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Alameda County
Environmental Health

February 3, 2009

Ms. Barbara Jakub –
Alameda County Health Care Services Agency
Environmental Health Services
Local Oversight Program
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Subject: Site Soil and Groundwater Investigation: Former Bolin's Garage,
6335 San Pablo Ave, Oakland, CA (Alameda County Fuel Leak Case No.
RO0000130 and CA Geotracker Global ID No. TO600100198)

Dear Ms Jakub:

INTRODUCTION AND BACKGROUND

On behalf of the property owner (Mr. Virgil Bolin), Stellar Environmental Solutions, Inc. (SES) is providing Alameda County Environmental Health Department (ACEH) this report of findings detailing the subsurface investigation at the referenced subject property. This investigation was conducted in accordance with SES' November 12, 2008 workplan that incorporated the ACEH technical comments in their letter dated December 30, 2008.

An auto repair shop was formally operated at the site for 30 years by the Bolin family. The site is currently occupied and operated as an auto smog shop by a tenant of the Bolin family. During the Bolin's family use of the property the site operated two underground fuel storage tanks (USTs), one 1,000-gallon and one 550-gallon gasoline UST that were used in support of the auto shop operation and not for resale of gasoline. The USTs was removed from the property in 1988 under County permit. Soil samples collected beneath the USTs in April 1988 showed 2,400 mg/kg total petroleum hydrocarbons as gasoline (TPHg) beneath the 1000-gallon UST. Soil and groundwater contamination was detected during UST removal, and limited soil removal and groundwater pumping was conducted (as reported by SEISCO, 2001).

In April 1999, ACEH requested follow-up soil and groundwater sampling and analysis for benzene, toluene, ethylbenzene and xylenes (BTEX) and MTBE. In July 1999, nine soil samples were collected beneath the former 550-gallon UST locations and dispenser piping. In addition, a monitoring well was installed approximately 10 feet downgradient of the former 1000-gallon UST excavation (SEISCO, 1999). The groundwater sample collected from the well showed 284.3 µg/L benzene, 9.43 µg/L toluene, 508.8 µg/L xylenes and 50.37 µg/L MTBE.

The analytical results of the July 1999 sampling resulted in excavation and removal of 55 cubic yards of contaminated soil in January 2001 and resampling of the monitoring well. Excavation confirmation samples and a groundwater sample were collected, the results of which are summarized in the attached Table 1. The analytical results of the groundwater sample showed no analytes (TPH-gasoline, BTEX and MTBE) exceeded the Water Board Environmental Screening Level (ESL) criteria for this area where groundwater is not considered a drinking water resource. The groundwater monitoring well MW-1 was grouted and closed under permit from Alameda County Public Works permit (No. 99WR467).

Four soil samples collected in January 2001 that were associated with the fuel dispenser and piping to the former 550-gallon UST in the eastern area of the property contained concentrations in excess of Water Board ESLs. These samples (D2-5.0, D3-8.0, PT2-4.0, and PT4-3.0) contained up to 210 mg/kg TPH-gasoline, 0.38 -1.1 mg/kg benzene and 12 mg/kg MTBE and are summarized in Table 1. The extent of contamination indicated by these samples is the focus of this investigation and report.

Attached Figures 1 and 2 present the site location and site plan, respectively.

SUBSURFACE INVESTIGATION

Permitting and Notifications

Prior to borehole drilling, we obtained the required Alameda County Public Works drilling permit and the City of Oakland excavation permit, as boring locations were located on city property (the parking lane areas along Ocean Avenue). A site visit was made to mark the boring locations prior to reporting the proposed activities to Underground Service Alert of Northern California (USA North Ticket No 010308), which notified local utility companies to conduct a site-specific survey and mark underground utilities. A drilling permit was obtained from the Alameda County Public Works (ACPW) a copy of which is contained in Attachment B.

Rationale for Borehole Locations

A specific objective of the sampling program was to determine the extent of soil contamination that was documented below the former fuel dispenser and in two areas along the former pipeline in the SEISCO 2001 investigation that are represented by samples PT-2, PT-4 D2-5 and D3-8. A continuous soil core was advanced below each of these locations.

In addition a downgradient grab groundwater sample was collected within the site boundary approximately 10 - 20 feet downgradient of the former pipeline and dispenser excavation to investigate potential groundwater contamination resulting from residual contaminated soil in these locations. This bore location (B1) was determined to be downgradient based upon data from surrounding sites that include: 1171 Ocean Ave (CA Geotracker No. SLT19794747 or ACEH No. RO0002937) located 1 block to the northwest and data from the former Mobile Station (RO0000445) located next door to the south that reported the gradient to be generally toward the west.

Borehole Drilling and Sampling

The exploratory borehole drilling was conducted by ECA Drilling (C-57 License No. 695970) on January 20, 2009 under the direct supervision of an SES California Professional Geologist Henry Pietropaoli, who continuously logged the bores. The boreholes were drilled with a GeoProbe™ 5400 rig in areas of suspected contamination documented in the January 2001 investigation. Boreholes were drilled with 2.5-inch-diameter steel outer drive casing lined with acetate sampling sleeves. Attachment C contains photodocumentation of the field activities. The core samples were collected for geologic logging using the visual method of the Unified Soils Classification System (USCS). Soil core was visually examined during drilling and periodically screened (approximately every 3-5 feet of core) with a photoionization detector (PID), the results of which are included on the geologic logs in Attachment D. Soil samples were collected and submitted for analysis based upon lithologic changes and/or elevated PID response. PID measurements collected during drilling ranged between 3.2 and 185 parts per million by volume (ppmv).

The following soil samples were collected and submitted for laboratory analysis:

- Soil was collected from 7 feet below ground surface (bgs) in bore B2 below the product piping excavation area represented in the previous investigation sample PT4.
- Soil was collected from 7.5 and 11.5 feet bgs in bore B3 below product piping excavation area represented in the previous investigation sample PT2.

- Soil was collected from 8 and 14 feet bgs in bore B4 below the dispenser excavation area represented in the previous investigation sample D3
- Soil and groundwater was collected from 10 and 22 feet bgs in bore B1, located downgradient 10 to 20 feet from bores B2, B3 and B4 to investigate the potential downgradient migration of contaminants for these bores

Lithology and Hydrogeology

Site-specific lithology to a depth of 30 feet bgs was characterized in borehole B1, to a depth of 11 feet bgs in bore B2, to a depth of 12 feet in bore B3 and to a depth of 16 feet bgs in bore B4. The site was surfaced by 5-6 inch thick concrete and underlying lithology consisted of primarily clay to silty clay, with occasional interbedded silt. Soils were generally firm and expansive. The upper zone in bores B2, B3, and B4 contained 5 to 7 feet of sandy pea gravel backfill from the former piping and dispenser excavations. Groundwater was encountered in only one boring (bore B1) at approximately 27 feet bgs infiltrated into the bore after about 15 minutes. Attachment D contains the borehole geologic logs from this investigation.

Grab-Groundwater Sample Collection

Groundwater was collected from bore B1, located from 10 – 20 feet downgradient of bores B2, B3 and B4 to investigate potential petroleum hydrocarbon contamination from the former UST related piping and dispenser. The groundwater sample was obtained by inserting a 1-inch outside diameter temporary PVC casing that was screened from 26 to 30 feet bgs. Groundwater was withdrawn using a peristaltic pump and new Tygon® tubing. Groundwater samples were containerized in 40-ml glass VOA vials preserved with hydrochloric acid, labeled, chilled, and transported to the analytical laboratory under chain-of-custody documentation.

Site Restoration and Investigation Related Waste Management

Following completion of drilling and sampling activities, the boreholes were tremie-grouted to surface with a slurry of neat Portland cement and potable water on January 20, 2009. ACPW was notified of the final grouting but the actual inspection was waived by the inspector, Mr. Ron Smalley. Drill cuttings from this investigation were placed in a 5-gallon plastic bucket, labeled and left with the owner at an adjacent business on the same parcel for subsequent disposal by the owner's site contractor.

SOIL AND GROUNDWATER ANALYTICAL METHODS AND RESULTS

Soil and Groundwater Analytical Methods

Previous site investigations documented contamination by the following LUFT-related constituents: gasoline; benzene toluene, ethyl benzene, and xylenes (BTEX); and methyl *tertiary*-butyl ether (MTBE). In addition, several other contaminants were analyzed during this investigation (as required by ACEH); fuel oxygenates (*tertiary*-butyl alcohol [TBA], diisopropyl ether [DIPE], ethyl *tertiary*-butyl ether [ETBE], and *tertiary*-amyl methyl ether [TAME]); and lead scavengers (1,2-dichloroethane [EDC] and 1,2-dibromoethane [EDB]).

The samples were analyzed using the following methods for:

- Total volatile hydrocarbons (TVH) gasoline range by EPA Method 8015M;
- Aromatic hydrocarbons benzene, toluene, ethylbenzene and total xylenes (BTEX) and MTBE by EPA Method 8020.
- BTEX and MTBE by EPA Method 8260;
- TBA, DIPE, ETBE, and TAME by EPA Method 8260B (as required by ACEH); and
- EDC and EDB by EPA Method 8260B (as required by ACEH).

The soil and groundwater samples were placed in an ice chest with ice at approximately 4°C and transported to the analytical laboratory under chain-of-custody the same day. Laboratory analysis was conducted by Curtis and Tompkins, Ltd. (of Berkeley, California), which maintains current State of California Environmental Laboratory Accreditation Program (ELAP) certifications for all the analytical methods utilized in this investigation.

Laboratory quality control (QC) samples (e.g., method blanks, matrix spikes, surrogate spikes, etc.) were analyzed by the laboratory in accordance with requirements of each analytical method. All laboratory QC sample results and sample holding times were within the acceptance limits of the analytical method.

Soil and Grab-Groundwater Analytical Results

Table 1 summarizes the groundwater monitoring analytical results for TVHg, and associated constituents. Table 2 presents the analytic results of the fuel oxygenates and lead scavengers analysis. Attached Figure 2 shows the boring locations and summarizes the analytical results.

The certified analytical results and chain of custody record are contained in Attachment E.

Soil Sample Analytical Results and Discussion

TVHg was detected in three of the seven soil samples but above the Water Board ESL criteria for commercial sites where groundwater is not considered a drinking water resource in only one sample from bore B4 at a concentration of 470 mg/kg. Benzene was detected above its ESL at 0.61 mg/kg in bore B3, along with trace levels of toluene, ethylbenzene and xylenes. MTBE was detected at levels below regulatory concern in the deeper soils collected from 10 and 22 feet in bore B1 and at 14 feet in bore B4. None of the fuel oxygenates or lead scavengers were detected above laboratory detection limits in any of the soil samples.

