RO 2512 DH

STELLAR ENVIRONMENTAL SOLUTIONS, INC.
2198 SIXTH STREET, SUITE 201, BERKELEY, CA 94710
TEL: 510.644.3123 FAX: 510.644.3859

TRANSMITTAL MEMORANDUM		
TO: ATLAS HEATING & AIR CONDITIONING 1451 32ND STREET OAKLAND, CA 9 4067		**DATE:** APRIL 27, 2004
ATTENTION: MR. ROBERT TUCK		**FILE:** 2003-36
SUBJECT: PRELIMINARY SITE ASSESSMENT REPORT 1451 32ND STREET, OAKLAND, CA		
WE ARE SENDING:	☒ HEREWITH	☐ UNDER SEPARATE COVER
	☒ VIA MAIL	☐ VIA
THE FOLLOWING:	"PRELIMINARY SITE ASSESSMENT REPORT" (DATED 4/13/2004)	
	☐ AS REQUESTED	☐ FOR YOUR APPROVAL
	☐ FOR REVIEW	☒ FOR YOUR USE
	☐ FOR SIGNATURE	☒ FOR YOUR FILES
COPIES TO: ALAMEDA COUNTY HEALTH CARE SERVICES (ATTN: BARNEY CHAN)		**BY:** Bruce Rucker

R02592

PRELIMINARY SITE ASSESSMENT REPORT

ATLAS HEATING & AIR CONDITIONING COMPANY
1451 – 32ND STREET
OAKLAND, CALIFORNIA

Prepared for

YOUR WARM FRIEND, INC.
D/B/A ATLAS HEATING AND AIR CONDITIONING COMPANY
OAKLAND, CALIFORNIA

April 2004

★ Stellar Environmental Solutions

Geoscience & Engineering Consulting

★ **Stellar Environmental Solutions**

2198 Sixth Street, Suite 201, Berkeley, CA 94710
Tel: (510) 644-3123 • Fax: (510) 644-3859
Geoscience & Engineering Consulting

April 13, 2004

Mr. Robert Tuck - President
Your Warm Friend, Inc.
d.b.a. Atlas Heating and Air Conditioning Co.
1451 32nd Street
Oakland, California 94607

Subject: Preliminary Site Assessment Report
Atlas Heating and Air Conditioning Company Facility
1451 32nd Street, Oakland, California

Dear Mr. Tuck:

This report documents the Preliminary Site Assessment conducted in March 2004 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, and was designed to evaluate residual soil and groundwater contamination. The work tasks included advancing, geologically logging, and sampling (soil and groundwater) nine exploratory boreholes in the immediate vicinity of two former onsite gasoline UFSTs. The data indicate that site soils and shallow groundwater have been impacted by gasoline, MTBE, and TBA above regulatory agency screening level criteria. Additional investigation (additional boreholes and/or installation and sampling of groundwater monitoring wells) will likely be required by Alameda County Department of Environmental Health (Alameda County Health) before it will consider regulatory closure. At your direction, this report has been forwarded to Alameda County Health for its evaluation.

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

Sincerely,

Bruce M. Rucker

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 Department of Environmental Health

PRELIMINARY SITE ASSESSMENT REPORT

ATLAS HEATING AND AIR CONDITIONING COMPANY 1451 32nd STREET OAKLAND, CALIFORNIA

Prepared for:

YOUR WARM FRIEND, INC.
d.b.a. ATLAS HEATING AND AIR CONDITIONING CO.
1451 32nd STREET
OAKLAND, CALIFORNIA 94607

Prepared by:

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

April 13, 2004

Project No. 2003-36

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1.0 INTRODUCTION

PROJECT BACKGROUND

Stellar Environmental Solutions, Inc. (SES) was retained by Your Warm Friend, Inc. (d.b.a. Atlas Heating and Air Conditioning Company) to conduct a Preliminary Site Assessment (exploratory borehole drilling and sampling investigation) associated with a documented release from two 2,000-gallon gasoline underground fuel storage tank (UFSTs) at 1451 32nd Street in Oakland, California. Your Warm Friend, Inc. is the current site occupant, and is the owner/operator of the former UFSTs. Between December 2000 and April 2001 the UFSTs were removed, and contaminated soil and groundwater corrective actions were conducted. That work was conducted by a contractor that did not complete an UFST removal closure report, and has since gone out of business.

SES was retained by the property owner to complete a closure report (SES, 2003a) discussing the UFST removals (using information provided by one of the principals of the UFST removal contractor). The closure report was submitted to both the City of Oakland Fire Department (UFST removal permitting agency) and the Alameda County Department of Environmental Health - Local Oversight Program (Alameda County Health), the local lead agency responsible for petroleum releases.

Alameda County Health assigned the site as Fuel Leak Case No. RO002592. On behalf of the property owner, SES submitted a technical workplan for implementing a Preliminary Site Assessment to address potential residual soil and groundwater contamination (Stellar Environmental Solutions, Inc., 2004a). Alameda County Health responded with a letter (February 26, 2004) approving the proposed scope of work, with a request for one additional borehole to be advanced beyond the inferred upgradient limit of the subject property (Alameda County Department of Environmental Health, 2004a). Alameda County Health also required that a preferential pathway survey and a vicinity water well survey be conducted. The implemented scope of work discussed herein was in full accordance with the SES workplan and the additional activities requested by Alameda County Health.

SITE AND VICINITY DESCRIPTION

The project site is an active mechanical contracting company (Atlas Heating and Air Conditioning Company) located at 1451 32nd Street, Oakland, Alameda County, California (site). Figure 1 is a site location map. Figure 2 shows the location of the former site UFSTs in relation to the site buildings and adjacent streets.

UFST DESCRIPTIONS AND USAGE HISTORY

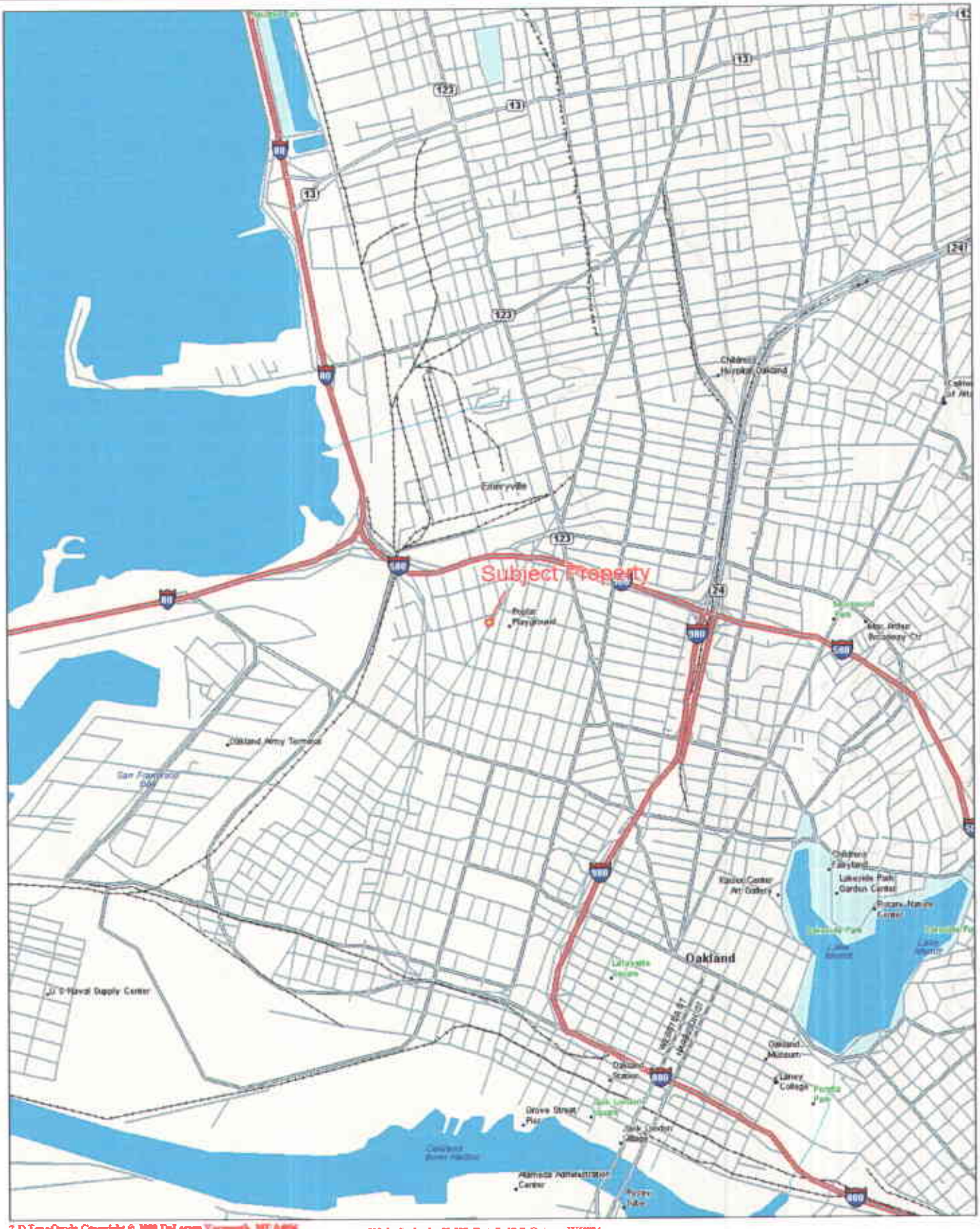
The two UFSTs were located in the southeast portion of the property, immediately adjacent to (west of) the Louise Street sidewalk. From 1979 to 1999, the UFSTs were used to fuel company cars and light trucks. The UFSTs were cylindrical, single-walled steel, and were installed in a common sand- and pea gravel-backfilled excavation slightly larger than the UFSTs. The top of the UFSTs had several ports/pipes typical of such UFSTs, including fill port, turbine, dispenser piping connection, and vent pipe. The UFST dispensers were located immediately adjacent to (east of) the UFSTs, between the UFSTs and the Louise Street sidewalk. The UFSTs were oriented with the long axis approximately east-west.

UFST REMOVAL FINDINGS

The UFSTs were removed in December 2000, creating a common excavation measuring 11 feet deep by 18 feet long by 13 feet wide. In removing the UFTSs and the obviously contaminated soil, a total of approximately 80 tons of backfill material was excavated, and temporarily stockpiled onsite. Excavation confirmation and stockpile soil sampling was conducted in February 2001. One soil sample was collected from each of the four excavation sidewalls, at a depth of approximately 7 feet, just above the excavation water level. One of the sidewall soil samples (location not specified in available data) contained gasoline and xylenes above current regulatory agency screening-level criteria, and neither benzene nor MTBE were detected. However, in one excavation "grab" groundwater sample, contaminants were detected above current regulatory agency screening-level criteria—including gasoline, benzene, and MTBE. Table 1 (in Section 3.0) summarizes the analytical results for the UFST removal activities.

CURRENT OBJECTIVES AND SCOPE OF WORK

The current investigation was conducted to evaluate the magnitude and probable extent of residual soil and groundwater contamination in the area of the former UFSTs. To accomplish this objective, SES advanced and sampled (soil and groundwater) exploratory boreholes in areas likely to intercept any residual contamination.



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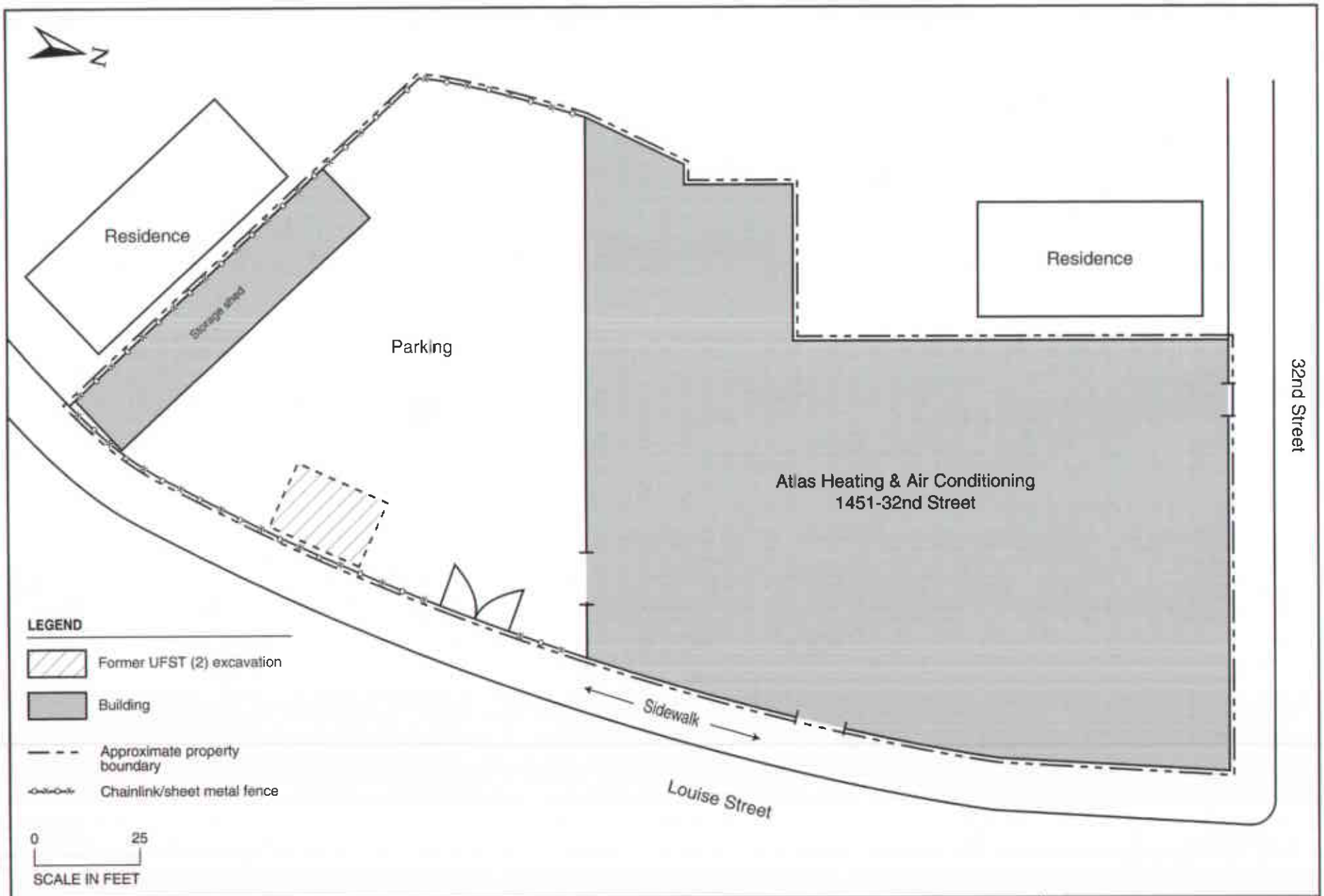
SITE LOCATION ON U.S.G.S. TOPOGRAPHIC MAP

1451 32nd Street Oakland, CA	By: MJC	APRIL 2004	★ Stellar Environmental Solutions, Inc. Geoscience & Engineering Consulting
	Figure 1		

2003-36-01



Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

SITE PLAN AND ADJACENT LAND USE
Atlas Heating & Air Conditioning, 1451-32nd Street, Oakland, CA

Figure 2

by: MJC | FEBRUARY 2004

2003-36-06

2.0 MARCH 2004 SITE INVESTIGATION

This section summarizes exploratory borehole drilling and sampling investigation activities conducted by SES at the subject property in March 2004. Figures 3 and 4 (in Section 3.0) show the borehole locations. Appendix A contains permits we obtained on behalf of the owner. Appendix B contains photodocumentation of the investigation field activities. Appendix C contains borehole geologic logs.

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. While regional shallow groundwater flow direction is generally to the west, it often can vary locally. The program included boreholes on all sides of the former UFST excavation, with higher borehole density to the northwest, west, and southwest of the former USTS, in anticipation of the likely range of groundwater flow direction. This approach maximized the likelihood of encountering UFST-sourced groundwater contamination in light of the uncertain groundwater flow direction. The one inferred upgradient (on Louise Street, to the east) borehole could also provide information on any offsite-sourced petroleum contamination migrating onto the subject property, or to confirm if there was a local groundwater flow reversal.

PRE-FIELD WORK PLANNING AND PERMITTING

The following pre-field work planning and permitting tasks were conducted prior to drilling:

- We marked the drilling locations and contacted Underground Service Alert of Northern California (USA North), per its requirements, so it could notify potential underground utility owners.
- As part of the preferential pathway survey (discussed in Section 4.0 of this report), a private utility locating firm was retained by SES; that firm confirmed the locations of onsite underground utilities within the drilling area.
- A drilling permit was obtained from Alameda County Public Works Agency.
- An excavation permit (required for the borehole drilled on Louise Street) was obtained from the City of Oakland Engineering Department.

- A site-specific Health & Safety Plan was prepared.

SAMPLING ACTIVITIES

Exploratory borehole drilling and sampling was conducted on March 23 and 24, 2004. Drilling was conducted by Gregg Drilling & Testing, Inc. (C-57 License No. 485165) under the direct supervision of a SES California Registered Geologist. The boreholes were drilled with a truck-mounted Geoprobe™ rig. Boreholes were drilled with 2.5-inch-diameter steel drive casings 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 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.

Two soil samples were collected for laboratory analysis from each borehole. The upper soil sample was one from the unsaturated zone 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.

Before deepening the borehole through the water-bearing zone (and into the underlying aquitard), we collected a "grab" groundwater sample (with a new disposable bailer). The borehole was then deepened completely through the water-bearing zone and into the underlying aquitard (clay) unit. In each borehole, a second soil sample was collected for laboratory analysis from this clay unit, to document the base of contamination.

Water levels were measured during and after drilling to evaluate first occurrence of groundwater and to determine whether groundwater occurred under unconfined or confining conditions. However, piezometers were not constructed and we cannot confirm that our "final" groundwater depths measured in boreholes were fully equilibrated.

Following completion of drilling and sampling activities, the boreholes were tremie-grouted to surface with a slurry of neat Portland cement and potable water.

Soil samples were collected from the more distal boreholes BH-08 and BH-09 and held in the laboratory. Based on the absence of soil contamination in the more proximal boreholes (see Section 3.0), these soil samples were not analyzed.

3.0 ANALYTICAL RESULTS AND FINDINGS

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. A total of nine boreholes were drilled (all to 24-foot depth).

Lithology

Per the borehole geologic logs, native soil consisted primarily of clay (often silty, occasionally gravelly) to a depth of at least 15 feet. In seven of the nine boreholes, the upper clay unit was underlain by an approximately 1- to 3-foot-thick sand or gravel unit at depths between approximately 19.5 feet (top) and 24 feet (deepest depth logged). In two of the boreholes, a more shallow (approximately 1.5- to 3.5-foot-thick) sand or gravel unit was encountered, at depths between approximately 15 feet (top) and 18.5 feet (bottom). In those two boreholes, the upper and lower sand/gravel units were separated by a cohesive clay.

Borehole BH-02 was advanced through the former UFST excavation. This borehole encountered fill material (clayey gravel) to a depth of approximately 10 feet below grade, underlain by native soil, as described above.

Hydrogeology

In all boreholes, there was no evidence of water to a depth of at least 16 feet (either by visibly wet samples or by measuring with a water level meter). Depths to first water varied between approximately 16.5 feet and 19.5 feet (within the upper shallow sand/gravel units). In all boreholes, water levels rose at least 3 feet and in some boreholes up to 10 feet above the depth of first occurrence, indicating semi-confining or confining conditions.

In some of the boreholes, water was again encountered in the lower sand/gravel unit. These two water-bearing units may be inter-connected or may be hydraulically distinct. In all boreholes except BH-03 and BH-06, a cohesive, unsaturated clay unit was encountered below the lower water-bearing zone. In those boreholes, the bottom of the saturated unit was not encountered.

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 (between southwest and northwest) based on lithology. As discussed in the following section, the footprint of the groundwater contamination suggests a local east to east-southeast groundwater flow direction.

In an attempt to more fully evaluate local groundwater flow direction, we conducted a search of the State of California "GeoTracker" (online) database of reported fuel leak sites. This database sometimes has information on groundwater flow direction ("GeoMap") and/or groundwater depths ("GeoWell"). We identified five reported fuel leak cases within approximately 1 mile of the Atlas site. Four of the site cases were closed (and had no information on groundwater hydrology). One site (2856 Helen Street) is located several hundred feet to the south-southwest, and is an active case. However there was no information on groundwater hydrology.

We also reviewed the physical setting summary (including groundwater flow direction) in a commercially-available regulatory database [commissioned for a separate SES project (Stellar Environmental Solutions, Inc., 2003b)]. These databases document approximately 14 sites within approximately 1 mile of the project site, with reported groundwater flow directions. Reported groundwater flow directions include: west (6 of 14); south (3 of 14); northeast (2 of 14); and east, southwest, and southeast (1 each). Appendix C contains a copy of that map. These data confirm that local groundwater flow direction varies widely in this area.

