

**STELLAR ENVIRONMENTAL SOLUTIONS, INC.**  
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*Alameda County  
 Environmental Health  
 JAN 13 2004*

TRANSMITTAL MEMORANDUM	
<b>TO:</b> ALAMEDA COUNTY HEALTH CARE SERVICES ENVIRONMENTAL HEALTH DEPT LOCAL OVERSIGHT PROGRAM 1131 HARBOR BAY PKWY, SUITE 250 ALAMEDA, CA 94502	<b>DATE:</b> JANUARY 9, 2004
<b>ATTENTION:</b> MR. BARNEY CHAN	<b>FILE:</b> SES 2003-41
<b>SUBJECT:</b> RUSS ELLIOTT, INC. FACILITY 2526 WOOD STREET OAKLAND, CALIFORNIA FUEL LEAK CASE NO. RO00040	
<b>WE ARE SENDING:</b> <input checked="" type="checkbox"/> HEREWITH	<input type="checkbox"/> UNDER SEPARATE COVER
<input checked="" type="checkbox"/> VIA MAIL	<input type="checkbox"/> VIA
<b>THE FOLLOWING:</b> WORKPLAN FOR GROUNDWATER CHARACTERIZATION (DATED JANUARY 8, 2004) PRELIMINARY SITE ASSESSMENT REPORT (DATED NOVEMBER 19, 2003) (1 COPY OF EACH)	
<input type="checkbox"/> AS REQUESTED	<input type="checkbox"/> FOR YOUR APPROVAL
<input type="checkbox"/> FOR REVIEW	<input checked="" type="checkbox"/> FOR YOUR USE
<input type="checkbox"/> FOR SIGNATURE	<input type="checkbox"/> FOR YOUR FILES
<b>COPY TO:</b> ELLIOTT FAMILY TRUST (PROPERTY OWNER) (2 COPIES)	<b>BY:</b> <u>JOE DINAN</u>

R040

**PRELIMINARY SITE  
ASSESSMENT REPORT**

**RUSS ELLIOTT, INC. FACILITY  
2526 WOOD STREET  
OAKLAND, CALIFORNIA**

*Prepared for*

**ELLIOTT FAMILY TRUST  
SAN LEANDRO, CALIFORNIA**

**November 2003**

November 19, 2003

Ms. Jeannette Elliott  
Elliott Family Trust  
1744 Skyview Drive  
San Leandro, California 94577

Alameda County  
JAN 13 2004  
Environmental Health

Subject: Preliminary Site Assessment Report  
Russ Elliott, Inc. Facility  
2526 Wood Street, Oakland, California

Dear Ms. Elliott:

This report documents the October 2003 Preliminary Site Assessment conducted by Stellar Environmental Solutions, Inc. (SES) at the referenced site. The scope of work was conducted in accordance with the lead regulatory agency-approved technical workplan. The work tasks included advancing, geologically logging, and sampling (soil and groundwater) eight exploratory boreholes in the immediate vicinity of two former UFSTs (gasoline and diesel) at the site. The data indicate that shallow groundwater contamination has been impacted by gasoline, diesel, benzene, and MTBE above regulatory agency screening level criteria, and that additional investigation (installation and sampling of groundwater monitoring wells) will likely be required by Alameda County Health Care Services (lead regulatory agency) before it will consider regulatory closure. This report, and the technical workplan for the proposed well installation/sampling program, have been forwarded to Alameda County Health Care Services for their evaluation.

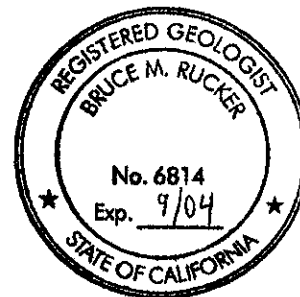
Please contact us at (510) 644-3123 if you have any questions.

Sincerely,

Bruce Rucker, R.G., R.E.A.  
Project Manager and Senior Geologist

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

cc. Mr. Barney Chan – Alameda County Health Care Services



**PRELIMINARY SITE  
ASSESSMENT REPORT**

**RUSS ELLIOTT, INC. FACILITY  
2526 WOOD STREET  
OAKLAND, CALIFORNIA**

*Prepared for:*

**ELLIOTT FAMILY TRUST  
1744 SKYVIEW DRIVE  
SAN LEANDRO, CALIFORNIA 94577**

*Prepared by:*

**STELLAR ENVIRONMENTAL SOLUTIONS, INC.  
2198 SIXTH STREET  
BERKELEY, CALIFORNIA 94710**

**November 19, 2003**

Project No. 2003-41

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## 1.0 INTRODUCTION

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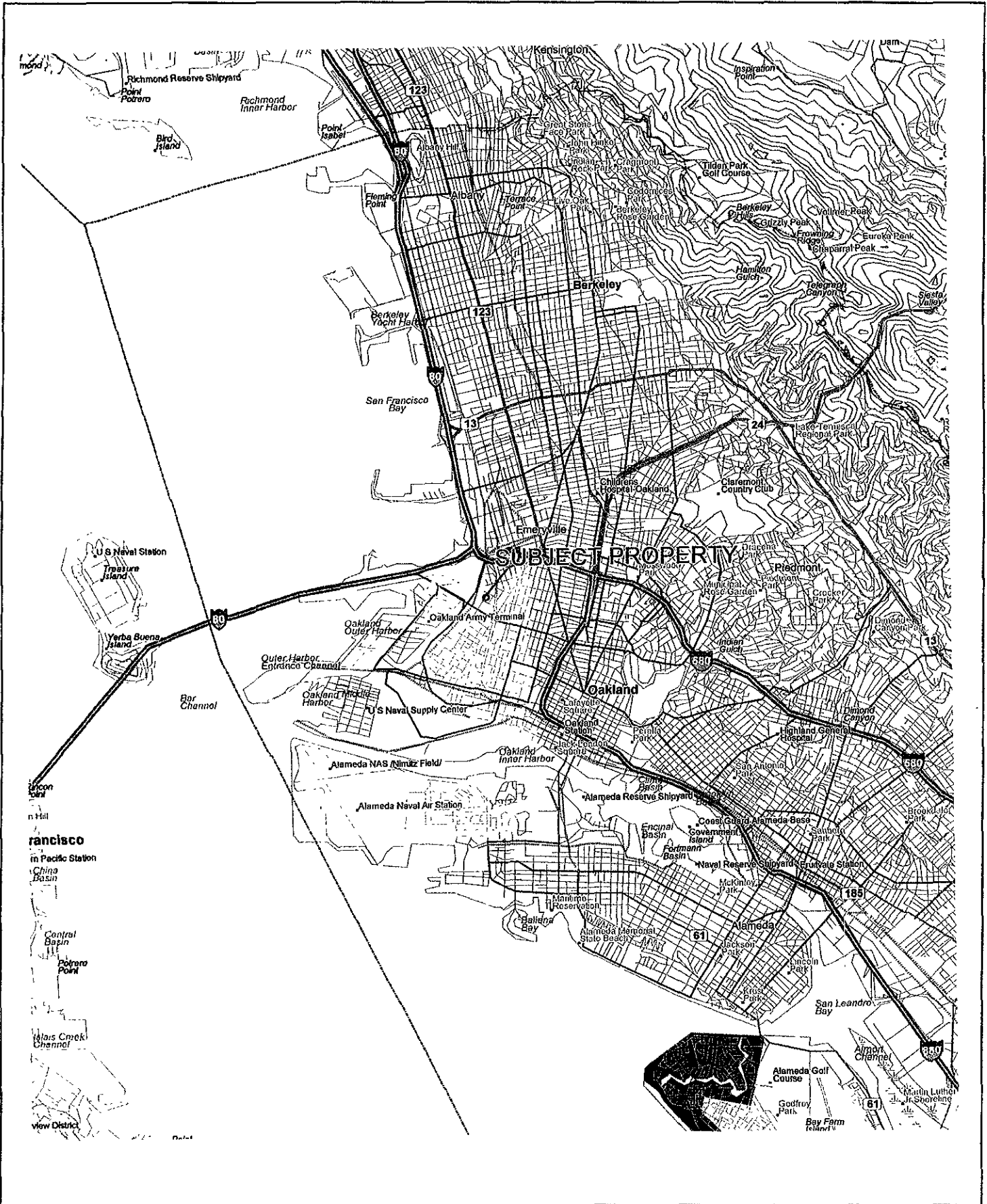
### PROJECT BACKGROUND

Stellar Environmental Solutions, Inc. (SES) was retained by the Elliott Family Trust (as property owner) to conduct a Preliminary Site Assessment (exploratory borehole drilling and sampling investigation) at 2526 Wood Street in Oakland, California. This work follows the removal of a diesel site underground fuel storage tank (UFST) in 1995 and a gasoline UFST in 2002. Both UFSTs were removed by a contractor that did not complete an UFST removal closure report, and has since gone out of business. SES was retained by the Elliott Family Trust to complete a closure report (SES, 2003a) discussing the UFST removals (using information provided by one of the principals of the contractor that removed the UFSTs). The closure report was submitted to both the City of Oakland Fire Department (UFST removal permitting agency) and the Alameda County Health Care Services Agency, Environmental Health Services, Environmental Protection, Local Oversight Program (Alameda County Health Care Services), the local lead agency responsible for petroleum releases.

Alameda County Health Care Services assigned the site as Fuel Leak Case No. RO000040. On behalf of the Elliott Family Trust, SES submitted (concurrently with the UFST closure report) a technical workplan for implementing a Preliminary Site Assessment to address potential residual soil and groundwater contamination (Stellar Environmental Solutions, Inc., 2003b). Alameda County Health Care Services responded with a letter (September 29, 2003) approving the proposed scope of work, with a request for additional laboratory analyses (Alameda County Health Care Services, 2003a). The implemented scope of work was in accordance with the SES workplan and the revisions requested by Alameda County Health Care Services.

### SITE AND VICINITY DESCRIPTION

The project site is an active roofing company (Russ Elliott, Inc.) located at 2526 Wood Street, Oakland, Alameda County, California (site). Figure 1 is a site location map. Figure 2 shows the location of the former site underground fuel storage tanks (UFSTs) in relation to the site buildings and adjacent streets.



**SITE LOCATION ON U.S.G.S. TOPOGRAPHIC MAP**

2526 Wood Street  
Oakland, CA

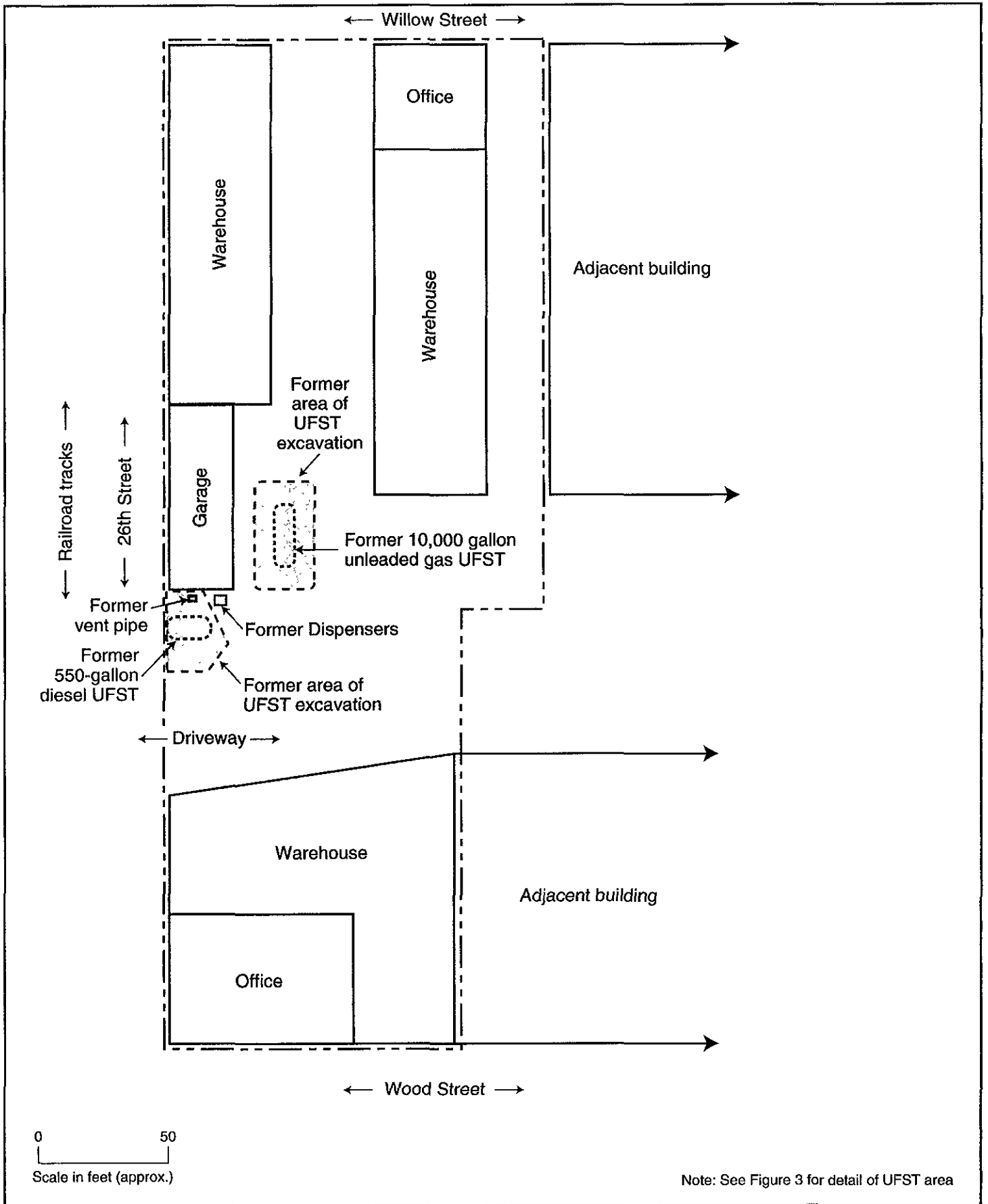
By: MJC

JULY 2003

Figure 1

2003-36-01





0 50  
Scale in feet (approx.)

Note: See Figure 3 for detail of UFST area

**SITE PLAN—RUSS ELLIOTT FACILITY, INC.**

2526 Wood Street  
Oakland, CA

By: MJC

AUGUST 2003

**Figure 2**

**★ Stellar Environmental Solutions, Inc.**  
Geoscience & Engineering Consulting

2003-41-02



## **UFST DESCRIPTIONS AND USAGE HISTORY**

The two UFSTs were located near the western border of the subject property (near 26<sup>th</sup> Street), approximately 40 feet from each other. Both UFSTs were utilized for fueling company vehicles, and shared a common dispenser island located between them. The following summarizes pertinent details of the two UFSTs. Section 2 discusses UFST removal activities and confirmation sampling.

### **Diesel UST**

The diesel UFST was used from at least 1977 (it was in place when the current business moved in) to 1995 (when it was removed). There was no documentation regarding its construction specifications. Based on its size, age, and usage, this UFST was likely cylindrical, single-walled, of fiberglass or steel construction, and installed in a sand- or pea gravel-backfilled excavation slightly larger than itself. The top of the UFST likely had at least two ports/pipes (fill pipe and vent pipe). Dispenser piping (size and type unknown) ran underground approximately 25 feet from the UFST to the dispenser island. The UFST was likely not tied down to a concrete anchor slab (a.k.a. deadman), as is sometimes done when shallow groundwater is considered to present a buoyancy problem. The UFST was configured as shown in Figure 2, with the long axis oriented approximately northwest-southeast.

### **Gasoline UFST**

This UFST was installed in 1982 and removed in 2002. The UFST was cylindrical, single-walled, and constructed of fiberglass. It was installed in a sand- and pea gravel-backfilled excavation slightly larger than itself. The top of the UFST had several ports/pipes typical of such UFSTs, including a fill port, turbine, dispenser piping connection, and vent pipe. The underground single-walled fiberglass dispenser piping ran from the UFST to the dispenser located directly adjacent to the UFST excavation. The UFST was not tied down to a deadman. The UFST was configured as shown in Figure 2, with the long axis oriented approximately north-south.

## **UFST REMOVAL FINDINGS**

### **1995 Diesel UFST Removal**

Table 2 (in Section 3.0) summarizes the analytical results for the 1995-96 diesel UFST removal activities. Elevated concentrations (above current regulatory agency screening levels) of gasoline, diesel, ethylbenzene, and xylenes were detected in the south sidewall sample. Following over-excavation, no residual soil contamination was detected at this location (including MTBE). No contamination was detected in the October 1995 pit water sample.

The available data suggest an historical leak in the UFST and/or piping. <sup>(or dispenser)</sup> The absence of contamination in the overexcavation (final) confirmation samples suggests that all unsaturated zone soil contamination was removed, and the absence of concurrent groundwater contamination suggests that groundwater had not been impacted by the release. However, MTBE analysis was not conducted, and will likely be required to obtain regulatory closure.

### **2002 Gasoline UFST Removal**

As discussed in detail in a subsequent section of this report, the only contaminant detected in residual (excavation sidewall or dispenser base) or stockpiled soil samples was MTBE. The maximum MTBE concentration was 0.24 mg/kg in one of the excavation sidewall samples. Lead was at background concentrations (11 mg/kg or less). Gasoline, BTEX, and MTBE were all detected in the pit water sample at elevated concentrations. Dissolved lead was not detected in that water sample.

The available data suggest an historical leak in the UFST and/or piping. While MTBE was detected in two of the four confirmation soil samples, the absence of gasoline and BTEX soil contamination (and detected contamination in the stockpile sample) indicates that the majority of residual soil contamination was removed. The data suggest that groundwater was impacted before soil corrective action was implemented.