Grab-Groundwater Analytical Results

Groundwater collected from bore B1 located in a downgradient position from the former site UST and dispenser piping contained 140 µg/L TVHg; 0.6 µg/L ethylbenzene; and 110 µg/L MTBE; all below their respective ESL criteria for commercial sites where groundwater is not considered a drinking water resource. In addition, the fuel oxygenates TBA and DIPE and the lead scavenger EDC were detected at levels all below their respective ESL criteria for commercial sites where groundwater is not considered a drinking water resource.

REGULATORY CONSIDERATIONS

The Regional Water Quality Control Board (Water Board) has established Environmental Screening Levels (ESLs) as conservative numerical standards for evaluating the likelihood of environmental impact. ESLs are screening-level criteria for soil and groundwater, designed to be generally protective of drinking water resources, aquatic environments, and indoor air intrusion (they incorporate both environmental and human health risk considerations).

The Water Board established ESLs as conservative numerical standards for evaluating the likelihood of environmental impact. The ESLs are screening-level criteria for soil-vapor and groundwater, designed to be generally protective of drinking water resources, aquatic environments, and indoor air intrusion (they incorporate both environmental and human health risk considerations). ESLs are not cleanup criteria (i.e., health-based numerical values or disposal-based values). Rather, they are used as a preliminary guide in determining whether additional remediation and/or investigation may be warranted. Significant exceedance of the ESLs suggests that additional investigation and/or remediation is warranted, such as monitoring groundwater plume stability to demonstrate no risk to sensitive receptors in the case of sites where drinking water is not threatened, or establishing indoor monitoring or vapor barriers to mitigate indoor air intrusion.

Table 1
Current and Historical Soil Analytical Results and Current
6355 San Pablo Avenue, Oakland, California

Sample ID	Sample Depth (feet bgs)	TPHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Total Lead
January 2001 Post Excavation Confirmation Soil Samples (mg/kg)								
D1-5.0	5.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	10
D2-5.0	5.0	120	0.38	0.51	1.4	8.3	<0.005	7.1
D3-8.0	8.0	14	1.0	1.3	0.41	1.9	<0.005	6.5
PT1-5.0	5.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	7.2
PT2-4.0	4.0	20	0.53	0.069	0.39	1.3	12	7.0
PT3-4.5	4.5	<1.0	<0.05	<0.005	<0.005	<0.005	6.1	7.0
PT4-3.0	3.0	210	1.1	0.29	1.2	5.2	<0.005	7.1
T1	6.5	4.3	0.008	0.030	0.0063	0.028	<0.005	20
January 2009 Site Investigation Soil Samples (mg/kg)								
B1-10	10	<0.98	<0.0049	<0.0049	<0.0049	<0.0049	0.0081	NA
B1-22	22	<0.93	<0.0048	<0.0048	<0.0048	<0.0048	0.0095	NA
B2-7	7.0	<1.1	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	NA
B3-7.5	7.5	66	0.006	0.027	0.04	0.233	<0.0049	NA
B3-11.5	11.5	14	0.61	0.44	0.059	0.26	<0.051	NA
B4-8	8.0	470	<0.051	<0.051	1.8	9.31	<0.051	NA
B4-14	14	<0.99	<0.0047	<0.0047	<0.0047	<0.0047	0.0069	NA
Soil ESLs		83/180	0.044/0.27	2.9/9.3	3.3/4.7	2.3/11	0.023/8.4	750
January 2009 Site excavation Groundwater Sample (µg/L)								
B1-GW		140	<0.5	<0.5	0.6	<0.5	110	NA
Groundwater ESLs		100 / 210	1.0 / 46	40 / 130	30 / 43	20 / 100	5 / 1,800	2.5

Notes:

ESLs = Water Board Environmental Screening Levels for commercial/industrial sites where groundwater *is/is not* a potential drinking water resource.

Samples in **bold-face type** exceed the ESL criterion where groundwater *is not* a drinking water resource.

MTBE = methyl tertiary-butyl ether

TPHg = total petroleum hydrocarbons as gasoline

bgs = below ground surface

NA = Not analyzed

Monitoring well MW-1 screened 4-16 feet bgs; destroyed in January 2001

Table 2
Lead Scavengers and Fuel Oxygenates,
Soil and Groundwater Sample Analytical Results – January 20, 2009
6335, Oakland, California

Sample I.D.	Sample Depth (feet bgs)	EDC	EDB	ETBE	DIPE	TAME	TBA
<i>January 2009 Site Investigation Soil Samples (mg/kg)</i>							
B1-10	10	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
B1-22	22	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
B2-7	7.0	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
B3-7.5	7.5	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
B3-11.5	11.5	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051
B4-8	8.0	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051
B4-14	14	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
Soil ESLs		0.0045 / 0.48	0.00034 / 0.044	NLP	NLP	NLP	0.075 / 110
<i>January 2009 Site excavation Groundwater Sample (µg/L)</i>							
B1-GW		26	<0.5	<0.5	0.6	<0.5	220
Groundwater ESLs		0.38 / 690	0.0097 / 510	NLP	NLP	NLP	12 / 18,000

Notes:

ESLs = Water Board Environmental Screening Levels for commercial sites where groundwater *is/is not* considered a potential drinking water resource. (Water Board, 2008).

Sample concentrations in **bold-face** type exceed the ESL criterion where groundwater *is not* considered a potential drinking water resource.

EDB = ethylene dibromide (1,2-dibromoethane)

EDC = ethylene dichloride (1,2-dichloroethane).

ETBE = ethyl tertiary-butyl ether

DIPE = isopropyl ether

TAME = tertiary-amyl methyl ether

TBA = tertiary-butyl alcohol

NLP = no level published

Different ESLs are published for commercial/industrial vs. residential land use, for sites where groundwater is a potential drinking water resource vs. is not a drinking water resource, and the type of receiving water body. A Water Board-published map (Figure 19 in the East Bay Plains Beneficial Use Study, San Francisco Bay, 1999) shows the subject property to be within the Zone B designated as where “groundwater is unlikely to be used as a drinking water source”. In our professional opinion, the appropriate ESLs for the subject site are based on the following:

- Commercial/industrial land use as zoned by the City of Oakland. *This is based on its current zoning*
- The appropriate ESLs given the land use and location is: *commercial/industrial land use and groundwater is unlikely to be used as a drinking water resource.*
- The receiving body for groundwater discharge is an estuary (San Francisco Bay).

The State of California also has promulgated drinking water maximum concentration limits (MCLs) for some of the site contaminants. Drinking water standards may also be utilized by regulatory agencies to evaluate the potential risk associated with long term groundwater potential use and in conformance with the San Francisco Bay Water Board contamination Basin Plan.

DISCUSSION AND RECOMMENDATIONS

Only two contaminants were detected above regulatory ESLs in soil collected during this investigation: TVHg in bore B4 and benzene in bore B3. The detection of TVHg above its ESL was at 8 feet bgs and was associated with minor detections of ethylbenzene and xylenes, however a deeper sample collected at 14 feet bgs from the same bore showed no hydrocarbon except minor MTBE at concentrations less than the MTBE ESL.

These data suggests minor residual TVHg (and associated constituents) in soil which based on past and current investigation bore and soil sample data suggest a small pod of residual contaminated soil less than 6 feet thick and wide, probably closer to 3 feet thick, but with an “clean” overburden of at least 8 feet of soil, making remediation by excavation possible but impractical, given, given the minor impacts reported.

Benzene was detected in two samples collected during this investigation, both from bore B3 and only one of which was above the ESL criteria. The vertical extent of benzene was not precisely delineated in bore B3 however its absence in adjacent borings and groundwater suggests minimal residual benzene in soil. We recommend following up with Alameda County Environmental Health Services following its receipt of this report, to discuss the requirements to move the site toward regulatory closure.

This report has been prepared for the exclusive use by Mr. Virgil Bolin (subject property owner), the regulatory agencies, and their authorized assigns and/or representatives. No reliance on this report shall be made by anyone other than those for whom it was prepared. A copy of this report has been electronic uploaded to Alameda County Environmental Health’s “ftp” system and the State Water Board’s GeoTracker system

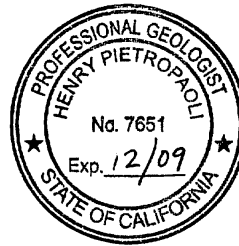
Ms. Barbara Jakub
February 3, 2009
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I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report are true and correct to the best of my knowledge. If you have any questions regarding this report, please contact us at (510) 644-3123.

Sincerely,



Henry Pietropaoli, R.G., R.E.A.
Project Manager



Richard S. Makdisi, R.G., R.E.A.
Principal

cc: Mr. Virgil Bolin
ACEH "ftp" server
CA Geotracker

REFERENCES

SEISCO Engineering and Inspection Services, 1999. Soil Sampling Plan, Results and Analyses, Bolin's Service Garage, 6335 San Pablo Ave, Oakland, CA. September 9.

SEISCO Engineering and Inspection Services, 2001. 1) Removal of Contaminated Soils, former Tank Site #. 2) Resampling under Previous Tank Site #1 & #2 at former Dispenser Tank Site #1 & #2 and at the Groundwater Monitoring Well, 6335 San Pablo Ave, Oakland, CA. February 5.

