



# PORT OF OAKLAND

November 4, 2004

Mr. Barney Chan  
Alameda County Health Care Services Agency  
Environmental Protection Division  
1131 Harbor Bay Parkway, #250  
Alameda, CA 94502-6577

Alameda County  
NOV 09 2004  
Environmental Health

**SUBJECT: RESULTS OF SOIL AND GRAB GROUNDWATER SAMPLING  
TERMINAL 2 SITE UTILITIES PROJECT  
SOUTH FIELD, OAKLAND INTERNATIONAL AIRPORT  
OAKLAND, CALIFORNIA**

Dear Mr. Chan:

Enclosed is a copy of the June 15, 2004 "*Results of Soil and Grab Groundwater Sampling, Terminal 2 Site Utilities Project, South Field, Oakland International Airport, Oakland, California*", prepared by Geomatrix Consultants, Inc.

This investigation identified soil and/or groundwater contamination in the areas of the former National and Avis Car Rental facilities. Should you have any questions or need additional information, please contact me at 627-1118.

Sincerely,

Dale Klettke, CHMM  
Associate Environmental Scientist  
Environmental Health & Safety Compliance

enclosure

c: w/o enc. Michele Heffes, Port Deputy Attorney  
Chris Noma, Wendel, Rosen, Black & Dean  
Greggory Brandt, Wendel, Rosen, Black & Dean

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2101 Webster Street  
12th Floor  
Oakland, CA 94612  
(510) 663-4100 • FAX (510) 663-4141



June 15, 2004  
Project 8207.009

Mr. Dale Klettke  
Associate Port Environmental Specialist  
Port of Oakland  
530 Water Street, Second Floor  
Oakland, California 94607

Subject: Results of Soil and Grab Groundwater Sampling  
Terminal 2 Site Utilities Project  
South Field, Oakland International Airport  
Oakland, California

Alameda County  
NOV 09 2004  
Environmental Health

Dear Mr. Klettke:

At the request of the Port of Oakland (Port), Geomatrix Consultants, Inc. (Geomatrix), implemented a soil and grab groundwater sampling program in June 2004 at the Oakland International Airport. Based on information provided by the Port, we understand that construction of a parking garage and underground utilities is scheduled for the near future and that the data collected from the sampling will be provided to potential construction contractors for the project. The objective of the sampling program was to assess the presence of petroleum hydrocarbons and/or related constituents in soil and grab groundwater samples collected from the subsurface in the area of proposed construction. This letter transmits the results of the sampling program.

A total of 26 borings were drilled to a maximum depth of approximately 20 feet below ground surface (bgs) to (1) collect soil and grab groundwater samples for chemical analysis; (2) measure the soil core for the presence of organic vapors; and (3) locate the fill/Bay Mud interface between the overlying artificial fill and the native Bay Mud. The approximate locations of the borings are shown on Figure 1, attached. The borings were advanced by Precision Sampling, Inc., of Richmond, California, a licensed-driller, using direct-push technology. The borings were continuously cored and logged by a Geomatrix field geologist under the direction of a California Professional Engineer or California Registered Geologist. The field geologist used a volatile organic vapor meter equipped with a photoionization detector (PID) to assess the presence of organic vapors of the soil core removed from the subsurface during drilling. PID measurements will be noted on the lithologic logs, provided as Attachment A.

Two (2) soil samples were collected from each boring, with the exception of boring B-18 (Figure 1), from which three (3) samples were collected. An additional soil sample was collected from boring B-18 based on measurable concentrations of organic vapors in the soil core using the PID. The drive casing on the drill rig was lined with clear acetate liners. Soil

**Geomatrix Consultants, Inc.**  
Engineers, Geologists, and Environmental Scientists

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samples for chemical analysis were collected by cutting the liner and capping the ends with Teflon sheets, plastic caps, and silicone tape. A grab groundwater sample was collected from each boring as well. Upon reaching the fill/Bay Mud interface, the drive casing on the drill rig was removed from the borehole and new polyvinyl chloride (PVC) casing with screen was placed in the borehole. A new, disposable bailer was used to collect each grab groundwater sample; the sample was transferred into laboratory-supplied containers. The soil and grab groundwater samples were labeled and placed in ice-chilled coolers. The samples were delivered under Geomatrix chain-of-custody procedures to the analytical laboratory for testing. The samples were analyzed for the following:

- Total petroleum hydrocarbons quantified in the diesel range (TPHd), in the motor oil range (TPHmo), and in the jet fuel range (TPHj) by U.S. Environmental Protection Agency (EPA) Method 8015M. These analyses were run with a silica gel preparation (EPA Method 3630). The grab groundwater samples were filtered by the laboratory prior to analysis using a 0.45-micron glass fiber filter.
- Total petroleum hydrocarbons quantified in the gasoline range (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8260B.

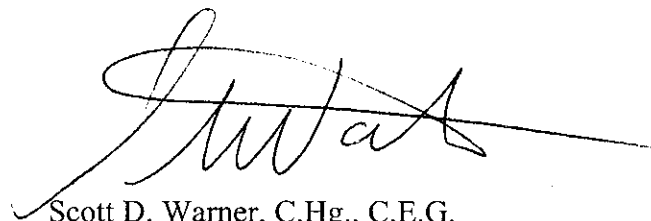
Chemical testing was performed by STL San Francisco of Pleasanton, California, a state-certified analytical laboratory. Soil and grab groundwater results are summarized in Tables 1 and 2, respectively. Copies of the analytical laboratory reports are presented in Attachment B.

We appreciate this opportunity to provide the Port with our services. Please call either of the undersigned at (510) 663-4100 if you have any questions or require any additional information.

Sincerely yours,  
GEOMATRIX CONSULTANTS, INC.



Elizabeth K. Wells, P.E.  
Senior Engineer



Scott D. Warner, C.Hg., C.E.G.  
Principal Hydrogeologist, Vice President

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Port of Oakland  
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Attachments: Table 1 – Soil Analytical Results  
Table 2 – Grab Groundwater Analytical Results  
Figure 1 – Boring Locations  
Appendix A – Lithologic Logs  
Appendix B – Analytical Laboratory Reports

TABLE 1

SOIL ANALYTICAL RESULTS<sup>1</sup>  
 Terminal 2 Site Utilities Project  
 South Field, Oakland International Airport  
 Oakland, California

Concentrations in milligrams/kilogram (mg/kg)

Boring ID	Sample Depth (ft bgs)	TPHd	TPHmo	TPHj	TPHg	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE
<b>Utility Trench Alignment</b>										
SB-1	3.0	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	6.5	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
SB-2	3.0	27	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	6.5	6.7	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
SB-3	3.0	8.5	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	6.5	64	1100	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
SB-4	3.0	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	7.5	12	120	<1.0	<1.0	<0.005	0.0072	<0.005	<0.005	<0.005
SB-5	3.0	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	8.5	1.3	<50	<1.0	<1.0	<0.005	0.0072	<0.005	<0.005	0.018
SB-6	3.0	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	8.5	11	140	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
SB-7	3.0	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	8.0	4.1	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
SB-8	3.0	18	200	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	8.0	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
SB-9	3.0	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	7.0	4.2	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
SB-10	3.0	14	55	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	9.0	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
SB-11	3.0	8.5	71	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	9.0	29	710	<5.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
SB-12	3.0	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	9.0	34	520	<2.0	<1.0	<0.005	0.03	<0.005	<0.005	<0.005
SB-13	3.0	18	560	<5.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	7.0	1.7	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005

TABLE 1

**SOIL ANALYTICAL RESULTS<sup>1</sup>**  
 Terminal 2 Site Utilities Project  
 South Field, Oakland International Airport  
 Oakland, California

Concentrations in milligrams/kilogram (mg/kg)

Boring ID	Sample Depth (ft bgs)	TPHd	TPHmo	TPHj	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
SB-14	3.0	<b>2.1</b>	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	6.5	<b>21</b>	<b>250</b>	<2.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
SB-15	3.0	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	8.5	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
SB-16	3.0	<b>1.4</b>	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	8.5	<b>13</b>	<b>130</b>	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
SB-17	2.5	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	5.3	<1.0	<50	<1.0	<1.0	<0.005	<b>0.0072</b>	<0.005	<0.005	<0.005
SB-18	3.0	<1.0	<50	<b>3.8</b>	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	10.2	<1.0	<50	<b>16</b>	<b>1.1</b>	<0.005	<0.005	<0.005	<0.005	<0.005
	11.5	<1.0	<50	<b>110</b>	<b>130</b>	<0.500	<0.500	<0.500	<b>0.54</b>	<0.500
<b>Proposed Garage Area</b>										
SB-19	3.0	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	6.5	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
SB-20	3.0	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	6.5	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
SB-21	3.0	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	6.5	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
SB-22	3.0	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	6.8	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
SB-23	3.0	<b>3.6</b>	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	5.0	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
SB-24	3.0	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	5.0	<b>6.1</b>	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.500

TABLE 1

**SOIL ANALYTICAL RESULTS<sup>1</sup>**  
 Terminal 2 Site Utilities Project  
 South Field, Oakland International Airport  
 Oakland, California

Concentrations in milligrams/kilogram (mg/kg)

Boring ID	Sample Depth (ft bgs)	TPHd	TPHmo	TPHj	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
<b>Proposed Lift Station Area</b>										
SB-25	3.0	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	5.5	<b>55</b>	<b>350</b>	<2.0	<1.0	<0.005	<b>0.0064</b>	<0.005	<0.005	<0.005
SB-26	3.0	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
	6.5	<1.0	<50	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.500

Notes:

Samples collected by Geomatrix Consultants, Inc., June 4-7, 2004 and analyzed by STL San Francisco of Pleasanton, California, for TPHd, TPHmo and TPHg by EPA Method 8015M following silica gel preparation (EPA Method 3630), and TPHg and benzene, toluene, ethylbenzene, xylenes and MTBE by EPA Method 8260.

Detections as reported by the laboratory are shown in bold face type.

"<" indicates analyte not reported as detected at or above concentration shown.

Abbreviations:

ft bgs = feet below ground surface (approximate depth)

TPHd = total petroleum hydrocarbons quantified in the diesel range

TPHmo = total petroleum hydrocarbons quantified in the motor oil range

TPHj = total petroleum hydrocarbons quantified in the jet fuel range

TPHg = total petroleum hydrocarbons quantified in the gasoline range

MTBE = methyl tertiary butyl ether

TABLE 2

GRAB GROUNDWATER ANALYTICAL RESULTS<sup>1</sup>

Terminal 2 Site Utilities Project  
 South Field, Oakland International Airport  
 Oakland, California

Concentrations in micrograms per liter (µg/L)

Boring ID	TPHd	TPHmo	TPHj	TPHg	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE
<b>Utility Trench Alignment</b>									
SB-1	<50	<500	<50	<50	<0.50	2.5	<0.50	<1.0	<0.50
SB-2	<50	<500	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50
SB-3	<50	<500	<50	<50	<0.50	1.1	<0.50	<1.0	<0.50
SB-4	<50	<500	<50	<50	<0.50	0.76	<0.50	<1.0	29
SB-5	<50	<500	<50	1500	<10	<10	<10	<20	1700
SB-6	<50	<500	<50	<50	<0.50	0.56	<0.50	<1.0	2.4
SB-7	<50	<500	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50
SB-8	<50	<500	<50	<50	<0.50	<0.50	<0.50	<1.0	5.5
SB-9	<50	<500	<50	<50	<0.50	<0.50	<0.50	<1.0	2.6
SB-10	<50	<500	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50
SB-11	<50	<500	<50	<50	<0.50	0.66	<0.50	<1.0	<0.50
SB-12	<50	<500	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50
SB-13	<50	<500	<50	290	<2.5	<2.5	<2.5	<5.0	460
SB-14	<50	<500	<50	<50	<0.50	0.62	<0.50	<1.0	<0.50
SB-15	<110	<1100	<110	<50	<0.50	<0.50	<0.50	<1.0	<0.50
SB-16	<50	<500	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50
SB-17	<50	<500	<50	<50	<0.50	4.7	<0.50	<1.0	<0.50
SB-18	<50	<500	98	13,000	<2.5	<2.5	<2.5	<5.0	<2.5
<b>Proposed Garage</b>									
SB-19	<50	<500	<50	<50	<0.50	1.2	<0.50	<1.0	1.7
SB-20	<50	<500	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50
SB-21	<50	<500	<50	<50	<0.50	0.6	<0.50	<1.0	<0.50
SB-22	<50	<500	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50
SB-23	<50	<500	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50
SB-24	<50	<500	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50



TABLE 2

**GRAB GROUNDWATER ANALYTICAL RESULTS<sup>1</sup>**

Terminal 2 Site Utilities Project  
 South Field, Oakland International Airport  
 Oakland, California

Concentrations in micrograms per liter (µg/L)

Boring ID	TPHd	TPHmo	TPHj	TPHg	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE
<b>Proposed Lift Station</b>									
SB-25	<50	<500	<50	<50	<0.50	<0.50	<0.50	<1.0	<0.50
SB-26	<50	<500	<50	<50	<0.50	<b>0.53</b>	<0.50	<1.0	<0.50

Notes:

Samples collected by Geomatrix Consultants, Inc., June 4-7, 2004 and analyzed by STL San Francisco of Pleasanton, California, for TPHd, TPHmo and TPHg by EPA Method 8015M following silica gel preparation (EPA Method 3630) and filtration using a 0.45-micron glass fiber filter, and TPHg and benzene, toluene, ethylbenzene, xylenes and MTBE by EPA Method 8260.

Detections as reported by the laboratory are shown in bold face type.

"<" indicates analyte not reported as detected at or above concentration shown.

Abbreviations:

ft bgs = feet below ground surface (approximate depth)

TPHd = total petroleum hydrocarbons quantified in the diesel range

TPHmo = total petroleum hydrocarbons quantified in the motor oil range

TPHj = total petroleum hydrocarbons quantified in the jet fuel range

TPHg = total petroleum hydrocarbons quantified in the gasoline range

MTBE = methyl tertiary butyl ether

# Appendix A

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Lithologic Logs

PROJECT: OAKLAND INTERNATIONAL AIRPORT  
Oakland, California

## Boring Log Explanation

BORING LOCATION:

ELEVATION AND DATUM:

DRILLING CONTRACTOR:

DATE STARTED:

DATE FINISHED:

DRILLING METHOD:

TOTAL DEPTH (ft.):

MEASURING POINT:

DRILLING EQUIPMENT:

DEPTH TO  
WATER

FIRST

COMPL.

24 HRS.

SAMPLING METHOD:

LOGGED BY:

HAMMER WEIGHT:

DROP:

RESPONSIBLE PROFESSIONAL:

REG. NO.

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION	REMARKS
	Sample No.	Sample	Blows/ Foot		NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	
					Surface Elevation:	
					Notes	
1					1. Soil described using visual-manual procedures of American Society of Testing and Materials (ASTM) Standard D 2488 for guidance; a Standard based on the Unified Soil Classification System.	
2					2. Soil color described according to Munsell Color Chart.	
3					3. Dashed lines separating soil strata represent inferred boundaries between sampled intervals that may be abrupt or gradual transitions.	
4					4. Solid lines represent approximate boundaries observed within sample intervals.	
5					5. OVM = organic vapor meter, reading in volumetric parts per million.	
6					6. Odor, if noted is subjective and not necessarily indicative of specific compounds or concentrations.	
7					7. NA = Not applicable.	
8					8. ND = No data.	
9					Interval of recovered soil core collected with split-barrel sampler.	
10						
11					Interval of no recovery.	
12						
13	SB-1-13.0				Sample collected for chemical analysis and sample identification.	
14						
15						



PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Log of Boring No. SB-1</b>	
BORING LOCATION: Equipment storage yard		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/4/04	DATE FINISHED: 6/4/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 12.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.)	FIRST 7.5      COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
	Sample No.	Sample	Blows/ Foot			
					Surface Elevation: Not surveyed	
1				0.5	ASPHALTIC CONCRETE AGGREGATE BASE	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2				0	CLAYEY SAND (SC): dark gray (5Y 4/1), moist, 65% fine to coarse sand, 30% low plasticity fines, 5% fine to coarse gravel	
3	SB-1-3.0			0	POORLY GRADED SAND (SP): olive (5Y 5/3), moist, 95% fine to medium sand, 5% fines	
4				0		
5				0	CLAYEY SAND (SC)	
6	SB-1-6.5			0		
7				0		
8				0	dark gray (5Y 4/1) wet	
9				0	olive (5Y 5/3) dark gray (5Y 4/1)	
10				0	LEAN CLAY (CL)	
11				0		
12				0	LEAN CLAY (CL): dark gray (5Y 5/4/1), moist, 95% fines, 5% fine sand, medium plasticity, soft, contains shells [BAY MUD] Bottom of boring at 12.0 feet	
13						Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
14						
15						

PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Log of Boring No. SB-2</b>	
BORING LOCATION: Equipment storage yard		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/4/04	DATE FINISHED: 6/4/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 12.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.)	FIRST 8.7 COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.  Surface Elevation: Not surveyed	REMARKS
	Sample No.	Sample	Blows/ Foot			
0					ASPHALTIC CONCRETE AGGREGATE BASE	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.  Grab groundwater sample SB-2 collected through 5 feet of 3/4-inch OD Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 7 to 12 feet bgs.  Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
1				0	CLAYEY SAND (SC): olive brown (5Y 4/3), moist, 60% fine to coarse sand, 30% low plasticity fines, 10% fine to coarse gravel	
2				0	POORLY GRADED SAND (SP): olive gray (5Y 4/2), moist, 95% fine to medium sand, 5% fines	
3	SB-2-3.0			0	POORLY GRADED SAND with CLAY (SP-SC): olive gray (5Y 4/2), moist, 90% fine to medium sand, 10% low plasticity fines	
4				0	CLAYEY SAND (SC): dark gray (5Y 4/1), moist, 65% fine to coarse sand, 35% medium plasticity fines	
5				0	POORLY GRADED SAND with CLAY (SP-SC): olive (5Y 5/3), moist, 90% fine to medium sand, 10% fines	
6	SB-2-6.5			0	POORLY GRADED SAND (SP): dark gray (5Y 4/1), wet, 95% fine sand, 5% fines	
7				0	CLAYEY SAND (SC): dark gray (5Y 4/1), wet, 75% fine to coarse sand, 20% medium plasticity fines, 5% fine to medium gravel, contains shells	
8				0	LEAN CLAY (CL): dark gray (5Y 4/1), moist, 95% fines, 5% fine sand, medium plasticity, soft [BAY MUD]	
9				0	Bottom of boring at 12.0 feet	
10				0		
11				0		
12				0		
13				0		
14				0		
15				0		

OAKBOREY (REV. 3/00)



PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Log of Boring No. SB-3</b>	
BORING LOCATION: Equipment storage yard		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/4/04	DATE FINISHED: 6/4/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 12.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.): 8.0	FIRST 8.0 COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.  Surface Elevation: Not surveyed	REMARKS
	Sample No.	Sample	Blows/ Foot			
1				1.7	ASPHALTIC CONCRETE	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
				0.5	AGGREGATE BASE	
2				0.9	CLAYEY SAND (SC): dark gray (5Y 4/1), moist, 70% fine to coarse sand, 20% low plasticity fines, 10% fine gravel	
3	SB-3-3.0			0	↓ olive brown (2.5Y 4/3), 65% fine to coarse sand, 35% low plasticity fines, trace fine gravel	
4				0	↓ 80% fine to coarse sand, 20% low plasticity fines, trace wood debris	
5				0	↓ dark gray (5Y 4/1), 85% fine to coarse sand, 15% low plasticity fines	
6	SB-3-6.5			0	SANDY LEAN CLAY (CL): dark gray (5Y 4/1), moist, 65% fines, 35% fine to coarse sand, low to medium plasticity, firm	
7						
8				0	POORLY GRADED SAND (SP): olive gray (5Y 4/2), wet, 95% fine sand, 5% fines	
9				0	CLAYEY SAND (SC): olive gray (5Y 4/2), wet, 75% fine to medium sand, 20% medium plasticity fines, 10% fine to medium gravel, contains shells	
10				0	LEAN CLAY (CL): olive gray (5Y 4/2), moist, 95% fines, 5% fine sand, medium plasticity, firm [BAY MUD]	
11				0	↓ dark gray (5Y 4/1), soft	
12					Bottom of boring at 12.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
13						
14						
15						

OAKBORE (REV. 3/00)



PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Log of Boring No. SB-4</b>	
BORING LOCATION: Shuttle van lot		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/4/04	DATE FINISHED: 6/4/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 12.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.): 8.5	FIRST 8.5 COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.  Surface Elevation: Not surveyed	REMARKS
	Sample No.	Sample	Blows/ Foot			
0					ASPHALTIC CONCRETE	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
0					AGGREGATE BASE	
1					CLAYEY SAND-SANDY LEAN CLAY (SC-CL): olive (5Y 5/4), moist, 55% fine to coarse sand, 45% medium plasticity fines	
2					LEAN CLAY with GRAVEL (CL): olive brown (2.5Y 4/3), moist, 75% fines, 20% fine to coarse gravel, 5% fine sand, medium plasticity, firm	
3	SB-4-3.0				LEAN CLAY (CL): olive brown (2.5Y 4/3), moist, 90% fines, 5% fine sand, 5% fine to medium gravel, medium plasticity, firm	
4					LEAN CLAY with SAND (CL): olive brown (2.5YR 4/3), moist, 85% fines, 15% fine sand, medium plasticity, firm	
5					LEAN CLAY (CL): dark gray (5Y 4/1), moist, 90% fines, 10% fine sand, medium plasticity, firm	
6				4	CLAYEY SAND (SC): dark gray (5Y 4/1), moist, 80% fine to medium sand, 20% medium plasticity fines	
7	SB-4-7.5			0	85% fine to medium sand, 15% fines olive (5Y 4/3), 75% fine to medium sand 25% fines	
8					LEAN CLAY (CL): dark gray (5Y 4/1), moist, 95% fines, 5% fine sand, medium plasticity, firm	
9					CLAYEY SAND (SC): dark gray (5Y 4/1), wet, 75% fine to coarse sand, 25% medium plasticity fines	
10					POORLY GRADED SAND with CLAY (SP-SC): dark gray (5Y 4/1), wet, 90% fine to medium sand, 10% low plasticity fines, contains shells	
11					LEAN CLAY (CL)	
12					LEAN CLAY (CL): dark gray (5Y 4/1), moist, 95% fines, 5% fine sand, medium plasticity, soft [BAY MUD] Bottom of boring at 12.0 feet	
13						Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
14						
15						

OAKBORE (REV. 3/00)



PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Log of Boring No. SB-5</b>	
BORING LOCATION: Shuttle van lot		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/5/04	DATE FINISHED: 6/5/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 12.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.): 8.5	FIRST 8.5 COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
	Sample No.	Sample	Blows/ Foot			
					Surface Elevation: Not surveyed	
0				0	ASPHALTIC CONCRETE AGGREGATE BASE	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
1				0	CLAYEY SAND (SC): olive brown (2.5Y 4/3), moist, 55% fine to coarse sand, 40% medium plasticity fines, 5% fine gravel	
2				0		
3	SB-5-3.0			0		
4				0	SANDY LEAN CLAY (CL): olive brown (2.5Y 4/3), moist, 65% fines, 35% fine to medium sand, medium plasticity, firm	
5				0	CLAYEY SAND (SC): olive brown (2.5Y 4/3), moist, 60% fine to coarse sand, 35% medium plasticity fines, 5% fine gravel	Grab groundwater sample SB-5 collected through 5 feet of 3/4-inch OD Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 7 to 12 feet bgs.
6				0		
7				0		
8	SB-5-8.5			0	LEAN CLAY with SAND (SC): olive brown (2.5Y 4/3), moist, 85% fines, 15% fine sand, medium plasticity, firm	
9				0	SANDY LEAN CLAY (CL): olive brown (2.5Y 4/3), moist, 65% fines, 35% fine sand, medium plasticity, firm	
10				0	CLAYEY SAND (SC): olive brown (2.5Y 4/3), wet, 75% fine to coarse sand, 25% medium plasticity fines	
11				0	POORLY GRADED SAND with CLAY (SP-SC): dark gray (5Y 4/1), wet, 90% fine to medium sand, 10% low plasticity fines, contains shells	
12				0	LEAN CLAY (CL): dark gray (5Y 4/1), moist, 95% fines, 5% fine sand, medium plasticity, soft [BAY MUD]	
13					Bottom of boring at 12.0 feet	
14						
15						

OAKBOREV (REV. 3/00)



Geomatrix Consultants

Project No. 8207.009

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PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Log of Boring No. SB-6</b>	
BORING LOCATION: Shuttle van lot		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/5/04	DATE FINISHED: 6/5/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 12.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.): 9.5	FIRST 9.5 COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
	Sample No.	Sample	Blows/ Foot			
					Surface Elevation: Not surveyed	
0					ASPHALTIC CONCRETE AGGREGATE BASE	
1				0		OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2				0	LEAN CLAY with SAND (CL): olive brown (2.5Y 4/3), moist, 80% fines, 20% fine sand, medium plasticity, firm	
3	SB-6-3.0			0		
4				0		
5				0		
6				0	LEAN CLAY (CL): olive brown (2.5Y 4/3), moist, 90% fines, 10% fine sand, medium plasticity, firm	
7				0	LEAN CLAY with SAND (CL): olive brown (2.5Y 4/3), moist, 75% fines, 25% fine sand, trace fine to medium gravel, medium plasticity, firm	
8				0	LEAN CLAY with GRAVEL (CL): olive brown (2.5Y 4/3), moist, 75% fines, 15% fine to coarse gravel, 10% fine sand, medium plasticity, firm	
9	SB-6-8.5			0	LEAN CLAY with SAND (CL): olive brown (2.5Y 4/3), moist, 80% fines, 15% fine sand, 5% fine gravel, medium plasticity, firm	
10				0	POORLY GRADED SAND (SP): dark gray (5Y 4/1), wet, 95% fine to medium sand, 5% fines, contains shells	
11				0	LEAN CLAY (CL): dark gray (5Y 4/1), moist, 95% fines, 5% fine sand, medium plasticity, soft [BAY MUD]	
12					Bottom of boring at 12.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
13						
14						
15						



PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Log of Boring No. SB-7</b>	
BORING LOCATION: Shuttle van lot		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/5/04	DATE FINISHED: 6/5/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 12.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.)	FIRST 8.1
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.H.G. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.  Surface Elevation: Not surveyed	REMARKS
	Sample No.	Sample	Blows/ Foot			
0				0	ASPHALTIC CONCRETE AGGREGATE BASE	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
1				0		
2				0	LEAN CLAY with SAND (CL): olive brown (2.5Y 4/3), moist, 80% fines, 20% fine to medium sand, medium plasticity, firm	
3	SB-7-3.0			0	LEAN CLAY (CL): olive brown (2.5Y 4/3), moist, 90% fines, 5% fine sand, 5% fine gravel, medium plasticity, firm	
4				0		
5				0	SANDY LEAN CLAY (CL): olive brown (2.5Y 4/3), moist, 60% fines, 40% fine to coarse sand, medium plasticity, firm	
6				0	LEAN CLAY with SAND (CL): olive brown (2.5Y 4/3), moist, 85% fines, 15% fine sand, trace fine gravel, medium plasticity, firm	
7				0	LEAN CLAY (CL): olive brown (2.5Y 4/3), moist, 90% fines, 10% fine sand, medium plasticity, firm	
8	SB-7-8.0			0	↓ olive gray (5Y 4/2)	
9				0	CLAYEY SAND (SC): olive gray (5Y 4/2), wet, 85% fine to medium sand, 15% medium plasticity fines	
10				0	LEAN CLAY (CL): olive gray (5Y 4/2), moist, 95% fines, 5% fine sand, medium plasticity, soft	
11				0	LEAN CLAY with SAND (CL): dark gray (5Y 4/1), moist, 85% fines, 15% fine sand, medium plasticity, soft	
12				0	LEAN CLAY (CL): dark gray (5Y 4/1), moist, 95% fines, 5% fine sand, medium plasticity, soft [BAY MUD]	
13					Bottom of boring at 12.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
14						
15						



PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Log of Boring No. SB-8</b>	
BORING LOCATION: 80 feet from SB-9		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/6/04	DATE FINISHED: 6/6/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 12.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.)	FIRST 8.5 COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		LOGGED BY: C. Dowman	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.  Surface Elevation: Not surveyed	REMARKS
	Sample No.	Sample	Blows/ Foot			
1					ASPHALTIC CONCRETE	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.  Grab groundwater sample SB-8-0604 collected through 5 feet of 3/4-inch OD Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 7 to 12 feet bgs.
2					AGGREGATE BASE	
3	SB-8-3.0				CLAYEY SAND (SC): dark gray (10YR 4/1), moist, 65% fine sand, 35% low to medium plasticity fines ↓ very dark gray (N 3/), 85% fine sand, 15% low plasticity fines	
4					SANDY LEAN CLAY (CL): brown (7.5YR 4/2), moist, 65% fines, 35% fine sand, medium plasticity, firm	
5						
6						
7						
8	SB-8-8.0				CLAYEY SAND (SC): dark gray (2.5Y 3/1), moist, 70% fine sand, 30% low to medium plasticity fines	
9					POORLY GRADED SAND (SP): grayish brown (2.5YR 5/2), wet, 95% fine to medium sand, 5% fines	
10					LEAN CLAY (CL): dark gray (5Y 4/1), moist, 95% fines, 5% fine sand, medium plasticity, soft, contains trace shells	
11						
12					Bottom of boring at 12.0 feet	
13						Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
14						
15						

PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Log of Boring No. SB-9</b>	
BORING LOCATION: 75 feet from SB-10		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/6/04	DATE FINISHED: 6/6/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 12.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.)	FIRST 8.3 COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		LOGGED BY: C. Dowman	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
	Sample No.	Sample	Blows/ Foot			
					Surface Elevation: Not surveyed	
0					ASPHALTIC CONCRETE	
1				0	AGGREGATE BASE	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2				0	CLAYEY SAND (SC): light olive brown (2.5Y 5/4), moist, 80% fine sand, 20% low plasticity fines	
3	SB-9-3.0					
4						
5				0	↓ olive gray (5Y 4/2)	
6	SB-9-6.5				↓ 70% fine to medium sand, 30% medium plasticity fines	Grab groundwater sample SB-9-0604 collected through 5 feet of 3/4-inch OD Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 7 to 12 feet bgs.
7				0	LEAN CLAY (CL): greenish black (5GY 3/1), moist, 90% fines, 10% fine sand, medium plasticity, firm, trace coarse fine gravel	
8						
9				0	POORLY GRADED SAND (SP): grayish brown (2.5YR 5/2), wet, 95% fine to medium sand, 5% fines	
10						
11				0		
12					LEAN CLAY (CL): dark gray (5Y 4/1), moist, 95% fines, 5% fine sand, medium plasticity, soft Bottom of boring at 12.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
13						
14						
15						



PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Log of Boring No. SB-10</b>	
BORING LOCATION: 75 feet from SB-11		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/6/04	DATE FINISHED: 6/6/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 12.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.): 9.5	FIRST 9.5 COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		LOGGED BY: C. Dowman	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES		OVM READING (ppm)	DESCRIPTION	REMARKS
	Sample No.	Sample Blows/ Foot		NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	
				Surface Elevation: Not surveyed	
0				ASPHALTIC CONCRETE	
1				AGGREGATE BASE	
2				CLAYEY SAND (SC): dark gray (2.5Y 4/1), moist, 80% fine sand, 20% low plasticity fines	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2				85% fine sand, 15% low plasticity fines	
3	SB-10-3.0				
4					
5					
6				dark greenish gray (10Y 4/1), 85% fine to medium sand, 15% low to medium plasticity fines	Grab groundwater sample SB-10-0604 collected through 5 feet of 3/4-inch OD Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 7 to 12 feet bgs.
7				LEAN CLAY (CL): greenish black (5GY 3/1), moist, 90% fines, 10% fine sand, medium plasticity, firm, contains wood fragments	
8					
9	SB-10-9.0			CLAYEY SAND (SC): olive gray (5Y 4/2), moist, 70% fine sand, 30% low to medium plasticity fines	
10				POORLY GRADED SAND (SP): grayish brown (2.5YR 5/2), wet, 95% fine to medium sand, 5% fines	
11				LEAN CLAY (CL): dark gray (5Y 4/1), moist, 95% fines, 5% fine sand, medium plasticity, soft	
12				Bottom of boring at 12.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
13					
14					
15					

PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Log of Boring No. SB-11</b>	
BORING LOCATION: 80 feet west of SB-12		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/6/04	DATE FINISHED: 6/6/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 12.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.): 9.5	FIRST 9.5
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		COMPL. NA	
HAMMER WEIGHT: NA		LOGGED BY: C. Dowman	
DROP: NA		RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
	Sample No.	Sample	Blows/ Foot			
					Surface Elevation: Not surveyed	
0					ASPHALTIC CONCRETE	
1				0	AGGREGATE BASE	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2				0	CLAYEY SAND (SC): olive gray (5Y 4/2), moist, 70% fine to medium sand, 30% low to medium plasticity fines	
3	SB-11-3.0					
4				0		
5				0	SANDY LEAN CLAY (CL): very dark gray (5Y 3/1), moist, 60% fines, 40% fine to medium sand, low plasticity, firm	Grab groundwater sample SB-11-0604 collected through 5 feet of 3/4-inch OD Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 7 to 12 feet bgs.
6				0	CLAYEY SAND (SC): dark greenish gray (5GY 3/1), moist, 80% fine to medium sand, 20% low plasticity fines	
7				0		
8				0	LEAN CLAY (CL): greenish black (5GY 2.5/1), moist, 90% fines, 10% fine sand, medium plasticity, firm, contains wood fragments	
9	SB-11-9.0					
10				0	dark greenish gray (10G 2/1), moist, 85% fines, 15% fine to medium sand	
11				0	CLAYEY SAND (SC): dark bluish gray (5B 4/1), wet, 80% fine sand, 20% low plasticity fines LEAN CLAY (CL): dark gray (5Y 4/1), moist, 95% fines, 5% fine sand, medium plasticity, soft	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
12					Bottom of boring at 12.0 feet	
13						
14						
15						



PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Boring Log SB-13</b>	
BORING LOCATION: 20 feet W of parking, 50 feet N of airport thrufare		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/7/04	DATE FINISHED: 6/7/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.):	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER	FIRST 8.5
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		COMPL.	24 HRS. NA
HAMMER WEIGHT: NA		LOGGED BY: C. Dowman	
DROP: NA		RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
	Sample No.	Sample	Blows/Foot			
					Surface Elevation: Not surveyed; datum is ground surface	
1					ASPHALTIC CONCRETE	
2					AGGREGATE BASE	
3					CLAYEY SAND ("SC"): dark grayish brown ("2.5Y 4/2"), moist, 65% fine sand, 35% low to medium plasticity fines	
4					olive brown (2.5Y 4/4), 70% fine to medium sand, 25% low plasticity fines, 5% fine to coarse gravel	
5						Grab groundwater sample SB-13-0604 collected through 5 feet of 3/4-inch OD Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 7 to 12 feet bgs.
6						
7						
8						
9					wet	
10					SANDY LEAN CLAY ("CL"): dark greenish gray ("5GY 4/1"), moist, 70% fines, 30% fine sand, medium plasticity, soft	
11					POORLY GRADED SAND with CLAY ("SP-SC"): dark gray ("N 4"), moist, 90% fine to medium sand, 10% low plasticity fines	
12					LEAN CLAY ("CL"): dark gray ("5Y 4/1"), moist, 95% fines, 5% fine sand, medium plasticity, soft	
13					Bottom of boring at 12.0 feet	
14						
15						Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.



PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Log of Boring No. SB-15</b>	
BORING LOCATION: 80 feet west of SB-14		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/7/04	DATE FINISHED: 6/7/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 12.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.): 9.0	FIRST 9.0 COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		LOGGED BY: C. Dowman	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
	Sample No.	Sample	Blows/ Foot			
					Surface Elevation: Not surveyed	
1				0	ASPHALTIC CONCRETE	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2				0	AGGREGATE BASE	
3				0	CLAYEY SAND (SC): olive brown (2.5Y 4/4), moist, 70% fine sand, 30% low plasticity fines	
4				0	↓ olive gray (5Y 4/2), moist, 85% fine sand, 15% low plasticity fines	
5				0		
6				0		
7				0	↓ dark gray (5Y 4/1) 80% fine to medium sand, 20% low plasticity fines	
8				0		
9				0	↓ wet	
10				0		
11				0	POORLY GRADED SAND with CLAY (SP-SC): dark gray (N 4/), wet, 90% fine to medium sand, 10% low plasticity fines	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
12				0	LEAN CLAY (CL): dark gray (5Y 4/1), moist, 95% fines, 5% fine sand, medium plasticity, soft Bottom of boring at 12.0 feet	
13						
14						
15						





PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Log of Boring No. SB-16</b>	
BORING LOCATION: 30' from terminal thruway, 70' from elevated piepline		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/7/04	DATE FINISHED: 6/7/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 12.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.): 9.0	FIRST 9.0
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		LOGGED BY: C. Dowman	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
	Sample No.	Sample	Blows/ Foot			
					Surface Elevation: Not surveyed	
					ASPHALTIC CONCRETE	
1				0	CLAYEY SAND (SC): dark olive brown (2.5Y 3/3), moist, 70% fine to medium sand, 25% low to medium plasticity fines, 5% fine to coarse gravel	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2				0	POORLY GRADED SAND with CLAY (SP-SC): dark gray (2.5Y 4/1), moist, 90% fine sand, 10% low plasticity fines	
3	SB-16-3.0			0		
4				0		
5				0		
6				0		
7				0		
8	SB-16-8.5			0	85% fine to medium sand, 5% fine to coarse sand, 10% low plasticity fines	
9				0	dark gray (4 / ), wet, 90% fine sand, 10% low plasticity fines	
10				0		
11				0		
12				0	LEAN CLAY (CL): dark gray (5Y 4/1), moist, 95% fines, 5% fine sand, medium plasticity, soft Bottom of boring at 12.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
13						
14						
15						

OAKBOREX (REV. 3/00)



PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		Log of Boring No. SB-17	
BORING LOCATION: Along pipeline alignment		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/4/04	DATE FINISHED: 6/4/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 12.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.): 5.8	FIRST 5.8 COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION	REMARKS
	Sample No.	Sample	Blows/ Foot		NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	
					Surface Elevation: Not surveyed	
1				0.5	CLAYEY SAND (SC): olive brown (2.5Y 4/3), moist, 60% fine to coarse sand, 40% medium plasticity fines	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2	SB-17-2.5			0	POORLY GRADED SAND (SP): olive gray (5Y 5/2), moist, 95% fine to medium sand, 5% fines	
3						
4				0	CLAYEY SAND (SC): olive brown (2.5Y 4/3), moist, 70% fine to coarse sand, 25% medium plasticity fines, 5% fine gravel	
5	SB-17-5.3			0	POORLY GRADED SAND with CLAY (SP-SC): olive gray (5Y 4/2), moist, 90% fine to medium sand, 10% low plasticity fines, contains shells	
6				0	wet	
7				0	LEAN CLAY (CL): dark greenish gray (5G 4/1), moist, 95% fines, 5% fine sand, medium plasticity, firm	
8				0	CLAYEY SAND (SC): olive brown (2.5Y 4/3), wet, 65% fine to coarse sand, 25% medium plasticity fines, 10% fine to medium gravel	
9				0	POORLY GRADED SAND (SP): dark gray (N 4/), wet, 95% fine to medium sand, 5% fines, contains shells	
10				0	LEAN CLAY (CL): dark gray (N 4/), moist, 95% fines, 5% fine sand, medium plasticity, very soft, contains shells [BAY MUD]	
11				0		
12				0	Bottom of boring at 12.0 feet	
13						
14						
15						



PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Log of Boring No. SB-18</b>	
BORING LOCATION: Along pipeline alignment		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/4/04	DATE FINISHED: 6/4/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 12.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.)	FIRST NA COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
	Sample No.	Sample	Blows/ Foot			
					Surface Elevation: Not surveyed	
0					CLAYEY SAND with GRAVEL (SC): olive brown (2.5Y 4/3), moist, 50% fine to coarse sand, 25% fine to coarse gravel, 20% medium plasticity fines	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
1						
2					CLAYEY SAND (SC): olive brown (2.5Y 4/3), moist, 65% fine to coarse sand, 30% medium plasticity fines, 5% fine gravel	Hand augered to 4 feet bgs.
3						
4					POORLY GRADED SAND with CLAY (SP-SC): olive (5Y 4/3), moist, 90% fine to medium sand, 10% low plasticity fines	Grab groundwater sample SB-18 collected through 5 feet of 3/4-inch OD Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 7 to 12 feet bgs.
5					LEAN CLAY (CL): olive gray (5Y 4/2), moist, 95% fines, 5% fine sand, medium plasticity, firm, trace charcoal fragments	
6					90% fines 10% fine sand	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
7					95% fines, 5% fine sand	
8					CLAYEY SAND (SC)	
9						
10						
11				81	dark gray (N 4/ ), soft, odor, contains shells [BAY MUD]	
12				249		
13				201	SANDY LEAN CLAY (CL)	
14				62		
15					Bottom of boring at 12.0 feet	

OAKBOREV (REV. 3/00)



PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Log of Boring No. SB-19</b>	
BORING LOCATION: Proposed parking structure		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/5/04	DATE FINISHED: 6/5/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 20.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.): 7.0	FIRST 7.0 COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
	Sample No.	Sample	Blows/ Foot			
					Surface Elevation: Not surveyed	
0					ASPHALTIC CONCRETE AGGREGATE BASE	
1						OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.  Grab groundwater sample SB-19 collected through 5 feet of 3/4-inch OD Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 15 to 20 feet bgs.
2					LEAN CLAY with SAND (CL): olive brown (2.5Y 4/3), moist, 80% fines, 15% fine to medium sand, 5% fine gravel, medium plasticity, firm	
3					CLAYEY SAND (SC): olive (5Y 5/3), moist, 85% fine to medium sand, 15% medium plasticity fines	
4						
5					POORLY GRADED SAND (SP): olive (5Y 5/3), moist, 95% fine to medium sand, 5% fines	
6						
7					SANDY LEAN CLAY (CL): olive (5Y 5/3), moist, 60% fines, 40% fine sand, medium plasticity, firm	
8					POORLY GRADED SAND (SP): olive (5Y 5/3), wet, 95% fine to medium sand, 5% fines	
8					CLAYEY SAND (SC) dark gray (5Y 4/1)	
9					CLAYEY SAND (SC): dark gray (5Y 4/1), wet, 75% fine to coarse sand, 25% medium plasticity fines	
10					POORLY GRADED SAND (SP): dark gray (5Y 4/1), wet, 95% fine to medium sand, 5% fines, contains shells	
11						
12						
13						
14						
15						



DEPTH (feet)	SAMPLES				OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
	Sample No.	Sample	Blows/ Foot				
					0	POORLY GRADED SAND (SP): cont'd	
16					0		
17					0		
18					0		
19					0		
20					0	LEAN CLAY (CL): dark bluish gray (5Y 4/1), moist, 95% fines, 5% fine sand, medium plasticity, soft [BAY MUD] Bottom of boring at 20.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							

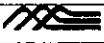


PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Log of Boring No. SB-20</b>	
BORING LOCATION: Proposed parking structure		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/5/04	DATE FINISHED: 6/5/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 12.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.):	FIRST 6.5      COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
	Sample No.	Sample	Blows/Foot			
					Surface Elevation: Not surveyed	
0					ASPHALTIC CONCRETE AGGREGATE BASE	
1				0	POORLY GRADED SAND (SP): pale olive (5Y 6/3), moist, 95% fine to medium sand, 5% fines	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2				0		
3				0		
4				0		
5				0		
6				0		
7				0	↓ dark gray (5Y 4/1), wet	
8				0		
9				0	85% fine to medium sand, 10% fine to coarse gravel, 5% fines	
10				0		
11				0		Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
12				0	LEAN CLAY (CL): dark gray (5Y 4/1), moist, 95% fines, 5% fine sand, medium plasticity [BAY MUD] Bottom of boring at 12.0 feet	
13						
14						
15						

PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Log of Boring No. SB-21</b>	
BORING LOCATION: Proposed parking structure		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/5/04	DATE FINISHED: 6/5/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 16.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.): 7.0	FIRST 7.0 COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.  Surface Elevation: Not surveyed	REMARKS
	Sample No.	Sample	Blows/ Foot			
1				0	ASPHALTIC CONCRETE	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.  Grab groundwater sample SB-21 collected through 5 feet of 3/4-inch OD Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 11 to 16 feet bgs.
2				0	AGGREGATE BASE	
3				0	POORLY GRADED SAND (SP): olive (5Y 5/3), moist, 95% fine to medium sand, 5% fines	
4				0		
5				0		
6				0		
7				0		
8				0		
9				0		
10				0		
11				0		
12				0		
13				0		
14				0		
15				0		



DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
	Sample No.	Sample	Blows/ Foot			
16					POORLY GRADED SAND (SP): cont'd LEAN CLAY (CL): dark gray (5Y 4/1), moist, 95% fines, 5% fine sand, medium plasticity, soft [BAY MUD] Bottom of boring at 16.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						





PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Log of Boring No. SB-22</b>	
BORING LOCATION: Proposed parking structure		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/5/04	DATE FINISHED: 6/5/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 16.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.)	FIRST 7.5      COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
	Sample No.	Sample	Blows/ Foot			
					Surface Elevation: Not surveyed	
0					ASPHALTIC CONCRETE	
0					AGGREGATE BASE	
1					POORLY GRADED SAND (SP): olive (5Y 5/3), moist, 95% fine to medium sand, 5% fines	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.  Grab groundwater sample SB-22 collected through 5 feet of 3/4-inch OD Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 11 to 16 feet bgs.
2						
3	SB-22-3.0	█		0		
4		⊗		0		
5				0		
6	SB-22-6.5	█		0		
7				0		
8				0	↓ wet	
9				0		
10				0		
11				0		
12				0		
13				0		
14				0		
15				0		

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
	Sample No.	Sample	Blows/ Foot			
16					POORLY GRADED SAND (SP): cont'd	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
17					Bottom of boring at 16.0 feet	
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						



PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Log of Boring No. SB-23</b>	
BORING LOCATION: 80 feet west of parking lot exit		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/7/04	DATE FINISHED: 6/7/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 12.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.)	FIRST 5.5 COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		LOGGED BY: C. Dowman	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
	Sample No.	Sample	Blows/ Foot			
					Surface Elevation: Not surveyed	
0					ASPHALTIC CONCRETE	
1					AGGREGATE BASE	
2					CLAYEY SAND (SC): brown (7.5YR 4/3), moist, 75% fine to medium sand, 20% low plasticity fines, 5% medium gravel POORLY GRADED SAND with CLAY (SP-SC): dark olive brown (2.5Y 3/3), moist, 90% fine to medium sand, 10% low plasticity fines	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.  Grab groundwater sample SB-23-0604 collected through 5 feet of 3/4-inch OD Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 7 to 12 feet bgs.  Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
3	SB-23-3.0			0		
4				0		
5	SB-23-5.0			0		
6				0	wet	
7				0	dark gray (2.5Y 4/1), 90% fine to medium sand, 10% low plasticity fines	
8				0		
9				0		
10				0	olive gray (5Y 5/2), 90% fine to medium sand, 10% low plasticity fines	
11				0		
12				0	LEAN CLAY (CL): dark gray (5Y 4/1), moist, 95% fines, 5% fine sand, medium plasticity, soft Bottom of boring at 12.0 feet	
13						
14						
15						



PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Log of Boring No. SB-24</b>	
BORING LOCATION: 80 feet west of parking lot exit		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/7/04	DATE FINISHED: 6/7/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 12.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.):	FIRST 6.5      COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		LOGGED BY: C. Dowman	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
	Sample No.	Sample	Blows/ Foot			
					Surface Elevation: Not surveyed	
0					ASPHALTIC CONCRETE	
1					AGGREGATE BASE	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2				3.7	SANDY LEAN CLAY with GRAVEL (CL): very dark gray (5Y 3/1), moist, 70% fines, 15% fine sand, 15% fine to coarse gravel, medium plasticity, firm	
3	SB-24-3.0					Grab groundwater sample SB-24-0604 collected through 5 feet of 3/4-inch OD Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 7 to 12 feet bgs.
4				0.7	POORLY GRADED SAND with CLAY (SP-SC): dark grayish brown (2.5Y 4/2), moist, 90% fine sand, 10% low plasticity fines	
5	SB-24-5.0					
6				0		
7				0	↓ dark bluish gray (5B 4/1), wet	
8				0	↓ grayish brown (2.5Y 5/2), sand fraction fine to medium	
9				0		
10				0		
11				0	LEAN CLAY (CL): dark gray (5Y 4/1), moist, 95% fines, 5% fine sand, medium plasticity, soft	
12					Bottom of boring at 12.0 feet	
13						Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
14						
15						



PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Log of Boring No. SB-25</b>	
BORING LOCATION: 30 feet northeast of shuttleport van office		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/6/04	DATE FINISHED: 6/6/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 12.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.)	FIRST 5.5      COMPL. NA
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		LOGGED BY: C. Dowman	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
	Sample No.	Sample	Blows/ Foot			
					Surface Elevation: Not surveyed	
1				0	ASPHALTIC CONCRETE	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2				0	AGGREGATE BASE	
3				0	CLAYEY SAND (SC): strong brown (7.5YR 4/6), moist, 70% fine to coarse sand, 30% low to medium plasticity fines	
4				0	↓ dark grayish brown (2.5Y 4/2), 75% fine sand, 25% medium plasticity fines	Grab groundwater sample SB-25-0604 collected through 5 feet of 3/4-inch OD Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 7 to 12 feet bgs.
5				0	↓ light olive brown (2.5Y 5/4), 80% fine sand, 20% medium plasticity fines	
6				0	POORLY GRADED SAND (SP): olive gray (5Y 4/2), wet, 95% fine to medium sand, 5% fines	
7				0		
8				0		
9				0	LEAN CLAY (CL): dark gray (5Y 4/1), moist, 95% fines, 5% fine sand, medium plasticity, soft	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
10				0		
11				0		
12				0	Bottom of boring at 12.0 feet	

PROJECT: OAKLAND INTERNATIONAL AIRPORT Oakland, California		<b>Log of Boring No. SB-26</b>	
BORING LOCATION: 25 feet W of SB-25, 30 feet NE of Shuttleport office		ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/6/04	DATE FINISHED: 6/6/04
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 12.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Geoprobe 5400		DEPTH TO WATER (ft.): 6.5	FIRST 6.5
SAMPLING METHOD: Geoprobe macro-core sampler [4' x 1.5"]		LOGGED BY: C. Dowman	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: J. Carolan	REG. NO. C.HG. 589

DEPTH (feet)	SAMPLES			OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
	Sample No.	Sample	Blows/ Foot			
					Surface Elevation: Not surveyed	
1					ASPHALTIC CONCRETE	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2				0	AGGREGATE BASE	
3				0	CLAYEY SAND (SC): strong brown (7.5YR 4/6), moist, 60% fine sand, 30% low to medium plasticity fines, 10% fine to coarse gravel	Grab groundwater sample SB-26-0604 collected through 5 feet of 3/4-inch OD Sch. 40 PVC screen (0.010-inch slot size) placed in borehole from 7 to 12 feet bgs.
4				0	dark grayish brown (2.5Y 4/2), moist, 70% fine sand, 30% low to medium plasticity fines	
5				0		
6				0	LEAN CLAY with SAND (CL): dark gray (2.5Y 4/1), moist, 65% fines, 30% fine sand, 5% fine to coarse gravel, medium plasticity, soft	
7				0	wet	
8				0		
9				0	POORLY GRADED SAND (SP): grayish brown (2.5YR 5/2), wet, 95% fine to medium sand, 5% fines	
10				0		
11				0	LEAN CLAY (CL): dark gray (5Y 4/1), moist, 95% fines, 5% fine sand, medium plasticity, soft	
12				0	Bottom of boring at 12.0 feet	
13						Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
14						
15						



## Appendix B

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### Analytical Laboratory Records

**Geomatrix Consultants**

June 08, 2004

2101 Webster Street, 12th Floor  
Oakland, CA 94612

Attn.: Elizabeth Wells

Project#: 8207.009

Project: Port Of Oakland - Airport Investigation

Dear Ms. Wells,

Attached is our report for your samples received on 06/05/2004 09:00

This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

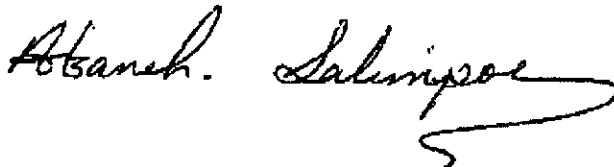
The report contains a Case Narrative detailing sample receipt and analysis.

Please note that any unused portion of the samples will be discarded after 07/20/2004 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: [asalimpour@stl-inc.com](mailto:asalimpour@stl-inc.com)

Sincerely,



Afsaneh Salimpour  
Project Manager

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* [www.stl-inc.com](http://www.stl-inc.com) \* CA DHS ELAP# 2496



**Geomatrix Consultants**

June 08, 2004

2101 Webster Street, 12th Floor  
Oakland, CA 94612

Attn.: Elizabeth Wells

Project#: 8207.009

Project: Port Of Oakland - Airport Investigation

**Case Narrative**

**General and Sample Comments**

We (STL San Francisco) received 13 Soil samples and 7 Water samples, on Saturday, June 05, 2004 9:00 AM.

**Analysis Comments and Flags by QC Batch**

Fuel Oxygenates by 8260B (Selectable)	Soil	QC Batch#: 2004/06/05-01.65
---------------------------------------	------	-----------------------------

SB-18-10.2 2004060177 010

Compound Flag(s)

g Hydrocarbon reported in the gasoline range does not match our gasoline standard.

Fuel Oxygenates by 8260B (Selectable)	Water	QC Batch#: 2004/06/05-01.66
---------------------------------------	-------	-----------------------------

SB-18 2004060177 018

Analysis Flag(s)

o Reporting limits were raised due to high level of analyte present in the sample.

SB-18 2004060177 018

Compound Flag(s)

g Hydrocarbon reported in the gasoline range does not match our gasoline standard.

TEPH w/ Silica Gel Clean-up	Soil	QC Batch#: 2004/06/05-03.10
-----------------------------	------	-----------------------------

SB-3-3.0 2004060177 001

Compound Flag(s)

ndp Hydrocarbon reported does not match the pattern of our Diesel standard

SB-3-6.5 2004060177 002

Compound Flag(s)

ldr Hydrocarbon reported is in the late Diesel range, and does not match our Diesel standard

SB-3-6.5 2004060177 002

Compound Flag(s)

sd Surrogate recovery not reportable due to required dilution.

SB-2-3.0 2004060177 003

Compound Flag(s)

ndp Hydrocarbon reported does not match the pattern of our Diesel standard

SB-2-6.5 2004060177 004

Compound Flag(s)

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

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**Geomatrix Consultants**

June 08, 2004

2101 Webster Street, 12th Floor  
Oakland, CA 94612

Attn.: Elizabeth Wells

Project#: 8207.009

Project: Port Of Oakland - Airport Investigation

**Case Narrative**

ndp Hydrocarbon reported does not match the pattern of our Diesel standard  
SB-18-3.0 2004060177 009  
Compound Flag(s)  
njap Hydrocarbons reported are in the Jet A fuel range and they do not  
match our Jet A standard.

SB-18-10.2 2004060177 010  
Compound Flag(s)  
njap Hydrocarbons reported are in the Jet A fuel range and they do not  
match our Jet A standard.

SB-18-11.5 2004060177 011  
Compound Flag(s)  
njap Hydrocarbons reported are in the Jet A fuel range and they do not  
match our Jet A standard.

SB-4-7.5 2004060177 013  
Compound Flag(s)  
ldr Hydrocarbon reported is in the late Diesel range, and does not  
match our Diesel standard

TEPH w/ Silica Gel Clean-up (filtered)	Water	QC Batch#: 2004/06/06-01.10
----------------------------------------	-------	-----------------------------

SB-18 2004060177 018  
Compound Flag(s)  
njap Hydrocarbons reported are in the Jet A fuel range and they do not  
match our Jet A standard.

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

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**TEPH w/ Silica Gel Clean-up**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/05/2004 09:00

Port Of Oakland - Airport Investigation

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
SB-3-3.0	06/04/2004 08:50	Soil	1
SB-3-6.5	06/04/2004 09:07	Soil	2
SB-2-3.0	06/04/2004 09:34	Soil	3
SB-2-6.5	06/04/2004 09:44	Soil	4
SB-1-3.0	06/04/2004 10:04	Soil	5
SB-1-6.5	06/04/2004 10:09	Soil	6
SB-17-2.5	06/04/2004 13:07	Soil	7
SB-17-5.3	06/04/2004 13:14	Soil	8
SB-18-3.0	06/04/2004 14:17	Soil	9
SB-18-10.2	06/04/2004 14:45	Soil	10
SB-18-11.5	06/04/2004 14:53	Soil	11
SB-4-3.0	06/04/2004 16:31	Soil	12
SB-4-7.5	06/04/2004 16:46	Soil	13

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/07/2004 17:18

Page 1 of 19

**TEPH w/ Silica Gel Clean-up**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 3550/8015M                      Test(s): 8015M  
Sample ID: **SB-3-3.0**                      Lab ID: 2004-06-0177 - 1  
Sampled: 06/04/2004 08:50              Extracted: 6/5/2004 11:09  
Matrix: Soil                                  QC Batch#: 2004/06/05-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	8.5	1.0	mg/Kg	1.00	06/06/2004 15:17	ndp
Motor Oil	ND	50	mg/Kg	1.00	06/06/2004 15:17	
Jet fuel	ND	1.0	mg/Kg	1.00	06/06/2004 15:17	
<b>Surrogate(s)</b> o-Terphenyl	82.4	60-130	%	1.00	06/06/2004 15:17	

**TEPH w/ Silica Gel Clean-up**

Geomatrix Consultants

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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 3550/8015M

Test(s): 8015M

Sample ID: SB-3-6.5

Lab ID: 2004-06-0177 - 2

Sampled: 06/04/2004 09:07

Extracted: 6/5/2004 11:09

Matrix: Soil

QC Batch#: 2004/06/05-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	64	10	mg/Kg	10.00	06/06/2004 14:22	ldr
Motor Oil	1100	500	mg/Kg	10.00	06/06/2004 14:22	
Jet fuel	ND	10	mg/Kg	10.00	06/06/2004 14:22	
<b>Surrogate(s)</b> o-Terphenyl	NA	60-130	%	10.00	06/06/2004 14:22	sd

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/07/2004 17:18

**TEPH w/ Silica Gel Clean-up**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 3550/8015M	Test(s): 8015M
Sample ID: <b>SB-2-3.0</b>	Lab ID: 2004-06-0177 - 3
Sampled: 06/04/2004 09:34	Extracted: 6/5/2004 11:09
Matrix: Soil	QC Batch#: 2004/06/05-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	27	1.0	mg/Kg	1.00	06/06/2004 14:50	ndp
Motor Oil	ND	50	mg/Kg	1.00	06/06/2004 14:50	
Jet fuel	ND	1.0	mg/Kg	1.00	06/06/2004 14:50	
<b>Surrogate(s)</b> o-Terphenyl	86.9	60-130	%	1.00	06/06/2004 14:50	

**TEPH w/ Silica Gel Clean-up**

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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 3550/8015M

Test(s): 8015M

Sample ID: SB-2-6.5

Lab ID: 2004-06-0177 - 4

Sampled: 06/04/2004 09:44

Extracted: 6/5/2004 11:09

Matrix: Soil

QC Batch#: 2004/06/05-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	6.7	1.0	mg/Kg	1.00	06/06/2004 15:17	ndp
Motor Oil	ND	50	mg/Kg	1.00	06/06/2004 15:17	
Jet fuel	ND	1.0	mg/Kg	1.00	06/06/2004 15:17	
<b>Surrogate(s)</b>						
o-Terphenyl	75.0	60-130	%	1.00	06/06/2004 15:17	

Severn Trent Laboratories, Inc.

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06/07/2004 17:18

**TEPH w/ Silica Gel Clean-up**

Geomatrix Consultants

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Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 3550/8015M	Test(s): 8015M
Sample ID: SB-1-3.0	Lab ID: 2004-06-0177 - 5
Sampled: 06/04/2004 10:04	Extracted: 6/5/2004 11:09
Matrix: Soil	QC Batch#: 2004/06/05-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/06/2004 15:45	
Motor Oil	ND	50	mg/Kg	1.00	06/06/2004 15:45	
Jet fuel	ND	1.0	mg/Kg	1.00	06/06/2004 15:45	
<b>Surrogate(s)</b> o-Terphenyl	71.0	60-130	%	1.00	06/06/2004 15:45	



## TEPH w/ Silica Gel Clean-up

Geomatrix Consultants

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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/05/2004 09:00

Port Of Oakland - Airport Investigation

Prep(s): 3550/8015M

Test(s): 8015M

Sample ID: SB-1-6.5

Lab ID: 2004-06-0177 - 6

Sampled: 06/04/2004 10:09

Extracted: 6/5/2004 11:09

Matrix: Soil

QC Batch#: 2004/06/05-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/06/2004 16:12	
Motor Oil	ND	50	mg/Kg	1.00	06/06/2004 16:12	
Jet fuel	ND	1.0	mg/Kg	1.00	06/06/2004 16:12	
<b>Surrogate(s)</b>						
o-Terphenyl	78.3	60-130	%	1.00	06/06/2004 16:12	

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants

Attn.: Elizabeth Wells

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 3550/8015M	Test(s): 8015M
Sample ID: SB-17-2.5	Lab ID: 2004-06-0177 - 7
Sampled: 06/04/2004 13:07	Extracted: 6/5/2004 11:09
Matrix: Soil	QC Batch#: 2004/06/05-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/06/2004 16:39	
Motor Oil	ND	50	mg/Kg	1.00	06/06/2004 16:39	
Jet fuel	ND	1.0	mg/Kg	1.00	06/06/2004 16:39	
<b>Surrogate(s)</b> o-Terphenyl	84.0	60-130	%	1.00	06/06/2004 16:39	

**TEPH w/ Silica Gel Clean-up**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

Oakland, CA 94612

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Project: 8207.009

Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s):	3550/8015M	Test(s):	8015M
Sample ID:	<b>SB-17-5.3</b>	Lab ID:	2004-06-0177 - 8
Sampled:	06/04/2004 13:14	Extracted:	6/7/2004 08:27
Matrix:	Soil	QC Batch#:	2004/06/07-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/07/2004 14:37	
Motor Oil	ND	50	mg/Kg	1.00	06/07/2004 14:37	
Jet fuel	ND	1.0	mg/Kg	1.00	06/07/2004 14:37	
<b>Surrogate(s)</b>						
o-Terphenyl	83.3	60-130	%	1.00	06/07/2004 14:37	

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s):	3550/8015M	Test(s):	8015M
Sample ID:	SB-18-3.0	Lab ID:	2004-06-0177 - 9
Sampled:	06/04/2004 14:17	Extracted:	6/5/2004 11:09
Matrix:	Soil	QC Batch#:	2004/06/05-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/06/2004 14:22	njap
Motor Oil	ND	50	mg/Kg	1.00	06/06/2004 14:22	
Jet fuel	3.8	1.0	mg/Kg	1.00	06/06/2004 14:22	
<b>Surrogate(s)</b> o-Terphenyl	86.5	60-130	%	1.00	06/06/2004 14:22	

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants  
Attn.: Elizabeth Wells

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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 3550/8015M                      Test(s): 8015M  
Sample ID: **SB-18-10.2**                      Lab ID: 2004-06-0177 - 10  
Sampled: 06/04/2004 14:45                      Extracted: 6/5/2004 11:09  
Matrix: Soil                                      QC Batch#: 2004/06/05-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/06/2004 15:45	njap
Motor Oil	ND	50	mg/Kg	1.00	06/06/2004 15:45	
Jet fuel	16	1.0	mg/Kg	1.00	06/06/2004 15:45	
<b>Surrogate(s)</b> o-Terphenyl	80.1	60-130	%	1.00	06/06/2004 15:45	

**TEPH w/ Silica Gel Clean-up**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 3550/8015M	Test(s): 8015M
Sample ID: <b>SB-18-11.5</b>	Lab ID: 2004-06-0177 - 11
Sampled: 06/04/2004 14:53	Extracted: 6/5/2004 11:09
Matrix: Soil	QC Batch#: 2004/06/05-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/06/2004 16:12	njap
Motor Oil	ND	50	mg/Kg	1.00	06/06/2004 16:12	
Jet fuel	110	1.0	mg/Kg	1.00	06/06/2004 16:12	
<b>Surrogate(s)</b> o-Terphenyl	80.3	60-130	%	1.00	06/06/2004 16:12	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566  
Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/07/2004 17:1

**TEPH w/ Silica Gel Clean-up**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 3550/8015M	Test(s): 8015M
Sample ID: <b>SB-4-3.0</b>	Lab ID: 2004-06-0177 - 12
Sampled: 06/04/2004 16:31	Extracted: 6/7/2004 08:27
Matrix: Soil	QC Batch#: 2004/06/07-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/07/2004 15:05	
Motor Oil	ND	50	mg/Kg	1.00	06/07/2004 15:05	
Jet fuel	ND	1.0	mg/Kg	1.00	06/07/2004 15:05	
<b>Surrogate(s)</b>						
o-Terphenyl	80.3	60-130	%	1.00	06/07/2004 15:05	

**TEPH w/ Silica Gel Clean-up**

Geomatrix Consultants  
Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 3550/8015M      Test(s): 8015M  
Sample ID: **SB-4-7.5**      Lab ID: 2004-06-0177 - 13  
Sampled: 06/04/2004 16:46      Extracted: 6/5/2004 11:09  
Matrix: Soil      QC Batch#: 2004/06/05-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	12	1.0	mg/Kg	1.00	06/06/2004 14:50	ldr
Motor Oil	120	50	mg/Kg	1.00	06/06/2004 14:50	
Jet fuel	ND	1.0	mg/Kg	1.00	06/06/2004 14:50	
<b>Surrogate(s)</b> o-Terphenyl	87.4	60-130	%	1.00	06/06/2004 14:50	



