1,200

5.4.2 Correlation of Total and WET Lead

Total and corresponding WET lead concentrations are bivariate data with a linear structure. This linear structure should allow for the prediction of WET lead concentrations based on the maximum total lead concentrations presented in the tables above.

To estimate the degree of interrelation between total and corresponding WET lead values (x and y, respectively), the *correlation coefficient [r]* is used. The correlation coefficient is a ratio that ranges from +1 to –1. A *correlation coefficient* of +1 indicates a perfect direct relationship between two variables; a *correlation coefficient* of –1 indicates that one variable changes inversely with relation to the other. Between the two extremes is a spectrum of less-than-perfect relationships, including zero, which indicates the lack of any sort of linear relationship at all.

The *correlation coefficient* was calculated for 14 (x, y) data points (i.e., soil samples analyzed for both total lead [x] and WET lead [y]) from the site. To achieve an acceptable correlation, the total WET soluble lead data from samples B4-0 (690, 17) and B6-0 (320, 57) were excluded from the regression analysis. The excluded total and WET soluble lead data have the highest squared residual WET soluble lead values (presented in Appendix B). Excluding these data points from the regression analysis yields an acceptable *coefficient of determination* (r^2) equaled 0.7887, which yields a corresponding *correlation coefficient* (r) of 0.8881.

For the *correlation coefficient* that indicates a linear relationship between total and WET lead concentrations, it is possible to compute the line of dependence or a best-fit line between the two variables. A least squares method was used to find the equation of a best-fit line (regression line) by forcing the y-intercept equal to zero since that is a known point. The equation of the regression line was determined to be $y = 0.0661(x)$, where x represents total lead concentrations and y represents predicted WET lead concentrations.

6.0 CONCLUSIONS

Waste classifications are evaluated based on the 90% UCL of the lead content for the relevant excavation depths; this has historically been considered sufficient to satisfy a good faith effort by the EPA as discussed in SW-846. Risk assessment characterization is based on the 95% UCL of the lead content in the waste for the relevant depths; this is in accordance with the Risk Assessment Guidance for Superfund (RAGS) Volume 1 Documentation for Exposure Assessment. Per Caltrans, the 90% UCLs are to be used to evaluate onsite reuse and the 95% UCLs are to be used to evaluate offsite disposal.

6.1 Lead in Soil

The following table summarizes the predicted waste classification for excavated soil based on the calculated weighted averages of the total lead UCLs and predicted WET lead concentrations for data collected from this portion of the Site. Weighted averages are calculated by using the total lead concentration for each 0.5-foot depth interval as the value for the underlying 0.5-foot depth interval (unless a sample was collected from the underlying depth interval). The total and WET lead calculations are summarized below.

EXCAVATION DEPTH	90% UCL TOTAL LEAD (MG/KG)	90% UCL PREDICTED WET LEAD (MG/L)	95% UCL TOTAL LEAD (MG/KG)	WASTE CLASSIFICATION
0 to 0.5 ft	501.8	**33.2**	526	**Hazardous**

90% UCL applicable for waste classification and onsite reuse; 95% UCL applicable for risk assessment and offsite disposal

Based on the data presented in the above table, soil excavated to a depth of 0.5 feet would be classified as a California hazardous waste since the 90% UCL-predicted WET lead concentration is greater than the lead STLC of 5.0 mg/l. Based on the TCLP lead results, excavated soil would not be classified as a RCRA hazardous waste.

Lead results are summarized in Table 2.

6.2 Other CAM 17 Metals Soil

With the exception of lead, copper, and zinc, CAM 17 metals were reported in the samples at total concentrations below ten times their respective STLCs.

Copper and zinc were reported in sample B12-0 at 8,000 mg/kg and 2,900 mg/kg, respectively. Due to these anomalous results, sample B12-0 was re-analyzed, and copper and zinc were reported at 310 mg/kg and 440 mg/kg. WET copper was reported at 9.1 mg/l, below its STLC of 25 mg/l.

Arsenic and lead were reported at concentrations greater than one or more ESL values. The 95% UCL calculations for arsenic and lead are included in Appendix B and summarized below along with the ESLs and published background concentrations.

METAL	MAXIMUM	95% UCL	SHALLOW SOIL RESIDENTIAL ESL	SHALLOW SOIL COMMERCIAL/ INDUSTRIAL ESL	WORKER DIRECT EXPOSURE ESL	PUBLISHED BACKGROUND MEAN[1]	PUBLISHED BACKGROUND RANGE [1]
Arsenic	4.3	4.06	0.39	0.96	10	3.5	0.6 to 11.0
Lead	1,200	526	80	320	320	23.9	12.4 to 97.1

Concentrations reported in mg/kg

[1] Kearney Foundation of Soil Science, March 1996

The 95% UCL arsenic concentration is greater than the residential and commercial land use ESLs; however, it is less than the construction exposure ESL and within the published background range. The SFRWQCB *November 2007 Update to Environmental Screening Levels (ESLs) Technical Document* states that ambient background concentrations of arsenic typically exceed risk-based screening levels. In such instances, it may be more appropriate to compare site data to regionally specific established background levels.

The 95% UCL lead concentration is greater than the residential and commercial land use ESLs, greater than the construction exposure ESL, and greater than the published background range.

Based on the reported results for arsenic and lead, offsite reuse or disposal of excavated soil may be restricted depending on proposed use.

Metals results for soil samples are summarized in Table 3.

6.3 Petroleum Hydrocarbons in Soil

TPHd was reported at concentrations greater than its residential and commercial land use ESLs of 100 mg/kg and 110 mg/kg, respectively, and less than the construction exposure ESL of 900 mg/kg.

TPHmo was reported at concentrations greater than it residential land use ESL of 100 mg/kg. TPHmo was not reported at concentrations greater than its commercial land use ESL of 500 mg/kg or the construction exposure ESL of 28,000 mg/kg.

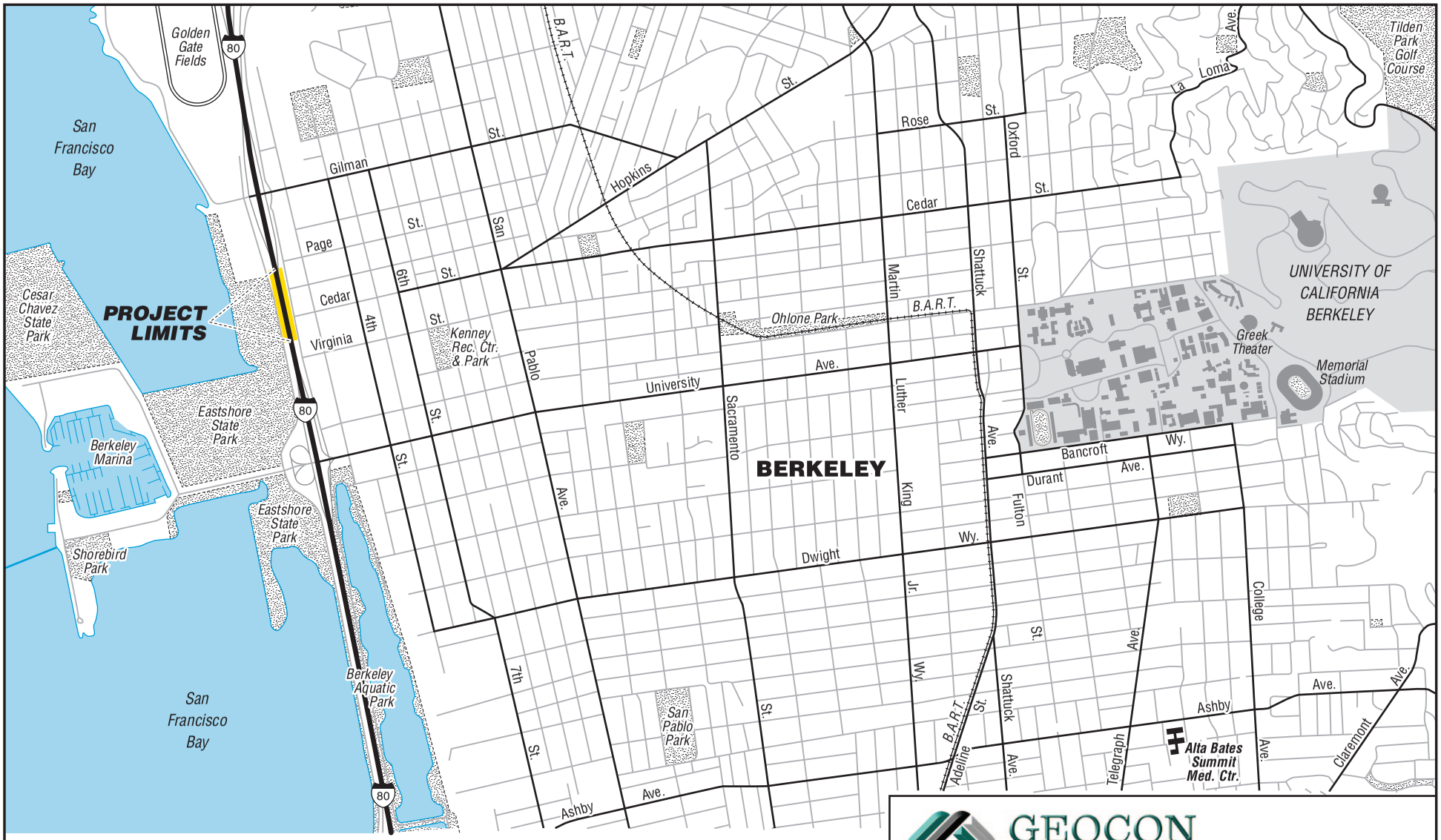
TPHg was not detected at or above laboratory reporting limits.

Petroleum hydrocarbon results are summarized in Table 4.

Based on the reported TPHd and TPHmo concentrations greater than ESLs, offsite reuse or disposal of excavated soil may be restricted depending on proposed use.

6.4 Worker Protection

The contractor(s) should prepare a project-specific health and safety plan to prevent or minimize worker exposure to metals and petroleum hydrocarbons in soil. The plan should include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other health and safety protocols and procedures for the handling of soil.



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Alameda County, California

VICINITY MAP

GEOCON Proj. No. E8560-02-59

Task Order No. 59 | November 2013 | Figure 1

LEGEND:

Boring Location

N

0 60 120

SCALE: feet

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I-80 Erosion Control

Berkeley, California

SITE PLAN

GEOCON Proj. No. E8560-02-59

EA No. 04-4A8201

December 2013

Figure 2

SITE1213

TABLE 1
Boring Coordinates
I-80 Erosion Control
Berkeley, California

Boring	Northing	Easting	Latitude	Longitude
B1	2,145,144.648	6,040,645.080	37.872391108	-122.305187809
B2	2,145,193.380	6,040,637.819	37.872524530	-122.305216216
B3	2,145,239.463	6,040,622.589	37.872650257	-122.305272053
B4	2,145,289.644	6,040,613.480	37.872787562	-122.305306958
B5	2,145,338.349	6,040,599.499	37.872920552	-122.305358639
B6	2,145,395.197	6,040,597.369	37.873076533	-122.305369818
B7	2,145,443.367	6,040,578.907	37.873207817	-122.305436988
B8	2,145,494.090	6,040,573.851	37.873346823	-122.305457889
B9	2,145,537.158	6,040,555.807	37.873464123	-122.305523271
B10	2,145,590.259	6,040,554.008	37.873609831	-122.305533053
B11	2,145,635.039	6,040,534.274	37.873731741	-122.305604403
B12	2,145,685.484	6,040,527.308	37.873869884	-122.305631902
B13	2,145,732.210	6,040,511.576	37.873997348	-122.305689521
B14	2,145,787.455	6,040,502.387	37.874148553	-122.305725045
B15	2,145,836.936	6,040,506.045	37.874284610	-122.305715678
B16	2,145,882.824	6,040,488.668	37.874409687	-122.305778940

Northing and Easting coordinates shown in NAD 83, Zone 3, feet.

TABLE 2
Summary of Lead and pH Results
I-80 Erosion Control
Berkeley, California

Sample ID	Sample Depth (feet)	Total Lead (mg/kg)	WET Lead (mg/l)	TCLP Lead (mg/l)	pH
B1-0	0 to 0.5	400	26	---	8.4
B2-0	0 to 0.5	300	17	---	---
B3-0	0 to 0.5	480	33	0.63	---
B4-0	0 to 0.5	690	17	---	---
B5-0	0 to 0.5	32	---	---	9.0
B6-0	0 to 0.5	320	57	<0.25	---
B7-0	0 to 0.5	510	31	0.49	---
B8-0	0 to 0.5	270	17	---	---
B9-0	0 to 0.5	120	9.6	---	---
B10-0	0 to 0.5	640	60	2.5	8.2
B11-0	0 to 0.5	100	6.8	---	---
B12-0	0 to 0.5	270	20	---	---
B13-0	0 to 0.5	700	36	---	---
B14-0	0 to 0.5	1,200	---	0.58	7.4
B15-0	0 to 0.5	300	12	---	---
B16-0	0 to 0.5	260	15	---	---
Hazardous Waste Criteria					
	TTLC (mg/kg)	1,000	---	---	---
	STLC (mg/l)	---	5.0	---	---
	TCLP (mg/l)	---	---	5.0	---

Notes:
mg/kg = Milligrams per kilogram
mg/l = Milligrams per liter
WET = Waste Extraction Test using citric acid as the extraction fluid
TTLC = Total Threshold Limit Concentration
STLC = Soluble Threshold Limit Concentration

TABLE 3
Summary of CAM 17 Metals Results
I-80 Erosion Control
Berkeley, California

