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

TRANSMITTAL MEMORANDUM		
TO:	**LOCAL OVERSIGHT PROGRAM** **ENVIRONMENTAL HEALTH SERVICES** **ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY** **1131 HARBOR BAY PARKWAY** **ALAMEDA, CALIFORNIA 94502-6577**	**DATE: JANUARY 13, 2004**
ATTENTION:	**MR. DON HWANG**	**FILE: SES 2003-43**
SUBJECT:	**OAKLAND AUTO WORKS** **240 W. MACARTHUR BLVD** **OAKLAND, CALIFORNIA** **ACEH FUEL LEAK CASE NO. R00000142**	
WE ARE SENDING:	☒ HEREWITH	☐ UNDER SEPARATE COVER
	☒ VIA MAIL	☐ VIA
THE FOLLOWING:	FOURTH QUARTER 2003 GROUNDWATER MONITORING REPORT (1 COPY)	
	☐ AS REQUESTED	☐ FOR YOUR APPROVAL
	☐ FOR REVIEW	☒ FOR YOUR USE
	☐ FOR SIGNATURE	☐ FOR YOUR FILES
COPY TO:	MR. GLEN POY-WING OAKLAND AUTO WORKS 240 WEST MCARTHUR BLVD. OAKLAND, CA 94711	**BY:** BRUCE RUCKER BMR

FOURTH QUARTER 2003 GROUNDWATER MONITORING REPORT

240 W. MACARTHUR BOULEVARD OAKLAND, CALIFORNIA

Prepared for:

Mr. Glen Pon-Wing
Oakland Auto Works
Oakland, California

January 2004

Stellar Environmental Solutions

★ **Stellar Environmental Solutions**

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

January 12, 2004

Mr. Glen Poy-Wing
Oakland Auto Works
240 W. MacArthur Boulevard
Oakland, CA 94711

Subject: Fourth Quarter 2003 Groundwater Monitoring Report
Oakland Auto Works Facility – 240 W. MacArthur Boulevard, Oakland, California
Alameda County Health Department Fuel Leak Case No. RO0000142

Dear Mr. Poy-Wing

Enclosed is the Stellar Environmental Solutions, Inc. (SES) report summarizing activities conducted in the Fourth Quarter of 2003 at the referenced site. The lead regulatory agency for this investigation is the Alameda County Environmental Health Department, to which we have provided a copy of this report.

This report discusses the Fourth Quarter 2003 groundwater monitoring event (the 21st site groundwater monitoring event) and site groundwater well surveying. Other Alameda County-requested activities (borehole sampling, a sensitive receptor survey, and a contaminant preferential pathway survey) will be discussed in an upcoming Soil and Water Investigation Report, to be submitted separately from the ongoing groundwater monitoring progress reports. If you have any questions regarding this report, please contact us at (510) 644-3123.

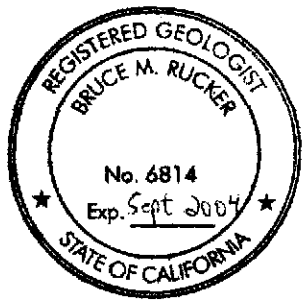
Sincerely,

Bruce M. Rucker

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

Richard S. Makdisi

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



cc: Don Hwang – Alameda County Environmental Health, Local Oversight Program

FOURTH QUARTER 2003
GROUNDWATER MONITORING REPORT

240 W. MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

Prepared for:

MR. GLEN POY-WING
OAKLAND AUTO WORKS
240 W. MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA 94612

Prepared by:

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

January 12, 2004

Project No. 2003-08

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1.0 INTRODUCTION

PROJECT BACKGROUND

The subject property, located at 240 W. MacArthur Boulevard, Oakland, Alameda County, California, is owned by Glen Poy-Wing and his wife of Oakland Auto Works, for whom Stellar Environmental Solutions, Inc. (SES) has provided environmental consulting services since July 2003. The site has undergone contaminant investigations and remediation since 1991 (discussed below). A list of all known environmental reports is included in Section 7.0, References and Bibliography.

In 2002, the current property owners purchased the property and assumed responsibility for continued environmental investigations. The property was formerly owned by Mr. Warren Dodson (Dodson Ltd.) and operated as Vogue Tyres.

REGULATORY STATUS

The Alameda County Environmental Health Department, Local Oversight Program (Alameda County Health) is the lead regulatory agency for the case, acting as a Local Oversight Program (LOP) for the California Regional Water Quality Control Board – San Francisco Bay Region (RWQCB). There are no Alameda County Health or RWQCB cleanup orders for the site; however, all site work has been conducted under oversight of Alameda County Health. In our August 2003 review of the Alameda County Health case file, we determined that all known technical reports for the site were included in that case file.

The previous consultant requested site closure in March 2003 (AEC, 2003a). Alameda County Health denied that request for case closure, and, in an April 16, 2003 letter, requested additional site characterization prior to considering case closure. Requested activities include: exploratory borehole drilling/sampling in the source area and downgradient area; a preferential pathway survey (identifying underground utilities); a vicinity water well search; and continued quarterly groundwater monitoring (including revisions to the analytical program). On behalf of the property owner, SES submitted to Alameda County Health a technical workplan for the requested work (SES, 2003). Alameda County Health subsequently requested technical revisions in a December 3, 2003 letter, all of which were addressed in the SES December 4, 2003 workplan amendments letter (SES, 2003c). We have not received Alameda County Health's

response to those amendments. The borehole program and pathway/well surveys will be addressed in a separate Soil and Water Investigation report.

The site is in compliance with State of California "GeoTracker" requirements. Tasks conducted include: uploading field point (well) names; surveying groundwater monitoring well horizontal and vertical coordinates, and uploading that data; and uploading groundwater monitoring analytical data from groundwater monitoring events conducted by SES (beginning in August 2003.

The site has been granted a Letter of Commitment (and has been receiving financial reimbursement) from the California Underground Storage Tank Cleanup Fund.

SCOPE OF REPORT

This report discusses the following activities, conducted between September 1 and December 31, 2003:

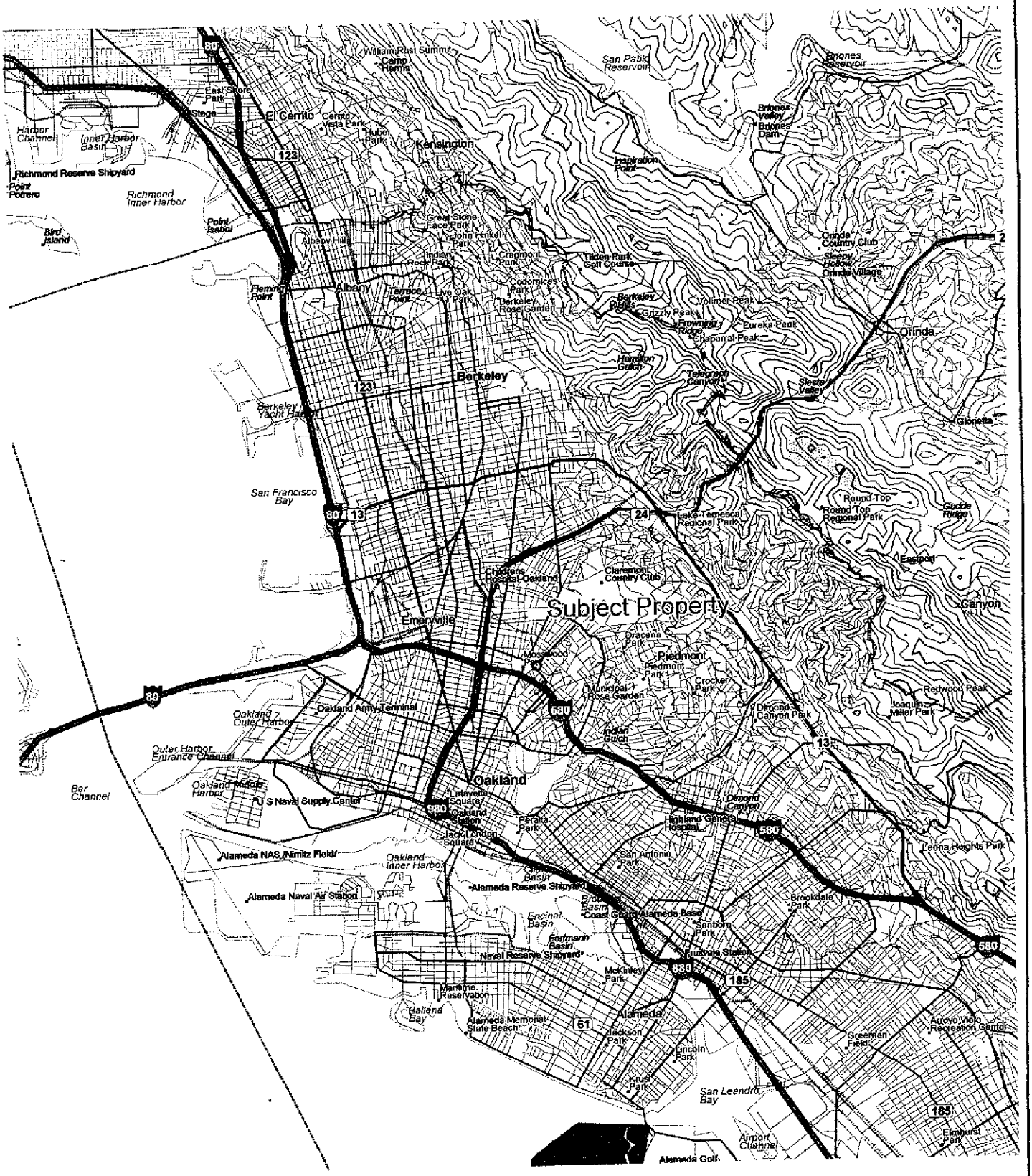
- Surveying groundwater monitoring well horizontal and vertical coordinates, per GeoTracker requirements; and
- The 21st groundwater monitoring and sampling event, conducted on August 18, 2003.

Specific activities requested by Alameda County Health (exploratory borehole program, preferential pathway survey, and sensitive receptor survey) will be addressed in an upcoming Soil and Water Investigation report, likely to be submitted in First Quarter 2004.

SITE DESCRIPTION

The project site is located at 240 W. MacArthur Boulevard in Oakland, California (see Figure 1). The rectangular-shaped project site is approximately 14,000 square feet (140 feet long by 100 feet wide), and is oriented with its long axis parallel to W. MacArthur Boulevard (approximately northwest-southeast). The project site is essentially flat and is wholly paved. One structure currently exists on the property—an automobile servicing shop that covers approximately 50 percent of the property. The building is currently occupied by Oakland Auto Works. Figure 2 is a site plan showing adjacent land uses.

Adjacent land use includes: a Shell-branded service station (*to the south*); W. MacArthur Boulevard (*to the west*); Howe Street (*to the north*); and a paved driveway, then a multi-story (with basement) health services building (*to the east*).



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

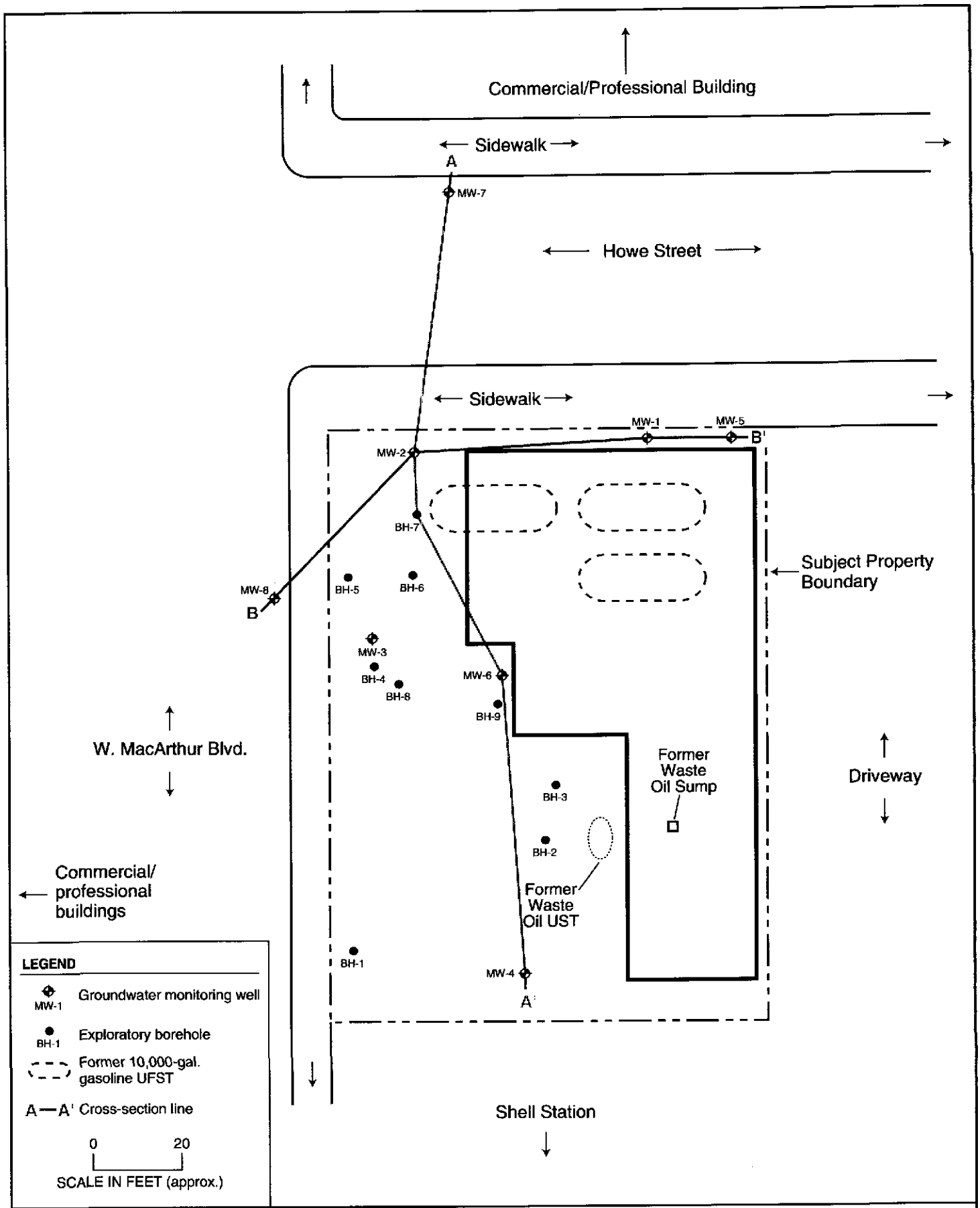
240 W. MacArthur Blvd.
Oakland, CA

By: MJC | AUGUST 2003

Figure 1

★ Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

2003-43-01



SITE PLAN WITH BOREHOLE AND GROUNDWATER WELL LOCATIONS

240 W. MacArthur Blvd. Oakland, CA	By: MJC	AUGUST 2003	Stellar Environmental Solutions, Inc. Geoscience & Engineering Consulting
	Figure 2		

2003-43-13

HISTORICAL ENVIRONMENTAL ACTIVITIES

This section summarizes historical (prior to the current quarter) environmental remediation and site characterization activities, based on documentation provided by the current property owners as well as Alameda County Health files. A detailed discussion of the magnitude and extent of residual soil and groundwater contamination will be discussed in an upcoming report. Figure 2 shows the site plan with the current groundwater well locations.

Historical remediation and site characterization activities include:

- Three 10,000-gallon gasoline underground fuel storage tanks (UFSTs) from a former Gulf service station occupancy were removed prior to 1991 (there is no available documentation regarding their removals).
- A waste oil sump was removed in 1991. Limited overexcavation was conducted, and there was no evidence of residual soil contamination, with the exception of 360 mg/kg of petroleum oil & grease (Mittelhauser Corporation, 1991b).
- A 350-gallon waste oil UFST was removed in 1996. Elevated levels of diesel and oil & grease were detected in confirmation soil samples. Subsequent overexcavation was conducted, and there was no evidence of residual soil contamination (All Environmental, Inc., 1997a).
- In accordance with a request by Alameda County Health, a subsurface investigation was conducted in January 1997 (All Environmental, Inc., 1997b). Six exploratory boreholes were advanced to a maximum depth of 20 feet, and soil samples were collected.
- Additional site characterization (three boreholes sampled and four monitoring wells installed) was performed in August 1997, and well locations were selected.
- Groundwater sampling of four onsite wells installed was conducted in March 1998, July 1998, October 1998, and January 1999.
- Four additional groundwater monitoring wells were installed in February 2001. Maximum historical soil concentrations were detected in well MW-5 in the northeastern corner of the subject property: 11,700 mg/kg gasoline and 25.6 mg/kg benzene (Advanced Environmental Concepts, Inc., 2001b).
- Short-term (less than 1-day duration) groundwater and vapor extraction from five wells was conducted over 4 days in October 2001 (Advanced Environmental Concepts, Inc., 2001e).

