FOR CONTRACT NO.: 03-3E130**4**

INFORMATION HANDOUT

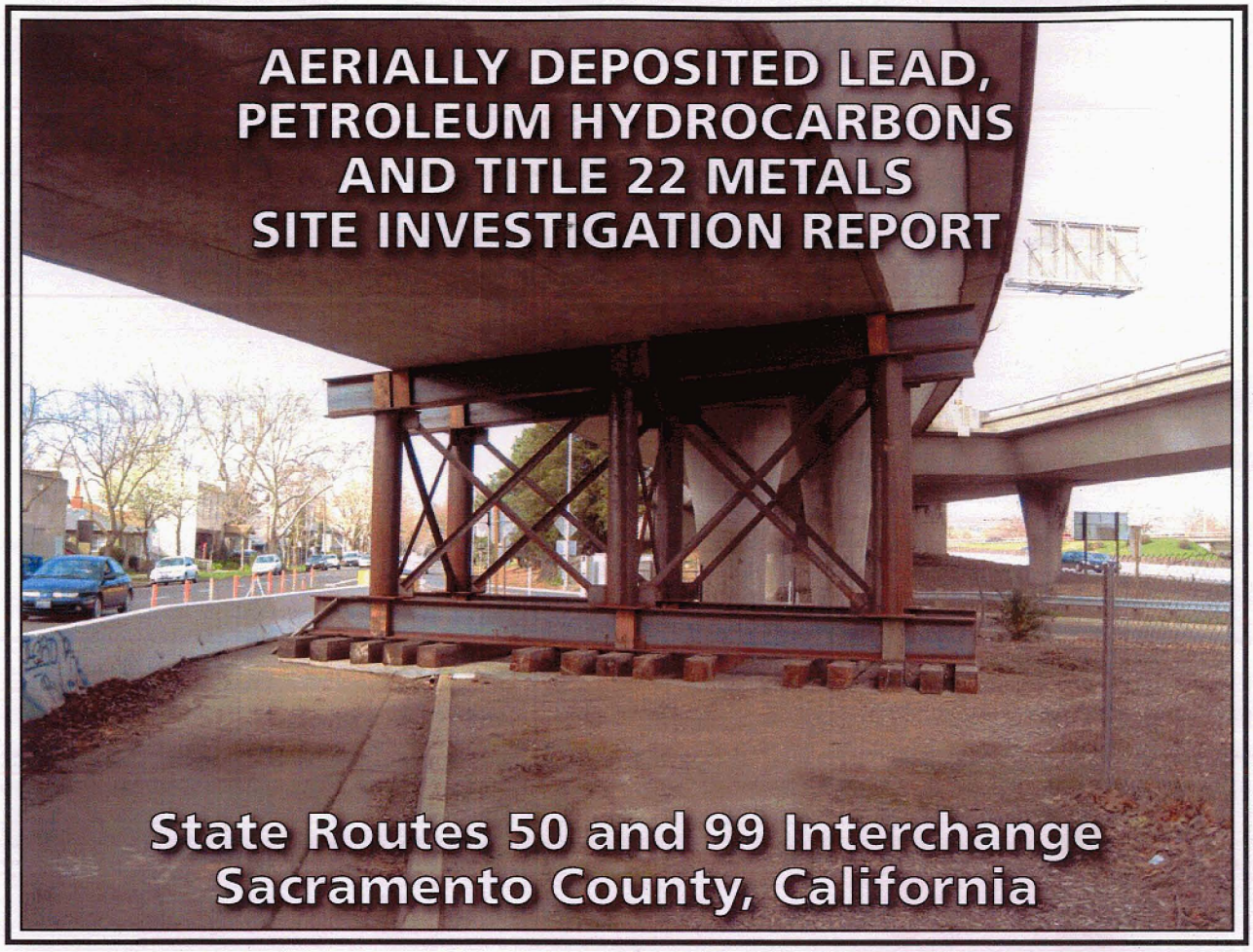
MATERIALS INFORMATION

AERIALLY DEPOSITED LEAD, PETROLEUM HYDROCARBONS AND TITLE 22 METALS
SITE INVESTIGATION REPORT

FOUNDATION RECOMMENDATION

FOUNDATION REVIEW

ROUTE: 03-SAC-50-L2.3



AERIALLY DEPOSITED LEAD, PETROLEUM HYDROCARBONS AND TITLE 22 METALS SITE INVESTIGATION REPORT

State Routes 50 and 99 Interchange
Sacramento County, California

PREPARED FOR:

CALIFORNIA DEPARTMENT OF TRANSPORTATION – DISTRICT 3
ENVIRONMENTAL ENGINEERING OFFICE
703 B STREET, P.O. BOX 911
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GEOCON PROJECT NO. S9300-06-110
TASK ORDER NO. 110, EA NO. 03-3E1301

FEBRUARY 2010

GEOCON
CONSULTANTS, INC.
GEOTECHNICAL ■ ENVIRONMENTAL ■ MATERIALS

Project No. S9300-06-110
February 23, 2010

Mr. Rajive Chadha
California Department of Transportation - District 3
Environmental Engineering Office
703 B Street, Post Office Box 911
Marysville, California 95901

Subject: STATE ROUTES 50 AND 99 INTERCHANGE
SACRAMENTO COUNTY, CALIFORNIA
CONTRACT NO. 03A1368, TASK ORDER NO. 110, EA 03-3E1301
AERIALLY DEPOSITED LEAD, PETROLEUM HYDROCARBONS AND
TITLE 22 METALS SITE INVESTIGATION REPORT

Dear Mr. Chadha:

In accordance with California Department of Transportation (Caltrans) Contract No. 03A1368, Task Order Number (TO) No. 110, and EA 03-3E1301, we have performed environmental engineering services at the project site. The Site consists of Caltrans right-of-way planned for bridge foundation improvements at the State Routes 50 and 99 interchange in Sacramento County, California. The accompanying report summarizes the services performed including the advancement of four direct-push borings for soil sampling for aerially deposited lead, petroleum hydrocarbons and Title 22 metals testing.

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.

Please contact us if there are any questions concerning the contents of this report or if we may be of further service.

Sincerely,

GEOCON CONSULTANTS, INC.

Gemma G. Reblando
Project Geologist

John E. Juhrend, PE, CEG
Project Manager

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(5 + 3 CD) Addressee

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AERIALLY DEPOSITED LEAD, PETROLEUM HYDROCARBONS AND TITLE 22 METALS SITE INVESTIGATION REPORT

1.0 INTRODUCTION

This Aerially Deposited Lead (ADL), Petroleum Hydrocarbons and Title 22 Metals Site Investigation report for the State Routes 50 and 99 (SR-50/99) Interchange project was prepared by Geocon Consultants, Inc. under California Department of Transportation (Caltrans) Contract No. 03A1368, Task Order (TO) No. 110 and EA 03-3E1301.

1.1 Project Description and Proposed Improvements

The project area consists of the shoulder of the SR-50/99 interchange from eastbound SR-50 to southbound SR-99 (the Site) in the Oak Park area of Sacramento, California. Caltrans proposes to install a spread footing to provide sufficient bridge support at the southwest quadrant of the SR-50/99 interchange. Prior to construction, Caltrans needs to determine if ADL, petroleum hydrocarbons, or Title 22 metals-impacted soil is present within the project limits. The approximate project location is depicted on the Vicinity Map, Figure 1 and Site Plan, Figure 2.

1.2 General Objectives

The purpose of the scope of services outlined in TO No. 110 was to evaluate whether impacts due to aerial lead deposition from motor vehicle exhaust exist in the surface and near surface soils within the project boundaries, and to evaluate the potential presence of petroleum hydrocarbons and Title 22 metals in soil within the project boundaries. The investigative results will be used by Caltrans for preliminary project scoping and to inform the construction contractor(s) if lead and/or Title 22 metals-impacted soil and petroleum hydrocarbon-impacted soil are present within the project boundaries for construction worker health and safety, and soil management and disposal evaluation purposes.

2.0 BACKGROUND

2.1 Potential Lead Soil Impacts

Ongoing testing by Caltrans throughout California has indicated that ADL exists along major freeway routes due to emissions from vehicles powered by leaded gasoline.

2.2 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 total metal content exceeds the respective Total Threshold Limit Concentration (TTLC); or 2) the soluble metal content exceeds the respective Soluble Threshold Limit Concentration (STLC) based on the standard Waste Extraction Test (WET). A waste may have the potential of exceeding the STLC when the waste's total metal content is greater than or equal to ten times the respective STLC value, since the WET uses a 1:10 dilution ratio. Hence, when a total metal is detected at a concentration greater than or equal to ten times the respective STLC, and assuming that 100 percent of the total metals are soluble, soluble metal analysis is required. A material is classified as RCRA hazardous, or Federal hazardous, when the soluble metal content exceeds the Federal regulatory level based on the Toxicity Characteristic Leaching Procedure (TCLP). The TTLC value for lead is 1,000 milligrams per kilogram (mg/kg). The STLC and TCLP values for lead are both 5.0 milligrams per liter (mg/l).

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., 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 corrosivity. Waste that is classified as either California hazardous or RCRA hazardous requires management as a hazardous waste.

The Department of Toxic Substances Control (DTSC) regulates and interprets hazardous waste laws in California. DTSC generally considers excavated or transported materials that exhibit "hazardous waste" characteristics to be a "waste" requiring proper management, treatment and disposal. Soil that contains lead above hazardous waste thresholds and is left in-place would not be necessarily classified by DTSC as a "waste." The DTSC has provided site-specific determinations that "movement of wastes within an area of contamination does not constitute "land disposal" and, thus, does not trigger hazardous waste disposal requirements." Therefore, lead-impacted soil that is scarified in-place, moisture-conditioned, and recompacted during roadway improvement activities might not be considered a "waste." DTSC should be consulted to confirm waste classification. It is noted that in addition to DTSC regulations, health and safety requirements and other local agency requirements may also apply to the handling and disposal of lead-impacted soil.

3.0 SCOPE OF SERVICES

The following scope of services was performed as requested by Caltrans in TO No. 110.

3.1 Pre-field Activities

- Conducted a pre-work site visit on December 22, 2009, to discuss the TO scope of services. Caltrans representative Rajive Chadha and Geocon representative Julio Esquivel were present during the site visit. The purpose of the site visit was to identify and observe the project

boundaries and conditions. The project limits were further outlined in white paint for subsequent utility clearance.

- Utilized a *Health and Safety Plan* dated June 5, 2009, to provide guidelines on the use of personal protective equipment and the health and safety procedures implemented during the field activities.
- Contacted the local public utilities via Underground Service Alert on December 24, 2009, and January 15, 2010 (Ticket No. 393860) to attempt to delineate subsurface public utilities and conduits in proximity to the proposed boring locations.
- Retained the services of Advanced Technology Laboratories (ATL), a Caltrans-approved and California-certified analytical laboratory, to perform the chemical analysis of soil samples.

3.2 Field Activities

The field activities consisted of collecting soil samples along the unpaved shoulder of the SR-50/99 interchange at Post Mile 2.33. On January 26, 2010, 14 soil samples were collected for ADL, petroleum hydrocarbons and Title 22 metals analyses from four direct-push borings (B1 through B4) at the Caltrans designated soil sampling locations.

4.0 INVESTIGATIVE METHODS

4.1 Boring Sample Location Rationale

Four 9-foot-deep soil borings were advanced in the vicinity of the proposed bridge support footing installation. Boring B1 was advanced on the west side of the existing concrete foundation. Boring B2 was advanced on the northwestern corner of the concrete foundation. Borings B3 and B4 were advanced on the north and east side, respectively, of the existing concrete foundation. The approximate soil boring locations are depicted on Figure 2.

The coordinates of each boring location were determined using a differential global positioning system (GPS). The GPS was utilized during the field activities to locate the horizontal position of the boring locations with an error of no more than 3.3 feet. The latitude and longitude of the boring locations are summarized in Table 1.

4.2 Soil Sampling Procedures

A total of 16 soil samples for ADL testing and 14 soil samples for petroleum hydrocarbons testing were collected from four direct-push borings excavated at the Site. The borings were excavated to the maximum sampling depth of 9.0 feet. Soil samples collected at approximate depths of 0.0 to 0.5 foot, 2.5 to 3.0 feet, 4.5 to 5.0 feet and 6.5 to 7.0 feet were composited for ADL testing. Soil samples were collected at approximate depths of 0.5 to 1.0 foot, 1.5 to 2.0 feet, 2.5 to 3.0 feet, 3.5 to 4.0 feet, 4.5 to 5.0 feet, 5.5 to 6.0 feet, 6.5 to 7.0 feet and/or 8.5 to 9.0 feet for petroleum hydrocarbons and Title 22 metals analyses. Soil samples were collected in cellulose thermoplastic (acetate) liners driven by the

direct-push rig. During the advancement of each boring, a continuous soil core was collected in cellulose thermoplastic (acetate) liners fitted inside the push rods. The top 6 inches of each one-foot sample interval was transferred to Ziploc® re-sealable plastic bags. The bottom 6 inches of each one-foot sample was retained in sample tubes, capped with Teflon sheets and plastic end caps. The samples were then labeled, placed in a chilled cooler and submitted to ATL under standard chain-of-custody (COC) documentation.

Disturbed soil samples from the soil core were retained in re-sealable plastic bags for field screening with a photo-ionization detector (PID) to qualitatively assess the presence of volatile organic compounds. The PID readings were recorded on the borings logs, which are presented in Appendix A. The soil cores were logged by the field geologist utilizing the Unified Soil Classification System (USCS) under the direction of a California Professional Geologist.

The borings were backfilled with the soil cuttings. The decontamination water was discharged to the ground surface away from surface water bodies or storm drain inlets.

4.3 Quality Assurance/Quality Control

QA/QC procedures were performed during the field sampling activities. These procedures included decontamination of sampling equipment before each boring was advanced and providing COC documentation for each sample submitted to the laboratory. The soil sampling equipment was cleansed between each boring by washing the equipment with an Alconox™ solution followed by a double rinse with deionized water. The field sampling activities were performed under the supervision of Geocon's project manager.

4.4 Laboratory Analyses

4.4.1 ADL

The ADL soil samples collected within the project area were submitted to ATL for the following analyses under expedited five-day turn-around-time (TAT). The laboratory was instructed to homogenize the ADL soil samples prior to analysis in accordance with contract requirements.

- Four composite soil samples were analyzed for total lead following United States Environmental Protection Agency (EPA) Test Method 6010B.

4.4.2 Petroleum Hydrocarbons and Title 22 Metals

Selected soil samples were analyzed for the following analyses under expedited five-working-day TAT.

- Eight soil samples were analyzed for gasoline package including gasoline-range organics (GRO) following EPA Test Method 8015B(M); benzene, toluene, ethylbenzene, total xylenes (BTEX), and methyl tert-butyl ether (MTBE) following EPA Test Method 8021B;
- Eight soil samples were analyzed for diesel-range organics (DRO) and motor oil-range organics (ORO) following EPA Test Method 8015B(M);
- Four soil samples were analyzed for volatile organic compounds (VOCs) following EPA Test Method 8260B;
- Four soil samples were analyzed for semi-volatile organic compounds (SVOCs) following EPA Test Method 8270C; and
- Four soil samples were analyzed for Title 22 metals following EPA Test Methods 6010B and 7471A (mercury).

4.5 Laboratory QA/QC Methods

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

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

Prior to submitting the soil samples to the laboratory, the COC documentation was reviewed for accuracy and completeness. Reproductions of the laboratory reports and COC documentation are presented in Appendix B.

5.0 FIELD OBSERVATIONS AND INVESTIGATIVE RESULTS

5.1 Soil Conditions

Fill materials encountered in the borings generally consist of sandy, clayey silt and silty clay to the maximum sampling depth of approximately 9.0 feet. We did not observe elevated PID readings in the soil samples collected, which ranged from 0.8 to 2.1 parts per million. Staining, odor, debris or other evidence of contamination were not observed in the vicinity of the boring locations. Groundwater was not encountered in the soil borings.

5.2 Laboratory Analytical Results

The laboratory analytical results are discussed below. The ADL analytical results are summarized on Table 1. The soil analytical results for GRO, DRO, ORO, BTEX, MTBE, VOCs and SVOCs are

summarized on Table 2. The soil analytical results for Title 22 metals analyses are summarized on Table 3. The laboratory reports and COC documentation are presented in Appendix B.

5.2.1 ADL

Total lead was detected in each of the four composite soil samples analyzed at concentrations ranging from 6.4 to 41 mg/kg, less than 50 mg/kg (ten times the STLC value for lead of 5.0 mg/l).

5.2.2 Petroleum Hydrocarbons and Title 22 Metals

GRO was not detected in the soil samples submitted for analysis. DRO was detected in four of the eight soil samples analyzed at concentrations ranging from 1.0 to 44 mg/kg. ORO was detected in two of the eight soil samples analyzed at concentrations of 5.3 mg/kg (B2-2.5) and 330 mg/kg (B1-1.5).

BTEX, MTBE, VOCs and SVOCs were not detected in the soil samples submitted for analysis.

Four soil samples were analyzed for Title 22 metals. The following metals were reported at concentrations exceeding the laboratory reporting limits:

- Arsenic ranging from 2.9 to 6.1 mg/kg;
- Barium ranging from 89 to 130 mg/kg;
- Chromium ranging from 24 to 36 mg/kg;
- Cobalt ranging from 8.6 to 11 mg/kg;
- Copper ranging from 23 to 64 mg/kg;
- Lead ranging from 5.3 to 29 mg/kg;
- Nickel ranging from 26 to 43 mg/kg;
- Vanadium ranging from 30 to 49 mg/kg;
- Zinc ranging from 29 to 35 mg/kg; and
- Mercury at 0.19 and 0.33 mg/kg.

None of the reported metals concentrations exceeded ten times their respective STLC values and appear to be within the range for naturally occurring background concentrations.

5.2.3 Laboratory QA/QC

We reviewed the laboratory QA/QC provided with the laboratory reports. The data show acceptable surrogate recoveries and non-detect results for the method blanks. The relative percent difference (RPD) for EPA Method 6010 is outside criteria for sample 109843-011ADUP. However, the laboratory control sample (LCS) validated the analytical batch. Percent recoveries for matrix spike (MS) and/or

MS duplicate for EPA Method 8270 are outside recovery criteria for sample 109843-008AMSD; however, the analytical batch was validated by the LCS. The data showed acceptable recoveries and RPDs for the rest of the MS and MSDs. Based on this limited data review, no additional qualifications of the data are necessary, and the data are of sufficient quality for the purposes of this report.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 ADL

Soil materials excavated to the maximum sampling depth of 9.0 feet within the project area would not be classified as a California hazardous waste since the total lead concentrations are less than 50 mg/kg (ten times the STLC value for lead of 5.0 mg/l). Consequently, the top 9.0 feet of excavated soil could be reused or disposed of as non-hazardous soil with respect to lead content.

6.2 Petroleum Hydrocarbons and Title 22 Metals in Soil

Gasoline-range petroleum hydrocarbons were not detected in the soil samples collected at the Site. Diesel-range petroleum hydrocarbons were reported in four of the eight soil samples obtained from the borings at concentrations less than 100 mg/kg. One soil sample (B1-1.5) contained motor oil at a concentration of 330 mg/kg. This sample was obtained from a depth of 1.5 feet from boring B1 located on the west side of the existing concrete foundation. It is our understanding that soil will be excavated in the vicinity of boring B1 where the elevated motor oil concentration was reported, and soil stockpiled and resampled to confirm waste classification in accordance with specific disposal facility acceptance criteria. Since only low level petroleum hydrocarbons were reported for soil samples collected from borings B2 through B4, soil excavation would not be necessary at locations farther north or east of these borings. Obvious indicators of petroleum hydrocarbon impacts (i.e. staining, odors, elevated PID readings) were not observed during the field sampling activities in the vicinity of the boring locations. If obviously petroleum hydrocarbon-impacted soil conditions are encountered during onsite construction excavations, these materials should be isolated, stockpiled and characterized to determine appropriate soil disposal options.

None of the Title 22 metals were reported for the soil samples at concentrations exceeding the respective TTLC values and ten times the respective STLC values, and they are within the range of naturally occurring background levels; therefore, special soil disposal requirements will not be required based on metals content.

6.3 Worker Protection

Per Caltrans' requirements, the contractor(s) should prepare a project-specific Lead Compliance Plan (CCR Title 8, Section 1532.1, the "Lead in Construction" standard) to minimize worker exposure to lead-impacted 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 lead-impacted soil.

7.0 REPORT LIMITATIONS

This report has been prepared exclusively for Caltrans. 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. We 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.