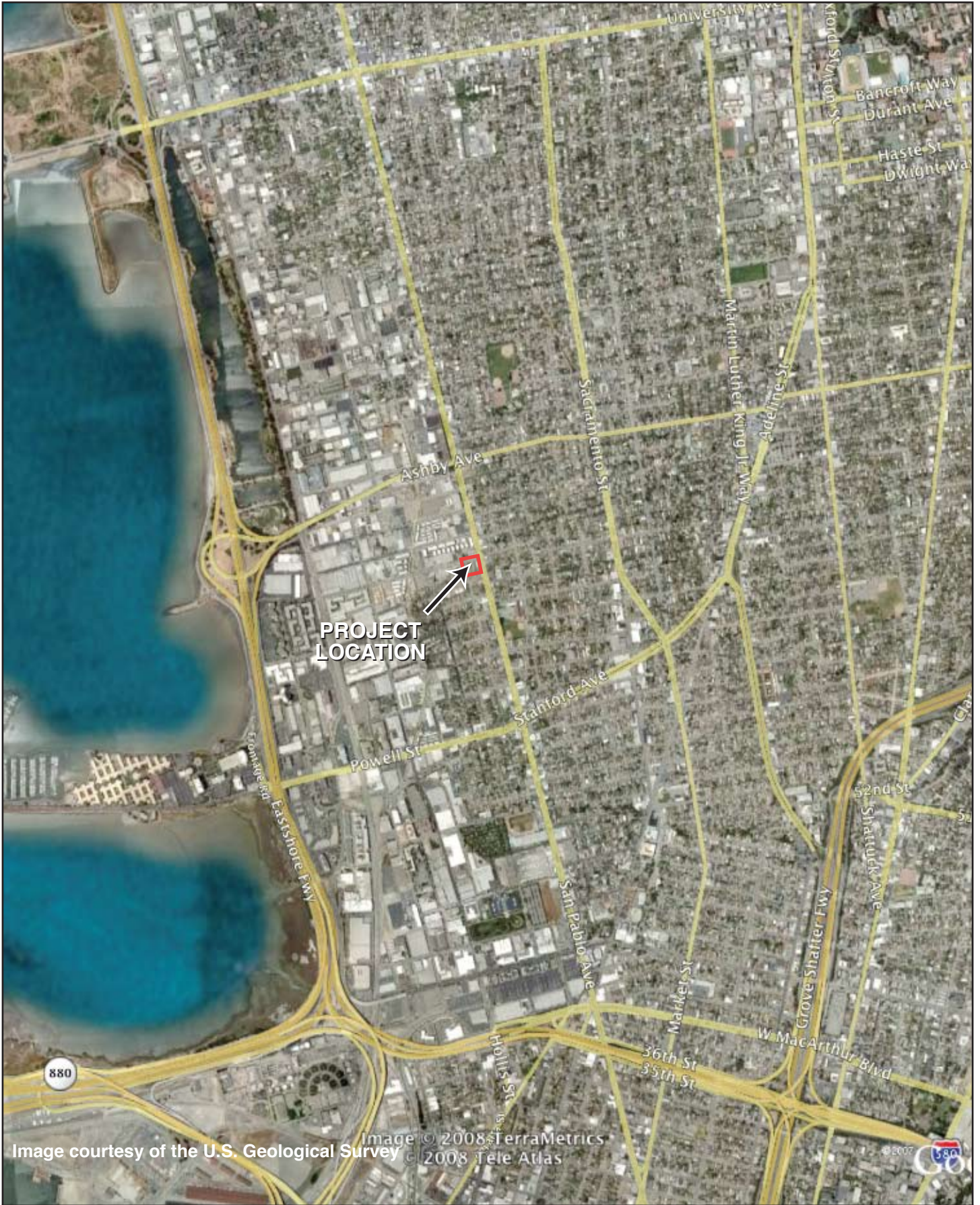
Regional Water Quality Control Board (Water Board), 1999. East Bay Plains Beneficial Use Study, San Francisco Bay. June 15.

Regional Water Quality Control Board (Water Board), 2007. San Francisco Bay Basin (Region 2) Water Quality Contra Board (Basin Plan). January 18.

Regional Water Quality Control Board (Water Board), 2008. Environmental Screening Levels for commercial/industrial sites where groundwater is and is not a drinking water resource. Revised May 2008.

ATTACHMENT A

Figures



SITE LOCATION ON AERIAL PHOTO

**6335 San Pablo Ave.
Oakland, CA**

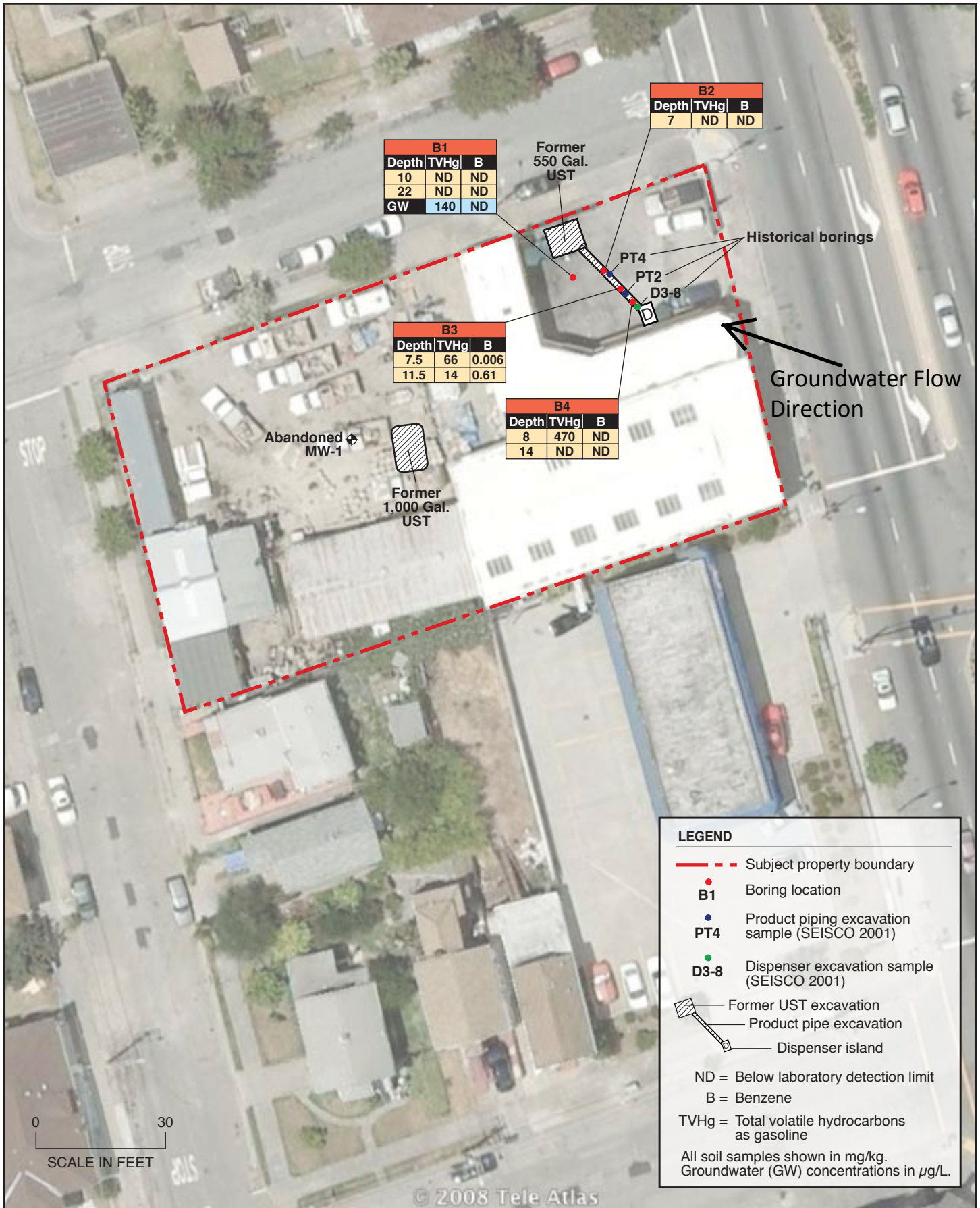
By: MJC

NOVEMBER 2008

Figure 1



2008-48-01



ANALYTICAL RESULTS OF CONTAMINANTS DETECTED ABOVE ESLS

6335 San Pablo Ave.
Oakland, CA

By: MJC

JANUARY 2009

Figure 2



ATTACHMENT B

Drilling Permit

Alameda County Public Works Agency - Water Resources Well Permit



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

Application Approved on: 01/08/2009 By jamesy

Permit Numbers: W2009-0010
Permits Valid from 01/20/2009 to 03/15/2009

Application Id: 1231356524653
Site Location: 6335 San Pablo Ave
Project Start Date: 01/20/2009
Requested Inspection: 01/20/2009
Scheduled Inspection: 01/20/2009 at 1:30 PM (Contact your inspector, Ron Smalley at (510) 670-5407, to confirm.)

City of Project Site:Oakland

Completion Date:03/15/2009

Applicant: Stellar Environmental solutions, Inc. - Henry Pietropaoli
2198 6th Street, Berkeley, CA 94710
Phone: 510-644-3123

Property Owner: Virgil Bolin
1129 Ptarmigan Drive # 1, Walnut Creek, CA 94595
Phone: 925-899-6425

Client: ** same as Property Owner **
Contact: Henry Pietropaoli
Phone: 510-644-3123
Cell: 510-926-9416

Receipt Number: WR2009-0007 Total Due: \$230.00
Payer Name : Henry Pietropaoli Total Amount Paid: \$230.00
Paid By: MC PAID IN FULL

Works Requesting Permits:

Borehole(s) for Geo Probes-Sampling 24 to 72 hours only - 4 Boreholes
Driller: ECA - Lic #: 695970 - Method: DP

Work Total: \$230.00

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2009-0010	01/08/2009	04/20/2009	4	2.25 in.	25.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.
2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
4. Applicant shall contact Ron Smalley for an inspection time at 510-670-5407 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
5. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled,

Alameda County Public Works Agency - Water Resources Well Permit

properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

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

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

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

ATTACHMENT C

Photodocumentation



Subject: Concrete corer at location B2

Site: 6335 San Pablo Ave, Oakland, California.

Date Taken: January 20, 2009

Project No.: SES 2008-48

Photographer: H. Pietropaoli

Photo No.: 01



Subject: Drilling at location B1

Site: 6335 San Pablo Ave, Oakland, California.

Date Taken: January 20, 2009

Project No.: SES 2008-48

Photographer: H. Pietropaoli

Photo No.: 02



Subject: Soil Cores in acetate sleeves

Site: 6335 San Pablo Ave, Oakland, California.

Date Taken: January 20, 2009

Project No.: SES 2008-48

Photographer: H. Pietropaoli

Photo No.: 03



Subject: Tremie grouting bore B2

Site: 6335 San Pablo Ave, Oakland, California.

Date Taken: January 20, 2009

Project No.: SES 2008-48

Photographer: H. Pietropaoli



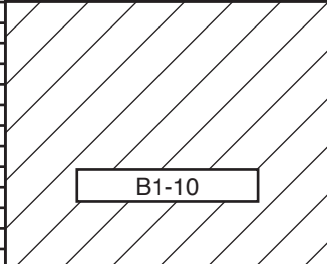
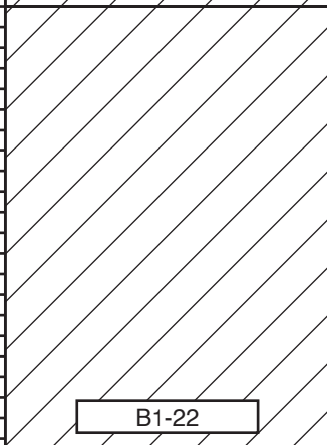
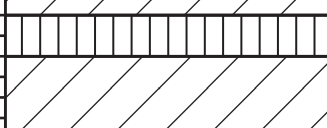

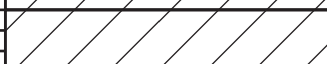

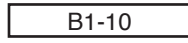
Photo No.: 04

ATTACHMENT D

Geologic Boring Logs

BORING NUMBER B1 Page 1 of 1

PROJECT Bolin's Garage OWNER Mr. Virgil Bolin
 LOCATION 6335 San Pablo Ave., Oakland, CA PROJECT NUMBER 2008-48
 TOTAL DEPTH 30 ft. bgs BOREHOLE DIA. 2.25 inch
 SURFACE ELEV. not known WATER FIRST ENCOUNTERED 28 feet bgs
 DRILLING COMPANY ECA DRILLING METHOD GeoProbe 5400
 DRILLER Brent GEOLOGIST H. Pietropaoli DATE DRILLED 1/20/2009