A total of 21 groundwater monitoring/sampling events have been conducted in available site wells between August 1997 and December 2003 (the most recent event).

2.0 PHYSICAL SETTING

The following evaluation of the physical setting of the site—including topography, surface water drainage, and geologic and hydrogeologic conditions—is based on previous (1991 through April 2003) site investigations conducted by others, and site inspections and groundwater monitoring data collected by SES since August 2003.

TOPOGRAPHY AND SURFACE WATER DRAINAGE

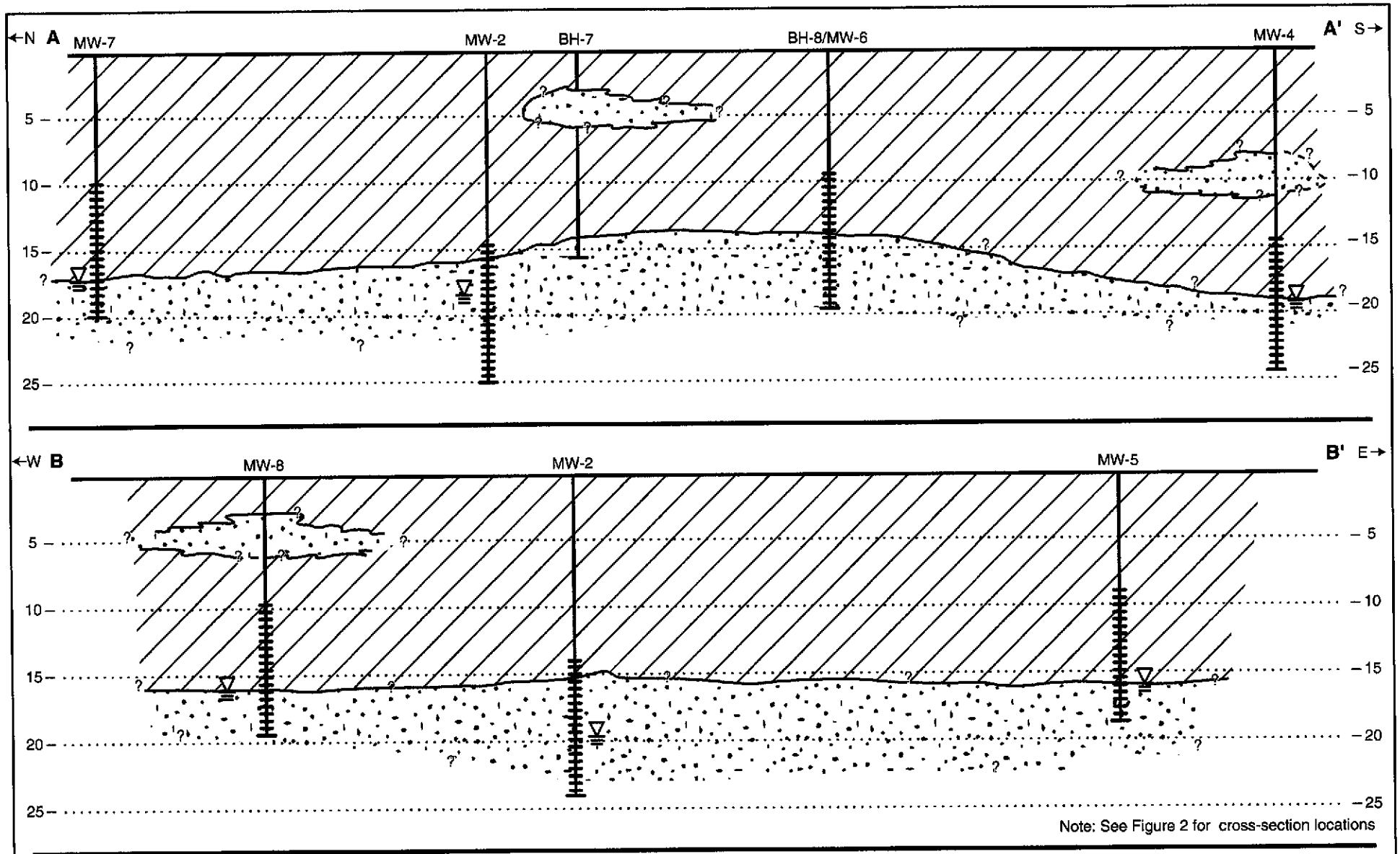
The site is on a gently-sloping alluvial fan at the base of the Berkeley/Oakland Hills, which rise approximately 1,100 feet above mean sea level (amsl) and are located approximately 3 miles east of San Francisco Bay. The mean elevation of the subject property is approximately 82 feet amsl. The subject property is essentially flat, with a local topographic gradient to the west. The nearest surface water bodies are: 1) Glen Echo Creek, a northeast-southwest trending creek located approximately 800 feet southeast of the subject property; and 2) Rockridge Branch, a north-south trending creek located approximately 1,000 feet northwest of the subject property. Both creeks are culverted underground in the areas nearest to the subject property.

SHALLOW LITHOLOGY

Site lithology is relatively consistent across the site. Lower-permeability soils (clays, silts, and silty sand) occur between ground surface and depths of approximately 15 to 18 feet. Locally-occurring thin lenses of higher-permeability soil (sand and gravel) have also been encountered in this depth interval. The upper zone is underlain by a laterally-continuous sand/gravel zone, the top of which is encountered at approximately 15 to 18 feet deep. In all site boreholes for which data were available, groundwater was encountered at or just below the top of this zone. The depth to the bottom of this upper water-bearing zone has not yet been determined, and will be evaluated in the proposed exploratory borehole drilling program. Figure 3 shows two geologic cross-sections through the area of historical investigations, based on historical geologic logging data. These cross-sections will be updated following the proposed additional site characterization activities.

GROUNDWATER HYDROLOGY

The number and positioning of existing site wells is adequate to evaluate the general groundwater flow direction and gradient.



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Geoscience & Engineering Consulting

GEOLOGIC CROSS SECTIONS A–A' AND B–B'

240 W. MacArthur Blvd., Oakland, CA

Figure 3

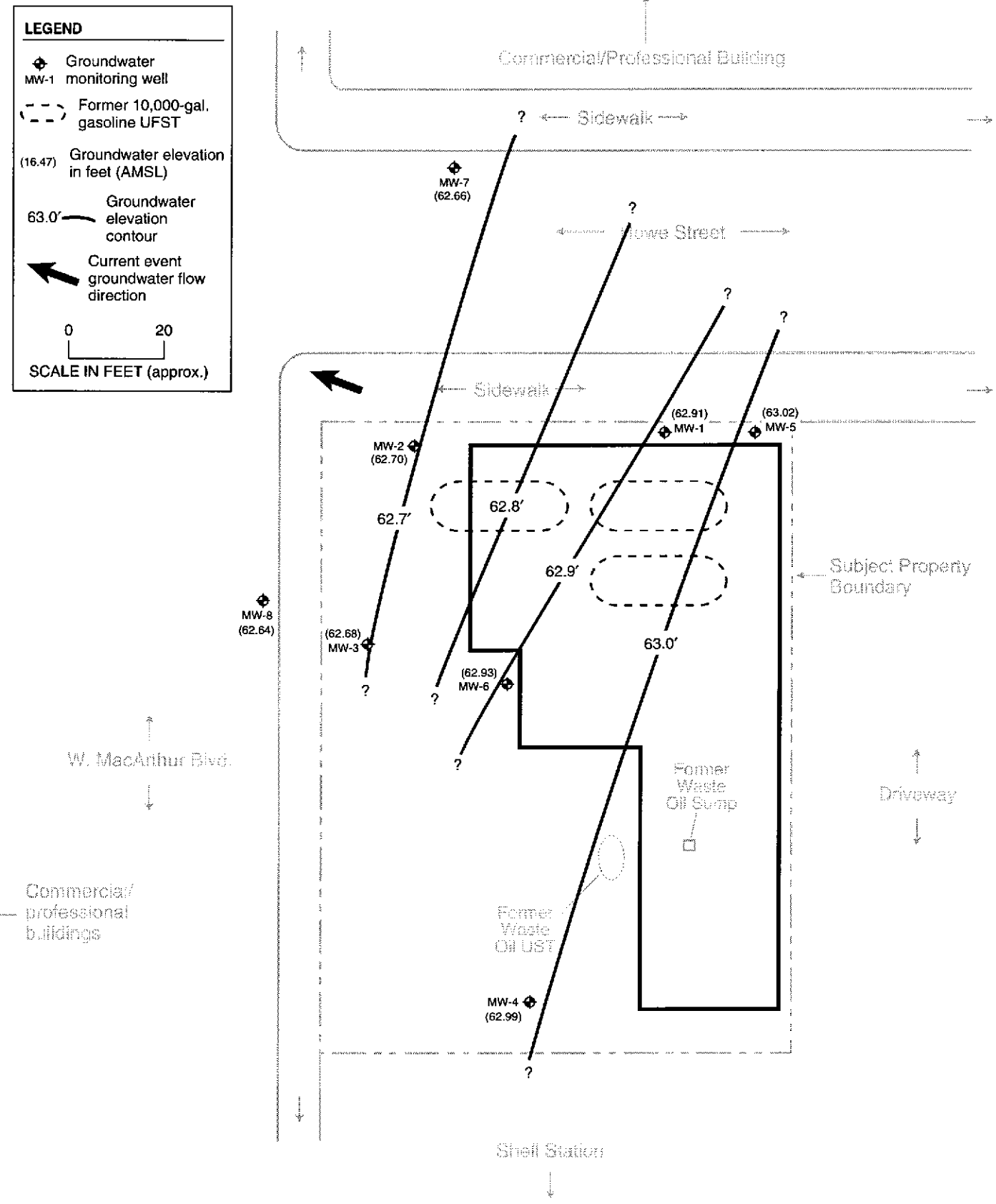
by: MJC | AUGUST 2003

2003-43-03

Vertical elevations of wells were first surveyed by a licensed land surveyor on September 26, 2003. A copy of the survey documentation is included in Appendix A. All historical (before August 2003) groundwater elevations were reported by the previous consultant relative to an arbitrary site datum (one of the site well's casing top), and well elevations had not been surveyed by a land surveyor. Following well surveying, SES evaluated groundwater flow direction of events (from October 2001 to March 2003) and found groundwater flow to be generally between west and northwest. Figures 4 and 5 are groundwater elevation maps that show elevations measured during the previous (August 2003) and recent (December 2003) groundwater monitoring events. Groundwater flow direction in these two events was again generally westward. A generally westward groundwater flow direction has also been measured at the adjacent Shell-branded service station (Cambria Environmental Technology, 2003).

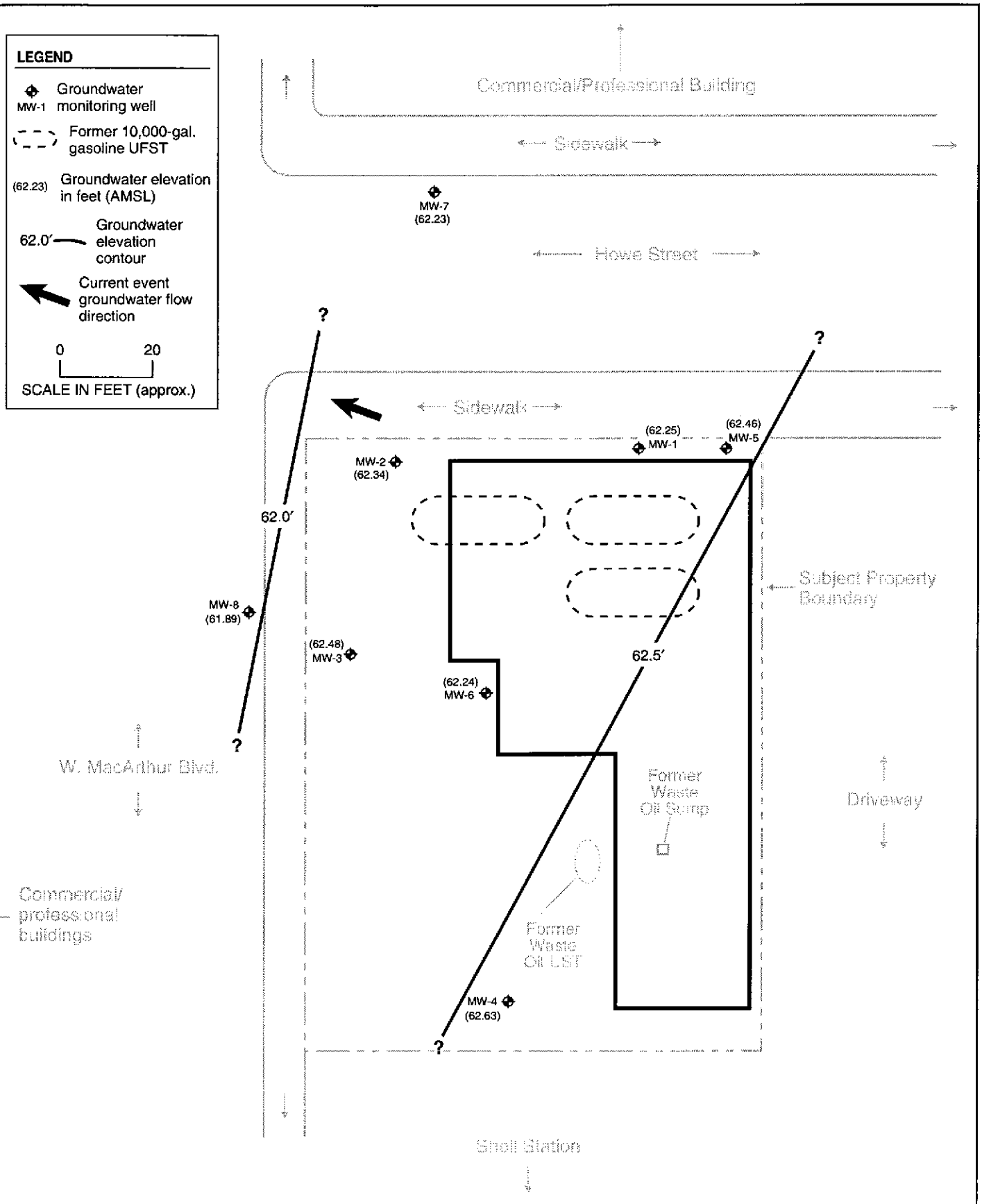
Historical equilibrated water levels (in wells) have been measured at depths of approximately 13 to 16 feet (slightly higher than first occurrence of groundwater encountered during drilling), indicating that groundwater occurs under slightly confining conditions. The range of water level elevations has varied by approximately 3 feet, and shows a strong seasonal variation, with highest elevations during the rainy winter-spring seasons and lowest elevations during the dry summer-fall seasons.

Groundwater gradient in the August and December 2003 events was relatively flat, at approximately 0.005 feet/foot. Historical groundwater gradient has varied between approximately 0.002 feet/foot and 0.008 feet/foot, averaging approximately 0.005 feet/foot. A rose diagram showing historical site groundwater flow direction and gradient, which was requested by Alameda County, will be completed in the upcoming soil and water investigation report, to be completed in the first quarter following the workplan approval by Alameda County. Appendix B contains a tabular summary of historical groundwater depths, elevations, flow direction, and gradient.



GROUNDWATER ELEVATION MAP—AUGUST 18, 2003			
240 W. MacArthur Blvd. Oakland, CA	By: MJC	AUGUST 2003	Stellar Environmental Solutions, Inc. Geoscience & Engineering Consulting
	Figure 4		

2003-43-16



GROUNDWATER ELEVATION MAP—DECEMBER 3, 2003

240 W. MacArthur Blvd. Oakland, CA	By: MJC	JANUARY 2004	Stellar Environmental Solutions, Inc. Geoscience & Engineering Consulting
	Figure 5		

2003-43-22

3.0 DECEMBER 2003 GROUNDWATER MONITORING AND SAMPLING

This section presents the groundwater sampling and analytical methods for the current event (Fourth Quarter 2003), conducted on December 3, 2003. Table 1 summarizes monitoring well construction and groundwater monitoring data. Groundwater analytical results are presented and discussed in Section 4.0.

Monitoring and sampling protocols were in accordance with the SES technical workplan (SES, 2003) submitted to Alameda County Health, and subsequent technical revision requested by Alameda County Health. As discussed in the workplan, all previous groundwater sampling events have been conducted using a "no-purge" method (i.e., "grab" groundwater samples are collected from the well without purging). The "no-purge" method has been approved by the RWQCB in its technical guidance "Utilization of Non-Purge Approach for Sampling of Monitoring Wells Impacted by Petroleum Hydrocarbons, BTEX, and MTBE" (dated January 31, 1997). The December 2003 groundwater sampling event involved collecting one set of "pre-purge" samples from all wells, then purging wells and collecting one set of "post-purge" samples the same day. Specific activities for this event included:

- Measuring static water levels and field measurement of "pre-purge" groundwater samples for hydrogeochemical parameters (temperature, pH, electrical conductivity, turbidity, and dissolved oxygen) in the eight site wells;
- Collecting "no-purge" groundwater samples for laboratory analysis of site contaminants from the eight site wells; and
- Purging each well, then collecting "post-purge" samples for field measurement of the aforementioned hydrogeochemical parameters, and for offsite laboratory analyses for contaminants of concern.

