January 30, 2012

Project 4096114864 02

Ms. Karel Detterman
Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502

RECEIVED

9:52 am, Feb 01, 2012

Alameda County
Environmental Health

Subject:

Soil and Groundwater Investigation

Alameda Police Department - Fuel Leak Case No. RO0003024 and

Geo Tracker Global ID T0600100045

1555 Oak Street Alameda, California

Dear Ms. Detterman:

AMEC Environment & Infrastructure, Inc. (AMEC) is providing the *Soil and Groundwater Investigation* for your review. This report was prepared to fulfill the requirements of the Alameda County Department of Environmental Health request, dated November 10, 2011.

I declare, under penalty of perjury, that the information and/or recommendations contained in the work plan are true and correct to the best of my knowledge.

Sincerely yours,

Jesse Barajas City of Alameda

Public Works Department



January 30, 2012

Project 4096114864 02

Ms. Karel Detterman Hazardous Materials Specialist Alameda County Environmental Health 1131 Harbor Bay Parkway Alameda, California 94502

Subject: Soil and Groundwater Investigation

Alameda Police Department - Fuel Leak Case No. RO0003024 and

Geo Tracker Global ID T0600100045

1555 Oak Street Alameda, California

Dear Ms. Detterman:

On behalf of the City of Alameda Public Works Department (the City), AMEC Environment & Infrastructure, Inc. (AMEC) is pleased to submit this report detailing the results of the Soil and Groundwater Investigation performed at the Alameda Police Department located at 1555 Oak Street, in Alameda, California (the Site). This investigation was conducted in response to the Alameda County Health Care Services Agency (the County) letter to the City dated June 30, 2011 and was performed as described in AMEC's October 3, 2011 Site Investigation Work Plan and the Alameda County Health Care Services Agency (the County) November 10, 2011 Approval of Work Plan with Modifications.

The purpose of this field work was to define the extent of soil and groundwater contamination at the Site as a result of a documented release from the 6,000-gallon underground storage tank (UST).

BACKGROUND

Based on the June 30, 2011 letter from the County, a 6,000-gallon UST was installed at the site in 1978. A July 2, 1986 report entitled *Fuel Tank Monitoring Well Installation Project Report* (Well Report), prepared by Aqua Science Engineers, Inc. documents the installation of one compliance well adjacent to the UST; however, no records were available stating whether the UST was removed or is still in place. Based on records provided from the City in October 2010, a newer 6,000 gallon UST is still in use at the site. The newer tank was reportedly installed at the same location as the previous tank.

SCOPE OF WORK

Our scope of included the following:

 Completion of a geophysical survey to identify subsurface utilities in the site vicinity, prior to initiating intrusive work



- Installation of three soil boring and collection of soil and groundwater samples from each of the boring
- Development and sampling of the existing historical monitoring well (compliance well)
- Evaluating the results of the investigation activities and preparing this report

INVESTIGATION ACTIVITES

Soil Boring Installation

On December 28, 2011 AMEC oversaw the installation of three direct-push soil borings (B-1, B-2, and B-3) in the parking lot of the Alameda Police Department, in the estimated vicinity of the former UST. In addition to the three soil borings, the pre-existing monitoring well at the site was re-developed and groundwater sample was collected for analysis. The location of the monitoring well and soil borings is included on Figure 1, Site Map.

Prior to conducting field activities, AMEC obtained a soil boring permit from the Alameda County Public Works Agency. Copies of the permits are included in Attachment A. AMEC also contacted Underground Service Alert (USA), and a private utility locator to identify subsurface utilities in the site vicinity, prior to initiating intrusive work. The utility survey was conducted using a combination of electromagnetic (EM) metal detection and Radio Frequency (RF) pipe location.

The borings were advanced using a Geoprobe 6620DT track-mounted rig operated by Cascade Drilling, L.P. of Rancho Cordova, California. The Geoprobe drill rig uses a combination of hydraulic and vibratory down-force to advance a 1.5-inch diameter steel drive rod into the subsurface. Within the drill rod is a 48-inch sampling tube lined with clear butyrate tubing that is used for continuous sample collection. These tubes are then removed and cut to the desired length to provide soil samples for the laboratory analysis. The selected soil sections were capped off with Teflon tape and plastic endcaps and labeled with unique sample designations to record the location and depth sampled.

The borings were advanced to approximately 20 feet below ground surface (bgs) and were continuously sampled to allow for detailed characterization of the sub-surface. The borings were screened for the presence of volatile organic compounds (VOCs) using an organic vapor meter (OVM), and select soil samples were collected from at or just above the soil-water interface and from the bottom of the boring, and prepared for laboratory analysis. Soil lithology and sample recovery, were recorded in the field logs which are included in Attachment B. All drive rods were washed in an alconox and water solution between boreholes to avoid any potential cross contamination issues.

No elevated VOC readings were obtained during OVM monitoring and no staining or odors were noted in the soil removed from the borings. Therefore, as requested in the November 10, 2011 letter from the County, AMEC submitted the soil samples from at or just above the soil-water interface and from the bottom of the boring.



After allowing time for the borehole to recharge, grab groundwater samples were collected from the three borings by installing a temporary well screen and pumping the water using a peristaltic pump. Clean (new) tubing was used for each location.

Samples were analyzed by TestAmerica of Pleasanton, California. TestAmerica is a state certified hazardous materials testing laboratory for the analyses requested and certified by the California Department of Health Services through the Environmental Laboratory Accreditation Program (ELAP).

The soil and grab groundwater samples from each boring location were analyzed for Diesel Range Organics (DRO) using EPA Test Method 8015m with silica gel strip (EPA Test Method 3630C) to remove naturally occurring polar hydrocarbon compounds. In addition, the VOCs benzene, toluene, ethylbenzene, and total xylenes (BTEX), ethylene dibromide (EDB), ethylene dichloride (EDC), Methyl Tertiary-Butyl Ether (MTBE), Tert-amyl-methyl ether (TAME), Ethyl tert-butyl ether (ETBE), Di-isopropyl ether (DIPE) and t-Butyl alcohol (TBA) were analyzed using EPA Test Method 8260 modified. Soil and groundwater analytical results are listed on Tables 1 and 2, and the laboratory analytical reports are included in Attachment C.

Upon completion of the drilling and sampling, soil cuttings were placed in Department of Transportation (DOT) approved drums for temporary storage pending analysis and proper disposal at a licensed California Landfill. The boreholes were filled with portland cement slurry to the surface. Rinsate water generated during decontamination procedures was mixed with soil cuttings.

Well Development and Sampling

The existing groundwater monitoring well was re-developed using a combination of surging, bailing, and pumping on December 28, 2011. AMEC removed approximately 80 well volumes (90 gallons) of water from the well, until collected readings (for pH, conductivity, and temperature) had stabilized and the removed groundwater exhibited a significant reduction in turbidity. Turbidity was greater than 1,000 NTUs at the start of the development and decreased to less than 10 NTUs when complete). Static groundwater water level was 9.08 feet below the top-of-casing (TOC).

Upon completion of well development a groundwater sample was collected from the well and analyzed for DRO using EPA Test Method 8015m with silica gel strip and the VOCs BTEX, EDB, EDC, MTBE, TAME, ETBE, DIPE, and TBA using EPA Test Method 8260 modified. Analytical results are listed on Table 2, and the laboratory analytical reports are included in Attachment C.

Development water was placed in DOT approved drums for temporary storage pending analysis and proper disposal at a licensed California Landfill.



RESULTS DISCUSSION

Site Lithology and hydrogeology

Observations during the drilling indicated that soils encountered during this investigation consisted entirely of sands with five to fifteen percent fines, except for a 6-inch thick interval containing approximately 30% clay present in soil boring B-2. As discussed above, elevated VOC readings were not detected during OVM monitoring of the soils and no staining or odors were noted in the soil. Groundwater was encountered at approximately 12 feet bgs at all the locations. Boring logs and field notes are included in Attachment B.

Soil Analysis

Table 1 presents the laboratory analytical results for the soil samples collected from soil borings B-1, B-2, and B-3. There were no reported detections above the laboratory reporting limits for DRO or any of the selected VOCs analyzed in the soil samples collected during this investigation. The laboratory analytical reports are included in Attachment C.

Grab Groundwater Analyses

Table 2 presents the laboratory analytical results for the grab groundwater samples collected from soil borings B-1, B-2, and B-3. DRO was reported at 270 micrograms per liter (μ g/l) in the groundwater sample collected from B-2. DRO was not detected above the laboratory reporting limits in the samples collected from B-1 or B-3, and there were no reported detections above the laboratory reporting limits for any of the selected VOCs analyzed in the groundwater samples collected during this investigation. The laboratory analytical reports are included in Attachment

Groundwater Monitoring Well Sampling Analysis

Table 2 presents the laboratory analytical results for the groundwater sample collected from the monitoring well. There were no reported detections above the laboratory reporting limits for DRO or any of the selected VOCs analyzed in the groundwater sample collected from the monitoring well during this investigation. The laboratory analytical reports are included in Attachment C.

CONCLUSIONS AND RECOMMENDATIONS

AMEC completed investigation activities at the Alameda Police Department on December 28, 2011. Activities included the installation of three soil borings and the collection of soil and grab groundwater samples for laboratory analysis and the development and sampling of the existing groundwater monitoring well.

The sample analytical results for the drilling investigation indicated the following:

- DRO and the requested VOCs were not detected in any of collected soil samples
- With the exception of DRO, detected at a concentration of 270 μg/l in the groundwater sample collected from boring B-2, DRO was not detected above the laboratory reporting



limits in groundwater samples and there were no reported detections above the laboratory reporting limits for any of the selected VOCs.

The sample analytical results for the groundwater sample collected from the monitoring well reported no detections above the laboratory reporting limits for DRO or any of the selected VOCs analyzed.

Based on the results of the investigation conducted to date, it appears that residual low concentrations of DRO are present in groundwater in the immediate vicinity of the former UST. Sampling results indicate groundwater from boring B-2, located just northeast of the former UST detected DRO at a concentration of 270 µg/L. Based on AMEC's interpretation of the local groundwater gradient, the B-2 location is up- to crossgradient of the former UST. DRO or VOCs were not detected in remaining groundwater samples collected from the borings or the existing groundwater monitoring well.

Based on analysis of these results, it is AMEC's opinion that no further work is warranted to characterize soil and groundwater at the Site. Although elevated levels of DRO were detected in the one grab groundwater sample in the immediate vicinity of the former UST, DRO was not detected in groundwater samples from the other borings which are cross- to downgradient of the former UST or the existing groundwater monitoring well which is in the assumed upgradient direction of the former UST.

In closing, there are no promulgated cleanup goals for petroleum hydrocarbons in groundwater. Comparison of the soil boring groundwater results to Regional Water Quality Control Board (Water Board) screening levels indicate that the DRO results are just above environmental screening level (ESL) toxicity limits of 210 µg/L for total extractable petroleum hydrocarbons (TEPH). Because no other petroleum based hydrocarbon compounds or breakdown products have been detected in groundwater during this investigation and DRO is the only compound of potential concern, we are requesting closure for this site based on the current use of this site and the limited mobility and low toxicity level of diesel.

If you have any questions or concerns, please contact Gary Lieberman at (707) 793-3858.

Sincerely yours,

AMEC Environment & Infrastructure, Inc.

Gary A Lieberman Project Manager Bethany P. Flynn, PG Principal Geologist

Bithang & Flyn

NO. 5710

EXP. 5/31/12

GAL/BPF:sac

p:\secretarial\2010 bay area - pet ca\ac alameda county\ac64133_soil and gw investigation.doc



Attachments: Table 1 Soil Sample Analytical Results

Table 2 Groundwater Sample Analytical Results

Figure 1 Site Map

Appendix A Soil Boring Permit

Appendix B Boring Logs and Field Notes
Appendix C Laboratory Analytical Reports

References:

Alameda County Health Care Services (Alameda County), 2011. Case File Review for Fuel Leak Case No. R00003024 and GeoTracker Global ID T0600100045, Alameda Police Department, 1555 Oak Street, Alameda, CA 94501. June 30.

______, 2011. Approval for Work Plan with Modifications, Fuel Leak Case No. R00003024 (Global ID T0600100045), Alameda Police Department, 1555 Oak Street, Alameda, CA 94501. November 10.

AMEC Environment & Infrastructure, Inc. (AMEC), 2011. Site Investigation Workplan, Alameda Police Department – Fuel Leak Case No. R00003024 and Geo Tracker Global ID T0600100045, 1555 Oak Street, Alameda, California. October 3.

Table 1. Soil Sample Ananlytical Results

Soil and Groundwater Investigation

Alameda Police Department, 1555 Oak Street Alameda, California

		Comple			Reported Concentrations										
Sample Location	Sample ID	Sample Depth	Date Collected	TPHd	Benzene	Toluene	Ethyl- benzene	Total Xylenes	EDB	EDC	MTBE	TAME	ETBE	DIPE	TBA
		μg/kg													
B-1	S-B1-11.5	11.5	12/28/2011	ND(1.0)	ND(3.9)	ND(3.9)	ND(3.9)	ND(7.7)	ND(3.9)	ND(3.9)	ND(3.9)	ND(3.9)	ND(3.9)	ND(3.9)	ND(7.7)
B-1	S-B1-19.5	19.5	12/28/2011	ND(0.99)	ND(7.9)	ND(7.9)	ND(7.9)	ND(16)	ND(7.9)	ND(7.9)	ND(7.9)	ND(7.9)	ND(7.9)	ND(7.9)	ND(16)
B-2	S-B2-11.5	11.5	12/28/2011	ND(1.0)	ND(3.7)	ND(3.7)	ND(3.7)	ND(7.5)	ND(3.7)	ND(3.7)	ND(3.7)	ND(3.7)	ND(3.7)	ND(3.7)	ND(7.5)
B-2	S-B2-19.5	19.5	12/28/2011	ND(1.0)	ND(3.6)	ND(3.6)	ND(3.6)	ND(7.3)	ND(3.6)	ND(3.6)	ND(3.6)	ND(3.6)	ND(3.6)	ND(3.6)	ND(7.3)
B-3	S-B3-11	11	12/28/2011	ND(1.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(8.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(8.0)
B-3	S-B3-19.5	19.5	12/28/2011	ND(0.99)	ND(3.7)	ND(3.7)	ND(3.7)	ND(7.5)	ND(3.7)	ND(3.7)	ND(3.7)	ND(3.7)	ND(3.7)	ND(3.7)	ND(7.5)
							·								

Notes:

bgs = below ground surface

DIPE = di-isopropyl ether analyzed using EPA method 8260B. EDB = ethylene dibromide analyzed using EPA method 8260B.