N

0 1/2

Scale in Miles

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State Route 50 and 99 Interchange

Sacramento, California

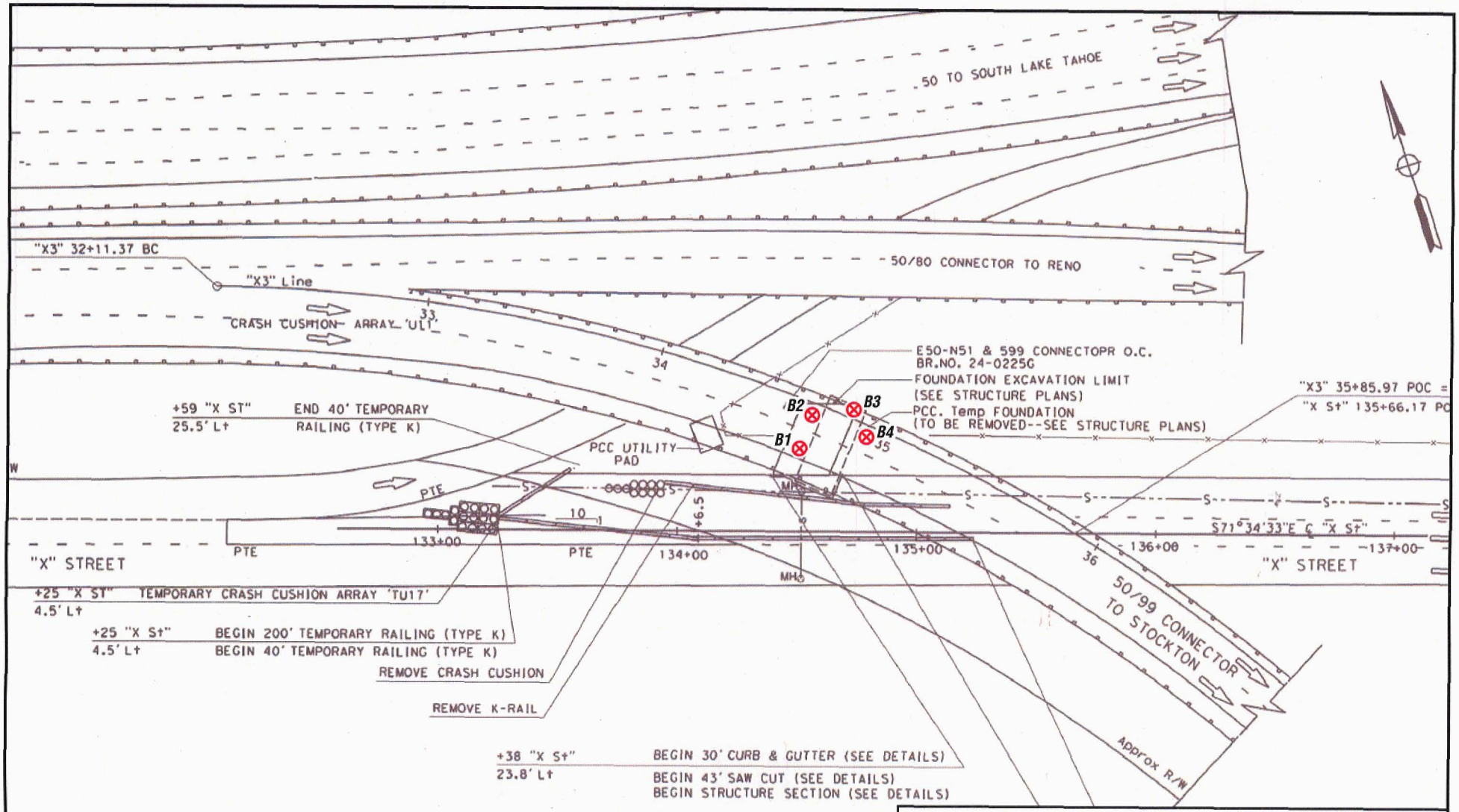
VICINITY MAP

GEOCON Proj. No. S9300-06-110

Task Order No. 110

February 2010

Figure 1



LEGEND:

B1 ⊗ Approximate Boring Location

0 60
Scale in Feet

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State Route 50 and 99 Interchange	
Sacramento, California	**SITE PLAN**
GEOCON Proj. No. S9300-06-110	
Task Order No. 110	February 2010 — Figure 2

TABLE 1
SUMMARY OF SOIL BORING COORDINATES AND LEAD ANALYTICAL RESULTS
STATE ROUTES 50 AND 99 INTERCHANGE
SACRAMENTO, CALIFORNIA

BORING ID	SAMPLE DATE	LATITUDE	LONGITUDE	TOTAL LEAD (mg/kg)
Composite B1-0.0, 2.5	1/26/2010	38.5585432	-121.4758685	7.2
Composite B2-0.0, 4.5	1/26/2010	38.55861719	-121.4757223	41
Composite B3-0.0, 2.5, 4.5, 6.5	1/26/2010	38.55860473	-121.4757155	27
Composite B4-0.0, 4.5	1/26/2010	38.55851831	-121.475605	6.4

Notes:

Composite B1-0.0, 2.5

Composite sample depth from 0.0 to 0.5 foot and 2.5 to 3.0 feet

Boring identification

mg/kg = Milligrams per kilogram

TABLE 2
SUMMARY OF SOIL ANALYTICAL RESULTS - GRO, DRO, ORO, BTEX, MTBE, VOCs AND SVOC
STATE ROUTES 50 AND 99 INTERCHANGE
SACRAMENTO, CALIFORNIA

SAMPLE ID	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	BTEX (µg/kg)	MTBE (µg/kg)	VOCs (µg/kg)	SVOCs (µg/kg)
B1-1.5	<1.0	44	330	ND	<5.0	---	---
B1-4.5	<1.0	<1.0	<1.0	ND	<5.0	---	---
B1-6.5	---	---	---	ND	---	ND	ND
B2-1.5	---	---	---	ND	---	ND	ND
B2-2.5	<1.0	2.0	5.3	ND	<5.0	---	---
B2-6.5	<1.0	<1.0	<1.0	ND	<5.0	---	---
B3-3.5	---	---	---	ND	---	ND	ND
B3-5.5	<1.0	<1.0	<1.0	ND	<5.0	---	---
B3-8.5	<1.0	1.4	<1.0	ND	<5.0	---	---
B4-2.5	<1.0	<1.0	<1.0	ND	<5.0	---	---
B4-5.5	---	---	---	ND	---	ND	ND
B4-8.5	<1.0	1.0	<1.0	ND	<5.0	---	---

Notes: B1-1.5

Top of sample depth interval in feet below ground surface
Boring identification

GRO = Gasoline-range organics by Environmental Protection Agency (EPA) Test Method 8015B(M)
DRO = Diesel-range organics by EPA Test Method 8015B(M)
ORO = Motor oil-range organics by EPA Test Method 8015B(M)
BTEX = Benzene, toluene, ethylbenzene and total xylenes by EPA Test Method 8021B
MTBE = Methyl tert-butyl ether by EPA Test Method 8021B
VOCs = Volatile organic compounds by EPA Test Method 8260B
SVOCs = Semi-volatile organic compounds by EPA Test Method 8270C
mg/kg = Milligrams per kilogram
µg/kg = Micrograms per kilogram
< = Less than the laboratory reporting limits
ND = Not detected at concentrations exceeding the respective laboratory reporting limits
--- = Not analyzed

TABLE 3
SUMMARY OF SOIL ANALYTICAL RESULTS - TITLE 22 METALS
STATE ROUTES 50 AND 99 INTERCHANGE
SACRAMENTO, CALIFORNIA

Sample ID	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
	Results Reported as mg/kg																
B1-1.5	<2.0	2.9	98	<1.0	<1.0	31	10	64	29	<1.0	37	<1.0	<1.0	<1.0	36	30	0.33
B2-8.5	<2.0	6.1	130	<1.0	<1.0	36	11	27	6.4	<1.0	43	<1.0	<1.0	<1.0	49	35	<0.10
B3-5.5	<2.0	4.4	110	<1.0	<1.0	28	9.2	23	5.3	<1.0	40	<1.0	<1.0	<1.0	34	29	<0.10
B4-0.5	<2.0	3.7	89	<1.0	<1.0	24	8.6	48	29	<1.0	26	<1.0	<1.0	<1.0	30	34	0.19
TTLC	500	500	10,000	75	100	2,500	8,000	2,500	1,000	3,500	2,000	100	500	700	2,400	5,000	20
10 x STLC	150	50	1,000	7.5	10	50	800	250	50	3,500	200	10	50	70	240	2,500	2.0
Published Background [1]	0.6	3.5	509	1.28	0.36	122	14.9	28.7	23.9	1.3	57	0.058	0.8	0.56	112	149	0.26

Notes: B1-1.5
- Top of sample depth in feet below ground surface
- Boring identification

mg/kg = Milligrams per kilogram
< = Less than the laboratory reporting limits
TTLC = Total Threshold Limit Concentrations
STLC = Soluble Threshold Limit Concentrations
[1]Background: Mean Concentration - Background Concentrations of Trace and Major Elements in California Soils, U.C. Calif., March 1996

APPENDIX A

PROJECT NO. **S9300-06-110**

BORING NO. B1

DATE DRILLED 1/26/10 WATER LEVEL (ATD) _____

EQUIPMENT GEOPROBE DRILLER GEOCON

DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	SOIL DESCRIPTION	SOIL (USCS)	HEADSPACE (PPM)
		B1-0.0 0930		**FILL** Stiff, moist, moderate yellowish brown to dark yellowish brown, Clayey, Sandy SILT		0.8
1						
		B1-1.5 0930		- moderate yellowish brown		1.1
2				Medium stiff, moist, dark yellowish brown, Clayey, Sandy SILT		
		B1-2.5 0935				0.9
3						
				- soft		1.3
4						
		B1-4.5 0940				1.4
5						
						1.8
6				Soft, moist, pale yellowish brown, Sandy, Clayey SILT		
		B1-6.5 1000				1.1
7						
				Medium stiff, moist, pale yellowish brown to moderate yellowish brown, Sandy, Clayey SILT		1.1
8				Very stiff, moist, dark yellowish brown, Sandy, Clayey SILT		
						1.2
9				BORING TERMINATED AT 9 FEET		

ENV_NO_WELL TO #110 B1 TO B4.GPJ 02/05/10

BORING ELEVATION:

ENGINEER/GEOLOGIST: **RICH BROWN**

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. **S9300-06-110**

BORING NO. B2

DATE DRILLED 1/26/10 WATER LEVEL (ATD) _____

EQUIPMENT GEOPROBE DRILLER GEOCON

DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	SOIL DESCRIPTION	SOIL (USCS)	HEADSPACE (PPM)
		B2-0.0 1020		**FILL** Medium dense, moist, dusky yellowish brown, Silty SAND		1.0
1						
		B2-1.5 1020				2.0
2				Dense, moist, moderate yellowish brown, Silty CLAY		
		B2-2.5 1025				1.7
3				Loose, moist, moderate brown, Silty fine SAND		
						1.9
4						
		B2-4.5 1040				0.8
5				Soft, moist, pale yellowish brown, Sandy, Clayey SILT		
						1.1
6						
		B2-6.5 1050				1.1
7						
						1.3
8				Very stiff, moist, moderate yellowish brown, Silty, Sandy CLAY		
		B2-8.5 1055				1.0
9				BORING TERMINATED AT 9 FEET		

ENV_NO_WELL TO #110 B1 TO B4.GPJ 02/05/10

BORING ELEVATION:

ENGINEER/GEOLOGIST: **RICH BROWN**

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. S9300-06-110

BORING NO. B3

DATE DRILLED 1/26/10 WATER LEVEL (ATD) _____

EQUIPMENT GEOPROBE DRILLER GEOCON

DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	SOIL DESCRIPTION	SOIL (USCS)	HEADSPACE (PPM)
		B3-0.0 1105		**FILL** Medium dense, moist, dusky yellowish brown, Silty fine SAND		1.3
1						
						1.8
2				Medium stiff, moist, dark yellowish brown, Clayey, Sandy SILT		
		B3-2.5 1105				2.1
3						
		B3-3.5 1115				1.5
4				Soft, moist, pale yellowish brown, Sandy, Clayey SILT		
		B3-4.5 1120				1.8
5						
		B3-5.5 1125				1.5
6				Soft, moist, pale yellowish brown, Sandy, Clayey SILT		
		B3-6.5 1130				1.4
7						
						1.4
8				Very stiff, moist, moderate yellowish brown, Silty, Sandy CLAY		
		B3-8.5 1135				0.9
9				BORING TERMINATED AT 9 FEET		

ENV_NO_WELL TO #110 B1 TO B4.GPJ 02/05/10

BORING ELEVATION:

ENGINEER/GEOLOGIST: **RICH BROWN**

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. **S9300-06-110**

BORING NO. B4

DATE DRILLED 1/26/10 WATER LEVEL (ATD) _____

EQUIPMENT GEOPROBE DRILLER GEOCON

DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	SOIL DESCRIPTION	SOIL (USCS)	HEADSPACE (PPM)
		B4-0.0 1140		**FILL** Stiff, moist, moderate yellowish brown, Clayey, Sandy SILT		
		B4-0.5 1140				1.0
1						
						0.8
2				- medium stiff		
		B4-2.5 1145				0.9
3						
						0.9
4				- soft		
		B4-4.5 1150				1.1
5				Soft, moist, pale yellowish brown, Sandy, Clayey SILT		
		B4-5.5 1155				0.9
6						
		B4-6.5 1205				1.3
7						
				- medium stiff		2.1
8				Very stiff, moist, dark yellowish brown, Sandy, Clayey SILT		
		B4-8.5 1215				1.6
9				BORING TERMINATED AT 9 FEET		

ENV_NO_WELL TO #110 B1 TO B4.GPJ 02/05/10

BORING ELEVATION:

ENGINEER/GEOLOGIST: **RICH BROWN**

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

APPENDIX B

February 03, 2010

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

Workorder No.: 109843

Rebecca Silva
Geocon Consultants, Inc.
3160 Gold Valley Drive, Suite 800
Rancho Cordova, CA 95742

TEL: (916) 852-9118
FAX: (916) 852-9132

RE: Hwy 50-99 Interchange, S9300-06-110

Attention: Rebecca Silva

Enclosed are the results for sample(s) received on January 27, 2010 by Advanced Technology Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,

Eddie F. Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories.

Advanced Technology Laboratories
3275 Walnut Avenue Signal Hill, CA 90755 Tel: 562 989-4045 Fax: 562 989-4040

CLIENT: Geocon Consultants, Inc.
Project: Hwy 50-99 Interchange, S9300-06-110
Lab Order: 109843

CASE NARRATIVE

Analytical Comments for Method 6010

RPD for Duplicate (DUP) is outside criteria for sample 109843-011ADUP; however, the Laboratory Control Sample (LCS) validated the analytical batch.

Analytical Comments for Method 8015 (DRO/ORO)

Dilution was necessary for sample 109843-001A, due to sample matrix.

Surrogate recovery was diluted out for sample 109843-001A.

Analytical Comments for Method 8270

Matrix Spike (MS) and /or Matrix Spike Duplicate (MSD) are/is outside recovery criteria for sample 109843-008AMSD; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

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

Advanced Technology Laboratories

Date: 2/3/2010

ANALYTICAL RESULTS

LEAD BY ICP
EPA 6010B

CLIENT:	Geocon Consultants, Inc.	**Lab Order:**	109843
Project:	Hwy 50-99 Interchange, S9300-06-110	**Date Received**	1/27/2010 6:00:45 PM
Project No:		**Matrix:**	Soil
Analyte:	Lead	**Analyst:**	CL

Laboratory ID	Client Sample ID	Results	Units	QC Batch	PQL	DF	Date Collected	Date Analyzed
109843-026A	COMPOSITE B1-0.0,2.5	7.2	mg/Kg	61532	5.0	1	1/26/2010	2/2/2010
109843-027A	COMPOSITE B2-0.0,4.5	41	mg/Kg	61532	5.0	1	1/26/2010	2/2/2010
109843-028A	COMPOSITE B3-0.0,2.5,4.5,6.5	27	mg/Kg	61532	5.0	1	1/26/2010	2/2/2010
109843-029A	COMPOSITE B4-0.0,4.5	6.4	mg/Kg	61532	5.0	1	1/26/2010	2/2/2010

Qualifiers:

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

Advanced Technology Laboratories

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

Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: *03-Feb-10*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B1-1.5
Lab Order:	109843	**Collection Date:**	1/26/2010 9:30:00 AM
Project:	Hwy 50-99 Interchange, S9300-06-110	**Matrix:**	SOIL
Lab ID:	109843-001A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS						
EPA 3050B				**EPA 6010B**		
RunID: ICP8_100202A	QC Batch: 61522			PrepDate:	2/2/2010	Analyst: **CL**
Antimony	ND	2.0		mg/Kg	1	2/2/2010 11:08 AM
Arsenic	2.9	1.0		mg/Kg	1	2/2/2010 11:08 AM
Barium	98	1.0		mg/Kg	1	2/2/2010 11:08 AM
Beryllium	ND	1.0		mg/Kg	1	2/2/2010 11:08 AM
Cadmium	ND	1.0		mg/Kg	1	2/2/2010 11:08 AM
Chromium	31	1.0		mg/Kg	1	2/2/2010 11:08 AM
Cobalt	10	1.0		mg/Kg	1	2/2/2010 11:08 AM
Copper	64	2.0		mg/Kg	1	2/2/2010 11:08 AM
Lead	29	1.0		mg/Kg	1	2/2/2010 11:08 AM
Molybdenum	ND	1.0		mg/Kg	1	2/2/2010 11:08 AM
Nickel	37	1.0		mg/Kg	1	2/2/2010 11:08 AM
Selenium	ND	1.0		mg/Kg	1	2/2/2010 11:08 AM
Silver	ND	1.0		mg/Kg	1	2/2/2010 11:08 AM
Thallium	ND	1.0		mg/Kg	1	2/2/2010 11:08 AM
Vanadium	36	1.0		mg/Kg	1	2/2/2010 11:08 AM
Zinc	30	1.0		mg/Kg	1	2/2/2010 11:08 AM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3550B				**EPA 8015B(M)**		
RunID: GC16_100202A	QC Batch: 61510			PrepDate:	2/1/2010	Analyst: **CBR**
DRO	44	10		mg/Kg	10	2/2/2010 11:59 AM
ORO	330	10		mg/Kg	10	2/2/2010 11:59 AM
Surr: p-Terphenyl	0	30-130	SDO	%REC	10	2/2/2010 11:59 AM
GASOLINE RANGE ORGANICS BY GC/FID						
EPA 8015B(M)						
RunID: GC2_100129A	QC Batch: E10VS028			PrepDate:		Analyst: **BD**
GRO	ND	1.0		mg/Kg	1	1/29/2010 01:51 PM
Surr: Bromofluorobenzene (FID)	95.8	59-145		%REC	1	1/29/2010 01:51 PM
VOLATILE ORGANIC COMPOUNDS BY GC/PID						
EPA 8021B						
RunID: GC2_100129A	QC Batch: E10VS028			PrepDate:		Analyst: **BD**
Benzene	ND	5.0		µg/Kg	1	1/29/2010 01:51 PM
Ethylbenzene	ND	5.0		µg/Kg	1	1/29/2010 01:51 PM
m,p-Xylene	ND	10		µg/Kg	1	1/29/2010 01:51 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		

Advanced Technology Laboratories

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Advanced Technology Laboratories

ANALYTICAL RESULTS

Print Date: *03-Feb-10*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B1-1.5
Lab Order:	109843	**Collection Date:**	1/26/2010 9:30:00 AM
Project:	Hwy 50-99 Interchange, S9300-06-110	**Matrix:**	SOIL
Lab ID:	109843-001A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/PID						
				EPA 8021B		
RunID: GC2_100129A	QC Batch:	E10VS028			PrepDate:	Analyst: **BD**
Methyl tert-butyl ether	ND	5.0		µg/Kg	1	1/29/2010 01:51 PM
o-Xylene	ND	5.0		µg/Kg	1	1/29/2010 01:51 PM
Toluene	ND	5.0		µg/Kg	1	1/29/2010 01:51 PM
Surr: Bromofluorobenzene (PID)	92.6	65-140		%REC	1	1/29/2010 01:51 PM
MERCURY BY COLD VAPOR TECHNIQUE						
				EPA 7471A		
RunID: AA1_100202A	QC Batch:	61523			PrepDate:	2/2/2010 Analyst: **IL**
Mercury	0.33	0.10		mg/Kg	1	2/2/2010 10:54 AM

Qualifiers:

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

Advanced Technology Laboratories

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Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: *03-Feb-10*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B1-4.5
Lab Order:	109843	**Collection Date:**	1/26/2010 9:40:00 AM
Project:	Hwy 50-99 Interchange, S9300-06-110	**Matrix:**	SOIL
Lab ID:	109843-002A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3550B				**EPA 8015B(M)**		
RunID: GC16_100202A	QC Batch: 61510			PrepDate: 2/1/2010		Analyst: **CBR**
DRO	ND	1.0		mg/Kg	1	2/2/2010 10:26 AM
ORO	ND	1.0		mg/Kg	1	2/2/2010 10:26 AM
Surr: p-Terphenyl	81.8	30-130		%REC	1	2/2/2010 10:26 AM
GASOLINE RANGE ORGANICS BY GC/FID						
				EPA 8015B(M)		
RunID: GC2_100129A	QC Batch: E10VS028			PrepDate:		Analyst: **BD**
GRO	ND	1.0		mg/Kg	1	1/29/2010 01:22 PM
Surr: Bromofluorobenzene (FID)	95.6	59-145		%REC	1	1/29/2010 01:22 PM
VOLATILE ORGANIC COMPOUNDS BY GC/PID						
				EPA 8021B		
RunID: GC2_100129A	QC Batch: E10VS028			PrepDate:		Analyst: **BD**
Benzene	ND	5.0		µg/Kg	1	1/29/2010 01:22 PM
Ethylbenzene	ND	5.0		µg/Kg	1	1/29/2010 01:22 PM
m,p-Xylene	ND	10		µg/Kg	1	1/29/2010 01:22 PM
Methyl tert-butyl ether	ND	5.0		µg/Kg	1	1/29/2010 01:22 PM
o-Xylene	ND	5.0		µg/Kg	1	1/29/2010 01:22 PM
Toluene	ND	5.0		µg/Kg	1	1/29/2010 01:22 PM
Surr: Bromofluorobenzene (PID)	92.4	65-140		%REC	1	1/29/2010 01:22 PM

