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Alameda County Environmental Health

November 4, 2009

Project 14740.000

Mr. Steven Plunkett Environmental Health Services Alameda County Health Care Services Agency 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577

Re: Soil and Groundwater Investigation Report of Former UST #4 Area

Pacific Shops, Inc. 1815 Clement Avenue Alameda, California Fuel Leak Case No. RO0002951

Dear Mr. Plunkett:

Enclosed please find the *Soil and Groundwater Investigation Report of Former UST #4 Area* for Fuel Leak Case No. RO0002951. This report was prepared by AMEC Geomatrix, Inc., (AMEC) on behalf of Pacific Shops, Inc.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Sincerely yours,

Sean/Svendsen

Sean/Svendsen

Enclosure: Soil and Groundwater Investigation Report of Former UST #4 Area



SOIL AND GROUNDWATER INVESTIGATION OF FORMER UST #4 AREA PACIFIC SHOPS, INC. 1815 CLEMENT AVENUE ALAMEDA, CALIFORNIA

Prepared for: Pacific Shops, Inc.

Prepared by: AMEC Geomatrix, Inc.

November 2009

Project 14740.000





SOIL AND GROUNDWATER INVESTIGATION REPORT OF FORMER UST #4 AREA Pacific Shops, Inc. 1815 Clement Avenue Alameda, California

November 4, 2009 Project 14740.000

This soil and groundwater investigation report was prepared by AMEC Geomatrix, Inc. under the professional supervision of Darren Croteau. The findings, recommendations, specifications and/or professional opinions presented in this report were prepared in accordance with generally accepted professional geologic practice, and within the scope of the project. There is no other warranty, either express or implied.

Darren Croteau, P.G. Senior Geologist





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SOIL AND GROUNDWATER INVESTIGATION REPORT OF FORMER UST #4 AREA

Pacific Shops, Inc. 1815 Clement Avenue Alameda, California

1.0 INTRODUCTION

AMEC Geomatrix, Inc. (AMEC) prepared this *Soil and Groundwater Investigation Report of Former UST#4 Area* on behalf of Pacific Shops, Inc. (Pacific Shops) for the property located at 1815 Clement Avenue in Alameda, California (designated herein as the site; Figure 1).

As described in this report, only very low concentrations of diesel range organics were detected in two soil samples. None of the target analytes were detected in any other soil samples or in the three groundwater samples collected. Based on the results of this investigation, on behalf of Pacific Shops, AMEC requests no further action for this case.

AMEC conducted the soil and groundwater investigation in accordance with the Work Plan for Investigation of Former UST #4 Area (work plan) (AMEC, 2009). Alameda County Environmental Health (ACEH) generally concurred with the work plan in their letter dated September 11, 2009 (Appendix A) and requested that, in addition to the work proposed in the work plan, soil borings be completed to at least 15 feet below ground surface (bgs) and a minimum of two soil samples be collected and analyzed from each boring, one soil sample collected at the capillary fringe and one soil sample collected from the total depth of the soil boring.

ACEH also requested that soil samples be analyzed at changes in lithology and from intervals where obvious odor, staining, or elevated photoionization detector (PID) reading are encountered. In addition, ACEH requested that methyl tertiary butyl ether (MTBE) be added to the sample analyses. This report describes an investigation to assess the extent of petroleum hydrocarbon compounds in soil and groundwater in the vicinity of former underground storage tanks (UST) #4 and #2 (Figure 2).

2.0 BACKGROUND

In March 2007, Treadwell and Rollo of San Francisco, California oversaw the removal of three USTs (designated as UST#2, UST#3, and UST#4; Figure 2) from the site. The USTs were removed by Technology, Engineering, and Construction, Inc. of South San Francisco,



California (Treadwell and Rollo, 2007). ACEH personnel observed the removal and sampling activities associated with the USTs.

Following removal of the three USTs, soil samples were collected from each UST excavation and a grab groundwater sample was collected from the UST#4 excavation. The grab groundwater sample from the UST#4 excavation appeared to be a combination of groundwater that infiltrated into the excavation and decontamination water generated by cleaning of the removed UST over the tank pit by the contractor [*Removal of Underground Storage Tanks*, Pacific Shops Site, Page 12 (Treadwell and Rollo, 2007)]. Anecdotal information from a site contact, present during the excavation activities, also indicated that rain was falling and some of the rainwater may have entered the UST excavation prior to sampling. The grab groundwater sample collected from the UST#4 excavation contained petroleum hydrocarbons quantified as diesel, kerosene, and bunker oil. This grab groundwater sample was determined to not be representative of groundwater conditions and a second sample was collected approximately 7-days later, following purging of water from the excavation and allowing groundwater to recharge (Treadwell and Rollo, 2007). No petroleum hydrocarbons were detected in the second grab groundwater sample. Soil and groundwater data tables prepared by Treadwell and Rollo are included as Appendix B.

Following submittal of the May 16, 2007 report entitled *Removal of Underground Storage Tanks, Pacific Shops Site* (Treadwell and Rollo, 2007) to ACEH, Mr. Steven Plunkett of ACEH issued a letter to Mr. Sean Svendsen of Pacific Shops dated July 9, 2007. This letter cited the petroleum hydrocarbon concentrations from the first UST#4 excavation pit grab groundwater sample and requested additional soil and groundwater sampling. The soil and groundwater investigation presented fulfills ACEH's request.

3.0 FIELD AND LABORATORY METHODS

Three soil borings were advanced at the site. The soil boring locations are shown on Figure 2. The field and laboratory methods for this investigation are presented below.

3.1 FIELD METHODS

Prior to conducting the field work, AMEC obtained a soil boring permit from Alameda County Public Works Agency. A copy of the permit is included as Appendix C. Additionally, AMEC marked the proposed boring locations with white paint, contacted Underground Service Alert, and contracted with a private utility locator to clear boring locations for underground utilities.



3.1.1 Soil Borings

The soil borings were advanced using Geoprobe [™] dual-tube direct-push technology by a licensed drilling contractor under the supervision of AMEC field personnel. Soil borings were advanced at the locations shown on Figure 2 to approximately 15 feet bgs.

A continuous core of soil was collected at each soil boring location for lithologic logging and to collect samples for laboratory analysis. Lithology was described by an AMEC field geologist, under the supervision of an AMEC California Professional Geologist, using the visual-manual procedures of the American Society for Testing and Materials (ASTM) Standard D 2488-09a for guidance, which is based on the Unified Soil Classification System (USCS). Recovered soil was screened for the presence of volatile organic compounds using a PID by placing soil in a resealable bag, agitating the soil, and introducing the PID probe into the headspace area of the bag after several minutes had elapsed. The PID readings were recorded on the litholigic logs prepared for each boring. Lithologic logs are included as Appendix D.

3.1.2 Soil Sampling

As requested by ACEH in their letter dated September 11, 2009, soil borings were completed to at least 15 feet bgs and soil samples were collected at the capillary fringe and the bottom of each boring. Soil samples were also collected at significant changes in lithology. Obvious odor, staining or elevated PID readings were not encountered in the borings. A total of eight soil samples were collected for chemical analysis, three from boring SB-1, three from boring SB-2, and two from boring SB-3.

3.1.3 Groundwater Sampling

Once each soil boring was completed, temporary 1-inch diameter polyvinyl chloride (PVC) casing with a 0.01-inch slotted screen was installed in each boring to facilitate collecting a grab groundwater sample. Prior to collecting the groundwater sample, the casing was purged with a peristaltic pump to remove water with suspended sediment. Once the purged groundwater appeared relatively clear, a sample was collected for laboratory analysis from each of the three borings.

The groundwater samples were placed in laboratory provided glassware and stored in an ice chilled cooler pending transport to the analytical laboratory under chain of custody procedures.

Following completion of sampling, the borings were backfilled from total depth to ground surface with cement bentonite grout using a tremie pipe, under the supervision of an inspector from the Alameda Public Works Agency.



3.1.4 Investigation Derived Waste

Investigation-derived waste, including drill cuttings, purge water, and equipment wash water, was stored at the site in 55-gallon drums pending disposal by Pacific Shops. Investigation-derived waste analytical results are included as Appendix E. No target analytes were detected in the investigation-derived waste samples.

3.2 LABORATORY ANALYTICAL METHODS

The soil samples and grab groundwater samples were analyzed for MTBE using EPA Method 8260B, diesel range organics and bunker oil range organics using EPA Method 8015B with a silica gel preparation procedure in accordance with EPA Method 3630B.

4.0 SOIL AND GROUNDWATER INVESTIGATION RESULTS

The soil and groundwater analytical results for this investigation are presented below. The laboratory analytical report is included as Appendix F.

4.1 SOIL OBSERVATIONS

Soil encountered during this investigation consisted of clay, clayey sand and silt to the total explored depth of 15 feet bgs. Saturated soil was encountered in every boring between approximately 4 and 6 feet bgs. Obvious odor, staining or elevated PID readings were not encountered in the borings.

4.2 SOIL ANALYTICAL RESULTS

The soil analytical results are presented on Table 1 and on Figure 2. Diesel range organics was only detected in sample SB-1-15.0, collected at a depth of 5 feet bgs, and sample SB-2-5.5, collected at 5.5 feet bgs, at concentrations of 3.0 and 1.0 milligrams per kilogram (mg/kg) respectively. Diesel range organics was not detected in any of the other soil samples and bunker oil range organics and MTBE were not detected in any of the soil samples.

4.3 **GROUNDWATER ANALYTICAL RESULTS**

The groundwater analytical results are presented on Table 2 and on Figure 2. Diesel range organics, bunker oil range organics and MTBE were not detected in any of the groundwater samples.

4.4 DATA QUALITY

Soil and groundwater data quality was assessed using the National Functional Guidelines for Organic Data Review (USEPA October 1999). All data were determined to be valid and usable.



5.0 NO FURTHER ACTION REQUEST

Based on the results of this investigation, on behalf of Pacific Shops, AMEC requests no further action for this case.

6.0 **REFERENCES**

- AMEC Geomatrix Inc, (AMEC), 2009, Work Plan for Investigation of Former UST Area #4, January 27.
- Treadwell and Rollo, 2007, Removal of Underground Storage Tanks, Pacific Shops Site, 1815 Clement Avenue, Alameda, California, May 16.
- United States Environmental Protection Agency (U.S. EPA), 1996, Closed-System Purge and Trap and Extraction for Volatile Organics in Soil and Waste Samples. Online reference: <u>http://www.epa.gov/sw-846/pdfs/5035.pdf</u>
- U.S. EPA, 1999, Contract Laboratory Program National Functional Guidelines for Organic Data Review (OSWER 9240.1-05A-P PB99-963506, EPA 540/R-99-008; October, 1999).



TABLES



TABLE 1

SOIL SAMPLE ANALYTICAL RESULTS¹

Pacific Shops Inc. 1815 Clement Avenue Alameda, California

Sample ID	Sample Date	Sample Depth (feet bgs)	Diesel Range Organics (mg/Kg)	Motor Oil Range Organics (mg/kg)	Bunker Oil Range Organics (mg/Kg)	MTBE (µg/Kg)
SB-1-6.0	10/2/2009	6.0	<0.99	<50	<50	<6.0
SB-1-6.5	10/2/2009	6.5	<0.99	<50	<50	<2.7
SB-1-15.0	10/2/2009	15.0	3.0	<49	<49	<6.3
SB-2-5.5	10/2/2009	5.5	1.0	<50	<50	<5.6
SB-2-8.0	10/2/2009	8.0	<0.99	<50	<50	<6.2
SB-2-15.0	10/2/2009	15.0	<1.0	<50	<50	<12
SB-3-5.5	10/2/2009	5.5	<0.99	<50	<50	<5.4
SB-3-15.0	10/2/2009	15.0	<1.0	<50	<50	<4.3

<u>Notes</u>

 Samples were collected by AMEC Geomatrix on October 2, 2009 and analyzed by TestAmerica, Inc., of Pleasanton, California using U.S. Environmental Protection Agency Methods 8260B and 8015B.

2. Detected concentrations are shown in **bold.**

Abbreviations

bgs = below ground surface

MTBE = methyl-tert-butyl-ether

mg/Kg = milligrams per kilogram

 μ g/Kg = micrograms per kilogram

"<" indicates constituent was not detected at a concentration equal to or greater than the laboratory reporting limit shown.



TABLE 2

GRAB GROUNDWATER SAMPLE ANALYTICAL RESULTS¹

Pacific Shops Inc. 1815 Clement Avenue Alameda, California

Results reported in micrograms per liter (µg/L)

Sample ID	Sample Date	Diesel Range Organics	Motor Oil Range Organics	Bunker Oil Range Organics	MTBE
GW-1-100209	10/2/2009	<51	<300	<510	<0.50
GW-2-100209	10/2/2009	<51	<300	<510	<0.50
GW-3-100209	10/2/2009	<51	<300	<510	<0.50

<u>Notes</u>

 Samples were collected by AMEC Geomatrix on October 2, 2009 and analyzed by TestAmerica, Inc., of Pleasanton, California using U.S. Environmental Protection Agency Methods 8260B and 8015B.