ANALYTICAL RESULTS AND EXTENT AND MAGNITUDE OF RESIDUAL CONTAMINATION

UFST Removal Samples

Soil

While four discrete soil samples were collected in February 2001 from the UFST excavation sidewalls, the location of each sample (i.e., which sidewall) was not specified in available documentation. One of the four sidewall samples contained gasoline and MTBE above regulatory agency screening-level criteria [RWQCB Environmental Screening Levels (ESLs), 2004]. Those concentrations were 250 mg/kg (gasoline) and 9,700 ~~mg~~/kg MTBE. Table 1 summarizes the historical UFST removal soil sampling analytical results.

Table 1
Underground Fuel Storage Tank Removal Analytical Results
1451 32nd Street, Oakland, California
(Samples collected February 2, 2001)

Sample ID	Sample Depth (feet)	TVHg	Benzene	Toluene	Ethyl benzene	Total Xylenes	MTBE	Total Lead
EXCAVATION CONFIRMATION SOIL SAMPLES (concentrations in µg/kg)								
S1	7'	*< 1,000*	*< 5*	*< 5*	*< 5*	*< 5*	*< 50*	24,000
S2	7'	*< 1,000*	*< 5*	*< 5*	*< 5*	*< 5*	*< 50*	6,900
S3	7'	250,000	*< 5*	120	870	9,700	*< 100*	12,000
S4	7'	35,000	*< 5*	17	12	530	*< 50*	10,000
S1-S4 [a] [analyzed only for soluble lead (concentration in µg/L)]								280
	Soil ESLs [b]	100,000	44	2,900	3,300	1,500	23	750,000
	Soil ESLs [c]	400,000	380	9,300	13,000	1,500	5,600	750,000
STOCKPILED SOIL SAMPLES (concentrations in µg/kg)								
West 1-4 Composite [d]	Not applicable	6,500	*< 5*	30	*< 5*	21	*< 5*	6,600
East 1-4 Composite [d]	Not applicable	*< 1,000*	*< 5*	*< 5*	*< 5*	26	*< 5*	14,000
PIT WATER SAMPLE (concentration in µg/L)								
W-1	9'	400	6.3	1.3	*< 0.5*	10	11,000	0.010
	Groundwater ESLs [e]	100	1.0	40	30	13	5.0	2.5
	Groundwater ESLs [f]	500	46	130	300	13	1,800	2.5

Notes:

[a] Sample is a 4-point composite from samples S1-S4.
[b] For surface soil (<10 feet deep) at commercial/industrial sites where groundwater is a current or potential drinking water source.
[c] For surface soil (<10 feet deep) at commercial/industrial sites where groundwater is not a current or potential drinking water source.
[d] Sample is a 4-point composite of approximately 40 cubic yards.
[e] For commercial/industrial sites where a drinking water resource is threatened.
[f] For commercial/industrial sites where a drinking water resource is not threatened.

NA = Not Analyzed for this constituent.
ESLs = Regional Water Quality Control Board, San Francisco Bay Region "Environmental Screening Levels (2004)."
TVHg = Total volatile hydrocarbons – gasoline range.

Water

One "grab" groundwater sample was collected from the UFST excavation in February 2001. Contaminants detected above ESL criteria included MTBE (11,000 µg/L); benzene (6.3 µg/L); and gasoline (400 µg/L). Neither dissolved lead nor BTEX were detected.

March 2004 Borehole Samples

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. Appendix D contains the certified analytical laboratory report and chain-of-custody record. Soil and groundwater samples in the March 2004 borehole sampling program were analyzed for:

- Total volatile hydrocarbons – gasoline range (TVHg), by EPA Method 8015M.
- MTBE and BTEX, by EPA Method 8260.
- Two lead scavengers (EDB and EDC) and fuel oxygenates (TAME, ETBE, DIPE, TBA, and ethanol), by EPA Method 8260.

Soil and groundwater samples collected from inferred downgradient boreholes BH-08 and BH-09 were initially held in the laboratory, pending evaluation of the results from boreholes nearer the UFSTs. Based on those results, groundwater samples from BH-08 and BH-09 were analyzed; however, the soil samples from those boreholes were not analyzed.

Table 1 summarizes historical (UFST removal) soil and groundwater sample results. Table 2 and Figure 3 summarize the March 2004 borehole soil analytical results. Table 3 and Figure 4 summarize March 2004 borehole "grab" groundwater sample results.

Soil Contamination

The primary soil contaminants detected include MTBE and the fuel oxygenates TBA and TAME. Gasoline was detected at an elevated concentration in only borehole soil sample (BH-06-19') at 254,000 µg/kg. Contaminants analyzed for and not detected in soil include benzene, toluene, and ethylbenzene. Ethylbenzene was detected in only borehole, at a trace concentration of 1.6 µg/kg at a depth of 20.5 feet, likely reflecting capillary fringe input.

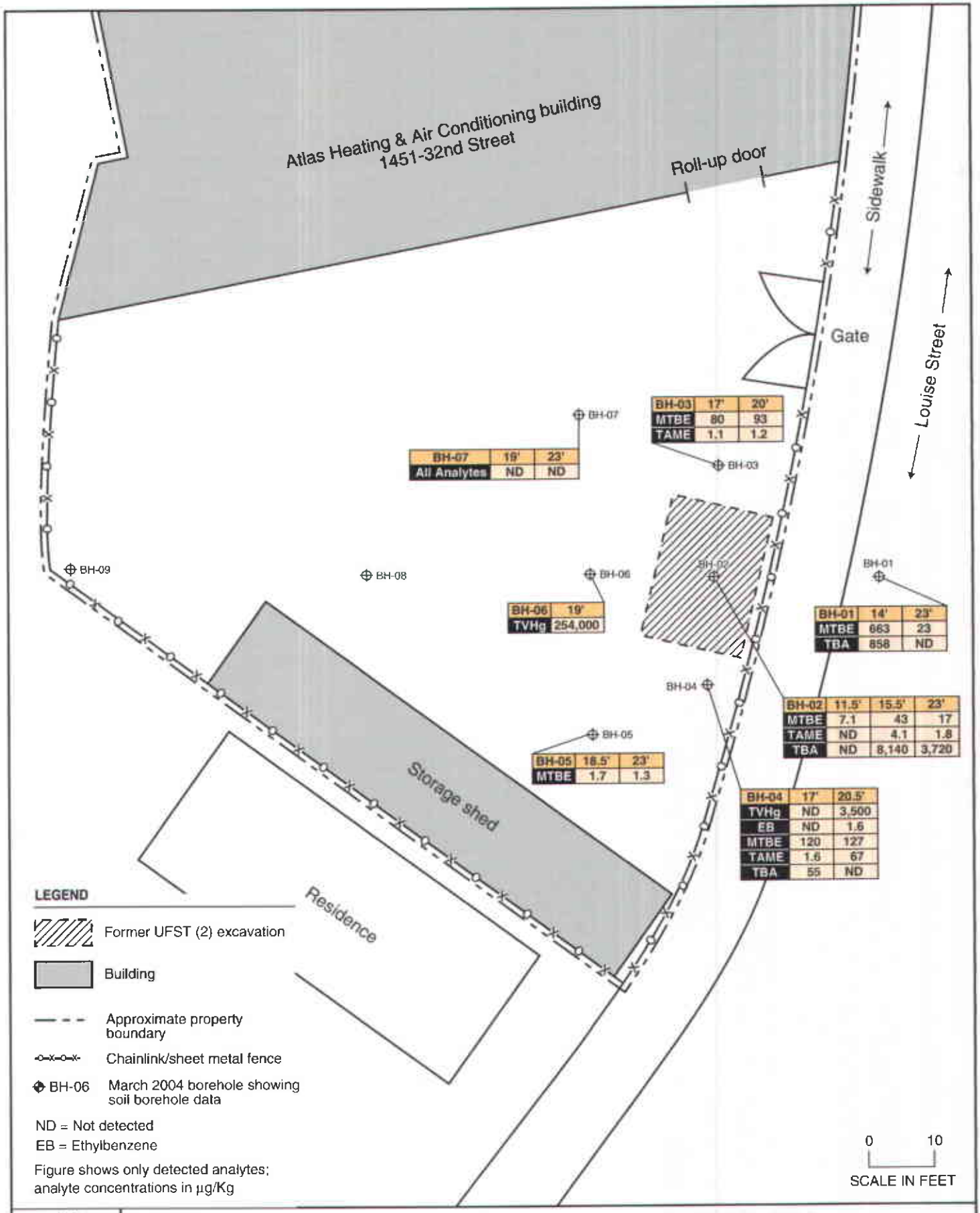
In general, the deeper samples (in the low-permeability clay underlying the water-bearing zone) had lower or approximately the same contaminant concentrations than the samples collected from the capillary fringe. Contaminants detected above regulatory agency screening-level criteria (see Section 5.0) in the deeper clay zone include MTBE and TBA.

Table 2
March 2004 Borehole Soil Analytical Results
1451 32nd Street, Oakland, California [a]

Sample I.D.	Sample Depth (feet)	TVHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TBA [b]	TAME [b]
BH-01-14'	14	*<3,000*	*<25*	*<25*	*<25*	<25	663	858	*<50*
BH-01-23'	23	*<3,000*	*<5*	*<5*	*<5*	<5	23	*<50*	*<10*
BH-02-11.5'	11.5	*<3,000*	*<5*	*<5*	*<5*	<5	7.1	*<50*	*<10*
BH-02-15.5'	15.5	*<3,000*	*<5*	*<5*	*<5*	<5	43	8,140	4.1 [c]
BH-02-23'	23	*<3,000*	*<5*	*<5*	*<5*	<5	17	3,720	1.8 [c]
BH-03-17'	17	*<3,000*	*<5*	*<5*	*<5*	<5	80	*<50*	1.1 [c]
BH-03-20'	20	*<3,000*	*<5*	*<5*	*<5*	<5	93	*<50*	1.2 [c]
BH-04-17.5'	17	*<3,000*	*<5*	*<5*	*<5*	<5	120	55	1.6 [c]
BH-04-20.5'	20.5	*3,500*	*<5*	*<5*	1.6 [c]	<5	127	67	*<10*
BH-05-18.5'	18.5	*<3,000*	*<5*	*<5*	*<5*	<5	1.7 [c]	*<50*	*<10*
BH-05-23.5'	23.5	*<3,000*	*<5*	*<5*	*<5*	<5	1.3 [c]	*<50*	*<10*
BH-06-19'	19	254,000	*<5*	*<5*	*<5*	<5	*<5*	*<50*	*<10*
BH-07-19'	19	*<3,000*	*<5*	*<5*	*<5*	<5	*<5*	*<50*	*<10*
BH-07-23'	23	*<3,000*	*<5*	*<5*	*<5*	<5	*<5*	*<50*	*<10*
	Soil ESLs [d]	100,000	44	2,900	3,300	1,500	23	73	NLP
	Soil ESLs [e]	400,000	380	9,300	13,000	1,500	5,600	110,000	NLP

Notes:

[a] All concentrations in µg/kg.
[b] Table reports only detected fuel oxygenates. Full list of analytes is included in Appendix D.
[c] Concentration detected below method reporting limit, and is a quantitative approximation.
[d] For surface soil (<10 feet deep) at commercial/industrial sites where groundwater is a current or potential drinking water source.
[e] For surface soil (<10 feet deep) at commercial/industrial sites where groundwater is not a current or potential drinking water source.
ESLs = Regional Water Quality Control Board, San Francisco Bay Region "Environmental Screening Levels (2004)."
TVHg = Total volatile hydrocarbons – gasoline range; MTBE = Methyl tertiary-butyl ether; TBA = tertiary-butyl alcohol; TAME = tertiary-amyl methyl ether.
NLP = No Level Published



SOIL CONTAMINANT CONCENTRATIONS—MARCH 2004

1451-32nd Street Oakland, CA	By: MJC	APRIL 2004	★ Stellar Environmental Solutions, Inc. Geoscience & Engineering Consulting
	Figure 3		

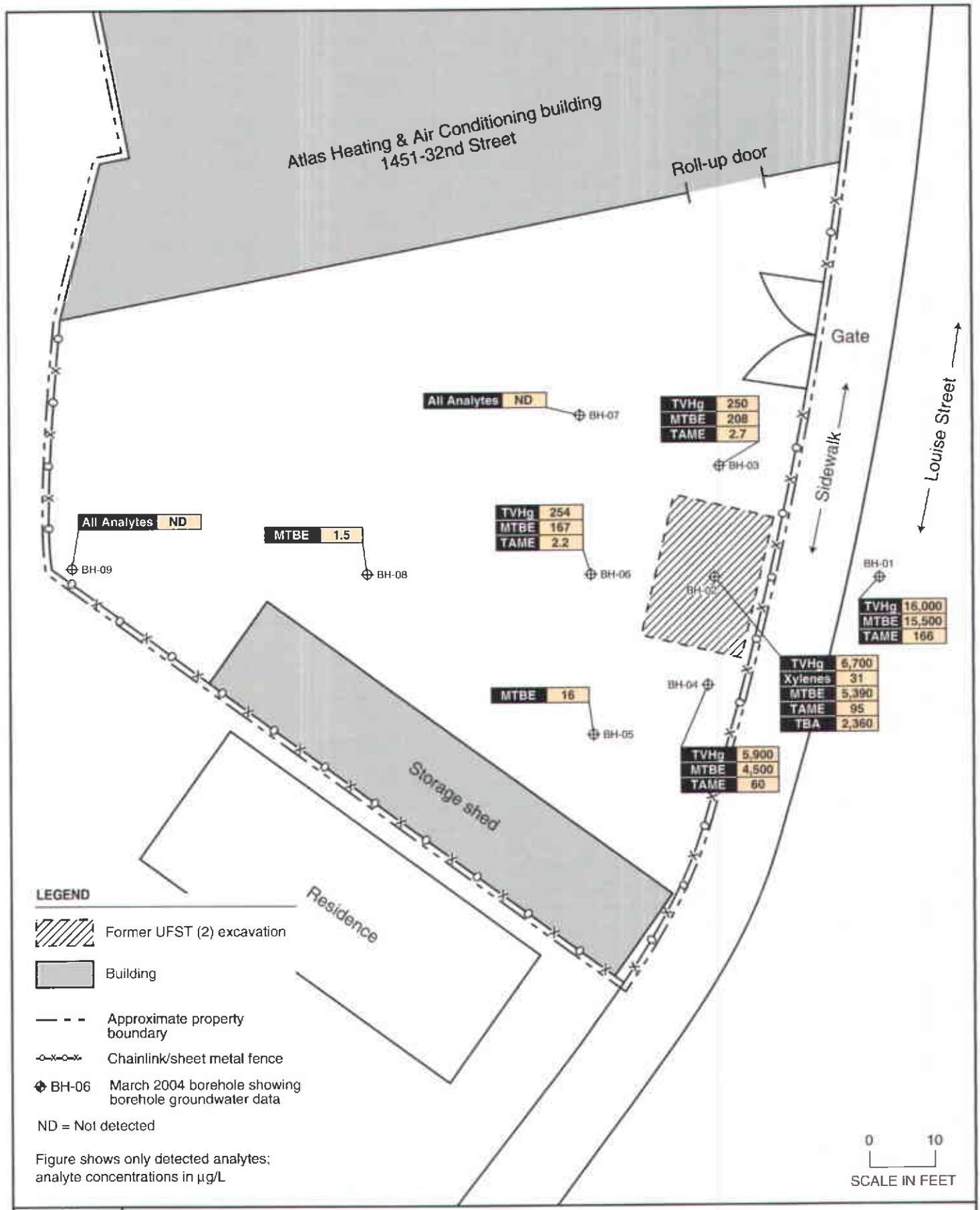
2003-36-29

Table 3
March 2004 Borehole Groundwater Analytical Results
1451 32nd Street, Oakland [a]

Sample I.D.	TVHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE [b]	TBA [b]	TAME [b]
BH-01-GW	16,000	*<100*	*<500*	*<500*	*<500*	15,500	*<1,000*	*<1,000*
BH-02-GW	6,700	*<10*	*<50*	*<50*	31(c)	5,390	2,360	95
BH-03-GW	250	*<1.0*	*<5.0*	*<5.0*	*<5.0*	208	*<10*	2.7
BH-04-GW	5,900	*<25*	*<125*	*<125*	*<125*	4,500	*<250*	60
BH-05-GW	*<50*	*<1.0*	*<5.0*	*<5.0*	*<5.0*	16	*<10*	*<1.0*
BH-06-GW	*254*	*<1.0*	*<5.0*	*<5.0*	*<5.0*	167	*<10*	2.2
BH-07-GW	*<50*	*<1.0*	*<5.0*	*<5.0*	*<5.0*	*<1.0*	*<10*	<1
BH-08-GW	*<50*	*<1.0*	*<5.0*	*<5.0*	*<5.0*	1.5	*<10*	*<1.0*
BH-09-GW	*<50*	*<1.0*	*<5.0*	*<5.0*	*<5.0*	*<1.0*	*<10*	*<1.0*
Groundwater ESLs [c]	100	1.0	40	30	13	5.0	12	NLP
Groundwater ESLs [d]	500	46	130	300	13	1,800	18,000	NLP

Notes:

[a] All concentrations in µg/L.
[b] Table reports only detected fuel oxygenates. Full list of analytes is included in Appendix D.
[c] For commercial/industrial sites where a drinking water resource is threatened.
[d] For commercial/industrial sites where a drinking water resource is not threatened.
ESLs = Regional Water Quality Control Board, San Francisco Bay Region "Environmental Screening Levels (2004)."
TVHg = Total volatile hydrocarbons – gasoline range
MTBE = Methyl tertiary-butyl ether
TBA = tertiary-butyl alcohol
TAME = tertiary-amyl methyl ether.
NLP = No Level Published.



GROUNDWATER CONTAMINANT CONCENTRATIONS—MARCH 2004

1451-32nd Street Oakland, CA	By: MJC	APRIL 2004
	Figure 4	

Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

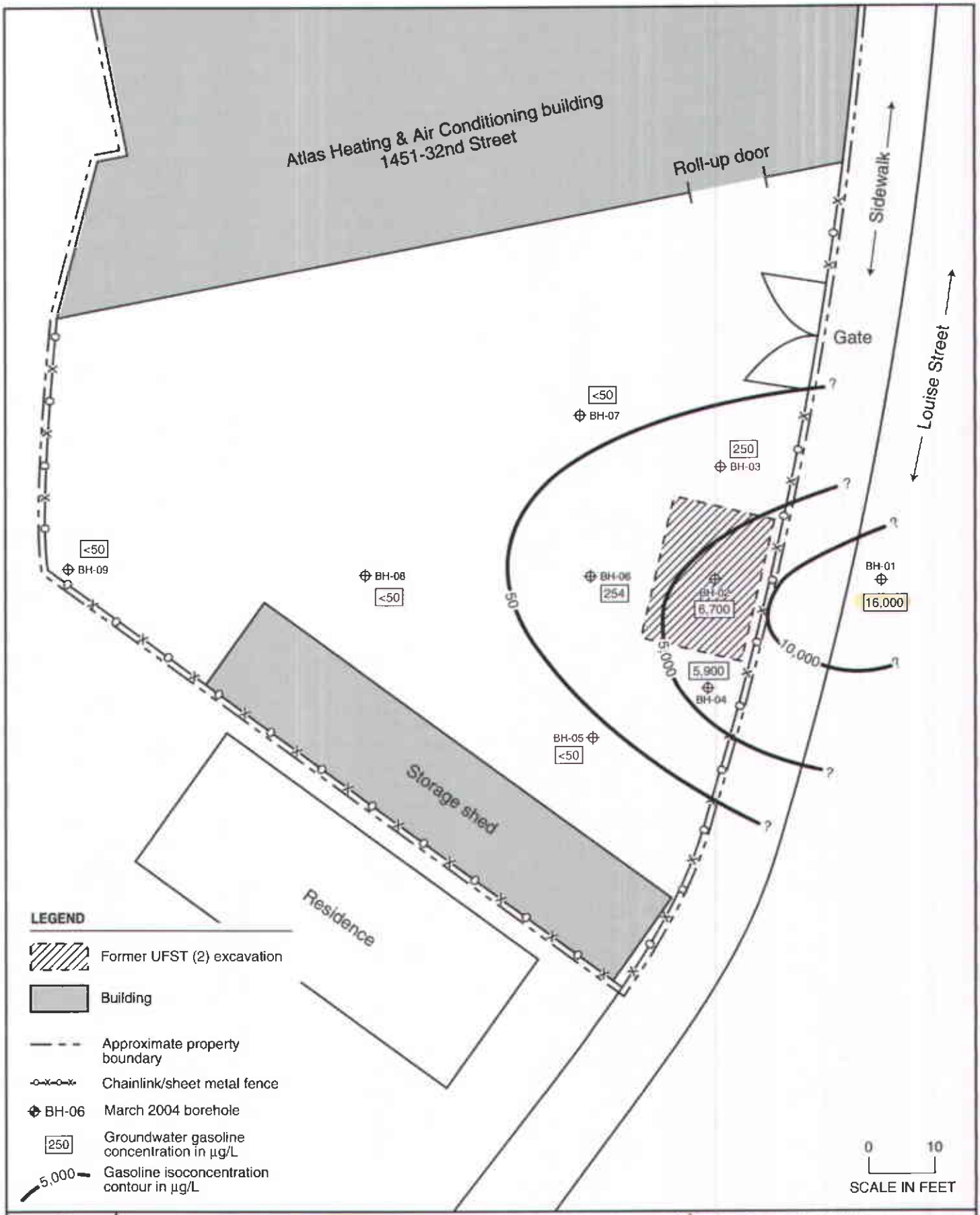
2003-06-30

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

The primary detected groundwater contaminants include gasoline, MTBE, TBA, and TAME. Xylenes were detected in only one borehole (BH-02). Contaminants analyzed for and not detected include benzene, toluene, and ethylbenzene. Note that the method reporting limits for BTEX were increased several fold for the BH-01 and BH-04 groundwater samples due to elevated MTBE and TVHg concentrations that required sample dilution. Therefore, method reporting limits for BTEX in these samples are above the groundwater ESL criteria.