The locations of all site monitoring well sampling locations are shown on Figure 2. Well construction information and water level data are summarized in Table 1. All site wells are 2-inch-diameter PVC, although the borehole geologic logs for MW-1 through MW-4 completed by the previous consultant mistakenly indicate that they are 4-inch-diameter. Appendix C contains the groundwater monitoring field records for the current event.

Table 1
Groundwater Monitoring Well Construction and Groundwater Elevation Data
240 W. MacArthur Boulevard, Oakland, California

Well	Well Depth (feet bgs)	Screened Interval (Depth in Feet / Elevation)	Groundwater Level Depth [a] December 3, 2003	Groundwater Elevation [b] December 3, 2003
MW-1	25	19.5 to 24.5 / 54.5 to 49.5	16.90	62.25 [c]
MW-2	25	14.5 to 24.5 / 64.2 to 54.2	16.11	62.34
MW-3	25	14.5 to 24.5 / 63.4 to 53.4	15.10	62.48
MW-4	25	14.5 to 24.5 / 63.6 to 53.6	15.11	62.63
MW-5	20	9 to 19 / 70.6 to 60.6	16.90	62.46
MW-6	20	9 to 19 / 69.7 to 59.7	16.19	62.24
MW-7	20	9 to 19 / 69.6 to 59.6	16.04	62.23
MW-8	20	9 to 19 / 67.7 to 57.7	14.50	61.89

Notes:

[a] Pre-purge measurement feet below top of well casing.
[b] Pre-purge measurement, feet above mean sea level.
[c] Equilibrated water level in well above top of screened interval.

Groundwater monitoring well water level measurements, sampling, and field analyses were conducted by Blaine Tech Services (San Jose, California) on December 3, 2003, under the direct supervision of SES personnel.

As the first task of the monitoring event, static water levels were measured in the eight site wells using an electric water level indicator. "Grab" groundwater samples were then collected from each well (using new disposable bailer) and field-analyzed for aquifer stability parameters—including temperature, pH, electrical conductivity, turbidity, and dissolved oxygen. "Grab" groundwater samples were then collected from each well and transferred to appropriate sampling containers (40-ml VOA vials with hydrochloric acid preservative, and 1-liter amber glass jars), labeled, and placed in coolers with "blue ice." These samples represent the "pre-purge" sample set.

Each well was then purged (by hand bailing with a new disposable bailer, separate from the one used for the pre-purge sample set) of three wetted casing volumes, and aquifer stability parameters (pH, temperature, electrical conductivity, and turbidity) were measured between each purging. When measurements indicated that representative formation water was entering the well, a "post-purge" groundwater sample set was collected from each well with the purging bailer. These samples were field-measured for pH, temperature, electrical conductivity, turbidity, and dissolved oxygen, and a separate set was collected for offsite laboratory analysis. All groundwater samples were managed under chain-of-custody procedures from the time of sample collection until samples were received in the laboratory. Table 2 presents a comparison of pre- and post-purge sampling.

Maximum water level drawdown in the wells during purging was 1.6 feet, with the majority of the wells having a drawdown of 1 foot or less. As shown on the well sampling documentation forms (Appendix C), none of the wells dewatered between purge volumes. This confirms that formation water was entering the groundwater screen.

Wastewater (purge water and equipment decontamination rinseate) was containerized in a labeled, 55-gallon steel drum that will be temporarily stored on site. This water will be combined with wastewater generated in the proposed exploratory borehole drilling/sampling program, and then will be profiled and disposed of at a permitted wastewater treatment facility.

Table 2
Comparison of Pre-Purge and Post-Purge Aquifer Parameters
December 3, 2003 Monitoring Event

Well		pH	Temp (°F)	Electrical Conductivity (µS)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
MW-1	Pre-Purge	6.8	61.7	925	280	1.1
	Post-Purge	6.7	62.9	924	259	1.2
	RPD	*1.5 (%)*	*1.9 (%)*	*0.1 (%)*	*7.8 (%)*	*8.7 (%)*
MW-2	Pre-Purge	6.6	62.9	740	168	1.2
	Post-Purge	6.6	63.8	767	319	1.1
	RPD	*0.0 (%)*	*1.4 (%)*	*3.6 (%)*	*62.0 (%)*	*8.7 (%)*
MW-3	Pre-Purge	6.8	64.5	954	402	0.9
	Post-Purge	6.8	64.5	926	771	1.0
	RPD	*0.0 (%)*	*0.0 (%)*	*3.0 (%)*	*62.9 (%)*	*10.5 (%)*
MW-4	Pre-Purge	6.4	64.2	519	79	1.4
	Post-Purge	6.3	65.3	552	>1,000	1.5
	RPD	*1.6 (%)*	*1.7 (%)*	*6.2 (%)*	—	*6.9 (%)*
MW-5	Pre-Purge	6.8	62.6	722	>1,000	0.8
	Post-Purge	6.8	63.9	611	>1,000	1.2
	RPD	*0.0 (%)*	*2.1 (%)*	*16.7 (%)*	—	*40.0 (%)*
MW-6	Pre-Purge	6.7	63.3	1,104	666	1.4
	Post-Purge	6.8	62.8	1,122	>1,000	1.2
	RPD	*1.5 (%)*	*0.8 (%)*	*1.6 (%)*	—	*15.4 (%)*
MW-7	Pre-Purge	6.4	65.7	760	305	3.4
	Post-Purge	6.5	64.8	864	>1,000	2.9
	RPD	*1.6 (%)*	*1.4 (%)*	*12.8 (%)*	—	*15.9 (%)*
MW-8	Pre-Purge	6.9	63.4	437	>1,000	2.8
	Post-Purge	6.8	63.5	474	835	2.0
	RPD	*1.5 (%)*	*-0.2 (%)*	*8.1 (%)*	—	*33.3 (%)*

Notes:

RPD: Relative Percent Difference = [(Pre Purge Reading – Post Purge Reading) / (Pre Purge Reading + Post Purge Reading) / 2] * 100

— Could not compute RPD because one or more turbidity readings was offscale.

4.0 REGULATORY CONSIDERATIONS, ANALYTICAL RESULTS AND FINDINGS

This section presents analytical results of the most recent monitoring event, preceded by a summary of relevant regulatory considerations. This section also discusses our evaluation of the pre-purging versus post-purging sampling techniques. Table 3 summarizes the contaminant analytical results of the current monitoring event. Appendix D contains the certified analytical laboratory report and chain-of-custody record.

REGULATORY CONSIDERATIONS

Environmental Screening Levels

There are no published cleanup goals for detected site contaminants in groundwater. The RWQCB has published "Environmental Screening Levels" (ESLs), which are screening-level concentrations for soil and groundwater that incorporate both environmental and human health risk considerations, and are used as a preliminary guide in determining whether additional remediation and/or investigation are warranted. The ESLs are not cleanup criteria; rather, they are conservative screening-level criteria designed to be protective of both drinking water resources and aquatic environments in general. The groundwater ESLs are composed of one or more components, including ceiling value, human toxicity, indoor air impacts, and aquatic life protection. Exceedance of ESLs suggests that additional remediation and/or investigation may be warranted, such as monitoring plume stability to demonstrate no risk to sensitive receptors in the case of sites where drinking water is not threatened.

The City of Oakland, via its Urban Land Redevelopment (URL) Program, utilizes a similar ESL approach in evaluating whether active remediation is necessary at sites proposed for redevelopment. This program is not currently applicable to the site, as no redevelopment is proposed.

For all site contaminants with published drinking water standards (BTEX and MTBE), the drinking water standards are equal to or greater than the published ESLs.

Table 3
Groundwater Sample Analytical Results – December 3, 2003
240 W. MacArthur Boulevard, Oakland, California

Well		TPHg	TPHd	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	EDC	EDB
MW-1	Pre-Purge	5,060	400	654	11	79	92	129	<5	<5
	Post-Purge	8,930	800	1,030	55	127	253	212	<5	<5
	RPD	*55%*	*67%*	*45%*	*133%*	*47%*	*93%*	*49%*	—	—
MW-2	Pre-Purge	2,120	100	45	9.4	9.5	20	289	NA	NA
	Post-Purge	1,980	100	29	22	7.4	13	295	NA	NA
	RPD	*-6.8%*	*0.0%*	*-43%*	*80%*	*-25%*	*-42%*	*2.1%*	—	—
MW-3	Pre-Purge	5,550	400	311	20	41	48	357	NA	NA
	Post-Purge	6,860	500	312	20	55	58	309	NA	NA
	RPD	*21%*	*22%*	*0.3%*	*0.0%*	*29%*	*19%*	*-14%*	—	—
MW-4	Pre-Purge	71	NA	<0.3	<0.3	<0.3	<0.6	<5.0	NA	NA
	Post-Purge	63	NA	<0.3	<0.3	<0.3	<0.6	<5.0	NA	NA
	RPD	*-12%*	—	—	—	—	—	—	—	—
MW-5	Pre-Purge	12,800	600	1,140	327	354	1,530	682	<5	<5
	Post-Purge	11,900	800	627	263	288	1,230	595	<5	<5
	RPD	*-7.3%*	*29%*	*-58%*	*-22%*	*-21%*	*22%*	*-14%*	—	—
MW-6	Pre-Purge	444	100	4.7	4.9	1.8	5.9	4.4	11.0	<5.0
	Post-Purge	365	200	2.5	3.8	1.4	6.1	<5.0	17.1	<5.0
	RPD	*-20%*	*67%*	*-61%*	*-25%*	*-25%*	*-3.3%*	—	*43%*	—
MW-7	Pre-Purge	<50	NA	<0.3	<0.3	<0.3	<0.6	<5.0	NA	NA
	Post-Purge	<50	NA	<0.3	<0.3	<0.3	<0.6	<5.0	NA	NA
	RPD	—	—	—	—	—	—	—	—	—

Table 3 *continued*

Well		TPHg	TPHd	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	EDC	EDB
MW-8	Pre-Purge	144	<100	<0.3	<0.3	<0.3	<0.6	7.6	NA	NA
	Post-Purge	163	<100	<0.3	<0.3	<0.3	<0.6	66	NA	NA
	RPD	*12%*	—	—	—	—	—	*159%*	—	—
Drinking Water Standards [a]										
		NLP	NLP	1.0 [b]	40	30	20	5.0	NLP	NLP
RWQCB Environmental Screening Levels [c]										
		100	100	1.0	40	30	13	5.0	0.5	0.05

Notes:

[a] Drinking water standards are State of California Secondary Maximum Contaminant Levels (MCLs)– Proposed, unless specified otherwise.
[b] State of California Primary MCL.
[c] For commercial/industrial sites where known/potential drinking water resource is threatened.

All concentrations in micrograms per liter (µg/L), equivalent to parts per billion (ppb).

RPD: Relative Percent Difference = [(Pre Purge Reading – Post Purge Reading) / (Pre Purge Reading + Post Purge Reading) / 2] * 100

— Could not compute RPD because one or more result was "not detect" or because that analysis was not conducted for this well.

EDB = Ethylene dibromide (1,2-dibromoethane); EDC = Ethylene dichloride (1,2-dichloroethane); MTBE = Methyl *tertiary*-butyl ether; TPHg = Total petroleum hydrocarbons- gasoline range (equivalent to total volatile hydrocarbons- gasoline range); TPHd = Total petroleum hydrocarbons- diesel range (equivalent to total extractable hydrocarbons- diesel range);
NA = Not analyzed for this contaminant; NLP = No level published.

Sensitive Receptors

Risk evaluation commonly includes the identification of sensitive receptors, including vicinity groundwater supply wells. As will be discussed in more detail in the upcoming Soil and Groundwater Investigation Report (proposed in the SES August 2003 technical workplan), the California Department of Water Resources identified only one groundwater supply well within 1,500 feet of the site. That well is located at 4082 Howe Street, approximately 1,600 feet to the northeast (crossgradient or downgradient) of the site. The well was installed in 1979 to a depth of 198 feet, was screened between 132 and 189 feet deep, and had a sanitary seal from surface to 30 feet. While it is not known if this well is still in use, its location and construction suggest that it would not intercept shallow groundwater emanating from the subject property.

As specified in the RWQCB's San Francisco Bay Region Water Quality Control Plan, all groundwaters are considered potential sources of drinking water unless otherwise approved by the RWQCB, and are assumed to ultimately discharge to a surface water body and potentially impact aquatic organisms. In the case of groundwater contamination, ESLs are published for two scenarios: groundwater *is* a source of drinking water, and groundwater *is not* a source of drinking water. Qualifying for the higher ESLs (applicable to groundwater *is not* a source of drinking water) requires meeting one of the two following criteria.

1. The RWQCB has completed the "East Bay Plain Groundwater Basin Beneficial Use Evaluation Report" (RWQCB, 1999) that delineates three types of areas with regard to beneficial uses of groundwater: Zone A (significant drinking water resource), Zone B (groundwater unlikely to be used as drinking water resource), and Zone C (shallow groundwater proposed for designation as Municipal Supply Beneficial Use). The subject site falls within Zone A.
2. A site-specific exemption can be obtained from the RWQCB. Such an exemption has not been obtained for this site.

As discussed below, multiple groundwater contaminants have been detected in excess of ESLs, for both groundwater beneficial scenarios (groundwater *is* versus *is not* a potential drinking water resource). These data indicate that continued site characterization is warranted until it can be demonstrated that site-sourced contamination poses no unacceptable risk to sensitive receptors. Our subsequent discussion of groundwater contamination is in the context of the ESL criteria for sites where groundwater *is* a potential drinking water resource.

GROUNDWATER SAMPLE ANALYTICAL METHODS

Groundwater samples were analyzed in accordance with the methods proposed in the SES technical workplan. Analytical methods included:

- Total volatile hydrocarbons – gasoline range (TVHg), by EPA Method 8015B (all wells);
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) and methyl *tertiary*-butyl ether (MTBE), by EPA Method 8021B;
- The lead scavengers 1,2-dichloroethane (EDC) and 1,2-dibromoethane (EDB), by EPA Method 8260B (wells MW-1, MW-5, and MW-6—the only wells with detectable concentrations in the previous monitoring event); and
- Total extractable hydrocarbons – diesel range (TEHd), by EPA Method 8015M (all wells except MW-4 and MW-7, which historically have never detected diesel).

GROUNDWATER SAMPLE RESULTS

As discussed previously, duplicate groundwater sample sets were collected in the recent event, representing "no-purge" (pre-purge) and "post-purge" conditions. The objective of this exercise was to determine if representative formation water could be obtained using the less costly "no-purge" technique. As discussed later in this section, there was no clear correlation between no-purge and post-purge sample analytical results; thus, in our opinion, the most technically appropriate groundwater monitoring technique is post-purge sampling. Therefore, the following discussion of current event hydrochemistry (and the associated isoconcentration contour maps) is based on post-purge analytical results.