Sample ID	Sample Depth (ft)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
B2-0	0 to 0.5	<2.0	3.8	130	<1.0	<1.0	33	8.8	100	300	0.16	1.5	36	<1.0	<1.0	<1.0	29	300
B4-0	0 to 0.5	<2.0	3.5	77	<1.0	<1.0	45	7.3	52	690	0.17	<1.0	32	<1.0	<1.0	<1.0	23	260
B6-0	0 to 0.5	<2.0	4.3	95	<1.0	<1.0	28	7.7	49	320	0.33	<1.0	33	<1.0	<1.0	<1.0	26	180
B9-0	0 to 0.5	<2.0	2.1	63	<1.0	<1.0	25	11	41	120	0.54	<1.0	27	1.4	<1.0	<1.0	55	120
B12-0*	0 to 0.5	<2.0	4.1	220	<1.0	<1.0	40	11	8,000	270	0.18	1.8	62	1.1	<1.0	<1.0	29	2,900
B12-0	0 to 0.5	<2.0	4.2	200	<1.0	1.1	46	12	310 *9.1*	290	0.21	3.0	45	1.2	<1.0	<1.0	33	440
B15-0	0 to 0.5	<2.0	3.6	120	<1.0	<1.0	35	8.2	71	300	0.13	1.3	42	<1.0	<1.0	<1.0	26	240
ESLs																		
Residential Land Use		20	0.39	750	4.0	12	750	23	230	80	6.7	40	150	10	20	0.78	200	600
Commercial/Industrial Land Use		40	0.96	1,500	8.0	12	750	80	230	320	10	40	150	10	40	10	200	600
Construction Worker Exposure		120	10	61,000	180	110	460,000	49	12,000	320	27	1,500	6,100	1,500	1,500	3.1	1,500	93,000
Hazardous Waste Criteria																		
TTLC (mg/kg)		500	500	10,000	75	100	2,500	8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000
STLC (mg/l)		15	5.0	100	0.75	1.0	5.0	80	25	5.0	0.2	350	20	1.0	5.0	7.0	24	250
TCLP (mg/l)		---	5.0	100	---	1.0	6.0	---	---	5.0	0.2	---	---	1.0	5.0	---	---	---

Notes:

Results are shown in milligrams per kilogram (mg/kg).
Soluble WET Copper result shown in italics in milligrams per liter (mg/l)
Values listed for chromium are for Chromium III, as there is no standard for total chromium.
< = Analyte was not detected above the laboratory reporting limit.
* = Initial results for this sample were not used in statistical analysis due to inconsistencies with data set. Sample was re-homogneized and analyzed again with final results reported below..
ESLs = Environmental Screening Levels, Tables A and K-3, SFRWQCB, Revised December 2013.
TTLC = total threshold limit concentration
STLC = soluble threshold limit concentration
TCLP = toxicity characteristic leaching procedure

TABLE 4
Summary of Petroleum Hydrocarbon Results
I-80 Erosion Control
Berkeley, California

Sample ID	Sample Depth (ft)	TPHd (mg/kg)	TPHmo (mg/kg)	TPHg (mg/kg)
B2-0	0 to 0.5	160	480	<1.0
B5-0	0 to 0.5	49	160	<1.0
B9-0	0 to 0.5	77	260	<1.0
B12-0	0 to 0.5	120	390	<1.0
B16-0	0 to 0.5	96	330	<1.0
	ESLs			
	Residential	100	100	100
	Commercial/Industrial	110	500	500
	Construction Exposure	900	28,000	2,700

Notes:
mg/kg = milligrams per kilogram
µg/kg = micrograms per kilogram
TPHd = Total petroleum hydrocarbons as diesel
TPHmo = Total petroleum hydrocarbons as motor oil
TPHg = Total petroleum hydrocarbons as gasoline
--- = Not analyzed or no standard for this compound
< = Not detected above the stated laboratory reporting limit
ESLs = Environmental Screening Levels, Tables A and K-3, SFRWQCB, Revised December 2013.

APPENDIX A

December 05, 2013

Luann Beadle
Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

TEL: 925-371-5900 Ext 403
FAX: (925) 371-5915

CA-ELAP No.: 2676
NV Cert. No.: NV-009222007A

Workorder No.: N011531

RE: I-80 Erosion Control, E8560-02-59

Attention: Luann Beadle

Enclosed are the results for sample(s) received on November 27, 2013 by Advanced Technology Laboratories, Inc. . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for Nancy Lubricas

Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time .

Analytical Comments for EPA 6010B:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

RPD for sampIes N011531-002, N011531-016 are outside criteria for some analytes ; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Analytical Comments for EPA 8015B DRO/ORO:

Dilution was necessary on samples N011531-002, N011531-005, N011531-009, N011531-012 and N011531-016 due to matrix. Sample extracts were black and very viscous.

Surrogate for samples and Matrix Spike (MS)/ Matrix Spike Duplicate (MSD) are outside recovery criteria possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable. All samples contain high concentrations of hydrocarbons.

RPD for Matrix Spike(MS) and Matrix Spike Duplicate(MSD) is outside criteria ; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Advanced Technology Laboratories, Inc.

Date: *05-Dec-13*

CLIENT: Geocon Consultants, Inc.
Project: I-80 Erosion Control, E8560-02-59
Lab Order: N011531
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N011531-001A	B1-0	Soil	11/26/2013 9:50:00 AM	11/27/2013	
N011531-002A	B2-0	Soil	11/26/2013 9:55:00 AM	11/27/2013	
N011531-003A	B3-0	Soil	11/26/2013 10:00:00 AM	11/27/2013	
N011531-004A	B4-0	Soil	11/26/2013 10:05:00 AM	11/27/2013	
N011531-005A	B5-0	Soil	11/26/2013 10:15:00 AM	11/27/2013	
N011531-006A	B6-0	Soil	11/26/2013 10:10:00 AM	11/27/2013	
N011531-007A	B7-0	Soil	11/26/2013 10:20:00 AM	11/27/2013	
N011531-008A	B8-0	Soil	11/26/2013 10:15:00 AM	11/27/2013	
N011531-009A	B9-0	Soil	11/26/2013 10:30:00 AM	11/27/2013	
N011531-010A	B10-0	Soil	11/26/2013 10:20:00 AM	11/27/2013	
N011531-011A	B11-0	Soil	11/26/2013 10:35:00 AM	11/27/2013	
N011531-012A	B12-0	Soil	11/26/2013 10:35:00 AM	11/27/2013	
N011531-013A	B13-0	Soil	11/26/2013 10:50:00 AM	11/27/2013	
N011531-014A	B14-0	Soil	11/26/2013 10:40:00 AM	11/27/2013	
N011531-015A	B15-0	Soil	11/26/2013 10:54:00 AM	11/27/2013	
N011531-016A	B16-0	Soil	11/26/2013 10:45:00 AM	11/27/2013	

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *05-Dec-13*

CLIENT: Geocon Consultants, Inc.
Lab Order: N011531
Project: I-80 Erosion Control, E8560-02-59
Lab ID: N011531-001

Client Sample ID: B1-0
Collection Date: 11/26/2013 9:50:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
PH						
				EPA 9045C		
RunID: WETCHEM_131127B	QC Batch: R91415			PrepDate:		Analyst: **LCC**
pH	8.4	0.10		pH Units	1	11/27/2013
Temp. at time of pH Analysis	25	0		pH Units	1	11/27/2013
PERCENT MOISTURE						
				D2216		
RunID: WETCHEM_131202A	QC Batch: R91441			PrepDate:		Analyst: **LCC**
Percent Moisture	10.72	0.1000		wt%	1	12/2/2013
LEAD BY ICP						
	EPA 3050B			**EPA 6010B**		
RunID: ICP2_131127D	QC Batch: 44491			PrepDate: 11/27/2013		Analyst: **JAA**
Lead	400	5.6		mg/Kg-dry	1	11/27/2013 04:58 PM

Qualifiers:

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

Results are wet unless otherwise specified

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *05-Dec-13*

CLIENT: Geocon Consultants, Inc.
Lab Order: N011531
Project: I-80 Erosion Control, E8560-02-59
Lab ID: N011531-002

Client Sample ID: B2-0
Collection Date: 11/26/2013 9:55:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3550B				**EPA 8015B**		
RunID: GC1_131204A	QC Batch: 44512			PrepDate:	12/4/2013	Analyst: **MDM**
DRO	160	5.0		mg/Kg	5	12/4/2013 06:59 PM
ORO	480	5.0		mg/Kg	5	12/4/2013 06:59 PM
Surr: p-Terphenyl	53.0	59-127	S	%REC	5	12/4/2013 06:59 PM
GASOLINE RANGE ORGANICS BY GC/FID						
				EPA 8015B		
RunID: GC4_131127A	QC Batch: E13VS125			PrepDate:		Analyst: **PN**
GRO	ND	1.0		mg/Kg	1	11/27/2013 11:50 AM
Surr: Chlorobenzene - d5	96.9	51-136		%REC	1	11/27/2013 11:50 AM
MERCURY BY COLD VAPOR TECHNIQUE						
EPA 7471				**EPA 7471A**		
RunID: AA1_131127B	QC Batch: 44492			PrepDate:	11/27/2013	Analyst: **LCC**
Mercury	0.16	0.10		mg/Kg	1	11/27/2013
ICP METALS						
EPA 3050B				**EPA 6010B**		
RunID: ICP2_131127D	QC Batch: 44491			PrepDate:	11/27/2013	Analyst: **JAA**
Antimony	ND	2.0		mg/Kg	1	11/27/2013 05:04 PM
Arsenic	3.8	1.0		mg/Kg	1	11/27/2013 05:04 PM
Barium	130	1.0		mg/Kg	1	11/27/2013 05:04 PM
Beryllium	ND	1.0		mg/Kg	1	11/27/2013 05:04 PM
Cadmium	ND	1.0		mg/Kg	1	11/27/2013 05:04 PM
Chromium	33	1.0		mg/Kg	1	11/27/2013 05:04 PM
Cobalt	8.8	1.0		mg/Kg	1	11/27/2013 05:04 PM
Copper	100	2.0		mg/Kg	1	12/4/2013 10:08 AM
Lead	300	1.0		mg/Kg	1	11/27/2013 05:04 PM
Molybdenum	1.5	1.0		mg/Kg	1	11/27/2013 05:04 PM
Nickel	36	1.0		mg/Kg	1	11/27/2013 05:04 PM
Selenium	ND	1.0		mg/Kg	1	11/27/2013 05:04 PM
Silver	ND	1.0		mg/Kg	1	11/27/2013 05:04 PM
Thallium	ND	1.0		mg/Kg	1	11/27/2013 05:04 PM
Vanadium	29	1.0		mg/Kg	1	11/27/2013 05:04 PM
Zinc	300	1.0		mg/Kg	1	11/27/2013 05:04 PM

Qualifiers:

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

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ANALYTICAL RESULTS

Print Date: *05-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B3-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:00:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-003		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050B			**EPA 6010B**		
RunID: ICP2_131127D	QC Batch: 44491				PrepDate: 11/27/2013	Analyst: **JAA**
Lead	480	5.0		mg/Kg	1	11/27/2013 05:54 PM

Qualifiers:

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

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ANALYTICAL RESULTS

Print Date: *05-Dec-13*

CLIENT: Geocon Consultants, Inc.
Lab Order: N011531
Project: I-80 Erosion Control, E8560-02-59
Lab ID: N011531-004

Client Sample ID: B4-0
Collection Date: 11/26/2013 10:05:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
MERCURY BY COLD VAPOR TECHNIQUE						
	EPA 7471			**EPA 7471A**		
RunID: AA1_131127B	QC Batch: 44492			PrepDate:	11/27/2013	Analyst: **LCC**
Mercury	0.17	0.10		mg/Kg	1	11/27/2013
ICP METALS						
	EPA 3050B			**EPA 6010B**		
RunID: ICP2_131127D	QC Batch: 44491			PrepDate:	11/27/2013	Analyst: **JAA**
Antimony	ND	2.0		mg/Kg	1	11/27/2013 06:01 PM
Arsenic	3.5	1.0		mg/Kg	1	11/27/2013 06:01 PM
Barium	77	1.0		mg/Kg	1	11/27/2013 06:01 PM
Beryllium	ND	1.0		mg/Kg	1	11/27/2013 06:01 PM
Cadmium	ND	1.0		mg/Kg	1	11/27/2013 06:01 PM
Chromium	45	1.0		mg/Kg	1	11/27/2013 06:01 PM
Cobalt	7.3	1.0		mg/Kg	1	11/27/2013 06:01 PM
Copper	52	2.0		mg/Kg	1	12/4/2013 10:38 AM
Lead	690	1.0		mg/Kg	1	11/27/2013 06:01 PM
Molybdenum	ND	1.0		mg/Kg	1	11/27/2013 06:01 PM
Nickel	32	1.0		mg/Kg	1	11/27/2013 06:01 PM
Selenium	ND	1.0		mg/Kg	1	11/27/2013 06:01 PM
Silver	ND	1.0		mg/Kg	1	11/27/2013 06:01 PM
Thallium	ND	1.0		mg/Kg	1	11/27/2013 06:01 PM
Vanadium	23	1.0		mg/Kg	1	11/27/2013 06:01 PM
Zinc	260	1.0		mg/Kg	1	11/27/2013 06:01 PM

Qualifiers:

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

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ANALYTICAL RESULTS

Print Date: *05-Dec-13*

CLIENT: Geocon Consultants, Inc.
Lab Order: N011531
Project: I-80 Erosion Control, E8560-02-59
Lab ID: N011531-005

Client Sample ID: B5-0
Collection Date: 11/26/2013 10:15:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
PH						
				EPA 9045C		
RunID: WETCHEM_131127B QC Batch: R91415				PrepDate:		Analyst: **LCC**
pH	9.0	0.10		pH Units	1	11/27/2013
Temp. at time of pH Analysis	25	0		pH Units	1	11/27/2013
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
		EPA 3550B		**EPA 8015B**		
RunID: GC1_131204A QC Batch: 44512				PrepDate:	12/4/2013	Analyst: **MDM**
DRO	49	5.0		mg/Kg	5	12/4/2013 07:24 PM
ORO	160	5.0		mg/Kg	5	12/4/2013 07:24 PM
Surr: p-Terphenyl	52.6	59-127	S	%REC	5	12/4/2013 07:24 PM
GASOLINE RANGE ORGANICS BY GC/FID						
				EPA 8015B		
RunID: GC4_131127A QC Batch: E13VS125				PrepDate:		Analyst: **PN**
GRO	ND	1.0		mg/Kg	1	11/27/2013 01:17 PM
Surr: Chlorobenzene - d5	98.2	51-136		%REC	1	11/27/2013 01:17 PM
LEAD BY ICP						
		EPA 3050B		**EPA 6010B**		
RunID: ICP2_131127D QC Batch: 44491				PrepDate:	11/27/2013	Analyst: **JAA**
Lead	32	5.0		mg/Kg	1	11/27/2013 06:07 PM

