

INFORMATION HANDOUT

For Contract No. 04-1J7104

**Identified by
Project ID 0414000332**

METERIALS INFORMATION

1. Pavement Recommendations for Storm Damage Repair dated September 16, 2015
2. Pavement Recommendations for Storm Damage Repair dated January 11, 2015: Supplement Recommendation for Trench Paving
3. Preliminary Site Investigation Report, I-780 Inside Shoulder Widening Project, Benicia, California dated December 2015

Memorandum

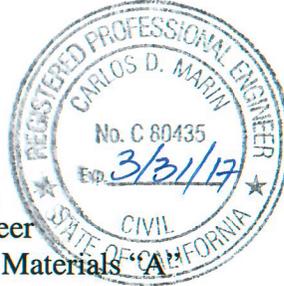
*Serious drought.
Help Save Water!*

To: GHULAM POPAL
District Branch Chief
Office of Design SHOPP

Date: September 16, 2015

File: 04-SOL-780 PM 1.21/1.58
04-1J7101
Project ID: 044000332
Storm Damage Repair

From: CARLOS MARIN, P.E.
Materials Design Engineer
Engineering Services I- Materials



Subject: PAVEMENT RECOMMENDATION FOR STORM DAMAGE REPAIR

This is in response to your memorandum dated September 4, 2015 requesting a materials recommendation of the above-mentioned project for the PS&E phase. The project proposes to install the permanent drainage system along the landscaped median in the City of Benicia, on Eastbound Route 780 PM 1.21/1.58 from Hospital Road Undercrossing to East 5th Street Undercrossing in Solano County.

The Inside shoulder will be widened to approximately 4-13 feet with HMA dike approximately 100 feet in length, inlets will be installed along the inside shoulder and remove existing / install new three beam barriers. The existing 18-inch cross culvert pipe on the Westbound will also be replaced by trenching across the westbound 780 and backfill with rapid setting concrete.

Information received with the memorandum:

- Typical Cross Section & Layout
- Materials Recommendation dated November 20, 2014

EXISTING CONDITION

As previously mentioned on the recommendation provided from Wei Lin on November 20, 2014 the existing condition of the pavement remains unchanged.

As per as built plans project # EA 0C2704 dated September 2003 the existing pavement structural section is 0.15' RAC(G) / 0.40' AC / 0.67 CTB / 1.08 AS(2).

INSIDE SHOULDER WIDENING

The following two alternatives are equivalent and provide a structural section design for a 20-Year design life.

Design Parameters used:

20 Year Traffic Index = 11.5

R-Value = 13

A. Alternative 1

Rubberized Hot Mix Asphalt (G)	RHMA-G	0.15'
Hot Mix Asphalt (Type A)	HMA-A	0.50'
Class 2 Aggregate Base	AB-2	1.85'
Total Thickness		2.50'

B. Alternative 2

Rubberized Hot Mix Asphalt (G)	RHMA-G	0.15'
Hot Mix Asphalt (A)	HMA-A	1.25'
Total Thickness		1.40'

TRENCH PAVING

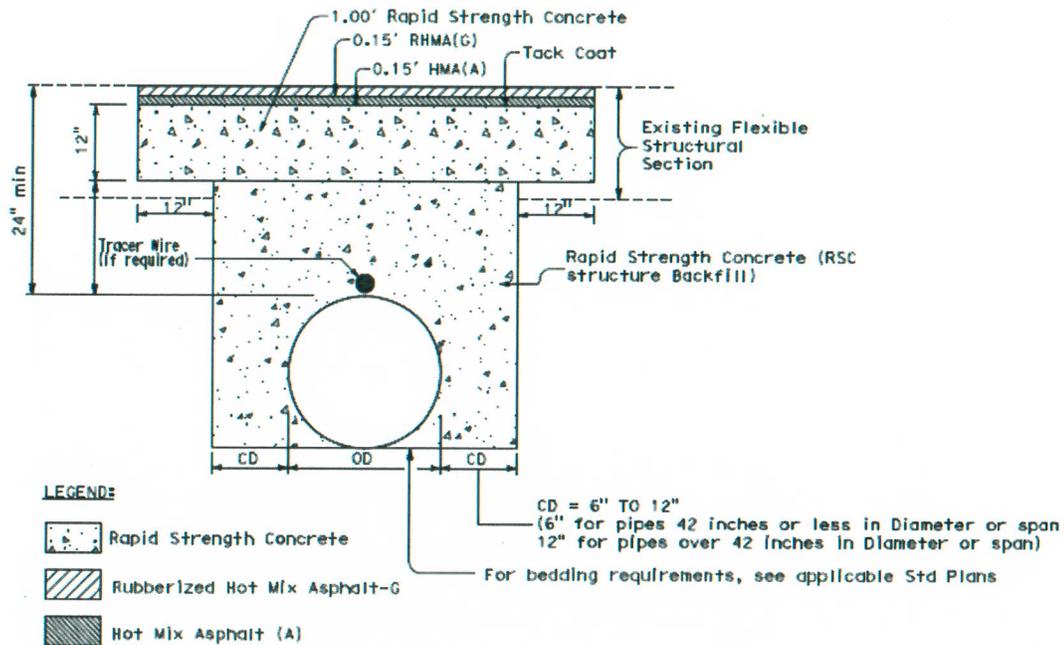
For the existing 18" cross culvert pipe replacement across WB 780, we recommend to follow the attached trench detail in order to avoid any potential roadway failures due to any compaction issues.

The backfill consists of Rapid Strength Concrete Backfill (RSC) with a cap of 1.00' of Rapid Strength Concrete, and 0.15' of HMA-A followed by a top layer of 0.15' of RHMA-G to match the existing top layer of Rubberized Asphalt. A bond breaker must be applied between the two layers of RSC (RSC backfill & RSC cap). Apply Tack Coat between the HMA-A and RHMA-G layers as well as between the RSC cap and the HMA-A layer, for more details please refer to the following trench detail labeled "Trench Paving Details – Exhibit A."

(NO SCALE)

TRENCH PAVING DETAILS - EXHIBIT "A"

CASE 1: FOR TRAFFIC INDEX (TI) LESS THAN OR EQUAL TO 12



NOTES:

1. Concrete cap may be Rapid Strength Concrete (RSC); if RSC is used, replace the Structure Backfill with Lean Concrete Backfill or RSC depending upon the project's time constraints.
2. For new installations, minimum depth of cover requirements are to follow guidelines in the Encroachment Permits Manual or Highway Design Manual. When cover over a replacement pipe/encasement pipe is less than 24", a Special Design is necessary (for in-house projects, refer to HO Drainage Detail Library).
3. Tack Coat (Asphaltic Emulsion) shall be applied prior to placing RHMA(G) and HMA layers.
4. Apply bond breaker to separate RSC structure backfill with RSC cap
5. All materials, workmanship, testing, and inspections shall comply with Caltrans Standard Specifications and project-specific Special Provisions.

ABBREVIATIONS:

- CD = Clear Distance
- HMA-A = Hot Mix Asphalt Type A
- RHMA(G) = Rubberized Hot Mix Asphalt Type G
- O.C. = On Center
- OD = Outside Diameter of Utility or Culvert

If you have any questions, please call Carlos Marin at (510) 622-8705 or Tinu Mishra at (510) 286-4841

c: Daily File, Route File, Tinu Mishra
C. Marin/SOL/Sol-780-Storm Damage Repair

DISCLAIMER

Any variations from the recommendations provided could have a significant impact. Members of this office bear no responsibility for any alterations that are made for whatever reason, to the preceding design without prior discussion with and approval from either the author or the branch chief. Such alteration could lead to inadequate performance and premature failure of the constructed pavement structural section. Also, while the members of this office make every effort both to precisely follow the available standard methods for testing and design, and to exercise sound engineering judgment, improper construction practices can have a negative impact on pavement performance irrespective of the accuracy practiced to obtain the recommended rehabilitation strategy.

Memorandum

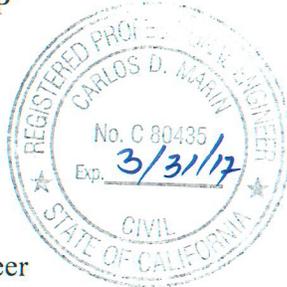
*Serious drought.
Help Save Water!*

To: GHULAM POPAL
District Branch Chief
Office of Design SHOPP

Date: January 11, 2016

File: 04-SOL-780 PM 1.21/1.58
04-1J7101
Project ID: 044000332
Storm Damage Repair

From:  CARLOS MARIN, P.E.
Materials Design Engineer
Engineering Services I- Materials "A"



Subject: **PAVEMENT RECOMMENDATION FOR STORM DAMAGE REPAIR**

This is in response to your email requesting a supplemental materials recommendation of the above-mentioned project for the PS&E phase for the work related to trench paving only.

This Recommendation is in addition to the previous one provided on September 16, 2015, and describes the trench paving options already provided via email on December 10, 2015.

TRENCH PAVING

For the existing 18" cross culvert pipe replacement across WB 780, we recommend to follow the attached trench details in order to avoid any potential roadway failures due to any compaction issues.

- **Alternative #1 (Trench Paving Detail – Exhibit A)**

The backfill consists of Rapid Strength Concrete Backfill (RSC) with a cap of 1.00' of Rapid Strength Concrete, and 0.15' of HMA-A followed by a top layer of 0.15' of RHMA-G to match the existing top layer of Rubberized Asphalt. A bond breaker must be applied between the two layers of RSC (RSC backfill & RSC cap). Apply Tack Coat between the HMA-A and RHMA-G layers as well as between the RSC cap and the HMA-A layer, for more details please refer to the following trench detail labeled "Trench Paving Details – Exhibit A."

- **Alternative #2 (Trench Paving Detail – Exhibit A & B)**

As per email from field construction dated December 10, 2015, there is a concern on availability of RHMA during the time of construction.

In case RHMA is not available during the trenching work window, we recommend to perform the trenching work with 0.30' of HMA-A as a top layer following the attached **“Trench Paving Detail – Exhibit B”**. At the time the shoulder work begins, and the plant is running RHMA-G, come back to the trench location and cold plane and replace 0.15' with RHMA-G.

- **Alternative #3 (Trench Paving Details – Exhibit B)**

As recommended by construction during the 95% PS&E review, this alternative replaces the 0.15' layer of RHMA-G described in alternative #1, with HMA-A.

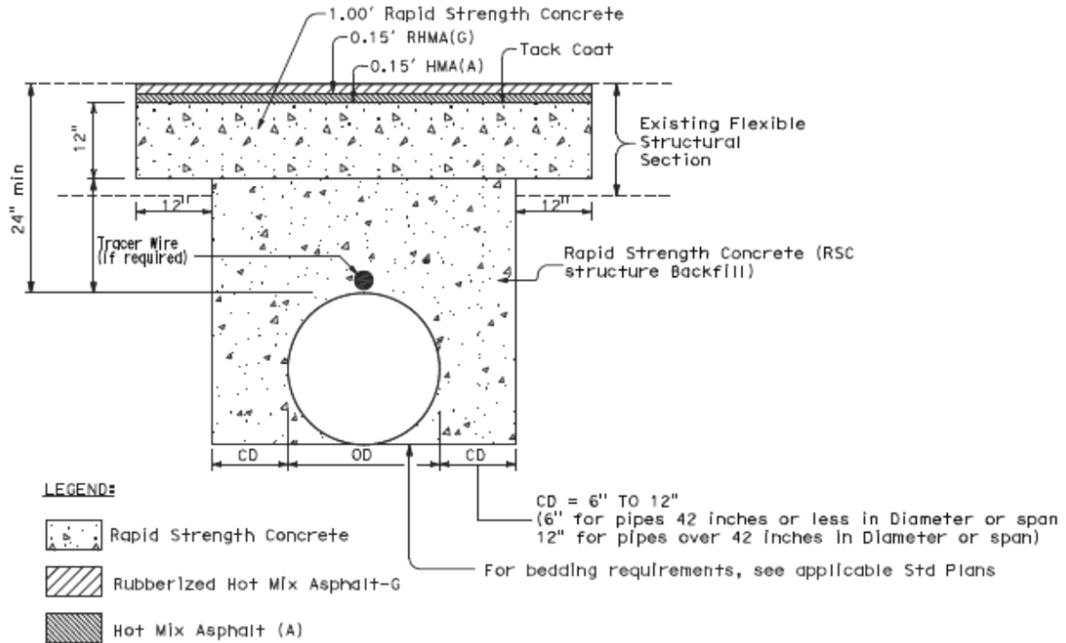
The backfill consists of Rapid Strength Concrete Backfill (RSC) with a cap of 1.00' of Rapid Strength Concrete, and a top layer of 0.30' of HMA-A. A bond breaker must be applied between the two layers of RSC (RSC backfill & RSC cap). Apply Tack Coat between the HMA-A the RSC cap, for more details please refer to the following trench detail labeled **“Trench Paving Details – Exhibit A.”**

Please note, Alternative #1 is the choice that should be considered over all others as per District Materials Engineer.

(NO SCALE)

TRENCH PAVING DETAILS - EXHIBIT "A"

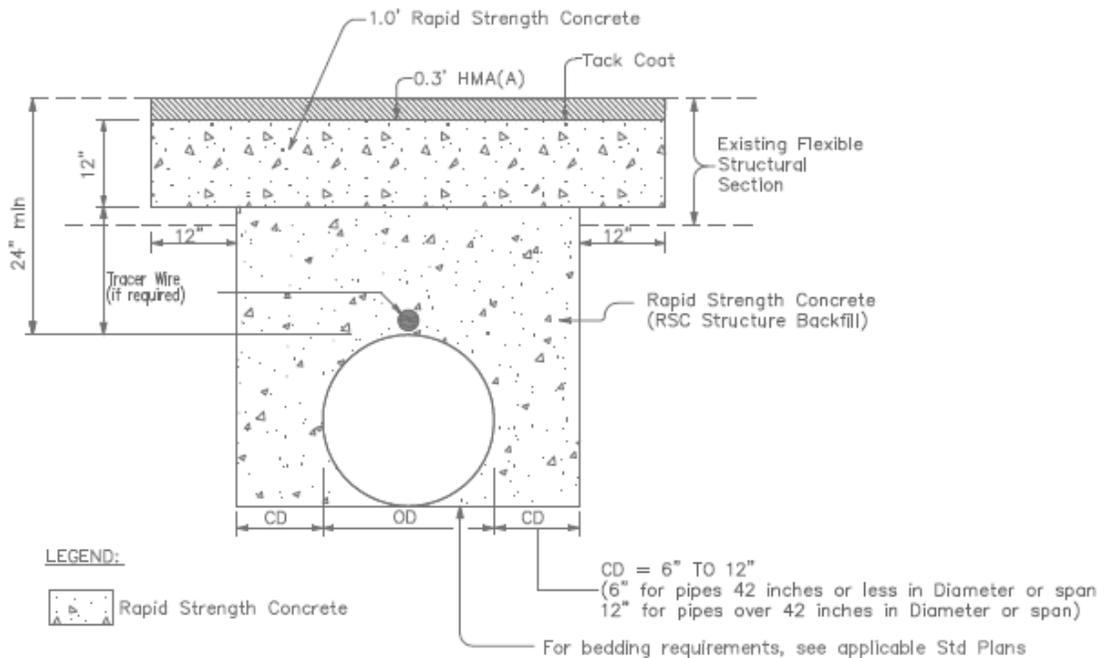
CASE 1: FOR TRAFFIC INDEX (TI) LESS THAN OR EQUAL TO 12



(NO SCALE)

TRENCH PAVING DETAILS – EXHIBIT "B"

CASE 1: FOR TRAFFIC INDEX (TI) LESS THAN OR EQUAL TO 12



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2. For new installations, minimum depth of cover requirements are to follow guidelines in the Encroachment Permits Manual or Highway Design Manual. When cover over a replacement pipe/encasement pipe is less than 24", a Special Design is necessary (for in-house projects, refer to HQ Drainage Detail Library).
3. Tack Coat (Asphaltic Emulsion) shall be applied prior to placing HMA-A layers.
4. All trench work subject to state regulations and inspection.
5. All materials, workmanship, testing, and inspections shall comply with Caltrans Standard Specifications and project-specific Special Provisions.

ABBREVIATIONS:

- CD = Clear Distance
 HMA-A = Hot Mix Asphalt Type A
- O.C. = On Center
 OD = Outside Diameter of Utility or Culvert

GHULAM POPAL

January 11, 2016

Page 5 of 5

If you have any questions, please call Carlos Marin at (510) 622-8705 or Tinu Mishra at (510) 286-4841

c: Daily File, Route File, Tinu Mishra
A. Marin/SOL/Sol-780-Storm Damage Repair

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PRELIMINARY SITE INVESTIGATION REPORT



PREPARED FOR:

CALIFORNIA DEPARTMENT OF TRANSPORTATION
DISTRICT 4
OFFICE OF ENVIRONMENTAL ENGINEERING
111 GRAND AVENUE, MS8C
OAKLAND, CA 94612



PREPARED BY:

GEOCON CONSULTANTS, INC.
6671 BRISA STREET
LIVERMORE, CA 94550



GEOCON

GEOCON PROJECT NO. E8721-02-42
CALTRANS EA 04-1J7101
PROJECT # 04-1400-0332-1

DECEMBER 2015

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FIGURES

1. Vicinity Map
2. Site Map

TABLES

1. Boring Coordinates
2. Summary of Lead Results
3. Summary of CAM 17 Metals Results
4. Summary of Petroleum Hydrocarbons Results
5. Summary of Lead Statistical Analysis

APPENDICES

- A. Laboratory Reports and Chain-of-Custody Documentation
- B. Metal Statistical Analysis

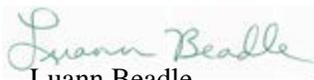
REPORT LIMITATIONS

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 Consultants, Inc. 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.

GEOCON CONSULTANTS, INC.