**TEPH w/ Silica Gel Clean-up**

Geomatrix Consultants

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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/05/2004 09:00

Port Of Oakland - Airport Investigation

**Batch QC Report**

Prep(s): 3550/8015M

Test(s): 8015M

Method Blank

Soil

QC Batch # 2004/06/05-03.10

MB: 2004/06/05-03.10-001

Date Extracted: 06/05/2004 11:09

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	06/05/2004 15:44	
Motor Oil	ND	50	mg/Kg	06/05/2004 15:44	
Jet fuel	ND	1	mg/Kg	06/05/2004 15:44	
<b>Surrogates(s)</b> o-Terphenyl	71.1	60-130	%	06/05/2004 15:44	

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06/07/2004 17:18

**TEPH w/ Silica Gel Clean-up**

Geomatrix Consultants  
Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

**Batch QC Report**

Prep(s): 3550/8015M

Test(s): 8015M

Method Blank

Soil

QC Batch # 2004/06/07-05.10

MB: 2004/06/07-05.10-003

Date Extracted: 06/07/2004 08:27

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	06/07/2004 13:14	
Motor Oil	ND	50	mg/Kg	06/07/2004 13:14	
Jet fuel	ND	1	mg/Kg	06/07/2004 13:14	
<b>Surrogates(s)</b> o-Terphenyl	71.0	60-130	%	06/07/2004 13:14	

**TEPH w/ Silica Gel Clean-up**

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Project: 8207.009  
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**Batch QC Report**

Prep(s): 3550/8015M

Test(s): 8015M

**Laboratory Control Spike**

**Soil**

**QC Batch # 2004/06/05-03.10**

LCS 2004/06/05-03.10-002

Extracted: 06/05/2004

Analyzed: 06/05/2004 14:49

LCSD 2004/06/05-03.10-003

Extracted: 06/05/2004

Analyzed: 06/05/2004 15:17

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Diesel	29.1	32.5	41.5	70.1	78.3	11.1	60-130	25		
<i>Surrogates(s)</i> o-Terphenyl	15.4	16.9	20.0	76.8	84.4		60-130	0		

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**Batch QC Report**

Prep(s): 3550/8015M

Test(s): 8015M

**Laboratory Control Spike**

**Soil**

**QC Batch # 2004/06/07-05.10**

LCS 2004/06/07-05.10-001

Extracted: 06/07/2004

Analyzed: 06/07/2004 15:18

LCSD 2004/06/07-05.10-002

Extracted: 06/07/2004

Analyzed: 06/07/2004 14:10

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Diesel	28.0	35.3	41.6	67.3	84.9	23.1	60-130	25		
<b>Surrogates(s)</b> o-Terphenyl	17.3	18.1	20.0	86.6	90.3		60-130	0		

**TEPH w/ Silica Gel Clean-up**

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**Legend and Notes**

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**Result Flag**

ldr

Hydrocarbon reported is in the late Diesel range, and does not match our Diesel standard

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

njap

Hydrocarbons reported are in the Jet A fuel range and they do not match our Jet A standard.

sd

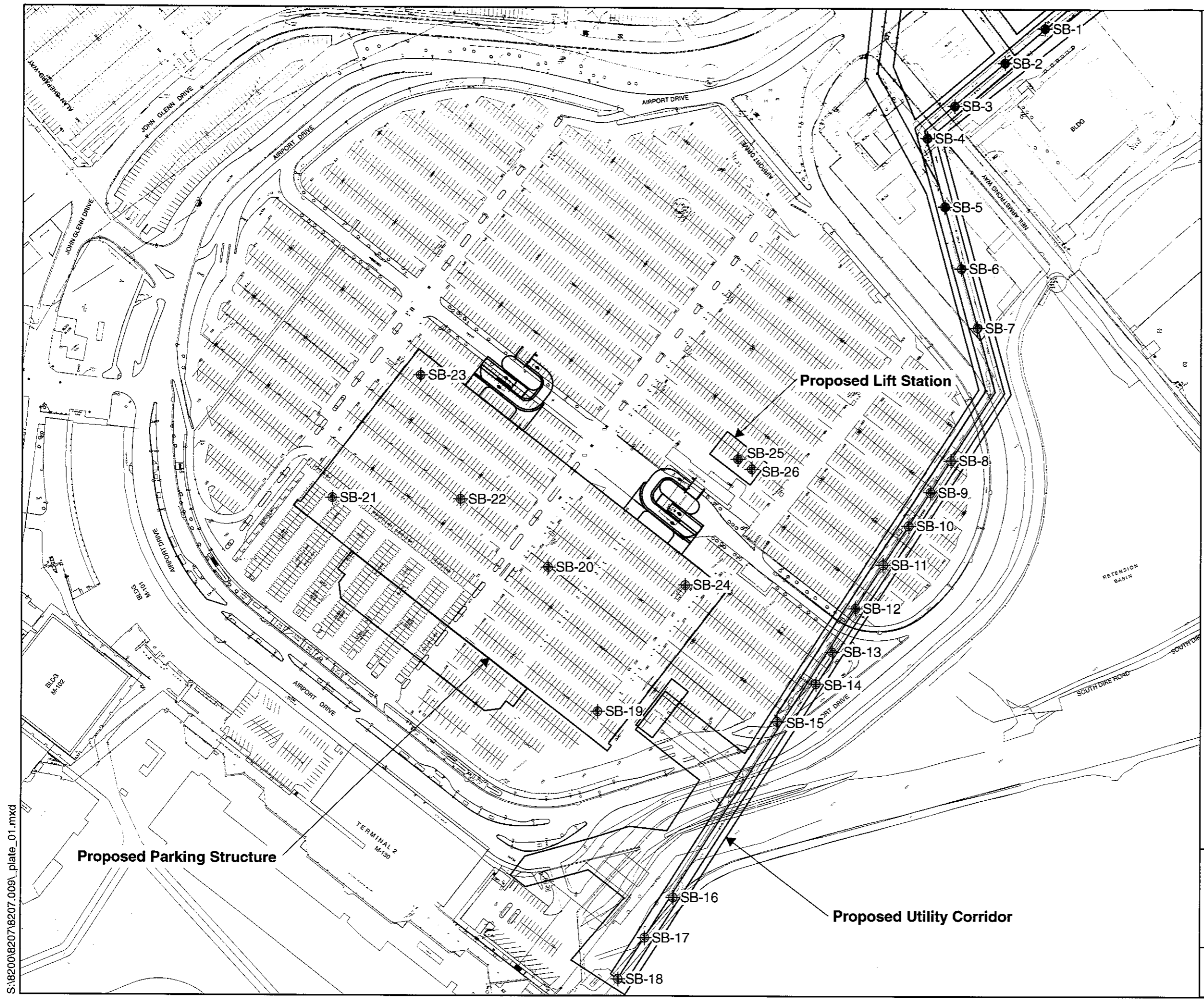
Surrogate recovery not reportable due to required dilution.

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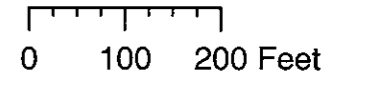
06/07/2004 17:18



Explanation

- ◆ Boring location

NOTE:  
Soil boring locations are not surveyed,  
and locations are approximate.



**BORING LOCATIONS**  
Terminal 2 Site Utilities Project  
South Field, Oakland International Airport  
Oakland, California



Project No.  
8207.009

Plate  
1

S:\8200\8207\8207\_009\_plate\_01.mxd

**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

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Project: 8207.009

Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
SB-3-3.0	06/04/2004 08:50	Soil	1
SB-3-6.5	06/04/2004 09:07	Soil	2
SB-2-3.0	06/04/2004 09:34	Soil	3
SB-2-6.5	06/04/2004 09:44	Soil	4
SB-1-3.0	06/04/2004 10:04	Soil	5
SB-1-6.5	06/04/2004 10:09	Soil	6
SB-17-2.5	06/04/2004 13:07	Soil	7
SB-17-5.3	06/04/2004 13:14	Soil	8
SB-18-3.0	06/04/2004 14:17	Soil	9
SB-18-10.2	06/04/2004 14:45	Soil	10
SB-4-3.0	06/04/2004 16:31	Soil	12
SB-4-7.5	06/04/2004 16:46	Soil	13

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Fuel Oxygenates by 8260B

Geomatrix Consultants

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 5030B Test(s): 8260B  
Sample ID: SB-3-3.0 Lab ID: 2004-06-0177 - 1  
Sampled: 06/04/2004 08:50 Extracted: 6/5/2004 11:36  
Matrix: Soil QC Batch#: 2004/06/05-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/05/2004 11:36	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/05/2004 11:36	
Benzene	ND	5.0	ug/Kg	1.00	06/05/2004 11:36	
Toluene	ND	5.0	ug/Kg	1.00	06/05/2004 11:36	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/05/2004 11:36	
Total xylenes	ND	5.0	ug/Kg	1.00	06/05/2004 11:36	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	100.3	72-124	%	1.00	06/05/2004 11:36	
Toluene-d8	95.3	75-116	%	1.00	06/05/2004 11:36	

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**Fuel Oxygenates by 8260B**

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Prep(s): 5030B Test(s): 8260B  
Sample ID: SB-3-6.5 Lab ID: 2004-06-0177 - 2  
Sampled: 06/04/2004 09:07 Extracted: 6/5/2004 16:00  
Matrix: Soil QC Batch#: 2004/06/05-01.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/05/2004 16:00	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/05/2004 16:00	
Benzene	ND	5.0	ug/Kg	1.00	06/05/2004 16:00	
Toluene	ND	5.0	ug/Kg	1.00	06/05/2004 16:00	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/05/2004 16:00	
Total xylenes	ND	5.0	ug/Kg	1.00	06/05/2004 16:00	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	88.8	72-124	%	1.00	06/05/2004 16:00	
Toluene-d8	97.7	75-116	%	1.00	06/05/2004 16:00	

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Project: 8207.009  
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Received: 06/05/2004 09:00

Prep(s):	5030B	Test(s):	8260B
Sample ID:	SB-2-3.0	Lab ID:	2004-06-0177 - 3
Sampled:	06/04/2004 09:34	Extracted:	6/5/2004 13:05
Matrix:	Soil	QC Batch#:	2004/06/05-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/05/2004 13:05	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/05/2004 13:05	
Benzene	ND	5.0	ug/Kg	1.00	06/05/2004 13:05	
Toluene	ND	5.0	ug/Kg	1.00	06/05/2004 13:05	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/05/2004 13:05	
Total xylenes	ND	5.0	ug/Kg	1.00	06/05/2004 13:05	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	112.0	72-124	%	1.00	06/05/2004 13:05	
Toluene-d8	87.9	75-116	%	1.00	06/05/2004 13:05	

**Fuel Oxygenates by 8260B**

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Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-2-6.5	Lab ID: 2004-06-0177 - 4
Sampled: 06/04/2004 09:44	Extracted: 6/5/2004 16:24
Matrix: Soil	QC Batch#: 2004/06/05-01.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/05/2004 16:24	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/05/2004 16:24	
Benzene	ND	5.0	ug/Kg	1.00	06/05/2004 16:24	
Toluene	ND	5.0	ug/Kg	1.00	06/05/2004 16:24	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/05/2004 16:24	
Total xylenes	ND	5.0	ug/Kg	1.00	06/05/2004 16:24	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	97.9	72-124	%	1.00	06/05/2004 16:24	
Toluene-d8	83.9	75-116	%	1.00	06/05/2004 16:24	

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Page 5 of 19

**Fuel Oxygenates by 8260B**

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Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-1-3.0	Lab ID: 2004-06-0177 - 5
Sampled: 06/04/2004 10:04	Extracted: 6/5/2004 11:58
Matrix: Soil	QC Batch#: 2004/06/05-01.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/05/2004 11:58	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/05/2004 11:58	
Benzene	ND	5.0	ug/Kg	1.00	06/05/2004 11:58	
Toluene	ND	5.0	ug/Kg	1.00	06/05/2004 11:58	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/05/2004 11:58	
Total xylenes	ND	5.0	ug/Kg	1.00	06/05/2004 11:58	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	90.9	72-124	%	1.00	06/05/2004 11:58	
Toluene-d8	96.3	75-116	%	1.00	06/05/2004 11:58	

**Fuel Oxygenates by 8260B**

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Project: 8207.009

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Prep(s): 5030B

Test(s): 8260B

Sample ID: SB-1-6.5

Lab ID: 2004-06-0177 - 6

Sampled: 06/04/2004 10:09

Extracted: 6/5/2004 13:11

Matrix: Soil

QC Batch#: 2004/06/05-01.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/05/2004 13:11	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/05/2004 13:11	
Benzene	ND	5.0	ug/Kg	1.00	06/05/2004 13:11	
Toluene	ND	5.0	ug/Kg	1.00	06/05/2004 13:11	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/05/2004 13:11	
Total xylenes	ND	5.0	ug/Kg	1.00	06/05/2004 13:11	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	88.9	72-124	%	1.00	06/05/2004 13:11	
Toluene-d8	94.9	75-116	%	1.00	06/05/2004 13:11	

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Received: 06/05/2004 09:00

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-17-2.5	Lab ID: 2004-06-0177 - 7
Sampled: 06/04/2004 13:07	Extracted: 6/5/2004 13:35
Matrix: Soil	QC Batch#: 2004/06/05-01.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/05/2004 13:35	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/05/2004 13:35	
Benzene	ND	5.0	ug/Kg	1.00	06/05/2004 13:35	
Toluene	ND	5.0	ug/Kg	1.00	06/05/2004 13:35	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/05/2004 13:35	
Total xylenes	ND	5.0	ug/Kg	1.00	06/05/2004 13:35	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	92.9	72-124	%	1.00	06/05/2004 13:35	
Toluene-d8	95.8	75-116	%	1.00	06/05/2004 13:35	

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Project: 8207.009  
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Received: 06/05/2004 09:00

Prep(s): 5030B Test(s): 8260B  
Sample ID: SB-17-5.3 Lab ID: 2004-06-0177 - 8  
Sampled: 06/04/2004 13:14 Extracted: 6/5/2004 14:00  
Matrix: Soil QC Batch#: 2004/06/05-01.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/05/2004 14:00	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/05/2004 14:00	
Benzene	ND	5.0	ug/Kg	1.00	06/05/2004 14:00	
Toluene	7.2	5.0	ug/Kg	1.00	06/05/2004 14:00	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/05/2004 14:00	
Total xylenes	ND	5.0	ug/Kg	1.00	06/05/2004 14:00	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	89.9	72-124	%	1.00	06/05/2004 14:00	
Toluene-d8	95.9	75-116	%	1.00	06/05/2004 14:00	

**Fuel Oxygenates by 8260B**

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-18-3.0	Lab ID: 2004-06-0177 - 9
Sampled: 06/04/2004 14:17	Extracted: 6/5/2004 14:24
Matrix: Soil	QC Batch#: 2004/06/05-01.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/05/2004 14:24	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/05/2004 14:24	
Benzene	ND	5.0	ug/Kg	1.00	06/05/2004 14:24	
Toluene	ND	5.0	ug/Kg	1.00	06/05/2004 14:24	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/05/2004 14:24	
Total xylenes	ND	5.0	ug/Kg	1.00	06/05/2004 14:24	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	92.5	72-124	%	1.00	06/05/2004 14:24	
Toluene-d8	95.4	75-116	%	1.00	06/05/2004 14:24	



**Fuel Oxygenates by 8260B**

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Received: 06/05/2004 09:00

Prep(s): 5030B

Test(s): 8260B

Sample ID: **SB-18-10.2**

Lab ID: 2004-06-0177 - 10

Sampled: 06/04/2004 14:45

Extracted: 6/5/2004 14:48

Matrix: Soil

QC Batch#: 2004/06/05-01.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	1100	1000	ug/Kg	1.00	06/05/2004 14:48	g
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/05/2004 14:48	
Benzene	ND	5.0	ug/Kg	1.00	06/05/2004 14:48	
Toluene	ND	5.0	ug/Kg	1.00	06/05/2004 14:48	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/05/2004 14:48	
Total xylenes	ND	5.0	ug/Kg	1.00	06/05/2004 14:48	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	93.2	72-124	%	1.00	06/05/2004 14:48	
Toluene-d8	96.7	75-116	%	1.00	06/05/2004 14:48	

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**Fuel Oxygenates by 8260B**

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-4-3.0	Lab ID: 2004-06-0177 - 12
Sampled: 06/04/2004 16:31	Extracted: 6/5/2004 16:49
Matrix: Soil	QC Batch#: 2004/06/05-01.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/05/2004 16:49	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/05/2004 16:49	
Benzene	ND	5.0	ug/Kg	1.00	06/05/2004 16:49	
Toluene	ND	5.0	ug/Kg	1.00	06/05/2004 16:49	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/05/2004 16:49	
Total xylenes	ND	5.0	ug/Kg	1.00	06/05/2004 16:49	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	92.6	72-124	%	1.00	06/05/2004 16:49	
Toluene-d8	99.0	75-116	%	1.00	06/05/2004 16:49	

**Fuel Oxygenates by 8260B**

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Project: 8207.009

Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 5030B

Test(s): 8260B

Sample ID: **SB-4-7.5**

Lab ID: 2004-06-0177 - 13

Sampled: 06/04/2004 16:46

Extracted: 6/5/2004 17:14

Matrix: Soil

QC Batch#: 2004/06/05-01.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/05/2004 17:14	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/05/2004 17:14	
Benzene	ND	5.0	ug/Kg	1.00	06/05/2004 17:14	
Toluene	7.2	5.0	ug/Kg	1.00	06/05/2004 17:14	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/05/2004 17:14	
Total xylenes	ND	5.0	ug/Kg	1.00	06/05/2004 17:14	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	97.9	72-124	%	1.00	06/05/2004 17:14	
Toluene-d8	95.7	75-116	%	1.00	06/05/2004 17:14	

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06/07/2004 17:23

**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/05/2004 09:00

Port Of Oakland - Airport Investigation

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2004/06/05-01.62-006

Soil

Test(s): 8260B

QC Batch # 2004/06/05-01.62

Date Extracted: 06/05/2004 09:06

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	06/05/2004 09:06	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	06/05/2004 09:06	
Benzene	ND	5.0	ug/Kg	06/05/2004 09:06	
Toluene	ND	5.0	ug/Kg	06/05/2004 09:06	
Ethyl benzene	ND	5.0	ug/Kg	06/05/2004 09:06	
Total xylenes	ND	5.0	ug/Kg	06/05/2004 09:06	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	103.4	72-124	%	06/05/2004 09:06	
Toluene-d8	96.0	75-116	%	06/05/2004 09:06	

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**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2004/06/05-01.65-001

Soil

Test(s): 8260B

QC Batch # 2004/06/05-01.65

Date Extracted: 06/05/2004 09:01

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	06/05/2004 09:01	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	06/05/2004 09:01	
Benzene	ND	5.0	ug/Kg	06/05/2004 09:01	
Toluene	ND	5.0	ug/Kg	06/05/2004 09:01	
Ethyl benzene	ND	5.0	ug/Kg	06/05/2004 09:01	
Total xylenes	ND	5.0	ug/Kg	06/05/2004 09:01	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	94.6	72-124	%	06/05/2004 09:01	
Toluene-d8	96.8	75-116	%	06/05/2004 09:01	

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**Fuel Oxygenates by 8260B**

Geomatrix Consultants

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Soil**

**QC Batch # 2004/06/05-01.62**

LCS 2004/06/05-01.62-022

Extracted: 06/05/2004

Analyzed: 06/05/2004 08:22

LCSD 2004/06/05-01.62-044

Extracted: 06/05/2004

Analyzed: 06/05/2004 08:44

Compound	Conc. ug/Kg		Exp.Conc.	Recovery %		RPD %	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	53.8	54.0	50.0	107.6	108.0	0.4	65-165	20		
Benzene	55.6	53.3	50.0	111.2	106.6	4.2	69-129	20		
Toluene	59.4	55.2	50.0	118.8	110.4	7.3	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	490	506	500	98.0	101.2		72-124			
Toluene-d8	492	497	500	98.4	99.4		75-116			

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**Fuel Oxygenates by 8260B**

Geomatrix Consultants  
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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Soil**

**QC Batch # 2004/06/05-01.65**

LCS 2004/06/05-01.65-055

Extracted: 06/05/2004

Analyzed: 06/05/2004 09:55

LCSD 2004/06/05-01.65-037

Extracted: 06/05/2004

Analyzed: 06/05/2004 08:37

Compound	Conc. ug/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	49.9	52.1	50.0	99.8	104.2	4.3	65-165	20		
Benzene	52.6	49.1	50.0	105.2	98.2	6.9	69-129	20		
Toluene	48.9	48.0	50.0	97.8	96.0	1.9	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	429	445	500	85.8	89.0		72-124			
Toluene-d8	497	494	500	99.4	98.8		75-116			

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Page 17 of 19

**Fuel Oxygenates by 8260B**

Geomatrix Consultants  
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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

**Batch QC Report**

Prep(s): 5030B Test(s): 8260B  
**Matrix Spike ( MS / MSD )** **Soil** **QC Batch # 2004/06/05-01.65**  
 SB-1-3.0 >> MS Lab ID: 2004-06-0177 - 005  
 MS: 2004/06/05-01.65-022 Extracted: 06/05/2004 Analyzed: 06/05/2004 12:22  
 Dilution: 1.00  
 MSD: 2004/06/05-01.65-046 Extracted: 06/05/2004 Analyzed: 06/05/2004 12:46  
 Dilution: 1.00

Compound	Conc. ug/Kg			Spk.Level ug/Kg	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	47.3	49.6	ND	44.2	107.0	112.2	4.7	65-165	20		
Benzene	48.5	49.0	ND	44.2	109.7	110.9	1.1	69-129	20		
Toluene	46.6	46.5	ND	44.2	105.4	105.2	0.2	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	423	447		500	84.5	89.4		72-124			
Toluene-d8	496	504		500	99.3	100.9		75-116			



**Fuel Oxygenates by 8260B**

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Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

---

**Legend and Notes**

---

**Result Flag**

g

Hydrocarbon reported in the gasoline range does not match our gasoline standard.

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Project: 8207.009

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Received: 06/05/2004 09:00

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
SB-1	06/04/2004 10:30	Water	14
SB-2	06/04/2004 11:00	Water	15
SB-3	06/04/2004 11:20	Water	16
SB-17	06/04/2004 13:30	Water	17
SB-18	06/04/2004 15:00	Water	18
SB-4	06/04/2004 17:00	Water	19

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06/07/2004 17:19

Page 1 of 10

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 3510/8015M                      Test(s): 8015M  
Sample ID: **SB-1**                              Lab ID: 2004-06-0177 - 14  
Sampled: 06/04/2004 10:30                      Extracted: 6/6/2004 09:16  
Matrix: Water                                      QC Batch#: 2004/06/06-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/07/2004 01:47	
Motor Oil	ND	500	ug/L	1.00	06/07/2004 01:47	
Jet fuel	ND	50	ug/L	1.00	06/07/2004 01:47	
<b>Surrogate(s)</b>						
o-Terphenyl	86.1	60-130	%	1.00	06/07/2004 01:47	

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**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

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Project: 8207.009

Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 3510/8015M

Test(s): 8015M

Sample ID: SB-2

Lab ID: 2004-06-0177 - 15

Sampled: 06/04/2004 11:00

Extracted: 6/6/2004 09:16

Matrix: Water

QC Batch#: 2004/06/06-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/07/2004 02:15	
Motor Oil	ND	500	ug/L	1.00	06/07/2004 02:15	
Jet fuel	ND	50	ug/L	1.00	06/07/2004 02:15	
<b>Surrogate(s)</b>						
o-Terphenyl	83.6	60-130	%	1.00	06/07/2004 02:15	

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 3510/8015M	Test(s): 8015M
Sample ID: <b>SB-3</b>	Lab ID: 2004-06-0177 - 16
Sampled: 06/04/2004 11:20	Extracted: 6/6/2004 09:16
Matrix: Water	QC Batch#: 2004/06/06-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/07/2004 02:43	
Motor Oil	ND	500	ug/L	1.00	06/07/2004 02:43	
Jet fuel	ND	50	ug/L	1.00	06/07/2004 02:43	
<b>Surrogate(s)</b>						
o-Terphenyl	62.6	60-130	%	1.00	06/07/2004 02:43	

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Project: 8207.009

Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 3510/8015M

Test(s): 8015M

Sample ID: **SB-17**

Lab ID: 2004-06-0177 - 17

Sampled: 06/04/2004 13:30

Extracted: 6/6/2004 09:16

Matrix: Water

QC Batch#: 2004/06/06-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/07/2004 03:10	
Motor Oil	ND	500	ug/L	1.00	06/07/2004 03:10	
Jet fuel	ND	50	ug/L	1.00	06/07/2004 03:10	
<b>Surrogate(s)</b>						
o-Terphenyl	91.2	60-130	%	1.00	06/07/2004 03:10	

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

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Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 3510/8015M      Test(s): 8015M  
Sample ID: **SB-18**      Lab ID: 2004-06-0177 - 18  
Sampled: 06/04/2004 15:00      Extracted: 6/6/2004 09:16  
Matrix: Water      QC Batch#: 2004/06/06-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/07/2004 03:38	njap
Motor Oil	ND	500	ug/L	1.00	06/07/2004 03:38	
Jet fuel	98	50	ug/L	1.00	06/07/2004 03:38	
<b>Surrogate(s)</b> o-Terphenyl	79.5	60-130	%	1.00	06/07/2004 03:38	

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**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

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Project: 8207.009

Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 3510/8015M

Test(s): 8015M

Sample ID: **SB-4**

Lab ID: 2004-06-0177 - 19

Sampled: 06/04/2004 17:00

Extracted: 6/6/2004 09:16

Matrix: Water

QC Batch#: 2004/06/06-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/07/2004 04:06	
Motor Oil	ND	500	ug/L	1.00	06/07/2004 04:06	
Jet fuel	ND	50	ug/L	1.00	06/07/2004 04:06	
<b>Surrogate(s)</b>						
o-Terphenyl	92.1	60-130	%	1.00	06/07/2004 04:06	

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06/07/2004 17:19



**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

**Batch QC Report**

Prep(s): 3510/8015M  
Method Blank  
MB: 2004/06/06-01.10-001

**Water**

Test(s): 8015M  
QC Batch # 2004/06/06-01.10  
Date Extracted: 06/06/2004 09:16

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	06/06/2004 13:27	
Motor Oil	ND	500	ug/L	06/06/2004 13:27	
Jet fuel	ND	50	ug/L	06/06/2004 13:27	
<b>Surrogates(s)</b> o-Terphenyl	81.6	50-120	%	06/06/2004 13:27	

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**TEPH w/ Silica Gel Clean-up (filtered)**

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

**Batch QC Report**

Prep(s): 3510/8015M

Test(s): 8015M

**Laboratory Control Spike**

**Water**

**QC Batch # 2004/06/06-01.10**

LCS 2004/06/06-01.10-002

Extracted: 06/06/2004

Analyzed: 06/06/2004 13:00

LCSD 2004/06/06-01.10-003

Extracted: 06/06/2004

Analyzed: 06/06/2004 13:27

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Diesel	704	750	1000	70.4	75.0	6.3	60-130	25		
<b>Surrogates(s)</b> o-Terphenyl	16.4	16.2	20.0	82.0	80.9		50-120	0		

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TEPH w/ Silica Gel Clean-up (filtered)

Geomatrix Consultants

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Project: 8207.009

Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

---

Legend and Notes

---

**Result Flag**

njap

Hydrocarbons reported are in the Jet A fuel range and they do not match our Jet A standard.

Severn Trent Laboratories, Inc.

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06/07/2004 17:1

**Gas/BTEXFuel Oxygenates by 8260B (High Level)**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
SB-18-11.5	06/04/2004 14:53	Soil	11

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06/08/2004 10:09

**Gas/BTEXFuel Oxygenates by 8260B (High Level)**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-18-11.5</b>	Lab ID: 2004-06-0177 - 11
Sampled: 06/04/2004 14:53	Extracted: 6/7/2004 19:48
Matrix: Soil	QC Batch#: 2004/06/07-03.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	130000	50000	ug/Kg	1.00	06/07/2004 19:48	
Benzene	ND	500	ug/Kg	1.00	06/07/2004 19:48	
Toluene	ND	500	ug/Kg	1.00	06/07/2004 19:48	
Ethyl benzene	ND	500	ug/Kg	1.00	06/07/2004 19:48	
Total xylenes	540	500	ug/Kg	1.00	06/07/2004 19:48	
Methyl tert-butyl ether (MTBE)	ND	500	ug/Kg	1.00	06/07/2004 19:48	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	96.1	53-129	%	1.00	06/07/2004 19:48	
Toluene-d8	101.1	47-136	%	1.00	06/07/2004 19:48	

**Gas/BTEXFuel Oxygenates by 8260B (High Level)**

Geomatrix Consultants

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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2004/06/07-03.62-030

Soil

Test(s): 8260B

QC Batch # 2004/06/07-03.62

Date Extracted: 06/07/2004 14:30

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50000	ug/Kg	06/07/2004 14:30	
Benzene	ND	500	ug/Kg	06/07/2004 14:30	
Toluene	ND	500	ug/Kg	06/07/2004 14:30	
Ethyl benzene	ND	500	ug/Kg	06/07/2004 14:30	
Total xylenes	ND	500	ug/Kg	06/07/2004 14:30	
Methyl tert-butyl ether (MTBE)	ND	500	ug/Kg	06/07/2004 14:30	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	94.3	53-129	%	06/07/2004 14:30	
Toluene-d8	105.1	47-136	%	06/07/2004 14:30	

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06/08/2004 10:09

**Gas/BTEXFuel Oxygenates by 8260B (High Level)**

Geomatrix Consultants

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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Soil**

**QC Batch # 2004/06/07-03.62**

LCS 2004/06/07-03.62-052

Extracted: 06/07/2004

Analyzed: 06/07/2004 14:52

LCSD 2004/06/07-03.62-014

Extracted: 06/07/2004

Analyzed: 06/07/2004 15:14

Compound	Conc. ug/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	9550	10100	10000	95.5	101.0	5.6	69-129	20		
Toluene	10100	10600	10000	101.0	106.0	4.8	70-130	20		
Methyl tert-butyl ether (MTBE)	8540	8970	10000	85.4	89.7	4.9	65-165	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	233	230	250	93.2	92.0		53-129			
Toluene-d8	254	261	250	101.6	104.4		47-136			

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/08/2004 10:00

**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
SB-1	06/04/2004 10:30	Water	14
SB-2	06/04/2004 11:00	Water	15
SB-3	06/04/2004 11:20	Water	16
SB-17	06/04/2004 13:30	Water	17
SB-18	06/04/2004 15:00	Water	18
SB-4	06/04/2004 17:00	Water	19
TB-1	06/04/2004	Water	20

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06/07/2004 16:20



**Fuel Oxygenates by 8260B**

Geomatrix Consultants

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s):	5030B	Test(s):	8260B
Sample ID:	SB-1	Lab ID:	2004-06-0177 - 14
Sampled:	06/04/2004 10:30	Extracted:	6/5/2004 13:46
Matrix:	Water	QC Batch#:	2004/06/05-01.66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/05/2004 13:46	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/05/2004 13:46	
Benzene	ND	0.50	ug/L	1.00	06/05/2004 13:46	
Toluene	2.5	0.50	ug/L	1.00	06/05/2004 13:46	
Ethylbenzene	ND	0.50	ug/L	1.00	06/05/2004 13:46	
Total xylenes	ND	1.0	ug/L	1.00	06/05/2004 13:46	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	99.3	72-128	%	1.00	06/05/2004 13:46	
Toluene-d8	98.2	80-113	%	1.00	06/05/2004 13:46	

Fuel Oxygenates by 8260B

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Project: 8207.009

Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 5030B

Sample ID: SB-2

Sampled: 06/04/2004 11:00

Matrix: Water

Test(s): 8260B

Lab ID: 2004-06-0177 - 15

Extracted: 6/5/2004 14:10

QC Batch#: 2004/06/05-01.66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/05/2004 14:10	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/05/2004 14:10	
Benzene	ND	0.50	ug/L	1.00	06/05/2004 14:10	
Toluene	ND	0.50	ug/L	1.00	06/05/2004 14:10	
Ethylbenzene	ND	0.50	ug/L	1.00	06/05/2004 14:10	
Total xylenes	ND	1.0	ug/L	1.00	06/05/2004 14:10	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	99.7	72-128	%	1.00	06/05/2004 14:10	
Toluene-d8	100.1	80-113	%	1.00	06/05/2004 14:10	

**Fuel Oxygenates by 8260B**

Geomatrix Consultants

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s):	5030B	Test(s):	8260B
Sample ID:	SB-3	Lab ID:	2004-06-0177 - 16
Sampled:	06/04/2004 11:20	Extracted:	6/5/2004 14:34
Matrix:	Water	QC Batch#:	2004/06/05-01.66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/05/2004 14:34	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/05/2004 14:34	
Benzene	ND	0.50	ug/L	1.00	06/05/2004 14:34	
Toluene	1.1	0.50	ug/L	1.00	06/05/2004 14:34	
Ethylbenzene	ND	0.50	ug/L	1.00	06/05/2004 14:34	
Total xylenes	ND	1.0	ug/L	1.00	06/05/2004 14:34	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	101.9	72-128	%	1.00	06/05/2004 14:34	
Toluene-d8	100.3	80-113	%	1.00	06/05/2004 14:34	