EDC = ethylene dichloride (1,2-Dichloroethane) analyzed using EPA method 8260B.

ETBE = ethyl tert-butyl ether analyzed using EPA method 8260B.

mg/kg = milligrams per kilogram

MTBE = methyl tertiary-butyl ether analyzed using EPA method 8260B.

ND() = Not detected above the laboratory reporting limits (reporting limit in paranthesis).

TAME = tert-amyl-methyl ether analyzed using EPA method 8260B.

TBA = t-butyl alcohol analyzed using EPA method 8260B.

TPHd = Total Petroleum Hydrocarbons, diesel range (C10-C28), analyzed using EPA method 8015M, with silica gel strip (EPA method 3630C).

μg/kg = micrograms per kilogram

Benzene, toluene, ethylbenzene, and total xylenes (BTEX) analyzed using EPA method 8260B.

Table 2. Groundwater Sample Analysis Results

Soil and Groundwater Investigation

Alameda Police Department, 1555 Oak Street Alameda, California

			Reported Concentrations												
Sample Location	Date Collected	TPHd	Benzene	Toluene	Ethyl- benzene	Total Xylenes	EDB	EDC	MTBE	TAME	ETBE	DIPE	TBA		
		μg/l													
B-1	12/28/2011	ND(55)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(4.0)		
B-2	12/28/2011	270	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(4.0)		
B-3	12/28/2011	ND(58)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(4.0)		
MW-1	12/28/2011	ND(53)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(4.0)		
		·			·						·				

Notes:

bgs = below ground surface

DIPE = di-isopropyl ether analyzed using EPA method 8260B. EDB = ethylene dibromide analyzed using EPA method 8260B.

EDC = ethylene dichloride (1,2-Dichloroethane) analyzed using EPA method 8260B.

ETBE = ethyl tert-butyl ether analyzed using EPA method 8260B.

MTBE = methyl tertiary-butyl ether analyzed using EPA method 8260B.

ND() = Not detected above the laboratory reporting limits (reporting limit in paranthesis).

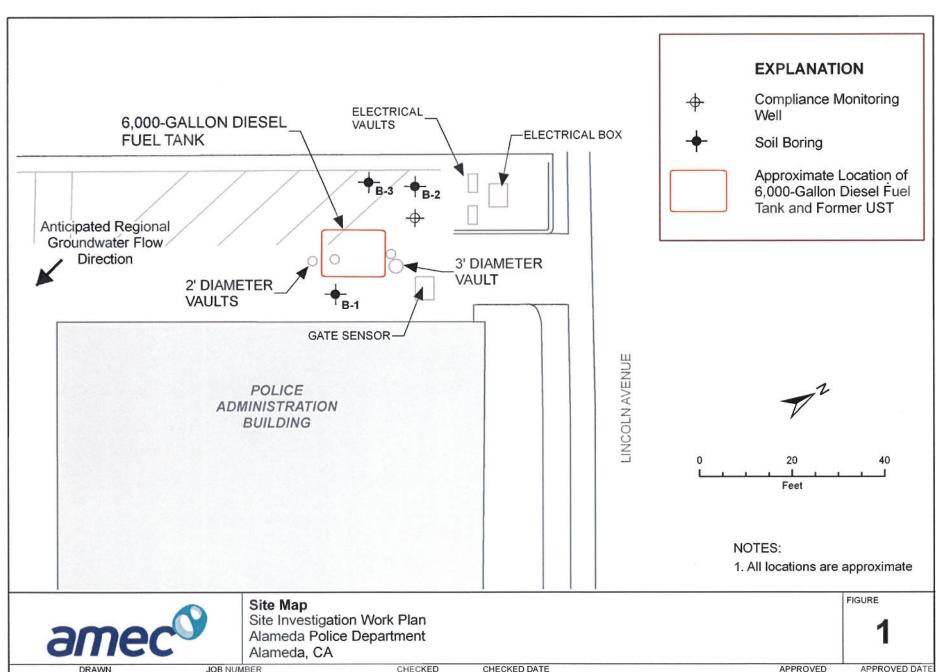
TAME = tert-amyl-methyl ether analyzed using EPA method 8260B.

TBA = t-butyl alcohol analyzed using EPA method 8260B.

TPHd = Total Petroleum Hydrocarbons, diesel range (C10-C28), analyzed using EPA method 8015M, with silica gel strip (EPA method 3630C).

 μ g/I = micrograms per liter

Benzene, toluene, ethylbenzene, and total xylenes (BTEX) analyzed using EPA method 8260B.



CHECKED

1/2012

JOB NUMBER

4096114864 01

TJH

January 30, 2012 1:47:45 PM P:\4096\114861_Alemeda_PD\GIS\projects.Figure1_SiteMap.mxd

APPROVED DATE 1/2012

BAF

APPENDIX A

Soil Boring Permit

Alameda County Public Works Agency - Water Resources Well Permit



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

Application Approved on: 12/21/2011 By jamesy

Permit Numbers: W2011-0783 Permits Valid from 12/28/2011 to 12/28/2011

Application Id: 1324494046907 City of Project Site:Alameda

Site Location: 1555 Oak St, Alameda, CA

Project Start Date: 12/28/2011 Completion Date:12/28/2011

Assigned Inspector: Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org

Applicant: AMEC - Gary Lieberman Phone: 707-793-3858

1465 N McDowell Blvd, Ste 200, Petaluma, CA 94954

Property Owner: City of Alameda Police Dept.

2263 Santa Clara Ave., Alameda, CA 94501

Client: Phone: 510-846-5139

2263 Santa Clara Ave, Alameda, CA 94501

Total Due: \$265.00

Phone: --

Receipt Number: WR2011-0382 Total Amount Paid: \$265.00

Payer Name : MACTEC Paid By: CHECK PAID IN FULL

Works Requesting Permits:

Borehole(s) for Investigation-Geotechnical Study/CPT's - 3 Boreholes

Driller: Cascade - Lic #: 938110 - Method: other Work Total: \$265.00

Specifications

Permit Issued Dt Expire Dt # Hole Diam Max Depth

Number Boreholes

W2011- 12/21/2011 03/27/2012 3 2.00 in. 25.00 ft

0783

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.
- 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. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
- 4. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an 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.
- 5. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to stevem@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24

Alameda County Public Works Agency - Water Resources Well Permit

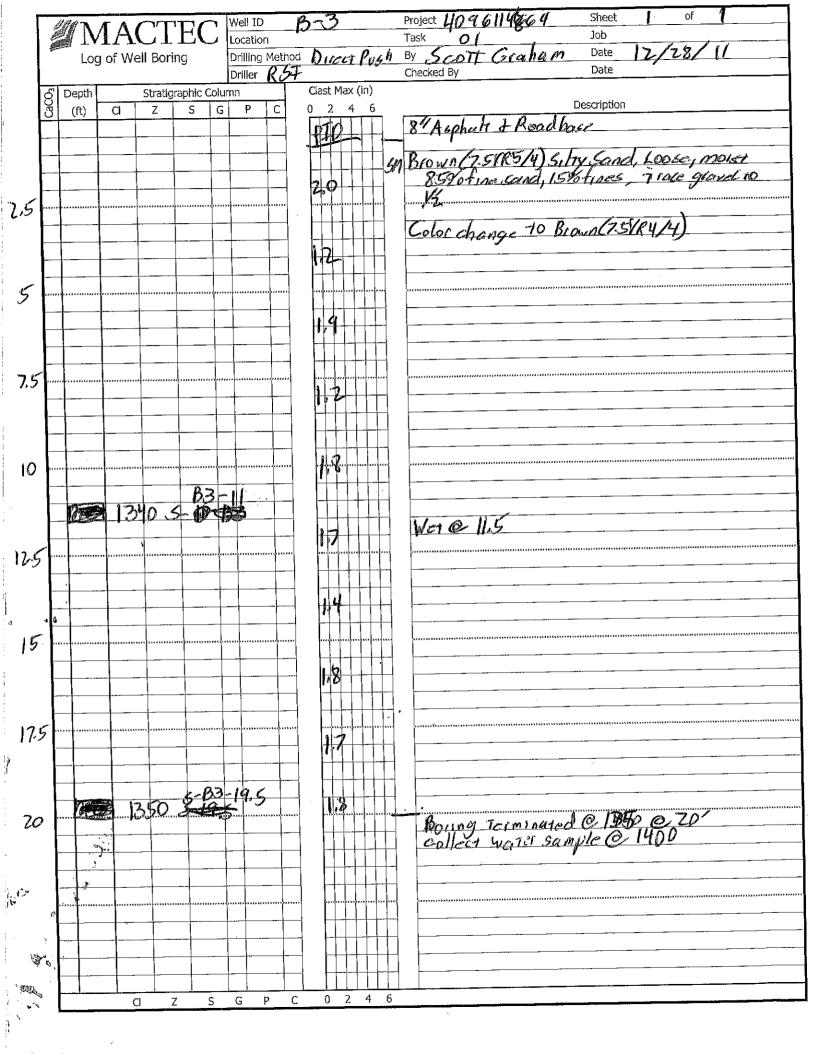
hours prior to drilling.

- 6. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.
- 7. 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.
- 8. 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.

Boring Logs and Field Notes

	12. 12.		ΓΔ		FC	Wel		/		Project 4096/19664 Sheet of Task 0 Job By Scott Graham Date 12/28/11 Checked By Date
		LV.	of We	ell Borin	u a		ation ing Metho	d //	Puch	ABY Scott Creshan Date 12/28/11
		L09	01 110		9	Drill		RSI	1000	Checked By Date
	CaCO ₃	Depth		Stratigra				Clast Max (in		Description
i	<u>8</u>	(ft)	Cl	Z	S	G I	P C	0 2 4	6 	Top 9"-asphale + 19adbase
:								CES OF E MOSTS WALES STATES		10 ft 1 ets peterti e nomenta
i									1.1	Brown (7.54R4/4) Genery Sand, Gose, moist, 80% eline
	 _	<u> </u>			-	_			1	Sund, 20% otines, TIOCE TO VILL GLAVEL TO 14
2.5	*****		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,,,,,,,,,,,,		,,,,,,,	11.52		Brown (7.5484/4) Genery Sand, boose, moist, 80% of inc Sund, 20% of hes, Trace to vad gravel to 54" approx 85% -lines @ 3' Poorly grades I sand with the Trace gravel 10 12", 95% of fine sand
									<u> </u>	Trace gravel 10 2, 95% from sand
	-	 		-					<i>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</i>	
5	-									4ppress
9	,,,,,,	22,000,000,000		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1979777774	******				
	<u> </u>	-				-			+	
	\vdash								+	
7.5	·	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	**********					,		·
1.7	-	_						0.9	+	
	┢	+	<u> </u>						\dashv	
10			**********		*****	·····	**********		1 PC CI EGMED	- 6- 17 EV 6500 5. Hy Sand Loose 10016-
•	-	-				-		08	- 9	Brown (75485/4) Sitty Sand, Loose, most
	t									
			102	5B1	11.2	<u> </u>		1,3		NC+ C. IZ
12.	ź.,	***********	e. 4 ec4 c6< = 0 * 4	*********	***********			142	*******	MC4. Gland Standard Commencer and Commencer
	-			<u> </u>						
					<u> </u>					
	<u>.</u> -	_	 		 	-				
15	ź	****	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	***********						
i								1.0		·
	-		<u> </u>		ļ	+-+			+	
						+-				
17	ٳڒ	51343511413141								
	1			-	ļ			 	+	
-	-	Felia-	10	30 5	(A) -1	4.6			++-	
. 7	[۵٫		10					16		
						-	-		+	Boung terminand & W a 10:00
1	Ì		-			+ }		┪		Boung terminal @ 20' @ 10:00 Water sample W-BI @ 1100
:										
			**** *****	************	>>>>		************	,,		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
-		-				-				
			+	_						
:								1 111		
1		<u> </u>		1 Z	S	G	Р (0 2	4 6	
		L	<u> </u>		3	<u>u</u>	, ,			