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Project Scientist



Richard Day, CEG, CHG
Senior Geologist



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PRELIMINARY SITE INVESTIGATION REPORT

1.0 INTRODUCTION

This Preliminary Site Investigation Report for the Interstate 780 (I-780) Inside Shoulder Widening and Drainage Installation Project in Benicia, Solano County, California was prepared by Geocon Consultants, Inc. (Geocon) under California Department of Transportation (Caltrans) Contract No. 04A4336 and Task Order No. 42 (TO-42), EA 04-1J7101.

1.1 Project Description and Proposed Improvements

The project proposes to widen the inside shoulder and install drainage along eastbound I-780 between Post Mile (PM) 1.3 and PM 1.5 in Solano County. The project location is depicted on the 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 total petroleum hydrocarbons as diesel (TPHd) and as motor oil (TPHmo) in soil within the project limits. 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 10 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 10 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 California Human Health Screening Levels

The California Environmental Protection Agency (Cal/EPA) has prepared technical reports entitled *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties* (Cal/EPA, January 2005) and *Revised California Human Health Screening Levels for Beryllium* (Cal/EPA, March 2009) and *Lead* (Cal/EPA, September 2009), which present CHHSLs for soil, shallow soil gas, and indoor air to assist in evaluating sites impacted by releases of hazardous chemicals.

The CHHSLs are concentrations of 54 hazardous chemicals including Title 22 metals that Cal/EPA considers to be below thresholds of concern for risks to human health. The CHHSLs were developed by the Office of Environmental Health Hazard Assessment (OEHHA) on behalf of Cal/EPA. The thresholds of concern used to develop the CHHSLs are an excess lifetime cancer risk of one in a million and a hazard quotient or 1.0 for non-cancer effects. Under most circumstances, the presence of a chemical at concentrations below its respective CHHSL can be assumed to not pose a significant risk. The presence of a chemical at concentrations above a CHHSL does not indicate that adverse impacts to human health are occurring or will occur but suggests that further evaluation is warranted (Cal/EPA, January 2005).

The CHHSLs for residential and industrial/commercial land use were used for comparison on Table 3.

2.3 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 in 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 (≤ 3 m 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 Table 3 and 4 for comparative purposes.

3.0 SCOPE OF SERVICES

The scope of services performed under TO-42, EA 04-1J7101 included the following:

3.1 Pre-Field Activities

- Prepared a health and safety plan (HSP) for the proposed site investigation. The HSP provided guidelines on the use of personal protective equipment and the health and safety procedures implemented during the proposed survey activities as specified in T8 CCR §1529, T8 CCR §3203, T8 CCR §3204, T8 CCR §§5095-5100, T8 CCR §5144, and T8 CCR §5192.
- Retained the services of Asset Laboratories (Asset), Las Vegas, Nevada, a Caltrans-approved and California-certified analytical laboratory, to perform the chemical analyses of soil samples.
- Notified Underground Service Alert (USA) at least 48 hours prior to fieldwork.
- Arranged site work with Caltrans.

3.2 Field Activities

The field investigation was performed on October 22, 2015, by Geocon staff. Ten soil borings were advanced at the project location using direct-push drilling techniques. The borings were advanced to a maximum depth of 3.5 feet and samples were collected at depth intervals of 0 to 0.5 foot, 1 to 1.5 feet, 2 to 2.5 feet, and 3 to 3.5 feet.

All samples were transported to Asset for analysis under standard chain-of-custody (COC) documentation.

4.0 INVESTIGATIVE METHODS

4.1 Sampling Procedures

Soil samples were collected from ten boring locations using direct-push drilling techniques. Boring coordinates are presented on Table 1. The Site Plan, Figure 2, shows the boring locations.

Soil samples were obtained by hydraulically advancing a two-inch-diameter, four-foot-long stainless steel core-barrel sampler lined with an acetate sample tube into undisturbed soil. Soil samples were collected for laboratory analysis by cutting an approximately six-inch-long section of the acetate tube from the target sample depth, and capping the ends with Teflon tape and plastic end caps.

Sample containers were labeled, placed in a chest cooled with ice as necessary, and transported to a Caltrans-approved, certified environmental laboratory using standard COC documentation. Soil borings were backfilled to surface with site soil.

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

4.2 Laboratory Analyses

Laboratory analyses were performed by Asset 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:

- 8 samples for CAM 17 metals using EPA Test Methods 6010 ICAP and 7471.
- 32 samples for total lead using EPA Test Method 6010 ICAP.
- 6 samples with total lead concentrations equal to or exceeding 50 mg/kg (i.e., equal to or exceeding 10 times the STLC of 5.0 mg/l) were further analyzed for WET lead.
- 5 samples with total lead concentrations equal to or exceeding 100 mg/kg and WET lead concentrations equal to or greater than 5 mg/l were further analyzed for TCLP lead.
- 8 samples for TPHd using EPA Test Method 8015B.
- 8 samples for TPHmo using EPA Test Method 8015B.

The rinse blank sample was analyzed for total lead using EPA Test Method 6010B.

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 10 samples, batch of samples or type of matrix, whichever was more frequent.
- One sample analyzed in duplicate for every 10 samples, batch of samples or type of matrix, whichever was more frequent.
- One spiked sample for every 10 samples, batch of samples or type of matrix; whichever was more frequent, with spike made at 10 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 Laboratory Analytical Results

The analytical results are presented in Tables 2 and 3 and are summarized below:

- Total lead was reported at concentrations ranging from not detected (reporting limit of 1.0 mg/kg) to 190 mg/kg.
- WET lead was reported at concentrations ranging from 2.8 mg/l to 17 mg/l.
- Remaining CAM 17 metals were reported in the samples at total concentrations below 10 times their respective STLCs.
- TPHd was reported at concentrations ranging from not detected (reporting limit of <1.0 mg/kg) to 28 mg/kg.
- TPHmo was reported at concentrations ranging from not detected (reporting limit of <1.0 mg/kg) to 67 mg/kg.

Total lead was not detected in the rinse blank sample at or above the reporting limit of 0.050 mg/l.

5.2 Laboratory Quality Assurance/Quality Control

We reviewed the QA/QC results provided with the laboratory analytical reports. The data indicate non-detect results for the method blanks at or above reporting limits. The relative percent difference (RPD) for one duplicate sample was outside of acceptance criteria, possibly due to matrix interference. A second RPD for a duplicate sample was outside of acceptance criteria due to non-homogeneity of the sample. The associated analytical batches were validated by the laboratory control samples. The matrix spike recovery was outside of the acceptance limits for several samples, possibly due to matrix interference; however, the associated laboratory control samples were

acceptable. Remaining samples and internal laboratory QA/QC samples showed acceptable recoveries and 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.

5.3 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 means of the total lead concentrations for each sampling depth; 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.

5.3.1 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 table presents the calculated UCLs and statistics for the site:

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	116	124	86.8	0.5	190
1 to 1.5	NC	NC	2.16	0.5	2.5
2 to 2.5	NC	NC	2.43	1.9	2.5
3 to 3.5	NC	NC	2.85	2.5	4.7

NC - Not calculated due to insufficient data set

5.3.2 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 95% UCL total lead concentrations presented in the table 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 six (x , y) data points (i.e., soil samples analyzed for both total lead [x] and WET lead [y]) from the site. The resulting *coefficient of determination* (r^2) equaled 0.7524, which yields a corresponding *correlation coefficient* (r) of 0.867.

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 $y = 0.0743(x)$, where x represents total lead concentrations and y represents predicted WET lead concentrations.

This equation was used to estimate the expected WET lead concentrations for the total lead UCLs for the data set (see Section 5.4.1). Regression analysis results and a scatter plot depicting the (x , y) data points along with the regression line are included in Appendix B. The predicted WET lead concentrations are summarized in Table 5.

6.0 CONCLUSIONS

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 and in Table 5.

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 1 ft	116	8.6	124	Hazardous
<i>Underlying soil (1 to 3.5 ft)</i>	2.9	0.2	2.9	<i>Non-hazardous</i>
0 to 2 ft	59	4.4	63	Non-hazardous
<i>Underlying soil (2 to 3.5 ft)</i>	3.2	0.2	3.2	<i>Non-hazardous</i>
0 to 3 ft	40	3.0	43	Non-hazardous
<i>Underlying soil (3 to 3.5 ft)</i>	4.7	0.3	4.7	<i>Non-hazardous</i>
0 to 3.5 ft	35	2.6	3.8	Non-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 1.0 foot would be classified as California hazardous waste. Based on the TCLP lead results, excavated soil would not be classified as a RCRA hazardous waste. Underlying soil (i.e., deeper than 1 foot) would be classified as non-hazardous based on lead results.

If soil were excavated to a depth of 2 feet or greater and handled as a unit, it would be classified as non-hazardous based on lead content.

6.2 CAM 17 Metals in Soil

Remaining CAM 17 metals were reported in the samples at total concentrations below 10 times their respective STLCS.

The CAM 17 metals concentrations in site soil were compared to CHHSLs and ESLs. Arsenic and lead were reported at concentrations greater than one or more CHHSL and ESL value. Because concentrations of arsenic and lead exceed one or more ESL, non-parametric bootstrap techniques were

used to calculate the UCLs. The bootstrap test result is included in Appendix B. ESLs, UCLs, and published background concentrations for arsenic and lead are summarized in the following table.

Metal	Maximum	95% UCL	Shallow Soil Residential CHHSL/ESL	Shallow Soil Commercial/Industrial CHHSL/ESL	Worker Direct Exposure ESL	Published Background Mean¹	Published Background Range¹
Arsenic	7.5	5.55	0.07/0.39	0.24/1.6	10	3.5	0.6 to 11.0
Lead	190	36.9	80/80	320/320	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 CHHSLs and ESLs; however, it is below 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 below the residential and commercial land use CHHSLs and ESLs and the construction exposure ESL. It is within the published background range.

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

Total metals results for soil samples are summarized in Tables 2 and 3.

6.3 Petroleum Hydrocarbons in Soil

TPHd and TPHmo were reported at maximum concentrations of 28 mg/kg and 67 mg/kg, respectively, below the ESLs. Therefore, reuse or disposal of excavated soil should not be restricted based on TPHd and TPHmo content.

A summary of petroleum hydrocarbon concentrations in site soil is presented in Table 4.

6.4 Worker Protection

The contractor(s) should prepare a project-specific health and safety plan to prevent or minimize worker exposure to metals 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.



GEOCON
CONSULTANTS, INC.

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I-780 Inside Shoulder Widening

Benicia, California

VICINITY MAP

GEOCON Proj. No E8721-02-42

Task Order No. 42, EA 04-1J7101

December 2015

Figure 1



LEGEND:
 ● Boring Location

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I-780 Inside Shoulder Widening	
Benicia, California	SITE PLAN
GEOCON Proj. No. E8721-02-42	
EA No. 04-1J7101	December 2015

TABLE 1
Boring Coordinates
I-780 Inside Shoulder Widening
Benicia, CA

Boring	Latitude	Longitude	Northing	Easting
B1	38.051093	-122.143506	1,780,461.353	6,520,337.265
B2	38.050942	-122.143272	1,780,397.283	6,520,412.508
B3	38.050786	-122.142975	1,780,345.742	6,520,499.936
B4	38.050618	-122.142658	1,780,287.343	6,520,579.793
B5	38.050508	-122.142370	1,780,247.066	6,520,672.928
B6	38.050381	-122.142088	1,780,199.100	6,520,759.392
B7	38.050314	-122.141733	1,780,170.473	6,520,856.800
B8	38.050217	-122.141406	1,780,134.050	6,520,948.728
B9	38.050149	-122.141086	1,780,117.469	6,521,048.771
B10	38.050095	-122.140717	1,780,091.469	6,521,144.195

Northings/eastings: NAD 83, Zone 2

TABLE 2
Summary of Lead Results
I-780 Inside Shoulder Widening
Benicia, CA

Sample ID	Sample Depth (feet)	Total Lead (mg/kg)	WET Lead (mg/l)	TCLP Lead (mg/l)
B1-0	0 to 0.5	20	---	---
B1-1	1 to 1.5	<5.0	---	---
B1-2	2 to 2.5	2.4	---	---
B1-3	3 to 3.5	<5.0	---	---
B2-0	0 to 0.5	16	---	---
B2-1	1 to 1.5	<1.0	---	---
B2-2	2 to 2.5	<5.0	---	---
B2-3	3 to 3.5	<5.0	---	---
B3-0	0 to 0.5	<1.0	---	---
B3-1	1 to 1.5	<5.0	---	---
B3-2	2 to 2.5	<5.0	---	---
B3-3	3 to 3.5	<5.0	---	---
B4-0	0 to 0.5	190	14	0.063
B4-1	1 to 1.5	1.1	---	---
B4-2	2 to 2.5	<5.0	---	---
B4-3	3 to 3.5	<5.0	---	---
B5-0	0 to 0.5	180	11	0.44
B5-1	1 to 1.5	<5.0	---	---
B5-2	2 to 2.5	<5.0	---	---
B5-3	3 to 3.5	3.8	---	---
B6-0	0 to 0.5	120	9.4	0.066
B6-1	1 to 1.5	<5.0	---	---
B6-2	2 to 2.5	<5.0	---	---
B6-3	3 to 3.5	<5.0	---	---
B7-0	0 to 0.5	98	5.5	<0.25
B7-1	1 to 1.5	<5.0	---	---
B7-2	2 to 2.5	1.9	---	---
B7-3	3 to 3.5	<5.0	---	---
B8-0	0 to 0.5	71	2.8	---
B8-1	1 to 1.5	<5.0	---	---
B8-2	2 to 2.5	<5.0	---	---
B8-3	3 to 3.5	<5.0	---	---
B9-0	0 to 0.5	170	17	0.064
B9-1	1 to 1.5	<5.0	---	---
B9-2	2 to 2.5	<5.0	---	---
B9-3	3 to 3.5	4.7	---	---

TABLE 2
Summary of Lead Results
I-780 Inside Shoulder Widening
Benicia, CA

Sample ID	Sample Depth (feet)	Total Lead (mg/kg)	WET Lead (mg/l)	TCLP Lead (mg/l)
B10-0	0 to 0.5	2.3	---	---
B10-1	1 to 1.5	<5.0	---	---
B10-2	2 to 2.5	<5.0	---	---
B10-3	3 to 3.5	<5.0	---	---
Rinse Blank		<0.0050 mg/l		

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

TCLP = Toxicity Characteristic Leaching Procedure

TTLC = Total Threshold Limit Concentration

STLC = Soluble Threshold Limit Concentration

TABLE 3
Summary of CAM 17 Metals Results
I-780 Inside Shoulder Widening
Benicia, CA

Sample ID	Sample Depth (ft)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	
B1-2	2 to 2.5	<2.0	3.9	32	<1.0	<1.0	11	2.3	2.8	2.4	<0.10	<1.0	7.7	<1.0	<1.0	<1.0	8.8	6.9	
B2-1	1 to 1.5	<2.0	2.9	43	<1.0	<1.0	3.2	12	3.6	<1.0	<0.099	<1.0	2.8	<1.0	<1.0	<1.0	33	16	
B3-0	0 to 0.5	<2.0	4.3	25	<1.0	<1.0	2.8	6.6	2.5	<1.0	<0.10	<1.0	2.6	<1.0	<1.0	<1.0	38	18	
B4-1	1 to 1.5	<2.0	<1.0	20	<1.0	<1.0	3.4	<1.0	<2.0	1.1	<0.099	<1.0	<1.0	<1.0	<1.0	<1.0	2.3	<1.0	
B5-3	3 to 3.5	<2.0	7.1	210	<1.0	<1.0	27	7.7	16	3.8	<0.10	<1.0	22	<1.0	<1.0	<1.0	28	42	
B7-2	2 to 2.5	<2.0	3.1	22	<1.0	<1.0	6.8	<1.0	2.0	1.9	<0.10	<1.0	1.8	<1.0	<1.0	<1.0	6.8	4.5	
B9-3	3 to 3.5	<2.0	7.5	150	<1.0	<1.0	22	7.2	11	4.7	<0.099	<1.0	15	<1.0	<1.0	<1.0	29	51	
B10-0	0 to 0.5	<2.0	5.0	35	<1.0	<1.0	3.7	8.9	3.0	2.3	<0.10	<1.0	4.2	<1.0	<1.0	<1.0	32	22	
ESLs																			
Residential Land Use		20	0.39	750	4.0	12	1,000	23	230	80	6.7	40	150	10	20	0.78	200	600	
Commercial/Industrial Land Use		40	1.6	1,500	8.0	12	2,500	80	230	320	10	40	150	10	40	10	200	600	
Construction Worker Exposure		120	10	61,000	180	110	460,000 ¹	49	12,000	320	27	1,500	6,100	1,500	1,500	3.1	1,500	93,000	
CHHSLs																			
Residential Land Use		30	0.07	5,200	16	1.7	100,000	660	3,000	80	18	380	1,600	380	380	5.0	530	23,000	
Commercial/Industrial Land Use		380	0.24	63,000	190	7.5	100,000	3,200	38,000	320	180	4,800	16,000	4,800	4,800	63	6,700	100,000	
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).
¹Value listed is for Chromium III, as there is no construction exposure standard for total chromium.
Values listed in italics are results of WET analysis
 < = Analyte was not detected above the laboratory reporting limit.
 ESLs = Environmental Screening Levels, Tables A and K-3, SFRWQCB, December 2013.
 TTLC = total threshold limit concentration
 STLC = soluble threshold limit concentration
 TCLP = toxicity characteristic leaching procedure

TABLE 4
Summary of Petroleum Hydrocarbons Results
I-780 Inside Shoulder Widening
Benicia, CA

Sample ID	Sample Depth (ft)	TPHd (mg/kg)	TPHmo (mg/kg)
B1-2	2 to 2.5	<1.0	1.9
B2-1	1 to 1.5	1.4	2.0
B3-0	0 to 0.5	<1.0	1.1
B4-1	1 to 1.5	<1.0	<1.0
B5-3	3 to 3.5	<1.0	1.2
B7-2	2 to 2.5	3.2	7.3
B9-3	3 to 3.5	<1.0	1.2
B10-0	0 to 0.5	28	67

<u>ESLs</u>			
Residential	100	100	
Commercial/Industrial	110	500	
Construction Exposure	900	28,000	

Notes:

- mg/kg = milligrams per kilogram
- TPHd = Total petroleum hydrocarbons as diesel
- TPHmo = Total petroleum hydrocarbons as motor oil
- ESLs = Environmental Screening Levels, Tables A and K-3, SFRWQCB, December 2013.

