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FIRST SEMI-ANNUAL 2006 GROUNDWATER MONITORING REPORT

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

ALAMEDA COUNTY HEALTH
CASE NO. RO000040

Prepared for

MS. JEANNETTE ELLIOTT
SAN LEANDRO, CALIFORNIA

March 2006

STELLAR
ENVIRONMENTAL SOLUTIONS, INC.
GEOSCIENCE & ENGINEERING CONSULTING

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March 20, 2006

Mr. Barney Chan
Hazardous Materials Specialist
Alameda County Health Care Services Agency
Department of Environmental Health, Local Oversight Program
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Subject: First Semi-Annual 2006 Groundwater Monitoring Report
Former Russ Elliott, Inc. Facility – 2526 Wood Street, Oakland, California
Alameda County Health Case No. RO000040

Dear Mr. Chan:

This report documents the ninth consecutive groundwater monitoring event conducted in February 2006 by Stellar Environmental Solutions, Inc. (SES) at the referenced site. This event marks the first semi-annual monitoring event in accordance with the reduced groundwater monitoring schedule, from quarterly to semi-annually, approved by Alameda County Health. Three site groundwater monitoring wells were installed and first sampled in February 2004 to evaluate impacts from two former onsite underground fuel storage tanks. The scope of work was conducted in accordance with the Alameda County Health-approved technical workplan. This report was uploaded to the State Water Resources Control Board's GeoTracker system and Alameda County Health's "ftp" website.

In our professional opinion, continued semi-annual monitoring is warranted to evaluate plume stability over time. I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge. Please contact us at (510) 644-3123 if you have any questions.

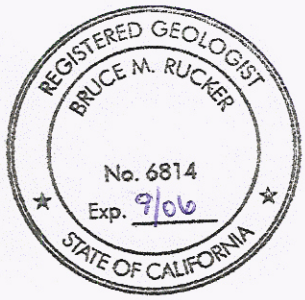
Sincerely,

Bruce M. Rucker

Bruce Rucker, R.G. (#6814), R.E.A.
Project Manager and Senior Geologist

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

cc: Ms. Jeannette Elliott – Property Owner



FIRST SEMI-ANNUAL 2006 GROUNDWATER MONITORING REPORT

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

ALAMEDA COUNTY HEALTH
CASE NO. RO000040

Prepared for:

MS. JEANNETTE ELLIOTT
1744 SKYVIEW DRIVE
SAN LEANDRO, CALIFORNIA 94577

Prepared by:

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2198 SIXTH STREET
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March 20, 2006

Project No. 2003-41

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1.0 INTRODUCTION

PROJECT BACKGROUND

Stellar Environmental Solutions, Inc. (SES) was retained by Ms. Jeannette Elliott (property owner) to conduct ongoing groundwater monitoring and sampling activities at 2526 Wood Street in Oakland, California. The work is designed to evaluate impacts from former onsite underground fuel storage tanks (UFSTs). Previous site corrective actions and investigations are summarized later in this report. The Alameda County Health Care Services Agency, Department of Environmental Health (Alameda County Health) is the lead regulatory agency for the investigation, and has assigned the site as Fuel Leak Case No. RO000040. The California GeoTracker Global ID for the facility is T0600102110.

SITE AND VICINITY DESCRIPTION

The project site is a former roofing company (Russ Elliott, Inc.) located at 2526 Wood Street, Oakland, Alameda County, California (site). The business ceased operations at the site in early 2004, and the property is currently occupied by a construction firm. The property was recently sold; however, the previous property owner (Ms. Jeannette Elliott) remains responsible for the UFST-related site investigation.

The property is approximately 380 feet long (between Wood Street and Willow Street) by approximately 120 feet wide. The long axis of the site (parallel to 26th Street) is oriented approximately northeast to southwest. 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.

The former UFSTs and current area of investigation are situated in the largely unpaved service yard near the western border of the subject property (near 26th Street). Access to this area is provided either through a chain link gate on 26th Street or a gate operated by the current tenant on Willow Street. The area available for exterior drilling is limited by adjacent buildings and an active railroad spur that services an adjacent parcel. Nearby land use is wholly commercial and light industrial (there are no residential or other sensitive land uses in the immediate vicinity).

Downgradient (to the west) land use includes streets, then undeveloped land with freeway overpasses, then San Francisco Bay (a total of approximately 3,000 feet from the subject property).

N

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

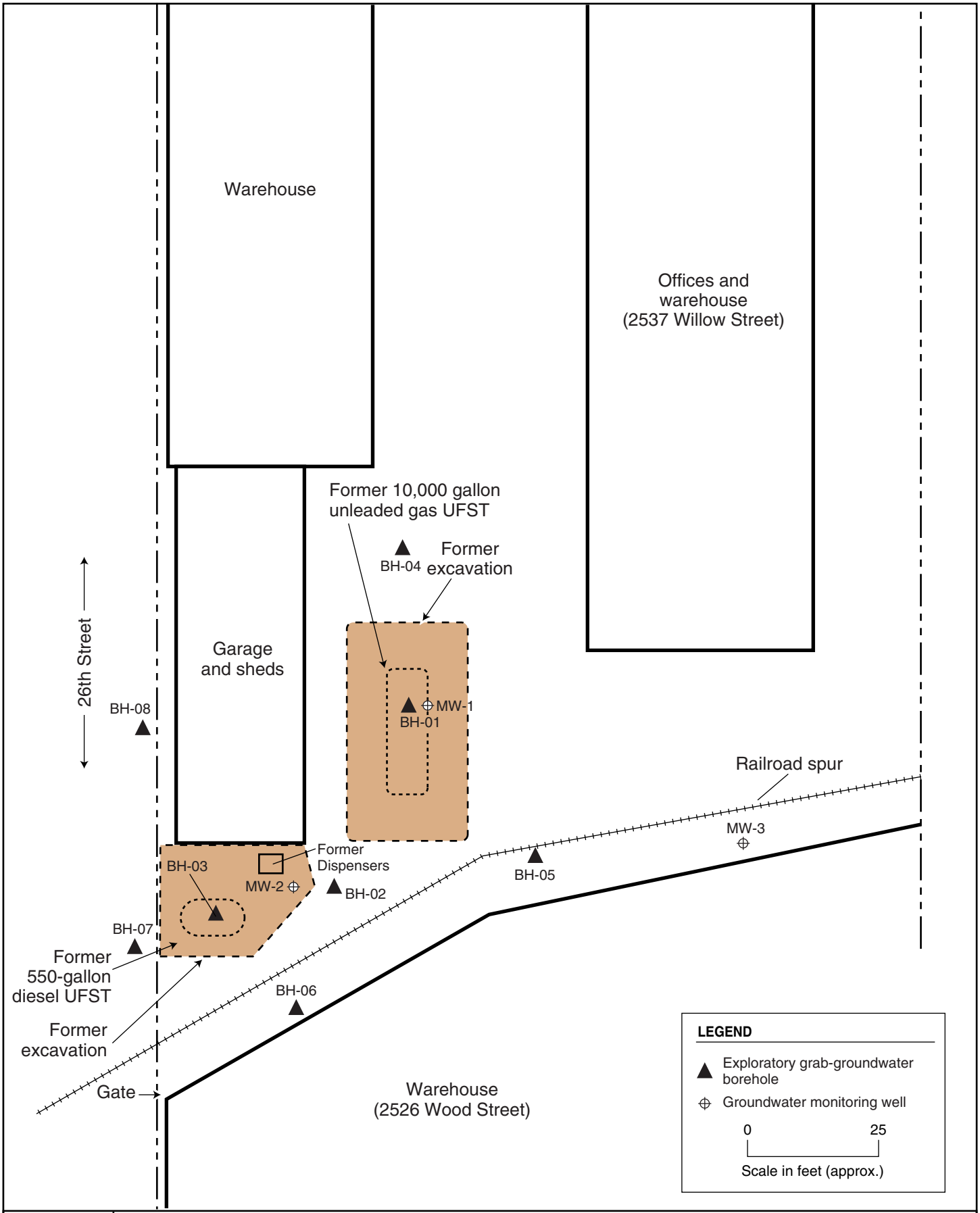
2526 Wood Street
Oakland, CA

By: MJC

JULY 2003

Figure 1

2003-36-01



SITE PLAN AND HISTORICAL SAMPLING LOCATIONS

2526 Wood Street Oakland, CA	By: MJC	JUNE 2004	Stellar Environmental Solutions, Inc. Geoscience & Engineering Consulting
	Figure 2		

2003-41-22

PREVIOUS INVESTIGATIONS AND CORRECTIVE ACTIONS

UFST Removals

Two UFSTs were located near the western border of the subject property (near 26th Street), approximately 40 feet from each other. Both UFSTs were utilized for fueling company vehicles, and shared a common dispenser island that was located between them. Both UFSTs were removed under permit and regulatory oversight.