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06/07/2004 16:2

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**Fuel Oxygenates by 8260B**

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Project: 8207.009

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Received: 06/05/2004 09:00

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-17	Lab ID: 2004-06-0177 - 17
Sampled: 06/04/2004 13:30	Extracted: 6/5/2004 15:46
Matrix: Water	QC Batch#: 2004/06/05-01.66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/05/2004 15:46	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/05/2004 15:46	
Benzene	ND	0.50	ug/L	1.00	06/05/2004 15:46	
Toluene	4.7	0.50	ug/L	1.00	06/05/2004 15:46	
Ethylbenzene	ND	0.50	ug/L	1.00	06/05/2004 15:46	
Total xylenes	ND	1.0	ug/L	1.00	06/05/2004 15:46	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	99.5	72-128	%	1.00	06/05/2004 15:46	
Toluene-d8	99.5	80-113	%	1.00	06/05/2004 15:46	

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**Fuel Oxygenates by 8260B**

Geomatrix Consultants

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-18	Lab ID: 2004-06-0177 - 18
Sampled: 06/04/2004 15:00	Extracted: 6/5/2004 16:10
Matrix: Water	QC Batch#: 2004/06/05-01.66
Analysis Flag: o ( See Legend and Note Section )	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	13000	250	ug/L	5.00	06/05/2004 16:10	g
Methyl tert-butyl ether (MTBE)	ND	2.5	ug/L	5.00	06/05/2004 16:10	
Benzene	ND	2.5	ug/L	5.00	06/05/2004 16:10	
Toluene	ND	2.5	ug/L	5.00	06/05/2004 16:10	
Ethylbenzene	ND	2.5	ug/L	5.00	06/05/2004 16:10	
Total xylenes	ND	5.0	ug/L	5.00	06/05/2004 16:10	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	104.0	72-128	%	5.00	06/05/2004 16:10	
Toluene-d8	102.0	80-113	%	5.00	06/05/2004 16:10	

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**Fuel Oxygenates by 8260B**

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-4	Lab ID: 2004-06-0177 - 19
Sampled: 06/04/2004 17:00	Extracted: 6/7/2004 14:31
Matrix: Water	QC Batch#: 2004/06/07-01.68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/07/2004 14:31	
Methyl tert-butyl ether (MTBE)	29	0.50	ug/L	1.00	06/07/2004 14:31	
Benzene	ND	0.50	ug/L	1.00	06/07/2004 14:31	
Toluene	0.76	0.50	ug/L	1.00	06/07/2004 14:31	
Ethylbenzene	ND	0.50	ug/L	1.00	06/07/2004 14:31	
Total xylenes	ND	1.0	ug/L	1.00	06/07/2004 14:31	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	100.7	72-128	%	1.00	06/07/2004 14:31	
Toluene-d8	92.1	80-113	%	1.00	06/07/2004 14:31	

**Fuel Oxygenates by 8260B**

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Project: 8207.009  
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Received: 06/05/2004 09:00

Prep(s): 5030B	Test(s): 8260B
Sample ID: TB-1	Lab ID: 2004-06-0177 - 20
Sampled: 06/04/2004	Extracted: 6/5/2004 13:21
Matrix: Water	QC Batch#: 2004/06/05-01.66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/05/2004 13:21	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/05/2004 13:21	
Benzene	ND	0.50	ug/L	1.00	06/05/2004 13:21	
Toluene	ND	0.50	ug/L	1.00	06/05/2004 13:21	
Ethylbenzene	ND	0.50	ug/L	1.00	06/05/2004 13:21	
Total xylenes	ND	1.0	ug/L	1.00	06/05/2004 13:21	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	99.1	72-128	%	1.00	06/05/2004 13:21	
Toluene-d8	99.5	80-113	%	1.00	06/05/2004 13:21	

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**Fuel Oxygenates by 8260B**

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Project: 8207.009  
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Received: 06/05/2004 09:00

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2004/06/05-01.66-033

Water

Test(s): 8260B

QC Batch # 2004/06/05-01.66

Date Extracted: 06/05/2004 09:33

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	06/05/2004 09:33	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/05/2004 09:33	
Benzene	ND	0.5	ug/L	06/05/2004 09:33	
Toluene	ND	0.5	ug/L	06/05/2004 09:33	
Ethylbenzene	ND	0.5	ug/L	06/05/2004 09:33	
Total xylenes	ND	1.0	ug/L	06/05/2004 09:33	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	94.4	72-128	%	06/05/2004 09:33	
Toluene-d8	102.6	80-113	%	06/05/2004 09:33	

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Fuel Oxygenates by 8260B

Geomatrix Consultants

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Method Blank

Water

QC Batch # 2004/06/07-01.68

MB: 2004/06/07-01.68-016

Date Extracted: 06/07/2004 08:16

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	06/07/2004 08:16	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/07/2004 08:16	
Benzene	ND	0.5	ug/L	06/07/2004 08:16	
Toluene	ND	0.5	ug/L	06/07/2004 08:16	
Ethylbenzene	ND	0.5	ug/L	06/07/2004 08:16	
Total xylenes	ND	1.0	ug/L	06/07/2004 08:16	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	95.0	72-128	%	06/07/2004 08:16	
Toluene-d8	101.3	80-113	%	06/07/2004 08:16	

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06/07/2004 16:3

**Fuel Oxygenates by 8260B**

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Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Water**

**QC Batch # 2004/06/05-01.66**

LCS 2004/06/05-01.66-044

Extracted: 06/05/2004

Analyzed: 06/05/2004 08:44

LCSD 2004/06/05-01.66-008

Extracted: 06/05/2004

Analyzed: 06/05/2004 09:08

Compound	Conc. ug/L		Exp. Conc.	Recovery %		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	26.3	27.1	25.0	105.2	108.4	3.0	65-165	20		
Benzene	26.1	27.1	25.0	104.4	108.4	3.8	69-129	20		
Toluene	28.0	28.2	25.0	112.0	112.8	0.7	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	447	445	500	89.4	89.0		72-128			
Toluene-d8	501	513	500	100.2	102.6		80-113			

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**Fuel Oxygenates by 8260B**

Geomatrix Consultants

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Water**

**QC Batch # 2004/06/07-01.68**

LCS 2004/06/07-01.68-038

Extracted: 06/07/2004

Analyzed: 06/07/2004 07:38

LCSD 2004/06/07-01.68-057

Extracted: 06/07/2004

Analyzed: 06/07/2004 07:57

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	23.5	22.5	25.0	94.0	90.0	4.3	65-165	20		
Benzene	23.4	23.8	25.0	93.6	95.2	1.7	69-129	20		
Toluene	25.7	25.4	25.0	102.8	101.6	1.2	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	438	430	500	87.6	86.0		72-128			
Toluene-d8	485	443	500	97.0	88.6		80-113			

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06/07/2004 16:2

**Fuel Oxygenates by 8260B**

Geomatrix Consultants  
Attn.: Elizabeth Wells

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Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/05/2004 09:00

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Matrix Spike ( MS / MSD )**

**Water**

**QC Batch # 2004/06/05-01.66**

SB-3 >> MS

Lab ID: 2004-06-0177 - 016

MS: 2004/06/05-01.66-058

Extracted: 06/05/2004

Analyzed: 06/05/2004 14:58

MSD: 2004/06/05-01.66-022

Extracted: 06/05/2004

Dilution: 1.00

Analyzed: 06/05/2004 15:22

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level ug/L	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	30.5	29.6	ND	25.0	122.0	118.4	3.0	65-165	20		
Benzene	31.0	30.5	ND	25.0	124.0	122.0	1.6	69-129	20		
Toluene	32.6	30.1	1.12	25.0	125.9	115.9	8.3	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	479	501		500	95.8	100.1		72-128			
Toluene-d8	512	504		500	102.4	100.8		80-113			

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**Fuel Oxygenates by 8260B**

Geomatrix Consultants

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Project: 8207.009

Received: 06/05/2004 09:00

Port Of Oakland - Airport Investigation

---

**Legend and Notes**

---

**Analysis Flag**

o

Reporting limits were raised due to high level of analyte present in the sample.

**Result Flag**

g

Hydrocarbon reported in the gasoline range does not match our gasoline standard.

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STL San Francisco

Sample Receipt Checklist

Submission #: 2004-06-0177

Checklist completed by: (initials) DSH Date: 06/05/04

Courier name:  STL San Francisco  Client

Custody seals intact on shipping container/samples

Chain of custody present?

Chain of custody signed when relinquished and received?

Chain of custody agrees with sample labels?

Samples in proper container/bottle?

Sample containers intact?

Sufficient sample volume for indicated test?

All samples received within holding time?

Container/Temp Blank temperature in compliance (4°C ± 2)?

Water - VOA vials have zero headspace?

Yes  No  Not Present

Yes  No

Yes  No

Yes  No

Yes  No

Yes  No

Yes  No

Yes  No

Temp: 2°C Yes  No

Ice Present Yes  No

No VOA vials submitted Yes  No

2 coolers rec'd.  
2°/2°C

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small - O), M (medium - O) or L (large - O))

Water - pH acceptable upon receipt?  Yes  No

pH adjusted- Preservative used:  HNO<sub>3</sub>  HCl  H<sub>2</sub>SO<sub>4</sub>  NaOH  ZnOAc - Lot #(s)

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments: (1) voa for TB-1 has medium bubble; all voa's have sediment (with exception of TB-1)

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/04

Client contacted:  Yes  No

Summary of discussion:

Corrective Action (per PM/Client):

Chain-of Custody Record

Date: 6/4/04

Page 1 of 2

Project No: 8207.009

ANALYSES

REMARKS

Samplers (Signature):  
Said Meanon

Additional Comments  
TPHd, TPHmo, TPHs  
w/0.7µm glass  
FIBER FILTER  
[WATER ONLY]

Date	Time	Sample Number	EPA Method 8021 (PUL Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BTEX only)	EPA Method 8021 (Total Solids)	EPA Method 8070 (PUL Scan)	EPA Method 8070 SIM (PAHs only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil)	Other Oil Cleanup	TPHjetfuel	Sol. (S), Water (W), Vapor (V), or Other (o)	Filtered	Preserved	Cooled	No. of Containers	REMARKS
6/4/04	0850	SB-3-3			X				X	X	X	X		S	N	N	U	1	BUTYRATE
6/4/04	0907	SB-2-6.5			X				X	X	X	X		S	N	N	U	1	BRASS
6/4/04	0934	SB-2-3			X				X	X	X	X		S	N	N	U	1	BUTYRATE
6/4/04	0944	SB-2-6.5			X				X	X	X	X		S	N	N	U	1	"
	1004	SB-1-3			X				X	X	X	X		S	N	N	Y	1	
	1009	SB-1-6.5			X				X	X	X	X		S	N	N	Y	1	
	1307	SB-17-2.5			X				X	X	X	X		S	N	N	Y	1	
	1314	SB-17-5.3			X				X	X	X	X		S	N	N	Y	1	↓
	1417	SB-18-3.0			X				X	X	X	X		S	N	N	Y	1	BRASS
	1445	SB-18-10.2			X				X	X	X	X		S	N	N	Y	1	BUTYRATE
	1453	SB-18-11.5			X				X	X	X	X		S	N	N	Y	1	BRASS
	1631	SB-4-3.0			X				X	X	X	X		S	N	N	Y	1	BUTYRATE
↓	1646	SB-4-7.5			X				X	X	X	X		S	N	N	Y	1	↓

RUSH

Laboratory: STL San Francisco

Turnaround Time: 48-hour

Results to: Elizabeth Wells

Total No. of Containers

13

\*Bill to Port of Oakland Airport Investigation  
Attn: Dale Klettke

Relinquished by (Signature):  
M. Kettner  
Printed Name: MARCUS KETNER  
Company: GMX

Date: 6/9/04  
Time: 09:00  
Relinquished by (Signature):  
Printed Name:  
Company:

Date: 6/3/04  
Time: 09:00  
Relinquished by (Signature):  
Printed Name: Denise Harrington  
Company: STL-SF

Date: 6/3/04  
Time: 09:00  
Method of Shipment: drop-off  
Laboratory Comments and Log No.:  
2°C  
Geomatrix Consultants  
2101 Webster Street, 12th Floor • Oakland, CA 94612  
Phone: 510-863-4100 Fax: 510-863-4141

2004-06-0177

18547

86594

# Chain-of Custody Record

Date: 6/4/04

Page 2 of 2

Project No.: 8207-009

Samplers (Signature): Sarah Mearon

## ANALYSES

## REMARKS

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Full VOCs only)	EPA Method 8021 (METH only)	EPA Method 8021 (METH, PHE, TCE, STC, SALLY)	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHs only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil)	Silica Gel Cleanup	TPH/gal fuel	Sol (S), Water (W), Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers	
																			Additional Comments
6/4/04	1030	SB-1				X								W	N	N	Y	5	3 VOAs 2 AMBERS
	1100	SB-2				X								W	N	N	Y	5	
	1120	SB-3				X								W	N	N	Y	5	
	1330	SB-17				X								W	N	Y	Y	5	
	1500	SB-18				X								W	N	N	Y	4	
✓	1700	SB-4				X								W	N	N	Y	5	3 VOAs 2 AMBERS
		TB-1				X								W	N	Y	Y	2	2 VOAs

# RUSH

\* Bill to Port of Oakland Airport Investigation  
Attn: Dale Klattke \*

Laboratory: STL San Francisco

Turnaround Time: 48-hour

Results to: Elizabeth Wells

Total No. of Containers: 29

Relinquished by (Signature): [Signature]  
Printed Name: MARCUS KEEWAW  
Company: GMAX

Date: 6/5/04  
Time: 0900  
Relinquished by (Signature):  
Printed Name:  
Company:

Date:  
Time:  
Relinquished by (Signature):  
Printed Name:  
Company:

Method of Shipment: drop-off  
Laboratory Comments and Log No.:

Received by:  
Printed Name:  
Company:

Date:  
Time:  
Received by:  
Printed Name:  
Company:

Date: 6/4/04  
Time: 0900  
Received by: [Signature]  
Printed Name: D. Harrington  
Company: STL-SF

Geometrix Consultants  
2101 Webster Street, 12th Floor - Oakland, CA 94612  
Phone: 510-863-4100 Fax: 510-863-4141



**Geomatrix Consultants**

June 08, 2004

2101 Webster Street, 12th Floor  
Oakland, CA 94612

Attn.: Elizabeth Wells

Project#: 8207.009

Project: Port Of Oakland - Airport Investigation

Dear Ms. Wells,

Attached is our report for your samples received on 06/06/2004 08:23

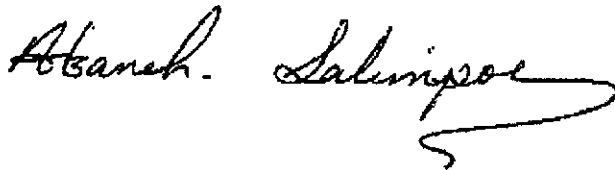
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 07/21/2004 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: [asalimpour@stl-inc.com](mailto:asalimpour@stl-inc.com)

Sincerely,



Afsaneh Salimpour  
Project Manager

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* [www.stl-inc.com](http://www.stl-inc.com) \* CA DHS ELAP# 2496

**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
SB-5-3.0	06/05/2004 08:15	Soil	1
SB-5-8.5	06/05/2004 09:37	Soil	2
SB-6-3.0	06/05/2004 09:20	Soil	3
SB-6-8.5	06/05/2004 09:38	Soil	4
SB-7-3.0	06/05/2004 10:15	Soil	5
SB-7-8.0	06/05/2004 10:23	Soil	6
SB-19-3.0	06/05/2004 11:23	Soil	7
SB-19-6.5	06/05/2004 11:32	Soil	8
SB-20-3.0	06/05/2004 13:58	Soil	9
SB-20-6.5	06/05/2004 14:00	Soil	10
SB-21-3.0	06/05/2004 14:44	Soil	11
SB-21-6.5	06/05/2004 15:00	Soil	12
SB-22-3.0	06/05/2004 16:04	Soil	13
SB-22-6.8	06/05/2004 16:11	Soil	14

**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-5-3.0	Lab ID: 2004-06-0185 - 1
Sampled: 06/05/2004 08:15	Extracted: 6/6/2004 11:11
Matrix: Soil	QC Batch#: 2004/06/06-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/06/2004 11:11	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/06/2004 11:11	
Benzene	ND	5.0	ug/Kg	1.00	06/06/2004 11:11	
Toluene	ND	5.0	ug/Kg	1.00	06/06/2004 11:11	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/06/2004 11:11	
Total xylenes	ND	5.0	ug/Kg	1.00	06/06/2004 11:11	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	98.2	72-124	%	1.00	06/06/2004 11:11	
Toluene-d8	96.2	75-116	%	1.00	06/06/2004 11:11	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/07/2004 15:28

**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-5-8.5	Lab ID: 2004-06-0185 - 2
Sampled: 06/05/2004 09:37	Extracted: 6/6/2004 11:33
Matrix: Soil	QC Batch#: 2004/06/06-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/06/2004 11:33	
Methyl tert-butyl ether (MTBE)	18	5.0	ug/Kg	1.00	06/06/2004 11:33	
Benzene	ND	5.0	ug/Kg	1.00	06/06/2004 11:33	
Toluene	7.2	5.0	ug/Kg	1.00	06/06/2004 11:33	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/06/2004 11:33	
Total xylenes	ND	5.0	ug/Kg	1.00	06/06/2004 11:33	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	98.5	72-124	%	1.00	06/06/2004 11:33	
Toluene-d8	100.1	75-116	%	1.00	06/06/2004 11:33	

**Fuel Oxygenates by 8260B**

Geomatrix Consultants

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-6-3.0	Lab ID: 2004-06-0185 - 3
Sampled: 06/05/2004 09:20	Extracted: 6/6/2004 12:39
Matrix: Soil	QC Batch#: 2004/06/06-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/06/2004 12:39	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/06/2004 12:39	
Benzene	ND	5.0	ug/Kg	1.00	06/06/2004 12:39	
Toluene	ND	5.0	ug/Kg	1.00	06/06/2004 12:39	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/06/2004 12:39	
Total xylenes	ND	5.0	ug/Kg	1.00	06/06/2004 12:39	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	96.0	72-124	%	1.00	06/06/2004 12:39	
Toluene-d8	97.3	75-116	%	1.00	06/06/2004 12:39	

Severn Trent Laboratories, Inc.

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

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**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-6-8.5	Lab ID: 2004-06-0185 - 4
Sampled: 06/05/2004 09:38	Extracted: 6/6/2004 13:01
Matrix: Soil	QC Batch#: 2004/06/06-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/06/2004 13:01	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/06/2004 13:01	
Benzene	ND	5.0	ug/Kg	1.00	06/06/2004 13:01	
Toluene	ND	5.0	ug/Kg	1.00	06/06/2004 13:01	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/06/2004 13:01	
Total xylenes	ND	5.0	ug/Kg	1.00	06/06/2004 13:01	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	100.6	72-124	%	1.00	06/06/2004 13:01	
Toluene-d8	97.2	75-116	%	1.00	06/06/2004 13:01	

**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Oakland, CA 94612

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Project: 8207.009

Received: 06/06/2004 08:23

Port Of Oakland - Airport Investigation

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-7-3.0	Lab ID: 2004-06-0185 - 5
Sampled: 06/05/2004 10:15	Extracted: 6/6/2004 13:24
Matrix: Soil	QC Batch#: 2004/06/06-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/06/2004 13:24	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/06/2004 13:24	
Benzene	ND	5.0	ug/Kg	1.00	06/06/2004 13:24	
Toluene	ND	5.0	ug/Kg	1.00	06/06/2004 13:24	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/06/2004 13:24	
Total xylenes	ND	5.0	ug/Kg	1.00	06/06/2004 13:24	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	112.4	72-124	%	1.00	06/06/2004 13:24	
Toluene-d8	101.6	75-116	%	1.00	06/06/2004 13:24	

Severn Trent Laboratories, Inc.

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06/07/2004 15:28

Fuel Oxygenates by 8260B

Geomatrix Consultants

Attn.: Elizabeth Wells

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Oakland, CA 94612  
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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-7-8.0	Lab ID: 2004-06-0185 - 6
Sampled: 06/05/2004 10:23	Extracted: 6/6/2004 13:46
Matrix: Soil	QC Batch#: 2004/06/06-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/06/2004 13:46	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/06/2004 13:46	
Benzene	ND	5.0	ug/Kg	1.00	06/06/2004 13:46	
Toluene	ND	5.0	ug/Kg	1.00	06/06/2004 13:46	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/06/2004 13:46	
Total xylenes	ND	5.0	ug/Kg	1.00	06/06/2004 13:46	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	103.3	72-124	%	1.00	06/06/2004 13:46	
Toluene-d8	95.6	75-116	%	1.00	06/06/2004 13:46	



Fuel Oxygenates by 8260B

Geomatrix Consultants

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s):	5030B	Test(s):	8260B
Sample ID:	SB-19-3.0	Lab ID:	2004-06-0185 - 7
Sampled:	06/05/2004 11:23	Extracted:	6/6/2004 14:08
Matrix:	Soil	QC Batch#:	2004/06/06-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/06/2004 14:08	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/06/2004 14:08	
Benzene	ND	5.0	ug/Kg	1.00	06/06/2004 14:08	
Toluene	ND	5.0	ug/Kg	1.00	06/06/2004 14:08	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/06/2004 14:08	
Total xylenes	ND	5.0	ug/Kg	1.00	06/06/2004 14:08	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	104.1	72-124	%	1.00	06/06/2004 14:08	
Toluene-d8	98.7	75-116	%	1.00	06/06/2004 14:08	

**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s):	5030B	Test(s):	8260B
Sample ID:	SB-19-6.5	Lab ID:	2004-06-0185 - 8
Sampled:	06/05/2004 11:32	Extracted:	6/7/2004 09:53
Matrix:	Soil	QC Batch#:	2004/06/07-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/07/2004 09:53	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/07/2004 09:53	
Benzene	ND	5.0	ug/Kg	1.00	06/07/2004 09:53	
Toluene	ND	5.0	ug/Kg	1.00	06/07/2004 09:53	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/07/2004 09:53	
Total xylenes	ND	5.0	ug/Kg	1.00	06/07/2004 09:53	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	113.3	72-124	%	1.00	06/07/2004 09:53	
Toluene-d8	99.9	75-116	%	1.00	06/07/2004 09:53	

**Fuel Oxygenates by 8260B**

Geomatrix Consultants  
Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s):	5030B	Test(s):	8260B
Sample ID:	SB-20-3.0	Lab ID:	2004-06-0185 - 9
Sampled:	06/05/2004 13:58	Extracted:	6/6/2004 14:52
Matrix:	Soil	QC Batch#:	2004/06/06-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/06/2004 14:52	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/06/2004 14:52	
Benzene	ND	5.0	ug/Kg	1.00	06/06/2004 14:52	
Toluene	ND	5.0	ug/Kg	1.00	06/06/2004 14:52	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/06/2004 14:52	
Total xylenes	ND	5.0	ug/Kg	1.00	06/06/2004 14:52	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	101.6	72-124	%	1.00	06/06/2004 14:52	
Toluene-d8	96.1	75-116	%	1.00	06/06/2004 14:52	

**Fuel Oxygenates by 8260B**

Geomatrix Consultants

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2101 Webster Street, 12th Floor  
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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s):	5030B	Test(s):	8260B
Sample ID:	SB-20-6.5	Lab ID:	2004-06-0185 - 10
Sampled:	06/05/2004 14:00	Extracted:	6/6/2004 15:14
Matrix:	Soil	QC Batch#:	2004/06/06-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/06/2004 15:14	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/06/2004 15:14	
Benzene	ND	5.0	ug/Kg	1.00	06/06/2004 15:14	
Toluene	ND	5.0	ug/Kg	1.00	06/06/2004 15:14	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/06/2004 15:14	
Total xylenes	ND	5.0	ug/Kg	1.00	06/06/2004 15:14	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	96.9	72-124	%	1.00	06/06/2004 15:14	
Toluene-d8	101.0	75-116	%	1.00	06/06/2004 15:14	

Severn Trent Laboratories, Inc.

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06/07/2004 15:14

Page 11 of 11

**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s):	5030B	Test(s):	8260B
Sample ID:	SB-21-3.0	Lab ID:	2004-06-0185 - 11
Sampled:	06/05/2004 14:44	Extracted:	6/6/2004 15:36
Matrix:	Soil	QC Batch#:	2004/06/06-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/06/2004 15:36	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/06/2004 15:36	
Benzene	ND	5.0	ug/Kg	1.00	06/06/2004 15:36	
Toluene	ND	5.0	ug/Kg	1.00	06/06/2004 15:36	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/06/2004 15:36	
Total xylenes	ND	5.0	ug/Kg	1.00	06/06/2004 15:36	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	102.8	72-124	%	1.00	06/06/2004 15:36	
Toluene-d8	96.3	75-116	%	1.00	06/06/2004 15:36	

Severn Trent Laboratories, Inc.

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/07/2004 15:28

Fuel Oxygenates by 8260B

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s): 5030B Test(s): 8260B  
 Sample ID: SB-21-6.5 Lab ID: 2004-06-0185 - 12  
 Sampled: 06/05/2004 15:00 Extracted: 6/7/2004 10:15  
 Matrix: Soil QC Batch#: 2004/06/07-01:62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/07/2004 10:15	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/07/2004 10:15	
Benzene	ND	5.0	ug/Kg	1.00	06/07/2004 10:15	
Toluene	ND	5.0	ug/Kg	1.00	06/07/2004 10:15	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/07/2004 10:15	
Total xylenes	ND	5.0	ug/Kg	1.00	06/07/2004 10:15	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	94.6	72-124	%	1.00	06/07/2004 10:15	
Toluene-d8	99.8	75-116	%	1.00	06/07/2004 10:15	

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06/07/2004 15:30

**Fuel Oxygenates by 8260B**

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s):	5030B	Test(s):	8260B
Sample ID:	SB-22-3.0	Lab ID:	2004-06-0185 - 13
Sampled:	06/05/2004 16:04	Extracted:	6/7/2004 10:37
Matrix:	Soil	QC Batch#:	2004/06/07-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/07/2004 10:37	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/07/2004 10:37	
Benzene	ND	5.0	ug/Kg	1.00	06/07/2004 10:37	
Toluene	ND	5.0	ug/Kg	1.00	06/07/2004 10:37	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/07/2004 10:37	
Total xylenes	ND	5.0	ug/Kg	1.00	06/07/2004 10:37	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	96.9	72-124	%	1.00	06/07/2004 10:37	
Toluene-d8	96.6	75-116	%	1.00	06/07/2004 10:37	

**Fuel Oxygenates by 8260B**

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Received: 06/06/2004 08:23

Prep(s): 5030B Test(s): 8260B  
Sample ID: SB-22-6.8 Lab ID: 2004-06-0185 - 14  
Sampled: 06/05/2004 16:11 Extracted: 6/7/2004 10:59  
Matrix: Soil QC Batch#: 2004/06/07-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/07/2004 10:59	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/07/2004 10:59	
Benzene	ND	5.0	ug/Kg	1.00	06/07/2004 10:59	
Toluene	ND	5.0	ug/Kg	1.00	06/07/2004 10:59	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/07/2004 10:59	
Total xylenes	ND	5.0	ug/Kg	1.00	06/07/2004 10:59	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	93.8	72-124	%	1.00	06/07/2004 10:59	
Toluene-d8	97.8	75-116	%	1.00	06/07/2004 10:59	



**Fuel Oxygenates by 8260B**

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Received: 06/06/2004 08:23

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2004/06/06-01.62-049

Soil

Test(s): 8260B

QC Batch # 2004/06/06-01.62

Date Extracted: 06/06/2004 09:49

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	06/06/2004 09:49	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	06/06/2004 09:49	
Benzene	ND	5.0	ug/Kg	06/06/2004 09:49	
Toluene	ND	5.0	ug/Kg	06/06/2004 09:49	
Ethyl benzene	ND	5.0	ug/Kg	06/06/2004 09:49	
Total xylenes	ND	5.0	ug/Kg	06/06/2004 09:49	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	111.4	72-124	%	06/06/2004 09:49	
Toluene-d8	102.1	75-116	%	06/06/2004 09:49	

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**Fuel Oxygenates by 8260B**

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**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Method Blank

Soil

QC Batch # 2004/06/07-01.62

MB: 2004/06/07-01.62-027

Date Extracted: 06/07/2004 07:27

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	06/07/2004 07:27	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	06/07/2004 07:27	
Benzene	ND	5.0	ug/Kg	06/07/2004 07:27	
Toluene	ND	5.0	ug/Kg	06/07/2004 07:27	
Ethyl benzene	ND	5.0	ug/Kg	06/07/2004 07:27	
Total xylenes	ND	5.0	ug/Kg	06/07/2004 07:27	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	95.6	72-124	%	06/07/2004 07:27	
Toluene-d8	99.6	75-116	%	06/07/2004 07:27	

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**Fuel Oxygenates by 8260B**

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Soil**

**QC Batch # 2004/06/06-01.62**

LCS 2004/06/06-01.62-004

Extracted: 06/06/2004

Analyzed: 06/06/2004 09:04

LCSD 2004/06/06-01.62-027

Extracted: 06/06/2004

Analyzed: 06/06/2004 09:27

Compound	Conc. ug/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	41.9	41.4	50.0	83.8	82.8	1.2	65-165	20		
Benzene	48.3	49.5	50.0	96.6	99.0	2.5	69-129	20		
Toluene	49.9	49.3	50.0	99.8	98.6	1.2	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	443	449	500	88.6	89.8		72-124			
Toluene-d8	495	477	500	99.0	95.4		75-116			

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**Fuel Oxygenates by 8260B**

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Soil**

**QC Batch # 2004/06/07-01.62**

LCS 2004/06/07-01.62-043

Extracted: 06/07/2004

Analyzed: 06/07/2004 06:43

LCSD 2004/06/07-01.62-005

Extracted: 06/07/2004

Analyzed: 06/07/2004 07:05

Compound	Conc. ug/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %			Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	44.3	50.8	50.0	88.6	101.6	13.7	65-165	20			
Benzene	50.0	48.5	50.0	100.0	97.0	3.0	69-129	20			
Toluene	53.0	51.6	50.0	106.0	103.2	2.7	70-130	20			
<b>Surrogates(s)</b>											
1,2-Dichloroethane-d4	497	473	500	99.4	94.6		72-124				
Toluene-d8	511	498	500	102.2	99.6		75-116				

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06/07/2004 15:

**Fuel Oxygenates by 8260B**

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Project: 8207.009

Received: 06/06/2004 08:23

Port Of Oakland - Airport Investigation

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
SB-5	06/05/2004 08:40	Water	15
SB-6	06/05/2004 09:45	Water	16
SB-7	06/05/2004 10:35	Water	17
SB-19	06/05/2004 12:15	Water	18
SB-20	06/05/2004 14:10	Water	19
SB-21	06/05/2004 15:20	Water	20
EB-1-60504	06/05/2004 16:15	Water	21
TB-2	06/05/2004	Water	22
SB-22	06/05/2004 16:45	Water	23

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06/08/2004 12:42

**Fuel Oxygenates by 8260B**

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Project: 8207.009

Received: 06/06/2004 08:23

Port Of Oakland - Airport Investigation

Prep(s): 5030B Test(s): 8260B  
 Sample ID: SB-5 Lab ID: 2004-06-0185 - 15  
 Sampled: 06/05/2004 08:40 Extracted: 6/7/2004 11:43  
 Matrix: Water QC Batch#: 2004/06/07-01.66  
 Analysis Flag: o ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	1500	1000	ug/L	20.00	06/07/2004 11:43	g
Methyl tert-butyl ether (MTBE)	1700	10	ug/L	20.00	06/07/2004 11:43	
Benzene	ND	10	ug/L	20.00	06/07/2004 11:43	
Toluene	ND	10	ug/L	20.00	06/07/2004 11:43	
Ethylbenzene	ND	10	ug/L	20.00	06/07/2004 11:43	
Total xylenes	ND	20	ug/L	20.00	06/07/2004 11:43	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	105.5	72-128	%	20.00	06/07/2004 11:43	
Toluene-d8	103.1	80-113	%	20.00	06/07/2004 11:43	

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06/08/2004 12:4

**Fuel Oxygenates by 8260B**

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-6	Lab ID: 2004-06-0185 - 16
Sampled: 06/05/2004 09:45	Extracted: 6/7/2004 12:07
Matrix: Water	QC Batch#: 2004/06/07-01.66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/07/2004 12:07	
Methyl tert-butyl ether (MTBE)	2.4	0.50	ug/L	1.00	06/07/2004 12:07	
Benzene	ND	0.50	ug/L	1.00	06/07/2004 12:07	
Toluene	0.56	0.50	ug/L	1.00	06/07/2004 12:07	
Ethylbenzene	ND	0.50	ug/L	1.00	06/07/2004 12:07	
Total xylenes	ND	1.0	ug/L	1.00	06/07/2004 12:07	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	99.3	72-128	%	1.00	06/07/2004 12:07	
Toluene-d8	101.4	80-113	%	1.00	06/07/2004 12:07	