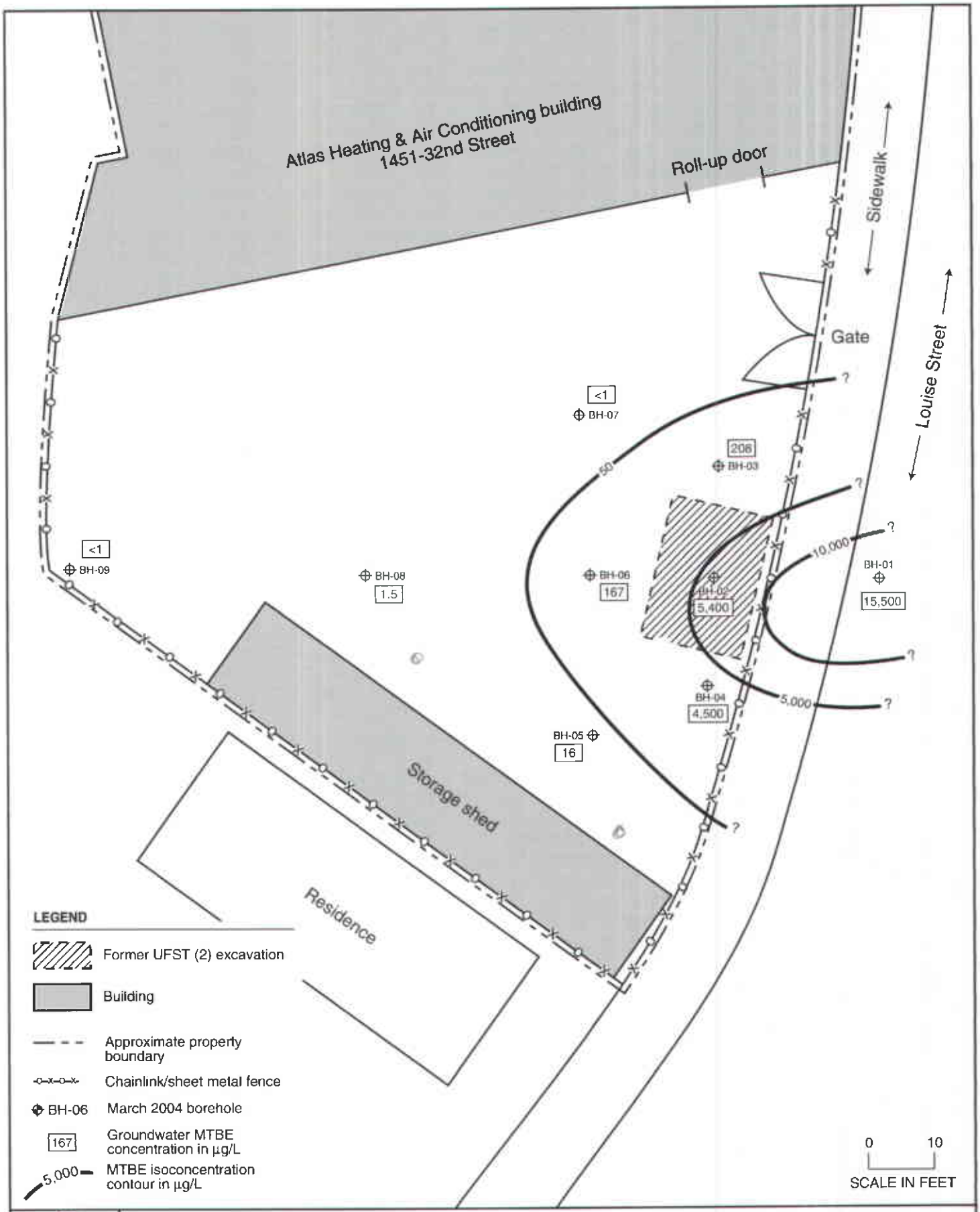
The dissolved gasoline and MTBE concentrations displayed a wide range of concentrations in the nine boreholes. Figures 5 and 6 show isoconcentration contours for gasoline and MTBE, respectively. For both gasoline and MTBE, maximum detected concentrations were at BH-01, approximately 20 feet east of the former UFSTs. The second highest contaminant concentrations are associated with borehole BH-02, installed through the former UFST backfill area, followed by BH-04, within 10 feet south of the excavation. The remaining five boreholes, mainly to the west and north, show a rapidly attenuating pattern with more distal boreholes BH-05, BH-07, BH-08, and BH-09 showing trace to non-detectable levels of gasoline or MTBE. The southern and eastern limits of groundwater contamination have not been defined, while the northern and western limits have been fairly well characterized. Two fuel oxygenates (TAME and TBA) were detected at elevated concentrations, with TBA at the highest concentration of 2,360 µg/L, which is confined to BH-02 in the area of the former excavation.



GASOLINE GROUNDWATER ISOCONCENTRATIONS—MARCH 2004

1451-32nd Street Oakland, CA	By: MJC	APRIL 2004	★ Stellar Environmental Solutions, Inc. Geoscience & Engineering Consulting
	Figure 5		

2003-36-27



GROUNDWATER MTBE ISOCONCENTRATIONS—MARCH 2004

1451-32nd Street Oakland, CA	By: MJC	APRIL 2004	★ Stellar Environmental Solutions, Inc. Geoscience & Engineering Consulting
	Figure 6		

2003-36-28

4.0 PREFENTIAL PATHWAY AND WATER WELL SURVEYS

This section presents the methods and findings of the preferential pathway and offsite well surveys requested in the Alameda County Health letter of February 26, 2004.

PREFERENTIAL PATHWAY SURVEY

Alameda County Health requested that a survey be conducted to identify potential preferential horizontal/vertical contaminant migration pathways that might be influencing site-sourced contaminant transport. This task focused on identifying both the location and depth of potential underground facilities, and included three components:

1. Contacting applicable municipal agencies and utility providers to obtain underground construction data;
2. Retaining a private utility locating firm to locate onsite utilities; and
3. Contacting USA North, which notified all known utility providers in the area; the utility providers will then be responsible for marking the locations of underground utilities servicing the property.

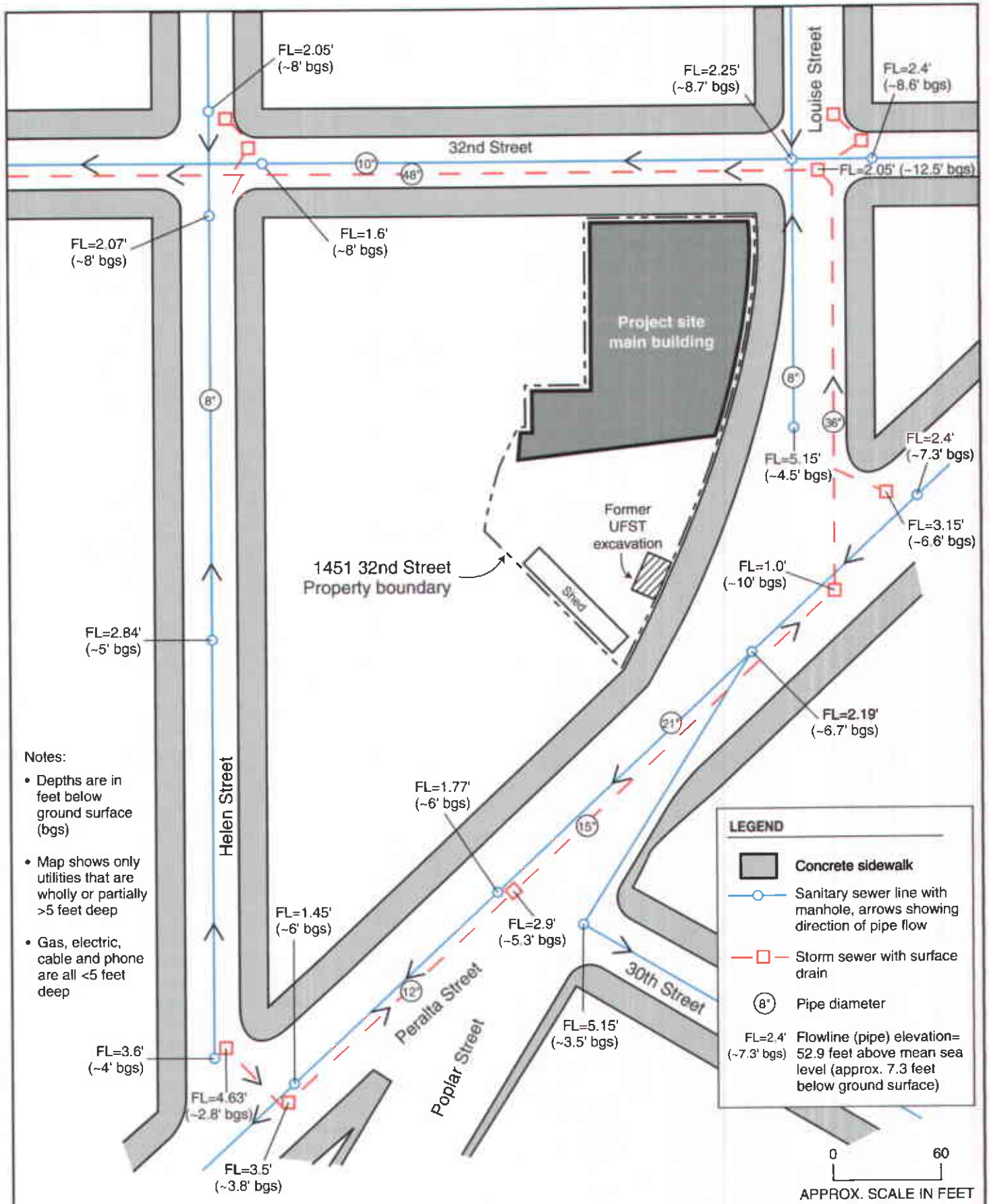
Table 4 summarizes the findings of the survey. Figure 7 shows the location of the documented utilities that are wholly or partially deeper than 5 feet below grade. We identified the following underground utilities (all located beneath surrounding streets and sidewalks): sanitary sewer, storm sewer, potable water, electric, and natural gas. The majority of these utilities were at a depth above 5 feet below grade.

Two utilities were identified to be wholly or partially deeper than 5 feet below grade:

- 12-inch-diameter to 48-inch-diameter storm sewer lines, located beneath 32nd Street (to the north), Louise Street (to the east), and Peralta Street (to the southeast and south). Depths of the pipe flow lines ranged from 2.8 to 12.5 feet (corresponding to a high of 4.6 feet above mean sea level and a low of 1.0 feet below mean sea level).
- 8-inch-diameter to 21-inch-diameter sanitary sewer lines, located beneath all surrounding streets. Depths of the pipe flow lines ranged from 3.5 to 8.7 feet (corresponding to a high of 5.2 feet to 1.5 feet above mean sea level).

Table 4
Preferential Pathway Survey Findings
1451 32nd Street, Oakland, California

Underground Utility	Agency / Firm Contacted	Utility Description and Location	Estimated Maximum Depth (feet below grade)	Potential Preferential Pathway for Groundwater?
Sanitary Sewer	City of Oakland – Records and Maps	Offsite: Service from surrounding streets / sidewalks onto adjacent and vicinity parcels.	9'	Possibly
	City of Oakland Public Works – Sewer Maintenance	Onsite: Service from Louise Street to subject property building bathroom, approximately 150 feet north of former UFSTs.	1'	No
Storm Sewer	City of Oakland – Records and Maps	Offsite: Beneath 32nd, Peralta, Louise, and Helen Streets. Onsite: No underground components.	13'	Possibly
Drinking Water	East Bay Municipal Utility District	Offsite: Service from surrounding streets / sidewalks onto adjacent and vicinity parcels. Onsite: 1) Service from Louise Street into the subject property building, approximately 150 feet north of the former UFSTs; and 2) Service from 32nd Street into the subject property building, approximately 200 feet north of the former UFSTs.	3' to 4'	No
Electric	Pacific Gas & Electric – Service Planning Department	Offsite: Beneath 32nd, Peralta, and Helen Streets. Onsite: No underground components.	3' to 4'	No
Natural Gas	Pacific Gas & Electric – Service Planning Department	Offsite: Service from surrounding streets / sidewalks onto adjacent and vicinity parcels. Onsite: Service from Louise Street into the subject property building, approximately 50 feet north of the former UFSTs.	2' to 3'	No



UNDERGROUND UTILITIES AND POTENTIAL RECEPTORS IN VICINITY OF PROJECT SITE

1451 32nd Street Oakland, CA	By: MJC	APRIL 2004
	Figure 7	

Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

2003-36-05

- According to City of Oakland Public Works – Sewer Maintenance Department, these lines could be installed within trenches backfilled with more permeable sand. The depth interval of the trench(es) is not known.

As summarized in Section 3.0, the shallowest depth that groundwater was encountered during the March 2004 borehole program was approximately 17 feet below grade. None of the identified utilities are deep enough to be considered potential preferential pathways for site-sourced contamination.

WELL SURVEY

Alameda County Health requested that a survey be conducted to identify water wells within ¼ mile of the subject property. Water wells might include groundwater monitoring wells and water supply wells (irrigation, domestic, industrial, and municipal). We made a formal well survey request to the California Department of Water Resources (DWR), the agency ultimately responsible for permitting water wells and retaining Water Well Driller's Reports.

Appendix E contains a copy of the DWR documentation. Table 5 summarizes the specific results of the survey. A total of nine wells (at five separate sites) were identified. The majority of them were at distances greater than the requested ¼-mile search radius from the subject property. The documentation does not specify if the wells are active/utilized, although all of the wells were installed at industrial facilities suggesting that the groundwater is/was used for industrial supply rather than as a drinking water supply.

Regional groundwater flow direction is generally westward, and can vary from northwest to southwest. Therefore, vicinity wells located to the northwest, west, and southwest are considered hydraulically downgradient from the subject property. The only identified well located in the potentially downgradient direction is the P.J. Walker & Company site, approximately 2,000 feet from the subject property. Based on its distance from the subject property, it is highly unlikely that subject property contamination could impact that well.

One of the sites (Judson Iron Works) had no information regarding its location. Based on our professional experience, we knew that this company formerly occupied the current IKEA property on Shellmound Street, south of Powell Street in Emeryville. This property underwent environmental remediation (California Department of Toxic Substances Control was the lead agency), was granted "no further action" status, and was wholly redeveloped. This indicates a high potential that the well was properly abandoned as part of the environmental project. Furthermore, the site is located hydraulically upgradient or crossgradient relative to the subject property.

Table 5
Vicinity Water Well Survey Findings
1451 32nd Street, Oakland, California

Well Location's Site Name	Well Location Address	Distance from Subject Property (feet)	Well Location Relative to Subject Property	Potential for Well to be Impacted by Subject Property Contamination
P.J. Walker & Company (five onsite wells)	26th & Magnolia Streets, Oakland 26th & Peralta Streets, Oakland	2,000 feet	South-southeast (hydraulically downgradient or crossgradient)	Very low
Presto-Lite Company	45th Street, Emeryville	1 mile (at the closest)	North-northeast (hydraulically upgradient or crossgradient)	None
Sherwin-Williams Co. Paint & Varnish Works	1450 Sherwin Street, Emeryville	2,500 feet	North-northwest (hydraulically upgradient or crossgradient)	None
Yosemite Laundry Co.	Emeryville	2,000 feet (at the closest, based on city border)	North-northwest (hydraulically upgradient or crossgradient)	None
Judson Iron Works	Shellmound Street, south of Powell Street, Emeryville	2,500 feet	North (hydraulically upgradient or crossgradient)	None

5.0 REGULATORY CONSIDERATIONS

REGULATORY STATUS

The lead regulatory agency for petroleum contamination cases in the City of Oakland is Alameda County Health, 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 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 recommends case closure to the RWQCB. Alameda County Health has designated the case as Fuel Leak Case No. RO0002592. The site is listed in the RWQCB's GeoTracker database of reported releases from petroleum USTs (GeoTracker Global ID T0600105911).

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, 2004). 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 or 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. 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, given the localized nature of the plume and the absence of any documented vicinity wells (see Section 4.0), use of the less conservative ESLs for "a potential or current drinking water source is not threatened" may be more appropriate when the site is considered for case closure.

RESIDUAL SOIL CONTAMINATION

Soil contaminants detected in residual soils (including both the UFST excavation and the March 2004 borehole program) above the more conservative (drinking water resource threatened) RWQCB ESL criteria include:

- Gasoline (maximum of 254,000 µg/kg rather than the ESL criteria of 100,000 µg/kg).
- MTBE (maximum of 663 µg/kg rather than the ESL criteria of 23 µg/kg).
- TBA (maximum of 8,140 µg/kg rather than the ESL criteria of 73 µg/kg).

No contaminants were detected in residual soils above the less conservative criteria (drinking water resource threatened), but were above the more conservative criteria.

GROUNDWATER CONTAMINATION

Groundwater contaminants detected above RWQCB ESL criteria include:

- Gasoline (maximum of 16,000 µg/L rather than the ESL criteria of 100 and 500 µg/L).
- MTBE (maximum of 15,500 µg/L rather than the ESL criteria of 5 and 1,800 µg/L).
- TBA (maximum of 2,360 µg/L rather than the ESL criteria of 12 and 1,800 µg/L).

The difference between the higher and lower conservative ESL criteria cited is that the lower ESLs concentrations are for sites where a drinking water resource is threatened, and the higher ESLs are for sites where drinking water resources are not threatened.