Log of Well Boring Drilling Method Discrete Push By Scoth Groken Date 12/23/1) Solution Description Stratigraphic Column Class Max (in) Description By Checked By Date Checked By Date Class Max (in) Description By Checked By Date Class Max (in) Description By Asthulu 4 road base Sylvan (15 YR 1/3) Silvy Sand Louis, mora, 85 Sylvan Sand, 15 of Innes, 1 race rough gravel to be supported by the sylvan (15 YR 1/3) Silvy Sand, 15 of Innes, 1 race rough gravel to be supported by the sylvan (15 YR 1/3) Silvy Sand, S	MACTEC Well ID	B-2 Project 40 9 6 11 4 6 6 4 Sheet 1 of Job
Septemble Scottegenic Column Set 10 Cl 2 S G P Cl Brown 7.5 VR 4/5 Sitry Sand, Looke, moist, 25 VR 4/5 Sitry Sand, Set predden, ground, 25 VR 5/4) Wet at 12/ Wet at 12/ Boung terminated e. 20/ e. 1150 Vati scaple W.B. Callect B. 1250 Vati scaple W.B. Callect B. 1250	Location Location Drilling Met	thod Direct Push By Scott Graham Date 12/23/1)
S (n) a Z 5 E 0 C (The Control of the Control of th		Checked By Date
Some (75 VR4/2) Sitry South Loose, mois, 257 for said, 1570 form, 1 rece covery grant to the form of t	Depth Stratigraphic Column (ft) Cl Z S G P C	Description
Colyr changers & conso(75 VR 5/4) Colyr changers & conso(75 VR 5/4) Colyr changers & conso(75 VR 5/4) Disance (7.5 VR 5/4) Changer Sind, soft-prediction worst, 20% from 70% from 70% from 50% from 50% from 70% from 7	8 (1) 3 2 3 3	
Colyr changers & conso(75 VR 5/4) Colyr changers & conso(75 VR 5/4) Colyr changers & conso(75 VR 5/4) Disance (7.5 VR 5/4) Changer Sind, soft-prediction worst, 20% from 70% from 70% from 50% from 50% from 70% from 7		Brown (75484/3) Silvy Sand, Louse, moist,
Colyr changers & conso(75 VR 5/4) Colyr changers & conso(75 VR 5/4) Colyr changers & conso(75 VR 5/4) Disance (7.5 VR 5/4) Changer Sind, soft-prediction worst, 20% from 70% from 70% from 50% from 50% from 70% from 7		11.2 SM 8570 two sand 15% tines, + race round gravel
Color abangers Brown (15485/4) 10		
		Color changerto Brown (15485/4)
118 S-82-11.5 117 Wet at 12/ 118 Sound terminated & 20 & 1150 Water sample W-B2 collected & 1250 Water sample W-B2 collected & 1250		
118 S-82-11.5 117 Wet at 12/ 118 Sound terminated & 20 & 1150 Water sample W-B2 collected & 1250 Water sample W-B2 collected & 1250		
118 S-82-11.5 117 Wet at 12/ 118 Sound terminated & 20 & 1150 Water sample W-B2 collected & 1250 Water sample W-B2 collected & 1250		
118 S-82-11.5 117 Wet at 12/ 118 Sound terminated & 20 & 1150 Water sample W-B2 collected & 1250 Water sample W-B2 collected & 1250		12 50 Brown (25 VR5/4) Clover Sind Set meddens
118 S-82-11.5 117 Wet at 12/ 118 Sound terminated & 20 & 1150 Water sample W-B2 collected & 1250 Water sample W-B2 collected & 1250		mouse, 30% from 70% frac sart
118 S-82-11.5 117 Wet at 12/ 118 Sound terminated & 20 & 1150 Water sample W-B2 collected & 1250 Water sample W-B2 collected & 1250		2.0 SMy Sand (45 atme)
1145 5-10-5 1-7		
S Wet 91 1/2 20 17 17 17 17 18 18 18 18 19 19 19 19 19 19		
S Wet 91 1/2 10 10 10 10 10 10 10 10 10 1		
18 20 20 20 20 20 20 20 20 20 20 20 20 20	1145 5-82-11.5	1 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1150 (-82-195) Boung terminated @ 20' @ 1150 Water Gample W-B2 collected @ 1750	.5	West 91 kde
1150 (-82-195) Boung terminated @ 20' @ 1150 Water Gample W-B2 collected @ 1750		
1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7		_ \
1.50 S-B2 19.5 Boung terminated @ 20' @ 1150 Water sample W-B2 collected @ 1250		
150 (-82-19.5 105 Boring terminated @ 20' @ 1150 Water sample W-B2 collected @ 1750		
150 (-82-19.5 105 Boring terminated @ 20' @ 1150 Water sample W-B2 collected @ 1750		
150 (-82-19.5 105 Boring terminated @ 20' @ 1150 Water sample W-B2 collected @ 1750		
Water gample W-B2 collected 0/1250	7,3	1.7
Water gample W-B2 collected 0/1250		
Water gample W-B2 collected 0/1250		
	1150 S-BZ-19.5	Boung to property of 20 6 1150
		Water sample W-BZ collected 0/1250
		<u> </u>
CI Z S G P C 0 2 4 6		
CI Z S G P C 0 2 4 6		
CI Z S G P C 0 2 4 6		
	CI Z S G P	C 0 2 4 6



```
12/28/11 - Scott Graham
Alomeda Police Dept, Job# 4096114664.01
120-DASITE, discuss job with Max Arbios (Pub Works) + Rob
Frankland (Alemeda)
800 - Chad + RSI Onene, Rig Geoprobe 6620 DT
845 - attend daily satety tailgate
905 - Cruz completes utility locate
Set up track mounded Direct-push rig & B-1, hand auger to 5'
   due to closeness of unline
715- Break asphalt & begin dathery hundaugering - encountered a PVC
    Line, move boring over + try again
1000-State advancing B-1
Water @ DTW = 9'in well
1030 - finish BI (10=20'), collect water sample @ 1100
1110 - Break as phate 1 @ BZ, moved SE TO avoid high Voltage Electre Line
   - Hand avger to 5' bgs
1130 Begin Distling B-Z, reach 20 @ 1150
     -collect water sample @ 1250
1310 - Break asphalt @ B-3+ hand auger to 5 , reach TO of ZP@1350
  -collect water sample@ 1400
1420- Steve County Inspector) onsite
1430 - GIOVA UP holes, cap WITH concrete (at Mox Arbias' Reguest)
Leave Ldrums onsize - One purge water, Dne soil Purge tolecon were
1500-Inspector departs
RSI Depairs 1515
```

City of Alameda California

919-9326

Max Arbios Public Works Supervisor

Maintenance Services 1616 Fortmann Way Alameda, California 94501-1274 510.747.7922 Fax: 510.521.8762/ TTY 510.522.7538 marbios@ci.alameda.ca.us

በወይኔ የሮክ



"In Partnership with Our Community"

ROB FRANKLAND LIEUTENANT 590 ~/542

1555 Oak Street Alameda, CA 94501 (510) 337-8340 (510) 337-8343 Fax: (510) 523-5322 Rfrankla@ci.alameda.ca.us

ANALYSIS REQUESTED (Сотрапу) (Сотрапу) (Company) (Company) (Сотрапу) CHAIN OF CUSTODY RECORD 1754 Scott Graham Seq. No.: No (Print Name) (Print Name) (Print Name) (Print Name) (Print Name) Lab: DEPTH STATION DESCRIPTION Relinquished By (Signature) Relinquished By (Signature) Method of Shipment: Received By (Signature) Received By (Signature) Received By (Signature) Samplers: Scott Graham CHAIN OF CUSTODY-ORM <u>0</u> NO か <u>の</u> 400 22811340 2281350 2281345 0 15 <u>0</u> TIME Hoge 114064.01 Alament, Oak 7 7 8 1 7 28 822 DATE MO DAY TURNAROUND TIME/ REMARKS Recorder: MACTEC 5341 Old Redwood Highway Suite 300 Peraluma, CA 94954 (707) 793-3800 ADDITIONAL INFORMATION SAMPLE NUMBER L Gary Lieberman SEQ 00 1 カシー 2 7 7 1-B3 19-1 # CONTAINERS SAMPLE NUMBER SEQ НСГ НИО3 3 **b** 3 (3) Project Manager: Unpres. H2SO4 Name/Location: 3 Job Number: 3 2 MATRIX ٦iA lloS Water

11/22/21

Date/Time

Date/Time

Date/Time

Date/Time

Date/Time

Field or Office Conv

Prolect Office Conv

I abonatory Conv

Date/Time

Project: Date For: Work Order: Prepared By: Checked By: File No: Note: This form must be used for project calculations and original filed in project files OGOO Depart, Retaluma to A lameda Police Dept. OTIS ON SITE, WISCOTT GRAHM, Drilling and Pocating OT30 la chtad mu-1, will need to keep causely OT4. Watur until 1009 for is completed lunderga OBOU unv-1 = 219 lvc well. LL-9.081 TD=1583 OBIS CONSTRUCTOR DVC WICK CALVE SANSE STANSE STANSE OPOS STATAN Sarse, check walve got structor of sanse stands will try to panyl. Chack value got structor and sans must. Jumping well all free purples and project of sanse sans sans must. OPOS STATAN Sarse, check value got place ax Soften, anging rain purpl. OPOS STATAN Sarse, check value stack and sans must. DPOS STATAN Sarse sure of sans place of sans sans sans sans sans sans sans san		IMETRIC)	Sheet Of	200
Data For: Prepared By: Checked By: File No: Note: This form must be used for project calculations and original filed in project files COGOO Degart Retaluma to Alameda Police Dept. OTIS OW Site, w/ Scott grahm, Drilling and Pocating Companies OTIS OW Site, w/ Scott grahm, Drilling and Pocating OTIS OW Site, w/ Scott grahm, Drilling and Pocating OTIS OW Site, w/ Scott grahm, Drilling and Pocating OTIS OF State of MW-1, will need to trees causely OF 30 / OF Atom White file will need for the completed conderged OF 30 / OF State of DVC w/ Check will be got the child said made OF 30 / OF State of DVC w/ Check will got stack w/ Sand OF 30 / State of Scote of the child got stack w/ Sand OF 30 / OF 30 / OF State of Many Check will got file at 30 / State OF 30 / OF 30 / OF State of Many Check will got file at 30 / State OF 30 / OF 30		10170c Waggi	<u> </u>	dillec
Prepared By: Checked By: File No: Note: This form must be used for project calculations and original filed in project files CGOO Depart Petaluma to Alameda Police Dept. 0715 ON Site uf Scott grahm, Drilling and locating 0730 location must, will need to keep curely 0740 location until 10(9 for is completed cunderged 0800 univ-1=21 by well unl-9, 98' TD=15' BJ' 0815 Constructed Pic will chark calve to make Saive Black 0900 Stated Saise, check while got stack of Said must. 0900 Stated Saise, check while got stack of Said must. 0905 Stated Saise, check while got stack of Said must. 0905 Stated Saise of the present o				
Note: This form must be used for project calculations and original filed in project files COECO Depart Retaluma to Alameda Police Dept. 0715 ON Site wil Scott grahm, prilling and locating 0730 located mu-1, will need to keep causely 0730 located mu-1, will need to keep causely 0410 year un 41 locator is completed conderged 0800 univ-1 = 2" Byc well wil-9,08" TD=1587 0815 constructed Dic will character to make Saise Black 0900 Stated Sarge, thech when got stack wil somet 0900 stated Sarge, thech when got stack wil somet 0900 will try to pump character with sand must 0900 will try to pump with the place at Bottom 0925 Stated pump with most by after 3 gallous. 0925 Stated pump with try low stack of somet 0930 pulled pipe to chick at to see peckage 0931 lyw Statel pump, well wint try after wall or gallous. 0941 with 1320 total Wil. naveel: 8 gallous will				
0715 ON Site wil Scott grahm, Drilling and locating 0730 locating min-1, will need to keep completed consequences of locating of the wint with locating of the wint with locating with the second will the plant, then whe got stuck at some second will the to plant, then whe got stuck at some second will the to plant, then whe place at 30 them with the plant with the plant with the plant of the plant of the plant of the plant of the second will plant the second pump around of 14,00° started pump, well wint they after a selection of soul with 1320 Total Will. Auxel is gallery will soul in the second will second will and the second will second the second will second with soul will second will se	, ,			
0730 lacated in w-1, will need to keep courty 07-104 for until 10(9 tor 15 completal conderge 0800 invo-1 = 21 gyc well wh-9,08' TD = 15.83' 0815 constructed pro will check calve to make saise Black 0900 statal sarge, check who got stack of sand will try to paint check who got stack of sand will try to paint check who file place at 30/film 0925 start pains well del pur pike place at 30/film 0925 start pains well and not say after 3 gallous. 0930 pulled lipe to check at to see Recharge 0937 val: 959 will try low from owap arwing 14,00' started pains well went they after walking say!	Note: This form must be used for	r project calculations and origina	l filed in project files	ing a second of growing to second and the growing second
0730 lacated in w-1, will need to keep courty 07-104 for until 10(9 tor 15 completal conderge 0800 invo-1 = 21 gyc well wh-9,08' TD = 15.83' 0815 constructed pro will check calve to make saise Black 0900 statal sarge, check who got stack of sand will try to paint check who got stack of sand will try to paint check who file place at 30/film 0925 start pains well del pur pike place at 30/film 0925 start pains well and not say after 3 gallous. 0930 pulled lipe to check at to see Recharge 0937 val: 959 will try low from owap arwing 14,00' started pains well went they after walking say!		0 1 1 4.	01-1-0	10000
0730 lacated in w-1, will need to keep courty 07-104 for until 10(9 tor 15 completal conderge 0800 invo-1 = 21 gyc well wh-9,08' TD = 15.83' 0815 constructed pro will check calve to make saise Black 0900 statal sarge, check who got stack of sand will try to paint check who got stack of sand will try to paint check who file place at 30/film 0925 start pains well del pur pike place at 30/film 0925 start pains well and not say after 3 gallous. 0930 pulled lipe to check at to see Recharge 0937 val: 959 will try low from owap arwing 14,00' started pains well went they after walking say!	OGO Defair	te taluma 10	acabas Dellin	a and location
0730 lack tod mn-1, will need to keep contilled of location up to location is completed conclerged with these way by a soft make place and the lack white got the make saile Black ogot stack of said said will try to rump the character of said made funging well all purp pur place at 30/2mg. 0925 Start Jump with most sing after 3 gallows. 0930 pulled fine to check at to see Recharge and of 14,00°, Started pump, well want long after additional 5 gallows.	COMPANION SITU	2/25/ 3/01/20	marine / pinning	game jaging
0800 univ-1 = 21 Pyc well 42-9,08 TD=15.83 0815 Constructed Dic wil Check wive to make Saise Dicete 0900 Stateol Sarge, check value got stack of Sand onil try to pump. Check value tack at sand, must pumping well the Per Pile place at 30/5cm 0925 Start pump. we do not for after 3 gallous. 0930 pulled fine to check at to see Recharge 0931 int: 9.59, will try low flow pump arwind 14,00; Started pump. Well went they after side sind 5 gallous.	0730 lacated	mw-1, w	11 need to Kee	p court
0800 univ-1 = 21 Pyc well 42-9,08 TD=15.83 0815 Constructed Dic wil Check wive to make Saise Dicete 0900 Stateol Sarge, check value got stack of Sand onil try to pump. Check value tack at sand, must pumping well the Per Pile place at 30/5cm 0925 Start pump. we do not for after 3 gallous. 0930 pulled fine to check at to see Recharge 0931 int: 9.59, will try low flow pump arwind 14,00; Started pump. Well went they after side sind 5 gallous.	07-10gg	tun until 10	(afor is compi	etal undergu
0815 Constructed PVC will check will got stuck of Saise Block 0900 Statal Saise, check will got stuck of Saise Block will try to pump. Check value stack at said mad pumping well at 1 pu Pike Place at Bottom, 0925 Start Jamp. well want Dry after 3 gallouss. 0930 Pulled fine to check at to see Recharge of 14,00° Start Jamp. Will want Dry after scaling of 14,00° Started pump, well want Dry after scaling is galloused.	utilitie.		11 11 0	19/71-1697
0900 Statal sarse, chech wive got stack at sand. vill ty to pump thech value stack at sand, must pumping well the purp the place at 30/2m 0925 Start pump well want for Get Recharge 0930 pulled pipe to check at to see Recharge 0931 int: 959 will try low flow pump arund 14,00' Startel pump well want they after scale find 5 gal	0000 mv-1	To Tolow	uua, ui-i	0 / 0 - /0 /03
0900 Statal sarse, chech wive got stack at sand. vill ty to pump thech value stack at sand, must pumping well the purp the place at 30/2m 0925 Start pump well want for Get Recharge 0930 pulled pipe to check at to see Recharge 0931 int: 959 will try low flow pump arund 14,00' Startel pump well want they after scale find 5 gal	0815 roustruct	of PVC 11 Ch	of calve to use	to Saire Diock
Jumping well the PUR PIPE Place at Bottern 0925 Start pamp. Well wast Ju after 3 5= 1045. 0930 Pulled fine to check at to see Restage 0937 Int: 9.59, will try low flow pump around 14.00' Startel pump well went try after stalking 5 591.	ngos statal	Sarca. rappe	We Cot Stuck	ul and
0925 Start Jump. We di wast Juy GFG 3 galous. 0930 pulled fine to chek ut to see Restante 0933 lul: 9.59, will try low flow pump arund 14,00' Startel pump. Well went Dry after stall time! 5 gal	will xy	to pump. Check	value stack as	Sahl mud
0925 Start Jump. Well wast Ju CARV 3 Gallous. 0930 pulled fine to check in the to see Restance 0933 line: 959, will try low flow pump around 14,00' Startel pump well went by after sold Kind 5 Gallous. 0941 we = 1320 Total Wil. Aurel: 6 Gallous will	pumpins'	well de	u rije flace	2/ /30/1249
0930 pulled fine to check ut to see Restante 0933 lul: 9.59, will try low flow pump armine 14,00°, Startel pump, well wont Dry after sold sind 5 gal.			4 Jul affer	3 GE/1005.
0937 lul: 19.59, will try low flow pump arunt 14,00° Statel pump well went Dry after soll friend 5 Gall 0941 W. 1320 Total Wil. Aurel: 6 Gallon well		lipe to check i	il to see Red	-4age
0941 WL= 13,20 Total Val. Aurel = & Gallon Lul	0937 int: 16	7.59, will Try	low flow po	up arunt
1944 16 Jechan	14,00', 54	atel pump. We	I went My after	sold it ing 5 Gal
1944 TU 11 EST 1925 1 1 2 2 1 1 6 2 1 2 2 1 2 1 2 1 2 1 2 1	0991 12 132	0, 1676/ 100. 1	rurser o galle	5. hul
The state of the s	0944 11 - 11,00	still wanting	for recharge	
The state of the s	and the second of the second o			
0952 ul 975				
0953 Stad pump again	0955 Start 194	pagain colle	1 000000 11 6011	as 1 th to
5955 Dry after 3 more Gallons pursed 1/ 99/1045 Potal	or Turbed S	still over 1,001	174'5	
ous to start name again. Towered pump 3" to Bottom.	605 HS Stat nas	up apain. laure	red pump 3	& Bottom,
from TD 15 interesting in start being recorded	100 70 15	increasing w/ san	or being remove,	
10 + all My w/ 4 more cally 5, 15 cg/145 fort	1007 well Ary	ul 4 more ca	My 5, 15 59 1/045	To Ke Z
1015 remaine an addition for the the at fands.	1015 Noticed	all it rachare	40-85 % OFF	5-10 mysexes
athe pains pursual wing luill continue doing this		is pursal wy	20111 Cas 13440	diring this
14 1/ Parameter Stablise	white // P	arameror Stall	ie.	
1020 15 98 New 1D as of Mow. Removed 6.15 or some	1000 15.90 NE	w ID as of how	1. Krmolied O. 13	2 3/
1022 Startel pump again moving It and above 2-3	1066 Starter pa	ing again mon	as It ay and ac	1/40 2 2 60 (1)
Rut Still ever 1,000 ut tack let le moure	Pat Stil	11 over 1,000 u	Ku Kall A A	maret
prove scale	mione Son			
1942 Reached 29-30 Sallons parsece. Tarlie & St. 11 Over	1142 Reacher 2	29-30 SG WOUT	Usecl. Tallety	X-11 OVE
1,000 A rust suit standard sandsans	1,000	TU AUX	17 removing sand	coas in the
Cand to enter through the screen cashe wall	Cand C to	enter through	the screen car	WE GOT
Seems to be at total Or Ath up back bottom	Servis	to be ax you	1 Opper us ban	bottom.
will try to sunt passe well with scare to	will try	to Just naise	well w/6 sa	of A
well by purp. Thinking the sarry is creasing the sands to enter though the screen cause well seems to be at their Depth by thank bottom. Will try to that parse well of scape to see of floors of floors.	see of	glears ap		
Wext page		أرز المسال عائم عانهما مطاعه المحال شاب	atamatan dan dan dan dan dalah Adil Kara Akan	The many