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**Fuel Oxygenates by 8260B**

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Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-7	Lab ID: 2004-06-0185 - 17
Sampled: 06/05/2004 10:35	Extracted: 6/6/2004 11:21
Matrix: Water	QC Batch#: 2004/06/06-01.64

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/06/2004 11:21	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/06/2004 11:21	
Benzene	ND	0.50	ug/L	1.00	06/06/2004 11:21	
Toluene	ND	0.50	ug/L	1.00	06/06/2004 11:21	
Ethylbenzene	ND	0.50	ug/L	1.00	06/06/2004 11:21	
Total xylenes	ND	1.0	ug/L	1.00	06/06/2004 11:21	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	97.5	72-128	%	1.00	06/06/2004 11:21	
Toluene-d8	97.0	80-113	%	1.00	06/06/2004 11:21	





**Fuel Oxygenates by 8260B**

Geomatrix Consultants

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-20	Lab ID: 2004-06-0185 - 19
Sampled: 06/05/2004 14:10	Extracted: 6/6/2004 12:06
Matrix: Water	QC Batch#: 2004/06/06-01.64

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/06/2004 12:06	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/06/2004 12:06	
Benzene	ND	0.50	ug/L	1.00	06/06/2004 12:06	
Toluene	ND	0.50	ug/L	1.00	06/06/2004 12:06	
Ethylbenzene	ND	0.50	ug/L	1.00	06/06/2004 12:06	
Total xylenes	ND	1.0	ug/L	1.00	06/06/2004 12:06	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	96.5	72-128	%	1.00	06/06/2004 12:06	
Toluene-d8	98.7	80-113	%	1.00	06/06/2004 12:06	

**Fuel Oxygenates by 8260B**

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-21	Lab ID: 2004-06-0185 - 20
Sampled: 06/05/2004 15:20	Extracted: 6/7/2004 09:27
Matrix: Water	QC Batch#: 2004/06/07-01.68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/07/2004 09:27	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/07/2004 09:27	
Benzene	ND	0.50	ug/L	1.00	06/07/2004 09:27	
Toluene	0.60	0.50	ug/L	1.00	06/07/2004 09:27	
Ethylbenzene	ND	0.50	ug/L	1.00	06/07/2004 09:27	
Total xylenes	ND	1.0	ug/L	1.00	06/07/2004 09:27	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	102.8	72-128	%	1.00	06/07/2004 09:27	
Toluene-d8	97.0	80-113	%	1.00	06/07/2004 09:27	

**Fuel Oxygenates by 8260B**

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Project: 8207.009  
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Received: 06/06/2004 08:23

Prep(s): 5030B	Test(s): 8260B
Sample ID: EB-1-60504	Lab ID: 2004-06-0185 - 21
Sampled: 06/05/2004 16:15	Extracted: 6/7/2004 09:46
Matrix: Water	QC Batch#: 2004/06/07-01.68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/07/2004 09:46	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/07/2004 09:46	
Benzene	ND	0.50	ug/L	1.00	06/07/2004 09:46	
Toluene	ND	0.50	ug/L	1.00	06/07/2004 09:46	
Ethylbenzene	ND	0.50	ug/L	1.00	06/07/2004 09:46	
Total xylenes	ND	1.0	ug/L	1.00	06/07/2004 09:46	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	96.5	72-128	%	1.00	06/07/2004 09:46	
Toluene-d8	91.9	80-113	%	1.00	06/07/2004 09:46	



**Fuel Oxygenates by 8260B**

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Received: 06/06/2004 08:23

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-22	Lab ID: 2004-06-0185 - 23
Sampled: 06/05/2004 16:45	Extracted: 6/7/2004 09:07
Matrix: Water	QC Batch#: 2004/06/07-01.68

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/07/2004 09:07	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/07/2004 09:07	
Benzene	ND	0.50	ug/L	1.00	06/07/2004 09:07	
Toluene	ND	0.50	ug/L	1.00	06/07/2004 09:07	
Ethylbenzene	ND	0.50	ug/L	1.00	06/07/2004 09:07	
Total xylenes	ND	1.0	ug/L	1.00	06/07/2004 09:07	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	99.2	72-128	%	1.00	06/07/2004 09:07	
Toluene-d8	96.7	80-113	%	1.00	06/07/2004 09:07	

**Fuel Oxygenates by 8260B**

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Project: 8207.009  
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Received: 06/06/2004 08:23

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2004/06/06-01.64-033

Water

Test(s): 8260B

QC Batch # 2004/06/06-01.64

Date Extracted: 06/06/2004 09:33

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	06/06/2004 09:33	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/06/2004 09:33	
Benzene	ND	0.5	ug/L	06/06/2004 09:33	
Toluene	ND	0.5	ug/L	06/06/2004 09:33	
Ethylbenzene	ND	0.5	ug/L	06/06/2004 09:33	
Total xylenes	ND	1.0	ug/L	06/06/2004 09:33	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	95.4	72-128	%	06/06/2004 09:33	
Toluene-d8	96.8	80-113	%	06/06/2004 09:33	

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**Fuel Oxygenates by 8260B**

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

**Batch QC Report**

Prep(s): 5030B  
Method Blank  
MB: 2004/06/07-01.66-034

Water

Test(s): 8260B  
QC Batch # 2004/06/07-01.66  
Date Extracted: 06/07/2004 07:34

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	06/07/2004 07:34	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/07/2004 07:34	
Benzene	ND	0.5	ug/L	06/07/2004 07:34	
Toluene	ND	0.5	ug/L	06/07/2004 07:34	
Ethylbenzene	ND	0.5	ug/L	06/07/2004 07:34	
Total xylenes	ND	1.0	ug/L	06/07/2004 07:34	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	95.4	72-128	%	06/07/2004 07:34	
Toluene-d8	101.2	80-113	%	06/07/2004 07:34	

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496



**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2004/06/07-01.68-016

Water

Test(s): 8260B

QC Batch # 2004/06/07-01.68

Date Extracted: 06/07/2004 08:16

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	06/07/2004 08:16	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/07/2004 08:16	
Benzene	ND	0.5	ug/L	06/07/2004 08:16	
Toluene	ND	0.5	ug/L	06/07/2004 08:16	
Ethylbenzene	ND	0.5	ug/L	06/07/2004 08:16	
Total xylenes	ND	1.0	ug/L	06/07/2004 08:16	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	95.0	72-128	%	06/07/2004 08:16	
Toluene-d8	101.3	80-113	%	06/07/2004 08:16	

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06/08/2004 12:42

**Fuel Oxygenates by 8260B**

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Water**

**QC Batch # 2004/06/06-01.64**

LCS 2004/06/06-01.64-049

Extracted: 06/06/2004

Analyzed: 06/06/2004 08:49

LCSD 2004/06/06-01.64-011

Extracted: 06/06/2004

Analyzed: 06/06/2004 09:11

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD %	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	24.9	26.2	25.0	99.6	104.8	5.1	65-165	20		
Benzene	24.0	24.2	25.0	96.0	96.8	0.8	69-129	20		
Toluene	25.4	25.5	25.0	101.6	102.0	0.4	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	447	442	500	89.4	88.4		72-128			
Toluene-d8	474	485	500	94.8	97.0		80-113			

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Project: 8207.009  
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Received: 06/06/2004 08:23

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2004/06/07-01.66

LCS 2004/06/07-01.66-046

Extracted: 06/07/2004

Analyzed: 06/07/2004 06:46

LCSD 2004/06/07-01.66-010

Extracted: 06/07/2004

Analyzed: 06/07/2004 07:10

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	23.0	24.4	25.0	92.0	97.6	5.9	65-165	20		
Benzene	24.5	25.6	25.0	98.0	102.4	4.4	69-129	20		
Toluene	25.3	25.7	25.0	101.2	102.8	1.6	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	434	449	500	86.8	89.8		72-128			
Toluene-d8	514	506	500	102.8	101.2		80-113			

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**Fuel Oxygenates by 8260B**

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Received: 06/06/2004 08:23

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Water**

**QC Batch # 2004/06/07-01.68**

LCS 2004/06/07-01.68-038

Extracted: 06/07/2004

Analyzed: 06/07/2004 07:38

LCSD 2004/06/07-01.68-057

Extracted: 06/07/2004

Analyzed: 06/07/2004 07:57

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD %	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	23.5	22.5	25.0	94.0	90.0	4.3	65-165	20		
Benzene	23.4	23.8	25.0	93.6	95.2	1.7	69-129	20		
Toluene	25.7	25.4	25.0	102.8	101.6	1.2	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	438	430	500	87.6	86.0		72-128			
Toluene-d8	485	443	500	97.0	88.6		80-113			

06/08/2004 12:30

**Fuel Oxygenates by 8260B**

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Project: 8207.009

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Received: 06/06/2004 08:23

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**Legend and Notes**

---

**Analysis Flag**

o

Reporting limits were raised due to high level of analyte present in the sample.

**Result Flag**

g

Hydrocarbon reported in the gasoline range does not match our gasoline standard.

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**TEPH w/ Silica Gel Clean-up**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Received: 06/06/2004 08:23

Project: 8207.009  
Port Of Oakland - Airport Investigation

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
SB-5-3.0	06/05/2004 08:15	Soil	1
SB-5-8.5	06/05/2004 09:37	Soil	2
SB-6-3.0	06/05/2004 09:20	Soil	3
SB-6-8.5	06/05/2004 09:38	Soil	4
SB-7-3.0	06/05/2004 10:15	Soil	5
SB-7-8.0	06/05/2004 10:23	Soil	6
SB-19-3.0	06/05/2004 11:23	Soil	7
SB-19-6.5	06/05/2004 11:32	Soil	8
SB-20-3.0	06/05/2004 13:58	Soil	9
SB-20-6.5	06/05/2004 14:00	Soil	10
SB-21-3.0	06/05/2004 14:44	Soil	11
SB-21-6.5	06/05/2004 15:00	Soil	12
SB-22-3.0	06/05/2004 16:04	Soil	13
SB-22-6.8	06/05/2004 16:11	Soil	14

06/08/2004 16:0

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Project: 8207.009

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Received: 06/06/2004 08:23

Prep(s): 3550/8015M

Test(s): 8015M

Sample ID: SB-5-3.0

Lab ID: 2004-06-0185 - 1

Sampled: 06/05/2004 08:15

Extracted: 6/7/2004 15:58

Matrix: Soil

QC Batch#: 2004/06/07-07.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/08/2004 12:41	
Motor Oil	ND	50	mg/Kg	1.00	06/08/2004 12:41	
Jet fuel	ND	1.0	mg/Kg	1.00	06/08/2004 12:41	
<b>Surrogate(s)</b> o-Terphenyl	96.2	60-130	%	1.00	06/08/2004 12:41	

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**TEPH w/ Silica Gel Clean-up**

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Received: 06/06/2004 08:23

Prep(s): 3550/8015M	Test(s): 8015M
Sample ID: <b>SB-5-8.5</b>	Lab ID: 2004-06-0185 - 2
Sampled: 06/05/2004 09:37	Extracted: 6/6/2004 09:45
Matrix: Soil	QC Batch#: 2004/06/06-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	1.3	1.0	mg/Kg	1.00	06/06/2004 20:46	ndp
Motor Oil	ND	50	mg/Kg	1.00	06/06/2004 20:46	
Jet fuel	ND	1.0	mg/Kg	1.00	06/06/2004 20:46	
<b>Surrogate(s)</b>						
o-Terphenyl	87.6	60-130	%	1.00	06/06/2004 20:46	



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Project: 8207.009

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Received: 06/06/2004 08:23

Prep(s): 3550/8015M	Test(s): 8015M
Sample ID: <b>SB-6-3.0</b>	Lab ID: 2004-06-0185 - 3
Sampled: 06/05/2004 09:20	Extracted: 6/7/2004 15:58
Matrix: Soil	QC Batch#: 2004/06/07-07.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/08/2004 10:52	
Motor Oil	ND	50	mg/Kg	1.00	06/08/2004 10:52	
Jet fuel	ND	1.0	mg/Kg	1.00	06/08/2004 10:52	
<b>Surrogate(s)</b> o-Terphenyl	92.8	60-130	%	1.00	06/08/2004 10:52	

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Received: 06/06/2004 08:23

Prep(s): 3550/8015M	Test(s): 8015M
Sample ID: SB-6-8.5	Lab ID: 2004-06-0185 - 4
Sampled: 06/05/2004 09:38	Extracted: 6/6/2004 09:45
Matrix: Soil	QC Batch#: 2004/06/06-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	11	1.0	mg/Kg	1.00	06/06/2004 20:46	ldr
Motor Oil	140	50	mg/Kg	1.00	06/06/2004 20:46	
Jet fuel	ND	1.0	mg/Kg	1.00	06/06/2004 20:46	
<b>Surrogate(s)</b>						
o-Terphenyl	94.8	60-130	%	1.00	06/06/2004 20:46	

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s): 3550/8015M                      Test(s): 8015M  
Sample ID: **SB-7-3.0**                      Lab ID: 2004-06-0185 - 5  
Sampled: 06/05/2004 10:15              Extracted: 6/7/2004 15:58  
Matrix: Soil                                  QC Batch#: 2004/06/07-07.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/08/2004 11:19	
Motor Oil	ND	50	mg/Kg	1.00	06/08/2004 11:19	
Jet fuel	ND	1.0	mg/Kg	1.00	06/08/2004 11:19	
<b>Surrogate(s)</b> o-Terphenyl	95.3	60-130	%	1.00	06/08/2004 11:19	

**TEPH w/ Silica Gel Clean-up**

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Project: 8207.009  
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Received: 06/06/2004 08:23

Prep(s): 3550/8015M	Test(s): 8015M
Sample ID: SB-7-8.0	Lab ID: 2004-06-0185 - 6
Sampled: 06/05/2004 10:23	Extracted: 6/6/2004 09:45
Matrix: Soil	QC Batch#: 2004/06/06-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	4.1	1.0	mg/Kg	1.00	06/06/2004 21:13	ndp
Motor Oil	ND	50	mg/Kg	1.00	06/06/2004 21:13	
Jet fuel	ND	1.0	mg/Kg	1.00	06/06/2004 21:13	
<b>Surrogate(s)</b>						
o-Terphenyl	85.0	60-130	%	1.00	06/06/2004 21:13	

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Project: 8207.009

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Port Of Oakland - Airport Investigation

Prep(s): 3550/8015M	Test(s): 8015M
Sample ID: <b>SB-19-3.0</b>	Lab ID: 2004-06-0185 - 7
Sampled: 06/05/2004 11:23	Extracted: 6/7/2004 15:58
Matrix: Soil	QC Batch#: 2004/06/07-07.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/08/2004 11:46	
Motor Oil	ND	50	mg/Kg	1.00	06/08/2004 11:46	
Jet fuel	ND	1.0	mg/Kg	1.00	06/08/2004 11:46	
<b>Surrogate(s)</b> o-Terphenyl	90.3	60-130	%	1.00	06/08/2004 11:46	

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**TEPH w/ Silica Gel Clean-up**

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Received: 06/06/2004 08:23

Prep(s): 3550/8015M	Test(s): 8015M
Sample ID: SB-19-6.5	Lab ID: 2004-06-0185 - 8
Sampled: 06/05/2004 11:32	Extracted: 6/7/2004 15:58
Matrix: Soil	QC Batch#: 2004/06/07-07.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/08/2004 12:14	
Motor Oil	ND	50	mg/Kg	1.00	06/08/2004 12:14	
Jet fuel	ND	1.0	mg/Kg	1.00	06/08/2004 12:14	
<b>Surrogate(s)</b>						
o-Terphenyl	87.9	60-130	%	1.00	06/08/2004 12:14	

**TEPH w/ Silica Gel Clean-up**

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Project: 8207.009

Received: 06/06/2004 08:23

Port Of Oakland - Airport Investigation

Prep(s):	3550/8015M	Test(s):	8015M
Sample ID:	SB-20-3.0	Lab ID:	2004-06-0185 - 9
Sampled:	06/05/2004 13:58	Extracted:	6/7/2004 15:58
Matrix:	Soil	QC Batch#:	2004/06/07-07:10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/08/2004 11:46	
Motor Oil	ND	50	mg/Kg	1.00	06/08/2004 11:46	
Jet fuel	ND	1.0	mg/Kg	1.00	06/08/2004 11:46	
<b>Surrogate(s)</b>						
o-Terphenyl	93.4	60-130	%	1.00	06/08/2004 11:46	

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Project: 8207.009  
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Received: 06/06/2004 08:23

Prep(s): 3550/8015M	Test(s): 8015M
Sample ID: SB-20-6.5	Lab ID: 2004-06-0185 - 10
Sampled: 06/05/2004 14:00	Extracted: 6/7/2004 15:58
Matrix: Soil	QC Batch#: 2004/06/07-07.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/08/2004 12:14	
Motor Oil	ND	50	mg/Kg	1.00	06/08/2004 12:14	
Jet fuel	ND	1.0	mg/Kg	1.00	06/08/2004 12:14	
<b>Surrogate(s)</b> o-Terphenyl	94.7	60-130	%	1.00	06/08/2004 12:14	



**TEPH w/ Silica Gel Clean-up**

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Project: 8207.009

Received: 06/06/2004 08:23

Port Of Oakland - Airport Investigation

Prep(s):	3550/8015M	Test(s):	8015M
Sample ID:	<b>SB-21-3.0</b>	Lab ID:	2004-06-0185 - 11
Sampled:	06/05/2004 14:44	Extracted:	6/7/2004 15:58
Matrix:	Soil	QC Batch#:	2004/06/07-07.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/08/2004 12:41	
Motor Oil	ND	50	mg/Kg	1.00	06/08/2004 12:41	
Jet fuel	ND	1.0	mg/Kg	1.00	06/08/2004 12:41	
<b>Surrogate(s)</b>						
o-Terphenyl	81.2	60-130	%	1.00	06/08/2004 12:41	

**TEPH w/ Silica Gel Clean-up**

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s): 3550/8015M	Test(s): 8015M
Sample ID: SB-21-6.5	Lab ID: 2004-06-0185 - 12
Sampled: 06/05/2004 15:00	Extracted: 6/6/2004 09:45
Matrix: Soil	QC Batch#: 2004/06/06-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/06/2004 22:35	
Motor Oil	ND	50	mg/Kg	1.00	06/06/2004 22:35	
Jet fuel	ND	1.0	mg/Kg	1.00	06/06/2004 22:35	
<b>Surrogate(s)</b>						
o-Terphenyl	89.3	60-130	%	1.00	06/06/2004 22:35	

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**TEPH w/ Silica Gel Clean-up**

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Project: 8207.009

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Received: 06/06/2004 08:23

Prep(s): 3550/8015M	Test(s): 8015M
Sample ID: <b>SB-22-6.8</b>	Lab ID: 2004-06-0185 - 14
Sampled: 06/05/2004 16:11	Extracted: 6/6/2004 09:45
Matrix: Soil	QC Batch#: 2004/06/06-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/06/2004 23:31	
Motor Oil	ND	50	mg/Kg	1.00	06/06/2004 23:31	
Jet fuel	ND	1.0	mg/Kg	1.00	06/06/2004 23:31	
<b>Surrogate(s)</b>						
o-Terphenyl	90.4	60-130	%	1.00	06/06/2004 23:31	

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**TEPH w/ Silica Gel Clean-up**

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Project: 8207.009  
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Received: 06/06/2004 08:23

**Batch QC Report**

Prep(s): 3550/8015M  
Method Blank  
MB: 2004/06/06-02.10-001

Soil

Test(s): 8015M  
QC Batch # 2004/06/06-02.10  
Date Extracted: 06/06/2004 09:45

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	06/06/2004 13:00	
Motor Oil	ND	50	mg/Kg	06/06/2004 13:00	
Jet fuel	ND	1	mg/Kg	06/06/2004 13:00	
<b>Surrogates(s)</b> o-Terphenyl	82.3	60-130	%	06/06/2004 13:00	

**TEPH w/ Silica Gel Clean-up**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

**Batch QC Report**

Prep(s): 3550/8015M

Method Blank

Soil

Test(s): 8015M

QC Batch # 2004/06/07-07.10

MB: 2004/06/07-07.10-001

Date Extracted: 06/07/2004 15:58

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	06/08/2004 10:24	
Motor Oil	ND	50	mg/Kg	06/08/2004 10:24	
Jet fuel	ND	1	mg/Kg	06/08/2004 10:24	
<b>Surrogates(s)</b> o-Terphenyl	94.3	60-130	%	06/08/2004 10:24	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/08/2004 16:00

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants  
Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Laboratory Control Spike

Soil

QC Batch # 2004/06/06-02.10

LCS 2004/06/06-02.10-002

Extracted: 06/06/2004

Analyzed: 06/06/2004 12:32

LCSD 2004/06/06-02.10-003

Extracted: 06/06/2004

Analyzed: 06/06/2004 12:32

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Diesel	34.1	34.6	41.3	82.6	83.6	1.2	60-130	25		
<i>Surrogates(s)</i> o-Terphenyl	17.7	18.2	20.0	88.4	91.1		60-130	0		

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**TEPH w/ Silica Gel Clean-up**

Geomatrix Consultants  
Attn.: Elizabeth Wells

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Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

**Batch QC Report**

Prep(s): 3550/8015M

Test(s): 8015M

**Laboratory Control Spike**

**Soil**

**QC Batch # 2004/06/07-07.10**

LCS 2004/06/07-07.10-002

Extracted: 06/07/2004

Analyzed: 06/08/2004 10:52

LCSD 2004/06/07-07.10-003

Extracted: 06/07/2004

Analyzed: 06/08/2004 11:19

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Diesel	29.3	31.9	41.4	70.8	77.1	8.5	60-130	25		
<b>Surrogates(s)</b> o-Terphenyl	18.0	17.9	20.0	90.2	89.4		60-130	0		

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06/08/2004 16:30



TEPH w/ Silica Gel Clean-up

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

---

Legend and Notes

---

**Result Flag**

ldr

Hydrocarbon reported is in the late Diesel range, and does not match our Diesel standard

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
SB-5	06/05/2004 08:40	Water	15
SB-6	06/05/2004 09:45	Water	16
SB-7	06/05/2004 10:35	Water	17
SB-19	06/05/2004 12:15	Water	18
SB-20	06/05/2004 14:10	Water	19
SB-21	06/05/2004 15:20	Water	20
EB-1-60504	06/05/2004 16:15	Water	21
SB-22	06/05/2004 16:45	Water	23

Severn Trent Laboratories, Inc.

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/08/2004 16:30



TEPH w/ Silica Gel Clean-up (filtered)

Geomatrix Consultants

Attn.: Elizabeth Wells

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Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s): 3510/8015M	Test(s): 8015M
Sample ID: SB-6	Lab ID: 2004-06-0185 - 16
Sampled: 06/05/2004 09:45	Extracted: 6/6/2004 09:16
Matrix: Water	QC Batch#: 2004/06/06-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/07/2004 05:01	
Motor Oil	ND	500	ug/L	1.00	06/07/2004 05:01	
Jet fuel	ND	50	ug/L	1.00	06/07/2004 05:01	
<b>Surrogate(s)</b>						
o-Terphenyl	88.7	60-130	%	1.00	06/07/2004 05:01	

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s): 3510/8015M                      Test(s): 8015M  
Sample ID: **SB-7**                              Lab ID: 2004-06-0185 - 17  
Sampled: 06/05/2004 10:35                      Extracted: 6/6/2004 09:16  
Matrix: Water                                      QC Batch#: 2004/06/06-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/07/2004 05:28	
Motor Oil	ND	500	ug/L	1.00	06/07/2004 05:28	
Jet fuel	ND	50	ug/L	1.00	06/07/2004 05:28	
<b>Surrogate(s)</b>						
o-Terphenyl	94.5	60-130	%	1.00	06/07/2004 05:28	

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants  
Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s): 3510/8015M	Test(s): 8015M
Sample ID: SB-19	Lab ID: 2004-06-0185 - 18
Sampled: 06/05/2004 12:15	Extracted: 6/6/2004 09:16
Matrix: Water	QC Batch#: 2004/06/06-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/07/2004 05:55	
Motor Oil	ND	500	ug/L	1.00	06/07/2004 05:55	
Jet fuel	ND	50	ug/L	1.00	06/07/2004 05:55	
<b>Surrogate(s)</b> o-Terphenyl	94.0	60-130	%	1.00	06/07/2004 05:55	

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Oakland, CA 94612

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Project: 8207.009

Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s): 3510/8015M

Test(s): 8015M

Sample ID: SB-20

Lab ID: 2004-06-0185 - 19

Sampled: 06/05/2004 14:10

Extracted: 6/6/2004 09:16

Matrix: Water

QC Batch#: 2004/06/06-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/07/2004 11:52	
Motor Oil	ND	500	ug/L	1.00	06/07/2004 11:52	
Jet fuel	ND	50	ug/L	1.00	06/07/2004 11:52	
<b>Surrogate(s)</b>						
o-Terphenyl	90.0	60-130	%	1.00	06/07/2004 11:52	

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TEPH w/ Silica Gel Clean-up (filtered)

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s): 3510/8015M	Test(s): 8015M
Sample ID: SB-21	Lab ID: 2004-06-0185 - 20
Sampled: 06/05/2004 15:20	Extracted: 6/6/2004 09:16
Matrix: Water	QC Batch#: 2004/06/06-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/07/2004 08:40	
Motor Oil	ND	500	ug/L	1.00	06/07/2004 08:40	
Jet fuel	ND	50	ug/L	1.00	06/07/2004 08:40	
<b>Surrogate(s)</b> o-Terphenyl	89.8	60-130	%	1.00	06/07/2004 08:40	

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06/08/2004 16:00



**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s): 3510/8015M                      Test(s): 8015M  
Sample ID: **EB-1-60504**                      Lab ID: 2004-06-0185 - 21  
Sampled: 06/05/2004 16:15                      Extracted: 6/7/2004 10:17  
Matrix: Water                                      QC Batch#: 2004/06/07-06.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/08/2004 13:09	
Motor Oil	ND	500	ug/L	1.00	06/08/2004 13:09	
Jet fuel	ND	50	ug/L	1.00	06/08/2004 13:09	
<b>Surrogate(s)</b>						
o-Terphenyl	99.9	60-130	%	1.00	06/08/2004 13:09	

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06/08/2004 16:04

Page 8 of 13

## TEPH w/ Silica Gel Clean-up (filtered)

Geomatrix Consultants

Attn.: Elizabeth Wells

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Oakland, CA 94612  
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Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	SB-22	Lab ID:	2004-06-0185 - 23
Sampled:	06/05/2004 16:45	Extracted:	6/6/2004 09:16
Matrix:	Water	QC Batch#:	2004/06/06-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/07/2004 09:34	
Motor Oil	ND	500	ug/L	1.00	06/07/2004 09:34	
Jet fuel	ND	50	ug/L	1.00	06/07/2004 09:34	
<b>Surrogate(s)</b> o-Terphenyl	98.9	60-130	%	1.00	06/07/2004 09:34	

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**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

**Batch QC Report**

Prep(s): 3510/8015M

Method Blank

MB: 2004/06/06-01.10-001

Water

Test(s): 8015M

QC Batch # 2004/06/06-01.10

Date Extracted: 06/06/2004 09:16

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	06/06/2004 13:27	
Motor Oil	ND	500	ug/L	06/06/2004 13:27	
Jet fuel	ND	50	ug/L	06/06/2004 13:27	
<b>Surrogates(s)</b>					
o-Terphenyl	81.6	50-120	%	06/06/2004 13:27	

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

**Batch QC Report**

Prep(s): 3510/8015M

Test(s): 8015M

Method Blank

Water

QC Batch # 2004/06/07-06.10

MB: 2004/06/07-06.10-001

Date Extracted: 06/07/2004 10:17

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	06/08/2004 13:09	
Motor Oil	ND	500	ug/L	06/08/2004 13:09	
Jet fuel	ND	50	ug/L	06/08/2004 13:09	
<b>Surrogates(s)</b>					
o-Terphenyl	91.5	50-120	%	06/08/2004 13:09	

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06/08/2004 16:00

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

**Batch QC Report**

Prep(s): 3510/8015M

Test(s): 8015M

**Laboratory Control Spike**

**Water**

**QC Batch # 2004/06/06-01.10**

LCS 2004/06/06-01.10-002

Extracted: 06/06/2004

Analyzed: 06/06/2004 13:00

LCSD 2004/06/06-01.10-003

Extracted: 06/06/2004

Analyzed: 06/06/2004 13:27

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Diesel	704	750	1000	70.4	75.0	6.3	60-130	25		
<b>Surrogates(s)</b> o-Terphenyl	16.4	16.2	20.0	82.0	80.9		50-120	0		

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06/08/2004 16:04

Page 12 of 13

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/06/2004 08:23

**Batch QC Report**

Prep(s): 3510/8015M

Test(s): 8015M

**Laboratory Control Spike**

**Water**

**QC Batch # 2004/06/07-06.10**

LCS 2004/06/07-06.10-002

Extracted: 06/07/2004

Analyzed: 06/08/2004 13:36

LCSD 2004/06/07-06.10-003

Extracted: 06/07/2004

Analyzed: 06/08/2004 13:36

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Diesel	818	821	1000	81.8	82.1	0.4	60-130	25		
<b>Surrogates(s)</b> o-Terphenyl	18.1	17.5	20.0	90.4	87.3		50-120	0		

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06/08/2004 16:

2004-06-0185

18587

86596

**Chain-of Custody Record**

Date: 6/5/04

Page 1 of 2

Project No.: 8207.009

**ANALYSES**

**REMARKS:**

Samplers (Signature): Sarah Meason

Additional Comments:

\* Bill to Port of Oakland Airport Investigation  
ATTN: Dale Klettke

Date	Time	Sample Number	EPA Method 8027 (Fuel Scan)	EPA Method 8021 (Fuel, VOCs only)	EPA Method 8021 (BTEX only)	EPA Method 8080 (TPH)	EPA Method 8270 (Fuel Scan)	EPA Method 8270 SIM (PAMS only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil)	Spill Gel Cleanup	TPH jet fuel	Soil (S), Water (W), Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers
6/5/04	0815	SB-5-3.0			X				X	X	X	X		S			X	1
	0839	SB-5-8.5			X				X	X	X	X		S			X	1
	0920	SB-6-3.0			X				X	X	X	X		S			X	1
	0938	SB-6-8.5			X				X	X	X	X		S			X	1
	1015	SB-7-3.0			X				X	X	X	X		S			X	1
	1023	SB-7-8.0			X				X	X	X	X		S			X	1
	1123	SB-19-3.0			X				X	X	X	X		S			X	1
	1132	SB-19-6.5			X				X	X	X	X		S			X	1
	1358	SB-20-3.0			X				X	X	X	X		S			X	1
	1400	SB-20-6.5			X				X	X	X	X		S			X	1
	1444	SB-21-3.0			X				X	X	X	X		S			X	1
	1500	SB-21-6.5			X				X	X	X	X		S			X	1
	1604	SB-22-3.0			X				X	X	X	X		S			X	1
	1611	SB-22-6.8			X				X	X	X	X		S			X	1

BRASS

BUTYRATE

**RUSH**

Laboratory: STL San Francisco

Turnaround Time: 48-hour

Results to: Elizabeth Wells

Total No. of Containers: 14

Relinquished by (Signature): [Signature]  
Printed Name: MARCUS KEEWAN  
Company: G-M-K

Date: 6/4/04  
Time: 0823  
Relinquished by (Signature):  
Printed Name:  
Company:

Date:  
Time:  
Relinquished by (Signature):  
Printed Name:  
Company:

Date:  
Time:  
Method of Shipment: drop-off  
Laboratory Comments and Log No.:

Received by:  
Printed Name:  
Company:

Date:  
Time:  
Received by:  
Printed Name:  
Company:

Date: 6/5/04  
Time: 0823  
Received by: Dennis Harrington  
Printed Name: D. Harrington  
Company: STL-SF

2004-06-0785

19586

80590

# Chain-of Custody Record

Date: 6/5/04

Page 2 of 2

Project No.: 8207.009

## ANALYSES

## REMARKS:

Sampler (Signature): *Sarah Meanon*

Additional Comments:

\* Bill to Port of Oakland Airport Investigation  
Attn: Dale Klattke

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Full Scan only)	EPA Method 8021 (BTEX only)	EPA Method 8021 (TPH only)	EPA Method 8021 (Full Scan)	EPA Method 8021 (Full Scan only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil)	Filter: GM Cleanup	TPH Jet fuel	Sol (S), Water (W), Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers
6/5/04	0840	SB-5				X			X	X	X	X		W		X	X	5
	0945	SB-6				X			X	X	X	X		W			X	5
	1035	SB-7				X			X	X	X	X		W			X	5
	1215	SB-19				X			X	X	X	X		W			X	5
	1410	SB-20				X			X	X	X	X		W	X	X	X	5
	1520	SB-21				X			X	X	X	X		W			X	5
	1615	EB-1-6050A				X			X	X	X	X		W	X	X	X	5
		TB-2				X			X	X	X	X		W	X	X	X	2
	1645	SB-22				X			X	X	X	X		W		X	X	5

3 VOAs, 2 ambers

2 VOAs

3 VOAs, 2 ambers

# RUSH

Laboratory: *STL San Francisco*

Turnaround Time: *48-hour*

Results to: *Elizabeth Wells*

Total No. of Containers:

42 \* Filter TP4d, no. j with 0.7um glass fiber filter \*

Relinquished by (Signature): *Marcus Keen*  
Printed Name: *MARCUS KEEN JW*  
Company: *GMX*

Date: 6/6/04  
Time: 0923  
Relinquished by (Signature):  
Printed Name:  
Company:

Date:  
Time:  
Relinquished by (Signature):  
Printed Name:  
Company:

Date:  
Time:  
Method of Shipment: *drop-off*  
Laboratory Comments and Log No.:

Received by:  
Printed Name:  
Company:

Date:  
Time:  
Received by:  
Printed Name:  
Company:

Date: 6/6/04  
Time: 0823  
Received by: *Deuse Harrington*  
Printed Name: *D Harrington*  
Company: *STL-SF*

 Geometrix Consultants  
2101 Webster Street, 12th Floor - Oakland, CA 94612  
Phone: 510-663-4100 Fax: 510-663-4141



**Geomatrix Consultants**

June 09, 2004

2101 Webster Street, 12th Floor  
Oakland, CA 94612

Attn.: Elizabeth Wells

Project#: 8207.009

Attached is our report for your samples received on 06/07/2004 07:10

This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

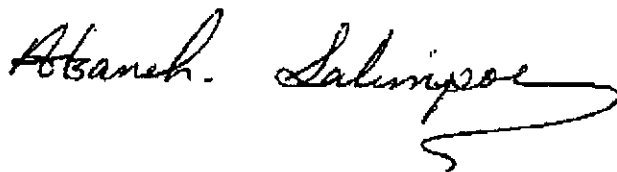
The report contains a Case Narrative detailing sample receipt and analysis.