The Alameda County Health Care Services letter of September 9, 2003 requested clarification on the fate of the soil excavated in the 2002 gasoline UFST removal. The only contaminant detected in the 4-point composite sample of that stockpiled soil was MTBE, at 0.15 mg/kg. As discussed in our closure documentation report (SES, 2003a), neither the property owner nor SES have any documentation regarding the ultimate disposal of the contaminated soil that was excavated and stockpiled by Bernabe & Brinker before it backfilled the excavation with clean fill material. We reviewed a letter from Bernabe & Brinker, Inc. to the Elliott Family Trust (dated April 16, 2002) proposing a unit price to transport and dispose of an unspecified quantity of contaminated soil. The documentation also includes subcontractor receipts for Class 2 base rock backfill material (provided by EBI Aggregates of Oakland, California) that was delivered to the site the same day as the UFST removal. As shown on the October 2003 borehole geologic logs (Appendix C), base rock/gravel material was encountered in the borehole advanced through the former gasoline UFST excavation. Mr. Thomas Seidman (president of Russ Elliott, Inc.), who was present during the UFST removal, verbally indicated to SES that the stockpiled soil was indeed removed the day it was excavated; however, he could not recall the destination of the soil (Seidman, 2003). These data indicate that the excavated soil was not reused in the excavation, but rather was disposed of offsite.

## **OBJECTIVES AND SCOPE OF WORK**

This investigation was conducted to evaluate the potential for soil and groundwater contamination associated with the former UFSTs. To accomplish this objective, SES advanced and sampled (soil and groundwater) exploratory boreholes in areas likely to intercept any residual contamination.

## 2.0 OCTOBER 2003 SITE INVESTIGATION

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This section summarizes exploratory borehole drilling and sampling investigation activities conducted by SES at the subject property in October 2003. Figure 2 shows the area of the former UFST as well as recent investigation borehole locations. Appendix A contains the Alameda County Public Works Agency drilling permit. Appendix B contains photodocumentation of the investigation field activities. Appendix C contains borehole geologic logs. Appendix D contains the certified analytical laboratory report and chain-of-custody record. All current investigation soil and groundwater samples were analyzed by Associated Laboratories (Orange, California), which maintains current ELAP certifications for all of the analytical methods utilized in this investigation.

Exploratory borehole drilling and sampling was conducted on October 27-28, 2003. Drilling was conducted by Precision Sampling Inc. (C-57 License No. 636387) under the direct supervision of a SES California Registered Geologist. Prior to drilling, Underground Service Alert (USA) was contacted with regard to potential underground utilities (none were encountered during drilling).

The primary objective of the Preliminary Site Assessment was to collect sufficient lithologic and soil/groundwater analytical data to demonstrate the magnitude and general limits of contamination in the immediate vicinity of the UFSTs. Multiple boreholes were advanced and sampled on all accessible sides of the former UFSTs. This approach maximized the likelihood of encountering UFST-sourced groundwater contamination in light of the uncertain groundwater flow direction, and could also provide information on any offsite-sourced petroleum contamination migrating onto the subject property. The following eight exploratory boreholes were drilled and sampled:

- One directly through the center of each former UFST (BH-01 and BH-03);
- One in the immediate vicinity of the former dispenser, between the two UFSTs (BH-02) (this location was specifically requested by Alameda County Health Care Services);
- One in the inferred upgradient direction (BH-04);
- Two in the inferred crossgradient directions (BH-05 and BH-08); and
- Two in the inferred downgradient direction (BH-06 and BH-07).

The boreholes were drilled with a truck-mounted Geoprobe™ rig. Boreholes were drilled with 2.5-inch-diameter steel drive casing lined with acetate sampling sleeves. Continuous soil cores were

collected from each borehole for geologic logging using the visual method of the Unified Soils Classification System (USCS). Borehole geologic logs are included in Appendix C. Soil samples were collected for laboratory analysis from the unsaturated zone (above first occurrence of groundwater) at the depth just above first occurrence of groundwater. We had anticipated the contingency of collecting soil sample at the depth showing maximum evidence of soil contamination (per PID readings, as discussed below); however, no contamination was evident. In all but one borehole, we collected one soil sample in the inferred aquitard unit beneath the upper water-bearing zone, to evaluate the vertical extent of contamination. That borehole (BH-01) could not be advanced below the saturated zone due to drilling refusal.

Soil samples were field-screened with a calibrated, portable photoionization detector (PID) for evidence of contamination, to assist in the selection of soil samples for laboratory analysis and to provide additional (qualitative) data on contaminant extent. The PID readings are shown on the borehole geologic logs in Appendix C. Soil samples selected for laboratory analysis were sealed within an approximately 6-inch length of the acetate sampling sleeve, capped with non-reactive plastic caps, labeled, chilled, and shipped to the analytical laboratory under chain-of-custody documentation. Upon reaching groundwater, one "grab" groundwater sample was collected from each borehole by installing a 1-inch-diameter PVC temporary well casing, inserting new Tygon tubing through the casing into groundwater, and withdrawing water directly into the sampling containers with a peristaltic pump. Following completion of drilling and sampling activities, the boreholes were tremie-grouted to surface with a slurry of neat Portland cement and potable water.

### **3.0 ANALYTICAL RESULTS AND FINDINGS**

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#### **LITHOLOGY AND HYDROGEOLOGY**

All boreholes in the current investigation were geologically logged onsite by a California Registered Geologist using the visual method of the Unified Soils Classification System. Four of the boreholes were advanced to 20 feet below ground surface (bgs); these boreholes encountered the unsaturated zone, then a saturated zone, then a deeper aquitard. Three of the boreholes were advanced to approximately 16 feet bgs, the depth necessary to collect “grab” groundwater samples. One of the boreholes (BH-01) encountered drilling refusal at 11.5 feet bgs.

Boreholes BH-01 and BH-03 were advanced through the former gasoline and diesel UFSTs, respectively. These boreholes encountered fill material (mixture of clay, sand, and gravel) to depths between 8 and 10 feet bgs, underlain by native soil. In general, native soil consisted primarily of clay (often silty), with interbedded sandy and gravelly zones. In all boreholes advanced outside the UFST excavations, saturated soil samples were first encountered at depths of approximately 5 to 8 feet bgs, generally in a sandy or gravelly unit. Below this zone, samples were not saturated again until a depth of approximately 14 to 18 feet bgs, again encountered generally in a sandy or gravelly unit. Soils beneath that zone were stiff, low-permeability clays, and were not wet. These data indicate that an upper, likely perched, zone of groundwater exists at approximately 5 to 8 feet bgs, and a lower water-bearing zone at approximately 14 to 18 feet bgs. This lower water-bearing zone is underlain by a low-permeability, non-water-bearing zone.

The direction of local groundwater flow has not yet been determined at the site, as no permanent elevation-surveyed wells have been installed. The regional groundwater flow direction in the area is likely to the west (following topography, toward San Francisco Bay), although groundwater flow direction may vary locally based on lithology. A quarterly groundwater monitoring report (dated May 2002) for a vicinity site (Pacific Supply Company, 1735 24<sup>th</sup> Street, located approximately two blocks away) available at Alameda County Health Care Services indicates that groundwater flow is to the northwest.

## **ANALYTICAL RESULTS AND EXTENT AND MAGNITUDE OF RESIDUAL CONTAMINATION**

### **UFST Removal Samples**

Figure 3 shows the former UFSTs with sampling locations and analytical results. Figure 4 shows the October 2003 borehole locations and analytical results. Tables 1 and 2 summarize the historical UFST removal soil and water sampling analytical results. At the former diesel UFST (removed in 1995), contaminants detected included gasoline (1,900 mg/kg), diesel (310 mg/kg), ethylbenzene (26 mg/kg), and xylenes (100 mg/kg). These were detected only in the initial sample collected beneath the UFST, and no contaminants were detected in the subsequent over-excavation samples. This suggests that all the contaminated soil in that area was removed. At the former gasoline UFST (removed in 2002), the only contaminant detected was MTBE (maximum of 0.24 mg/kg). No contamination was detected in the sample collected beneath the dispensers ("D-1" collected in 2002).

Gasoline, diesel, BTEX, and MTBE were all detected at elevated concentrations in the pit water samples. Dissolved lead was not detected.

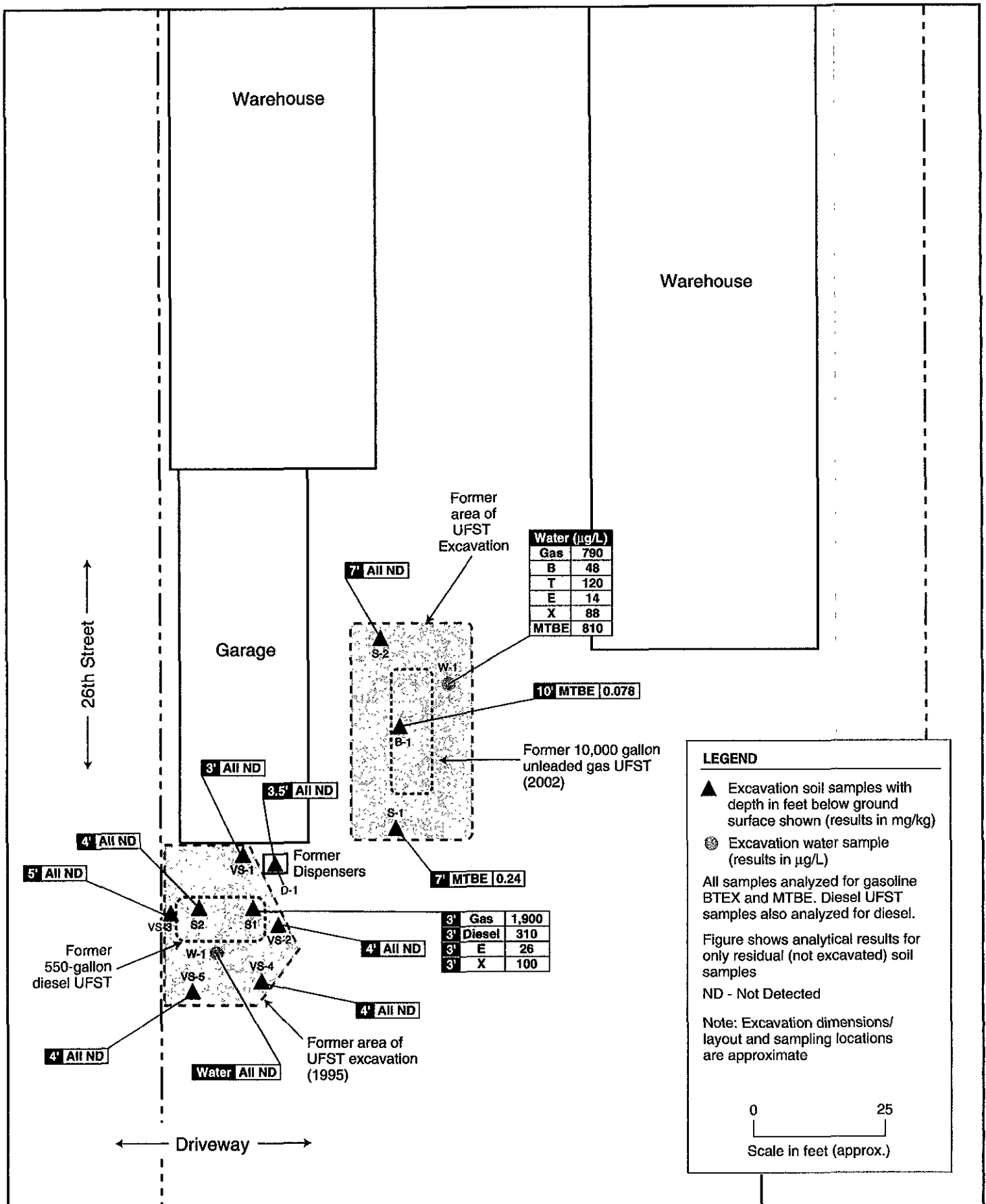
### **October 2003 Borehole Samples**

All soil and groundwater samples in the October 2003 borehole sampling program were analyzed for:

- Diesel and gasoline, by EPA Method 8015M; and
- BTEX and MTBE, by EPA Method 8021B.

In accordance with the Alameda County Health Care Services request, soil and water samples from boreholes BH-01, BH-02, and BH-03 (within the former UFST excavations and adjacent to the former dispensers) were analyzed for fuel oxygenates (including MTBE) by EPA Method 8260B. For any of the other samples that had detectable MTBE (by the EPA 8021B analysis), these samples were re-analyzed by the more precise EPA 8260B method. Subsequent references to MTBE concentrations in this report refer to the EPA 8260B quantification.





**DETAIL OF FORMER UFSTs SHOWING SAMPLING LOCATIONS AND 1995/1996 & 2002 ANALYTICAL RESULTS**

2526 Wood Street  
Oakland, CA

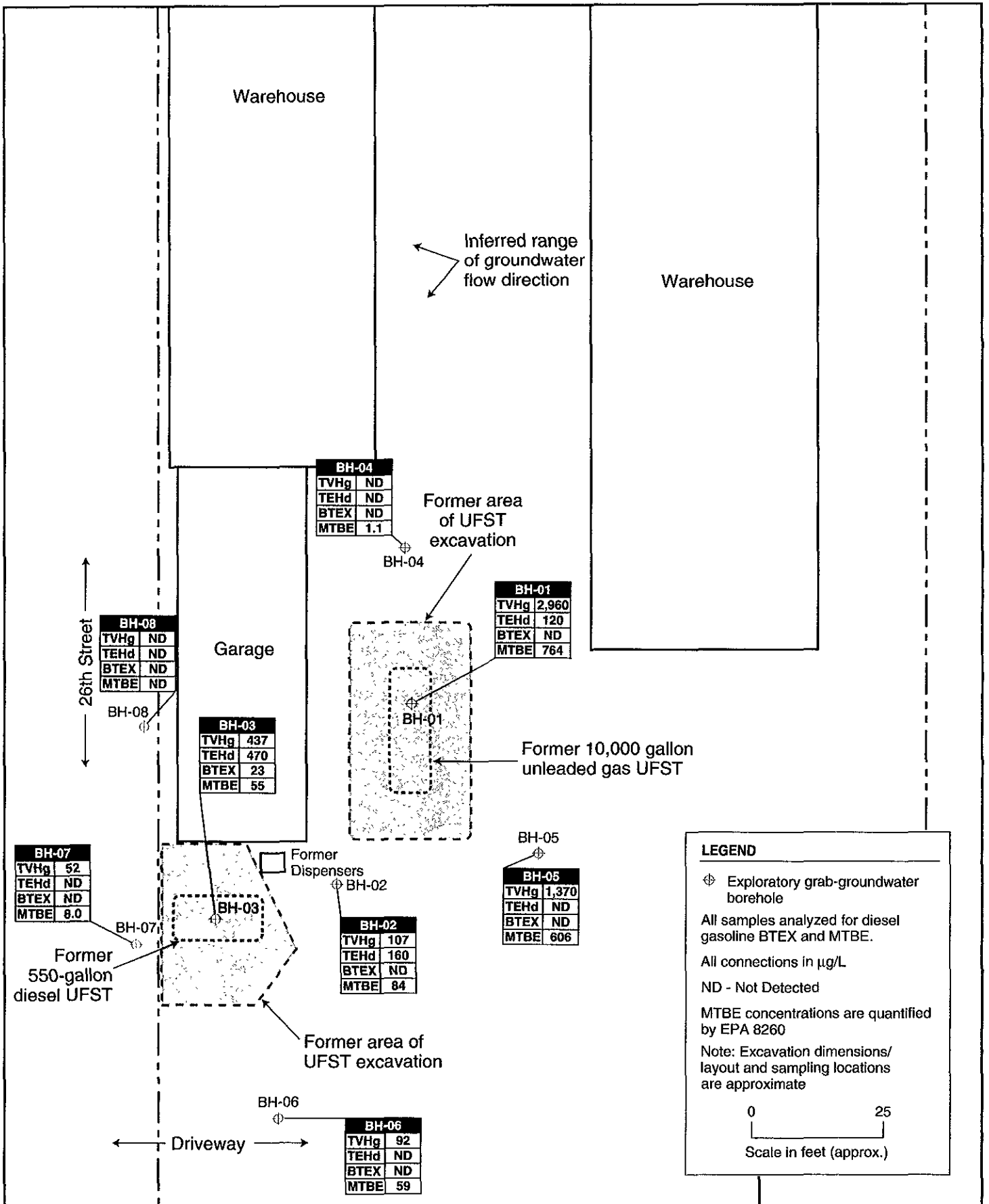
By: MJC

AUGUST 2003

**Figure 3**

**Stellar Environmental Solutions, Inc.**  
Geoscience & Engineering Consulting

2003-41-03



**OCTOBER 2003 BOREHOLE LOCATIONS AND GRAB GROUNDWATER ANALYTICAL RESULTS**

2526 Wood Street  
Oakland, CA

By: MJC

NOVEMBER 2003

**Figure 4**

**★ Stellar Environmental Solutions, Inc.**  
Geoscience & Engineering Consulting

2003-41-05

**Table 1**  
**1995-1996 Diesel UFST Removal Sampling Analytical Results**  
**2526 Wood Street, Oakland, California**

Sample I.D.	Sample Depth (feet)	TEHd	TVHg	Benzene	Toluene	Ethyl benzene	Total Xylenes	MTBE	Total Lead
<b>July 1995 Excavation Confirmation Samples (concentrations in mg/kg) (sample locations subsequently overexcavated)</b>									
S-1 (south sidewall)	3	310	1,900	26	<1.4	26	100	NA	NA
S-2 (north sidewall)	4	<1	<0.5	<0.005	<0.005	<0.005	0.0054	NA	NA
<b>June 1996 Excavation Confirmation Soil Samples (concentrations in mg/kg)</b>									
VS-1	3	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.05	NA
VS-2	4	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.05	NA
VS-3	5	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.05	NA
VS-4	4	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.05	NA
VS-5	4	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.05	NA
Soil ESLs		100 / 500	100 / 400	0.044 / 0.38	2.9 / 9.3	3.3 / 4.7	1.5 / 1.5	0.023 / 5.6	750 / 750
<b>July 1995 Stockpiled Soil Sample (concentrations in mg/kg)</b>									
SPI (A-D) <sup>(a)</sup>	—	340	960	<0.005	<0.005	<0.005	<0.015	NA	NA
<b>June 1996 Stockpiled Soil Sample (concentrations in mg/kg)</b>									
STK (A-D)	—	<25	340	0.80	1.2	0.71	<0.005	<0.05	NA
<b>October 1995 Pit Water Sample (concentration in µg/L)</b>									
W-1	4.5	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
Groundwater ESLs		100 / 640	100 / 500	1.0 / 46	40 / 130	30 / 290	13 / 13	5.0 / 18,000	2.5 / 2.5

Notes

<sup>(a)</sup> 4-point composite sample.