Qualifiers:

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

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ANALYTICAL RESULTS

Print Date: *05-Dec-13*

CLIENT: Geocon Consultants, Inc.
Lab Order: N011531
Project: I-80 Erosion Control, E8560-02-59
Lab ID: N011531-006

Client Sample ID: B6-0
Collection Date: 11/26/2013 10:10:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
MERCURY BY COLD VAPOR TECHNIQUE						
	EPA 7471			**EPA 7471A**		
RunID: AA1_131127B	QC Batch: 44492			PrepDate:	11/27/2013	Analyst: **LCC**
Mercury	0.33	0.10		mg/Kg	1	11/27/2013
ICP METALS						
	EPA 3050B			**EPA 6010B**		
RunID: ICP2_131127D	QC Batch: 44491			PrepDate:	11/27/2013	Analyst: **JAA**
Antimony	ND	2.0		mg/Kg	1	11/27/2013 06:14 PM
Arsenic	4.3	1.0		mg/Kg	1	11/27/2013 06:14 PM
Barium	95	1.0		mg/Kg	1	11/27/2013 06:14 PM
Beryllium	ND	1.0		mg/Kg	1	11/27/2013 06:14 PM
Cadmium	ND	1.0		mg/Kg	1	11/27/2013 06:14 PM
Chromium	28	1.0		mg/Kg	1	11/27/2013 06:14 PM
Cobalt	7.7	1.0		mg/Kg	1	11/27/2013 06:14 PM
Copper	49	2.0		mg/Kg	1	12/4/2013 10:52 AM
Lead	320	1.0		mg/Kg	1	11/27/2013 06:14 PM
Molybdenum	ND	1.0		mg/Kg	1	11/27/2013 06:14 PM
Nickel	33	1.0		mg/Kg	1	11/27/2013 06:14 PM
Selenium	ND	1.0		mg/Kg	1	11/27/2013 06:14 PM
Silver	ND	1.0		mg/Kg	1	11/27/2013 06:14 PM
Thallium	ND	1.0		mg/Kg	1	11/27/2013 06:14 PM
Vanadium	26	1.0		mg/Kg	1	11/27/2013 06:14 PM
Zinc	180	1.0		mg/Kg	1	11/27/2013 06:14 PM

Qualifiers:

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

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ANALYTICAL RESULTS

Print Date: *05-Dec-13*

CLIENT: Geocon Consultants, Inc.
Lab Order: N011531
Project: I-80 Erosion Control, E8560-02-59
Lab ID: N011531-007

Client Sample ID: B7-0
Collection Date: 11/26/2013 10:20:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE						
				D2216		
RunID: WETCHEM_131202A	QC Batch: R91441			PrepDate:		Analyst: **LCC**
Percent Moisture	8.707	0.1000		wt%	1	12/2/2013
LEAD BY ICP						
	EPA 3050B			**EPA 6010B**		
RunID: ICP2_131127D	QC Batch: 44491			PrepDate: 11/27/2013		Analyst: **JAA**
Lead	510	5.5		mg/Kg-dry	1	11/27/2013 06:21 PM

Qualifiers:

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

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *05-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B8-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:15:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-008		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050B			**EPA 6010B**		
RunID: ICP2_131127D	QC Batch: 44491			PrepDate:	11/27/2013	Analyst: **JAA**
Lead	270	5.0		mg/Kg	1	11/27/2013 06:28 PM

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

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *05-Dec-13*

CLIENT: Geocon Consultants, Inc.
Lab Order: N011531
Project: I-80 Erosion Control, E8560-02-59
Lab ID: N011531-009

Client Sample ID: B9-0
Collection Date: 11/26/2013 10:30:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3550B				**EPA 8015B**		
RunID: GC1_131204A	QC Batch: 44512			PrepDate:	12/4/2013	Analyst: **MDM**
DRO	77	5.0		mg/Kg	5	12/4/2013 07:50 PM
ORO	260	5.0		mg/Kg	5	12/4/2013 07:50 PM
Surr: p-Terphenyl	58.3	59-127	S	%REC	5	12/4/2013 07:50 PM
GASOLINE RANGE ORGANICS BY GC/FID						
				EPA 8015B		
RunID: GC4_131127A	QC Batch: E13VS125			PrepDate:		Analyst: **PN**
GRO	ND	1.0		mg/Kg	1	11/27/2013 01:47 PM
Surr: Chlorobenzene - d5	104	51-136		%REC	1	11/27/2013 01:47 PM
MERCURY BY COLD VAPOR TECHNIQUE						
EPA 7471				**EPA 7471A**		
RunID: AA1_131127B	QC Batch: 44492			PrepDate:	11/27/2013	Analyst: **LCC**
Mercury	0.54	0.099		mg/Kg	1	11/27/2013
ICP METALS						
EPA 3050B				**EPA 6010B**		
RunID: ICP2_131127D	QC Batch: 44491			PrepDate:	11/27/2013	Analyst: **JAA**
Antimony	ND	2.0		mg/Kg	1	11/27/2013 06:34 PM
Arsenic	2.1	1.0		mg/Kg	1	11/27/2013 06:34 PM
Barium	63	1.0		mg/Kg	1	11/27/2013 06:34 PM
Beryllium	ND	1.0		mg/Kg	1	11/27/2013 06:34 PM
Cadmium	ND	1.0		mg/Kg	1	11/27/2013 06:34 PM
Chromium	25	1.0		mg/Kg	1	11/27/2013 06:34 PM
Cobalt	11	1.0		mg/Kg	1	11/27/2013 06:34 PM
Copper	41	2.0		mg/Kg	1	12/4/2013 10:57 AM
Lead	120	1.0		mg/Kg	1	11/27/2013 06:34 PM
Molybdenum	ND	1.0		mg/Kg	1	11/27/2013 06:34 PM
Nickel	27	1.0		mg/Kg	1	11/27/2013 06:34 PM
Selenium	1.4	1.0		mg/Kg	1	11/27/2013 06:34 PM
Silver	ND	1.0		mg/Kg	1	11/27/2013 06:34 PM
Thallium	ND	1.0		mg/Kg	1	11/27/2013 06:34 PM
Vanadium	55	1.0		mg/Kg	1	11/27/2013 06:34 PM
Zinc	120	1.0		mg/Kg	1	11/27/2013 06:34 PM

Qualifiers:

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

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ANALYTICAL RESULTS

Print Date: *05-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B10-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:20:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-010		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
PH						
				EPA 9045C		
RunID: WETCHEM_131127B	QC Batch: R91415			PrepDate:		Analyst: **LCC**
pH	8.2	0.10		pH Units	1	11/27/2013
Temp. at time of pH Analysis	25	0		pH Units	1	11/27/2013
LEAD BY ICP						
	EPA 3050B			**EPA 6010B**		
RunID: ICP2_131127D	QC Batch: 44491			PrepDate:	11/27/2013	Analyst: **JAA**
Lead	640	5.0		mg/Kg	1	11/27/2013 06:41 PM

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

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *05-Dec-13*

CLIENT: Geocon Consultants, Inc.
Lab Order: N011531
Project: I-80 Erosion Control, E8560-02-59
Lab ID: N011531-011

Client Sample ID: B11-0
Collection Date: 11/26/2013 10:35:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE						
				D2216		
RunID: WETCHEM_131202A	QC Batch: R91441			PrepDate:		Analyst: **LCC**
Percent Moisture	3.913	0.1000		wt%	1	12/2/2013
LEAD BY ICP						
	EPA 3050B			**EPA 6010B**		
RunID: ICP2_131127D	QC Batch: 44491			PrepDate: 11/27/2013		Analyst: **JAA**
Lead	100	5.2		mg/Kg-dry	1	11/27/2013 07:11 PM

Qualifiers:

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

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ANALYTICAL RESULTS

Print Date: *05-Dec-13*

CLIENT: Geocon Consultants, Inc.
Lab Order: N011531
Project: I-80 Erosion Control, E8560-02-59
Lab ID: N011531-012

Client Sample ID: B12-0
Collection Date: 11/26/2013 10:35:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3550B				**EPA 8015B**		
RunID: GC1_131204A	QC Batch: 44512			PrepDate:	12/4/2013	Analyst: **MDM**
DRO	120	5.0		mg/Kg	5	12/4/2013 08:15 PM
ORO	390	5.0		mg/Kg	5	12/4/2013 08:15 PM
Surr: p-Terphenyl	54.2	59-127	S	%REC	5	12/4/2013 08:15 PM
GASOLINE RANGE ORGANICS BY GC/FID						
				EPA 8015B		
RunID: GC4_131127A	QC Batch: E13VS125			PrepDate:		Analyst: **PN**
GRO	ND	1.0		mg/Kg	1	11/27/2013 02:45 PM
Surr: Chlorobenzene - d5	96.8	51-136		%REC	1	11/27/2013 02:45 PM
MERCURY BY COLD VAPOR TECHNIQUE						
EPA 7471				**EPA 7471A**		
RunID: AA1_131127B	QC Batch: 44492			PrepDate:	11/27/2013	Analyst: **LCC**
Mercury	0.18	0.099		mg/Kg	1	11/27/2013
ICP METALS						
EPA 3050B				**EPA 6010B**		
RunID: ICP2_131127D	QC Batch: 44491			PrepDate:	11/27/2013	Analyst: **JAA**
Antimony	ND	2.0		mg/Kg	1	11/27/2013 07:18 PM
Arsenic	4.1	1.0		mg/Kg	1	11/27/2013 07:18 PM
Barium	220	1.0		mg/Kg	1	11/27/2013 07:18 PM
Beryllium	ND	1.0		mg/Kg	1	11/27/2013 07:18 PM
Cadmium	ND	1.0		mg/Kg	1	11/27/2013 07:18 PM
Chromium	40	1.0		mg/Kg	1	11/27/2013 07:18 PM
Cobalt	11	1.0		mg/Kg	1	11/27/2013 07:18 PM
Copper	8000	10		mg/Kg	5	12/2/2013 09:49 AM
Lead	270	1.0		mg/Kg	1	11/27/2013 07:18 PM
Molybdenum	1.8	1.0		mg/Kg	1	11/27/2013 07:18 PM
Nickel	62	1.0		mg/Kg	1	11/27/2013 07:18 PM
Selenium	1.1	1.0		mg/Kg	1	11/27/2013 07:18 PM
Silver	ND	1.0		mg/Kg	1	11/27/2013 07:18 PM
Thallium	ND	1.0		mg/Kg	1	11/27/2013 07:18 PM
Vanadium	29	1.0		mg/Kg	1	11/27/2013 07:18 PM
Zinc	2900	5.0		mg/Kg	5	12/2/2013 09:49 AM

Qualifiers:

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

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ANALYTICAL RESULTS

Print Date: *05-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B13-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:50:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-013		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050B			**EPA 6010B**		
RunID: ICP2_131127D	QC Batch: 44491				PrepDate: 11/27/2013	Analyst: **JAA**
Lead	700	5.0		mg/Kg	1	11/27/2013 07:26 PM

Qualifiers:

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

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ANALYTICAL RESULTS

Print Date: *05-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B14-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:40:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-014		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
PH						
				EPA 9045C		
RunID: WETCHEM_131127B	QC Batch: R91415			PrepDate:		Analyst: **LCC**
pH	7.4	0.10		pH Units	1	11/27/2013
Temp. at time of pH Analysis	25	0		pH Units	1	11/27/2013
LEAD BY ICP						
	EPA 3050B			**EPA 6010B**		
RunID: ICP2_131127D	QC Batch: 44491			PrepDate:	11/27/2013	Analyst: **JAA**
Lead	1200	5.0		mg/Kg	1	11/27/2013 07:33 PM

Qualifiers:

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

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ANALYTICAL RESULTS

Print Date: *05-Dec-13*

CLIENT: Geocon Consultants, Inc.
Lab Order: N011531
Project: I-80 Erosion Control, E8560-02-59
Lab ID: N011531-015

Client Sample ID: B15-0
Collection Date: 11/26/2013 10:54:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
MERCURY BY COLD VAPOR TECHNIQUE						
	EPA 7471			**EPA 7471A**		
RunID: AA1_131127B	QC Batch: 44492			PrepDate:	11/27/2013	Analyst: **LCC**
Mercury	0.13	0.10		mg/Kg	1	11/27/2013
ICP METALS						
	EPA 3050B			**EPA 6010B**		
RunID: ICP2_131127D	QC Batch: 44491			PrepDate:	11/27/2013	Analyst: **JAA**
Antimony	ND	2.0		mg/Kg	1	11/27/2013 07:40 PM
Arsenic	3.6	1.0		mg/Kg	1	11/27/2013 07:40 PM
Barium	120	1.0		mg/Kg	1	11/27/2013 07:40 PM
Beryllium	ND	1.0		mg/Kg	1	11/27/2013 07:40 PM
Cadmium	ND	1.0		mg/Kg	1	11/27/2013 07:40 PM
Chromium	35	1.0		mg/Kg	1	11/27/2013 07:40 PM
Cobalt	8.2	1.0		mg/Kg	1	11/27/2013 07:40 PM
Copper	71	2.0		mg/Kg	1	12/4/2013 11:01 AM
Lead	300	1.0		mg/Kg	1	11/27/2013 07:40 PM
Molybdenum	1.3	1.0		mg/Kg	1	11/27/2013 07:40 PM
Nickel	42	1.0		mg/Kg	1	11/27/2013 07:40 PM
Selenium	ND	1.0		mg/Kg	1	11/27/2013 07:40 PM
Silver	ND	1.0		mg/Kg	1	11/27/2013 07:40 PM
Thallium	ND	1.0		mg/Kg	1	11/27/2013 07:40 PM
Vanadium	26	1.0		mg/Kg	1	11/27/2013 07:40 PM
Zinc	240	1.0		mg/Kg	1	11/27/2013 07:40 PM