Client: Project: Data For:	<u> </u>	<u> </u>	7000	t 1	veg (Da	eet ite: ork Oi	- i	<u> </u>	1	2	8/	/		Č	<i>][</i>	T	16	?C	
Prepared By:			Che	cked B	y:				e No:			·										
Note: This for	m must	be use	d for pr	oject c	alculatio	ons and	l origin	al file	d in p	rojec	t files	;										
1052	4 n	e	pai	re.	04	9	no	The	بر ۽	4	5	41	100	, ,-	ą	7	_	3	3			
	701	4/	Ca	610	ν_J .	71	187	7	12		10		10	/	10	11	10	3)	a	20	1	
	n	imo	nal	erto	un,	100	doi	u	aj	N	01	nsf	u	64	~	ſ	J G	n e n.	7 C سرید			
	N	mo	Il.	ل	cen	45	95	` ک		914	5	ne	a	" "	u a	A	رمے	_	1	- u		
75T	C4	nxe	7	wu	g h ach	9/1	ce	7	ر د د در و	10	4/2	26,	دم بر	:	C A		/) _/	, 7,	10	سر ،		
	CA	y u	act	be	614.	do	ny	1	014	K	21.		- 4				<i></i>		¥			
122	117	tul	41	66/1	655	nu	VCan		<i>[</i> 4	far	, ,	44	11	30	١.,	50	s //	104	1./	1	፫	-
) / J	onne	ل ا مر	ura	175	n	u	00	1	u	al	J.	101	THE		1		-	11		111-	4 P (4 P) P(4 P) - P
704	m	01	(64%	1440	145	か		1/0	ny		11-0	n	1	7	U	1		U	, 6	ر	
	a	F 1	0	Tui	Side	5	1/2	1.11	2/	cie		a		en	L	w	n		4	-6	7	
	11	400	[]	υ	sec	/		/		مب	′ / /		· (g Cas	7	L			a	20		
340	14	1712	17	, 01	nd	a	N	p	419	22	e K	سرر	c	no	_	ſχ) a	16			4	
345	Sa	m	las	u	ell	n	u)- <u> </u>	/	tev	<i>,</i>	5.	26	0	a	اسیه مورم		8	01.] [.]	
350	7	ean.		1.1	Samp //	GEN	R	50	01	10	FY		12"	De	chie	6 /2	1	γ ₄ .	1,40		4 c	ee-
1430	OF	Ċ	Six.	7	/ /					, ,							-		J			
												}						y				1
						and the second of the second																A. S. S. S.
														<u>.</u>								
	· [1															}				
																						ļ.,
		ļ\.													ļ							
						4									ļ			}		 		-
				- -																		
															1							
		ļ													ļ							
				}										10.70 (0.00)	ļ							. 2
		1														[
					-																	<u> </u>
				1														~ .,.				
		1										· · · · · · · · · · · · · · · · · · ·	1000		Ť							1
											ļ ļ.		.		ļ	ļ.,						



MW-1 Well Number: Well Type: St. Steel Job Name: Date: Job Number: Sampled By: Recorded By: WELL PURGING PURGE METHOD PURGE VOLUME Casing Diameter (D in inches): 2

Total Depth of Casing (TD in ft BTOC): Bailer - Type: Y Submersible - Type: Water Level Depth (WL in ft BTOC): 9.09 No. of Well Volumes to be purged (# V): PUMP INTAKE SETTING Near Top Near Bottom PURGE VOLUME CALCULATION Other 2 X X X 0.0408 = _____ O gals Depth in feet (BTOC): Screen Interval in feet (BTOC): Calculated Purge Volume TD (feet) Field Parameter Measurement PURGE RATE ☐ °C Turbidity PURGE TIME Conductivity Minutes Purge Start: GPM 71,000 Purge Stop: Initial >1,000 Elapsed: PURGE VOLUME 71,000 gallons Volume: Observations During Purging (Well Condition, Color, Odor): 1,000 railor orde. No Sheen. 405 Discharge Water Disposal: 33 Other Storm Sewer Meter S/N WELLSAMPLING Sample Time: Bailer - Type: Comments Preservatives Volume/Cont. Analysis Requested Sample No. QUALITY CONTROL SAMPLES Other Samples Blank Samples **Duplicate Samples** Sample No. Туре Sample No. Dupl. Sample No. Туре Original Sample No.

GROUNDWATER SAMPLING FORM



Well Number: Extraction Well Type: St. Steel Other Job Name: 12126/11 Date: Job Number: Sampled By: Recorded By: WELL PURGING PURGE METHOD PURGE VOLUME Bailer - Type: Casing Diameter (D in inches): Submersible - Type: Total Depth of Casing (TD in ft BTOC): Water Level Depth (WL in ft BTOC): No. of Well Volumes to be purged (# V): PUMP INTAKE SETTING Near Bottom PURGE VOLUME CALCULATION Other Depth in feet (BTOC): 2 X 3 X 0.0408 = Screen Interval in feet (BTOC): Calculated Purge Volume TD (feet) Field Parameter Measurement PURGE RATE PURGETIME C Turbidity gell. Conductivity ☐ °F (NTU) Purge Start: GPM: Purge Stop: 38 **⊣**nitia⊢ Elapsed: PURGE VOLUME gallons Volume: Observations During Purging (Well Condition, Color, Odor): 109 less sands after 30 gal. purged. 55.7 Sanitary Sewer 50.2 Storm Sewer Other WELL SAMPLING Sample Time: Bailer - Type: Comments Preservatives Lab Analysis Requested Volume/Cont. Sample No. QUALITY CONTROL SAMPLES Other Samples Blank Samples **Duplicate Samples** Sample No. Sample No. Туре Dupl. Sample No. Туре Original Sample No.

GROUNDWATER SAMPLING FORM

Job Name: Job Number: Recorded By: PURGE Casing Diameter (D in inch Total Depth of Casing (TD Water Level Depth (WL in No. of Well Volumes to be PURGE VOLUM (VOLUME Jesigna Jesigna Jesigna VOLUME Jesigna Je	WELL PURG	Well Number Well Type: Date: Sampled By ING Bailer - Type: Submersible - Other - Type: Other - Type: Near Bottom Other Depth in feet (BT Screen Interval in PURGE TIME Purge Start: Purge Stop: Elapsed: PURGE VOLUM Volume: Observations Du Discharge Wate	PURGE M Type: 12 U PUMP INTAKE Y OF Teet (BTOC): For puring Purging (Well I OU F Tolsposal:	Extraction Other St. Steel Other / 28 / // Condition, Color, Odor):	al.	of 3
Meter S/N			_	r Disposal:	Sanitary Sewer	[0	
Bailer - Type: 12 Vo H	umpul!			1345		i v saa	
Sample No.	Volume/Cont.	Analysis Requested	Preservat	ives Lab	Comments		
	3.40ML 2.(LA)	826013 8015m	Hel- N/A				
	Job Name: Job Number: Recorded By: Casing Diameter (D in inch Total Depth of Casing (TD Water Level Depth (WL in No. of Well Volumes to be PURGE VOLUM! PURGE VOLUM! PURGE VOLUM! Field Paramete Minutes PH Initial Field Paramete Sample No.	Job Name: Job Number: Recorded By: PURGE VOLUME Casing Diameter (D in inches): Total Depth of Casing (TD in ft BTOC): Water Level Depth (WL in ft BTOC): No. of Well Volumes to be purged (# V): PURGE VOLUME CALCULATION (Job Number: Recorded By: WELL PURG PURGE VOLUME Casing Diameter (D in inches): Total Depth of Casing (TD in ft BTOC): Water Level Depth (WL in ft BTOC): No. of Well Volumes to be purged (# V): PURGE VOLUME CALCULATION (Sob Name:	Well Number: Well Number: Well Type: Monitor	Well Type: Monitor Extraction Other Other	Well Number: Well Type: Monitor Extraction Other

Duplicate Samples
Original Sample No.
Dupl. Sample No.

Blank Samples
Type Sample No.
Type Sample No.
Type Sample No.

A left 1/2" Dedocated sample tasing in uch.

APPENDIX C Laboratory Analytical Reports

2

3

-

6

8

10

12

13



THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica San Francisco 1220 Quarry Lane Pleasanton, CA 94566 Tel: (925)484-1919

TestAmerica Job ID: 720-39507-1

Client Project/Site: City of Alameda

Revision: 1

For:

AMEC E&I, Inc 1465 North McDowell Blvd Suite 200 Petaluma, California 94954

Attn: Mr. Gary Lieberman

Shaema

Authorized for release by: 1/6/2012 3:55:48 PM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com

·····LINKS ·······

Review your project results through

Total Access

Have a Question?



Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: AMEC E&I, Inc Project/Site: City of Alameda TestAmerica Job ID: 720-39507-1

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
QC Sample Results	13
QC Association Summary	19
Lab Chronicle	21
Certification Summary	23
Method Summary	24
Sample Summary	25
Chain of Custody	26
Receipt Chacklists	27

9

10

12

16

Definitions/Glossary

Client: AMEC E&I, Inc Project/Site: City of Alameda TestAmerica Job ID: 720-39507-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
F	MS or MSD exceeds the control limits
F	RPD of the MS and MSD exceeds the control limits
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
‡	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: AMEC E&I, Inc Project/Site: City of Alameda TestAmerica Job ID: 720-39507-1

Job ID: 720-39507-1

Laboratory: TestAmerica San Francisco

Narrative

Job Narrative 720-39507-1

Comments

No additional comments.

Receipt

Received 4 trip blank vials not listed on coc. Logged on hold.

All other samples were received in good condition within temperature requirements.

GC/MS VOA

Method 8260B: Internal standard responses were outside of acceptance limits for the following sample 39507-2: S-B1-19.5 (720-39507-2). The sample shows evidence of matrix interference.

Method 8260B: Due to the high concentration of Ethylbenzene, Benzene, Xylenes the matrix spike / matrix spike duplicate (MS/MSD) for batch 105377 could not be

No other analytical or quality issues were noted.

GC Semi VOA

Method 8015B: Surrogate recovery for the following sample was outside the upper control limit: S-B2-19.5 (720-39507-5), S-B3-11 (720-39507-7), S-B3-19.5 (720-39507-8). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8015B: The matrix spike duplicate (MSD) recoveries for batch 105342 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

Organic Prep

No other analytical or quality issues were noted.