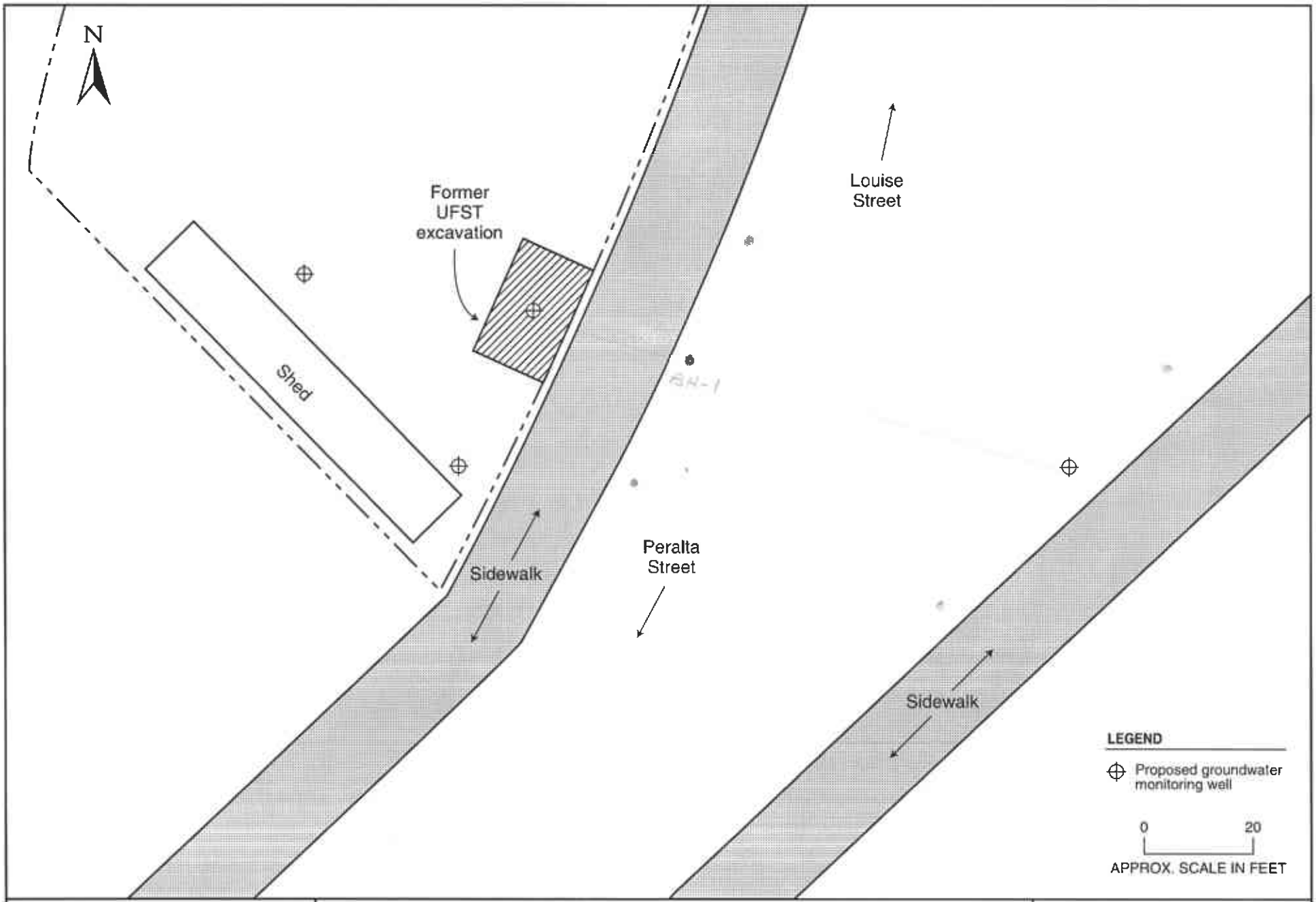
SITE CLOSURE CRITERIA

Alameda County Health and RWQCB generally require that the following criteria be met before issuing regulatory closure of petroleum release cases. The criteria and extent to which the site data appear to meet that criteria are discussed below:

1. The contaminant source (i.e., the UFST and obviously-contaminated backfill material) has been removed. This criterion has been met, and the available soil analytical results do not indicate a significant mass 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 does not increase in concentration or lateral extent). This criterion has not been met, and Alameda County Health will likely require the installation and sampling of groundwater monitoring wells to define the extent of the plume and demonstrate compliance. As shown on Figure 8, we propose to install four groundwater monitoring wells—one in the center of the former UFST excavation; one to the west of the former UFST excavation; one to the south of the former UFST excavation (as the contaminant plume shows a southward component); and one across Louise Street (to the east) because the contaminant plume shows an eastward component.

3. Where 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, since the limits of groundwater contamination dictate the need to conduct off-site risk assessment. We have already determined that there are no likely wells that could act as sensitive receptors, although other potential sensitive receptors have not been evaluated. Based on the available site contamination data, it appears likely that the site would pass the RBCA assessment.



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Geoscience & Engineering Consulting

PROPOSED GROUNDWATER MONITORING WELL LOCATIONS
1451 32nd Street, Oakland, CA

Figure 8

by: MJC | APRIL 2004

2003-36-31

6.0 SUMMARY, CONCLUSIONS, OPINIONS, AND RECOMMENDATIONS

SUMMARY, CONCLUSIONS, AND OPINIONS

The available data support the following findings and conclusions:

- Two 2,000-gallon gasoline UFSTs were removed from the facility in December 2000 under appropriate regulatory permits and inspections. Corrective actions included removing approximately 80 tons of contaminated backfill material for offsite disposal. Excavation confirmation soil samples contained gasoline and xylenes above regulatory agency screening level criteria; pit water sample concentrations of gasoline, BTEX, and MTBE exceeded those criteria. A UFST closure documentation report was submitted to the appropriate regulatory agencies in 2003.
- The lead agency for UFST-related petroleum contamination sites in the City of Oakland is Alameda County Health, which has assigned the site to its Local Oversight Program (for fuel releases). Alameda County Health requested, and SES submitted, a technical workplan for a Preliminary Site Assessment (PSA).
- The PSA was implemented in March 2004, and included drilling and sampling nine exploratory boreholes to a depth of 24 feet below grade. Boreholes were advanced through the center of the former UFST excavation, and on all four sides of the former excavation. A total of 14 soil samples (one to three from each of the seven most proximal boreholes) were collected for laboratory analysis, and one "grab" groundwater sample was collected from each borehole for laboratory analysis.
- Site lithology ranges from low-permeability silts and clays to higher-permeability (and water-bearing) sands and gravels. Two water-bearing zones were encountered in the majority of the boreholes, with a low-permeability clay unit separating the two zones. Groundwater was first encountered (as evidenced by saturated soil cuttings and measurable water in the borehole) at depths of approximately 17 to 20 feet. In some of the boreholes, groundwater was again encountered at depths of approximately 21 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.

- Groundwater occurs under semi-confining or confining conditions (water levels equilibrating in boreholes up to 10 feet above the depth of first occurrence during drilling). The regional groundwater flow direction in generally expected to be to the west (following regional topography, toward San Francisco Bay), although a local groundwater flow direction reversal (to the east) is suggested by the geometry of the groundwater contamination.
- The subject property is located within RWQCB Zone C (groundwater is not reasonably expected to be a municipal water supply source). The RWQCB guidance dictates that all pollution sites, regardless of groundwater use designation, 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.
- There are no DWR-documented water wells that could act as sensitive receptors. While the potential exists for underground utilities to be located beneath the water table in the vicinity of the site, the available data indicate that none of these utilities are deep enough to act as potential preferential pathways for site-sourced contamination.
- A preliminary review of the State of California's on-line database of reported fuel releases did not identify any vicinity sites that might have a reasonable potential to be contributing to site groundwater contamination.
- Soil contaminants detected above regulatory agency screening-level criteria include gasoline, MTBE, and TBA. Maximum detected site concentrations were all below the more conservative criteria (for a threatened drinking water resource case). Soil contamination in some boreholes was detected above screening-level criteria in the deeper samples, collected in the low-permeability zone below the upper water-bearing zone.
- Groundwater contaminants above screening-level criteria include gasoline (detected above both ESL criteria), MTBE, and TBA (maximum concentration not exceeding the threatened drinking water resource criteria). The lateral limits of groundwater contamination are constrained by available data to the north, west, and south of the former UFSTs. The lateral limit of groundwater contamination to the east (under Louise Street) has not been determined, and maximum site-sourced groundwater was detected in the borehole advanced within Louise Street.
- The property owner may be eligible for reimbursement for part or all costs incurred under the State of California Underground Storage Tank Cleanup Fund. The property owner is currently determining eligibility requirements, and may elect to submit a claim application in the future.

- Based on the detected contamination in groundwater, Alameda County Health 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 or reducing, and if the site passes a RBCA or similar assessment, regulatory closure would likely be granted.
- Analytical results of the PSA soil and groundwater samples, and a site plan showing sampling locations, have been uploaded to the State of California GeoTracker on-line database.

RECOMMENDATIONS

- We recommend that further investigation be conducted to evaluate the limits and magnitude of site contamination, as necessary to satisfy Alameda County Health's regulatory closure criteria. The installation of four groundwater monitoring wells is recommended to meet the minimum criteria to define the lateral extent of dissolved phase contamination and to define the local hydrologic regime. A year of quarterly groundwater monitoring to define seasonal hydrologic and hydrochemical variations is recommended based on anticipated regulatory requirements for sites with conditions like this one.

7.0 REFERENCES

Alameda County Department of Environmental Health, 2004. Letter approving Stellar Environmental Solutions' February 19, 2004 technical workplan for 1451 32nd Street, Oakland, California. February 26.

Regional Water Quality Control Board, San Francisco Bay Region (RWQCB), 2004. Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater. Internet-available "Surfer" version, downloaded April 8.

RWQCB, 1999. East Bay Plain Groundwater Basin Beneficial Use Evaluation Report. June.

Stellar Environmental Solutions, Inc. (SES), 2004a. Workplan for Preliminary Site Assessment – Atlas Heating and Air Conditioning Company, 1451 32nd Street, Oakland, California. February 19.

SES, 2003a. Gasoline Underground Fuel Storage Tank Closure Report, Atlas Heating and Air Conditioning Company – 1451 32nd Street, Oakland, California. July 24.

SES, 2003b. Phase I Environmental Site Assessment – 2515 Willow Street, Oakland, California. October 30.

8.0 LIMITATIONS

This report has been prepared for the exclusive use of Your Warm Friend, Inc. (d.b.a. Atlas Heating and Air Conditioning), Mr. and Mrs. Robert Tuck (property owners), their authorized representatives and assigns, 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, and activities conducted by SES since July 2003. 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

OCATION OF PROJECT Alias Heating
1451 32nd Street
Oakland, CA 94608

LIENT
ame Alias Heating & Air Conditioning Co.
ddress 1451 32nd Street Phone 510-893-4343
ity Oakland Zip 94608

PPLICANT
ame Stellar Environmental Solutions, Inc.
Bruce Rucker Fax 510-644-3859
ddress 2198 Sixth St #201 Phone 510-644-3123
ity Berkeley Zip 94710

YPE OF PROJECT

Well Construction		(Geotechnical Investigation)	
Cathodic Protection	•	General	•
Water Supply	•	Contamination	•
Monitoring	•	Well Destruction	•

ROPOSED WATER SUPPLY WELL USE

New Domestic	•	Replacement Domestic	•
Municipal	•	Irrigation	•
Industrial	•	Other _____	•

RILLING METHOD:

Mud Rotary	•	Air Rotary	•	Auger	•
Cable	•	(Other)	•	Direct Push-Geoprobe	

RILLER'S NAME Gregg Drilling & Testing

RILLER'S LICENSE NO. 485165

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

EOTECHNICAL PROJECTS
Number of Borings 9 Maximum
Hole Diameter 3 in. Depth 25 ft.

TARTING DATE March 23 2004

OMPLETION DATE March 24 2004

FOR OFFICE USE
PERMIT NUMBER W04-0205
WELL NUMBER _____
APN _____

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
Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or 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 BH 1

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 3-10-04

hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Bruce M. Rucker DATE 3/5/2004

PLEASE PRINT NAME Bruce Rucker

Rev.9-18-02

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

PERMIT NO. W04-0205

WATER RESOURCES SECTION
GROUNDWATER PROTECTION ORDINANCE
B#1-GENERAL CONDITIONS: GEOTECHNICAL & CONTAMINATION BOREHOLES

1. Prior to any drilling activities shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that Federal, State, County or to the City and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained.

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

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

4. Permit is valid only for the purpose specified herein **March 23 to March 24, 2004**. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

5. Drilling Permit(s) can be voided/ canceled only in writing. It is the applicants responsibilities to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.

6. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, property damage, personal injury and wrongful death.

Office of Planning and Building

EXCAVATION PERMIT

TO EXCAVATE IN STREETS OR OTHER SPECIFIED WORK

CIVIL ENGINEERING

Permit valid for 90 days from date of issuance.

PERMIT NUMBER	SITE ADDRESS/LOCATION
X 0 4 0 0 7 0 3	1451 32nd STREET OAKLAND CA
APPROX. START DATE: MARCH 23 2004 / APPROX. END DATE: MARCH 24 2004	24-HOUR EMERGENCY PHONE NUMBER (Permit not valid without 24-Hour number): 5
CONTRACTOR'S LICENSE # AND CLASS: C-57 485165	CITY BUSINESS TAX #: 585033

ATTENTION:

1- State law requires that the contractor/owner call Underground Service Alert (USA) two working days before excavating. This permit is not valid unless applicant has secured an inquiry identification number issued by USA. The USA telephone number is 1-800-642-2444. Underground Service Alert (USA) # _____

2- **48 hours prior to starting work, you MUST CALL (510) 238-3651 to schedule an inspection.**

3- **48 hours prior to re-paving, a compaction certificate is required (waived for approved slurry backfill).**

OWNER/BUILDER

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5 Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License law Chapter 9 (commencing with Sec. 7000) of Division 3 of the Business and Professions Code, or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than $500):

☐ I, as an owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).

☐ I, as owner of the property, am exempt from the sale requirements of the above due to: (1) I am improving my principal place of residence or appurtenances thereto, (2) the work will be performed prior to sale, (3) I have resided in the residence for the 12 months prior to completion of the work, and (4) I have not claimed exemption on this subdivision on more than two structures more than once during any three-year period. (Sec. 7044 Business and Professions Code).

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project, (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License law).

☐ I am exempt under Sec. _____, B&PC for this reason _____.

WORKER'S COMPENSATION

☐ I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Worker's Compensation Insurance, or a certified copy thereof (Sec. 3700, Labor Code).

Policy # _____ Company Name _____

☐ I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California (not required for work valued at one hundred dollars ($100) or less).

NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Worker's Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked. This permit is issued pursuant to all provisions of Title 12 Chapter 12.12 of the Oakland Municipal Code. It is granted upon the express condition that the permittee shall be responsible for all claims and liabilities arising out of work performed under the permit or arising out of permittee's failure to perform the obligations with respect to street maintenance. The permittee shall, and by acceptance of the permit agrees to defend, indemnify, save and hold harmless the City, its officers and employees, from and against any and all suits, claims, or actions brought by any person for or on account of any bodily injuries, disease or illness or damage to persons and/or property sustained or arising in the construction of the work performed under the permit or in consequence of permittee's failure to perform the obligations with respect to street maintenance. This permit is void 90 days from the date of issuance unless an extension is granted by the Director of the Office of Planning and Building.

I hereby affirm that I am licensed under provisions of Chapter 9 of Division 3 of the Business and Professions Code and my license is in full force and effect (if contractor), that I have read this permit and agree to its requirements, and that the above information is true and correct under penalty of law.

Signature of Permittee [signature] ☒ Agent for ☑ Contractor ☐ Owner — Date: MARCH 8 2004

DATE STREET LAST RESURFACED	SPECIAL PAVING DETAIL REQUIRED? ☐ YES ☒ NO	HOLIDAY RESTRICTION? (NOV 1 - JAN 1) ☐ YES ☒ NO	LIMITED OPERATION AREA? (7AM-9AM & 4PM-6PM) ☐ YES ☒ NO
ISSUED BY [signature]		DATE ISSUED a	

CITY OF OAKLAND • Community and Economic Development Agency
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • FAX (510) 238-2263

Job Site 1451 32ND ST Parcel# 007 -0590-013-00 Appl# X0400703

Descr soil boring Permit Issued 03/08/04

Work Type EXCAVATION-PRIVATE P

USA # Util Co. Job # Acctg#:
Util Fund #:

	Applcnt	Phone#	Lic#	--License Classes--
Owner	TUCK ROBERT D & ELIZABETH B			
Contractor	GREGG DRILLING & TESTING, INC.	X (510)313-5800	485165	C57
Arch/Engr				
Agent	JOE DINAN/STELLAR ENVIRO SOLUT			

Applic Addr 950 HOWE RD, MARTINEZ, CA., 94553

$291.84 TOTAL FEES PAID AT ISSUANCE

$51.00 Applic	$205.00 Permit
$.00 Process	$23.04 Rec Mgmt
$.00 Gen Plan	$.00 Invstg
$.00 Other	$12.80 Tech Enh

JOB SITE

ADDRESS:

DIST:

Subject: GeoProbe rig at borehole BH-01 (east of former UFST excavation, in Louise Street), looking to the south.	
Site: 1451 – 32nd Street, Oakland, California	
Date Taken: March 23, 2004	Project No.: SES 2003-36
Photographer: B. Rucker	Photo No.: 01

Subject: GeoProbe rig at borehole BH-02 (within former UFST excavation), looking to the north.	
Site: 1451 – 32nd Street, Oakland, California	
Date Taken: March 23, 2004	Project No.: SES 2003-36
Photographer: B. Rucker	Photo No.: 02

Subject: GeoProbe rig at borehole BH-07 (northwest of former UFSTs), looking to the northeast.	
Site: 1451 – 32nd Street, Oakland, California	
Date Taken: March 23, 2004	Project No.: SES 2003-36
Photographer: B. Rucker	Photo No.: 03

Subject: GeoProbe rig at borehole BH-09 (western property line), looking to the west.	
Site: 1451 – 32nd Street, Oakland, California	
Date Taken: March 23, 2004	Project No.: SES 2003-36
Photographer: B. Rucker	Photo No.: 04

- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- (GI) Indeterminate Groundwater Flow at Location
- (GV) Groundwater Flow Varies at Location
- (HD) Closest Hydrogeological Data
- Oil, gas or related wells

Figure 3: Physical Setting Map

TARGET PROPERTY:	2515 Willow Street	CUSTOMER:	Stellar Enviro Solutions
ADDRESS:	2515 Willow Street	CONTACT:	Joe Dinan
CITY/STATE/ZIP:	Oakland CA 94607	INQUIRY #:	1064609.3s
LAT/LONG:	37.8204 / 122.2903	DATE:	October 14, 2003 7:16 pm

Stellar Environmental Solutions, Inc.
2198 Sixth Street, Berkeley, CA 94710
Geoscience & Engineering Consulting

Soil Boring Log

BORING NUMBER BH-01 Page 1 of 2

PROJECT Atlas Heating & Air Conditioning
OWNER Atlas Heating & Air Conditioning
LOCATION 1451 32nd St., Oakland, CA
PROJECT NUMBER 2003-36
TOTAL DEPTH 24 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED ~16.5'
DRILLING COMPANY Gregg Drilling
DRILLING METHOD GeoProbe
DRILLER Paul Rogers
GEOLOGIST Bruce Rucker
DATE DRILLED 3/23/04

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0					Asphalt	"Instrument is a photoionization detector. "Readings" are in parts per million per volume air (ppmv)
2					Black silty clay (CL), stiff, cohesive, dry-sl. moist	
4				<1	4' color change to grey & brown	
6				<1	7' silt absent	
8				<1		
10				<1	11' becomes silty	No measurable water in hole after drilling to 16'.
12				<1	12' becomes sl. stiff	
14	soil sample BH-01-14'			6	14.5' becomes gravelly, sandy clay, sl. stiff, cohesive, gravel is small-med.	Water sample collected after drilling to 20'.
16				3	Red-brown clayey sand (SC), friable, sl. cohesive, sl. moist	Final (poss. not equilibrated) water level = 10'
18				10	Brown sand (SP), fine-grained, saturated, loose	
20					Red-brown sandy clay (CL). Sand is fine-grained, sl. moist, mod. stiff 19' silt replaces sand	

2003-36-11

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Soil Boring Log

BORING NUMBER BH-01 Page 2 of 2

PROJECT Atlas Heating & Air Conditioning
OWNER Atlas Heating & Air Conditioning
LOCATION 1451 32nd St., Oakland, CA
PROJECT NUMBER 2003-36
TOTAL DEPTH 24 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED ~16.5 ft.
DRILLING COMPANY Gregg Drilling
DRILLING METHOD GeoProbe
DRILLER Paul Rogers
GEOLOGIST Bruce Rucker
DATE DRILLED 3/23/04

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
20	?				20-22' slough (no sample recovery of native material)	
22	soil sample BH-01-23'			<1	22.5' black clay, sl. stiff, cohesive, sl. moist	
24				<1	TD = 24'	
26						
28						
30						
32						
34						
36						
38						
40						

2003-36-12

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Soil Boring Log

BORING NUMBER BH-02 Page 1 of 2

PROJECT Atlas Heating & Air Conditioning
OWNER Atlas Heating & Air Conditioning
LOCATION 1451 32nd St., Oakland, CA
PROJECT NUMBER 2003-36
TOTAL DEPTH 24 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED ~17'
DRILLING COMPANY Gregg Drilling
DRILLING METHOD GeoProbe
DRILLER Paul Rogers
GEOLOGIST Bruce Rucker
DATE DRILLED 3/23/04

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0					Gravel	"Instrument is a photoionization detector. "Readings" are in parts per million per volume air (ppmv)
2					Clayey gravel fill (former UFST excavation)	
4				<1		
6				<1		
8				<1		
10	? — ?			<1	? — ? — ? — ? — ? — ?	Borehole closes at 5-6' after each 4' sampling run.
12	soil sample BH-02-11.5'			<1	Black clay (CL), stiff, cohesive, sl. moist 12'-16' 1' recovery of sample	
14				<1		Water sample collected after drilling to 24'.
16	soil sample BH-02-15.5'			<1	15' red-brown silty-clay, mod. stiff, cohesive, sl. moist, minor small gravel	Final (poss. not equilibrated) water level = 8.3'
18				7	17' becomes gravelly (small) and sandy (fine), v. moist, sl. friable 17.5' gravel absent, saturated 18.5' becomes silty clay, sl. moist	
20				5	Sandy clayey gravel (GC), stiff, friable, dry-sl. moist	