TEHd = total extractable hydrocarbons- diesel range, TVHg = total volatile hydrocarbons gasoline range; NA = sample not analyzed for this constituent.

ESLs = Regional Water Quality Control Board, San Francisco Bay Region "Environmental Screening Levels" for commercial/industrial sites. First value is for sites where groundwater is a potential or current drinking water source. Second value is for sites where groundwater is not a potential or current drinking water source.

**Table 2**  
**April 2002 Gasoline UFST Removal Sampling Analytical Results**  
**2526 Wood Street, Oakland, California**

Sample I.D.	Sample Depth (feet)	TEHd	TVHg	Benzene	Toluene	Ethyl benzene	Total Xylenes	MTBE	Total Lead
<b>Excavation Confirmation Soil Samples (concentrations in mg/kg)</b>									
S-1 (west sidewall)	7'	NA	<1.0	<0.005	<0.005	<0.005	<0.005	0.24	8.5
S-2 (east sidewall)	7'	NA	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	<3.0
B-1 (UFST base)	10'	NA	<1.0	<0.005	<0.005	<0.005	<0.005	0.078	3.1
D-1 (below dispenser)	3.5'	NA	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	11
	Soil ESLs	100 / 500	100 / 400	0.044 / 0.38	2.9 / 9.3	3.3 / 4.7	1.5 / 1.5	0.023 / 5.6	750 / 750
<b>Stockpiled Soil Sample (concentrations in mg/kg)</b>									
STK 1A-1D	—	NA	< 1.0	<0.005	<0.005	<0.005	<0.005	0.15	9.9
<b>Pit Water Sample (concentration in µg/L)</b>									
W-1	7'	790	NA	48	120	14	88	810	ND <sup>(a)</sup>
	Groundwater ESLs	100 / 640	100 / 500	1.0 / 46	40 / 130	30 / 290	13 / 13	5.0 / 18,000	2.5 / 2.5

Notes:

<sup>(a)</sup> Not Detected— method reporting limit not specified in lab report.

TEHd = total extractable hydrocarbons- diesel range; TVHg = total volatile hydrocarbons gasoline range; NA = sample not analyzed for this constituent.

ESLs = Regional Water Quality Control Board, San Francisco Bay Region "Environmental Screening Levels" for commercial/industrial sites. First value is for sites where groundwater is a potential or current drinking water source. Second value is for sites where groundwater is not a potential or current drinking water source.

**Table 3**  
**October 2003 Borehole Soil Analytical Results**  
**2526 Wood Street, Oakland, California**

Sample I.D.	Sample Depth (feet)	TEHd	TVHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE <sup>(a)</sup>	Fuel Oxygenates <sup>(b)</sup>
BH-01-4'	4	< 10.0	< 3.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035 / 0.0017	ND
BH-02-6.5'	6.5	< 1.0	< 3.0	< 0.005	< 0.005	< 0.005	< 0.015	0.095 / 0.135	TBA = 0.061
BH-02-16'	16	< 1.0	< 3.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035 / < 0.005	ND
BH-03-4.5'	4.5	< 1.0	< 3.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035 / < 0.005	ND
BH-03-15'	15	< 1.0	< 3.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035 / < 0.005	ND
BH-04-7'	7	< 1.0	< 3.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035	NA
BH-04-18'	18	2.0	< 3.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035	NA
BH-05-6'	6	2.0	< 3.0	< 0.005	< 0.005	< 0.005	< 0.015	0.094 / 0.026	NA
BH-05-15.5'	15.5	< 1.0	< 3.0	< 0.005	< 0.005	< 0.005	< 0.015	0.046 / 0.0025	NA
BH-06-8.5'	8.5	1.3	< 3.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035	NA
BH-06-15.5'	15.5	< 1.0	< 3.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035	NA
BH-06-19.5'	19.5	< 1.0	< 3.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035	NA
BH-07-6'	6	2.2	< 3.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035	NA
BH-07-15.5'	15.5	< 1.0	< 3.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035	NA
BH-08-10'	10	< 1.0	< 3.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035	NA
BH-08-19.5'	19.5	2.0	< 3.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035	NA
<b>Soil ESLs</b>		100 / 500	100 / 400	0.044 / 0.38	2.9 / 9.3	3.3 / 13	1.5 / 1.5	0.023 / 5.6	TBA = 0.073 / 110

Notes

<sup>(a)</sup> First value is quantification by EPA Method 8021b; second value is confirmation quantification by EPA Method 8260B.

<sup>(b)</sup> Table reports only detected fuel oxygenates. Full list of analytes is included in Appendix D.

TEHd = total extractable hydrocarbons- diesel range; TVHg = total volatile hydrocarbons- gasoline range; TBA = tertiary butyl alcohol;  
 ND = not selected above method reporting limits, NA = not analyzed for these constituents

All concentrations are in mg/kg

**Table 4**  
**October 2003 Borehole Groundwater Analytical Results**  
**2526 Wood Street, Oakland**

Sample I.D.	TEHd	TVHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE <sup>(a)</sup>	Fuel Oxygenates <sup>(b)</sup>
BH-01-GW	120	2,960	< 0.30	< 0.30	< 0.30	< 0.60	1,020 / 764	TAME = 4.7 TBA = 93
BH-02-GW	160	107	< 0.30	< 0.30	< 0.30	< 0.60	103 / 84	ND
BH-03-GW	470	437	1.0	1.9	16	4.1	69 / 55	TBA = 10
BH-04-GW	< 100	< 50	< 0.30	< 0.30	< 0.30	< 0.60	5.0 / 1.1	NA
BH-05-GW	< 100	1,370	< 0.30	< 0.30	< 0.30	< 0.60	737 / 606	NA
BH-06-GW	< 100	92	< 0.30	< 0.30	< 0.30	< 0.60	70 / 59	NA
BH-07-GW	< 100	52	< 0.30	< 0.30	< 0.30	< 0.60	12 / 8.0	NA
BH-08-GW	< 100	< 50	< 0.30	< 0.30	< 0.30	< 0.60	< 5.0	NA
<b>Groundwater ESLs</b>	100 / 640	100 / 500	1.0 / 46	40 / 130	30 / 290	13 / 13	5.0 / 18,000	TAME = NLP TBA = 12 / 18,000

Notes

<sup>(a)</sup> First value is quantified by EPA Method 821b; second value is quantified by EPA Method 8260B

<sup>(b)</sup> Table reports only detected fuel oxygenates. Full list of analytes is included in Appendix D

TEHd = total extractable hydrocarbons- diesel range, TVHg = total volatile hydrocarbons gasoline range; TAME = tertiaryamylmethylether; TBA = tertiary butyl alcohol; ND = not selected above method reporting limits, NA = not analyzed for these constituents; NLP = no level published.

All concentrations are in mg/L.

## Soil Contamination

Neither gasoline nor BTEX constituents were detected in any of the borehole samples. Diesel was detected in four of the boreholes, at a maximum concentration of 2.2 mg/kg. MTBE was detected in three of the boreholes (BH-01, BH-02, and BH-05) at a maximum concentration of 0.135 mg/kg. Of the five soil samples for which fuel oxygenates were analyzed (from boreholes BH-01, BH-02, and BH-03), only tertiary butyl alcohol (TBA) was detected, and only in one soil sample (61 ~~mg~~<sup>µg</sup>/kg in BH-02-6.5').

As shown on the borehole geologic logs (Appendix C), soil samples were field-screened with a PID for evidence of contamination, to aid in the selection of soil samples for offsite laboratory analysis. None of the PID readings were indicative of soil contamination.

## Groundwater Contamination

Gasoline was detected in six of the eight borehole "grab" groundwater samples, with the highest concentrations detected within and immediately adjacent to the former gasoline UFST (BH-01 at 2,960 µg/L and BH-05 at 1,370 µg/L). Similarly, MTBE was detected in seven of the eight boreholes, with the highest MTBE concentrations detected in BH-01 (764 µg/L) and BH-05 (606 µg/L). BTEX constituents were detected in only BH-03. Diesel was detected only in the three boreholes within and between the former UFST excavations (BH-01, BH-02, and BH-03) at a maximum concentration of 470 µg/L. Of the three groundwater samples for which fuel oxygenates were analyzed (from BH-01, BH-02, and BH-03), TBA was detected in two of the samples (maximum of 93 µg/L in BH-01) and tertiary-amylmethylether (TAME) was detected in only one sample (4.7 µg/L in BH-01).

## 4.0 REGULATORY CONSIDERATIONS

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### REGULATORY STATUS

The lead regulatory agency for petroleum contamination cases in the City of Oakland is Alameda County Health Care Services, which is a Local Oversight Program (LOP) for the State Water Resources Control Board (covering Region 2 of the RWQCB). As such, Alameda County Health Care Services directly oversees soil and groundwater investigations/remediation on UFST sites (with or without RWQCB guidance) until determining that case closure is appropriate, at which time Alameda County Health Care Services recommends case closure to the RWQCB. Alameda County Health Care Services has designated the case as Fuel Leak Case No. RO00040. The site is listed in the RWQCB's GeoTracker database of reported releases from petroleum USTs (RWQCB Case No. 01-2294). Based on the date of the database entry (1995), the case citation is likely for the removal of the diesel UFST rather than the gasoline UFST.

### RESIDUAL CONTAMINATION REGULATORY CONSIDERATIONS

The most applicable published numerical criteria governing residual soil and groundwater contamination at this site are the RWQCB's Environmental Screening Levels (ESLs) (RWQCB, 2001). These are screening-level criteria used to evaluate if additional investigation and/or remediation is warranted. Criteria to be considered in using the ESLs include: contamination limited to surface soil (less than 10 feet deep) or to subsurface soil; fine-grained vs. coarse-grained soil; residential or commercial/industrial land use; and whether groundwater is or is not a known or potential drinking water source. For the detected site contaminants, the ESL values are the same for surface soil and subsurface soil.

The appropriate ESLs for this site are for coarse-grained soil (a conservative assumption since grain-size analysis has not been conducted) and commercial/industrial land use (because the owner has no plans to redevelop the property with residential land use). Qualifying for the (usually higher) ESL values for sites where groundwater is not a current or potential drinking water source requires obtaining a site-specific variance from the RWQCB. The RWQCB completed an East Bay Beneficial Use Study (RWQCB, 1999) that covers the Richmond to Hayward East Bay Basin Area and, based on multiple technical criteria, divided the Basin into three zones:

- Zone A (significant drinking water resource);



- Zone B (groundwater unlikely to be used as drinking water source); and
- Zone C (shallow groundwater proposed for de-designation as Municipal Supply Beneficial Use). This classification indicates that groundwater could not reasonably be expected to serve a public water supply; however, it does not specifically address private water supply wells that might be used for drinking water. In accordance with State Water Resources Control Board Resolution 92-49, pollution sites within this zone must not pose a potential impact to human health or ecologic receptors, and the groundwater contamination plume must be stable or reducing.

The subject site falls within Zone C. The most conservative assumption for the site is that there is a potential for private drinking water wells to be impacted. However, the site location (with no residential downgradient land use) suggests that the less conservative ESLs of "a potential or current drinking water source is not threatened" may be appropriate when the site is considered for case closure.

#### **RESIDUAL SOIL CONTAMINATION**

Soil contaminants detected in residual soils (including both the UFST excavations and the October 2003 borehole program) include diesel, MTBE, and TBA. Gasoline, ethylbenzene, and total xylenes were detected in initial soil samples from the 1995 diesel UFST excavation, but those sampling locations were subsequently over-excavated, and confirmation samples did not contain detectable concentrations.

The only soil contaminants detected in excess of the most conservative ESL criteria (for sites where groundwater is a potential drinking water source) is MTBE, detected within the 2002 gasoline UFST excavation and in BH-05 immediately to the south.

No site contaminants were detected above their less conservative ESL criteria (for sites where groundwater is not a potential drinking water source).

#### **GROUNDWATER CONTAMINATION**

Groundwater contaminants detected include diesel, gasoline, BTEX, MTBE, TAME, and TBA. Groundwater contaminants detected in excess of the most conservative ESL criteria (for sites where groundwater is a potential drinking water source) include all of the above contaminants, except ethylbenzene and TAME. Groundwater contamination by these compounds was limited to the areas within the former UFST excavation or immediately to the south.

Groundwater contaminants detected in excess of the less conservative ESL criteria (for sites where groundwater is not a potential drinking water source) include diesel (only in the 2002 gasoline UFST

excavation), gasoline, benzene (only in the 2002 gasoline UFST excavation), and xylenes (only in the 2002 gasoline UFST excavation). Groundwater contamination by these compounds was limited to the areas within the former UFST excavation or immediately to the south.

### **SITE CLOSURE CRITERIA**

Alameda County Health Care Services and RWQCB generally require that the following criteria be met before issuing regulatory closure of petroleum release cases:

1. The contaminant source has been removed (i.e., the UFST and obviously-contaminated backfill material). This criterion has been met, and the available soil analytical results do not indicate elevated concentrations of residual soil contamination that could be a potential long-term source of groundwater contamination.
2. The groundwater contaminant plume is stable or reducing (i.e., groundwater contamination is not increasing in concentration or lateral extent). This criterion has not yet been met, and Alameda County Health Care Services will likely require the installation and sampling of groundwater monitoring wells to demonstrate compliance.
3. If residual contamination (soil or groundwater) exists, there is no reasonable risk to sensitive receptors (i.e., contaminant discharge to surface water or water supply wells) or to site occupants. This criterion is generally met by conducting a Risk-Based Corrective Action (RBCA) assessment that models the fate and transport of residual contamination in the context of potential impacts to sensitive receptors. This task is generally conducted after the previous two criteria have been met. Based on the apparent absence of benzene (the probable "risk driver" compound for this site) at elevated concentrations and the likely absence of sensitive receptors, if one eliminates private wells as potential receptors, the site would likely pass the RBCA assessment.

## 5.0 SUMMARY, CONCLUSIONS, OPINION, AND RECOMMENDATIONS

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### SUMMARY AND CONCLUSIONS

The available data support the following findings and conclusions:

- Two UFSTs containing gasoline and diesel were removed from the site in 2002 and 1995, respectively. Excavation confirmation soil samples indicated that MTBE was the sole contaminant of concern in soil, although pit water samples contained elevated levels of diesel, gasoline, and MTBE. A UFST closure documentation report discussing both UFST removals was submitted to the appropriate regulatory agencies in 2003.
- Alameda County Health Care Services requested additional information on the fate of soil excavated in 2002 from the gasoline UFST removal. While we could not confirm the fate of the soil, the available evidence indicates that the excavation was backfilled the same day with imported backfill material, and that the excavated soil was transported offsite for disposal.
- The lead agency for UFST-related petroleum contamination sites in the City of Oakland is Alameda County Health Care Services, which assigned the site to its Local Oversight Program (for fuel releases) based on the 1995 diesel UFST removal.
- At the written request of Alameda County Health Care Services, a Preliminary Site Assessment (exploratory borehole drilling and sampling program) was conducted in October 2003. Eight exploratory boreholes were advanced to a maximum depth of 25 feet below grade, on all four sides of the former UFSTs, including two through the center of the former excavations and one immediately adjacent to the former UFST dispenser. A total of 16 soil samples were collected for laboratory analysis, from depths just above an inferred perched water zone, and from just above a more laterally-extensive upper water-bearing zone. One “grab” groundwater sample was collected from each borehole. The boreholes were geologically logged from continuous soil cores, and PID readings were collected as an indicator of potential contamination.
- Site lithology ranges from low-permeability silts and clays to higher-permeability (and water-bearing) sands and gravels. Groundwater was first encountered (as evidenced by saturated soil cuttings and measurable water in the borehole) in an inferred perched zone at depths of

approximately 8 to 10 feet. A more laterally-extensive lower water-bearing zone occurs at depths of approximately 16 to 18 feet. The lower water-bearing zone is underlain by a low-permeability, non-water-bearing zone.