Please note that any unused portion of the samples will be discarded after 07/22/2004 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: [asalimpour@stl-inc.com](mailto:asalimpour@stl-inc.com)

Sincerely,



Afsaneh Salimpour  
Project Manager

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* [www.stl-inc.com](http://www.stl-inc.com) \* CA DHS ELAP# 2496

**Geomatrix Consultants**

June 09, 2004

2101 Webster Street, 12th Floor  
Oakland, CA 94612

Attn.: Elizabeth Wells

Project#: 8207.009

Case Narrative

General and Sample Comments

We (STL San Francisco) received 9 Water samples , on Monday, June 07, 2004  
7:10 AM.

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
SB-25-0604	06/06/2004 09:40	Water	1
SB-26-0604	06/06/2004 10:30	Water	2
SB-12-0604	06/06/2004 11:40	Water	3
SB-11-0604	06/06/2004 13:40	Water	4
SB-10-0604	06/06/2004 14:20	Water	5
SB-9-0604	06/06/2004 15:30	Water	6
SB-8-0604	06/06/2004 16:15	Water	7
EB-1-060604	06/06/2004 14:30	Water	8
TB-3-060604	06/06/2004	Water	9

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06/09/2004 12:40

Page 1 of 13



**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 5030B Test(s): 8260B  
Sample ID: **SB-26-0604** Lab ID: 2004-06-0187 - 2  
Sampled: 06/06/2004 10:30 Extracted: 6/8/2004 10:13  
Matrix: Water QC Batch#: 2004/06/08-01.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/08/2004 10:13	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/08/2004 10:13	
Benzene	ND	0.50	ug/L	1.00	06/08/2004 10:13	
Toluene	0.53	0.50	ug/L	1.00	06/08/2004 10:13	
Ethylbenzene	ND	0.50	ug/L	1.00	06/08/2004 10:13	
Total xylenes	ND	1.0	ug/L	1.00	06/08/2004 10:13	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	86.6	72-128	%	1.00	06/08/2004 10:13	
Toluene-d8	96.2	80-113	%	1.00	06/08/2004 10:13	

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**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 5030B Test(s): 8260B  
Sample ID: SB-10-0604 Lab ID: 2004-06-0187 - 5  
Sampled: 06/06/2004 14:20 Extracted: 6/8/2004 12:33  
Matrix: Water QC Batch#: 2004/06/08-01.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/08/2004 12:33	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/08/2004 12:33	
Benzene	ND	0.50	ug/L	1.00	06/08/2004 12:33	
Toluene	ND	0.50	ug/L	1.00	06/08/2004 12:33	
Ethylbenzene	ND	0.50	ug/L	1.00	06/08/2004 12:33	
Total xylenes	ND	1.0	ug/L	1.00	06/08/2004 12:33	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	91.8	72-128	%	1.00	06/08/2004 12:33	
Toluene-d8	97.1	80-113	%	1.00	06/08/2004 12:33	

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**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-9-0604	Lab ID: 2004-06-0187 - 6
Sampled: 06/06/2004 15:30	Extracted: 6/8/2004 12:57
Matrix: Water	QC Batch#: 2004/06/08-01.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/08/2004 12:57	
Methyl tert-butyl ether (MTBE)	2.6	0.50	ug/L	1.00	06/08/2004 12:57	
Benzene	ND	0.50	ug/L	1.00	06/08/2004 12:57	
Toluene	ND	0.50	ug/L	1.00	06/08/2004 12:57	
Ethylbenzene	ND	0.50	ug/L	1.00	06/08/2004 12:57	
Total xylenes	ND	1.0	ug/L	1.00	06/08/2004 12:57	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	93.2	72-128	%	1.00	06/08/2004 12:57	
Toluene-d8	96.1	80-113	%	1.00	06/08/2004 12:57	

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## Fuel Oxygenates by 8260B

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 5030B Test(s): 8260B  
Sample ID: SB-8-0604 Lab ID: 2004-06-0187 - 7  
Sampled: 06/06/2004 16:15 Extracted: 6/8/2004 13:21  
Matrix: Water QC Batch#: 2004/06/08-01.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/08/2004 13:21	
Methyl tert-butyl ether (MTBE)	5.5	0.50	ug/L	1.00	06/08/2004 13:21	
Benzene	ND	0.50	ug/L	1.00	06/08/2004 13:21	
Toluene	ND	0.50	ug/L	1.00	06/08/2004 13:21	
Ethylbenzene	ND	0.50	ug/L	1.00	06/08/2004 13:21	
Total xylenes	ND	1.0	ug/L	1.00	06/08/2004 13:21	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	91.5	72-128	%	1.00	06/08/2004 13:21	
Toluene-d8	98.4	80-113	%	1.00	06/08/2004 13:21	

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**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Oakland, CA 94612  
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Project: 8207.009

Received: 06/07/2004 07:10

Prep(s):	5030B	Test(s):	8260B
Sample ID:	<b>EB-1-060604</b>	Lab ID:	2004-06-0187 - 8
Sampled:	06/06/2004 14:30	Extracted:	6/8/2004 13:45
Matrix:	Water	QC Batch#:	2004/06/08-01.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/08/2004 13:45	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/08/2004 13:45	
Benzene	ND	0.50	ug/L	1.00	06/08/2004 13:45	
Toluene	ND	0.50	ug/L	1.00	06/08/2004 13:45	
Ethylbenzene	ND	0.50	ug/L	1.00	06/08/2004 13:45	
Total xylenes	ND	1.0	ug/L	1.00	06/08/2004 13:45	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	88.5	72-128	%	1.00	06/08/2004 13:45	
Toluene-d8	96.5	80-113	%	1.00	06/08/2004 13:45	

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**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141  
Project: 8207.009

Received: 06/07/2004 07:10

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Method Blank

Water

QC Batch # 2004/06/08-01.65

MB: 2004/06/08-01.65-020

Date Extracted: 06/08/2004 09:20

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	06/08/2004 09:20	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/08/2004 09:20	
Benzene	ND	0.5	ug/L	06/08/2004 09:20	
Toluene	ND	0.5	ug/L	06/08/2004 09:20	
Ethylbenzene	ND	0.5	ug/L	06/08/2004 09:20	
Total xylenes	ND	1.0	ug/L	06/08/2004 09:20	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	97.6	72-128	%	06/08/2004 09:20	
Toluene-d8	99.0	80-113	%	06/08/2004 09:20	

Fuel Oxygenates by 8260B

Geomatrix Consultants  
Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141  
Project: 8207.009

Received: 06/07/2004 07:10

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2004/06/08-01.65

LCS 2004/06/08-01.65-032  
LCSD 2004/06/08-01.65-056

Extracted: 06/08/2004  
Extracted: 06/08/2004

Analyzed: 06/08/2004 08:32  
Analyzed: 06/08/2004 08:56

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	26.2	26.0	25.0	104.8	104.0	0.8	65-165	20		
Benzene	25.6	24.1	25.0	102.4	96.4	6.0	69-129	20		
Toluene	24.8	23.1	25.0	99.2	92.4	7.1	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	448	462	500	89.6	92.4		72-128			
Toluene-d8	498	484	500	99.6	96.8		80-113			

Severn Trent Laboratories, Inc.

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Fuel Oxygenates by 8260B

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike ( MS / MSD )

Water

QC Batch # 2004/06/08-01.65

SB-26-0604 >> MS

Lab ID: 2004-06-0187 - 002

MS: 2004/06/08-01.65-037

Extracted: 06/08/2004

Analyzed: 06/08/2004 10:37

Dilution: 1.00

MSD: 2004/06/08-01.65-002

Extracted: 06/08/2004

Analyzed: 06/08/2004 11:02

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level ug/L	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	29.6	25.8	ND	25.0	118.4	103.2	13.7	65-165	20		
Benzene	29.6	25.6	ND	25.0	118.4	102.4	14.5	69-129	20		
Toluene	29.3	25.4	0.528	25.0	115.1	99.5	14.5	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	476	441		500	95.2	88.2		72-128			
Toluene-d8	494	500		500	98.8	100.0		80-113			

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06/09/2004 12:40

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**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
SB-25-0604	06/06/2004 09:40	Water	1
SB-26-0604	06/06/2004 10:30	Water	2
SB-12-0604	06/06/2004 11:40	Water	3
SB-11-0604	06/06/2004 13:40	Water	4
SB-10-0604	06/06/2004 14:20	Water	5
SB-9-0604	06/06/2004 15:30	Water	6
SB-8-0604	06/06/2004 16:15	Water	7
EB-1-060604	06/06/2004 14:30	Water	8

Severn Trent Laboratories, Inc.

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/09/2004 13:30



**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 3510/8015M	Test(s): 8015M
Sample ID: SB-25-0604	Lab ID: 2004-06-0187 - 1
Sampled: 06/06/2004 09:40	Extracted: 6/7/2004 10:17
Matrix: Water	QC Batch#: 2004/06/07-06.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/08/2004 17:18	
Motor Oil	ND	500	ug/L	1.00	06/08/2004 17:18	
Jet fuel	ND	50	ug/L	1.00	06/08/2004 17:18	
<b>Surrogate(s)</b>						
o-Terphenyl	70.7	60-130	%	1.00	06/08/2004 17:18	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/09/2004 13:30

Page 2 of 11

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 3510/8015M	Test(s): 8015M
Sample ID: <b>SB-26-0604</b>	Lab ID: 2004-06-0187 - 2
Sampled: 06/06/2004 10:30	Extracted: 6/7/2004 10:17
Matrix: Water	QC Batch#: 2004/06/07-06.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/08/2004 17:46	
Motor Oil	ND	500	ug/L	1.00	06/08/2004 17:46	
Jet fuel	ND	50	ug/L	1.00	06/08/2004 17:46	
<b>Surrogate(s)</b> o-Terphenyl	84.6	60-130	%	1.00	06/08/2004 17:46	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566  
Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/09/2004 13:3

TEPH w/ Silica Gel Clean-up (filtered)

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 3510/8015M

Test(s): 8015M

Sample ID: SB-12-0604

Lab ID: 2004-06-0187 - 3

Sampled: 06/06/2004 11:40

Extracted: 6/7/2004 10:17

Matrix: Water

QC Batch#: 2004/06/07-06.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/08/2004 18:13	
Motor Oil	ND	500	ug/L	1.00	06/08/2004 18:13	
Jet fuel	ND	50	ug/L	1.00	06/08/2004 18:13	
<b>Surrogate(s)</b> o-Terphenyl	75.6	60-130	%	1.00	06/08/2004 18:13	

TEPH w/ Silica Gel Clean-up (filtered)

Geomatrix Consultants

Attn.: Elizabeth Wells

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Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 3510/8015M                      Test(s): 8015M  
Sample ID: SB-11-0604                      Lab ID: 2004-06-0187 - 4  
Sampled: 06/06/2004 13:40                      Extracted: 6/7/2004 10:17  
Matrix: Water                                      QC Batch#: 2004/06/07-06.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/08/2004 18:41	
Motor Oil	ND	500	ug/L	1.00	06/08/2004 18:41	
Jet fuel	ND	50	ug/L	1.00	06/08/2004 18:41	
<b>Surrogate(s)</b> o-Terphenyl	79.3	60-130	%	1.00	06/08/2004 18:41	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/09/2004 13:3

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 3510/8015M	Test(s): 8015M
Sample ID: <b>SB-10-0604</b>	Lab ID: 2004-06-0187 - 5
Sampled: 06/06/2004 14:20	Extracted: 6/7/2004 10:17
Matrix: Water	QC Batch#: 2004/06/07-06.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/08/2004 19:08	
Motor Oil	ND	500	ug/L	1.00	06/08/2004 19:08	
Jet fuel	ND	50	ug/L	1.00	06/08/2004 19:08	
<b>Surrogate(s)</b>						
o-Terphenyl	82.8	60-130	%	1.00	06/08/2004 19:08	

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

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Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 3510/8015M	Test(s): 8015M
Sample ID: <b>SB-9-0604</b>	Lab ID: 2004-06-0187 - 6
Sampled: 06/06/2004 15:30	Extracted: 6/7/2004 10:17
Matrix: Water	QC Batch#: 2004/06/07-06.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/08/2004 18:41	
Motor Oil	ND	500	ug/L	1.00	06/08/2004 18:41	
Jet fuel	ND	50	ug/L	1.00	06/08/2004 18:41	
<b>Surrogate(s)</b>						
o-Terphenyl	89.9	60-130	%	1.00	06/08/2004 18:41	

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

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Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 3510/8015M	Test(s): 8015M
Sample ID: <b>SB-8-0604</b>	Lab ID: 2004-06-0187 - 7
Sampled: 06/06/2004 16:15	Extracted: 6/7/2004 10:17
Matrix: Water	QC Batch#: 2004/06/07-06:10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/08/2004 19:08	
Motor Oil	ND	500	ug/L	1.00	06/08/2004 19:08	
Jet fuel	ND	50	ug/L	1.00	06/08/2004 19:08	
<b>Surrogate(s)</b>						
o-Terphenyl	79.5	60-130	%	1.00	06/08/2004 19:08	

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 3510/8015M	Test(s): 8015M
Sample ID: <b>EB-1-060604</b>	Lab ID: 2004-06-0187 - 8
Sampled: 06/06/2004 14:30	Extracted: 6/7/2004 10:17
Matrix: Water	QC Batch#: 2004/06/07-06.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/08/2004 19:36	
Motor Oil	ND	500	ug/L	1.00	06/08/2004 19:36	
Jet fuel	ND	50	ug/L	1.00	06/08/2004 19:36	
<b>Surrogate(s)</b> o-Terphenyl	75.0	60-130	%	1.00	06/08/2004 19:36	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566  
Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/09/2004 13:3

Page 9 of 1



TEPH w/ Silica Gel Clean-up (filtered)

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Batch QC Report

Prep(s): 3510/8015M  
Method Blank  
MB: 2004/06/07-06.10-001

Water

Test(s): 8015M  
QC Batch # 2004/06/07-06.10  
Date Extracted: 06/07/2004 10:17

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	06/08/2004 13:09	
Motor Oil	ND	500	ug/L	06/08/2004 13:09	
Jet fuel	ND	50	ug/L	06/08/2004 13:09	
<b>Surrogates(s)</b> o-Terphenyl	91.5	60-130	%	06/08/2004 13:09	

TEPH w/ Silica Gel Clean-up (filtered)

Geomatrix Consultants  
Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141  
Project: 8207.009

Received: 06/07/2004 07:10

Batch QC Report

Prep(s): 3510/8015M

Test(s): 8015M

Laboratory Control Spike

Water

QC Batch # 2004/06/07-06.10

LCS 2004/06/07-06.10-002

Extracted: 06/07/2004

Analyzed: 06/08/2004 13:36

LCSD 2004/06/07-06.10-003

Extracted: 06/07/2004

Analyzed: 06/08/2004 13:36

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Diesel	818	821	1000	81.8	82.1	0.4	60-130	25		
<i>Surrogates(s)</i> o-Terphenyl	18.1	17.5	20.0	90.4	87.3		60-130	0		

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/09/2004 13:36

STL San Francisco

Sample Receipt Checklist

Submission #: 2004-06-0187

Checklist completed by: (Initials) JM Date: 06/07/04

Courier name: [ ] STL San Francisco [X] Client

Custody seals intact on shipping container/samples:

Yes No Not Present [X]

Chain of custody present?

Yes [X] No

Chain of custody signed when relinquished and received?

Yes [X] No

Chain of custody agrees with sample labels?

Yes [X] No

Samples in proper container/bottle?

Yes [X] No

Sample containers intact?

Yes [X] No

Sufficient sample volume for indicated test?

Yes [X] No

All samples received within holding time?

Yes [X] No

Container/Temp Blank temperature in compliance (4° C ± 2)?

Temp: 2°C Yes [X] No

Water - VOA vials have zero headspace?

Ice Present Yes [X] No

No VOA vials submitted Yes [X] No

(If bubble is present, refer to approximate bubble size and itemize in comments as S (small - O), M (medium - O) or L (large - O))

Water - pH acceptable upon receipt? [ ] Yes [ ] No

[ ] pH adjusted- Preservative used: [ ] HNO3 [ ] HCl [ ] H2SO4 [ ] NaOH [ ] ZnOAc - Lot #(s)

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments:

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) Date: / /04


Client contacted: [ ] Yes [ ] No

Summary of discussion:

Corrective Action (per PM/Client):

007-06-0177

00596

Chain-of Custody Record										Date: 6/6/04	Page 1 of 1					
Project No: 8207.009			ANALYSES								REMARKS					
Samplers (Signature): <i>R. David Pearson</i>			EPA Method 8021 (Pb)	EPA Method 8021 (Cd)	EPA Method 8021 (Cu)	EPA Method 8021 (Mn)	EPA Method 8021 (Ni)	EPA Method 8021 (Zn)	EPA Method 8021 (As)	EPA Method 8021 (Cr)	Soil (S), Water (W), Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments: * B11 to Port of Oakland Airport Investigation Attn: Dale Kietke *
Date	Time	Sample Number	Method 8021 (Pb)	Method 8021 (Cd)	Method 8021 (Cu)	Method 8021 (Mn)	Method 8021 (Ni)	Method 8021 (Zn)	Method 8021 (As)	Method 8021 (Cr)						
6/6/04	0940	SB-25-0604						X	X	X	X	W	N	Y	5	3-40 ml VOA, w/HCL 2-11cc Amber
	1030	SB-26-0604						X	X	X	X	W	N	Y	5	
	1140	SB-12-0604						X	X	X	X	W	N	Y	5	2-40 ml VOA w/HCL 1-40 ml VOA (NO HCL!) 2-11 Amber
	1340	SB-11-0604						X	X	X	X	W	N	Y	5	3-40 ml VOA, 2-11 Amber
	1420	SB-10-0604						X	X	X	X	W	N	Y	5	
	1530	SB-9-0604						X	X	X	X	N	N	Y	5	
	1615	SB-8-0604						X	X	X	X	W	N	Y	5	
	1430	EB-1-060604						X	X	X	X	W	N	Y	5	3-40 ml VOA preserved w/HCL 2-11 Amber
		TB-3-060604						X	X	X	X	W	N	Y	2	2-40 ml VOA
<b>RUSH</b>																
Laboratory: STL - SAN FRANCISCO			Turnaround Time: 48 hr			Results to: Elmer's Wells			Total No. of Containers			* Filter TPH no. from with 0.7 um glass fiber filter *				
Relinquished by (Signature): <i>R. David Pearson</i>		Date: 6/1/04	Relinquished by (Signature):		Date:	Relinquished by (Signature):		Date:	Method of Shipment:							
Printed Name: R. David Pearson		Time: 0710	Printed Name:		Time:	Printed Name:		Time:	Laboratory Comments and Log No.:							
Company: Geomatrix			Company:			Company:										
Received by: <i>Joan Mullen</i>		Date: 06/07/04	Received by:		Date:	Received by:		Date:	 <b>Geomatrix Consultants</b> 2101 Webster Street, 12th Floor • Oakland, CA 94612 Phone: 510-663-4100 Fax: 510-663-4141							
Printed Name: Joan Mullen		Time: 0710	Printed Name:		Time:	Printed Name:		Time:								
Company: STL SF			Company:			Company:										

**Geomatrix Consultants**

June 09, 2004

2101 Webster Street, 12th Floor  
Oakland, CA 94612

Attn.: Elizabeth Wells

Project#: 8207.009

Attached is our report for your samples received on 06/07/2004 07:10

This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

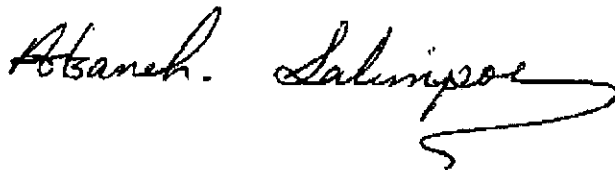
The report contains a Case Narrative detailing sample receipt and analysis.

Please note that any unused portion of the samples will be discarded after 07/22/2004 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: [asalimpour@stl-inc.com](mailto:asalimpour@stl-inc.com)

Sincerely,



Afsaneh Salimpour  
Project Manager

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* [www.stl-inc.com](http://www.stl-inc.com) \* CA DHS ELAP# 2496

**Geomatrix Consultants**

June 09, 2004

2101 Webster Street, 12th Floor  
Oakland, CA 94612

Attn.: Elizabeth Wells

Project#: 8207.009

**Case Narrative**

**General and Sample Comments**

We (STL San Francisco) received 14 Soil samples , on Monday, June 07, 2004 7:10 AM.

**Analysis Comments and Flags by QC Batch**

TEPH w/ Silica Gel Clean-up	Soil	QC Batch#: 2004/06/07-05.10
SB-25-5.5 Compound Flag(s) ldr	Hydrocarbon reported is in the late Diesel range, and does not match our Diesel standard	2004-06-0186-002
SB-12-9.0 Compound Flag(s) ldr	Hydrocarbon reported is in the late Diesel range, and does not match our Diesel standard	2004-06-0186-006
SB-11-3.0 Compound Flag(s) ldr	Hydrocarbon reported is in the late Diesel range, and does not match our Diesel standard	2004-06-0186-007
SB-11-9.0 Compound Flag(s) sd	Surrogate recovery not reportable due to required dilution.	2004-06-0186-008
SB-11-9.0 Compound Flag(s) ldr	Hydrocarbon reported is in the late Diesel range, and does not match our Diesel standard	2004-06-0186-008
SB-10-3.0 Compound Flag(s) ldr	Hydrocarbon reported is in the late Diesel range, and does not match our Diesel standard	2004-06-0186-009
SB-9-7.0 Compound Flag(s) ldr	Hydrocarbon reported is in the late Diesel range, and does not match our Diesel standard	2004-06-0186-012
SB-8-3.0 Compound Flag(s) ldr	Hydrocarbon reported is in the late Diesel range, and does not match our Diesel standard	2004-06-0186-013

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
SB-25-3.0	06/06/2004 09:15	Soil	1
SB-25-5.5	06/06/2004 09:15	Soil	2
SB-26-3.0	06/06/2004 10:15	Soil	3
SB-26-6.5	06/06/2004 10:15	Soil	4
SB-12-3.0	06/06/2004 11:30	Soil	5
SB-12-9.0	06/06/2004 11:30	Soil	6
SB-11-3.0	06/06/2004 13:10	Soil	7
SB-11-9.0	06/06/2004 13:15	Soil	8
SB-10-3.0	06/06/2004 14:05	Soil	9
SB-10-9.0	06/06/2004 14:10	Soil	10
SB-9-3.0	06/06/2004 14:50	Soil	11
SB-9-7.0	06/06/2004 15:00	Soil	12
SB-8-3.0	06/06/2004 16:00	Soil	13
SB-8-8.0	06/06/2004 16:05	Soil	14

Severn Trent Laboratories, Inc.

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/09/2004 16:56

Page 1 of 22

## Fuel Oxygenates by 8260B

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 5030B Test(s): 8260B  
Sample ID: SB-25-3.0 Lab ID: 2004-06-0186 - 1  
Sampled: 06/06/2004 09:15 Extracted: 6/7/2004 08:46  
Matrix: Soil QC Batch#: 2004/06/07-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/07/2004 08:46	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/07/2004 08:46	
Benzene	ND	5.0	ug/Kg	1.00	06/07/2004 08:46	
Toluene	ND	5.0	ug/Kg	1.00	06/07/2004 08:46	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/07/2004 08:46	
Total xylenes	ND	5.0	ug/Kg	1.00	06/07/2004 08:46	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	104.0	72-124	%	1.00	06/07/2004 08:46	
Toluene-d8	99.1	75-116	%	1.00	06/07/2004 08:46	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

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Fuel Oxygenates by 8260B

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 5030B Test(s): 8260B  
 Sample ID: SB-25-5.5 Lab ID: 2004-06-0186 - 2  
 Sampled: 06/06/2004 09:15 Extracted: 6/7/2004 09:08  
 Matrix: Soil QC Batch#: 2004/06/07-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/07/2004 09:08	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/07/2004 09:08	
Benzene	ND	5.0	ug/Kg	1.00	06/07/2004 09:08	
Toluene	6.4	5.0	ug/Kg	1.00	06/07/2004 09:08	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/07/2004 09:08	
Total xylenes	ND	5.0	ug/Kg	1.00	06/07/2004 09:08	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	102.4	72-124	%	1.00	06/07/2004 09:08	
Toluene-d8	101.4	75-116	%	1.00	06/07/2004 09:08	

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Page 3 of 22

**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 5030B Test(s): 8260B  
Sample ID: SB-26-3.0 Lab ID: 2004-06-0186 - 3  
Sampled: 06/06/2004 10:15 Extracted: 6/7/2004 09:31  
Matrix: Soil QC Batch#: 2004/06/07-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/07/2004 09:31	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/07/2004 09:31	
Benzene	ND	5.0	ug/Kg	1.00	06/07/2004 09:31	
Toluene	ND	5.0	ug/Kg	1.00	06/07/2004 09:31	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/07/2004 09:31	
Total xylenes	ND	5.0	ug/Kg	1.00	06/07/2004 09:31	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	98.5	72-124	%	1.00	06/07/2004 09:31	
Toluene-d8	102.4	75-116	%	1.00	06/07/2004 09:31	

Severn Trent Laboratories, Inc.

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**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s):	5030B	Test(s):	8260B
Sample ID:	SB-26-6.5	Lab ID:	2004-06-0186 - 4
Sampled:	06/06/2004 10:15	Extracted:	6/8/2004 10:11
Matrix:	Soil	QC Batch#:	2004/06/08-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/08/2004 10:11	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/08/2004 10:11	
Benzene	ND	5.0	ug/Kg	1.00	06/08/2004 10:11	
Toluene	ND	5.0	ug/Kg	1.00	06/08/2004 10:11	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/08/2004 10:11	
Total xylenes	ND	5.0	ug/Kg	1.00	06/08/2004 10:11	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	95.2	72-124	%	1.00	06/08/2004 10:11	
Toluene-d8	96.1	75-116	%	1.00	06/08/2004 10:11	

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**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-12-3.0	Lab ID: 2004-06-0186 - 5
Sampled: 06/06/2004 11:30	Extracted: 6/7/2004 12:05
Matrix: Soil	QC Batch#: 2004/06/07-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/07/2004 12:05	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/07/2004 12:05	
Benzene	ND	5.0	ug/Kg	1.00	06/07/2004 12:05	
Toluene	ND	5.0	ug/Kg	1.00	06/07/2004 12:05	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/07/2004 12:05	
Total xylenes	ND	5.0	ug/Kg	1.00	06/07/2004 12:05	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	99.9	72-124	%	1.00	06/07/2004 12:05	
Toluene-d8	101.8	75-116	%	1.00	06/07/2004 12:05	

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## Fuel Oxygenates by 8260B

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 5030B

Test(s): 8260B

Sample ID: SB-12-9.0

Lab ID: 2004-06-0186 - 6

Sampled: 06/06/2004 11:30

Extracted: 6/7/2004 12:27

Matrix: Soil

QC Batch#: 2004/06/07-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/07/2004 12:27	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/07/2004 12:27	
Benzene	ND	5.0	ug/Kg	1.00	06/07/2004 12:27	
Toluene	30	5.0	ug/Kg	1.00	06/07/2004 12:27	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/07/2004 12:27	
Total xylenes	ND	5.0	ug/Kg	1.00	06/07/2004 12:27	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	102.3	72-124	%	1.00	06/07/2004 12:27	
Toluene-d8	88.7	75-116	%	1.00	06/07/2004 12:27	

Severn Trent Laboratories, Inc.