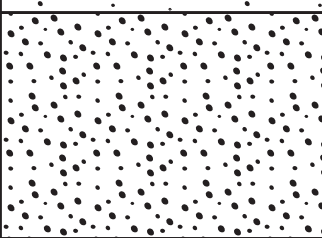
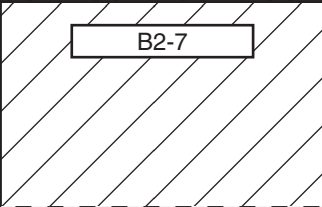
DEPTH (feet)	GRAPHIC LOG	PID	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0			5" concrete	
2		6.2	CL, olive gray silty clay, med. plastic, damp	
4			ML, clayey coarse, sandy silt, olive gray, moist	
6		4.0	CL, reddish brown clay, soft, sl. plastic, moist, interbedded, layers of reddish brown silt	
8				
10		80	slight fuel odor from 9-10 feet	
12				
14		7.2	CL, reddish brown silty clay, w/streaks of gray, soft, plastic, moist	
16			(could not extract sample from sampler between 16 and 20 feet; clay seen on both ends)	Notes: PID = Photoionization Detector "Readings" are in parts per million per volume air (ppmv)
18				Continuous core sampling—100% core recovery unless specified otherwise
20		5.1		
22		6.5		
24			ML, reddish brown clayey silt, coarse sand, moist to wet, soft, med. plastic	Soil sample collected for laboratory analysis.
26			CL, reddish brown coarse sandy clay, moist to wet, soft, med. plastic	
28		3.2	▼ CL, reddish brown coarse sandy clay, moist to wet, soft, med. plastic	Grab groundwater sample collected. Temporary screen set at 25-30' bgs.
30			CL, reddish brown clay, firm	
			Bottom of boring	

2008-48-03

▼ First encountered groundwater

BORING NUMBER B2 Page 1 of 1

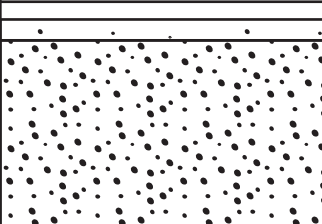
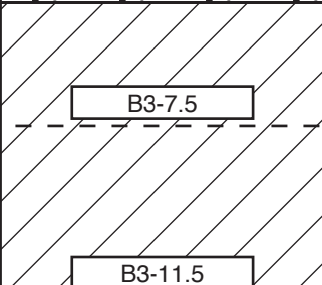
PROJECT Bolin's Garage OWNER Mr. Virgil Bolin
 LOCATION 6335 San Pablo Ave., Oakland, CA PROJECT NUMBER 2008-48
 TOTAL DEPTH 11 ft. bgs BOREHOLE DIA. 2.25 inch
 SURFACE ELEV. not known WATER FIRST ENCOUNTERED not encountered
 DRILLING COMPANY ECA DRILLING METHOD GeoProbe 5400
 DRILLER Brent GEOLOGIST H. Pietropaoli DATE DRILLED 1/20/2009

DEPTH (feet)	GRAPHIC LOG	PID	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0				
2			6" concrete with underlying sandy pea gravel fill, damp, loose	
4				
6		22	(bottom of fill)	
8	 B2-7		CL, grayish brown clay, med. plastic, slight fuel odor	Hole collapsed because of fill, could not advance deeper than 12 feet
10		6.0		
12			Bottom of boring	
14				
16				
18				Notes: PID = Photoionization Detector "Readings" are in parts per million per volume air (ppmv)
20				Continuous core sampling—100% core recovery unless specified otherwise
22				Soil sample collected for laboratory analysis.
24				
26				
28				
30				

2008-48-04

BORING NUMBER B3 Page 1 of 1

PROJECT Bolin's Garage OWNER Mr. Virgil Bolin
 LOCATION 6335 San Pablo Ave., Oakland, CA PROJECT NUMBER 2008-48
 TOTAL DEPTH 12 ft. bgs BOREHOLE DIA. 2.25 inch
 SURFACE ELEV. not known WATER FIRST ENCOUNTERED not encountered
 DRILLING COMPANY ECA DRILLING METHOD GeoProbe 5400
 DRILLER Brent GEOLOGIST H. Pietropaoli DATE DRILLED 1/20/2009

DEPTH (feet)	GRAPHIC LOG	PID	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0			6" concrete with underlying sandy pea gravel fill	
2			(bottom of fill)	
4				
6		132	CL, discolored blue green silty clay, fuel odor, med. plastic	
8	<div style="border: 1px solid black; padding: 2px; display: inline-block;">B3-7.5</div>		CL, becomes reddish brown, damp	
10		8		
12	<div style="border: 1px solid black; padding: 2px; display: inline-block;">B3-11.5</div>		Bottom of boring	
14				
16				
18				
20				
22				
24				
26				
28				
30				

Notes:
 PID = Photoionization Detector "Readings" are in parts per million per volume air (ppmv)

Continuous core sampling—100% core recovery unless specified otherwise

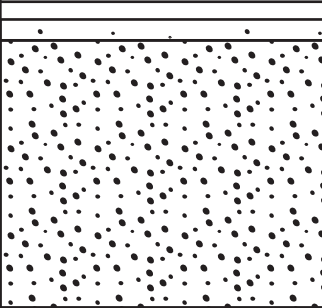
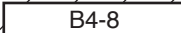

Soil sample collected for laboratory analysis.

B3-7.5

2008-48-06

BORING NUMBER B4 Page 1 of 1

PROJECT Bolin's Garage OWNER Mr. Virgil Bolin
 LOCATION 6335 San Pablo Ave., Oakland, CA PROJECT NUMBER 2008-48
 TOTAL DEPTH 16 ft. bgs BOREHOLE DIA. 2.25 inch
 SURFACE ELEV. not known WATER FIRST ENCOUNTERED not encountered
 DRILLING COMPANY ECA DRILLING METHOD GeoProbe 5400
 DRILLER Brent GEOLOGIST H. Pietropaoli DATE DRILLED 1/20/2009

DEPTH (feet)	GRAPHIC LOG	PID	DESCRIPTION/SOIL CLASSIFICATION	REMARKS	
0			6" concrete with underlying pea gravel and sand fill, damp, loose		
2					
4					
6					
8			185		CL, discolored blue gray clay, fuel odor, plastic, slight fuel odor
10			120		CL, reddish brown clay with gray streaks, slight fuel odor
12					
14		6.5			
16			ML, clayey silt with coarse sand	Notes: PID = Photoionization Detector "Readings" are in parts per million per volume air (ppmv) Continuous core sampling—100% core recovery unless specified otherwise Soil sample collected for laboratory analysis. <div style="border: 1px solid black; display: inline-block; padding: 2px;">B4-8</div>	
18			Bottom of boring		
20					
22					
24					
26					
28					
30					

2008-48-06

ATTACHMENT E

Laboratory Analytical Results and Chain of Custody Documentation



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 209387
ANALYTICAL REPORT

Stellar Environmental Solutions
2198 6th Street
Berkeley, CA 94710

Project : 2008-48
Location : Site Investigation
Level : II

Table with 2 columns: Sample ID and Lab ID. Rows include B1-10, B1-22, B2-7, B3-7.5, B3-11.5, B4-8, B4-14, and B1-GW.

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: [Handwritten Signature]
Project Manager

Date: 01/26/2009

Signature: [Handwritten Signature]
Senior Program Manager

Date: 01/26/2009

CASE NARRATIVE

Laboratory number: 209387
Client: Stellar Environmental Solutions
Project: 2008-48
Location: Site Investigation
Request Date: 01/20/09
Samples Received: 01/20/09

This data package contains sample and QC results for seven soil samples and one water sample, requested for the above referenced project on 01/20/09. The samples were received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B) Water:

High surrogate recoveries were observed for bromofluorobenzene (FID) in the MS/MSD for batch 147131; the corresponding trifluorotoluene (FID) surrogate recoveries were within limits, and the parent sample was not a project sample. B1-GW (lab # 209387-008) had pH greater than 2. No other analytical problems were encountered.

TPH-Purgeables and/or BTXE by GC (EPA 8015B) Soil:

High surrogate recovery was observed for bromofluorobenzene (FID) in B4-8 (lab # 209387-006); the corresponding trifluorotoluene (FID) surrogate recovery was within limits. No other analytical problems were encountered.

Volatile Organics by GC/MS (EPA 8260B) Water:

B1-GW (lab # 209387-008) was analyzed with more than 1 mL of headspace in the VOA vial. B1-GW (lab # 209387-008) had multiple vials combined due to sediment. No other analytical problems were encountered.

Volatile Organics by GC/MS (EPA 8260B) Soil:

Low response was observed for tert-butyl alcohol (TBA) in the CCV analyzed 01/21/09 12:14; this analyte met minimum response criteria, and affected data was qualified with "b". Low surrogate recovery was observed for 1,2-dichloroethane-d4 in the LCS for batch 147218. No other analytical problems were encountered.

Total Volatile Hydrocarbons			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8015B
Field ID:	B1-GW	Batch#:	147131
Matrix:	Water	Sampled:	01/20/09
Units:	ug/L	Received:	01/20/09
Diln Fac:	1.000	Analyzed:	01/21/09

Type: SAMPLE Lab ID: 209387-008

Analyte	Result	RL
Gasoline C7-C12	140 Y	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	110	61-149
Bromofluorobenzene (FID)	118	65-146

Type: BLANK Lab ID: QC480108

Analyte	Result	RL
Gasoline C7-C12	ND	250

Surrogate	%REC	Limits
Trifluorotoluene (FID)	92	61-149
Bromofluorobenzene (FID)	93	65-146

Y= Sample exhibits chromatographic pattern which does not resemble standard
 ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC480109	Batch#:	147131
Matrix:	Water	Analyzed:	01/21/09
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	948.7	95	78-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	118	61-149
Bromofluorobenzene (FID)	113	65-146

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	147131
MSS Lab ID:	209409-002	Sampled:	01/20/09
Matrix:	Water	Received:	01/20/09
Units:	ug/L	Analyzed:	01/21/09
Diln Fac:	1.000		

Type: MS Lab ID: QC480110

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	687.1	2,000	2,355	83	65-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	136	61-149
Bromofluorobenzene (FID)	154 *	65-146