TABLE 5
Summary of Lead Statistical Analysis
I-780 Inside Shoulder Widening
Benicia, CA

Borings B1 to B10

TOTAL LEAD

	90% UCL	95% UCL	Maximum
0 to 0.5 ft	116	124	---
1 to 1.5 ft	---	---	2.5
2 to 2.5 ft	---	---	2.5
3 to 3.5 ft	---	---	4.7

EXCAVATION SCENARIOS

Excavation Depth	Weighted Averages		
	90% UCL Total Lead (mg/kg)	WET Lead* (mg/l)	95% UCL Total Lead (mg/kg)
0 to 1 ft <i>Underlying Soil (1 to 3.5 ft)</i>	116 2.9	8.6 0.2	124 2.9
0 to 2 ft <i>Underlying Soil (2 to 3.5 ft)</i>	59 3.2	4.4 0.2	63 3.2
0 to 3 ft <i>Underlying Soil (3 to 3.5 ft)</i>	40 4.7	3.0 0.3	43 4.7
0 to 3.5 ft	35	2.6	38

Notes:

UCL = Upper Confidence Limit (90% UCL is applicable for waste classification; 95% UCL applicable for risk assessment)

mg/kg = milligrams per kilogram

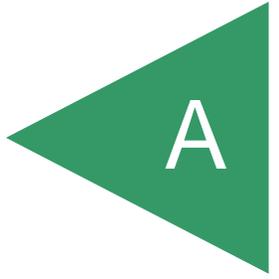
mg/l = milligrams per liter

* = WET lead concentrations are predicted using slope of regression line,
 where y = predicted WET lead and x = total lead.

Regression Line Slope: $y = 0.0743 x$

APPENDIX

A



October 30, 2015

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-00922

Workorder No.: N017369

RE: ALA-780, E8721-02-42

Attention: Luann Beadle

Enclosed are the results for sample(s) received on October 23, 2015 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,



Glen Gesmundo
QA Manager

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.



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"Serving Clients with Passion and Professionalism"

CLIENT: Geocon Consultants, Inc.
Project: ALA-780, E8721-02-42
Lab Order: N017369

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 Soil:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes on QC samples N017357-001A-MS, N017357-001A-MSD and N017369-037A-MS possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

RPD for Sample Duplicate N017369-037A-DUP is outside criteria for some analytes possibly due matrix interference; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Analytical Comments for EPA 6010B Water:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes on QC samples N017361-001A-MS and N017361-001A-MSD possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6010B Lead:

Matrix Spike (MS) N017369-001A-MS is outside recovery criteria possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

RPD for Sample Duplicate (DUP) is outside criteria possibly due to non-homogeneity of sample; however, the Laboratory Control Sample (LCS) validated the analytical batch.



ASSET Laboratories

Date: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Project: ALA-780, E8721-02-42
Lab Order: N017369
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N017369-001A	B1-0'	Soil	10/22/2015 10:06:00 AM	10/23/2015	10/30/2015
N017369-002A	B1-1'	Soil	10/22/2015 10:07:00 AM	10/23/2015	10/30/2015
N017369-003A	B1-2'	Soil	10/22/2015 10:08:00 AM	10/23/2015	10/30/2015
N017369-004A	B1-3'	Soil	10/22/2015 10:09:00 AM	10/23/2015	10/30/2015
N017369-005A	B2-0'	Soil	10/22/2015 10:18:00 AM	10/23/2015	10/30/2015
N017369-006A	B2-1'	Soil	10/22/2015 10:19:00 AM	10/23/2015	10/30/2015
N017369-007A	B2-2'	Soil	10/22/2015 10:20:00 AM	10/23/2015	10/30/2015
N017369-008A	B2-3'	Soil	10/22/2015 10:21:00 AM	10/23/2015	10/30/2015
N017369-009A	B3-0'	Soil	10/22/2015 10:30:00 AM	10/23/2015	10/30/2015
N017369-010A	B3-1'	Soil	10/22/2015 10:31:00 AM	10/23/2015	10/30/2015
N017369-011A	B3-2'	Soil	10/22/2015 10:32:00 AM	10/23/2015	10/30/2015
N017369-012A	B3-3'	Soil	10/22/2015 10:33:00 AM	10/23/2015	10/30/2015
N017369-013A	B4-0'	Soil	10/22/2015 10:38:00 AM	10/23/2015	10/30/2015
N017369-014A	B4-1'	Soil	10/22/2015 10:39:00 AM	10/23/2015	10/30/2015
N017369-015A	B4-2'	Soil	10/22/2015 10:40:00 AM	10/23/2015	10/30/2015
N017369-016A	B4-3'	Soil	10/22/2015 10:41:00 AM	10/23/2015	10/30/2015
N017369-017A	B5-0'	Soil	10/22/2015 10:45:00 AM	10/23/2015	10/30/2015
N017369-018A	B5-1'	Soil	10/22/2015 10:46:00 AM	10/23/2015	10/30/2015
N017369-019A	B5-2'	Soil	10/22/2015 10:47:00 AM	10/23/2015	10/30/2015
N017369-020A	B5-3'	Soil	10/22/2015 10:48:00 AM	10/23/2015	10/30/2015
N017369-021A	B6-0'	Soil	10/22/2015 10:51:00 AM	10/23/2015	10/30/2015
N017369-022A	B6-1'	Soil	10/22/2015 10:52:00 AM	10/23/2015	10/30/2015
N017369-023A	B6-2'	Soil	10/22/2015 10:53:00 AM	10/23/2015	10/30/2015
N017369-024A	B6-3'	Soil	10/22/2015 10:54:00 AM	10/23/2015	10/30/2015
N017369-025A	B7-0'	Soil	10/22/2015 10:57:00 AM	10/23/2015	10/30/2015
N017369-026A	B7-1'	Soil	10/22/2015 10:58:00 AM	10/23/2015	10/30/2015
N017369-027A	B7-2'	Soil	10/22/2015 10:59:00 AM	10/23/2015	10/30/2015
N017369-028A	B7-3'	Soil	10/22/2015 11:00:00 AM	10/23/2015	10/30/2015
N017369-029A	B8-0'	Soil	10/22/2015 11:05:00 AM	10/23/2015	10/30/2015



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Page 1 of 2
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"Serving Clients with Passion and Professionalism"

CLIENT: Geocon Consultants, Inc.
Project: ALA-780, E8721-02-42
Lab Order: N017369
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N017369-030A	B8-1'	Soil	10/22/2015 11:06:00 AM	10/23/2015	10/30/2015
N017369-031A	B8-2'	Soil	10/22/2015 11:07:00 AM	10/23/2015	10/30/2015
N017369-032A	B8-3'	Soil	10/22/2015 11:08:00 AM	10/23/2015	10/30/2015
N017369-033A	B9-0'	Soil	10/22/2015 11:12:00 AM	10/23/2015	10/30/2015
N017369-034A	B9-1'	Soil	10/22/2015 11:13:00 AM	10/23/2015	10/30/2015
N017369-035A	B9-2'	Soil	10/22/2015 11:14:00 AM	10/23/2015	10/30/2015
N017369-036A	B9-3'	Soil	10/22/2015 11:15:00 AM	10/23/2015	10/30/2015
N017369-037A	B10-0'	Soil	10/22/2015 11:18:00 AM	10/23/2015	10/30/2015
N017369-038A	B10-1'	Soil	10/22/2015 11:19:00 AM	10/23/2015	10/30/2015
N017369-039A	B10-2'	Soil	10/22/2015 11:20:00 AM	10/23/2015	10/30/2015
N017369-040A	B10-3'	Soil	10/22/2015 11:21:00 AM	10/23/2015	10/30/2015
N017369-041A	Rinse Blank	Water	10/22/2015 11:30:00 AM	10/23/2015	10/30/2015



ASSET Laboratories

ANALYTICAL RESULTS
 Print Date: 30-Oct-15

CLIENT:	Geocon Consultants, Inc.	Client Sample ID:	B1-0'
Lab Order:	N017369	Collection Date:	10/22/2015 10:06:00 AM
Project:	ALA-780, E8721-02-42	Matrix:	SOIL
Lab ID:	N017369-001		

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

LEAD BY ICP

EPA 3050B

EPA 6010B

RunID: ICP2_151027A	QC Batch: 52836			PrepDate: 10/26/2015	Analyst: CEI
Lead	20	5.0	mg/Kg	1	10/27/2015 02:52 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: 30-Oct-15

CLIENT:	Geocon Consultants, Inc.	Client Sample ID:	B1-1'
Lab Order:	N017369	Collection Date:	10/22/2015 10:07:00 AM
Project:	ALA-780, E8721-02-42	Matrix:	SOIL
Lab ID:	N017369-002		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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LEAD BY ICP

EPA 3050B

EPA 6010B

RunID: ICP2_151027A	QC Batch: 52836	PrepDate: 10/26/2015	Analyst: CEI
Lead	ND	5.0	mg/Kg
		1	10/27/2015 03:32 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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ANALYTICAL RESULTS

Print Date: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-003

Client Sample ID: B1-2'
Collection Date: 10/22/2015 10:08:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3550B			EPA 8015B			
RunID: GC3_151029A	QC Batch: 52877				PrepDate: 10/29/2015	Analyst: MDM
DRO	ND	1.0		mg/Kg	1	10/29/2015 12:15 PM
ORO	1.9	1.0		mg/Kg	1	10/29/2015 12:15 PM
Surr: p-Terphenyl	81.7	48-123		%REC	1	10/29/2015 12:15 PM
TOTAL MERCURY BY COLD VAPOR TECHNIQUE						
EPA 7471A						
RunID: AA1_151028A	QC Batch: 52849				PrepDate: 10/27/2015	Analyst: CEI
Mercury	ND	0.10		mg/Kg	1	10/28/2015 01:31 PM
TOTAL METALS BY ICP						
EPA 3050B			EPA 6010B			
RunID: ICP2_151027B	QC Batch: 52835				PrepDate: 10/26/2015	Analyst: CEI
Antimony	ND	2.0		mg/Kg	1	10/27/2015 12:33 PM
Arsenic	3.9	1.0		mg/Kg	1	10/27/2015 12:33 PM
Barium	32	1.0		mg/Kg	1	10/27/2015 12:33 PM
Beryllium	ND	1.0		mg/Kg	1	10/27/2015 12:33 PM
Cadmium	ND	1.0		mg/Kg	1	10/27/2015 12:33 PM
Chromium	11	1.0		mg/Kg	1	10/27/2015 12:33 PM
Cobalt	2.3	1.0		mg/Kg	1	10/27/2015 12:33 PM
Copper	2.8	2.0		mg/Kg	1	10/27/2015 12:33 PM
Lead	2.4	1.0		mg/Kg	1	10/27/2015 12:33 PM
Molybdenum	ND	1.0		mg/Kg	1	10/27/2015 12:33 PM
Nickel	7.7	1.0		mg/Kg	1	10/27/2015 12:33 PM
Selenium	ND	1.0		mg/Kg	1	10/27/2015 12:33 PM
Silver	ND	1.0		mg/Kg	1	10/27/2015 12:33 PM
Thallium	ND	1.0		mg/Kg	1	10/28/2015 09:22 AM
Vanadium	8.8	1.0		mg/Kg	1	10/27/2015 12:33 PM
Zinc	6.9	1.0		mg/Kg	1	10/27/2015 12:33 PM

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



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ANALYTICAL RESULTS
 Print Date: 30-Oct-15

CLIENT:	Geocon Consultants, Inc.	Client Sample ID:	B1-3'
Lab Order:	N017369	Collection Date:	10/22/2015 10:09:00 AM
Project:	ALA-780, E8721-02-42	Matrix:	SOIL
Lab ID:	N017369-004		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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LEAD BY ICP

EPA 3050B

EPA 6010B

RunID: ICP2_151027A	QC Batch: 52836	PrepDate: 10/26/2015	Analyst: CEI
Lead	ND	5.0	mg/Kg
		1	10/27/2015 03:49 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		



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ANALYTICAL RESULTS

Print Date: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-005

Client Sample ID: B2-0'
Collection Date: 10/22/2015 10:18:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050B		EPA 6010B			
RunID: ICP2_151027A	QC Batch: 52836			PrepDate: 10/26/2015		Analyst: CEI
Lead	16	5.0	mg/Kg	1		10/27/2015 06:21 PM

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



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ANALYTICAL RESULTS
 Print Date: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-006

Client Sample ID: B2-1'
Collection Date: 10/22/2015 10:19:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3550B			EPA 8015B			
RunID: GC3_151029A	QC Batch: 52877				PrepDate: 10/29/2015	Analyst: MDM
DRO	1.4	1.0		mg/Kg	1	10/29/2015 01:07 PM
ORO	2.0	1.0		mg/Kg	1	10/29/2015 01:07 PM
Surr: p-Terphenyl	89.4	48-123		%REC	1	10/29/2015 01:07 PM
TOTAL MERCURY BY COLD VAPOR TECHNIQUE						
EPA 7471A						
RunID: AA1_151028A	QC Batch: 52849				PrepDate: 10/27/2015	Analyst: CEI
Mercury	ND	0.099		mg/Kg	1	10/28/2015 01:34 PM
TOTAL METALS BY ICP						
EPA 3050B			EPA 6010B			
RunID: ICP2_151027B	QC Batch: 52835				PrepDate: 10/26/2015	Analyst: CEI
Antimony	ND	2.0		mg/Kg	1	10/27/2015 01:50 PM
Arsenic	2.9	1.0		mg/Kg	1	10/27/2015 01:50 PM
Barium	43	1.0		mg/Kg	1	10/27/2015 01:50 PM
Beryllium	ND	1.0		mg/Kg	1	10/27/2015 01:50 PM
Cadmium	ND	1.0		mg/Kg	1	10/27/2015 01:50 PM
Chromium	3.2	1.0		mg/Kg	1	10/27/2015 01:50 PM
Cobalt	12	1.0		mg/Kg	1	10/27/2015 01:50 PM
Copper	3.6	2.0		mg/Kg	1	10/27/2015 01:50 PM
Lead	ND	1.0		mg/Kg	1	10/27/2015 01:50 PM
Molybdenum	ND	1.0		mg/Kg	1	10/27/2015 01:50 PM
Nickel	2.8	1.0		mg/Kg	1	10/27/2015 01:50 PM
Selenium	ND	1.0		mg/Kg	1	10/27/2015 01:50 PM
Silver	ND	1.0		mg/Kg	1	10/27/2015 01:50 PM
Thallium	ND	1.0		mg/Kg	1	10/28/2015 09:28 AM
Vanadium	33	1.0		mg/Kg	1	10/27/2015 01:50 PM
Zinc	16	1.0		mg/Kg	1	10/27/2015 01:50 PM

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



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ANALYTICAL RESULTS
 Print Date: 30-Oct-15

CLIENT:	Geocon Consultants, Inc.	Client Sample ID:	B2-2'
Lab Order:	N017369	Collection Date:	10/22/2015 10:20:00 AM
Project:	ALA-780, E8721-02-42	Matrix:	SOIL
Lab ID:	N017369-007		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050B		EPA 6010B			
RunID: ICP2_151027A	QC Batch: 52836			PrepDate: 10/26/2015		Analyst: CEI
Lead	ND	5.0		mg/Kg	1	10/27/2015 04:01 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: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-008

Client Sample ID: B2-3'
Collection Date: 10/22/2015 10:21:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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LEAD BY ICP

EPA 3050B

EPA 6010B

RunID: ICP2_151027A	QC Batch: 52836				PrepDate: 10/26/2015	Analyst: CEI
Lead	ND	5.0		mg/Kg	1	10/27/2015 04:07 PM

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



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ANALYTICAL RESULTS
 Print Date: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-009

Client Sample ID: B3-0'
Collection Date: 10/22/2015 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: GC3_151029A	QC Batch: 52877				PrepDate: 10/29/2015	Analyst: MDM
DRO	ND	1.0		mg/Kg	1	10/29/2015 11:48 AM
ORO	1.1	1.0		mg/Kg	1	10/29/2015 11:48 AM
Surr: p-Terphenyl	85.7	48-123		%REC	1	10/29/2015 11:48 AM
TOTAL MERCURY BY COLD VAPOR TECHNIQUE						
EPA 7471A						
RunID: AA1_151028A	QC Batch: 52849				PrepDate: 10/27/2015	Analyst: CEI
Mercury	ND	0.10		mg/Kg	1	10/28/2015 01:37 PM
TOTAL METALS BY ICP						
EPA 3050B			EPA 6010B			
RunID: ICP2_151027B	QC Batch: 52835				PrepDate: 10/26/2015	Analyst: CEI
Antimony	ND	2.0		mg/Kg	1	10/27/2015 01:57 PM
Arsenic	4.3	1.0		mg/Kg	1	10/27/2015 01:57 PM
Barium	25	1.0		mg/Kg	1	10/27/2015 01:57 PM
Beryllium	ND	1.0		mg/Kg	1	10/27/2015 01:57 PM
Cadmium	ND	1.0		mg/Kg	1	10/27/2015 01:57 PM
Chromium	2.8	1.0		mg/Kg	1	10/27/2015 01:57 PM
Cobalt	6.6	1.0		mg/Kg	1	10/27/2015 01:57 PM
Copper	2.5	2.0		mg/Kg	1	10/27/2015 01:57 PM
Lead	ND	1.0		mg/Kg	1	10/27/2015 01:57 PM
Molybdenum	ND	1.0		mg/Kg	1	10/27/2015 01:57 PM
Nickel	2.6	1.0		mg/Kg	1	10/27/2015 01:57 PM
Selenium	ND	1.0		mg/Kg	1	10/27/2015 01:57 PM
Silver	ND	1.0		mg/Kg	1	10/27/2015 01:57 PM
Thallium	ND	1.0		mg/Kg	1	10/28/2015 09:35 AM
Vanadium	38	1.0		mg/Kg	1	10/27/2015 01:57 PM
Zinc	18	1.0		mg/Kg	1	10/27/2015 01:57 PM

