

**FOURTH QUARTER 2005
GROUNDWATER MONITORING
AND ANNUAL SUMMARY REPORT**

**240 W. MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA**

Prepared for:

**MR. GLEN POY-WING
OAKLAND AUTO WORKS
OAKLAND, CALIFORNIA**

January 2006

RECEIVED

By loprojectop at 11:52 am, Jan 24, 2006



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GEOSCIENCE & ENGINEERING CONSULTING

January 18, 2006

Mr. Don Hwang
Hazardous Materials Specialist
Alameda County Environmental Health Department
Local Oversight Program
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Subject: Fourth Quarter 2005 Groundwater Monitoring and Annual Summary Report
Oakland Auto Works Facility – 240 W. MacArthur Boulevard, Oakland, California
Alameda County Health Department Fuel Leak Case No. RO0000142

Dear Mr. Hwang:

Enclosed is the Stellar Environmental Solutions, Inc. report presenting the findings of the Fourth Quarter 2005 groundwater monitoring event for the Oakland Auto Works facility. This is the 29th site groundwater monitoring event since August 1997.

This report also summarizes historical findings, evaluates hydrologic and hydrochemical contaminant trends, and assesses contaminant plume stability and the potential for migration. This report was uploaded to both the Water Board's GeoTracker system and the Alameda County Environmental Health Department's Electronic Upload ftp system.

If you have any questions regarding this report, please contact us at (510) 644-3123.

Sincerely,

A handwritten signature in blue ink that reads "Bruce M. Rucker".

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

A handwritten signature in blue ink that reads "Richard S. Makdisi".

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

cc: Mr. Glen Poy-Wing, Property Owner



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Prepared for:

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

Prepared by:

**STELLAR ENVIRONMENTAL SOLUTIONS, INC.
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January 18, 2006

Project No. 2003-43

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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. This report presents findings for the 29th site groundwater monitoring event since monitoring began in August 1997.

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 Health Care Services Agency, Department of Environmental Health (Alameda County Health) is the lead regulatory agency for the case, acting as a Local Oversight Program (LOP) for the Regional Water Quality Control Board – San Francisco Bay Region (Water Board). There are no Alameda County Health or Water Board 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 file.

The previous consultant requested site closure in March 2003 (AEC, 2003a). Alameda County Health denied that request and, in a letter dated April 16, 2003, requested additional site characterization prior to considering case closure. That work was subsequently conducted by SES (discussed below).

The most recent regulatory agency directive was an October 27, 2004 Alameda County Health letter requesting a technical workplan for additional site characterization. That workplan was submitted to Alameda County Health on December 27, 2004 (SES, 2004f). Alameda County Health has not responded to that workplan, and that work has not yet been implemented.

The site is in compliance with State Water Resources Control Board “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). Beginning January 1, 2005, portable data format (pdf) electronic copies of site technical reports were uploaded to GeoTracker, along with hard-copy reports submitted to Alameda County Health. Since Q2 2005, electronic copies of technical documentation reports have also been uploaded to Alameda County Health’s Electronic Upload file transfer protocol (ftp) system.

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 October 1 and December 31, 2005:

- The 29th groundwater monitoring and sampling event, conducted on December 19, 2005.
- An evaluation of historical analytical results, hydrochemical and hydrologic trends, and the stability of the groundwater contaminant plume.

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*).

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. Figure 2 shows the site plan with the current groundwater well and former underground fuel storage tanks (UFSTs) locations.