Abbreviations

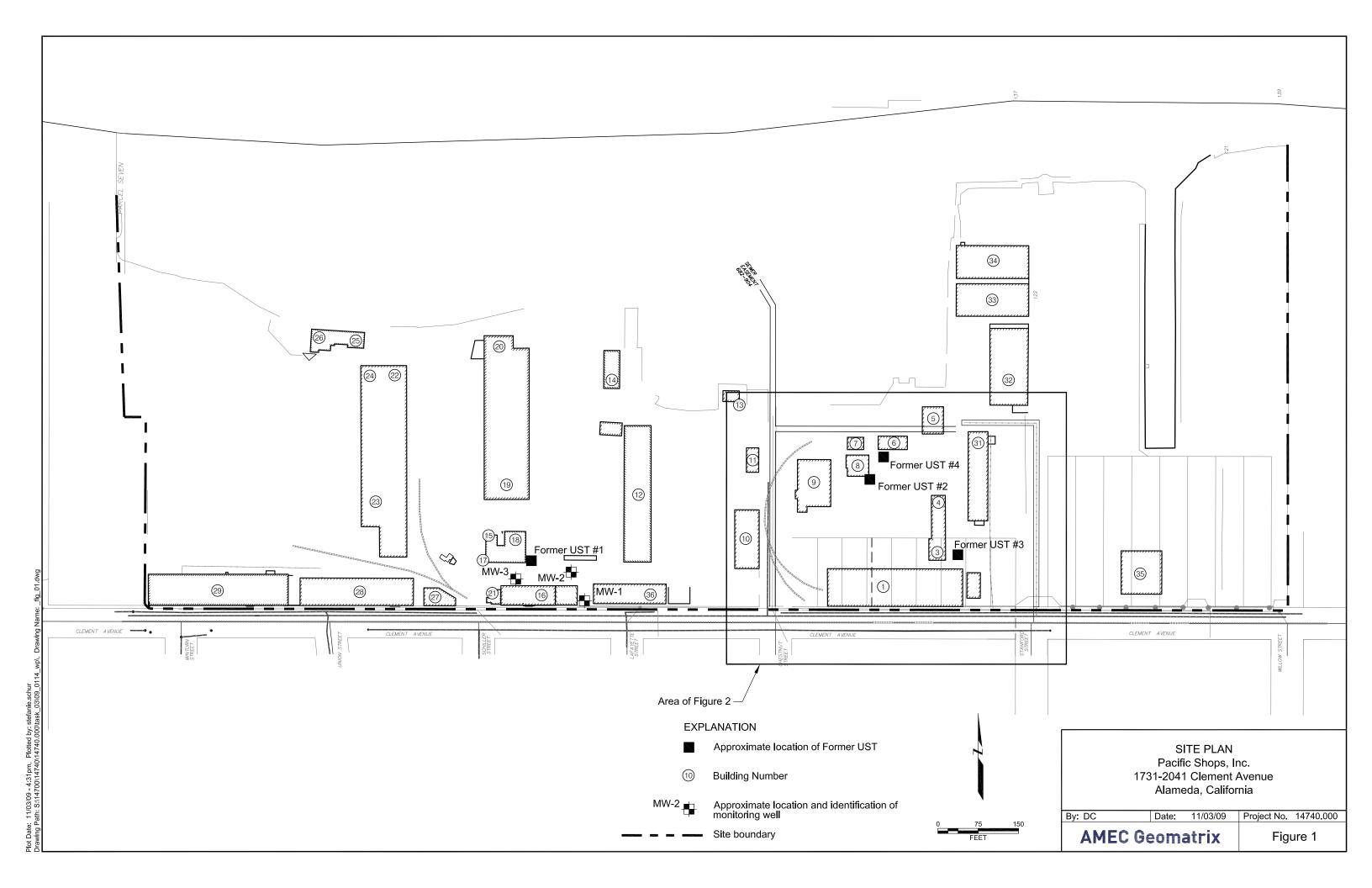
MTBE = methyl-tert-butyl-ether

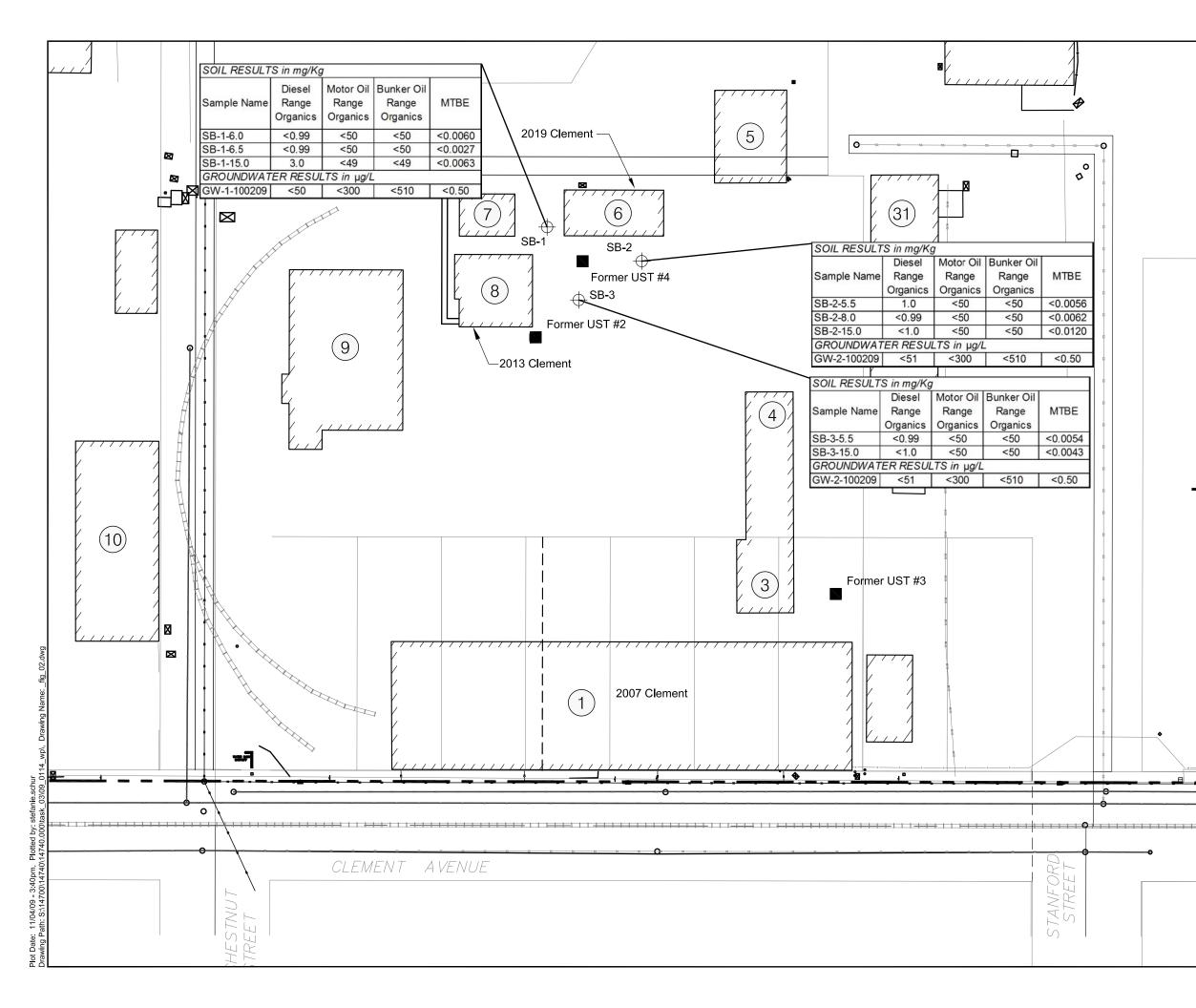
 $\mu g/L = micrograms per liter$

"<" indicates constituent was not detected at a concentration equal to or greater than the laboratory reporting limit shown.

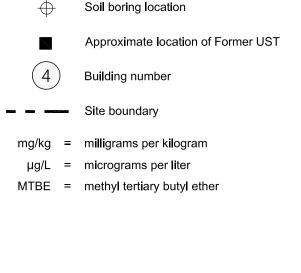


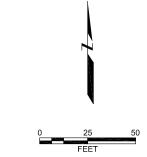
FIGURES











BASEMAP MODIFIED FROM

SOIL BORING LOCATIONS AND SOIL AND GROUNDWATER CHEMICAL ANALYTICAL RESULTS Pacific Shops, Inc. 1731-2041 Clement Avenue Alameda, California

By: DC Date: 11/04/09 Project No. 14740.000 **AMEC** Geomatrix



APPENDIX A

Alameda County Environmental Health Letter Dated September 11, 2009

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY

ALEX BRISCOE, Acting Director



ENVIRONMENTAL HEALTH SERVICES ENVIRONMENTAL PROTECTION 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577 (510) 567-6700 FAX (510) 337-9335

September 11, 2009

Mr. Sean Svendson Pacific Shops Inc. 1801 Clement Avenue Alameda, CA 94501

Subject: Fuel Leak Case No. RO0002951 (Geotracker ID #T0619711981), Pacific Shops Inc, 1815 Clement Avenue, Alameda, CA 64501

Dear Mr. Svendson:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above referenced site including the report entitled, "Work Plan for Investigation of Former UST #4 Area" dated January 26, 2009 and prepared on your behalf by AMEC Geomatrix (AMEC). ACEH generally concurs with the scope of work as proposed in the work plan, provided the technical comments discussed below are implemented prior to the start of work.

We request that you perform the proposed work, and send us the reports described below. Please provide 72-hour advance written notification to this office (e-mail preferred to <u>steven.plunkett@acgov.org</u>) prior to the start of field activities.

TECHNICAL COMMENTS

- 1. Soil Boring Installation and Location. ACEH generally concurs with the proposed soil boring locations, and that soil boring shall be completed to a depth of at least 15 feet below ground surface and a minimum of two soil samples will be analyzed from each boring, one soil sample collected at the capillary fringe and one soil sample collected from the total depth of the soil boring. In addition, soil samples should be analyzed at changes in lithology and from intervals where obvious odor, staining or elevated PID readings are encountered. ACEH generally concurs with the proposed soil sample analysis. Please present the result from the investigation in the report requested below.
- 2. Grab Groundwater Sampling. AMEC proposes to collect grab-groundwater samples from each of the soil borings using silica gel cleanup and filtering groundwater with a 7 micron glass filter. ACEH concurs with the use of silica gel cleanup for groundwater samples, but we do not concur with the recommendation to filter groundwater prior to the collection of groundwater samples. Althuogh field filtering may remove suspended sediment in groundwater, currently there are no certified or accepted regulatory methods for field filtering TPH. ACEH generally concurs with the proposed groundwater sample analysis with the addition of MTBE as an analyses, this analysis was not performed during the removal of UST #4. Please present the results for the investigation in the report requested below.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Mr. Steven Plunkett), according to the following schedule:

• November 6, 2009 – Soil and Groundwater Investigation

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/electronic submittal/report rgmts.shtml.

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Mr. Sean Svendson September 11, 2009 RO0002951 Page 2

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

If you have any questions, please call me at (510) 383-1767 or send me an electronic mail message at steven plunkett@acgov.org.

Sincerely,

S. Flat

09.09.11 11:29:20 -07'00"

Steven Plunkett Hazardous Materials Specialist

cc: Darren Croteau AMEC Geomatrix 2101 Webster Street, 12th Floor Oakland, CA 94612

Donna Drogos, Steven Plunkett, File



APPENDIX B

Soil and Groundwater Analytical Data Tables Prepared by Treadwell and Rollo

Table 1 UST Removal Soil Sample Analytical Results Pacific Shops 1815 Clement Avenue Alameda, CA

				Analytical Method	TPH As Gasoline C ₆ -C ₁₂ mg/kg 8260B	TPH As Kerosene C ₉ -C ₁₈ mg/kg 8015M ²	TPH As Diesel C ₁₀ -C ₂₃ mg/kg 8015M ²	TPH As Bunker Oil C ₁₈₊ mg/kg 8015M ²	Benzene mg/kg 8260B	Toluene mg/kg 8260B	Ethylbenzene mg/kg 8260B	Total Xylenes mg/kg 8260B	Cadmium mg/kg 6010	Chromium mg/kg 6010	Lead mg/kg 6010	STLC Lead mg/L 6010	Nickel mg/kg 6010	Zine mg/kg 6010	PCBa mg/kg 8010	Other Oxygenates ¹ mg/kg 8260
UST Area	Sample Name	Sample Date	Sample Depth (feet)	Location of Sample																
UST #2																			ND<0.025	<u> </u>
ſ	UST2-1-4'	3/7/2007	4.0	East Sidewall		ND<1.0	ND<1.0	ND<5.0			- Stational	-	-	 				1. A. A.		
	UST2-2-4	3/7/2007	4.0	West Sidewall			260, c, g	400	Non-27 M			2018) - 115,05 - 115,			1.52			And and a second	ND-0.12	
	UST2-3-7	3/7/2007	7.0	Bottom	1.33 4 3643	320	330, 1/m	430		States and	and the second	Partition and a second	- DATA CARLES	STATE STATE	AND COMPLETENCE	NUMBER OF STREET	Standard and a standard at	(Apple and the second sec		1
	UST2-4-12'	3/29/2007	12	Bottom after over- excavation	-		ND<2.0	ND<0.2	ND<0.005	ND<0.005	ND<0.005	ND<0.015	-	-		-		-	ND<0.1	ND
	UST2-5-7	3/29/2007	7.0	West Sidewall after over-excavation			ND<2.0	ND<0.2	ND<0.005	ND<0.005	ND<0.005	ND<0.015	'						ND<0.1	ND
UST #3	0011-0-1	5/25/2001																		
1001	UST3-1-4'	3/7/2007	4.0	North Sidewall	ND<1.0	ND<1.0	ND<1.0	ND<5.0	ND<0.005		ND<0.005	ND<0.005								
	UST3-2-5'	3/7/2007	5.0	Bottom	ND<1.0	ND<1.0	ND<1.0	ND<5.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005		L			<u> </u>			
UST #4		w														r	,		·····	T
	UST4-1-5	3/7/2007	5.0	Bottom	•	ND<1.0	1.5, c	ND<5.0			-					<u> </u>	<u> </u>			
	UST4-2-4'	3/7/2007	4.0	North Sidewall		4.0	5.4, m	9.1				-	-	-		I				
Stockpile San	aples							·	T	·	r			<u>۲</u>	<u>_</u>	r	I	r	T	T
UST #2	Stock-1-1-1-2	3/7/2007	0.5	Stockpile 1 (composite)		2,900	2,900, 1/m	3,100	-			-	ND<1.5	44	82	3.7	19	110	ND<0.025	-
UST #2	Stack-1-3-1-4	3/7/2007	0.5	Stockpile 1 (composite)		110	150, I/m	240					-						-	
UST #3 & UST #4	Stock-2-3-2-4	3/7/2007	0.5	Stockpile 2 (composite)	ND<1.0	3.4	24, g, b	210	ND<0.005	ND<0.005	ND<0.005	ND<0.005		-		<u> </u>				

<u>Notes</u> TPH - Total petroleum hydrocarbons PCBs - Palychlorinatod Biphenyls C₆-C₁₂ - Carbon Hange C₆ to C₁₂

Co-C-10 - Carbon Rance Co to Car

C10-C21 - Carbon Range C10 to C21

C14 · Above Carbon Range C1

mg/kg - millignums per kilogrum

mg/L · milligrams per liter

mgr. - minigrams per ince 1-Other Daygenater include: 12-Distance(EDB), 12-Dischloroethane (EDC), Ethanol, Ethyl tert-buryl ether (ETBE), Isopropyl ether (DIPE), Methyl tert-buryl ether (MTBE), I-Buryl alcohol (t-Butanol), tert-Amyl methyl other (TAME) 2-uning sills of cleanup feet - feet below ground surface

-- not analyzed

ND<1.0 - not detected above laboratory reparting limit ind State

Laboratory Qualifiers

h - diesel range compounds are significant; au recognizable pattern c - aged diesel? is significant

- e agos deserras agontean g ail range compounds are significant l bunker oil m fuel oil

5/16/2007

Table 2 UST Removal Groundwater Analytical Results Pacific Shops 1815 Clement Avenue Alameda, CA All results reported in micrograms per liter (µg/L)

					TPH as Gasoline C ₆ -C ₁₂	TPH as Kerosene C9-C18	TPH as Diesel C ₁₀ -C ₂₃	TPH as Bunker Oil C ₁₈₊	PCBs µg/L
				Analytical Method	8260B	8015M ¹	8015M ¹	8015M ¹	8010
UST Area	Sample Name	Sample Date	Sample Depth (feet)	Location of Sample					
UST #4	UST4-GW	3/7/2007	5.0	Water in Excavation		28,000	33,000, a, g, i	37,000	-
UST #4	UST4-GW2	3/14/2007	5.0	Water in Excavation		ND<50	ND<50	ND<250	
UST #2	UST2-W	3/22/2007	7.0	Water in Excavation			250, a/m	390	ND<0.5

Notes

TPH - Total petroleum hydrocarbons PCBs - Polychlorinated Biphenyls $\mu g/L$ - micrograms per liter C_6 - C_{12} - Carbon Range C_6 to C_{12} C_9 - C_{18} - Carbon Range C_9 to C_{18} C_{10} - C_{23} - Carbon Range C_{10} to C_{23} C_{18} - Above Carbon Range C_{18} 1-using silica gel cleanup feet - feet below ground surface

-- not analyzed ND<50 - not detected above laboratory reporting limit

Laboratory Qualifiers

a - unmodified or weakly modified diesel is significant g - oil range compounds are significant i - liquid sample that contains greater than ~1 vol. % sediment m - fuel oil

Page 1 of 1



APPENDIX C

Soil Boring Permit

Alameda County Public Works Agency - Water Resources Well Permit

and · B	alarga a
S B	PUBLIC WORKS
Conces .	