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



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ANALYTICAL RESULTS
 Print Date: 30-Oct-15

CLIENT:	Geocon Consultants, Inc.	Client Sample ID:	B3-1'
Lab Order:	N017369	Collection Date:	10/22/2015 10:31:00 AM
Project:	ALA-780, E8721-02-42	Matrix:	SOIL
Lab ID:	N017369-010		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050B		EPA 6010B			
RunID: ICP2_151027A	QC Batch: 52836			PrepDate: 10/26/2015		Analyst: CEI
Lead	ND	5.0		mg/Kg	1	10/27/2015 04:13 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: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-011

Client Sample ID: B3-2'
Collection Date: 10/22/2015 10:32:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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LEAD BY ICP

EPA 3050B

EPA 6010B

RunID: ICP2_151027A	QC Batch: 52836				PrepDate: 10/26/2015	Analyst: CEI
Lead	ND	5.0		mg/Kg	1	10/27/2015 04:19 PM

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



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ANALYTICAL RESULTS
Print Date: 30-Oct-15

CLIENT:	Geocon Consultants, Inc.	Client Sample ID:	B3-3'
Lab Order:	N017369	Collection Date:	10/22/2015 10:33:00 AM
Project:	ALA-780, E8721-02-42	Matrix:	SOIL
Lab ID:	N017369-012		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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LEAD BY ICP

EPA 3050B

EPA 6010B

RunID: ICP2_151027A	QC Batch: 52836	PrepDate: 10/26/2015	Analyst: CEI	
Lead	ND	5.0 mg/Kg	1	10/27/2015 04:25 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: 30-Oct-15

CLIENT:	Geocon Consultants, Inc.	Client Sample ID:	B4-0'
Lab Order:	N017369	Collection Date:	10/22/2015 10:38:00 AM
Project:	ALA-780, E8721-02-42	Matrix:	SOIL
Lab ID:	N017369-013		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050B		EPA 6010B			
RunID: ICP2_151027A	QC Batch: 52836			PrepDate: 10/26/2015		Analyst: CEI
Lead	190	5.0		mg/Kg	1	10/27/2015 06:27 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: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-014

Client Sample ID: B4-1'
Collection Date: 10/22/2015 10:39:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3550B			EPA 8015B			
RunID: GC3_151029A	QC Batch: 52877				PrepDate: 10/29/2015	Analyst: MDM
DRO	ND	1.0		mg/Kg	1	10/29/2015 01:33 PM
ORO	ND	1.0		mg/Kg	1	10/29/2015 01:33 PM
Surr: p-Terphenyl	59.3	48-123		%REC	1	10/29/2015 01:33 PM
TOTAL MERCURY BY COLD VAPOR TECHNIQUE						
EPA 7471A						
RunID: AA1_151028A	QC Batch: 52849				PrepDate: 10/27/2015	Analyst: CEI
Mercury	ND	0.099		mg/Kg	1	10/28/2015 01:39 PM
TOTAL METALS BY ICP						
EPA 3050B			EPA 6010B			
RunID: ICP2_151027B	QC Batch: 52835				PrepDate: 10/26/2015	Analyst: CEI
Antimony	ND	2.0		mg/Kg	1	10/27/2015 12:52 PM
Arsenic	ND	1.0		mg/Kg	1	10/27/2015 12:52 PM
Barium	20	1.0		mg/Kg	1	10/27/2015 12:52 PM
Beryllium	ND	1.0		mg/Kg	1	10/27/2015 12:52 PM
Cadmium	ND	1.0		mg/Kg	1	10/27/2015 12:52 PM
Chromium	3.4	1.0		mg/Kg	1	10/27/2015 12:52 PM
Cobalt	ND	1.0		mg/Kg	1	10/27/2015 12:52 PM
Copper	ND	2.0		mg/Kg	1	10/27/2015 12:52 PM
Lead	1.1	1.0		mg/Kg	1	10/27/2015 12:52 PM
Molybdenum	ND	1.0		mg/Kg	1	10/27/2015 12:52 PM
Nickel	ND	1.0		mg/Kg	1	10/27/2015 12:52 PM
Selenium	ND	1.0		mg/Kg	1	10/27/2015 12:52 PM
Silver	ND	1.0		mg/Kg	1	10/27/2015 12:52 PM
Thallium	ND	1.0		mg/Kg	1	10/28/2015 09:41 AM
Vanadium	2.3	1.0		mg/Kg	1	10/27/2015 12:52 PM
Zinc	ND	1.0		mg/Kg	1	10/27/2015 12:52 PM

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



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ANALYTICAL RESULTS
 Print Date: 30-Oct-15

CLIENT:	Geocon Consultants, Inc.	Client Sample ID:	B4-2'
Lab Order:	N017369	Collection Date:	10/22/2015 10:40:00 AM
Project:	ALA-780, E8721-02-42	Matrix:	SOIL
Lab ID:	N017369-015		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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LEAD BY ICP

EPA 3050B

EPA 6010B

RunID: ICP2_151027A	QC Batch: 52836	PrepDate: 10/26/2015	Analyst: CEI
Lead	ND	5.0	mg/Kg
		1	10/27/2015 04:37 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: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-016

Client Sample ID: B4-3'
Collection Date: 10/22/2015 10:41:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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LEAD BY ICP

EPA 3050B

EPA 6010B

RunID: ICP2_151027A QC Batch: 52836 PrepDate: 10/26/2015 Analyst: **CEI**
Lead ND 5.0 mg/Kg 1 10/27/2015 05:05 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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ANALYTICAL RESULTS
Print Date: 30-Oct-15

CLIENT:	Geocon Consultants, Inc.	Client Sample ID:	B5-0'
Lab Order:	N017369	Collection Date:	10/22/2015 10:45:00 AM
Project:	ALA-780, E8721-02-42	Matrix:	SOIL
Lab ID:	N017369-017		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050B		EPA 6010B			
RunID: ICP2_151027A	QC Batch: 52836			PrepDate: 10/26/2015		Analyst: CEI
Lead	180	5.0		mg/Kg	1	10/27/2015 05:11 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: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-018

Client Sample ID: B5-1'
Collection Date: 10/22/2015 10:46:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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LEAD BY ICP

EPA 3050B

EPA 6010B

RunID: ICP2_151027A	QC Batch: 52836				PrepDate: 10/26/2015	Analyst: CEI
Lead	ND	5.0		mg/Kg	1	10/27/2015 05:18 PM

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



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ANALYTICAL RESULTS

Print Date: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-019

Client Sample ID: B5-2'
Collection Date: 10/22/2015 10:47:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050B		EPA 6010B			
RunID: ICP2_151027A	QC Batch: 52836			PrepDate: 10/26/2015		Analyst: CEI
Lead	ND	5.0	mg/Kg	1		10/27/2015 05:25 PM

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



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ANALYTICAL RESULTS
 Print Date: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-020

Client Sample ID: B5-3'
Collection Date: 10/22/2015 10:48:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3550B			EPA 8015B			
RunID: GC3_151029A	QC Batch: 52877				PrepDate: 10/29/2015	Analyst: MDM
DRO	ND	1.0		mg/Kg	1	10/29/2015 02:00 PM
ORO	1.2	1.0		mg/Kg	1	10/29/2015 02:00 PM
Surr: p-Terphenyl	85.1	48-123		%REC	1	10/29/2015 02:00 PM
TOTAL MERCURY BY COLD VAPOR TECHNIQUE						
EPA 7471A						
RunID: AA1_151028A	QC Batch: 52849				PrepDate: 10/27/2015	Analyst: CEI
Mercury	ND	0.10		mg/Kg	1	10/28/2015 01:42 PM
TOTAL METALS BY ICP						
EPA 3050B			EPA 6010B			
RunID: ICP2_151027B	QC Batch: 52835				PrepDate: 10/26/2015	Analyst: CEI
Antimony	ND	2.0		mg/Kg	1	10/27/2015 12:56 PM
Arsenic	7.1	1.0		mg/Kg	1	10/27/2015 12:56 PM
Barium	210	1.0		mg/Kg	1	10/28/2015 09:45 AM
Beryllium	ND	1.0		mg/Kg	1	10/27/2015 12:56 PM
Cadmium	ND	1.0		mg/Kg	1	10/27/2015 12:56 PM
Chromium	27	1.0		mg/Kg	1	10/27/2015 12:56 PM
Cobalt	7.7	1.0		mg/Kg	1	10/27/2015 12:56 PM
Copper	16	2.0		mg/Kg	1	10/27/2015 12:56 PM
Lead	3.8	1.0		mg/Kg	1	10/27/2015 12:56 PM
Molybdenum	ND	1.0		mg/Kg	1	10/27/2015 12:56 PM
Nickel	22	1.0		mg/Kg	1	10/27/2015 12:56 PM
Selenium	ND	1.0		mg/Kg	1	10/27/2015 12:56 PM
Silver	ND	1.0		mg/Kg	1	10/27/2015 12:56 PM
Thallium	ND	1.0		mg/Kg	1	10/28/2015 09:45 AM
Vanadium	28	1.0		mg/Kg	1	10/27/2015 12:56 PM
Zinc	42	1.0		mg/Kg	1	10/27/2015 12:56 PM

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



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ANALYTICAL RESULTS

Print Date: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-021

Client Sample ID: B6-0'
Collection Date: 10/22/2015 10:51:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050B		EPA 6010B			
RunID: ICP2_151027A	QC Batch: 52836			PrepDate: 10/26/2015		Analyst: CEI
Lead	120	5.0	mg/Kg	1		10/27/2015 06:34 PM

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



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ANALYTICAL RESULTS
 Print Date: 30-Oct-15

CLIENT:	Geocon Consultants, Inc.	Client Sample ID:	B6-1'
Lab Order:	N017369	Collection Date:	10/22/2015 10:52:00 AM
Project:	ALA-780, E8721-02-42	Matrix:	SOIL
Lab ID:	N017369-022		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050B		EPA 6010B			
RunID: ICP2_151027A	QC Batch: 52836			PrepDate: 10/26/2015		Analyst: CEI
Lead	ND	5.0		mg/Kg	1	10/27/2015 05:37 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: 30-Oct-15

CLIENT:	Geocon Consultants, Inc.	Client Sample ID:	B6-2'
Lab Order:	N017369	Collection Date:	10/22/2015 10:53:00 AM
Project:	ALA-780, E8721-02-42	Matrix:	SOIL
Lab ID:	N017369-023		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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LEAD BY ICP

EPA 3050B

EPA 6010B

RunID: ICP2_151027A	QC Batch: 52836	PrepDate: 10/26/2015	Analyst: CEI
Lead	ND	5.0	mg/Kg
		1	10/27/2015 06:47 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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ANALYTICAL RESULTS

Print Date: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-024

Client Sample ID: B6-3'
Collection Date: 10/22/2015 10:54:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050B		EPA 6010B			
RunID: ICP2_151027A	QC Batch: 52836			PrepDate: 10/26/2015		Analyst: CEI
Lead	ND	5.0		mg/Kg	1	10/27/2015 05:50 PM

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



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ANALYTICAL RESULTS
 Print Date: 30-Oct-15

CLIENT:	Geocon Consultants, Inc.	Client Sample ID:	B7-0'
Lab Order:	N017369	Collection Date:	10/22/2015 10:57:00 AM
Project:	ALA-780, E8721-02-42	Matrix:	SOIL
Lab ID:	N017369-025		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050B		EPA 6010B			
RunID: ICP2_151027A	QC Batch: 52836			PrepDate: 10/26/2015		Analyst: CEI
Lead	98	5.0	mg/Kg	1		10/27/2015 05:57 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: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-026

Client Sample ID: B7-1'
Collection Date: 10/22/2015 10:58:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050B			EPA 6010B		
RunID: ICP2_151028B	QC Batch: 52851			PrepDate: 10/27/2015		Analyst: CEI
Lead	ND	5.0		mg/Kg	1	10/28/2015 11:45 AM

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



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ANALYTICAL RESULTS
 Print Date: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-027

Client Sample ID: B7-2'
Collection Date: 10/22/2015 10:59:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3550B			EPA 8015B			
RunID: GC3_151029A	QC Batch: 52877				PrepDate: 10/29/2015	Analyst: MDM
DRO	3.2	1.0		mg/Kg	1	10/29/2015 02:26 PM
ORO	7.3	1.0		mg/Kg	1	10/29/2015 02:26 PM
Surr: p-Terphenyl	78.7	48-123		%REC	1	10/29/2015 02:26 PM
TOTAL MERCURY BY COLD VAPOR TECHNIQUE						
EPA 7471A						
RunID: AA1_151028A	QC Batch: 52849				PrepDate: 10/27/2015	Analyst: CEI
Mercury	ND	0.10		mg/Kg	1	10/28/2015 01:45 PM
TOTAL METALS BY ICP						
EPA 3050B			EPA 6010B			
RunID: ICP2_151027B	QC Batch: 52835				PrepDate: 10/26/2015	Analyst: CEI
Antimony	ND	2.0		mg/Kg	1	10/27/2015 01:02 PM
Arsenic	3.1	1.0		mg/Kg	1	10/27/2015 01:02 PM
Barium	22	1.0		mg/Kg	1	10/27/2015 01:02 PM
Beryllium	ND	1.0		mg/Kg	1	10/27/2015 01:02 PM
Cadmium	ND	1.0		mg/Kg	1	10/27/2015 01:02 PM
Chromium	6.8	1.0		mg/Kg	1	10/27/2015 01:02 PM
Cobalt	ND	1.0		mg/Kg	1	10/27/2015 01:02 PM
Copper	2.0	2.0		mg/Kg	1	10/27/2015 01:02 PM
Lead	1.9	1.0		mg/Kg	1	10/27/2015 01:02 PM
Molybdenum	ND	1.0		mg/Kg	1	10/27/2015 01:02 PM
Nickel	1.8	1.0		mg/Kg	1	10/27/2015 01:02 PM
Selenium	ND	1.0		mg/Kg	1	10/27/2015 01:02 PM
Silver	ND	1.0		mg/Kg	1	10/27/2015 01:02 PM
Thallium	ND	1.0		mg/Kg	1	10/28/2015 09:51 AM
Vanadium	6.8	1.0		mg/Kg	1	10/27/2015 01:02 PM
Zinc	4.5	1.0		mg/Kg	1	10/27/2015 01:02 PM

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



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ANALYTICAL RESULTS

Print Date: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-028

Client Sample ID: B7-3'
Collection Date: 10/22/2015 11:00:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050B		EPA 6010B			
RunID: ICP2_151028B	QC Batch: 52851			PrepDate: 10/27/2015		Analyst: CEI
Lead	ND	5.0	mg/Kg	1		10/28/2015 12:20 PM

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



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ANALYTICAL RESULTS
 Print Date: 30-Oct-15

CLIENT: Geocon Consultants, Inc.	Client Sample ID: B8-0'
Lab Order: N017369	Collection Date: 10/22/2015 11:05:00 AM
Project: ALA-780, E8721-02-42	Matrix: SOIL
Lab ID: N017369-029	

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050B		EPA 6010B			
RunID: ICP2_151028B	QC Batch: 52851			PrepDate: 10/27/2015		Analyst: CEI
Lead	71	5.0	mg/Kg	1		10/28/2015 12:38 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: 30-Oct-15

CLIENT:	Geocon Consultants, Inc.	Client Sample ID:	B8-2'
Lab Order:	N017369	Collection Date:	10/22/2015 11:07:00 AM
Project:	ALA-780, E8721-02-42	Matrix:	SOIL
Lab ID:	N017369-031		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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LEAD BY ICP

EPA 3050B

EPA 6010B

RunID: ICP2_151028B	QC Batch: 52851	PrepDate: 10/27/2015	Analyst: CEI
Lead	ND	5.0 mg/Kg	1
			10/28/2015 12:51 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: 30-Oct-15

CLIENT:	Geocon Consultants, Inc.	Client Sample ID:	B8-3'
Lab Order:	N017369	Collection Date:	10/22/2015 11:08:00 AM
Project:	ALA-780, E8721-02-42	Matrix:	SOIL
Lab ID:	N017369-032		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050B		EPA 6010B			
RunID: ICP2_151028B	QC Batch: 52851			PrepDate: 10/27/2015		Analyst: CEI
Lead	ND	5.0		mg/Kg	1	10/28/2015 02:04 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: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-033

Client Sample ID: B9-0'
Collection Date: 10/22/2015 11:12:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050B		EPA 6010B			
RunID: ICP2_151028B	QC Batch: 52851			PrepDate: 10/27/2015		Analyst: CEI
Lead	170	5.0	mg/Kg	1		10/28/2015 02:42 PM

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



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ANALYTICAL RESULTS
 Print Date: 30-Oct-15

CLIENT:	Geocon Consultants, Inc.	Client Sample ID:	B9-1'
Lab Order:	N017369	Collection Date:	10/22/2015 11:13:00 AM
Project:	ALA-780, E8721-02-42	Matrix:	SOIL
Lab ID:	N017369-034		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050B		EPA 6010B			
RunID: ICP2_151028B	QC Batch: 52851			PrepDate: 10/27/2015		Analyst: CEI
Lead	ND	5.0		mg/Kg	1	10/28/2015 02:18 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: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-035

Client Sample ID: B9-2'
Collection Date: 10/22/2015 11:14:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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LEAD BY ICP