Type: MSD Lab ID: QC480111

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,308	81	65-120	2	20

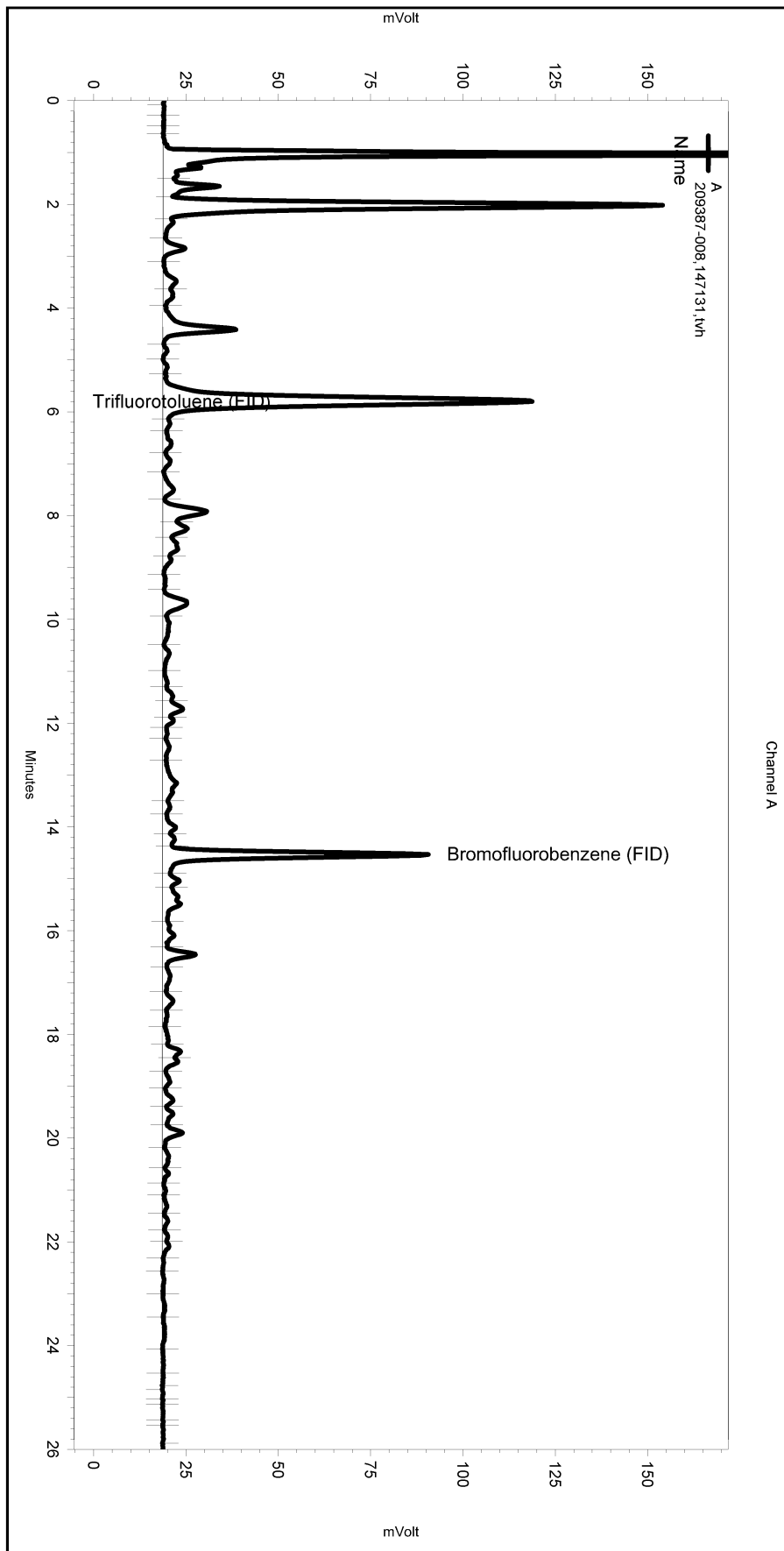
Surrogate	%REC	Limits
Trifluorotoluene (FID)	142	61-149
Bromofluorobenzene (FID)	157 *	65-146

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC04\Sequence\021.seq
 Sample Name: 209387-008,147131,tvh
 Data File: \\Lims\gdrive\ezchrom\Projects\GC04\Data\021_017
 Instrument: GC04 Vial: N/A Operator: lims2k3\tvh3
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC04\Method\tvhbtxe010.met

Software Version 3.1.7
 Run Date: 1/21/2009 6:38:55 PM
 Analysis Date: 1/21/2009 7:08:24 PM
 Sample Amount: 5 Multiplier: 5
 Vial & pH or Core ID: B2.5



 ---< General Method Parameters >-----

No items selected for this section

 ---< A >-----

No items selected for this section

Integration Events

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Width	0	0	0.2
Yes	Threshold	0	0	50

Manual Integration Fixes

Data File: C:\Documents and Settings\All Users\Application
 Data\ChromatographySystem\Recovery
 Data\Instrument.10047\021_017_B31F.tmp

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
None				

Total Volatile Hydrocarbons			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	01/20/09
Units:	mg/Kg	Received:	01/20/09
Basis:	as received		

Field ID:	B1-10	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	147100
Lab ID:	209387-001	Analyzed:	01/20/09

Analyte	Result	RL
Gasoline C7-C12	ND	0.98

Surrogate	%REC	Limits
Trifluorotoluene (FID)	99	55-151
Bromofluorobenzene (FID)	98	55-153

Field ID:	B1-22	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	147100
Lab ID:	209387-002	Analyzed:	01/20/09

Analyte	Result	RL
Gasoline C7-C12	ND	0.93

Surrogate	%REC	Limits
Trifluorotoluene (FID)	105	55-151
Bromofluorobenzene (FID)	95	55-153

Field ID:	B2-7	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	147100
Lab ID:	209387-003	Analyzed:	01/20/09

Analyte	Result	RL
Gasoline C7-C12	ND	1.1

Surrogate	%REC	Limits
Trifluorotoluene (FID)	104	55-151
Bromofluorobenzene (FID)	104	55-153

*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

Total Volatile Hydrocarbons			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	01/20/09
Units:	mg/Kg	Received:	01/20/09
Basis:	as received		

Field ID:	B3-7.5	Diln Fac:	5.000
Type:	SAMPLE	Batch#:	147141
Lab ID:	209387-004	Analyzed:	01/21/09

Analyte	Result	RL
Gasoline C7-C12	66	5.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	136	55-151
Bromofluorobenzene (FID)	116	55-153

Field ID:	B3-11.5	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	147100
Lab ID:	209387-005	Analyzed:	01/20/09

Analyte	Result	RL
Gasoline C7-C12	14	0.97

Surrogate	%REC	Limits
Trifluorotoluene (FID)	118	55-151
Bromofluorobenzene (FID)	115	55-153

Field ID:	B4-8	Diln Fac:	25.00
Type:	SAMPLE	Batch#:	147141
Lab ID:	209387-006	Analyzed:	01/21/09

Analyte	Result	RL
Gasoline C7-C12	470	25

Surrogate	%REC	Limits
Trifluorotoluene (FID)	148	55-151
Bromofluorobenzene (FID)	158 *	55-153

*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

Total Volatile Hydrocarbons			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	01/20/09
Units:	mg/Kg	Received:	01/20/09
Basis:	as received		

Field ID: B4-14 Diln Fac: 1.000
 Type: SAMPLE Batch#: 147100
 Lab ID: 209387-007 Analyzed: 01/21/09

Analyte	Result	RL
Gasoline C7-C12	ND	0.99

Surrogate	%REC	Limits
Trifluorotoluene (FID)	112	55-151
Bromofluorobenzene (FID)	109	55-153

Type: BLANK Batch#: 147100
 Lab ID: QC479994 Analyzed: 01/20/09
 Diln Fac: 1.000

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	90	55-151
Bromofluorobenzene (FID)	91	55-153

Type: BLANK Batch#: 147141
 Lab ID: QC480153 Analyzed: 01/21/09
 Diln Fac: 1.000

Analyte	Result	RL
Gasoline C7-C12	ND	0.20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	94	55-151
Bromofluorobenzene (FID)	95	55-153

*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8015B
Type:	LCS	Basis:	as received
Lab ID:	QC479996	Diln Fac:	1.000
Matrix:	Soil	Batch#:	147100
Units:	mg/Kg	Analyzed:	01/20/09

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	5.000	5.182	104	78-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	127	55-151
Bromofluorobenzene (FID)	112	55-153

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8015B
Field ID:	B1-22	Diln Fac:	1.000
MSS Lab ID:	209387-002	Batch#:	147100
Matrix:	Soil	Sampled:	01/20/09
Units:	mg/Kg	Received:	01/20/09
Basis:	as received	Analyzed:	01/20/09

Type: MS Lab ID: QC479997

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.1405	10.00	8.109	80	29-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	116	55-151
Bromofluorobenzene (FID)	119	55-153

Type: MSD Lab ID: QC479998

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	10.00	8.825	87	29-120	8	34

Surrogate	%REC	Limits
Trifluorotoluene (FID)	130	55-151
Bromofluorobenzene (FID)	130	55-153

RPD= Relative Percent Difference

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8015B
Matrix:	Soil	Diln Fac:	1.000
Units:	mg/Kg	Batch#:	147141
Basis:	as received	Analyzed:	01/21/09

Type: BS Lab ID: QC480156

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	5.000	4.865	97	78-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	110	55-151
Bromofluorobenzene (FID)	99	55-153

Type: BSD Lab ID: QC480157

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	10.00	8.874	89	78-120	9	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	121	55-151
Bromofluorobenzene (FID)	102	55-153

RPD= Relative Percent Difference

BTXE & Oxygenates			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8260B
Field ID:	B1-GW	Units:	ug/L
Lab ID:	209387-008	Sampled:	01/20/09
Matrix:	Water	Received:	01/20/09

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
tert-Butyl Alcohol (TBA)	220	10	1.000	147128	01/21/09
MTBE	110	1.0	2.000	147163	01/22/09
Isopropyl Ether (DIPE)	0.6	0.5	1.000	147128	01/21/09
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	1.000	147128	01/21/09
1,2-Dichloroethane	26	0.5	1.000	147128	01/21/09
Benzene	ND	0.5	1.000	147128	01/21/09
Methyl tert-Amyl Ether (TAME)	ND	0.5	1.000	147128	01/21/09
Toluene	ND	0.5	1.000	147128	01/21/09
1,2-Dibromoethane	ND	0.5	1.000	147128	01/21/09
Ethylbenzene	0.6	0.5	1.000	147128	01/21/09
m,p-Xylenes	ND	0.5	1.000	147128	01/21/09
o-Xylene	ND	0.5	1.000	147128	01/21/09

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	92	80-125	1.000	147128	01/21/09
1,2-Dichloroethane-d4	97	80-137	1.000	147128	01/21/09
Toluene-d8	105	80-120	1.000	147128	01/21/09
Bromofluorobenzene	91	80-122	1.000	147128	01/21/09

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

BTXE & Oxygenates			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	147128
Units:	ug/L	Analyzed:	01/21/09
Diln Fac:	1.000		