- The subject property is located within the RWQCB Zone C (groundwater is not reasonably expected to be a municipal water supply source). The site location (not upgradient of residential land use) suggests that the more conservative regulatory agency screening-level criteria (where groundwater could be a potential drinking water source) would not be appropriate. However, all pollution sites must be shown to have no potential adverse impact to ecological receptors or human health, and that the contaminant plume is stable. This generally requires installation and long-term sampling of monitoring wells, possibly augmented by a risk assessment.
- The only soil contaminant detected above regulatory agency screening-level criteria is MTBE; that contamination is confined to the immediate vicinity of the former gasoline UFST.
- Groundwater contaminants above screening-level criteria include diesel, gasoline, benzene, MTBE, and TBA. Based on concentrations and distribution, gasoline and MTBE appear to be a greater concern than the other detected contaminants. Until further groundwater characterization demonstrates otherwise, Alameda County Health Care Services will likely require all further groundwater samples to be analyzed for gasoline, diesel, BTEX, and fuel oxygenates (including MTBE).
- Elevated levels of groundwater contamination appears to be beneath the area of the UFSTs and to the south, with only minor contamination in the other directions. The geometry of groundwater contamination appears to indicate a westerly groundwater flow direction, with a shallow or flat hydraulic gradient.
- The property owner may be eligible for reimbursement for part or all costs incurred under the State of California Underground Storage Tank Cleanup Fund (Fund). The likely deductible applied would be \$5,000 to \$10,000. The process requires submitting an application, receiving a Letter of Commitment, and submitting Reimbursement Requests. Work conducted by SES to date has been compliant with Fund requirements/guidelines, including documentation on procurement and costs incurred. Pre-approval of incurred project costs (formerly recommended by the Fund) was not conducted, specifically in response to the Fund's previous discontinuation of this policy.
- Based on the detected contamination in groundwater, it is unlikely that Alameda County Health Care Services (or the RWQCB, from which Alameda County Health Care Services would request concurrence) would grant regulatory closure at this time. Alameda County Health Care Services will likely require that groundwater monitoring wells be installed and

sampled on a quarterly basis (likely for a minimum of 1 year) to evaluate the stability of the groundwater contaminant plume. Should contaminant concentrations in wells be shown to be stable and reducing, and if the site passes a RBCA assessment, regulatory closure would likely be granted.

- Based on the available data, it would be appropriate to install three groundwater monitoring wells: one through the center of each of the former excavations, and one to the south (as groundwater contamination extends in that direction). Three groundwater wells is the minimum that the regulators will accept to determine local groundwater flow direction. One or more additional wells may be needed if the initial wells do not adequately define the extent of contamination. The wells should be monitored and sampled on a quarterly basis for at least 1 year.
- To ensure compliance with the Fund and maximize the potential for reimbursement, any additional investigation activities should be approved by Alameda County Health Care Services before implementation.
- At the request of the property owner, a technical workplan for groundwater monitoring well installation and sampling has been submitted under separate cover to Alameda County Health Care Services, concurrently with this report.

#### **PROPOSED ACTIONS**

- The property owner proposes to implement the groundwater monitoring well installation and sampling program, in accordance with the submitted technical workplan and any revisions requested by Alameda County Health Care Services.
- The property owner will be proceeding with application to the Fund for reimbursement of costs incurred, beginning with this Preliminary Site Assessment.

## 6.0 REFERENCES

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- Alameda County Health Care Services, 2003. Letter approving Stellar Environmental Solutions' August 20, 2003 technical workplan for 2526 Wood Street, Oakland, California. September 29.
- Regional Water Quality Control Board, San Francisco Bay Region (RWQCB), 2003. Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater July.
- RWQCB, 1999. East Bay Plain Groundwater Basin Beneficial Use Evaluation Report. June.
- Seidman, Thomas, 2003. President, Russ Elliott, Inc. Personal communication to Bruce Rucker of Stellar Environmental Solutions. November 19.
- Stellar Environmental Solutions, Inc. (SES), 2003a. Underground Fuel Storage Tanks Closure Documentation and Assessment Report, Russ Elliott, Inc. – 2526 Wood Street, Oakland, California. August 15.
- SES, 2003b. Workplan for Preliminary Site Assessment – Russ Elliott, Inc. Facility, 2526 Wood Street, Oakland, California. August 20.

## 7.0 LIMITATIONS

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This report has been prepared for the exclusive use of Elliot Family Trust, Russ Elliot, Inc., their authorized representatives, and the regulatory agencies. No reliance on this report shall be made by anyone other than those for whom it was prepared.

The findings and conclusions presented in this report are based on a review of previous investigators' findings at the site. This report provides neither a certification nor guarantee that the property is free of hazardous substance contamination. This report has been prepared in accordance with generally accepted methodologies and standards of practice. The SES personnel who performed this limited remedial investigation are qualified to perform such investigations and have accurately reported the information available, but cannot attest to the validity of that information. No warranty, expressed or implied, is made as to the findings, conclusions, and recommendations included in the report.

The findings of this report are valid as of the present. Site conditions may change with the passage of time, natural processes, or human intervention, which can invalidate the findings and conclusions presented in this report. As such, this report should be considered a reflection of the current site conditions as based on the activities completed.



# ALAMEDA COUNTY PUBLIC WORKS AGENCY

**WATER RESOURCES SECTION**  
 399 ELMHURST ST. HAYWARD CA. 94544-1395  
 PHONE (510) 670-6633 James Yoo  
 FAX (510) 782-1939

**APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS  
 DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION**

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 2526 Wood Street  
Oakland CA

PERMIT NUMBER W03-0524  
 WELL NUMBER \_\_\_\_\_  
 APN \_\_\_\_\_

CLIENT Rev. Elliot Roofing  
 name \_\_\_\_\_  
 address 2526 Wood Street Phone 510-782-1300  
 city Oakland CA Zip \_\_\_\_\_

APPLICANT Stellar Environmental Solutions  
 name Bruce Rucker Fax 510-644-3851  
 address 2148 51st St Phone 510-644-3123  
 city Berkeley CA Zip 94710

**TYPE OF PROJECT**  
 Well Construction  Geotechnical Investigation  
 Cathodic Protection  General  
 Water Supply  Contamination  
 Monitoring  Well Destruction

**PROPOSED WATER SUPPLY WELL USE**  
 New Domestic  Replacement Domestic   
 Municipal  Irrigation   
 Industrial  Other \_\_\_\_\_

**DRILLING METHOD:**  
 Mud Rotary  Air Rotary  Auger   
 Cable  Other Geoprobe

DRILLER'S NAME Precision Sampling  
 DRILLER'S LICENSE NO. 636387

**WELL PROJECTS**  
 Drill Hole Diameter \_\_\_\_\_ in. Maximum \_\_\_\_\_  
 Casing Diameter \_\_\_\_\_ in. Depth \_\_\_\_\_ ft.  
 Surface Seal Depth \_\_\_\_\_ ft. Owner's Well Number \_\_\_\_\_

**GEOTECHNICAL PROJECTS**  
 Number of Borings 2 Maximum \_\_\_\_\_  
 Hole Diameter 2 in. Depth 25 ft.

STARTING DATE 10/27/03  
 COMPLETION DATE 10/28/03

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.  
 APPLICANT'S SIGNATURE Bruce M. Rucker DATE \_\_\_\_\_  
 PLEASE PRINT NAME Bruce M. Rucker Rev. 9-18-02

**PERMIT CONDITIONS**  
 Circled Permit Requirements Apply

**A. GENERAL**

1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources-Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date.

**B. WATER SUPPLY WELLS**

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

**C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS**

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

**D. GEOTECHNICAL / Contamination**

Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind with compacted cuttings.

**E. CATHODIC**

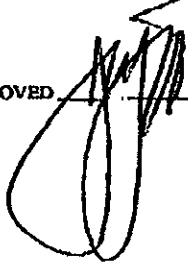
Fill hole anode zone with concrete placed by tremie.

**F. WELL DESTRUCTION**

Send a map of work site. A separate permit is required for wells deeper than 45 feet.

**G. SPECIAL CONDITIONS** B#1 Attached

**NOTE:** One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED  DATE 10-27-03





Subject: Geoprobe drill rig at location BH-02.

Site: 2526 Wood Street, Oakland, California

Date Taken: October 27, 2003

Project No.: SES 2003-41

Photographer: B. Rucker

Photo No.: 01



Subject: Geoprobe drill rig at location BH-03.

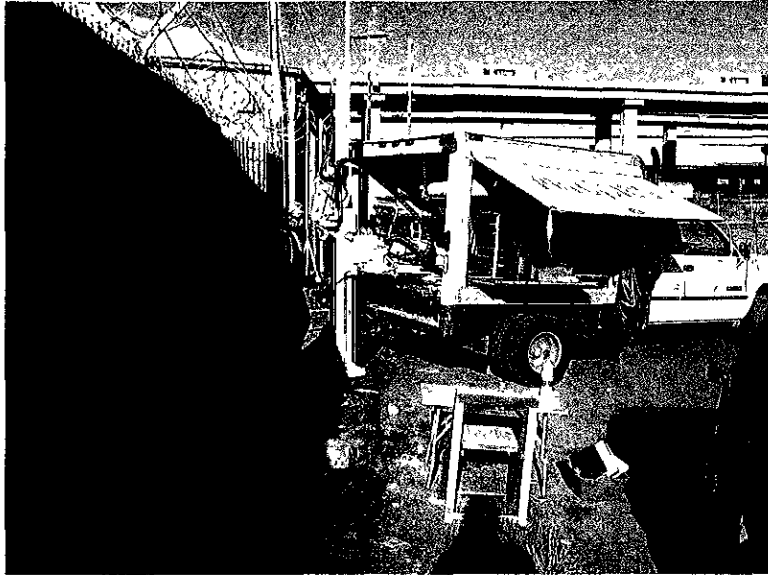
Site: 2526 Wood Street, Oakland, California

Date Taken: October 27, 2003

Project No.: SES 2003-41

Photographer: B. Rucker

Photo No.: 02



Subject: Geoprobe drill rig at location BH-07.

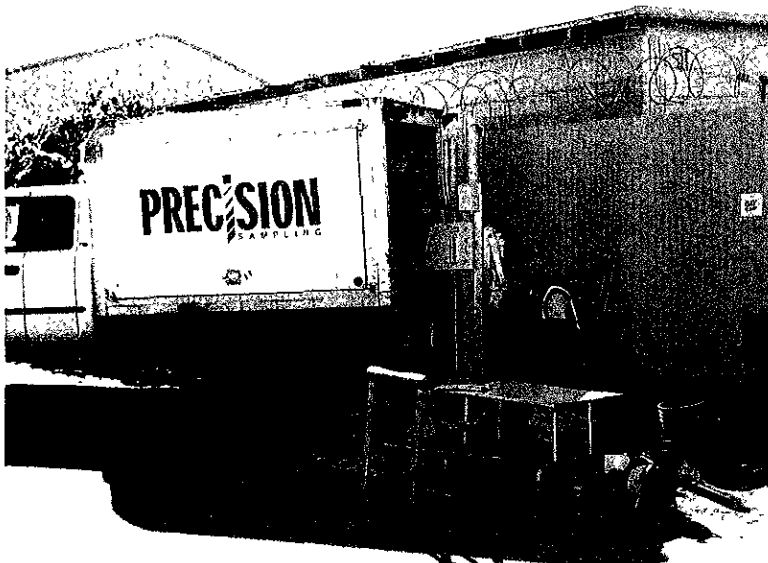
Site: 2526 Wood Street, Oakland, California

Date Taken: October 28, 2003

Project No.: SES 2003-41

Photographer: B. Rucker

Photo No.: 03



Subject: Geoprobe drill rig at location BH-08.

Site: 2526 Wood Street, Oakland, California

Date Taken: October 28, 2003

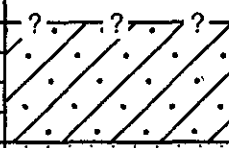
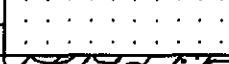
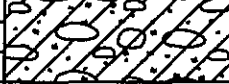
Project No.: SES 2003-41

Photographer: B. Rucker

Photo No.: 04

BORING NUMBER BH-01 Page 1 of 1

PROJECT Russ Elliott, Inc. OWNER Elliott Trust  
 LOCATION 2526 Wood St., Oakland, CA PROJECT NUMBER 2003-41  
 TOTAL DEPTH 11.5 feet BOREHOLE DIA. 2-inch  
 SURFACE ELEV. ~50 ft. amsl WATER FIRST ENCOUNTERED 4 ft.  
 DRILLING COMPANY Precision Sampling DRILLING METHOD Geo Probe  
 DRILLER Fernando GEOLOGIST B. Rucker DATE DRILLED 10/27/03

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/RECOVERY	BLOW COUNTS	PID INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0					Gravel paving	"Instrument" is a photoionization detector (PID), "readings" are in parts per million by volume air (ppmv).
2					Black clayey gravel (fill)	
4	BH-01-4'				4' Wet	Sample recovery is 100% unless specified otherwise.
6				<1		
8				<1	Black clayey sand (SC), wet, sl. cohesive, friable, minor small gravel	Previous tank removal report indicates that excavation depth was 8'. Material in that interval is fill.
10				<1	Dark grey sand (SP), medium-grained, wet, friable	
12				<1	Dark grey clayey gravel (GC), wet, no cohesion, gravel is small to medium	4'-8': 2' recovery
14					Bottom of borehole = 11.5' (drilling refusal)	Collected groundwater sample "BH-01-GW"
16						
18						
20						

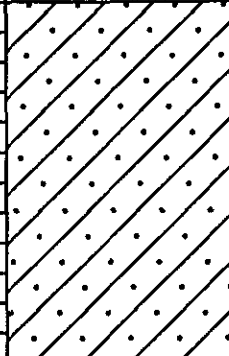
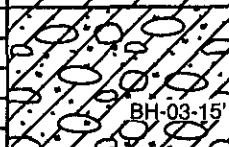
BORING NUMBER BH-02 Page 1 of 1

PROJECT Russ Elliott, Inc. OWNER Elliott Trust  
 LOCATION 2526 Wood St., Oakland, CA PROJECT NUMBER 2003-41  
 TOTAL DEPTH 16 feet BOREHOLE DIA. 2-inch  
 SURFACE ELEV. ~50 ft. amsl WATER FIRST ENCOUNTERED ~14 ft.  
 DRILLING COMPANY Precision Sampling DRILLING METHOD Geo Probe  
 DRILLER Fernando GEOLOGIST B. Rucker DATE DRILLED 10/27/03

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/RECOVERY	BLOW COUNTS	PID INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0	Fill				Asphalt, base rock, gravelly fill	"Instrument" is a photoionization detector (PID), "readings" are in parts per million by volume air (ppmv).  Sample recovery is 100% unless specified otherwise.
2						
4				<1	Blue grey silty clay (CL), sl. moist, sl. stiff, v. cohesive, not friable	8' to 12: 50% recovery
4				<1	Brown sand (SW), moist, sl. cohesive, v. friable, gravelly from 4 to 4.5'	
6				<1	Blue grey clayey sand (SC), mod. stiff, cohesive, v. moist	
6.5	BH-02-6.5'			<1	Blue grey clay (CL), moist, sl. stiff	
8				<1	Blue grey clay (CH), soft, v. cohesive, high plasticity	
10				<1		Collected groundwater sample "BH-02-GW"
12				<1	Blue grey silty clay (CL), sl. stiff, cohesive, moist	
14				<1	14' Becomes saturated and loose	
16				<1	15.5' Becomes gravelly (small ~30%)	
16	BH-02-16'				Bottom of borehole = 16.5'	
18						
20						

BORING NUMBER BH-03 Page 1 of 1

PROJECT Russ Elliott, Inc. OWNER Elliott Trust  
 LOCATION 2526 Wood St., Oakland, CA PROJECT NUMBER 2003-41  
 TOTAL DEPTH 16 feet BOREHOLE DIA. 2-inch  
 SURFACE ELEV. ~50 ft. amsl WATER FIRST ENCOUNTERED 5 ft. and 13.5 ft.  
 DRILLING COMPANY Precision Sampling DRILLING METHOD Geo Probe  
 DRILLER Fernando GEOLOGIST B. Rucker DATE DRILLED 10/27/03

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/RECOVERY	BLOW COUNTS	PID INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0					Asphalt, then base rock	"Instrument" is a photolionization detector (PID), "readings" are in parts per million by volume air (ppmv).  Sample recovery is 100% unless specified otherwise.
2	Fill				Clayey gravel	
4				<1	5' Becomes wet	
6				<1		
8					Blue grey-black clayey sand (SC), wet, sl. stiff, sl. cohesive, friable, petroleum odor	Hole swells shut at 4.5' after each sample run.  8-12': 1' recovery (all gravel)
10				<1 (depth of sample uncertain)		
12						Water level = 4.7' after drilling to 16'
14					Dark grey clayey gravel (GC), wet, no cohesion, gravel is small-med.	Previous tank removal report indicates former excavation depth was 10'. Material logged in that interval is likely fill.
16				<1	14.5' Gravel becomes large, clay is cohesive, moist	
16				<1	15' Gravel becomes small	
18					Bottom of borehole = 16'	Collected groundwater sample "BH-03-GW"
20						

BORING NUMBER BH-04 Page 1 of 1

PROJECT Russ Elliott, Inc. OWNER Elliott Trust  
 LOCATION 2526 Wood St., Oakland, CA PROJECT NUMBER 2003-41  
 TOTAL DEPTH 20 feet BOREHOLE DIA. 2-inch  
 SURFACE ELEV. ~50 ft. amsl WATER FIRST ENCOUNTERED 8 ft. and 16.5 ft.  
 DRILLING COMPANY Precision Sampling DRILLING METHOD Geo Probe  
 DRILLER Fernando GEOLOGIST B. Rucker DATE DRILLED 10/27/03 & 10/28/03