Qualifiers:

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

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Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: *03-Feb-10*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B1-6.5
Lab Order:	109843	**Collection Date:**	1/26/2010 10:00:00 AM
Project:	Hwy 50-99 Interchange, S9300-06-110	**Matrix:**	SOIL
Lab ID:	109843-003A		

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS5_100129A QC Batch: T10VS009 PrepDate: Analyst: **HH**

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
1,1,1-Trichloroethane	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
1,1,2-Trichloroethane	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
1,1-Dichloroethane	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
1,1-Dichloroethene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
1,1-Dichloropropene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
1,2,3-Trichlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
1,2,3-Trichloropropane	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
1,2,4-Trichlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
1,2,4-Trimethylbenzene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
1,2-Dibromo-3-chloropropane	ND	10		µg/Kg	1	1/29/2010 02:21 PM
1,2-Dibromoethane	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
1,2-Dichlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
1,2-Dichloroethane	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
1,2-Dichloropropane	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
1,3,5-Trimethylbenzene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
1,3-Dichlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
1,3-Dichloropropane	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
1,4-Dichlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
2,2-Dichloropropane	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
2-Chlorotoluene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
4-Chlorotoluene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
4-Isopropyltoluene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Benzene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Bromobenzene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Bromodichloromethane	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Bromoform	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Bromomethane	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Carbon tetrachloride	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Chlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Chloroethane	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Chloroform	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Chloromethane	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
cis-1,2-Dichloroethene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM

Qualifiers:

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

Advanced Technology Laboratories

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Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: *03-Feb-10*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B1-6.5
Lab Order:	109843	**Collection Date:**	1/26/2010 10:00:00 AM
Project:	Hwy 50-99 Interchange, S9300-06-110	**Matrix:**	SOIL
Lab ID:	109843-003A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS						
				EPA 8260B		
RunID: MS5_100129A	QC Batch:	T10VS009			PrepDate:	Analyst: **HH**
cis-1,3-Dichloropropene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Dibromochloromethane	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Dibromomethane	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Dichlorodifluoromethane	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Ethylbenzene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Hexachlorobutadiene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Isopropylbenzene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
m,p-Xylene	ND	10		µg/Kg	1	1/29/2010 02:21 PM
Methylene chloride	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
n-Butylbenzene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
n-Propylbenzene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Naphthalene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
o-Xylene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
sec-Butylbenzene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Styrene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
tert-Butylbenzene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Tetrachloroethene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Toluene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
trans-1,2-Dichloroethene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Trichloroethene	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Trichlorofluoromethane	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Vinyl chloride	ND	5.0		µg/Kg	1	1/29/2010 02:21 PM
Surr: 1,2-Dichloroethane-d4	79.3	70-130		%REC	1	1/29/2010 02:21 PM
Surr: 4-Bromofluorobenzene	90.2	70-130		%REC	1	1/29/2010 02:21 PM
Surr: Dibromofluoromethane	76.2	70-130		%REC	1	1/29/2010 02:21 PM
Surr: Toluene-d8	90.1	70-130		%REC	1	1/29/2010 02:21 PM
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS						
	EPA 3550B			**EPA 8270C**		
RunID: MS 13_100201A	QC Batch:	61503			PrepDate:	2/1/2010 Analyst: **SMH**
1,2,4-Trichlorobenzene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
1,2-Dichlorobenzene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
1,3-Dichlorobenzene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
1,4-Dichlorobenzene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
2,4,5-Trichlorophenol	ND	330		µg/Kg	1	2/1/2010 06:21 PM
2,4,6-Trichlorophenol	ND	330		µg/Kg	1	2/1/2010 06:21 PM

Qualifiers:

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

Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: *03-Feb-10*

CLIENT: Geocon Consultants, Inc.
Lab Order: 109843
Project: Hwy 50-99 Interchange, S9300-06-110
Lab ID: 109843-003A

Client Sample ID: B1-6.5
Collection Date: 1/26/2010 10:00:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS						
EPA 3550B				**EPA 8270C**		
RunID: MS 13_100201A	QC Batch: 61503				PrepDate: 2/1/2010	Analyst: **SMH**
2,4-Dichlorophenol	ND	1600		µg/Kg	1	2/1/2010 06:21 PM
2,4-Dimethylphenol	ND	330		µg/Kg	1	2/1/2010 06:21 PM
2,4-Dinitrophenol	ND	1600		µg/Kg	1	2/1/2010 06:21 PM
2,4-Dinitrotoluene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
2,6-Dinitrotoluene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
2-Chloronaphthalene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
2-Chlorophenol	ND	330		µg/Kg	1	2/1/2010 06:21 PM
2-Methylnaphthalene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
2-Methylphenol	ND	330		µg/Kg	1	2/1/2010 06:21 PM
2-Nitroaniline	ND	1600		µg/Kg	1	2/1/2010 06:21 PM
2-Nitrophenol	ND	330		µg/Kg	1	2/1/2010 06:21 PM
3,3´-Dichlorobenzidine	ND	660		µg/Kg	1	2/1/2010 06:21 PM
3-Nitroaniline	ND	1600		µg/Kg	1	2/1/2010 06:21 PM
4,6-Dinitro-2-methylphenol	ND	1600		µg/Kg	1	2/1/2010 06:21 PM
4-Bromophenyl-phenylether	ND	330		µg/Kg	1	2/1/2010 06:21 PM
4-Chloro-3-methylphenol	ND	660		µg/Kg	1	2/1/2010 06:21 PM
4-Chloroaniline	ND	660		µg/Kg	1	2/1/2010 06:21 PM
4-Chlorophenyl-phenylether	ND	330		µg/Kg	1	2/1/2010 06:21 PM
4-Methylphenol	ND	330		µg/Kg	1	2/1/2010 06:21 PM
4-Nitroaniline	ND	1600		µg/Kg	1	2/1/2010 06:21 PM
4-Nitrophenol	ND	1600		µg/Kg	1	2/1/2010 06:21 PM
Acenaphthene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Acenaphthylene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Anthracene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Benzidine (M)	ND	1600		µg/Kg	1	2/1/2010 06:21 PM
Benzo(a)anthracene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Benzo(a)pyrene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Benzo(b)fluoranthene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Benzo(g,h,i)perylene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Benzo(k)fluoranthene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Benzoic acid	ND	1600		µg/Kg	1	2/1/2010 06:21 PM
Benzyl alcohol	ND	660		µg/Kg	1	2/1/2010 06:21 PM
Bis(2-chloroethoxy)methane	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Bis(2-chloroethyl)ether	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Bis(2-chloroisopropyl)ether	ND	330		µg/Kg	1	2/1/2010 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

Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: *03-Feb-10*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B1-6.5
Lab Order:	109843	**Collection Date:**	1/26/2010 10:00:00 AM
Project:	Hwy 50-99 Interchange, S9300-06-110	**Matrix:**	SOIL
Lab ID:	109843-003A		

SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 3550B **EPA 8270C**

RunID: MS 13_100201A QC Batch: 61503 PrepDate: 2/1/2010 Analyst: **SMH**

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Bis(2-ethylhexyl)phthalate	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Butylbenzylphthalate	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Chrysene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Di-n-butylphthalate	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Di-n-octylphthalate	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Dibenz(a,h)anthracene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Dibenzofuran	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Diethylphthalate	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Dimethylphthalate	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Fluoranthene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Fluorene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Hexachlorobenzene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Hexachlorobutadiene	ND	660		µg/Kg	1	2/1/2010 06:21 PM
Hexachlorocyclopentadiene	ND	660		µg/Kg	1	2/1/2010 06:21 PM
Hexachloroethane	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Indeno(1,2,3-cd)pyrene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Isophorone	ND	330		µg/Kg	1	2/1/2010 06:21 PM
N-Nitrosodi-n-propylamine	ND	330		µg/Kg	1	2/1/2010 06:21 PM
N-Nitrosodiphenylamine	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Naphthalene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Nitrobenzene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Pentachlorophenol	ND	1600		µg/Kg	1	2/1/2010 06:21 PM
Phenanthrene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Phenol	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Pyrene	ND	330		µg/Kg	1	2/1/2010 06:21 PM
Surr: 1,2-Dichlorobenzene-d4	72.8	45-105		%REC	1	2/1/2010 06:21 PM
Surr: 2,4,6-Tribromophenol	84.6	41-129		%REC	1	2/1/2010 06:21 PM
Surr: 2-Chlorophenol-d4	80.5	55-108		%REC	1	2/1/2010 06:21 PM
Surr: 2-Fluorobiphenyl	80.3	56-114		%REC	1	2/1/2010 06:21 PM
Surr: 2-Fluorophenol	79.4	50-108		%REC	1	2/1/2010 06:21 PM
Surr: 4-Terphenyl-d14	97.9	59-141		%REC	1	2/1/2010 06:21 PM
Surr: Nitrobenzene-d5	74.8	45-114		%REC	1	2/1/2010 06:21 PM
Surr: Phenol-d5	84.9	46-118		%REC	1	2/1/2010 06:21 PM

Qualifiers:

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

Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: *03-Feb-10*

CLIENT: Geocon Consultants, Inc.
Client Sample ID: B2-1.5
Lab Order: 109843
Collection Date: 1/26/2010 10:20:00 AM
Project: Hwy 50-99 Interchange, S9300-06-110
Matrix: SOIL
Lab ID: 109843-004A

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS						
			EPA 8260B			
RunID: MS5_100129A	QC Batch: T10VS009			PrepDate:		Analyst: **HH**
1,1,1,2-Tetrachloroethane	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
1,1,1-Trichloroethane	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
1,1,2-Trichloroethane	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
1,1-Dichloroethane	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
1,1-Dichloroethene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
1,1-Dichloropropene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
1,2,3-Trichlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
1,2,3-Trichloropropane	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
1,2,4-Trichlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
1,2,4-Trimethylbenzene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
1,2-Dibromo-3-chloropropane	ND	10		µg/Kg	1	1/29/2010 02:44 PM
1,2-Dibromoethane	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
1,2-Dichlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
1,2-Dichloroethane	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
1,2-Dichloropropane	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
1,3,5-Trimethylbenzene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
1,3-Dichlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
1,3-Dichloropropane	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
1,4-Dichlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
2,2-Dichloropropane	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
2-Chlorotoluene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
4-Chlorotoluene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
4-Isopropyltoluene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Benzene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Bromobenzene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Bromodichloromethane	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Bromoform	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Bromomethane	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Carbon tetrachloride	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Chlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Chloroethane	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Chloroform	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Chloromethane	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
cis-1,2-Dichloroethene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM

Qualifiers:

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

Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: *03-Feb-10*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B2-1.5
Lab Order:	109843	**Collection Date:**	1/26/2010 10:20:00 AM
Project:	Hwy 50-99 Interchange, S9300-06-110	**Matrix:**	SOIL
Lab ID:	109843-004A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS						
				EPA 8260B		
RunID: MS5_100129A	QC Batch:	T10VS009			PrepDate:	Analyst: **HH**
cis-1,3-Dichloropropene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Dibromochloromethane	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Dibromomethane	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Dichlorodifluoromethane	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Ethylbenzene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Hexachlorobutadiene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Isopropylbenzene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
m,p-Xylene	ND	10		µg/Kg	1	1/29/2010 02:44 PM
Methylene chloride	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
n-Butylbenzene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
n-Propylbenzene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Naphthalene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
o-Xylene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
sec-Butylbenzene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Styrene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
tert-Butylbenzene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Tetrachloroethene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Toluene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
trans-1,2-Dichloroethene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Trichloroethene	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Trichlorofluoromethane	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Vinyl chloride	ND	5.0		µg/Kg	1	1/29/2010 02:44 PM
Surr: 1,2-Dichloroethane-d4	79.9	70-130		%REC	1	1/29/2010 02:44 PM
Surr: 4-Bromofluorobenzene	87.2	70-130		%REC	1	1/29/2010 02:44 PM
Surr: Dibromofluoromethane	80.5	70-130		%REC	1	1/29/2010 02:44 PM
Surr: Toluene-d8	91.0	70-130		%REC	1	1/29/2010 02:44 PM
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS						
	EPA 3550B			**EPA 8270C**		
RunID: MS 13_100201A	QC Batch:	61503			PrepDate:	2/1/2010 Analyst: **SMH**
1,2,4-Trichlorobenzene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
1,2-Dichlorobenzene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
1,3-Dichlorobenzene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
1,4-Dichlorobenzene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
2,4,5-Trichlorophenol	ND	330		µg/Kg	1	2/1/2010 07:17 PM
2,4,6-Trichlorophenol	ND	330		µg/Kg	1	2/1/2010 07:17 PM

Qualifiers:

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

Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: *03-Feb-10*

CLIENT: Geocon Consultants, Inc.
Lab Order: 109843
Project: Hwy 50-99 Interchange, S9300-06-110
Lab ID: 109843-004A

Client Sample ID: B2-1.5
Collection Date: 1/26/2010 10:20:00 AM
Matrix: SOIL

SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 3550B **EPA 8270C**

RunID: MS 13_100201A QC Batch: 61503 PrepDate: 2/1/2010 Analyst: **SMH**

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
2,4-Dichlorophenol	ND	1600		µg/Kg	1	2/1/2010 07:17 PM
2,4-Dimethylphenol	ND	330		µg/Kg	1	2/1/2010 07:17 PM
2,4-Dinitrophenol	ND	1600		µg/Kg	1	2/1/2010 07:17 PM
2,4-Dinitrotoluene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
2,6-Dinitrotoluene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
2-Chloronaphthalene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
2-Chlorophenol	ND	330		µg/Kg	1	2/1/2010 07:17 PM
2-Methylnaphthalene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
2-Methylphenol	ND	330		µg/Kg	1	2/1/2010 07:17 PM
2-Nitroaniline	ND	1600		µg/Kg	1	2/1/2010 07:17 PM
2-Nitrophenol	ND	330		µg/Kg	1	2/1/2010 07:17 PM
3,3´-Dichlorobenzidine	ND	660		µg/Kg	1	2/1/2010 07:17 PM
3-Nitroaniline	ND	1600		µg/Kg	1	2/1/2010 07:17 PM
4,6-Dinitro-2-methylphenol	ND	1600		µg/Kg	1	2/1/2010 07:17 PM
4-Bromophenyl-phenylether	ND	330		µg/Kg	1	2/1/2010 07:17 PM
4-Chloro-3-methylphenol	ND	660		µg/Kg	1	2/1/2010 07:17 PM
4-Chloroaniline	ND	660		µg/Kg	1	2/1/2010 07:17 PM
4-Chlorophenyl-phenylether	ND	330		µg/Kg	1	2/1/2010 07:17 PM
4-Methylphenol	ND	330		µg/Kg	1	2/1/2010 07:17 PM
4-Nitroaniline	ND	1600		µg/Kg	1	2/1/2010 07:17 PM
4-Nitrophenol	ND	1600		µg/Kg	1	2/1/2010 07:17 PM
Acenaphthene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Acenaphthylene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Anthracene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Benzidine (M)	ND	1600		µg/Kg	1	2/1/2010 07:17 PM
Benzo(a)anthracene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Benzo(a)pyrene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Benzo(b)fluoranthene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Benzo(g,h,i)perylene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Benzo(k)fluoranthene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Benzoic acid	ND	1600		µg/Kg	1	2/1/2010 07:17 PM
Benzyl alcohol	ND	660		µg/Kg	1	2/1/2010 07:17 PM
Bis(2-chloroethoxy)methane	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Bis(2-chloroethyl)ether	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Bis(2-chloroisopropyl)ether	ND	330		µg/Kg	1	2/1/2010 07:17 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

Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: *03-Feb-10*

CLIENT: Geocon Consultants, Inc.
Lab Order: 109843
Project: Hwy 50-99 Interchange, S9300-06-110
Lab ID: 109843-004A

Client Sample ID: B2-1.5
Collection Date: 1/26/2010 10:20:00 AM
Matrix: SOIL

SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 3550B **EPA 8270C**

RunID: MS 13_100201A QC Batch: 61503 PrepDate: 2/1/2010 Analyst: **SMH**

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Bis(2-ethylhexyl)phthalate	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Butylbenzylphthalate	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Chrysene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Di-n-butylphthalate	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Di-n-octylphthalate	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Dibenz(a,h)anthracene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Dibenzofuran	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Diethylphthalate	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Dimethylphthalate	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Fluoranthene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Fluorene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Hexachlorobenzene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Hexachlorobutadiene	ND	660		µg/Kg	1	2/1/2010 07:17 PM
Hexachlorocyclopentadiene	ND	660		µg/Kg	1	2/1/2010 07:17 PM
Hexachloroethane	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Indeno(1,2,3-cd)pyrene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Isophorone	ND	330		µg/Kg	1	2/1/2010 07:17 PM
N-Nitrosodi-n-propylamine	ND	330		µg/Kg	1	2/1/2010 07:17 PM
N-Nitrosodiphenylamine	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Naphthalene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Nitrobenzene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Pentachlorophenol	ND	1600		µg/Kg	1	2/1/2010 07:17 PM
Phenanthrene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Phenol	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Pyrene	ND	330		µg/Kg	1	2/1/2010 07:17 PM
Surr: 1,2-Dichlorobenzene-d4	71.1	45-105		%REC	1	2/1/2010 07:17 PM
Surr: 2,4,6-Tribromophenol	84.5	41-129		%REC	1	2/1/2010 07:17 PM
Surr: 2-Chlorophenol-d4	80.0	55-108		%REC	1	2/1/2010 07:17 PM
Surr: 2-Fluorobiphenyl	79.4	56-114		%REC	1	2/1/2010 07:17 PM
Surr: 2-Fluorophenol	77.9	50-108		%REC	1	2/1/2010 07:17 PM
Surr: 4-Terphenyl-d14	92.3	59-141		%REC	1	2/1/2010 07:17 PM
Surr: Nitrobenzene-d5	73.2	45-114		%REC	1	2/1/2010 07:17 PM
Surr: Phenol-d5	83.7	46-118		%REC	1	2/1/2010 07:17 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

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

Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: *03-Feb-10*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B2-2.5
Lab Order:	109843	**Collection Date:**	1/26/2010 10:25:00 AM
Project:	Hwy 50-99 Interchange, S9300-06-110	**Matrix:**	SOIL
Lab ID:	109843-005A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3550B				**EPA 8015B(M)**		
RunID: GC16_100202A	QC Batch: 61510			PrepDate: 2/1/2010		Analyst: **CBR**
DRO	2.0	1.0		mg/Kg	1	2/2/2010 11:30 AM
ORO	5.3	1.0		mg/Kg	1	2/2/2010 11:30 AM
Surr: p-Terphenyl	93.1	30-130		%REC	1	2/2/2010 11:30 AM
GASOLINE RANGE ORGANICS BY GC/FID						
				EPA 8015B(M)		
RunID: GC2_100129A	QC Batch: E10VS028			PrepDate:		Analyst: **BD**
GRO	ND	1.0		mg/Kg	1	1/29/2010 02:06 PM
Surr: Bromofluorobenzene (FID)	89.9	59-145		%REC	1	1/29/2010 02:06 PM
VOLATILE ORGANIC COMPOUNDS BY GC/PID						
				EPA 8021B		
RunID: GC2_100129A	QC Batch: E10VS028			PrepDate:		Analyst: **BD**
Benzene	ND	5.0		µg/Kg	1	1/29/2010 02:06 PM
Ethylbenzene	ND	5.0		µg/Kg	1	1/29/2010 02:06 PM
m,p-Xylene	ND	10		µg/Kg	1	1/29/2010 02:06 PM
Methyl tert-butyl ether	ND	5.0		µg/Kg	1	1/29/2010 02:06 PM
o-Xylene	ND	5.0		µg/Kg	1	1/29/2010 02:06 PM
Toluene	ND	5.0		µg/Kg	1	1/29/2010 02:06 PM
Surr: Bromofluorobenzene (PID)	86.8	65-140		%REC	1	1/29/2010 02:06 PM

Qualifiers:

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

Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: *03-Feb-10*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B2-6.5
Lab Order:	109843	**Collection Date:**	1/26/2010 10:50:00 AM
Project:	Hwy 50-99 Interchange, S9300-06-110	**Matrix:**	SOIL
Lab ID:	109843-006A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3550B				**EPA 8015B(M)**		
RunID: GC16_100202A	QC Batch: 61510			PrepDate: 2/1/2010		Analyst: **CBR**
DRO	ND	1.0		mg/Kg	1	2/2/2010 10:35 AM
ORO	ND	1.0		mg/Kg	1	2/2/2010 10:35 AM
Surr: p-Terphenyl	85.8	30-130		%REC	1	2/2/2010 10:35 AM
GASOLINE RANGE ORGANICS BY GC/FID						
				EPA 8015B(M)		
RunID: GC2_100129A	QC Batch: E10VS028			PrepDate:		Analyst: **BD**
GRO	ND	1.0		mg/Kg	1	1/29/2010 02:20 PM
Surr: Bromofluorobenzene (FID)	96.4	59-145		%REC	1	1/29/2010 02:20 PM
VOLATILE ORGANIC COMPOUNDS BY GC/PID						
				EPA 8021B		
RunID: GC2_100129A	QC Batch: E10VS028			PrepDate:		Analyst: **BD**
Benzene	ND	5.0		µg/Kg	1	1/29/2010 02:20 PM
Ethylbenzene	ND	5.0		µg/Kg	1	1/29/2010 02:20 PM
m,p-Xylene	ND	10		µg/Kg	1	1/29/2010 02:20 PM
Methyl tert-butyl ether	ND	5.0		µg/Kg	1	1/29/2010 02:20 PM
o-Xylene	ND	5.0		µg/Kg	1	1/29/2010 02:20 PM
Toluene	ND	5.0		µg/Kg	1	1/29/2010 02:20 PM
Surr: Bromofluorobenzene (PID)	93.3	65-140		%REC	1	1/29/2010 02:20 PM