Type: BS Lab ID: QC480100

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	100.0	80.75	81	59-152
MTBE	20.00	16.73	84	70-125
Isopropyl Ether (DIPE)	20.00	17.96	90	67-126
Ethyl tert-Butyl Ether (ETBE)	20.00	20.01	100	69-127
1,2-Dichloroethane	20.00	20.45	102	78-132
Benzene	20.00	19.96	100	80-120
Methyl tert-Amyl Ether (TAME)	20.00	21.27	106	80-122
Toluene	20.00	20.58	103	80-120
1,2-Dibromoethane	20.00	18.63	93	80-120
Ethylbenzene	20.00	21.75	109	80-122
m,p-Xylenes	40.00	41.29	103	80-126
o-Xylene	20.00	20.27	101	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-125
1,2-Dichloroethane-d4	105	80-137
Toluene-d8	110	80-120
Bromofluorobenzene	96	80-122

Type: BSD Lab ID: QC480101

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	100.0	69.05	69	59-152	16	20
MTBE	20.00	16.85	84	70-125	1	20
Isopropyl Ether (DIPE)	20.00	18.09	90	67-126	1	20
Ethyl tert-Butyl Ether (ETBE)	20.00	19.96	100	69-127	0	20
1,2-Dichloroethane	20.00	19.58	98	78-132	4	20
Benzene	20.00	20.34	102	80-120	2	20
Methyl tert-Amyl Ether (TAME)	20.00	20.00	100	80-122	6	20
Toluene	20.00	20.51	103	80-120	0	20
1,2-Dibromoethane	20.00	17.62	88	80-120	6	20
Ethylbenzene	20.00	21.76	109	80-122	0	20
m,p-Xylenes	40.00	41.70	104	80-126	1	20
o-Xylene	20.00	20.34	102	80-120	0	20

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-125
1,2-Dichloroethane-d4	102	80-137
Toluene-d8	107	80-120
Bromofluorobenzene	89	80-122

RPD= Relative Percent Difference

Batch QC Report

BTXE & Oxygenates			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC480102	Batch#:	147128
Matrix:	Water	Analyzed:	01/21/09
Units:	ug/L		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
Toluene	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-125
1,2-Dichloroethane-d4	106	80-137
Toluene-d8	109	80-120
Bromofluorobenzene	94	80-122

ND= Not Detected

RL= Reporting Limit

Batch QC Report

BTXE & Oxygenates			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	147128
MSS Lab ID:	209410-001	Sampled:	01/20/09
Matrix:	Water	Received:	01/20/09
Units:	ug/L	Analyzed:	01/21/09
Diln Fac:	1.000		

Type: MS Lab ID: QC480183

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<2.000	125.0	96.54	77	65-150
MTBE	<0.1000	25.00	20.46	82	74-124
Isopropyl Ether (DIPE)	<0.1000	25.00	21.87	87	73-127
Ethyl tert-Butyl Ether (ETBE)	<0.1000	25.00	25.89	104	74-125
1,2-Dichloroethane	<0.1000	25.00	24.05	96	80-133
Benzene	<0.1000	25.00	25.23	101	80-121
Methyl tert-Amyl Ether (TAME)	<0.1000	25.00	27.53	110	80-120
Toluene	<0.1000	25.00	24.88	100	80-120
1,2-Dibromoethane	<0.1000	25.00	23.14	93	80-120
Ethylbenzene	<0.1000	25.00	26.83	107	80-120
m,p-Xylenes	<0.1095	50.00	51.89	104	80-121
o-Xylene	<0.1000	25.00	25.11	100	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-125
1,2-Dichloroethane-d4	99	80-137
Toluene-d8	111	80-120
Bromofluorobenzene	91	80-122

Type: MSD Lab ID: QC480184

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	96.91	78	65-150	0	20
MTBE	25.00	20.63	83	74-124	1	20
Isopropyl Ether (DIPE)	25.00	21.03	84	73-127	4	20
Ethyl tert-Butyl Ether (ETBE)	25.00	24.57	98	74-125	5	20
1,2-Dichloroethane	25.00	23.66	95	80-133	2	20
Benzene	25.00	25.14	101	80-121	0	20
Methyl tert-Amyl Ether (TAME)	25.00	27.96	112	80-120	2	20
Toluene	25.00	24.56	98	80-120	1	20
1,2-Dibromoethane	25.00	22.75	91	80-120	2	20
Ethylbenzene	25.00	26.03	104	80-120	3	20
m,p-Xylenes	50.00	49.65	99	80-121	4	20
o-Xylene	25.00	24.71	99	80-120	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	90	80-125
1,2-Dichloroethane-d4	101	80-137
Toluene-d8	106	80-120
Bromofluorobenzene	93	80-122

RPD= Relative Percent Difference

Batch QC Report

BTXE & Oxygenates			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	147163
Units:	ug/L	Analyzed:	01/22/09
Diln Fac:	1.000		

Type: BS Lab ID: QC480236

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	100.0	71.84	72	59-152
MTBE	20.00	15.96	80	70-125
Isopropyl Ether (DIPE)	20.00	17.25	86	67-126
Ethyl tert-Butyl Ether (ETBE)	20.00	20.19	101	69-127
1,2-Dichloroethane	20.00	19.66	98	78-132
Benzene	20.00	20.85	104	80-120
Methyl tert-Amyl Ether (TAME)	20.00	21.58	108	80-122
Toluene	20.00	20.30	102	80-120
1,2-Dibromoethane	20.00	18.97	95	80-120
Ethylbenzene	20.00	22.73	114	80-122
m,p-Xylenes	40.00	41.67	104	80-126
o-Xylene	20.00	19.96	100	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	91	80-125
1,2-Dichloroethane-d4	107	80-137
Toluene-d8	112	80-120
Bromofluorobenzene	93	80-122

Type: BSD Lab ID: QC480237

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	100.0	73.77	74	59-152	3	20
MTBE	20.00	15.82	79	70-125	1	20
Isopropyl Ether (DIPE)	20.00	17.38	87	67-126	1	20
Ethyl tert-Butyl Ether (ETBE)	20.00	19.50	97	69-127	3	20
1,2-Dichloroethane	20.00	19.22	96	78-132	2	20
Benzene	20.00	20.34	102	80-120	2	20
Methyl tert-Amyl Ether (TAME)	20.00	21.07	105	80-122	2	20
Toluene	20.00	19.23	96	80-120	5	20
1,2-Dibromoethane	20.00	17.65	88	80-120	7	20
Ethylbenzene	20.00	21.95	110	80-122	4	20
m,p-Xylenes	40.00	40.19	100	80-126	4	20
o-Xylene	20.00	21.00	105	80-120	5	20

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-125
1,2-Dichloroethane-d4	104	80-137
Toluene-d8	107	80-120
Bromofluorobenzene	94	80-122

RPD= Relative Percent Difference

Batch QC Report

BTXE & Oxygenates			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC480238	Batch#:	147163
Matrix:	Water	Analyzed:	01/22/09
Units:	ug/L		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
Toluene	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	91	80-125
1,2-Dichloroethane-d4	100	80-137
Toluene-d8	106	80-120
Bromofluorobenzene	98	80-122

ND= Not Detected

RL= Reporting Limit

BTXE & Oxygenates			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8260B
Field ID:	B1-10	Diln Fac:	0.9804
Lab ID:	209387-001	Batch#:	147136
Matrix:	Soil	Sampled:	01/20/09
Units:	ug/Kg	Received:	01/20/09
Basis:	as received	Analyzed:	01/21/09

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	98
MTBE	8.1	4.9
Isopropyl Ether (DIPE)	ND	4.9
Ethyl tert-Butyl Ether (ETBE)	ND	4.9
1,2-Dichloroethane	ND	4.9
Benzene	ND	4.9
Methyl tert-Amyl Ether (TAME)	ND	4.9
Toluene	ND	4.9
1,2-Dibromoethane	ND	4.9
Ethylbenzene	ND	4.9
m,p-Xylenes	ND	4.9
o-Xylene	ND	4.9

Surrogate	%REC	Limits
Dibromofluoromethane	92	75-129
1,2-Dichloroethane-d4	88	74-133
Toluene-d8	106	80-120
Bromofluorobenzene	94	79-127

ND= Not Detected
 RL= Reporting Limit

BTXE & Oxygenates			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8260B
Field ID:	B1-22	Diln Fac:	0.9671
Lab ID:	209387-002	Batch#:	147168
Matrix:	Soil	Sampled:	01/20/09
Units:	ug/Kg	Received:	01/20/09
Basis:	as received	Analyzed:	01/22/09

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	97
MTBE	9.5	4.8
Isopropyl Ether (DIPE)	ND	4.8
Ethyl tert-Butyl Ether (ETBE)	ND	4.8
1,2-Dichloroethane	ND	4.8
Benzene	ND	4.8
Methyl tert-Amyl Ether (TAME)	ND	4.8
Toluene	ND	4.8
1,2-Dibromoethane	ND	4.8
Ethylbenzene	ND	4.8
m,p-Xylenes	ND	4.8
o-Xylene	ND	4.8

Surrogate	%REC	Limits
Dibromofluoromethane	100	75-129
1,2-Dichloroethane-d4	96	74-133
Toluene-d8	98	80-120
Bromofluorobenzene	96	79-127

ND= Not Detected
 RL= Reporting Limit

BTXE & Oxygenates			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8260B
Field ID:	B2-7	Diln Fac:	0.9452
Lab ID:	209387-003	Batch#:	147168
Matrix:	Soil	Sampled:	01/20/09
Units:	ug/Kg	Received:	01/20/09
Basis:	as received	Analyzed:	01/22/09

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	95
MTBE	ND	4.7
Isopropyl Ether (DIPE)	ND	4.7
Ethyl tert-Butyl Ether (ETBE)	ND	4.7
1,2-Dichloroethane	ND	4.7
Benzene	ND	4.7
Methyl tert-Amyl Ether (TAME)	ND	4.7
Toluene	ND	4.7
1,2-Dibromoethane	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7

Surrogate	%REC	Limits
Dibromofluoromethane	101	75-129
1,2-Dichloroethane-d4	96	74-133
Toluene-d8	100	80-120
Bromofluorobenzene	94	79-127

ND= Not Detected
 RL= Reporting Limit

BTXE & Oxygenates			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8260B
Field ID:	B3-7.5	Diln Fac:	0.9747
Lab ID:	209387-004	Batch#:	147168
Matrix:	Soil	Sampled:	01/20/09
Units:	ug/Kg	Received:	01/20/09
Basis:	as received	Analyzed:	01/22/09

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	97
MTBE	ND	4.9
Isopropyl Ether (DIPE)	ND	4.9
Ethyl tert-Butyl Ether (ETBE)	ND	4.9
1,2-Dichloroethane	ND	4.9
Benzene	6.0	4.9
Methyl tert-Amyl Ether (TAME)	ND	4.9
Toluene	27	4.9
1,2-Dibromoethane	ND	4.9
Ethylbenzene	40	4.9
m,p-Xylenes	180	4.9
o-Xylene	53	4.9

Surrogate	%REC	Limits
Dibromofluoromethane	95	75-129
1,2-Dichloroethane-d4	98	74-133
Toluene-d8	100	80-120
Bromofluorobenzene	96	79-127