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/RECOVERY	BLOW COUNTS	PID INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0					Concrete then base rock	"Instrument" is a photoionization detector (PID), "readings" are in parts per million by volume air (ppmv).
2	Diagonal lines with dots			<1	Clayey sand (possibly fill), dry, not cohesive	
4	Diagonal lines			<1	Dark grey silty clay (CL), sl. stiff to soft, v. moist, cohesive	Sample recovery is 100% unless specified otherwise.
6	Diagonal lines			<1	Dark grey clay (CH), soft, v. moist, cohesive, sticky	
8	Diagonal lines with dots			<1	Dark grey-black clayey sand (SC), v. moist, sl. cohesive, friable	Hole swells shut at 4' after drilling to 8'.
10	Diagonal lines with dots			<1	10' Becomes v. moist	4'-8': 3' recovery
12	Diagonal lines			<1	Dark grey clay (CH), v. moist, soft, sticky, high plasticity	Water on rods after drilling to 12'.
14	Diagonal lines			<1		Water level = 11.3'
16	Diagonal lines			<1	Dark grey silty clay (CL), v. moist, sl. stiff, cohesive	16' to 20': 2' recovery
18	Diagonal lines			<1	15.5' Becomes v. stiff, sl. moist 16.5' Becomes gravelly and saturated	Collected groundwater sample "BH-04-GW"
20				<1	18' Color change to red brown, becomes sandy and silty clay (no gravel), dry, v. stiff, mod. cohesive	
					Bottom of borehole = 20'	

2003-41-09

BORING NUMBER BH-05 Page 1 of 1

PROJECT Russ Elliott, Inc. OWNER Elliott Trust  
 LOCATION 2526 Wood St., Oakland, CA PROJECT NUMBER 2003-41  
 TOTAL DEPTH 16 feet BOREHOLE DIA. 2-inch  
 SURFACE ELEV. ~50 ft. amsl WATER FIRST ENCOUNTERED 7 ft.  
 DRILLING COMPANY Precision Sampling DRILLING METHOD Geo Probe  
 DRILLER Fernando GEOLOGIST B. Rucker DATE DRILLED 10/27/03

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/RECOVERY	BLOW COUNTS	PID INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0	Fill				Asphalt then base rock	"Instrument" is a photoionization detector (PID), "readings" are in parts per million by volume air (ppmv).  Sample recovery is 100% unless specified otherwise.
2						
3.5				<1	Grey clayey sand (SC); fine grained, dry	4' to 8': 50% recovery
4				<1	Light brown sand (SP), fine grained, sl. moist, no cohesion	
6	BH-05-6'			<1	6' Becomes gravelly (small, ~20%), dry, iron oxidation	
8				<1	Dark grey clayey sand (SC), wet, sl. cohesive	
10				<1	Dark grey clay (CH), soft, v. moist, v. cohesive, sticky, high plasticity	12' to 16': 75% recovery
12				<1 (depth of sample uncertain)	Dark grey silty clay (CL), sl. stiff, mod. cohesive, moist	
14				<1	14.5' Becomes mod. stiff	
16	BH-05-15.5'			<1	15.5' Becomes gravelly (small, ~30%), sl. moist, dense, cohesive	
16				<1	Bottom of borehole = 16'	Collected groundwater sample "BH-05-GW"
18						
20						

BORING NUMBER BH-06 Page 1 of 1

PROJECT Russ Elliott, Inc. OWNER Elliott Trust  
 LOCATION 2526 Wood St., Oakland, CA PROJECT NUMBER 2003-41  
 TOTAL DEPTH 20 feet BOREHOLE DIA. 2-inch  
 SURFACE ELEV. ~50 ft. amsl WATER FIRST ENCOUNTERED 5.5 ft. & 16.5 ft.  
 DRILLING COMPANY Precision Sampling DRILLING METHOD Geo Probe  
 DRILLER Fernando GEOLOGIST B. Rucker DATE DRILLED 10/27/03 & 10/28/03

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/RECOVERY	BLOW COUNTS	PID INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0	Fill				Asphalt then baserock	"Instrument" is a photoionization detector (PID), "readings" are in parts per million by volume air (ppmv).
2					Blue grey silty clay (CL), sl. moist, sl. stiff, v. cohesive, not friable	
4				<1	Brown sand (SW), moist, sl. cohesive, v. friable, gravelly from 4 to 4.5'	Sample recovery is 100% unless specified otherwise.
6				<1	Grey clayey sand (SC), wet, loose, friable, fine-grained	
8				<1	Dark grey clay (CH), v. moist to wet, soft, cohesive	
10				<1		
12				<1	Dark grey silty clay (CL), v. moist, sl. stiff, cohesive	Borehole terminated at 16' on 10/27/03. Due to inadequate recharge, borehole was deepened to 20' on 10/28/03.
14				<1		
16				<1	15.5' Becomes gravelly (small-med., ~30%), sl. moist, cohesive	Collected groundwater sample "BH-06-GW"
18				<1	Dark grey clayey sand (SC), wet, loose, minor small gravel	
20				<1	Red-brown silty clay (CL), sl. moist, cohesive, stiff	
					Bottom of borehole = 20'	



BORING NUMBER BH-07 Page 1 of 1

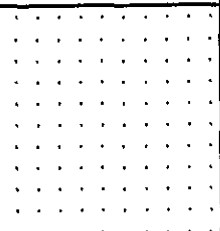
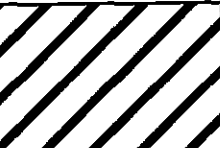
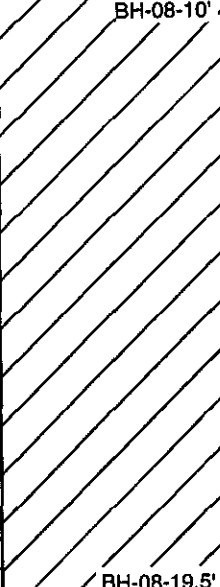
PROJECT Russ Elliott, Inc. OWNER Elliott Trust  
 LOCATION 2526 Wood St., Oakland, CA PROJECT NUMBER 2003-41  
 TOTAL DEPTH 20 feet BOREHOLE DIA. 2-inch  
 SURFACE ELEV. ~50 ft. amsl WATER FIRST ENCOUNTERED 6.5 ft. & 17.5 ft.  
 DRILLING COMPANY Precision Sampling DRILLING METHOD Geo Probe  
 DRILLER Fernando GEOLOGIST B. Rucker DATE DRILLED 10/28/03

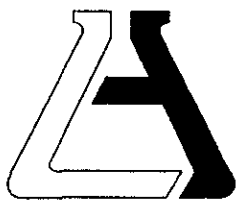
DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/RECOVERY	BLOW COUNTS	PID INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0	Fill				Unpaved ground then gravelly sandy fill	"Instrument" is a photoionization detector (PID), "readings" are in parts per million by volume air (ppmv).
2						
4	[Diagonal Hatching]			<1	Dark grey silty clay (CL), sl. moist, mod. stiff, cohesive, minor gravel	Sample recovery is 100% unless specified otherwise.
6				<1	6' Becomes sandy clay, soft, v. moist	
6	BH-07-6'				Dark grey clayey sand (SC), wet, loose	0'-4': 1' recovery
8	[Diagonal Hatching]			<1	Dark grey clay (CH), soft, v. moist, v. cohesive	8'-12': 2' recovery
10				<1	? — ? — ? — ? — ? — ? Dark grey silty clay (CL), sl. stiff, v. moist, v. cohesive	
12	[Diagonal Hatching]			<1		Collected groundwater sample "BH-07-GW"
14				<1		
16	BH-07-15.5'				15' Becomes v. stiff and gravelly, sl. moist, cohesive, gravel is small & occ. medium	
18				<1	15.5' Color change to red-brown	
18	[Diagonal Hatching]			<1	Dark grey clay (CH), wet, loose, minor sand and small gravel	
20				<1	Red-brown silty to sandy clay (CL), sl. moist, mod. stiff, v. cohesive, 20' Becomes v. stiff and dry	
20					Bottom of borehole = 20'	

2003-41-12

BORING NUMBER BH-08 Page 1 of 1

PROJECT Russ Elliott, Inc. OWNER Elliott Trust  
 LOCATION 2526 Wood St., Oakland, CA PROJECT NUMBER 2003-41  
 TOTAL DEPTH 20 feet BOREHOLE DIA. 2-inch  
 SURFACE ELEV. ~50 ft. amsl WATER FIRST ENCOUNTERED 7 ft. & 16.5 ft.  
 DRILLING COMPANY Precision Sampling DRILLING METHOD Geo Probe  
 DRILLER Fernando GEOLOGIST B. Rucker DATE DRILLED 10/28/03

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL / RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0					Unpaved ground then gravelly sandy fill	"Instrument" is a photoionization detector (PID), "readings" are in parts per million by volume air (ppmv).
2						
4					Brown sand (SP), fine-med. grained, dry, loose, no cohesion	Sample recovery is 100% unless specified otherwise.
6				<1	7' Becomes v. moist to wet	4'-8' = 2' recovery
8				<1	Dark grey clay (CH), soft, v. moist, cohesive	8'-12' = 3' recovery
10		BH-08-10'		<1		
12				<1	Dark grey clay (CL), sl. stiff, v. moist, cohesive	12'-16' = 3' recovery
14				<1	15' Becomes silty, stiff, sl. moist to dry	
16				<1	16' to 16.5' Wet	
18				<1	17' Becomes light brown silty clay (CL), dry, stiff, cohesive	Collected groundwater sample "BH-08-GW"
20		BH-08-19.5'		<1	Bottom of borehole = 20'	



**ASSOCIATED LABORATORIES**

806 North Batavia - Orange, California 92868 - 714/771-6900

FAX 714/538-1209

CLIENT Stellar Environmental Solutions (10503)  
ATTN: Bruce Rucker  
2198 Sixth Street  
#201  
Berkeley, CA 94710

LAB REQUEST 118884

REPORTED 11/06/2003

RECEIVED 10/29/2003

PROJECT #2003-41/Russ Elliott, Inc.  
2526 Wood St., Oakland

SUBMITTER Client

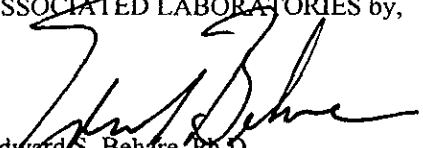
COMMENTS "J" denotes value between MDL and DLR. Added 8260 MTBE to  
310, 311, 312, 320, 323, 324, RUSH!!! per DR 11-5-03 AV

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods as indicated on the report. This cover letter is an integral part of the final report.

<u>Order No.</u>	<u>Client Sample Identification</u>
473301	BH-01-4
473302	BH-01-GW
473303	BH-02-6.5
473304	BH-02-16
473305	BH-02-GW
473306	BH-03-4.5
473307	BH-03-15
473308	BH-03-GW
473309	BH-04-7
473310	BH-05-6

I thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

ASSOCIATED LABORATORIES by,

  
Edward S. Behare, Ph.D.  
Vice President

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 30 days from date reported

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TESTING & CONSULTING  
Chemical  
Microbiological  
Environmental

CLIENT Stellar Environmental Solutions (10503)  
ATTN: Bruce Rucker  
2198 Sixth Street  
#201  
Berkeley, CA 94710

LAB REQUEST 118884

REPORTED 11/06/2003

RECEIVED 10/29/2003

PROJECT #2003-41/Russ Elliott, Inc.  
2526 Wood St., Oakland

SUBMITTER Client

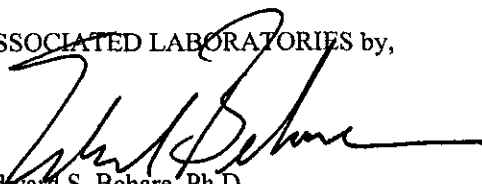
COMMENTS "J" denotes value between MDL and DLR. Added 8260 MTBE to  
310, 311, 312, 320, 323, 324, RUSH!!! per DR 11-5-03 AV

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods as indicated on the report. This cover letter is an integral part of the final report.

<u>Order No.</u>	<u>Client Sample Identification</u>
473311	BH-05-15.5
473312	BH-05-GW
473313	BH-06-8.5
473314	BH-06-15.5
473315	BH-07-6
473316	BH-7-15.5
473317	BH-08-10
473318	BH-08-19.5
473319	BH-04-18
473320	BH-04-GW
473321	BH-06-19.5
473322	BH-08-GW
473323	BH-06-GW
473324	BH-07-GW
473325	Laboratory Method Blank-S
473326	Laboratory Method Blank-W

I thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

ASSOCIATED LABORATORIES by,



Edward S. Behare, Ph.D.  
Vice President

*NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 30 days from date reported.*

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TESTING & CONSULTING  
Chemical  
Microbiological  
Environmental

**Subject: Request for Re-Analysis: Lab Request 118884**

**Date: Tue, 4 Nov 2003 16:13:14 -0800**

**From: "Bruce Rucker" <brucker@stellar-environmental.com>**

**To: "Danielle Roberts" <droboterts@associatedlabs.com>**

Danielle-

Thank you for the faxed lab reports. I need to order some re-analysis for MTBE (only) by EPA 8260B, for the following samples:

BH-04-GW (Order no. 473320)

BH-05-GW (Order no.473312)

BH-06-GW (Order no.473323)

BH-07-GW (Order no.473324)

BH-05-6 (Order no.473310)

BH-05-15.5 (Order no.473311)

Please e-mail to me a confirmation that you have received this request, and that there will be no problem with remaining sample volume or holding time. Thanks.

-----  
Bruce M. Rucker  
Stellar Environmental Solutions, Inc.  
2198 Sixth Street, #201  
Berkeley, CA 94710

Tel: 510-644-3123  
Fax: 510-644-3859  
E-mail: Brucker@stellar-environmental.com

*LR*

*118884*

*Ann  
or*

*RUSL*

*Holds Times*

*[Handwritten signature]*

# Chain of Custody Record

118884

Lab job no. \_\_\_\_\_  
 Date 10/28/03  
 Page 1 of 2

Laboratory Associated Laboratories  
 Address 800 N. Batavia  
Orange, CA 92868  
714/771-6900  
 Project Owner Elliott Trust  
 Site Address 2526 Wood St.  
Oakland CA  
 Project Name Russ Elliot, Inc.  
 Project Number 063-41

Method of Shipment Federal Express  
 Shipment No. \_\_\_\_\_  
 Airbill No. 8430 8483 8584  
 Cooler No. \_\_\_\_\_  
 Project Manager Bruce Rucker  
 Telephone No. (510) 644-3123  
 Fax No. (510) 644-3859  
 Samplers: (Signature) Bruce M. Rucker

+0600102110

Field Sample Number	Location/Depth	Date	Time	Sample Type	Type/Size of Container	Preservation		Analysis Required										Remarks							
						Cooler	Chemical	Filtered	No. of Containers	TVH 403 + BTEX Y	MTBE (3015/3040)	TEH - diesel													
BH-01-4'	4'	10/27/03	830	Soil	acetate sleeve	✓		1	X				X												
BH-01-6W	-	4	855	H <sub>2</sub> O	(a)	✓	(a)	4	X				X												
BH-02-6.5'	6.5'		1030	Soil	acetate sleeve	✓		1	X				X												
BH-02-16'	16'		1040	Soil	8 oz glass jar	✓		1	X				X												
BH-03-6W	-		1110	H <sub>2</sub> O	(a)	✓	(a)	4	X				X												
BH-03-4.5'	4.5'		1120	Soil	acetate sleeve	✓		1	X				X												
BH-03-15'	16'		1130	Soil	8 oz glass jar	✓		1	X				X												
BH-03-6W	-		1205	H <sub>2</sub> O	(a)	✓	(a)	4	X				X												
BH-04-7'	7'		1250	Soil	acetate sleeve	✓		1	X				X												
BH-05-6'	6'		1415	Soil	acetate sleeve	✓		1	X				X												
BH-05-15.5'	15.5'		1430	Soil	8 oz glass jar	✓		1	X				X												
BH-05-6W	-		1600	H <sub>2</sub> O	(a)	✓	(a)	4	X				X												

1 VOA  
 VAS  
 RECEIVED  
 BROKEN

only  
 1  
 VOA

Relinquished by: Signature <u>Bruce M. Rucker</u> Printed <u>Stellar Env. Solutions</u> Company <u>Bruce M. Rucker</u>	Date <u>10/28/03</u> Time <u>1700</u>	Received by: Signature <u>[Signature]</u> Printed <u>[Signature]</u> Company <u>Assoc. Lab</u>	Date <u>11/02</u> Time <u>10/29</u>	Relinquished by: Signature _____ Printed _____ Company _____	Date _____ Time _____	Received by: Signature _____ Printed _____ Company _____	Date _____ Time _____			
Turnaround Time: _____ Comments: <u>(a) water samples include (3) 40 ml VOAs w/ HCl + (1) 1-L amber, unpreserved</u>				Relinquished by: Signature _____ Printed _____ Company _____				Date _____ Time _____	Received by: Signature _____ Printed _____ Company _____	Date _____ Time _____