399 Elmhurst Street Hayward, CA 94544-1395 Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved	l on: 09/22/2009 By jamesy	Permit Numbers: W2009-0866 Permits Valid from 10/02/2009 to 10/02/2009				
Application Id: Site Location:	1253575232453 1815 Clement Ave	City of Project Site	:Alameda			
Project Start Date:	10/02/2009	Completion Date	:10/02/2009			
Assigned Inspector:	Contact John Shouldice at (510) 670-5424 or joh	ins@acpwa.org				
Applicant:	AMEC Geomatrix - Tiffany Klitzke 2101 Webster Street, Oakland, CA 94612	Phone: 510-663-4144				
Property Owner:	Sean Svendsen 1815 Clement Avenue, Alameda, CA 94501	Phone:				
Client: Contact:	** same as Property Owner ** Tiffany Klitzke	Phone: 510-663-4144 Cell: 831-227-5144				
	Receipt Number: WR2009-0347 Payer Name : Tiffany R Klitzke		\$265.00 <u>\$265.00</u> PAID IN FULL			
Works Requesting Pe	rmits:					

in the mediate many is a minute of the second s

Borehole(s) for Investigation-Environmental/Monitorinig Study - 3 Boreholes Driller: RSI Inc - Lic #: 802334 - Method: DP

Work Total: \$265.00

Specifications

Permit	Issued Dt	Expire Dt	#	Hole Diam	Max Depth
Number			Boreholes		
W2009-	09/22/2009	12/31/2009	3	1.13 in.	15.00 ft
0866					

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. Applicant shall contact John Shouldice for an inspection time at 510-670-5424 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

4. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

5. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

Alameda County Public Works Agency - Water Resources Well Permit

6. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.



APPENDIX D

Lithologic Logs

PROJECT: PACIFIC SHOPS IN Alameda, California		Boring Log Explanation					
BORING LOCATION:		ELEVATION AND DATUM	И:				
DRILLING CONTRACTOR:		DATE STARTED:	DATE FINI	SHED:			
DRILLING METHOD:		TOTAL DEPTH (ft.):	MEASURIN	NG POINT:			
DRILLING EQUIPMENT:		DEPTH TO WATER (ft.)	FIRST	COMPL.			
SAMPLING METHOD:		LOGGED BY:					
HAMMER WEIGHT:	DROP:	RESPONSIBLE PROFES	SIONAL:	REG. NO.			
DEPTH (feet) No. Blows/ Sample	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. den cementation, react. w/HCl, geo. inter	sity, structure,	RE	EMARKS			
	Surface Elevation:		_				
	Notes:		_				
	 Soil described using visual-manual procedure Society of Testing and Materials (ASTM) Star 		_				
	guidance; a Standard based on the Unified S System.		-				
2-	 Soil color described according to Munsell Col 	or Chart.	_				
3			-				
4-	 Dashed lines separating soil strata represent boundaries between sampled intervals that m gradual transitions. 	_					
5-	4. Solid lines represent approximate boundaries sample intervals.	observed within	_				
6-	 OVM = organic vapor meter, reading in volun million (ppm). 	netric parts per	_				
7-	 Odor, if noted is subjective and not necessari specific compounds or concentrations. 	ly indicative of	_				
	7. NA = not applicable.		-				
	8. ND = no data.		_				
9-			_				
	Interval of recovered soil collected with a continu	ious core sampler.	_				
10-			_				
	Interval of no recovery.		-				
			-				
			_				
12 ⁻ - 21 - 88 -	Sample collected for chemical analysis and sam	ple identification.	_				
			_				
			_				
14-			-				
			-				
15			K	EYFORM (REV. 6/2008)			
AMEC Geomatrix		Project No. 147	40.000	Page 1 of 1			

PROJE				C SHOP: la, Califo		Log of Boring No. SB-1					
BORIN					8' W, 5' N of SW corner of bldg 6	ELEVATION AND DATU Not surveyed; datum		s around si	urface		
DRILLI	ING C	ONT	RAC	TOR: RSI	Drilling, Inc.	DATE STARTED: 10/2/09		DATE FINI 10/2/09			
DRILLI	ING M	ETH	OD:	Direct	push	TOTAL DEPTH (ft.): 15.0		MEASURIN Ground s			
DRILLI	ING E	QUIF	MEN	IT: Geopr	obe 6620 DT	DEPTH TO WATER (ft.)		FIRST	COMPL.		
SAMPI		ИЕТН	HOD:	Geoprob	e DT21 dual-tube sampling system [4' x 1.125"]	LOGGED BY: T. Klitzke		1.0.1			
НАММ	IER W	EIGH	HT:	NA	DROP: NA	RESPONSIBLE PROFES	SSI	ONAL:	REG. NO. PG 7495		
DEPTH (feet)	Sample No.	SAMPLES DESCRIPTION Description NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Surface Elevation:				nsity, structure,		RE	MARKS		
- 1- -	-				SANDY LEAN CLAY with GRAVEL (CL): very c 2.5/3), moist, 50% fines, 30% fine sand, 20% fin plasticity [FILL]	lark brown (7.5YR e gravel, medium	_		iRAE 2000 PID <i>v</i> ith 100 ppm standard.		
2	-			0.2			_ _ _	Hand auger bgs.	red to 5 feet		
4- - 5-	SB-1-6.0			0.3 0	↓ contains brick fragments		_		dwater sample		
6-	SB			0	CLAYEY SAND (SC): greenish black (5GY 2.5/ medium sand, 20% low plasticity fines	1), wet, 80% fine to		through 10	09 collected feet of 2-inch PVC screen		
	SB-1 6.5				SANDY LEAN CLAY (CL): dark grayish brown of 70% fines, 30% fine to medium sand, medium p		_	(0.010-inch	slot size) prehole from 5		
8-				0.1			_				
	-			0			_				
11- - 12-	-		0 mottled with dark yellowish brown (10YR 3/6)								
- 13-				0.1			_				
	-			0			$\left - \right $	Type I-II ne			
14-	SB-1-15.0			0 0.1	POORLY-GRADED SAND with CLAY (SP-SC): 4/3), moist, 90% medium sand, 10% low plastici		-	grout place depth to gro with a tremi	ound surface		
15-	0 N			0	Bottom of boring at 15.0 feet				AKBOREV (REV. 6/2008)		
	AM	EC	Geo	matrix		Project No. 14	740	r	Page 1 of 1		
L									-		

PROJE				C SHOP		Log of Boring No. SB-2					
BORIN	G LO	САТ	ION:	Approx.	14' S, 11' W of SE corner of bldg 6		ION AND DATU veyed; datum		s around si	urface	
DRILLI	NG C	ONT	RAC	TOR: RSI	Drilling, Inc.		TARTED:		DATE FINI 10/2/09		
DRILLI	NG M	ET⊦	IOD:	Direct	push		DEPTH (ft.):		MEASURIN Ground s		
DRILLI	NG E	ວບເ	PMEN	NT: Geopr	obe 6620 DT	DEPTH TO WATER (#) FIRST COM				COMPL.	
SAMPL	ING I	MET	HOD	Geoprob	e DT21 dual-tube sampling system [4' x 1.125"]	LOGGED T. Klitz					
НАММ	HAMMER WEIGHT: NA			NA	DROP: NA		SIBLE PROFES	SSI	ONAL:	REG. NO. PG 7495	
DEPTH (feet)		SAMPLES O DESCRIPTION a b b b a b b b b </td <td></td> <td></td> <td>RE</td> <td>EMARKS</td>						RE	EMARKS		
	°S_	Š		RI	Surface Elevation:						
– 1–				0.1	ASPHALTIC CONCRETE SANDY LEAN CLAY with GRAVEL (CL): very d 2.5/3), moist, 50% fines, 30% fine to medium sa			_		iRAE 2000 PID vith 100 ppm	
					medium plasticity			_	ISODULYIEIIE	Stanuaru.	
2-				0.2				_	Hand auger bgs.	red to 5 feet	
3-								_	-9-		
-								-			
4-								-			
5-	SB-2-5.5			0.7	CLAYEY SAND (SC): greenish black (5GY 2.5/ medium sand, 20% low plasticity fines	1), wet, 80	9% fine to	_	Grab group	dwater sample	
-	SB-2			1				-	Grab groundwater sample GW-2-100209 collected through 10 feet of 2-inch		
6-				0.3				_		PVC screen	
7-				0.0				_	placed in bo to 15 feet b	prehole from 5 gs.	
8-	SB-2-8.0			0.7	SANDY LEAN CLAY (CL): very dark greenish g mottled with dark yellowish brown (10YR 3/6), m			-			
-					30% fine to medium sand, medium plasticity			-			
9-				0.1							
10-								_			
-								$\left -\right $			
11-				0.1	POORLY-GRADED SAND (SP): dark yellowish	brown (10	YR 4/6)				
12-					light brownish gray (2.5Y 6/2)			_			
-				0.2				-			
13-				0.3	POORLY-GRADED SAND with CLAY (SP-SC): brown (10YR 4/6), moist, 90% medium sand, 10					estroyed using	
14-	2.0			0.0	fines	Ind, 10% low plasticity - Type I-II neat cement grout placed from total depth to ground surface					
-	SB-2-15.0			0.1	Bottom of boring at 15.0 feet			-	with a trem		
15-									0/	AKBOREV (REV. 6/2008)	
	AM	EC	Geo	omatrix			Project No. 147	740	.000	Page 1 of 1	