ND= Not Detected
 RL= Reporting Limit

BTXE & Oxygenates			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8260B
Field ID:	B3-11.5	Diln Fac:	10.20
Lab ID:	209387-005	Batch#:	147168
Matrix:	Soil	Sampled:	01/20/09
Units:	ug/Kg	Received:	01/20/09
Basis:	as received	Analyzed:	01/22/09

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	1,000
MTBE	ND	51
Isopropyl Ether (DIPE)	ND	51
Ethyl tert-Butyl Ether (ETBE)	ND	51
1,2-Dichloroethane	ND	51
Benzene	610	51
Methyl tert-Amyl Ether (TAME)	ND	51
Toluene	440	51
1,2-Dibromoethane	ND	51
Ethylbenzene	59	51
m,p-Xylenes	190	51
o-Xylene	70	51

Surrogate	%REC	Limits
Dibromofluoromethane	104	75-129
1,2-Dichloroethane-d4	99	74-133
Toluene-d8	96	80-120
Bromofluorobenzene	95	79-127

ND= Not Detected
 RL= Reporting Limit

BTXE & Oxygenates			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8260B
Field ID:	B4-8	Basis:	as received
Lab ID:	209387-006	Sampled:	01/20/09
Matrix:	Soil	Received:	01/20/09
Units:	ug/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
tert-Butyl Alcohol (TBA)	ND	1,000	10.20	147136	01/21/09
MTBE	ND	51	10.20	147136	01/21/09
Isopropyl Ether (DIPE)	ND	51	10.20	147136	01/21/09
Ethyl tert-Butyl Ether (ETBE)	ND	51	10.20	147136	01/21/09
1,2-Dichloroethane	ND	51	10.20	147136	01/21/09
Benzene	ND	51	10.20	147136	01/21/09
Methyl tert-Amyl Ether (TAME)	ND	51	10.20	147136	01/21/09
Toluene	ND	51	10.20	147136	01/21/09
1,2-Dibromoethane	ND	51	10.20	147136	01/21/09
Ethylbenzene	1,800	51	10.20	147136	01/21/09
m,p-Xylenes	8,900	250	50.00	147218	01/23/09
o-Xylene	410	51	10.20	147136	01/21/09

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	89	75-129	10.20	147136	01/21/09
1,2-Dichloroethane-d4	87	74-133	10.20	147136	01/21/09
Toluene-d8	108	80-120	10.20	147136	01/21/09
Bromofluorobenzene	112	79-127	10.20	147136	01/21/09
Trifluorotoluene (MeOH)	106	55-147	50.00	147218	01/23/09

ND= Not Detected
 RL= Reporting Limit

BTXE & Oxygenates			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8260B
Field ID:	B4-14	Diln Fac:	0.9363
Lab ID:	209387-007	Batch#:	147168
Matrix:	Soil	Sampled:	01/20/09
Units:	ug/Kg	Received:	01/20/09
Basis:	as received	Analyzed:	01/22/09

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	94
MTBE	6.9	4.7
Isopropyl Ether (DIPE)	ND	4.7
Ethyl tert-Butyl Ether (ETBE)	ND	4.7
1,2-Dichloroethane	ND	4.7
Benzene	ND	4.7
Methyl tert-Amyl Ether (TAME)	ND	4.7
Toluene	ND	4.7
1,2-Dibromoethane	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7

Surrogate	%REC	Limits
Dibromofluoromethane	105	75-129
1,2-Dichloroethane-d4	106	74-133
Toluene-d8	101	80-120
Bromofluorobenzene	96	79-127

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

BTXE & Oxygenates			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8260B
Type:	BLANK	Basis:	as received
Lab ID:	QC480134	Diln Fac:	1.000
Matrix:	Soil	Batch#:	147136
Units:	ug/Kg	Analyzed:	01/21/09

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	100
MTBE	ND	5.0
Isopropyl Ether (DIPE)	ND	5.0
Ethyl tert-Butyl Ether (ETBE)	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Methyl tert-Amyl Ether (TAME)	ND	5.0
Toluene	ND	5.0
1,2-Dibromoethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	90	75-129
1,2-Dichloroethane-d4	77	74-133
Toluene-d8	106	80-120
Bromofluorobenzene	96	79-127

ND= Not Detected

RL= Reporting Limit

Batch QC Report

BTXE & Oxygenates			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8260B
Matrix:	Soil	Diln Fac:	1.000
Units:	ug/Kg	Batch#:	147136
Basis:	as received	Analyzed:	01/21/09

Type: BS Lab ID: QC480135

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	75.97 b	61	58-141
MTBE	25.00	19.69	79	67-127
Isopropyl Ether (DIPE)	25.00	20.90	84	68-126
Ethyl tert-Butyl Ether (ETBE)	25.00	20.24	81	66-128
1,2-Dichloroethane	25.00	19.49	78	72-127
Benzene	25.00	26.88	108	80-123
Methyl tert-Amyl Ether (TAME)	25.00	22.19	89	73-130
Toluene	25.00	25.08	100	80-124
1,2-Dibromoethane	25.00	21.24	85	80-122
Ethylbenzene	25.00	26.12	104	80-127
m,p-Xylenes	50.00	53.58	107	80-125
o-Xylene	25.00	26.44	106	80-122

Surrogate	%REC	Limits
Dibromofluoromethane	84	75-129
1,2-Dichloroethane-d4	80	74-133
Toluene-d8	107	80-120
Bromofluorobenzene	95	79-127

Type: BSD Lab ID: QC480136

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	86.06 b	69	58-141	12	27
MTBE	25.00	19.93	80	67-127	1	20
Isopropyl Ether (DIPE)	25.00	21.03	84	68-126	1	20
Ethyl tert-Butyl Ether (ETBE)	25.00	20.45	82	66-128	1	20
1,2-Dichloroethane	25.00	20.19	81	72-127	4	20
Benzene	25.00	25.92	104	80-123	4	20
Methyl tert-Amyl Ether (TAME)	25.00	22.34	89	73-130	1	20
Toluene	25.00	24.03	96	80-124	4	20
1,2-Dibromoethane	25.00	20.81	83	80-122	2	20
Ethylbenzene	25.00	24.61	98	80-127	6	20
m,p-Xylenes	50.00	47.03	94	80-125	13	20
o-Xylene	25.00	22.03	88	80-122	18	20

Surrogate	%REC	Limits
Dibromofluoromethane	88	75-129
1,2-Dichloroethane-d4	81	74-133
Toluene-d8	103	80-120
Bromofluorobenzene	107	79-127

b= See narrative
 RPD= Relative Percent Difference
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Batch QC Report

BTXE & Oxygenates			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8260B
Field ID:	B1-22	Diln Fac:	0.9579
MSS Lab ID:	209387-002	Batch#:	147136
Matrix:	Soil	Sampled:	01/20/09
Units:	ug/Kg	Received:	01/20/09
Basis:	as received	Analyzed:	01/21/09

Type: MS Lab ID: QC480197

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	26.86	239.5	149.3 b	51	41-130
MTBE	14.44	47.89	47.67	69	51-121
Isopropyl Ether (DIPE)	<0.9579	47.89	38.01	79	48-120
Ethyl tert-Butyl Ether (ETBE)	<0.9579	47.89	35.66	74	49-122
1,2-Dichloroethane	2.227	47.89	37.55	74	50-120
Benzene	<0.9579	47.89	50.99	106	54-120
Methyl tert-Amyl Ether (TAME)	<0.9579	47.89	37.68	79	52-124
Toluene	<0.9579	47.89	48.49	101	50-120
1,2-Dibromoethane	<0.9579	47.89	40.07	84	50-120
Ethylbenzene	<0.9579	47.89	48.79	102	46-120
m,p-Xylenes	<0.9579	95.79	96.81	101	44-120
o-Xylene	<0.9579	47.89	46.85	98	45-120

Surrogate	%REC	Limits
Dibromofluoromethane	91	75-129
1,2-Dichloroethane-d4	79	74-133
Toluene-d8	107	80-120
Bromofluorobenzene	92	79-127

Type: MSD Lab ID: QC480198

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	239.5	156.4 b	54	41-130	5	37
MTBE	47.89	51.14	77	51-121	7	29
Isopropyl Ether (DIPE)	47.89	39.90	83	48-120	5	29
Ethyl tert-Butyl Ether (ETBE)	47.89	36.67	77	49-122	3	29
1,2-Dichloroethane	47.89	38.24	75	50-120	2	25
Benzene	47.89	51.13	107	54-120	0	25
Methyl tert-Amyl Ether (TAME)	47.89	39.45	82	52-124	5	27
Toluene	47.89	48.51	101	50-120	0	28
1,2-Dibromoethane	47.89	40.29	84	50-120	1	28
Ethylbenzene	47.89	50.69	106	46-120	4	29
m,p-Xylenes	95.79	101.1	106	44-120	4	30
o-Xylene	47.89	49.72	104	45-120	6	30

Surrogate	%REC	Limits
Dibromofluoromethane	90	75-129
1,2-Dichloroethane-d4	78	74-133
Toluene-d8	105	80-120
Bromofluorobenzene	87	79-127

b= See narrative
 RPD= Relative Percent Difference
 Page 1 of 1

Batch QC Report

BTXE & Oxygenates			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8260B
Type:	BLANK	Basis:	as received
Lab ID:	QC480259	Diln Fac:	1.000
Matrix:	Soil	Batch#:	147168
Units:	ug/Kg	Analyzed:	01/22/09

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	100
MTBE	ND	5.0
Isopropyl Ether (DIPE)	ND	5.0
Ethyl tert-Butyl Ether (ETBE)	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Methyl tert-Amyl Ether (TAME)	ND	5.0
Toluene	ND	5.0
1,2-Dibromoethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	102	75-129
1,2-Dichloroethane-d4	97	74-133
Toluene-d8	100	80-120
Bromofluorobenzene	93	79-127

ND= Not Detected

RL= Reporting Limit

Batch QC Report

BTXE & Oxygenates			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8260B
Type:	LCS	Basis:	as received
Lab ID:	QC480260	Diln Fac:	1.000
Matrix:	Soil	Batch#:	147168
Units:	ug/Kg	Analyzed:	01/22/09

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	94.92	76	58-141
MTBE	25.00	22.12	88	67-127
Isopropyl Ether (DIPE)	25.00	24.44	98	68-126
Ethyl tert-Butyl Ether (ETBE)	25.00	23.97	96	66-128
1,2-Dichloroethane	25.00	25.57	102	72-127
Benzene	25.00	26.25	105	80-123
Methyl tert-Amyl Ether (TAME)	25.00	22.91	92	73-130
Toluene	25.00	27.30	109	80-124
1,2-Dibromoethane	25.00	22.88	92	80-122
Ethylbenzene	25.00	28.32	113	80-127
m,p-Xylenes	50.00	58.39	117	80-125
o-Xylene	25.00	26.77	107	80-122