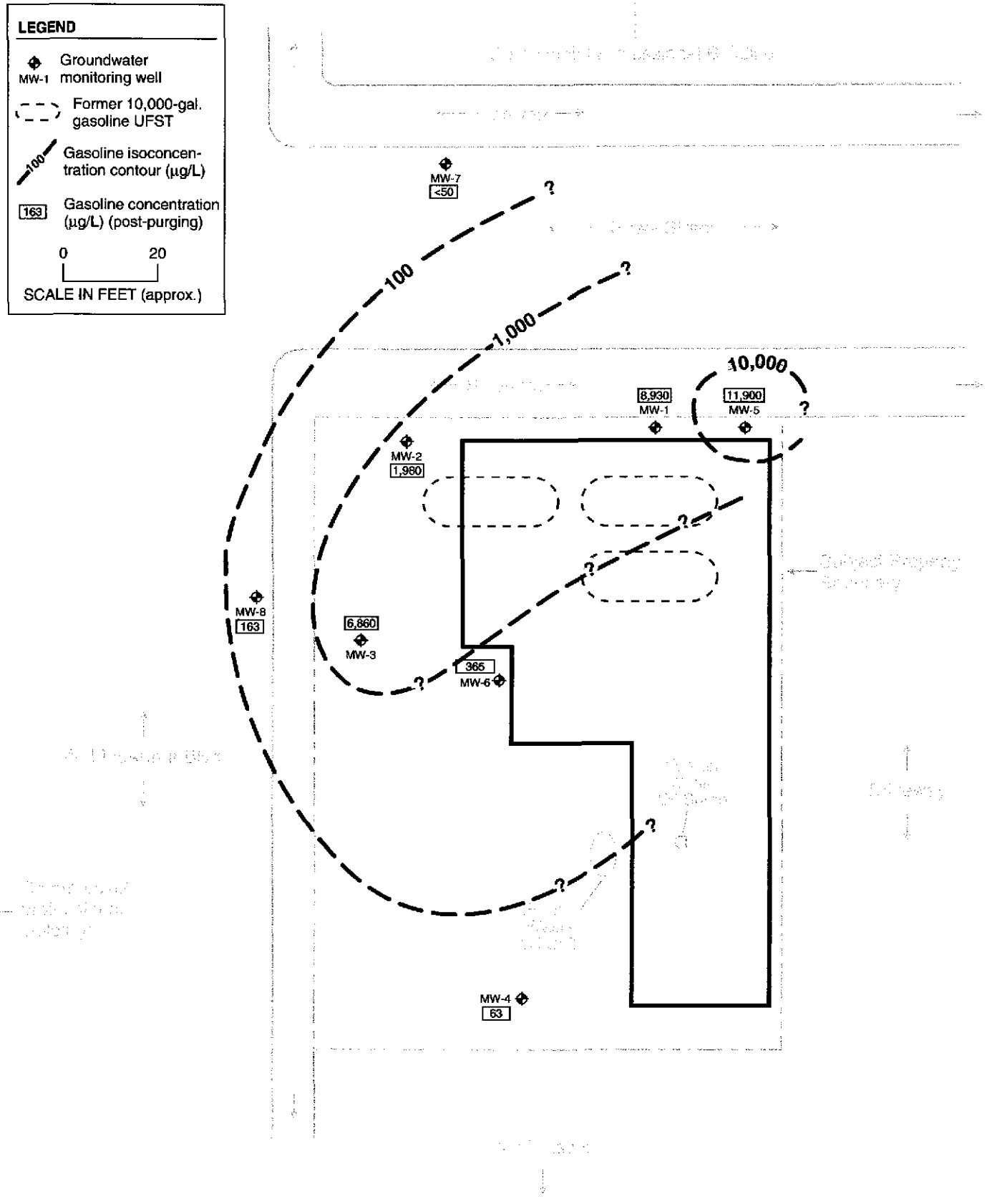
Gasoline

Figure 6 shows gasoline isoconcentration contours for the recent event. Gasoline was detected in all site wells except MW-7 (northernmost well) at concentrations between 63 µg/L (well MW-4) and 11,900 µg/L (well MW-5). Several of the gasoline concentrations exceeded the 100 µg/L ESL criterion. As shown on Figure 6, the lateral extent of the gasoline plume is well defined to the west and south, and does not appear to extend offsite more than 10 feet. The gasoline plume extends offsite to the north (beneath Howe Street) and to the east an undefined distance.

Diesel

Figure 7 shows diesel isoconcentration contours for the recent event. Diesel was detected in five of the six wells analyzed for diesel. Diesel concentrations ranged from 100 µg/L (well MW-2) to 800 µg/L (wells MW-1 and MW-5). These concentrations equal or exceed the 100 µg/L ESL criterion.

As shown on Figure 7, the lateral extent of the diesel plume is well defined to the west and south, and does not appear to extend offsite more than 10 feet. The diesel plume extends offsite to the north (beneath Howe Street) and to the east an undefined distance.



GASOLINE ISOCONCENTRATION CONTOURS (DECEMBER 2003)

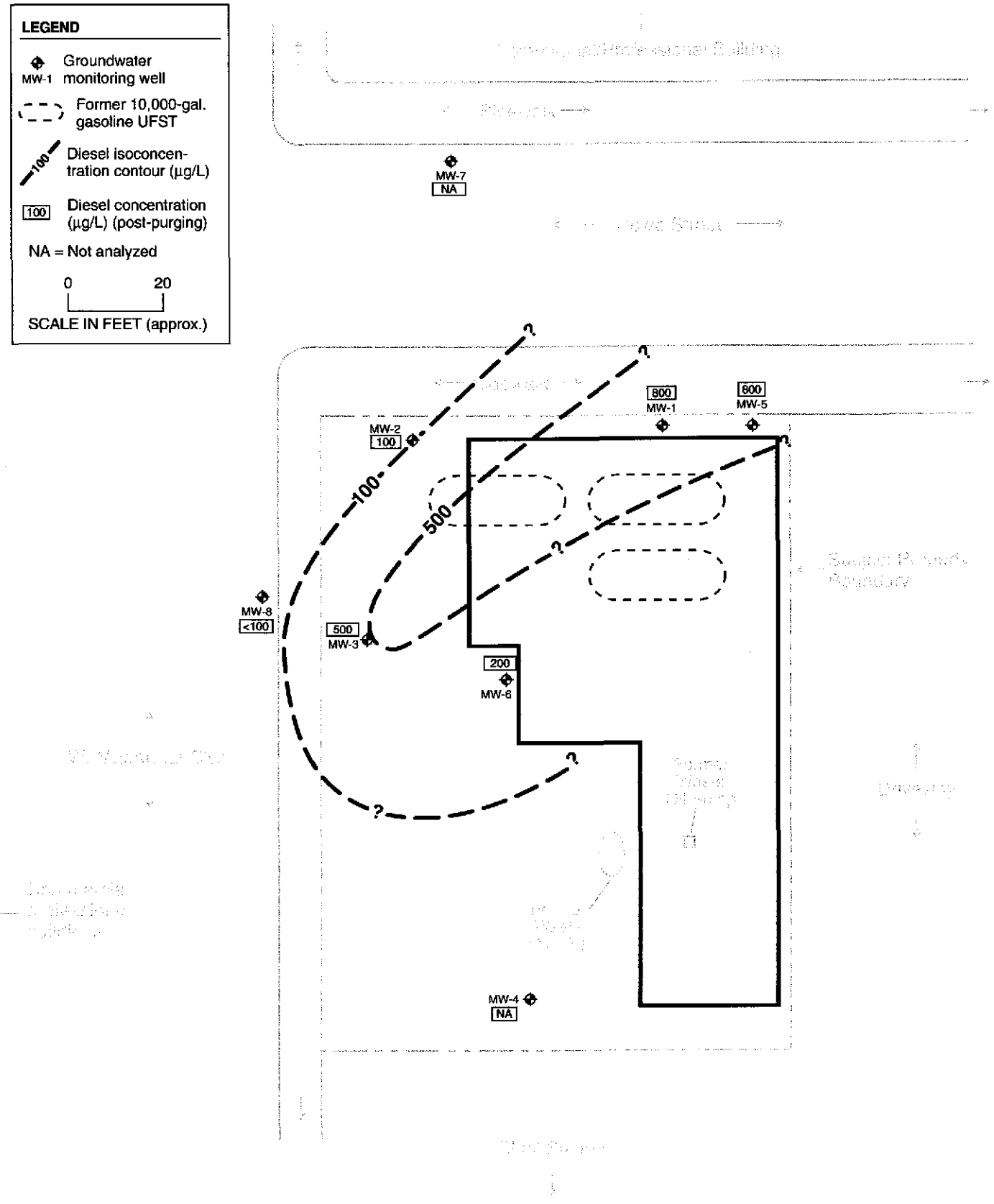
240 W. MacArthur Blvd.
Oakland, CA

By: MJC | JANUARY 2004

Figure 6

Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

2003-43-19



DIESEL ISOCONCENTRATION CONTOURS (DECEMBER 2003)

240 W. MacArthur Blvd.
Oakland, CA

By: MJC | JANUARY 2004

Figure 7

Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

2003-43-21

Benzene, Toluene, Ethylbenzene, and Total Xylenes

Benzene was detected in five of the eight site wells. Figure 8 shows benzene isoconcentration contours for the recent event. The lateral extent of the benzene plume is well defined to the west and south, and does not extend offsite in those directions. The benzene plume extends offsite to the north (beneath Howe Street) and to the east an undefined distance.

Toluene was detected in five of the eight site wells, at concentrations ranging from 3.8 to 263 µg/L. Ethylbenzene was detected in five of the wells, at concentrations ranging from 1.4 to 288 µg/L. Total xylenes were also detected in five of the wells, at concentrations ranging from 6.1 to 1,230 µg/L. Maximum BTEX constituent concentrations were all detected in well MW-5. Maximum BTEX concentrations were all in excess of their respective ESL criteria.

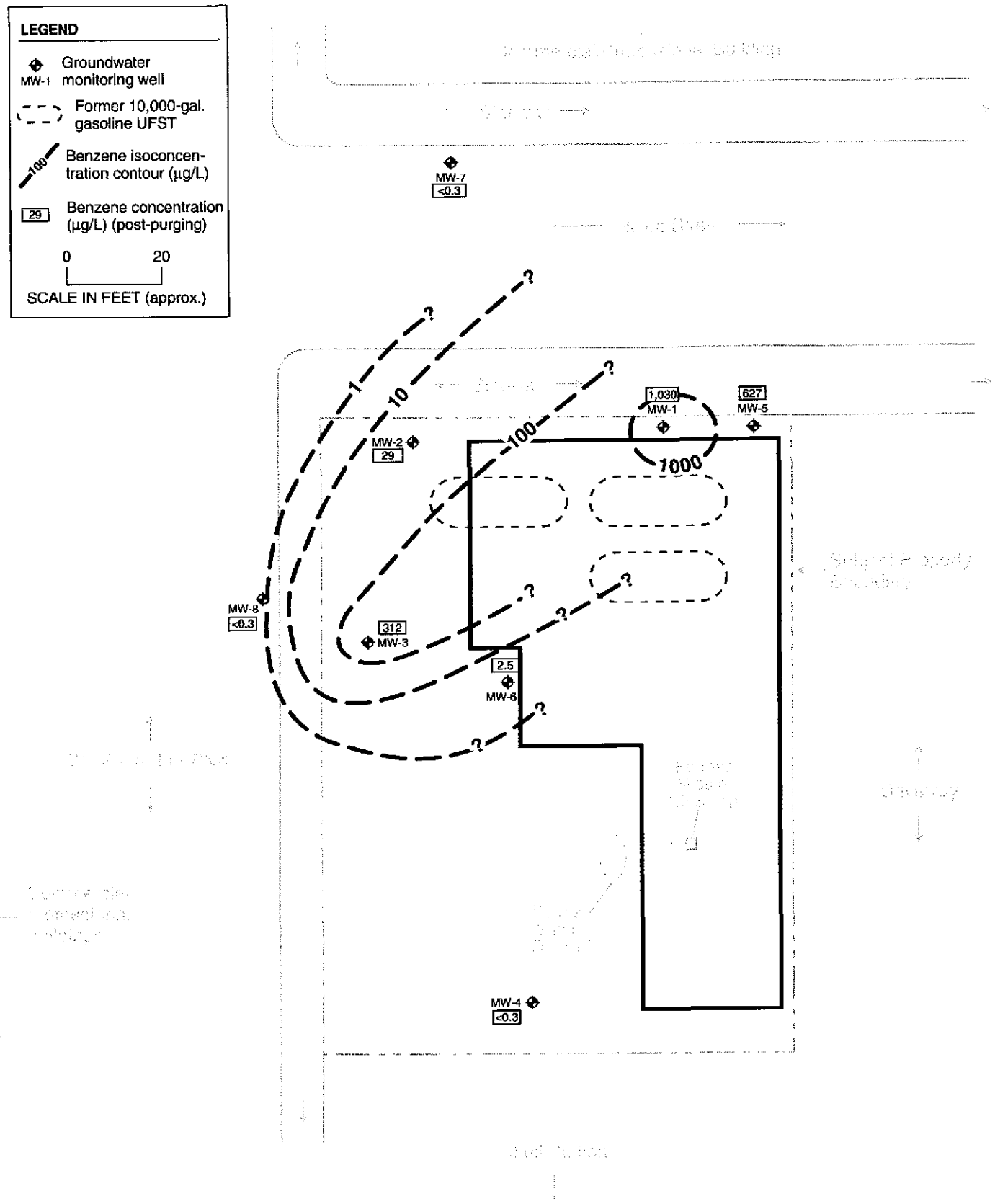
Methyl *tertiary*-Butyl Ether

Figure 9 shows MTBE (a fuel oxygenate) isoconcentration contours for the recent event. MTBE was detected in five of the eight site well, at concentrations of 66 to 595 µg/L. These results exceed the 5 µg/L ESL. As shown on Figure 9, the lateral extent of the MTBE plume is well defined in all directions, and extends offsite to the northeast (near MW-5) and west of MW-8 into W. MacArthur Boulevard.

Alameda County Health has requested (in its workplan request letter) that the adjacent Shell-branded service station be evaluated as a potential source for the MTBE contamination. That issue will be fully evaluated in the upcoming Soil and Water Investigation report (to follow the proposed borehole program). Based on our preliminary evaluation of groundwater flow direction and contaminant plume geometry, there appears to be a very low probability that the onsite MTBE contamination is the result of migration from the Shell-branded service station.

Lead Scavengers

EDC was analyzed for in the three site wells (MW-1, MW-5, and MW-6) in which EDC was detected in the previous event. For the current event, the only detection was in well MW-6, with pre-purge and post-purge concentrations of 11 µg/L and 17.1 µg/L, respectively. These concentrations exceed the 0.5 µg/L ESL. EDB was not detected in any of the wells. Note that the laboratory used elevated method reporting limits for lead scavengers (in some cases above the ESL criteria). As discussed in the Proposed Actions section, we are proposing to utilize in future sampling events a different analytical method that has lower method reporting limits.



BENZENE ISOCONCENTRATION CONTOURS (DECEMBER 2003)

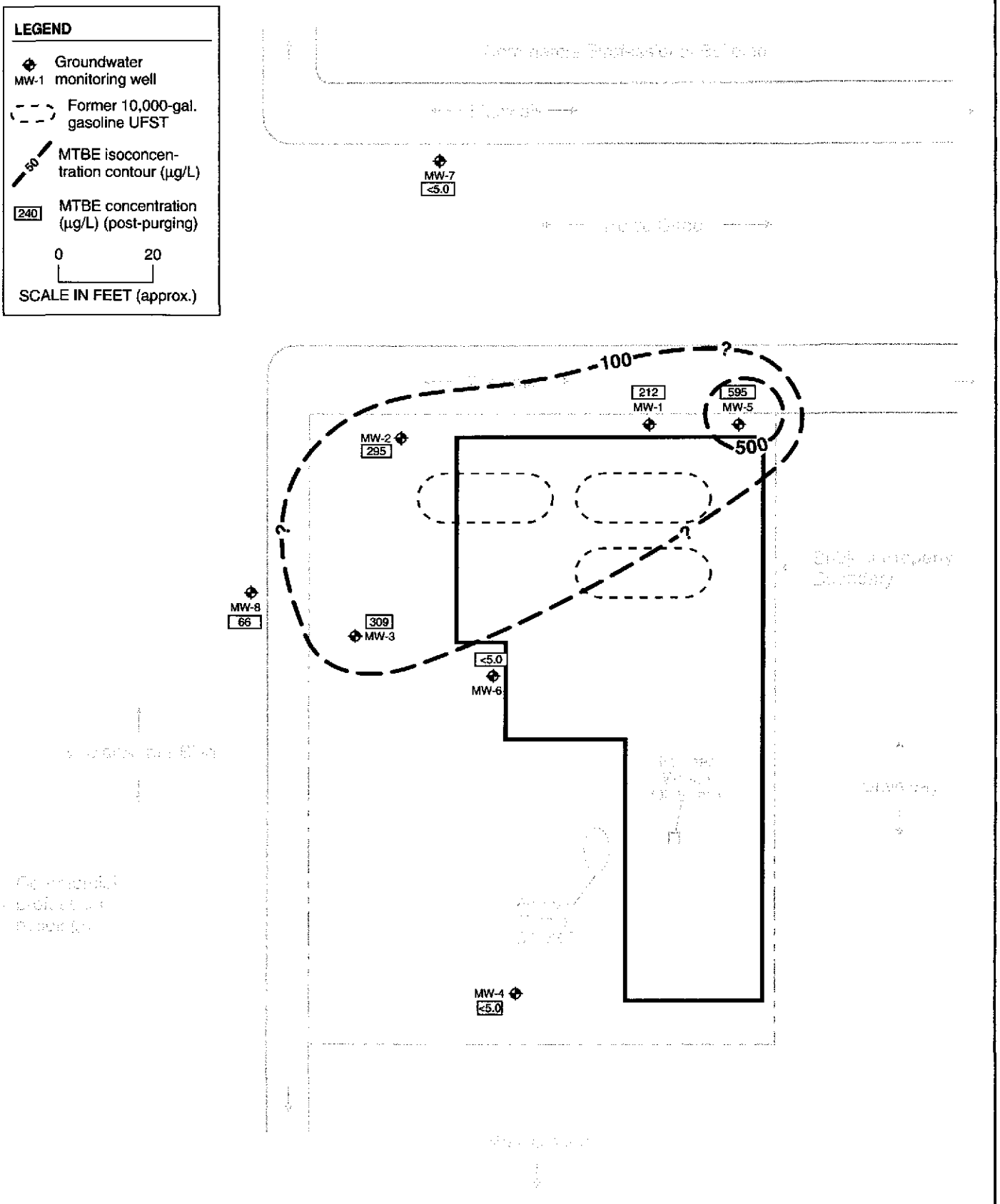
240 W. MacArthur Blvd.
Oakland, CA

By: MJC | JANUARY 2004

Figure 8

Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

2003-43-20



2003-43-23

MTBE ISOCONCENTRATION CONTOURS (DECEMBER 2003)

240 W. MacArthur Blvd. Oakland, CA	By: MJC	JANUARY 2004	★ Stellar Environmental Solutions, Inc. Geoscience & Engineering Consulting
	Figure 9		

Summary

With the exception of EDC, maximum contaminant concentrations were detected in wells MW-5 or MW-1, located in the northeastern corner of the property, near the former UFSTs, which appears to be the center of the groundwater contaminant mass. Groundwater contamination extends in a limited way offsite to the west of MW-8 (for MTBE) and is fully contained onsite to the south, based on the non-detectable concentrations at well MW-4. The lateral extent of groundwater contamination to the east and to the north is undefined.