4

_

__

7

O

11

14

114

Client Sample ID: S-B1-11.5

Lab Sample ID: 720-39507-1

No Detections

Client Sample ID: S-B1-19.5 Lab Sample ID: 720-39507-2

No Detections

Client Sample ID: W-B1 Lab Sample ID: 720-39507-3

No Detections

Client Sample ID: S-B2-11.5 Lab Sample ID: 720-39507-4

No Detections

Client Sample ID: S-B2-19.5 Lab Sample ID: 720-39507-5

No Detections

Client Sample ID: W-B2 Lab Sample ID: 720-39507-6

AnalyteResult
Diesel Range Organics [C10-C28]Result
270QualifierRLMDL
65UnitDil Fac
ug/LD
1MethodPrep TypeSilica Gel Clear

Client Sample ID: S-B3-11 Lab Sample ID: 720-39507-7

No Detections

Client Sample ID: S-B3-19.5 Lab Sample ID: 720-39507-8

No Detections

Client Sample ID: MW-1 Lab Sample ID: 720-39507-9

No Detections

Client Sample ID: W-B3 Lab Sample ID: 720-39507-10

No Detections

TestAmerica Job ID: 720-39507-1

Lab Sample ID: 720-39507-1

Lab Sample ID: 720-39507-2

Matrix: Solid

Matrix: Solid

Client: AMEC E&I, Inc Project/Site: City of Alameda

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Client Sample ID: S-B1-11.5

Date Collected: 12/28/11 10:25 Date Received: 12/29/11 13:10

Analyte	Result Qualifier	RL	MDL Un	nit	D	Prepared	Analyzed	Dil Fac
MTBE	ND Qualific	3.9		/Kg		12/29/11 18:00	12/30/11 12:52	1
Benzene	ND	3.9	•	/Kg		12/29/11 18:00	12/30/11 12:52	1
Ethylbenzene	ND	3.9	•	/Kg		12/29/11 18:00	12/30/11 12:52	1
Toluene	ND	3.9		/Kg		12/29/11 18:00	12/30/11 12:52	1
Xylenes, Total	ND	7.7	ug	/Kg		12/29/11 18:00	12/30/11 12:52	1
TBA	ND	7.7	ug	/Kg		12/29/11 18:00	12/30/11 12:52	1
DIPE	ND	3.9	ug	/Kg		12/29/11 18:00	12/30/11 12:52	1
TAME	ND	3.9	ug	/Kg		12/29/11 18:00	12/30/11 12:52	1
Ethyl t-butyl ether	ND	3.9	ug	/Kg		12/29/11 18:00	12/30/11 12:52	1
Ethylene Dibromide	ND	3.9	ug	/Kg		12/29/11 18:00	12/30/11 12:52	1
1.2-Dichloroethane	ND	3.9	ua	/Ka		12/29/11 18:00	12/30/11 12:52	1

Surrogate	%Recovery Qual	alifier Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95	45 - 131	12/29/11 18:00	12/30/11 12:52	1
1,2-Dichloroethane-d4 (Surr)	92	60 - 140	12/29/11 18:00	12/30/11 12:52	1
Toluene-d8 (Surr)	93	58 - 140	12/29/11 18:00	12/30/11 12:52	1

Client Sample ID: S-B1-19.5 Date Collected: 12/28/11 10:30

Date Received: 12/29/11 13:10

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		7.9		ug/Kg		12/29/11 18:00	12/30/11 13:21	1
Benzene	ND		7.9		ug/Kg		12/29/11 18:00	12/30/11 13:21	1
Ethylbenzene	ND		7.9		ug/Kg		12/29/11 18:00	12/30/11 13:21	1
Toluene	ND		7.9		ug/Kg		12/29/11 18:00	12/30/11 13:21	1
Xylenes, Total	ND		16		ug/Kg		12/29/11 18:00	12/30/11 13:21	1
TBA	ND		16		ug/Kg		12/29/11 18:00	12/30/11 13:21	1
DIPE	ND		7.9		ug/Kg		12/29/11 18:00	12/30/11 13:21	1
TAME	ND		7.9		ug/Kg		12/29/11 18:00	12/30/11 13:21	1
Ethyl t-butyl ether	ND		7.9		ug/Kg		12/29/11 18:00	12/30/11 13:21	1
Ethylene Dibromide	ND		7.9		ug/Kg		12/29/11 18:00	12/30/11 13:21	1
1,2-Dichloroethane	ND		7.9		ug/Kg		12/29/11 18:00	12/30/11 13:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	79		45 - 131	12/29/11 18	12/30/11 13:21	1
1,2-Dichloroethane-d4 (Surr)	66		60 - 140	12/29/11 18	00 12/30/11 13:21	1
Toluene-d8 (Surr)	90		58 ₋ 140	12/29/11 18	00 12/30/11 13:21	1

Client Sample ID: W-B1 Date Collected: 12/28/11 11:00

Date Received: 12/29/11 13:10

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			12/30/11 19:22	1
Benzene	ND		0.50		ug/L			12/30/11 19:22	1
Ethylbenzene	ND		0.50		ug/L			12/30/11 19:22	1
Toluene	ND		0.50		ug/L			12/30/11 19:22	1
Xylenes, Total	ND		1.0		ug/L			12/30/11 19:22	1
TBA	ND		4.0		ug/L			12/30/11 19:22	1

Lab Sample ID: 720-39507-3

Matrix: Water

Client: AMEC E&I, Inc

TestAmerica Job ID: 720-39507-1

Project/Site: City of Alameda

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Client Sample ID: W-B1

Date Collected: 12/28/11 11:00

Lab Sample ID: 720-39507-3

Matrix: Water

Date Received: 12/29/11 13:10

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIPE	ND		0.50		ug/L			12/30/11 19:22	1
TAME	ND		0.50		ug/L			12/30/11 19:22	1
Ethyl t-butyl ether	ND		0.50		ug/L			12/30/11 19:22	1
1,2-Dichloroethane	ND		0.50		ug/L			12/30/11 19:22	1
Ethylene Dibromide	ND		0.50		ug/L			12/30/11 19:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	97		67 - 130			_		12/30/11 19:22	1
1,2-Dichloroethane-d4 (Surr)	104		75 ₋ 138					12/30/11 19:22	1
Toluene-d8 (Surr)	99		70 - 130					12/30/11 19:22	1

Lab Sample ID: 720-39507-4

Matrix: Solid

Date Collected: 12/28/11 11:45 Date Received: 12/29/11 13:10

Client Sample ID: S-B2-11.5

Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac MTBE ND 3.7 12/29/11 18:00 12/30/11 13:50 ug/Kg Benzene ND ug/Kg 12/29/11 18:00 12/30/11 13:50 3.7 Ethylbenzene 12/30/11 13:50 ND 3.7 ug/Kg 12/29/11 18:00 Toluene ND 3.7 12/29/11 18:00 12/30/11 13:50 ug/Kg ND Xylenes, Total 7.5 ug/Kg 12/29/11 18:00 12/30/11 13:50 TBA ND 7.5 ug/Kg 12/29/11 18:00 12/30/11 13:50 DIPE ND 3 7 ug/Kg 12/29/11 18:00 12/30/11 13:50 TAME ND 3.7 ug/Kg 12/29/11 18:00 12/30/11 13:50 ND Ethyl t-butyl ether 3.7 ug/Kg 12/29/11 18:00 12/30/11 13:50 Ethylene Dibromide ND 3.7 ug/Kg 12/29/11 18:00 12/30/11 13:50 1,2-Dichloroethane ND 3.7 ug/Kg 12/29/11 18:00 12/30/11 13:50

	Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	4-Bromofluorobenzene	91		45 - 131	12/29/11 18:00	12/30/11 13:50	1
	1,2-Dichloroethane-d4 (Surr)	93		60 - 140	12/29/11 18:00	12/30/11 13:50	1
ı	Toluene-d8 (Surr)	92		58 - 140	12/29/11 18:00	12/30/11 13:50	1

Client Sample ID: S-B2-19.5 Date Collected: 12/28/11 11:50 Date Received: 12/29/11 13:10

Lab Sample ID: 720-39507-5 **Matrix: Solid**

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND	3.6	ug/Kg		12/29/11 18:00	12/30/11 14:19	1
Benzene	ND	3.6	ug/Kg		12/29/11 18:00	12/30/11 14:19	1
Ethylbenzene	ND	3.6	ug/Kg		12/29/11 18:00	12/30/11 14:19	1
Toluene	ND	3.6	ug/Kg		12/29/11 18:00	12/30/11 14:19	1
Xylenes, Total	ND	7.3	ug/Kg		12/29/11 18:00	12/30/11 14:19	1
TBA	ND	7.3	ug/Kg		12/29/11 18:00	12/30/11 14:19	1
DIPE	ND	3.6	ug/Kg		12/29/11 18:00	12/30/11 14:19	1
TAME	ND	3.6	ug/Kg		12/29/11 18:00	12/30/11 14:19	1
Ethyl t-butyl ether	ND	3.6	ug/Kg		12/29/11 18:00	12/30/11 14:19	1
Ethylene Dibromide	ND	3.6	ug/Kg		12/29/11 18:00	12/30/11 14:19	1
1,2-Dichloroethane	ND	3.6	ug/Kg		12/29/11 18:00	12/30/11 14:19	1

Client: AMEC E&I, Inc Project/Site: City of Alameda

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	90		45 - 131	12/29/11 18:00	12/30/11 14:19	1
1,2-Dichloroethane-d4 (Surr)	90		60 - 140	12/29/11 18:00	12/30/11 14:19	1
Toluene-d8 (Surr)	91		58 - 140	12/29/11 18:00	12/30/11 14:19	1

Client Sample ID: W-B2

Date Collected: 12/28/11 12:50 Date Received: 12/29/11 13:10

Lab Sample ID: 720-39507-6

Matrix: Water

Analyte	
Methyl tert-butyl ether	

Analyte	Result	Qualifier RL	. MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND	0.50		ug/L			12/30/11 19:51	1
Benzene	ND	0.50		ug/L			12/30/11 19:51	1
Ethylbenzene	ND	0.50		ug/L			12/30/11 19:51	1
Toluene	ND	0.50		ug/L			12/30/11 19:51	1
Xylenes, Total	ND	1.0		ug/L			12/30/11 19:51	1
TBA	ND	4.0		ug/L			12/30/11 19:51	1
DIPE	ND	0.50		ug/L			12/30/11 19:51	1
TAME	ND	0.50		ug/L			12/30/11 19:51	1
Ethyl t-butyl ether	ND	0.50		ug/L			12/30/11 19:51	1
1,2-Dichloroethane	ND	0.50		ug/L			12/30/11 19:51	1
Ethylene Dibromide	ND	0.50		ug/L			12/30/11 19:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	96		67 - 130	 	12/30/11 19:51	1
1,2-Dichloroethane-d4 (Surr)	106		75 - 138		12/30/11 19:51	1
Toluene-d8 (Surr)	98		70 - 130		12/30/11 19:51	1

Client Sample ID: S-B3-11

Date Collected: 12/28/11 13:40

Date Received: 12/29/11 13:10

Lab Sample ID: 720-39507-7

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		4.0		ug/Kg		12/29/11 18:00	12/30/11 14:48	1
Benzene	ND		4.0		ug/Kg		12/29/11 18:00	12/30/11 14:48	1
Ethylbenzene	ND		4.0		ug/Kg		12/29/11 18:00	12/30/11 14:48	1
Toluene	ND		4.0		ug/Kg		12/29/11 18:00	12/30/11 14:48	1
Xylenes, Total	ND		8.0		ug/Kg		12/29/11 18:00	12/30/11 14:48	1
ТВА	ND		8.0		ug/Kg		12/29/11 18:00	12/30/11 14:48	1
DIPE	ND		4.0		ug/Kg		12/29/11 18:00	12/30/11 14:48	1
TAME	ND		4.0		ug/Kg		12/29/11 18:00	12/30/11 14:48	1
Ethyl t-butyl ether	ND		4.0		ug/Kg		12/29/11 18:00	12/30/11 14:48	1
Ethylene Dibromide	ND		4.0		ug/Kg		12/29/11 18:00	12/30/11 14:48	1
1,2-Dichloroethane	ND		4.0		ug/Kg		12/29/11 18:00	12/30/11 14:48	1

Surrogate	%Recovery	Qualifier	Limits	Pro	epared	Analyzed	Dil Fac
4-Bromofluorobenzene	90		45 - 131	12/29	/11 18:00	12/30/11 14:48	1
1,2-Dichloroethane-d4 (Surr)	97		60 - 140	12/29	/11 18:00	12/30/11 14:48	1
Toluene-d8 (Surr)	91		58 ₋ 140	12/29	/11 18:00	12/30/11 14:48	1

Client Sample ID: S-B3-19.5 Date Collected: 12/28/11 13:50

Date Received: 12/29/11 13:10

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		3.7		ug/Kg		12/29/11 18:00	12/30/11 15:17	1

Lab Sample ID: 720-39507-8

Matrix: Solid

TestAmerica Job ID: 720-39507-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Client Sample ID: S-B3-19.5

Date Collected: 12/28/11 13:50 Date Received: 12/29/11 13:10

Lab Sample ID: 720-39507-8

Matrix: Solid

Analyte	Result Qu	alifier RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND	3.7	ug/Kg		12/29/11 18:00	12/30/11 15:17	1
Ethylbenzene	ND	3.7	ug/Kg		12/29/11 18:00	12/30/11 15:17	1
Toluene	ND	3.7	ug/Kg		12/29/11 18:00	12/30/11 15:17	1
Xylenes, Total	ND	7.5	ug/Kg		12/29/11 18:00	12/30/11 15:17	1
TBA	ND	7.5	ug/Kg		12/29/11 18:00	12/30/11 15:17	1
DIPE	ND	3.7	ug/Kg		12/29/11 18:00	12/30/11 15:17	1
TAME	ND	3.7	ug/Kg		12/29/11 18:00	12/30/11 15:17	1
Ethyl t-butyl ether	ND	3.7	ug/Kg		12/29/11 18:00	12/30/11 15:17	1
Ethylene Dibromide	ND	3.7	ug/Kg		12/29/11 18:00	12/30/11 15:17	1
1,2-Dichloroethane	ND	3.7	ug/Kg		12/29/11 18:00	12/30/11 15:17	1
Surrogate	%Recovery Qu	alifier l imits			Prepared	Analyzed	Dil Fac

%Recovery Qualifier 4-Bromofluorobenzene 89 45 - 131 12/29/11 18:00 12/30/11 15:17 60 - 140 1,2-Dichloroethane-d4 (Surr) 96 12/29/11 18:00 12/30/11 15:17 Toluene-d8 (Surr) 91 58 - 140 12/29/11 18:00 12/30/11 15:17

Lab Sample ID: 720-39507-9

Matrix: Water

Client Sample ID: MW-1 Date Collected: 12/28/11 13:45 Date Received: 12/29/11 13:10