2003-36-13

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Soil Boring Log

BORING NUMBER BH-02 Page 2 of 2

PROJECT Atlas Heating & Air Conditioning
OWNER Atlas Heating & Air Conditioning
LOCATION 1451 32nd St., Oakland, CA
PROJECT NUMBER 2003-36
TOTAL DEPTH 24 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED
DRILLING COMPANY Gregg Drilling
DRILLING METHOD GeoProbe
DRILLER Paul Rogers
GEOLOGIST Bruce Rucker
DATE DRILLED 3/23/04

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
20						
22				<1	Red-brown silty clay (CL), mod. stiff, sl. friable, sl. moist,	
				<1	22' becomes sl. stiff, not friable, sl. moist	
24					TD = 24'	
26						
28						
30						
32						
34						
36						
38						
40						

2003-36-14

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Soil Boring Log

BORING NUMBER BH-03 Page 1 of 2

PROJECT Atlas Heating & Air Conditioning
OWNER Atlas Heating & Air Conditioning
LOCATION 1451 32nd St., Oakland, CA
PROJECT NUMBER 2003-36
TOTAL DEPTH 24 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED ~17.5' & 20.5'
DRILLING COMPANY Gregg Drilling
DRILLING METHOD GeoProbe
DRILLER Paul Rogers
GEOLOGIST Bruce Rucker
DATE DRILLED 3/23/04

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0					Asphalt	"Instrument is a photoionization detector. "Readings" are in parts per million per volume air (ppmv)
2					Black silty clay (CL), stiff, cohesive, dry-sl. moist	
4				<1		
6				<1	6.5' color change to tan-light brown, v. stiff, dry	
8				<1		
10				<1	9.5' color change to grey	No measurable water in hole after drilling to 16'.
12				<1		
14				<1		Water sample collected after drilling to 20'.
16				<1		Final (poss. not equilibrated) water level = 8.7'
18	soil sample BH-03-17'			<1	17.5' becomes gravelly, sandy clay, v. moist, mod. friable, gravel is small & angular	
20				<1	18.5' silty clay, red-brown, mod. stiff, cohesive, sl. moist	

2003-36-09

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Soil Boring Log

BORING NUMBER BH-03 Page 2 of 2

PROJECT Atlas Heating & Air Conditioning
OWNER Atlas Heating & Air Conditioning
LOCATION 1451 32nd St., Oakland, CA
PROJECT NUMBER 2003-36
TOTAL DEPTH 24 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED ~17.5' & 20.5'
DRILLING COMPANY Gregg Drilling
DRILLING METHOD GeoProbe
DRILLER Paul Rogers
GEOLOGIST Bruce Rucker
DATE DRILLED 3/23/04

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
20	soil sample BH-03-20'			<1		
22				<1	Brown sand (SP), fine-grained, saturated, loose	
24				<1	TD = 24'	
26						
28						
30						
32						
34						
36						
38						
40						

2003-36-10

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Geoscience & Engineering Consulting

Soil Boring Log

BORING NUMBER BH-04 Page 1 of 2

PROJECT Atlas Heating & Air Conditioning
OWNER Atlas Heating & Air Conditioning
LOCATION 1451 32nd St., Oakland, CA
PROJECT NUMBER 2003-36
TOTAL DEPTH 24 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED ~18.5' & 21.5'
DRILLING COMPANY Gregg Drilling
DRILLING METHOD GeoProbe
DRILLER Paul Rogers
GEOLOGIST Bruce Rucker
DATE DRILLED 3/23/04

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0					Asphalt	"Instrument is a photoionization detector. "Readings" are in parts per million per volume air (ppmv)
					Black silty clay (CL), stiff, cohesive, dry-sl. moist, minor occ. gravel	
2						
4				<1		
6				<1		
8				<1		
					9' becomes sl. stiff	No measurable water in hole after drilling to 16'.
10				<1		
					11' color change to grey	
12				<1	12.5' gravel absent, stiff, cohesive, sl. moist	
14				<1		Water sample collected after drilling to 20'.
					15.5' color change to red-brown, silt % increases	Final (poss. not equilibrated) water level = 15.7'
16				<1	16.5' silt absent	
					17.5' becomes sl. stiff	
18	soil sample BH-04-17.5'			<1	18.5' becomes v. moist sandy clay	
					19.5' becomes silty clay	
20				<1		

2003-36-15

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Soil Boring Log

BORING NUMBER BH-04 Page 2 of 2

PROJECT Atlas Heating & Air Conditioning
OWNER Atlas Heating & Air Conditioning
LOCATION 1451 32nd St., Oakland, CA
PROJECT NUMBER 2003-36
TOTAL DEPTH 24 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED
DRILLING COMPANY Gregg Drilling
DRILLING METHOD GeoProbe
DRILLER Paul Rogers
GEOLOGIST Bruce Rucker
DATE DRILLED 3/23/04

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
20	soil sample BH-04-20.5'					
22				<1	Black clayey sand (SC), saturated, loose	
24				<1	Black sandy clay (CL), mod. stiff, cohesive, sl. moist	
					TD = 24'	
26						
28						
30						
32						
34						
36						
38						
40						

2003-36-1B

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Soil Boring Log

BORING NUMBER BH-05 Page 1 of 2

PROJECT Atlas Heating & Air Conditioning
OWNER Atlas Heating & Air Conditioning
LOCATION 1451 32nd St., Oakland, CA
PROJECT NUMBER 2003-36
TOTAL DEPTH 24 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED ~19'
DRILLING COMPANY Gregg Drilling
DRILLING METHOD GeoProbe
DRILLER Paul Rogers
GEOLOGIST Bruce Rucker
DATE DRILLED 3/23/04

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0					Asphalt	"Instrument is a photoionization detector. "Readings" are in parts per million per volume air (ppmv)
2					Black silty clay (CL), stiff, cohesive, dry-sl. moist	
4				<1		
6				<1		
8				<1	7.5' red-brown gravelly, sandy clay, stiff, sl. friable, dry	
10				<1	9.5' dark grey silty clay, stiff, cohesive, dry	No measurable water in hole after drilling to 16'.
12				<1		
14				<1	14.5' sl.-mod. stiff, sl. moist	Water sample collected after drilling to 20'.
16				<1	15.5'-16' minor small gravel	Final (poss. not equilibrated) water level = 12.2'
18	soil sample BH-05-18.5'			<1	17.5' color change to red-brown 18.5' mod. stiff, dry	
20				<1	19' sandy (fine) gravelly (small) clay, v. moist	

2003-36-17

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Soil Boring Log

BORING NUMBER BH-05 Page 2 of 2

PROJECT Atlas Heating & Air Conditioning
OWNER Atlas Heating & Air Conditioning
LOCATION 1451 32nd St., Oakland, CA
PROJECT NUMBER 2003-36
TOTAL DEPTH 24 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED ~19 ft.
DRILLING COMPANY Gregg Drilling
DRILLING METHOD GeoProbe
DRILLER Paul Rogers
GEOLOGIST Bruce Rucker
DATE DRILLED 3/23/04

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
20					20'-23.5' no recovery, poss. saturated sand as in other boreholes at this depth	
22	soil sample BH-05-23.5'				23.5' grey clay, sl. stiff, cohesive	
24	? ?				TD = 24'	
26						
28						
30						
32						
34						
36						
38						
40						

2003-36-1B

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Soil Boring Log

BORING NUMBER BH-06 Page 1 of 2

PROJECT Atlas Heating & Air Conditioning
OWNER Atlas Heating & Air Conditioning
LOCATION 1451 32nd St., Oakland, CA
PROJECT NUMBER 2003-36
TOTAL DEPTH 24 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED ~16' & 20.5'
DRILLING COMPANY Gregg Drilling
DRILLING METHOD GeoProbe
DRILLER Paul Rogers
GEOLOGIST Bruce Rucker
DATE DRILLED 3/23/04

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0					Asphalt	"Instrument is a photoionization detector. "Readings" are in parts per million per volume air (ppmv)
2					Black silty clay (CL), stiff, cohesive, dry-sl. moist	
4				<1		
6				<1		
8				<1	8.5' color change to tan-brown	
10				<1		No measurable water in hole after drilling to 16'.
12				<1	11.5'-12' minor small gravel	
14				<1	14.5' gravel content increases to ~40%, stiff & dry	Water sample collected after drilling to 20'.
16	soil sample BH-06-15.5'			<1	Red-brown clayey gravel (GC), v. moist, gravel mostly small, some med.	Final (poss. not equilibrated) water level = 8.1'
18				1.2	Red-brown silty clay (CL), med. stiff, cohesive, sl. moist	
	soil sample BH-06-19'				18.5' color change to tan	
20				<1		

2003-36-19

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Soil Boring Log

BORING NUMBER BH-06 Page 2 of 2

PROJECT Atlas Heating & Air Conditioning
OWNER Atlas Heating & Air Conditioning
LOCATION 1451 32nd St., Oakland, CA
PROJECT NUMBER 2003-36
TOTAL DEPTH 24 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED
DRILLING COMPANY Gregg Drilling
DRILLING METHOD GeoProbe
DRILLER Paul Rogers
GEOLOGIST Bruce Rucker
DATE DRILLED 3/23/04

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
20						
22				<1	Red-brown sand (SP), saturated, loose 22.5' becomes gravelly & clayey, friable, sl. moist	
24				<1	TD = 24'	
26						
28						
30						
32						
34						
36						
38						
40						

2003-36-20

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Soil Boring Log

BORING NUMBER BH-07 Page 1 of 2

PROJECT Atlas Heating & Air Conditioning
OWNER Atlas Heating & Air Conditioning
LOCATION 1451 32nd St., Oakland, CA
PROJECT NUMBER 2003-36
TOTAL DEPTH 24 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED ~19.5'
DRILLING COMPANY Gregg Drilling
DRILLING METHOD GeoProbe
DRILLER Paul Rogers
GEOLOGIST Bruce Rucker
DATE DRILLED 3/23/04

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0					Asphalt	"Instrument is a photoionization detector. "Readings" are in parts per million per volume air (ppmv)
2					Black silty clay (CL), stiff, cohesive, dry-sl. moist	
4				<1		
6				<1	6.5' color change to grey, gravelly, v. stiff, dry	
8				<1	8' color change to tan, minor small gravel, dry	
10				<1	9.5' silt absent, cohesive	No measurable water in hole after drilling to 16'.
12				<1		
14				<1		Water sample collected after drilling to 20'.
16				<1	15.5'-16' gravelly (~30%) v. stiff, dry 16' color change to grey, mod. stiff, sl. moist, cohesive	Final (poss. not equilibrated) water level = 10.7'
18				<1	17.5' color change to red-brown, sl. stiff-soft, cohesive 18.5' minor small gravel	
	soil sample BH-07-19'					
20					Red-brown clayey sand (SC), fine-grained, friable, v. moist	

2003-36-21

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Geoscience & Engineering Consulting

Soil Boring Log

BORING NUMBER BH-07 Page 2 of 2

PROJECT Atlas Heating & Air Conditioning
OWNER Atlas Heating & Air Conditioning
LOCATION 1451 32nd St., Oakland, CA
PROJECT NUMBER 2003-36
TOTAL DEPTH 24 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED ~19.5 ft.
DRILLING COMPANY Gregg Drilling
DRILLING METHOD GeoProbe
DRILLER Paul Rogers
GEOLOGIST Bruce Rucker
DATE DRILLED 3/23/04

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
20						
22						
	soil sample BH-07-23'				Red-brown gravelly clay (CL), v. stiff, dry, gravel small-med.	
24					TD = 24'	
26						
28						
30						
32						
34						
36						
38						
40						

2003-36-22

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Geoscience & Engineering Consulting

Soil Boring Log

BORING NUMBER BH-08 Page 1 of 2

PROJECT Atlas Heating & Air Conditioning
OWNER Atlas Heating & Air Conditioning
LOCATION 1451 32nd St., Oakland, CA
PROJECT NUMBER 2003-36
TOTAL DEPTH 24 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED ~17'-20'
DRILLING COMPANY Gregg Drilling
DRILLING METHOD GeoProbe
DRILLER Paul Rogers
GEOLOGIST Bruce Rucker
DATE DRILLED 3/23/04

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0					Asphalt	"Instrument is a photoionization detector. "Readings" are in parts per million per volume air (ppmv)
2					Black silty clay (CL), stiff, cohesive, dry	
4				<1		
6				<1		
8				<1	8.5' color change to tan	
10				<1		No measurable water in hole after drilling to 16'.
12				<1	12.5'-13' gravelly (small) lens, dry	Hole swells shut at 17' after drilling to 20'. Make a cleanout run to 20'
14				<1	14' sl. stiff, sl. moist	Water sample collected after drilling to 20'.
16				<1		Final (poss. not equilibrated) water level = 8.4'
18	soil sample BH-08-17'			<1	17' mod.-sl. stiff	
20				<1	19.5' v. stiff	

2003-36-23

Stellar Environmental Solutions, Inc.
2198 Sixth Street, Berkeley, CA 94710
Geoscience & Engineering Consulting

Soil Boring Log

BORING NUMBER BH-08 Page 2 of 2

PROJECT Atlas Heating & Air Conditioning
OWNER Atlas Heating & Air Conditioning
LOCATION 1451 32nd St., Oakland, CA
PROJECT NUMBER 2003-36
TOTAL DEPTH 24 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED ~17-20 ft.
DRILLING COMPANY Gregg Drilling
DRILLING METHOD GeoProbe
DRILLER Paul Rogers
GEOLOGIST Bruce Rucker
DATE DRILLED 3/23/04

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
20					20'-24' 1.5' sample recovery. Low drill resistance from 21.5' to 24'. Upper part of sample is sand and gravel; lower is grey clay	
22						
24					TD = 24'	
26						
28						
30						
32						
34						
36						
38						
40						

2003-36-24

Stellar Environmental Solutions, Inc.
2198 Sixth Street, Berkeley, CA 94710
Geoscience & Engineering Consulting

Soil Boring Log

BORING NUMBER BH-09 Page 1 of 2

PROJECT Atlas Heating & Air Conditioning
OWNER Atlas Heating & Air Conditioning
LOCATION 1451 32nd St., Oakland, CA
PROJECT NUMBER 2003-36
TOTAL DEPTH 24 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED ~17.5' & 20.5'
DRILLING COMPANY Gregg Drilling
DRILLING METHOD GeoProbe
DRILLER Paul Rogers
GEOLOGIST Bruce Rucker
DATE DRILLED 3/23/04

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
0					Asphalt	"Instrument is a photoionization detector. "Readings" are in parts per million per volume air (ppmv)
2					Black silty clay (CL), stiff, cohesive, dry	
4				<1		
6				<1		
8				<1		
					9' color change to tan	
10				<1	10.5' becomes gravelly, friable, v. moist	
					11.5'-12' clayey sand lens	
12				<1	12' tan gravelly clay, gravel is small, ~30%, mod. stiff, sl. moist	No measurable water in hole after drilling to 16'.
14				<1	14.5' gravel absent, minor silt	Water sample collected after drilling to 20'.
16				<1		Final (poss. not equilibrated) water level = 9.4'
					17.5' minor small gravel, sl. moist	
18	soil sample BH-09-18'			<1		
					Tan clayey sand (SC), fine-grained friable, sl. moist	
20				<1		

2003-36-25

Stellar Environmental Solutions, Inc.
2198 Sixth Street, Berkeley, CA 94710
Geoscience & Engineering Consulting

Soil Boring Log

BORING NUMBER BH-09 Page 2 of 2

PROJECT Atlas Heating & Air Conditioning
OWNER Atlas Heating & Air Conditioning
LOCATION 1451 32nd St., Oakland, CA
PROJECT NUMBER 2003-36
TOTAL DEPTH 24 feet
BOREHOLE DIA. 2-inch
SURFACE ELEV. Unknown
WATER FIRST ENCOUNTERED ~17.5 ft. & 20.5 ft.
DRILLING COMPANY Gregg Drilling
DRILLING METHOD GeoProbe
DRILLER Paul Rogers
GEOLOGIST Bruce Rucker
DATE DRILLED 3/23/04

DEPTH (feet)	GRAPHIC LOG	SAMPLE INTERVAL/ RECOVERY	BLOW COUNTS	INSTRUMENT READING	DESCRIPTION/SOIL CLASSIFICATION	REMARKS
20					20'-24' 1' recovery at base (tan clay). Upper portion likely sandy and/or gravelly unit encountered above	
22	? ?			<1		
24				<1	TD = 24'	
26						
28						
30						
32						
34						
36						
38						
40						

2003-36-26

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 126719
REPORTED 04/01/2004
RECEIVED 03/25/2004

PROJECT Atlas Heating + Air Conditioning

SUBMITTER Client

COMMENTS Order #508300 and 302 were taken off hold on 4-5-04.

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.

Order No.	Client Sample Identification
508277	BH-01-14
508278	BH-01-GW
508279	BH-01-23
508280	BH-02-11.5
508281	BH-02-15.5
508282	BH-02-23
508283	BH-02-GW
508284	BH-03-17
508285	BH-03-GW
508286	BH-03-20
508287	BH-04-17.5
508288	BH-04-GW
508289	BH-04-20.5
508290	BH-05-18.5
508291	BH-05-GW
508292	BH-05-23.5

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.

TESTING & CONSULTING
Chemical
Microbiological
Environmental

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 126719
REPORTED 04/01/2004
RECEIVED 03/25/2004

PROJECT Atlas Heating + Air Conditioning

SUBMITTER Client

COMMENTS Order #508300 and 302 were taken off hold on 4-5-04.

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.

Order No.	Client Sample Identification
508293	BH-06-15.5
508294	BH-06-19
508295	BH-06-GW
508296	BH-07-19
508297	BH-07-GW
508298	BH-07-23
508300	BH-08-GW
508302	BH-09-GW
508317	Laboratory Method Blank-S
508318	Laboratory Method Blank-W

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.

TESTING & CONSULTING
Chemical
Microbiological
Environmental

Order #: 508277 **Client:** Stellar Environmental Solutions

Matrix: SOLID **Client Sample ID:** BH-01-14

Date Sampled: 03/23/2004

Time Sampled: 08:30

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
1,2-Dibromo-3-chloropropane	ND	5	25.0	ug/Kg	03/31/04	LB
1,2-Dibromoethane	ND	5	25.0	ug/Kg	03/31/04	LB
Benzene	ND	5	25.0	ug/Kg	03/31/04	LB
Ethyl benzene	ND	5	25.0	ug/Kg	03/31/04	LB
Ethyl-tertbutylether (ETBE)	ND	5	50.0	ug/Kg	03/31/04	LB
Isopropyl ether (DIPE)	ND	5	50.0	ug/Kg	03/31/04	LB
Methyl-tert-butylether (MTBE)	663	5	25.0	ug/Kg	03/31/04	LB
Tert-amylmethylether (TAME)	ND	5	50.0	ug/Kg	03/31/04	LB
Tertiary butyl alcohol (TBA)	858	5	250.0	ug/Kg	03/31/04	LB
Toluene	ND	5	25.0	ug/Kg	03/31/04	LB
Xylenes, total	ND	5	25.0	ug/Kg	03/31/04	LB
Surrogates				**Units**	**Control Limits**	
Surr1 - Dibromofluoromethane	101			%	70 - 130	
Surr2 - 1,2-Dichloroethane-d4	69			%	70 - 130	
Surr3 - Toluene-d8	101			%	70 - 130	
Surr4 - p-Bromofluorobenzene	111			%	70 - 130	
8015M - Gasoline						
Gasoline	ND	1	3	mg/Kg	03/31/04	LT
Surrogates				**Units**	**Control Limits**	
a,a,a-Trifluorotoluene	98			%	55 - 200	

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

Order #: 508278 **Client:** Stellar Environmental Solutions

Matrix: WATER **Client Sample ID:** BH-01-GW

Date Sampled: 03/23/2004

Time Sampled: 08:35

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
1,2-Dibromo-3-chloropropane	ND	100	500.0	ug/L	03/28/04	LB
1,2-Dibromoethane	ND	100	500.0	ug/L	03/28/04	LB
Benzene	ND	100	100.0	ug/L	03/28/04	LB
Ethyl benzene	ND	100	500.0	ug/L	03/28/04	LB
Ethyl-tertbutylether (ETBE)	ND	100	100.0	ug/L	03/28/04	LB
Isopropyl ether (DIPE)	ND	100	100.0	ug/L	03/28/04	LB
Methyl-tert-butylether (MTBE)	15500	100	100.0	ug/L	03/28/04	LB
Tert-amylmethylether (TAME)	166	100	100.0	ug/L	03/28/04	LB
Tertiary butyl alcohol (TBA)	ND	100	1000.0	ug/L	03/28/04	LB
Toluene	ND	100	500.0	ug/L	03/28/04	LB
Xylenes, total	ND	100	500.0	ug/L	03/28/04	LB
Surrogates				**Units**	**Control Limits**	
Surr1 - Dibromofluoromethane	107			%	70 - 130	
Surr2 - 1,2-Dichloroethane-d4	114			%	70 - 130	
Surr3 - Toluene-d8	102			%	70 - 130	
Surr4 - p-Bromofluorobenzene	121			%	70 - 130	
8015M - Gasoline						
Gasoline	16000	10	500.0	ug/L	03/27/04	LZ
Surrogates				**Units**	**Control Limits**	
a,a,a-Trifluorotoluene	88			%	55 - 200	