BORING LOCATION: Approx. 24* E. 15* N of the SE comer of bidg 8 ELEVATION AND DATUME:	PROJECT: PACIFIC SHOPS INC. Alameda, California				Log of	Log of Boring No. SB-3				
DRILLING CONTRACTOR: RSI Drilling, Inc. DATE STAFTED: 102/09 DIVERSIDE: DIVERSIDE: 102/09 DIVERSIDE: 102/09 DRILLING METHOD: Direct push TOTAL DEPTH 101: (SUBJING POINT: Ground Surface: NAT COMPL (SUBJING POINT: COMPL (NAT COMPL (SUBJING POINT: COMPL (SUBJING POINT: SUBJING POINT: COMPL (SUBJING POINT: SUBJING POINT: COMPL (SUBJING POINT: SUBJING POINT: SUBJING POINT: COMPL (SUBJING POINT: SUBJING POINT: SUBJING POINT: COMPL (SUBJING POINT: SUBJING POINT: SUB	ROBING LOCATION: Approx 24' E 15' N of the SE corpor of bldg 8 ELEVATION AND DA									
DRILLING METHOD: Direct push TOTAL DEFTH (ft): MEASURING POINT: Ground surface c INST MAE I COMPL. NAT COMPL. NAT COMPL. NAT COMPL. NAT COMPL. NAT COMPL. NAT S.7 SAMPLING METHOD: Geoprobe 6820 DT DEPTH TO WATER (ft). MEASURING POINT: COGGED BY: T. Klizke REG. NO. NAT PG 7495 HAMMER WEIGHT: NA DROP: NA DESCRIPTION RESPONSIBLE PROFESSIONAL: PG 7495 REG. NO. 1 SAMPLES BB BS BS Samples NAME (USCS): commentation, react, which, sho utching, structure, commentation, react, which, gene inter. REMARKS 2 0.5 CLAYEY SAND (SC): greenish black (SGY 2.5/1), wet, 80%, fine to medium sand, 20% iow plasticity fines OV/M = MinRAE 2000 PID calabotypiene standard. 4 0.5 CLAYEY SAND (SC): greenish black (SGY 2.5/1), wet, 80%, fine to medium sand, 20% iow plasticity fines Charge y commentation, solution (10YR 54), moist 7 0.5 OS CLAYEY SAND (SC): greenish black (SGY 2.5/1), wet, 80%, fine to medium sand, 20% iow plasticity fines Grab groundwater sample GW-3.1070000 cellected through 10 feed 2-ainch to 0.5 http://dot.ent.solutice/ through 10 feed 2-ainch to 0.5 http://dot.ent.solutice/ tor.gotypiene standard. 1 0.1 1 Final groundwater sample groundwater sample GW-3.1070000 cellected through 10 feed 2-ainch to 0.5 http://dot.ent.solutice/ tor.gotypiene standard 1 <td< td=""><td colspan="5">DATE STARTED: DATE STARTED:</td><td></td><td colspan="3">DATE FINISHED:</td></td<>	DATE STARTED: DATE STARTED:						DATE FINISHED:			
DRILLING GEUIPMENT: Geoprobe 6620 DT DEPTH TO WATER (t). FIRST NA COMPL. S.7 SAMPLING METHOD. Geoprobe DT21 dual-tube sampling system [4' x 1.125] LOGGED BY: T. Kiltzke T. Kiltzke HAMMER WEIGHT: NA DROP: NA DESCRIPTION DESCRIPTION Suffect Elevision: react. wHCl. goo. inter. RESPONSIBLE PROFESSIONAL: P.G 7435 REG. NO. D. Croteau T SMMPLES B B B B B B B SMMPLES B B B B B B CASPHALTIC CONCRETE LEAN CLAY (CL): very dark greenish gray (5GY 3/1), molst, 95% REMARKS 1 - - -ASPHALTIC CONCRETE LEAN CLAY (CL): very dark greenish gray (5GY 3/1), molst, 95% CLAYEY SAND (SC): greenish black (5GY 2.5/1), wet, 80% fine to medium sand, 20% low plasticity fines OVM = MiniRAE 2000 PID calibrated with 100 ppm isobulyiene standard. 4 - 0.5 - CLAYEY SAND (SC): greenish black (5GY 2.5/1), wet, 80% fine to medium sand, 20% low plasticity fines - 7 0.3 - - - - 8 0 - - - 9 - 0.1 - - 11 - - - - 12 - - - - 13 0 - - - 14	DPULING METHOD: Direct nuch						MEASURING POINT:			
SAMPLING METHOD: Geoprobe DT21 dual-tube sampling system [4' x 1.125"] LOCGED BY: T. Kitzke Integer Construction (Construction (Constrution (Construction (Construction (Constructi						ft.)	FIRST	COMPL.		
HAMMER WEIGHT: NA DROP: NA DESCRIPTION RESPONSIBLE PROFESSIONAL: REG. NO. P.G. 7485 SAMPLES Very and the construction of the constructio								,	INA	5.1
SAMPLES PG 7495 Image: Solution of the solution of t						FESS	IONAL:	REG. NO.		
ASPHALTIC CONCRETE ASPHALTIC CONCRETE Class ASPHALTIC CONCRETE Class Clas Class </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>D. Croteau</td> <td></td> <td></td> <td>PG 7495</td>							D. Croteau			PG 7495
ASPHALTIC CONCRETE ASPHALTIC CONCRETE Class LEAN CLAY (CL): very dark greenish gray (5GY 3/1), moist, 95% The system 1 2 0.5 0.5 0.5 0.5 0.5 0.5 0.6 0.7 0.8 0.4 0.4 0.5 0.6 0.7 0.8 0.4 0.4 0.5 0.6 0.7 0.8 0.4 10 0.4 11 12 13 14 0.9 0.1 13 0.1 14 0.2 0.3 0.4 0.4 0.5 0.6 0.7 0.8 0.9 0.1 12	DEPTH (feet) (feet) nmple oot Oot OVM CVM			lows/ Foot	OVM EADIN((ppm)	NAME (USCS): color, moist, % by wt., plast. density, structure,			RE	EMARKS
1 LEAN CLAY (CL): very dark greenish gray (SGY 3'1), moist, 95% CVM = MinRAE 2000 PID calibrated with 100 ppm isobutylene standard. 2 0.5 Image: S% fine to medium sand, medium plasticity Hand augered to 5 feet bgs. 3 - - - - 4 - - - - 4 - - - - 4 - - - - 4 - - - - 4 - - - - 4 - - - - 4 - - - - 5 - - - - 6 - - - - 6 - - - - 7 - - - - - 7 - - - - - 10 - - - - - 11 - - - - - 12 -		, М	Ň	<u>а</u> —	R					
1 1 Index, 5% the to medulin sand, medulin plasticity isobutylene standard. 2 0.5 CLAYEY SAND (SC): greenish black (5GY 2.5/1), wet, 80% fine to medium sand, 20% low plasticity fines Grab groundwater sample GW-3-100200 collected through 10 feet of 2-inch 4 0 0.4 Vellowish brown (10YR 5/4), moist Grab groundwater sample GW-3-100200 collected through 10 feet of 2-inch 7 0.3 0 0.1 OD Sch. 40 PVC screen (0,010-inch size) placed in borehole from 5 to 15 feet bgs. 10 0.1 0 0 0 9 0 0.1 0 11 0 0 0 12 1.8 mottled with dark yellowish brown (10YR 4/6) Borehole destroyed using Type I-II neat cement quot placed from total depth to ground surface with a tremie pipe. 14 0 0.4 Borehole destroyed using Type I-II neat cement quot place from total depth to ground surface with a tremie pipe.	-					LEAN CLAY (CL): very dark greenish gray (5G)				
3 -	1-					fines, 5% fine to medium sand, medium plasticit	/	_		
3 -	-							-		
3 4 -	2-	-			0.5			_	-	red to 5 feet
4- 90 0.5 CLAYEY SAND (SC): greenish black (5GY 2.5/1), wet, 80% fine to medium sand, 20% low plasticity fines Grab groundwater sample GW-3-100209 collected through 10 feet of 2-inch OD Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 5 to 15 feet bgs. 6- 0.4 ✓ yellowish brown (10YR 5/4), moist Feetback (SGY 2.5/1), wet, 80% fine to OS Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 5 to 15 feet bgs. 7- 0.3 Feetback (SGY 2.5/1), wet, 80% fine to OS Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 5 to 15 feet bgs. 10- 0.1 Feetback (SGY 2.5/1), wet, 80% fine to OS Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 5 to 15 feet bgs. 11- 0.9 SANDY LEAN CLAY (CL) Forehole destroyed using Type I-II neat cernent (V3), moist 90% medium sand, 10% low plasticity fines Borehole destroyed using Type I-II neat cernent (V3), moist 90% medium sand, 10% low plasticity fines 14- 0.9 Estimate V (CL) FOORLY-GRADED SAND with CLAY (SP-SC): olive brown (2.5Y) With a tremie pipe. 15- 0.4 Bottom of boring at 15.0 feet Status of the top	-							_	bgs.	
5- 90 0.5 CLAYEY SAND (SC): greenish black (5GY 2.5/1), wet, 80% fine to medium sand, 20% low plasticity fines Grab groundwater sample GW-3-100209 collected through 10 feet of 2-inch OD Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 5 to 15 feet bgs. 7- 0.3 • • • 9- 0.1 • • • 10- 0.1 • • • 11- 0.1 • • • 12- 1.8 • mottled with dark yellowish brown (10YR 4/6) • 14- 0.9 • SANDY LEAN CLAY (CL) • • POORLY-GRADED SAND with CLAY (SP-SC): olive brown (2.5Y • • • 14- 0.4 • • • • 15- 0.4 • • • • 14- • • • • • • 13- 0.4 • • • • • • 14- • • • • • • • • 14- • • •										
5 3 6 0.4 7 0.3 8 0 9 0.1 10 0.1 11 0.1 12 1.8 13 0.9 14 0.9 0.9 0.9 13 0.9 14 0.9 0.9 0.9 13 0.9 14 0.9 0.9 0.9 14 0.9 0.9 0.9 14 0.9 0.9 0.9 13 0.9 0.9 SANDY LEAN CLAY (CL) POORLY-GRADED SAND with CLAY (SP-SC): olive brown (2.5Y 4/3), moist, 90% medium sand, 10% low plasticity fines 0.4 Bottom of boring at 15.0 feet	4-	-						_		
5 3 6 0.4 7 0.3 8 0 9 0.1 10 0.1 11 0.1 12 1.8 13 0.9 14 0.9 0.9 0.9 13 0.9 14 0.9 0.9 0.9 13 0.9 14 0.9 0.9 0.9 14 0.9 0.9 0.9 14 0.9 0.9 0.9 13 0.9 0.9 SANDY LEAN CLAY (CL) POORLY-GRADED SAND with CLAY (SP-SC): olive brown (2.5Y 4/3), moist, 90% medium sand, 10% low plasticity fines 0.4 Bottom of boring at 15.0 feet	-	-						_		
6 0.4 yellowish brown (10YR 5/4), moist through 10 feet of 2-inch OD Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 5 to 15 feet bgs. 8 0 9 0 9 0 10 0.1 11 0 12 18 13 0.9 14 0.9 9 0.9 13 0.9 14 0.9 90 0.4 13 0.9 14 0.9 90 0.4 15 0.4	5-	-5.5			0.5	CLAYEY SAND (SC): greenish black (5GY 2.5/1), wet, 80% fine t			Grah groundwater sample	
6- 0.4 ↓ yellowish brown (10YR 5/4), moist OD Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 5 to 15 feet bgs. 7- 0.3 0 - - 8- 0 - - - 9- 0 - - - 10- 0.1 - - - 11- 12- 1.8 - - 13- 0.9 - SANDY LEAN CLAY (CL) - POORLY-GRADED SAND with CLAY (SP-SC): olive brown (2.5Y - - 14- 0.9 - - - 14- 0.9 - SANDY LEAN CLAY (CL) - POORLY-GRADED SAND with CLAY (SP-SC): olive brown (2.5Y - - - 15- 0.4 - - - - 15- 0.4 - - - - -	-	SB-3				medium sand, 20% low plasticity lines		_	GW-3-1002	209 collected
7- 0.3 8- 0 9- 0 10- 0.1 11- 0.1 12- 1.8 13- 0.9 14- 0.9 0.9 0.9 0.9 0.1 13- 0.9 14- 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.4 Bottom of boring at 15.0 feet	6-	-			0.4	yellowish brown (10YR 5/4), moist		_	OD Sch. 40) PVC screen
8 0 9 0 10 0.1 11 0.1 12 1.8 13 0.9 14 0.9 0.9 0.9 14 0.9 0.9 0.9 14 0.9 0.9 0.9 14 0.9 0.4 Bottom of boring at 15.0 feet		-						_	placed in b	orehole from 5
0 0 9 0.1 10 0.1 11 0.1 12 1.8 13 0.9 14 0.9 0.9 ORRLY-GRADED SAND with CLAY (SP-SC): olive brown (2.5Y) 4/3), moist, 90% medium sand, 10% low plasticity fines 15	7-		\square		0.3				to 15 feet b	gs.
9 0 - 10 0.1 - 11 0 - 12 1.8 - 13 0.9 - 14 0.9 - 90 0.9 - 90 0.9 - 90 0.9 - 14 0.9 - 90 0.9 - 90 0.9 - 90 - - 14 0.9 - 90 0.9 - 900 - - 900 - - 900 - - 900 - - 900 - - 900 - - 900 - - 900 - - 900 - - 900 - - 900 - - 900 - - 900 - -			\wedge							
10 0.1 11 0.1 12 1.8 13 0.9 14 0.9 0.9 0.00 CRLY-GRADED SAND with CLAY (SP-SC): olive brown (2.5Y) 14 0.4 15 0.4 Bottom of boring at 15.0 feet		-			0			_		
11 11 11 11 12 1.8 Import Model with dark yellowish brown (10YR 4/6) Import Model with dark yellowish brown (10YR 4/6) 13 0.9 SANDY LEAN CLAY (CL) Import Model with dark yellowish brown (2.5Y) 14 0.9 POORLY-GRADED SAND with CLAY (SP-SC): olive brown (2.5Y) Import Model with dark yellowish brown (2.5Y) 14 0.9 0.4 Bottom of boring at 15.0 feet Import Model with dark yellowish brown (2.5Y)	9-	-						_		
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12- 1.8 Image: mottled with dark yellowish brown (10YR 4/6) Image: mottled with dark yellowish brown (10YR 4/6) 13- 0.9 SANDY LEAN CLAY (CL) Image: mottled with dark yellowish brown (10YR 4/6) 14- 0.9 POORLY-GRADED SAND with CLAY (SP-SC): olive brown (2.5Y 4/3), moist, 90% medium sand, 10% low plasticity fines Image: mottled with dark yellowish brown (2.5Y 4/3), moist, 90% medium sand, 10% low plasticity fines Image: mottled with dark yellowish brown (2.5Y 4/3), moist, 90% medium sand, 10% low plasticity fines Image: mottled with dark yellowish brown (2.5Y 4/3), moist, 90% medium sand, 10% low plasticity fines Image: mottled with dark yellowish brown (2.5Y 4/3), moist, 90% medium sand, 10% low plasticity fines Image: mottled with dark yellowish brown (2.5Y 4/3), moist, 90% medium sand, 10% low plasticity fines Image: mottled with dark yellowish brown (2.5Y 4/3), moist, 90% medium sand, 10% low plasticity fines Image: mottled with dark yellowish brown (2.5Y 4/3), moist, 90% medium sand, 10% low plasticity fines Image: mottled with dark yellowish brown (2.5Y 4/3), moist, 90% medium sand, 10% low plasticity fines Image: mottled with dark yellowish brown (2.5Y 4/3), moist, 90% medium sand, 10% low plasticity fines Image: mottled with dark yellowish brown (2.5Y 4/3), moist, 90% medium sand, 10% low plasticity fines Image: mottled with dark yellowish brown (2.5Y 4/3), m	10-				0.1			_		
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13 0.9 SANDY LEAN CLAY (CL) Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe. 14 0.9 0.4 Bottom of boring at 15.0 feet Bottom of boring at 15.0 feet	-					mottled with dark yellowish brown (10YR 4/6)		_		
14 0.9 0.9 POORLY-GRADED SAND with CLAY (SP-SC): olive brown (2.5Y Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe. 15 0.4 Bottom of boring at 15.0 feet Bottom of boring at 15.0 feet Bottom of boring at 15.0 feet	12-		Ħ		1.8			-		
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14 0.4 POORLY-GRADED SAND with CLAY (SP-SC): olive brown (2.5Y 4/3), moist, 90% medium sand, 10% low plasticity fines grout placed from total depth to ground surface with a tremie pipe. 15 0.4 Bottom of boring at 15.0 feet -<		-			0.9					
	14-	2:0							grout placed from total	
	-	B-3-1{			0.4			_		
OAKBOREV (REV. 6/2008)	15-	S				Bottom of boring at 15.0 feet			o	AKBOREV (REV. 6/2008)
AMEC Geomatrix Project No. 14740.000 Page 1 of 1		AMEC Geomatrix Project No				14740	r			



APPENDIX E

Laboratory Analytical Report - Investigation Derived Waste



ANALYTICAL REPORT

Job Number: 720-23004-1 Job Description: Pacific Shops Inc

For: AMEC Geomatrix Inc. 2101 Webster Street, 12th Floor Oakland, CA 94612 Attention: Ms. Tiffany Klitzke

Asanif Sal

Approved for release. Afsaneh Salimpour Project Manager I 10/13/2009 1:00 PM

Afsaneh Salimpour Project Manager I afsaneh.salimpour@testamericainc.com 10/13/2009

CA ELAP Certification # 2496

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A trip blank is required to be provided for volatile analyses. If trip blank results are not included in the report, either the trip blank was not submitted or requested to be analyzed.

EXECUTIVE SUMMARY - Detections

Client: AMEC Geomatrix Inc.

Job Number: 720-23004-1

Lab Sample ID	Client Sample ID		Reporting		
Analyte		Result / Qualifier	Limit	Units	Method

No Detections

METHOD SUMMARY

Client: AMEC Geomatrix Inc.

Job Number: 720-23004-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds by GC/MS	TAL SF	SW846 8260	B/CA_LUFTMS
Purge and Trap	TAL SF		SW846 5030B
Diesel Range Organics (DRO) (GC)	TAL SF	SW846 8015	В
Liquid-Liquid Extraction (Separatory Funnel)	TAL SF		SW846 3510C SGC

Lab References:

TAL SF = TestAmerica San Francisco

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Job Number: 720-23004-1

Method	Analyst	Analyst ID
SW846 8260B/CA_LUFTMS	Ali, Badri	BA
SW846 8015B	Hayashi, Derek	DH

SAMPLE SUMMARY

Job Number: 720-23004-1

			Date/Time	Date/Time	
Lab Sample ID	Client Sample ID	Client Matrix	Sampled	Received	
720-23004-1	IDW-100209	Water	10/02/2009 1225	10/02/2009 1711	

Client: AMEC Geomatrix Inc.

Client Sample ID:	IDW-100209				
Lab Sample ID:	720-23004-1			Date	Sampled: 10/02/2009 122
Client Matrix:	Water			Date	Received: 10/02/2009 17
	8260	B/CA_LUFTMS Volatile Organic C	Compounds by GC/N	IS	
Method:	8260B/CA_LUFTMS	Analysis Batch: 720-59288	Instrum	nent ID:	SAT 3900C
Preparation:	5030B		Lab File	e ID:	e:\data\200910\10090
Dilution:	1.0		Initial V	Veight/Volume:	40 mL
Date Analyzed:	10/09/2009 1512		Final W	/eight/Volume:	40 mL
Date Prepared:	10/09/2009 1512				
Analyte		Result (ug/L)	Qualifier		RL
MTBE		ND			0.50
Surrogate		%Rec	Qualifier	Acceptar	nce Limits
Toluene-d8 (Surr)		101		70 - 130	
1,2-Dichloroethane-	-d4 (Surr)	102		67 - 130	

Client: AMEC Geomatrix Inc.

Job Number: 720-23004-1

Client Sample ID:	IDW-100209	
Lab Sample ID:	720-23004-1	Date Sampled: 10/02/2009 1225
Client Matrix:	Water	Date Received: 10/02/2009 1711

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: Preparation: Dilution: Date Analyzed: Date Prepared:	8015B 3510C SGC 1.0 10/07/2009 1722 10/06/2009 1357	Analysis Batch: 720-59054 Prep Batch: 720-59002	Instrument ID: Initial Weight/V Final Weight/V Injection Volun Result Type:	/olume: 980 mL /olume: 5 mL
Analyte		Result (ug/L)	Qualifier	RL
Diesel Range Orga	anics [C10-C28]	ND		51
Motor Oil Range C	organics [C24-C36]	ND		310
Bunker Range Org	anics (C9-C36)	ND		510
Surrogate		%Rec	Qualifier	Acceptance Limits
Capric Acid (Surr)		0		0 - 5
p-Terphenyl		80		31 - 150

DATA REPORTING QUALIFIERS

Lab Section

Qualifier

Description

Client: AMEC Geomatrix Inc.