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/09/2004 16:56

Page 7 of 22

**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s):	5030B	Test(s):	8260B
Sample ID:	SB-11-3.0	Lab ID:	2004-06-0186 - 7
Sampled:	06/06/2004 13:10	Extracted:	6/7/2004 12:50
Matrix:	Soil	QC Batch#:	2004/06/07-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/07/2004 12:50	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/07/2004 12:50	
Benzene	ND	5.0	ug/Kg	1.00	06/07/2004 12:50	
Toluene	ND	5.0	ug/Kg	1.00	06/07/2004 12:50	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/07/2004 12:50	
Total xylenes	ND	5.0	ug/Kg	1.00	06/07/2004 12:50	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	94.6	72-124	%	1.00	06/07/2004 12:50	
Toluene-d8	95.0	75-116	%	1.00	06/07/2004 12:50	

**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s):	5030B	Test(s):	8260B
Sample ID:	SB-11-9.0	Lab ID:	2004-06-0186 - 8
Sampled:	06/06/2004 13:15	Extracted:	6/8/2004 10:33
Matrix:	Soil	QC Batch#:	2004/06/08-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/08/2004 10:33	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/08/2004 10:33	
Benzene	ND	5.0	ug/Kg	1.00	06/08/2004 10:33	
Toluene	ND	5.0	ug/Kg	1.00	06/08/2004 10:33	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/08/2004 10:33	
Total xylenes	ND	5.0	ug/Kg	1.00	06/08/2004 10:33	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	106.3	72-124	%	1.00	06/08/2004 10:33	
Toluene-d8	91.6	75-116	%	1.00	06/08/2004 10:33	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/09/2004 16:56

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**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-10-3.0	Lab ID: 2004-06-0186 - 9
Sampled: 06/06/2004 14:05	Extracted: 6/8/2004 10:55
Matrix: Soil	QC Batch#: 2004/06/08-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/08/2004 10:55	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/08/2004 10:55	
Benzene	ND	5.0	ug/Kg	1.00	06/08/2004 10:55	
Toluene	ND	5.0	ug/Kg	1.00	06/08/2004 10:55	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/08/2004 10:55	
Total xylenes	ND	5.0	ug/Kg	1.00	06/08/2004 10:55	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	101.0	72-124	%	1.00	06/08/2004 10:55	
Toluene-d8	101.8	75-116	%	1.00	06/08/2004 10:55	

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**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s):	5030B	Test(s):	8260B
Sample ID:	<b>SB-10-9.0</b>	Lab ID:	2004-06-0186 - 10
Sampled:	06/06/2004 14:10	Extracted:	6/7/2004 22:23
Matrix:	Soil	QC Batch#:	2004/06/07-02.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/07/2004 22:23	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/07/2004 22:23	
Benzene	ND	5.0	ug/Kg	1.00	06/07/2004 22:23	
Toluene	ND	5.0	ug/Kg	1.00	06/07/2004 22:23	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/07/2004 22:23	
Total xylenes	ND	5.0	ug/Kg	1.00	06/07/2004 22:23	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	115.7	72-124	%	1.00	06/07/2004 22:23	
Toluene-d8	102.3	75-116	%	1.00	06/07/2004 22:23	

## Fuel Oxygenates by 8260B

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Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 5030B Test(s): 8260B  
Sample ID: SB-9-3.0 Lab ID: 2004-06-0186 - 11  
Sampled: 06/06/2004 14:50 Extracted: 6/7/2004 22:45  
Matrix: Soil QC Batch#: 2004/06/07-02.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/07/2004 22:45	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/07/2004 22:45	
Benzene	ND	5.0	ug/Kg	1.00	06/07/2004 22:45	
Toluene	ND	5.0	ug/Kg	1.00	06/07/2004 22:45	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/07/2004 22:45	
Total xylenes	ND	5.0	ug/Kg	1.00	06/07/2004 22:45	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	97.3	72-124	%	1.00	06/07/2004 22:45	
Toluene-d8	94.7	75-116	%	1.00	06/07/2004 22:45	

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**Fuel Oxygenates by 8260B**

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Project: 8207.009

Received: 06/07/2004 07:10

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2004/06/07-01.62-027

Soil

Test(s): 8260B

QC Batch # 2004/06/07-01.62

Date Extracted: 06/07/2004 07:27

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	06/07/2004 07:27	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	06/07/2004 07:27	
Benzene	ND	5.0	ug/Kg	06/07/2004 07:27	
Toluene	ND	5.0	ug/Kg	06/07/2004 07:27	
Ethyl benzene	ND	5.0	ug/Kg	06/07/2004 07:27	
Total xylenes	ND	5.0	ug/Kg	06/07/2004 07:27	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	95.6	72-124	%	06/07/2004 07:27	
Toluene-d8	99.6	75-116	%	06/07/2004 07:27	

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**Fuel Oxygenates by 8260B**

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Project: 8207.009

Received: 06/07/2004 07:10

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2004/06/07-02.62-019

Soil

Test(s): 8260B

QC Batch # 2004/06/07-02.62

Date Extracted: 06/07/2004 19:19

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	06/07/2004 19:19	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	06/07/2004 19:19	
Benzene	ND	5.0	ug/Kg	06/07/2004 19:19	
Toluene	ND	5.0	ug/Kg	06/07/2004 19:19	
Ethyl benzene	ND	5.0	ug/Kg	06/07/2004 19:19	
Total xylenes	ND	5.0	ug/Kg	06/07/2004 19:19	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	93.0	72-124	%	06/07/2004 19:19	
Toluene-d8	97.4	75-116	%	06/07/2004 19:19	

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## Fuel Oxygenates by 8260B

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Project: 8207.009

Received: 06/07/2004 07:10

## Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Method Blank

Soil

QC Batch # 2004/06/08-01.62

MB: 2004/06/08-01.62-022

Date Extracted: 06/08/2004 07:22

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	06/08/2004 07:22	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	06/08/2004 07:22	
Benzene	ND	5.0	ug/Kg	06/08/2004 07:22	
Toluene	ND	5.0	ug/Kg	06/08/2004 07:22	
Ethyl benzene	ND	5.0	ug/Kg	06/08/2004 07:22	
Total xylenes	ND	5.0	ug/Kg	06/08/2004 07:22	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	100.8	72-124	%	06/08/2004 07:22	
Toluene-d8	98.0	75-116	%	06/08/2004 07:22	

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**Fuel Oxygenates by 8260B**

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Project: 8207.009

Received: 06/07/2004 07:10

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Soil**

**QC Batch # 2004/06/07-01.62**

LCS 2004/06/07-01.62-043

Extracted: 06/07/2004

Analyzed: 06/07/2004 06:43

LCSD 2004/06/07-01.62-005

Extracted: 06/07/2004

Analyzed: 06/07/2004 07:05

Compound	Conc. ug/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	44.3	50.8	50.0	88.6	101.6	13.7	65-165	20		
Benzene	50.0	48.5	50.0	100.0	97.0	3.0	69-129	20		
Toluene	53.0	51.6	50.0	106.0	103.2	2.7	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	497	473	500	99.4	94.6		72-124			
Toluene-d8	511	498	500	102.2	99.6		75-116			

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**Fuel Oxygenates by 8260B**

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Project: 8207.009

Received: 06/07/2004 07:10

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Soil**

**QC Batch # 2004/06/07-02.62**

LCS 2004/06/07-02.62-034

Extracted: 06/07/2004

Analyzed: 06/07/2004 18:34

LCSD 2004/06/07-02.62-057

Extracted: 06/07/2004

Analyzed: 06/07/2004 18:57

Compound	Conc. ug/Kg		Exp.Conc.	Recovery %		RPD %	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	42.5	47.1	50.0	85.0	94.2	10.3	65-165	20		
Benzene	45.0	48.4	50.0	90.0	96.8	7.3	69-129	20		
Toluene	48.8	49.6	50.0	97.6	99.2	1.6	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	448	438	500	89.6	87.6		72-124			
Toluene-d8	484	484	500	96.8	96.8		75-116			

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**Fuel Oxygenates by 8260B**

Geomatrix Consultants  
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Project: 8207.009

Received: 06/07/2004 07:10

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Soil**

**QC Batch # 2004/06/08-01.62**

LCS 2004/06/08-01.62-037  
LCSD 2004/06/08-01.62-000

Extracted: 06/08/2004  
Extracted: 06/08/2004

Analyzed: 06/08/2004 06:37  
Analyzed: 06/08/2004 07:00

Compound	Conc. ug/Kg		Exp. Conc.	Recovery %		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	48.4	44.0	50.0	96.8	88.0	9.5	65-165	20		
Benzene	47.8	46.2	50.0	95.6	92.4	3.4	69-129	20		
Toluene	50.1	47.6	50.0	100.2	95.2	5.1	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	467	468	500	93.4	93.6		72-124			
Toluene-d8	487	482	500	97.4	96.4		75-116			

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**Fuel Oxygenates by 8260B**

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Project: 8207.009

Received: 06/07/2004 07:10

Batch QC Report											
Prep(s): 5030B						Test(s): 8260B					
<b>Matrix Spike ( MS / MSD )</b>				<b>Soil</b>				<b>QC Batch # 2004/06/07-01.62</b>			
SB-12-3.0 >> MS						Lab ID: 2004-06-0186 - 005					
MS: 2004/06/07-01.62-046			Extracted: 06/07/2004			Analyzed: 06/07/2004 13:46			Dilution: 1.00		
MSD: 2004/06/07-01.62-008			Extracted: 06/07/2004			Analyzed: 06/07/2004 14:08			Dilution: 1.00		

Compound	Conc. ug/Kg			Spk.Level ug/Kg	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	39.1	35.3	ND	49.8	78.5	76.9	2.1	65-165	20		
Benzene	38.4	34.2	ND	49.8	77.1	74.5	3.4	69-129	20		
Toluene	41.6	37.5	ND	49.8	83.5	81.7	2.2	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	480	481		500	96.0	96.2		72-124			
Toluene-d8	493	494		500	98.6	98.8		75-116			

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**TEPH w/ Silica Gel Clean-up**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
SB-25-3.0	06/06/2004 09:15	Soil	1
SB-25-5.5	06/06/2004 09:15	Soil	2
SB-26-3.0	06/06/2004 10:15	Soil	3
SB-26-6.5	06/06/2004 10:15	Soil	4
SB-12-3.0	06/06/2004 11:30	Soil	5
SB-12-9.0	06/06/2004 11:30	Soil	6
SB-11-3.0	06/06/2004 13:10	Soil	7
SB-11-9.0	06/06/2004 13:15	Soil	8
SB-10-3.0	06/06/2004 14:05	Soil	9
SB-10-9.0	06/06/2004 14:10	Soil	10
SB-9-3.0	06/06/2004 14:50	Soil	11
SB-9-7.0	06/06/2004 15:00	Soil	12
SB-8-3.0	06/06/2004 16:00	Soil	13
SB-8-8.0	06/06/2004 16:05	Soil	14

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TEPH w/ Silica Gel Clean-up

Geomatrix Consultants

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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 3550/8015M                      Test(s): 8015M  
Sample ID: SB-25-3.0                      Lab ID: 2004-06-0186 - 1  
Sampled: 06/06/2004 09:15                      Extracted: 6/7/2004 08:27  
Matrix: Soil                                      QC Batch#: 2004/06/07-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/08/2004 03:01	
Motor Oil	ND	50	mg/Kg	1.00	06/08/2004 03:01	
Jet fuel	ND	1.0	mg/Kg	1.00	06/08/2004 03:01	
<b>Surrogate(s)</b> o-Terphenyl	83.3	60-130	%	1.00	06/08/2004 03:01	

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**TEPH w/ Silica Gel Clean-up**

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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 3550/8015M Test(s): 8015M  
Sample ID: SB-25-5.5 Lab ID: 2004-06-0186 - 2  
Sampled: 06/06/2004 09:15 Extracted: 6/7/2004 08:27  
Matrix: Soil QC Batch#: 2004/06/07-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	55	2.0	mg/Kg	2.00	06/08/2004 02:06	ldr
Motor Oil	350	100	mg/Kg	2.00	06/08/2004 02:06	
Jet fuel	ND	2.0	mg/Kg	2.00	06/08/2004 02:06	
<b>Surrogate(s)</b> o-Terphenyl	88.3	60-130	%	2.00	06/08/2004 02:06	

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TEPH w/ Silica Gel Clean-up

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Project: 8207.009

Received: 06/07/2004 07:10

Prep(s):	3550/8015M	Test(s):	8015M
Sample ID:	SB-26-3.0	Lab ID:	2004-06-0186 - 3
Sampled:	06/06/2004 10:15	Extracted:	6/7/2004 08:27
Matrix:	Soil	QC Batch#:	2004/06/07-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/07/2004 21:58	
Motor Oil	ND	50	mg/Kg	1.00	06/07/2004 21:58	
Jet fuel	ND	1.0	mg/Kg	1.00	06/07/2004 21:58	
<b>Surrogate(s)</b> o-Terphenyl	89.1	60-130	%	1.00	06/07/2004 21:58	



**TEPH w/ Silica Gel Clean-up**

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Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 3550/8015M	Test(s): 8015M
Sample ID: <b>SB-26-6.5</b>	Lab ID: 2004-06-0186 - 4
Sampled: 06/06/2004 10:15	Extracted: 6/7/2004 08:27
Matrix: Soil	QC Batch#: 2004/06/07-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/07/2004 21:03	
Motor Oil	ND	50	mg/Kg	1.00	06/07/2004 21:03	
Jet fuel	ND	1.0	mg/Kg	1.00	06/07/2004 21:03	
<b>Surrogate(s)</b> o-Terphenyl	77.3	60-130	%	1.00	06/07/2004 21:03	

TEPH w/ Silica Gel Clean-up

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Project: 8207.009

Received: 06/07/2004 07:10

Prep(s):	3550/8015M	Test(s):	8015M
Sample ID:	SB-12-3.0	Lab ID:	2004-06-0186 - 5
Sampled:	06/06/2004 11:30	Extracted:	6/7/2004 08:27
Matrix:	Soil	QC Batch#:	2004/06/07-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/07/2004 21:30	
Motor Oil	ND	50	mg/Kg	1.00	06/07/2004 21:30	
Jet fuel	ND	1.0	mg/Kg	1.00	06/07/2004 21:30	
<b>Surrogate(s)</b> o-Terphenyl	80.2	60-130	%	1.00	06/07/2004 21:30	

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**TEPH w/ Silica Gel Clean-up**

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Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 3550/8015M      Test(s): 8015M  
Sample ID: **SB-12-9.0**      Lab ID: 2004-06-0186 - 6  
Sampled: 06/06/2004 11:30      Extracted: 6/7/2004 08:27  
Matrix: Soil      QC Batch#: 2004/06/07-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	34	2.0	mg/Kg	2.00	06/08/2004 02:34	ldr
Motor Oil	520	100	mg/Kg	2.00	06/08/2004 02:34	
Jet fuel	ND	2.0	mg/Kg	2.00	06/08/2004 02:34	
<b>Surrogate(s)</b> o-Terphenyl	95.7	60-130	%	2.00	06/08/2004 02:34	

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## TEPH w/ Silica Gel Clean-up

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Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 3550/8015M                      Test(s): 8015M  
Sample ID: SB-11-3.0                      Lab ID: 2004-06-0186 - 7  
Sampled: 06/06/2004 13:10                      Extracted: 6/7/2004 08:27  
Matrix: Soil                                      QC Batch#: 2004/06/07-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	8.5	1.0	mg/Kg	1.00	06/09/2004 12:30	ldr
Motor Oil	71	50	mg/Kg	1.00	06/09/2004 12:30	
Jet fuel	ND	1.0	mg/Kg	1.00	06/09/2004 12:30	
<b>Surrogate(s)</b> o-Terphenyl	90.7	60-130	%	1.00	06/09/2004 12:30	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/09/2004 16:5



## TEPH w/ Silica Gel Clean-up

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 3550/8015M Test(s): 8015M  
Sample ID: SB-10-3.0 Lab ID: 2004-06-0186 - 9  
Sampled: 06/06/2004 14:05 Extracted: 6/7/2004 08:27  
Matrix: Soil QC Batch#: 2004/06/07-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	14	1.0	mg/Kg	1.00	06/09/2004 14:19	ldr
Motor Oil	55	50	mg/Kg	1.00	06/09/2004 14:19	
Jet fuel	ND	1.0	mg/Kg	1.00	06/09/2004 14:19	
<b>Surrogate(s)</b> o-Terphenyl	91.3	60-130	%	1.00	06/09/2004 14:19	

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

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## TEPH w/ Silica Gel Clean-up

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s):	3550/8015M	Test(s):	8015M
Sample ID:	SB-10-9.0	Lab ID:	2004-06-0186 - 10
Sampled:	06/06/2004 14:10	Extracted:	6/7/2004 08:27
Matrix:	Soil	QC Batch#:	2004/06/07-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/08/2004 03:29	
Motor Oil	ND	50	mg/Kg	1.00	06/08/2004 03:29	
Jet fuel	ND	1.0	mg/Kg	1.00	06/08/2004 03:29	
<b>Surrogate(s)</b> o-Terphenyl	83.3	60-130	%	1.00	06/08/2004 03:29	

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06/09/2004 16:50

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**TEPH w/ Silica Gel Clean-up**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 3550/8015M	Test(s): 8015M
Sample ID: SB-9-3.0	Lab ID: 2004-06-0186 - 11
Sampled: 06/06/2004 14:50	Extracted: 6/7/2004 08:27
Matrix: Soil	QC Batch#: 2004/06/07-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/08/2004 00:16	
Motor Oil	ND	50	mg/Kg	1.00	06/08/2004 00:16	
Jet fuel	ND	1.0	mg/Kg	1.00	06/08/2004 00:16	
<b>Surrogate(s)</b> o-Terphenyl	78.2	60-130	%	1.00	06/08/2004 00:16	

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**TEPH w/ Silica Gel Clean-up**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s): 3550/8015M	Test(s): 8015M
Sample ID: <b>SB-9-7.0</b>	Lab ID: 2004-06-0186 - 12
Sampled: 06/06/2004 15:00	Extracted: 6/7/2004 08:27
Matrix: Soil	QC Batch#: 2004/06/07-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	4.2	1.0	mg/Kg	1.00	06/08/2004 00:44	ldr
Motor Oil	ND	50	mg/Kg	1.00	06/08/2004 00:44	
Jet fuel	ND	1.0	mg/Kg	1.00	06/08/2004 00:44	
<b>Surrogate(s)</b>						
o-Terphenyl	71.4	60-130	%	1.00	06/08/2004 00:44	

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06/09/2004 16:50

Page 13 of 19

## TEPH w/ Silica Gel Clean-up

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Prep(s):	3550/8015M	Test(s):	8015M
Sample ID:	SB-8-3.0	Lab ID:	2004-06-0186 - 13
Sampled:	06/06/2004 16:00	Extracted:	6/7/2004 08:27
Matrix:	Soil	QC Batch#:	2004/06/07-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	18	1.0	mg/Kg	1.00	06/09/2004 12:02	ldr
Motor Oil	200	50	mg/Kg	1.00	06/09/2004 12:02	
Jet fuel	ND	1.0	mg/Kg	1.00	06/09/2004 12:02	
<b>Surrogate(s)</b> o-Terphenyl	93.0	60-130	%	1.00	06/09/2004 12:02	

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TEPH w/ Silica Gel Clean-up

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Method Blank

Soil

QC Batch # 2004/06/07-05.10

MB: 2004/06/07-05.10-003

Date Extracted: 06/07/2004 08:27

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	06/07/2004 13:14	
Motor Oil	ND	50	mg/Kg	06/07/2004 13:14	
Jet fuel	ND	1	mg/Kg	06/07/2004 13:14	
<b>Surrogates(s)</b>					
o-Terphenyl	71.0	60-130	%	06/07/2004 13:14	

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**TEPH w/ Silica Gel Clean-up**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

**Batch QC Report**

Prep(s): 3550/8015M

Test(s): 8015M

**Laboratory Control Spike**

**Soil**

**QC Batch # 2004/06/07-05.10**

LCS 2004/06/07-05.10-001

Extracted: 06/07/2004

Analyzed: 06/07/2004 15:18

LCSD 2004/06/07-05.10-002

Extracted: 06/07/2004

Analyzed: 06/07/2004 14:10

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Diesel	28.0	35.3	41.6	67.3	84.9	23.1	60-130	25		
<b>Surrogates(s)</b> o-Terphenyl	17.3	18.1	20.0	86.6	90.3		60-130	0		

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06/09/2004 16:50

Page 17 of 19

**TEPH w/ Silica Gel Clean-up**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

**Batch QC Report**

Prep(s): 3550/8015M

Test(s): 8015M

**Matrix Spike ( MS / MSD )**

**Soil**

**QC Batch # 2004/06/07-05.10**

SB-26-6.5 >> MS

Lab ID: 2004-06-0186 - 004

MS: 2004/06/07-05.10-004

Extracted: 06/07/2004

Analyzed: 06/08/2004 03:56

Dilution: 1.00

MSD: 2004/06/07-05.10-005

Extracted: 06/07/2004

Analyzed: 06/08/2004 04:23

Dilution: 1.00

Compound	Conc. mg/Kg		Spk.Level mg/Kg	Recovery %			Limits %		Flags		
	MS	MSD		Sample	MS	MSD	RPD	Rec.	RPD	MS	MSD
Diesel	27.1	25.3	ND	40.9	66.3	60.7	8.8	60-130	25		
<b>Surrogate(s)</b> o-Terphenyl	16.5	16.2		20.0	82.5	80.9		60-130	0		

Severn Trent Laboratories, Inc.

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06/09/2004 16:5

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 07:10

---

Legend and Notes

---

**Result Flag**

ldr

Hydrocarbon reported is in the late Diesel range, and does not match our Diesel standard

sd

Surrogate recovery not reportable due to required dilution.

Sample Receipt Checklist

Submission #: 2004-06 - 0186

Checklist completed by: (initials) JM Date: 06 10 7 /04

Courier name:  STL San Francisco  Client

Custody seals intact on shipping container/samples Yes \_\_\_ No \_\_\_ Not Present

Chain of custody present? Yes  No \_\_\_

Chain of custody signed when relinquished and received? Yes  No \_\_\_

Chain of custody agrees with sample labels? Yes \_\_\_ No

Samples in proper container/bottle? Yes  No \_\_\_

Sample containers intact? Yes  No \_\_\_

Sufficient sample volume for indicated test? Yes  No \_\_\_

All samples received within holding time? Yes  No \_\_\_

Container/Temp Blank temperature in compliance (4° C ± 2)? Temp: 2 °C Yes  No \_\_\_

Water - VOA vials have zero headspace? Ice Present Yes  No \_\_\_

No VOA vials submitted  Yes \_\_\_ No \_\_\_

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small - O), M (medium - O), or L (large - O))

Water - pH acceptable upon receipt?  Yes  No

SOIL

pH adjusted- Preservative used:  HNO<sub>3</sub>  HCl  H<sub>2</sub>SO<sub>4</sub>  NaOH  ZnOAc - Lot #(s)

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments: some of times on samples don't match chain

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) Date: / /04

Client contacted:  Yes  No

Summary of discussion:

Corrective Action (per PM/Client):




2004-06-0186

18589 86597

Chain-of Custody Record				ANALYSES										REMARKS				
Project No.: 8207.009				Date: 6/6/04										Page 1 of 1				
Samplers (Signature): <i>R. David Pearson</i>				Additional Comments *Bill to Port of Oakland Airport Investigation Attn: DALE Klotke *														
Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Full VOCs only)	EPA Method 8021 (BTEX only)	EPA Method 8020 (Full Scan)	EPA Method 8020 SIM (PAHS only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil)	Silica Gel Cleanup	TPH JET FUEL	Soil (S), Water (W), Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers	
6/6/04	0915	SB-25-3.0			X			X	X	X	X	X	S	N	N	Y	1	Butyrate
	0915	SB-25-5.5			X			X	X	X	X	X	S	N	N	Y	1	
	1015	SB-26-3.0			X			X	X	X	X	X	S	N	N	Y	1	
	1015	SB-26-6.5			X			X	X	X	X	X	S	N	N	Y	1	
	1130	SB-12-3.0			X			X	X	X	X	X	S	N	N	Y	1	
	1130	SB-12-9.0			X			X	X	X	X	X	S	N	N	Y	1	
	1310	SB-11-3.0			X			X	X	X	X	X	S	N	N	Y	1	
	1315	SB-11-9.0			X			X	X	X	X	X	S	N	N	Y	1	
	1405	SB-10-3.0			X			X	X	X	X	X	S	N	N	Y	1	
	1410	SB-10-9.0			X			X	X	X	X	X	S	N	N	Y	1	
	1450	SB-9-3.0			X			X	X	X	X	X	S	N	N	Y	1	
	1500	SB-9-7.0			X			X	X	X	X	X	S	N	N	Y	1	Brass 2x6
	1600	SB-8-3.0			X			X	X	X	X	X	S	N	N	Y	1	Butyrate
	1605	SB-8-8.0			X			X	X	X	X	X	S	N	N	Y	1	Brass 2x6

**RUSH**

Laboratory: **STL - San Francisco** Turnaround Time: **48 hour** Results to: **ELIZABETH WELLS** Total No. of Containers: **14**

Relinquished by (Signature): <i>R. David Pearson</i>	Date: 6/7/04	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Method of Shipment: <b>Drop-off</b>	
Printed Name: <b>R. David Pearson</b>	Time: 0710	Printed Name:	Time:	Printed Name:	Time:		Laboratory Comments and Log No.:
Company: <b>Geomatrix</b>		Company:		Company:			
Received by: <i>John Mullen</i>	Date: 6/6/04	Received by:	Date:	Received by:	Date:		
Printed Name: <b>John Mullen</b>	Time: 0710	Printed Name:	Time:	Printed Name:	Time:	 <b>Geomatrix Consultants</b> 2101 Webster Street, 12th Floor • Oakland, CA 94612 Phone: 510-863-4100 Fax: 510-863-4141	
Company: <b>STL SF</b>		Company:		Company:			

**Geomatrix Consultants**

June 11, 2004

2101 Webster Street, 12th Floor  
Oakland, CA 94612

Attn.: Elizabeth Wells

Project#: 8207.009

Project: Port Of Oakland - Airport Investigation

Dear Ms. Wells,

Attached is our report for your samples received on 06/07/2004 16:24

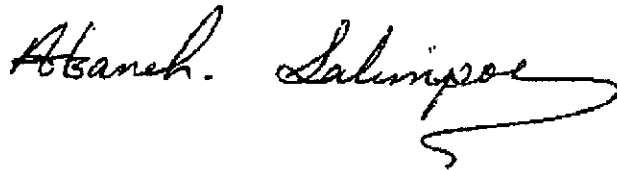
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 07/22/2004 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: [asalimpour@stl-inc.com](mailto:asalimpour@stl-inc.com)

Sincerely,



Afsaneh Salimpour  
Project Manager

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* [www.stl-inc.com](http://www.stl-inc.com) \* CA DHS ELAP# 2496

## Fuel Oxygenates by 8260B

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

## Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SB-16-3.0	06/07/2004 08:30	Soil	9
SB-16-8.5	06/07/2004 08:30	Soil	10
SB-24-3.0	06/07/2004 10:00	Soil	11
SB-24-5.0	06/07/2004 10:00	Soil	12
SB-23-3.0	06/07/2004 10:45	Soil	13
SB-23-5.0	06/07/2004 10:45	Soil	14
SB-13-3.0	06/07/2004 12:50	Soil	15
SB-13-7.0	06/07/2004 12:50	Soil	16
SB-14-3.0	06/07/2004 13:30	Soil	17
SB-14-6.5	06/07/2004 13:30	Soil	18
SB-15-3.0	06/07/2004 14:15	Soil	19
SB-15-8.5	06/07/2004 14:15	Soil	20

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/08/2004 16:3

**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

Prep(s):	5030B	Test(s):	8260B
Sample ID:	<b>SB-16-3.0</b>	Lab ID:	2004-06-0204 - 9
Sampled:	06/07/2004 08:30	Extracted:	6/8/2004 08:20
Matrix:	Soil	QC Batch#:	2004/06/08-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/08/2004 08:20	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/08/2004 08:20	
Benzene	ND	5.0	ug/Kg	1.00	06/08/2004 08:20	
Toluene	ND	5.0	ug/Kg	1.00	06/08/2004 08:20	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/08/2004 08:20	
Total xylenes	ND	5.0	ug/Kg	1.00	06/08/2004 08:20	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	100.2	72-124	%	1.00	06/08/2004 08:20	
Toluene-d8	93.6	75-116	%	1.00	06/08/2004 08:20	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

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06/08/2004 16:31

Page 2 of 16

**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

Prep(s):	5030B	Test(s):	8260B
Sample ID:	SB-16-8.5	Lab ID:	2004-06-0204 - 10
Sampled:	06/07/2004 08:30	Extracted:	6/8/2004 08:42
Matrix:	Soil	QC Batch#:	2004/06/08-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/08/2004 08:42	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/08/2004 08:42	
Benzene	ND	5.0	ug/Kg	1.00	06/08/2004 08:42	
Toluene	ND	5.0	ug/Kg	1.00	06/08/2004 08:42	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/08/2004 08:42	
Total xylenes	ND	5.0	ug/Kg	1.00	06/08/2004 08:42	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	95.8	72-124	%	1.00	06/08/2004 08:42	
Toluene-d8	95.9	75-116	%	1.00	06/08/2004 08:42	

**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 16:24

Port Of Oakland - Airport Investigation

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-24-3.0	Lab ID: 2004-06-0204 - 11
Sampled: 06/07/2004 10:00	Extracted: 6/8/2004 09:04
Matrix: Soil	QC Batch#: 2004/06/08-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/08/2004 09:04	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/08/2004 09:04	
Benzene	ND	5.0	ug/Kg	1.00	06/08/2004 09:04	
Toluene	ND	5.0	ug/Kg	1.00	06/08/2004 09:04	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/08/2004 09:04	
Total xylenes	ND	5.0	ug/Kg	1.00	06/08/2004 09:04	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	92.7	72-124	%	1.00	06/08/2004 09:04	
Toluene-d8	97.8	75-116	%	1.00	06/08/2004 09:04	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/08/2004 16:31

Fuel Oxygenates by 8260B

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

Prep(s):	5030B	Test(s):	8260B
Sample ID:	SB-23-5.0	Lab ID:	2004-06-0204 - 14
Sampled:	06/07/2004 10:45	Extracted:	6/8/2004 13:30
Matrix:	Soil	QC Batch#:	2004/06/08-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/08/2004 13:30	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/08/2004 13:30	
Benzene	ND	5.0	ug/Kg	1.00	06/08/2004 13:30	
Toluene	ND	5.0	ug/Kg	1.00	06/08/2004 13:30	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/08/2004 13:30	
Total xylenes	ND	5.0	ug/Kg	1.00	06/08/2004 13:30	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	94.9	72-124	%	1.00	06/08/2004 13:30	
Toluene-d8	100.9	75-116	%	1.00	06/08/2004 13:30	

**Fuel Oxygenates by 8260B**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Project: 8207.009

Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

Prep(s): 5030B Test(s): 8260B  
 Sample ID: SB-13-3.0 Lab ID: 2004-06-0204 - 15  
 Sampled: 06/07/2004 12:50 Extracted: 6/8/2004 13:52  
 Matrix: Soil QC Batch#: 2004/06/08-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/08/2004 13:52	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/08/2004 13:52	
Benzene	ND	5.0	ug/Kg	1.00	06/08/2004 13:52	
Toluene	ND	5.0	ug/Kg	1.00	06/08/2004 13:52	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/08/2004 13:52	
Total xylenes	ND	5.0	ug/Kg	1.00	06/08/2004 13:52	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	93.6	72-124	%	1.00	06/08/2004 13:52	
Toluene-d8	99.4	75-116	%	1.00	06/08/2004 13:52	

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Fuel Oxygenates by 8260B

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Received: 06/07/2004 16:24

Prep(s): 5030B Test(s): 8260B  
Sample ID: SB-13-7.0 Lab ID: 2004-06-0204 - 16  
Sampled: 06/07/2004 12:50 Extracted: 6/8/2004 14:14  
Matrix: Soil QC Batch#: 2004/06/08-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/08/2004 14:14	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/08/2004 14:14	
Benzene	ND	5.0	ug/Kg	1.00	06/08/2004 14:14	
Toluene	ND	5.0	ug/Kg	1.00	06/08/2004 14:14	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/08/2004 14:14	
Total xylenes	ND	5.0	ug/Kg	1.00	06/08/2004 14:14	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	108.9	72-124	%	1.00	06/08/2004 14:14	
Toluene-d8	99.0	75-116	%	1.00	06/08/2004 14:14	

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Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-14-6.5	Lab ID: 2004-06-0204 - 18
Sampled: 06/07/2004 13:30	Extracted: 6/8/2004 14:58
Matrix: Soil	QC Batch#: 2004/06/08-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/08/2004 14:58	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/08/2004 14:58	
Benzene	ND	5.0	ug/Kg	1.00	06/08/2004 14:58	
Toluene	ND	5.0	ug/Kg	1.00	06/08/2004 14:58	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/08/2004 14:58	
Total xylenes	ND	5.0	ug/Kg	1.00	06/08/2004 14:58	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	100.5	72-124	%	1.00	06/08/2004 14:58	
Toluene-d8	98.7	75-116	%	1.00	06/08/2004 14:58	

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Prep(s): 5030B Test(s): 8260B  
Sample ID: SB-15-8.5 Lab ID: 2004-06-0204 - 20  
Sampled: 06/07/2004 14:15 Extracted: 6/8/2004 15:42  
Matrix: Soil QC Batch#: 2004/06/08-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/08/2004 15:42	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/08/2004 15:42	
Benzene	ND	5.0	ug/Kg	1.00	06/08/2004 15:42	
Toluene	ND	5.0	ug/Kg	1.00	06/08/2004 15:42	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/08/2004 15:42	
Total xylenes	ND	5.0	ug/Kg	1.00	06/08/2004 15:42	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	104.1	72-124	%	1.00	06/08/2004 15:42	
Toluene-d8	95.3	75-116	%	1.00	06/08/2004 15:42	

**Fuel Oxygenates by 8260B**

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**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Method Blank

Soil

QC Batch # 2004/06/08-01.62

MB: 2004/06/08-01.62-022

Date Extracted: 06/08/2004 07:22

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	06/08/2004 07:22	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	06/08/2004 07:22	
Benzene	ND	5.0	ug/Kg	06/08/2004 07:22	
Toluene	ND	5.0	ug/Kg	06/08/2004 07:22	
Ethyl benzene	ND	5.0	ug/Kg	06/08/2004 07:22	
Total xylenes	ND	5.0	ug/Kg	06/08/2004 07:22	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	100.8	72-124	%	06/08/2004 07:22	
Toluene-d8	98.0	75-116	%	06/08/2004 07:22	

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Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Soil

QC Batch # 2004/06/08-01.62

LCS 2004/06/08-01.62-037

Extracted: 06/08/2004

Analyzed: 06/08/2004 06:37

LCSD 2004/06/08-01.62-000

Extracted: 06/08/2004

Analyzed: 06/08/2004 07:00

Compound	Conc. ug/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	48.4	44.0	50.0	96.8	88.0	9.5	65-165	20		
Benzene	47.8	46.2	50.0	95.6	92.4	3.4	69-129	20		
Toluene	50.1	47.6	50.0	100.2	95.2	5.1	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	467	468	500	93.4	93.6		72-124			
Toluene-d8	487	482	500	97.4	96.4		75-116			

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**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Matrix Spike ( MS / MSD )**

**Soil**

**QC Batch # 2004/06/08-01.62**

SB-13-3.0 >> MS

Lab ID: 2004-06-0204 - 015

MS: 2004/06/08-01.62-023

Extracted: 06/08/2004

Analyzed: 06/08/2004 12:23

Dilution: 1.00

MSD: 2004/06/08-01.62-046

Extracted: 06/08/2004

Analyzed: 06/08/2004 12:46

Dilution: 1.00

Compound	Conc. ug/Kg		Spk.Level	Recovery %			Limits %		Flags		
	MS	MSD		Sample	ug/Kg	MS	MSD	RPD	Rec.	RPD	MS
Methyl tert-butyl ether	35.8	35.6	ND	47.3	75.7	76.9	1.6	65-165	20		
Benzene	39.1	37.7	ND	47.3	82.7	81.4	1.6	69-129	20		
Toluene	41.8	40.2	ND	47.3	88.4	86.8	1.8	70-130	20		
<b>Surrogate(s)</b>											
1,2-Dichloroethane-d4	445	466		500	89.0	93.2		72-124			
Toluene-d8	504	492		500	100.8	98.3		75-116			

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## Fuel Oxygenates by 8260B

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## Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SB-16-0604	06/07/2004 08:40	Water	1
SB-24-0604	06/07/2004 10:10	Water	2
SB-23-0604	06/07/2004 11:20	Water	3
EB-1-060704	06/07/2004 12:30	Water	4
TRIP BLANK	06/07/2004 08:40	Water	5
SB-13-0604	06/07/2004 13:00	Water	6
SB-14-0604	06/07/2004 13:50	Water	7
SB-15-0604	06/07/2004 15:00	Water	8