The 550-gallon diesel UFST was removed in 1995, and the 10,000-gallon gasoline UFST was removed in 2002. The confirmation soil and water sampling conducted during the UFST removals suggested an historical leak in the UFST and/or piping. No UFST closure documentation report was submitted for these UFST removals by the contractor that conducted the removals.

A UFST closure documentation report prepared by SES (SES, 2003a), that discussed both UFST removals, was submitted to both the Oakland Fire Department and Alameda County Health.

2003 Preliminary Site Assessment

Concurrent with the UFST closure documentation report, SES submitted to Alameda County Health a technical workplan for a Preliminary Site Assessment (PSA) (consisting of exploratory borehole drilling and sampling) to evaluate the potential for residual contamination (SES, 2003b). Alameda County Health subsequently approved the technical workplan (Alameda County Health, 2003). The investigation, conducted in 2003, included advancing and sampling (of soil and groundwater) from eight exploratory boreholes. A PSA documentation report was submitted to Alameda County Health (SES, 2003c).

Groundwater contaminants detected above screening-level criteria include diesel, gasoline, benzene, methyl *tertiary*-butyl ether (MTBE), and *tertiary*-butyl alcohol (TBA). The only soil contaminant detected above screening-level criteria was MTBE; however, that contamination was confined to the immediate vicinity of the former gasoline UFST. No soil contamination was detected beneath the upper water-bearing zone.

Groundwater Monitoring Well Installation

On behalf of the property owner, SES submitted to Alameda County Health a technical workplan for a program of groundwater monitoring well installation, sampling, and reporting (SES, 2004a). Alameda County Health subsequently approved the well installation workplan (Alameda County Health, 2004). Three groundwater monitoring wells were installed, developed, surveyed, and sampled in February 2004 (SES, 2004b).

Groundwater Monitoring Well Sampling

Groundwater monitoring well monitoring/sampling events have been conducted on a quarterly basis since February 2004. This event marks the first semi-annual monitoring event in accordance with the Alameda County Health-approved reduced groundwater monitoring schedule. Appendix C contains historical groundwater well monitoring analytical results.

OBJECTIVES AND SCOPE OF WORK

This report discusses the following activities conducted/coordinated by SES between January 1 and March 31, 2006:

- Collecting water levels in site wells to determine shallow groundwater flow direction.
- Sampling site wells for contaminant analysis and indicators of natural attenuation.

REGULATORY OVERSIGHT

The lead regulatory agency for the site investigation and remediation is Alameda County Health. All workplans and reports are submitted to this agency. The most recent Alameda County Health directive regarding the site (email dated January 26, 2006) approved the reduction of groundwater monitoring events from quarterly to semi-annually (two events per year). The previous Alameda County Health directive regarding the site (letter dated January 6, 2004) approved the well installation and quarterly groundwater monitoring and sampling.

The site is in compliance with the State Water Resources Control Board's GeoTracker requirements for uploading electronic data and reports. In addition, electronic copies of technical documentation reports published since Q3 2005 have been uploaded to Alameda County Health's file transfer protocol (ftp) system. Per Alameda County Health's October 31, 2005 "Miscellaneous Administrative Topics and Procedures" directive, effective January 31, 2006, paper copies of reports will no longer be provided to Alameda County Health.

2.0 PHYSICAL SETTING

Following is a brief summary of the site hydrogeologic conditions based on geologic logging and water level measurements collected at the site since October 2003.

A detailed discussion of site lithology and hydrogeology was provided in the well installation report (SES, 2004a). The following summarizes site conditions. A total of 11 exploratory boreholes at the subject property have been geologically logged by a California Registered Geologist using the visual method of the Unified Soils Classification System. The majority of site boreholes have been advanced to 20 feet below ground surface (bgs). That interval includes the upper water-bearing zone and the underlying low-permeability non-water-bearing zone (aquitard).

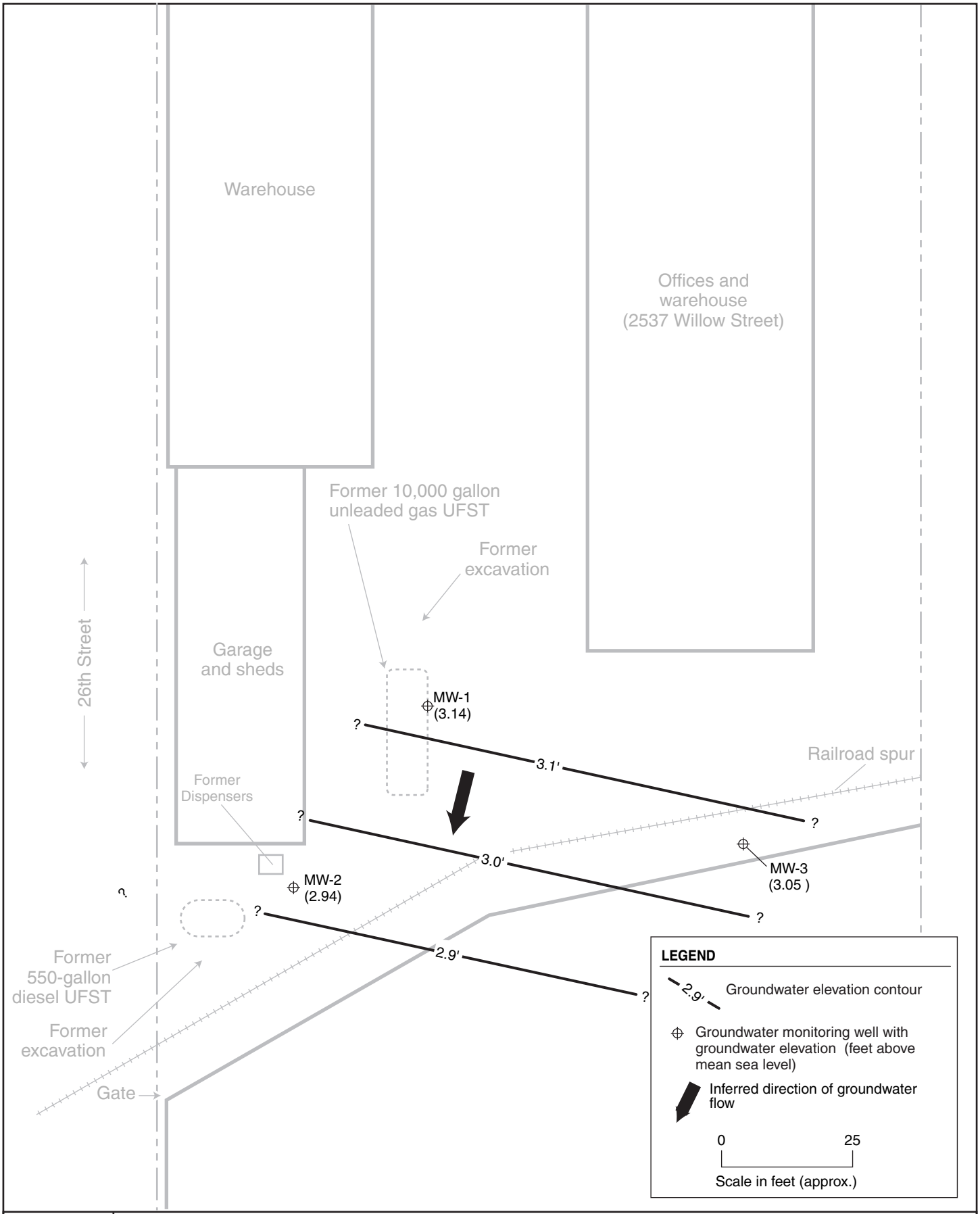
LITHOLOGY

In general, native soil consists primarily of clay (often silty), with interbedded sandy and gravelly zones. The upper 2 to 3 feet is dry, gravelly, sandy fill material. In the majority of the boreholes, this was underlain by a sand (often silty and clayey) varying in thickness from 1 to 6 feet, in which water was encountered (see below). This is underlain by a clay unit, occasionally with interbedded sand stringers. In some of the boreholes, this clay unit extends to total depth. In other boreholes, this clay unit is underlain by a sand unit, which in turn is underlain by a low-permeability clay (often gravelly). The shallow site lithology is typical of alluvial fan and stream depositional environments in this area, with lower-permeability (clay and silt) overbank deposits, and higher-permeability (sand and gravel) channel deposits, with significant lateral and depth variation over short distances.