Qualifiers:

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

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ANALYTICAL RESULTS

Print Date: *05-Dec-13*

CLIENT: Geocon Consultants, Inc.
Lab Order: N011531
Project: I-80 Erosion Control, E8560-02-59
Lab ID: N011531-016

Client Sample ID: B16-0
Collection Date: 11/26/2013 10:45:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3550B				**EPA 8015B**		
RunID: GC1_131204A	QC Batch: 44512			PrepDate:	12/4/2013	Analyst: **MDM**
DRO	96	5.0		mg/Kg	5	12/4/2013 08:40 PM
ORO	330	5.0		mg/Kg	5	12/4/2013 08:40 PM
Surr: p-Terphenyl	50.7	59-127	S	%REC	5	12/4/2013 08:40 PM
GASOLINE RANGE ORGANICS BY GC/FID						
				EPA 8015B		
RunID: GC4_131127A	QC Batch: E13VS125			PrepDate:		Analyst: **PN**
GRO	ND	1.0		mg/Kg	1	11/27/2013 03:15 PM
Surr: Chlorobenzene - d5	98.1	51-136		%REC	1	11/27/2013 03:15 PM
LEAD BY ICP						
EPA 3050B				**EPA 6010B**		
RunID: ICP2_131127D	QC Batch: 44491			PrepDate:	11/27/2013	Analyst: **JAA**
Lead	260	5.0		mg/Kg	1	11/27/2013 07:47 PM

Qualifiers:

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

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CLIENT: Geocon Consultants, Inc.
Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **MB1-44491** SampType: **MBLK** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91432**
Client ID: **PBS** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/27/2013** SeqNo: **1694364**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.451	2.0									
Arsenic	ND	1.0									
Barium	ND	1.0									
Beryllium	ND	1.0									
Cadmium	ND	1.0									
Chromium	ND	1.0									
Cobalt	ND	1.0									
Lead	ND	1.0									
Molybdenum	0.907	1.0									
Nickel	ND	1.0									
Selenium	ND	1.0									
Silver	ND	1.0									
Thallium	ND	1.0									
Vanadium	ND	1.0									
Zinc	ND	1.0									

Sample ID: **MB2-44491** SampType: **MBLK** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91432**
Client ID: **PBS** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/27/2013** SeqNo: **1694365**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.299	2.0									
Arsenic	ND	1.0									
Barium	ND	1.0									
Beryllium	ND	1.0									
Cadmium	ND	1.0									
Chromium	ND	1.0									
Cobalt	ND	1.0									
Lead	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories, Inc.
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CLIENT: Geocon Consultants, Inc.
Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **MB2-44491** SampType: **MBLK** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91432**
Client ID: **PBS** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/27/2013** SeqNo: **1694365**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	ND	1.0									
Nickel	ND	1.0									
Selenium	ND	1.0									
Silver	ND	1.0									
Thallium	ND	1.0									
Vanadium	ND	1.0									
Zinc	ND	1.0									

Sample ID: **LCS-44491** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91432**
Client ID: **LCSS** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/27/2013** SeqNo: **1694366**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	22.582	2.0	25.00	0	90.3	80	120				
Arsenic	23.526	1.0	25.00	0	94.1	80	120				
Barium	24.554	1.0	25.00	0	98.2	80	120				
Beryllium	24.272	1.0	25.00	0	97.1	80	120				
Cadmium	24.209	1.0	25.00	0	96.8	80	120				
Chromium	24.471	1.0	25.00	0	97.9	80	120				
Cobalt	24.338	1.0	25.00	0	97.4	80	120				
Lead	24.531	1.0	25.00	0	98.1	80	120				
Molybdenum	24.796	1.0	25.00	0	99.2	80	120				
Nickel	24.285	1.0	25.00	0	97.1	80	120				
Selenium	21.948	1.0	25.00	0	87.8	80	120				
Silver	22.897	1.0	25.00	0	91.6	80	120				
Thallium	24.177	1.0	25.00	0	96.7	80	120				
Vanadium	24.928	1.0	25.00	0	99.7	80	120				
Zinc	23.801	1.0	25.00	0	95.2	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DQ Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

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CLIENT: Geocon Consultants, Inc.
Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **N011531-002A-DUP** SampType: **DUP** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91432**
Client ID: **ZZZZZZ** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/27/2013** SeqNo: **1694371**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	2.0						0	0	20	
Arsenic	3.873	1.0						3.754	3.12	20	
Barium	138.252	1.0						129.3	6.66	20	
Beryllium	0.132	1.0						0.1426	0	20	
Cadmium	0.724	1.0						0.5905	0	20	
Chromium	30.403	1.0						32.83	7.67	20	
Cobalt	8.632	1.0						8.769	1.57	20	
Lead	383.199	1.0						298.7	24.8	20	R
Molybdenum	1.199	1.0						1.548	25.4	20	R
Nickel	32.515	1.0						36.25	10.9	20	
Selenium	0.735	1.0						0.9799	0	20	
Silver	ND	1.0						0	0	20	
Thallium	ND	1.0						0	0	20	
Vanadium	28.533	1.0						29.07	1.85	20	
Zinc	294.885	1.0						302.4	2.52	20	

Sample ID: **N011531-002A-MS** SampType: **MS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91432**
Client ID: **ZZZZZZ** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/27/2013** SeqNo: **1694376**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	10.332	2.0	25.00	0	41.3	75	125				S
Arsenic	25.248	1.0	25.00	3.754	86.0	75	125				
Barium	159.308	1.0	25.00	129.3	120	75	125				
Beryllium	21.909	1.0	25.00	0.1426	87.1	75	125				
Cadmium	21.156	1.0	25.00	0.5905	82.3	75	125				
Chromium	53.667	1.0	25.00	32.83	83.4	75	125				
Cobalt	31.295	1.0	25.00	8.769	90.1	75	125				
Lead	397.793	1.0	25.00	298.7	396	75	125				S
Molybdenum	21.245	1.0	25.00	1.548	78.8	75	125				
Nickel	56.681	1.0	25.00	36.25	81.7	75	125				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

Advanced Technology Laboratories, Inc.
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CLIENT: Geocon Consultants, Inc.
Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **N011531-002A-MS** SampType: **MS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91432**
Client ID: **ZZZZZZ** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/27/2013** SeqNo: **1694376**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	20.141	1.0	25.00	0.9799	76.6	75	125				
Silver	17.440	1.0	25.00	0	69.8	75	125				S
Thallium	19.671	1.0	25.00	0	78.7	75	125				
Vanadium	52.150	1.0	25.00	29.07	92.3	75	125				
Zinc	344.340	1.0	25.00	302.4	168	75	125				S

Sample ID: **N011531-002A-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91432**
Client ID: **ZZZZZZ** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/27/2013** SeqNo: **1694377**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	10.426	2.0	24.99	0	41.7	75	125	10.33	0.912	20	S
Arsenic	24.697	1.0	24.99	3.754	83.8	75	125	25.25	2.21	20	
Barium	166.663	1.0	24.99	129.3	149	75	125	159.3	4.51	20	S
Beryllium	21.293	1.0	24.99	0.1426	84.6	75	125	21.91	2.85	20	
Cadmium	21.210	1.0	24.99	0.5905	82.5	75	125	21.16	0.255	20	
Chromium	55.704	1.0	24.99	32.83	91.5	75	125	53.67	3.72	20	
Cobalt	32.105	1.0	24.99	8.769	93.4	75	125	31.29	2.56	20	
Lead	379.941	1.0	24.99	298.7	325	75	125	397.8	4.59	20	S
Molybdenum	21.284	1.0	24.99	1.548	79.0	75	125	21.24	0.182	20	
Nickel	57.161	1.0	24.99	36.25	83.7	75	125	56.68	0.842	20	
Selenium	20.363	1.0	24.99	0.9799	77.6	75	125	20.14	1.10	20	
Silver	17.212	1.0	24.99	0	68.9	75	125	17.44	1.32	20	S
Thallium	19.715	1.0	24.99	0	78.9	75	125	19.67	0.225	20	
Vanadium	51.264	1.0	24.99	29.07	88.8	75	125	52.15	1.71	20	
Zinc	341.183	1.0	24.99	302.4	155	75	125	344.3	0.921	20	S

Sample ID: **N011531-016A-DUP** SampType: **DUP** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91432**
Client ID: **ZZZZZZ** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/27/2013** SeqNo: **1694396**

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

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

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Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **N011531-016A-DUP** SampType: **DUP** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91432**
Client ID: **ZZZZZZ** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/27/2013** SeqNo: **1694396**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	2.0						0	0	20	
Arsenic	2.965	1.0						3.538	17.6	20	
Barium	105.762	1.0						122.8	14.9	20	
Beryllium	ND	1.0						0	0	20	
Cadmium	0.384	1.0						0.4255	0	20	
Chromium	26.944	1.0						35.68	27.9	20	R
Cobalt	6.530	1.0						7.270	10.7	20	
Lead	171.987	1.0						255.9	39.2	20	R
Molybdenum	1.390	1.0						2.455	55.4	20	R
Nickel	30.813	1.0						34.97	12.6	20	
Selenium	0.656	1.0						0.6870	0	20	
Silver	ND	1.0						0	0	20	
Thallium	ND	1.0						0	0	20	
Vanadium	23.417	1.0						26.29	11.6	20	
Zinc	225.598	1.0						241.5	6.79	20	

Sample ID: **N011531-016A-MS** SampType: **MS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91432**
Client ID: **ZZZZZZ** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/27/2013** SeqNo: **1694397**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	10.532	2.0	24.96	0	42.2	75	125				S
Arsenic	23.505	1.0	24.96	3.538	80.0	75	125				
Barium	143.701	1.0	24.96	122.8	83.7	75	125				
Beryllium	21.224	1.0	24.96	0	85.0	75	125				
Cadmium	20.292	1.0	24.96	0.4255	79.6	75	125				
Chromium	52.664	1.0	24.96	35.68	68.0	75	125				S
Cobalt	28.890	1.0	24.96	7.270	86.6	75	125				
Lead	220.097	1.0	24.96	255.9	-143	75	125				S
Molybdenum	21.664	1.0	24.96	2.455	77.0	75	125				
Nickel	57.315	1.0	24.96	34.97	89.5	75	125				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

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Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **N011531-016A-MS** SampType: **MS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91432**
Client ID: **ZZZZZZ** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/27/2013** SeqNo: **1694397**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	19.904	1.0	24.96	0.6870	77.0	75	125				
Silver	17.026	1.0	24.96	0	68.2	75	125				S
Thallium	19.110	1.0	24.96	0	76.6	75	125				
Vanadium	48.321	1.0	24.96	26.29	88.3	75	125				
Zinc	420.995	1.0	24.96	241.5	719	75	125				S

Sample ID: **MB1-44491** SampType: **MBLK** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91476**
Client ID: **PBS** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **12/4/2013** SeqNo: **1696430**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	0.157	2.0									

Sample ID: **MB2-44491** SampType: **MBLK** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91476**
Client ID: **PBS** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **12/4/2013** SeqNo: **1696431**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	2.0									

Sample ID: **LCS-44491** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91476**
Client ID: **LCSS** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **12/4/2013** SeqNo: **1696432**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	24.355	2.0	25.00	0	97.4	80	120				

Sample ID: **N011531-002A-DUP** SampType: **DUP** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91476**
Client ID: **ZZZZZZ** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **12/4/2013** SeqNo: **1696434**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	75.327	2.0						104.6	32.5	20	R

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **N011531-002A-MS** SampType: **MS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91476**
Client ID: **ZZZZZZ** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **12/4/2013** SeqNo: **1696437**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	105.019	2.0	25.00	104.6	1.66	75	125				S

Sample ID: **N011531-002A-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91476**
Client ID: **ZZZZZZ** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **12/4/2013** SeqNo: **1696438**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	112.130	2.0	24.99	104.6	30.1	75	125	105.0	6.55	20	S

Sample ID: **N011531-016A-DUP** SampType: **DUP** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91476**
Client ID: **ZZZZZZ** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **12/4/2013** SeqNo: **1696446**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	67.628	2.0						63.93	5.63	20	

Sample ID: **N011531-016A-MS** SampType: **MS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91476**
Client ID: **ZZZZZZ** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **12/4/2013** SeqNo: **1696447**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	90.876	2.0	24.96	63.93	108	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB1-44491** SampType: **MBLK** TestCode: **6010_SPB** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91432**
Client ID: **PBS** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/27/2013** SeqNo: **1694322**

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

Sample ID: **MB2-44491** SampType: **MBLK** TestCode: **6010_SPB** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91432**
Client ID: **PBS** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/27/2013** SeqNo: **1694323**

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

Sample ID: **LCS-44491** SampType: **LCS** TestCode: **6010_SPB** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91432**
Client ID: **LCSS** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/27/2013** SeqNo: **1694324**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	24.531	5.0	25.00	0	98.1	80	120				

Sample ID: **N011531-002A-DUP** SampType: **DUP** TestCode: **6010_SPB** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91432**
Client ID: **ZZZZZZ** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/27/2013** SeqNo: **1694329**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	383.199	5.0						298.7	24.8	20	R

Sample ID: **N011531-002A-MS** SampType: **MS** TestCode: **6010_SPB** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91432**
Client ID: **ZZZZZZ** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/27/2013** SeqNo: **1694334**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	397.793	5.0	25.00	298.7	396	75	125				S

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DQ Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

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ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **N011531-002A-MSD** SampType: **MSD** TestCode: **6010_SPB** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91432**
Client ID: **ZZZZZZ** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/27/2013** SeqNo: **1694335**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	379.941	5.0	24.99	298.7	325	75	125	397.8	4.59	20	S

Sample ID: **N011531-016A-DUP** SampType: **DUP** TestCode: **6010_SPB** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91432**
Client ID: **ZZZZZZ** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/27/2013** SeqNo: **1694354**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	171.987	5.0						255.9	39.2	20	R

Sample ID: **N011531-016A-MS** SampType: **MS** TestCode: **6010_SPB** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91432**
Client ID: **ZZZZZZ** Batch ID: **44491** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **11/27/2013** SeqNo: **1694355**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	220.097	5.0	24.96	255.9	-143	75	125				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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ANALYTICAL QC SUMMARY REPORT