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			12/30/11 20:20	1
Benzene	ND		0.50		ug/L			12/30/11 20:20	1
Ethylbenzene	ND		0.50		ug/L			12/30/11 20:20	1
Toluene	ND		0.50		ug/L			12/30/11 20:20	1
Xylenes, Total	ND		1.0		ug/L			12/30/11 20:20	1
TBA	ND		4.0		ug/L			12/30/11 20:20	1
DIPE	ND		0.50		ug/L			12/30/11 20:20	1
TAME	ND		0.50		ug/L			12/30/11 20:20	1
Ethyl t-butyl ether	ND		0.50		ug/L			12/30/11 20:20	1
1,2-Dichloroethane	ND		0.50		ug/L			12/30/11 20:20	1
Ethylene Dibromide	ND		0.50		ug/L			12/30/11 20:20	1
0	0/5	0	1::4-				Dramarad	A l	D# 5

Surrogate	%Recovery Qualifier	Limits	Prepared Analyzed	Dil Fac
4-Bromofluorobenzene	96	67 - 130	12/30/11 20	:20 1
1,2-Dichloroethane-d4 (Surr)	107	75 - 138	12/30/11 20	:20 1
Toluene-d8 (Surr)	98	70 - 130	12/30/11 20	:20 1

Client Sample ID: W-B3 Lab Sample ID: 720-39507-10 Date Collected: 12/28/11 14:00 **Matrix: Water**

Date Received: 12/29/11 13:10

Analyte	Result (Qualifier RL	MDL Uni	t D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND	0.50	ug/			01/03/12 15:10	1
Benzene	ND	0.50	ug/	L		01/03/12 15:10	1
Ethylbenzene	ND	0.50	ug/	L		01/03/12 15:10	1
Toluene	ND	0.50	ug/	L		01/03/12 15:10	1
Xylenes, Total	ND	1.0	ug/	L		01/03/12 15:10	1
TBA	ND	4.0	ug/	L		01/03/12 15:10	1
DIPE	ND	0.50	ug/	Ĺ		01/03/12 15:10	1

Client Sample Results

Client: AMEC E&I, Inc Project/Site: City of Alameda TestAmerica Job ID: 720-39507-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Client Sample ID: W-B3

Date Collected: 12/28/11 14:00 Date Received: 12/29/11 13:10 Lab Sample ID: 720-39507-10

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
TAME	ND		0.50		ug/L			01/03/12 15:10	1
Ethyl t-butyl ether	ND		0.50		ug/L			01/03/12 15:10	1
1,2-Dichloroethane	ND		0.50		ug/L			01/03/12 15:10	1
Ethylene Dibromide	ND		0.50		ug/L			01/03/12 15:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	103		67 - 130			_		01/03/12 15:10	1
1,2-Dichloroethane-d4 (Surr)	105		75 - 138					01/03/12 15:10	1
Toluene-d8 (Surr)	102		70 - 130					01/03/12 15:10	1

5

7

9

10

13

TestAmerica Job ID: 720-39507-1

Matrix: Water

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

Client Sample ID: S-B1-11.5

Lab Sample ID: 720-39507-1

Date Collected: 12/28/11 10:25

Matrix: Solid

Date Received: 12/29/11 13:10

ĺ	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		12/30/11 08:36	01/03/12 12:28	1
	Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
	Capric Acid (Surr)	0.0002		0 - 1				12/30/11 08:36	01/03/12 12:28	1
	p-Terphenyl	74		38 - 148				12/30/11 08:36	01/03/12 12:28	1

Client Sample ID: S-B1-19.5

Date Collected: 12/28/11 10:30

Lab Sample ID: 720-39507-2

Matrix: Solid

Date Received: 12/29/11 13:10

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg	 . _ _	12/30/11 08:36	01/03/12 16:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.009		0 - 1				12/30/11 08:36	01/03/12 16:09	1
p-Terphenyl	87		38 - 148				12/30/11 08:36	01/03/12 16:09	1

Client Sample ID: W-B1 Lab Sample ID: 720-39507-3

Date Collected: 12/28/11 11:00 Date Received: 12/29/11 13:10

Analyte Diesel Range Organics [C10-C28]	Result ND	Qualifier		MDL	Unit ug/L	D	Prepared 01/03/12 14:06	Analyzed 01/04/12 16:34	Dil Fac
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.004		0 - 5				01/03/12 14:06	01/04/12 16:34	1
p-Terphenyl	83		31 - 150				01/03/12 14:06	01/04/12 16:34	1

Client Sample ID: S-B2-11.5

Date Collected: 12/28/11 11:45

Lab Sample ID: 720-39507-4

Matrix: Solid

Date Received: 12/29/11 13:10

Analyte Diesel Range Organics [C10-C28]	Result	Qualifier		MDL	Unit mg/Kg	D	Prepared 12/30/11 08:36	Analyzed 01/03/12 16:33	Dil Fac
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)			0 - 1				12/30/11 08:36	01/03/12 16:33	1
p-Terphenvl	87		38 - 148				12/30/11 08:36	01/03/12 16:33	1

Client Sample ID: S-B2-19.5

Date Collected: 12/28/11 11:50

Lab Sample ID: 720-39507-5

Matrix: Solid

Date Collected: 12/28/11 11:50 Date Received: 12/29/11 13:10

Analyte Diesel Range Organics [C10-C28]	Result ND	Qualifier	RL 1.0	MDL	Unit mg/Kg	D	Prepared 12/30/11 08:36	Analyzed 01/03/12 16:57	Dil Fac
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.01		0 - 1				12/30/11 08:36	01/03/12 16:57	1
p-Terphenyl	171	X	38 - 148				12/30/11 08:36	01/03/12 16:57	1

TestAmerica Job ID: 720-39507-1

Lab Sample ID: 720-39507-6

Matrix: Water

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

Client Sample ID: W-B2

Date Collected: 12/28/11 12:50

Date Received: 12/29/11 13:10

Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fa

Analyte	Result	Qualifier	IXL.	MIDE	Oilit	 riepaieu	Allalyzeu	Dillac
Diesel Range Organics [C10-C28]	270		65		ug/L	 01/03/12 14:06	01/05/12 13:28	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.06		0 - 5			01/03/12 14:06	01/05/12 13:28	1
p-Terphenyl	37		31 - 150			01/03/12 14:06	01/05/12 13:28	1

Client Sample ID: S-B3-11

Date Collected: 12/28/11 13:40

Lab Sample ID: 720-39507-7

Matrix: Solid

Date Received: 12/29/11 13:10

Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac Diesel Range Organics [C10-C28] ND 1.0 12/30/11 08:36 01/03/12 17:22 mg/Kg Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac Capric Acid (Surr) 0.01 0 - 1 12/30/11 08:36 01/03/12 17:22 p-Terphenyl 168 X 38 - 148 12/30/11 08:36 01/03/12 17:22

Client Sample ID: S-B3-19.5

Date Collected: 12/28/11 13:50

Lab Sample ID: 720-39507-8

Matrix: Solid

Date Received: 12/29/11 13:10

Analyte MDL Unit Result Qualifier RL D Prepared Analyzed Dil Fac Diesel Range Organics [C10-C28] ND 0.99 mg/Kg 12/30/11 08:36 01/03/12 17:46 Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac Capric Acid (Surr) 0.02 12/30/11 08:36 01/03/12 17:46 0 - 1 12/30/11 08:36 01/03/12 17:46 p-Terphenyl 181 X 38 - 148

Client Sample ID: MW-1 Lab Sample ID: 720-39507-9
Date Collected: 12/28/11 13:45
Matrix: Water

Date Received: 12/29/11 13:10

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		53		ug/L		01/03/12 14:06	01/04/12 16:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.01		0 - 5				01/03/12 14:06	01/04/12 16:58	1
n-Ternhenyl	80		31 150				01/03/12 14:06	01/04/12 16:58	1

Client Sample ID: W-B3

Lab Sample ID: 720-39507-10

Date Collected: 12/28/11 14:00

Matrix: Water

Date Received: 12/29/11 13:10

Analyte Diesel Range Organics [C10-C28]	Result ND	Qualifier	RL 58	MDL	Unit ug/L	<u>D</u>	Prepared 01/03/12 14:06	Analyzed 01/04/12 17:23	Dil Fac
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.02		0 - 5				01/03/12 14:06	01/04/12 17:23	1
p-Terphenyl	99		31 - 150				01/03/12 14:06	01/04/12 17:23	1

TestAmerica San Francisco 1/6/2012

Page 12 of 27

2

3

4

6

11

13

Client: AMEC E&I, Inc Project/Site: City of Alameda

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Lab Sample ID: MB 720-105341/4

Matrix: Water

Analysis Batch: 105341

Client Sample ID: Method Blank

Prep Type: Total/NA

		MB	MB							
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Methyl tert-butyl ether	ND		0.50		ug/L			12/30/11 10:15	1
	Benzene	ND		0.50		ug/L			12/30/11 10:15	1
	Ethylbenzene	ND		0.50		ug/L			12/30/11 10:15	1
	Toluene	ND		0.50		ug/L			12/30/11 10:15	1
	Xylenes, Total	ND		1.0		ug/L			12/30/11 10:15	1
	TBA	ND		4.0		ug/L			12/30/11 10:15	1
	DIPE	ND		0.50		ug/L			12/30/11 10:15	1
	TAME	ND		0.50		ug/L			12/30/11 10:15	1
	Ethyl t-butyl ether	ND		0.50		ug/L			12/30/11 10:15	1
	Ethylene Dibromide	ND		0.50		ug/L			12/30/11 10:15	1
	1,2-Dichloroethane	ND		0.50		ug/L			12/30/11 10:15	1
ı										

MB MB

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		67 - 130	_		12/30/11 10:15	1
1,2-Dichloroethane-d4 (Surr)	105		75 - 138			12/30/11 10:15	1
Toluene-d8 (Surr)	98		70 - 130			12/30/11 10:15	1

Lab Sample ID: LCS 720-105341/5

Matrix: Water

Analysis Batch: 105341

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Spike	LCS	LCS				%Rec.	
Added	Result	Qualifier	Unit	D	%Rec	Limits	
25.0	24.3		ug/L		97	62 - 130	
25.0	23.6		ug/L		94	79 - 120	
25.0	24.2		ug/L		97	84 - 120	
25.0	23.5		ug/L		94	78 - 118	
50.0	47.2		ug/L		94	70 - 142	
25.0	24.6		ug/L		98	85 - 127	
500	503		ug/L		101	82 - 116	
25.0	22.1		ug/L		88	69 - 134	
25.0	24.3		ug/L		97	79 - 129	
25.0	22.4		ug/L		90	70 - 130	
25.0	25.5		ug/L		102	70 - 130	
25.0	23.9		ug/L		96	70 - 126	
	25.0 25.0 25.0 25.0 50.0 25.0 500 25.0 25.	Added Result 25.0 24.3 25.0 23.6 25.0 24.2 25.0 23.5 50.0 47.2 25.0 24.6 500 503 25.0 22.1 25.0 24.3 25.0 22.4 25.0 25.5	Added Result Qualifier 25.0 24.3 25.0 23.6 25.0 24.2 25.0 23.5 50.0 47.2 25.0 24.6 500 503 25.0 22.1 25.0 24.3 25.0 22.4 25.0 25.5	Added Result Qualifier Unit 25.0 24.3 ug/L 25.0 23.6 ug/L 25.0 24.2 ug/L 25.0 23.5 ug/L 50.0 47.2 ug/L 25.0 24.6 ug/L 500 503 ug/L 25.0 22.1 ug/L 25.0 24.3 ug/L 25.0 22.4 ug/L 25.0 25.5 ug/L	Added Result Qualifier Unit D 25.0 24.3 ug/L ug/L 25.0 23.6 ug/L ug/L 25.0 24.2 ug/L ug/L 50.0 47.2 ug/L ug/L 25.0 24.6 ug/L ug/L 500 503 ug/L ug/L 25.0 22.1 ug/L ug/L 25.0 24.3 ug/L ug/L 25.0 22.4 ug/L ug/L 25.0 25.5 ug/L ug/L	Added Result Qualifier Unit D %Rec 25.0 24.3 ug/L 97 25.0 23.6 ug/L 94 25.0 24.2 ug/L 97 25.0 23.5 ug/L 94 50.0 47.2 ug/L 94 25.0 24.6 ug/L 98 500 503 ug/L 101 25.0 22.1 ug/L 88 25.0 24.3 ug/L 97 25.0 22.4 ug/L 90 25.0 25.5 ug/L 102	Added Result Qualifier Unit D %Rec Limits 25.0 24.3 ug/L 97 62 - 130 25.0 23.6 ug/L 94 79 - 120 25.0 24.2 ug/L 97 84 - 120 25.0 23.5 ug/L 94 78 - 118 50.0 47.2 ug/L 94 70 - 142 25.0 24.6 ug/L 98 85 - 127 500 503 ug/L 101 82 - 116 25.0 22.1 ug/L 88 69 - 134 25.0 24.3 ug/L 97 79 - 129 25.0 22.4 ug/L 90 70 - 130 25.0 25.5 ug/L 102 70 - 130

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	97		67 - 130
1,2-Dichloroethane-d4 (Surr)	99		75 - 138
Toluene-d8 (Surr)	101		70 - 130

Lab Sample ID: LCSD 720-105341/6

Matrix: Water

Analysis Batch: 105341

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Methyl tert-butyl ether	25.0	25.7		ug/L		103	62 - 130	6	20
Benzene	25.0	24.0		ug/L		96	79 - 120	2	20
Ethylbenzene	25.0	24.1		ug/L		96	84 - 120	0	20
Toluene	25.0	23.5		ug/L		94	78 - 118	0	20

TestAmerica San Francisco 1/6/2012

Prep Type: Total/NA

Client Sample ID: Lab Control Sample Dup

Page 13 of 27

TestAmerica Job ID: 720-39507-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-105341/6

Matrix: Water

Analysis Batch: 105341

Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
m-Xylene & p-Xylene	50.0	46.8		ug/L		94	70 - 142	1	20
o-Xylene	25.0	24.6		ug/L		98	85 - 127	0	20
TBA	500	484		ug/L		97	82 - 116	4	20
DIPE	25.0	23.0		ug/L		92	69 - 134	4	20
TAME	25.0	25.6		ug/L		102	79 - 129	5	20
Ethyl t-butyl ether	25.0	23.6		ug/L		94	70 - 130	5	20
Ethylene Dibromide	25.0	26.5		ug/L		106	70 - 130	4	20
1,2-Dichloroethane	25.0	24.5		ug/L		98	70 - 126	2	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	96		67 - 130
1,2-Dichloroethane-d4 (Surr)	99		75 - 138
Toluene-d8 (Surr)	102		70 - 130