Job Number: 720-23004-1

QC Association Summary

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:720-59288					
LCS 720-59288/2	Lab Control Sample	Т	Water	8260B/CA_LUFT	
LCSD 720-59288/1	Lab Control Sample Duplicate	Т	Water	8260B/CA_LUFT	
MB 720-59288/3	Method Blank	Т	Water	8260B/CA_LUFT	
720-23004-1	IDW-100209	Т	Water	8260B/CA_LUFT	
Report Basis					
T = Total					
GC Semi VOA					
Prep Batch: 720-59002					
_CS 720-59002/2-A	Lab Control Sample	Α	Water	3510C SGC	
_CSD 720-59002/3-A	Lab Control Sample Duplicate	A	Water	3510C SGC	
MB 720-59002/1-A	Method Blank	Α	Water	3510C SGC	
720-23004-1	IDW-100209	A	Water	3510C SGC	
Analysis Batch:720-59054					
MB 720-59002/1-A	Method Blank	А	Water	8015B	720-59002
720-23004-1	IDW-100209	А	Water	8015B	720-59002
Analysis Batch:720-59055					
LCS 720-59002/2-A	Lab Control Sample	A	Water	8015B	720-59002
LCSD 720-59002/3-A	Lab Control Sample Duplicate	А	Water	8015B	720-59002

Report Basis

A = Silica Gel Cleanup

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Job Number: 720-23004-1

Method: 8260B/CA_LUFTMS Preparation: 5030B

Lab Sample ID:	MB 720-59288/3	Analysis Batch: 720-59288	Instrument ID: Varian 3900C
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: e:\data\200910\100909\mb-wa
Dilution:	1.0	Units: ug/L	Initial Weight/Volume: 40 mL
Date Analyzed:	10/09/2009 1244		Final Weight/Volume: 40 mL
Date Prepared:	10/09/2009 1244		

Analyte	Result	Qual	RL
МТВЕ	ND		0.50
Surrogate	% Rec	Acceptance Limits	
Toluene-d8 (Surr)	94	70 - 130	
1,2-Dichloroethane-d4 (Surr)	94	67 - 130	

Lab Control Sample/

Client: AMEC Geomatrix Inc.

Method Blank - Batch: 720-59288

```
Lab Control Sample Duplicate Recovery Report - Batch: 720-59288
```

Method: 8260B/CA_LUFTMS Preparation: 5030B

LCS Lab Sample ID:	LCS 720-59288/2	Analysis Batch: 720-59288	Instrument ID: Varian 3900C
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: e:\data\200910\100909\ls-wa-
Dilution:	1.0	Units: ug/L	Initial Weight/Volume: 40 mL
Date Analyzed:	10/09/2009 1356		Final Weight/Volume: 40 mL
Date Prepared:	10/09/2009 1356		
LCSD Lab Sample ID Client Matrix: Dilution: Date Analyzed: Date Prepared:	: LCSD 720-59288/1 Water 1.0 10/09/2009 1421 10/09/2009 1421	Analysis Batch: 720-59288 Prep Batch: N/A Units: ug/L	Instrument ID: Varian 3900C Lab File ID: e:\data\200910\100909\ld-wa-9- Initial Weight/Volume: 40 mL Final Weight/Volume: 40 mL

	<u> </u>	<u>6 Rec.</u>					
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
			0.4 400	•			
МТВЕ	90	93	64 - 130	3	20		
Surrogate	L	CS % Rec	LCSD %	Rec	Ассер	tance Limits	
Toluene-d8 (Surr)	9.	7	95		7	0 - 130	
1,2-Dichloroethane-d4 (Surr)	93	2	85		6	7 - 130	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: AMEC Geomatrix Inc.

Lab Sample ID:

Client Matrix:

Date Analyzed:

Date Prepared:

Dilution:

Surrogate

p-Terphenyl

Method Blank - Batch: 720-59002

Water

1.0

MB 720-59002/1-A

10/07/2009 1535

10/06/2009 1357

LCSD % Rec

93

Quality Control Results

Job Number: 720-23004-1

Method: 8015B

Lab File ID:

Preparation: 3510C SGC Silica Gel Cleanup

Instrument ID: HP DRO5

Initial Weight/Volume:

Final Weight/Volume:

Injection Volume:

5a1007018.d

1000 mL

5 mL

1 uL

Date i lepaieu.	00/2000 1001					
					C	Column ID: PRIMARY
Analyte			Result		Qual	RL
Diesel Range Organic	cs [C10-C28]		ND			50
Motor Oil Range Orga	anics [C24-C36]		ND			300
Bunker Range Organi	ics (C9-C36)		ND			500
Surrogate			% Rec			Acceptance Limits
Capric Acid (Surr)			0			0 - 5
p-Terphenyl			90			31 - 150
Lab Control Samp	le/				I	Method: 8015B
Lab Control Samp	le Duplicate Recovery Re	eport - Bat	tch: 720-590	002	F	Preparation: 3510C SGC
					5	Silica Gel Cleanup
LCS Lab Sample ID:	LCS 720-59002/2-A	Analy	sis Batch: 72	20-59055	Ins	strument ID: HP DRO5
Client Matrix:	Water	Prep I	Batch: 720-5	9002	La	b File ID: 5b1007008.d
Dilution:	1.0	Units:	ug/L		Ini	tial Weight/Volume: 1000 mL
Date Analyzed:	10/07/2009 1027				Fir	nal Weight/Volume: 5 mL
Date Prepared:	10/06/2009 1357					ection Volume: 1 uL
•						Dumn ID: PRIMARY
LCSD Lab Sample ID	: LCSD 720-59002/3-A	Analy	sis Batch: 72	20-59055	Ins	strument ID: HP DR05
Client Matrix:	Water	-	Batch: 720-5		La	b File ID: 5b1007009.d
Dilution:	1.0		ug/L			tial Weight/Volume: 1000 mL
Date Analyzed:	10/07/2009 1054	•	~9, <u>–</u>			nal Weight/Volume: 5 mL
Date Prepared:	10/06/2009 1357					ection Volume: 1 uL
Date i repared.	10,00,2000 100,					blumn ID: PRIMARY
			% Rec.			
Analyte		LCS	LCSD	Limit	RPD	RPD Limit LCS Qual LCSD
Diesel Range Organio	cs [C10-C28]	78	86	32 - 119	9	35

Analysis Batch: 720-59054

Prep Batch: 720-59002

Units: ug/L

94

LCS % Rec

Acceptance Limits

31 - 150

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Client: AMEC Geomatrix Inc.

Login Number: 23004

Creator: Mullen, Joan List Number: 1

LISU	Number. I	

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified	True	

Job Number: 720-23004-1

List Source: TestAmerica San Francisco



APPENDIX F

Laboratory Analytical Report - Soil and Groundwater Investigation Data



ANALYTICAL REPORT

Job Number: 720-23001-1 Job Description: Pacific Shops Inc

For: AMEC Geomatrix Inc. 2101 Webster Street, 12th Floor Oakland, CA 94612

Attention: Ms. Tiffany Klitzke

Alsonef Sal

Approved for release. Afsaneh Salimpour Project Manager I 10/13/2009 12:53 PM

Afsaneh Salimpour Project Manager I afsaneh.salimpour@testamericainc.com 10/13/2009

CA ELAP Certification # 2496

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A trip blank is required to be provided for volatile analyses. If trip blank results are not included in the report, either the trip blank was not submitted or requested to be analyzed.

TestAmerica Laboratories, Inc.

TestAmerica San Francisco 1220 Quarry Lane, Pleasanton, CA 94566 Tel (925) 484-1919 Fax (925) 600-3002 <u>www.testamericainc.com</u>

Comments

No additional comments.

Receipt

All samples were received in good condition within temperature requirements.

GC/MS VOA

Method(s) 8260B: Surrogate recovery for the following sample(s) was outside the upper control limit: SB-1-15.0 (720-23001-3), SB-1-6.0 (720-23001-1), SB-2-5.5 (720-23001-5), SB-2-8.0 (720-23001-6), SB-3-5.5 (720-23001-8). Surrogate 1,2-Dichloroethane-d4 was out high. This sample did not contain any target analytes; Re-extraction and/or re-analysis was performed and confirmed.

No other analytical or quality issues were noted.

GC Semi VOA

Method(s) 8015B: Concentrations reported represent individual or discrete peaks: 23001-3

No other analytical or quality issues were noted.

Organic Prep

No analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: AMEC Geomatrix Inc.

Job Number: 720-23001-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-23001-3	SB-1-15.0				
<i>Silica Gel Cleanup</i> Diesel Range Orgar		3.0	0.99	mg/Kg	8015B
720-23001-5	SB-2-5.5				
<i>Silica Gel Cleanup</i> Diesel Range Orgar		1.0	0.99	mg/Kg	8015B

TestAmerica San Francisco

METHOD SUMMARY

Client: AMEC Geomatrix Inc.

Job Number: 720-23001-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL SF	SW846 8260B	
Closed System Purge and Trap	TAL SF		SW846 5035
Diesel Range Organics (DRO) (GC)	TAL SF	SW846 8015B	
Ultrasonic Extraction	TAL SF		SW846 3550B
Matrix: Water			
Volatile Organic Compounds by GC/MS	TAL SF	SW846 8260B/C	A_LUFTMS
Purge and Trap	TAL SF		SW846 5030B
Diesel Range Organics (DRO) (GC)	TAL SF	SW846 8015B	
Liquid-Liquid Extraction (Separatory Funnel)	TAL SF		SW846 3510C SGC

Lab References:

TAL SF = TestAmerica San Francisco

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Method	Analyst	Analyst ID
SW846 8260B	Nguyen, Thuy M	TMN
SW846 8260B/CA_LUFTMS	Zhao, June	JZ
SW846 8015B	Hayashi, Derek	DH

SAMPLE SUMMARY

Client: AMEC Geomatrix Inc.

			Date/Time	Date/Time
Lab Sample ID	Client Sample ID	Client Matrix	Sampled	Received
720-23001-1	SB-1-6.0	Solid	10/02/2009 0844	10/02/2009 1711
720-23001-2	SB-1-6.5	Solid	10/02/2009 0909	10/02/2009 1711
720-23001-3	SB-1-15.0	Solid	10/02/2009 0829	10/02/2009 1711
720-23001-4	SB-2-15.0	Solid	10/02/2009 0951	10/02/2009 1711
720-23001-5	SB-2-5.5	Solid	10/02/2009 0945	10/02/2009 1711
720-23001-6	SB-2-8.0	Solid	10/02/2009 1009	10/02/2009 1711
720-23001-7	SB-3-15.0	Solid	10/02/2009 1052	10/02/2009 1711
720-23001-8	SB-3-5.5	Solid	10/02/2009 1100	10/02/2009 1711
720-23001-9	GW-1-100209	Water	10/02/2009 1130	10/02/2009 1711
720-23001-10	GW-2-100209	Water	10/02/2009 1146	10/02/2009 1711
720-23001-11	GW-3-100209	Water	10/02/2009 1200	10/02/2009 1711
720-23001-12	TB-100209	Water	10/02/2009 1500	10/02/2009 1711

Client: AMEC Geomatrix Inc.

Client Sample ID:	SB-1-6.0					
Lab Sample ID: Client Matrix:	720-23001-1 Solid				Sampled: 10/02/200 Received: 10/02/200	
	ξ	3260B Volatile Organic Compou	inds (GC/MS)			
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	8260B 5035 1.0 10/12/2009 1444 10/12/2009 0800	Analysis Batch: 720-59330 Prep Batch: 720-59381			HP12 10120910.D 4.16 g 10 mL	
Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier		RL	
MTBE	Ann an a	ND			6.0	
Surrogate		%Rec	Qualifier	Acceptar	ice Limits	
4-Bromofluorobenze	ene	88		52 - 130		
1,2-Dichloroethane-	-d4 (Surr)	134	X	67 - 132		
Toluene-d8 (Surr)		100		58 - 130		

Client: AMEC Geomatrix Inc.

Client Sample ID:	SB-1-6.5				
Lab Sample ID: Client Matrix:	720-23001-2 Solid				Sampled: 10/02/2009 0909 Received: 10/02/2009 1711
	8	260B Volatile Organic Compou	inds (GC/MS)		
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	8260B 5035 1.0 10/12/2009 1517 10/12/2009 0800	Analysis Batch: 720-59330 Prep Batch: 720-59381	Instrument Lab File ID Initial Weig Final Weigl	: ht/Volume:	HP12 10120911.D 9.13 g 10 mL
Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier		RL
МТВЕ	an a	ND	1990 C.		2.7
Surrogate		%Rec	Qualifier	Acceptar	nce Limits
4-Bromofluorobenze	ene	94		52 - 130	
1,2-Dichloroethane-	-d4 (Surr)	118		67 - 132	
Toluene-d8 (Surr)		100		58 - 130	

Client: AMEC Geomatrix Inc.

Client Sample ID:	SB-1-15.0			
Lab Sample ID:	720-23001-3			Date Sampled: 10/02/2009 0829
Client Matrix:	Solid			Date Received: 10/02/2009 1711
		8260B Volatile Organic Compou	unds (GC/MS)	
Method:	8260B	Analysis Batch: 720-59330	Instrument ID	HP12
Preparation:	5035	Prep Batch: 720-59381	Lab File ID:	10120912.D
Dilution:	1.0		Initial Weight/Vol	lume: 3.95 g
Date Analyzed:	10/12/2009 1549		Final Weight/Vol	ume: 10 mL
Date Prepared:	10/12/2009 0800			
Analyte	DryWt Corrected:	N Result (ug/Kg)	Qualifier	RL
МТВЕ		ND		6.3
Surrogate		%Rec	Qualifier A	cceptance Limits
4-Bromofluorobenz	ene	103	52	2 - 130
1,2-Dichloroethane	-d4 (Surr)	134	X 6	7 - 132
Toluene-d8 (Surr)		101	58	8 - 130

Client: AMEC Geomatrix Inc.

Client Sample ID:	SB-2-15.0					
Lab Sample ID: Client Matrix:	720-23001-4 Solid		•		Sampled: 10/02/2009 Received: 10/02/2009	
	8	260B Volatile Organic Compou	inds (GC/MS)			
Method:	8260B	Analysis Batch: 720-59330	Instrum	ent ID:	HP12	
Preparation:	5035	Prep Batch: 720-59381	Lab File	e ID:	10120907.D	
Dilution:	1.0		Initial W	/eight/Volume:	2.11 g	
Date Analyzed:	10/12/2009 1307		Final W	/eight/Volume:	10 mL	
Date Prepared:	10/12/2009 0800					
Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier		RL	
MTBE	99999999999999999999999999999999999999	ND	#999.0000.0000.0000.0000.0000.0000.0000		12	
Surrogate		%Rec	Qualifier	Acceptan	ce Limits	
4-Bromofluorobenze	ene	103	alinda a an	52 - 130		-2-36-600660000.co.d
1,2-Dichloroethane-	d4 (Surr)	126		67 - 132		
Toluene-d8 (Surr)		101		58 - 130		

Job Number: 720-23001-1

Client Sample ID: SB-2-5.5 Lab Sample ID: 720-23001-5 Date Sampled: 10/02/2009 0945 Date Received: 10/02/2009 1711 Client Matrix: Solid 8260B Volatile Organic Compounds (GC/MS) Analysis Batch: 720-59330 Instrument ID: HP12 Method: 8260B Prep Batch: 720-59381 Lab File ID: 10120913.D Preparation: 5035 Initial Weight/Volume: 4.48 g Dilution: 1.0 Date Analyzed: 10/12/2009 1621 Final Weight/Volume: 10 mL 10/12/2009 0800 Date Prepared: Result (ug/Kg) Qualifier RL Analyte DryWt Corrected: N 5.6 MTBE ND Qualifier %Rec Acceptance Limits Surrogate 4-Bromofluorobenzene 102 52 - 130 1,2-Dichloroethane-d4 (Surr) 136 Х 67 - 132 58 - 130 100 Toluene-d8 (Surr)

Client: AMEC Geomatrix Inc.