TestCode: 7471_S

Sample ID: **LCS-44492** SampType: **LCS** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91421**
Client ID: **LCSS** Batch ID: **44492** TestNo: **EPA 7471A** **EPA 7471** Analysis Date: **11/27/2013** SeqNo: **1693910**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.420	0.10	0.4153	0	101	80	120				

Sample ID: **MB-44492** SampType: **MBLK** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91421**
Client ID: **PBS** Batch ID: **44492** TestNo: **EPA 7471A** **EPA 7471** Analysis Date: **11/27/2013** SeqNo: **1693911**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: **N011531-002A-DUP** SampType: **DUP** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91421**
Client ID: **ZZZZZZ** Batch ID: **44492** TestNo: **EPA 7471A** **EPA 7471** Analysis Date: **11/27/2013** SeqNo: **1693913**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.151	0.10						0.1575	3.89	20	

Sample ID: **N011531-002A-MS** SampType: **MS** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91421**
Client ID: **ZZZZZZ** Batch ID: **44492** TestNo: **EPA 7471A** **EPA 7471** Analysis Date: **11/27/2013** SeqNo: **1693914**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.597	0.10	0.4216	0.1575	104	75	125				

Sample ID: **N011531-002A-MSD** SampType: **MSD** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **11/27/2013** RunNo: **91421**
Client ID: **ZZZZZZ** Batch ID: **44492** TestNo: **EPA 7471A** **EPA 7471** Analysis Date: **11/27/2013** SeqNo: **1693915**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.609	0.10	0.4167	0.1575	108	75	125	0.5966	2.07	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_DM LL

Sample ID: **LCS-44512** SampType: **LCS** TestCode: **8015_S_DM L** Units: **mg/Kg** Prep Date: **12/4/2013** RunNo: **91488**
Client ID: **LCSS** Batch ID: **44512** TestNo: **EPA 8015B EPA 3550B** Analysis Date: **12/4/2013** SeqNo: **1697115**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	73.451	1.0	83.30	0	88.2	52	126				
Surr: p-Terphenyl	4.967		6.670		74.5	59	127				

Sample ID: **MB-44512** SampType: **MBLK** TestCode: **8015_S_DM L** Units: **mg/Kg** Prep Date: **12/4/2013** RunNo: **91488**
Client ID: **PBS** Batch ID: **44512** TestNo: **EPA 8015B EPA 3550B** Analysis Date: **12/4/2013** SeqNo: **1697116**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	ND	1.0									
ORO	ND	1.0									
Surr: p-Terphenyl	4.009		6.670		60.1	59	127				

Sample ID: **N011531-016A-DUP** SampType: **DUP** TestCode: **8015_S_DM L** Units: **mg/Kg** Prep Date: **12/4/2013** RunNo: **91488**
Client ID: **ZZZZZZ** Batch ID: **44512** TestNo: **EPA 8015B EPA 3550B** Analysis Date: **12/4/2013** SeqNo: **1697122**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	98.821	5.0						95.71	3.20	20	
ORO	322.206	5.0						325.3	0.965	20	
Surr: p-Terphenyl	3.315		6.686		49.6	59	127		0		S

Sample ID: **N011531-016A-MS** SampType: **MS** TestCode: **8015_S_DM L** Units: **mg/Kg** Prep Date: **12/4/2013** RunNo: **91488**
Client ID: **ZZZZZZ** Batch ID: **44512** TestNo: **EPA 8015B EPA 3550B** Analysis Date: **12/4/2013** SeqNo: **1697123**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	161.686	5.0	83.19	95.71	79.3	13	129				
Surr: p-Terphenyl	3.295		6.661		49.5	59	127				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories, Inc.
3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: Geocon Consultants, Inc.
Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_DM LL

Sample ID: **N011531-016A-MSD** SampType: **MSD** TestCode: **8015_S_DM L** Units: **mg/Kg** Prep Date: **12/4/2013** RunNo: **91488**
Client ID: **ZZZZZZ** Batch ID: **44512** TestNo: **EPA 8015B EPA 3550B** Analysis Date: **12/4/2013** SeqNo: **1697124**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	130.260	5.0	83.16	95.71	41.5	13	129	161.7	21.5	20	R
Surr: p-Terphenyl	2.192		6.659		32.9	59	127		0		S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories, Inc.
3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: Geocon Consultants, Inc.
Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_S

Sample ID: **E131127LCS** SampType: **LCS** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **91438**
Client ID: **LCSS** Batch ID: **E13VS125** TestNo: **EPA 8015B** Analysis Date: **11/27/2013** SeqNo: **1694875**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	5.516	1.0	5.000	0	110	77	122				
Surr: Chlorobenzene - d5	102.116		100.0		102	51	136				

Sample ID: **E131127MB1** SampType: **MBLK** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **91438**
Client ID: **PBS** Batch ID: **E13VS125** TestNo: **EPA 8015B** Analysis Date: **11/27/2013** SeqNo: **1694876**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	0.052	1.0									
Surr: Chlorobenzene - d5	100.342		100.0		100	51	136				

Sample ID: **N011531-002AMS** SampType: **MS** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **91438**
Client ID: **ZZZZZZ** Batch ID: **E13VS125** TestNo: **EPA 8015B** Analysis Date: **11/27/2013** SeqNo: **1694878**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	5.028	1.0	5.000	0.02700	100	41	132				
Surr: Chlorobenzene - d5	99.908		100.0		99.9	51	136				

Sample ID: **N011531-002AMSD** SampType: **MSD** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **91438**
Client ID: **ZZZZZZ** Batch ID: **E13VS125** TestNo: **EPA 8015B** Analysis Date: **11/27/2013** SeqNo: **1694879**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.997	1.0	5.000	0.02700	99.4	41	132	5.028	0.618	20	
Surr: Chlorobenzene - d5	97.907		100.0		97.9	51	136		0		

Sample ID: **N011531-009ADUP** SampType: **DUP** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **91438**
Client ID: **ZZZZZZ** Batch ID: **E13VS125** TestNo: **EPA 8015B** Analysis Date: **11/27/2013** SeqNo: **1694882**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	0.034	1.0						0.03000	0	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

Advanced Technology Laboratories, Inc.
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CLIENT: Geocon Consultants, Inc.
Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_S

Sample ID: **N011531-009ADUP** SampType: **DUP** TestCode: **8015GAS_S** Units: **mg/Kg** Prep Date: RunNo: **91438**
Client ID: **ZZZZZZ** Batch ID: **E13VS125** TestNo: **EPA 8015B** Analysis Date: **11/27/2013** SeqNo: **1694882**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Chlorobenzene - d5	99.763		100.0		99.8	51	136		0		

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: Geocon Consultants, Inc.
Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 9045_S

Sample ID: **N011531-014A-DUP** SampType: **DUP** TestCode: **9045_S** Units: **pH Units** Prep Date: RunNo: **91415**
Client ID: **ZZZZZZ** Batch ID: **R91415** TestNo: **EPA 9045C** Analysis Date: **11/27/2013** SeqNo: **1693885**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.400	0.10						7.400	0	20	
Temp. at time of pH Analysis	25.000	0						25.00	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories, Inc.
3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: Geocon Consultants, Inc.
Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: PMOIST

Sample ID: **MB-R91441** SampType: **MBLK** TestCode: **PMOIST** Units: **wt%** Prep Date: RunNo: **91441**
Client ID: **PBS** Batch ID: **R91441** TestNo: **D2216** Analysis Date: **12/2/2013** SeqNo: **1694941**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	ND	0.1000									

Sample ID: **N011531-001A-DUP** SampType: **DUP** TestCode: **PMOIST** Units: **wt%** Prep Date: RunNo: **91441**
Client ID: **ZZZZZZ** Batch ID: **R91441** TestNo: **D2216** Analysis Date: **12/2/2013** SeqNo: **1694943**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	10.790	0.1000						10.72	0.623	30	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories, Inc.
3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories INC.
3151-3153 W. Post Rd.
Las Vegas, NV 89118
Tel: (702) 307-2659 • Fax: (702) 307-2691

FOR LABORATORY USE ONLY

P.O. #: _____

Logged By: HSG Date: 11/27/13

Method of Transport: Client ☐ ATL ☐ CA OverN ☐ FedEx ☐ Other: GSO

Sample Condition Upon Receipt:
1. CHILLED 1.2°C IR2 Y ☑ N ☐
2. HEADSPACE (VOA) NA Y ☐ N ☐
3. CONTAINER INTACT Y ☑ N ☐
4. SEALED Y ☑ N ☐
5. # OF SPLS MATCH COC Y ☑ N ☐
6. PRESERVED Y ☐ N ☑

Client: Geocon Consultants, Inc.
Attention: Luann Beadle
Address: 6671 Brisa St.
City: Livermore State: CA Zip Code: 94550
Tel: 925 961-5272
Fax:

Project Name: I-80 Erosion Control
Project #: E8560-02-59
Sampler: *I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.*
(Printed Name) Luann Beadle / Chris Menti
(Signature) Luann Beadle

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (Signature and Printed Name)	Date	Time
Luann Beadle / Luann Beadle	11-26-13	GSO	Shelton / ATL LOD Dec 12A	11/27/13	0848

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter: Luann Beadle 11-26-13
Print Name Date
Signature: Luann Beadle

Send Report To:
Attn: Luann Beadle
Co: Geocon Consultants
Addr: beadle@geoconinc.com
City: State: Zip:

Bill To:
Attn: Same
Co:
Addr:
City: State: Zip:

Special Instructions/Comments:

Sample/Records - Archival & Disposal
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

Storage Fees (applies when storage is requested):
- Sample :$2.00 / sample /mo (after 45 days)
- Records: $1 /ATL workorder /mo (after 1 year)

Circle or Add Analysis(es) Requested

SPECIFY APPROPRIATE MATRIX

QA/QC: RTNE ☐ CT ☑ SWRCB ☐ Logcode ____ OTHER ____

ITEM	LAB USE ONLY: Lab No.	Sample Description: Sample ID / Location	Date	Time	8260B (Volatiles)	8015M - GRO	8015B - DRO/ORO	6010 CAM 17	Co 010 Pb only		SOIL	WATER	GROUND WATER	WASTEWATER	TAT	Container(s) #	Type	PRESERVATION	REMARKS
	N011631-1	B1-0	11-26-13	0950				X	X		X				E	1	P B	H	
	-2	B2-0		0955	X	X	X										S T		
	-3	B3-0		1000				X									P B		
	-4	B4-0		1005			X										S T		
	-5	B5-0		1015	X	X		X	X								S T		
	-6	B6-0		1010			X										S T		
	-7	B7-0		1020				X									P B		
	-8	B8-0		1015				X									P B		
	-9	B9-0		1030	X	X	X										S T		
	-10	B10-0		1020				X	X								P B		

- TAT starts 8AM the following day if samples received after 3 PM

TAT: ☐ A = Overnight ≤ 24 hrs ☐ B = Emergency Next Workday ☐ C = Critical 2 Workdays ☐ D = Urgent 3 Workdays ☑ E = Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives:
H=HCl N=HNO_3 S=H_2SO_4 C=4°C
Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories INC.
3151-3153 W. Post Rd.
Las Vegas, NV 89118
Tel: (702) 307-2659 • Fax: (702) 307-2691

FOR LABORATORY USE ONLY

P.O. #:
Logged By: HSG Date: 11/27/13

Method of Transport: Client ☐ ATL ☐ CA OverN ☐ FedEx ☐ Other: GSO

Sample Condition Upon Receipt:
1. CHILLED 1.2°C IR2 Y ☑ N ☐
2. HEADSPACE (VOA) NA Y ☐ N ☐
3. CONTAINER INTACT Y ☑ N ☐
4. SEALED Y ☑ N ☐
5. # OF SPLS MATCH COC Y ☑ N ☐
6. PRESERVED Y ☐ N ☑

Client: Geocon Consultants, Inc.
Attention: Luann Beadle
Address: 6671 Brisa St.
City: Livermore State: CA Zip Code: 94550
Tel:
Fax:

Project Name: I-80 Erosion Control
Project #: E8560-02-59
Sampler: *I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.*
(Printed Name) Luann Beadle
(Signature) Luann Beadle

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (Signature and Printed Name)	Date	Time
Luann Beadle — Luann Beadle	11-26-13	GSO delivery	HGLO/ATL	11/27/13	0848

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter: Luann Beadle 11-26-13
Print Name Date
Signature

Send Report To:
Attn: Luann Beadle
Co: Geocon Consultants
Addr: beadle@geoconinc.com
City: State: Zip:

Bill To:
Attn: Same
Co:
Addr:
City: State: Zip:

Special Instructions/Comments:

Sample/Records - Archival & Disposal
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

Storage Fees (applies when storage is requested):
- Sample :$2.00 / sample /mo (after 45 days)
- Records: $1 /ATL workorder /mo (after 1 year)

Circle or Add Analysis(es) Requested

SPECIFY APPROPRIATE MATRIX

QA/QC: RTNE ☐ CT ☑ SWRCB ☐ Logcode ____ OTHER ____

ITEM	LAB USE ONLY: Lab No.	Sample ID / Location	Date	Time	8260B (Volatiles)	8015M - GRO	8015B - DRO/ORO	6010 CAM 17	Cd10 Lead only	pH	SOIL	WATER	GROUND WATER	WASTEWATER	TAT	Container(s) #	Type	PRESERVATION	REMARKS
	N01153 1-11	B11-0	11-26-13	1035				X			X				E	1	P	B	
	12	B12-0	↓	1035	X	X	X	X			↓				↓	1	S	T	
	13	B13-0	↓	1050				X			↓				↓	1	P	B	
	14	B14-0	↓	1040				X	X		↓				↓	1	P	B	
	15	B15-0	↓	1054			X				↓				↓	1	S	T	
	16	B16-0	↓	1045	X	X	X	X			X				↓	1	S	T	

■ TAT starts 8AM the following day if samples received after 3 PM

TAT: ☐ A = Overnight ≤ 24 hrs ☐ B = Emergency Next Workday ☐ C = Critical 2 Workdays ☐ D = Urgent 3 Workdays ☒ E = Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives:
H=HCl N=HNO_3 S=H_2SO_4 C=4°C
Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

Advanced Technology Laboratories, Inc.