GROUNDWATER HYDROLOGY

Two shallow water-bearing zones were encountered in native soils in the majority of site boreholes. The top of the upper zone (possibly a perched water zone) was encountered at depths between approximately 4 and 8 feet bgs, in a sandy zone. Water was then encountered again at depths between approximately 13.5 and 17.5 feet bgs. In some of the boreholes, this deeper water was encountered at the top of the sand zone (when present); in other boreholes, it was within the lower clay unit. Water levels in wells MW-1 and MW-2 (installed in the former UFST backfill areas) are likely influenced by direct infiltration during winter recharge events due to the higher permeability of excavation backfill material.

Depth to groundwater (equilibrated in wells) in the current monitoring event ranged from approximately 3.4 to 3.9 feet below grade (corresponding to approximately 2.9 to 3.1 feet above mean sea level). Figure 3 is a groundwater elevation and contour map for the current event. Table 1 (in Section 3.0) summarizes current groundwater level data. Groundwater flow direction during the current event was to the southwest. The groundwater flow direction varies seasonally between west and southeast (SES, 2005e).



GROUNDWATER ELEVATION MAP — FEBRUARY 24, 2006

2526 Wood Street Oakland, CA	By: MJC	MARCH 2006
	Figure 3	

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2003-41-45

3.0 FIRST SEMI-ANNUAL 2006 GROUNDWATER MONITORING AND SAMPLING ACTIVITIES

This section presents the groundwater monitoring and sampling methods for the most recent groundwater monitoring/sampling event. Analytical results are discussed in a subsequent section. Activities included:

- Measuring static water levels with an electric water level indicator;
- Purging wells to obtain representative formation water (and collecting aquifer stability parameters between each purging); and
- Collecting post-purge groundwater samples for laboratory analysis.

On February 24, 2006, groundwater monitoring well water level measurements, purging, and sampling activities were conducted by Dysert Environmental, Inc., under the supervision of SES personnel. Table 1 shows the well construction and groundwater elevation data. Appendix A contains the groundwater monitoring field records for the sampling event.

Table 1
Groundwater Monitoring Well Construction and Groundwater Elevation Data
February 24, 2006 Monitoring Event
2526 Wood Street, Oakland, California

Well	Well Depth [a]	Screened Interval	TOC Elevation [b]	Groundwater Depth [c]	Groundwater Elevation [b]
MW-1	20 [d]	5 to 20	6.95	3.81	3.14
MW-2	20	5 to 20	6.29	3.35	2.94
MW-3	20	5 to 20	6.94	3.89	3.05

Notes:

[a] Well depths are expressed in feet bgs, and are approximate.
[b] All elevations are expressed as feet above mean sea level.
[c] Groundwater depths are expressed in feet bgs relative to the top of well casing.
[c] Well has approximately 8 feet of gravel in bottom due to a wellbox displacement and gravel entry during construction in January 2004.

TOC = Top of casing.

All wells are 2-inch-diameter.

MW-1 elevation was resurveyed in April 2005 after the well box and casing tops were damaged and replaced.

As the first task of the monitoring event, static water levels were measured using an electric water level indicator. Each well was then purged (with a downhole pump) of three wetted casing volumes. Aquifer stability parameters were measured between each purged casing volume to ensure that representative formation water entered the well before sampling. Neither separate-phase petroleum product nor sheen was observed during well purging/sampling.

The "GeoWell" data for this event (water levels) were uploaded in electronic data file (EDF) format to the State Water Resources Control Board's GeoTracker on-line database.

In reviewing previous groundwater monitoring data, we have noted that measured well depths (during groundwater monitoring) in MW-2 and MW-3 are less than installed depth (approximately 1.5 feet in MW-3 and approximately 3 feet in MW-2). This is likely due to infiltration of sediment through the well screen, a common occurrence in fine-grained sediments. We have also determined that the measured well depth in MW-1 is approximately 6.5 feet less than the installed depth. This is almost certainly the result of gravel falling in the well in January 2005 when the MW-1 wellbox was damaged/removed during re-paving. In our professional opinion, these conditions do not significantly affect the ability of the well to act as monitoring points for the contaminant plume (either by contaminant concentration or water level).

4.0 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 Regional Water Quality Control Board, San Francisco Bay Region (Water Board). As such, Alameda County Health directly oversees soil and groundwater investigations/remediation on UFST sites (with or without Water Board guidance) until determining that case closure is appropriate, at which time Alameda County Health recommends case closure to the Water Board. Alameda County Health has designated the subject property case as Fuel Leak Case No. RO00040. The site is listed in the Water Board's GeoTracker database of reported releases from petroleum UFSTs (Water Board Case No. 01-2294 and Global ID No. T0600102110).

RESIDUAL CONTAMINATION REGULATORY CONSIDERATIONS

The most applicable published numerical criteria governing residual soil and groundwater contamination at this site are the Water Board's Environmental Screening Levels (ESLs) (Water Board, 2005). ESLs are screening-level criteria used to evaluate whether additional investigation and/or remediation are warranted. Criteria to be considered in using the ESLs include:

- contamination is limited to surface soil (less than 10 feet deep) or to subsurface soil;
- soil is fine-grained or coarse-grained;
- land use is residential or commercial/industrial; and
- 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, as grain-size analysis has not been conducted) and commercial/industrial land use (because the owner has no plans to redevelop the property with residential land use). Qualifying for the (usually higher) ESL values for sites where groundwater *is not* a current or potential drinking water source requires obtaining a site-specific variance from the Water Board. The Water Board completed an East Bay Beneficial Use Study (Water Board, 1999) that covers the Richmond-to-Hayward East Bay Basin Area and, based on multiple technical criteria, divides 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 redesignation as Municipal Supply Beneficial Use). This classification indicates that groundwater could not reasonably be expected to serve a public water supply; however, it does not specifically address private water supply wells that might be used for drinking water. In accordance with State Water Resources Control Board Resolution 92-49, pollution sites within this zone must not pose a potential impact to human health or ecologic receptors, and the groundwater contamination plume must be stable or reducing.

The subject site falls within Zone C. The most conservative assumption for the site is that there is a potential for private drinking water wells to be impacted. However, the site location (with no residential downgradient land use) suggests that the less conservative ESLs ("a potential or current drinking water source is not threatened") may be appropriate when the site is considered for case closure. Until case closure is considered, this report (and future reports) will discuss residual soil and groundwater contamination in the context of the more conservative ESL criteria.