Lab Sample ID: MB 720-105350/1-A

Matrix: Solid

Analysis Batch: 105343

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 105350

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		5.0		ug/Kg		12/30/11 08:00	12/30/11 10:12	1
Benzene	ND		5.0		ug/Kg		12/30/11 08:00	12/30/11 10:12	1
Ethylbenzene	ND		5.0		ug/Kg		12/30/11 08:00	12/30/11 10:12	1
Toluene	ND		5.0		ug/Kg		12/30/11 08:00	12/30/11 10:12	1
Xylenes, Total	ND		9.9		ug/Kg		12/30/11 08:00	12/30/11 10:12	1
ТВА	ND		9.9		ug/Kg		12/30/11 08:00	12/30/11 10:12	1
DIPE	ND		5.0		ug/Kg		12/30/11 08:00	12/30/11 10:12	1
TAME	ND		5.0		ug/Kg		12/30/11 08:00	12/30/11 10:12	1
Ethyl t-butyl ether	ND		5.0		ug/Kg		12/30/11 08:00	12/30/11 10:12	1
Ethylene Dibromide	ND		5.0		ug/Kg		12/30/11 08:00	12/30/11 10:12	1
1,2-Dichloroethane	ND		5.0		ug/Kg		12/30/11 08:00	12/30/11 10:12	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		45 - 131	12/30/11 08:00	12/30/11 10:12	1
1,2-Dichloroethane-d4 (Surr)	98		60 - 140	12/30/11 08:00	12/30/11 10:12	1
Toluene-d8 (Surr)	95		58 ₋ 140	12/30/11 08:00	12/30/11 10:12	1

Lab Sample ID: LCS 720-105350/2-A

Matrix: Solid

Analysis Batch: 105343

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 105350

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
MTBE	49.9	51.7		ug/Kg		104	71 - 144	
Benzene	49.9	46.7		ug/Kg		94	77 - 113	
Ethylbenzene	49.9	49.5		ug/Kg		99	80 - 137	
Toluene	49.9	47.1		ug/Kg		94	68 - 121	
m-Xylene & p-Xylene	99.8	96.2		ug/Kg		96	79 - 146	
o-Xylene	49.9	49.7		ug/Kg		100	84 - 140	
TBA	998	945		ug/Kg		95	63 _ 119	
DIPE	49.9	45.9		ug/Kg		92	83 _ 131	

2

3

6

9

11

Client: AMEC E&I, Inc Project/Site: City of Alameda

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-105350/2-A

Matrix: Solid

Analysis Batch: 105343

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 105350

	S	pike	LCS LCS			%Rec.
	Analyte	dded Re	sult Qualifier	Unit I	D %Rec	Limits
	TAME	49.9	56.7	ug/Kg	114	74 - 140
	Ethyl t-butyl ether	49.9	48.3	ug/Kg	97	76 - 129
ı	Ethylene Dibromide	49.9	52.5	ug/Kg	105	79 - 140
١	1,2-Dichloroethane	49.9	42.5	ug/Kg	85	72 - 130
- 1						

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	99		45 - 131
1,2-Dichloroethane-d4 (Surr)	87		60 - 140
Toluene-d8 (Surr)	98		58 ₋ 140

Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Analysis Batch: 105343

Lab Sample ID: LCSD 720-105350/3-A

Prep Type: Total/NA

Prep Batch: 105350

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
MTBE	49.9	54.7		ug/Kg		110	71 - 144	6	20
Benzene	49.9	46.7		ug/Kg		94	77 - 113	0	20
Ethylbenzene	49.9	48.7		ug/Kg		98	80 - 137	2	20
Toluene	49.9	46.3		ug/Kg		93	68 - 121	2	20
m-Xylene & p-Xylene	99.8	95.2		ug/Kg		95	79 - 146	1	20
o-Xylene	49.9	49.3		ug/Kg		99	84 - 140	1	20
TBA	998	939		ug/Kg		94	63 - 119	1	20
DIPE	49.9	46.9		ug/Kg		94	83 - 131	2	20
TAME	49.9	56.7		ug/Kg		114	74 - 140	0	20
Ethyl t-butyl ether	49.9	50.5		ug/Kg		101	76 - 129	4	20
Ethylene Dibromide	49.9	55.9		ug/Kg		112	79 - 140	6	20
1,2-Dichloroethane	49.9	43.7		ug/Kg		88	72 - 130	3	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	97		45 - 131
1,2-Dichloroethane-d4 (Surr)	91		60 - 140
Toluene-d8 (Surr)	98		58 - 140

Lab Sample ID: MB 720-105377/5 Client Sample ID: Method Blank **Matrix: Water**

Prep Type: Total/NA Analysis Batch: 105377

мв мв

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			01/03/12 11:04	1
Benzene	ND		0.50		ug/L			01/03/12 11:04	1
Ethylbenzene	ND		0.50		ug/L			01/03/12 11:04	1
Toluene	ND		0.50		ug/L			01/03/12 11:04	1
Xylenes, Total	ND		1.0		ug/L			01/03/12 11:04	1
TBA	ND		4.0		ug/L			01/03/12 11:04	1
DIPE	ND		0.50		ug/L			01/03/12 11:04	1
TAME	ND		0.50		ug/L			01/03/12 11:04	1
Ethyl t-butyl ether	ND		0.50		ug/L			01/03/12 11:04	1
Ethylene Dibromide	ND		0.50		ug/L			01/03/12 11:04	1
1,2-Dichloroethane	ND		0.50		ug/L			01/03/12 11:04	1

Client: AMEC E&I, Inc Project/Site: City of Alameda

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-105377/5

Lab Sample ID: LCS 720-105377/6

Matrix: Water

Analysis Batch: 105377

Client Sample ID: Method Blank

Prep Type: Total/NA

	IVIB	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	99		67 - 130		01/03/12 11:04	1
1,2-Dichloroethane-d4 (Surr)	100		75 - 138		01/03/12 11:04	1
Toluene-d8 (Surr)	100		70 - 130		01/03/12 11:04	1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analysis Batch: 105377

Matrix: Water

Spike	LCS	LCS				%Rec.	
Added	Result	Qualifier	Unit	D	%Rec	Limits	
25.0	27.5		ug/L		110	62 - 130	
25.0	25.8		ug/L		103	79 - 120	
25.0	27.6		ug/L		110	84 - 120	
25.0	27.0		ug/L		108	78 - 118	
50.0	56.3		ug/L		113	70 - 142	
25.0	28.0		ug/L		112	85 - 127	
500	500		ug/L		100	82 - 116	
25.0	25.5		ug/L		102	69 - 134	
25.0	27.6		ug/L		110	79 - 129	
25.0	25.0		ug/L		100	70 - 130	
25.0	28.6		ug/L		114	70 - 130	
25.0	25.6		ug/L		102	70 - 126	
	Added 25.0 25.0 25.0 25.0 50.0 25.0 500 25.0 25.	Added Result 25.0 27.5 25.0 25.8 25.0 27.6 25.0 27.0 50.0 56.3 25.0 28.0 500 500 25.0 25.5 25.0 27.6 25.0 25.0 25.0 28.6	Added Result Qualifier 25.0 27.5 25.0 25.8 25.0 27.6 25.0 27.0 50.0 56.3 25.0 28.0 500 500 25.0 25.5 25.0 27.6 25.0 25.0 25.0 28.6	Added Result Qualifier Unit 25.0 27.5 ug/L 25.0 25.8 ug/L 25.0 27.6 ug/L 25.0 27.0 ug/L 50.0 56.3 ug/L 25.0 28.0 ug/L 500 500 ug/L 25.0 25.5 ug/L 25.0 27.6 ug/L 25.0 25.0 ug/L 25.0 28.6 ug/L	Added Result Qualifier Unit D 25.0 27.5 ug/L ug/L 25.0 25.8 ug/L ug/L 25.0 27.6 ug/L ug/L 50.0 56.3 ug/L ug/L 25.0 28.0 ug/L ug/L 25.0 25.5 ug/L ug/L 25.0 27.6 ug/L ug/L 25.0 25.0 ug/L ug/L 25.0 28.6 ug/L ug/L	Added Result 25.0 Qualifier 27.5 Unit ug/L ug/L D %Rec 110 25.0 27.5 ug/L 110 25.0 25.8 ug/L 103 25.0 27.6 ug/L 110 25.0 27.0 ug/L 108 50.0 56.3 ug/L 113 25.0 28.0 ug/L 112 500 500 ug/L 100 25.0 25.5 ug/L 102 25.0 27.6 ug/L 110 25.0 25.0 ug/L 110 25.0 25.0 ug/L 110 25.0 25.0 ug/L 114	Added Result Qualifier Unit D %Rec Limits 25.0 27.5 ug/L 110 62 - 130 25.0 25.8 ug/L 103 79 - 120 25.0 27.6 ug/L 110 84 - 120 25.0 27.0 ug/L 108 78 - 118 50.0 56.3 ug/L 113 70 - 142 25.0 28.0 ug/L 112 85 - 127 500 500 ug/L 100 82 - 116 25.0 25.5 ug/L 102 69 - 134 25.0 27.6 ug/L 110 79 - 129 25.0 25.0 ug/L 100 70 - 130 25.0 25.0 ug/L 114 70 - 130

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene	104	67 - 130
1,2-Dichloroethane-d4 (Surr)	101	75 ₋ 138
Toluene-d8 (Surr)	102	70 - 130

Lab Sample ID: LCSD 720-105377/7

Matrix: Water

Analysis Batch: 105377

Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Methyl tert-butyl ether	25.0	27.4		ug/L		110	62 - 130	0	20
Benzene	25.0	25.6		ug/L		102	79 - 120	1	20
Ethylbenzene	25.0	28.1		ug/L		112	84 - 120	2	20
Toluene	25.0	27.5		ug/L		110	78 ₋ 118	2	20
m-Xylene & p-Xylene	50.0	57.1		ug/L		114	70 - 142	1	20
o-Xylene	25.0	28.5		ug/L		114	85 - 127	2	20
TBA	500	497		ug/L		99	82 - 116	1	20
DIPE	25.0	25.1		ug/L		100	69 - 134	2	20
TAME	25.0	27.2		ug/L		109	79 - 129	1	20
Ethyl t-butyl ether	25.0	24.6		ug/L		98	70 - 130	2	20
Ethylene Dibromide	25.0	28.6		ug/L		114	70 - 130	0	20
1,2-Dichloroethane	25.0	25.2		ug/L		101	70 - 126	2	20

LCSD	LCSD
%Recovery	Qualifie

Surrogate	%Recovery	Quaimer	Limits
4-Bromofluorobenzene	104		67 - 130
1,2-Dichloroethane-d4 (Surr)	100		75 ₋ 138
Toluene-d8 (Surr)	100		70 - 130

TestAmerica San Francisco 1/6/2012

Page 16 of 27

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-105342/1-A Client Sample ID: Method Blank **Matrix: Solid** Prep Type: Silica Gel Cleanup Analysis Batch: 105380 Prep Batch: 105342 мв мв

Result Qualifier RL MDL Unit D Analyzed Dil Fac Analyte Prepared 1.0 12/30/11 08:36 Diesel Range Organics [C10-C28] ND mg/Kg 01/03/12 12:03

MB MB Dil Fac Surrogate %Recovery Qualifier Limits Prepared Analyzed 12/30/11 08:36 Capric Acid (Surr) 0 - 1 01/03/12 12:03 0.0007 p-Terphenyl 96 38 - 148 12/30/11 08:36 01/03/12 12:03

Lab Sample ID: LCS 720-105342/2-A Client Sample ID: Lab Control Sample **Matrix: Solid** Prep Type: Silica Gel Cleanup Analysis Batch: 105380 Prep Batch: 105342 LCS LCS %Rec. Spike

Analyte Added Result Qualifier Unit D %Rec Limits 83.3 36 - 112 Diesel Range Organics 50.4 mg/Kg 61

[C10-C28]

LCS LCS Surrogate %Recovery Qualifier Limits p-Terphenyl 89 38 - 148

Lab Sample ID: LCSD 720-105342/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid** Prep Type: Silica Gel Cleanup

Analysis Batch: 105380

Prep Batch: 105342 Spike LCSD LCSD %Rec. RPD Added Result Qualifier Unit D %Rec Limits RPD Limit 83.1 56.2 mg/Kg 36 - 112 Diesel Range Organics 11

[C10-C28]

LCSD LCSD Surrogate %Recovery Qualifier Limits 92 38 - 148 p-Terphenyl

Lab Sample ID: 720-39507-1 MS Client Sample ID: S-B1-11.5 **Matrix: Solid** Prep Type: Silica Gel Cleanup Prep Batch: 105342

Analysis Batch: 105381

MS MS Spike %Rec. Sample Sample Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits ND 83.3 54.9 mg/Kg 65 50 - 150 Diesel Range Organics

MS MS Surrogate %Recovery Qualifier Limits

p-Terphenyl 77 38 - 148

Matrix: Solid

[C10-C28]

Analysis Batch: 105381

Lab Sample ID: 720-39507-1 MSD

Prep Batch: 105342 MSD MSD Spike Sample Sample %Rec. RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit ND 83.3 40.7 F 48 50 - 150 20 mg/Kg Diesel Range Organics

[C10-C28]

MSD MSD Limits Surrogate %Recovery Qualifier 38 - 148 p-Terphenyl 69

Client Sample ID: S-B1-11.5 Prep Type: Silica Gel Cleanup

p-Terphenyl

[C10-C28]

TestAmerica Job ID: 720-39507-1

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 720-105406/1-A Client Sample ID: Method Blank **Matrix: Water** Prep Type: Silica Gel Cleanup Prep Batch: 105406 Analysis Batch: 105432 MB MB

Analyte	Result	Qualifier	RL	MDL	Unit	I	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L			01/03/12 14:06	01/04/12 21:02	1

	MB	MB					
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.002		0 - 5	01	1/03/12 14:06	01/04/12 21:02	1
p-Terphenyl	80		31 - 150	01	//03/12 14:06	01/04/12 21:02	1

Lab Sample ID: LCS 720-105406/2-A Client Sample ID: Lab Control Sample **Matrix: Water** Prep Type: Silica Gel Cleanup Analysis Batch: 105432 Prep Batch: 105406

		Spike	LUS	LUS				70Kec.	
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	
Diesel Range Organics		2500	1180		ug/L		47	32 _ 119	
[C10-C28]									

LCS LCS %Recovery Qualifier Limits Surrogate

75

Lab Sample ID: LCSD 720-105406/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Water** Prep Type: Silica Gel Cleanup