COMPARISON OF NO-PURGE AND POST-PURGE SAMPLING

The following discusses the findings of the no-purge (pre-purge) versus post-purge sampling techniques conducted in the December 2003 event. This discussion includes both an evaluation of the pre- and post purge aquifer parameters and the hydrochemical results. The objective of this comparative sampling was to determine if the less costly no-purge sampling technique is technically appropriate for this site.

Aquifer Parameters

The Alameda County Health supplemental technical guidance for non-purge sampling requested that the following criteria be met:

1. Conduct field measurement of aquifer parameters (temperature, pH, electrical conductivity, turbidity, and dissolved oxygen) to demonstrate that groundwater is entering the well screen (i.e., that there is "no significant difference" in parameter readings); and
2. Demonstrate that well purging does not cause a significant drawdown of water level in the wells.

Table 2 summarizes the pre-purge and post-purge field measurements for the current event. The data indicate the following:

- Maximum relative percent difference (RPD) for temperature was 1.9 percent.
- Maximum RPD for pH was 1.6 percent
- Maximum RPD for electrical conductivity was 16.7 percent
- For six of the eight wells, RPD for dissolved oxygen was at or below 16 percent. Two wells had RPDs of 33 and 40 percent; however, the actual range of dissolved oxygen readings for these wells was minor.

- Turbidity readings varied widely, with RPD values ranging from approximately 8 to 63 percent. Several of the wells had turbidity readings above the scale of the meter (greater than 1,000 NTU); RPD for turbidity could therefore not be calculated.

The pre-purge and post-purge field measurements showed insignificant difference in temperature or pH; electrical conductivity, dissolved oxygen, and turbidity units values varied more significantly. The temperature and pH are typically unaffected by the groundwater being within the formation versus static water within the well while the electrical conductivity, dissolved oxygen, and turbidity units are more affected. Thus, the data suggest that formation water is best represented by the post -purge sampling.

Hydrochemical Findings

While the RPD for the aquifer parameters can indicate differences between pre- and post-purge water samples, the more precise indicator of the need to purge the well in order to obtain representative samples is the RPD of the chemical of concern.

As summarized in Table 3, there were wide variations between pre- and post-purge analytical results, with RPDs of greater than 100 percent between the two sample sets. In addition, there was no clear correlation between the sample sets (i.e., one set of results was not consistently greater or less than the other set). From a contaminant mass balance perspective, the majority of contaminant mass is in the gasoline range, and the greatest RPD for gasoline (representing the greatest difference in mass between the two data sets) is in MW-1, which showed higher concentrations for post-purge samples than for pre-purge samples.

This finding suggests that post-purge sampling is more appropriate for this site, given the higher concentrations in the post purge samples in critical wells.

Hydrogeologic and Well Construction Considerations

As discussed in Section 3, there was no significant drawdown (i.e., wells did not dewater) as a result of well purging. As summarized in Appendix B (historical groundwater elevations compared to well screen intervals), several wells have historically shown equilibrated groundwater levels above the top of the well screened interval. In addition, groundwater at the site appears to be confined. We understand that groundwater equilibrating above well screens and confining conditions do not satisfy the technical criteria to allow for no-purge sampling. Coupled with the hydrochemical findings, in our opinion, no-purge sampling is not appropriate for this site. Therefore, post-purge sampling should be implemented, as stated in the Proposed Actions section of this report.

QUALITY CONTROL SAMPLE ANALYTICAL RESULTS

Laboratory QC samples (e.g., method blanks, matrix spikes, surrogate spikes, etc.) were analyzed by the laboratory in accordance with requirements of each analytical method. All laboratory QC sample results and sample holding times were within the acceptance limits of the methods (Appendix D), with one exception. High surrogate recovery was observed for the MW-2 sample. This may be due to co-elution of the sample hydrocarbons with the surrogate. This does not appear to have any significant adverse impact on the reported sample concentrations.

The method reporting limit (MRL) for EDB and EDC using EPA Method 8260B was 5 µg/L, which exceeds the RWQCB ESL criteria of 0.05 µg/L and 0.5 µg/L, respectively. The analytical laboratory has indicated that the MRL for these analytes can be lowered to 0.5 µg/L by using EPA Method 504, which we recommend utilizing for future events (see Proposed Actions section).

5.0 SUMMARY, CONCLUSIONS, AND PROPOSED ACTIONS

SUMMARY AND CONCLUSIONS

- The site has undergone site investigations and remediation since 1991 (and by SES since August 2003) to address soil and groundwater contamination resulting from leaking underground fuel storage tanks (UFSTs) that were reportedly removed. Alameda County Health is the lead regulatory agency.
- A total of 21 groundwater monitoring/sampling events have been conducted in the eight site wells between August 1997 and December 2003 (the most recent event). Alameda County Health recently denied a request for case closure, and requested a technical workplan for additional site characterization (to include exploratory borehole drilling/sampling, a vicinity water well survey, and a preferential pathway survey). That workplan was submitted by SES in August 2003, and the Alameda County Health response has not yet been received.
- Site lithology is consistent across the site. Lower-permeability soils (clays, silts, and silty sand) occur between ground surface and depths of approximately 15 to 18 feet. The upper zone is underlain by a laterally-continuous sand/gravel zone, the top of which is encountered at approximately 15 to 18 feet deep.
- Shallow groundwater occurs at depths of approximately 15 to 18 feet deep, and appears to be slightly confined, equilibrating in wells between approximately 12 and 17 feet deep. The depth to the bottom of the upper water-bearing zone has not been determined. Site groundwater flow direction has ranged between northwest and west, with a relatively flat hydraulic gradient averaging approximately 0.005 ft/ft.
- Site groundwater contaminants include gasoline, diesel, BTEX, MTBE, and the lead scavenger EDB. Current-event groundwater concentrations for all these contaminants exceed RWQCB ESLs (screening-level criteria) except EDB, for which no ESL is published.
- The December 2003 event included conducting an evaluation of no-purge sampling versus post-purge sampling (by collecting a sample set before and after well purging). The findings indicate that post-purge sampling is the most technically appropriate sampling technique for this site.

- Site groundwater contaminants detected in excess of regulatory agency screening level criteria include gasoline, diesel, BTEX, MTBE, and the lead scavenger EDC. Maximum groundwater contamination is located in the northern corner of the site (near wells MW-1 and MW-5). The limits of groundwater contamination for all contaminants are relatively well defined to the west and to the south, and does not appear to extend offsite to the south, with a limited offsite component of MTBE to the west. The lateral extent of groundwater contamination to the north and to the east are undefined due to the absence of groundwater monitoring wells (or exploratory boreholes) in those directions. The proposed (in the SES technical workplan) additional site characterization will provide better definition of contaminant extent and magnitude.

PROPOSED ACTIONS

The property owner proposes to implement the following action to address regulatory concerns:

- Continue the program of quarterly groundwater sampling and reporting, with the objectives of obtaining site closure and continuing reimbursement requests under the State of California Petroleum UST Cleanup Fund.
- Revise the analytical methods of the groundwater monitoring program to include diesel (all wells except MW-4 and MW-7), and EDB/EDC (only in wells MW-1, MW-5, and MW-6).
- Revise the analytical method for EDB/EDC from EPA Method 8260B to EPA Method 504, to achieve lower method reporting limits.
- Revise the groundwater monitoring program from "no-purge" well sampling to "post-purge" well sampling. This revision will not be implemented until Alameda County Health provides written approval of the proposed action.
- Implement the activities proposed in the SES August 2003 workplan (and December 2003 workplan amendments), following Alameda County Health approval of that workplan. Report on those activities (including a comprehensive evaluation of contaminant distribution and hydrochemical trends) in the First Quarter 2004 report.
- Continue to upload Electronic Data Format (EDF) analytical results to the GeoTracker database.

6.0 REFERENCES AND BIBLIOGRAPHY

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7.0 LIMITATIONS

This report has been prepared for the exclusive use of the current property owners (Mr. and Mrs. Glen Poy-Wing, d.b.a. Oakland Auto Works) their representatives, and the regulators. 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 the review of previous investigators' findings at the site, as well as site activities conducted by SES since August 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 of the area. 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 investigation and remediation completed.

Virgil Chavez Land Surveying
312 Georgia Street, Suite 225
Vallejo, California 94590-5907
(707) 553-2476 • Fax (707) 553-8698

September 29. 2003
Project No.: 2324-00

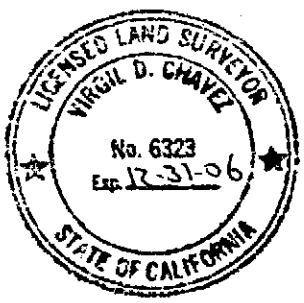
Bruce Rucker
Stellar Environmental Solutions
2198 Sixth Street
Berkeley, CA 94710

Subject: Monitoring Well Survey
Oakland Auto Works
240 W. MacArthur Boulevard
Oakland, CA

Dear Bruce:

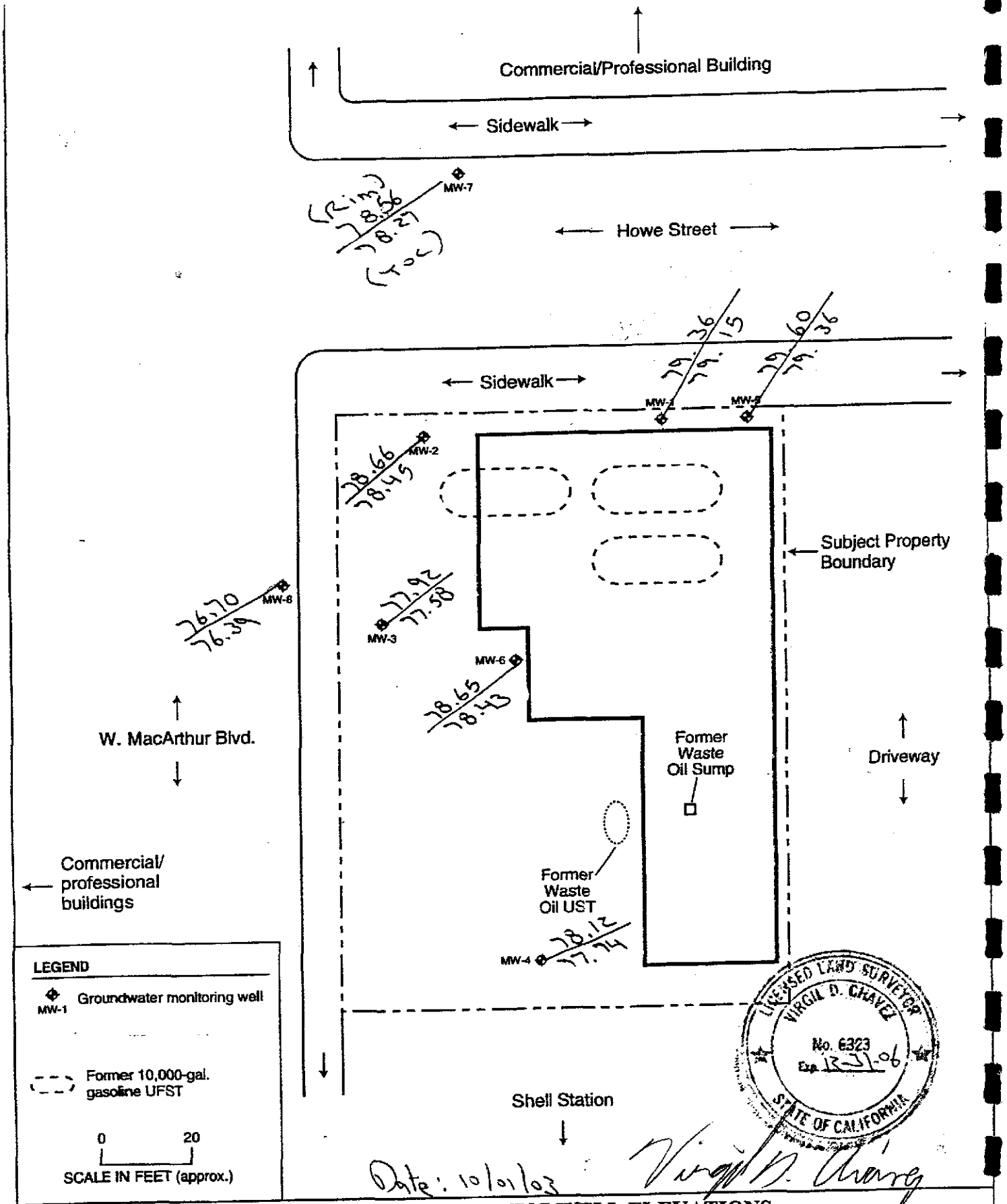
This is to confirm that we have proceeded at your request to survey the ground water monitoring wells located at the above referenced location. The survey was completed on September 26, 2003. The benchmark for this survey was a cut square in northeast corner of Piedmont Avenue and MacArthur Boulevard. The latitude, longitude and coordinates are for top of casings and are based on the California State Coordinate System, Zone III (NAD83). Benchmark Elevation = 75.96 feet (NGVD 29).

Latitude	Longitude	Northing	Easting	Elev.	Desc.
				79.36	RIM MW-1
37.8239755	-122.2570335	2127253.85	6054210.98	79.15	TOC MW-1
				78.66	RIM MW-2
37.8238903	-122.2571158	2127223.27	6054186.64	78.45	TOC MW-2
				77.92	RIM MW-3
37.8238057	-122.2570809	2127192.27	6054196.11	77.58	TOC MW-3
				78.12	RIM MW-4
37.8237323	-122.2567770	2127163.93	6054283.38	77.74	TOC MW-4
				79.60	RIM MW-5
37.8240217	-122.2569706	2127270.31	6054229.46	79.36	TOC MW-5
				78.65	RIM MW-6
37.8238251	-122.2569539	2127198.66	6054232.94	78.43	TOC MW-6
				78.56	RIM MW-7
37.8240665	-122.2572306	2127288.03	6054154.68	78.27	TOC MW-7
				76.70	RIM MW-8
37.8237765	-122.2571464	2127182.00	6054177.01	76.39	TOC MW-8



Sincerely,

Virgil D. Chavez, PLS 6323



GROUNDWATER MONITORING WELL ELEVATIONS

240 W. MacArthur Blvd. Oakland, CA	By: MJC	AUGUST 2003	★ Stellar Environmental Solutions, Inc. Geoscience & Engineering Consulting

2003-43.02

Historical Water Level and Hydraulic Gradient Data
240 W. MacArthur Boulevard, Oakland, Alameda, California

Well I.D.	Sampling Event No.	Date Measured	Water Level Depth (a)	Water Level Elevation (b)
MW-1	1	Aug-97	16.83	62.32
	2	Dec-97	NA	NA
	3	Mar-98	13.58	65.57
	4	Jul-98	15.55	63.60
	5	Oct-98	15.70	63.45
	6	Jan-99	15.21	63.94
	7	Jun-00	15.41	63.74
	8	Dec-00	NA	NA
	9	Feb-01	NA	NA
	10	May-01	15.57	63.58
	11	Jul-01	16.42	62.73
	12	Oct-01	16.82	62.33
	13	Dec-01	15.08	64.07
	14	Mar-02	14.53	64.62
	15	May-02	NA	NA
	16	Jul-02	16.39	62.76
	17	Oct-02	17.03	62.12
	18	Jan-03	14.91	64.24
	19	Mar-03	15.26	63.89
	20	Aug-03	16.24	62.91
	21	Dec-03	16.90	62.25
MW-2	1	Aug-97	16.32	62.13
	2	Dec-97	NA	NA
	3	Mar-98	13.05	64.95
	4	Jul-98	14.95	63.50
	5	Oct-98	15.09	63.36
	6	Jan-99	14.61	63.84
	7	Jun-00	14.80	63.65
	8	Dec-00	NA	NA
	9	Feb-01	NA	NA
	10	May-01	14.98	63.47
	11	Jul-01	15.86	62.59
	12	Oct-01	16.69	61.76
	13	Dec-01	13.49	64.96
	14	Mar-02	13.07	65.38
	15	May-02	NA	NA
	16	Jul-02	15.86	62.59
	17	Oct-02	16.54	61.91
	18	Jan-03	14.37	64.08
	19	Mar-03	14.74	63.71
	20	Aug-03	15.75	62.70
	21	Dec-03	16.11	62.34