EPA 3050B

EPA 6010B

RunID: ICP2_151028B	QC Batch: 52851				PrepDate: 10/27/2015	Analyst: CEI
Lead	ND	5.0		mg/Kg	1	10/28/2015 02:24 PM

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



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ANALYTICAL RESULTS
 Print Date: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-036

Client Sample ID: B9-3'
Collection Date: 10/22/2015 11:15:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3550B			EPA 8015B			
RunID: GC3_151029A	QC Batch: 52877				PrepDate: 10/29/2015	Analyst: MDM
DRO	ND	1.0		mg/Kg	1	10/29/2015 02:52 PM
ORO	1.2	1.0		mg/Kg	1	10/29/2015 02:52 PM
Surr: p-Terphenyl	69.3	48-123		%REC	1	10/29/2015 02:52 PM
TOTAL MERCURY BY COLD VAPOR TECHNIQUE						
EPA 7471A						
RunID: AA1_151028A	QC Batch: 52849				PrepDate: 10/27/2015	Analyst: CEI
Mercury	ND	0.099		mg/Kg	1	10/28/2015 01:53 PM
TOTAL METALS BY ICP						
EPA 3050B			EPA 6010B			
RunID: ICP2_151027B	QC Batch: 52835				PrepDate: 10/26/2015	Analyst: CEI
Antimony	ND	2.0		mg/Kg	1	10/27/2015 01:08 PM
Arsenic	7.5	1.0		mg/Kg	1	10/27/2015 01:08 PM
Barium	150	1.0		mg/Kg	1	10/28/2015 09:56 AM
Beryllium	ND	1.0		mg/Kg	1	10/27/2015 01:08 PM
Cadmium	ND	1.0		mg/Kg	1	10/27/2015 01:08 PM
Chromium	22	1.0		mg/Kg	1	10/27/2015 01:08 PM
Cobalt	7.2	1.0		mg/Kg	1	10/27/2015 01:08 PM
Copper	11	2.0		mg/Kg	1	10/27/2015 01:08 PM
Lead	4.7	1.0		mg/Kg	1	10/27/2015 01:08 PM
Molybdenum	ND	1.0		mg/Kg	1	10/27/2015 01:08 PM
Nickel	15	1.0		mg/Kg	1	10/27/2015 01:08 PM
Selenium	ND	1.0		mg/Kg	1	10/27/2015 01:08 PM
Silver	ND	1.0		mg/Kg	1	10/27/2015 01:08 PM
Thallium	ND	1.0		mg/Kg	1	10/28/2015 09:56 AM
Vanadium	29	1.0		mg/Kg	1	10/27/2015 01:08 PM
Zinc	51	1.0		mg/Kg	1	10/27/2015 01:08 PM

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



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ANALYTICAL RESULTS

Print Date: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-037

Client Sample ID: B10-0'
Collection Date: 10/22/2015 11:18:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3550B			EPA 8015B			
RunID: GC3_151029A	QC Batch: 52877				PrepDate: 10/29/2015	Analyst: MDM
DRO	28	1.0		mg/Kg	1	10/29/2015 06:17 PM
ORO	67	1.0		mg/Kg	1	10/29/2015 06:17 PM
Surr: p-Terphenyl	92.6	48-123		%REC	1	10/29/2015 06:17 PM
TOTAL MERCURY BY COLD VAPOR TECHNIQUE						
EPA 7471A						
RunID: AA1_151028A	QC Batch: 52849				PrepDate: 10/27/2015	Analyst: CEI
Mercury	ND	0.10		mg/Kg	1	10/28/2015 01:55 PM
TOTAL METALS BY ICP						
EPA 3050B			EPA 6010B			
RunID: ICP2_151027B	QC Batch: 52835				PrepDate: 10/26/2015	Analyst: CEI
Antimony	ND	2.0		mg/Kg	1	10/27/2015 01:22 PM
Arsenic	5.0	1.0		mg/Kg	1	10/27/2015 01:22 PM
Barium	35	1.0		mg/Kg	1	10/28/2015 10:02 AM
Beryllium	ND	1.0		mg/Kg	1	10/27/2015 01:22 PM
Cadmium	ND	1.0		mg/Kg	1	10/27/2015 01:22 PM
Chromium	3.7	1.0		mg/Kg	1	10/27/2015 01:22 PM
Cobalt	8.9	1.0		mg/Kg	1	10/27/2015 01:22 PM
Copper	3.0	2.0		mg/Kg	1	10/27/2015 01:22 PM
Lead	2.3	1.0		mg/Kg	1	10/27/2015 01:22 PM
Molybdenum	ND	1.0		mg/Kg	1	10/27/2015 01:22 PM
Nickel	4.2	1.0		mg/Kg	1	10/27/2015 01:22 PM
Selenium	ND	1.0		mg/Kg	1	10/27/2015 01:22 PM
Silver	ND	1.0		mg/Kg	1	10/27/2015 01:22 PM
Thallium	ND	1.0		mg/Kg	1	10/28/2015 10:02 AM
Vanadium	32	1.0		mg/Kg	1	10/27/2015 01:22 PM
Zinc	22	1.0		mg/Kg	1	10/27/2015 01:22 PM

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



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ANALYTICAL RESULTS
Print Date: 30-Oct-15

CLIENT: Geocon Consultants, Inc. **Client Sample ID:** B10-1'
Lab Order: N017369 **Collection Date:** 10/22/2015 11:19:00 AM
Project: ALA-780, E8721-02-42 **Matrix:** SOIL
Lab ID: N017369-038

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050B		EPA 6010B			
RunID: ICP2_151028B	QC Batch: 52851			PrepDate: 10/27/2015		Analyst: CEI
Lead	ND	5.0		mg/Kg	1	10/28/2015 02:30 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: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-039

Client Sample ID: B10-2'
Collection Date: 10/22/2015 11:20:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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LEAD BY ICP

EPA 3050B

EPA 6010B

RunID: ICP2_151028B	QC Batch: 52851				PrepDate: 10/27/2015	Analyst: CEI
Lead	ND	5.0		mg/Kg	1	10/28/2015 01:29 PM

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



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ANALYTICAL RESULTS
 Print Date: 30-Oct-15

CLIENT:	Geocon Consultants, Inc.	Client Sample ID:	B10-3'
Lab Order:	N017369	Collection Date:	10/22/2015 11:21:00 AM
Project:	ALA-780, E8721-02-42	Matrix:	SOIL
Lab ID:	N017369-040		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
LEAD BY ICP						
	EPA 3050B		EPA 6010B			
RunID: ICP2_151028B	QC Batch: 52851			PrepDate: 10/27/2015		Analyst: CEI
Lead	ND	5.0		mg/Kg	1	10/28/2015 01:58 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: 30-Oct-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-041

Client Sample ID: Rinse Blank
Collection Date: 10/22/2015 11:30:00 AM
Matrix: WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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TOTAL METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_151026B QC Batch: 52837 PrepDate: 10/26/2015 Analyst: **CEI**
Lead ND 0.0050 mg/L 1 10/26/2015 04:51 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: N017369
Project: ALA-780, E8721-02-42

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: MB1-52835	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 10/26/2015	RunNo: 103822						
Client ID: PBS	Batch ID: 52835	TestNo: EPA 6010B EPA 3050B		Analysis Date: 10/27/2015	SeqNo: 2118578						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Antimony	ND	2.0									
Arsenic	ND	1.0									
Barium	0.060	1.0									
Beryllium	ND	1.0									
Cadmium	ND	1.0									
Chromium	ND	1.0									
Cobalt	ND	1.0									
Copper	ND	2.0									
Lead	ND	1.0									
Molybdenum	0.062	1.0									
Nickel	0.040	1.0									
Selenium	ND	1.0									
Silver	0.043	1.0									
Thallium	ND	1.0									
Vanadium	ND	1.0									
Zinc	ND	1.0									

Sample ID: MB2-52835	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 10/26/2015	RunNo: 103822						
Client ID: PBS	Batch ID: 52835	TestNo: EPA 6010B EPA 3050B		Analysis Date: 10/27/2015	SeqNo: 2118579						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Antimony	ND	2.0									
Arsenic	ND	1.0									
Barium	0.059	1.0									
Beryllium	ND	1.0									
Cadmium	ND	1.0									
Chromium	0.105	1.0									
Cobalt	ND	1.0									

Qualifiers:

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



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CLIENT: Geocon Consultants, Inc.
Work Order: N017369
Project: ALA-780, E8721-02-42

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: MB2-52835	SampType: MBLK	TestCode: 6010_S	Units: mg/Kg	Prep Date: 10/26/2015	RunNo: 103822
Client ID: PBS	Batch ID: 52835	TestNo: EPA 6010B EPA 3050B		Analysis Date: 10/27/2015	SeqNo: 2118579

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	2.0									
Lead	ND	1.0									
Molybdenum	0.052	1.0									
Nickel	0.055	1.0									
Selenium	ND	1.0									
Silver	0.047	1.0									
Thallium	ND	1.0									
Vanadium	ND	1.0									
Zinc	0.264	1.0									

Sample ID: LCS-52835	SampType: LCS	TestCode: 6010_S	Units: mg/Kg	Prep Date: 10/26/2015	RunNo: 103822
Client ID: LCSS	Batch ID: 52835	TestNo: EPA 6010B EPA 3050B		Analysis Date: 10/27/2015	SeqNo: 2118580

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	26.543	2.0	25.00	0	106	80	120				
Arsenic	26.155	1.0	25.00	0	105	80	120				
Barium	27.031	1.0	25.00	0	108	80	120				
Beryllium	25.226	1.0	25.00	0	101	80	120				
Cadmium	22.604	1.0	25.00	0	90.4	80	120				
Chromium	25.089	1.0	25.00	0	100	80	120				
Cobalt	23.202	1.0	25.00	0	92.8	80	120				
Copper	24.598	2.0	25.00	0	98.4	80	120				
Lead	25.771	1.0	25.00	0	103	80	120				
Molybdenum	25.180	1.0	25.00	0	101	80	120				
Nickel	25.509	1.0	25.00	0	102	80	120				
Selenium	24.179	1.0	25.00	0	96.7	80	120				
Silver	22.893	1.0	25.00	0	91.6	80	120				
Thallium	21.725	1.0	25.00	0	86.9	80	120				
Vanadium	21.159	1.0	25.00	0	84.6	80	120				
Zinc	23.901	1.0	25.00	0	95.6	80	120				

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: N017369
Project: ALA-780, E8721-02-42

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: N017357-001A-DUP SampType: DUP		TestCode: 6010_S		Units: mg/Kg	Prep Date: 10/26/2015			RunNo: 103822			
Client ID: ZZZZZZ		Batch ID: 52835		TestNo: EPA 6010B EPA 3050B	Analysis Date: 10/27/2015			SeqNo: 2118582			
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	2.442	1.0						2.237	8.75	20	
Barium	59.688	1.0						58.51	1.99	20	
Beryllium	ND	1.0						0	0	20	
Cadmium	0.322	1.0						0.3420	0	20	
Chromium	14.363	1.0						18.96	27.6	20	R
Cobalt	4.202	1.0						3.800	10.0	20	
Copper	12.498	2.0						12.63	1.05	20	
Lead	20.544	1.0						26.86	26.7	20	R
Molybdenum	0.254	1.0						0.2936	0	20	
Nickel	8.497	1.0						8.001	6.01	20	
Selenium	ND	1.0						0	0	20	
Silver	ND	1.0						0	0	20	
Thallium	ND	1.0						0	0	20	
Vanadium	11.779	1.0						11.55	1.97	20	
Zinc	113.849	1.0						102.8	10.2	20	

Sample ID: N017357-001A-MS SampType: MS		TestCode: 6010_S		Units: mg/Kg	Prep Date: 10/26/2015			RunNo: 103822			
Client ID: ZZZZZZ		Batch ID: 52835		TestNo: EPA 6010B EPA 3050B	Analysis Date: 10/27/2015			SeqNo: 2118585			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	17.299	2.0	24.95	0	69.3	75	125				S
Arsenic	24.729	1.0	24.95	2.237	90.1	75	125				
Barium	100.592	1.0	24.95	58.51	169	75	125				S
Beryllium	21.443	1.0	24.95	0	85.9	75	125				
Cadmium	18.138	1.0	24.95	0.3420	71.3	75	125				S
Chromium	51.071	1.0	24.95	18.96	129	75	125				S
Cobalt	25.648	1.0	24.95	3.800	87.6	75	125				
Copper	40.159	2.0	24.95	12.63	110	75	125				
Lead	72.706	1.0	24.95	26.86	184	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 |
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| DO Surrogate Diluted Out | Calculations are based on raw values | |



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"Serving Clients with Passion and Professionalism"

CLIENT: Geocon Consultants, Inc.
Work Order: N017369
Project: ALA-780, E8721-02-42

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: N017357-001A-MS		SampType: MS		TestCode: 6010_S		Units: mg/Kg		Prep Date: 10/26/2015		RunNo: 103822	
Client ID: ZZZZZZ		Batch ID: 52835		TestNo: EPA 6010B EPA 3050B		Analysis Date: 10/27/2015		SeqNo: 2118585			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	21.190	1.0	24.95	0.2936	83.8	75	125				
Nickel	30.657	1.0	24.95	8.001	90.8	75	125				
Selenium	15.846	1.0	24.95	0	63.5	75	125				S
Silver	17.015	1.0	24.95	0	68.2	75	125				S
Thallium	17.984	1.0	24.95	0	72.1	75	125				S
Vanadium	33.177	1.0	24.95	11.55	86.7	75	125				
Zinc	144.027	1.0	24.95	102.8	165	75	125				S

Sample ID: N017357-001A-MSD		SampType: MSD		TestCode: 6010_S		Units: mg/Kg		Prep Date: 10/26/2015		RunNo: 103822	
Client ID: ZZZZZZ		Batch ID: 52835		TestNo: EPA 6010B EPA 3050B		Analysis Date: 10/27/2015		SeqNo: 2118586			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	18.426	2.0	24.99	0	73.7	75	125	17.30	6.31	20	S
Arsenic	25.481	1.0	24.99	2.237	93.0	75	125	24.73	2.99	20	
Barium	137.766	1.0	24.99	58.51	317	75	125	100.6	31.2	20	SR
Beryllium	21.354	1.0	24.99	0	85.5	75	125	21.44	0.415	20	
Cadmium	18.402	1.0	24.99	0.3420	72.3	75	125	18.14	1.44	20	S
Chromium	97.620	1.0	24.99	18.96	315	75	125	51.07	62.6	20	SR
Cobalt	26.206	1.0	24.99	3.800	89.7	75	125	25.65	2.15	20	
Copper	58.534	2.0	24.99	12.63	184	75	125	40.16	37.2	20	SR
Lead	124.598	1.0	24.99	26.86	391	75	125	72.71	52.6	20	SR
Molybdenum	20.517	1.0	24.99	0.2936	80.9	75	125	21.19	3.22	20	
Nickel	30.342	1.0	24.99	8.001	89.4	75	125	30.66	1.03	20	
Selenium	15.638	1.0	24.99	0	62.6	75	125	15.85	1.32	20	S
Silver	17.171	1.0	24.99	0	68.7	75	125	17.01	0.914	20	S
Thallium	17.782	1.0	24.99	0	71.2	75	125	17.98	1.13	20	S
Vanadium	35.315	1.0	24.99	11.55	95.1	75	125	33.18	6.24	20	
Zinc	153.815	1.0	24.99	102.8	204	75	125	144.0	6.57	20	S

Qualifiers:

- | | | |
|---|--|--|
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CLIENT: Geocon Consultants, Inc.
Work Order: N017369
Project: ALA-780, E8721-02-42

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: N017369-037A-DUP		SampType: DUP		TestCode: 6010_S		Units: mg/Kg		Prep Date: 10/26/2015		RunNo: 103822	
Client ID: ZZZZZZ		Batch ID: 52835		TestNo: EPA 6010B EPA 3050B		Analysis Date: 10/27/2015		SeqNo: 2118699			
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	ND	1.0						5.041	0	20	
Beryllium	ND	1.0						0	0	20	
Cadmium	1.299	1.0						0.9965	26.4	20	R
Chromium	9.789	1.0						3.669	90.9	20	R
Cobalt	20.672	1.0						8.940	79.2	20	R
Copper	31.798	2.0						2.953	166	20	R
Lead	3.110	1.0						2.340	28.3	20	R
Molybdenum	ND	1.0						0	0	20	
Nickel	13.544	1.0						4.235	105	20	R
Selenium	ND	1.0						0	0	20	
Silver	ND	1.0						0	0	20	
Vanadium	112.938	1.0						31.93	112	20	R
Zinc	81.783	1.0						21.62	116	20	R

Sample ID: N017369-037A-MS		SampType: MS		TestCode: 6010_S		Units: mg/Kg		Prep Date: 10/26/2015		RunNo: 103822	
Client ID: ZZZZZZ		Batch ID: 52835		TestNo: EPA 6010B EPA 3050B		Analysis Date: 10/27/2015		SeqNo: 2118703			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	10.721	2.0	25.06	0	42.8	75	125				S
Arsenic	23.074	1.0	25.06	5.041	72.0	75	125				S
Beryllium	17.777	1.0	25.06	0	70.9	75	125				S
Cadmium	16.140	1.0	25.06	0.9965	60.4	75	125				S
Chromium	23.094	1.0	25.06	3.669	77.5	75	125				
Cobalt	32.901	1.0	25.06	8.940	95.6	75	125				
Copper	23.827	2.0	25.06	2.953	83.3	75	125				
Lead	20.920	1.0	25.06	2.340	74.1	75	125				S
Molybdenum	15.630	1.0	25.06	0	62.4	75	125				S
Nickel	24.598	1.0	25.06	4.235	81.2	75	125				
Selenium	8.534	1.0	25.06	0	34.1	75	125				S

Qualifiers:

- | | | |
|---|--|--|
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Work Order: N017369
Project: ALA-780, E8721-02-42