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	11/27/2013	Workorder:	N011531
Rep sample Temp (Deg C):	1.2	IR Gun ID:	2
Temp Blank:	☐ Yes ☑ No		
Carrier name:	GSO		
Last 4 digits of Tracking No.:	5516	Packing Material Used:	None
Cooling process:	☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None		

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☐	No ☐	NA ☑
15. Did the bottle labels indicate correct preservatives used?	Yes ☐	No ☐	NA ☑
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments: Samples B1-0, B7-0 and B11-0 are partly wet from the melted ice.

Checklist Completed By: HG 12/2/2013

Reviewed By: gsg 2013-12-03

December 13, 2013

Luann Beadle
Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

TEL: 925-371-5900 Ext 403
FAX: (925) 371-5915

CA-ELAP No.: 2676
NV Cert. No.: NV-009222007A

Workorder No.: N011531

RE: I-80 Erosion Control, E8560-02-59

Attention: Luann Beadle

Enclosed are the results for sample(s) received on November 27, 2013 by Advanced Technology Laboratories, Inc. . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Libucao for

Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.

Advanced Technology Laboratories, Inc. **Date:** *13-Dec-13*

CLIENT: Geocon Consultants, Inc.
Project: I-80 Erosion Control, E8560-02-59
Lab Order: N011531

CASE NARRATIVE

Analytical Comments for EPA 6010B_Addendum:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD)on QC samples N011531-012AMS/MSD are outside recovery criteria for some analytes possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

RPD for Sample Duplicate on N011531-012 is outside criteria for some analytes ; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Analytical Comments for EPA 6010B_STLC:

Matrix Spike (MS) on QC sample N011531-009AMS is outside recovery criteria for Lead possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Dilution was necessary due to matrix.

Advanced Technology Laboratories, Inc. *3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691*

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *13-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B1-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 9:50:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-001		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS BY STLC						
WET/ EPA 6010B						
RunID: ICP2_131211B QC Batch: R91566 PrepDate: Analyst: **JAA**						
Lead	26	0.050		mg/L	5	12/11/2013 08:49 PM

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

Advanced Technology Laboratories, Inc.

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *13-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B2-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 9:55:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-002		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS BY STLC						
WET/ EPA 6010B						
RunID: ICP2_131211B QC Batch: R91566 PrepDate: Analyst: **JAA**						
Lead	17	0.050		mg/L	5	12/11/2013 08:54 PM

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

Advanced Technology Laboratories, Inc.

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *13-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B3-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:00:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-003		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS BY STLC						
			WET/ EPA 6010B			
RunID: ICP2_131211B	QC Batch: R91566			PrepDate:		Analyst: **JAA**
Lead	33	0.050		mg/L	5	12/11/2013 09:00 PM

Qualifiers:

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

Advanced Technology Laboratories, Inc.

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *13-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B4-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:05:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-004		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS BY STLC						
WET/ EPA 6010B						
RunID: ICP2_131211B	QC Batch: R91566			PrepDate:		Analyst: **JAA**
Lead	17	0.050		mg/L	5	12/11/2013 09:05 PM

Qualifiers:

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

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *13-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B6-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:10:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-006		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS BY STLC						
			WET/ EPA 6010B			
RunID: ICP2_131211B	QC Batch: R91566			PrepDate:		Analyst: **JAA**
Lead	57	0.050		mg/L	5	12/11/2013 09:11 PM

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

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ANALYTICAL RESULTS

Print Date: *13-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B7-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:20:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-007		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS BY STLC						
WET/ EPA 6010B						
RunID: ICP2_131211B QC Batch: R91566 PrepDate: Analyst: **JAA**						
Lead	31	0.050		mg/L	5	12/11/2013 09:16 PM

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

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ANALYTICAL RESULTS

Print Date: *13-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B8-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:15:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-008		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS BY STLC						
WET/ EPA 6010B						
RunID: ICP2_131211B QC Batch: R91566 PrepDate: Analyst: **JAA**						
Lead	17	0.050		mg/L	5	12/11/2013 09:22 PM

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

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ANALYTICAL RESULTS

Print Date: *13-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B9-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:30:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-009		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS BY STLC						
WET/ EPA 6010B						
RunID: ICP2_131211B	QC Batch: R91566			PrepDate:		Analyst: **JAA**
Lead	9.6	0.050		mg/L	5	12/11/2013 09:28 PM

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

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ANALYTICAL RESULTS

Print Date: *13-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B10-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:20:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-010		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS BY STLC						
WET/ EPA 6010B						
RunID: ICP2_131211B QC Batch: R91566 PrepDate: Analyst: **JAA**						
Lead	60	0.050		mg/L	5	12/11/2013 09:56 PM

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

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ANALYTICAL RESULTS

Print Date: *13-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B11-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:35:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-011		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS BY STLC						
WET/ EPA 6010B						
RunID: ICP2_131211B	QC Batch: R91566			PrepDate:		Analyst: **JAA**
Lead	6.8	0.050		mg/L	5	12/11/2013 10:01 PM

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

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ANALYTICAL RESULTS

Print Date: *13-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B12-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:35:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-012		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS BY STLC						
WET/ EPA 6010B						
RunID: ICP2_131211B QC Batch: R91566 PrepDate: Analyst: **JAA**						
Lead	20	0.050		mg/L	5	12/11/2013 10:07 PM

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

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ANALYTICAL RESULTS

Print Date: *13-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B13-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:50:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-013		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS BY STLC						
			WET/ EPA 6010B			
RunID: ICP2_131211B	QC Batch: R91566			PrepDate:		Analyst: **JAA**
Lead	36	0.050		mg/L	5	12/11/2013 10:12 PM

Qualifiers:

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

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ANALYTICAL RESULTS

Print Date: *13-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B15-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:54:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-015		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS BY STLC						
WET/ EPA 6010B						
RunID: ICP2_131211B QC Batch: R91566 PrepDate: Analyst: **JAA**						
Lead	12	0.050		mg/L	5	12/11/2013 10:18 PM

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

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ANALYTICAL RESULTS

Print Date: *13-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B16-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:45:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-016		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS BY STLC						
			WET/ EPA 6010B			
RunID: ICP2_131211B	QC Batch: R91566			PrepDate:		Analyst: **JAA**
Lead	15	0.050		mg/L	5	12/11/2013 10:24 PM

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

Advanced Technology Laboratories, Inc.

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CLIENT: Geocon Consultants, Inc.
Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_ST

Sample ID: **MB-R91566** SampType: **MBLK** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **91566**
Client ID: **PBS** Batch ID: **R91566** TestNo: **WET/ EPA 60** Analysis Date: **12/11/2013** SeqNo: **1701270**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.010									

Sample ID: **MB1-44531** SampType: **MBLK** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **91566**
Client ID: **PBS** Batch ID: **R91566** TestNo: **WET/ EPA 60** Analysis Date: **12/11/2013** SeqNo: **1701271**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.050									

Sample ID: **MB2-44531** SampType: **MBLK** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **91566**
Client ID: **PBS** Batch ID: **R91566** TestNo: **WET/ EPA 60** Analysis Date: **12/11/2013** SeqNo: **1701272**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.050									

Sample ID: **LCS-R91566** SampType: **LCS** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **91566**
Client ID: **LCSS** Batch ID: **R91566** TestNo: **WET/ EPA 60** Analysis Date: **12/11/2013** SeqNo: **1701273**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.493	0.010	0.5000	0	98.7	85	115				

Sample ID: **N011350-162A-DUP** SampType: **DUP** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **91566**
Client ID: **ZZZZZZ** Batch ID: **R91566** TestNo: **WET/ EPA 60** Analysis Date: **12/11/2013** SeqNo: **1701275**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.417	0.050						2.424	0.308	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DQ	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories, Inc.
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CLIENT: Geocon Consultants, Inc.
Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_ST

Sample ID: **N011350-162A-MS** SampType: **MS** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **91566**
Client ID: **ZZZZZZ** Batch ID: **R91566** TestNo: **WET/ EPA 60** Analysis Date: **12/11/2013** SeqNo: **1701277**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.328	0.050	2.500	2.424	76.2	75	125				

Sample ID: **N011350-162A-MSD** SampType: **MSD** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **91566**
Client ID: **ZZZZZZ** Batch ID: **R91566** TestNo: **WET/ EPA 60** Analysis Date: **12/11/2013** SeqNo: **1701278**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	4.316	0.050	2.500	2.424	75.7	75	125	4.328	0.294	20	

Sample ID: **N011531-009A-DUP** SampType: **DUP** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **91566**
Client ID: **ZZZZZZ** Batch ID: **R91566** TestNo: **WET/ EPA 60** Analysis Date: **12/11/2013** SeqNo: **1701292**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	9.672	0.050						9.648	0.249	20	

Sample ID: **N011531-009A-MS** SampType: **MS** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **91566**
Client ID: **ZZZZZZ** Batch ID: **R91566** TestNo: **WET/ EPA 60** Analysis Date: **12/11/2013** SeqNo: **1701293**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	14.780	0.050	2.500	9.648	205	75	125				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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ANALYTICAL RESULTS

Print Date: *13-Dec-13*

CLIENT: Geocon Consultants, Inc.
Lab Order: N011531
Project: I-80 Erosion Control, E8560-02-59
Lab ID: N011531-012

Client Sample ID: B12-0
Collection Date: 11/26/2013 10:35:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
MERCURY BY COLD VAPOR TECHNIQUE						
	EPA 7471			**EPA 7471A**		
RunID: AA1_131206B	QC Batch: 44543			PrepDate:	12/6/2013	Analyst: **LCC**
Mercury	0.21	0.10		mg/Kg	1	12/9/2013
ICP METALS						
	EPA 3050B			**EPA 6010B**		
RunID: ICP2_131210C	QC Batch: 44540			PrepDate:	12/6/2013	Analyst: **JAA**
Antimony	ND	2.0		mg/Kg	1	12/10/2013 04:46 PM
Arsenic	4.2	1.0		mg/Kg	1	12/10/2013 04:46 PM
Barium	200	1.0		mg/Kg	1	12/10/2013 04:46 PM
Beryllium	ND	1.0		mg/Kg	1	12/10/2013 04:46 PM
Cadmium	1.1	1.0		mg/Kg	1	12/10/2013 04:46 PM
Chromium	46	1.0		mg/Kg	1	12/10/2013 04:46 PM
Cobalt	12	1.0		mg/Kg	1	12/10/2013 04:46 PM
Copper	310	2.0		mg/Kg	1	12/10/2013 04:46 PM
Lead	290	1.0		mg/Kg	1	12/10/2013 04:46 PM
Molybdenum	3.0	1.0		mg/Kg	1	12/10/2013 04:46 PM
Nickel	45	1.0		mg/Kg	1	12/10/2013 04:46 PM
Selenium	1.2	1.0		mg/Kg	1	12/10/2013 04:46 PM
Silver	ND	1.0		mg/Kg	1	12/10/2013 04:46 PM
Thallium	ND	1.0		mg/Kg	1	12/10/2013 04:46 PM
Vanadium	33	1.0		mg/Kg	1	12/10/2013 04:46 PM
Zinc	440	1.0		mg/Kg	1	12/10/2013 04:46 PM

Qualifiers:

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

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CLIENT: Geocon Consultants, Inc.
Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **MB-44540** SampType: **MBLK** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **12/6/2013** RunNo: **91548**
Client ID: **PBS** Batch ID: **44540** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **12/10/2013** SeqNo: **1700238**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.286	2.0									
Arsenic	ND	1.0									
Barium	ND	1.0									
Beryllium	ND	1.0									
Cadmium	ND	1.0									
Chromium	0.218	1.0									
Cobalt	ND	1.0									
Copper	ND	2.0									
Lead	ND	1.0									
Molybdenum	0.369	1.0									
Nickel	ND	1.0									
Selenium	ND	1.0									
Silver	ND	1.0									
Thallium	ND	1.0									
Vanadium	ND	1.0									
Zinc	0.304	1.0									

Sample ID: **LCS-44540** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **12/6/2013** RunNo: **91548**
Client ID: **LCSS** Batch ID: **44540** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **12/10/2013** SeqNo: **1700239**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	22.135	2.0	25.00	0	88.5	80	120				
Arsenic	22.234	1.0	25.00	0	88.9	80	120				
Barium	23.553	1.0	25.00	0	94.2	80	120				
Beryllium	24.026	1.0	25.00	0	96.1	80	120				
Cadmium	22.894	1.0	25.00	0	91.6	80	120				
Chromium	23.366	1.0	25.00	0	93.5	80	120				
Cobalt	23.626	1.0	25.00	0	94.5	80	120				
Copper	24.111	2.0	25.00	0	96.4	80	120				
Lead	23.291	1.0	25.00	0	93.2	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

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CLIENT: Geocon Consultants, Inc.
Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **LCS-44540** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **12/6/2013** RunNo: **91548**
Client ID: **LCSS** Batch ID: **44540** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **12/10/2013** SeqNo: **1700239**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	24.766	1.0	25.00	0	99.1	80	120				
Nickel	23.886	1.0	25.00	0	95.5	80	120				
Selenium	20.919	1.0	25.00	0	83.7	80	120				
Silver	21.949	1.0	25.00	0	87.8	80	120				
Thallium	23.302	1.0	25.00	0	93.2	80	120				
Vanadium	23.781	1.0	25.00	0	95.1	80	120				
Zinc	22.879	1.0	25.00	0	91.5	80	120				