MW-3	1	Aug-97	15.36	62.22
	2	Dec-97	NA	NA
	3	Mar-98	12.18	65.40
	4	Jul-98	14.08	63.50
	5	Oct-98	14.24	63.34
	6	Jan-99	13.74	63.84
	7	Jun-00	13.94	63.64
	8	Dec-00	NA	NA
	9	Feb-01	NA	NA
	10	May-01	14.08	63.50
	11	Jul-01	14.99	62.59
	12	Oct-01	16.26	61.32
	13	Dec-01	13.62	63.96
	14	Mar-02	13.19	64.39
	15	May-02	NA	NA
	16	Jul-02	14.97	62.61
	17	Oct. 2002	15.44	62.14
	18	Jan-03	13.49	64.09
	19	Mar-03	13.83	63.75
	20	Aug-03	14.90	62.68
	21	Dec-03	15.10	62.48
MW-4	1	Aug-97	NA	NA
	2	Dec-97	NA	NA
	3	Mar-98	11.87	65.87
	4	Jul-98	13.90	63.84
	5	Oct-98	14.10	63.64
	6	Jan-99	13.56	64.18
	7	Jun-00	13.75	63.99
	8	Dec-00	NA	NA
	9	Feb-01	NA	NA
	10	May-01	13.65	64.09
	11	Jul-01	14.87	62.87
	12	Oct-01	15.78	61.96
	13	Dec-01	13.54	64.20
	14	Mar-02	13.02	64.72
	15	May-02	NA	NA
	16	Jul-02	14.81	62.93
	17	Oct-02	15.56	62.18
	18	Jan-03	13.39	64.35
	19	Mar-03	13.75	63.99
	20	Aug-03	14.75	62.99
	21	Dec-03	15.11	62.63

MW-5	9	Feb-01	NA	NA
	10	May-01	15.65	63.71
	11	Jul-01	16.50	62.86
	12	Oct-01	17.46	61.90
	13	Dec-01	15.28	64.08
	14	Mar-02	14.62	64.74
	15	May-02	NA	NA
	16	Jul-02	16.46	62.90
	17	Oct-02	17.18	62.18
	18	Jan-03	14.99	64.37
	19	Mar-03	15.33	64.03
	20	Aug-03	16.34	63.02
	21	Dec-03	16.90	62.46
MW-6	9	Feb-01	NA	NA
	10	May-01	15.54	62.89
	11	Jul-01	15.56	62.87
	12	Oct-01	16.41	62.02
	13	Dec-01	14.37	64.06
	14	Mar-02	13.75	64.68
	15	May-02	NA	NA
	16	Jul-02	15.55	62.88
	17	Oct-02	16.24	62.19
	18	Jan-03	14.17	64.26
	19	Mar-03	14.52	63.91
	20	Aug-03	15.50	62.93
	21	Dec-03	16.19	62.24
MW-7	9	Feb-01	NA	NA
	10	May-01	15.04	62.23
	11	Jul-01	15.69	62.58
	12	Oct-01	16.59	61.68
	13	Dec-01	14.30	63.97
	14	Mar-02	13.87	64.40
	15	May-02	NA	NA
	16	Jul-02	15.72	62.55
	17	Oct-02	16.36	61.91
	18	Jan-03	14.22	64.05
	19	Mar-03	14.57	63.70
	20	Aug-03	15.61	62.66
	21	Dec-03	16.04	62.23
MW-8	9	Feb-01	NA	NA
	10	May-01	12.75	63.64
	11	Jul-01	13.84	62.55
	12	Oct-01	14.65	61.74
	13	Dec-01	12.39	64.00
	14	Mar-02	11.89	64.50
	15	May-02	NA	NA
	16	Jul-02	13.96	62.43
	17	Oct-02	14.48	61.91
	18	Jan-03	12.49	63.90
	19	Mar-03	12.85	63.54
	20	Aug-03	13.75	62.65
	21	Dec-03	14.50	61.89

Sampling Event No.	Date Measured	Groundwater Flow Direction	Groundwater Hydraulic Gradient (feet/foot)
1	Aug-97	NW	0.0048
2	Dec-97	NW	0.0051
3	Mar-98	NW	0.0063
4	Jul-98	N46W	0.0053
5	Oct-98	N46W	0.0053
6	Jan-99	N73W	0.0043
7	Jun-00	N78W	0.0050
8	Dec-00	NA	NA
9	Feb-01	N50W	0.0028
10	May-01	NA	NA
11	Jul-01	N85W	NA
12	Oct-01	N71W	NA
13	Dec-01	N71W	0.0027
14	Mar-02	N50W	0.0021
15	May-02	NA	NA
16	Jul-02	N80W	0.0075
17	Oct-02	N45W	0.0030
18	Jan-03	N70W	0.0033
19	Mar-03	N80W	0.0063
20	Aug-03	S80W	0.0050
21	Dec-03	W	0.0055

Notes:

(a) Feet below well top of casing.

(b) Relative to mean sea level.

NA = Data Not Available

Data prior to August 2003 are likely not valid as well elevations were not surveyed.

GROUNDWATER WELL SAMPLING DOCUMENTATION FORM

Project Address: 240 W. Macarthur Blvd. Oakland, California

Sampler Name: Aaron Costa

Sampling Firm: Blaine Tech Services, Inc. - San Jose, CA

Sampling Date: 12/3/03

Well Name: MW-1

Well Diameter (inches): 2-inch

Measured Well Depth (feet from top of casing): 24.45

Initial Water Level (feet from top of casing): 16.90

Height of Water Column in feet (well depth - water level): 7.55

Gallons per casing volume (ht of water column * 0.16) 1.5

Well Purging Method: ~~Middleburg Pump~~ Bailer

Well Purging Data

	Gallons Purged (running total)	Pumping Rate (gpm)	Water Level (ft)	Temp (°F)	pH	Electrical Conductivity (µS)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
Pre-Purge	0		16.90	61.7	6.8	925	280	1.1
Purge Vol. #1	1.5	.5	16.99	62.8	6.7	931	266	
Purge Vol. #2	3	.5	17.57	62.9	6.7	924	231	
Purge Vol. #3	4.5	.5	18.01	62.9	6.7	924	259	1.2

Did well Dewater? NO

Sampling Method: Disposable bailer ~~Dedicated Bailer~~ Disposable Bailer

Pre-Purge Sampling Time: 1130 Post-Purge Sampling Time: 1145

Sampling Containers Filled:

(for each of pre- and post-purge sample sets)

Three 40 ml VOA vials (with HCL preservative)

One 1-liter amber glass (no preservative)

GROUNDWATER WELL SAMPLING DOCUMENTATION FORM

Project Address: 240 W. Macarthur Blvd. Oakland, California

Sampler Name: Aaron Costa

Sampling Firm: Blaine Tech Services, Inc. - San Jose, CA

Sampling Date: 12/3/03

Well Name: MW-2

Well Diameter (inches): 2-inch

Measured Well Depth (feet from top of casing): 24.33

Initial Water Level (feet from top of casing): 16.11

Height of Water Column in feet (well depth - water level): 8.22

Gallons per casing volume (ht of water column * 0.16) 1.5

Well Purging Method: ~~Middleburg Pump~~ Bailer

Well Purging Data

	Gallons Purged (running total)	Pumping Rate (gpm)	Water Level (ft)	Temp (°F)	pH	Electrical Conductivity (µS)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
Pre-Purge	0		16.11	62.9	6.6	740	168	1.2
Purge Vol. #1	1.5	.5	16.31	63.1	6.6	752	199	
Purge Vol. #2	3	.5	16.34	63.5	6.6	755	301	
Purge Vol. #3	4.5	.5	16.51	63.8	6.6	767	319	1.1

Did well Dewater? NO

Sampling Method: Disposable bailer ~~Dedicated Bailer~~ Disposable Bailer

Pre-Purge Sampling Time: 1000 Post-Purge Sampling Time: 1020

Sampling Containers Filled:

(for each of pre- and post-purge sample sets)

Three 40 ml VOA vials (with HCL preservative)

One 1-liter amber glass (no preservative)

GROUNDWATER WELL SAMPLING DOCUMENTATION FORM

Project Address: 240 W. Macarthur Blvd. Oakland, California

Sampler Name: Aaron Costa

Sampling Firm: Blaine Tech Services, Inc. - San Jose, CA

Sampling Date: 12/3/03

Well Name: MW-3

Well Diameter (inches): 2-inch

Measured Well Depth (feet from top of casing): 24.36

Initial Water Level (feet from top of casing): 15.10

Height of Water Column in feet (well depth - water level): 9.26

Gallons per casing volume (ht of water column * 0.16) 1.5

Well Purging Method: ~~Middleburg Pump~~ Bailer

Well Purging Data

	Gallons Purged (running total)	Pumping Rate (gpm)	Water Level (ft)	Temp (°F)	pH	Electrical Conductivity (µS)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
Pre-Purge	0		15.10	64.5	6.8	954	402	0.9
Purge Vol. #1	1.5	.5	15.60	64.7	6.8	951	561	
Purge Vol. #2	3	.5	15.92	64.9	6.8	929	590	
Purge Vol. #3	4.5	.5	16.25	64.5	6.8	926	771	1.0

Did well Dewater? NO

Sampling Method: Disposable bailer ~~Dedicated Bailer~~ Disposable Bailer

Pre-Purge Sampling Time: 1100 Post-Purge Sampling Time: 1115

Sampling Containers Filled:

(for each of pre- and post-purge sample sets)

Three 40 ml VOA vials (with HCL preservative)

One 1-liter amber glass (no preservative)

GROUNDWATER WELL SAMPLING DOCUMENTATION FORM

Project Address: 240 W. Macarthur Blvd. Oakland, California

Sampler Name: Aaron Costa

Sampling Firm: Blaine Tech Services, Inc. - San Jose, CA

Sampling Date: 12/3/03

Well Name: MW-4

Well Diameter (inches): 2-inch

Measured Well Depth (feet from top of casing): 24.40

Initial Water Level (feet from top of casing): 15.11

Height of Water Column in feet (well depth - water level): 9.29

Gallons per casing volume (ht of water column * 0.16) 1.5

Well Purging Method: ~~Middleburg Pump~~ Bailer

Well Purging Data

	Gallons Purged (running total)	Pumping Rate (gpm)	Water Level (ft)	Temp (°F)	pH	Electrical Conductivity (µS)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
Pre-Purge	0		15.11	64.2	6.4	519	79	1.4
Purge Vol. #1	1.5	.5	16.39	65.1	6.4	527	287	
Purge Vol. #2	3	.5	16.61	65.1	6.5	542	692	
Purge Vol. #3	4.5	.5	16.69	65.3	6.3	552	>1000	1.5

Did well Dewater? NO

Sampling Method: Disposable bailer ~~Dedicated Bailer~~ Disposable Bailer

Pre-Purge Sampling Time: 0845 Post-Purge Sampling Time: 0905

Sampling Containers Filled:

(for each of pre- and post-purge sample sets)

Three 40 ml VOA vials (with HCL preservative)

One 1-liter amber glass (no preservative)

GROUNDWATER WELL SAMPLING DOCUMENTATION FORM

Project Address: 240 W. Macarthur Blvd. Oakland, California

Sampler Name: Aaron Costa

Sampling Firm: Blaine Tech Services, Inc. - San Jose, CA

Sampling Date: 12/3/03

Well Name: MW-5

Well Diameter (inches): 2-inch

Measured Well Depth (feet from top of casing): 20.13

Initial Water Level (feet from top of casing): 16.90

Height of Water Column in feet (well depth - water level): 3.23

Gallons per casing volume (ht of water column * 0.16) .50

Well Purging Method: ~~Middleburg Pump~~ Bailer

Well Purging Data

	Gallons Purged (running total)	Pumping Rate (gpm)	Water Level (ft)	Temp (°F)	pH	Electrical Conductivity (µS)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
Pre-Purge	0		16.90	62.6	6.8	722	71000	0.8
Purge Vol. #1	.50	.5	17.13	63.1	6.8	609	71000	
Purge Vol. #2	1.0	.5	17.39	63.5	6.8	613	71000	
Purge Vol. #3	1.50	.5	17.82	63.9	6.8	611	71000	1.2

Did well Dewater? NO

Sampling Method: Disposable bailer Dedicated Bailer ~~Disposable Bailer~~

Pre-Purge Sampling Time: 1210 Post-Purge Sampling Time: 1230

Sampling Containers Filled:

(for each of pre- and post-purge sample sets)

Three 40 ml VOA vials (with HCL preservative)

One 1-liter amber glass (no preservative)

GROUNDWATER WELL SAMPLING DOCUMENTATION FORM

Project Address: 240 W. Macarthur Blvd. Oakland, California

Sampler Name: Aaron Costa

Sampling Firm: Blaine Tech Services, Inc. - San Jose, CA

Sampling Date: 12/3/03

Well Name: MW-6

Well Diameter (inches): 2-inch

Measured Well Depth (feet from top of casing): 20.16

Initial Water Level (feet from top of casing): 16.19

Height of Water Column in feet (well depth - water level): 3.97

Gallons per casing volume (ht of water column * 0.16) .75

Well Purging Method: ~~Middleburg Pump~~ Bailer

Well Purging Data

	Gallons Purged (running total)	Pumping Rate (gpm)	Water Level (ft)	Temp (°F)	pH	Electrical Conductivity (µS)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
Pre-Purge	0		16.19	63.3	6.7	1104	666	1.4
Purge Vol. #1	.75	.5	16.38	62.9	6.7	1112	71000	
Purge Vol. #2	1.50	.5	16.95	62.6	6.7	1119	71000	
Purge Vol. #3	2.25	.5	17.13	62.8	6.8	1122	71000	1.2

Did well Dewater? NO

Sampling Method: Disposable bailer ~~Dedicated Bailer~~ Disposable Bailer

Pre-Purge Sampling Time: 1030 Post-Purge Sampling Time: 1045

Sampling Containers Filled:

(for each of pre- and post-purge sample sets)

Three 40 ml VOA vials (with HCL preservative)

One 1-liter amber glass (no preservative)

GROUNDWATER WELL SAMPLING DOCUMENTATION FORM

Project Address: 240 W. Macarthur Blvd. Oakland, California

Sampler Name: Aaron Costa

Sampling Firm: Blaine Tech Services, Inc. - San Jose, CA

Sampling Date: 12/3/03

Well Name: MW-7

Well Diameter (inches): 2-inch

Measured Well Depth (feet from top of casing): 20.07

Initial Water Level (feet from top of casing): 16.04

Height of Water Column in feet (well depth - water level): 4.03

Gallons per casing volume (ht of water column * 0.16) .75 gal

Well Purging Method: ~~Middleburg Pump~~ Bailer

Well Purging Data

	Gallons Purged (running total)	Pumping Rate (gpm)	Water Level (ft)	Temp (°F)	pH	Electrical Conductivity (µS)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
Pre-Purge	0		16.04	65.7	6.4	760	305	3.4
Purge Vol. #1	.75	.5	16.70	58.9	6.5	673	>1000	
Purge Vol. #2	1.5	.5	17.05	63.9	6.4	853	>1000	
Purge Vol. #3	2.25	.5	16.90	64.8	6.5	864	>1000	2.9

Did well Dewater? No

Sampling Method: Disposable bailer ~~Dedicated Bailer~~ Disposable Bailer

Pre-Purge Sampling Time: 0725 Post-Purge Sampling Time: 0800

Sampling Containers Filled:

(for each of pre- and post-purge sample sets)

Three 40 ml VOA vials (with HCL preservative)

One 1-liter amber glass (no preservative)

GROUNDWATER WELL SAMPLING DOCUMENTATION FORM

Project Address: 240 W. Macarthur Blvd. Oakland, California

Sampler Name: Aaron Costa

Sampling Firm: Blaine Tech Services, Inc. - San Jose, CA

Sampling Date: 12/3/03

Well Name: MW-8

Well Diameter (inches): 2-inch

Measured Well Depth (feet from top of casing): 20.05

Initial Water Level (feet from top of casing): 14.50

Height of Water Column in feet (well depth - water level): 5.55

Gallons per casing volume (ht of water column * 0.16) 1.0

Well Purging Method: ~~Middleburg Pump~~ Bailer

Well Purging Data

	Gallons Purged (running total)	Pumping Rate (gpm)	Water Level (ft)	Temp (°F)	pH	Electrical Conductivity (µS)	Turbidity (NTU)	Dissolved Oxygen (mg/L)
Pre-Purge	0		14.50	63.4	6.9	437	>1000	2.8
Purge Vol. #1	1	.5	14.79	63.5	6.8	467	>1000	
Purge Vol. #2	2	.5	15.01	63.6	6.8	471	921	
Purge Vol. #3	3	.5	15.22	63.5	6.8	474	835	2.0