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

Order #: 508279 **Client:** Stellar Environmental Solutions

Matrix: SOLID **Client Sample ID:** BH-01-23

Date Sampled: 03/23/2004

Time Sampled: 08:50

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	03/29/04	LB
1,2-Dibromoethane	ND	1	5	ug/Kg	03/29/04	LB
Benzene	ND	1	5	ug/Kg	03/29/04	LB
Ethyl benzene	ND	1	5	ug/Kg	03/29/04	LB
Ethyl-tertbutylether (ETBE)	ND	1	10	ug/Kg	03/29/04	LB
Isopropyl ether (DIPE)	ND	1	10	ug/Kg	03/29/04	LB
Methyl-tert-butylether (MTBE)	23	1	5	ug/Kg	03/29/04	LB
Tert-amylmethylether (TAME)	ND	1	10	ug/Kg	03/29/04	LB
Tertiary butyl alcohol (TBA)	ND	1	50	ug/Kg	03/29/04	LB
Toluene	ND	1	5	ug/Kg	03/29/04	LB
Xylenes, total	ND	1	5	ug/Kg	03/29/04	LB
Surrogates				**Units**	**Control Limits**	
Surr1 - Dibromofluoromethane	113			%	70 - 130	
Surr2 - 1,2-Dichloroethane-d4	124			%	70 - 130	
Surr3 - Toluene-d8	101			%	70 - 130	
Surr4 - p-Bromofluorobenzene	113			%	70 - 130	
8015M - Gasoline						
Gasoline	ND	1	3	mg/Kg	03/31/04	LT
Surrogates				**Units**	**Control Limits**	
a,a,a-Trifluorotoluene	96			%	55 - 200	

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

Order #: 508280 **Client:** Stellar Environmental Solutions
Matrix: SOLID **Client Sample ID:** BH-02-11.5
Date Sampled: 03/23/2004
Time Sampled: 09:25
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
8260B Volatile Organic Compounds					
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	03/30/04 LB
1,2-Dibromoethane	ND	1	5	ug/Kg	03/30/04 LB
Benzene	ND	1	5	ug/Kg	03/30/04 LB
Ethyl benzene	ND	1	5	ug/Kg	03/30/04 LB
Ethyl-tertbutylether (ETBE)	ND	1	10	ug/Kg	03/30/04 LB
Isopropyl ether (DIPE)	ND	1	10	ug/Kg	03/30/04 LB
Methyl-tert-butylether (MTBE)	7.1	1	5	ug/Kg	03/30/04 LB
Tert-amylmethylether (TAME)	ND	1	10	ug/Kg	03/30/04 LB
Tertiary butyl alcohol (TBA)	ND	1	50	ug/Kg	03/30/04 LB
Toluene	ND	1	5	ug/Kg	03/30/04 LB
Xylenes, total	ND	1	5	ug/Kg	03/30/04 LB
Surrogates				**Units**	**Control Limits**
Surr1 - Dibromofluoromethane	113			%	70 - 130
Surr2 - 1,2-Dichloroethane-d4	123			%	70 - 130
Surr3 - Toluene-d8	102			%	70 - 130
Surr4 - p-Bromofluorobenzene	113			%	70 - 130
8015M - Gasoline					
Gasoline	ND	1	3	mg/Kg	03/31/04 LT
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	101			%	55 - 200

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

Order #: 508281 **Client:** Stellar Environmental Solutions

Matrix: SOLID **Client Sample ID:** BH-02-15.5

Date Sampled: 03/23/2004

Time Sampled: 09:40

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	03/30/04	LB
1,2-Dibromoethane	ND	1	5	ug/Kg	03/30/04	LB
Benzene	ND	1	5	ug/Kg	03/30/04	LB
Ethyl benzene	ND	1	5	ug/Kg	03/30/04	LB
Ethyl-tertbutylether (ETBE)	ND	1	10	ug/Kg	03/30/04	LB
Isopropyl ether (DIPE)	ND	1	10	ug/Kg	03/30/04	LB
Methyl-tert-butylether (MTBE)	43	1	5	ug/Kg	03/30/04	LB
Tert-amylmethylether (TAME)	4.1 J	1	10	ug/Kg	03/30/04	LB
Tertiary butyl alcohol (TBA)	8140	5	250.0	ug/Kg	03/31/04	LB
Toluene	ND	1	5	ug/Kg	03/30/04	LB
Xylenes, total	ND	1	5	ug/Kg	03/30/04	LB
Surrogates				**Units**	**Control Limits**	
Surr1 - Dibromofluoromethane	112			%	70 - 130	
Surr2 - 1,2-Dichloroethane-d4	120			%	70 - 130	
Surr3 - Toluene-d8	100			%	70 - 130	
Surr4 - p-Bromofluorobenzene	112			%	70 - 130	
8015M - Gasoline						
Gasoline	ND	1	3	mg/Kg	03/31/04	LT
Surrogates				**Units**	**Control Limits**	
a,a,a-Trifluorotoluene	111			%	55 - 200	

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

Order #: 508282
Matrix: SOLID
Date Sampled: 03/23/2004
Time Sampled: 09:50
Sampled By:

Client: Stellar Environmental Solutions
Client Sample ID: BH-02-23

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	03/30/04	LB
1,2-Dibromoethane	ND	1	5	ug/Kg	03/30/04	LB
Benzene	ND	1	5	ug/Kg	03/30/04	LB
Ethyl benzene	ND	1	5	ug/Kg	03/30/04	LB
Ethyl-tertbutylether (ETBE)	ND	1	10	ug/Kg	03/30/04	LB
Isopropyl ether (DIPE)	ND	1	10	ug/Kg	03/30/04	LB
Methyl-tert-butylether (MTBE)	17	1	5	ug/Kg	03/30/04	LB
Tert-amylmethylether (TAME)	1.8 J	1	10	ug/Kg	03/30/04	LB
Tertiary butyl alcohol (TBA)	3720	5	250.0	ug/Kg	03/31/04	LB
Toluene	ND	1	5	ug/Kg	03/30/04	LB
Xylenes, total	ND	1	5	ug/Kg	03/30/04	LB
Surrogates				**Units**	**Control Limits**	
Surr1 - Dibromofluoromethane	113			%	70 - 130	
Surr2 - 1,2-Dichloroethane-d4	117			%	70 - 130	
Surr3 - Toluene-d8	105			%	70 - 130	
Surr4 - p-Bromofluorobenzene	110			%	70 - 130	
8015M - Gasoline						
Gasoline	ND	1	3	mg/Kg	03/31/04	LT
Surrogates				**Units**	**Control Limits**	
a,a,a-Trifluorotoluene	103			%	55 - 200	

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

Order #: 508283 **Client:** Stellar Environmental Solutions

Matrix: WATER **Client Sample ID:** BH-02-GW

Date Sampled: 03/23/2004

Time Sampled: 10:00

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
1,2-Dibromo-3-chloropropane	ND	10	50.0	ug/L	03/28/04	LB
1,2-Dibromoethane	ND	10	50.0	ug/L	03/28/04	LB
Benzene	ND	10	10.0	ug/L	03/28/04	LB
Ethyl benzene	ND	10	50.0	ug/L	03/28/04	LB
Ethyl-tertbutylether (ETBE)	ND	10	10.0	ug/L	03/28/04	LB
Isopropyl ether (DIPE)	ND	10	10.0	ug/L	03/28/04	LB
Methyl-tert-butylether (MTBE)	5390	10	10.0	ug/L	03/28/04	LB
Tert-amylmethylether (TAME)	95	10	10.0	ug/L	03/28/04	LB
Tertiary butyl alcohol (TBA)	2360	10	100.0	ug/L	03/28/04	LB
Toluene	ND	10	50.0	ug/L	03/28/04	LB
Xylenes, total	31 J	10	50.0	ug/L	03/28/04	LB
Surrogates				**Units**	**Control Limits**	
Surr1 - Dibromofluoromethane	107			%	70 - 130	
Surr2 - 1,2-Dichloroethane-d4	116			%	70 - 130	
Surr3 - Toluene-d8	99			%	70 - 130	
Surr4 - p-Bromofluorobenzene	114			%	70 - 130	
8015M - Gasoline						
Gasoline	6700	10	500.0	ug/L	03/27/04	LZ
Surrogates				**Units**	**Control Limits**	
a,a,a-Trifluorotoluene	96			%	55 - 200	

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

Order #: 508284 **Client:** Stellar Environmental Solutions

Matrix: SOLID **Client Sample ID:** BH-03-17

Date Sampled: 03/23/2004

Time Sampled: 10:30

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
8260B Volatile Organic Compounds					
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	03/30/04 LB
1,2-Dibromoethane	ND	1	5	ug/Kg	03/30/04 LB
Benzene	ND	1	5	ug/Kg	03/30/04 LB
Ethyl benzene	ND	1	5	ug/Kg	03/30/04 LB
Ethyl-tertbutylether (ETBE)	ND	1	10	ug/Kg	03/30/04 LB
Isopropyl ether (DIPE)	ND	1	10	ug/Kg	03/30/04 LB
Methyl-tert-butylether (MTBE)	80	1	5	ug/Kg	03/30/04 LB
Tert-amylmethylether (TAME)	1.1 J	1	10	ug/Kg	03/30/04 LB
Tertiary butyl alcohol (TBA)	ND	1	50	ug/Kg	03/30/04 LB
Toluene	ND	1	5	ug/Kg	03/30/04 LB
Xylenes, total	ND	1	5	ug/Kg	03/30/04 LB
Surrogates				**Units**	**Control Limits**
Surr1 - Dibromofluoromethane	112			%	70 - 130
Surr2 - 1,2-Dichloroethane-d4	124			%	70 - 130
Surr3 - Toluene-d8	103			%	70 - 130
Surr4 - p-Bromofluorobenzene	119			%	70 - 130
8015M - Gasoline					
Gasoline	ND	1	3	mg/Kg	03/31/04 LT
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	114			%	55 - 200

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

Order #: 508285 **Client:** Stellar Environmental Solutions

Matrix: WATER **Client Sample ID:** BH-03-GW

Date Sampled: 03/23/2004

Time Sampled: 10:40

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
1,2-Dibromo-3-chloropropane	ND	1	5	ug/L	03/28/04	LB
1,2-Dibromoethane	ND	1	5	ug/L	03/28/04	LB
Benzene	ND	1	1	ug/L	03/28/04	LB
Ethyl benzene	ND	1	5	ug/L	03/28/04	LB
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L	03/28/04	LB
Isopropyl ether (DIPE)	ND	1	1	ug/L	03/28/04	LB
Methyl-tert-butylether (MTBE)	208	1	1	ug/L	03/28/04	LB
Tert-amylmethylether (TAME)	2.7	1	1	ug/L	03/28/04	LB
Tertiary butyl alcohol (TBA)	ND	1	10	ug/L	03/28/04	LB
Toluene	ND	1	5	ug/L	03/28/04	LB
Xylenes, total	ND	1	5	ug/L	03/28/04	LB
Surrogates				**Units**	**Control Limits**	
Surr1 - Dibromofluoromethane	108			%	70 - 130	
Surr2 - 1,2-Dichloroethane-d4	116			%	70 - 130	
Surr3 - Toluene-d8	105			%	70 - 130	
Surr4 - p-Bromofluorobenzene	124			%	70 - 130	
8015M - Gasoline						
Gasoline	250	1	50	ug/L	03/27/04	LZ
Surrogates				**Units**	**Control Limits**	
a,a,a-Trifluorotoluene	90			%	55 - 200	

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

Order #: 508286
Matrix: SOLID
Date Sampled: 03/23/2004
Time Sampled: 10:50
Sampled By:

Client: Stellar Environmental Solutions
Client Sample ID: BH-03-20

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	03/30/04	LB
1,2-Dibromoethane	ND	1	5	ug/Kg	03/30/04	LB
Benzene	ND	1	5	ug/Kg	03/30/04	LB
Ethyl benzene	ND	1	5	ug/Kg	03/30/04	LB
Ethyl-tertbutylether (ETBE)	ND	1	10	ug/Kg	03/30/04	LB
Isopropyl ether (DIPE)	ND	1	10	ug/Kg	03/30/04	LB
Methyl-tert-butylether (MTBE)	93	1	5	ug/Kg	03/30/04	LB
Tert-amylmethylether (TAME)	1.2 J	1	10	ug/Kg	03/30/04	LB
Tertiary butyl alcohol (TBA)	ND	1	50	ug/Kg	03/30/04	LB
Toluene	ND	1	5	ug/Kg	03/30/04	LB
Xylenes, total	ND	1	5	ug/Kg	03/30/04	LB
Surrogates				**Units**	**Control Limits**	
Surr1 - Dibromofluoromethane	113			%	70 - 130	
Surr2 - 1,2-Dichloroethane-d4	126			%	70 - 130	
Surr3 - Toluene-d8	98			%	70 - 130	
Surr4 - p-Bromofluorobenzene	114			%	70 - 130	
8015M - Gasoline						
Gasoline	ND	1	3	mg/Kg	03/31/04	LT
Surrogates				**Units**	**Control Limits**	
a,a,a-Trifluorotoluene	116			%	55 - 200	

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

Order #: 508287 **Client:** Stellar Environmental Solutions

Matrix: SOLID **Client Sample ID:** BH-04-17.5

Date Sampled: 03/23/2004

Time Sampled: 11:15

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	03/30/04	LB
1,2-Dibromoethane	ND	1	5	ug/Kg	03/30/04	LB
Benzene	ND	1	5	ug/Kg	03/30/04	LB
Ethyl benzene	ND	1	5	ug/Kg	03/30/04	LB
Ethyl-tertbutylether (ETBE)	ND	1	10	ug/Kg	03/30/04	LB
Isopropyl ether (DIPE)	ND	1	10	ug/Kg	03/30/04	LB
Methyl-tert-butylether (MTBE)	120	1	5	ug/Kg	03/30/04	LB
Tert-amylmethylether (TAME)	1.6 J	1	10	ug/Kg	03/30/04	LB
Tertiary butyl alcohol (TBA)	55	1	50	ug/Kg	03/30/04	LB
Toluene	ND	1	5	ug/Kg	03/30/04	LB
Xylenes, total	ND	1	5	ug/Kg	03/30/04	LB
Surrogates				**Units**	**Control Limits**	
Surr1 - Dibromofluoromethane	115			%	70 - 130	
Surr2 - 1,2-Dichloroethane-d4	127			%	70 - 130	
Surr3 - Toluene-d8	102			%	70 - 130	
Surr4 - p-Bromofluorobenzene	119			%	70 - 130	
8015M - Gasoline						
Gasoline	ND	1	3	mg/Kg	03/31/04	LT
Surrogates				**Units**	**Control Limits**	
a,a,a-Trifluorotoluene	110			%	55 - 200	

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

Order #: 508288 **Client:** Stellar Environmental Solutions
Matrix: WATER **Client Sample ID:** BH-04-GW
Date Sampled: 03/23/2004
Time Sampled: 11:25
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
8260B Volatile Organic Compounds					
1,2-Dibromo-3-chloropropane	ND	25	125.0	ug/L	03/28/04 LB
1,2-Dibromoethane	ND	25	125.0	ug/L	03/28/04 LB
Benzene	ND	25	25.0	ug/L	03/28/04 LB
Ethyl benzene	ND	25	125.0	ug/L	03/28/04 LB
Ethyl-tertbutylether (ETBE)	ND	25	25.0	ug/L	03/28/04 LB
Isopropyl ether (DIPE)	ND	25	25.0	ug/L	03/28/04 LB
Methyl-tert-butylether (MTBE)	4500	25	25.0	ug/L	03/28/04 LB
Tert-amylmethylether (TAME)	60	25	25.0	ug/L	03/28/04 LB
Tertiary butyl alcohol (TBA)	ND	25	250.0	ug/L	03/28/04 LB
Toluene	ND	25	125.0	ug/L	03/28/04 LB
Xylenes, total	ND	25	125.0	ug/L	03/28/04 LB
Surrogates				**Units**	**Control Limits**
Surr1 - Dibromofluoromethane	106			%	70 - 130
Surr2 - 1,2-Dichloroethane-d4	114			%	70 - 130
Surr3 - Toluene-d8	104			%	70 - 130
Surr4 - p-Bromofluorobenzene	129			%	70 - 130
8015M - Gasoline					
Gasoline	5900	20	1000.0	ug/L	03/27/04 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	99			%	55 - 200

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

Order #: 508289 **Client:** Stellar Environmental Solutions

Matrix: SOLID **Client Sample ID:** BH-04-20.5

Date Sampled: 03/23/2004

Time Sampled: 11:30

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	03/30/04	LB
1,2-Dibromoethane	ND	1	5	ug/Kg	03/30/04	LB
Benzene	ND	1	5	ug/Kg	03/30/04	LB
Ethyl benzene	1.6 J	1	5	ug/Kg	03/30/04	LB
Ethyl-tertbutylether (ETBE)	ND	1	10	ug/Kg	03/30/04	LB
Isopropyl ether (DIPE)	ND	1	10	ug/Kg	03/30/04	LB
Methyl-tert-butylether (MTBE)	127	1	5	ug/Kg	03/30/04	LB
Tert-amylmethylether (TAME)	ND	1	10	ug/Kg	03/30/04	LB
Tertiary butyl alcohol (TBA)	67	1	50	ug/Kg	03/30/04	LB
Toluene	ND	1	5	ug/Kg	03/30/04	LB
Xylenes, total	ND	1	5	ug/Kg	03/30/04	LB
Surrogates				**Units**	**Control Limits**	
Surr1 - Dibromofluoromethane	111			%	70 - 130	
Surr2 - 1,2-Dichloroethane-d4	117			%	70 - 130	
Surr3 - Toluene-d8	101			%	70 - 130	
Surr4 - p-Bromofluorobenzene	115			%	70 - 130	
8015M - Gasoline						
Gasoline	3.5	1	3	mg/Kg	03/31/04	LT
Surrogates				**Units**	**Control Limits**	
a,a,a-Trifluorotoluene	133			%	55 - 200	

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

Order #: 508290
Matrix: SOLID
Date Sampled: 03/23/2004
Time Sampled: 12:15
Sampled By:

Client: Stellar Environmental Solutions
Client Sample ID: BH-05-18.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	03/30/04	LB
1,2-Dibromoethane	ND	1	5	ug/Kg	03/30/04	LB
Benzene	ND	1	5	ug/Kg	03/30/04	LB
Ethyl benzene	ND	1	5	ug/Kg	03/30/04	LB
Ethyl-tertbutylether (ETBE)	ND	1	10	ug/Kg	03/30/04	LB
Isopropyl ether (DIPE)	ND	1	10	ug/Kg	03/30/04	LB
Methyl-tert-butylether (MTBE)	1.7 J	1	5	ug/Kg	03/30/04	LB
Tert-amylmethylether (TAME)	ND	1	10	ug/Kg	03/30/04	LB
Tertiary butyl alcohol (TBA)	ND	1	50	ug/Kg	03/30/04	LB
Toluene	ND	1	5	ug/Kg	03/30/04	LB
Xylenes, total	ND	1	5	ug/Kg	03/30/04	LB
Surrogates				**Units**	**Control Limits**	
Surr1 - Dibromofluoromethane	112			%	70 - 130	
Surr2 - 1,2-Dichloroethane-d4	123			%	70 - 130	
Surr3 - Toluene-d8	100			%	70 - 130	
Surr4 - p-Bromofluorobenzene	118			%	70 - 130	
8015M - Gasoline						
Gasoline	ND	1	3	mg/Kg	03/31/04	LT
Surrogates				**Units**	**Control Limits**	
a,a,a-Trifluorotoluene	85			%	55 - 200	

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

Order #: 508291 **Client:** Stellar Environmental Solutions

Matrix: WATER **Client Sample ID:** BH-05-GW

Date Sampled: 03/23/2004

Time Sampled: 12:20

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
1,2-Dibromo-3-chloropropane	ND	1	5	ug/L	03/28/04	LB
1,2-Dibromoethane	ND	1	5	ug/L	03/28/04	LB
Benzene	ND	1	1	ug/L	03/28/04	LB
Ethyl benzene	ND	1	5	ug/L	03/28/04	LB
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L	03/28/04	LB
Isopropyl ether (DIPE)	ND	1	1	ug/L	03/28/04	LB
Methyl-tert-butylether (MTBE)	16	1	1	ug/L	03/28/04	LB
Tert-amylmethylether (TAME)	ND	1	1	ug/L	03/28/04	LB
Tertiary butyl alcohol (TBA)	ND	1	10	ug/L	03/28/04	LB
Toluene	ND	1	5	ug/L	03/28/04	LB
Xylenes, total	ND	1	5	ug/L	03/28/04	LB
Surrogates				**Units**	**Control Limits**	
Surr1 - Dibromofluoromethane	108			%	70 - 130	
Surr2 - 1,2-Dichloroethane-d4	115			%	70 - 130	
Surr3 - Toluene-d8	103			%	70 - 130	
Surr4 - p-Bromofluorobenzene	123			%	70 - 130	
8015M - Gasoline						
Gasoline	ND	1	50	ug/L	03/27/04	LZ
Surrogates				**Units**	**Control Limits**	
a,a,a-Trifluorotoluene	93			%	55 - 200	