SITE CLOSURE CRITERIA

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

1. *The contaminant source (UFSTs and obviously-contaminated backfill material) has been removed.* This criterion has been met, and the available soil analytical results indicate that the residual MTBE soil contamination in the immediate vicinity of the former UFSTs will not be an appreciable long-term source of groundwater contamination.
2. *The groundwater contaminant plume is stable or reducing—i.e., groundwater contamination is not increasing in concentration or lateral extent.* This criterion has not yet been met, and will be evaluated based on the ongoing semi-annual groundwater sampling program.
3. *If residual contamination (soil or groundwater) exists, there is no reasonable risk to sensitive receptors (i.e., surface water or water supply wells) or to site occupants.* This criterion is generally met by conducting a sensitive receptor survey and/or a Risk-Based Corrective Action (RBCA) assessment that models the fate and transport of residual contamination in the context of potential impacts to sensitive receptors. This task is generally conducted after the previous two criteria have been met. Based on the apparent absence of benzene (the probable "risk driver" compound for this site) at elevated concentrations and the likely absence of sensitive receptors, if private wells are eliminated as potential receptors, the site would likely pass the RBCA assessment.

5.0 FIRST SEMI-ANNUAL 2006 MONITORING EVENT ANALYTICAL RESULTS

This section discusses the findings of the current sampling event. Historical groundwater monitoring well analytical results are included as Appendix C.

All groundwater samples in the current sampling event were analyzed for:

- Total volatile hydrocarbons – gasoline range (TVHg), by modified EPA Method 8015;
- Total extractable hydrocarbons – diesel range (TEHd), by modified EPA Method 8015;
- Benzene, toluene, ethylbenzene, and xylenes (BTEX), by EPA Method 8020;
- MTBE, by EPA Method 8260;
- Fuel oxygenates (*tertiary*-amyl methyl ether [TAME], di-isopropyl ether [DIPE], and TBA), by EPA Method 8260; and
- Lead scavengers (1,2-dichloroethane [EDC] and 1,2-dibromomethane [EDB]), by EPA Method 8260.

All groundwater samples were analyzed by EnTech Analytical Labs, which maintains current ELAP certifications for all of the analytical methods utilized in this investigation. Appendix B contains the certified analytical laboratory report and chain-of-custody record for this event.

Table 2 summarizes the groundwater sample analytical results from the current well sampling event. Figure 4 displays the groundwater analytical results on the site plan.

Only two contaminants were detected in the current event. MTBE was detected at concentrations between 27 µg/L (MW-2) and 36 µg/L (MW-1). The Water Board ESL criterion for MTBE is 5.0 µg/L. TBA was detected (MW-3 only) at 10 µg/L; the ESL is 12 µg/L. Contaminants analyzed for and not detected in the current event include gasoline, diesel, BTEX, lead scavengers, and fuel oxygenates.

The analytical laboratory report was uploaded in EDF format to the GeoTracker on-line database.

Table 2
February 24, 2006 Groundwater Analytical Results
2526 Wood Street, Oakland [a]

Sample I.D.	TEHd	TVHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE [b]	Fuel Oxygenates and Lead Scavengers [b]
MW-1	*< 50*	*< 50*	*< 0.5*	*< 0.5*	*< 0.5*	*< 1.0*	**36**	*ND*
MW-2	*< 50*	*< 50*	*< 0.5*	*< 0.5*	*< 0.5*	*< 1.0*	**27**	*ND*
MW-3	*< 50*	*< 50*	*< 0.5*	*< 0.5*	*< 0.5*	*< 1.0*	*< 1.0*	**TBA = 10**
Groundwater ESLs	100	100	1.0	40	30	13	5.0	**TBA = 12**

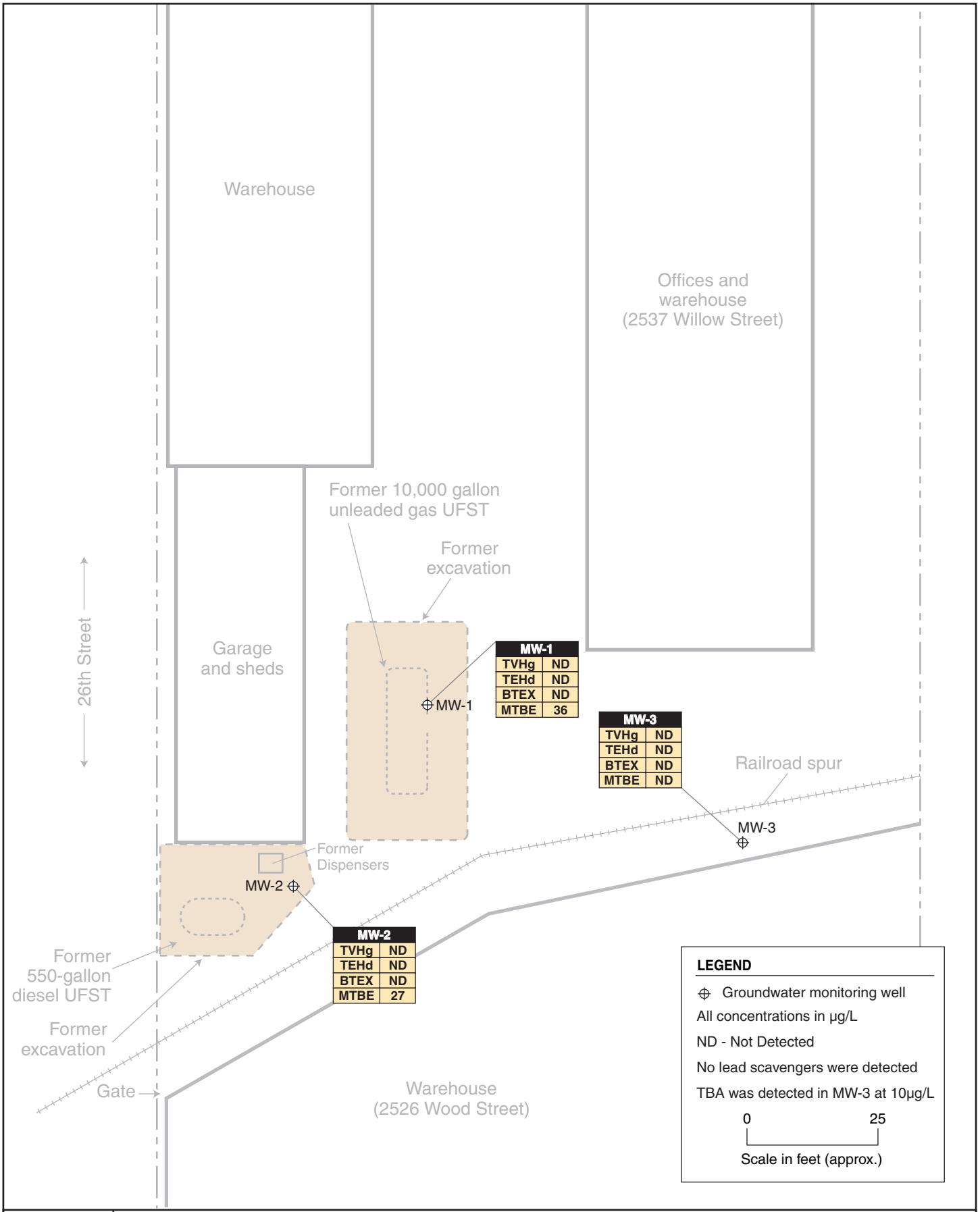
Notes:

[a] All concentrations are in micrograms per liter (µg/L).
[b] Full list of fuel oxygenates and lead scavengers is included in Appendix B.

MTBE = methyl *tertiary*-butyl ether
TBA = *tertiary*-butyl alcohol
TEHd = total extractable hydrocarbons – diesel range
TVHg = total volatile hydrocarbons – gasoline range

ESLs = Regional Water Quality Control Board, San Francisco Bay Region, Environmental Screening Levels (Water Board, 2005) for commercial/industrial sites where groundwater is a potential drinking water source.