Client: AMEC Geomatrix Inc.

Client Sample ID:	SB-2-8.0					
Lab Sample ID: Client Matrix:	720-23001-6 Solid		•		Sampled: 10/02/2009 Received: 10/02/2009	
	8	260B Volatile Organic Compou	nds (GC/MS)			
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	8260B 5035 1.0 10/12/2009 1654 10/12/2009 0800	Analysis Batch: 720-59330 Prep Batch: 720-59381			HP12 10120914.D 4.01 g 10 mL	
Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier		RL	
MTBE		ND			6.2	
Surrogate		%Rec	Qualifier	Acceptar	ce Limits	
4-Bromofluorobenze	ene	104		52 - 130		
1,2-Dichloroethane-	d4 (Surr)	141	Х	67 - 132		
Toluene-d8 (Surr)	•	99		58 - 130		

Client: AMEC Geomatrix Inc.

Client Sample ID:	SB-3-15.0					
Lab Sample ID: Client Matrix:	720-23001-7 Solid				ampled: 10/02/2009 Received: 10/02/2009	
		8260B Volatile Organic Compou	inds (GC/MS)			
Method:	8260B	Analysis Batch: 720-59330	Instrument ID:		HP12	
Preparation:	5035	Prep Batch: 720-59381	Lab File ID:		10120908.D	
Dilution:	1.0		Initial Weight/Vo	lume:	5.82 g	
Date Analyzed:	10/12/2009 1339		Final Weight/Vol	lume:	10 mL	
Date Prepared:	10/12/2009 0800					
Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier		RL	
MTBE		ND		, 2010 CO official and a second s	4.3	104037000 09 409
Surrogate		%Rec	Qualifier A	cceptanc	e Limits	
4-Bromofluorobenze	ene	102	53	2 - 130		
1,2-Dichloroethane-	d4 (Surr)	128	6	7 - 132		
Toluene-d8 (Surr)		101	50	8 - 130		

Client: AMEC Geomatrix Inc.

Client Sample ID:	SB-3-5.5				
Lab Sample ID:	720-23001-8			Date	Sampled: 10/02/2009 110
Client Matrix:	Solid			Date	Received: 10/02/2009 171
	8	260B Volatile Organic Compou	ınds (GC/MS)		
Method:	8260B	Analysis Batch: 720-59330	Instrum	nent ID:	HP12
Preparation:	5035	Prep Batch: 720-59381	Lab Fi	le ID:	10120909.D
Dilution:	1.0		Initial \	Veight/Volume:	4.63 g
Date Analyzed:	10/12/2009 1412		Final V	Veight/Volume:	10 mL
Date Prepared:	10/12/2009 0800				
Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier		RL
MTBE		ND .		00000000000000000000000000000000000000	5.4
Surrogate		%Rec	Qualifier	Acceptar	ice Limits
4-Bromoflüorobenze	ene	100		52 - 130	
1,2-Dichloroethane-	-d4 (Surr)	137	Х	67 - 132	
Toluene-d8 (Surr)		101		58 - 130	

Client: AMEC Geomatrix Inc.

Job Number: 720-23001-1

Client Sample ID:	GW-1-100209				
Lab Sample ID:	720-23001-9				Sampled: 10/02/2009 1130
Client Matrix:	Water			Date	Received: 10/02/2009 1711
	8260	B/CA_LUFTMS Volatile Organic Co	ompounds by GC/MS		
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	8260B/CA_LUFTMS 5030B 1.0 10/07/2009 0225 10/07/2009 0225	Analysis Batch: 720-59217	Instrument I Lab File ID: Initial Weigh Final Weigh	t/Volume:	SAT 3900C e:\data\200910\10060 40 mL 40 mL
Analyte		Result (ug/L)	Qualifier		RL
MTBE		ND -			0.50
Surrogate		%Rec	Qualifier	Acceptar	nce Limits
Toluene-d8 (Surr)		96		70 - 130	
1,2-Dichloroethane	-d4 (Surr)	98		67 - 130	

Job Number: 720-23001-1

Client: AMEC Geomatrix Inc.

Date Prepared: 10/07/2009 0249

Client Sample ID:	GW-2-100209			
Lab Sample ID: Client Matrix:	720-23001-10			Sampled: 10/02/2009 1146
	Water	······································	Date	Received: 10/02/2009 1711
	8260	B/CA_LUFTMS Volatile Organic Compo	ounds by GC/MS	
Method:	8260B/CA_LUFTMS	Analysis Batch: 720-59217	Instrument ID:	SAT 3900C
Preparation:	5030B		Lab File ID:	e:\data\200910\10060
Dilution:	1.0		Initial Weight/Volume:	40 mL
Date Analyzed:	10/07/2009 0249	*	Final Weight/Volume:	40 mL

Analyte	Result (ug/L)	Qualifier	RL	
MTBE	ND	Qualifier	0.50	
Surrogate Toluene-d8 (Surr)	%Rec 97	Qualifier	Acceptance Limits 70 - 130	
1,2-Dichloroethane-d4 (Surr)	102		67 - 130	

Client: AMEC Geomatrix Inc.

Job Number: 720-23001-1

Client Sample ID:	GW-3-100209		
Lab Sample ID: Client Matrix:	720-23001-11 Water		Date Sampled: 10/02/2009 1200 Date Received: 10/02/2009 1711

8260B/CA_LUFTMS Volatile Organic Compounds by GC/MS						
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	8260B/CA_LUFTMS 5030B 1.0 10/07/2009 0314 10/07/2009 0314	Analysis Batch: 720-59217	•		SAT 3900C e:\data\200910\10060 40 mL 40 mL	
Analyte MTBE		Result (ug/L) ND	Qualifier		RL 0.50	
Surrogate Toluene-d8 (Surr)		%Rec 94	Qualifier	Acceptan 70 - 130		
1,2-Dichloroethane	-d4 (Surr)	86		67 - 130		

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Client: AMEC Geomatrix Inc.

Client Sample ID:	TB-100209				
Lab Sample ID:	720-23001-12			Date	Sampled: 10/02/2009 1500
Client Matrix:	Water			Date	Received: 10/02/2009 1711
	8260	B/CA_LUFTMS Volatile Organic Co	ompounds by GC/MS	;	
Method:	8260B/CA_LUFTMS	Analysis Batch: 720-59217	Instrume	nt ID:	SAT 3900C
Preparation:	5030B		Lab File	ID:	e:\data\200910\10060
Dilution:	1.0		Initial We	eight/Volume:	40 mL
Date Analyzed:	10/06/2009 2129		Final We	ight/Volume:	40 mL
Date Prepared:	10/06/2009 2129				
Analyte		Result (ug/L)	Qualifier		RL
MTBE		ND	ar yn de	di hara sa 1999 kabalaharin naharaka sa karaka di barak	0.50
Surrogate		%Rec	Qualifier	Acceptar	nce Limits
Toluene-d8 (Surr)	*****	99		70 - 130	
1,2-Dichloroethane-	d4 (Surr)	78		67 - 130	

Job Number: 720-23001-1

Client: AMEC Geomatrix Inc.

Client Sample ID:	SB-1-6.0	
Lab Sample ID: Client Matrix:	720-23001-1 Solid	Date Sampled: 10/02/2009 0844 Date Received: 10/02/2009 1711

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: Preparation: Dilution: Date Analyzed: Date Prepared:	8015B 3550B 1.0 10/08/2009 1554 10/07/2009 1426	Analysis Batch: 720-59175 Prep Batch: 720-59111	Instrument ID: Initial Weight/Volum Final Weight/Volum Injection Volume: Result Type:	•
Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Org	anics [C10-C28]	ND		0.99
Motor Oil Range C	Organics [C24-C36]	ND		50
Bunker Range Org	ganics (C9-C36)	ND		50
Surrogate		%Rec	Qualifier Acce	eptance Limits
Capric Acid (Surr)		0	0 - 5	
p-Terphenyl		83	46 -	115

Client: AMEC Geomatrix Inc.

Client Sample ID:	SB-1-6.5			
Lab Sample ID:	720-23001-2			Date Sampled: 10/02/2009 0909
Client Matrix:	Solid			Date Received: 10/02/2009 1711
	8015B Die	esel Range Organics (DRO) (G	C)-Silica Gel Cleanup	
Method:	8015B	Analysis Batch: 720-59175	Instrument ID:	CHDRO6
Preparation:	3550B	Prep Batch: 720-59111	Initial Weight/Vol	ume: 30.29 g
Dilution:	1.0		Final Weight/Volu	ume: 5 mL
Date Analyzed:	10/08/2009 1659		Injection Volume:	: 1 uL.
Date Prepared:	10/07/2009 1426		Result Type:	PRIMARY
Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Orga	nics [C10-C28]	ND		0.99
Motor Oil Range Oi	rganics [C24-C36]	ND		50
Bunker Range Orga	anics (C9-C36)	ND		50
Surrogate		%Rec	Qualifier Ad	cceptance Limits
Capric Acid (Surr)		0	0 ·	- 5
p-Terphenyl		84	46	6 - 115

Client: AMEC Geomatrix Inc.

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Job Number: 720-23001-1

Client Sample ID:	SB-1-15.0				
Lab Sample ID: Client Matrix:	720-23001-3 Solid				Sampled: 10/02/2009 0829 Received: 10/02/2009 1711
	8015B Di	esel Range Organics (DRO) (G	C)-Silica Gel Cleanup		-
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	8015B 3550B 1.0 10/08/2009 1721 10/07/2009 1426	Analysis Batch: 720-59175 Prep Batch: 720-59111	Instrument ID Initial Weight/ Final Weight/ Injection Volu Result Type:	Volume: Volume:	CHDRO6 30.32 g 5 mL 1 uL PRIMARY
Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier		RL
Diesel Range Orgai	nics [C10-C28]	3.0		-2.2010/000000000000000000000000000000000	0.99
Motor Oil Range Or	ganics [C24-C36]	ND			49
Bunker Range Orga	anics (C9-C36)	ND			49
Surrogate		%Rec	Qualifier	Acceptar	nce Limits
Capric Acid (Surr)		0		0 - 5	
p-Terphenyl		89		46 - 115	

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Client: AMEC Geomatrix Inc.

Client Sample ID:	SB-2-15.0				
Lab Sample ID:	720-23001-4			Date Sampl	ed: 10/02/2009 0951
Client Matrix:	Solid			Date Receiv	/ed: 10/02/2009 1711
	8015B Di	esel Range Organics (DRO) (G	C)-Silica Gel Cleanup		
Method:	8015B	Analysis Batch: 720-59175	Instrument ID): CHI	DRO6
Preparation:	3550B	Prep Batch: 720-59111	Initial Weight	/Volume: 30.1	10 g
Dilution:	1.0		Final Weight	/Volume: 5 r	nL
Date Analyzed:	10/08/2009 1742		Injection Volu	ume: 1 u	۱L
Date Prepared:	10/07/2009 1426		Result Type:	PRI	MARY
Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier		RL
Diesel Range Orga	nics [C10-C28]	ND			1.0
Motor Oil Range Or	ganics [C24-C36]	ND			50

Bunker Range Organics (C9-C36)	ND		50
Surrogate	%Rec	Qualifier	Acceptance Limits
Capric Acid (Surr)	0		0 - 5
p-Terphenyl	86		46 - 115

Job Number: 720-23001-1

Client: AMEC Geomatrix Inc.

Client Sample ID:	SB-2-5.5	
Lab Sample ID: Client Matrix:	720-23001-5 Solid	Date Sampled: 10/02/2009 0945 Date Received: 10/02/2009 1711
Onone matrix.		

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method:	8015B	Analysis Batch: 720-59175	Instrumen	t ID:	CHDRO6	
Preparation:	3550B	Prep Batch: 720-59111	Initial Wei	ght/Volume:	30.30 g	
Dilution:	1.0		Final Weig	ht/Volume:	5 mL	
Date Analyzed:	10/08/2009 1804		Injection V	'olume:	1 uL	
Date Prepared:	10/07/2009 1426		Result Typ	e:	PRIMARY	
Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier		RL	
Diesel Range Orga	anics [C10-C28]	1.0			0.99	
Motor Oil Range Organics [C24-C36]		ND			50	
Bunker Range Org	janics (C9-C36)	ND			50	
Surrogate		%Rec	Qualifier	Acceptar	nce Limits	
Capric Acid (Surr)		0	99999999999999999999999999999999999999	0 - 5		
p-Terphenyl		81		46 - 115		

Client: AMEC Geomatrix Inc.

Client Sample ID:	SB-2-8.0			
Lab Sample ID: Client Matrix:	720-23001-6 Solid			Date Sampled: 10/02/2009 1009 Date Received: 10/02/2009 1711
	8015B Die	esel Range Organics (DRO) (G	C)-Silica Gel Cleanup	
Method:	8015B	Analysis Batch: 720-59175	Instrument ID:	CHDRO6
Preparation:	3550B	Prep Batch: 720-59111	Initial Weight/Volum	ne: 30.19 g
Dilution:	1.0		Final Weight/Volum	ie: 5 mL
Date Analyzed:	10/08/2009 1826		Injection Volume:	1 uL
Date Prepared:	10/07/2009 1426		Result Type:	PRIMARY
Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Orga	nics [C10-C28]	ND		0.99
Motor Oil Range Or	ganics [C24-C36]	ND		50
Bunker Range Orga	anics (C9-C36)	ND		50
Surrogate		%Rec	Qualifier Acce	eptance Limits
Capric Acid (Surr)		0	0 - 5	
p-Terphenyl		77	46 -	115

Job Number: 720-23001-1

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PRIMARY

Client: AMEC Geomatrix Inc.

Date Analyzed:

Date Prepared:

10/08/2009 2036

10/07/2009 1426

Client Sample ID:	SB-3-15.0			
Lab Sample ID:	720-23001-7		Date	Sampled: 10/02/2009 1052
Client Matrix:	Solid		Date	Received: 10/02/2009 1711
	801	5B Diesel Range Organics (DRO) (GC)-S	ilica Gel Cleanup	
Method:	8015B	Analysis Batch: 720-59175	Instrument ID:	CHDRO6
Preparation:	3550B	Prep Batch: 720-59111	Initial Weight/Volume:	30.03 g
Dilution:	1.0		Final Weight/Volume:	5 mL

Injection Volume:

Result Type:

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organ	ics [C10-C28]	ND		1.0
Motor Oil Range Org	anics [C24-C36]	ND		50
Bunker Range Orga	nics (C9-C36)	ND		50
Surrogate		%Rec	Qualifier	Acceptance Limits
Capric Acid (Surr)		0		0 - 5
p-Terphenyl		85		46 - 115
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Client: AMEC Geomatrix Inc.