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**Fuel Oxygenates by 8260B**

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Received: 06/07/2004 16:24

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Prep(s): 5030B

Test(s): 8260B

Sample ID: **SB-16-0604**

Lab ID: 2004-06-0204 - 1

Sampled: 06/07/2004 08:40

Extracted: 6/8/2004 14:34

Matrix: Water

QC Batch#: 2004/06/08-01.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/08/2004 14:34	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/08/2004 14:34	
Benzene	ND	0.50	ug/L	1.00	06/08/2004 14:34	
Toluene	ND	0.50	ug/L	1.00	06/08/2004 14:34	
Ethylbenzene	ND	0.50	ug/L	1.00	06/08/2004 14:34	
Total xylenes	ND	1.0	ug/L	1.00	06/08/2004 14:34	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	89.6	72-128	%	1.00	06/08/2004 14:34	
Toluene-d8	97.0	80-113	%	1.00	06/08/2004 14:34	

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**Fuel Oxygenates by 8260B**

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Project: 8207.009  
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Received: 06/07/2004 16:24

Prep(s): 5030B	Test(s): 8260B
Sample ID: <b>SB-24-0604</b>	Lab ID: 2004-06-0204 - 2
Sampled: 06/07/2004 10:10	Extracted: 6/8/2004 14:58
Matrix: Water	QC Batch#: 2004/06/08-01.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/08/2004 14:58	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/08/2004 14:58	
Benzene	ND	0.50	ug/L	1.00	06/08/2004 14:58	
Toluene	ND	0.50	ug/L	1.00	06/08/2004 14:58	
Ethylbenzene	ND	0.50	ug/L	1.00	06/08/2004 14:58	
Total xylenes	ND	1.0	ug/L	1.00	06/08/2004 14:58	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	93.4	72-128	%	1.00	06/08/2004 14:58	
Toluene-d8	99.2	80-113	%	1.00	06/08/2004 14:58	

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**Fuel Oxygenates by 8260B**

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Received: 06/07/2004 16:24

Prep(s): 5030B	Test(s): 8260B
Sample ID: SB-23-0604	Lab ID: 2004-06-0204 - 3
Sampled: 06/07/2004 11:20	Extracted: 6/8/2004 15:22
Matrix: Water	QC Batch#: 2004/06/08-01.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/08/2004 15:22	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/08/2004 15:22	
Benzene	ND	0.50	ug/L	1.00	06/08/2004 15:22	
Toluene	ND	0.50	ug/L	1.00	06/08/2004 15:22	
Ethylbenzene	ND	0.50	ug/L	1.00	06/08/2004 15:22	
Total xylenes	ND	1.0	ug/L	1.00	06/08/2004 15:22	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	91.9	72-128	%	1.00	06/08/2004 15:22	
Toluene-d8	97.7	80-113	%	1.00	06/08/2004 15:22	

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**Fuel Oxygenates by 8260B**

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Received: 06/07/2004 16:24

Prep(s):	5030B	Test(s):	8260B
Sample ID:	EB-1-060704	Lab ID:	2004-06-0204 - 4
Sampled:	06/07/2004 12:30	Extracted:	6/8/2004 15:46
Matrix:	Water	QC Batch#:	2004/06/08-01.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/08/2004 15:46	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/08/2004 15:46	
Benzene	ND	0.50	ug/L	1.00	06/08/2004 15:46	
Toluene	ND	0.50	ug/L	1.00	06/08/2004 15:46	
Ethylbenzene	ND	0.50	ug/L	1.00	06/08/2004 15:46	
Total xylenes	ND	1.0	ug/L	1.00	06/08/2004 15:46	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	90.5	72-128	%	1.00	06/08/2004 15:46	
Toluene-d8	94.9	80-113	%	1.00	06/08/2004 15:46	

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Project: 8207.009

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Prep(s): 5030B

Test(s): 8260B

Sample ID: SB-14-0604

Lab ID: 2004-06-0204 - 7

Sampled: 06/07/2004 13:50

Extracted: 6/8/2004 19:27

Matrix: Water

QC Batch#: 2004/06/08-02.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/08/2004 19:27	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/08/2004 19:27	
Benzene	ND	0.50	ug/L	1.00	06/08/2004 19:27	
Toluene	0.62	0.50	ug/L	1.00	06/08/2004 19:27	
Ethylbenzene	ND	0.50	ug/L	1.00	06/08/2004 19:27	
Total xylenes	ND	1.0	ug/L	1.00	06/08/2004 19:27	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	92.9	72-128	%	1.00	06/08/2004 19:27	
Toluene-d8	96.4	80-113	%	1.00	06/08/2004 19:27	

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## Fuel Oxygenates by 8260B

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Received: 06/07/2004 16:24

Prep(s):	5030B	Test(s):	8260B
Sample ID:	SB-15-0604	Lab ID:	2004-06-0204 - 8
Sampled:	06/07/2004 15:00	Extracted:	6/8/2004 19:51
Matrix:	Water	QC Batch#:	2004/06/08-02.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/08/2004 19:51	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/08/2004 19:51	
Benzene	ND	0.50	ug/L	1.00	06/08/2004 19:51	
Toluene	ND	0.50	ug/L	1.00	06/08/2004 19:51	
Ethylbenzene	ND	0.50	ug/L	1.00	06/08/2004 19:51	
Total xylenes	ND	1.0	ug/L	1.00	06/08/2004 19:51	
<b>Surrogate(s)</b>						
1,2-Dichloroethane-d4	96.7	72-128	%	1.00	06/08/2004 19:51	
Toluene-d8	98.4	80-113	%	1.00	06/08/2004 19:51	

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Fuel Oxygenates by 8260B

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Received: 06/07/2004 16:24

Batch QC Report

Prep(s): 5030B  
Method Blank  
MB: 2004/06/08-01.65-020

Water

Test(s): 8260B  
QC Batch # 2004/06/08-01.65  
Date Extracted: 06/08/2004 09:20

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	06/08/2004 09:20	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/08/2004 09:20	
Benzene	ND	0.5	ug/L	06/08/2004 09:20	
Toluene	ND	0.5	ug/L	06/08/2004 09:20	
Ethylbenzene	ND	0.5	ug/L	06/08/2004 09:20	
Total xylenes	ND	1.0	ug/L	06/08/2004 09:20	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	97.6	72-128	%	06/08/2004 09:20	
Toluene-d8	99.0	80-113	%	06/08/2004 09:20	

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Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/09/2004 13:14

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**Fuel Oxygenates by 8260B**

Geomatrix Consultants  
Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Method Blank

Water

QC Batch # 2004/06/08-02.65

MB: 2004/06/08-02.65-012

Date Extracted: 06/08/2004 18:12

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	06/08/2004 18:12	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/08/2004 18:12	
Benzene	ND	0.5	ug/L	06/08/2004 18:12	
Toluene	ND	0.5	ug/L	06/08/2004 18:12	
Ethylbenzene	ND	0.5	ug/L	06/08/2004 18:12	
Total xylenes	ND	1.0	ug/L	06/08/2004 18:12	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	93.0	72-128	%	06/08/2004 18:12	
Toluene-d8	96.2	80-113	%	06/08/2004 18:12	

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**Fuel Oxygenates by 8260B**

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Oakland, CA 94612

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Project: 8207.009

Received: 06/07/2004 16:24

Port Of Oakland - Airport Investigation

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Method Blank

Water

QC Batch # 2004/06/09-01.64

MB: 2004/06/09-01.64-024

Date Extracted: 06/09/2004 11:24

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	06/09/2004 11:24	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/09/2004 11:24	
Benzene	ND	0.5	ug/L	06/09/2004 11:24	
Toluene	ND	0.5	ug/L	06/09/2004 11:24	
Ethylbenzene	ND	0.5	ug/L	06/09/2004 11:24	
Total xylenes	ND	1.0	ug/L	06/09/2004 11:24	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	95.8	72-128	%	06/09/2004 11:24	
Toluene-d8	96.8	80-113	%	06/09/2004 11:24	

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**Fuel Oxygenates by 8260B**

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Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Water**

**QC Batch # 2004/06/08-01.65**

LCS 2004/06/08-01.65-032

Extracted: 06/08/2004

Analyzed: 06/08/2004 08:32

LCSD 2004/06/08-01.65-056

Extracted: 06/08/2004

Analyzed: 06/08/2004 08:56

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	26.2	26.0	25.0	104.8	104.0	0.8	65-165	20		
Benzene	25.6	24.1	25.0	102.4	96.4	6.0	69-129	20		
Toluene	24.8	23.1	25.0	99.2	92.4	7.1	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	448	462	500	89.6	92.4		72-128			
Toluene-d8	498	484	500	99.6	96.8		80-113			

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**Fuel Oxygenates by 8260B**

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Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Water**

**QC Batch # 2004/06/08-02.65**

LCS 2004/06/08-02.65-024

Extracted: 06/08/2004

Analyzed: 06/08/2004 17:24

LCSD 2004/06/08-02.65-048

Extracted: 06/08/2004

Analyzed: 06/08/2004 17:48

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	27.9	24.9	25.0	111.6	99.6	11.4	65-165	20		
Benzene	26.1	26.0	25.0	104.4	104.0	0.4	69-129	20		
Toluene	24.6	24.4	25.0	98.4	97.6	0.8	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	441	433	500	88.2	86.6		72-128			
Toluene-d8	489	480	500	97.8	96.0		80-113			

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**Fuel Oxygenates by 8260B**

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Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

**Laboratory Control Spike**

**Water**

**QC Batch # 2004/06/09-01.64**

LCS 2004/06/09-01.64-039

Extracted: 06/09/2004

Analyzed: 06/09/2004 10:39

LCSD 2004/06/09-01.64-001

Extracted: 06/09/2004

Analyzed: 06/09/2004 11:01

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	23.1	22.6	25.0	92.4	90.4	2.2	65-165	20		
Benzene	24.2	24.4	25.0	96.8	97.6	0.8	69-129	20		
Toluene	24.6	25.8	25.0	98.4	103.2	4.8	70-130	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	448	438	500	89.6	87.6		72-128			
Toluene-d8	494	488	500	98.8	97.6		80-113			

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Project: 8207.009

Received: 06/07/2004 16:24

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**Legend and Notes**

---

**Analysis Flag**

o

Reporting limits were raised due to high level of analyte present in the sample.

**Result Flag**

g

Hydrocarbon reported in the gasoline range does not match our gasoline standard.



## TEPH w/ Silica Gel Clean-up

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Phone: (510) 663-4100 Fax: (510) 663-4141Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

## Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SB-16-3.0	06/07/2004 08:30	Soil	9
SB-16-8.5	06/07/2004 08:30	Soil	10
SB-24-3.0	06/07/2004 10:00	Soil	11
SB-24-5.0	06/07/2004 10:00	Soil	12
SB-23-3.0	06/07/2004 10:45	Soil	13
SB-23-5.0	06/07/2004 10:45	Soil	14
SB-13-3.0	06/07/2004 12:50	Soil	15
SB-13-7.0	06/07/2004 12:50	Soil	16
SB-14-3.0	06/07/2004 13:30	Soil	17
SB-14-6.5	06/07/2004 13:30	Soil	18
SB-15-3.0	06/07/2004 14:15	Soil	19
SB-15-8.5	06/07/2004 14:15	Soil	20

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**TEPH w/ Silica Gel Clean-up**

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

Prep(s): 3550/8015M      Test(s): 8015M  
Sample ID: **SB-16-3.0**      Lab ID: 2004-06-0204 - 9  
Sampled: 06/07/2004 08:30      Extracted: 6/8/2004 07:17  
Matrix: Soil      QC Batch#: 2004/06/08-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	1.4	1.0	mg/Kg	1.00	06/08/2004 16:51	ndp
Motor Oil	ND	50	mg/Kg	1.00	06/08/2004 16:51	
Jet fuel	ND	1.0	mg/Kg	1.00	06/08/2004 16:51	
<b>Surrogate(s)</b>						
o-Terphenyl	93.2	60-130	%	1.00	06/08/2004 16:51	

**TEPH w/ Silica Gel Clean-up**

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

Prep(s):	3550/8015M	Test(s):	8015M
Sample ID:	SB-16-8.5	Lab ID:	2004-06-0204 - 10
Sampled:	06/07/2004 08:30	Extracted:	6/8/2004 07:17
Matrix:	Soil	QC Batch#:	2004/06/08-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	13	1.0	mg/Kg	1.00	06/08/2004 23:42	ldr
Motor Oil	130	50	mg/Kg	1.00	06/08/2004 23:42	
Jet fuel	ND	1.0	mg/Kg	1.00	06/08/2004 23:42	
<b>Surrogate(s)</b> o-Terphenyl	85.6	60-130	%	1.00	06/08/2004 23:42	

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**TEPH w/ Silica Gel Clean-up**

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

Prep(s): 3550/8015M      Test(s): 8015M  
Sample ID: **SB-24-3.0**      Lab ID: 2004-06-0204 - 11  
Sampled: 06/07/2004 10:00      Extracted: 6/8/2004 07:17  
Matrix: Soil      QC Batch#: 2004/06/08-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/09/2004 13:25	
Motor Oil	ND	50	mg/Kg	1.00	06/09/2004 13:25	
Jet fuel	ND	1.0	mg/Kg	1.00	06/09/2004 13:25	
<b>Surrogate(s)</b> o-Terphenyl	74.1	60-130	%	1.00	06/09/2004 13:25	

## TEPH w/ Silica Gel Clean-up

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Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

Prep(s):	3550/8015M	Test(s):	8015M
Sample ID:	SB-24-5.0	Lab ID:	2004-06-0204 - 12
Sampled:	06/07/2004 10:00	Extracted:	6/8/2004 07:17
Matrix:	Soil	QC Batch#:	2004/06/08-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	6.1	1.0	mg/Kg	1.00	06/09/2004 11:35	ldr
Motor Oil	ND	50	mg/Kg	1.00	06/09/2004 11:35	
Jet fuel	ND	1.0	mg/Kg	1.00	06/09/2004 11:35	
<b>Surrogate(s)</b> o-Terphenyl	83.4	60-130	%	1.00	06/09/2004 11:35	

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

Prep(s): 3550/8015M	Test(s): 8015M
Sample ID: SB-23-3.0	Lab ID: 2004-06-0204 - 13
Sampled: 06/07/2004 10:45	Extracted: 6/8/2004 07:17
Matrix: Soil	QC Batch#: 2004/06/08-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	3.6	1.0	mg/Kg	1.00	06/09/2004 13:52	ldr
Motor Oil	ND	50	mg/Kg	1.00	06/09/2004 13:52	
Jet fuel	ND	1.0	mg/Kg	1.00	06/09/2004 13:52	
<b>Surrogate(s)</b> o-Terphenyl	82.3	60-130	%	1.00	06/09/2004 13:52	

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Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

Prep(s):	3550/8015M	Test(s):	8015M
Sample ID:	SB-23-5.0	Lab ID:	2004-06-0204 - 14
Sampled:	06/07/2004 10:45	Extracted:	6/8/2004 07:17
Matrix:	Soil	QC Batch#:	2004/06/08-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/09/2004 12:30	
Motor Oil	ND	50	mg/Kg	1.00	06/09/2004 12:30	
Jet fuel	ND	1.0	mg/Kg	1.00	06/09/2004 12:30	
<b>Surrogate(s)</b> o-Terphenyl	73.8	60-130	%	1.00	06/09/2004 12:30	

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Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

Prep(s): 3550/8015M	Test(s): 8015M
Sample ID: SB-13-3.0	Lab ID: 2004-06-0204 - 15
Sampled: 06/07/2004 12:50	Extracted: 6/8/2004 07:17
Matrix: Soil	QC Batch#: 2004/06/08-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	18	5.0	mg/Kg	5.00	06/09/2004 13:52	ldr
Motor Oil	560	250	mg/Kg	5.00	06/09/2004 13:52	
Jet fuel	ND	5.0	mg/Kg	5.00	06/09/2004 13:52	
<b>Surrogate(s)</b>						
o-Terphenyl	NA	60-130	%	5.00	06/09/2004 13:52	sd

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06/09/2004 17:02



## TEPH w/ Silica Gel Clean-up

Geomatrix Consultants

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Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

Prep(s): 3550/8015M      Test(s): 8015M  
Sample ID: SB-13-7.0      Lab ID: 2004-06-0204 - 16  
Sampled: 06/07/2004 12:50      Extracted: 6/8/2004 07:17  
Matrix: Soil      QC Batch#: 2004/06/08-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	1.7	1.0	mg/Kg	1.00	06/09/2004 12:02	ldr
Motor Oil	ND	50	mg/Kg	1.00	06/09/2004 12:02	
Jet fuel	ND	1.0	mg/Kg	1.00	06/09/2004 12:02	
<b>Surrogate(s)</b> o-Terphenyl	78.1	60-130	%	1.00	06/09/2004 12:02	

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

Prep(s):	3550/8015M	Test(s):	8015M
Sample ID:	SB-14-6.5	Lab ID:	2004-06-0204 - 18
Sampled:	06/07/2004 13:30	Extracted:	6/8/2004 07:17
Matrix:	Soil	QC Batch#:	2004/06/08-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	21	2.0	mg/Kg	2.00	06/09/2004 00:10	ldr
Motor Oil	250	100	mg/Kg	2.00	06/09/2004 00:10	
Jet fuel	ND	2.0	mg/Kg	2.00	06/09/2004 00:10	
<b>Surrogate(s)</b> o-Terphenyl	89.0	60-130	%	2.00	06/09/2004 00:10	

**TEPH w/ Silica Gel Clean-up**

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Received: 06/07/2004 16:24

Prep(s): 3550/8015M

Test(s): 8015M

Sample ID: **SB-15-3.0**

Lab ID: 2004-06-0204 - 19

Sampled: 06/07/2004 14:15

Extracted: 6/8/2004 07:17

Matrix: Soil

QC Batch#: 2004/06/08-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/09/2004 11:35	
Motor Oil	ND	50	mg/Kg	1.00	06/09/2004 11:35	
Jet fuel	ND	1.0	mg/Kg	1.00	06/09/2004 11:35	
<b>Surrogate(s)</b> o-Terphenyl	76.1	60-130	%	1.00	06/09/2004 11:35	

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Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

Prep(s): 3550/8015M	Test(s): 8015M
Sample ID: <b>SB-15-8.5</b>	Lab ID: 2004-06-0204 - 20
Sampled: 06/07/2004 14:15	Extracted: 6/8/2004 07:17
Matrix: Soil	QC Batch#: 2004/06/08-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/09/2004 11:07	
Motor Oil	ND	50	mg/Kg	1.00	06/09/2004 11:07	
Jet fuel	ND	1.0	mg/Kg	1.00	06/09/2004 11:07	
<b>Surrogate(s)</b> o-Terphenyl	81.3	60-130	%	1.00	06/09/2004 11:07	

**TEPH w/ Silica Gel Clean-up**

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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 16:24

Port Of Oakland - Airport Investigation

**Batch QC Report**

Prep(s): 3550/8015M

Test(s): 8015M

Method Blank

Soil

QC Batch # 2004/06/08-02.10

MB: 2004/06/08-02.10-001

Date Extracted: 06/08/2004 07:17

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	06/08/2004 16:23	
Motor Oil	ND	50	mg/Kg	06/08/2004 16:23	
Jet fuel	ND	1	mg/Kg	06/08/2004 16:23	
<b>Surrogates(s)</b> o-Terphenyl	64.6	60-130	%	06/08/2004 16:23	

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**TEPH w/ Silica Gel Clean-up**

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

**Batch QC Report**

Prep(s): 3550/8015M

Test(s): 8015M

**Laboratory Control Spike**

**Soil**

**QC Batch # 2004/06/08-02.10**

LCS 2004/06/08-02.10-002

Extracted: 06/08/2004

Analyzed: 06/08/2004 16:51

LCSD 2004/06/08-02.10-003

Extracted: 06/08/2004

Analyzed: 06/08/2004 16:23

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Diesel	33.1	27.9	41.6	79.6	67.7	16.2	60-130	25		
<b>Surrogates(s)</b> o-Terphenyl	16.8	15.7	20.0	83.9	78.7		60-130	0		

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STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/09/2004 17:0

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 16:24

Port Of Oakland - Airport Investigation

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Legend and Notes

---

**Result Flag**

ldr

Hydrocarbon reported is in the late Diesel range, and does not match our Diesel standard

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

sd

Surrogate recovery not reportable due to required dilution.



**TEPH w/ Silica Gel Clean-up (filtered)**

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Project: 8207.009

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**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
SB-16-0604	06/07/2004 08:40	Water	1
SB-23-0604	06/07/2004 11:20	Water	3
EB-1-060704	06/07/2004 12:30	Water	4
SB-13-0604	06/07/2004 13:00	Water	6
SB-14-0604	06/07/2004 13:50	Water	7
SB-15-0604	06/07/2004 15:00	Water	8

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06/10/2004 17:4

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 16:24

Port Of Oakland - Airport Investigation

Prep(s): 3510/8015M	Test(s): 8015M
Sample ID: SB-16-0604	Lab ID: 2004-06-0204 - 1
Sampled: 06/07/2004 08:40	Extracted: 6/9/2004 10:07
Matrix: Water	QC Batch#: 2004/06/09-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/10/2004 10:40	
Motor Oil	ND	500	ug/L	1.00	06/10/2004 10:40	
Jet fuel	ND	50	ug/L	1.00	06/10/2004 10:40	
<b>Surrogate(s)</b>						
o-Terphenyl	72.5	60-130	%	1.00	06/10/2004 10:40	

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**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
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Received: 06/07/2004 16:24

Prep(s): 3510/8015M	Test(s): 8015M
Sample ID: EB-1-060704	Lab ID: 2004-06-0204 - 4
Sampled: 06/07/2004 12:30	Extracted: 6/9/2004 10:07
Matrix: Water	QC Batch#: 2004/06/09-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/10/2004 12:02	
Motor Oil	ND	500	ug/L	1.00	06/10/2004 12:02	
Jet fuel	ND	50	ug/L	1.00	06/10/2004 12:02	
<b>Surrogate(s)</b>						
o-Terphenyl	76.5	60-130	%	1.00	06/10/2004 12:02	

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

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Oakland, CA 94612  
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Project: 8207.009  
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Received: 06/07/2004 16:24

Prep(s): 3510/8015M	Test(s): 8015M
Sample ID: <b>SB-13-0604</b>	Lab ID: 2004-06-0204 - 6
Sampled: 06/07/2004 13:00	Extracted: 6/9/2004 10:07
Matrix: Water	QC Batch#: 2004/06/09-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/10/2004 12:30	
Motor Oil	ND	500	ug/L	1.00	06/10/2004 12:30	
Jet fuel	ND	50	ug/L	1.00	06/10/2004 12:30	
<b>Surrogate(s)</b> o-Terphenyl	83.1	60-130	%	1.00	06/10/2004 12:30	

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**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants  
Attn.: Elizabeth Wells

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Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
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Received: 06/07/2004 16:24

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	<b>SB-14-0604</b>	Lab ID:	2004-06-0204 - 7
Sampled:	06/07/2004 13:50	Extracted:	6/9/2004 10:07
Matrix:	Water	QC Batch#:	2004/06/09-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/10/2004 12:57	
Motor Oil	ND	500	ug/L	1.00	06/10/2004 12:57	
Jet fuel	ND	50	ug/L	1.00	06/10/2004 12:57	
<b>Surrogate(s)</b>						
o-Terphenyl	66.7	60-130	%	1.00	06/10/2004 12:57	

## TEPH w/ Silica Gel Clean-up (filtered)

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

Prep(s): 3510/8015M Test(s): 8015M  
Sample ID: SB-15-0604 Lab ID: 2004-06-0204 - 8  
Sampled: 06/07/2004 15:00 Extracted: 6/9/2004 10:07  
Matrix: Water QC Batch#: 2004/06/09-03.10  
Analysis Flag: rl ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	110	ug/L	2.12	06/10/2004 13:25	
Motor Oil	ND	1100	ug/L	2.12	06/10/2004 13:25	
Jet fuel	ND	110	ug/L	2.12	06/10/2004 13:25	
<b>Surrogate(s)</b>						
o-Terphenyl	75.7	60-130	%	2.12	06/10/2004 13:25	

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**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Received: 06/07/2004 16:24

Port Of Oakland - Airport Investigation

**Batch QC Report**

Prep(s): 3510/8015M

Test(s): 8015M

Method Blank

Water

QC Batch # 2004/06/09-03.10

MB: 2004/06/09-03.10-001

Date Extracted: 06/09/2004 10:07

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	06/09/2004 12:57	
Motor Oil	ND	500	ug/L	06/09/2004 12:57	
Jet fuel	ND	50	ug/L	06/09/2004 12:57	
<b>Surrogates(s)</b>					
o-Terphenyl	76.1	50-120	%	06/09/2004 12:57	

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**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

**Batch QC Report**

Prep(s): 3510/8015M

Test(s): 8015M

**Laboratory Control Spike**

**Water**

**QC Batch # 2004/06/09-03.10**

LCS 2004/06/09-03.10-002

Extracted: 06/09/2004

Analyzed: 06/09/2004 12:57

LCSD 2004/06/09-03.10-003

Extracted: 06/09/2004

Analyzed: 06/09/2004 13:25

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Diesel	851	851	1000	85.1	85.1	0.0	60-130	25		
<b>Surrogates(s)</b> o-Terphenyl	17.1	17.4	20.0	85.3	87.2		50-120	0		

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**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

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**Legend and Notes**

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**Analysis Flag**

rl

Reporting limits raised due to reduced sample size.

Severn Trent Laboratories, Inc.

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2004-06-0204

8/6/27  
Date: 6/7/04

18590

Page 1 of 1

Chain-of Custody Record

Project No.: 8207009

ANALYSES

REMARKS

Samplers (Signature):  
*Edward Reason*


Additional Comments  
\*Bill to Port of Oakland  
Airport Investigation

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BTEX only)	EPA Method 8021 (TPH, 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100)	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015m (Organics)	Method 8015m (Inerts)	Method 8015m (Mercury)	Splice Gas Cleanup	TPH Jet Set	Set (G), Water (W), Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers	
6/7/04	0840	SB-16-0604				X			X	X	X	X	X	W	N	N	Y	5	3-40 ml VOA 2-1 L Amber ①
	1010	SB-24-0604				X			X	X	X	X	X	W	N	N	Y	5	①
	1120	SB-23-0604				X			X	X	X	X	X	W	N	N	Y	5	①
	1230	FB-1-060704				X			X	X	X	X	X	W	N	N	Y	5	①
	—	TRBLANK				X								W	N	Y	Y	2	2-40 ml VOA
	1300	SB-13-0604				X			X	X	X	X	X	W	N	N	Y	5	①
	1350	SB-14-0604				X			X	X	X	X	X	W	N	N	Y	5	①
✓	1500	SB-15-0604				X			X	X	X	X	X	W	N	N	Y	1	1 L Amber

**RUSH**

*Handwritten initials*

Laboratory: **STL-SAN FRANCISCO** Turnaround Time: **48 hour** Results to: **ELIOTT WELLS** Total No. of Containers: **33** WATER Temp: **6°C**

Relinquished by (Signature): <i>R. Edward Reason</i>	Date: 6/7/04	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Method of Shipment: <i>hand</i>
Printed Name: <b>R. Edward Reason</b>	Time: 1613	Printed Name:	Time:	Printed Name:	Time:	Laboratory Comments and Log No.:
Company: <b>Geometric</b>		Company:		Company:		
Received by (Signature): <i>M. Williams</i>	Date: 6/7/04	Received by (Signature):	Date:	Received by (Signature):	Date:	 <b>Geometric Consultants</b> 2101 Webster Street, 12th Floor - Oakland, CA 94612 Phone: 510-863-4100 Fax: 510-863-4141
Printed Name: <b>M. Williams</b>	Time: 1613	Printed Name:	Time:	Printed Name:	Time:	
Company: <b>STL SIC</b>		Company:		Company:		

2009-06-0204

18391 8627

Chain-of Custody Record

Date: 6/7/04

Page 1 of 1

Project No.: 8207.009

ANALYSES

REMARKS

Samplers (Signature):

*Edward Ram*  
Edward Ram

Additional Comments

\*B.I. to Port of Oakland  
Airport Investigations  
Attn: DALE KLOTKE

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal VOCs only)	EPA Method 8021 (BTEX only)	EPA Method 8021 (TPH) (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil)	Silica Gel Cleanup	TPH jet fuel	Soil (S), Water (W), Vapor (V), or Other (o)	Filtered	Preserved	Cooled	No. of Containers	
6/7/04	0830	SB-16-3.0			X			X	X	X	X	X	S			Y	1	BUTYRATE
	0830	SB-16-8.5			X			X	X	X	X	X	S			Y	1	
	1000	SB-24-3.0			X			X	X	X	X	X	S			Y	1	
	1000	SB-24-5.0			X			X	X	X	X	X	S			Y	1	
	1045	SB-23-3.0			X			X	X	X	X	X	S			Y	1	
	1045	SB-23-5.0			X			X	X	X	X	X	S			Y	1	BRASS
	1250	SB-13-3.0			X			X	X	X	X	X	S			Y	1	BUTYRATE
	1250	SB-13-7.0			X			X	X	X	X	X	S			Y	1	BRASS
	1330	SB-14-3.0			X			X	X	X	X	X	S			Y	1	BUTYRATE
	1330	SB-14-6.5			X			X	X	X	X	X	S			Y	1	BUTYRATE
	1415	SB-15-3.0			X			X	X	X	X	X	S			Y	1	BUTYRATE
✓	1415	SB-15-8.5			X			X	X	X	X	X	S			Y	1	BRASS

**RUSH**

Laboratory: STL - San Francisco

Turnaround Time: 48 hour

Results to: Elizabeth Weiss

Total No. of Containers: 12

Soil Temp: 40c

Relinquished by (Signature): *Edward Ram*  
Printed Name: Edward Ram  
Company: Geomatrix

Date: 6/7/04  
Time: 1612

Relinquished by (Signature):  
Printed Name:  
Company:

Date:  
Time:

Relinquished by (Signature):  
Printed Name:  
Company:

Date:  
Time:

Method of Shipment: *post-off*  
Laboratory Comments and Log No.:

Received by: *David Villanueva*  
Printed Name: David Villanueva  
Company: STL - SF

Date: 6/7/04  
Time: 1612

Received by:  
Printed Name:  
Company:

Date:  
Time:

Received by:  
Printed Name:  
Company:

Date:  
Time:

**Geomatrix Consultants**  
2101 Webster Street, 12th Floor - Oakland, CA 94612  
Phone: 510-863-4100 Fax: 510-683-4141

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
SB-24-0604	06/07/2004 10:10	Water	2

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants  
 Attn.: Elizabeth Wells  
 2101 Webster Street, 12th Floor  
 Oakland, CA 94612  
 Phone: (510) 663-4100 Fax: (510) 663-4141  
 Project: 8207.009  
 Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

Prep(s): 3510/8015M                      Test(s): 8015M  
 Sample ID: **SB-24-0604**                      Lab ID: 2004-06-0204 - 2  
 Sampled: 06/07/2004 10:10                      Extracted: 6/11/2004 12:49  
 Matrix: Water                      QC Batch#: 2004/06/11-07.10  
 Analysis Flag: . ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	06/11/2004 23:31	
Motor Oil	ND	500	ug/L	1.00	06/11/2004 23:31	
Jet fuel	ND	50	ug/L	1.00	06/11/2004 23:31	
<b>Surrogate(s)</b>						
o-Terphenyl	70.3	60-130	%	1.00	06/11/2004 23:31	

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

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Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

**Batch QC Report**

Prep(s): 3510/8015M

**Method Blank**

MB: 2004/06/11-07.10-001

**Water**

Test(s): 8015M

**QC Batch # 2004/06/11-07.10**

Date Extracted: 06/11/2004 12:49

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	06/11/2004 21:42	
Motor Oil	ND	500	ug/L	06/11/2004 21:42	
Jet fuel	ND	50	ug/L	06/11/2004 21:42	
<b>Surrogates(s)</b> o-Terphenyl	71.8	60-130	%	06/11/2004 21:42	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

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06/14/2004 08:12

**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor  
Oakland, CA 94612  
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009  
Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

**Batch QC Report**

Prep(s): 3510/8015M

Test(s): 8015M

**Laboratory Control Spike**

**Water**

**QC Batch # 2004/06/11-07.10**

LCS 2004/06/11-07.10-002

Extracted: 06/11/2004

Analyzed: 06/11/2004 22:09

LCSD 2004/06/11-07.10-003

Extracted: 06/11/2004

Analyzed: 06/11/2004 22:36

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Diesel	811	843	1000	81.1	84.3	3.9	60-130	25		
<b>Surrogates(s)</b> o-Terphenyl	17.2	17.1	20.0	85.8	85.6		60-130	0		

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/14/2004 08:12



**TEPH w/ Silica Gel Clean-up (filtered)**

Geomatrix Consultants

Attn.: Elizabeth Wells

2101 Webster Street, 12th Floor

Oakland, CA 94612

Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 8207.009

Port Of Oakland - Airport Investigation

Received: 06/07/2004 16:24

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**Legend and Notes**

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**Analysis Flag**

Severn Trent Laboratories, Inc.

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06/14/2004 08:12