ND = not detected above method reporting limits



FEBRUARY 2006 GROUNDWATER ANALYTICAL RESULTS

2526 Wood Street Oakland, CA	By: MJC	MARCH 2006
	Figure 4	

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6.0 SUMMARY, CONCLUSIONS, OPINION, AND RECOMMENDATIONS

SUMMARY AND CONCLUSIONS

The available data support the following findings and conclusions:

- Two UFSTs containing diesel and gasoline were removed from the site in 1995 and 2002, respectively. Excavation confirmation soil samples indicated that MTBE was the sole contaminant of concern in soil, although pit water samples contained elevated levels of diesel, gasoline, and MTBE. A UFST closure documentation report discussing both UFST removals was submitted to the appropriate regulatory agencies in 2003.
- A Preliminary Site Assessment (exploratory borehole drilling and sampling program) was conducted in October 2003; activities included advancing and sampling eight exploratory boreholes to a maximum depth of 25 feet below grade. Hydrocarbon contamination was most pronounced in samples from the areas of the two former UFSTs and to the south-southwest.
- Three shallow site groundwater monitoring wells were installed, developed, and surveyed in February 2004, and have been sampled on a quarterly basis since that time. In January 2006, Alameda County Health approved a change in the site monitoring schedule from quarterly to semi-annually.
- Site lithology ranges from low-permeability silts and clays to higher-permeability (and water-bearing) sands and gravels. There are two shallow water bearing zones: the top of the upper zone (potentially a seasonally-perched zone), which is encountered at depths between 4 and 8 feet bgs; and the top of the third zone, which is encountered at depths between approximately 13.5 and 17.5 feet bgs. The lower water-bearing zone is underlain by a low-permeability, non-water-bearing zone.
- Local groundwater flow direction varies from south (generally in the rainy season) to west (generally in the dry season). Historical data show the expected seasonal trend of lower groundwater elevations in the dry season, increasing with the onset of rains. The site data suggest that backfill material in one or both of the former UFST excavations may be influencing apparent flow direction.

- The only soil contaminant historically detected above ESL criteria in residual soils (including UFST removal, borehole, and well installation phases) is MTBE, at locations within 15 feet of the former UFST excavations. The maximum detected MTBE concentration in soil is between the most restrictive (residential, groundwater used) and the least restrictive (commercial/industrial, groundwater not used) Water Board ESL criteria.
- In the current monitoring event, neither gasoline, diesel, BTEX, nor lead scavengers were detected. The only fuel oxygenate detected was TBA, at a concentration below the ESL. The only contaminant detected above ESL criteria was MTBE (in MW-1 and MW-2).
- The current monitoring wells appear adequate to define local groundwater flow direction and to evaluate site-sourced hydrochemistry, although continued groundwater monitoring is warranted to ensure that groundwater contamination above regulatory agency levels of concern is not migrating offsite.
- The property owner is pursuing reimbursement from the State of California Underground Storage Tank Cleanup Fund (Fund) for regulatory agency-directed corrective action and investigation costs. The initial Claim Application was submitted to the Fund in February 2004.
- The site is in compliance with State Water Resources Control Board for electronic uploads of data and technical reports to the GeoTracker on-line database, as well as with Alameda County Health's requirement for electronic upload of technical reports.

PROPOSED ACTIONS

- The property owner proposes to continue the semi-annual groundwater monitoring well monitoring and sampling program as approved by Alameda County Health. This will include electronic uploads (water levels, groundwater analytical data, and technical reports) for future monitoring events to the State GeoTracker system and the Alameda County Health "ftp" website.
- Future groundwater monitoring will continue to focus on the evaluation of the magnitude and extent of groundwater contamination, particularly with regard to plume stability. If future monitoring indicates that offsite migration of contamination is occurring, additional assessment activities—i.e., sensitive receptor survey; vicinity well survey; RBCA study; and/or additional exploratory boreholes/groundwater monitoring wells—will be considered. If the data indicate that the plume is contained onsite, and has been reduced by attenuation to low concentrations and stable conditions, SES will evaluate the data in the context of meeting regulatory closure criteria.
- The property owner will continue to pursue reimbursement of eligible incurred corrective action costs from the Fund.

8.0 REFERENCES AND BIBLIOGRAPHY

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SES, 2003a. Underground Fuel Storage Tanks Closure Documentation and Assessment Report, Russ Elliott, Inc. – 2526 Wood Street, Oakland, California. August 15.

SES, 2003b. Workplan for Preliminary Site Assessment – Russ Elliott, Inc. Facility, 2526 Wood Street, Oakland, California. August 20.

SES, 2003c. Preliminary Site Assessment Report – Russ Elliott, Inc. Facility, 2526 Wood Street, Oakland, California. November 19.

9.0 LIMITATIONS

This report has been prepared for the exclusive use of Ms. Jeannette Elliott, her authorized representatives, and the regulatory agencies. No reliance on this report shall be made by anyone other than those for whom it was prepared.

The findings and conclusions presented in this report are based on a review of previous investigators' findings at the site, as well as site investigations conducted by SES since 2003. 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 date of this report. 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.

APPENDIX A

Well Monitoring and Sampling Field Records

Dysert Environmental, Inc.

FLUID-LEVEL MONITORING DATA

Project No: _____ Date: 2-24-06

Project/Site Location: 2526 Wood St., Oakland, CA

Technician: JWS Method: Electronic

Boring/ Well	Depth to Water (feet)	Depth to Product (feet)	Product Thickness (feet)	Total Well Depth (feet)	Comments
MW-1	3.81	-	-	11.27 SG	1056
MW-2	3.35	-	-	15.06	1054
MW-3	3.89	-	-	18.18	1052

Measurements referenced to top of well casing.

DYSERT ENVIRONMENTAL, INC.
WELL PURGING / SAMPLING DATA

PROJECT: **DATE:** 2-24-06
SITE LOCATION: 2526 Wood St.

CITY: OAKLAND **STATE:** CA

PURGE DEVICE

circle one 12volt submersible pump peristaltic pump bladder pump disposable bailer

SAMPLING DEVICE

circle one bladder pump peristaltic pump disposable bailer other

casing diameter (inches)	*circle one*	0.75	(2)	4	6
casing volumes (gallons)	*circle one*	0.02	(0.2)	0.7	1.52

WELL DATA

SAMPLER: JWS
WELL NUMBER / FIELD POINT ID: MW-1
A. TOTAL WELL DEPTH: 11.27
B. DEPTH TO WATER: 3.81
C. WATER HEIGHT (A-B): 7.46
D. WELL CASING DIAMETER: 2.0
E. CASING VOLUME: 0.2
F. SINGLE CASE VOLUME (CxE): 1.49
G. CASE VOLUME (s) (CxEx 3): 4.48
H: 80% RECHARGE LEVEL (F+B): 5.30

PURGE DATA

START TIME: 1200
PUMP DEPTH: 4.0
FINISH TIME: 1204
PUMP DEPTH: 5.0

RECHARGE / SAMPLE TIME

DEPTH TO WATER: 3.83 **TIME MEASURED:** 1205
GREATER THAN OR EQUAL TO 80% RECHARGE LEVEL (H): circle one (YES) NO
SAMPLE TIME: 1207 **DEPTH TO WATER:**
SAMPLE APPEARANCE / ODOR: YELLOW/CLEAR NO ODOR.
TOTAL GALLONS PURGED: 6.0 gal

WELL FLUID PARAMETERS

CASE VOL.	0	0.5	1	1.5	2	2.5	3	POST
Ph	9.31		9.18		8.87	8.83	8.79	8.41
TEMP in °C	17.2		16.9		16.8	16.8	16.9	16.1
COND / SC	396		479		509	528	593	582
DO in mg/L								
DO in %								
ORP								
TURBIDITY								

DYSERT ENVIRONMENTAL, INC.
WELL PURGING / SAMPLING DATA

PROJECT: **DATE:** 2-24-06
SITE LOCATION: 2526 Wood St.