31 - 150

Analysis Batch: 105432 Prep Batch: 105406 Spike LCSD LCSD %Rec. RPD Added Result Qualifier Unit %Rec Limits RPD Limit 2500 1210 48 32 - 119 2 Diesel Range Organics ug/L

LCSD LCSD %Recovery Qualifier Surrogate Limits p-Terphenyl 66 31 - 150

QC Association Summary

Client: AMEC E&I, Inc Project/Site: City of Alameda TestAmerica Job ID: 720-39507-1

GC/MS VOA

Analysis Batch: 105341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Batcl	h
720-39507-3	W-B1	Total/NA	Water	8260B/CA_LUFT	_
				MS	
720-39507-6	W-B2	Total/NA	Water	8260B/CA_LUFT	
				MS	
720-39507-9	MW-1	Total/NA	Water	8260B/CA_LUFT	
				MS	
LCS 720-105341/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT	
				MS	
LCSD 720-105341/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT	
				MS	
MB 720-105341/4	Method Blank	Total/NA	Water	8260B/CA_LUFT	
				MS	

Analysis Batch: 105343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-39507-1	S-B1-11.5	Total/NA	Solid	8260B/CA_LUFT	105350
				MS	
720-39507-2	S-B1-19.5	Total/NA	Solid	8260B/CA_LUFT	105350
				MS	
720-39507-4	S-B2-11.5	Total/NA	Solid	8260B/CA_LUFT	105350
				MS	
720-39507-5	S-B2-19.5	Total/NA	Solid	8260B/CA_LUFT	105350
				MS	
720-39507-7	S-B3-11	Total/NA	Solid	8260B/CA_LUFT	105350
				MS	
720-39507-8	S-B3-19.5	Total/NA	Solid	8260B/CA_LUFT	105350
				MS	
LCS 720-105350/2-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT	105350
1.000 700 405050/0.4		a.a	0 " 1	MS	105050
LCSD 720-105350/3-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT	105350
MD 700 40505044 A		T	0 " 1	MS	105050
MB 720-105350/1-A	Method Blank	Total/NA	Solid	8260B/CA_LUFT	105350
_				MS	

Prep Batch: 105350

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-39507-1	S-B1-11.5	Total/NA	Solid	5035	
720-39507-2	S-B1-19.5	Total/NA	Solid	5035	
720-39507-4	S-B2-11.5	Total/NA	Solid	5035	
720-39507-5	S-B2-19.5	Total/NA	Solid	5035	
720-39507-7	S-B3-11	Total/NA	Solid	5035	
720-39507-8	S-B3-19.5	Total/NA	Solid	5035	
LCS 720-105350/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 720-105350/3-A	Lab Control Sample Dup	Total/NA	Solid	5035	
MB 720-105350/1-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 105377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-39507-10	W-B3	Total/NA	Water	8260B/CA_LUFT	
				MS	
LCS 720-105377/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT	
				MS	
LCSD 720-105377/7	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT	
				MS	
MB 720-105377/5	Method Blank	Total/NA	Water	8260B/CA_LUFT	
				MS	

TestAmerica San Francisco 1/6/2012

Page 19 of 27

3

8

9

12

13

Client: AMEC E&I, Inc Project/Site: City of Alameda

GC Semi VOA

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-39507-1	S-B1-11.5	Silica Gel Cleanup	Solid	3546	
720-39507-1 MS	S-B1-11.5	Silica Gel Cleanup	Solid	3546	
720-39507-1 MSD	S-B1-11.5	Silica Gel Cleanup	Solid	3546	
720-39507-2	S-B1-19.5	Silica Gel Cleanup	Solid	3546	
720-39507-4	S-B2-11.5	Silica Gel Cleanup	Solid	3546	
720-39507-5	S-B2-19.5	Silica Gel Cleanup	Solid	3546	
720-39507-7	S-B3-11	Silica Gel Cleanup	Solid	3546	
720-39507-8	S-B3-19.5	Silica Gel Cleanup	Solid	3546	
LCS 720-105342/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
LCSD 720-105342/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3546	
MB 720-105342/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

Analysis Batch: 105380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-39507-1	S-B1-11.5	Silica Gel Cleanup	Solid	8015B	105342
LCS 720-105342/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	105342
LCSD 720-105342/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	8015B	105342
MB 720-105342/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	105342

Analysis Batch: 105381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-39507-1 MS	S-B1-11.5	Silica Gel Cleanup	Solid	8015B	105342
720-39507-1 MSD	S-B1-11.5	Silica Gel Cleanup	Solid	8015B	105342
720-39507-2	S-B1-19.5	Silica Gel Cleanup	Solid	8015B	105342
720-39507-4	S-B2-11.5	Silica Gel Cleanup	Solid	8015B	105342
720-39507-5	S-B2-19.5	Silica Gel Cleanup	Solid	8015B	105342
720-39507-7	S-B3-11	Silica Gel Cleanup	Solid	8015B	105342
720-39507-8	S-B3-19.5	Silica Gel Cleanup	Solid	8015B	105342

Prep Batch: 105406

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-39507-3	W-B1	Silica Gel Cleanup	Water	3510C SGC	· ·
720-39507-6	W-B2	Silica Gel Cleanup	Water	3510C SGC	
720-39507-9	MW-1	Silica Gel Cleanup	Water	3510C SGC	
720-39507-10	W-B3	Silica Gel Cleanup	Water	3510C SGC	
LCS 720-105406/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 720-105406/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	
MB 720-105406/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	

Analysis Batch: 105432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-39507-3	W-B1	Silica Gel Cleanup	Water	8015B	105406
720-39507-9	MW-1	Silica Gel Cleanup	Water	8015B	105406
720-39507-10	W-B3	Silica Gel Cleanup	Water	8015B	105406
LCS 720-105406/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	105406
LCSD 720-105406/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	105406
MB 720-105406/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	105406

Analysis Batch: 105505

_ *					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-39507-6	W-B2	Silica Gel Cleanup	Water	8015B	105406

Client: AMEC E&I, Inc Project/Site: City of Alameda

Lab Sample ID: 720-39507-1 Client Sample ID: S-B1-11.5 Date Collected: 12/28/11 10:25

Matrix: Solid

Date Received: 12/29/11 13:10

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			105350	12/29/11 18:00	AC	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	105343	12/30/11 12:52	AC	TAL SF
Silica Gel Cleanup	Prep	3546			105342	12/30/11 08:36	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	105380	01/03/12 12:28	DH	TAL SF

Lab Sample ID: 720-39507-2

Client Sample ID: S-B1-19.5 Date Collected: 12/28/11 10:30

Matrix: Solid

Date Received: 12/29/11 13:10

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			105350	12/29/11 18:00	AC	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	105343	12/30/11 13:21	AC	TAL SF
Silica Gel Cleanup	Prep	3546			105342	12/30/11 08:36	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	105381	01/03/12 16:09	DH	TAL SF

Client Sample ID: W-B1 Lab Sample ID: 720-39507-3

Matrix: Water

Date Received: 12/29/11 13:10

Date Collected: 12/28/11 11:00

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS			105341	12/30/11 19:22	AC	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			105406	01/03/12 14:06	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	105432	01/04/12 16:34	DH	TAL SF

Client Sample ID: S-B2-11.5 Lab Sample ID: 720-39507-4

Date Collected: 12/28/11 11:45 Matrix: Solid

Date Received: 12/29/11 13:10

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			105350	12/29/11 18:00	AC	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	105343	12/30/11 13:50	AC	TAL SF
Silica Gel Cleanup	Prep	3546			105342	12/30/11 08:36	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	105381	01/03/12 16:33	DH	TAL SF

Client Sample ID: S-B2-19.5 Lab Sample ID: 720-39507-5

Date Collected: 12/28/11 11:50 **Matrix: Solid**

Date Received: 12/29/11 13:10

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			105350	12/29/11 18:00	AC	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	105343	12/30/11 14:19	AC	TAL SF
Silica Gel Cleanup	Prep	3546			105342	12/30/11 08:36	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	105381	01/03/12 16:57	DH	TAL SF

Client: AMEC E&I, Inc TestAmerica Job ID: 720-39507-1 Project/Site: City of Alameda

Client Sample ID: W-B2 Lab Sample ID: 720-39507-6 Date Collected: 12/28/11 12:50

Matrix: Water

Date Received: 12/29/11 13:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS	-	1	105341	12/30/11 19:51	AC	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			105406	01/03/12 14:06	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	105505	01/05/12 13:28	DH	TAL SF

Client Sample ID: S-B3-11 Lab Sample ID: 720-39507-7

Matrix: Solid Date Collected: 12/28/11 13:40

Date Received: 12/29/11 13:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			105350	12/29/11 18:00	AC	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	105343	12/30/11 14:48	AC	TAL SF
Silica Gel Cleanup	Prep	3546			105342	12/30/11 08:36	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	105381	01/03/12 17:22	DH	TAL SF

Lab Sample ID: 720-39507-8 Client Sample ID: S-B3-19.5

Date Collected: 12/28/11 13:50 **Matrix: Solid**

Date Received: 12/29/11 13:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			105350	12/29/11 18:00	AC	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	105343	12/30/11 15:17	AC	TAL SF
Silica Gel Cleanup	Prep	3546			105342	12/30/11 08:36	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	105381	01/03/12 17:46	DH	TAL SF

Client Sample ID: MW-1 Lab Sample ID: 720-39507-9

Date Collected: 12/28/11 13:45

Date Received: 12/29/11 13:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS			105341	12/30/11 20:20	AC	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			105406	01/03/12 14:06	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	105432	01/04/12 16:58	DH	TAL SF

Client Sample ID: W-B3 Lab Sample ID: 720-39507-10

Date Collected: 12/28/11 14:00 **Matrix: Water**

Date Received: 12/29/11 13:10

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS	_		105377	01/03/12 15:10	YB	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			105406	01/03/12 14:06	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	105432	01/04/12 17:23	DH	TAL SF

Laboratory References:

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Matrix: Water

Certification Summary

Client: AMEC E&I, Inc Project/Site: City of Alameda TestAmerica Job ID: 720-39507-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica San Francisco	California	State Program	9	2496

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

2

4

£

Q

9

10

13

Method Summary

Client: AMEC E&I, Inc Project/Site: City of Alameda TestAmerica Job ID: 720-39507-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTM	8260B / CA LUFT MS	SW846	TAL SF
S			
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL SF

Protocol References:

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

Laboratory References:

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

4

5

8

46

11

15

13

Sample Summary

Client: AMEC E&I, Inc Project/Site: City of Alameda TestAmerica Job ID: 720-39507-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-39507-1	S-B1-11.5	Solid	12/28/11 10:25	12/29/11 13:10
720-39507-2	S-B1-19.5	Solid	12/28/11 10:30	12/29/11 13:10
720-39507-3	W-B1	Water	12/28/11 11:00	12/29/11 13:10
720-39507-4	S-B2-11.5	Solid	12/28/11 11:45	12/29/11 13:10
720-39507-5	S-B2-19.5	Solid	12/28/11 11:50	12/29/11 13:10
720-39507-6	W-B2	Water	12/28/11 12:50	12/29/11 13:10
720-39507-7	S-B3-11	Solid	12/28/11 13:40	12/29/11 13:10
720-39507-8	S-B3-19.5	Solid	12/28/11 13:50	12/29/11 13:10
720-39507-9	MW-1	Water	12/28/11 13:45	12/29/11 13:10
720-39507-10	W-B3	Water	12/28/11 14:00	12/29/11 13:10

3

4

5

7

8

9

10

13

							→	-	•	
# 1	ALTE	C	5341 Old Redwood Highway	CHAIN OF CUSTODY -O		Seq. No.: N	o 1754		Leeina D.	
			5341 Old Redwood Highway Suite 300 Petaluma, CA 94954 707) 793-3800	Samplers: Scott Col	chan	Lab:			temp.	\$ C
Job Num	nber:	4	096114064.01	Samplers: Scott College Transport, Ogk Stier	-3950	Ž.	/ろこ	5699		<u> </u>
Name/Lo	ocation:	Ala	meda Police Deni	Girment Oak STIPE	-7	* 8.	Z2.		_	
Project N	/lanager:	Gary	Lieberman	Recorder: (Signature Required)			STUDY ANALYSI	IS REQUESTED		
Water Soil Air	Unpress H2SO4 & PHO3 B4 CL HCL HCL HCL		SAMPLE NUMBER	DATE	STATION DESCR	<u> </u>	600-87EX E00-411 E16E,01			
		YR	SEQ	YR MO DAY TIME		DEPTH DEPTH				+
	3 1 3 1	5	B 1 - 1105	11112281025						+
	2 3	<u>S</u> -	·BI-19.5 ·BI							+
	2 1	W- 5-		11112281100						+
	2 11	5-	BZ-11.5 BZ-195	1112281150			x			+
	2 3	1.1.	BZ 1763							- 40
	3 i	S-	B3-111	11112281340						6
$\frac{1}{x}$	3 1	5-	B3-19,5	11177281350		- 				- 6
	2 3	MV	 	1112281345		X				10
	Z 3	- W	B3 111111	11112221400						
			ADDITIONAL INFORMATION						In Carre	
	SAMPLE NUMBER						USTODY RECORD		12/24	[//
YR	SEQ		TURNAROUI	ND TIME/ REMARKS	Relinguished By (Signature)		Graham Al Compa + THSF	1 FC	Date/Time	
			10 day		W 22	5 T.Stit	+ TASF		<u>" 945</u>	
			/		Received By (Signature)	(Print Name) T- Stitt			Date/Time -// /3/0	0
					Relinquished By (Signature)		(Compa	any)	Date/Time	
					Received By (Signature)	(Print Name)	(Compa		2<-((\ } () Date/Time	0
				÷	Relinquished By (Signature)	(Print Name)	(Compa	iny)	Date/Time	
					Received By (Signature)	(Print Name)	(Compa	ny)	Date/Time	
			· · · · · · · · · · · · · · · · · · ·		Method of Shipment:	· · · · · · · · · · · · · · · · · · ·		***************************************		
F1008-E	3 (5/04)			atory Copy Project Office C White Yellow	Copy Field or Of Pink		r lannaria (MARA malar) et dia hidd (Mard I n Mart I dea malar di sult I malara malar			

Client: AMEC E&I, Inc Job Number: 720-39507-1

Login Number: 39507 List Source: TestAmerica San Francisco

List Number: 1 Creator: Mullen, Joan

ordator. manori, doan		
Question	Answer	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.	False	
Is the Field Sampler's name present on COC?	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	
Sample Preservation Verified.	N/A	
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	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	