Sample ID: **N011531-012A-DUP** SampType: **DUP** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **12/6/2013** RunNo: **91548**
Client ID: **ZZZZZZ** Batch ID: **44540** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **12/10/2013** SeqNo: **1700241**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	2.0						0.6539	0	20	
Arsenic	3.837	1.0						4.178	8.51	20	
Barium	205.856	1.0						200.9	2.43	20	
Beryllium	0.141	1.0						0	0	20	
Cadmium	1.014	1.0						1.088	6.98	20	
Chromium	43.148	1.0						45.91	6.20	20	
Cobalt	10.300	1.0						12.00	15.2	20	
Copper	135.811	2.0						309.7	78.1	20	R
Lead	321.846	1.0						289.3	10.6	20	
Molybdenum	2.141	1.0						2.972	32.5	20	R
Nickel	45.561	1.0						45.37	0.416	20	
Selenium	0.915	1.0						1.207	0	20	
Silver	ND	1.0						0	0	20	
Thallium	ND	1.0						0	0	20	
Vanadium	32.820	1.0						33.19	1.11	20	
Zinc	362.595	1.0						444.5	20.3	20	R

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

Advanced Technology Laboratories, Inc.
3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: Geocon Consultants, Inc.
Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **N011531-012A-MS** SampType: **MS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **12/6/2013** RunNo: **91548**
Client ID: **ZZZZZZ** Batch ID: **44540** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **12/10/2013** SeqNo: **1700245**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	13.055	2.0	24.91	0.6539	49.8	75	125				S
Arsenic	25.752	1.0	24.91	4.178	86.6	75	125				
Barium	207.054	1.0	24.91	200.9	24.6	75	125				S
Beryllium	22.845	1.0	24.91	0	91.7	75	125				
Cadmium	21.491	1.0	24.91	1.088	81.9	75	125				
Chromium	65.128	1.0	24.91	45.91	77.1	75	125				
Cobalt	32.537	1.0	24.91	12.00	82.4	75	125				
Copper	163.554	2.0	24.91	309.7	-587	75	125				S
Lead	270.902	1.0	24.91	289.3	-74.0	75	125				S
Molybdenum	24.758	1.0	24.91	2.972	87.4	75	125				
Nickel	58.676	1.0	24.91	45.37	53.4	75	125				S
Selenium	21.451	1.0	24.91	1.207	81.3	75	125				
Silver	18.599	1.0	24.91	0	74.7	75	125				S
Thallium	19.618	1.0	24.91	0	78.7	75	125				
Vanadium	56.805	1.0	24.91	33.19	94.8	75	125				
Zinc	409.417	1.0	24.91	444.5	-141	75	125				S

Sample ID: **N011531-012A-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **12/6/2013** RunNo: **91548**
Client ID: **ZZZZZZ** Batch ID: **44540** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **12/10/2013** SeqNo: **1700246**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	13.279	2.0	24.93	0.6539	50.7	75	125	13.05	1.70	20	S
Arsenic	26.232	1.0	24.93	4.178	88.5	75	125	25.75	1.85	20	
Barium	202.003	1.0	24.93	200.9	4.35	75	125	207.1	2.47	20	S
Beryllium	23.008	1.0	24.93	0	92.3	75	125	22.84	0.714	20	
Cadmium	22.443	1.0	24.93	1.088	85.7	75	125	21.49	4.33	20	
Chromium	61.584	1.0	24.93	45.91	62.9	75	125	65.13	5.59	20	S
Cobalt	33.993	1.0	24.93	12.00	88.2	75	125	32.54	4.38	20	
Copper	192.675	2.0	24.93	309.7	-469	75	125	163.6	16.3	20	S
Lead	261.236	1.0	24.93	289.3	-113	75	125	270.9	3.63	20	S

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DQ Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

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CLIENT: Geocon Consultants, Inc.
Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **N011531-012A-MSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **12/6/2013** RunNo: **91548**
Client ID: **ZZZZZZ** Batch ID: **44540** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **12/10/2013** SeqNo: **1700246**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	25.576	1.0	24.93	2.972	90.7	75	125	24.76	3.25	20	
Nickel	63.993	1.0	24.93	45.37	74.7	75	125	58.68	8.67	20	S
Selenium	21.937	1.0	24.93	1.207	83.2	75	125	21.45	2.24	20	
Silver	18.205	1.0	24.93	0	73.0	75	125	18.60	2.14	20	S
Thallium	20.139	1.0	24.93	0	80.8	75	125	19.62	2.62	20	
Vanadium	59.071	1.0	24.93	33.19	104	75	125	56.81	3.91	20	
Zinc	415.972	1.0	24.93	444.5	-114	75	125	409.4	1.59	20	S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Advanced Technology Laboratories, Inc.
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CLIENT: Geocon Consultants, Inc.
Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 7471_S

Sample ID: **LCS-44543** SampType: **LCS** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **12/6/2013** RunNo: **91506**
Client ID: **LCSS** Batch ID: **44543** TestNo: **EPA 7471A** **EPA 7471** Analysis Date: **12/9/2013** SeqNo: **1698938**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.415	0.10	0.4216	0	98.5	80	120				

Sample ID: **MB-44543** SampType: **MBLK** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **12/6/2013** RunNo: **91506**
Client ID: **PBS** Batch ID: **44543** TestNo: **EPA 7471A** **EPA 7471** Analysis Date: **12/9/2013** SeqNo: **1698939**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.009	0.099									

Sample ID: **N011531-012A-DUP** SampType: **DUP** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **12/6/2013** RunNo: **91506**
Client ID: **ZZZZZZ** Batch ID: **44543** TestNo: **EPA 7471A** **EPA 7471** Analysis Date: **12/9/2013** SeqNo: **1698941**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.218	0.10						0.2216	1.59	20	

Sample ID: **N011531-012A-MS** SampType: **MS** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **12/6/2013** RunNo: **91506**
Client ID: **ZZZZZZ** Batch ID: **44543** TestNo: **EPA 7471A** **EPA 7471** Analysis Date: **12/9/2013** SeqNo: **1698942**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.631	0.099	0.4112	0.2216	99.6	75	125				

Sample ID: **N011531-012A-MSD** SampType: **MSD** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **12/6/2013** RunNo: **91506**
Client ID: **ZZZZZZ** Batch ID: **44543** TestNo: **EPA 7471A** **EPA 7471** Analysis Date: **12/9/2013** SeqNo: **1698943**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.700	0.099	0.4105	0.2216	116	75	125	0.6312	10.3	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DQ Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *13-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B14-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:40:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-014		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY TCLP EXTRACTION						
EPA 3010A			**EPA 1311/ 6010B**			
RunID: ICP2_131211B	QC Batch: 44571			PrepDate:	12/11/2013	Analyst: **JAA**
Lead	0.58	0.25		mg/L	1	12/11/2013 05:32 PM

Qualifiers:

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

Advanced Technology Laboratories, Inc.

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CLIENT: Geocon Consultants, Inc.
Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_TCPB

Sample ID: **MB-44571** SampType: **MBLK** TestCode: **6010_TCPB** Units: **mg/L** Prep Date: **12/11/2013** RunNo: **91566**
Client ID: **PBS** Batch ID: **44571** TestNo: **EPA 1311/ 60 EPA 3010A** Analysis Date: **12/11/2013** SeqNo: **1701479**

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

Sample ID: **MB-44539 TCLP** SampType: **MBLK** TestCode: **6010_TCPB** Units: **mg/L** Prep Date: **12/11/2013** RunNo: **91566**
Client ID: **PBS** Batch ID: **44571** TestNo: **EPA 1311/ 60 EPA 3010A** Analysis Date: **12/11/2013** SeqNo: **1701482**

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

Sample ID: **N011495-003A-MS** SampType: **MS** TestCode: **6010_TCPB** Units: **mg/L** Prep Date: **12/11/2013** RunNo: **91566**
Client ID: **ZZZZZZ** Batch ID: **44571** TestNo: **EPA 1311/ 60 EPA 3010A** Analysis Date: **12/11/2013** SeqNo: **1701487**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.505	0.25	0.5000	0	101	75	125				

Sample ID: **N011495-003A-MSD** SampType: **MSD** TestCode: **6010_TCPB** Units: **mg/L** Prep Date: **12/11/2013** RunNo: **91566**
Client ID: **ZZZZZZ** Batch ID: **44571** TestNo: **EPA 1311/ 60 EPA 3010A** Analysis Date: **12/11/2013** SeqNo: **1701488**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.504	0.25	0.5000	0	101	75	125	0.5050	0.180	20	

Sample ID: **N011531-014A-DUP** SampType: **DUP** TestCode: **6010_TCPB** Units: **mg/L** Prep Date: **12/11/2013** RunNo: **91566**
Client ID: **ZZZZZZ** Batch ID: **44571** TestNo: **EPA 1311/ 60 EPA 3010A** Analysis Date: **12/11/2013** SeqNo: **1701490**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.579	0.25						0.5814	0.331	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: Geocon Consultants, Inc.
Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_TCPB

Sample ID: **LCS-44571** SampType: **LCS** TestCode: **6010_TCPB** Units: **mg/L** Prep Date: **12/11/2013** RunNo: **91566**
Client ID: **LCSS** Batch ID: **44571** TestNo: **EPA 1311/ 60 EPA 3010A** Analysis Date: **12/11/2013** SeqNo: **1701502**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.554	0.25	0.5000	0	111	85	115				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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Glen S. Gesmundo

From: Luann Beadle [beadle@geoconinc.com]
Sent: Friday, December 06, 2013 9:02 AM
To: Advanced Technology Labs, Inc.
Subject: Lab Order N011531 TO-59

Hi ATL,

For this lab order, please run WET lead on the following samples:

N011531-001A	B1-0	400
N011531-002A	B2-0	300
N011531-003A	B3-0	480
N011531-004A	B4-0	690
N011531-006A	B6-0	320
N011531-007A	B7-0	510
N011531-008A	B8-0	270
N011531-009A	B9-0	120
N011531-010A	B10-0	640
N011531-011A	B11-0	100
N011531-012A	B12-0	270
N011531-013A	B13-0	700
N011531-	B15-0	300

015A		
N011531-016A	B16-0	260

And TCLP lead on sample N011531-016A (B14-0).

Also, it looks as though we may have a bit of debris in the soil from B12-0. Could you please look through it and see if you see an artifact of some kind? Then, re-homogenize and re-analyze it for CAM 17.

All on a regular TAT, please.

Thank you,
Luann

Luann Beadle | Senior Staff Scientist
Geocon Consultants, Inc.
6671 Brisa Street, Livermore, CA 94550
Office: 925.371.5900, ext. 403 Direct: 925.961.5272 Mobile: 925.395.1669
beadle@geoconinc.com

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December 23, 2013

Luann Beadle
Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

TEL: 925-371-5900 Ext 403
FAX: (925) 371-5915

CA-ELAP No.: 2676
NV Cert. No.: NV-009222007A

Workorder No.: N011531

RE: I-80 Erosion Control, E8560-02-59

Attention: Luann Beadle

Enclosed are the results for sample(s) received on November 27, 2013 by Advanced Technology Laboratories, Inc. . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Jose Tenorio Jr.
Laboratory Director

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *23-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B3-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:00:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-003A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY TCLP EXTRACTION						
EPA 3010A			**EPA 1311/ 6010B**			
RunID: ICP2_131219C	QC Batch: 44648			PrepDate: 12/19/2013	Analyst: **JAA**	
Lead	0.63	0.25		mg/L	1	12/19/2013 05:20 PM

Qualifiers:

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

Advanced Technology Laboratories, Inc.

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *23-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B6-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:10:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-006A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY TCLP EXTRACTION						
EPA 3010A			**EPA 1311/ 6010B**			
RunID: ICP2_131219C	QC Batch: 44648			PrepDate:	12/19/2013	Analyst: **JAA**
Lead	ND	0.25		mg/L	1	12/19/2013 04:32 PM

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

Advanced Technology Laboratories, Inc.

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *23-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B7-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:20:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-007A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY TCLP EXTRACTION						
EPA 3010A			**EPA 1311/ 6010B**			
RunID: ICP2_131219C	QC Batch: 44648			PrepDate: 12/19/2013	Analyst: **JAA**	
Lead	0.49	0.25		mg/L	1	12/19/2013 03:45 PM

Qualifiers:

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

Advanced Technology Laboratories, Inc.

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *23-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B10-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:20:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-010A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY TCLP EXTRACTION						
EPA 3010A			**EPA 1311/ 6010B**			
RunID: ICP2_131219C QC Batch: 44648				PrepDate: 12/19/2013		Analyst: **JAA**
Lead	2.5	0.25		mg/L	1	12/19/2013 03:50 PM

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

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *23-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B14-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:40:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-014A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY TCLP EXTRACTION						
	EPA 3010A			**EPA 1311/ 6010B**		
RunID: ICP2_131211B	QC Batch: 44571			PrepDate: 12/11/2013	Analyst: **JAA**	
Lead	0.58	0.25		mg/L	1	12/11/2013 05:32 PM

Qualifiers:

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

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Advanced Technology Laboratories, Inc.

ANALYTICAL RESULTS

Print Date: *23-Dec-13*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B12-0
Lab Order:	N011531	**Collection Date:**	11/26/2013 10:35:00 AM
Project:	I-80 Erosion Control, E8560-02-59	**Matrix:**	SOIL
Lab ID:	N011531-012A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS BY STLC						
			WET/ EPA 6010B			
RunID: ICP2_131211B	QC Batch: R91566			PrepDate:		Analyst: **JAA**
Copper	9.1	0.050		mg/L	5	12/11/2013 10:07 PM
Lead	20	0.050		mg/L	5	12/11/2013 10:07 PM

Qualifiers:

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

Advanced Technology Laboratories, Inc.