3 VOA's were received broken

RE 10/28/03

# Chain of Custody Record

118884

Lab Job no. \_\_\_\_\_

Date 10/28/03

Page 2 of 2

Laboratory Associated Laboratories

Method of Shipment Federal Express

Address 806 N. Batavia

Shipment No. \_\_\_\_\_

Orange CA 92668

Airbill No. 8430 8483 8584

714/ 771-6900

Cooler No. \_\_\_\_\_

Project Owner Elliott Trust

Project Manager Bruce Rucker

Site Address 2526 Wax St

Telephone No. (510) 644-3123

OAKLAND CA

Fax No. (510) 644-3859

Project Name Russ Elliott Inc

Samplers: (Signature) B.M. Rucker

Project Number 2003-41

Analysis Required										Remarks
Filtered	No. of Containers	TVH gas + BTEX	MTBE (BOLB/BOB)	TEH-Diesel						
1	X	X	X	X						
1	X	X	X	X						
1	X	X	X	X						
1	X	X	X	X						
1	X	X	X	X						
1	X	X	X	X						
1	X	X	X	X						
4	X	X	X	X						
1	X	X	X	X						
4	X	X	X	X						
4	X	X	X	X						

SES

Field Sample Number	Location/Depth	Date	Time	Sample Type	Type/Size of Container	Preservation																
						Cooler	Chemical															
BH-06-8.5'	8.5'	10/27/03	1510	Soil	acetate sleeve	✓		1	X													
BH-06-15.5'	15.5'	10/27/03	1520	Soil	" "	✓		1	X													
BH-07-6'	6'	10/29/03	910	Soil	" "	✓		1	X													
BH-07-15.5'	15.5'	10/29/03	915	Soil	" "	✓		1	X													
BH-08-10'	10'	10/29/03	1000	Soil	" "	✓		1	X													
BH-08-19.5'	19.5'	10/29/03	1010	Soil	" "	✓		1	X													
BH-04-18'	18'	10/29/03	1040	Soil	" "	✓		1	X													
BH-04-GW	—	10/29/03	1100	H <sub>2</sub> O	(a)	✓	(a)	4	X													
BH-06-19.5'	19.5'	10/29/03	1120	Soil	acetate sleeve	✓	(a)	1	X													
BH-08-GW	—	10/29/03	1200	H <sub>2</sub> O	(a)	✓	(a)	4	X													
BH-06-GW	—	10/29/03	1250	H <sub>2</sub> O	(a)	✓	(a)	4	X													
BH-07-GW	—	10/29/03	1045	H <sub>2</sub> O	(a)	✓	(a)	4	X													

Relinquished by: Signature <u>Bruce M. Rucker</u> Printed <u>Bruce M. Rucker</u> Company <u>Stellar Env. Solutions</u>	Date <u>10/28/03</u> Time _____	Received by: Signature <u>Ryan Lewis</u> Printed <u>Ryan Lewis</u> Company <u>Assoc. Lab.</u>	Date <u>10/29</u> Time _____	Relinquished by: Signature _____ Printed _____ Company _____	Date _____ Time _____	Received by: Signature _____ Printed _____ Company _____	Date _____ Time _____		
Turnaround Time: _____ Comments: <u>(a) water samples include (3) 40ml Vials + 1-L Amber preserved w/ H<sub>2</sub>S HCl un-preserved</u>				Relinquished by: Signature _____ Printed _____ Company _____				Received by: Signature _____ Printed _____ Company _____	

2000-06-01

Order #: 473301

Client: Stellar Environmental Solutions

Matrix: SOLID

Client Sample ID: BH-01-4

Date Sampled: 10/27/2003

Time Sampled: 08:30

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
---------	--------	----	-----	-------	--------------

**8015 TEPH Diesel**

TEPH Diesel	ND	10	10.0	mg/Kg	10/30/03	AF
<b>Surrogates</b>				<b>Units</b>	<b>Control Limits</b>	
o-Terphenyl (sur)	68			%	55 - 200	

**8021B BTEX + MTBE**

Benzene	ND	1	0.005	mg/Kg	10/29/03	LT
Ethyl benzene	ND	1	0.005	mg/Kg	10/29/03	LT
Methyl t - butyl ether	ND	1	0.035	mg/Kg	10/29/03	LT
Toluene	ND	1	0.005	mg/Kg	10/29/03	LT
Xylene (total)	ND	1	0.015	mg/Kg	10/29/03	LT

**8260B Volatile Organic Compounds**

1,2-Dibromoethane	ND	1	5	ug/Kg	11/03/03	LB
1,2-Dichloroethane	ND	1	5	ug/Kg	11/03/03	LB
Ethyl-tertbutylether (ETBE)	ND	1	10	ug/Kg	11/03/03	LB
Isopropyl ether (DIPE)	ND	1	10	ug/Kg	11/03/03	LB
Methyl-tert-butylether (MTBE)	1.7 J	1	5	ug/Kg	11/03/03	LB
Tert-amylmethylether (TAME)	ND	1	10	ug/Kg	11/03/03	LB
Tertiary butyl alcohol (TBA)	ND	1	50	ug/Kg	11/03/03	LB

**8015M - Gasoline**

Gasoline	ND	1	3	mg/Kg	10/29/03	LT
<b>Surrogates</b>				<b>Units</b>	<b>Control Limits</b>	
a,a,a-Trifluorotoluene	101			%	55 - 200	

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

**ASSOCIATED LABORATORIES**

Analytical Results Report





Order #: 473302

Client: Stellar Environmental Solutions

Matrix: WATER

Client Sample ID: BH-01-GW

Date Sampled: 10/27/2003

Time Sampled: 08:55

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
---------	--------	----	-----	-------	--------------

**8015 TEPH Diesel**

TEPH Diesel	0.12	1	0.1	mg/L	10/30/03 AF
-------------	------	---	-----	------	-------------

**Surrogates**

	Result	DF	DLR	Units	Control Limits
o-Terphenyl (sur)	75			%	55 - 200

**8021B BTEX + MTBE**

Benzene	ND	1	0.3	ug/L	10/29/03 LZ
Ethyl benzene	ND	1	0.3	ug/L	10/29/03 LZ
Methyl t - butyl ether	1020	50	250.0	ug/L	10/29/03 LZ
Toluene	ND	1	0.3	ug/L	10/29/03 LZ
Xylene (total)	ND	1	0.6	ug/L	10/29/03 LZ

**8260B Volatile Organic Compounds**

1,2-Dibromoethane	ND	1	5	ug/L	11/03/03 LB
1,2-Dichloroethane	ND	1	5	ug/L	11/03/03 LB
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L	11/03/03 LB
Isopropyl ether (DIPE)	ND	1	1	ug/L	11/03/03 LB
Methyl-tert-butylether (MTBE)	764	1	1	ug/L	11/03/03 LB
Tert-amylmethylether (TAME)	4.7	1	1	ug/L	11/03/03 LB
Tertiary butyl alcohol (TBA)	93	1	10	ug/L	11/03/03 LB

**8015M - Gasoline**

Gasoline	2960	50	2500.0	ug/L	10/29/03 LZ
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**Surrogates**

	Result	DF	DLR	Units	Control Limits
a,a,a-Trifluorotoluene	72			%	55 - 200

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 473303

Client: Stellar Environmental Solutions

Matrix: SOLID

Client Sample ID: BH-02-6.5

Date Sampled: 10/27/2003

Time Sampled: 10:30

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
<b>8015 TEPH Diesel</b>					
TEPH Diesel	ND	1	1.0	mg/Kg	10/30/03 AF
				<b>Units</b>	<b>Control Limits</b>
o-Terphenyl (sur)	103			%	55 - 200

**8021B BTEX + MTBE**

Benzene	ND	1	0.005	mg/Kg	10/29/03 LT
Ethyl benzene	ND	1	0.005	mg/Kg	10/29/03 LT
Methyl t - butyl ether	0.095	1	0.035	mg/Kg	10/29/03 LT
Toluene	ND	1	0.005	mg/Kg	10/29/03 LT
Xylene (total)	ND	1	0.015	mg/Kg	10/29/03 LT

**8260B Volatile Organic Compounds**

1,2-Dibromoethane	ND	1	5	ug/Kg	11/03/03 LB
1,2-Dichloroethane	ND	1	5	ug/Kg	11/03/03 LB
Ethyl-tertbutylether (ETBE)	ND	1	10	ug/Kg	11/03/03 LB
Isopropyl ether (DIPE)	ND	1	10	ug/Kg	11/03/03 LB
Methyl-tert-butylether (MTBE)	135	1	5	ug/Kg	11/03/03 LB
Tert-amylmethylether (TAME)	ND	1	10	ug/Kg	11/03/03 LB
Tertiary butyl alcohol (TBA)	61	1	50	ug/Kg	11/03/03 LB

**8015M - Gasoline**

Gasoline	ND	1	3	mg/Kg	10/29/03 LT
				<b>Units</b>	<b>Control Limits</b>
a,a,a-Trifluorotoluene	134			%	55 - 200

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 473304

Client: Stellar Environmental Solutions

Matrix: SOLID

Client Sample ID: BH-02-16

Date Sampled: 10/27/2003

Time Sampled: 10:40

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
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**8015 TEPH Diesel**

TEPH Diesel	ND	1	1.0	mg/Kg	10/30/03	AF
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**Surrogates**

o-Terphenyl (sur)	94			%	55 - 200	
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**8021B BTEX + MTBE**

Benzene	ND	1	0.005	mg/Kg	10/29/03	LT
Ethyl benzene	ND	1	0.005	mg/Kg	10/29/03	LT
Methyl t - butyl ether	ND	1	0.035	mg/Kg	10/29/03	LT
Toluene	ND	1	0.005	mg/Kg	10/29/03	LT
Xylene (total)	ND	1	0.015	mg/Kg	10/29/03	LT

**8260B Volatile Organic Compounds**

1,2-Dibromoethane	ND	1	5	ug/Kg	11/03/03	LB
1,2-Dichloroethane	ND	1	5	ug/Kg	11/03/03	LB
Ethyl-tertbuylether (ETBE)	ND	1	10	ug/Kg	11/03/03	LB
Isopropyl ether (DIPE)	ND	1	10	ug/Kg	11/03/03	LB
Methyl-tert-butylether (MTBE)	ND	1	5	ug/Kg	11/03/03	LB
Tert-amylmethylether (TAME)	ND	1	10	ug/Kg	11/03/03	LB
Tertiary butyl alcohol (TBA)	ND	1	50	ug/Kg	11/03/03	LB

**8015M - Gasoline**

Gasoline	ND	1	3	mg/Kg	10/29/03	LT
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**Surrogates**

a,a,a-Trifluorotoluene	144			%	55 - 200	
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DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 473305

Client: Stellar Environmental Solutions

Matrix: WATER

Client Sample ID: BH-02-GW

Date Sampled: 10/27/2003

Time Sampled: 11:10

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
<b>8015 TEPH Diesel</b>					
TEPH Diesel	0.16	1	0.1	mg/L	10/30/03 AF
				<b>Units</b>	<b>Control Limits</b>
Surrogates					
o-Terphenyl (sur)	107			%	55 - 200
<b>8021B BTEX + MTBE</b>					
Benzene	ND	1	0.3	ug/L	10/29/03 LZ
Ethyl benzene	ND	1	0.3	ug/L	10/29/03 LZ
Methyl t - butyl ether	103	5	25.0	ug/L	10/29/03 LZ
Toluene	ND	1	0.3	ug/L	10/29/03 LZ
Xylene (total)	ND	1	0.6	ug/L	10/29/03 LZ

**8260B Volatile Organic Compounds**

1,2-Dibromoethane	ND	1	5	ug/L	11/03/03 LB
1,2-Dichloroethane	ND	1	5	ug/L	11/03/03 LB
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L	11/03/03 LB
Isopropyl ether (DIPE)	ND	1	1	ug/L	11/03/03 LB
Methyl-tert-butylether (MTBE)	84	1	1	ug/L	11/03/03 LB
Tert-amylmethylether (TAME)	ND	1	1	ug/L	11/03/03 LB
Tertiary butyl alcohol (TBA)	ND	1	10	ug/L	11/03/03 LB

**8015M - Gasoline**

Gasoline	107	1	50	ug/L	10/29/03 LZ
				<b>Units</b>	<b>Control Limits</b>
Surrogates					
a,a,a-Trifluorotoluene	60			%	55 - 200

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

**ASSOCIATED LABORATORIES**

Analytical Results Report



Order #: 473306

Client: Stellar Environmental Solutions

Matrix: SOLID

Client Sample ID: BH-03-4.5

Date Sampled: 10/27/2003

Time Sampled: 11:20

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
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**8015 TEPH Diesel**

TEPH Diesel	ND	1	1.0	mg/Kg	10/30/03 AF
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**Surrogates**

	Result	DF	DLR	Units	Control Limits
o-Terphenyl (sur)	101			%	55 - 200

**8021B BTEX + MTBE**

Benzene	ND	1	0.005	mg/Kg	10/29/03 LT
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Ethyl benzene	ND	1	0.005	mg/Kg	10/29/03 LT
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Methyl t - butyl ether	ND	1	0.035	mg/Kg	10/29/03 LT
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Toluene	ND	1	0.005	mg/Kg	10/29/03 LT
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Xylene (total)	ND	1	0.015	mg/Kg	10/29/03 LT
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**8260B Volatile Organic Compounds**

1,2-Dibromoethane	ND	1	5	ug/Kg	11/03/03 LB
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1,2-Dichloroethane	ND	1	5	ug/Kg	11/03/03 LB
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Ethyl-tertbutylether (ETBE)	ND	1	10	ug/Kg	11/03/03 LB
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Isopropyl ether (DIPE)	ND	1	10	ug/Kg	11/03/03 LB
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Methyl-tert-butylether (MTBE)	ND	1	5	ug/Kg	11/03/03 LB
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Tert-amylmethylether (TAME)	ND	1	10	ug/Kg	11/03/03 LB
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Tertiary butyl alcohol (TBA)	ND	1	50	ug/Kg	11/03/03 LB
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**8015M - Gasoline**

Gasoline	ND	1	3	mg/Kg	10/29/03 LT
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**Surrogates**

	Result	DF	DLR	Units	Control Limits
a,a,a-Trifluorotoluene	145			%	55 - 200

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

**ASSOCIATED LABORATORIES**

Analytical Results Report



Order #: 473307

Client: Stellar Environmental Solutions

Matrix: SOLID

Client Sample ID: BH-03-15

Date Sampled: 10/27/2003

Time Sampled: 11:30

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
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**8015 TEPH Diesel**

TEPH Diesel	ND	1	1.0	mg/Kg	10/30/03	AF
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**Surrogates**

Units Control Limits

o-Terphenyl (sur)	93			%	55 - 200	
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**8021B BTEX + MTBE**

Benzene	ND	1	0.005	mg/Kg	10/29/03	LT
Ethyl benzene	ND	1	0.005	mg/Kg	10/29/03	LT
Methyl t - butyl ether	ND	1	0.035	mg/Kg	10/29/03	LT
Toluene	ND	1	0.005	mg/Kg	10/29/03	LT
Xylene (total)	ND	1	0.015	mg/Kg	10/29/03	LT

**8260B Volatile Organic Compounds**

1,2-Dibromoethane	ND	1	5	ug/Kg	11/03/03	LB
1,2-Dichloroethane	ND	1	5	ug/Kg	11/03/03	LB
Ethyl-tertbutylether (ETBE)	ND	1	10	ug/Kg	11/03/03	LB
Isopropyl ether (DIPE)	ND	1	10	ug/Kg	11/03/03	LB
Methyl-tert-butylether (MTBE)	ND	1	5	ug/Kg	11/03/03	LB
Tert-amylmethylether (TAME)	ND	1	10	ug/Kg	11/03/03	LB
Tertiary butyl alcohol (TBA)	ND	1	50	ug/Kg	11/03/03	LB

**8015M - Gasoline**

Gasoline	ND	1	3	mg/Kg	10/29/03	LT
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**Surrogates**

Units Control Limits

a,a,a-Trifluorotoluene	147			%	55 - 200	
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DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

**ASSOCIATED LABORATORIES**

Analytical Results Report



Order #: 473308

Client: Stellar Environmental Solutions

Matrix: WATER

Client Sample ID: BH-03-GW

Date Sampled: 10/27/2003

Time Sampled: 12:05

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
<b>8015 TEPH Diesel</b>					
TEPH Diesel	0.47	1	0.1	mg/L	10/30/03 AF
<b>Surrogates</b>				<b>Units</b>	<b>Control Limits</b>
o-Terphenyl (sur)	106			%	55 - 200
<b>8021B BTEX + MTBE</b>					
Benzene	1.0	1	0.3	ug/L	10/29/03 LZ
Ethyl benzene	16	1	0.3	ug/L	10/29/03 LZ
Methyl t - butyl ether	69	2	10.0	ug/L	10/29/03 LZ
Toluene	1.9	1	0.3	ug/L	10/29/03 LZ
Xylene (total)	4.1	1	0.6	ug/L	10/29/03 LZ
<b>8260B Volatile Organic Compounds</b>					
1,2-Dibromoethane	ND	1	5	ug/L	11/03/03 LB
1,2-Dichloroethane	ND	1	5	ug/L	11/03/03 LB
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L	11/03/03 LB
Isopropyl ether (DIPE)	ND	1	1	ug/L	11/03/03 LB
Methyl-tert-butylether (MTBE)	55	1	1	ug/L	11/03/03 LB
Tert-amylmethylether (TAME)	ND	1	1	ug/L	11/03/03 LB
Tertiary butyl alcohol (TBA)	10	1	10	ug/L	11/03/03 LB
<b>8015M - Gasoline</b>					
Gasoline	437	1	50	ug/L	10/29/03 LZ
<b>Surrogates</b>				<b>Units</b>	<b>Control Limits</b>
a,a,a-Trifluorotoluene	76			%	55 - 200