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: N017369-037A-MS		SampType: MS		TestCode: 6010_S		Units: mg/Kg		Prep Date: 10/26/2015		RunNo: 103822	
Client ID: ZZZZZZ		Batch ID: 52835		TestNo: EPA 6010B EPA 3050B				Analysis Date: 10/27/2015		SeqNo: 2118703	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	13.458	1.0	25.06	0	53.7	75	125				S
Vanadium	54.878	1.0	25.06	31.93	91.6	75	125				
Zinc	38.548	1.0	25.06	21.62	67.6	75	125				S

Sample ID: N017369-037A-DUP		SampType: DUP		TestCode: 6010_S		Units: mg/Kg		Prep Date: 10/26/2015		RunNo: 103836	
Client ID: ZZZZZZ		Batch ID: 52835		TestNo: EPA 6010B EPA 3050B				Analysis Date: 10/28/2015		SeqNo: 2119333	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	27.593	1.0						34.96	23.6	20	R
Thallium	ND	1.0						0	0	20	

Sample ID: N017369-037A-MS		SampType: MS		TestCode: 6010_S		Units: mg/Kg		Prep Date: 10/26/2015		RunNo: 103836	
Client ID: ZZZZZZ		Batch ID: 52835		TestNo: EPA 6010B EPA 3050B				Analysis Date: 10/28/2015		SeqNo: 2119337	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	161.464	1.0	25.06	34.96	505	75	125				S
Thallium	13.672	1.0	25.06	0	54.6	75	125				S

Qualifiers:

- | | | |
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Work Order: N017369
Project: ALA-780, E8721-02-42

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: MB1-52836	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 10/26/2015	RunNo: 103821						
Client ID: PBS	Batch ID: 52836	TestNo: EPA 6010B EPA 3050B		Analysis Date: 10/27/2015	SeqNo: 2118518						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead ND 5.0

Sample ID: MB2-52836	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 10/26/2015	RunNo: 103821						
Client ID: PBS	Batch ID: 52836	TestNo: EPA 6010B EPA 3050B		Analysis Date: 10/27/2015	SeqNo: 2118519						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead ND 5.0

Sample ID: LCS-52836	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 10/26/2015	RunNo: 103821						
Client ID: LCSS	Batch ID: 52836	TestNo: EPA 6010B EPA 3050B		Analysis Date: 10/27/2015	SeqNo: 2118520						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 25.889 5.0 25.00 0 104 80 120

Sample ID: N017369-001A-DUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 10/26/2015	RunNo: 103821						
Client ID: ZZZZZ	Batch ID: 52836	TestNo: EPA 6010B EPA 3050B		Analysis Date: 10/27/2015	SeqNo: 2118522						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 5.104 5.0 19.87 118 20 R

Sample ID: N017369-001A-MSD	SampType: MSD	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 10/26/2015	RunNo: 103821						
Client ID: ZZZZZ	Batch ID: 52836	TestNo: EPA 6010B EPA 3050B		Analysis Date: 10/27/2015	SeqNo: 2118526						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 44.637 5.0 24.90 19.87 99.5 75 125 36.83 19.2 20

Qualifiers:

- | | | |
|---|--|--|
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CLIENT: Geocon Consultants, Inc.
Work Order: N017369
Project: ALA-780, E8721-02-42

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: N017369-015A-DUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 10/26/2015	RunNo: 103821						
Client ID: ZZZZZZ	Batch ID: 52836	TestNo: EPA 6010B EPA 3050B	Analysis Date: 10/27/2015	SeqNo: 2118539							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.792	5.0						1.822	0	20	

Sample ID: N017369-015A-MS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 10/26/2015	RunNo: 103821						
Client ID: ZZZZZZ	Batch ID: 52836	TestNo: EPA 6010B EPA 3050B	Analysis Date: 10/27/2015	SeqNo: 2118542							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	23.733	5.0	25.00	1.822	87.6	75	125				

Sample ID: N017369-001A-MS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 10/26/2015	RunNo: 103821						
Client ID: ZZZZZZ	Batch ID: 52836	TestNo: EPA 6010B EPA 3050B	Analysis Date: 10/27/2015	SeqNo: 2118554							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	60.424	5.0	24.89	19.87	163	75	125				S

Qualifiers:

- | | | |
|---|--|--|
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ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: MB1-52851	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 10/27/2015	RunNo: 103838						
Client ID: PBS	Batch ID: 52851	TestNo: EPA 6010B EPA 3050B		Analysis Date: 10/28/2015	SeqNo: 2119451						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead ND 5.0

Sample ID: MB2-52851	SampType: MBLK	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 10/27/2015	RunNo: 103838						
Client ID: PBS	Batch ID: 52851	TestNo: EPA 6010B EPA 3050B		Analysis Date: 10/28/2015	SeqNo: 2119452						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead ND 5.0

Sample ID: LCS-52851	SampType: LCS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 10/27/2015	RunNo: 103838						
Client ID: LCSS	Batch ID: 52851	TestNo: EPA 6010B EPA 3050B		Analysis Date: 10/28/2015	SeqNo: 2119453						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 23.582 5.0 25.00 0 94.3 80 120

Sample ID: N017369-026A-DUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 10/27/2015	RunNo: 103838						
Client ID: ZZZZZ	Batch ID: 52851	TestNo: EPA 6010B EPA 3050B		Analysis Date: 10/28/2015	SeqNo: 2119457						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 2.078 5.0 1.994 0 20

Sample ID: N017369-026A-MS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 10/27/2015	RunNo: 103838						
Client ID: ZZZZZ	Batch ID: 52851	TestNo: EPA 6010B EPA 3050B		Analysis Date: 10/28/2015	SeqNo: 2119458						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 21.109 5.0 24.98 1.994 76.5 75 125

Qualifiers:

- | | | |
|---|--|--|
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Work Order: N017369
Project: ALA-780, E8721-02-42

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: N017369-026A-MSD	SampType: MSD	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 10/27/2015	RunNo: 103838						
Client ID: ZZZZZZ	Batch ID: 52851	TestNo: EPA 6010B EPA 3050B		Analysis Date: 10/28/2015	SeqNo: 2119459						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	20.803	5.0	24.94	1.994	75.4	75	125	21.11	1.46	20	

Sample ID: N017369-039A-DUP	SampType: DUP	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 10/27/2015	RunNo: 103838						
Client ID: ZZZZZZ	Batch ID: 52851	TestNo: EPA 6010B EPA 3050B		Analysis Date: 10/28/2015	SeqNo: 2119472						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.101	5.0						2.124	0	20	

Sample ID: N017369-039A-MS	SampType: MS	TestCode: 6010_SPB	Units: mg/Kg	Prep Date: 10/27/2015	RunNo: 103838						
Client ID: ZZZZZZ	Batch ID: 52851	TestNo: EPA 6010B EPA 3050B		Analysis Date: 10/28/2015	SeqNo: 2119475						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	23.571	5.0	24.95	2.124	86.0	75	125				

Qualifiers:

- | | | |
|---|--|--|
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Project: ALA-780, E8721-02-42

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_W

Sample ID: LCS-52837	SampType: LCS	TestCode: 6010_W	Units: mg/L	Prep Date: 10/26/2015	RunNo: 103795						
Client ID: LCSW	Batch ID: 52837	TestNo: EPA 6010B EPA 3010A		Analysis Date: 10/26/2015	SeqNo: 2117413						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.489	0.010	0.5000	0	97.9	85	115				
Arsenic	0.505	0.010	0.5000	0	101	85	115				
Barium	0.521	0.0030	0.5000	0	104	85	115				
Beryllium	0.502	0.0030	0.5000	0	100	85	115				
Cadmium	0.481	0.0030	0.5000	0	96.1	85	115				
Chromium	0.494	0.0030	0.5000	0	98.8	85	115				
Cobalt	0.504	0.0030	0.5000	0	101	85	115				
Copper	0.481	0.0050	0.5000	0	96.2	85	115				
Lead	0.501	0.0050	0.5000	0	100	85	115				
Molybdenum	0.510	0.0050	0.5000	0	102	85	115				
Nickel	0.509	0.0050	0.5000	0	102	85	115				
Selenium	0.492	0.010	0.5000	0	98.4	85	115				
Silver	0.469	0.0030	0.5000	0	93.8	85	115				
Thallium	0.462	0.015	0.5000	0	92.5	85	115				
Vanadium	0.470	0.0030	0.5000	0	94.1	85	115				
Zinc	0.499	0.010	0.5000	0	99.7	85	115				

Sample ID: MB-52837	SampType: MBLK	TestCode: 6010_W	Units: mg/L	Prep Date: 10/26/2015	RunNo: 103795						
Client ID: PBW	Batch ID: 52837	TestNo: EPA 6010B EPA 3010A		Analysis Date: 10/26/2015	SeqNo: 2117418						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.010									
Arsenic	ND	0.010									
Barium	ND	0.0030									
Beryllium	ND	0.0030									
Cadmium	ND	0.0030									
Chromium	0.000216	0.0030									
Cobalt	ND	0.0030									
Copper	ND	0.0050									
Lead	ND	0.0050									

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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"Serving Clients with Passion and Professionalism"

CLIENT: Geocon Consultants, Inc.
Work Order: N017369
Project: ALA-780, E8721-02-42

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_W

Sample ID: MB-52837	SampType: MBLK	TestCode: 6010_W	Units: mg/L	Prep Date: 10/26/2015	RunNo: 103795						
Client ID: PBW	Batch ID: 52837	TestNo: EPA 6010B EPA 3010A		Analysis Date: 10/26/2015	SeqNo: 2117418						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Molybdenum	0.000469	0.0050									
Nickel	ND	0.0050									
Selenium	ND	0.010									
Silver	ND	0.0030									
Thallium	ND	0.015									
Vanadium	ND	0.0030									
Zinc	ND	0.010									

Sample ID: N017361-001A-MS	SampType: MS	TestCode: 6010_W	Units: mg/L	Prep Date: 10/26/2015	RunNo: 103795						
Client ID: ZZZZZ	Batch ID: 52837	TestNo: EPA 6010B EPA 3010A		Analysis Date: 10/26/2015	SeqNo: 2117427						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Antimony	0.239	0.050	0.5000	0	47.9	75	125				S
Arsenic	0.433	0.050	0.5000	0.05744	75.0	75	125				
Barium	3.864	0.015	0.5000	3.613	50.1	75	125				S
Beryllium	0.352	0.015	0.5000	0	70.4	75	125				S
Cadmium	0.355	0.015	0.5000	0.006259	69.7	75	125				S
Chromium	0.627	0.015	0.5000	0.2372	78.1	75	125				
Cobalt	0.470	0.015	0.5000	0.09176	75.6	75	125				
Copper	0.804	0.025	0.5000	0.3982	81.1	75	125				
Lead	0.382	0.025	0.5000	0.01460	73.5	75	125				S
Molybdenum	0.432	0.025	0.5000	0.09825	66.8	75	125				S
Nickel	0.918	0.025	0.5000	0.5322	77.2	75	125				
Selenium	0.340	0.050	0.5000	0	68.0	75	125				S
Silver	0.351	0.015	0.5000	0	70.2	75	125				S
Thallium	0.366	0.075	0.5000	0.02089	69.0	75	125				S
Vanadium	0.606	0.015	0.5000	0.1715	86.8	75	125				
Zinc	0.854	0.050	0.5000	0.5255	65.8	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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CLIENT: Geocon Consultants, Inc.
Work Order: N017369
Project: ALA-780, E8721-02-42

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_W

Sample ID: N017361-001A-MSD	SampType: MSD	TestCode: 6010_W	Units: mg/L	Prep Date: 10/26/2015	RunNo: 103795						
Client ID: ZZZZZZ	Batch ID: 52837	TestNo: EPA 6010B	EPA 3010A	Analysis Date: 10/26/2015	SeqNo: 2117430						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.227	0.050	0.5000	0	45.3	75	125	0.2393	5.42	20	S
Arsenic	0.412	0.050	0.5000	0.05744	71.0	75	125	0.4325	4.77	20	S
Barium	3.521	0.015	0.5000	3.613	-18.5	75	125	3.864	9.29	20	S
Beryllium	0.336	0.015	0.5000	0	67.2	75	125	0.3522	4.69	20	S
Cadmium	0.340	0.015	0.5000	0.006259	66.8	75	125	0.3549	4.23	20	S
Chromium	0.587	0.015	0.5000	0.2372	70.1	75	125	0.6275	6.59	20	S
Cobalt	0.439	0.015	0.5000	0.09176	69.5	75	125	0.4697	6.69	20	S
Copper	0.736	0.025	0.5000	0.3982	67.5	75	125	0.8036	8.79	20	S
Lead	0.365	0.025	0.5000	0.01460	70.2	75	125	0.3823	4.50	20	S
Molybdenum	0.408	0.025	0.5000	0.09825	62.0	75	125	0.4322	5.74	20	S
Nickel	0.849	0.025	0.5000	0.5322	63.3	75	125	0.9184	7.89	20	S
Selenium	0.322	0.050	0.5000	0	64.4	75	125	0.3401	5.46	20	S
Silver	0.357	0.015	0.5000	0	71.4	75	125	0.3511	1.65	20	S
Thallium	0.352	0.075	0.5000	0.02089	66.3	75	125	0.3659	3.76	20	S
Vanadium	0.564	0.015	0.5000	0.1715	78.5	75	125	0.6056	7.09	20	S
Zinc	0.786	0.050	0.5000	0.5255	52.0	75	125	0.8544	8.38	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 | |



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CLIENT: Geocon Consultants, Inc.
Work Order: N017369
Project: ALA-780, E8721-02-42

ANALYTICAL QC SUMMARY REPORT

TestCode: 7471_S

Sample ID: MB-52849	SampType: MBLK	TestCode: 7471_S	Units: mg/Kg	Prep Date: 10/27/2015	RunNo: 103829						
Client ID: PBS	Batch ID: 52849	TestNo: EPA 7471A		Analysis Date: 10/28/2015	SeqNo: 2118932						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.10									

Sample ID: LCS-52849	SampType: LCS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 10/27/2015	RunNo: 103829						
Client ID: LCSS	Batch ID: 52849	TestNo: EPA 7471A		Analysis Date: 10/28/2015	SeqNo: 2118933						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.387	0.10	0.4167	0	92.9	80	120				

Sample ID: N017369-003A-MS	SampType: MS	TestCode: 7471_S	Units: mg/Kg	Prep Date: 10/27/2015	RunNo: 103829						
Client ID: ZZZZZ	Batch ID: 52849	TestNo: EPA 7471A		Analysis Date: 10/28/2015	SeqNo: 2118934						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.382	0.10	0.4167	0	91.7	75	125				

Sample ID: N017369-003A-MSD	SampType: MSD	TestCode: 7471_S	Units: mg/Kg	Prep Date: 10/27/2015	RunNo: 103829						
Client ID: ZZZZZ	Batch ID: 52849	TestNo: EPA 7471A		Analysis Date: 10/28/2015	SeqNo: 2118935						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.379	0.10	0.4167	0	90.9	75	125	0.3820	0.857	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: N017369
Project: ALA-780, E8721-02-42

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_DM LL

Sample ID: LCS-52877	SampType: LCS	TestCode: 8015_S_DM L	Units: mg/Kg	Prep Date: 10/29/2015	RunNo: 103865						
Client ID: LCSS	Batch ID: 52877	TestNo: EPA 8015B EPA 3550B		Analysis Date: 10/29/2015	SeqNo: 2120553						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	78.857	1.0	83.30	0	94.7	51	100				
Surr: p-Terphenyl	6.868		6.670		103	48	123				

Sample ID: MB-52877	SampType: MBLK	TestCode: 8015_S_DM L	Units: mg/Kg	Prep Date: 10/29/2015	RunNo: 103865						
Client ID: PBS	Batch ID: 52877	TestNo: EPA 8015B EPA 3550B		Analysis Date: 10/29/2015	SeqNo: 2120554						
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	6.282		6.670		94.2	48	123				

Sample ID: N017369-003A-DUP	SampType: DUP	TestCode: 8015_S_DM L	Units: mg/Kg	Prep Date: 10/29/2015	RunNo: 103865						
Client ID: ZZZZZ	Batch ID: 52877	TestNo: EPA 8015B EPA 3550B		Analysis Date: 10/29/2015	SeqNo: 2120557						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	ND	1.0						0	0	20	
ORO	1.964	1.0						1.862	5.32	20	
Surr: p-Terphenyl	5.801		6.666		87.0	48	123		0		

Sample ID: N017369-003A-MS	SampType: MS	TestCode: 8015_S_DM L	Units: mg/Kg	Prep Date: 10/29/2015	RunNo: 103865						
Client ID: ZZZZZ	Batch ID: 52877	TestNo: EPA 8015B EPA 3550B		Analysis Date: 10/29/2015	SeqNo: 2120564						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	69.696	1.0	83.27	0	83.7	31	108				
Surr: p-Terphenyl	5.964		6.668		89.4	48	123				

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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"Serving Clients with Passion and Professionalism"

CLIENT: Geocon Consultants, Inc.
Work Order: N017369
Project: ALA-780, E8721-02-42

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_DM LL

Sample ID: N017369-003A-MSD		SampType: MSD		TestCode: 8015_S_DM L			Units: mg/Kg		Prep Date: 10/29/2015		RunNo: 103865	
Client ID: ZZZZZ		Batch ID: 52877		TestNo: EPA 8015B EPA 3550B		Analysis Date: 10/29/2015			SeqNo: 2120565			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
DRO	73.954	1.0	83.30	0	88.8	31	108	69.70	5.93	20		
Surr: p-Terphenyl	6.450		6.670		96.7	48	123		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 |
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CHAIN OF CUSTODY RECORD