Qualifiers:

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

Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: *03-Feb-10*

CLIENT: Geocon Consultants, Inc.
Lab Order: 109843
Project: Hwy 50-99 Interchange, S9300-06-110
Lab ID: 109843-007A

Client Sample ID: B2-8.5
Collection Date: 1/26/2010 10:55:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS						
	EPA 3050B			**EPA 6010B**		
RunID: ICP8_100202A	QC Batch: 61522			PrepDate:	2/2/2010	Analyst: **CL**
Antimony	ND	2.0		mg/Kg	1	2/2/2010 11:11 AM
Arsenic	6.1	1.0		mg/Kg	1	2/2/2010 11:11 AM
Barium	130	1.0		mg/Kg	1	2/2/2010 11:11 AM
Beryllium	ND	1.0		mg/Kg	1	2/2/2010 11:11 AM
Cadmium	ND	1.0		mg/Kg	1	2/2/2010 11:11 AM
Chromium	36	1.0		mg/Kg	1	2/2/2010 11:11 AM
Cobalt	11	1.0		mg/Kg	1	2/2/2010 11:11 AM
Copper	27	2.0		mg/Kg	1	2/2/2010 11:11 AM
Lead	6.4	1.0		mg/Kg	1	2/2/2010 11:11 AM
Molybdenum	ND	1.0		mg/Kg	1	2/2/2010 11:11 AM
Nickel	43	1.0		mg/Kg	1	2/2/2010 11:11 AM
Selenium	ND	1.0		mg/Kg	1	2/2/2010 11:11 AM
Silver	ND	1.0		mg/Kg	1	2/2/2010 11:11 AM
Thallium	ND	1.0		mg/Kg	1	2/2/2010 11:11 AM
Vanadium	49	1.0		mg/Kg	1	2/2/2010 11:11 AM
Zinc	35	1.0		mg/Kg	1	2/2/2010 11:11 AM
MERCURY BY COLD VAPOR TECHNIQUE						
				EPA 7471A		
RunID: AA1_100202A	QC Batch: 61523			PrepDate:	2/2/2010	Analyst: **IL**
Mercury	ND	0.10		mg/Kg	1	2/2/2010 10:56 AM

Qualifiers:

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

Advanced Technology Laboratories
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Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: *03-Feb-10*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B3-3.5
Lab Order:	109843	**Collection Date:**	1/26/2010 11:15:00 AM
Project:	Hwy 50-99 Interchange, S9300-06-110	**Matrix:**	SOIL
Lab ID:	109843-008A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS						
				EPA 8260B		
RunID: MS5_100129A	QC Batch: T10VS009			PrepDate:		Analyst: **HH**
1,1,1,2-Tetrachloroethane	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
1,1,1-Trichloroethane	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
1,1,2-Trichloroethane	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
1,1-Dichloroethane	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
1,1-Dichloroethene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
1,1-Dichloropropene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
1,2,3-Trichlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
1,2,3-Trichloropropane	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
1,2,4-Trichlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
1,2,4-Trimethylbenzene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
1,2-Dibromo-3-chloropropane	ND	10		µg/Kg	1	1/29/2010 03:29 PM
1,2-Dibromoethane	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
1,2-Dichlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
1,2-Dichloroethane	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
1,2-Dichloropropane	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
1,3,5-Trimethylbenzene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
1,3-Dichlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
1,3-Dichloropropane	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
1,4-Dichlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
2,2-Dichloropropane	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
2-Chlorotoluene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
4-Chlorotoluene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
4-Isopropyltoluene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Benzene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Bromobenzene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Bromodichloromethane	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Bromoform	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Bromomethane	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Carbon tetrachloride	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Chlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Chloroethane	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Chloroform	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Chloromethane	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
cis-1,2-Dichloroethene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM

Qualifiers:

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

Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: *03-Feb-10*

CLIENT: Geocon Consultants, Inc.
Lab Order: 109843
Project: Hwy 50-99 Interchange, S9300-06-110
Lab ID: 109843-008A

Client Sample ID: B3-3.5
Collection Date: 1/26/2010 11:15:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS						
				EPA 8260B		
RunID: MS5_100129A	QC Batch:	T10VS009			PrepDate:	Analyst: **HH**
cis-1,3-Dichloropropene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Dibromochloromethane	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Dibromomethane	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Dichlorodifluoromethane	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Ethylbenzene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Hexachlorobutadiene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Isopropylbenzene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
m,p-Xylene	ND	10		µg/Kg	1	1/29/2010 03:29 PM
Methylene chloride	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
n-Butylbenzene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
n-Propylbenzene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Naphthalene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
o-Xylene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
sec-Butylbenzene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Styrene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
tert-Butylbenzene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Tetrachloroethene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Toluene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
trans-1,2-Dichloroethene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Trichloroethene	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Trichlorofluoromethane	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Vinyl chloride	ND	5.0		µg/Kg	1	1/29/2010 03:29 PM
Surr: 1,2-Dichloroethane-d4	80.7	70-130		%REC	1	1/29/2010 03:29 PM
Surr: 4-Bromofluorobenzene	91.3	70-130		%REC	1	1/29/2010 03:29 PM
Surr: Dibromofluoromethane	79.9	70-130		%REC	1	1/29/2010 03:29 PM
Surr: Toluene-d8	93.9	70-130		%REC	1	1/29/2010 03:29 PM
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS						
	EPA 3550B			**EPA 8270C**		
RunID: MS 13_100201A	QC Batch:	61503			PrepDate:	2/1/2010 Analyst: **SMH**
1,2,4-Trichlorobenzene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
1,2-Dichlorobenzene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
1,3-Dichlorobenzene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
1,4-Dichlorobenzene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
2,4,5-Trichlorophenol	ND	330		µg/Kg	1	2/1/2010 05:52 PM
2,4,6-Trichlorophenol	ND	330		µg/Kg	1	2/1/2010 05:52 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

Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: *03-Feb-10*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B3-3.5
Lab Order:	109843	**Collection Date:**	1/26/2010 11:15:00 AM
Project:	Hwy 50-99 Interchange, S9300-06-110	**Matrix:**	SOIL
Lab ID:	109843-008A		

SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 3550B **EPA 8270C**

RunID: MS 13_100201A QC Batch: 61503 PrepDate: 2/1/2010 Analyst: **SMH**

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
2,4-Dichlorophenol	ND	1600		µg/Kg	1	2/1/2010 05:52 PM
2,4-Dimethylphenol	ND	330		µg/Kg	1	2/1/2010 05:52 PM
2,4-Dinitrophenol	ND	1600		µg/Kg	1	2/1/2010 05:52 PM
2,4-Dinitrotoluene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
2,6-Dinitrotoluene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
2-Chloronaphthalene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
2-Chlorophenol	ND	330		µg/Kg	1	2/1/2010 05:52 PM
2-Methylnaphthalene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
2-Methylphenol	ND	330		µg/Kg	1	2/1/2010 05:52 PM
2-Nitroaniline	ND	1600		µg/Kg	1	2/1/2010 05:52 PM
2-Nitrophenol	ND	330		µg/Kg	1	2/1/2010 05:52 PM
3,3´-Dichlorobenzidine	ND	660		µg/Kg	1	2/1/2010 05:52 PM
3-Nitroaniline	ND	1600		µg/Kg	1	2/1/2010 05:52 PM
4,6-Dinitro-2-methylphenol	ND	1600		µg/Kg	1	2/1/2010 05:52 PM
4-Bromophenyl-phenylether	ND	330		µg/Kg	1	2/1/2010 05:52 PM
4-Chloro-3-methylphenol	ND	660		µg/Kg	1	2/1/2010 05:52 PM
4-Chloroaniline	ND	660		µg/Kg	1	2/1/2010 05:52 PM
4-Chlorophenyl-phenylether	ND	330		µg/Kg	1	2/1/2010 05:52 PM
4-Methylphenol	ND	330		µg/Kg	1	2/1/2010 05:52 PM
4-Nitroaniline	ND	1600		µg/Kg	1	2/1/2010 05:52 PM
4-Nitrophenol	ND	1600		µg/Kg	1	2/1/2010 05:52 PM
Acenaphthene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Acenaphthylene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Anthracene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Benzidine (M)	ND	1600		µg/Kg	1	2/1/2010 05:52 PM
Benzo(a)anthracene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Benzo(a)pyrene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Benzo(b)fluoranthene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Benzo(g,h,i)perylene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Benzo(k)fluoranthene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Benzoic acid	ND	1600		µg/Kg	1	2/1/2010 05:52 PM
Benzyl alcohol	ND	660		µg/Kg	1	2/1/2010 05:52 PM
Bis(2-chloroethoxy)methane	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Bis(2-chloroethyl)ether	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Bis(2-chloroisopropyl)ether	ND	330		µg/Kg	1	2/1/2010 05:52 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		

Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: *03-Feb-10*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B3-3.5
Lab Order:	109843	**Collection Date:**	1/26/2010 11:15:00 AM
Project:	Hwy 50-99 Interchange, S9300-06-110	**Matrix:**	SOIL
Lab ID:	109843-008A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS						
EPA 3550B				**EPA 8270C**		
RunID: MS 13_100201A	QC Batch: 61503				PrepDate: 2/1/2010	Analyst: **SMH**
Bis(2-ethylhexyl)phthalate	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Butylbenzylphthalate	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Chrysene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Di-n-butylphthalate	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Di-n-octylphthalate	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Dibenz(a,h)anthracene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Dibenzofuran	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Diethylphthalate	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Dimethylphthalate	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Fluoranthene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Fluorene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Hexachlorobenzene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Hexachlorobutadiene	ND	660		µg/Kg	1	2/1/2010 05:52 PM
Hexachlorocyclopentadiene	ND	660		µg/Kg	1	2/1/2010 05:52 PM
Hexachloroethane	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Indeno(1,2,3-cd)pyrene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Isophorone	ND	330		µg/Kg	1	2/1/2010 05:52 PM
N-Nitrosodi-n-propylamine	ND	330		µg/Kg	1	2/1/2010 05:52 PM
N-Nitrosodiphenylamine	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Naphthalene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Nitrobenzene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Pentachlorophenol	ND	1600		µg/Kg	1	2/1/2010 05:52 PM
Phenanthrene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Phenol	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Pyrene	ND	330		µg/Kg	1	2/1/2010 05:52 PM
Surr: 1,2-Dichlorobenzene-d4	76.3	45-105		%REC	1	2/1/2010 05:52 PM
Surr: 2,4,6-Tribromophenol	91.6	41-129		%REC	1	2/1/2010 05:52 PM
Surr: 2-Chlorophenol-d4	83.3	55-108		%REC	1	2/1/2010 05:52 PM
Surr: 2-Fluorobiphenyl	84.2	56-114		%REC	1	2/1/2010 05:52 PM
Surr: 2-Fluorophenol	81.4	50-108		%REC	1	2/1/2010 05:52 PM
Surr: 4-Terphenyl-d14	99.6	59-141		%REC	1	2/1/2010 05:52 PM
Surr: Nitrobenzene-d5	76.3	45-114		%REC	1	2/1/2010 05:52 PM
Surr: Phenol-d5	87.4	46-118		%REC	1	2/1/2010 05:52 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		

Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: *03-Feb-10*

CLIENT: Geocon Consultants, Inc.
Lab Order: 109843
Project: Hwy 50-99 Interchange, S9300-06-110
Lab ID: 109843-009A

Client Sample ID: B3-5.5
Collection Date: 1/26/2010 11:25:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS						
	EPA 3050B			**EPA 6010B**		
RunID: ICP8_100202A	QC Batch: 61522			PrepDate:	2/2/2010	Analyst: **CL**
Antimony	ND	2.0		mg/Kg	1	2/2/2010 11:14 AM
Arsenic	4.4	1.0		mg/Kg	1	2/2/2010 11:14 AM
Barium	110	1.0		mg/Kg	1	2/2/2010 11:14 AM
Beryllium	ND	1.0		mg/Kg	1	2/2/2010 11:14 AM
Cadmium	ND	1.0		mg/Kg	1	2/2/2010 11:14 AM
Chromium	28	1.0		mg/Kg	1	2/2/2010 11:14 AM
Cobalt	9.2	1.0		mg/Kg	1	2/2/2010 11:14 AM
Copper	23	2.0		mg/Kg	1	2/2/2010 11:14 AM
Lead	5.3	1.0		mg/Kg	1	2/2/2010 11:14 AM
Molybdenum	ND	1.0		mg/Kg	1	2/2/2010 11:14 AM
Nickel	40	1.0		mg/Kg	1	2/2/2010 11:14 AM
Selenium	ND	1.0		mg/Kg	1	2/2/2010 11:14 AM
Silver	ND	1.0		mg/Kg	1	2/2/2010 11:14 AM
Thallium	ND	1.0		mg/Kg	1	2/2/2010 11:14 AM
Vanadium	34	1.0		mg/Kg	1	2/2/2010 11:14 AM
Zinc	29	1.0		mg/Kg	1	2/2/2010 11:14 AM
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
	EPA 3550B			**EPA 8015B(M)**		
RunID: GC16_100202A	QC Batch: 61510			PrepDate:	2/1/2010	Analyst: **CBR**
DRO	ND	1.0		mg/Kg	1	2/2/2010 10:44 AM
ORO	ND	1.0		mg/Kg	1	2/2/2010 10:44 AM
Surr: p-Terphenyl	84.1	30-130		%REC	1	2/2/2010 10:44 AM
GASOLINE RANGE ORGANICS BY GC/FID						
				EPA 8015B(M)		
RunID: GC2_100129A	QC Batch: E10VS028			PrepDate:		Analyst: **BD**
GRO	ND	1.0		mg/Kg	1	1/29/2010 02:35 PM
Surr: Bromofluorobenzene (FID)	94.5	59-145		%REC	1	1/29/2010 02:35 PM
VOLATILE ORGANIC COMPOUNDS BY GC/PID						
				EPA 8021B		
RunID: GC2_100129A	QC Batch: E10VS028			PrepDate:		Analyst: **BD**
Benzene	ND	5.0		µg/Kg	1	1/29/2010 02:35 PM
Ethylbenzene	ND	5.0		µg/Kg	1	1/29/2010 02:35 PM
m,p-Xylene	ND	10		µg/Kg	1	1/29/2010 02:35 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

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ANALYTICAL RESULTS

Print Date: *03-Feb-10*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B3-5.5
Lab Order:	109843	**Collection Date:**	1/26/2010 11:25:00 AM
Project:	Hwy 50-99 Interchange, S9300-06-110	**Matrix:**	SOIL
Lab ID:	109843-009A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/PID						
				EPA 8021B		
RunID: GC2_100129A	QC Batch: E10VS028			PrepDate:		Analyst: **BD**
Methyl tert-butyl ether	ND	5.0		µg/Kg	1	1/29/2010 02:35 PM
o-Xylene	ND	5.0		µg/Kg	1	1/29/2010 02:35 PM
Toluene	ND	5.0		µg/Kg	1	1/29/2010 02:35 PM
Surr: Bromofluorobenzene (PID)	90.5	65-140		%REC	1	1/29/2010 02:35 PM
MERCURY BY COLD VAPOR TECHNIQUE						
				EPA 7471A		
RunID: AA1_100202A	QC Batch: 61523			PrepDate:	2/2/2010	Analyst: **IL**
Mercury	ND	0.10		mg/Kg	1	2/2/2010 10:59 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: *03-Feb-10*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B3-8.5
Lab Order:	109843	**Collection Date:**	1/26/2010 11:35:00 AM
Project:	Hwy 50-99 Interchange, S9300-06-110	**Matrix:**	SOIL
Lab ID:	109843-010A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3550B				**EPA 8015B(M)**		
RunID: GC16_100202A	QC Batch: 61510			PrepDate:	2/1/2010	Analyst: **CBR**
DRO	1.4	1.0		mg/Kg	1	2/2/2010 10:54 AM
ORO	ND	1.0		mg/Kg	1	2/2/2010 10:54 AM
Surr: p-Terphenyl	80.0	30-130		%REC	1	2/2/2010 10:54 AM
GASOLINE RANGE ORGANICS BY GC/FID						
				EPA 8015B(M)		
RunID: GC2_100129A	QC Batch: E10VS028			PrepDate:		Analyst: **BD**
GRO	ND	1.0		mg/Kg	1	1/29/2010 02:51 PM
Surr: Bromofluorobenzene (FID)	94.8	59-145		%REC	1	1/29/2010 02:51 PM
VOLATILE ORGANIC COMPOUNDS BY GC/PID						
				EPA 8021B		
RunID: GC2_100129A	QC Batch: E10VS028			PrepDate:		Analyst: **BD**
Benzene	ND	5.0		µg/Kg	1	1/29/2010 02:51 PM
Ethylbenzene	ND	5.0		µg/Kg	1	1/29/2010 02:51 PM
m,p-Xylene	ND	10		µg/Kg	1	1/29/2010 02:51 PM
Methyl tert-butyl ether	ND	5.0		µg/Kg	1	1/29/2010 02:51 PM
o-Xylene	ND	5.0		µg/Kg	1	1/29/2010 02:51 PM
Toluene	ND	5.0		µg/Kg	1	1/29/2010 02:51 PM
Surr: Bromofluorobenzene (PID)	91.3	65-140		%REC	1	1/29/2010 02:51 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: *03-Feb-10*

CLIENT: Geocon Consultants, Inc.
Lab Order: 109843
Project: Hwy 50-99 Interchange, S9300-06-110
Lab ID: 109843-011A

Client Sample ID: B4-0.5
Collection Date: 1/26/2010 11:40:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ICP METALS						
	EPA 3050B			**EPA 6010B**		
RunID: ICP8_100202A	QC Batch: 61522			PrepDate:	2/2/2010	Analyst: **CL**
Antimony	ND	2.0		mg/Kg	1	2/2/2010 10:48 AM
Arsenic	3.7	1.0		mg/Kg	1	2/2/2010 10:48 AM
Barium	89	1.0		mg/Kg	1	2/2/2010 10:48 AM
Beryllium	ND	1.0		mg/Kg	1	2/2/2010 10:48 AM
Cadmium	ND	1.0		mg/Kg	1	2/2/2010 10:48 AM
Chromium	24	1.0		mg/Kg	1	2/2/2010 10:48 AM
Cobalt	8.6	1.0		mg/Kg	1	2/2/2010 10:48 AM
Copper	48	2.0		mg/Kg	1	2/2/2010 10:48 AM
Lead	29	1.0		mg/Kg	1	2/2/2010 10:48 AM
Molybdenum	ND	1.0		mg/Kg	1	2/2/2010 10:48 AM
Nickel	26	1.0		mg/Kg	1	2/2/2010 10:48 AM
Selenium	ND	1.0		mg/Kg	1	2/2/2010 10:48 AM
Silver	ND	1.0		mg/Kg	1	2/2/2010 10:48 AM
Thallium	ND	1.0		mg/Kg	1	2/2/2010 10:48 AM
Vanadium	30	1.0		mg/Kg	1	2/2/2010 10:48 AM
Zinc	34	1.0		mg/Kg	1	2/2/2010 10:48 AM
MERCURY BY COLD VAPOR TECHNIQUE						
				EPA 7471A		
RunID: AA1_100202A	QC Batch: 61523			PrepDate:	2/2/2010	Analyst: **IL**
Mercury	0.19	0.10		mg/Kg	1	2/2/2010 10:50 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: *03-Feb-10*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B4-2.5
Lab Order:	109843	**Collection Date:**	1/26/2010 11:45:00 AM
Project:	Hwy 50-99 Interchange, S9300-06-110	**Matrix:**	SOIL
Lab ID:	109843-012A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3550B				**EPA 8015B(M)**		
RunID: GC16_100202A	QC Batch: 61510			PrepDate: 2/1/2010		Analyst: **CBR**
DRO	ND	1.0		mg/Kg	1	2/2/2010 11:21 AM
ORO	ND	1.0		mg/Kg	1	2/2/2010 11:21 AM
Surr: p-Terphenyl	75.7	30-130		%REC	1	2/2/2010 11:21 AM
GASOLINE RANGE ORGANICS BY GC/FID						
				EPA 8015B(M)		
RunID: GC2_100129A	QC Batch: E10VS028			PrepDate:		Analyst: **BD**
GRO	ND	1.0		mg/Kg	1	1/29/2010 03:05 PM
Surr: Bromofluorobenzene (FID)	94.4	59-145		%REC	1	1/29/2010 03:05 PM
VOLATILE ORGANIC COMPOUNDS BY GC/PID						
				EPA 8021B		
RunID: GC2_100129A	QC Batch: E10VS028			PrepDate:		Analyst: **BD**
Benzene	ND	5.0		µg/Kg	1	1/29/2010 03:05 PM
Ethylbenzene	ND	5.0		µg/Kg	1	1/29/2010 03:05 PM
m,p-Xylene	ND	10		µg/Kg	1	1/29/2010 03:05 PM
Methyl tert-butyl ether	ND	5.0		µg/Kg	1	1/29/2010 03:05 PM
o-Xylene	ND	5.0		µg/Kg	1	1/29/2010 03:05 PM
Toluene	ND	5.0		µg/Kg	1	1/29/2010 03:05 PM
Surr: Bromofluorobenzene (PID)	91.8	65-140		%REC	1	1/29/2010 03:05 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: *03-Feb-10*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B4-5.5
Lab Order:	109843	**Collection Date:**	1/26/2010 11:55:00 AM
Project:	Hwy 50-99 Interchange, S9300-06-110	**Matrix:**	SOIL
Lab ID:	109843-013A		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS						
			EPA 8260B			
RunID: MS5_100129A	QC Batch:	T10VS009		PrepDate:		Analyst: **HH**
1,1,1,2-Tetrachloroethane	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
1,1,1-Trichloroethane	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
1,1,2,2-Tetrachloroethane	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
1,1,2-Trichloroethane	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
1,1-Dichloroethane	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
1,1-Dichloroethene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
1,1-Dichloropropene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
1,2,3-Trichlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
1,2,3-Trichloropropane	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
1,2,4-Trichlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
1,2,4-Trimethylbenzene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
1,2-Dibromo-3-chloropropane	ND	10		µg/Kg	1	1/29/2010 03:52 PM
1,2-Dibromoethane	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
1,2-Dichlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
1,2-Dichloroethane	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
1,2-Dichloropropane	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
1,3,5-Trimethylbenzene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
1,3-Dichlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
1,3-Dichloropropane	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
1,4-Dichlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
2,2-Dichloropropane	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
2-Chlorotoluene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
4-Chlorotoluene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
4-Isopropyltoluene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Benzene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Bromobenzene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Bromodichloromethane	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Bromoform	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Bromomethane	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Carbon tetrachloride	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Chlorobenzene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Chloroethane	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Chloroform	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Chloromethane	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
cis-1,2-Dichloroethene	ND	5.0		µg/Kg	1	1/29/2010 03:52 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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Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: *03-Feb-10*