Did well Dewater? NO

Sampling Method: Disposable bailer ~~Dedicated Bailer~~ Disposable Bailer

Pre-Purge Sampling Time: 0930 Post-Purge Sampling Time: 0945

Sampling Containers Filled:

(for each of pre- and post-purge sample sets)

Three 40 ml VOA vials (with HCL preservative)

One 1-liter amber glass (no preservative)

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 120950
REPORTED 12/15/2003
RECEIVED 12/05/2003

PROJECT Oakland Auto Works - Pre Purge

SUBMITTER Client

COMMENTS Global ID - T0600102243

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
482128	MW-7
482129	MW-4
482130	MW-8
482131	MW-2
482132	MW-6
482133	MW-3
482134	MW-1
482135	MW-5
482136	Laboratory Method Blank

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 #: 482128
Matrix: WATER
Date Sampled: 12/03/2003
Time Sampled: 07:25
Sampled By:

Client: Stellar Environmental Solutions
Client Sample ID: MW-7

Analyte	Result	DF	DLR	Units	Date/Analyst
8021B BTEX + MTBE					
Benzene	ND	1	0.3	ug/L	12/08/03 LZ
Ethyl benzene	ND	1	0.3	ug/L	12/08/03 LZ
Methyl t - butyl ether	ND	1	5	ug/L	12/08/03 LZ
Toluene	ND	1	0.3	ug/L	12/08/03 LZ
Xylene (total)	ND	1	0.6	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	88			%	70 - 130
8015M - Gasoline					
Gasoline	ND	1	50	ug/L	12/08/03 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 #: 482129
Matrix: WATER
Date Sampled: 12/03/2003
Time Sampled: 08:45
Sampled By:

Client: Stellar Environmental Solutions
Client Sample ID: MW-4

Analyte	Result	DF	DLR	Units	Date/Analyst
8021B BTEX + MTBE					
Benzene	ND	1	0.3	ug/L	12/08/03 LZ
Ethyl benzene	ND	1	0.3	ug/L	12/08/03 LZ
Methyl t - butyl ether	ND	1	5	ug/L	12/08/03 LZ
Toluene	ND	1	0.3	ug/L	12/08/03 LZ
Xylene (total)	ND	1	0.6	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	111			%	70 - 130
8015M - Gasoline					
Gasoline	71	1	50	ug/L	12/08/03 LZ
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 #: 482130
Matrix: WATER
Date Sampled: 12/03/2003
Time Sampled: 09:30
Sampled By:

Client: Stellar Environmental Solutions
Client Sample ID: MW-8

Analyte	Result	DF	DLR	Units	Date/Analyst
8015 TEPH Diesel					
TEPH Diesel	ND	1	0.1	mg/L	12/11/03 AF
Surrogates				**Units**	**Control Limits**
o-Terphenyl (sur)	83			%	55 - 200
8021B BTEX + MTBE					
Benzene	ND	1	0.3	ug/L	12/08/03 LZ
Ethyl benzene	ND	1	0.3	ug/L	12/08/03 LZ
Methyl t - butyl ether	7.6	1	5	ug/L	12/08/03 LZ
Toluene	ND	1	0.3	ug/L	12/08/03 LZ
Xylene (total)	ND	1	0.6	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	106			%	70 - 130
8015M - Gasoline					
Gasoline	144	1	50	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	106			%	55 - 200

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

Order #: 482131
Matrix: WATER
Date Sampled: 12/03/2003
Time Sampled: 10:00
Sampled By:

Client: Stellar Environmental Solutions
Client Sample ID: MW-2

Analyte	Result	DF	DLR	Units	Date/Analyst
8015 TEPH Diesel					
TEPH Diesel	0.1	1	0.1	mg/L	12/11/03 AF
Surrogates				**Units**	**Control Limits**
o-Terphenyl (sur)	84			%	55 - 200
8021B BTEX + MTBE					
Benzene	45	1	0.3	ug/L	12/08/03 LZ
Ethyl benzene	9.5	1	0.3	ug/L	12/08/03 LZ
Methyl t - butyl ether	289	10	50.0	ug/L	12/08/03 LZ
Toluene	9.4	1	0.3	ug/L	12/08/03 LZ
Xylene (total)	20	1	0.6	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	388*			%	70 - 130
8015M - Gasoline					
Gasoline	2120	1	50	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	388*			%	55 - 200

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

Order #: 482132
Matrix: WATER
Date Sampled: 12/03/2003
Time Sampled: 10:30
Sampled By:

Client: Stellar Environmental Solutions
Client Sample ID: MW-6

Analyte	Result	DF	DLR	Units	Date/Analyst
8015 TEPH Diesel					
TEPH Diesel	0.1	1	0.1	mg/L	12/11/03 AF
Surrogates				**Units**	**Control Limits**
o-Terphenyl (sur)	126			%	55 - 200
8021B BTEX + MTBE					
Benzene	4.7	1	0.3	ug/L	12/08/03 LZ
Ethyl benzene	1.8	1	0.3	ug/L	12/08/03 LZ
Methyl t - butyl ether	4.4	1	5	ug/L	12/08/03 LZ
Toluene	4.9	1	0.3	ug/L	12/08/03 LZ
Xylene (total)	5.9	1	0.6	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	166			%	70 - 130
8260B Volatile Organic Compounds					
1,2-Dibromoethane	ND	1	5	ug/L	12/10/03 AM
1,2-Dichloroethane	11	1	5	ug/L	12/10/03 AM
8015M - Gasoline					
Gasoline	444	1	50	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	166			%	55 - 200

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

Order #: 482133
Matrix: WATER
Date Sampled: 12/03/2003
Time Sampled: 11:00
Sampled By:

Client: Stellar Environmental Solutions
Client Sample ID: MW-3

Analyte	Result	DF	DLR	Units	Date/Analyst
8015 TEPH Diesel					
TEPH Diesel	0.4	1	0.1	mg/L	12/11/03 AF
Surrogates				**Units**	**Control Limits**
o-Terphenyl (sur)	92			%	55 - 200
8021B BTEX + MTBE					
Benzene	311	5	1.5	ug/L	12/08/03 LZ
Ethyl benzene	41	5	1.5	ug/L	12/08/03 LZ
Methyl t - butyl ether	357	10	50.0	ug/L	12/08/03 LZ
Toluene	20	5	1.5	ug/L	12/08/03 LZ
Xylene (total)	48	5	3.0	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	108			%	70 - 130
8015M - Gasoline					
Gasoline	5550	5	250.0	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	108			%	55 - 200

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

Order #: 482134 **Client:** Stellar Environmental Solutions

Matrix: WATER **Client Sample ID:** MW-1

Date Sampled: 12/03/2003

Time Sampled: 11:30

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8015 TEPH Diesel						
TEPH Diesel	0.4	1	0.1	mg/L	12/11/03	AF
Surrogates				**Units**	**Control Limits**	
o-Terphenyl (sur)	111			%	55 - 200	
8021B BTEX + MTBE						
Benzene	654	20	6.0	ug/L	12/08/03	LZ
Ethyl benzene	79	5	1.5	ug/L	12/08/03	LZ
Methyl t - butyl ether	129	5	25.0	ug/L	12/08/03	LZ
Toluene	11	5	1.5	ug/L	12/08/03	LZ
Xylene (total)	92	5	3.0	ug/L	12/08/03	LZ
Surrogates				**Units**	**Control Limits**	
a,a,a-Trifluorotoluene	91			%	70 - 130	
8260B Volatile Organic Compounds						
1,2-Dibromoethane	ND	1	5.0	ug/L	12/08/03	AM
1,2-Dichloroethane	ND	1	5.0	ug/L	12/08/03	AM
8015M - Gasoline						
Gasoline	5060	5	250.0	ug/L	12/08/03	LZ
Surrogates				**Units**	**Control Limits**	
a,a,a-Trifluorotoluene	91			%	55 - 200	

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

Order #: 482135 **Client:** Stellar Environmental Solutions

Matrix: WATER **Client Sample ID:** MW-5

Date Sampled: 12/03/2003

Time Sampled: 12:10

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
8015 TEPH Diesel					
TEPH Diesel	0.6	1	0.1	mg/L	12/11/03 AF
Surrogates				**Units**	**Control Limits**
o-Terphenyl (sur)	89			%	55 - 200
8021B BTEX + MTBE					
Benzene	1140	50	15.0	ug/L	12/08/03 LZ
Ethyl benzene	354	10	3.0	ug/L	12/08/03 LZ
Methyl t - butyl ether	682	10	50.0	ug/L	12/08/03 LZ
Toluene	327	10	3.0	ug/L	12/08/03 LZ
Xylene (total)	1530	50	30.0	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	179			%	70 - 130
8260B Volatile Organic Compounds					
1,2-Dibromoethane	ND	1	5.0	ug/L	12/09/03 AM
1,2-Dichloroethane	ND	1	5.0	ug/L	12/09/03 AM
8015M - Gasoline					
Gasoline	12800	10	500.0	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	179			%	55 - 200

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

Order #: 482136
Matrix: WATER
Date Sampled:
Time Sampled:
Sampled By:

Client: Stellar Environmental Solutions
Client Sample ID: Laboratory Method Blank

Analyte	Result	DF	DLR	Units	Date/Analyst
8015 TEPH Diesel					
TEPH Diesel	ND	1	0.1	mg/L	12/11/03 AF
Surrogates				**Units**	**Control Limits**
o-Terphenyl (sur)	125			%	55 - 200
8021B BTEX + MTBE					
Benzene	ND	1	0.3	ug/L	12/08/03 LZ
Ethyl benzene	ND	1	0.3	ug/L	12/08/03 LZ
Methyl t - butyl ether	ND	1	5	ug/L	12/08/03 LZ
Toluene	ND	1	0.3	ug/L	12/08/03 LZ
Xylene (total)	ND	1	0.6	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	89			%	70 - 130
8260B Volatile Organic Compounds					
1,2-Dibromoethane	ND	1	5	ug/L	12/08/03 AM
1,2-Dichloroethane	ND	1	5	ug/L	12/08/03 AM
8015M - Gasoline					
Gasoline	ND	1	50	ug/L	12/08/03 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

ASSOCIATED LABORATORIES

LCS REPORT FORM - METHOD 8260 / 624 / 524.2

C Sample: LCS/LCSD - Water Samples

Analysis Date: 12/09/03 4:08 PM

pplies to: LR 120736, 120860, 120942, 120896, 120951, 120950

eporting 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-Dichloroethene	ND	50	55.48	51.59	111	103	7	22	59-172
MTBE	ND	50	37.32	39.24	75	78	5	24	62-137
enzene	ND	50	41.23	44.04	82	88	7	24	62-137
Trichloroethene	ND	50	42.24	45.09	84	90	7	21	66-142
oluene	ND	50	41.13	44.75	82	90	8	21	59-139
Chlorobenzene	ND	50	36.17	42.70	72	85	17	21	60-133

Method Blank = All ND

SURROGATE (QC Limits : 70-135)

Compound	MB 1	MB 2	LCS	LCSD
DBFM	84	82	88	89
1,2-DCA	96	95	84	87
Tol-d8	103	106	104	102
p-BFB	102	104	102	99

ASSOCIATED LABORATORIES

LCS REPORT FORM - METHOD 8260 / 624 / 524.2

QC Sample: LCS/LCSD - Water Samples

Analysis Date: 12/08/03 2:53 PM

Applies to: LR 120932, 120964, 120953, 120987, 120922, 120950, 120951, 120954

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	61.89	59.59	124	119	4	22	59-172
MTBE	ND	50	37.18	37.26	74	75	0	24	62-137
Benzene	ND	50	44.70	44.89	89	90	0	24	62-137
Trichloroethene	ND	50	46.53	45.72	93	91	2	21	66-142
Toluene	ND	50	46.01	44.94	92	90	2	21	59-139
Chlorobenzene	ND	50	44.30	42.96	89	86	3	21	60-133

Method Blank = All ND

SURROGATE (QC Limits : 70-135)

Compound	MB 1	MB 2	LCS	LCSD
DBFM	82	81	88	90
1,2-DCA	82	95	84	85
Tol-d8	108	107	102	100
p-BFB	103	102	99	100

ASSOCIATED LABORATORIES

LCS REPORT FORM

QC Sample: LCS / LCSD

Matrix: WATER

Prep. Date: 12/08/03

Analysis Date: 12/08/03-12/09/03

LAB ID#'s in Batch: LR 120950, 120951

REPORTING UNITS = mg/L

PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS

Test	Method	PREP. BLK	LCS			LCSD	
		Value	Result	TRUE	%Rec	Result	%Rec
Benzene	8021	ND	21.8	20	109	22.5	113
Toluene	8021	ND	21.0	20	105	21.3	107
Ethylbenzene	8021	ND	21.6	20	108	22.1	111
Xylenes	8021	ND	65.3	60	109	67.5	113

L.Limit	H.Limit
80%	120%

LCS = 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	89
LCS	102
LCSD	100

AAA-TFT = a,a,a-Trifluorotoluene

ASSOCIATED LABORATORIES
QA REPORT FORM

QC Sample: LCS / LCSD

Matrix: WATER

Prep. Date: 12/08/03

Analysis Date: 12/08/03-12/09/03

ID#'s in Batch: LR 120950, 120951, 120984

Reporting Units = mg/L

PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS

			PREP BLK					
			Value	Result	True	%Rec	L.Limit	H.Limit
Test	**Method**	LCS	ND	461	500	92	80%	120%
TPH	8015M-G	LCSD	ND	461	500	92	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	89
LCS	148
LCSD	150

AAA-TFT = a,a,a-Trifluorotoluene

ASSOCIATED LABORATORIES
QA REPORT FORM

QC Sample: LCS/LCSD

Matrix: WATER

Extraction Method : 3510 B

Prep. Date: 12/10/03

Analysis Date: 12/11/03

ID#'s in Batch: LR 121025, 120950, 120951

Reporting Units = mg/L

PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS

			PREP BLK					
			Value	Result	True	%Rec	L.Limit	H.Limit
Test	Method	LCS	ND	0.94	1	94	70%	130%
DIESEL	8015D	LCSD	ND	0.99	1	99	70%	130%

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

SURROGATE RECOVERY

Sample No.	O-Terphenyl
QC Limit	55-200
Method Blank	125
LCS	122
LCSD	121

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

Cooler Receipt Form

Client: Stellar Environmental Project: Oakland Auto Work Pre Purge

Date Cooler Received: 12-5-03 Date Cooler Opened: 12-5-03

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 ✓ Ice Packs _____ Bubble wrap _____
Styrofoam _____ Paper _____ None _____ Other _____

Cooler Temperature: 5.0° *
*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: Alberto Vargas Date: 12-5-03

Chain of Custody Record

120950

Lab job no. _____
Date 12/3/03
Page 1 of 2

Laboratory Associated Laboratories, Inc.
Address 806 N. Batavia
Orange, CA 92863
Tel: 1-714-771-6900

Project Owner Mr. Glen Foy-Wing
Site Address 240 W. MacArthur Blvd.
Oakland, CA
Project Name Oakland Auto Works-Pre Purge
Project Number 2003-43

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

Field Sample Number	Location/ Depth	Date	Time	Sample Type	Type/Size of Container	Preservation: Cooler	Preservation: Chemical	Filtered	No. of Containers	TVH-gas (EPA 8015)	TEH-Diesel (EPA 8015)	BTEX + MTBE (EPA 8021)	EDB + EDC (EPA 8260)	Remarks
MW-7		12/3	0725	H_2O	(9)	Yes	(9)	No	4	X		X		
MW-4			0845						4	X		X		
MW-8			0930						5	X	X	X		
MW-2			1000						5	X	X	X		
MW-6			1030						5	X	X	X	X	
MW-3			1100						5	X	X	X		
MW-1			1130						5	X	X	X	X	
MW-5		↓	1210	↓	↓	↓	↓	↓	5	X	X	X	X	

Relinquished by:	Date	Received by:	Date	Relinquished by:	Date	Received by:	Date
Signature Aaron Costa	12/3/03	Signature B. M. Rucker	12/3/03	Signature B. M. Rucker	12/4/03	Signature Albert Vargas	12-5
Printed Aaron Costa	Time 1245	Printed Bruce M. Rucker	Time 1345	Printed Bruce M. Rucker	Time 930	Printed Albert Vargas	Time 10:10
Company Blaine Tech Services		Company Stellar Env Solutions		Company Stellar Env. Solutions		Company Associated Lab.	
				Relinquished by:	Date	Received by:	Date
				Signature	Time	Signature	Time
				Printed		Printed	
				Company		Company	

Turnaround Time: _____

Comments:
(9) 40 ml VOA vials with HCl preservative + 1-L amber glass, unpreserved
All Samples collected BEFORE well purging

2000-00-01

★ Stellar Environmental Solutions

Samples shipped Golden State Overnight (same day delivery)