1.5°C RA#1

 ADVANCED TECHNOLOGY LABORATORIES 3151 W. Post Road, Las Vegas, NV 89118 Tel: (702) 307-2659 • Fax: (702) 307-2691	P.O. #: _____ Quote #: _____ Logged By: _____ Date: _____	FOR LABORATORY USE ONLY	
	NOTE: Please include your Quote No. to ensure proper pricing of your project.	Method of Transport <input type="checkbox"/> Client <input type="checkbox"/> ATL <input type="checkbox"/> FedEx <input type="checkbox"/> OnTrac <input type="checkbox"/> GSO <input type="checkbox"/> Other: _____	Sample Condition Upon Receipt 1. CHILLED Y <input checked="" type="checkbox"/> N <input type="checkbox"/> 2. HEADSPACE (VOA) Y <input type="checkbox"/> N <input type="checkbox"/> 3. CONTAINER INTACT Y <input checked="" type="checkbox"/> N <input type="checkbox"/> 4. SEALED Y <input type="checkbox"/> N <input checked="" type="checkbox"/> 5. # OF SPLS MATCH COC Y <input checked="" type="checkbox"/> N <input type="checkbox"/> 6. PRESERVED Y <input type="checkbox"/> N <input checked="" type="checkbox"/>

Client: GEBCON Attention: L. BEADLE	Address: 6671 BRISA ST City: LIVERMORE State: CA Zip Code: 94550	Tel: 925-371-5900 Fax: 925-371-5915
--	---	--

Project Name: **ALA - 780** Project #: **E8721-02-42** Sampler: **CORD DENNIG**

Relinquished by: <i>[Signature]</i> Date: 10/22/15 Time: 1600	Received by: GSO Date: 10/23/15 Time: 1600
---	---

Relinquished by: <i>[Signature]</i> Date: _____ Time: _____	Received by: Anthony Hattori Date: 10/23/15 Time: 1029
---	---

Relinquished by: _____ Date: _____ Time: _____	Received by: _____ Date: _____ Time: _____
--	--

I hereby authorize ATL to perform the work indicated below.	Send Report To: Attn: _____ Co: *CLIENT Addr: _____ City: _____ State: _____ Zip: _____	Bill To: Attn: _____ Co: _____ Addr: _____ City: _____ State: _____ Zip: _____	Special Instructions/Comments: Caltans Contract 04A4336 Analyze Rinse Blank (RB) for Pb
---	---	---	---

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 SEDIMENT SOLID SOIL DRINKING WATER GROUND WATER WASTEWATER STORMWATER AQUEOUS	PRESERVATION	QA/QC RTNE <input type="checkbox"/> CT <input checked="" type="checkbox"/> Legal <input type="checkbox"/> SWRCB <input type="checkbox"/> Logcode _____ OTHER _____
--------------------------------------	--	--------------	--

ITEM	LAB USE ONLY:		Sample Description	
	Batch #:	Sample ID / Location	Date	Time
	N017369-1	B1-0'	10/22	1006
	-2	-1'		1007
	-3	-2'		1008
	-4	-3'		1009
	-5	B2-0'		1018
	-6	-1'		1019
	-7	-2'		1020
	-8	-3'		1021
	-9	B3-0'		1030
	-10	-1'		1030

Requested	8081A (Pesticides) 8082 (PCs) 8280B (Volatiles) 8270C (BVA) 8010B (Total Metal) 8015B (GRO) / 8021 (BTEX) 8015B (DRO) TITLE 22 / CAM 17 (6070, 7000) Total Lead field	TAT	# Type REMARKS X E1 Baggie X TP X Baggie X TP X Baggie X TP X Baggie
-----------	---	-----	--

TAT starts 8AM the following day if samples received after 5 PM	TAT: <input type="checkbox"/> A = Overnight ≤ 24 hrs <input type="checkbox"/> B = Emergency Next Workday <input type="checkbox"/> C = Critical 2 Workdays <input type="checkbox"/> D = Urgent 3 Workdays <input type="checkbox"/> E = Routine 7 Workdays	Preservatives: H=HCl N=HNO ₃ S=H ₂ SO ₄ C=4°C Z=Zn(AC) ₂ O=NaOH T=Na ₂ S ₂ O ₃
Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal		

CHAIN OF CUSTODY RECORD

1.5^c IR#2

Pr: 2 of 5

 <p>ADVANCED TECHNOLOGY LABORATORIES</p> <p>3151 W. Post Road, Las Vegas, NV 89118 Tel: (702) 307-2659 • Fax: (702) 307-2691</p>		P.O. #: _____ Quote #: _____ Logged By: _____ Date: _____		FOR LABORATORY USE ONLY	
		NOTE: Please include your Quote No. to ensure proper pricing of your project.		Method of Transport <input type="checkbox"/> Client <input type="checkbox"/> ATL <input type="checkbox"/> FedEx <input type="checkbox"/> OnTrac <input type="checkbox"/> GSO <input type="checkbox"/> Other: _____	
Client: <u>Gecon</u> Attention: <u>L Beadle</u>		Address: <u>6671 Brisa St.</u> City: <u>Livermore</u> State: <u>CA</u> Zip Code: <u>94550</u>		Sample Condition Upon Receipt 1. CHILLED Y <input checked="" type="checkbox"/> N <input type="checkbox"/> 2. HEADSPACE (VOA) Y <input type="checkbox"/> N <input type="checkbox"/> 3. CONTAINER INTACT Y <input checked="" type="checkbox"/> N <input type="checkbox"/> 4. SEALED Y <input type="checkbox"/> N <input checked="" type="checkbox"/> 5. # OF SPLS MATCH COC Y <input checked="" type="checkbox"/> N <input type="checkbox"/> 6. PRESERVED Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	
Project Name: <u>ALA-780</u> Project #: <u>E8721-02-42</u>		Sampler: <u>J. Esquivel</u>		Tel: <u>925-371-5900</u> Fax: <u>925-371-5915</u>	
Relinquished by: (Signature and Printed Name) <u>J. Esquivel</u>		Date: <u>10/22/15</u> Time: <u>1600</u>		Received by: (Signature and Printed Name) <u>GSO</u>	
Relinquished by: (Signature and Printed Name) _____		Date: _____ Time: _____		Received by: (Signature and Printed Name) <u>Anthony Kattori</u>	
Relinquished by: (Signature and Printed Name) _____		Date: _____ Time: _____		Received by: (Signature and Printed Name) _____	
I hereby authorize ATL to perform the work indicated below.		Send Report To: Attn: _____ Co: _____ Addr: _____ City: _____ State: _____ Zip: _____		Bill To: Attn: _____ Co: _____ Addr: _____ City: _____ State: _____ Zip: _____	
Project Mgr /Submitter: _____ Print Name _____ Date _____ Signature _____		Special Instructions/Comments: <u>see page 1</u>		SPECIFY APPROPRIATE MATRIX	
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.		Circle or Add Analysis(es) Requested 8081A (Pesticides) _____ 8082 (PCB) _____ 8260B (Volatiles) _____ 8270C (BNA) _____ 8010B (Total Metal) _____ 8015B (GRO) / 8021 (BTEX) _____ TITLE 22 / CAM 17 (COB / TOB) _____ Lead 8010 _____		QAIQC RTNE <input type="checkbox"/> CT <input checked="" type="checkbox"/> Legal <input type="checkbox"/> SWRCB <input type="checkbox"/> Logcode _____ OTHER _____ REMARKS _____	
Storage Fees (applies when storage is requested): ■ Sample: \$2.00 / sample /mo (after 45 days) ■ Records: \$1 /ATL workorder /mo (after 1 year)		SEDIMENT SOLID SOIL DRINKING WATER GROUND WATER WASTEWATER STORMWATER AQUEOUS		Container(s) # Type _____ # _____ Type _____	
LAB USE ONLY: Batch #: _____ Lab No. _____		Sample Description Sample ID / Location Date Time		TAT # Type	
NO17369-11		B3-2' 10/22 1032		E (Baggie)	
-12		-3' 1033		↓	
-13		B4-0' 1036		↓	
-14		-1' 1039		T/P	
-15		-2' 1040		Baggie	
-16		-3' 1041		↓	
-17		B5-0' 1045		↓	
-18		-1' 1046		↓	
-19		-2' 1047		↓	
-20		-3' 1048		T/P	
■ TAT starts 8AM the following day if samples received after 5 PM		TAT: <input type="checkbox"/> A = Overnight ≤ 24 hrs <input type="checkbox"/> B = Emergency Next Workday <input type="checkbox"/> C = Critical 2 Workdays <input type="checkbox"/> D = Urgent 3 Workdays <input type="checkbox"/> E = Routine 7 Workdays		Preservatives: H=HCl N=HNO ₃ S=H ₂ SO ₄ C=4°C Z=Zn(AC) ₂ O=NaOH T=Na ₂ S ₂ O ₃	
Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Bedlar G=Glass P=Plastic M=Metal					

CHAIN OF CUSTODY RECORD 15°C IR#1

 ADVANCED TECHNOLOGY LABORATORIES 3151 W. Post Road, Las Vegas, NV 89118 Tel: (702) 307-2659 • Fax: (702) 307-2691		P.O. #: _____ Quote #: _____ Logged By: _____ Date: _____		FOR LABORATORY USE ONLY			
		NOTE: Please include your Quote No. to ensure proper pricing of your project.		Method of Transport <input type="checkbox"/> Client <input type="checkbox"/> ATL <input type="checkbox"/> FedEx <input type="checkbox"/> OnTrac <input type="checkbox"/> GSO <input type="checkbox"/> Other: _____		Sample Condition Upon Receipt 1. CHILLED Y <input checked="" type="checkbox"/> N <input type="checkbox"/> 2. HEADSPACE (VOA) Y <input type="checkbox"/> N <input type="checkbox"/> 3. CONTAINER INTACT Y <input checked="" type="checkbox"/> N <input type="checkbox"/> 4. SEALED Y <input type="checkbox"/> N <input checked="" type="checkbox"/> 5. # OF SPLS MATCH COC Y <input checked="" type="checkbox"/> N <input type="checkbox"/> 6. PRESERVED Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	
Client: <u>Geocon</u> Attention: <u>L. Beadle</u>		Address: <u>6674 Brisson St</u> City: <u>Livermore</u> State: <u>CA</u> Zip Code: <u>94550</u>		Tel: <u>925-371-5900</u> Fax: <u>4-4-5915</u>			
Project Name: <u>ALA-780</u>		Project #: <u>E8721-02-42</u>		Sampler: <u>J. Esquivel</u> (Signature)			
Relinquished by: (Signature and Printed Name) <u>[Signature]</u>		Date: <u>10/22/15</u> Time: <u>1600</u>		Received by: (Signature and Printed Name) <u>[Signature]</u>			
Relinquished by: (Signature and Printed Name) <u>J. Esquivel</u>		Date: <u>10/22/15</u> Time: <u>1600</u>		Received by: (Signature and Printed Name) <u>Anthony Kattori</u>			
Relinquished by: (Signature and Printed Name) _____		Date: _____ Time: _____		Received by: (Signature and Printed Name) _____			
I hereby authorize ATL to perform the work indicated below: Project Mgr /Submitter: _____ Print Name _____ Date _____ Signature _____		Send Report To: Attn: _____ Co: _____ Addr: _____ City: _____ State: _____ Zip: _____		Bill To: Attn: _____ Co: _____ Addr: _____ City: _____ State: _____ Zip: _____			
				Special Instructions/Comments: <u>see page 1</u>			
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 8081A (Pesticides) 8082 (PCB) 8280B (Volatiles) 8270C (BVA) 6010B (Total Metal) 8015B (GRO) / 8021 (BTEX) 8015B (DRO) <u>also /mo</u> TITLE 22 / CAM 17 (6070) 7000 <u>Total Lead 6010</u>			
				SPECIFY APPROPRIATE MATRIX SEDIMENT SOLID SOIL DRINKING WATER GROUND WATER WASTEWATER STORMWATER AQUEOUS			
				TAT # Type PRESERVATION REMARKS			
LAB USE ONLY: Batch #: _____ Sample Description: _____ Lab No. Sample ID / Location Date Time							
NU17369-31 B8-2' 10/22 1107							
-32 -3' 1108							
-33 B9-0' 1112							
-34 -1' 1113							
-35 -2' 1114							
-36 -3' 1115							
-37 B10-0' 1118							
-38 -1' 1119							
-39 -2' 1120							
-40 -3' 1121							
■ TAT starts 8AM the following day if samples received after 5 PM		TAT: <input type="checkbox"/> A = Overnight ≤ 24 hrs <input type="checkbox"/> B = Emergency Next Workday <input type="checkbox"/> C = Critical 2 Workdays <input type="checkbox"/> D = Urgent 3 Workdays <input type="checkbox"/> E = Routine 7 Workdays		Preservatives: H=HCl N=HNO ₃ S=H ₂ SO ₄ C=4°C Z=Zn(AC) ₂ O=NaOH T=Na ₂ S ₂ O ₃			
		Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal					

ASSET Laboratories

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: 10/23/2015 Workorder: N017369
 Rep sample Temp (Deg C): 1.5 IR Gun ID: 1
 Temp Blank: Yes No
 Carrier name: Golden State Overnight
 Last 4 digits of Tracking No.: 7963 Packing Material Used: Bubble Wrap
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

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

Comments: Rinse Blank was lab preserved.

PLEASE PRESS FIRMLY

1	DATE	10-22-15	
	COMPANY	Geo Con	
F R O M	ADDRESS	3160 Gold Valley Dr	
	ADDRESS	Suite 800	
	CITY	Rancho Cordova	
	ZIP	95743	STATE/ROOM
	PHONE NUMBER	916-852-9118	ZIP CODE
T O	COMPANY	Asset Link	
	NAME	Sample receiving	
	ADDRESS	3151 West Post Road	
	ADDRESS		
	CITY	Las Vegas NV	
3	YOUR INTERNAL BILLING REFERENCE WILL APPEAR ON YOUR INVOICE		
	SPECIAL INSTRUCTIONS		

GSO
GOLDEN STATE OVERNIGHT
1-800-322-5555
WWW.GSO.COM

SHIPPING AIR BILL

4 PACKAGE INFORMATION

LETTER (MAX 8 OZ)

PACKAGE (WT) 25.1 lb

DECLARED VALUE \$ _____

COD AMOUNT \$ _____
(CASH NOT ACCEPTED)

PACKAGE LABEL

5 DELIVERY SERVICE PRIORITY OVERNIGHT BY 10:30 AM EARLY PRIORITY BY 8:00 AM SATURDAY DELIVERY

*DELIVERY TIMES MAY BE LATER IN SOME AREAS • CONSULT YOUR SERVICE GUIDE OR CALL GOLDEN STATE OVERNIGHT.

6 RELEASE SIGNATURE _____
SIGN TO AUTHORIZE DELIVERY WITHOUT OBTAINING SIGNATURE

7 PICK UP INFORMATION _____
TIME DRIVER # ROUTE #



GSOAB108007963

PEEL OFF HERE

8 GSO TRACKING NUMBER

November 15, 2015

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-00922

Workorder No.: N017369

RE: ALA-780, E8721-02-42

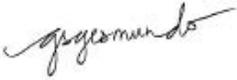
Attention: Luann Beadle

Enclosed are the results for sample(s) received on October 23, 2015 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,



Glen Gesmundo
QA Manager

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.



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3151 W. Post Rd., Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691

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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 15-Nov-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-013

Client Sample ID: B4-0'
Collection Date: 10/22/2015 10:38:00 AM
Matrix: SOIL

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

ICP METALS BY STLC

WET/ EPA 6010B

RunID: ICP2_151109A	QC Batch: R104038	PrepDate:	Analyst: CEI	
Lead	14	0.25 mg/L	5	11/9/2015 09:18 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: 15-Nov-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-017

Client Sample ID: B5-0'
Collection Date: 10/22/2015 10:45:00 AM
Matrix: SOIL

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

ICP METALS BY STLC

WET/ EPA 6010B

RunID: ICP2_151112A	QC Batch: R104134	PrepDate: 11/11/2015	Analyst: CEI		
Lead	11	0.050	mg/L	1	11/12/2015 11:35 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: 15-Nov-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-021

Client Sample ID: B6-0'
Collection Date: 10/22/2015 10:51:00 AM
Matrix: SOIL

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

ICP METALS BY STLC

WET/ EPA 6010B

RunID: ICP2_151109A	QC Batch: R104038	PrepDate:	Analyst: CEI	
Lead	9.4	0.25 mg/L	5	11/9/2015 09:27 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: 15-Nov-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-025

Client Sample ID: B7-0'
Collection Date: 10/22/2015 10:57:00 AM
Matrix: SOIL

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

ICP METALS BY STLC

WET/ EPA 6010B

RunID: ICP2_151112A QC Batch: R104134 PrepDate: 11/11/2015 Analyst: **CEI**
Lead 5.5 0.050 mg/L 1 11/12/2015 12:27 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: 15-Nov-15

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-029

Client Sample ID: B8-0'
Collection Date: 10/22/2015 11:05:00 AM
Matrix: SOIL

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

ICP METALS BY STLC

WET/ EPA 6010B

RunID: ICP2_151112A QC Batch: R104134 PrepDate: 11/11/2015 Analyst: **CEI**
Lead 2.8 0.050 mg/L 1 11/12/2015 12:53 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: N017369
Project: ALA-780, E8721-02-42

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_ST

Sample ID: MB-R104038	SampType: MBLK	TestCode: 6010_ST	Units: mg/L	Prep Date:	RunNo: 104038						
Client ID: PBS	Batch ID: R104038	TestNo: WET/ EPA 60		Analysis Date: 11/9/2015	SeqNo: 2131030						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead ND 0.050

Sample ID: MB-52936	SampType: MBLK	TestCode: 6010_ST	Units: mg/L	Prep Date:	RunNo: 104038						
Client ID: PBS	Batch ID: R104038	TestNo: WET/ EPA 60		Analysis Date: 11/9/2015	SeqNo: 2131031						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead ND 0.25