CLIENT: Geocon Consultants, Inc.
Client Sample ID: B4-5.5
Lab Order: 109843
Collection Date: 1/26/2010 11:55:00 AM
Project: Hwy 50-99 Interchange, S9300-06-110
Matrix: SOIL
Lab ID: 109843-013A

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS						
			EPA 8260B			
RunID: MS5_100129A	QC Batch:	T10VS009		PrepDate:		Analyst: **HH**
cis-1,3-Dichloropropene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Dibromochloromethane	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Dibromomethane	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Dichlorodifluoromethane	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Ethylbenzene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Hexachlorobutadiene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Isopropylbenzene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
m,p-Xylene	ND	10		µg/Kg	1	1/29/2010 03:52 PM
Methylene chloride	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
n-Butylbenzene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
n-Propylbenzene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Naphthalene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
o-Xylene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
sec-Butylbenzene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Styrene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
tert-Butylbenzene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Tetrachloroethene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Toluene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
trans-1,2-Dichloroethene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Trichloroethene	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Trichlorofluoromethane	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Vinyl chloride	ND	5.0		µg/Kg	1	1/29/2010 03:52 PM
Surr: 1,2-Dichloroethane-d4	78.6	70-130		%REC	1	1/29/2010 03:52 PM
Surr: 4-Bromofluorobenzene	86.4	70-130		%REC	1	1/29/2010 03:52 PM
Surr: Dibromofluoromethane	81.5	70-130		%REC	1	1/29/2010 03:52 PM
Surr: Toluene-d8	91.5	70-130		%REC	1	1/29/2010 03:52 PM
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS						
	EPA 3550B		**EPA 8270C**			
RunID: MS 13_100201A	QC Batch:	61503		PrepDate:	2/1/2010	Analyst: **SMH**
1,2,4-Trichlorobenzene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
1,2-Dichlorobenzene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
1,3-Dichlorobenzene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
1,4-Dichlorobenzene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
2,4,5-Trichlorophenol	ND	330		µg/Kg	1	2/1/2010 07:45 PM
2,4,6-Trichlorophenol	ND	330		µg/Kg	1	2/1/2010 07:45 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

Advanced Technology Laboratories

ANALYTICAL RESULTS
Print Date: *03-Feb-10*

CLIENT:	Geocon Consultants, Inc.	**Client Sample ID:**	B4-5.5
Lab Order:	109843	**Collection Date:**	1/26/2010 11:55:00 AM
Project:	Hwy 50-99 Interchange, S9300-06-110	**Matrix:**	SOIL
Lab ID:	109843-013A		

SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 3550B **EPA 8270C**

RunID: MS 13_100201A QC Batch: 61503 PrepDate: 2/1/2010 Analyst: **SMH**

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
2,4-Dichlorophenol	ND	1600		µg/Kg	1	2/1/2010 07:45 PM
2,4-Dimethylphenol	ND	330		µg/Kg	1	2/1/2010 07:45 PM
2,4-Dinitrophenol	ND	1600		µg/Kg	1	2/1/2010 07:45 PM
2,4-Dinitrotoluene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
2,6-Dinitrotoluene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
2-Chloronaphthalene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
2-Chlorophenol	ND	330		µg/Kg	1	2/1/2010 07:45 PM
2-Methylnaphthalene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
2-Methylphenol	ND	330		µg/Kg	1	2/1/2010 07:45 PM
2-Nitroaniline	ND	1600		µg/Kg	1	2/1/2010 07:45 PM
2-Nitrophenol	ND	330		µg/Kg	1	2/1/2010 07:45 PM
3,3´-Dichlorobenzidine	ND	660		µg/Kg	1	2/1/2010 07:45 PM
3-Nitroaniline	ND	1600		µg/Kg	1	2/1/2010 07:45 PM
4,6-Dinitro-2-methylphenol	ND	1600		µg/Kg	1	2/1/2010 07:45 PM
4-Bromophenyl-phenylether	ND	330		µg/Kg	1	2/1/2010 07:45 PM
4-Chloro-3-methylphenol	ND	660		µg/Kg	1	2/1/2010 07:45 PM
4-Chloroaniline	ND	660		µg/Kg	1	2/1/2010 07:45 PM
4-Chlorophenyl-phenylether	ND	330		µg/Kg	1	2/1/2010 07:45 PM
4-Methylphenol	ND	330		µg/Kg	1	2/1/2010 07:45 PM
4-Nitroaniline	ND	1600		µg/Kg	1	2/1/2010 07:45 PM
4-Nitrophenol	ND	1600		µg/Kg	1	2/1/2010 07:45 PM
Acenaphthene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Acenaphthylene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Anthracene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Benzidine (M)	ND	1600		µg/Kg	1	2/1/2010 07:45 PM
Benzo(a)anthracene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Benzo(a)pyrene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Benzo(b)fluoranthene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Benzo(g,h,i)perylene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Benzo(k)fluoranthene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Benzoic acid	ND	1600		µg/Kg	1	2/1/2010 07:45 PM
Benzyl alcohol	ND	660		µg/Kg	1	2/1/2010 07:45 PM
Bis(2-chloroethoxy)methane	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Bis(2-chloroethyl)ether	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Bis(2-chloroisopropyl)ether	ND	330		µg/Kg	1	2/1/2010 07:45 PM

Qualifiers:

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

Advanced Technology Laboratories

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ANALYTICAL RESULTS
Print Date: *03-Feb-10*

CLIENT: Geocon Consultants, Inc.
Lab Order: 109843
Project: Hwy 50-99 Interchange, S9300-06-110
Lab ID: 109843-013A

Client Sample ID: B4-5.5
Collection Date: 1/26/2010 11:55:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS						
EPA 3550B				**EPA 8270C**		
RunID: MS 13_100201A	QC Batch: 61503			PrepDate:	2/1/2010	Analyst: **SMH**
Bis(2-ethylhexyl)phthalate	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Butylbenzylphthalate	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Chrysene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Di-n-butylphthalate	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Di-n-octylphthalate	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Dibenz(a,h)anthracene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Dibenzofuran	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Diethylphthalate	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Dimethylphthalate	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Fluoranthene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Fluorene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Hexachlorobenzene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Hexachlorobutadiene	ND	660		µg/Kg	1	2/1/2010 07:45 PM
Hexachlorocyclopentadiene	ND	660		µg/Kg	1	2/1/2010 07:45 PM
Hexachloroethane	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Indeno(1,2,3-cd)pyrene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Isophorone	ND	330		µg/Kg	1	2/1/2010 07:45 PM
N-Nitrosodi-n-propylamine	ND	330		µg/Kg	1	2/1/2010 07:45 PM
N-Nitrosodiphenylamine	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Naphthalene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Nitrobenzene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Pentachlorophenol	ND	1600		µg/Kg	1	2/1/2010 07:45 PM
Phenanthrene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Phenol	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Pyrene	ND	330		µg/Kg	1	2/1/2010 07:45 PM
Surr: 1,2-Dichlorobenzene-d4	75.9	45-105		%REC	1	2/1/2010 07:45 PM
Surr: 2,4,6-Tribromophenol	92.8	41-129		%REC	1	2/1/2010 07:45 PM
Surr: 2-Chlorophenol-d4	82.7	55-108		%REC	1	2/1/2010 07:45 PM
Surr: 2-Fluorobiphenyl	83.4	56-114		%REC	1	2/1/2010 07:45 PM
Surr: 2-Fluorophenol	81.8	50-108		%REC	1	2/1/2010 07:45 PM
Surr: 4-Terphenyl-d14	105	59-141		%REC	1	2/1/2010 07:45 PM
Surr: Nitrobenzene-d5	76.5	45-114		%REC	1	2/1/2010 07:45 PM
Surr: Phenol-d5	87.9	46-118		%REC	1	2/1/2010 07:45 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: *03-Feb-10*

CLIENT: Geocon Consultants, Inc.
Client Sample ID: B4-8.5
Lab Order: 109843
Collection Date: 1/26/2010 12:15:00 PM
Project: Hwy 50-99 Interchange, S9300-06-110
Matrix: SOIL
Lab ID: 109843-014A

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3550B				**EPA 8015B(M)**		
RunID: GC16_100202A	QC Batch: 61510			PrepDate:	2/1/2010	Analyst: **CBR**
DRO	1.0	1.0		mg/Kg	1	2/2/2010 11:03 AM
ORO	ND	1.0		mg/Kg	1	2/2/2010 11:03 AM
Surr: p-Terphenyl	76.0	30-130		%REC	1	2/2/2010 11:03 AM
GASOLINE RANGE ORGANICS BY GC/FID						
				EPA 8015B(M)		
RunID: GC2_100129A	QC Batch: E10VS028			PrepDate:		Analyst: **BD**
GRO	ND	1.0		mg/Kg	1	1/29/2010 03:20 PM
Surr: Bromofluorobenzene (FID)	93.0	59-145		%REC	1	1/29/2010 03:20 PM
VOLATILE ORGANIC COMPOUNDS BY GC/PID						
				EPA 8021B		
RunID: GC2_100129A	QC Batch: E10VS028			PrepDate:		Analyst: **BD**
Benzene	ND	5.0		µg/Kg	1	1/29/2010 03:20 PM
Ethylbenzene	ND	5.0		µg/Kg	1	1/29/2010 03:20 PM
m,p-Xylene	ND	10		µg/Kg	1	1/29/2010 03:20 PM
Methyl tert-butyl ether	ND	5.0		µg/Kg	1	1/29/2010 03:20 PM
o-Xylene	ND	5.0		µg/Kg	1	1/29/2010 03:20 PM
Toluene	ND	5.0		µg/Kg	1	1/29/2010 03:20 PM
Surr: Bromofluorobenzene (PID)	90.2	65-140		%REC	1	1/29/2010 03:20 PM

Qualifiers:

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

CLIENT: Geocon Consultants, Inc.
Work Order: 109843
Project: Hwy 50-99 Interchange, S9300-06-110

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **MB-61522** SampType: **MBLK** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/2/2010** RunNo: **117551**
Client ID: **PBS** Batch ID: **61522** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/2/2010** SeqNo: **1867027**

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	ND	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	ND	1.0									
Nickel	ND	1.0									
Selenium	ND	1.0									
Silver	ND	1.0									
Thallium	ND	1.0									
Vanadium	ND	1.0									
Zinc	ND	1.0									

Sample ID: **LCS-61522** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/2/2010** RunNo: **117551**
Client ID: **LCSS** Batch ID: **61522** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/2/2010** SeqNo: **1867028**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	48.786	2.0	50.00	0	97.6	80	120				
Arsenic	47.914	1.0	50.00	0	95.8	80	120				
Barium	50.509	1.0	50.00	0	101	80	120				
Beryllium	50.552	1.0	50.00	0	101	80	120				
Cadmium	49.995	1.0	50.00	0	100	80	120				
Chromium	50.905	1.0	50.00	0	102	80	120				
Cobalt	51.411	1.0	50.00	0	103	80	120				

Qualifiers:

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

CLIENT: Geocon Consultants, Inc.
Work Order: 109843
Project: Hwy 50-99 Interchange, S9300-06-110

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **LCS-61522** SampType: **LCS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/2/2010** RunNo: **117551**
Client ID: **LCSS** Batch ID: **61522** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/2/2010** SeqNo: **1867028**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	51.323	2.0	50.00	0	103	80	120				
Lead	48.906	1.0	50.00	0	97.8	80	120				
Molybdenum	51.228	1.0	50.00	0	102	80	120				
Nickel	49.145	1.0	50.00	0	98.3	80	120				
Selenium	46.592	1.0	50.00	0	93.2	80	120				
Silver	47.552	1.0	50.00	0	95.1	80	120				
Thallium	50.082	1.0	50.00	0	100	80	120				
Vanadium	51.826	1.0	50.00	0	104	80	120				
Zinc	49.676	1.0	50.00	0	99.4	80	120				

Sample ID: **109843-011ADUP** SampType: **DUP** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/2/2010** RunNo: **117551**
Client ID: **B4-0.5** Batch ID: **61522** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/2/2010** SeqNo: **1867030**

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	4.472	1.0						3.663	19.9	20	
Barium	103.794	1.0						89.04	15.3	20	
Beryllium	ND	1.0						0	0	20	
Cadmium	0.444	1.0						0.3709	0	20	
Chromium	29.564	1.0						24.18	20.1	20	R
Cobalt	9.578	1.0						8.558	11.2	20	
Copper	45.964	2.0						48.18	4.71	20	
Lead	50.366	1.0						28.92	54.1	20	R
Molybdenum	ND	1.0						0	0	20	
Nickel	32.638	1.0						26.31	21.5	20	R
Selenium	ND	1.0						0	0	20	
Silver	ND	1.0						0	0	20	
Thallium	ND	1.0						0	0	20	
Vanadium	35.796	1.0						29.77	18.4	20	
Zinc	52.500	1.0						33.65	43.8	20	R

Qualifiers:

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

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CLIENT: Geocon Consultants, Inc.
Work Order: 109843
Project: Hwy 50-99 Interchange, S9300-06-110

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **109843-011AMS** SampType: **MS** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/2/2010** RunNo: **117551**
Client ID: **B4-0.5** Batch ID: **61522** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/2/2010** SeqNo: **1867031**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	66.353	2.0	125.0	0	53.1	25	106				
Arsenic	74.700	1.0	125.0	3.663	56.8	42	113				
Barium	164.599	1.0	125.0	89.04	60.4	19	140				
Beryllium	78.761	1.0	125.0	0	63.0	50	109				
Cadmium	74.105	1.0	125.0	0.3709	59.0	48	106				
Chromium	102.214	1.0	125.0	24.18	62.4	44	116				
Cobalt	83.455	1.0	125.0	8.558	59.9	47	107				
Copper	123.376	2.0	125.0	48.18	60.2	49	124				
Lead	100.918	1.0	125.0	28.92	57.6	33	120				
Molybdenum	75.166	1.0	125.0	0	60.1	46	111				
Nickel	101.224	1.0	125.0	26.31	59.9	43	111				
Selenium	62.684	1.0	125.0	0	50.1	43	104				
Silver	76.890	1.0	125.0	0	61.5	53	114				
Thallium	73.920	1.0	125.0	0	59.1	41	107				
Vanadium	107.829	1.0	125.0	29.77	62.4	48	116				
Zinc	104.609	1.0	125.0	33.65	56.8	24	129				

Sample ID: **109843-011AMSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/2/2010** RunNo: **117551**
Client ID: **B4-0.5** Batch ID: **61522** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/2/2010** SeqNo: **1867032**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	59.112	2.0	125.0	0	47.3	25	106	66.35	11.5	20	
Arsenic	67.402	1.0	125.0	3.663	51.0	42	113	74.70	10.3	20	
Barium	161.448	1.0	125.0	89.04	57.9	19	140	164.6	1.93	20	
Beryllium	70.237	1.0	125.0	0	56.2	50	109	78.76	11.4	20	
Cadmium	66.220	1.0	125.0	0.3709	52.7	48	106	74.10	11.2	20	
Chromium	93.284	1.0	125.0	24.18	55.3	44	116	102.2	9.14	20	
Cobalt	73.897	1.0	125.0	8.558	52.3	47	107	83.46	12.1	20	
Copper	110.617	2.0	125.0	48.18	49.9	49	124	123.4	10.9	20	
Lead	89.840	1.0	125.0	28.92	48.7	33	120	100.9	11.6	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: 109843
Project: Hwy 50-99 Interchange, S9300-06-110

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_S

Sample ID: **109843-011AMSD** SampType: **MSD** TestCode: **6010_S** Units: **mg/Kg** Prep Date: **2/2/2010** RunNo: **117551**
Client ID: **B4-0.5** Batch ID: **61522** TestNo: **EPA 6010B** **EPA 3050B** Analysis Date: **2/2/2010** SeqNo: **1867032**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	66.895	1.0	125.0	0	53.5	46	111	75.17	11.6	20	
Nickel	91.042	1.0	125.0	26.31	51.8	43	111	101.2	10.6	20	
Selenium	56.056	1.0	125.0	0	44.8	43	104	62.68	11.2	20	
Silver	68.105	1.0	125.0	0	54.5	53	114	76.89	12.1	20	
Thallium	65.918	1.0	125.0	0	52.7	41	107	73.92	11.4	20	
Vanadium	96.646	1.0	125.0	29.77	53.5	48	116	107.8	10.9	20	
Zinc	97.317	1.0	125.0	33.65	50.9	24	129	104.6	7.22	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: 109843
Project: Hwy 50-99 Interchange, S9300-06-110

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_SPB

Sample ID: **MB-61532** SampType: **MBLK** TestCode: **6010_SPB** Units: **mg/Kg** Prep Date: **2/2/2010** RunNo: **117560**
Client ID: **PBS** Batch ID: **61532** TestNo: **EPA 6010B** **EPA 3050M** Analysis Date: **2/2/2010** SeqNo: **1867110**

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

Sample ID: **LCS-61532** SampType: **LCS** TestCode: **6010_SPB** Units: **mg/Kg** Prep Date: **2/2/2010** RunNo: **117560**
Client ID: **LCSS** Batch ID: **61532** TestNo: **EPA 6010B** **EPA 3050M** Analysis Date: **2/2/2010** SeqNo: **1867111**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	229.009	5.0	250.0	0	91.6	80	120				

Sample ID: **109843-029ADUP** SampType: **DUP** TestCode: **6010_SPB** Units: **mg/Kg** Prep Date: **2/2/2010** RunNo: **117560**
Client ID: **COMPOSITE B4-0.0,** Batch ID: **61532** TestNo: **EPA 6010B** **EPA 3050M** Analysis Date: **2/2/2010** SeqNo: **1867113**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	6.951	5.0						6.400	8.26	20	

Sample ID: **109843-029AMS** SampType: **MS** TestCode: **6010_SPB** Units: **mg/Kg** Prep Date: **2/2/2010** RunNo: **117560**
Client ID: **COMPOSITE B4-0.0,** Batch ID: **61532** TestNo: **EPA 6010B** **EPA 3050M** Analysis Date: **2/2/2010** SeqNo: **1867114**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	204.629	5.0	250.0	6.400	79.3	33	120				

Sample ID: **109843-029AMSD** SampType: **MSD** TestCode: **6010_SPB** Units: **mg/Kg** Prep Date: **2/2/2010** RunNo: **117560**
Client ID: **COMPOSITE B4-0.0,** Batch ID: **61532** TestNo: **EPA 6010B** **EPA 3050M** Analysis Date: **2/2/2010** SeqNo: **1867115**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	193.925	5.0	250.0	6.400	75.0	33	120	204.6	5.37	20	

Qualifiers:

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

CLIENT: Geocon Consultants, Inc.
Work Order: 109843
Project: Hwy 50-99 Interchange, S9300-06-110

ANALYTICAL QC SUMMARY REPORT

TestCode: 7471_S

Sample ID: **MB-61523** SampType: **MBLK** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/2/2010** RunNo: **117547**
Client ID: **PBS** Batch ID: **61523** TestNo: **EPA 7471A** Analysis Date: **2/2/2010** SeqNo: **1866951**

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

Sample ID: **LCS-61523** SampType: **LCS** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/2/2010** RunNo: **117547**
Client ID: **LCSS** Batch ID: **61523** TestNo: **EPA 7471A** Analysis Date: **2/2/2010** SeqNo: **1866952**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.979	0.10	0.8300	0	118	80	120				

Sample ID: **109843-011A-MS** SampType: **MS** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/2/2010** RunNo: **117547**
Client ID: **B4-0.5** Batch ID: **61523** TestNo: **EPA 7471A** Analysis Date: **2/2/2010** SeqNo: **1866953**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.213	0.10	0.8300	0.1859	124	70	130				

Sample ID: **109843-011A-MSD** SampType: **MSD** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/2/2010** RunNo: **117547**
Client ID: **B4-0.5** Batch ID: **61523** TestNo: **EPA 7471A** Analysis Date: **2/2/2010** SeqNo: **1866954**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.185	0.10	0.8300	0.1859	120	70	130	1.213	2.35	20	