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

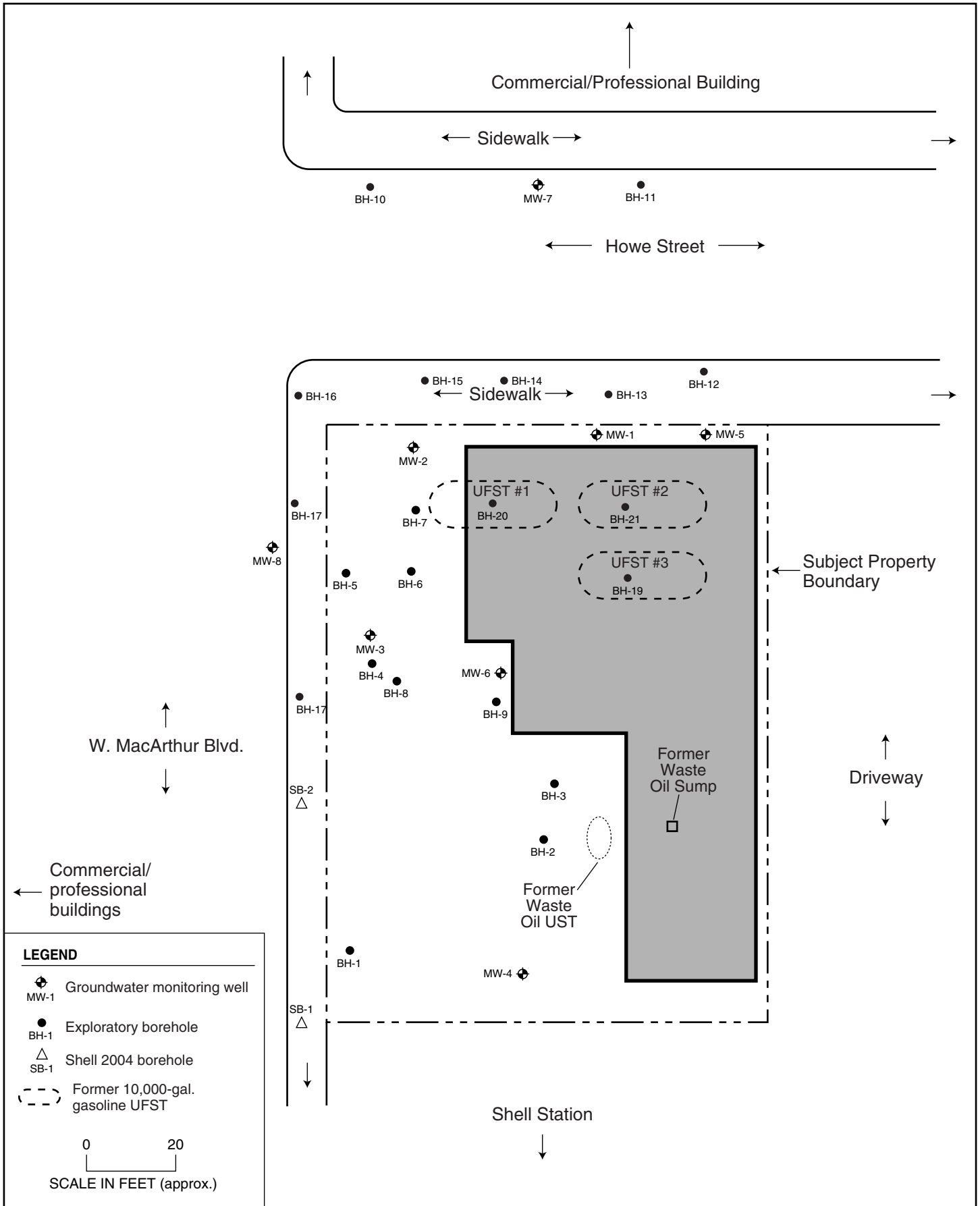
240 W. MacArthur Blvd.
Oakland, CA

By: MJC

APRIL 2004

Figure 1

Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting



SITE PLAN WITH BOREHOLE AND GROUNDWATER WELL LOCATIONS

240 W. MacArthur Blvd.
Oakland, CA

By: MJC

MAY 2004

Figure 2

Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

Historical remediation and site characterization activities include:

- **Pre-1991.** Three 10,000-gallon gasoline UFSTs from a former Gulf service station occupancy were removed prior to 1991 (there is no available documentation regarding their removals).
- **1991.** A waste oil sump was removed. 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).
- **1996.** A 350-gallon waste oil UST was removed. 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).
- **January 1997.** In accordance with a request by Alameda County Health, a subsurface investigation was conducted (All Environmental, Inc., 1997b). Six exploratory boreholes were advanced to a maximum depth of 20 feet, and soil samples were collected.
- **August 1997.** Additional site characterization was conducted, which included sampling three boreholes, installing four groundwater monitoring wells, and conducting the initial groundwater sampling event.
- **December 2000.** Quarterly (approximately) groundwater monitoring began.
- **February 2001.** Four additional groundwater monitoring wells were installed. Maximum historical soil concentrations were detected in well MW-5 in the northeastern corner of the subject property: 11,700 mg/kg of gasoline and 25.6 mg/kg of benzene (AEC, 2001b).
- **October 2001.** Short-term (less than 1-day duration) groundwater and vapor extraction from five wells was conducted over 4 days (AEC, 2001e) (referred to by that consultant as “Hi-Vac” process).
- **2003.** A sensitive receptor and vicinity water well survey was conducted.
- **April 2004.** Additional site characterization was conducted, including: advancing and sampling 12 exploratory boreholes; analyzing 64 soil and 12 grab-groundwater sample results; and further evaluating site hydrogeology and contaminant extent and magnitude.

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 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.

LITHOLOGY

The unsaturated zone (from ground surface to approximately 20 feet below ground surface [bgs]) consists of interbedded silty/sandy clays with silty/clayey sand, with occasional gravelly zones. In the sand zones, clay and/or silt content is high, and the sand is generally very fine- to fine-grained—such that the unit is, in essence, gradational between a clayey sand and a sandy clay. The most laterally-extensive unsaturated zone unit is a sandy clay encountered between ground surface and approximately 15 feet, locally pinching out and displaying lenticular form. Locally, this unit is interbedded with a sandy clay. The sediment types and geometry are suggestive of channel deposits, which is a common depositional facies in this area.