CITY: OAKLAND **STATE:** CA

PURGE DEVICE

circle one 12volt submersible pump peristaltic pump bladder pump disposable bailer

SAMPLING DEVICE

circle one	bladder pump	peristaltic pump	disposable bailer	other
casing diameter (inches)	*circle one*	0.75 (2)	4	6
casing volumes (gallons)	*circle one*	0.02 (0.2)	0.7	1.52

WELL DATA

SAMPLER: JWS
WELL NUMBER / FIELD POINT ID: MW-2
A. TOTAL WELL DEPTH: 15.06
B. DEPTH TO WATER: 3.35
C. WATER HEIGHT (A-B): 11.71
D. WELL CASING DIAMETER: 2.0
E. CASING VOLUME: 0.2
F. SINGLE CASE VOLUME (CxE): 2.34
G. CASE VOLUME (s) (CxEx 3): 7.03
H: 80% RECHARGE LEVEL (F+G): 9.69

PURGE DATA

START TIME: 1138
PUMP DEPTH: 4.0
FINISH TIME: 1144
PUMP DEPTH: 9.5

RECHARGE / SAMPLE TIME

DEPTH TO WATER: 3.38 **TIME MEASURED:** 1146
GREATER THAN OR EQUAL TO 80% RECHARGE LEVEL (H): circle one YES NO
SAMPLE TIME: 1150 **DEPTH TO WATER:**
SAMPLE APPEARANCE / ODOR: TURBID - W/ SLIGHT BRN TINT SOLIDS.
TOTAL GALLONS PURGED: 9.0 gal

WELL FLUID PARAMETERS

CASE VOL.	0	0.5	1	1.5	2	2.5	3	POST
Ph	7.39		7.25		7.02	7.03	6.97	6.86
TEMP in °C	17.1		15.7		15.5	15.4	15.5	15.0
COND / SC	441		369		200.1	195.8	196.1	186.4
DO in mg/L								
DO in %								
ORP								
TURBIDITY								

DYSERT ENVIRONMENTAL, INC.
WELL PURGING / SAMPLING DATA

PROJECT: **DATE:** 2.24.06
SITE LOCATION: 2526 Wood St

CITY: OAKLAND **STATE:** CA

PURGE DEVICE

circle one 12volt submersible pump peristaltic pump bladder pump disposable bailer

SAMPLING DEVICE

circle one bladder pump peristaltic pump disposable bailer other

casing diameter (inches)	*circle one*	0.75	2	4	6
casing volumes (gallons)	*circle one*	0.02	0.2	0.7	1.52

WELL DATA

SAMPLER: JWS
WELL NUMBER / FIELD POINT ID: MW-3
A. TOTAL WELL DEPTH: ~~18.18~~ 18.18
B. DEPTH TO WATER: ~~3.89~~ 3.89
C. WATER HEIGHT (A-B): 14.29
D. WELL CASING DIAMETER: 2.0
E. CASING VOLUME: 0.2
F. SINGLE CASE VOLUME (CxE): 2.86
G. CASE VOLUME (s) (CxEx 3): 8.57
H: 80% RECHARGE LEVEL (F+B): 6.75

PURGE DATA

START TIME: ~~1102~~ 1103 PUMPED DRY @ 1115 3x.
PUMP DEPTH: 4.0
FINISH TIME: 11:19
PUMP DEPTH: 18.0

RECHARGE / SAMPLE TIME

DEPTH TO WATER: 16.74 @ 1121 // 3.9 **TIME MEASURED:** 1224
GREATER THAN OR EQUAL TO 80% RECHARGE LEVEL (H): circle one **YES** **NO**
SAMPLE TIME: 1225 **DEPTH TO WATER:**
SAMPLE APPEARANCE / ODOR: CLEAR / NO ODOR.
TOTAL GALLONS PURGED: 3.5

WELL FLUID PARAMETERS

CASE VOL.	0	0.5	1	1.5	2	2.5	3	POST
Ph	6.65	6.72	6.70		6.69	6.92	6.95	
TEMP in °C	17.5	18.0	18.6		18.3	18.8	19.0	
COND / SC	736	813	827		823	895	936	
DO in mg/L								
DO in %								
ORP						PUMPED DRY		
TURBIDITY	CLEAR		SLIGHTLY TURBID		RED. SILT/SLUDGE.	VERY SILTY.		

APPENDIX B

Analytical Laboratory Report and Chain-of-Custody Record

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Bruce Rucker
Stellar Environmental Sol.
2198 Sixth Street Suite 201
Berkeley, CA 94710

Lab Certificate Number: 48097
Issued: 03/13/2006

Global ID: T0600102110

Project Name: Russ Elliott
Project Location: 2526 Wood St/Oakland

Certificate of Analysis - Final Report

On February 27, 2006, samples were received under chain of custody for analysis.
Entech analyzes samples "as received" unless otherwise noted. The following results are included:

Matrix	Test / Comments
Liquid	Electronic Deliverables
	EPA 8260B for Groundwater and Water - EPA 624 for Wastewater
	TPH-Extractable
	Volatile-GC

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Stellar Environmental Sol.
2198 Sixth Street Suite 201
Berkeley, CA 94710
Attn: Bruce Rucker

Project Name: Russ Elliott
Project Location: 2526 Wood St/Oakland
GlobalID: T0600102110

Certificate of Analysis - Data Report

Samples Received: 02/27/2006
Sample Collected by: Client

Lab # : 48097-001 **Sample ID: MW-1** **Matrix:** Liquid **Sample Date:** 2/24/2006 12:07 PM

TPH-Extractable

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1.0	50	µg/L	2/28/2006	WD060228B	3/2/2006	WD060228B
490ppb Motor oil range organics. No Diesel pattern.									

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	49.1	22 - 133

Analyzed by: JHsiang
Reviewed by: dba

Volatile-GC

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1.0	50	µg/L	N/A	N/A	3/7/2006	WGC060307

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	86.6	65 - 135

Analyzed by: mruan
Reviewed by: dba

EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1.0	0.50	µg/L	N/A	N/A	3/10/2006	WM1060310
Toluene	ND		1.0	0.50	µg/L	N/A	N/A	3/10/2006	WM1060310
Ethyl Benzene	ND		1.0	0.50	µg/L	N/A	N/A	3/10/2006	WM1060310
Xylenes, Total	ND		1.0	0.50	µg/L	N/A	N/A	3/10/2006	WM1060310
Methyl-t-butyl Ether	36		1.0	1.0	µg/L	N/A	N/A	3/10/2006	WM1060310
tert-Butyl Ethyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	3/10/2006	WM1060310
tert-Butanol (TBA)	10		1.0	10	µg/L	N/A	N/A	3/10/2006	WM1060310
Diisopropyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	3/10/2006	WM1060310
tert-Amyl Methyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	3/10/2006	WM1060310
1,2-Dichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	3/10/2006	WM1060310
1,2-Dibromoethane (EDB)	ND		1.0	0.50	µg/L	N/A	N/A	3/10/2006	WM1060310

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	96.2	60 - 130
Dibromofluoromethane	111	60 - 130
Toluene-d8	103	60 - 130

Analyzed by: XBian
Reviewed by: MaiChiTu

Detection Limit = Detection Limit for Reporting.
D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
Qual = Data Qualifier

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Stellar Environmental Sol.
2198 Sixth Street Suite 201
Berkeley, CA 94710
Attn: Bruce Rucker

Project Name: Russ Elliott
Project Location: 2526 Wood St/Oakland
GlobalID: T0600102110

Certificate of Analysis - Data Report

Samples Received: 02/27/2006
Sample Collected by: Client

Lab # : 48097-002 **Sample ID: MW-2** **Matrix:** Liquid **Sample Date:** 2/24/2006 1:15 PM

TPH-Extractable

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1.0	50	µg/L	3/2/2006	WD060302A	3/2/2006	WD060302A

Surrogate	Surrogate Recovery	Control Limits (%)	
o-Terphenyl	67.1	22 - 133	

Analyzed by: JHsiang
Reviewed by: dba

Volatile-GC

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1.0	50	µg/L	N/A	N/A	3/4/2006	WGCA060303A

Surrogate	Surrogate Recovery	Control Limits (%)	
4-Bromofluorobenzene	87.0	65 - 135	