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

**ASSOCIATED LABORATORIES**

Analytical Results Report



Order #: 473309

Client: Stellar Environmental Solutions

Matrix: SOLID

Client Sample ID: BH-04-7

Date Sampled: 10/27/2003

Time Sampled: 12:50

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
<b>8015 TEPH Diesel</b>					
TEPH Diesel	ND	1	1.0	mg/Kg	10/30/03 AF
<b>Surrogates</b>				<b>Units</b>	<b>Control Limits</b>
o-Terphenyl (sur)	109			%	55 - 200

**8021B BTEX + MTBE**

Benzene	ND	1	0.005	mg/Kg	10/29/03 LT
Ethyl benzene	ND	1	0.005	mg/Kg	10/29/03 LT
Methyl t - butyl ether	ND	1	0.035	mg/Kg	10/29/03 LT
Toluene	ND	1	0.005	mg/Kg	10/29/03 LT
Xylene (total)	ND	1	0.015	mg/Kg	10/29/03 LT

**8015M - Gasoline**

Gasoline	ND	1	3	mg/Kg	10/29/03 LT
<b>Surrogates</b>				<b>Units</b>	<b>Control Limits</b>
a,a,a-Trifluorotoluene	140			%	55 - 200

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor





Order #: 473310

Client: Stellar Environmental Solutions

Matrix: SOLID

Client Sample ID: BH-05-6

Date Sampled: 10/27/2003

Time Sampled: 14:15

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
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**8015 TEPH Diesel**

TEPH Diesel	2.0	1	1.0	mg/Kg	10/31/03	AF
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**Surrogates**

o-Terphenyl (sur)	89			%	55 - 200	
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**8021B BTEX + MTBE**

Benzene	ND	1	0.005	mg/Kg	10/29/03	LT
Ethyl benzene	ND	1	0.005	mg/Kg	10/29/03	LT
Methyl t - butyl ether	0.094	1	0.035	mg/Kg	10/29/03	LT
Toluene	ND	1	0.005	mg/Kg	10/29/03	LT
Xylene (total)	ND	1	0.015	mg/Kg	10/29/03	LT

**8260B BTEX/MTBE Only**

Methyl-tert-butylether (MTBE)	26	1	5	ug/Kg	11/06/03	LB
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**8015M - Gasoline**

Gasoline	ND	1	3	mg/Kg	10/29/03	LT
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**Surrogates**

a,a,a-Trifluorotoluene	145			%	55 - 200	
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DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 473311

Client: Stellar Environmental Solutions

Matrix: SOLID

Client Sample ID: BH-05-15.5

Date Sampled: 10/27/2003

Time Sampled: 14:30

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
<b>8015 TEPH Diesel</b>					
TEPH Diesel	ND	1	1.0	mg/Kg	10/31/03 AF
<b>Surrogates</b>				<b>Units</b>	<b>Control Limits</b>
o-Terphenyl (sur)	77			%	55 - 200

**8021B BTEX + MTBE**

Benzene	ND	1	0.005	mg/Kg	10/29/03 LT
Ethyl benzene	ND	1	0.005	mg/Kg	10/29/03 LT
Methyl t - butyl ether	0.046	1	0.035	mg/Kg	10/29/03 LT
Toluene	ND	1	0.005	mg/Kg	10/29/03 LT
Xylene (total)	ND	1	0.015	mg/Kg	10/29/03 LT

**8260B BTEX/MTBE Only**

Methyl-tert-butylether (MTBE)	2.5	1	5	ug/Kg	11/06/03 LB
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**8015M - Gasoline**

Gasoline	ND	1	3	mg/Kg	10/29/03 LT
<b>Surrogates</b>				<b>Units</b>	<b>Control Limits</b>
a,a,a-Trifluorotoluene	155			%	55 - 200

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 473312

Client: Stellar Environmental Solutions

Matrix: WATER

Client Sample ID: BH-05-GW

Date Sampled: 10/27/2003

Time Sampled: 16:00

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
<b>8015 TEPH Diesel</b>					
TEPH Diesel	ND	1	0.1	mg/L	10/30/03 AF
				<b>Units</b>	<b>Control Limits</b>
Surrogates					
o-Terphenyl (sur)	80			%	55 - 200
<b>8021B BTEX + MTBE</b>					
Benzene	ND	1	0.3	ug/L	10/29/03 LZ
Ethyl benzene	ND	1	0.3	ug/L	10/29/03 LZ
Methyl t - butyl ether	737	20	100.0	ug/L	10/29/03 LZ
Toluene	ND	1	0.3	ug/L	10/29/03 LZ
Xylene (total)	ND	1	0.6	ug/L	10/29/03 LZ

**8260B BTEX/MTBE Only**

Methyl-tert-butylether (MTBE)	606	10	10.0	ug/L	11/06/03 LB
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**8015M - Gasoline**

Gasoline	1370	20	1000.0	ug/L	10/29/03 LZ
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**Surrogates**

a,a,a-Trifluorotoluene	74			%	55 - 200
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DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 473313

Client: Stellar Environmental Solutions

Matrix: SOLID

Client Sample ID: BH-06-8.5

Date Sampled: 10/27/2003

Time Sampled: 15:10

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
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**8015 TEPH Diesel**

TEPH Diesel	1.3	1	1.0	mg/Kg	10/31/03 AF
<b>Surrogates</b>				<b>Units</b>	<b>Control Limits</b>
o-Terphenyl (sur)	111			%	55 - 200

**8021B BTEX + MTBE**

Benzene	ND	1	0.005	mg/Kg	10/29/03 LT
Ethyl benzene	ND	1	0.005	mg/Kg	10/29/03 LT
Methyl t - butyl ether	ND	1	0.035	mg/Kg	10/29/03 LT
Toluene	ND	1	0.005	mg/Kg	10/29/03 LT
Xylene (total)	ND	1	0.015	mg/Kg	10/29/03 LT

**8015M - Gasoline**

Gasoline	ND	1	3	mg/Kg	10/29/03 LT
<b>Surrogates</b>				<b>Units</b>	<b>Control Limits</b>
a,a,a-Trifluorotoluene	150			%	55 - 200

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 473314

Client: Stellar Environmental Solutions

Matrix: SOLID

Client Sample ID: BH-06-15.5

Date Sampled: 10/27/2003

Time Sampled: 15:20

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
<b>8015 TEPH Diesel</b>					
TEPH Diesel	ND	1	1.0	mg/Kg	10/31/03 AF
				<b>Units</b>	<b>Control Limits</b>
Surrogates					
o-Terphenyl (sur)	82			%	55 - 200
<b>8021B BTEX + MTBE</b>					
Benzene	ND	1	0.005	mg/Kg	10/30/03 LT
Ethyl benzene	ND	1	0.005	mg/Kg	10/30/03 LT
Methyl t - butyl ether	ND	1	0.035	mg/Kg	10/30/03 LT
Toluene	ND	1	0.005	mg/Kg	10/30/03 LT
Xylene (total)	ND	1	0.015	mg/Kg	10/30/03 LT
<b>8015M - Gasoline</b>					
Gasoline	ND	1	3	mg/Kg	10/30/03 LT
				<b>Units</b>	<b>Control Limits</b>
Surrogates					
a,a,a-Trifluorotoluene	113			%	55 - 200

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 473315

Client: Stellar Environmental Solutions

Matrix: SOLID

Client Sample ID: BH-07-6

Date Sampled: 10/28/2003

Time Sampled: 09:10

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
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**8015 TEPH Diesel**

TEPH Diesel	2.2	2	2.0	mg/Kg	10/31/03	AF
<b>Surrogates</b>				<b>Units</b>		<b>Control Limits</b>
o-Terphenyl (sur)	180			%		55 - 200

**8021B BTEX + MTBE**

Benzene	ND	1	0.005	mg/Kg	10/30/03	LT
Ethyl benzene	ND	1	0.005	mg/Kg	10/30/03	LT
Methyl t - butyl ether	ND	1	0.035	mg/Kg	10/30/03	LT
Toluene	ND	1	0.005	mg/Kg	10/30/03	LT
Xylene (total)	ND	1	0.015	mg/Kg	10/30/03	LT

**8015M - Gasoline**

Gasoline	ND	1	3	mg/Kg	10/30/03	LT
<b>Surrogates</b>				<b>Units</b>		<b>Control Limits</b>
a,a,a-Trifluorotoluene	134			%		55 - 200

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 473316

Client: Stellar Environmental Solutions

Matrix: SOLID

Client Sample ID: BH-7-15.5

Date Sampled: 10/28/2003

Time Sampled: 09:15

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
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**8015 TEPH Diesel**

TEPH Diesel	ND	1	1.0	mg/Kg	10/30/03 AF
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**Surrogates**

	Result	DF	DLR	Units	Control Limits
o-Terphenyl (sur)	75			%	55 - 200

**8021B BTEX + MTBE**

Benzene	ND	1	0.005	mg/Kg	10/30/03 LT
Ethyl benzene	ND	1	0.005	mg/Kg	10/30/03 LT
Methyl t - butyl ether	ND	1	0.035	mg/Kg	10/30/03 LT
Toluene	ND	1	0.005	mg/Kg	10/30/03 LT
Xylene (total)	ND	1	0.015	mg/Kg	10/30/03 LT

**8015M - Gasoline**

Gasoline	ND	1	3	mg/Kg	10/30/03 LT
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**Surrogates**

	Result	DF	DLR	Units	Control Limits
a,a,a-Trifluorotoluene	146			%	55 - 200

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 473317

Client: Stellar Environmental Solutions

Matrix: SOLID

Client Sample ID: BH-08-10

Date Sampled: 10/28/2003

Time Sampled: 10:00

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
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**8015 TEPH Diesel**

TEPH Diesel	1.0	1	1.0	mg/Kg	10/30/03	AF
<b>Surrogates</b>				<b>Units</b>		<b>Control Limits</b>
o-Terphenyl (sur)	56			%		55 - 200

**8021B BTEX + MTBE**

Benzene	ND	1	0.005	mg/Kg	10/30/03	LT
Ethyl benzene	ND	1	0.005	mg/Kg	10/30/03	LT
Methyl t - butyl ether	ND	1	0.035	mg/Kg	10/30/03	LT
Toluene	ND	1	0.005	mg/Kg	10/30/03	LT
Xylene (total)	ND	1	0.015	mg/Kg	10/30/03	LT

**8015M - Gasoline**

Gasoline	ND	1	3	mg/Kg	10/30/03	LT
<b>Surrogates</b>				<b>Units</b>		<b>Control Limits</b>
a,a,a-Trifluorotoluene	141			%		55 - 200

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor





Order #: 473318

Client: Stellar Environmental Solutions

Matrix: SOLID

Client Sample ID: BH-08-19.5

Date Sampled: 10/28/2003

Time Sampled: 10:10

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
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**8015 TEPH Diesel**

TEPH Diesel	2.0	1	1.0	mg/Kg	10/30/03	AF
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**Surrogates**

o-Terphenyl (sur)	94			%	55 - 200	
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**8021B BTEX + MTBE**

Benzene	ND	1	0.005	mg/Kg	10/30/03	LT
Ethyl benzene	ND	1	0.005	mg/Kg	10/30/03	LT
Methyl t - butyl ether	ND	1	0.035	mg/Kg	10/30/03	LT
Toluene	ND	1	0.005	mg/Kg	10/30/03	LT
Xylene (total)	ND	1	0.015	mg/Kg	10/30/03	LT

**8015M - Gasoline**

Gasoline	ND	1	3	mg/Kg	10/30/03	LT
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**Surrogates**

a,a,a-Trifluorotoluene	151			%	55 - 200	
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DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

**ASSOCIATED LABORATORIES**

Analytical Results Report



Order #: 473319

Client: Stellar Environmental Solutions

Matrix: SOLID

Client Sample ID: BH-04-18

Date Sampled: 10/28/2003

Time Sampled: 10:40

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
<b>8015 TEPH Diesel</b>					
TEPH Diesel	2.0	1	1.0	mg/Kg	10/30/03 AF
<b>Surrogates</b>				<b>Units</b>	<b>Control Limits</b>
o-Terphenyl (sur)	87			%	55 - 200

**8021B BTEX + MTBE**

Benzene	ND	1	0.005	mg/Kg	10/30/03 LT
Ethyl benzene	ND	1	0.005	mg/Kg	10/30/03 LT
Methyl t - butyl ether	ND	1	0.035	mg/Kg	10/30/03 LT
Toluene	ND	1	0.005	mg/Kg	10/30/03 LT
Xylene (total)	ND	1	0.015	mg/Kg	10/30/03 LT

**8015M - Gasoline**

Gasoline	ND	1	3	mg/Kg	10/30/03 LT
<b>Surrogates</b>				<b>Units</b>	<b>Control Limits</b>
a,a,a-Trifluorotoluene	153			%	55 - 200

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 473320

Client: Stellar Environmental Solutions

Matrix: WATER

Client Sample ID: BH-04-GW

Date Sampled: 10/28/2003

Time Sampled: 11:00

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
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**8015 TEPH Diesel**

TEPH Diesel	ND	1	0.1	mg/L	10/30/03 AF
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**Surrogates**

	Result	DF	DLR	Units	Control Limits
o-Terphenyl (sur)	87			%	55 - 200

**8021B BTEX + MTBE**

Benzene	ND	1	0.3	ug/L	10/29/03 LZ
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Ethyl benzene	ND	1	0.3	ug/L	10/29/03 LZ
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Methyl t - butyl ether	5.0	1	5	ug/L	10/29/03 LZ
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Toluene	ND	1	0.3	ug/L	10/29/03 LZ
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Xylene (total)	ND	1	0.6	ug/L	10/29/03 LZ
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**8260B BTEX/MTBE Only**

Methyl-tert-butylether (MTBE)	1.1	1	1	ug/L	11/06/03 LB
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**8015M - Gasoline**

Gasoline	ND	1	50	ug/L	10/29/03 LZ
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**Surrogates**

	Result	DF	DLR	Units	Control Limits
a,a,a-Trifluorotoluene	59			%	55 - 200

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 473321

Client: Stellar Environmental Solutions

Matrix: SOLID

Client Sample ID: BH-06-19,5

Date Sampled: 10/28/2003

Time Sampled: 11:20

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
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**8015 TEPH Diesel**

TEPH Diesel	ND	1	1.0	mg/Kg	10/31/03 AF
<b>Surrogates</b>				<b>Units</b>	<b>Control Limits</b>
o-Terphenyl (sur)	125			%	55 - 200

**8021B BTEX + MTBE**

Benzene	ND	1	0.005	mg/Kg	10/30/03 LT
Ethyl benzene	ND	1	0.005	mg/Kg	10/30/03 LT
Methyl t - butyl ether	ND	1	0.035	mg/Kg	10/30/03 LT
Toluene	ND	1	0.005	mg/Kg	10/30/03 LT
Xylene (total)	ND	1	0.015	mg/Kg	10/30/03 LT

**8015M - Gasoline**

Gasoline	ND	1	3	mg/Kg	10/30/03 LT
<b>Surrogates</b>				<b>Units</b>	<b>Control Limits</b>
a,a,a-Trifluorotoluene	151			%	55 - 200

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 473322

Client: Stellar Environmental Solutions

Matrix: WATER

Client Sample ID: BH-08-GW

Date Sampled: 10/28/2003

Time Sampled: 12:00

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
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**8015 TEPH Diesel**

TEPH Diesel	ND	1	0.1	mg/L	10/30/03 AF
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**Surrogates**

<b>Units</b>	<b>Control Limits</b>
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o-Terphenyl (sur)	133			%	55 - 200
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**8021B BTEX + MTBE**

Benzene	ND	1	0.3	ug/L	10/29/03 LZ
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Ethyl benzene	ND	1	0.3	ug/L	10/29/03 LZ
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Methyl t - butyl ether	ND	1	5	ug/L	10/29/03 LZ
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Toluene	ND	1	0.3	ug/L	10/29/03 LZ
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Xylene (total)	ND	1	0.6	ug/L	10/29/03 LZ
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**8015M - Gasoline**

Gasoline	ND	1	50	ug/L	10/29/03 LZ
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**Surrogates**

<b>Units</b>	<b>Control Limits</b>
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a,a,a-Trifluorotoluene	72			%	55 - 200
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DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 473323

Client: Stellar Environmental Solutions

Matrix: WATER

Client Sample ID: BH-06-GW

Date Sampled: 10/28/2003

Time Sampled: 12:50

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
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**8015 TEPH Diesel**

TEPH Diesel	ND	1	0.1	mg/L	10/30/03 AF
<b>Surrogates</b>				<b>Units</b>	<b>Control Limits</b>
o-Terphenyl (sur)	129			%	55 - 200

**8021B BTEX + MTBE**

Benzene	ND	1	0.3	ug/L	10/29/03 LZ
Ethyl benzene	ND	1	0.3	ug/L	10/29/03 LZ
Methyl t - butyl ether	70	2	10.0	ug/L	10/29/03 LZ
Toluene	ND	1	0.3	ug/L	10/29/03 LZ
Xylene (total)	ND	1	0.6	ug/L	10/29/03 LZ

**8260B BTEX/MTBE Only**

Methyl-tert-butylether (MTBE)	59	10	10.0	ug/L	11/06/03 LB
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**8015M - Gasoline**

Gasoline	92	1	50	ug/L	10/29/03 LZ
<b>Surrogates</b>				<b>Units</b>	<b>Control Limits</b>
a,a,a-Trifluorotoluene	61			%	55 - 200

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor



Order #: 473324

Client: Stellar Environmental Solutions

Matrix: WATER

Client Sample ID: BH-07-GW

Date Sampled: 10/28/2003

Time Sampled: 10:45

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
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**8015 TEPH Diesel**

TEPH Diesel	ND	1	0.1	mg/L	10/30/03 AF
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**Surrogates**