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

Order #: 508292
Matrix: SOLID
Date Sampled: 03/23/2004
Time Sampled: 12:25
Sampled By:

Client: Stellar Environmental Solutions
Client Sample ID: BH-05-23.5

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	03/30/04	LB
1,2-Dibromoethane	ND	1	5	ug/Kg	03/30/04	LB
Benzene	ND	1	5	ug/Kg	03/30/04	LB
Ethyl benzene	ND	1	5	ug/Kg	03/30/04	LB
Ethyl-tertbutylether (ETBE)	ND	1	10	ug/Kg	03/30/04	LB
Isopropyl ether (DIPE)	ND	1	10	ug/Kg	03/30/04	LB
Methyl-tert-butylether (MTBE)	1.3 J	1	5	ug/Kg	03/30/04	LB
Tert-amylmethylether (TAME)	ND	1	10	ug/Kg	03/30/04	LB
Tertiary butyl alcohol (TBA)	ND	1	50	ug/Kg	03/30/04	LB
Toluene	ND	1	5	ug/Kg	03/30/04	LB
Xylenes, total	ND	1	5	ug/Kg	03/30/04	LB
Surrogates				**Units**	**Control Limits**	
Surr1 - Dibromofluoromethane	114			%	70 - 130	
Surr2 - 1,2-Dichloroethane-d4	128			%	70 - 130	
Surr3 - Toluene-d8	98			%	70 - 130	
Surr4 - p-Bromofluorobenzene	116			%	70 - 130	
8015M - Gasoline						
Gasoline	ND	1	3	mg/Kg	03/31/04	LT
Surrogates				**Units**	**Control Limits**	
a,a,a-Trifluorotoluene	67			%	55 - 200	

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

Order #: 508293 **Client:** Stellar Environmental Solutions

Matrix: SOLID **Client Sample ID:** BH-06-15.5

Date Sampled: 03/23/2004

Time Sampled: 13:05

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	03/31/04	LB
1,2-Dibromoethane	ND	1	5	ug/Kg	03/31/04	LB
Benzene	ND	1	5	ug/Kg	03/31/04	LB
Ethyl benzene	ND	1	5	ug/Kg	03/31/04	LB
Ethyl-tertbutylether (ETBE)	ND	1	10	ug/Kg	03/31/04	LB
Isopropyl ether (DIPE)	ND	1	10	ug/Kg	03/31/04	LB
Methyl-tert-butylether (MTBE)	2.0 J	1	5	ug/Kg	03/31/04	LB
Tert-amylmethylether (TAME)	ND	1	10	ug/Kg	03/31/04	LB
Tertiary butyl alcohol (TBA)	ND	1	50	ug/Kg	03/31/04	LB
Toluene	ND	1	5	ug/Kg	03/31/04	LB
Xylenes, total	ND	1	5	ug/Kg	03/31/04	LB
Surrogates				**Units**	**Control Limits**	
Surr1 - Dibromofluoromethane	117			%	70 - 130	
Surr2 - 1,2-Dichloroethane-d4	126			%	70 - 130	
Surr3 - Toluene-d8	98			%	70 - 130	
Surr4 - p-Bromofluorobenzene	108			%	70 - 130	
8015M - Gasoline						
Gasoline	ND	1	3	mg/Kg	03/31/04	LT
Surrogates				**Units**	**Control Limits**	
a,a,a-Trifluorotoluene	95			%	55 - 200	

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

Order #: 508294 **Client:** Stellar Environmental Solutions

Matrix: SOLID **Client Sample ID:** BH-06-19

Date Sampled: 03/23/2004

Time Sampled: 13:10

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
8260B Volatile Organic Compounds					
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	03/31/04 LB
1,2-Dibromoethane	ND	1	5	ug/Kg	03/31/04 LB
Benzene	ND	1	5	ug/Kg	03/31/04 LB
Ethyl benzene	ND	1	5	ug/Kg	03/31/04 LB
Ethyl-tertbutylether (ETBE)	ND	1	10	ug/Kg	03/31/04 LB
Isopropyl ether (DIPE)	ND	1	10	ug/Kg	03/31/04 LB
Methyl-tert-butylether (MTBE)	ND	1	5	ug/Kg	03/31/04 LB
Tert-amylmethylether (TAME)	ND	1	10	ug/Kg	03/31/04 LB
Tertiary butyl alcohol (TBA)	ND	1	50	ug/Kg	03/31/04 LB
Toluene	ND	1	5	ug/Kg	03/31/04 LB
Xylenes, total	ND	1	5	ug/Kg	03/31/04 LB
Surrogates				**Units**	**Control Limits**
Surr1 - Dibromofluoromethane	120			%	70 - 130
Surr2 - 1,2-Dichloroethane-d4	127			%	70 - 130
Surr3 - Toluene-d8	99			%	70 - 130
Surr4 - p-Bromofluorobenzene	110			%	70 - 130
8015M - Gasoline					
Gasoline	254	1	3	mg/Kg	03/27/04 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	89			%	55 - 200

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

Order #: 508295 **Client:** Stellar Environmental Solutions

Matrix: WATER **Client Sample ID:** BH-06-GW

Date Sampled: 03/23/2004

Time Sampled: 13:15

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
1,2-Dibromo-3-chloropropane	ND	1	5	ug/L	03/28/04	LB
1,2-Dibromoethane	ND	1	5	ug/L	03/28/04	LB
Benzene	ND	1	1	ug/L	03/28/04	LB
Ethyl benzene	ND	1	5	ug/L	03/28/04	LB
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L	03/28/04	LB
Isopropyl ether (DIPE)	ND	1	1	ug/L	03/28/04	LB
Methyl-tert-butylether (MTBE)	167	1	1	ug/L	03/28/04	LB
Tert-amylmethylether (TAME)	2.2	1	1	ug/L	03/28/04	LB
Tertiary butyl alcohol (TBA)	ND	1	10	ug/L	03/28/04	LB
Toluene	ND	1	5	ug/L	03/28/04	LB
Xylenes, total	ND	1	5	ug/L	03/28/04	LB
Surrogates				**Units**	**Control Limits**	
Surr1 - Dibromofluoromethane	99			%	70 - 130	
Surr2 - 1,2-Dichloroethane-d4	70			%	70 - 130	
Surr3 - Toluene-d8	107			%	70 - 130	
Surr4 - p-Bromofluorobenzene	130			%	70 - 130	
8015M - Gasoline						
Gasoline	254	1	50	ug/L	03/27/04	LZ
Surrogates				**Units**	**Control Limits**	
a,a,a-Trifluorotoluene	89			%	55 - 200	

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

Order #: 508296 **Client:** Stellar Environmental Solutions

Matrix: SOLID **Client Sample ID:** BH-07-19

Date Sampled: 03/23/2004

Time Sampled: 13:40

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	03/31/04	LB
1,2-Dibromoethane	ND	1	5	ug/Kg	03/31/04	LB
Benzene	ND	1	5	ug/Kg	03/31/04	LB
Ethyl benzene	ND	1	5	ug/Kg	03/31/04	LB
Ethyl-tertbutylether (ETBE)	ND	1	10	ug/Kg	03/31/04	LB
Isopropyl ether (DIPE)	ND	1	10	ug/Kg	03/31/04	LB
Methyl-tert-butylether (MTBE)	ND	1	5	ug/Kg	03/31/04	LB
Tert-amylmethylether (TAME)	ND	1	10	ug/Kg	03/31/04	LB
Tertiary butyl alcohol (TBA)	ND	1	50	ug/Kg	03/31/04	LB
Toluene	ND	1	5	ug/Kg	03/31/04	LB
Xylenes, total	ND	1	5	ug/Kg	03/31/04	LB
Surrogates				**Units**	**Control Limits**	
Surr1 - Dibromofluoromethane	111			%	70 - 130	
Surr2 - 1,2-Dichloroethane-d4	119			%	70 - 130	
Surr3 - Toluene-d8	100			%	70 - 130	
Surr4 - p-Bromofluorobenzene	113			%	70 - 130	
8015M - Gasoline						
Gasoline	ND	1	3	mg/Kg	03/31/04	LT
Surrogates				**Units**	**Control Limits**	
a,a,a-Trifluorotoluene	96			%	55 - 200	

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

Order #: 508297 **Client:** Stellar Environmental Solutions

Matrix: WATER **Client Sample ID:** BH-07-GW

Date Sampled: 03/23/2004

Time Sampled: 13:45

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
1,2-Dibromo-3-chloropropane	ND	1	5	ug/L	03/28/04	LB
1,2-Dibromoethane	ND	1	5	ug/L	03/28/04	LB
Benzene	ND	1	1	ug/L	03/28/04	LB
Ethyl benzene	ND	1	5	ug/L	03/28/04	LB
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L	03/28/04	LB
Isopropyl ether (DIPE)	ND	1	1	ug/L	03/28/04	LB
Methyl-tert-butylether (MTBE)	ND	1	1	ug/L	03/28/04	LB
Tert-amylmethylether (TAME)	ND	1	1	ug/L	03/28/04	LB
Tertiary butyl alcohol (TBA)	ND	1	10	ug/L	03/28/04	LB
Toluene	ND	1	5	ug/L	03/28/04	LB
Xylenes, total	ND	1	5	ug/L	03/28/04	LB
Surrogates				**Units**	**Control Limits**	
Surr1 - Dibromofluoromethane	109			%	70 - 130	
Surr2 - 1,2-Dichloroethane-d4	116			%	70 - 130	
Surr3 - Toluene-d8	102			%	70 - 130	
Surr4 - p-Bromofluorobenzene	127			%	70 - 130	
8015M - Gasoline						
Gasoline	ND	1	50	ug/L	03/27/04	LZ
Surrogates				**Units**	**Control Limits**	
a,a,a-Trifluorotoluene	92			%	55 - 200	

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

Order #: 508298 **Client:** Stellar Environmental Solutions

Matrix: SOLID **Client Sample ID:** BH-07-23

Date Sampled: 03/23/2004

Time Sampled: 14:00

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8260B Volatile Organic Compounds						
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	03/31/04	LB
1,2-Dibromoethane	ND	1	5	ug/Kg	03/31/04	LB
Benzene	ND	1	5	ug/Kg	03/31/04	LB
Ethyl benzene	ND	1	5	ug/Kg	03/31/04	LB
Ethyl-tertbutylether (ETBE)	ND	1	10	ug/Kg	03/31/04	LB
Isopropyl ether (DIPE)	ND	1	10	ug/Kg	03/31/04	LB
Methyl-tert-butylether (MTBE)	ND	1	5	ug/Kg	03/31/04	LB
Tert-amylmethylether (TAME)	ND	1	10	ug/Kg	03/31/04	LB
Tertiary butyl alcohol (TBA)	ND	1	50	ug/Kg	03/31/04	LB
Toluene	ND	1	5	ug/Kg	03/31/04	LB
Xylenes, total	ND	1	5	ug/Kg	03/31/04	LB
Surrogates				**Units**	**Control Limits**	
Surr1 - Dibromofluoromethane	114			%	70 - 130	
Surr2 - 1,2-Dichloroethane-d4	120			%	70 - 130	
Surr3 - Toluene-d8	101			%	70 - 130	
Surr4 - p-Bromofluorobenzene	113			%	70 - 130	
8015M - Gasoline						
Gasoline	ND	1	3	mg/Kg	03/31/04	LT
Surrogates				**Units**	**Control Limits**	
a,a,a-Trifluorotoluene	103			%	55 - 200	

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

Order #: 508317 **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	
8260B Volatile Organic Compounds						
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg	03/29/04	LB
1,2-Dibromoethane	ND	1	5	ug/Kg	03/29/04	LB
Benzene	ND	1	5	ug/Kg	03/29/04	LB
Ethyl benzene	ND	1	5	ug/Kg	03/29/04	LB
Ethyl-tertbutylether (ETBE)	ND	1	10	ug/Kg	03/29/04	LB
Isopropyl ether (DIPE)	ND	1	10	ug/Kg	03/29/04	LB
Methyl-tert-butylether (MTBE)	ND	1	5	ug/Kg	03/29/04	LB
Tert-amylmethylether (TAME)	ND	1	10	ug/Kg	03/29/04	LB
Tertiary butyl alcohol (TBA)	ND	1	50	ug/Kg	03/29/04	LB
Toluene	ND	1	5	ug/Kg	03/29/04	LB
Xylenes, total	ND	1	5	ug/Kg	03/29/04	LB
Surrogates				**Units**	**Control Limits**	
Surr1 - Dibromofluoromethane	109			%	70 - 130	
Surr2 - 1,2-Dichloroethane-d4	117			%	70 - 130	
Surr3 - Toluene-d8	100			%	70 - 130	
Surr4 - p-Bromofluorobenzene	117			%	70 - 130	
8015M - Gasoline						
Gasoline	ND	1	3	mg/Kg	03/31/04	LT
Surrogates				**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 #: 508318 **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
8260B Volatile Organic Compounds					
1,2-Dibromo-3-chloropropane	ND	1	5	ug/L	03/27/04 LB
1,2-Dibromoethane	ND	1	5	ug/L	03/27/04 LB
Benzene	ND	1	1	ug/L	03/27/04 LB
Ethyl benzene	ND	1	5	ug/L	03/27/04 LB
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L	03/27/04 LB
Isopropyl ether (DIPE)	ND	1	1	ug/L	03/27/04 LB
Methyl-tert-butylether (MTBE)	ND	1	1	ug/L	03/27/04 LB
Tert-amylmethylether (TAME)	ND	1	1	ug/L	03/27/04 LB
Tertiary butyl alcohol (TBA)	ND	1	10	ug/L	03/27/04 LB
Toluene	ND	1	5	ug/L	03/27/04 LB
Xylenes, total	ND	1	5	ug/L	03/27/04 LB
Surrogates				**Units**	**Control Limits**
Surr1 - Dibromofluoromethane	109			%	70 - 130
Surr2 - 1,2-Dichloroethane-d4	118			%	70 - 130
Surr3 - Toluene-d8	102			%	70 - 130
Surr4 - p-Bromofluorobenzene	123			%	70 - 130
8015M - Gasoline					
Gasoline	ND	1	50	ug/L	03/27/04 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	84			%	55 - 200

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

ASSOCIATED LABORATORIES
QA REPORT FORM

QC Sample: LCS / LCSD

Matrix: WATER

Prep. Date: 03/27/04

Analysis Date: 03/27/04-03/28/04

ID#'s in Batch: LR 126719, 126721

Reporting Units = ug/L

PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS

			PREP BLK					
			Value	Result	True	%Rec	L.Limit	H.Limit
Test	Method	LCS	ND	427	500	85	80%	120%
TPH	8015M-G	LCSD	ND	435	500	87	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	84
LCS	140
LCSD	138

AAA-TFT = a,a,a-Trifluorotoluene

ASSOCIATED LABORATORIES
LCS REPORT FORM

QC Sample: LCS / LCSD

Matrix: SOLID

Prep. Date: 03/30/04

Analysis Date: 03/30/04-03/31/04

ID#'s in Batch: LR 126719

Reporting Units = mg/Kg

PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS

			PREP BLK					
			Value	Result	True	%Rec	L.Limit	H.Limit
Test	**Method**	LCS	ND	4.7	5	94	80%	120%
TPH	8015M-G	LCSD	ND	4.7	5	94	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	72
LCS	118
LCSD	119

AAA-TFT = a,a,a-Trifluorotoluene

ASSOCIATED LABORATORIES

LCS REPORT FORM - METHOD 8260 / 624 / 524.2

QC Sample: LCS/LCSD - Water Samples

Analysis Date: 03/27/04

Applies to: LR 126630, 126595, 126636, 126689, 126523, 126719

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	QC Limits %REC
1,1-Dichloroethene	ND	50	56.48	56.75	113	114	0	22	59-172
MTBE	ND	50	48.12	50.38	96	101	5	24	62-137
Benzene	ND	50	49.86	51.90	100	104	4	24	62-137
Trichloroethene	ND	50	55.02	62.35	110	125	12	21	66-142
Toluene	ND	50	51.14	51.98	102	104	2	21	59-139
Chlorobenzene	ND	50	50.04	51.35	100	103	3	21	60-133

Method Blank = All ND

SURROGATE (QC Limits : 70-135)

Compounds	DBFM	1,2-DCA	Tol-d8	p-BFB
LCS	111	108	102	106
LCSD	110	110	105	104
BLANK # 3	109	118	102	123
BLANK # 4	108	118	104	123

ASSOCIATED LABORATORIES

LCS REPORT FORM - METHOD 8260 / 624 / 524.2

QC Sample: LCS/LCSD - Water Samples

Analysis Date: 03/28/04

Applies to: LR 126719

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	QC Limits %REC
1,1-Dichloroethene	ND	50	56.43	56.81	113	114	1	22	59-172
MTBE	ND	50	48.29	50.73	97	101	5	24	62-137
Benzene	ND	50	48.97	51.01	98	102	4	24	62-137
Trichloroethene	ND	50	55.00	55.79	110	112	1	21	66-142
Toluene	ND	50	50.76	51.05	102	102	1	21	59-139
Chlorobenzene	ND	50	48.96	49.64	98	99	1	21	60-133

Method Blank = All ND

SURROGATE (QC Limits : 70-135)

Compounds	DBFM	1,2-DCA	Tol-d8	p-BFB
LCS	111	106	102	104
LCSD	110	110	102	104
BLANK # 5	109	118	106	122

ASSOCIATED LABORATORIES

LCS REPORT FORM - METHOD 8260 / 624 / 524.2

QC Sample: LCS/LCSD - Soil Samples

Analysis Date: 03/29/04

Applies to: LR 126740, 126719

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	QC Limits %REC
,1-Dichloroethene	ND	50	60.20	56.38	120	113	7	22	59-172
MTBE	ND	50	50.65	49.25	101	99	3	24	62-137
Benzene	ND	50	52.99	50.40	106	101	5	24	62-137
Trichloroethene	ND	50	57.49	56.04	115	112	3	21	66-142
Toluene	ND	50	51.89	51.76	104	104	0	21	59-139
Chlorobenzene	ND	50	51.71	49.53	103	99	4	21	60-133

Method Blank = All ND

SURROGATE (QC Limits : 70-135)

Compounds	DBFM	1,2-DCA	Tol-d8	p-BFB
LCS	119	98	102	99
LCSD	116	108	100	102
BLANK # 2	109	117	100	117

ASSOCIATED LABORATORIES

QA REPORT FORM - METHOD 8260 / 624 / 524.2

QC Sample: MS / MSD - Solid Samples 126386-744

Analysis Date: 03/30/04

Applies to: LR 126315, 126386, 126719

Reporting Units = ug/Kg

Matrix Spike / Matrix Spike Duplicate

Test	Sample Result	Spike Added	Matrix Spike	Matrix Spk. Dup	%Rec MS	%Rec MSD	RPD	QC Limits RPD	QC Limits %REC
1,1-Dichloroethene	ND	50	54.95	53.69	110	107	2	22	59-172
MTBE	ND	50	43.99	44.45	88	89	1	24	62-137
Benzene	ND	50	48.17	46.09	96	92	4	24	62-137
Trichloroethene	ND	50	53.99	52.57	108	105	3	21	66-142
Toluene	ND	50	48.71	46.97	97	94	4	21	59-139
Chlorobenzene	ND	50	48.59	46.35	97	93	5	21	60-133

QC Sample: LCS/LCSD
Analysis Date: 03/30/04

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	QC Limits %REC
1,1-Dichloroethene	ND	50.0	56.75	60.22	114	120	6	22	59-172
MTBE	ND	50.0	50.05	52.72	100	105	5	24	62-137
Benzene	ND	50.0	52.02	53.05	104	106	2	24	62-137
Trichloroethene	ND	50.0	57.89	57.99	116	116	0	21	66-142
Toluene	ND	50.0	51.99	53.83	104	108	3	21	59-139
Chlorobenzene	ND	50.0	53.17	54.01	106	108	2	21	60-133

Method Blank = All ND

SURROGATE (QC Limits : 70-135)

Compounds	DBFM	1,2-DCA	Tol-d8	p-BFB
MS	119	109	104	94
MSD	116	109	104	104
LCS	113	99	100	100
LCSD	123	104	102	101
BLANK # 4	110	117	102	106
BLANK # 5	111	115	106	113

ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92868-1225 - 714/771-6900 FAX 714/538-1209

Cooler Receipt Form

Client: Stellar Env Project: 2003-36

Date Cooler Received: 3/25 Date Cooler Opened: 3/25

Was cooler scanned for presence of radioactivity ? Yes/No
If yes was radioactivity results above 25 cpm ? Yes/No

Was a shipper's packing slip attached to the cooler ? Yes/No

If the cooler had custody seal(s), were thy signed and intact ? Yes/No/Na

Was the cooler packed with: Ice x Ice Packs ____ Bubble wrap ____
Styrofoam ____ Paper ____ None ____ Other ____

Cooler Temperature: 2.3°C *
*cooler needs to be received @ 4°C with an acceptable range of 2°- 6 °C

If samples were hand delivered do they meet the temp. criteria, which should be @ 4°C with an acceptable range of 2°- 6 °C ? Yes/No

If no explain: ____

Were all samples sealed in plastic bags ? Yes/No

Did all samples arrive intact ? If no, indicate below. Yes/No

Were all samples labeled correctly ? (ID's Dates, Times) If no, indicate below. Yes/No

Can the tests required be ran with the provided containers, If no indicate below. Yes/No

Was sufficient sample volume sent for all containers ? Yes/No

Were any VOA vials received with head space ? Yes/No/Na

Was the correct preservatives used ? Yes/No/Na
If no, see the pH log for a list of samples containers regarding pH

Any other important information: ____

Receiving Department: ____ Date: 3/25

Chain of Custody Record

12679 Rec'd

Lab job no. _____
Date _____
Page 1 of 3

Laboratory Associated Laboratories
Address 806 N. Batavia
Orange, CA

Method of Shipment overnight courier
Shipment No. —
Airbill No. —
Cooler No. —
Project Manager Bruce Rucker
Telephone No. (510) 644-3123
Fax No. (510) 644-3859
Samplers: (Signature) B M. Rucker

Project Owner Atlas Heating + Air Conditioning
Site Address 1451 - 32nd Street
Oakland CA
Project Name Atlas Heating + Air Conditioning
SES Project Number 2003-36

Field Sample Number	Location/ Depth	Date	Time	Sample Type	Type/Size of Container	Preservation: Cooler	Preservation: Chemical	Filtered	No. of Containers	TVH-gasoline (8015M)	MTBE + BTEX (8260)	Fuel oxygenates + lead scavengers (EPA 8260)	Remarks
BH-01-14'	14'	3/23/04	830	Soil	acetate sleeve	✓			1	X	X	X	
BH-01-GW	~16'		835	H2O	40ml VOAs		HCl		3				
BH-01-23'	23'		850	Soil	acetate sleeve				1				
BH-02-11.5'	11.5'		925	"	" "				1				
BH-02-15.5'	15.5'		940	"	" "				1				
BH-02-23'	23'		950	"	" "				1				
BH-02-GW	~17'		1000	H2O	40ml VOAs		HCl		3				
BH-03-17'	17'		1030	Soil	acetate sleeve				1				
BH-03-GW	~17.5'		1040	H2O	40 ml VOAs		HCl		3				
BH-03-20'	20'		1050	Soil	acetate sleeve				1				
BH-04-17.5'	17.5'		1115	"	"				1				
BH-04-GW	~18'	↓	1125	H2O	VOAs	↓	HCl		3	↓	↓	↓	

Relinquished by:	Date	Received by:	Date	Relinquished by:	Date	Received by:	Date
Signature B.M. Rucker	3/24/04	Signature		Signature		Signature	3/25
Printed Bruce Rucker	Time	Printed	Time	Printed	Time	Printed DVORAK	Time
Company Stellar Env. Solutions	1200	Company		Company		Company Associated Lab	9

Turnaround Time: Need results by 4/5/04
Comments: hold several samples (see "Remarks")

Relinquished by:	Date	Received by:	Date
Signature		Signature	
Printed	Time	Printed	Time
Company		Company	

2725047.20

Chain of Custody Record

Lab Job No. 126719

Date

Page 2 of 3

Laboratory: Associated Laboratories
Address: 806 N. Batavia, Orange, CA

Project Owner: Atlas Heating + Air Conditioning
Site Address: 1451 - 32nd Street, Oakland CA
Project Name: Atlas Heating + Air Conditioning
SES Project Number: 2003-36

Method of Shipment: overnight courier
Shipment No.: —
Airbill No.: —
Cooler No.: —
Project Manager: Bruce Rucker
Telephone No.: (510) 644-3123
Fax No.: (510) 644-3859
Samplers: (Signature) B. M. Rucker

Field Sample Number	Location/ Depth	Date	Time	Sample Type	Type/Size of Container	Preservation: Cooler	Preservation: Chemical	Filtered	No. of Containers	Analysis Required: TVH-gasoline (8015M)	Analysis Required: MTBE + BTEX (8260)	Analysis Required: Fuel oxygenates + lead scavengers (EPA 8260)	Remarks
BH-04-20.5'	20.5'	3/23/04	1130	Soil	acetate sleeve	✓			1	X	X	X	
BH-05-18.5'	18.5'		1215	"	" "				1				
BH-05-GW	~19'		1220	H2O	VOAs		HCl		3				
BH-05-23.5'	23.5'		1225	Soil	acetate sleeve				1				
BH-06-15.5'	15.5'		1305	"	" "				1				
BH-06-19'	19'		1310	"	" "				1				
BH-06-GW	~19'		1315	H2O	VOAs		HCl		3				
BH-07-19'	19'		1340	Soil	acetate sleeve				1				
BH-07-GW	~19'		1345	H2O	VOAs		HCl		3				
BH-07-23'	23'		1400	Soil	acetate sleeve				1				
BH-08-17'	17'		1430	"	" "				1				HOLD
BH-08-GW	~19'		1440	water	VOAs		HCl		3				HOLD

Relinquished by:	Date	Received by:	Date	Relinquished by:	Date	Received by:	Date
Signature: B. M. Rucker	3/24/04	Signature:		Signature:		Signature: DVONGW	3/24
Printed: Bruce Rucker	Time: 1000	Printed:	Time:	Printed:	Time:	Printed: Associated Lab	Time: 930
Company: Stellar Env. Solutions		Company:		Company:		Company:	

Turnaround Time:

Comments:

Relinquished by:	Date	Received by:	Date
Signature:		Signature:	
Printed:	Time:	Printed:	Time:
Company:		Company:	

Chain of Custody Record

Lab job no. 126719

Date

Page 3 of 3

Laboratory Associated Laboratories
Address 806 N. Batavia
Orange, CA

Project Owner Atlas Heating + Air Conditioning
Site Address 1451 - 32nd Street
Oakland CA
Project Name Atlas Heating + Air Conditioning
SES Project Number 2003-36

Method of Shipment Overnight courier
Shipment No. —
Airbill No. —
Cooler No. —
Project Manager Bruce Rucker
Telephone No. (510) 644-3123
Fax No. (510) 644-3859
Samplers: (Signature) B M. Rucker

Field Sample Number	Location/ Depth	Date	Time	Sample Type	Type/Size of Container	Preservation: Cooler	Preservation: Chemical	Filtered	No. of Containers	TVH-gasoline (8015M)	MTBE + BTEX (8260)	Fuel oxygenates + lead scavengers (EPA 8260)	Remarks
BH-09-18'	18'	3/24/04	1515	Soil	acetate sleeve	✓			1				HOLD
BH-09-GW	~18.5'	"	1520	H2O	VOAs	"	HCl		3				HOLD
BH-09-23'	23'	"	1530	Soil	acetate sleeve	"			1				HOLD

Relinquished by:	Date	Received by:	Date	Relinquished by:	Date	Received by:	Date
Signature B M. Rucker	3/24/04	Signature		Signature		Signature	3/25
Printed Bruce Rucker	Time 1200	Printed	Time	Printed	Time	Printed DUNG VU	Time 9
Company Stellar Env. Solutions		Company		Company		Company Associated Lab	

Turnaround Time:
Comments:

Relinquished by:	Date	Received by:	Date
Signature		Signature	
Printed	Time	Printed	Time
Company		Company	

Subject: Lab Request 126719 (32nd Street, Oakland, CA)
Date: Mon, 5 Apr 2004 08:51:48 -0700
From: "Bruce Rucker" <brucker@stellar-environmental.com>
To: "Danielle Roberts" <droberts@associatedlabs.com>

Danielle,

Please proceed with analysis of the following two water samples, that were previously submitted "on hold" (sampled on 3/23/04):

"BH-08-GW" and "BH-09-GW"

Please reply ASAP (phone or e-mail) to confirm that you received this. HOLD TIME IS UP TODAY!

Bruce M. Rucker, R.G., R.E.A
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

508300
508302

LR 126719

RUSH

STATE OF CALIFORNIA -- THE RESOURCES AGENCY
ARNOLD SCHWARZENEGGER, *Governor*

DEPARTMENT OF WATER RESOURCES
CENTRAL DISTRICT
3251 S STREET
SACRAMENTO, CA 95816-7017

MAR 1 1 2004

Mr. Bruce Rucker
Stellar Environmental Solutions
2198 Sixth Street, Suite 201
Berkeley, California 94710

Dear Mr. Rucker:

In response to your request, enclosed is the well location information for the production wells in the following area:

A one-quarter mile radius of 1451 – 32nd Street, Oakland
Township 01 South, Range 04 West, Sections 22 and 27

Your data request required one-half hour of staff time. We located nine well drillers reports as a result of this search. The total charge to reproduce the copies is $27.25 ($50 per hour of staff time plus 25 cents per page for nine pages). Your remittance should be made payable to the Department of Water Resources, General Accounting Office, Post Office Box 942836, Sacramento, California 94236-0001. Please show **"Invoice MAR 10-3"** on your remittance and return it with the enclosed copy of this letter to our Accounting Office.

If you need additional information or have any questions, please contact Anne Roth at (916) 227-7632 or fax (916) 227-7600.

Sincerely,

Robert L. Niblack, Chief
Geology and Groundwater Section

Enclosures

J. M. OUGH
1201 East 12th Street
OAKLAND, CALIF.
Phone Fruitvale 2266

01-726

15/4W-22

Job #998. P. J. Walker Company,
Boring Test Holes, 26th. & E
Peralta Streets, Oakland.

LOG OF TEST HOLE #1.

Yellow sand		2	feet
Blue sand	2 to	4	"
Black & Blue Peat & Vegetation	4 "	9	"
Hard white clay	9 "	12	"
Cementy	12 "	14	"
White clay	14 "	15	"
White cementy clay	15 "	18	"
Blue clay	18 "	24	"
Blue clay & Gravel	24 "	27	"
White & Blue clay	27 "	33	"
Yellow clay	33 "	38	"
Sandy yellow clay	38 "	39	"
Brown clay	39 "	42	"
Sandy blue clay	42 "	44	"
Hard white clay	44 "	47	"
Soft white clay	47 "	50	"
White & Yellow clay	50 "	56	"
Yellow water sand	56 "	59	"
White & Yellow clay	59 "	61	"
Yellow sandy clay	61 "	63	"
Cementy gravel	63 "	67	"
White & Yellow clay	67 "	68	"

J. M. OUGH
1201 East 12th Street
OAKLAND, CALIF.
Phone Fruitvale 2284

15/4J1-

01-770

Job #998. P. J. Walker Company,
Boring Test Holes, 26th. &
Peralta Sts. Oakland, Calif.

LOG OF TEST HOLE #2.

Dry yellow sand			2	feet
Black mud and vegetation	2	to	8	"
White clay	8	"	11	"
White & yellow clay	11	"	14½	"
Mixed clay & gravel	14½	"	17	"
Dirty gravel	17	"	20½	"
White & Yellow clay	20½	"	22	"
White clay & gravel	22	"	25	"
Blue & Yellow clay	25	"	28	"
Blue clay	28	"	30	"
Mixed clay, different colors	30	"	32	"
Mixed clay & gravel	32	"	37	"
Yellow sandy clay	37	"	39	"
Greenish blue clay	39	"	41	"
Brown sandy clay	41	"	42	"
Yellow clay	42	"	46	"
Soft white clay	46	"	48	"

J. M. OUGH
1201 East 12th Street
OAKLAND, CALIF.
Phone Fruitvale 2280

15/-11/-2

01-771

Job #998. P. J. Walker Company, Boring Test Holes, 26th. & Peralta Sts. Oakland.

LOG OF TEST HOLE #3.

Dry yellow sand			1	foot
Black muck and clam shells	1	to	8	"
White & Blue clay	8	"	11	"
Yellow clay & gravel	11	"	14	"
White clay & Gravel	14	"	17	"
Blue & Yellow clay	17	"	23	"
Blue & White clay	23	"	27	"
Dirty gravel	27	"	29	"
White clay	29	"	32	"
Brown clay	32	"	37	"
Brown & Blue clay	37	"	39	"
Brown clay	39	"	42	"
Brown sand	42	"	44	"
White clay	44	"	48	"
Lime, soft	48	"	49	"
Sandy	49	"	50	"
White & Yellow clay	50	"	57	"
Gravel & sand	57	"	59	"
White & Yellow clay	59	"	62	"
Cementy gravel	62	"	63	"
Blue & Yellow clay	63	"	66	"
White clay	66	"	68	"
Coarse white sand	68	"	71	"
Gravel	71	"	72	"
Blue & Yellow clay	72	"	75	"
Soft white clay	75	"	76	"
White sandy clay	76	"	79	"
White clay	79	"	80	"
Cementy gravel	80	"	84	"
Dirty gravel	84	"	86	"
Yellow clay	86	"	87	"
Hard white cementy clay	87	"	90	"

J. M. OUGH
1201 East 12th Street
OAKLAND, CALIF.
Phone Fruitvale 2264

01-774

Job #998. P. J. Walker Company,
Boring Test Holes, 26th. and
Magnolia Sts. Oakland.

LOG OF TEST HOLE # 4.

Rock & sand filled		5	feet
Bay mud and vegetation	5 to	8	"
White clay	8 "	11	"
White and Greev clay	11 "	13	"
White clay & gravel	13 "	15½	"
Yellow and blue clay	15½"	25	"
Sandy yellow clay	25 "	27	"
Loose water gravel	27 "	31	"
Yellow sticky clay	31 "	37	"
Yellow clay	37 "	41	"
Brown clay	41 "	44	"
Brown sand	44 "	46	"
Brown clay	46 "	47	"
Greenish lime	47 "	49	"
Green and White clay	49 "	52	"
White, yellow sandy clay	52 "	54	"
White clay	54 "	58	"

J. M. OUGH
1201 East 12th Street
OAKLAND, CALIF.
Phone Fruitvale 2280

15/41.22
01-778

Job #998 - P. J. Walker Company,
Boring Test Holes, 26th. &
Peralta Sts. Oakland, Calif.

LOG OF TEST HOLE # 5.

Yellow sand fill			1 feet
Blue bay muck	1 to	5	"
Brown vegetation	5 "	8	"
White & Green clay	8 "	11	"
Yellow clay, hard	11 "	15	"
Dirty water gravel	15 "	19½	"
Brown clay	19½ "	23	"
Serpentine	23 "	25	"
Sandy blue clay	25 "	30	"
Blue clay	30 "	33	"
Brown clay	33 "	36	"
Brown sandy clay	36 "	37	"
Brown & blue clay	37 "	40	"
Brown sand	40 "	45	"
Lime and white clay	45 "	47	"

15/4W — 2
15/2W - 32 [illegible]

01-750

LOG OF WELL — Presto-Lite Company, 45th. Street, Emeryville.

Black adobe		8	feet
Cement gravel	8 to	12	"
Yellow clay & gravel	12 "	52	"
Blue clay & gravel	52 "	58	"
Yellow clay & gravel	58 "	66	"
Cement gravel	66 "	76	"
Yellow clay	76 "	88	"
Cement gravel	88 "	92	"
Yellow clay	92 "	106	"
Cement gravel	106 "	112	"
Yellow clay & gravel	112 "	129	"
Red cement gravel	129 "	134	"
Yellow clay	134 "	140	"
Yellow clay & gravel	140 "	153	"
Yellow clay	153 "	183	"
Cement gravel	183 "	196	"
Blue clay	196 "	220	"
Blue clay & sand	220 "	230	"
Blue hard pan	230 "	234	"
White Hard Pan	234 "	238	"
Yellow hard pan & rock	238 "	266	"
Yellow clay	266 "	280	"
Cement gravel	280 "	282	"
Yellow clay	282 "	293	"
Yellow clay & sand	293 "	302	"
Blue clay	302 "	304	"
Cement gravel	304 "	307	"
Sediment & sand	307 "	314	"
Yellow clay, gritty	314 "	326	"
Cement gravel	326 "	335	"
Yellow clay & grit	335 "	358	"
Cement gravel	358 "	373	"
Yellow clay, grit	373 "	383	"
Cement gravel	383 "	398	"
Yellow clay, gritty	398 "	408	"

393 feet of 8" No. 14 R. H. Double Casing, no shoe.

Water table 10 feet.

September 1908.

Kinney, driller.
G. P. Marcus, Contractor.

C. M. Cogh.
201 - E 12th St.

12

1450 Sherwin St.

1450 Sherwin St.

1S/4W-28C

BORED WELL

01-779

12 In. Diameter

In Sherwin-Williams Company

Paint & Varnish Works

Soil	4 Feet		
Yellow Clay	10 "		
Gravel	20 "		
Blue Clay	24 "		
Yellow Clay	42 "		
Gravel (Perforated)	46 "	1	10
Yellow Clay	62 "		
Cement Gravel (Perforated)	70 "	1	10
Yellow Clay	80 "		
Cement Gravel (Perforated)	86 "	1	8
Yellow Clay	94 "		
Cement Gravel (Perforated)	100 "		
Yellow Clay	104 "		14
Cement Gravel (Perforated)	116 "	1	10
Gray Clay	126 "		
Yellow Clay	176 "		
Cement Gravel (Perforated)	178 "		52
Yellow Clay	230 "		
Blue Lime Clay	244 "		
Yellow Clay	284 "		
Yellow Sediment	294 "		
Cemented Gravel(Perforated	296 "		
Yellow Sediment	302 "		
White Lime Clay	304 "	5 in.	

Re per [illegible]

1S/4W-23A

01-751

1S/4W-

4701

Job #795. Yosemite Laundry Compa
Drilling Well Emeryvill

LOG OF WELL.

Surface soil			4 feet
Sandy yellow clay	4	to 20	"
Dry Gravel	20	" 26	"
Sandy clay	26	" 50	"
Cement gravel	50	" 60	"
Yellow clay	60	" 115	"
Cement gravel	115	" 120	"
Yellow clay	120	" 160	"
Sandy yellow clay	160	" 225	"
Blue clay	225	" 235	"
Decomposed sandstone	235	" 270	"
Sandy clay	270	" 285	"
Sandstone	285	" 300	"
Blue clay	300	" 310	"
Sandy clay	310	" 330	"
Blue shale	330	" 335	"
Yellow cementy clay	335	" 385	"
Blue sand & clay	385	" 398	"
Water gravel	398	" 400	"
Yellow sandy clay	400	" 470	"
Yellow sand	470	" 490	"

1W

12" cy Casing 20'
10" " 466'

J.M. Cough.
1201 E 12th St.

(4)

J. M. OUGH
1201 East 12th Street
OAKLAND, CALIF.
Phone Fruitvale 2280

144-22

Judson Iron Works, Oakland.

01-749

LOG OF WELL #1.

Filled ground		4	feet
Adobe	4 to	8	"
Yellow clay	8 "	12	"
Gray clay	12 "	14	"
Yellow clay	14 "	17	"
Clay	17 "	25	"
Yellow sandy clay	25 "	38	"
Gray clay	38 "	49	"
Yellow clay	49 "	56	"
Cement coarse sand	56 "	61	"
Gray clay	61 "	64	"
Cementy clay	64 "	76	"
Gray clay	76 "	91	"
Yellow clay	91 "	104	"
Cement	104 "	113	"
Hard yellow clay	113 "	131	"
Dirty gravel	131 "	133	"
Gray clay	133 "	141	"
Coarse sand	141 "	151	"
Sandy clay	151 "	155	"
Cement gravel	155 "	158	"
Sandy clay	158 "	169	"
Yellow clay	169 "	183	"
Coarse sandy clay	183 "	186	"
Sandy yellow clay	186 "	204	"
Gravel	204 "	211	"
Yellow clay	211 "	234	"
Gray clay	234 "	239	"
Cementy clay	239 "	247	"
Hard cement gravel	247 "	249½	"
Cementy clay	249½ "	252	"
Yellow clay	252 "	264	"
Yellow and Blue clay mixed	264 "	271	"
Coarse sandy clay	271 "	277	"
Yellow clay	277 "	281	"
Blue clay	281 "	285	"
Yellow clay & grit	285 "	311	"
Yellow & Blue clay mixed with grit	311 "	326	"

Depth of Well 326'