Analyzed by: mruan
Reviewed by: dba

EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1.0	0.50	µg/L	N/A	N/A	3/10/2006	WM1060310
Toluene	ND		1.0	0.50	µg/L	N/A	N/A	3/10/2006	WM1060310
Ethyl Benzene	ND		1.0	0.50	µg/L	N/A	N/A	3/10/2006	WM1060310
Xylenes, Total	ND		1.0	0.50	µg/L	N/A	N/A	3/10/2006	WM1060310
Methyl-t-butyl Ether	27		1.0	1.0	µg/L	N/A	N/A	3/10/2006	WM1060310
tert-Butyl Ethyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	3/10/2006	WM1060310
tert-Butanol (TBA)	ND		1.0	10	µg/L	N/A	N/A	3/10/2006	WM1060310
Diisopropyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	3/10/2006	WM1060310
tert-Amyl Methyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	3/10/2006	WM1060310
1,2-Dichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	3/10/2006	WM1060310
1,2-Dibromoethane (EDB)	ND		1.0	0.50	µg/L	N/A	N/A	3/10/2006	WM1060310

Surrogate	Surrogate Recovery	Control Limits (%)	
4-Bromofluorobenzene	99.8	60 - 130	
Dibromofluoromethane	109	60 - 130	
Toluene-d8	100	60 - 130	

Analyzed by: XBian
Reviewed by: MaiChiTu

Detection Limit = Detection Limit for Reporting.
D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
Qual = Data Qualifier

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Stellar Environmental Sol.
2198 Sixth Street Suite 201
Berkeley, CA 94710
Attn: Bruce Rucker

Project Name: Russ Elliott
Project Location: 2526 Wood St/Oakland
GlobalID: T0600102110

Certificate of Analysis - Data Report

Samples Received: 02/27/2006
Sample Collected by: Client

Lab # : 48097-003 **Sample ID: MW-3** **Matrix:** Liquid **Sample Date:** 2/24/2006 12:25 PM

TPH-Extractable

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1.0	50	µg/L	3/2/2006	WD060302A	3/2/2006	WD060302A

Surrogate	Surrogate Recovery	Control Limits (%)	
o-Terphenyl	53.6	22 - 133	

Analyzed by: JHsiang
Reviewed by: dba

Volatile-GC

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1.0	50	µg/L	N/A	N/A	3/4/2006	WGCA060303A

Surrogate	Surrogate Recovery	Control Limits (%)	
4-Bromofluorobenzene	78.8	65 - 135	

Analyzed by: mruan
Reviewed by: dba

EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1.0	0.50	µg/L	N/A	N/A	3/10/2006	WM1060310
Toluene	ND		1.0	0.50	µg/L	N/A	N/A	3/10/2006	WM1060310
Ethyl Benzene	ND		1.0	0.50	µg/L	N/A	N/A	3/10/2006	WM1060310
Xylenes, Total	ND		1.0	0.50	µg/L	N/A	N/A	3/10/2006	WM1060310
Methyl-t-butyl Ether	ND		1.0	1.0	µg/L	N/A	N/A	3/10/2006	WM1060310
tert-Butyl Ethyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	3/10/2006	WM1060310
tert-Butanol (TBA)	ND		1.0	10	µg/L	N/A	N/A	3/10/2006	WM1060310
Diisopropyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	3/10/2006	WM1060310
tert-Amyl Methyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	3/10/2006	WM1060310
1,2-Dichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	3/10/2006	WM1060310
1,2-Dibromoethane (EDB)	ND		1.0	0.50	µg/L	N/A	N/A	3/10/2006	WM1060310

Surrogate	Surrogate Recovery	Control Limits (%)	
4-Bromofluorobenzene	97.8	60 - 130	
Dibromofluoromethane	111	60 - 130	
Toluene-d8	101	60 - 130	

Analyzed by: XBian
Reviewed by: MaiChiTu

Detection Limit = Detection Limit for Reporting.
D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
Qual = Data Qualifier

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - TPH-Extractable

QC/Prep Batch ID: WD060228B

Validated by: dba - 03/03/06

QC/Prep Date: 2/28/2006

Parameter	Result	DF	PQLR	Units
TPH as Diesel	ND	1	50	µg/L

Surrogate for Blank	% Recovery	Control Limits
o-Terphenyl	**73.8**	22 - 133

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - TPH-Extractable

QC/Prep Batch ID: WD060302A

Validated by: dba - 03/03/06

QC/Prep Date: 3/2/2006

Parameter	Result	DF	PQLR	Units
TPH as Diesel	ND	1	50	µg/L

Surrogate for Blank	% Recovery	Control Limits
o-Terphenyl	**88.2**	22 - 133

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - Volatile-GC

QC Batch ID: WGC060307

Validated by: dba - 03/09/06

QC Batch Analysis Date: 3/7/2006

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**85.5**	65 - 135

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - Volatile-GC

QC Batch ID: WGCA060303A

Validated by: dba - 03/07/06

QC Batch Analysis Date: 3/3/2006

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**85.6**	65 - 135

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

QC Batch ID: WM1060310

Validated by: MaiChiTu - 03/13/06

QC Batch Analysis Date: 3/10/2006

Parameter	Result	DF	PQLR	Units
1,2-Dibromoethane (EDB)	ND	1	0.50	µg/L
1,2-Dichloroethane	ND	1	0.50	µg/L
Benzene	ND	1	0.50	µg/L
Diisopropyl Ether	ND	1	5.0	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Methyl-t-butyl Ether	ND	1	1.0	µg/L
tert-Amyl Methyl Ether	ND	1	5.0	µg/L
tert-Butanol (TBA)	ND	1	10	µg/L
tert-Butyl Ethyl Ether	ND	1	5.0	µg/L
Toluene	ND	1	0.50	µg/L
Xylenes, Total	ND	1	0.50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**100**	60 - 130
Dibromofluoromethane	**108**	60 - 130
Toluene-d8	**98.3**	60 - 130

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - TPH-Extractable

QC Batch ID: WD060228B

Reviewed by: dba - 03/03/06

QC/Prep Date: 2/28/2006

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Diesel	<50	1000	692	µg/L	69.2	40 - 138
TPH as Motor Oil	<200	1000	722	µg/L	72.2	40 - 138

Surrogate	% Recovery	Control Limits
o-Terphenyl	**84.8**	22 - 133

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Diesel	<50	1000	811	µg/L	81.1	**16**	25.0	40 - 138
TPH as Motor Oil	<200	1000	845	µg/L	84.5	**16**	25.0	40 - 138

Surrogate	% Recovery	Control Limits
o-Terphenyl	**96.6**	22 - 133

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - TPH-Extractable

QC Batch ID: WD060302A

Reviewed by: dba - 03/03/06

QC/Prep Date: 3/2/2006

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Diesel	<50	1000	597	µg/L	59.7	40 - 138
TPH as Motor Oil	<200	1000	770	µg/L	77.0	40 - 138

Surrogate	% Recovery	Control Limits
o-Terphenyl	**73.5**	22 - 133

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Diesel	<50	1000	720	µg/L	72.0	**19**	25.0	40 - 138
TPH as Motor Oil	<200	1000	796	µg/L	79.6	**3.3**	25.0	40 - 138

Surrogate	% Recovery	Control Limits
o-Terphenyl	**74.8**	22 - 133

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - Volatile-GC

QC Batch ID: WGC060307

Reviewed by: dba - 03/09/06

QC Batch ID Analysis Date: 3/7/2006

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Gasoline	<50	120	122	µg/L	97.8	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**101.0**	65 - 135

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<50	120	123	µg/L	98.4	**0.57**	25.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**100.0**	65 - 135

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - Volatile-GC

QC Batch ID: WGCA060303A

Reviewed by: dba - 03/07/06

QC Batch ID Analysis Date: 3/3/2006

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Gasoline	<50	120	112	µg/L	89.6	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**94.3**	65 - 135

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<50	120	104	µg/L	83.2	**7.4**	25.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**101.0**	65 - 135

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

QC Batch ID: WM1060310 Reviewed by: MaiChiTu - 03/13/06

QC Batch ID Analysis Date: 3/10/2006

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Benzene	<0.50	20	20.5	µg/L	102	70 - 130
Methyl-t-butyl Ether	<1.0	20	24.2	µg/L	121	70 - 130
Toluene	<0.50	20	18.6	µg/L	93.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**97.1**	60 - 130
Dibromofluoromethane	**109.0**	60 - 130
Toluene-d8	**91.6**	60 - 130