2198 Sixth Street #201, Berkeley, CA 94710

2 12:5:03 1:20

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

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

LAB REQUEST 120951
REPORTED 12/15/2003
RECEIVED 12/05/2003

PROJECT Oakland Auto Works - Post Purge

SUBMITTER Client

COMMENTS Global ID - T0600102243

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
482137	MW-7
482138	MW-4
482139	MW-8
482140	MW-2
482141	MW-6
482142	MW-3
482143	MW-1
482144	MW-5
482145	Laboratory Method Blank

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 #: 482137
Matrix: WATER
Date Sampled: 12/03/2003
Time Sampled: 08:00
Sampled By:

Client: Stellar Environmental Solutions
Client Sample ID: MW-7

Analyte	Result	DF	DLR	Units	Date/Analyst
8021B BTEX + MTBE					
Benzene	ND	1	0.3	ug/L	12/08/03 LZ
Ethyl benzene	ND	1	0.3	ug/L	12/08/03 LZ
Methyl t - butyl ether	ND	1	5	ug/L	12/08/03 LZ
Toluene	ND	1	0.3	ug/L	12/08/03 LZ
Xylene (total)	ND	1	0.6	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	88			%	70 - 130
8015M - Gasoline					
Gasoline	ND	1	50	ug/L	12/08/03 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 #: 482138
Matrix: WATER
Client: Stellar Environmental Solutions
Client Sample ID: MW-4
Date Sampled: 12/03/2003
Time Sampled: 09:05
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
8021B BTEX + MTBE					
Benzene	ND	1	0.3	ug/L	12/08/03 LZ
Ethyl benzene	ND	1	0.3	ug/L	12/08/03 LZ
Methyl t - butyl ether	ND	1	5	ug/L	12/08/03 LZ
Toluene	ND	1	0.3	ug/L	12/08/03 LZ
Xylene (total)	ND	1	0.6	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	112			%	70 - 130
8015M - Gasoline					
Gasoline	63	1	50	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	112			%	55 - 200

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

Order #: 482139
Matrix: WATER
Date Sampled: 12/03/2003
Time Sampled: 09:45
Sampled By:

Client: Stellar Environmental Solutions
Client Sample ID: MW-8

Analyte	Result	DF	DLR	Units	Date/Analyst
8015 TEPH Diesel					
TEPH Diesel	ND	1	0.1	mg/L	12/11/03 AF
Surrogates				**Units**	**Control Limits**
o-Terphenyl (sur)	111			%	55 - 200
8021B BTEX + MTBE					
Benzene	ND	1	0.3	ug/L	12/08/03 LZ
Ethyl benzene	ND	1	0.3	ug/L	12/08/03 LZ
Methyl t - butyl ether	66	1	5	ug/L	12/08/03 LZ
Toluene	ND	1	0.3	ug/L	12/08/03 LZ
Xylene (total)	ND	1	0.6	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	92			%	70 - 130
8015M - Gasoline					
Gasoline	163	1	50	ug/L	12/08/03 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 #: 482140 **Client:** Stellar Environmental Solutions

Matrix: WATER **Client Sample ID:** MW-2

Date Sampled: 12/03/2003

Time Sampled: 10:20

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
8015 TEPH Diesel					
TEPH Diesel	0.1	1	0.1	mg/L	12/11/03 AF
Surrogates				**Units**	**Control Limits**
o-Terphenyl (sur)	93			%	55 - 200
8021B BTEX + MTBE					
Benzene	29	1	0.3	ug/L	12/08/03 LZ
Ethyl benzene	7.4	1	0.3	ug/L	12/08/03 LZ
Methyl t - butyl ether	295	10	50.0	ug/L	12/08/03 LZ
Toluene	22	1	0.3	ug/L	12/08/03 LZ
Xylene (total)	13	1	0.6	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	101			%	70 - 130
8015M - Gasoline					
Gasoline	1980	1	50	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	361*			%	55 - 200

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

Order #: 482141
Matrix: WATER
Date Sampled: 12/03/2003
Time Sampled: 10:45
Sampled By:

Client: Stellar Environmental Solutions
Client Sample ID: MW-6

Analyte	Result	DF	DLR	Units	Date/Analyst
8015 TEPH Diesel					
TEPH Diesel	0.2	1	0.1	mg/L	12/11/03 AF
Surrogates				**Units**	**Control Limits**
o-Terphenyl (sur)	90			%	55 - 200
8021B BTEX + MTBE					
Benzene	2.5	1	0.3	ug/L	12/08/03 LZ
Ethyl benzene	1.4	1	0.3	ug/L	12/08/03 LZ
Methyl t - butyl ether	ND	1	5	ug/L	12/08/03 LZ
Toluene	3.8	1	0.3	ug/L	12/08/03 LZ
Xylene (total)	6.1	1	0.6	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	150			%	70 - 130
8260B Volatile Organic Compounds					
1,2-Dibromoethane	ND	1	5	ug/L	12/10/03 AM
1,2-Dichloroethane	17.1	1	5	ug/L	12/10/03 AM
8015M - Gasoline					
Gasoline	365	1	50	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	150			%	55 - 200

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

Order #: 482142
Matrix: WATER
Date Sampled: 12/03/2003
Time Sampled: 11:15
Sampled By:

Client: Stellar Environmental Solutions
Client Sample ID: MW-3

Analyte	Result	DF	DLR	Units	Date/Analyst
8015 TEPH Diesel					
TEPH Diesel	0.5	1	0.1	mg/L	12/11/03 AF
Surrogates				**Units**	**Control Limits**
o-Terphenyl (sur)	93			%	55 - 200
8021B BTEX + MTBE					
Benzene	312	5	1.5	ug/L	12/08/03 LZ
Ethyl benzene	55	5	1.5	ug/L	12/08/03 LZ
Methyl t - butyl ether	309	10	50.0	ug/L	12/08/03 LZ
Toluene	20	5	1.5	ug/L	12/08/03 LZ
Xylene (total)	58	5	3.0	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	161			%	70 - 130
8015M - Gasoline					
Gasoline	6860	5	250.0	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	246*			%	55 - 200

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

Order #: 482143
Matrix: WATER
Date Sampled: 12/03/2003
Time Sampled: 11:45
Sampled By:

Client: Stellar Environmental Solutions
Client Sample ID: MW-1

Analyte	Result	DF	DLR	Units	Date/Analyst
8015 TEPH Diesel					
TEPH Diesel	0.8	1	0.1	mg/L	12/11/03 AF
Surrogates				**Units**	**Control Limits**
o-Terphenyl (sur)	84			%	55 - 200
8021B BTEX + MTBE					
Benzene	1030	20	6.0	ug/L	12/08/03 LZ
Ethyl benzene	127	5	1.5	ug/L	12/08/03 LZ
Methyl t - butyl ether	212	5	25.0	ug/L	12/08/03 LZ
Toluene	55	5	1.5	ug/L	12/08/03 LZ
Xylene (total)	253	5	3.0	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	145			%	70 - 130
8260B Volatile Organic Compounds					
1,2-Dibromoethane	ND	1	5.0	ug/L	12/09/03 AM
1,2-Dichloroethane	ND	1	5.0	ug/L	12/09/03 AM
8015M - Gasoline					
Gasoline	8930	5	250.0	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	219*			%	55 - 200

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

Order #: 482144 **Client:** Stellar Environmental Solutions

Matrix: WATER **Client Sample ID:** MW-5

Date Sampled: 12/03/2003

Time Sampled: 12:30

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8015 TEPH Diesel						
TEPH Diesel	0.8	1	0.1	mg/L	12/11/03	AF
Surrogates				**Units**	**Control Limits**	
o-Terphenyl (sur)	103			%	55 - 200	
8021B BTEX + MTBE						
Benzene	627	50	15.0	ug/L	12/08/03	LZ
Ethyl benzene	288	10	3.0	ug/L	12/08/03	LZ
Methyl t - butyl ether	595	10	50.0	ug/L	12/08/03	LZ
Toluene	263	10	3.0	ug/L	12/08/03	LZ
Xylene (total)	1230	10	6.0	ug/L	12/08/03	LZ
Surrogates				**Units**	**Control Limits**	
a,a,a-Trifluorotoluene	111			%	70 - 130	
8260B Volatile Organic Compounds						
1,2-Dibromoethane	ND	1	5.0	ug/L	12/09/03	AM
1,2-Dichloroethane	ND	1	5.0	ug/L	12/09/03	AM
8015M - Gasoline						
Gasoline	11900	10	500.0	ug/L	12/08/03	LZ
Surrogates				**Units**	**Control Limits**	
a,a,a-Trifluorotoluene	170			%	55 - 200	

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

Order #: 482145
Matrix: WATER
Date Sampled:
Time Sampled:
Sampled By:

Client: Stellar Environmental Solutions
Client Sample ID: Laboratory Method Blank

Analyte	Result	DF	DLR	Units	Date/Analyst
8015 TEPH Diesel					
TEPH Diesel	ND	1	0.1	mg/L	12/11/03 AF
Surrogates				**Units**	**Control Limits**
o-Terphenyl (sur)	125			%	55 - 200
8021B BTEX + MTBE					
Benzene	ND	1	0.3	ug/L	12/08/03 LZ
Ethyl benzene	ND	1	0.3	ug/L	12/08/03 LZ
Methyl t - butyl ether	ND	1	5	ug/L	12/08/03 LZ
Toluene	ND	1	0.3	ug/L	12/08/03 LZ
Xylene (total)	ND	1	0.6	ug/L	12/08/03 LZ
Surrogates				**Units**	**Control Limits**
a,a,a-Trifluorotoluene	89			%	70 - 130
8260B Volatile Organic Compounds					
1,2-Dibromoethane	ND	1	5	ug/L	12/09/03 AM
1,2-Dichloroethane	ND	1	5	ug/L	12/09/03 AM
8015M - Gasoline					
Gasoline	ND	1	50	ug/L	12/08/03 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

ASSOCIATED LABORATORIES
QA REPORT FORM

QC Sample: LCS/LCSD

Matrix: WATER

Extraction Method : 3510 B

Prep. Date: 12/10/03

Analysis Date: 12/11/03

ID#'s in Batch: LR 121025, 120950, 120951

Reporting Units = mg/L

PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS

			PREP BLK					
			Value	Result	True	%Rec	L.Limit	H.Limit
Test	Method	LCS	ND	0.94	1	94	70%	130%
DIESEL	8015D	LCSD	ND	0.99	1	99	70%	130%

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

SURROGATE RECOVERY

Sample No.	O-Terphenyl
QC Limit	55-200
Method Blank	125
LCS	122
LCSD	121

ASSOCIATED LABORATORIES
QA REPORT FORM

QC Sample: LCS / LCSD

Matrix: WATER

Prep. Date: 12/08/03

Analysis Date: 12/08/03-12/09/03

ID#'s in Batch: LR 120950, 120951, 120984

Reporting Units = mg/L

PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS

			PREP BLK					
			Value	Result	True	%Rec	L.Limit	H.Limit
Test	Method	LCS	ND	461	500	92	80%	120%
TPH	8015M-G	LCSD	ND	461	500	92	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	89
LCS	148
LCSD	150

AAA-TFT = a,a,a-Trifluorotoluene

ASSOCIATED LABORATORIES

LCS REPORT FORM

QC Sample: LCS / LCSD

Matrix: WATER

Prep. Date: 12/08/03

Analysis Date: 12/08/03-12/09/03

LAB ID#'s in Batch: LR 120950, 120951

REPORTING UNITS = mg/L

PREPARATION BLANK / LAB CONTROL SAMPLE RESULTS

Test	Method	PREP. BLK	LCS			LCSD	
		Value	Result	TRUE	%Rec	Result	%Rec
Benzene	8021	ND	21.8	20	109	22.5	113
Toluene	8021	ND	21.0	20	105	21.3	107
Ethylbenzene	8021	ND	21.6	20	108	22.1	111
Xylenes	8021	ND	65.3	60	109	67.5	113

L.Limit	H.Limit
80%	120%

LCS = 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	89
LCS	102
LCSD	100

AAA-TFT = a,a,a-Trifluorotoluene

ASSOCIATED LABORATORIES

LCS REPORT FORM - METHOD 8260 / 624 / 524.2

QC Sample: LCS/LCSD - Water Samples

Analysis Date: 12/08/03 2:53 PM

Applies to: LR 120932, 120964, 120953, 120987, 120922, 120950, 120951, 120954

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	61.89	59.59	124	119	4	22	59-172
MTBE	ND	50	37.18	37.26	74	75	0	24	62-137
Benzene	ND	50	44.70	44.89	89	90	0	24	62-137
Trichloroethene	ND	50	46.53	45.72	93	91	2	21	66-142
Toluene	ND	50	46.01	44.94	92	90	2	21	59-139
Chlorobenzene	ND	50	44.30	42.96	89	86	3	21	60-133

Method Blank = All ND

SURROGATE (QC Limits : 70-135)

Compound	MB 1	MB 2	LCS	LCSD
DBFM	82	81	88	90
1,2-DCA	82	95	84	85
Tol-d8	108	107	102	100
p-BFB	103	102	99	100

ASSOCIATED LABORATORIES

LCS REPORT FORM - METHOD 8260 / 624 / 524.2

QC Sample: LCS/LCSD - Water Samples

Analysis Date: 12/09/03 4:08 PM

Applies to: LR 120736, 120860, 120942, 120896, 120951, 120950

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	55.48	51.59	111	103	7	22	59-172
MTBE	ND	50	37.32	39.24	75	78	5	24	62-137
Benzene	ND	50	41.23	44.04	82	88	7	24	62-137
Trichloroethene	ND	50	42.24	45.09	84	90	7	21	66-142
Toluene	ND	50	41.13	44.75	82	90	8	21	59-139
Chlorobenzene	ND	50	36.17	42.70	72	85	17	21	60-133

Method Blank = All ND

SURROGATE (QC Limits : 70-135)

Compound	MB 1	MB 2	LCS	LCSD
DBFM	84	82	88	89
1,2-DCA	96	95	84	87
Tol-d8	103	106	104	102
p-BFB	102	104	102	99

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

Cooler Receipt Form

Client: Stellar Environmental Project: Oakland Auto Works - Post Purge

Date Cooler Received: 12-5-03 Date Cooler Opened: _____

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 ✓ Ice Packs _____ Bubble wrap _____
Styrofoam _____ Paper _____ None _____ Other _____

Cooler Temperature: 5.0° *
*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: Albert Vargas Date: 12-5-03

Chain of Custody Record

120951

Lab job no. _____
Date 12/3/03
Page 2 of 2

Laboratory: Associated Laboratories, Inc.
Address: 806 N. Batavia, Orange, CA 92868
Tel: 1-714-771-6900

Method of Shipment: Golden State Overnight (courier)
Shipment No.: —
Airbill No.: —
Cooler No.: —

Project Owner: Mr. Glen Poy-Wing
Site Address: 240 W. MacArthur Blvd. Oakland, CA
Project Name: Oakland Auto Works - Post Purge
Project Number: 2003-43

Project Manager: Bruce Rucker
Telephone No.: (510) 644-3123
Fax No.: (510) 644-3859
Samplers: (Signature)

Field Sample Number	Location/ Depth	Date	Time	Sample Type	Type/Size of Container	Preservation: Cooler	Preservation: Chemical	Filtered	No. of Containers	TVH-gas (EPA 8015)	TEH-diesel (EPA 8015)	BTEX + MTBE (EPA 8021)	EDB + EDC (EPA 8260)	Remarks
MW-7		12/3	0800	H_2O	(a)	Yes	(a)	No	4	X		X		
MW-4			0905						4	X		X		
MW-8			0945						5	X	X	X		
MW-2			1020						5	X	X	X		
MW-6			1045						5	X	X	X	X	
MW-3			1115						5	X	X	X		
MW-1			1145						5	X	X	X	X	
MW-5			1230						5	X	X	X	X	

For lab report title page "Project": Name it "Oakland Auto Works Post-Purge"

Relinquished by:	Date	Received by:	Date	Relinquished by:	Date	Received by:	Date
Signature: Aaron Coster	12/3/03	Signature: B.M. Rucker	12/3/03	Signature: B.M. Rucker	12/4/03	Signature: Albert Vargas	12-5-03
Printed: Aaron Coster	Time: 1245	Printed: Bruce M. Rucker	Time: 1245	Printed: Bruce M. Rucker	Time: 930	Printed: Albert Vargas	Time: 10:10
Company: Blaine Tech Services		Company: Stellar Environmental		Company: Stellar Env. Solutions		Company: Associated Lab	
				Relinquished by:	Date	Received by:	Date
				Signature	Time	Signature	Time
				Printed		Printed	
				Company		Company	

Turnaround Time: _____

Comments:
(a) 40 ml VOA vials with HCl preservative & 1-L amber glass, unpreserved
All samples collected AFTER well purging

2000-00-01

★ Stellar Environmental Solutions

Samples shipped via Golden State Overnight (same day delivery)

2198 Sixth Street #201, Berkeley, CA 94710

12-5-03 1:20