Client Sample ID:	SB-3-5.5			
Lab Sample ID:	720-23001-8			Date Sampled: 10/02/2009 1100
Client Matrix:	Solid			Date Received: 10/02/2009 1711
	8015B Die	esel Range Organics (DRO) (G	C)-Silica Gel Cleanup	
Method:	8015B	Analysis Batch: 720-59175	Instrument ID:	CHDRO6
Preparation:	3550B	Prep Batch: 720-59111	Initial Weight/Volu	me: 30.19 g
Dilution:	1.0		Final Weight/Volu	me: 5 mL
Date Analyzed:	10/08/2009 2058		Injection Volume:	1 uL
Date Prepared:	10/07/2009 1426		Result Type:	PRIMARY
Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Orgai	nics [C10-C28]	ND ·		0.99
Motor Oil Range Or	ganics [C24-C36]	ND		50
Bunker Range Orga	nics (C9-C36)	ND		50
Surrogate		%Rec	Qualifier Acc	ceptance Limits
Capric Acid (Surr)		0	0 -	5
p-Terphenyl		79	46	- 115

Job Number: 720-23001-1

Client: AMEC Geomatrix Inc.

Client Sample ID:	GW-1-100209	
Lab Sample ID:	720-23001-9	Date Sampled: 10/02/2009 1130
Client Matrix:	Water	Date Received: 10/02/2009 1711

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: Preparation: Dilution: Date Analyzed: Date Prepared:	8015B 3510C SGC 1.0 10/07/2009 1601 10/06/2009 1357	Analysis Batch: 720-59054 Prep Batch: 720-59002	Instrument ID: Initial Weight/Volu Final Weight/Volu Injection Volume: Result Type:	
Analyte		Result (ug/L)	Qualifier	RL
Diesel Range Orga	anics [C10-C28]	ND		51
Motor Oil Range C	organics [C24-C36]	ND		300
Bunker Range Org	anics (C9-C36)	ND		510
Surrogate		%Rec	Qualifier Ac	ceptance Limits
Capric Acid (Surr)		0	0 -	5
p-Terphenyl		78	· 31	- 150

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Analytical Data

Client: AMEC Geomatrix Inc.

Job Number: 720-23001-1

Client Sample ID: Lab Sample ID: Client Matrix:	GW-2-100209 720-23001-10 Water			e Sampled: 10/02/2009 1146 e Received: 10/02/2009 1711
		8015B Diesel Range Organics (DRO) (G0	C)-Silica Gel Cleanup	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	8015B 3510C SGC 1.0 10/07/2009 1628 10/06/2009 1357	Analysis Batch: 720-59054 Prep Batch: 720-59002	Instrument ID: Initial Weight/Volume: Final Weight/Volume: Injection Volume: Result Type:	CHDRO5 990 mL 5 mL 1 uL PRIMARY
Analyte Diesel Range Orgar Motor Oil Range Or Bunker Range Orga	ganics [C24-C36]	Result (ug/L) ND ND ND	Qualifier	RL 51 300 510
Surrogate Capric Acid (Surr) p-Terphenyl		%Rec 4 77	Qualifier Accepta 0 - 5 31 - 150	ance Limits

Analytical Data

Client: AMEC Geomatrix Inc.

Job Number: 720-23001-1

Client Sample ID:	GW-3-100209	•	
Lab Sample ID: Client Matrix:	720-23001-11 Water		Date Sampled: 10/02/2009 1200 Date Received: 10/02/2009 1711
	-		

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup						
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	8015B 3510C SGC 1.0 10/07/2009 1655 10/06/2009 1357	Analysis Batch: 720-59054 Prep Batch: 720-59002		ght/Volume: ght/Volume: /olume:	CHDRO5 990 mL 5 mL 1 uL PRIMARY	
Analyte		Result (ug/L)	Qualifier		RL	
Diesel Range Orgar	nics [C10-C28]	ND	99999999999999999999999999999999999999		51	
Motor Oil Range Org	ganics [C24-C36]	ND			300	
Bunker Range Orga	nics (C9-C36)	ND			510	
Surrogate		%Rec	Qualifier	Acceptar	nce Limits	
Capric Acid (Surr)	***************************************	0		0 - 5		
p-Terphenyl		79		31 - 150		

DATA REPORTING QUALIFIERS

Client: AMEC Geomatrix Inc.

Job Number: 720-23001-1

Lab Section	Qualifier	Description
GC/MS VOA		
	Х	Surrogate exceeds the control limits
· ·		
		·

Job Number: 720-23001-1

QC Association Summary

		Report Basis		RR-All	Draw Datab
Lab Sample ID	Client Sample ID	DdSIS	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:720-59217					
LCS 720-59217/2	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCSD 720-59217/1	Lab Control Sample Duplicate	Т	Water	8260B/CA_LUFT	
MB 720-59217/3	Method Blank	Т	Water	8260B/CA_LUFT	
720-23001-9	GW-1-100209	Ť	Water	8260B/CA_LUFT	
720-23001-10	GW-2-100209	T	Water	8260B/CA_LUFT	
720-23001-11	GW-3-100209	Ť	Water	8260B/CA_LUFT	
720-23001-12	TB-100209	Т	Water	8260B/CA_LUFT	
720-23004-A-1 MS	Matrix Spike	т	Water	8260B/CA_LUFT	
720-23004-A-1 MSD	Matrix Spike Duplicate	Т	Water	8260B/CA_LUFT	
Analysis Batch:720-59330					
LCS 720-59381/1-A	Lab Control Sample	Т	Solid	8260B	720-59381
LCSD 720-59381/2-A	Lab Control Sample Duplicate	Т	Solid	8260B	720-59381
MB 720-59381/3-A	Method Blank	Т	Solid	8260B	720-59381
720-23001-1	SB-1-6.0	Т	Solid	8260B	720-59381
720-23001-2	SB-1-6.5	Т	Solid	8260B	720-59381
720-23001-3	SB-1-15.0	т	Solid	8260B	720-59381
720-23001-4	SB-2-15.0	т	Solid	8260B	720-59381
720-23001-5	SB-2-5.5	т	Solid	8260B	720-59381
720-23001-6	SB-2-8.0	Т	Solid	8260B	720-59381
720-23001-7	SB-3-15.0	т	Solid	8260B	720-59381
720-23001-8	SB-3-5.5	Т	Solid	8260B	720-59381
Prep Batch: 720-59381					
LCS 720-59381/1-A	Lab Control Sample	Т	Solid	5035	
LCSD 720-59381/2-A	Lab Control Sample Duplicate	т	Solid	5035	
MB 720-59381/3-A	Method Blank	Т	Solid	5035	
720-23001-1	SB-1-6.0	т	Solid	5035	
720-23001-2	SB-1-6.5	т	Solid	5035	
720-23001-3	SB-1-15.0	т	Solid	5035	
720-23001-4	SB-2-15.0	T	Solid	5035	
720-23001-5	SB-2-5.5	т	Solid	5035	
720-23001-6	SB-2-8.0	T .	Solid	5035	
720-23001-7	SB-3-15.0	Т	Solid	5035	
720-23001-8	SB-3-5.5	Т	Solid	5035	

Report Basis

T = Total

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Job Number: 720-23001-1

QC Association Summary

		Report			•
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 720-59002					
LCS 720-59002/2-A	Lab Control Sample	А	Water	3510C SGC	
LCSD 720-59002/3-A	Lab Control Sample Duplicate	А	Water	3510C SGC	
MB 720-59002/1-A	Method Blank	A	Water	3510C SGC	
720-23001-9	GW-1-100209	A	Water	3510C SGC	
720-23001-10	GW-2-100209	A	Water	3510C SGC	
720-23001-11	GW-3-100209	А	Water	3510C SGC	
Analysis Batch:720-59054	L .				
MB 720-59002/1-A	Method Blank	А	Water	8015B	720-59002
720-23001-9	GW-1-100209	А	Water	8015B	720-59002
720-23001-10	GW-2-100209	А	Water	8015B	720-59002
720-23001-11	GW-3-100209	А	Water	8015B	720-59002
Analysis Batch:720-59055	;				
LCS 720-59002/2-A	Lab Control Sample	A	Water	8015B	720-59002
LCSD 720-59002/3-A	Lab Control Sample Duplicate	A	Water	8015B	720-59002
Prep Batch: 720-59111					
LCS 720-59111/2-A	Lab Control Sample	А	Solid	3550B	
LCSD 720-59111/3-A	Lab Control Sample Duplicate	Α	Solid	3550B	
MB 720-59111/1-A	Method Blank	Α	Solid	3550B	
720-23001-1	SB-1-6.0	A	Solid	3550B	
720-23001-1MS	Matrix Spike	А	Solid	3550B	
720-23001-1MSD	Matrix Spike Duplicate	А	Solid	3550B	
720-23001-2	SB-1-6.5	А	Solid	3550B	
720-23001-3	SB-1-15.0	А	Solid	3550B	
720-23001-4	SB-2-15.0	А	Solid	3550B	
720-23001-5	SB-2-5.5	А	Solid	3550B	
720-23001-6	SB-2-8.0	А	Solid	3550B	
720-23001-7	SB-3-15.0	А	Solid	3550B	
720-23001-8	SB-3-5.5	А	Solid	3550B	

Job Number: 720-23001-1

QC Association Summary

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		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Analysis Batch:720-5917	75				
LCS 720-59111/2-A	Lab Control Sample	А	Solid	8015B	720-59111
LCSD 720-59111/3-A	Lab Control Sample Duplicate	А	Solid	8015B	720-59111
MB 720-59111/1-A	Method Blank	А	Solid	8015B	720-59111
720-23001-1	SB-1-6.0	A	Solid	8015B	720-59111
720-23001-1MS	Matrix Spike	А	Solid	8015B	720-59111
720-23001-1MSD	Matrix Spike Duplicate	А	Solid	8015B	720-59111
720-23001-2	SB-1-6.5	A	Solid	8015B	720-59111
720-23001-3	SB-1-15.0	А	Solid	8015B	720-59111
720-23001-4	SB-2-15.0	А	Solid	8015B	720-59111
720-23001-5	SB-2-5.5	А	Solid	8015B	720-59111
720-23001-6	SB-2-8.0	A	Solid	8015B	720-59111
720-23001-7	SB-3-15.0	А	Solid	8015B	720-59111
720-23001-8	SB-3-5.5	А	Solid	8015B	720-59111

Report Basis

A = Silica Gel Cleanup

Quality Control Results

Job Number: 720-23001-1

Client: AMEC Geomatrix Inc.

13

Method Blank - Batch: 720-59381

Method: 8260B Preparation: 5035

Lab Sample ID:	MB 720-59381/3-A	Analysis Batch: 720-59330	Instrument ID: Chenstation 3
Client Matrix:	Solid	Prep Batch: 720-59381	Lab File ID: 10120905.D
Dilution:	1.0	Units: ug/Kg	Initial Weight/Volume: 5 g
Date Analyzed:	10/12/2009 1144		Final Weight/Volume: 10 mL
Date Prepared:	10/12/2009 0800		

Analyte	Result	Qual	RL
MTBE	ND	gen unversion zeiten synamiser er fegeler bereiten synamiser synamiser fer staten som forste staten som efter s	5.0
Surrogate	% Rec	Acceptance Limits	
4-Bromofluorobenzene	107	52 - 130	
1,2-Dichloroethane-d4 (Surr)	123	67 - 132	
Toluene-d8 (Surr)	103	58 - 130	

Lab Control Sample/ Lab Control Sample Duplicate Recovery Report - Batch: 720-59381

10/12/2009 0800

Method: 8260B Preparation: 5035

LCS Lab Sample ID:	LCS 720-59381/1-A	Analysis Batch: 720-59330	Instrument ID: Chenstation 3
Client Matrix:	Solid	Prep Batch: 720-59381	Lab File ID: 10120906.D
Dilution:	1.0	Units: ug/Kg	Initial Weight/Volume: 5 g
Date Analyzed:	10/12/2009 1216		Final Weight/Volume: 10 mL
Date Prepared:	10/12/2009 0800		
LCSD Lab Sample ID	LCSD 720-59381/2-A	Analysis Batch: 720-59330	Instrument ID: Chenstation 3
Client Matrix:	Solid	Prep Batch: 720-59381	Lab File ID: 10120904.D
Dilution:	1.0	Units: ug/Kg	Initial Weight/Volume: 5 g
Date Analyzed:	10/12/2009 1111		Final Weight/Volume: 10 mL

Analyte	LCS	<u>% Rec.</u> LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Construction of the second secon	124	123	69 - 125	0	20		
Surrogate	L	CS % Rec	LCSD %	Rec	Ассер	tance Limits	
4-Bromofluorobenzene	1	13	110		5	2 - 130	
1,2-Dichloroethane-d4 (Surr)	1	24	121		6	7 - 132	
Toluene-d8 (Surr)	1	05	106		5	8 - 130	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Date Prepared:

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Job Number: 720-23001-1

Method: 8260B/CA_LUFTMS Preparation: 5030B

Lab Sample ID:	MB 720-59217/3	Analysis Batch: 720-59217	Instrument ID: Varian 3900C
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: e:\data\200910\100609\mb-wa
Dilution:	1.0	Units: ug/L	Initial Weight/Volume: 40 mL
Date Analyzed:	10/06/2009 1950		Final Weight/Volume: 40 mL
Date Prepared:	10/06/2009 1950		

Analyte	Result	Qual	RL
MTBE	ND		0.50
Surrogate	% Rec	Acceptance Limits	
Toluene-d8 (Surr) 1,2-Dichloroethane-d4 (Surr)	98 95	70 - 130 67 - 130	

Lab Control Sample/

Client: AMEC Geomatrix Inc.

Method Blank - Batch: 720-59217

Method: 8260B/CA_LUFTMS Preparation: 5030B

LCS Lab Sample ID:	LCS 720-59217/2	Analysis Batch: 720-59217	Instrument ID: Varian 3900C
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: e:\data\200910\100609\ls-wa-
Dilution:	1.0	Units: ug/L	Initial Weight/Volume: 40 mL
Date Analyzed:	10/06/2009 2015		Final Weight/Volume: 40 mL
Date Prepared:	10/06/2009 2015		
LCSD Lab Sample ID:	LCSD 720-59217/1	Analysis Batch: 720-59217	Instrument ID: Varian 3900C
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: e:\data\200910\100609\ld-wa-9-
Dilution:	1.0	Units: ug/L	Initial Weight/Volume: 40 mL
Date Analyzed:	10/06/2009 2040		Final Weight/Volume: 40 mL
Date Prepared:	10/06/2009 2040		

	0	<u>% Rec.</u>					
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
MTBE	97	95	64 - 130	2	20		
	57	55	04 - 100	<u>~</u>	20		
Surrogate	L	CS % Rec	LCSD %	Rec	. Accep	tance Limits	
Toluene-d8 (Surr)	9	7	99		7	0 - 130	
1,2-Dichloroethane-d4 (Surr)	9	8	90		6	7 - 130	

10/13/2009

Quality Control Results

Job Number: 720-23001-1

Method: 8260B/CA_LUFTMS Preparation: 5030B

MS Lab Sample ID: Client Matrix: Dilution: Date Analyzed: Date Prepared:	720-23004-A-1 MS Water 5.0 10/07/2009 0542 10/07/2009 0542	Analysis Batch: 720-59217 Prep Batch: N/A	Instrument ID: Varian 3900C Lab File ID: e:\data\200910\100609\sa-w Initial Weight/Volume: 40 mL Final Weight/Volume: 40 mL
MSD Lab Sample ID: Client Matrix: Dilution: Date Analyzed: Date Prepared:	720-23004-A-1 MSD Water 5.0 10/07/2009 0606 10/07/2009 0606	Analysis Batch: 720-59217 Prep Batch: N/A	Instrument ID: Varian 3900C Lab File ID: e:\data\200910\100609\sa-wa- Initial Weight/Volume: 40 mL Final Weight/Volume: 40 mL

	<u>%</u>	<u>6 Rec.</u>					
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
MTBE	92	102	22 - 185	[.] 10	20		
Surrogate		MS % Rec	MSD %	6 Rec	Acce	ptance Limits	
Toluene-d8 (Surr)		99	100		7() - 130	
1,2-Dichloroethane-d4 (Surr)		81	97		6	7 - 130	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: AMEC Geomatrix Inc.