Sample ID: MB-52961	SampType: MBLK	TestCode: 6010_ST	Units: mg/L	Prep Date:	RunNo: 104038						
Client ID: PBS	Batch ID: R104038	TestNo: WET/ EPA 60		Analysis Date: 11/9/2015	SeqNo: 2131032						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead ND 0.25

Sample ID: LCS-R104038	SampType: LCS	TestCode: 6010_ST	Units: mg/L	Prep Date:	RunNo: 104038						
Client ID: LCSS	Batch ID: R104038	TestNo: WET/ EPA 60		Analysis Date: 11/9/2015	SeqNo: 2131033						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 0.528 0.050 0.5000 0 106 85 115

Sample ID: N017366-011A-DUP	SampType: DUP	TestCode: 6010_ST	Units: mg/L	Prep Date:	RunNo: 104038						
Client ID: ZZZZZZ	Batch ID: R104038	TestNo: WET/ EPA 60		Analysis Date: 11/9/2015	SeqNo: 2131035						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 4.173 0.25 4.390 5.07 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



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CLIENT: Geocon Consultants, Inc.
Work Order: N017369
Project: ALA-780, E8721-02-42

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_ST

Sample ID: N017369-033A-DUP		SampType: DUP		TestCode: 6010_ST		Units: mg/L		Prep Date:		RunNo: 104038	
Client ID: ZZZZZZ		Batch ID: R104038		TestNo: WET/ EPA 60		Analysis Date: 11/9/2015				SeqNo: 2131054	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	17.525	0.25						17.39	0.772	20	

Sample ID: N017366-011A-MS		SampType: MS		TestCode: 6010_ST		Units: mg/L		Prep Date:		RunNo: 104038	
Client ID: ZZZZZZ		Batch ID: R104038		TestNo: WET/ EPA 60		Analysis Date: 11/9/2015				SeqNo: 2131055	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.570	0.25	2.500	4.390	127	75	125				S

Sample ID: N017366-011A-MSD		SampType: MSD		TestCode: 6010_ST		Units: mg/L		Prep Date:		RunNo: 104038	
Client ID: ZZZZZZ		Batch ID: R104038		TestNo: WET/ EPA 60		Analysis Date: 11/9/2015				SeqNo: 2131056	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	7.643	0.25	2.500	4.390	130	75	125	7.570	0.956	20	S

Sample ID: N017369-033A-MS		SampType: MS		TestCode: 6010_ST		Units: mg/L		Prep Date:		RunNo: 104038	
Client ID: ZZZZZZ		Batch ID: R104038		TestNo: WET/ EPA 60		Analysis Date: 11/9/2015				SeqNo: 2131057	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	19.899	0.25	2.500	17.39	100	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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CLIENT: Geocon Consultants, Inc.
Work Order: N017369
Project: ALA-780, E8721-02-42

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_ST

Sample ID: N017369-029A-MSD	SampType: MSD	TestCode: 6010_ST	Units: mg/L	Prep Date: 11/11/2015	RunNo: 104134						
Client ID: ZZZZZZ	Batch ID: R104134	TestNo: WET/ EPA 60	Analysis Date: 11/12/2015	SeqNo: 2136704							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.975	0.050	0.5000	2.752	44.6	75	125	3.404	13.5	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 | |



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 P: 702.307.2659 F: 702.307.2691

"Serving Clients with Passion and Professionalism"

November 30, 2015

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-00922

Workorder No.: N017369

RE: ALA-780, E8721-02-42

Attention: Luann Beadle

Enclosed are the results for sample(s) received on October 23, 2015 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,



Glen Gesmundo
QA Manager

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P: 702.307.2659 F: 702.307.2691

"Serving Clients with Passion and Professionalism"

CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-013A

Client Sample ID: B4-0'
Collection Date: 10/22/2015 10:38:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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ICP METALS BY TCLP EXTRACTION

EPA 3010A

EPA 1311/ 6010B

RunID: ICP2_151119B	QC Batch: 54099	PrepDate: 11/18/2015	Analyst: CEI
Lead	0.063	0.050	mg/L
		1	11/19/2015 02:52 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



CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-017A

Client Sample ID: B5-0'
Collection Date: 10/22/2015 10:45:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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ICP METALS BY TCLP EXTRACTION

EPA 3010A

EPA 1311/ 6010B

RunID: ICP2_151119B	QC Batch: 54099	PrepDate: 11/18/2015	Analyst: CEI
Lead	0.44	0.050	mg/L
		1	11/19/2015 02:58 PM

Qualifiers:

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



CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-021A

Client Sample ID: B6-0'
Collection Date: 10/22/2015 10:51:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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ICP METALS BY TCLP EXTRACTION

EPA 3010A

EPA 1311/ 6010B

RunID: ICP2_151119B	QC Batch: 54099	PrepDate: 11/18/2015	Analyst: CEI
Lead	0.066	0.050	mg/L
		1	11/19/2015 03:14 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	



CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-025A

Client Sample ID: B7-0'
Collection Date: 10/22/2015 10:57:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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ICP METALS BY TCLP EXTRACTION

EPA 3010A

EPA 1311/ 6010B

RunID: ICP2_151119B	QC Batch: 54099	PrepDate: 11/18/2015	Analyst: CEI
Lead	ND	0.25 mg/L	5
			11/19/2015 04:35 PM

Qualifiers:

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



CLIENT: Geocon Consultants, Inc.
Lab Order: N017369
Project: ALA-780, E8721-02-42
Lab ID: N017369-033A

Client Sample ID: B9-0'
Collection Date: 10/22/2015 11:12:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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ICP METALS BY TCLP EXTRACTION

EPA 3010A

EPA 1311/ 6010B

RunID: ICP2_151119B	QC Batch: 54099	PrepDate: 11/18/2015	Analyst: CEI
Lead	0.064	0.050	mg/L
		1	11/19/2015 03:35 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



CLIENT: Geocon Consultants, Inc.
Work Order: N017369
Project: ALA-780, E8721-02-42

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_TC

Sample ID: MB-54099	SampType: MBLK	TestCode: 6010_TC	Units: mg/L	Prep Date: 11/18/2015	RunNo: 104257						
Client ID: PBS	Batch ID: 54099	TestNo: EPA 1311/ 60 EPA 3010A		Analysis Date: 11/19/2015	SeqNo: 2143571						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead ND 0.050

Sample ID: MB-54087 TCLP	SampType: MBLK	TestCode: 6010_TC	Units: mg/L	Prep Date: 11/18/2015	RunNo: 104257						
Client ID: PBS	Batch ID: 54099	TestNo: EPA 1311/ 60 EPA 3010A		Analysis Date: 11/19/2015	SeqNo: 2143572						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead ND 0.050

Sample ID: LCS-54099	SampType: LCS	TestCode: 6010_TC	Units: mg/L	Prep Date: 11/18/2015	RunNo: 104257						
Client ID: LCSS	Batch ID: 54099	TestNo: EPA 1311/ 60 EPA 3010A		Analysis Date: 11/19/2015	SeqNo: 2143573						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 0.504 0.050 0.5000 0 101 85 115

Sample ID: N017656-001A-MSD	SampType: MSD	TestCode: 6010_TC	Units: mg/L	Prep Date: 11/18/2015	RunNo: 104257						
Client ID: ZZZZZZ	Batch ID: 54099	TestNo: EPA 1311/ 60 EPA 3010A		Analysis Date: 11/19/2015	SeqNo: 2143578						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 0.360 0.050 0.5000 0.1484 42.3 75 125 0.3461 3.87 20 S

Sample ID: N017620-001A-DUP	SampType: DUP	TestCode: 6010_TC	Units: mg/L	Prep Date: 11/18/2015	RunNo: 104257						
Client ID: ZZZZZZ	Batch ID: 54099	TestNo: EPA 1311/ 60 EPA 3010A		Analysis Date: 11/19/2015	SeqNo: 2143584						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead ND 0.050 0 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



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NEVADA
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 P: 702.307.2659 F: 702.307.2691

"Serving Clients with Passion and Professionalism"

CLIENT: Geocon Consultants, Inc.
Work Order: N017369
Project: ALA-780, E8721-02-42

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_TC

Sample ID: N017656-001A-MS	SampType: MS	TestCode: 6010_TC	Units: mg/L	Prep Date: 11/18/2015	RunNo: 104257						
Client ID: ZZZZZZ	Batch ID: 54099	TestNo: EPA 1311/ 60 EPA 3010A		Analysis Date: 11/19/2015	SeqNo: 2143596						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.346	0.050	0.5000	0.1484	39.5	75	125				S

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



ASSET LABORATORIES
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Glen Gesmundo

From: Luann Beadle [beadle@geoconinc.com]
Sent: Monday, November 16, 2015 10:28 AM
To: reports.lv@assetlaboratories.com
Subject: RE: ALA-780, E8721-02-42 (ASSET Labs No.N017369)

Hi Glen,

Please run TCLP lead on:

B7-0
B6-0
B5-0
B4-0
B9-0

All on a regular TAT.

Thank you, and I hope you have a good week.
Luann

From: reports.lv@assetlaboratories.com [<mailto:reports.lv@assetlaboratories.com>]
Sent: Sunday, November 15, 2015 6:23 AM
To: Luann Beadle
Cc: Rick Day
Subject: RE: ALA-780, E8721-02-42 (ASSET Labs No.N017369)

Enclosed is an addendum report for the above project.

Thanks,
Glen

From: reports.lv@assetlaboratories.com [<mailto:reports.lv@assetlaboratories.com>]
Sent: Friday, October 30, 2015 3:46 PM
To: 'Luann Beadle'

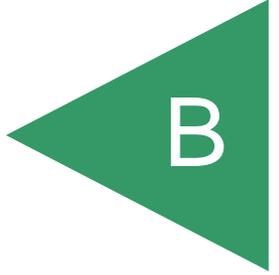


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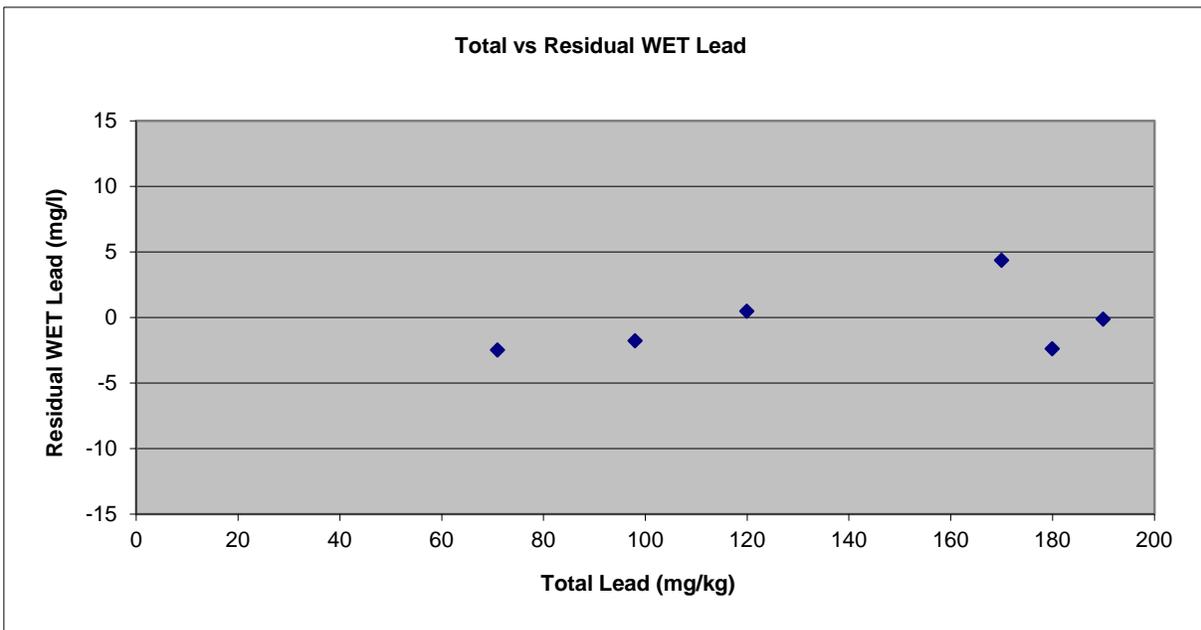
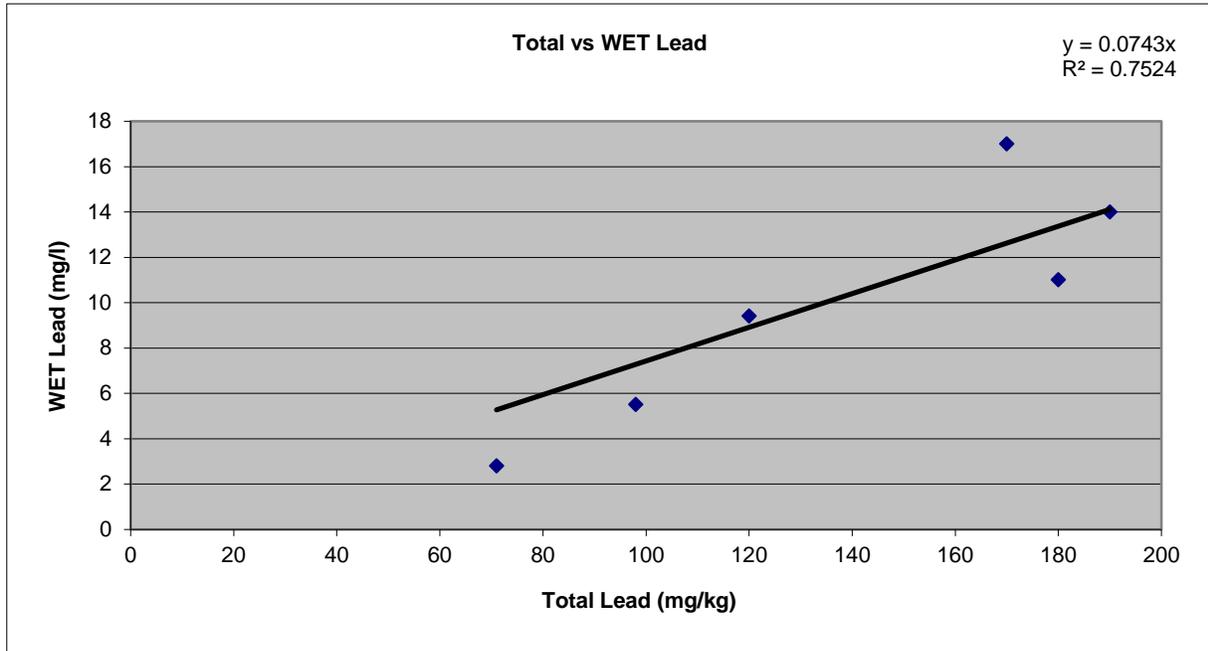
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APPENDIX



Sample ID	Sample Depth (feet)	Total Lead (mg/kg)	WET Lead (mg/l)	Residual WET Lead (mg/l)	Squared Residual WET Lead (mg/l)
B4-0	0 to 0.5	190	14	-0.12	0.01
B6-0	0 to 0.5	120	9.4	0.48	0.23
B7-0	0 to 0.5	98	5.5	-1.78	3.18
B5-0	0 to 0.5	180	11	-2.38	5.64
B8-0	0 to 0.5	71	2.8	-2.48	6.13
B9-0	0 to 0.5	170	17	4.37	19.08



Pb - 0 to 0.5

Total Number of Observations	10
Number of Distinct Observations	10
Number of Missing Observations	0
Mean	86.8
Median	84.5
Std. Error of Mean	23.99
Skewness	0.198
SD of logged Data	2.041
Minimum	0.5
Maximum	190
SD	75.86
Coefficient of Variation	0.874
Mean of logged Data	3.512
90% Standard Bootstrap UCL	116
95% Standard Bootstrap UCL	124

Pb - 1 to 1.5

Total Number of Observations	10
Number of Distinct Observations	3
Number of Missing Observations	0
Mean	2.16
Median	2.5
Std. Error of Mean	0.231
Skewness	-1.941
SD of logged Data	0.545
Minimum	0.5
Maximum	2.5
SD	0.731
Coefficient of Variation	0.338
Mean of logged Data	0.673
90% Standard Bootstrap UCL	N/A
95% Standard Bootstrap UCL	N/A

Pb - 2 to 2.5

Total Number of Observations	10
Number of Distinct Observations	3
Number of Missing Observations	0
Mean	2.43
Median	2.5
Std. Error of Mean	0.0597
Skewness	-3.014
SD of logged Data	0.0863
Minimum	1.9
Maximum	2.5
SD	0.189
Coefficient of Variation	0.0777
Mean of logged Data	0.885
90% Standard Bootstrap UCL	N/A
95% Standard Bootstrap UCL	N/A

Pb - 3 to 3.5

Total Number of Observations	10
Number of Distinct Observations	3
Number of Missing Observations	0
Mean	2.85
Median	2.5
Std. Error of Mean	0.243
Skewness	2.101
SD of logged Data	0.227
Minimum	2.5
Maximum	4.7
SD	0.768
Coefficient of Variation	0.269
Mean of logged Data	1.021
90% Standard Bootstrap UCL	N/A
95% Standard Bootstrap UCL	N/A

Pb -Total (0 to 3.5)

Total Number of Observations	40
Number of Distinct Observations	16
Number of Missing Observations	0
Mean	23.56
Median	2.5
Std. Error of Mean	8.208
Skewness	2.449
SD of logged Data	1.553
Minimum	0.5
Maximum	190
SD	51.91
Coefficient of Variation	2.204
Mean of logged Data	1.523
90% Standard Bootstrap UCL	33.8
95% Standard Bootstrap UCL	36.9

Arsenic

Total Number of Observations	8
Number of Distinct Observations	8
Number of Missing Observations	0
Mean	4.288
Median	4.1
Std. Error of Mean	0.808
Skewness	-0.0474
SD of logged Data	0.853
Minimum	0.5
Maximum	7.5
SD	2.286
Coefficient of Variation	0.533
Mean of logged Data	1.238
95% Standard Bootstrap UCL	5.55