Surrogate	%REC	Limits
Dibromofluoromethane	96	75-129
1,2-Dichloroethane-d4	94	74-133
Toluene-d8	100	80-120
Bromofluorobenzene	94	79-127

Batch QC Report

BTXE & Oxygenates			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Diln Fac:	0.8403
MSS Lab ID:	209431-006	Batch#:	147168
Matrix:	Soil	Sampled:	01/12/09
Units:	ug/Kg	Received:	01/12/09
Basis:	as received	Analyzed:	01/22/09

Type: MS Lab ID: QC480360

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<16.81	210.1	165.9	79	41-130
MTBE	<0.8403	42.02	33.32	79	51-121
Isopropyl Ether (DIPE)	<0.8403	42.02	34.12	81	48-120
Ethyl tert-Butyl Ether (ETBE)	<0.8403	42.02	34.44	82	49-122
1,2-Dichloroethane	<0.8403	42.02	45.23	108	50-120
Benzene	<0.8403	42.02	39.80	95	54-120
Methyl tert-Amyl Ether (TAME)	<0.8403	42.02	33.26	79	52-124
Toluene	<0.8403	42.02	41.13	98	50-120
1,2-Dibromoethane	<0.8403	42.02	39.11	93	50-120
Ethylbenzene	<0.8403	42.02	42.49	101	46-120
m,p-Xylenes	<1.349	84.03	85.11	101	44-120
o-Xylene	<0.8403	42.02	38.72	92	45-120

Surrogate	%REC	Limits
Dibromofluoromethane	113	75-129
1,2-Dichloroethane-d4	124	74-133
Toluene-d8	106	80-120
Bromofluorobenzene	95	79-127

Type: MSD Lab ID: QC480361

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	210.1	137.8	66	41-130	19	37
MTBE	42.02	32.23	77	51-121	3	29
Isopropyl Ether (DIPE)	42.02	36.68	87	48-120	7	29
Ethyl tert-Butyl Ether (ETBE)	42.02	36.55	87	49-122	6	29
1,2-Dichloroethane	42.02	40.97	98	50-120	10	25
Benzene	42.02	38.19	91	54-120	4	25
Methyl tert-Amyl Ether (TAME)	42.02	33.45	80	52-124	1	27
Toluene	42.02	39.00	93	50-120	5	28
1,2-Dibromoethane	42.02	34.58	82	50-120	12	28
Ethylbenzene	42.02	40.17	96	46-120	6	29
m,p-Xylenes	84.03	81.80	97	44-120	4	30
o-Xylene	42.02	36.34	86	45-120	6	30

Surrogate	%REC	Limits
Dibromofluoromethane	108	75-129
1,2-Dichloroethane-d4	116	74-133
Toluene-d8	104	80-120
Bromofluorobenzene	97	79-127

RPD= Relative Percent Difference

Batch QC Report

BTXE & Oxygenates			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8260B
Type:	BLANK	Basis:	as received
Lab ID:	QC480455	Diln Fac:	1.000
Matrix:	Soil	Batch#:	147218
Units:	ug/Kg	Analyzed:	01/23/09

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	100
MTBE	ND	5.0
Isopropyl Ether (DIPE)	ND	5.0
Ethyl tert-Butyl Ether (ETBE)	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Methyl tert-Amyl Ether (TAME)	ND	5.0
Toluene	ND	5.0
1,2-Dibromoethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	86	75-129
1,2-Dichloroethane-d4	76	74-133
Toluene-d8	107	80-120
Bromofluorobenzene	90	79-127

ND= Not Detected

RL= Reporting Limit

Batch QC Report

BTXE & Oxygenates			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8260B
Type:	LCS	Basis:	as received
Lab ID:	QC480456	Diln Fac:	1.000
Matrix:	Soil	Batch#:	147218
Units:	ug/Kg	Analyzed:	01/23/09

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	80.62	64	58-141
MTBE	25.00	19.45	78	67-127
Isopropyl Ether (DIPE)	25.00	22.05	88	68-126
Ethyl tert-Butyl Ether (ETBE)	25.00	20.58	82	66-128
1,2-Dichloroethane	25.00	18.80	75	72-127
Benzene	25.00	29.92	120	80-123
Methyl tert-Amyl Ether (TAME)	25.00	22.21	89	73-130
Toluene	25.00	29.28	117	80-124
1,2-Dibromoethane	25.00	23.69	95	80-122
Ethylbenzene	25.00	29.42	118	80-127
m,p-Xylenes	50.00	61.59	123	80-125
o-Xylene	25.00	28.70	115	80-122

Surrogate	%REC	Limits
Dibromofluoromethane	85	75-129
1,2-Dichloroethane-d4	72 *	74-133
Toluene-d8	110	80-120
Bromofluorobenzene	82	79-127

*= Value outside of QC limits; see narrative

Batch QC Report

BTXE & Oxygenates			
Lab #:	209387	Location:	Site Investigation
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2008-48	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Diln Fac:	0.9921
MSS Lab ID:	209431-010	Batch#:	147218
Matrix:	Soil	Sampled:	01/14/09
Units:	ug/Kg	Received:	01/14/09
Basis:	as received	Analyzed:	01/23/09

Type: MS Lab ID: QC480487

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<19.84	248.0	150.8	61	41-130
MTBE	<0.9921	49.60	39.47	80	51-121
Isopropyl Ether (DIPE)	<0.9921	49.60	43.08	87	48-120
Ethyl tert-Butyl Ether (ETBE)	<0.9921	49.60	41.01	83	49-122
1,2-Dichloroethane	<0.9921	49.60	39.75	80	50-120
Benzene	<0.9921	49.60	55.98	113	54-120
Methyl tert-Amyl Ether (TAME)	<0.9921	49.60	43.29	87	52-124
Toluene	<0.9921	49.60	53.65	108	50-120
1,2-Dibromoethane	<0.9921	49.60	44.48	90	50-120
Ethylbenzene	<0.9921	49.60	52.10	105	46-120
m,p-Xylenes	<0.9921	99.21	105.4	106	44-120
o-Xylene	<0.9921	49.60	51.53	104	45-120

Surrogate	%REC	Limits
Dibromofluoromethane	89	75-129
1,2-Dichloroethane-d4	77	74-133
Toluene-d8	107	80-120
Bromofluorobenzene	95	79-127

Type: MSD Lab ID: QC480488

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	248.0	161.0	65	41-130	7	37
MTBE	49.60	41.65	84	51-121	5	29
Isopropyl Ether (DIPE)	49.60	45.20	91	48-120	5	29
Ethyl tert-Butyl Ether (ETBE)	49.60	42.47	86	49-122	4	29
1,2-Dichloroethane	49.60	38.50	78	50-120	3	25
Benzene	49.60	53.70	108	54-120	4	25
Methyl tert-Amyl Ether (TAME)	49.60	43.51	88	52-124	1	27
Toluene	49.60	50.74	102	50-120	6	28
1,2-Dibromoethane	49.60	42.17	85	50-120	5	28
Ethylbenzene	49.60	51.39	104	46-120	1	29
m,p-Xylenes	99.21	101.7	102	44-120	4	30
o-Xylene	49.60	50.31	101	45-120	2	30

Surrogate	%REC	Limits
Dibromofluoromethane	90	75-129
1,2-Dichloroethane-d4	78	74-133
Toluene-d8	107	80-120
Bromofluorobenzene	92	79-127

RPD= Relative Percent Difference

209387 Chain of Custody Record

Lab job no. _____

Date _____

Page 1 of 1

Laboratory Curtis and Tompkins, Ltd. Method of Shipment Hand Delivery
 Address 2323 Fifth Street Shipment No. _____
Berkeley, California 94710 Airbill No. _____
510-486-0900 Cooler No. _____

Project Owner Bolin' Garage Project Manager Richard Makdisi
 Site Address 6335 San Pablo Ave Telephone No. (510) 644-3123
Oakland, CA Fax No. (510) 644-3859
 Project Name Site Investigation Samplers: (Signature) Henry Pichay
 Project Number 2008-48

Filtered
 No. of Containers
 1 VH-9 AS 8015
 BTXE/MTBE/6ASOX 58260

Analysis Required

Remarks

	Field Sample Number	Location/Depth	Date	Time	Sample Type	Type/Size of Container	Preservation		No	Analysis Required		Remarks
							Cooler	Chemical				
1	B1-10	10-10.5	1/20/09	0800	Soil	acetate sleeve	yes	none	No	X	X	
2	B1-22	22-22.5		0840						X	X	
3	B2-7	7-7.5		0900						X	X	
4	B3-7.5	7.5-8		0915						X	X	
5	B3-11.5 42	11.5-12		0920						X	X	
6	B4-8	8-8.5		1000						X	X	
7	B4-14	14-14.5		1005						X	X	
8	B1-GW	-		1015		3-40 ml VOA		HCL		3	X	X

Relinquished by: Signature <u>Henry Pichay</u> Printed <u>Henry Pichay</u> Company <u>Stellar Environmental</u>	Date <u>1/20/09</u> Time <u>1140</u>	Received by: Signature <u>Pat Gonzalez</u> Printed <u>Pat Gonzalez</u> Company <u>Curtis & Tompkins</u>	Date <u>1/20/09</u> Time <u>1140</u>	Relinquished by: Signature _____ Printed _____ Company _____	Date _____ Time _____	Received by: Signature _____ Printed _____ Company _____	Date _____ Time _____
Turnaround Time: <u>5 Day TAT</u>				Relinquished by: Signature _____ Printed _____ Company _____			
Comments: <u>samples on ice</u>				Received by: Signature _____ Printed _____ Company _____			
<u>Global ID T0600100198</u>				Date _____ Time _____			

2000-00-01

COOLER RECEIPT CHECKLIST



Login # 209387 Date Received 1/20/09 Number of coolers 1
Client STELLAR Project Site Investigation

Date Opened 1/20/09 By (print) PHUONG (sign) P. Le
Date Logged in By (print) (sign)

1. Did cooler come with a shipping slip (airbill, etc) YES NO
Shipping info

2A. Were custody seals present? ... YES (circle) on cooler on samples NO
How many Name Date

2B. Were custody seals intact upon arrival? YES NO N/A

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe)

- Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels

7. Temperature documentation:

Type of ice used: Wet Blue/Gel None Temp(C)

Samples Received on ice & cold without a temperature blank

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES NO
If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? YES NO

10. Are samples in the appropriate containers for indicated tests? YES NO

11. Are sample labels present, in good condition and complete? YES NO

12. Do the sample labels agree with custody papers? YES NO

13. Was sufficient amount of sample sent for tests requested? YES NO

14. Are the samples appropriately preserved? YES NO N/A

15. Are bubbles > 6mm absent in VOA samples? YES NO N/A

16. Was the client contacted concerning this sample delivery? YES NO
If YES, Who was called? By Date:

COMMENTS

Blank lines for handwritten comments.