	Result	DF	DLR	Units	Control Limits
o-Terphenyl (sur)	94			%	55 - 200

**8021B BTEX + MTBE**

Benzene	ND	1	0.3	ug/L	10/30/03 LZ
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Ethyl benzene	ND	1	0.3	ug/L	10/30/03 LZ
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Methyl t - butyl ether	12	1	5	ug/L	10/30/03 LZ
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Toluene	ND	1	0.3	ug/L	10/30/03 LZ
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Xylene (total)	ND	1	0.6	ug/L	10/30/03 LZ
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**8260B BTEX/MTBE Only**

Methyl-tert-butylether (MTBE)	8.0	1	1	ug/L	11/06/03 LB
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**8015M - Gasoline**

Gasoline	52	1	50	ug/L	10/30/03 LZ
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**Surrogates**

	Result	DF	DLR	Units	Control Limits
a,a,a-Trifluorotoluene	58			%	55 - 200

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

**ASSOCIATED LABORATORIES**

Analytical Results Report



Order #: 473325

Client: Stellar Environmental Solutions

Matrix: SOLID

Client Sample ID: Laboratory Method Blank-S

Date Sampled:

Time Sampled:

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
<b>8015 TEPH Diesel</b>					
TEPH Diesel	ND	1	1.0	mg/Kg	10/30/03 AF
<b>Surrogates</b>				<b>Units</b>	<b>Control Limits</b>
o-Terphenyl (sur)	127			%	55 - 200

**8021B BTEX + MTBE**

Benzene	ND	1	0.005	mg/Kg	10/29/03 LT
Ethyl benzene	ND	1	0.005	mg/Kg	10/29/03 LT
Methyl t - butyl ether	ND	1	0.035	mg/Kg	10/29/03 LT
Toluene	ND	1	0.005	mg/Kg	10/29/03 LT
Xylene (total)	ND	1	0.015	mg/Kg	10/29/03 LT

**8260B Volatile Organic Compounds**

1,2-Dibromoethane	ND	1	5	ug/Kg	11/03/03 LB
1,2-Dichloroethane	ND	1	5	ug/Kg	11/03/03 LB
Ethyl-tertbutylether (ETBE)	ND	1	10	ug/Kg	11/03/03 LB
Isopropyl ether (DIPE)	ND	1	10	ug/Kg	11/03/03 LB
Methyl-tert-butylether (MTBE)	ND	1	5	ug/Kg	11/03/03 LB
Tert-amylmethylether (TAME)	ND	1	10	ug/Kg	11/03/03 LB
Tertiary butyl alcohol (TBA)	ND	1	50	ug/Kg	11/03/03 LB

**8015M - Gasoline**

Gasoline	ND	1	3	mg/Kg	10/29/03 LT
<b>Surrogates</b>				<b>Units</b>	<b>Control Limits</b>
a,a,a-Trifluorotoluene	125			%	55 - 200

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor





Order #: 473326

Client: Stellar Environmental Solutions

Matrix: WATER

Client Sample ID: Laboratory Method Blank-W

Date Sampled:

Time Sampled:

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
<b>8015 TEPH Diesel</b>					
TEPH Diesel	ND	1	0.1	mg/L	10/30/03 AF
<b>Surrogates</b>				<b>Units</b>	<b>Control Limits</b>
o-Terphenyl (sur)	171			%	55 - 200
<b>8021B BTEX + MTBE</b>					
Benzene	ND	1	0.3	ug/L	10/29/03 LZ
Ethyl benzene	ND	1	0.3	ug/L	10/29/03 LZ
Methyl t - butyl ether	ND	1	5	ug/L	10/29/03 LZ
Toluene	ND	1	0.3	ug/L	10/29/03 LZ
Xylene (total)	ND	1	0.6	ug/L	10/29/03 LZ
<b>8260B Volatile Organic Compounds</b>					
1,2-Dibromoethane	ND	1	5	ug/L	11/02/03 LB
1,2-Dichloroethane	ND	1	5	ug/L	11/02/03 LB
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L	11/02/03 LB
Isopropyl ether (DIPE)	ND	1	1	ug/L	11/02/03 LB
Methyl-tert-butylether (MTBE)	ND	1	1	ug/L	11/02/03 LB
Tert-amylmethylether (TAME)	ND	1	1	ug/L	11/02/03 LB
Tertiary butyl alcohol (TBA)	ND	1	10	ug/L	11/02/03 LB
<b>8015M - Gasoline</b>					
Gasoline	ND	1	50	ug/L	10/29/03 LZ

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

**ASSOCIATED LABORATORIES**

Analytical Results Report



ASSOCIATED LABORATORIES  
LCS REPORT FORM - METHOD 8260 / 624 / 524.2

QC Sample: LCS/LCSD - Water Samples

Analysis Date: 11/06/03

Applies to: LR 118884

Reporting Units = ug/L

**Lab Controlled Spike / Lab Controlled Spike Duplicate**

Test	Sample Result	Spike Added	LCS Spike	LCS Spk. Dup	%Rec LCS	%Rec LCS D	RPD	QC Limits	
								RPD	%REC
1,1-Dichloroethene	ND	50	55.25	57.80	111	116	5	22	59-172
MTBE	ND	50	47.78	51.28	96	103	7	24	62-137
Benzene	ND	50	47.78	50.03	96	100	5	24	62-137
Trichloroethene	ND	50	50.40	51.15	101	102	1	21	66-142
Toluene	ND	50	48.51	50.17	97	100	3	21	59-139
Chlorobenzene	ND	50	46.72	47.88	93	96	2	21	60-133

Method Blank = All ND

**SURROGATE ( QC Limits : 70-135 )**

Compounds	DBFM	1,2-DCA	Tol-d8	p-BFB
LCS	94	95	104	100
LCSD	99	99	102	100
BLANK # 2	95	103	102	102

ASSOCIATED LABORATORIES  
LCS REPORT FORM - METHOD 8260 / 624 / 524.2

QC Sample: LCS/LCSD - Water Samples

Analysis Date: 11/06/03

Applies to: LR 118884

Reporting Units = ug/L

**Lab Controlled Spike / Lab Controlled Spike Duplicate**

Test	Sample Result	Spike Added	LCS Spike	LCS Spk. Dup	%Rec LCS	%Rec LCS D	RPD	QC Limits	
								RPD	%REC
1,1-Dichloroethene	ND	50	58.90	60.37	118	121	2	22	59-172
MTBE	ND	50	54.69	54.93	109	110	0	24	62-137
Benzene	ND	50	51.92	51.54	104	103	1	24	62-137
Trichloroethene	ND	50	50.46	51.74	101	103	3	21	66-142
Toluene	ND	50	48.27	49.69	97	99	3	21	59-139
Chlorobenzene	ND	50	46.37	46.37	93	93	0	21	60-133

Method Blank = All ND

**SURROGATE ( QC Limits : 70-135 )**

Compounds	DBFM	1,2-DCA	Tol-d8	p-BFB
LCS	100	103	99	100
LCSD	100	101	100	101
BLANK # 2	100	106	104	107

ASSOCIATED LABORATORIES  
LCS REPORT FORM - METHOD 8260 / 624 / 524.2

QC Sample: LCS/LCSD - Soil Samples

Analysis Date: 11/05/2003 - 11/06/2003

Applies to: LR 118884

Reporting Units = ug/Kg

**Lab Controlled Spike / Lab Controlled Spike Duplicate**

Test	Sample Result	Spike Added	LCS Spike	LCS Spk. Dup	%Rec LCS	%Rec LCS D	RPD	QC Limits	
								RPD	%REC
1,1-Dichloroethene	ND	50	59.48	57.37	119	115	4	22	59-172
MTBE	ND	50	54.26	49.43	109	99	9	24	62-137
Benzene	ND	50	51.66	50.33	103	101	3	24	62-137
Trichloroethene	ND	50	50.91	50.80	102	102	0	21	66-142
Toluene	ND	50	49.03	48.65	98	97	1	21	59-139
Chlorobenzene	ND	50	46.90	45.25	94	91	4	21	60-133

Method Blank = All ND

**SURROGATE ( QC Limits : 70-135 )**

Compounds	DBFM	1,2-DCA	Tol-d8	p-BFB
LCS	100	104	100	102
LCSD	99	100	102	102
BLANK # 1	96	102	102	103

**ASSOCIATED LABORATORIES  
QA REPORT FORM**

QC Sample: LCS/LCSD  
 Matrix: WATER  
 Extraction Method : 3510 B  
 Prep. Date: 10/30/03  
 Analysis Date: 10/30/03  
 ID#'s in Batch: LR 118884, 118854, 118914, 118916  
 Reporting Units = mg/L

**PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS**

		PREP BLK						
		Value	Result	True	%Rec	L.Limit	H.Limit	
Test	Method	LCS	ND	1.10	1	110	70%	130%
DIESEL	8015D	LCSD	ND	1.04	1	104	70%	130%

*LCS Result = Lab Control Sample Result  
 True = True Value of LCS  
 L.Limit / H.Limit = LCS Control Limits*

**SURROGATE RECOVERY**

Sample No.	O-Terphenyl
QC Limit	55-200
Method Blank	171
LCS	125
LCSD	139

ASSOCIATED LABORATORIES  
LCS REPORT FORM

QC Sample: LCS / LCSD  
 Matrix: WATER  
 Prep. Date: 10/29/03  
 Analysis Date: 10/29/03-10/30/03  
 LAB ID#'s in Batch: LR 118884, 118868

REPORTING UNITS = mg/L

**PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS**

Test	Method	PREP. BLK	LCS			LCSD	
		Value	Result	TRUE	%Rec	Result	%Rec
Benzene	8021	ND	17.2	20	86	18.5	93
Toluene	8021	ND	19.5	20	98	20.1	101
Ethylbenzene	8021	ND	22.3	20	112	23.1	116
Xylenes	8021	ND	62.8	60	105	63.2	105

LCS = Lab Control Sample Result  
 TRUE = True Value of LCS  
 L.LIMIT / H.LIMIT = LCS Control Limits

L.Limit	H.Limit
80%	120%

**SURROGATE RECOVERY**

Sample No.	AAA-TFT
QC Limit	55-200
Method Blank	86
LCS	93
LCSD	95

AAA-TFT = *a,a,a*-Trifluorotoluene

**ASSOCIATED LABORATORIES  
LCS REPORT FORM**

QC Sample: LCS / LCSD

Matrix: SOLID

Prep. Date: 10/29/03

Analysis Date: 10/29/03-10/30/03

LAB ID#'s in Batch: LR 118884

REPORTING UNITS = mg/Kg

**PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS**

Test	Method	PREP. BLK	LCS			LCSD	
		Value	Result	TRUE	%Rec	Result	%Rec
Benzene	8021	ND	0.018	0.02	90	0.017	85
Toluene	8021	ND	0.018	0.02	90	0.019	95
Ethylbenzene	8021	ND	0.018	0.02	90	0.019	95
Xylenes	8021	ND	0.057	0.06	95	0.061	102

*LCS = Lab Control Sample Result*  
*TRUE = True Value of LCS*  
*L.LIMIT / H.LIMIT = LCS Control Limits*

<i>L.Limit</i>	<i>H.Limit</i>
80%	120%

**SURROGATE RECOVERY**

Sample No.	AAA-TFT
QC Limit	55-200
Method Blank	125
LCS	139
LCSD	136

*AAA-TFT = a,a,a-Trifluorotoluene*

ASSOCIATED LABORATORIES  
QA REPORT FORM

QC Sample: LCS / LCSD

Matrix: SOLID

Prep. Date: 10/29/03

Analysis Date: 10/29/03-10/30/03

ID#'s in Batch: LR 118884

Reporting Units = mg/Kg

**PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS**

		PREP BLK						
		Value	Result	True	%Rec	L.Limit	H.Limit	
Test	Method	LCS	ND	4.8	5	96	80%	120%
TPH	8015M-G	LCSD	ND	4.8	5	96	80%	120%

*LCS Result = Lab Control Sample Result*

*True = True Value of LCS*

*L.Limit / H.Limit = LCS Control Limits*

**SURROGATE RECOVERY**

Sample No.	AAA-TFT
QC Limit	55-200
Method Blank	125
LCS	190
LCSD	184

*AAA-TFT = a,a,a-Trifluorotoluene*



ASSOCIATED LABORATORIES  
LCS REPORT FORM - METHOD 8260 / 624 / 524.2

QC Sample: LCS/LCSD - Soil Samples

Analysis Date: 11/03/03

Applies to: LR 118884

Reporting Units = ug/Kg

**Lab Controlled Spike / Lab Controlled Spike Duplicate**

Test	Sample Result	Spike Added	LCS Spike	LCS Spk. Dup	%Rec LCS	%Rec LCS D	RPD	QC Limits	
								RPD	%REC
1-Dichloroethene	ND	50	57.81	52.38	116	105	10	22	59-172
MTBE	ND	50	54.84	50.50	110	101	8	24	62-137
Benzene	ND	50	53.72	49.38	107	99	8	24	62-137
Trichloroethene	ND	50	51.67	47.70	103	95	8	21	66-142
Toluene	ND	50	52.71	50.45	105	101	4	21	59-139
Chlorobenzene	ND	50	55.42	50.81	111	102	9	21	60-133

Method Blank = All ND

**SURROGATE ( QC Limits : 70-135 )**

Compounds	DBFM	1,2-DCA	Tol-d8	p-BFB
LCS	101	108	97	94
LCSD	101	103	100	94
BLANK # 1	96	101	100	97

ASSOCIATED LABORATORIES  
LCS REPORT FORM - METHOD 8260 / 624 / 524.2

QC Sample: LCS/LCSD - Soil Samples

Analysis Date: 11/03/03

Applies to: LR 118884

Reporting Units = ug/Kg

**Lab Controlled Spike / Lab Controlled Spike Duplicate**

Test	Sample Result	Spike Added	LCS Spike	LCS Spk. Dup	%Rec LCS	%Rec LCS D	RPD	QC Limits	
								RPD	%REC
1,1-Dichloroethene	ND	50	47.40	58.17	95	116	20	22	59-172
MTBE	ND	50	46.22	49.37	92	99	7	24	62-137
Benzene	ND	50	47.78	47.58	96	95	0	24	62-137
Trichloroethene	ND	50	45.40	45.97	91	92	1	21	66-142
Toluene	ND	50	46.19	46.88	92	94	1	21	59-139
Chlorobenzene	ND	50	46.11	46.30	92	93	0	21	60-133

Method Blank = All ND

**SURROGATE ( QC Limits : 70-135 )**

Compounds	DBFM	1,2-DCA	Tol-d8	p-BFB
LCS	96	87	97	97
LCSD	97	88	97	98
BLANK # 2	89	108	96	98

ASSOCIATED LABORATORIES  
**LCS REPORT FORM - METHOD 8260 / 624 / 524.2**

QC Sample: LCS/LCSD - Water Samples

Analysis Date: 11/02/03

Applies to: LR 118884

Reporting Units = ug/L

**Lab Controlled Spike / Lab Controlled Spike Duplicate**

Test	Sample Result	Spike Added	LCS Spike	LCS Spk. Dup	%Rec LCS	%Rec LCS D	RPD	QC Limits	
								RPD	%REC
1,1-Dichloroethene	ND	50	46.38	51.76	93	104	11	22	59-172
MTBE	ND	50	44.56	50.32	89	101	12	24	62-137
Benzene	ND	50	49.63	48.57	99	97	2	24	62-137
Trichloroethene	ND	50	47.54	47.83	95	96	1	21	66-142
Toluene	ND	50	49.40	48.83	99	98	1	21	59-139
Chlorobenzene	ND	50	47.63	48.08	95	96	1	21	60-133

Method Blank = All ND

**SURROGATE ( QC Limits : 70-135 )**

Compounds	DBFM	1,2-DCA	Tol-d8	p-BFB
LCS	97	87	98	98
LCSD	95	85	98	99
BLANK # 1	92	112	99	100

**ASSOCIATED LABORATORIES  
QA REPORT FORM**

QC Sample: LCS / LCSD  
 Matrix: WATER  
 Prep. Date: 10/29/03  
 Analysis Date: 10/29/03-10/30/03  
 ID#'s in Batch: LR 118868, 118884, 118778, 118724  
 Reporting Units = mg/L

**PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS**

		PREP BLK						
		Value	Result	True	%Rec	L.Limit	H.Limit	
Test	Method	LCS	ND	493	500	99	80%	120%
TPH	8015M-G	LCSD	ND	475	500	95	80%	120%

*LCS Result = Lab Control Sample Result*

*True = True Value of LCS*

*L.Limit / H.Limit = LCS Control Limits*

**SURROGATE RECOVERY**

Sample No.	AAA-TFT
QC Limit	55-200
Method Blank	86
LCS	113
LCSD	139

*AAA-TFT = a,a,a-Trifluorotoluene*

ASSOCIATED LABORATORIES  
QA REPORT FORM

QC Sample: LCS/LCSD  
 Matrix: SOLID  
 Extraction Method : 3545  
 Prep. Date: 10/30/03  
 Analysis Date: 10/30/03  
 ID#'s in Batch: LR 118884, 118566  
 Reporting Units = mg/Kg

**PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS**

		PREP BLK						
		Value	Result	True	%Rec	L.Limit	H.Limit	
Test	Method	LCS	ND	28.0	25	112	70%	130%
DIESEL	8015D	LCSD	ND	32.5	25	130	70%	130%

*LCS Result = Lab Control Sample Result*  
*True = True Value of LCS*  
*L.Limit / H.Limit = LCS Control Limits*

**SURROGATE RECOVERY**

Sample No.	O-Terphenyl
QC Limit	55-200
Method Blank	127
LCS	130
LCSD	132