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.50	20	19.2	µg/L	96.0	**6.5**	25.0	70 - 130
Methyl-t-butyl Ether	<1.0	20	22.1	µg/L	110	**9.1**	25.0	70 - 130
Toluene	<0.50	20	17.7	µg/L	88.5	**5.0**	25.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**92.3**	60 - 130
Dibromofluoromethane	**102.0**	60 - 130
Toluene-d8	**89.9**	60 - 130

Entech Analytical Labs, Inc. Chain of Custody / Analysis Request

3334 Victor Court (408) 588-0200
Santa Clara, CA 95054 (408) 588-0201 - Fax
ELAP No. 2346

Attention to: Joe Dinan / Bruce Rucker	Phone No.: 510-644-3123	Purchase Order No.:	Invoice to: (If Different)	Phone:
Company Name: Stellar Environ. Solutions	Fax No.: 510-644-3859	Project No. / Name: Russ Elliot	Company:	
Mailing Address: 2198 Sixth St. Suite 201	Email Address: brucker@stellarenvironmental.com		Billing Address: (If Different)	
City: Berkeley	State: CA Zip Code: 94710	Project Location: 2526 Wood	City: Oakland	State: CA Zip:

Entech Order ID: 48097

EDF ☒ Global ID: T0600102110

Turn Around Time: ☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 4 Day ☐ 5 Day ☒ 10 Day

Sample Information

Sampler: JCD

Circle Applicable

Client ID	Field Point	Date	Time	Entech Lab. No.	Matrix	No. of Containers	EPA 8260B Full List	8260 Petroleum: List includes: ~~Gas~~, BTEX, MtBE, EtBE, TBA, TAME, DIPE, 1,2-DCA, EDB (ALL)			EPA 8270: Base/Neutral/Acid Organics; 8270 Full List	PAHs Only; PAHs - SIM	Pesticides-8081	PCBs - 8082	TPH Extractable: Diesel, ~~Motor Oil, Other~~ w/ ~~Si Gel Cleanup~~	TPH Gas, BTEX, MtBE by EPA 8015/8021B					Metals - Circle Below Total Dissolved STLC TCLP	Remarks Instructions
MW-1	MW-1	2-24-06	1207	-001	W	6		X							X	X						
MW-2	MW-2	↓	115	-002	W	6		X							X	X						
MW-3	MW-3	↓	~~1130~~ 1235	-003	W	6		X							X	X						
		JC	~~1225~~																			

Relinquished by:	Received by:	Date:	Time:
[signature]	Scott Cassady	2/27/06	10:00
Scott Cassady	[signature]	2/27/06	1130

Lab Use: LOG CODE SESB

Order notes per Brucker
Gas by 8015
Diesel only -
BTEX/OXYS/LS by 8260 DLT

Metals: Al, As, Sb, Ba, Be, Bi, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Li, Mg, Mn, Hg, Mo, Ni, K, Si, Ag, Na, Se, Tl, Sn, Ti, Zn, V

☐ Plating ☐ LUFT-5 ☐ RCRA-8 ☐ PPM-13 ☐ CAM-17

Lab Use:
Samples: Iced (Y)/N Temperature: 5°
Appropriate Containers/Preservatives: (Y)/N
Labels match CoC? (Y)/N Headspace? Y/(N)
Shipment Method: Scott
Custody Seals? Y/(N)
Seperate Receipt Log Y/(N)

If any N's, Explain:
(2) Liters each
(4) VOAs/HCl
DLT

COC December 2005

APPENDIX C

Historical Groundwater Monitoring Well Analytical Results

Table C-1
Historical Groundwater Monitoring Well Groundwater Analytical Results
2526 Wood Street, Oakland

Sample I.D.	TEHd	TVHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	Fuel Oxygenates [(a)]
February 2004 Event								
MW-1	*<50*	**172**	**1.2**	*<0.5*	*<0.5*	*<1.0*	**578**	**TAME = 3 | TBA = 19**
MW-2	*<50*	**72**	*<0.5*	*<0.5*	*<0.5*	*<1.0*	**16.4**	*ND*
MW-3	*<50*	**58**	*<0.5*	**0.6**	*<0.5*	*<1.0*	*<0.5*	*ND*
May 2004 Event								
MW-1	*<50*	*< 50*	*<0.5*	*<0.5*	*<0.5*	*<1.0*	**399**	**TAME = 2**
MW-2	*<50*	**83**	*<0.5*	*<0.5*	*<0.5*	*<1.0*	**1,230**	**TAME = 52 | DIPE = 0.6 TBA = 243**
MW-3	*<50*	*< 50*	*<0.5*	*<0.5*	*<0.5*	*<1.0*	*<0.5*	*ND*
August 2004 Event								
MW-1	*<50*	*< 50*	*<0.5*	*<0.5*	*<0.5*	*<1.0*	**1,210**	**TAME = 3 | TBA = 78**
MW-2	*<50*	*< 50*	*<0.5*	*<0.5*	*<0.5*	*<1.0*	**769**	**TAME = 6 | TBA = 81**
MW-3	*<50*	*< 50*	*<0.5*	*<0.5*	*<0.5*	*<1.0*	*<0.5*	*ND*
November 2004 Event								
MW-1	*<50*	*< 50*	*<0.5*	*<0.5*	*<0.5*	*<1.0*	**83**	*ND*
MW-2	*<50*	**271**	**102**	*<0.5*	*<0.5*	**1.3**	**1,820**	**TAME = 139 | TBA = 486**
MW-3	*<50*	*< 50*	*<0.5*	*<0.5*	*<0.5*	*<1.0*	*<0.5*	*ND*
February 2005 Event								
MW-1	*<50*	*< 50*	*<0.5*	*<0.5*	*<0.5*	*<1.0*	**12.6**	*ND*
MW-2	*<50*	*< 50*	*<0.5*	*<0.5*	*<0.5*	*<1.0*	**4.8**	*ND*
MW-3	*<50*	*< 50*	*<0.5*	*<0.5*	*<0.5*	*<1.0*	*<0.5*	*ND*

Table C-1 *continued*

Sample I.D.	TEHd	TVHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	Fuel Oxygenates [(a)]
May 2005 Event								
MW-1	*<50*	*< 50*	*<0.5*	*<0.5*	*<0.5*	*<1.0*	**116**	*ND*
MW-2	*<50*	*< 50*	*<0.5*	*<0.5*	*<0.5*	*<1.0*	**100**	TAME = 4 TBA = 48
MW-3	*<50*	*< 50*	*<0.5*	*<0.5*	*<0.5*	*<1.0*	*<0.5*	*ND*
August 2005 Event								
MW-1	*<500*	**220**	*<0.5*	*<0.5*	*<0.5*	*<1.0*	**310**	*ND*
MW-2	*<50*	**110**	*<0.5*	*<0.5*	*<0.5*	*<1.0*	**100**	*ND*
MW-3	*<50*	*< 50*	*<0.5*	*<0.5*	*<0.5*	*<1.0*	*<1.0*	*ND*
November 2005 Event								
MW-1	*<50*	*<50*	*<4.0*	*<4.0*	*<4.0*	*<4.0*	**97**	*ND*
MW-2	*<50*	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	**7.7**	*ND*
MW-3	*<50*	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<1.0*	*ND*
February 2006 Event								
MW-1	*<50*	*<50*	*<0.5*	*<0.5*	*<0.5*	*<1.0*	**36**	*ND*
MW-2	*<50*	*<50*	*<0.5*	*<0.5*	*<0.5*	*<1.0*	**27**	*ND*
MW-3	*<50*	*<50*	*<0.5*	*<0.5*	*<0.5*	*<1.0*	*<1.0*	TBA = 10

Notes:

[(a)] Table reports only detected fuel oxygenates and lead scavengers.

DIPE = di-isopropyl ether
MTBE = methyl *tertiary*-butyl ether
TAME = *tertiary*-amyl methyl ether
TBA = *tertiary*-butyl alcohol
TEHd = total extractable hydrocarbons – diesel range
TVHg = total volatile hydrocarbons – gasoline range

ND = not detected above method reporting limits

All results are in micrograms per liter (µg/L).