Matrix Spike Duplicate Recovery Report - Batch: 720-59217

Matrix Spike/

Calculations are performed before rounding to avoid round-off errors in calculated results.

p-Terphenyl

93

94

10/13/2009	
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31 - 150

Quality Control Results

Job Number: 720-23001-1

Method: 8015B

Preparation: 3510C SGC

Client: AMEC Geomatrix Inc.

Diesel Range Orga	anics [C10-C28]	78	86	32 - 119	9	35
-		2 inite da competencia produce			******	
Analyte		LCS	<u>% Rec.</u> LCSD	Limit	RPE	D RPD Limit LCS Qual LCSD Qual
LCSD Lab Sample Client Matrix: Dilution: Date Analyzed: Date Prepared:	ID: LCSD 720-59002/3-A Water 1.0 10/07/2009 1054 10/06/2009 1357	Prep	rsis Batch: 72 Batch: 720-5 : ug/L			Instrument ID: HP DRO5 Lab File ID: 5b1007009.d Initial Weight/Volume: 1000 mL Final Weight/Volume: 5 mL Injection Volume: 1 uL Column ID: PRIMARY
LCS Lab Sample II Client Matrix: Dilution: Date Analyzed: Date Prepared:	 D: LCS 720-59002/2-A Water 1.0 10/07/2009 1027 10/06/2009 1357 	Prep	rsis Batch: 72 Batch: 720-5 : ug/L			Instrument ID: HP DRO5 Lab File ID: 5b1007008.d Initial Weight/Volume: 1000 mL Final Weight/Volume: 5 mL Injection Volume: 1 uL Column ID: PRIMARY
Capric Acid (Surr) p-Terphenyl Lab Control San Lab Control San	nple/ nple Duplicate Recovery Re	eport - Ba	0 90 tch: 720-590	002		0 - 5 31 - 150 Method: 8015B Preparation: 3510C SGC Silica Gel Cleanup
Surrogate			% Rec			Acceptance Limits
Diesel Range Orga Motor Oil Range O Bunker Range Orga	rganics [C24-C36]		ND ND ND			50 300 500
Analyte		0,0000	Result		Qual	RL
Client Matrix: M Dilution: 1 Date Analyzed: 1	AB 720-59002/1-A Vater .0 10/07/2009 1535 10/06/2009 1357	•	s Batch: 720- atch: 720-590 ug/L			Instrument ID: HP DRO5 Lab File ID: 5a1007018.d Initial Weight/Volume: 1000 mL Final Weight/Volume: 5 mL Injection Volume: 1 uL Column ID: PRIMARY
						Silica Gel Cleanup

Method Blank - Batch: 720-59002

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Calculations are performed before rounding to avoid round-off errors in calculated results.

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Job Number: 720-23001-1

Method: 8015B Preparation: 3550B Silica Gel Cleanup

Lab Sample ID: ME	3 720-59111/1-A	Analysis Batch: 720-	59175	Instrument ID: HP GC 7890
Client Matrix: So	lid	Prep Batch: 720-591	11	Lab File ID: FID1000009.D
Dilution: 1.0)	Units: mg/Kg		Initial Weight/Volume: 30.04 g
Date Analyzed: 10	/08/2009 1447			Final Weight/Volume: 5 mL
Date Prepared: 10	/07/2009 1426			Injection Volume: 1 uL
				Column ID: PRIMARY
Analyte		Result	Qual	I RL
Diesel Range Organi	cs [C10-C28]	ND		
Motor Oil Range Org		ND		50
Bunker Range Organ	ics (C9-C36)	ND		50
Surrogate		% Rec		Acceptance Limits
Capric Acid (Surr)		0		0 - 5
p-Terphenyl		86		46 - 115
Lab Control Samp	le/			Method: 8015B
Lab Control Samp	le Duplicate Recovery Re	port - Batch: 720-591	11	Preparation: 3550B
				Silica Gel Cleanup
LCS Lab Sample ID:	LCS 720-59111/2-A	Analysis Batch: 720)-59175	Instrument ID: HP GC 7890
Client Matrix:	Solid	Prep Batch: 720-59	111	Lab File ID: FID1000010.D
Dilution:	1.0	Units: mg/Kg		Initial Weight/Volume: 30.12 g
Date Analyzed:	10/08/2009 1509			Final Weight/Volume: 5 mL
Date Prepared:	10/07/2009 1426			Injection Volume: 1 uL
Date Prepared:	10/07/2009 1426			Injection Volume: 1 uL Column ID: PRIMARY
	10/07/2009 1426): LCSD 720-59111/3-A	Analysis Batch: 720)-59175	
LCSD Lab Sample ID		Analysis Batch: 720 Prep Batch: 720-59		Column ID: PRIMARY
LCSD Lab Sample IE Client Matrix:): LCSD 720-59111/3-A			Column ID: PRIMARY Instrument ID: HP GC 7890 Lab File ID: FID1000011.D
·): LCSD 720-59111/3-A Solid	Prep Batch: 720-59		Column ID: PRIMARY Instrument ID: HP GC 7890 Lab File ID: FID1000011.D
LCSD Lab Sample ID Client Matrix: Dilution:): LCSD 720-59111/3-A Solid 1.0	Prep Batch: 720-59		Column ID: PRIMARY Instrument ID: HP GC 7890 Lab File ID: FID1000011.D Initial Weight/Volume: 30.04 g
LCSD Lab Sample IE Client Matrix: Dilution: Date Analyzed:	9: LCSD 720-59111/3-A Solid 1.0 10/08/2009 1532	Prep Batch: 720-59		Column ID: PRIMARY Instrument ID: HP GC 7890 Lab File ID: FID1000011.D Initial Weight/Volume: 30.04 g Final Weight/Volume: 5 mL
LCSD Lab Sample IE Client Matrix: Dilution: Date Analyzed:	9: LCSD 720-59111/3-A Solid 1.0 10/08/2009 1532	Prep Batch: 720-59		Column ID: PRIMARY Instrument ID: HP GC 7890 Lab File ID: FID1000011.D Initial Weight/Volume: 30.04 g Final Weight/Volume: 5 mL Injection Volume: 1 uL
LCSD Lab Sample IE Client Matrix: Dilution: Date Analyzed:	9: LCSD 720-59111/3-A Solid 1.0 10/08/2009 1532	Prep Batch: 720-59 Units: mg/Kg		Column ID: PRIMARY Instrument ID: HP GC 7890 Lab File ID: FID1000011.D Initial Weight/Volume: 30.04 g Final Weight/Volume: 5 mL Injection Volume: 1 uL
LCSD Lab Sample ID Client Matrix: Dilution: Date Analyzed: Date Prepared: Analyte	 b: LCSD 720-59111/3-A Solid 1.0 10/08/2009 1532 10/07/2009 1426 	Prep Batch: 720-59 Units: mg/Kg <u>% Rec.</u>	111	Column ID:PRIMARYInstrument ID:HP GC 7890Lab File ID:FID1000011.DInitial Weight/Volume:30.04 gFinal Weight/Volume:5 mLInjection Volume:1 uLColumn ID:PRIMARY
LCSD Lab Sample ID Client Matrix: Dilution: Date Analyzed: Date Prepared:	 b: LCSD 720-59111/3-A Solid 1.0 10/08/2009 1532 10/07/2009 1426 	Prep Batch: 720-59 Units: mg/Kg <u>% Rec.</u> LCS LCSD	111 Limit	Column ID: PRIMARY Instrument ID: HP GC 7890 Lab File ID: FID1000011.D Initial Weight/Volume: 30.04 g Final Weight/Volume: 5 mL Injection Volume: 1 uL Column ID: PRIMARY RPD RPD Limit LCS Qual LCSD Q 14 35

Method Blank - Batch: 720-59111

Client: AMEC Geomatrix Inc.

Quality Control Results

Job Number: 720-23001-1

Client: AMEC Geomatrix Inc.

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 720-59111

Method: 8015B Preparation: 3550B Silica Gel Cleanup

MS Lab Sample ID: Client Matrix: Dilution: Date Analyzed: Date Prepared:	720-23001-1 Solid 1.0 10/08/2009 1616 10/07/2009 1426	Analysis Batch: 720-59175 Prep Batch: 720-59111	Instrument ID: HP GC 7890 Lab File ID: FID1000013.D Initial Weight/Volume: 30.15 g Final Weight/Volume: 5 mL Injection Volume: 1 uL Column ID: PRIMARY
MSD Lab Sample ID: Client Matrix: Dilution: Date Analyzed: Date Prepared:	720-23001-1 Solid 1.0 10/08/2009 1637 10/07/2009 1426	Analysis Batch: 720-59175 Prep Batch: 720-59111	Instrument ID: HP GC 7890 Lab File ID: FID1000014.D Initial Weight/Volume: 30.13 g Final Weight/Volume: 5 mL Injection Volume: 1 uL Column ID: PRIMARY

· ·	<u>%</u>	Rec.					
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Diesel Range Organics [C10-C28]	88	81	50 - 130	9	30		
Surrogate		MS % Rec	MSD % R	ec	Accep	tance Limits	
p-Terphenyl		98	95		46	- 115	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Page 1 OI 1

720-23001 (Revised)

Salimpour, Afsaneh

From: Klitzke, Tiffany [Tiffany.Klitzke@amec.com]

Sent: Monday, October 05, 2009 10:33 AM

To: Salimpour, Afsaneh

Subject: Pacific Shops Samples

Hi Afsaneh,

On Friday I had a courier pick up some samples for our Pacific Shops project (#14740). I'd like to request two things:

- 1. Please analyze TB-100209 for MTBE by 8260.
- 2. I did not collect a sample specifically for an MS/MSD, however if there is enough volume left after sample analysis, please use one of our samples for the MS/MSD.

I will be in the office Monday-Wednesday this week if you have any questions.

Thank you,

Tiffany Klitzke

Staff Geologist

AMEC Geomatrix

2101 Webster St 12th Floor Oakland, CA 94618 510-663-4144 direct 510-663-4141 fax tiffany.klitzke@amec.com

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Its contents (including any attachments) may contain confidential and/or privileged information.

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CHAIN-OF-CUSTOUT RECORD	W Vow.	11/176244
PROJECT NAME: PACIFIC Shops I	1C ×	DATE: 10-2-09 PAGE OF 3
PROJECT NUMBER 14740,000	LABORATORY NAME: CLIENT INFORMATION:	REFLACTING RELEASED
HEALING TO: LIKE KE @ amec. CTWO	LABORATORY ADDRESS	
TURNARDUND TURE STAMAAYA BAMPLE SHIPMENT METHOD	Persenton, ca	
BAMPLE SHIPMENT METHOD	LABORATORY CONTACT	GEOTRACKER REQUIRED YES
Courrer	CALORATIONY PLONE NUMBER	SITE SPECIFIC GLOBAL ID NO:
SAMPLERS (SIGNATURE):	ANALYSES	
	4 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4	
Mester	TH Burler O BUS BUS + HTBE Back	CONTAINER TABOUT ON CONTENTS No. of Content MSSMSD MSSMSD MSSMSD MSSMSD MSSMSSS MSSMSSD MSSMSSS MSSMSSD MSSMSSS MSSMSSS MSSMSSS MSSMSSS MSSMSSS MSSMSS
	Reverse Strand	CONTAINER (S) and (S)
SAMPLE		CONTAINER
DATE TIME NUMBER	南南国盟王	
10-2-69 0844 SB-1- 4.0		40 mL VOR SN SOBI YN 2
TE 0909 - SB-1- 0.5		40 mL VOA S N Meolt 4 N 1
and the second se		Grinch liner SN Noru YN 1
1012109 0909 SB-1-4.5		40mL VOA SN SOB! YN 2
		40 mL VOA S N Medit Y N I
		6-inch liner SN None YN 1
1012109 0829 SB-1-15.0		40mL VOIA SN SOBI YN 2
		40 mL NOA- S N Heart Y N 1
		6-inch liner SN Nove YN 1
1012109 0951 SB-2-15.0		40mL VOA DIV DUBITINA
		40 mL VOA SN Meat YN 1
		G-inchliner SN None: YN1
1012109 0945 58-2-5.5		40mL VOA S N SOBI Y N 2 40mL VOA S N HEOH Y N I
		6-inch liner S NNone YN1
RELINQUISHED BY: DATE TIME		IBER OF CONTAINERS:
Provence and the second		COMMENTS:
ERINA OVAME	PRINTED NAME 7/07 /7/1 SOBI=	Sodium Bisulfate
AMAC Geometrix	PRINTED NAME 7/02 /7/1 SOBI= COMPANY Amine 09 /7/1 SOBI= NEOH	Sodium Bisulfate = Methyl Alcohol
SIGNATURE:	SIGNATURE	
PRINTED NAME	PRINTED NAME	
COMPANY:	COMPANY	z.st/1.72
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10/13/2009

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	PROJECT NAME: PACIFIC Shops																DATE: 10-2-09 PAGE & OF 3							3		
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	SAMPLE SHIPMENT METHOD						Sil	un'	S.			GEØTRADKE								KER REQUIRED YES NO						
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•	SAMPLEBS (SIGNATURE):				Dev C	Mer 0(180													Water (W), /). or Other (O)		ive Type		maineta			
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Page							1										40 mL	VOA	S	NI	4cott-	8 1 1	NI			
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Login Number: 23001 Creator: Mullen, Joan

List Number: 1

Question	T / F/ NA Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A
The cooler's custody seal, if present, is intact.	N/A
The cooler or samples do not appear to have been compromised or tampered with.	True
Samples were received on ice.	True
Cooler Temperature is acceptable.	True
Cooler Temperature is recorded.	True
COC is present.	True
COC is filled out in ink and legible.	True
COC is filled out with all pertinent information.	True
There are no discrepancies between the sample IDs on the containers and the COC.	True
Samples are received within Holding Time.	True
Sample containers have legible labels.	True
Containers are not broken or leaking.	True
Sample collection date/times are provided.	True
Appropriate sample containers are used.	True
Sample bottles are completely filled.	True
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True
If necessary, staff have been informed of any short hold time or quick TAT needs	True
Multiphasic samples are not present.	True
Samples do not require splitting or compositing.	True
Is the Field Sampler's name present on COC?	True
Sample Preservation Verified	True

Job Number: 720-23001-1

List Source: TestAmerica San Francisco