Sample ID: **109843-011A-DUP** SampType: **DUP** TestCode: **7471_S** Units: **mg/Kg** Prep Date: **2/2/2010** RunNo: **117547**
Client ID: **B4-0.5** Batch ID: **61523** TestNo: **EPA 7471A** Analysis Date: **2/2/2010** SeqNo: **1866956**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.187	0.10						0.1859	0.378	20	

Qualifiers:

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

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ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_DM LL

Sample ID: **MB-61510** SampType: **MBLK** TestCode: **8015_S_DM L** Units: **mg/Kg** Prep Date: **2/1/2010** RunNo: **117571**
Client ID: **PBS** Batch ID: **61510** TestNo: **EPA 8015B(M EPA 3550B** Analysis Date: **2/2/2010** SeqNo: **1867209**

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	3.773		5.340		70.6	30	130				

Sample ID: **LCS-61510** SampType: **LCS** TestCode: **8015_S_DM L** Units: **mg/Kg** Prep Date: **2/1/2010** RunNo: **117571**
Client ID: **LCSS** Batch ID: **61510** TestNo: **EPA 8015B(M EPA 3550B** Analysis Date: **2/2/2010** SeqNo: **1867210**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	37.787	1.0	66.00	0	57.3	35	124				
Surr: p-Terphenyl	4.475		5.340		83.8	30	130				

Sample ID: **109843-010AMS** SampType: **MS** TestCode: **8015_S_DM L** Units: **mg/Kg** Prep Date: **2/1/2010** RunNo: **117571**
Client ID: **B3-8.5** Batch ID: **61510** TestNo: **EPA 8015B(M EPA 3550B** Analysis Date: **2/2/2010** SeqNo: **1867211**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	28.598	1.0	66.00	1.394	41.2	12	125				
Surr: p-Terphenyl	4.006		5.340		75.0	30	130				

Sample ID: **109843-010AMSD** SampType: **MSD** TestCode: **8015_S_DM L** Units: **mg/Kg** Prep Date: **2/1/2010** RunNo: **117571**
Client ID: **B3-8.5** Batch ID: **61510** TestNo: **EPA 8015B(M EPA 3550B** Analysis Date: **2/2/2010** SeqNo: **1867212**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	23.467	1.0	66.00	1.394	33.4	12	125	28.60	19.7	20	
Surr: p-Terphenyl	3.592		5.340		67.3	30	130		0	0	

Sample ID: **109843-010ADUP** SampType: **DUP** TestCode: **8015_S_DM L** Units: **mg/Kg** Prep Date: **2/1/2010** RunNo: **117571**
Client ID: **B3-8.5** Batch ID: **61510** TestNo: **EPA 8015B(M EPA 3550B** Analysis Date: **2/2/2010** SeqNo: **1867213**

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

Qualifiers:

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

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ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_DM LL

Sample ID: **109843-010ADUP** SampType: **DUP** TestCode: **8015_S_DM L** Units: **mg/Kg** Prep Date: **2/1/2010** RunNo: **117571**
Client ID: **B3-8.5** Batch ID: **61510** TestNo: **EPA 8015B(M EPA 3550B** Analysis Date: **2/2/2010** SeqNo: **1867213**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DRO	ND	1.0						1.394	0	20	
ORO	ND	1.0						0	0	20	
Surr: p-Terphenyl	3.264		5.340		61.1	30	130		0	0	

Qualifiers:

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

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ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_GAS

Sample ID: **E100129LCS1** SampType: **LCS** TestCode: **8015_S_GAS** Units: **mg/Kg** Prep Date: RunNo: **117527**
Client ID: **LCSS** Batch ID: **E10VS028** TestNo: **EPA 8015B(M** Analysis Date: **1/29/2010** SeqNo: **1866564**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.655	1.0	5.000	0	93.1	73	120				
Surr: Bromofluorobenzene (FID)	88.715		100.0		88.7	59	145				

Sample ID: **109843-002AMS** SampType: **MS** TestCode: **8015_S_GAS** Units: **mg/Kg** Prep Date: RunNo: **117527**
Client ID: **B1-4.5** Batch ID: **E10VS028** TestNo: **EPA 8015B(M** Analysis Date: **1/29/2010** SeqNo: **1866566**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.479	1.0	5.000	0	89.6	39	135				
Surr: Bromofluorobenzene (FID)	93.562		100.0		93.6	59	145				

Sample ID: **109843-002AMSD** SampType: **MSD** TestCode: **8015_S_GAS** Units: **mg/Kg** Prep Date: RunNo: **117527**
Client ID: **B1-4.5** Batch ID: **E10VS028** TestNo: **EPA 8015B(M** Analysis Date: **1/29/2010** SeqNo: **1866567**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	4.424	1.0	5.000	0	88.5	39	135	4.479	1.24	20	
Surr: Bromofluorobenzene (FID)	117.388		100.0		117	59	145		0	0	

Sample ID: **E100129MB1** SampType: **MBLK** TestCode: **8015_S_GAS** Units: **mg/Kg** Prep Date: RunNo: **117527**
Client ID: **PBS** Batch ID: **E10VS028** TestNo: **EPA 8015B(M** Analysis Date: **1/29/2010** SeqNo: **1866568**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
GRO	ND	1.0									
Surr: Bromofluorobenzene (FID)	89.416		100.0		89.4	59	145				

Sample ID: **109843-002ADUP** SampType: **DUP** TestCode: **8015_S_GAS** Units: **mg/Kg** Prep Date: RunNo: **117527**
Client ID: **B1-4.5** Batch ID: **E10VS028** TestNo: **EPA 8015B(M** Analysis Date: **1/29/2010** SeqNo: **1866570**

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

Qualifiers:

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

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ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_GAS

Sample ID: **109843-002ADUP** SampType: **DUP** TestCode: **8015_S_GAS** Units: **mg/Kg** Prep Date: RunNo: **117527**
Client ID: **B1-4.5** Batch ID: **E10VS028** TestNo: **EPA 8015B(M** Analysis Date: **1/29/2010** SeqNo: **1866570**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Bromofluorobenzene (FID)	94.987		100.0		95.0	59	145		0	0	

Qualifiers:

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

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ANALYTICAL QC SUMMARY REPORT

TestCode: 8021_S_BTEX

Sample ID: **E100129LCS2** SampType: **LCS** TestCode: **8021_S_BTE** Units: **µg/Kg** Prep Date: RunNo: **117527**
Client ID: **LCSS** Batch ID: **E10VS028** TestNo: **EPA 8021B** Analysis Date: **1/29/2010** SeqNo: **1866578**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	101.689	5.0	100.0	0	102	80	121				
Ethylbenzene	105.580	5.0	100.0	0	106	84	120				
m,p-Xylene	215.844	10	200.0	0	108	84	122				
Methyl tert-butyl ether	91.495	5.0	100.0	0	91.5	66	128				
o-Xylene	107.621	5.0	100.0	0	108	84	123				
Toluene	104.118	5.0	100.0	0	104	84	120				
Surr: Bromofluorobenzene (PID)	88.938		100.0		88.9	65	140				

Sample ID: **109843-002AMS** SampType: **MS** TestCode: **8021_S_BTE** Units: **µg/Kg** Prep Date: RunNo: **117527**
Client ID: **B1-4.5** Batch ID: **E10VS028** TestNo: **EPA 8021B** Analysis Date: **1/29/2010** SeqNo: **1866579**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	32.033	5.0	35.75	0	89.6	22	132				
Ethylbenzene	31.951	5.0	49.65	0	64.4	15	133				
m,p-Xylene	156.504	10	199.6	0	78.4	30	118				
Methyl tert-butyl ether	523.285	5.0	578.9	0	90.4	38	136				
o-Xylene	57.115	5.0	78.40	0	72.9	21	119				
Toluene	151.476	5.0	172.2	0	87.9	36	129				
Surr: Bromofluorobenzene (PID)	91.256		100.0		91.3	65	140				

Sample ID: **109843-002AMSD** SampType: **MSD** TestCode: **8021_S_BTE** Units: **µg/Kg** Prep Date: RunNo: **117527**
Client ID: **B1-4.5** Batch ID: **E10VS028** TestNo: **EPA 8021B** Analysis Date: **1/29/2010** SeqNo: **1866580**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	31.679	5.0	35.75	0	88.6	22	132	32.03	1.11	20	
Ethylbenzene	32.328	5.0	49.65	0	65.1	15	133	31.95	1.17	20	
m,p-Xylene	157.291	10	199.6	0	78.8	30	118	156.5	0.502	20	
Methyl tert-butyl ether	555.762	5.0	578.9	0	96.0	38	136	523.3	6.02	20	
o-Xylene	59.256	5.0	78.40	0	75.6	21	119	57.12	3.68	20	
Toluene	150.728	5.0	172.2	0	87.5	36	129	151.5	0.495	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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Project: Hwy 50-99 Interchange, S9300-06-110

ANALYTICAL QC SUMMARY REPORT

TestCode: 8021_S_BTEX

Sample ID: **109843-002AMSD** SampType: **MSD** TestCode: **8021_S_BTE** Units: **µg/Kg** Prep Date: RunNo: **117527**
Client ID: **B1-4.5** Batch ID: **E10VS028** TestNo: **EPA 8021B** Analysis Date: **1/29/2010** SeqNo: **1866580**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Bromofluorobenzene (PID)	98.085		100.0		98.1	65	140		0	20	

Sample ID: **E100129MB1** SampType: **MBLK** TestCode: **8021_S_BTE** Units: **µg/Kg** Prep Date: RunNo: **117527**
Client ID: **PBS** Batch ID: **E10VS028** TestNo: **EPA 8021B** Analysis Date: **1/29/2010** SeqNo: **1866581**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	5.0									
Ethylbenzene	ND	5.0									
m,p-Xylene	ND	10									
Methyl tert-butyl ether	ND	5.0									
o-Xylene	ND	5.0									
Toluene	ND	5.0									
Surr: Bromofluorobenzene (PID)	86.624		100.0		86.6	65	140				

Sample ID: **109843-002ADUP** SampType: **DUP** TestCode: **8021_S_BTE** Units: **µg/Kg** Prep Date: RunNo: **117527**
Client ID: **B1-4.5** Batch ID: **E10VS028** TestNo: **EPA 8021B** Analysis Date: **1/29/2010** SeqNo: **1866583**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	5.0						0	0	20	
Ethylbenzene	ND	5.0						0	0	20	
m,p-Xylene	ND	10						0	0	20	
Methyl tert-butyl ether	ND	5.0						0	0	20	
o-Xylene	ND	5.0						0	0	20	
Toluene	ND	5.0						0	0	20	
Surr: Bromofluorobenzene (PID)	91.198		100.0		91.2	65	140		0	0	

Qualifiers:

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

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ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S

Sample ID: **T100129LC1** SampType: **LCS** TestCode: **8260_S** Units: **µg/Kg** Prep Date: RunNo: **117555**
Client ID: **LCSS** Batch ID: **T10VS009** TestNo: **EPA 8260B** Analysis Date: **1/29/2010** SeqNo: **1867051**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	46.990	5.0	50.00	0	94.0	70	130				
Benzene	105.230	5.0	100.0	0	105	70	130				
Chlorobenzene	52.660	5.0	50.00	0	105	82	130				
MTBE	47.360	5.0	50.00	0	94.7	70	130				
Toluene	103.440	5.0	100.0	0	103	70	130				
Trichloroethene	54.730	5.0	50.00	0	109	77	130				
Surr: 1,2-Dichloroethane-d4	35.440		50.00		70.9	70	130				
Surr: 4-Bromofluorobenzene	44.400		50.00		88.8	70	130				
Surr: Dibromofluoromethane	36.760		50.00		73.5	70	130				
Surr: Toluene-d8	42.630		50.00		85.3	70	130				

Sample ID: **T100129MB2** SampType: **MBLK** TestCode: **8260_S** Units: **µg/Kg** Prep Date: RunNo: **117555**
Client ID: **PBS** Batch ID: **T10VS009** TestNo: **EPA 8260B** Analysis Date: **1/29/2010** SeqNo: **1867052**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	5.0									
1,1,1-Trichloroethane	ND	5.0									
1,1,2,2-Tetrachloroethane	ND	5.0									
1,1,2-Trichloroethane	ND	5.0									
1,1-Dichloroethane	ND	5.0									
1,1-Dichloroethene	ND	5.0									
1,1-Dichloropropene	ND	5.0									
1,2,3-Trichlorobenzene	ND	5.0									
1,2,3-Trichloropropane	ND	5.0									
1,2,4-Trichlorobenzene	ND	5.0									
1,2,4-Trimethylbenzene	ND	5.0									
1,2-Dibromo-3-chloropropane	ND	10									
1,2-Dibromoethane	ND	5.0									
1,2-Dichlorobenzene	ND	5.0									
1,2-Dichloroethane	ND	5.0									

Qualifiers:

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

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ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S

Sample ID: **T100129MB2** SampType: **MBLK** TestCode: **8260_S** Units: **µg/Kg** Prep Date: RunNo: **117555**
Client ID: **PBS** Batch ID: **T10VS009** TestNo: **EPA 8260B** Analysis Date: **1/29/2010** SeqNo: **1867052**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloropropane	ND	5.0									
1,3,5-Trimethylbenzene	ND	5.0									
1,3-Dichlorobenzene	ND	5.0									
1,3-Dichloropropane	ND	5.0									
1,4-Dichlorobenzene	ND	5.0									
2,2-Dichloropropane	ND	5.0									
2-Chlorotoluene	ND	5.0									
4-Chlorotoluene	ND	5.0									
4-Isopropyltoluene	ND	5.0									
Benzene	ND	5.0									
Bromobenzene	ND	5.0									
Bromodichloromethane	ND	5.0									
Bromoform	ND	5.0									
Bromomethane	ND	5.0									
Carbon tetrachloride	ND	5.0									
Chlorobenzene	ND	5.0									
Chloroethane	ND	5.0									
Chloroform	ND	5.0									
Chloromethane	ND	5.0									
cis-1,2-Dichloroethene	ND	5.0									
cis-1,3-Dichloropropene	ND	5.0									
Dibromochloromethane	ND	5.0									
Dibromomethane	ND	5.0									
Dichlorodifluoromethane	ND	5.0									
Ethylbenzene	ND	5.0									
Hexachlorobutadiene	ND	5.0									
Isopropylbenzene	ND	5.0									
m,p-Xylene	ND	10									
Methylene chloride	ND	5.0									
n-Butylbenzene	ND	5.0									

Qualifiers:

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

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ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S

Sample ID: **T100129MB2** SampType: **MBLK** TestCode: **8260_S** Units: **µg/Kg** Prep Date: RunNo: **117555**
Client ID: **PBS** Batch ID: **T10VS009** TestNo: **EPA 8260B** Analysis Date: **1/29/2010** SeqNo: **1867052**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
n-Propylbenzene	ND	5.0									
Naphthalene	ND	5.0									
o-Xylene	ND	5.0									
sec-Butylbenzene	ND	5.0									
Styrene	ND	5.0									
tert-Butylbenzene	ND	5.0									
Tetrachloroethene	ND	5.0									
Toluene	ND	5.0									
trans-1,2-Dichloroethene	ND	5.0									
Trichloroethene	ND	5.0									
Trichlorofluoromethane	ND	5.0									
Vinyl chloride	ND	5.0									
Surr: 1,2-Dichloroethane-d4	36.440		50.00		72.9	70	130				
Surr: 4-Bromofluorobenzene	41.120		50.00		82.2	70	130				
Surr: Dibromofluoromethane	38.440		50.00		76.9	70	130				
Surr: Toluene-d8	45.620		50.00		91.2	70	130				

Sample ID: **109843-004ADUP** SampType: **DUP** TestCode: **8260_S** Units: **µg/Kg** Prep Date: RunNo: **117555**
Client ID: **B2-1.5** Batch ID: **T10VS009** TestNo: **EPA 8260B** Analysis Date: **1/29/2010** SeqNo: **1867055**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	5.0						0	0	20	
1,1,1-Trichloroethane	ND	5.0						0	0	20	
1,1,2,2-Tetrachloroethane	ND	5.0						0	0	20	
1,1,2-Trichloroethane	ND	5.0						0	0	20	
1,1-Dichloroethane	ND	5.0						0	0	20	
1,1-Dichloroethene	ND	5.0						0	0	20	
1,1-Dichloropropene	ND	5.0						0	0	20	
1,2,3-Trichlorobenzene	ND	5.0						0	0	20	
1,2,3-Trichloropropane	ND	5.0						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

CLIENT: Geocon Consultants, Inc.
Work Order: 109843
Project: Hwy 50-99 Interchange, S9300-06-110

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S

Sample ID: **109843-004ADUP** SampType: **DUP** TestCode: **8260_S** Units: **µg/Kg** Prep Date: RunNo: **117555**
Client ID: **B2-1.5** Batch ID: **T10VS009** TestNo: **EPA 8260B** Analysis Date: **1/29/2010** SeqNo: **1867055**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	ND	5.0						0	0	20	
1,2,4-Trimethylbenzene	ND	5.0						0	0	20	
1,2-Dibromo-3-chloropropane	ND	10						0	0	20	
1,2-Dibromoethane	ND	5.0						0	0	20	
1,2-Dichlorobenzene	ND	5.0						0	0	20	
1,2-Dichloroethane	ND	5.0						0	0	20	
1,2-Dichloropropane	ND	5.0						0	0	20	
1,3,5-Trimethylbenzene	ND	5.0						0	0	20	
1,3-Dichlorobenzene	ND	5.0						0	0	20	
1,3-Dichloropropane	ND	5.0						0	0	20	
1,4-Dichlorobenzene	ND	5.0						0	0	20	
2,2-Dichloropropane	ND	5.0						0	0	20	
2-Chlorotoluene	ND	5.0						0	0	20	
4-Chlorotoluene	ND	5.0						0	0	20	
4-Isopropyltoluene	ND	5.0						0	0	20	
Benzene	ND	5.0						0	0	20	
Bromobenzene	ND	5.0						0	0	20	
Bromodichloromethane	ND	5.0						0	0	20	
Bromoform	ND	5.0						0	0	20	
Bromomethane	ND	5.0						0	0	20	
Carbon tetrachloride	ND	5.0						0	0	20	
Chlorobenzene	ND	5.0						0	0	20	
Chloroethane	ND	5.0						0	0	20	
Chloroform	ND	5.0						0	0	20	
Chloromethane	ND	5.0						0	0	20	
cis-1,2-Dichloroethene	ND	5.0						0	0	20	
cis-1,3-Dichloropropene	ND	5.0						0	0	20	
Dibromochloromethane	ND	5.0						0	0	20	
Dibromomethane	ND	5.0						0	0	20	
Dichlorodifluoromethane	ND	5.0						0	0	20	

Qualifiers:

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

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

CLIENT: Geocon Consultants, Inc.
Work Order: 109843
Project: Hwy 50-99 Interchange, S9300-06-110

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S

Sample ID: **109843-004ADUP** SampType: **DUP** TestCode: **8260_S** Units: **µg/Kg** Prep Date: RunNo: **117555**
Client ID: **B2-1.5** Batch ID: **T10VS009** TestNo: **EPA 8260B** Analysis Date: **1/29/2010** SeqNo: **1867055**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	ND	5.0						0	0	20	
Hexachlorobutadiene	ND	5.0						0	0	20	
Isopropylbenzene	ND	5.0						0	0	20	
m,p-Xylene	ND	10						0	0	20	
Methylene chloride	ND	5.0						0	0	20	
n-Butylbenzene	ND	5.0						0	0	20	
n-Propylbenzene	ND	5.0						0	0	20	
Naphthalene	ND	5.0						0	0	20	
o-Xylene	ND	5.0						0	0	20	
sec-Butylbenzene	ND	5.0						0	0	20	
Styrene	ND	5.0						0	0	20	
tert-Butylbenzene	ND	5.0						0	0	20	
Tetrachloroethene	ND	5.0						0	0	20	
Toluene	ND	5.0						0	0	20	
trans-1,2-Dichloroethene	ND	5.0						0	0	20	
Trichloroethene	ND	5.0						0	0	20	
Trichlorofluoromethane	ND	5.0						0	0	20	
Vinyl chloride	ND	5.0						0	0	20	
Surr: 1,2-Dichloroethane-d4	39.060		50.00		78.1	70	130		0	20	
Surr: 4-Bromofluorobenzene	45.890		50.00		91.8	70	130		0	20	
Surr: Dibromofluoromethane	40.480		50.00		81.0	70	130		0	20	
Surr: Toluene-d8	47.240		50.00		94.5	70	130		0	20	

Sample ID: **109843-004AMS** SampType: **MS** TestCode: **8260_S** Units: **µg/Kg** Prep Date: RunNo: **117555**
Client ID: **B2-1.5** Batch ID: **T10VS009** TestNo: **EPA 8260B** Analysis Date: **1/29/2010** SeqNo: **1867058**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	39.670	5.0	50.00	0	79.3	70	130				
Benzene	89.200	5.0	100.0	0	89.2	70	130				
Chlorobenzene	43.400	5.0	50.00	0	86.8	70	130				

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: 109843
Project: Hwy 50-99 Interchange, S9300-06-110