3151 W. Post Rd Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: Geocon Consultants, Inc.
Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_TCPB

Sample ID: **MB-44571** SampType: **MBLK** TestCode: **6010_TCPB** Units: **mg/L** Prep Date: **12/11/2013** RunNo: **91566**
Client ID: **PBS** Batch ID: **44571** TestNo: **EPA 1311/ 60 EPA 3010A** Analysis Date: **12/11/2013** SeqNo: **1701479**

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

Sample ID: **MB-44539 TCLP** SampType: **MBLK** TestCode: **6010_TCPB** Units: **mg/L** Prep Date: **12/11/2013** RunNo: **91566**
Client ID: **PBS** Batch ID: **44571** TestNo: **EPA 1311/ 60 EPA 3010A** Analysis Date: **12/11/2013** SeqNo: **1701482**

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

Sample ID: **N011495-003A-MS** SampType: **MS** TestCode: **6010_TCPB** Units: **mg/L** Prep Date: **12/11/2013** RunNo: **91566**
Client ID: **ZZZZZZ** Batch ID: **44571** TestNo: **EPA 1311/ 60 EPA 3010A** Analysis Date: **12/11/2013** SeqNo: **1701487**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.505	0.25	0.5000	0	101	75	125				

Sample ID: **N011495-003A-MSD** SampType: **MSD** TestCode: **6010_TCPB** Units: **mg/L** Prep Date: **12/11/2013** RunNo: **91566**
Client ID: **ZZZZZZ** Batch ID: **44571** TestNo: **EPA 1311/ 60 EPA 3010A** Analysis Date: **12/11/2013** SeqNo: **1701488**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.504	0.25	0.5000	0	101	75	125	0.5050	0.180	20	

Sample ID: **N011531-014A-DUP** SampType: **DUP** TestCode: **6010_TCPB** Units: **mg/L** Prep Date: **12/11/2013** RunNo: **91566**
Client ID: **ZZZZZZ** Batch ID: **44571** TestNo: **EPA 1311/ 60 EPA 3010A** Analysis Date: **12/11/2013** SeqNo: **1701490**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.579	0.25						0.5814	0.331	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: Geocon Consultants, Inc.
Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_TCPB

Sample ID: **LCS-44571** SampType: **LCS** TestCode: **6010_TCPB** Units: **mg/L** Prep Date: **12/11/2013** RunNo: **91566**
Client ID: **LCSS** Batch ID: **44571** TestNo: **EPA 1311/ 60 EPA 3010A** Analysis Date: **12/11/2013** SeqNo: **1701502**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.554	0.25	0.5000	0	111	85	115				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_TCPB

Sample ID: **MB-44648** SampType: **MBLK** TestCode: **6010_TCPB** Units: **mg/L** Prep Date: **12/19/2013** RunNo: **91728**
Client ID: **PBS** Batch ID: **44648** TestNo: **EPA 1311/ 60 EPA 3010A** Analysis Date: **12/19/2013** SeqNo: **1707868**

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

Sample ID: **MB-44641 TCLP** SampType: **MBLK** TestCode: **6010_TCPB** Units: **mg/L** Prep Date: **12/19/2013** RunNo: **91728**
Client ID: **PBS** Batch ID: **44648** TestNo: **EPA 1311/ 60 EPA 3010A** Analysis Date: **12/19/2013** SeqNo: **1707869**

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

Sample ID: **LCS-44648** SampType: **LCS** TestCode: **6010_TCPB** Units: **mg/L** Prep Date: **12/19/2013** RunNo: **91728**
Client ID: **LCSS** Batch ID: **44648** TestNo: **EPA 1311/ 60 EPA 3010A** Analysis Date: **12/19/2013** SeqNo: **1707870**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.520	0.25	0.5000	0	104	85	115				

Sample ID: **N011531-006A-MS** SampType: **MS** TestCode: **6010_TCPB** Units: **mg/L** Prep Date: **12/19/2013** RunNo: **91728**
Client ID: **ZZZZZZ** Batch ID: **44648** TestNo: **EPA 1311/ 60 EPA 3010A** Analysis Date: **12/19/2013** SeqNo: **1707887**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.636	0.25	0.5000	0.1513	97.0	75	125				

Sample ID: **N011531-006A-MSD** SampType: **MSD** TestCode: **6010_TCPB** Units: **mg/L** Prep Date: **12/19/2013** RunNo: **91728**
Client ID: **ZZZZZZ** Batch ID: **44648** TestNo: **EPA 1311/ 60 EPA 3010A** Analysis Date: **12/19/2013** SeqNo: **1707888**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.677	0.25	0.5000	0.1513	105	75	125	0.6363	6.23	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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CLIENT: Geocon Consultants, Inc.
Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_ST

Sample ID: **MB-R91566** SampType: **MBLK** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **91566**
Client ID: **PBS** Batch ID: **R91566** TestNo: **WET/ EPA 60** Analysis Date: **12/11/2013** SeqNo: **1701270**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.010									

Sample ID: **MB1-44531** SampType: **MBLK** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **91566**
Client ID: **PBS** Batch ID: **R91566** TestNo: **WET/ EPA 60** Analysis Date: **12/11/2013** SeqNo: **1701271**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.050									

Sample ID: **MB2-44531** SampType: **MBLK** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **91566**
Client ID: **PBS** Batch ID: **R91566** TestNo: **WET/ EPA 60** Analysis Date: **12/11/2013** SeqNo: **1701272**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.050									

Sample ID: **LCS-R91566** SampType: **LCS** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **91566**
Client ID: **LCSS** Batch ID: **R91566** TestNo: **WET/ EPA 60** Analysis Date: **12/11/2013** SeqNo: **1701273**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	0.504	0.010	0.5000	0	101	85	115				
Lead	0.493	0.010	0.5000	0	98.7	85	115				

Sample ID: **N011350-162A-DUP** SampType: **DUP** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **91566**
Client ID: **ZZZZZZ** Batch ID: **R91566** TestNo: **WET/ EPA 60** Analysis Date: **12/11/2013** SeqNo: **1701275**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.417	0.050						2.424	0.308	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: Geocon Consultants, Inc.
Work Order: N011531
Project: I-80 Erosion Control, E8560-02-59

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_ST

Sample ID: **N011350-162A-MS** SampType: **MS** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **91566**
Client ID: **ZZZZZZ** Batch ID: **R91566** TestNo: **WET/ EPA 60** Analysis Date: **12/11/2013** SeqNo: **1701277**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	2.700	0.050	2.500	0.2637	97.5	75	125				
Lead	4.328	0.050	2.500	2.424	76.2	75	125				

Sample ID: **N011350-162A-MSD** SampType: **MSD** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **91566**
Client ID: **ZZZZZZ** Batch ID: **R91566** TestNo: **WET/ EPA 60** Analysis Date: **12/11/2013** SeqNo: **1701278**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	2.671	0.050	2.500	0.2637	96.3	75	125	2.700	1.07	20	
Lead	4.316	0.050	2.500	2.424	75.7	75	125	4.328	0.294	20	

Sample ID: **N011531-009A-DUP** SampType: **DUP** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **91566**
Client ID: **ZZZZZZ** Batch ID: **R91566** TestNo: **WET/ EPA 60** Analysis Date: **12/11/2013** SeqNo: **1701292**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	9.672	0.050						9.648	0.249	20	

Sample ID: **N011531-009A-MS** SampType: **MS** TestCode: **6010_ST** Units: **mg/L** Prep Date: RunNo: **91566**
Client ID: **ZZZZZZ** Batch ID: **R91566** TestNo: **WET/ EPA 60** Analysis Date: **12/11/2013** SeqNo: **1701293**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	14.780	0.050	2.500	9.648	205	75	125				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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Glen S. Gesmundo

From: Luann Beadle [beadle@geoconinc.com]
Sent: Tuesday, December 17, 2013 9:32 AM
To: Advanced Technology Labs, Inc.
Subject: FW: Lab Order N011531 (TO-59)

Hi again,
Also, please run WET copper on the re-run sample from boring B12-0 on a regular TAT.
Thanks,
Luann

From: Luann Beadle [mailto:beadle@geoconinc.com]
Sent: Tuesday, December 17, 2013 9:27 AM
To: Advanced Technology Labs, Inc. (reports@atl-labs.com)
Subject: Lab Order N011531 (TO-59)

Hi ATL,
Please run TCLP lead on samples B3-0, B6-0, B7-0, and B10-0 on a regular TAT.
Thanks,
Luann

Luann Beadle | Senior Staff Scientist
Geocon Consultants, Inc.
6671 Brisa Street, Livermore, CA 94550
Office: 925.371.5900, ext. 403 Direct: 925.961.5272 Mobile: 925.395.1669
beadle@geoconinc.com

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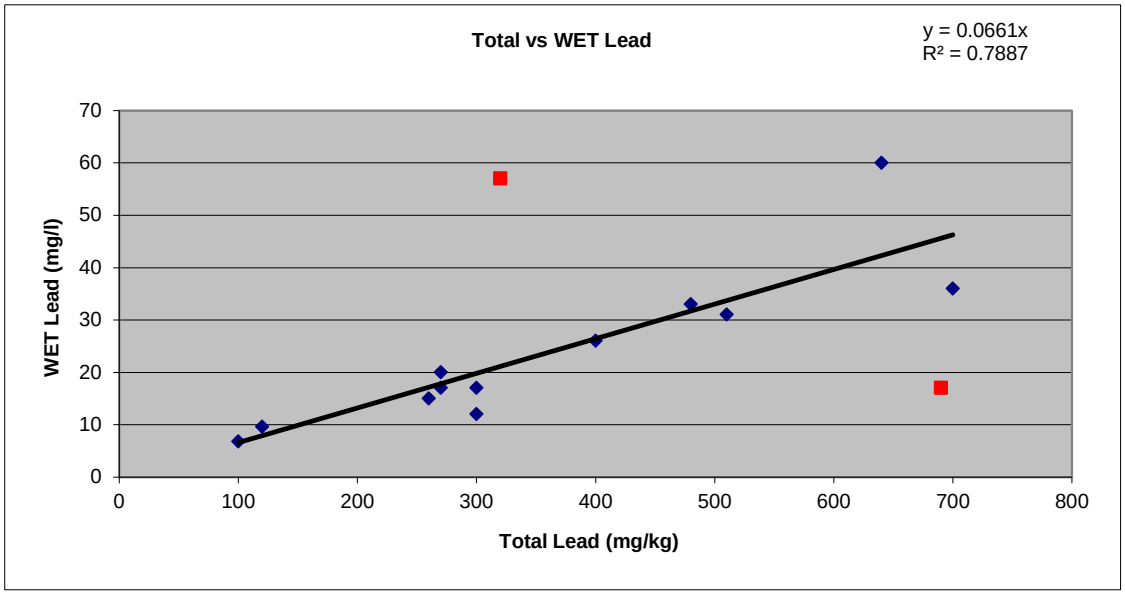
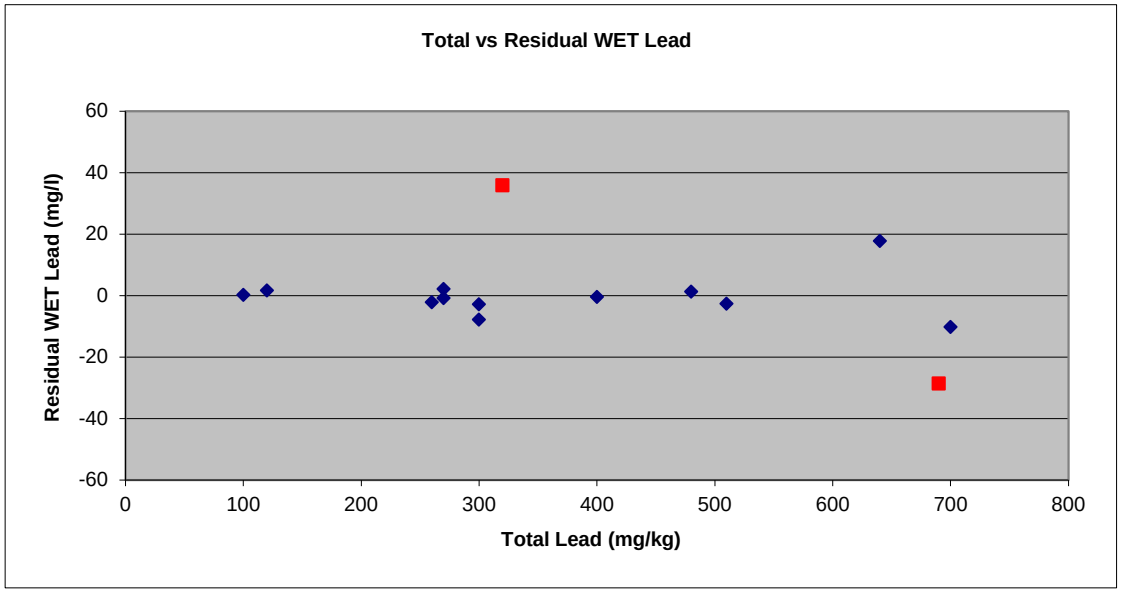
APPENDIX B

Pb

Number of Valid Observations	16
Number of Distinct Observations	14
Minimum	32
Maximum	1,200
Mean	412
Geometric Mean	310.9
Median	310
SD	291.1
Variance	84,768
Std. Error of Mean	72.79
Coefficient of Variation	0.707
Skewness	1.311
90% Standard Bootstrap UCL	**501.8**
95% Standard Bootstrap UCL	**526**

As

Number of Valid Observations	6
Number of Distinct Observations	6
Minimum	2.1
Maximum	4.3
Mean	3.583
Geometric Mean	3.493
Median	3.7
SD	0.794
Variance	0.63
Std. Error of Mean	0.324
Coefficient of Variation	0.221
Skewness	-1.592
95% Standard Bootstrap UCL	**4.06**

Sample ID	Sample Depth (feet)	Total Lead (mg/kg)	WET Lead (mg/l)	Residual WET Lead (mg/l)	Squared Residual WET Lead (mg/l)
B11-0	0 to 0.5	100	6.8	0.19	0.04
B1-0	0 to 0.5	400	26	-0.44	0.19
B8-0	0 to 0.5	270	17	-0.85	0.72
B3-0	0 to 0.5	480	33	1.27	1.62
B9-0	0 to 0.5	120	9.6	1.67	2.78
B12-0	0 to 0.5	270	20	2.15	4.64
B16-0	0 to 0.5	260	15	-2.19	4.78
B7-0	0 to 0.5	510	31	-2.71	7.34
B2-0	0 to 0.5	300	17	-2.83	8.00
B15-0	0 to 0.5	300	12	-7.83	61.29
B13-0	0 to 0.5	700	36	-10.27	105.43
B10-0	0 to 0.5	640	60	17.70	313.22
Not Used					
B4-0	0 to 0.5	690	17	-28.61	818.35
B6-0	0 to 0.5	320	57	35.85	1285.15