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S

Sample ID: **109843-004AMS** SampType: **MS** TestCode: **8260_S** Units: **µg/Kg** Prep Date: RunNo: **117555**
Client ID: **B2-1.5** Batch ID: **T10VS009** TestNo: **EPA 8260B** Analysis Date: **1/29/2010** SeqNo: **1867058**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
MTBE	42.110	5.0	50.00	0	84.2	70	130				
Toluene	85.390	5.0	100.0	0	85.4	70	130				
Trichloroethene	43.670	5.0	50.00	0	87.3	70	130				
Surr: 1,2-Dichloroethane-d4	38.830		50.00		77.7	70	130				
Surr: 4-Bromofluorobenzene	46.470		50.00		92.9	70	130				
Surr: Dibromofluoromethane	39.040		50.00		78.1	70	130				
Surr: Toluene-d8	44.210		50.00		88.4	70	130				

Sample ID: **109843-004AMSD** SampType: **MSD** TestCode: **8260_S** Units: **µg/Kg** Prep Date: RunNo: **117555**
Client ID: **B2-1.5** Batch ID: **T10VS009** TestNo: **EPA 8260B** Analysis Date: **1/29/2010** SeqNo: **1867059**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	42.750	5.0	50.00	0	85.5	70	130	39.67	7.47	20	
Benzene	97.610	5.0	100.0	0	97.6	70	130	89.20	9.00	20	
Chlorobenzene	46.260	5.0	50.00	0	92.5	70	130	43.40	6.38	20	
MTBE	45.110	5.0	50.00	0	90.2	70	130	42.11	6.88	20	
Toluene	92.240	5.0	100.0	0	92.2	70	130	85.39	7.71	20	
Trichloroethene	48.570	5.0	50.00	0	97.1	70	130	43.67	10.6	20	
Surr: 1,2-Dichloroethane-d4	37.810		50.00		75.6	70	130		0	0	
Surr: 4-Bromofluorobenzene	45.050		50.00		90.1	70	130		0	0	
Surr: Dibromofluoromethane	39.910		50.00		79.8	70	130		0	0	
Surr: Toluene-d8	43.960		50.00		87.9	70	130		0	0	

Qualifiers:

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

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CLIENT: Geocon Consultants, Inc.
Work Order: 109843
Project: Hwy 50-99 Interchange, S9300-06-110

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_S_FULL

Sample ID: **MB-61503** SampType: **MBLK** TestCode: **8270_S_FUL** Units: **µg/Kg** Prep Date: **2/1/2010** RunNo: **117524**
Client ID: **PBS** Batch ID: **61503** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **2/1/2010** SeqNo: **1866499**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	ND	330									
1,2-Dichlorobenzene	ND	330									
1,3-Dichlorobenzene	ND	330									
1,4-Dichlorobenzene	ND	330									
2,4,5-Trichlorophenol	ND	330									
2,4,6-Trichlorophenol	ND	330									
2,4-Dichlorophenol	ND	1600									
2,4-Dimethylphenol	ND	330									
2,4-Dinitrophenol	ND	1600									
2,4-Dinitrotoluene	ND	330									
2,6-Dinitrotoluene	ND	330									
2-Chloronaphthalene	ND	330									
2-Chlorophenol	ND	330									
2-Methylnaphthalene	ND	330									
2-Methylphenol	ND	330									
2-Nitroaniline	ND	1600									
2-Nitrophenol	ND	330									
3,3´-Dichlorobenzidine	ND	660									
3-Nitroaniline	ND	1600									
4,6-Dinitro-2-methylphenol	ND	1600									
4-Bromophenyl-phenylether	ND	330									
4-Chloro-3-methylphenol	ND	660									
4-Chloroaniline	ND	660									
4-Chlorophenyl-phenylether	ND	330									
4-Methylphenol	ND	330									
4-Nitroaniline	ND	1600									
4-Nitrophenol	ND	1600									
Acenaphthene	ND	330									
Acenaphthylene	ND	330									
Anthracene	ND	330									

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: 109843
Project: Hwy 50-99 Interchange, S9300-06-110

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_S_FULL

Sample ID: **MB-61503** SampType: **MBLK** TestCode: **8270_S_FUL** Units: **µg/Kg** Prep Date: **2/1/2010** RunNo: **117524**
Client ID: **PBS** Batch ID: **61503** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **2/1/2010** SeqNo: **1866499**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzidine (M)	ND	1600									
Benzo(a)anthracene	ND	330									
Benzo(a)pyrene	ND	330									
Benzo(b)fluoranthene	ND	330									
Benzo(g,h,i)perylene	ND	330									
Benzo(k)fluoranthene	ND	330									
Benzoic acid	ND	1600									
Benzyl alcohol	ND	660									
Bis(2-chloroethoxy)methane	ND	330									
Bis(2-chloroethyl)ether	ND	330									
Bis(2-chloroisopropyl)ether	ND	330									
Bis(2-ethylhexyl)phthalate	ND	330									
Butylbenzylphthalate	ND	330									
Chrysene	ND	330									
Di-n-butylphthalate	ND	330									
Di-n-octylphthalate	ND	330									
Dibenz(a,h)anthracene	ND	330									
Dibenzofuran	ND	330									
Diethylphthalate	ND	330									
Dimethylphthalate	ND	330									
Fluoranthene	ND	330									
Fluorene	ND	330									
Hexachlorobenzene	ND	330									
Hexachlorobutadiene	ND	660									
Hexachlorocyclopentadiene	ND	660									
Hexachloroethane	ND	330									
Indeno(1,2,3-cd)pyrene	ND	330									
Isophorone	ND	330									
N-Nitrosodi-n-propylamine	ND	330									
N-Nitrosodiphenylamine	ND	330									

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: 109843
Project: Hwy 50-99 Interchange, S9300-06-110

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_S_FULL

Sample ID: **MB-61503** SampType: **MBLK** TestCode: **8270_S_FUL** Units: **µg/Kg** Prep Date: **2/1/2010** RunNo: **117524**
Client ID: **PBS** Batch ID: **61503** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **2/1/2010** SeqNo: **1866499**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	330									
Nitrobenzene	ND	330									
Pentachlorophenol	ND	1600									
Phenanthrene	ND	330									
Phenol	ND	330									
Pyrene	ND	330									
Surr: 1,2-Dichlorobenzene-d4	2402.333		3330		72.1	45	105				
Surr: 2,4,6-Tribromophenol	2839.667		3330		85.3	41	129				
Surr: 2-Chlorophenol-d4	2484.667		3330		74.6	55	108				
Surr: 2-Fluorobiphenyl	2469.000		3330		74.1	56	114				
Surr: 2-Fluorophenol	2442.000		3330		73.3	50	108				
Surr: 4-Terphenyl-d14	3072.000		3330		92.3	59	141				
Surr: Nitrobenzene-d5	2343.333		3330		70.4	45	114				
Surr: Phenol-d5	2596.333		3330		78.0	46	118				

Sample ID: **LCS-61503** SampType: **LCS** TestCode: **8270_S_FUL** Units: **µg/Kg** Prep Date: **2/1/2010** RunNo: **117524**
Client ID: **LCSS** Batch ID: **61503** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **2/1/2010** SeqNo: **1866500**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	3210.333	330	3330	0	96.4	67	107				
1,4-Dichlorobenzene	3097.333	330	3330	0	93.0	64	99				
2,4-Dinitrotoluene	3936.667	330	3330	0	118	81	122				
2-Chlorophenol	3043.000	330	3330	0	91.4	62	112				
4-Chloro-3-methylphenol	3441.667	660	3330	0	103	64	138				
4-Nitrophenol	3871.667	1600	3330	0	116	60	142				
Acenaphthene	3324.667	330	3330	0	99.8	70	116				
N-Nitrosodi-n-propylamine	3597.667	330	3330	0	108	73	115				
Pentachlorophenol	3586.000	1600	3330	0	108	59	135				
Phenol	3237.333	330	3330	0	97.2	61	120				
Pyrene	3381.000	330	3330	0	102	75	117				

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: 109843
Project: Hwy 50-99 Interchange, S9300-06-110

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_S_FULL

Sample ID: **LCS-61503** SampType: **LCS** TestCode: **8270_S_FUL** Units: **µg/Kg** Prep Date: **2/1/2010** RunNo: **117524**
Client ID: **LCSS** Batch ID: **61503** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **2/1/2010** SeqNo: **1866500**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 1,2-Dichlorobenzene-d4	2844.667		3330		85.4	45	105				
Surr: 2,4,6-Tribromophenol	3402.333		3330		102	41	129				
Surr: 2-Chlorophenol-d4	2927.333		3330		87.9	55	108				
Surr: 2-Fluorobiphenyl	2983.000		3330		89.6	56	114				
Surr: 2-Fluorophenol	2876.667		3330		86.4	50	108				
Surr: 4-Terphenyl-d14	3521.333		3330		106	59	141				
Surr: Nitrobenzene-d5	2982.333		3330		89.6	45	114				
Surr: Phenol-d5	3010.333		3330		90.4	46	118				

Sample ID: **109843-008AMS** SampType: **MS** TestCode: **8270_S_FUL** Units: **µg/Kg** Prep Date: **2/1/2010** RunNo: **117524**
Client ID: **B3-3.5** Batch ID: **61503** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **2/1/2010** SeqNo: **1866769**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	2789.000	330	3330	0	83.8	62	109				
1,4-Dichlorobenzene	3205.667	330	3330	0	96.3	57	99				
2,4-Dinitrotoluene	3676.000	330	3330	0	110	76	126				
2-Chlorophenol	2614.667	330	3330	0	78.5	52	120				
4-Chloro-3-methylphenol	3040.667	660	3330	0	91.3	63	137				
4-Nitrophenol	3434.000	1600	3330	0	103	52	144				
Acenaphthene	3022.000	330	3330	0	90.8	61	121				
N-Nitrosodi-n-propylamine	3244.000	330	3330	0	97.4	67	116				
Pentachlorophenol	3116.000	1600	3330	0	93.6	47	143				
Phenol	2809.000	330	3330	0	84.4	54	126				
Pyrene	3089.333	330	3330	0	92.8	68	121				
Surr: 1,2-Dichlorobenzene-d4	2443.667		3330		73.4	45	105				
Surr: 2,4,6-Tribromophenol	3099.333		3330		93.1	41	129				
Surr: 2-Chlorophenol-d4	2598.667		3330		78.0	55	108				
Surr: 2-Fluorobiphenyl	2697.667		3330		81.0	56	114				
Surr: 2-Fluorophenol	2576.000		3330		77.4	50	108				
Surr: 4-Terphenyl-d14	3230.000		3330		97.0	59	141				

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: 109843
Project: Hwy 50-99 Interchange, S9300-06-110

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_S_FULL

Sample ID: **109843-008AMS** SampType: **MS** TestCode: **8270_S_FUL** Units: **µg/Kg** Prep Date: **2/1/2010** RunNo: **117524**
Client ID: **B3-3.5** Batch ID: **61503** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **2/1/2010** SeqNo: **1866769**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Nitrobenzene-d5	2594.333		3330		77.9	45	114				
Surr: Phenol-d5	2753.667		3330		82.7	46	118				

Sample ID: **109843-008AMSD** SampType: **MSD** TestCode: **8270_S_FUL** Units: **µg/Kg** Prep Date: **2/1/2010** RunNo: **117524**
Client ID: **B3-3.5** Batch ID: **61503** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **2/1/2010** SeqNo: **1866770**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	2866.333	330	3330	0	86.1	62	109	2789	2.73	20	
1,4-Dichlorobenzene	3645.333	330	3330	0	109	57	99	3206	12.8	20	S
2,4-Dinitrotoluene	3875.333	330	3330	0	116	76	126	3676	5.28	20	
2-Chlorophenol	2673.333	330	3330	0	80.3	52	120	2615	2.22	20	
4-Chloro-3-methylphenol	3150.667	660	3330	0	94.6	63	137	3041	3.55	20	
4-Nitrophenol	3587.333	1600	3330	0	108	52	144	3434	4.37	20	
Acenaphthene	3089.667	330	3330	0	92.8	61	121	3022	2.21	20	
N-Nitrosodi-n-propylamine	3380.333	330	3330	0	102	67	116	3244	4.12	20	
Pentachlorophenol	3272.333	1600	3330	0	98.3	47	143	3116	4.89	20	
Phenol	2886.000	330	3330	0	86.7	54	126	2809	2.70	20	
Pyrene	3141.333	330	3330	0	94.3	68	121	3089	1.67	20	
Surr: 1,2-Dichlorobenzene-d4	2487.333		3330		74.7	45	105		0	0	
Surr: 2,4,6-Tribromophenol	3288.667		3330		98.8	41	129		0	0	
Surr: 2-Chlorophenol-d4	2675.667		3330		80.4	55	108		0	0	
Surr: 2-Fluorobiphenyl	2774.000		3330		83.3	56	114		0	0	
Surr: 2-Fluorophenol	2636.000		3330		79.2	50	108		0	0	
Surr: 4-Terphenyl-d14	3352.000		3330		101	59	141		0	0	
Surr: Nitrobenzene-d5	2665.333		3330		80.0	45	114		0	0	
Surr: Phenol-d5	2828.000		3330		84.9	46	118		0	0	

Qualifiers:

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

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

CLIENT: Geocon Consultants, Inc.
Work Order: 109843
Project: Hwy 50-99 Interchange, S9300-06-110

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_S_FULL

Sample ID: **109843-003ADUP** SampType: **DUP** TestCode: **8270_S_FUL** Units: **µg/Kg** Prep Date: **2/1/2010** RunNo: **117524**
Client ID: **B1-6.5** Batch ID: **61503** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **2/1/2010** SeqNo: **1866773**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	ND	330						0	0	20	
1,2-Dichlorobenzene	ND	330						0	0	20	
1,2-Diphenylhydrazine	ND	330						0	0	20	
1,3-Dichlorobenzene	ND	330						0	0	20	
1,4-Dichlorobenzene	ND	330						0	0	20	
1,4-Dioxane	ND	330						0	0	20	
2,4,5-Trichlorophenol	ND	330						0	0	20	
2,4,6-Trichlorophenol	ND	330						0	0	20	
2,4-Dichlorophenol	ND	1600						0	0	20	
2,4-Dimethylphenol	ND	330						0	0	20	
2,4-Dinitrophenol	ND	1600						0	0	20	
2,4-Dinitrotoluene	ND	330						0	0	20	
2,6-Dinitrotoluene	ND	330						0	0	20	
2-Chloronaphthalene	ND	330						0	0	20	
2-Chlorophenol	ND	330						0	0	20	
2-Methylnaphthalene	ND	330						0	0	20	
2-Methylphenol	ND	330						0	0	20	
2-Nitroaniline	ND	1600						0	0	20	
2-Nitrophenol	ND	330						0	0	20	
3,3´-Dichlorobenzidine	ND	660						0	0	20	
3-Nitroaniline	ND	1600						0	0	20	
4,6-Dinitro-2-methylphenol	ND	1600						0	0	20	
4-Bromophenyl-phenylether	ND	330						0	0	20	
4-Chloro-3-methylphenol	ND	660						0	0	20	
4-Chloroaniline	ND	660						0	0	20	
4-Chlorophenyl-phenylether	ND	330						0	0	20	
3/4-Methylphenol	ND	330						0	0	20	
4-Methylphenol	ND	330						0	0	20	
4-Nitroaniline	ND	1600						0	0	20	
4-Nitrophenol	ND	1600						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

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

CLIENT: Geocon Consultants, Inc.
Work Order: 109843
Project: Hwy 50-99 Interchange, S9300-06-110

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_S_FULL

Sample ID: **109843-003ADUP** SampType: **DUP** TestCode: **8270_S_FUL** Units: **µg/Kg** Prep Date: **2/1/2010** RunNo: **117524**
Client ID: **B1-6.5** Batch ID: **61503** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **2/1/2010** SeqNo: **1866773**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	ND	330						0	0	20	
Acenaphthylene	ND	330						0	0	20	
Aniline	ND	330						0	0	20	
Anthracene	ND	330						0	0	20	
Benzidine (M)	ND	1600						0	0	20	
Benzo(a)anthracene	ND	330						0	0	20	
Benzo(a)pyrene	ND	330						0	0	20	
Benzo(b)fluoranthene	ND	330						0	0	20	
Benzo(g,h,i)perylene	ND	330						0	0	20	
Benzo(k)fluoranthene	ND	330						0	0	20	
Benzoic acid	ND	1600						0	0	20	
Benzyl alcohol	ND	660						0	0	20	
Bis(2-chloroethoxy)methane	ND	330						0	0	20	
Bis(2-chloroethyl)ether	ND	330						0	0	20	
Bis(2-chloroisopropyl)ether	ND	330						0	0	20	
Bis(2-ethylhexyl)phthalate	ND	330						0	0	20	
Butylbenzylphthalate	ND	330						0	0	20	
Carbazole	ND	330						0	0	20	
Chrysene	ND	330						0	0	20	
Di-n-butylphthalate	ND	330						0	0	20	
Di-n-octylphthalate	ND	330						0	0	20	
Dibenz(a,h)anthracene	ND	330						0	0	20	
Dibenzofuran	ND	330						0	0	20	
Diethylphthalate	ND	330						0	0	20	
Dimethylphthalate	ND	330						0	0	20	
Fluoranthene	ND	330						0	0	20	
Fluorene	ND	330						0	0	20	
Hexachlorobenzene	ND	330						0	0	20	
Hexachlorobutadiene	ND	660						0	0	20	
Hexachlorocyclopentadiene	ND	660						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

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

CLIENT: Geocon Consultants, Inc.
Work Order: 109843
Project: Hwy 50-99 Interchange, S9300-06-110

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_S_FULL

Sample ID: **109843-003ADUP** SampType: **DUP** TestCode: **8270_S_FUL** Units: **µg/Kg** Prep Date: **2/1/2010** RunNo: **117524**
Client ID: **B1-6.5** Batch ID: **61503** TestNo: **EPA 8270C** **EPA 3550B** Analysis Date: **2/1/2010** SeqNo: **1866773**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloroethane	ND	330						0	0	20	
Indeno(1,2,3-cd)pyrene	ND	330						0	0	20	
Isophorone	ND	330						0	0	20	
N-Nitrosodi-n-propylamine	ND	330						0	0	20	
N-Nitrosodimethylamine	ND	330						0	0	20	
N-Nitrosodiphenylamine	ND	330						0	0	20	
Naphthalene	ND	330						0	0	20	
Nitrobenzene	ND	330						0	0	20	
Pentachlorophenol	ND	1600						0	0	20	
Phenanthrene	ND	330						0	0	20	
Phenol	ND	330						155.0	0	20	
Pyrene	ND	330						0	0	20	
Pyridine	ND	1600						0	0	20	
Surr: 1,2-Dichlorobenzene-d4	2577.667		3330		77.4	45	105		0	0	
Surr: 2,4,6-Tribromophenol	2949.333		3330		88.6	41	129		0	0	
Surr: 2-Chlorophenol-d4	2863.000		3330		86.0	55	108		0	0	
Surr: 2-Fluorobiphenyl	2718.000		3330		81.6	56	114		0	0	
Surr: 2-Fluorophenol	2827.667		3330		84.9	50	108		0	0	
Surr: 4-Terphenyl-d14	3463.667		3330		104	59	141		0	0	
Surr: Nitrobenzene-d5	2568.333		3330		77.1	45	114		0	0	
Surr: Phenol-d5	3002.333		3330		90.2	46	118		0	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

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

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
(562) 989-4045 • Fax (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____

Logged By: _____ Date: 1/27/10

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

Sample Condition Upon Receipt: 1. CHILLED 4.2 Y☐ N☐ 2. HEADSPACE (VOA) N/A Y☐ N☐ 3. CONTAINER INTACT Y☑ N☐ 4. SEALED Y☐ N☑ 5. # OF SPLS MATCH COC Y☑ N☐ 6. PRESERVED Y☐ N☑

Client: GEOCON CONSULTANTS, INC.
Attn: Rebecca Silva
Address: 3160 Gold Valley Drive, Suite 800
City: Rancho Cordova State: CA Zip Code: 95742
TEL: (916) 852-9118
FAX: (916) 852-9132

Project Name: Hwy 50 - 99 Interchange Project #: S9300-06-110 Sampler: (Printed Name) Rich Brown (Signature) Rich B

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (Signature and Printed Name)	Date	Time
Rich Brown	1/26/10	1630	GSO	1/26/10	1630
			Marge	1/27/10	8:26

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter: Rebecca S 1/26/10
Print Name Date
Signature: Rebecca S

Send Report To: Attn: ____ Co: ____ Address ____ City ____ State ____ Zip ____

Bill To: Attn: ____ Co: ____ Address ____ City ____ State ____ Zip ____

Special Instructions/Comments:
* Caltrans #: 03A1348.
* Homogenize lead samples
* 5-day TAT EDD to cook@geocon.com

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 : $1.00 / ATL workorder / mo (after 1 year)

Circle or Add Analysis(es) Requested

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D. / Location	Date (2010)	Time	8081A (Pesticides)	8082 (PCB)	8260B (Volatiles)	8270C (BNA)	6010B (Total Metal) (CAM 17)	8015B (GRO) / BTEX + MTBE	8015B (DRO)	VOCs 8240	SVOCs 8270	SOIL	WATER	GROUND WATER	WASTEWATER	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
	109843-1	B1-1.5	1/26	0930				X	X	X				X				5 day	1	T	P	C
	-2	B1-4.5		0940					X	X												
	-3	B1-6.5		1000								X	X									
	-4	B2-1.5		1020								X	X									
	-5	B2-2.5		1025					X	X												
	-6	B2-6.5		1050					X	X												
	-7	B2-8.5		1055				X														
	-8	B3-3.5		1115								X	X									
	-9	B3-5.5		1125				X	X	X												
	-10	B3-8.5		1135					X	X												

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

• TAT starts 8 a.m. following day if samples received after 3 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

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

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

DISTRIBUTION: White with report Yellow to folder Pink to submitter.

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
(562) 989-4045 • Fax (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____

Logged By: _____ Date: _____

Method of Transport: Client ☐ ATL ☐ CA OverN ☐ FEDEX ☐ Other: _____

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

Client: GEOCON CONSULTANTS, INC.
Attn: Rebecca Stoc
Address: 3160 Gold Valley Drive, Suite 800
City: Rancho Cordova State: CA Zip Code: 95742
TEL: (916) 852-9118
FAX: (916) 852-9132

Project Name: Hwy 50-99 Interchange Project #: 59300-06-110 Sampler: (Printed Name) Rich Brown (Signature) Rich B

Relinquished by: (Signature and Printed Name) Rich B Rich Brown Date: 1/26/10 Time: 1630 Received by: (Signature and Printed Name) GSO Date: 1/26/10 Time: 1630

Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Print Name _____ Date _____
Signature _____

Send Report To:
Attn: _____
Co: _____
Address _____
City _____ State _____ Zip _____

Bill To:
Attn: _____
Co: _____
Address _____
City _____ State _____ Zip _____

Special Instructions/Comments:
See page 1

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 : $1.00 / ATL workorder / mo (after 1 year)

Circle or Add Analysis(es) Requested

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D. / Location	Date (2010)	Time	8081A (Pesticides)	8082 (POB)	8260B (Volatiles)	8270C (BNA)	6010B (Total Metals)	8015B (GRO) / BTEX	8015B (DRO)	VOCs 8260	SVOCs 8270	Total Lead (6010B)	SOIL	WATER	GROUND WATER	WASTEWATER	TAT	#	Type	PRESERVATION	REMARKS
	109843-11	B4-0.5	1/26	1140				X							X				5day	1	T	P	C
	-12	B4-2.5		1145					X	X					X								
	-13	B4-5.5		1155								X	X		X								
	-14	B4-8.5		1215					X	X					X								
	-15	B1-0.0		0930 ~~0940~~											X				5day	1	B	P	C
	-16	B1-2.5		0935											X					1	T	P	C
	~~-17~~	B1-4.5		0940										X	X					1	T	P	C
	~~-18~~	B1-6.5		1000											X					1	T	P	C

composite

composite & nonaqueous

QA/QC: RTNE ☐ CT ☒ SWRCB ☐ Logcode _____ OTHER _____

• TAT starts 8 a.m. following day if samples received after 3 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

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

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

DISTRIBUTION: White with report Yellow to folder. Pink to submitter.

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
(562) 989-4045 • Fax (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____

Logged By: _____ Date: _____

Method of Transport: Client ☐ ATL ☐ CA OverN ☐ FEDEX ☐ Other: _____

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

Client: GEOCON CONSULTANTS, INC.
Attn: Rebecca Silva
Address: 3160 Gold Valley Drive, Suite 800
City: Rancho Cordova State: CA Zip Code: 95742
TEL: (916) 852-9118
FAX: (916) 852-9132

Project Name: Hwy 50-99 Interchange Project #: 89350-06-110 Sampler: (Printed Name) Rich Brown (Signature) Rich B

Relinquished by: (Signature and Printed Name) Rich B Rich Brown Date: 1/26/10 Time: 1630 Received by: (Signature and Printed Name) GSO Date: 1/26/10 Time: 1630
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter: _____ Print Name _____ Date _____ Signature

Send Report To: Attn: _____ Co: _____ Address _____ City _____ State _____ Zip _____

Bill To: Attn: _____ Co: _____ Address _____ City _____ State _____ Zip _____

Special Instructions/Comments: see pg. 1

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 : $1.00 / ATL workorder / mo (after 1 year)

Circle or Add Analysis(es) Requested: 8081A (Pesticides), 8082 (PCB), 8260B (Volatiles), 8270C (BNA), 6010B (Total Metal), 8015B (GRO) / BTEX, 8015B (DRO), total lead (6010B)

SPECIFY APPROPRIATE MATRIX: SOIL, WATER, GROUND WATER, WASTEWATER

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D. / Location	Date (2010)	Time	8081A (Pesticides)	8082 (PCB)	8260B (Volatiles)	8270C (BNA)	6010B (Total Metal)	8015B (GRO) / BTEX	8015B (DRO)	total lead (6010B)	SOIL	WATER	GROUND WATER	WASTEWATER	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
	109843-17	B2-0.0 (composite)	1/26	1020									X				5-day	1	BP	C	composite & homogenize
	-18	B2-2.5		1025								X	X					1	TP	C	
	-18	B2-4.5		1040									X								
	-20	B2-6.5		1050									X								
	-19	B3-0.0 (composite)	1/26	1105									X				5-day	1	BP	C	composite & homogenize
	-20	B3-2.5		1105								X	X					1	TP	C	
	-21	B3-4.5		1120									X								
	-22	B3-6.5		1130									X								

QA/QC: RTNE ☐ CT ☒ SWRCB ☐ Logcode _____ OTHER _____

• TAT starts 8 a.m. following day if samples received after 3 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

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

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

DISTRIBUTION: White with report Yellow to folder Pink to submitter.

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
(562) 989-4045 • Fax (562) 989-4040

FOR LABORATORY USE ONLY:

P.O.#: _____

Logged By: _____ Date: _____

Method of Transport: Client ☐ ATL ☐ CA OverN ☐ FEDEX ☐ Other: _____

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

Client: GEOCON CONSULTANTS, INC.
Attn: Rebecca Silva
Address: 3160 Gold Valley Drive, Suite 800
City: Rancho Cordova State: CA Zip Code: 95742
TEL: (916) 852-9118
FAX: (916) 852-9132

Project Name: Hwy 50-99 Interchange Project #: S9300-06-110 Sampler: (Printed Name) Rich Brown (Signature) [signature]

Relinquished by: (Signature and Printed Name) [signature] Rich Brown Date: 1/26/10 Time: 1630 Received by: (Signature and Printed Name) GSO Date: 1/26/10 Time: 1630

Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter:
Print Name _____ Date _____
Signature _____

Send Report To:
Attn: _____
Co: _____
Address _____
City _____ State _____ Zip _____

Bill To:
Attn: _____
Co: _____
Address _____
City _____ State _____ Zip _____

Special Instructions/Comments: see pg 1

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 : $1.00 / ATL workorder / mo (after 1 year)

Circle or Add Analysis(es) Requested: 8081A (Pesticides), 8082 (PCB), 8260B (Volatiles), 8270C (BNA), 6010B (Total Metal), 8015B (GRO) / BTEX, 8015B (DRO), total lead (6010)

SPECIFY APPROPRIATE MATRIX: SOIL, WATER, GROUND WATER, WASTEWATER

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

ITEM	LAB USE ONLY: Batch #: / Lab No.	Sample Description: Sample I.D. / Location	Date (2010)	Time	TAT	Container(s) #	Type	PRESERVATION	REMARKS
	109543-23	B4-0.0	1/26	1140	5 day	1	B	P	C
	~~-24~~	B4-2.5	↓	1145	↓	1	T	P	C
	-24	B4-4.5	↓	1150	↓	↓	↓	↓	↓
	-25	B4-6.5	↓	1205	↓	↓	↓	↓	↓

composite

composite & homogenize

RS 1/26/10

• TAT starts 8 a.m. following day if samples received after 3 p.m.

TAT: A= Overnight ≤ 24 hr B= Emergency Next workday C= Critical 2 Workdays D= Urgent 3 Workdays E= Routine 7 Workdays

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

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

DISTRIBUTION: White with report Yellow to folder Pink to submitter.

Memorandum

Flex your power!
Be energy efficient!

Rec'd 11/9/2009

To: JEFF SIMS
Chief, Branch 1
Division of Engineering Services
Structural Design
Office of Bridge Design North

ATT. Mr. Greg Jones

Date: September 1, 2009

File: 03-SAC-50-PM L2.33
EA 03-3E1301
E50-N51 & S99 Connector
Overcrossing Bridge
(Hinge Support)
Bridge No. 24-0225G

From: **DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
GEOTECHNICAL SERVICES – MS 5

Subject: Foundation Report

Per your request, the Office of Geotechnical Design North (OGD-N) has prepared this Foundation Report for the proposed permanent hinge support at column 3R of the E50-N51& S99 Connector Overcrossing (Bridge Number 24-0225G) in Sacramento. The Bridge was originally named "X" Street On-Ramp Undercrossing, Br. No. 24-0225. This report includes review and evaluation of the existing E50-N51& S99 Connector Overcrossing (Bridge Number 24-0225G), As-Built bridge files and field reconnaissance.

Elevations used in this report are based on the arbitrary vertical datum (see Foundation Plan for details). To convert the new arbitrary datum survey to the As-Built plans of 1968, Preliminary Investigations-North, Office of Design and Technical Services, have provided a conversion factor of +79.37 feet

Summary of Site Geology and Subsurface Conditions

Based on the "As-Built" Log of Test Borings (LOTBs) dated August 1968 for the existing E50-N51 & S99 Connector Overcrossing (Br. No. 24-0225G), the soils under the site consist mainly of silty clay, silty sand, sandy silt, and clayey silt. The soils apparent density ranged from dense to very dense for granular soil and consistency ranged from stiff to very hard for cohesive soils.

Soil boring number B-57 of "As-Built" LOTBs, which was located 3 feet left of the "X_3" line at Station 34+65, is the boring that is closest to the proposed foundation area. This

boring indicates that very hard clayey silt, silty clay, and very dense silty sand were encountered and extended from the surface to elevation approximately 75.37 feet, and stiff to hard clay/silt and dense sand were encountered from elevation approximately 75.37 feet to the bottom of the boring. Please note that the elevation used in this report is based on the arbitrary vertical datum and the conversion factor is +79.37 feet.

Ground Water

Ground water and soil moisture were not mentioned in Boring B-57 based on the "As-Built" LOTBs. Ground water was measured between elevations approximately 72.87 feet in September 1963 and 71.47 feet in January 1964 (see "As-Built" LOTBs for details). Ground water elevations may fluctuate with seasonal precipitation and other factors.

Scour

Scour is not an issue at this site because the bridge is not in a watercourse.

Corrosion Evaluation

There is no corrosion test information available for this project. The recent field investigation for 65th Street Undercrossing (Br. No. 24-0318), which is approximately 2 miles east of the site, indicates the soils in that site are non-corrosive to construction materials or structural elements. Both sites have similar geology based on the LOTBs and other geology information, therefore, the soils in this site are consider as non-corrosive to construction materials or structural elements.

Seismicity

Based on the 1996 Caltrans Seismic Hazard Map, the controlling fault for the project is the Coast Ranges-Sierran Block Boundary Zone Fault (reverse, including thrust). This fault possesses a Maximum Credible Earthquake moment magnitude of Mw = 7.0, and is located approximately 27 miles from the project site to the southwest. Based on the referenced map, the peak bedrock acceleration is estimated to be 0.2g. The soil profile as shown on the "As-Built" LOTBs corresponds to Type "D" per Caltrans Seismic Design Criteria Version 1.4, June 2006. The recommended Acceleration Response Spectrum curve is shown in attached Figure 1.

Liquefaction Potential

Based on liquefaction analysis, the liquefaction potential is considered to be insignificant.

Surface Fault Rupture Hazard

Surface fault rupture is defined as displacement that occurs along the surface trace of a fault. There are no known active faults crossing beneath or extending directly toward the site. Therefore, the potential hazard due to ground rupture is considered to be very low.

Environmental Issues

According to "Project Scope Summary Report" dated February 2009, there is potential for contaminated soil/ground water to exist within the proposed foundation area. It is our understanding that a Site Investigation (SI) was required by District 3. The impact of the potential contamination will have on construction activities should be considered and the extent of the potential contamination in the construction area should be defined.

Foundation Recommendations

It is our understanding that this project is using Load Factor Design methodology instead of Load and Resistance Factor Design methodology.

We do not recommend driven piles or CIDH piles for the proposed foundation due to the limited bridge overhead clearance and potential contaminated soil/ground water at the site. Spread footings are recommended for the project. The foundation recommendations are based on the "As-Built" LOTBs and Plans and the assumption that the soil contamination is at or below a safe level for foundation construction.

Based on the "As-Built" LOTBs, we used a cohesive soil model to estimate soil resistance and settlement for this project. The nominal bearing resistance of the soil underlying the footings was calculated using the formulation provided by AASHTO Bridge Design Specification, Section 10.6.3.1.2a. The elastic half-space method, Caltrans Amendments to AASHTO LRFD, December 2008, was used to estimate the soil settlement.

Table 1. Foundation Design Recommendations for Spread Footings, Bridge No. 24-0225G[1, 2]

Support Location	Minimum Footing Width (feet)	Bottom of Footing Elevation (feet)	Recommended Bearing Limits	
			WSD (1)	LFD (2)
			Gross Allowable Bearing Capacity (q_{all})	Nominal Bearing Resistance (q_n)
Bent 3AR	20	+ 90.37	N/A	13.5 ksf

Notes:
1. Working Stress Design (WSD): The Maximum Contact Pressure (q_{max}) is not to exceed the Recommended Gross Allowable Soil Bearing Capacity, (q_{all}).
2. Load Factor Design (LFD): The Maximum Contact Pressure (q_{max}), divided by the Strength Reduction Factor (ϕ) is not to exceed the Nominal Bearing Resistance (q_n).

Sliding Resistance

The coefficient of friction (tan δ) between the base of the footings and the supporting soils may be assumed as 0.4 for the bents. A minimum factor of safety for sliding shall be 1.5.

GENERAL NOTES TO DESIGNER

1. Support locations are to be plotted on the Log of Test Borings, in plan view, as stated in "Memos to Designers" 4-2. The plotting of the support locations should be made prior to the foundation review.

Construction Considerations

1. If excavations for spread footings expose unsuitable materials for support of the proposed structure foundations, the unsuitable materials shall be removed and replaced with structural backfill compacted to a relative compaction of not less than 95%, or the bottom of footing elevation shall be lowered to undisturbed competent material.

2. Ground water should not be encountered during footing excavation.

3. The Contractor should be aware that there are underground utilities running through the site, and may interfere with the footing excavations and shoring.

4. Spread footings shall be placed neat against competent materials. All loose materials shall be removed prior to placement of concrete.

5. When excavations are completed to the bottom of footing and prior to placement of concrete, all footing excavations are to be inspected and approved by this Office or a representative of the Office of Structure Construction.

6. If the site is determined to be contaminated, appropriate measures should be taken for worker's safety.

PROJECT INFORMATION

Standard Special Provisions S5-280, "Project Information," discloses to bidders and contractors a list of pertinent information available for their inspection prior to bid opening. The following is an excerpt from SSP S5-280 disclosing information originating from Geotechnical Services. Items listed to be included in the Information Handout will be provided in Acrobat (.pdf) format to the addressees of this report via electronic mail.

Data and information attached with the project plans are:

A. *"AS-Built" Log of Test Borings for 'X' street On-Ramp Undercrossing, Bridge Number 24-0225 (New Br. No. is 24-0225G).*

Data and information included in the Information Handout provided to the bidders and contractors are:

A. *Foundation Report for E50-N51 & S99 Connector Undercrossing, Bridge Number 24-0225G, dated September 1, 2009.*

Data and information available for inspection at the District Office:

A. *N/A*

Data and information available for inspection at the Transportation Laboratory:

A. *N/A*

If there are any questions, please contact Xing Zheng at 916 227-1036 or Reza Mahallati at 916 227-1033.

XING ZHENG, CEG 2130
Engineering Geologist
Geotechnical Design – North

Reza Mahallati, P.E.
Senior Materials and Research Engineer
Geotechnical Design – North

REGISTERED GEOLOGIST
XING ZHENG
No. 2130
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA
exp. 3/31/11

REGISTERED PROFESSIONAL ENGINEER
REZA MAHALLATI
No. 49374
Exp. 9/30/12
CIVIL
STATE OF CALIFORNIA

Attachment: ARS curve
c: Reid Buell
R.E. Pending
Structure OE (E-copy)
Eskinder Taddese-PCE (E-copy)
Joe Peterson DME (E-copy)
GDN File
GS File

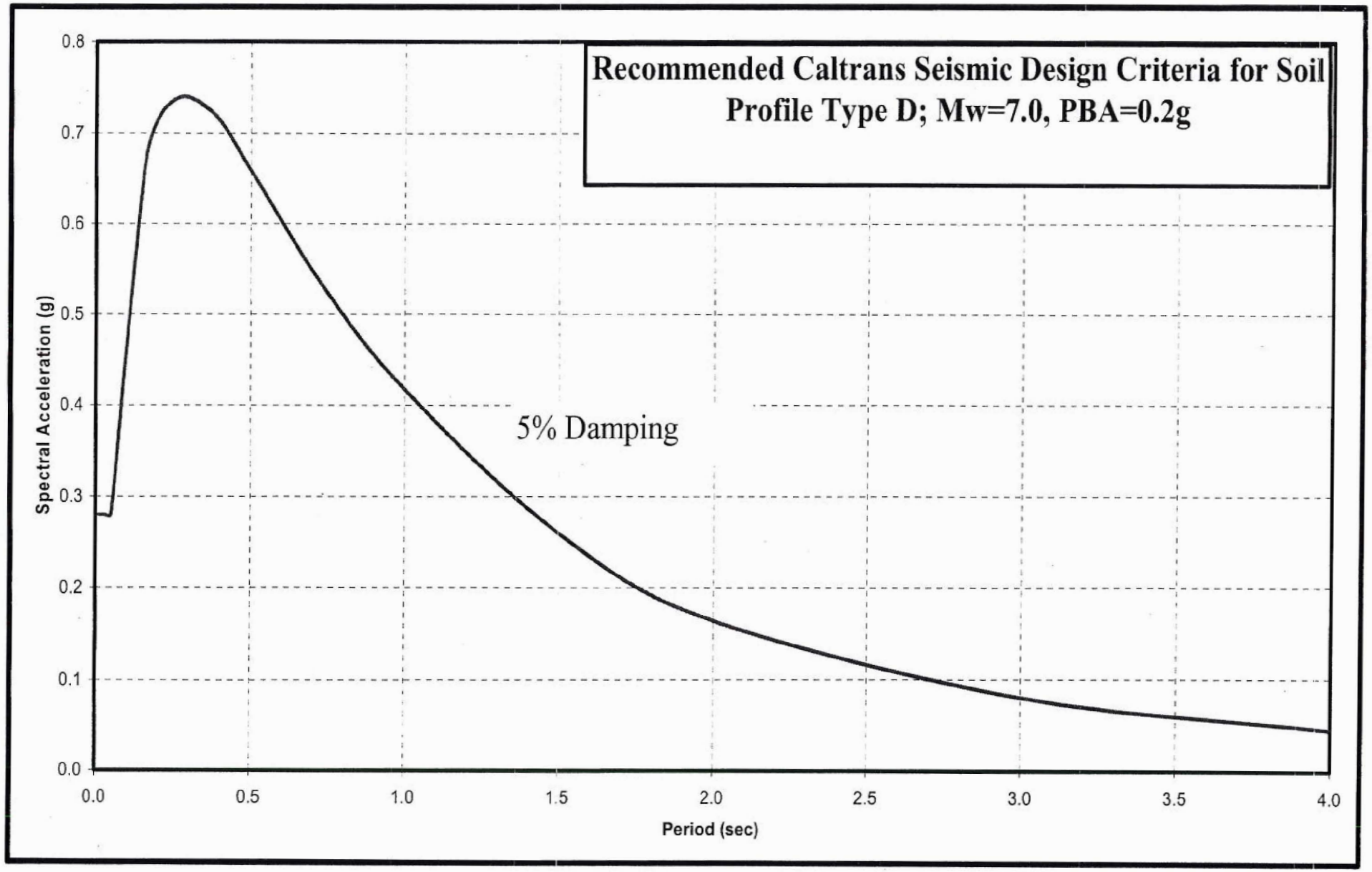

Figure 1. Acceleration Response Spectrum Recommended for Design

FOUNDATION REVIEW

DIVISION OF ENGINEERING SERVICES
GEOTECHNICAL SERVICES

To: Structure Design
1. Preliminary Report
2. R.E. Pending File
3. Specifications & Estimates
4. File

Geotechnical Services
1. GS (Sacramento)
2. GS

District Project Development

Date: 9/22/09

E50-N51 ? S99 Conn OC
Structure Name

03 - Sac - 50 - 2.33
District County Route Post ~~Km~~ m.

District Project Engineer

03-3E1301
E.A. Number

24-225G
Structure Number

Foundation Report By: X. Zhang

Dated: 9/1/09

Reviewed By: G. Jones (OSD) R. Price (GS)

General Plan Dated: 8/27/09

Foundation Plan Dated: 8/27/09

☒ No changes. ☐ The following changes are necessary.

FOUNDATION CHECKLIST

- ✓ Pile Types and Design Loads
- ✓ Pile Lengths
- ✓ Predrilling
- ✓ Pile Load Test
- ✓ Substitution of H Piles For Concrete Piles ☐ Yes ☐ No
- ✓ Footing Elevations, Design Loads, and Locations
- ✓ Seismic Data
- ✓ Location of Adjacent Structures and Utilities
- ✓ Stability of Cuts or Fills
- ✓ Fill Time Delay
- ✓ Effect of Fills on Abutments and Bents
- ✓ LOTB's
- ✓ Fill Surcharge
- ✓ Approach Paving Slabs
- ✓ Scour
- ✓ Ground Water
- ✓ Tremie Seals/Type D Excavation

Office of Structure Design

Branch No.

Geotechnical Services

Rev. 10/02