Depth to groundwater in all onsite April 2004 boreholes was approximately 20 to 21 feet bgs, predominantly in a saturated, loose, clayey sand. The saturated portion of this clayey sand constitutes the bottom of the unit; the saturated zone is approximately 0.5 to 2.5 feet thick, underlain in all boreholes by a cohesive, non-water-bearing clay. The top of this clay was consistently at a depth between approximately 21 and 23 feet. Of the 12 boreholes, 9 were advanced at least 1.5 feet into this clay before terminating (and not encountering visible moisture or sand). One of the boreholes was advanced deeper, documenting a thickness of at least 4.5

feet. The lithologic data (supported by soil sample analytical data) strongly suggest that this clay unit inhibits downward migration of groundwater contamination.

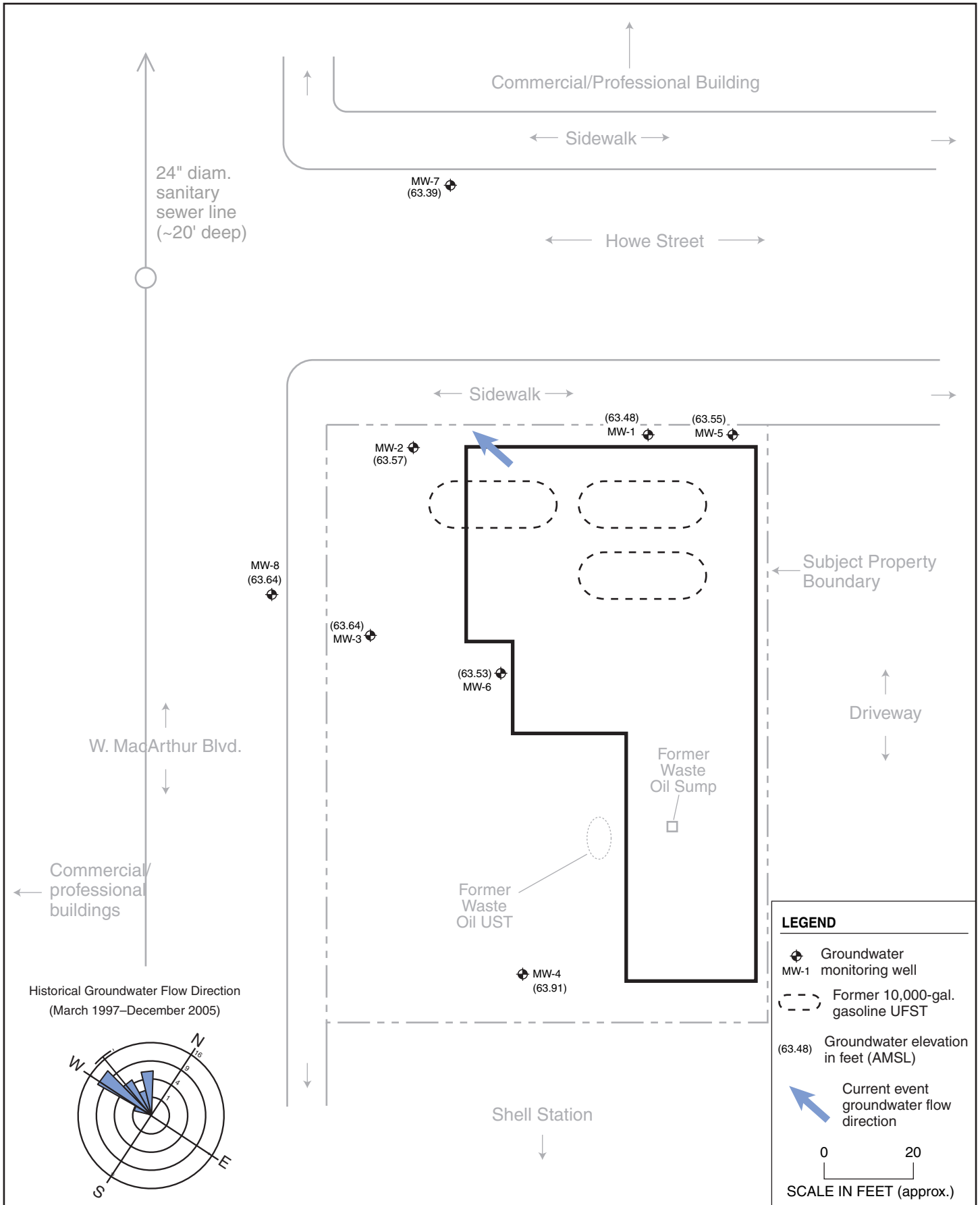
The site lithology is consistent with that documented at the adjacent Shell service station site. Specifically, the boreholes document that the thin upper, water-bearing zone is underlain by what site-specific data suggest is a non-water-bearing clay unit. In three of the four well boreholes at the Shell site, that clay unit was at least 2 feet thick. In one of the well boreholes, the clay unit was underlain by a saturated clayey sand unit (from approximately 22 to 25.5 feet bgs, which was underlain by a non-water-bearing clay). There are insufficient data to conclude whether the second deepest saturated clayey sand is connected to the most shallow saturated zone above it that occurs across the site. The subsequent (March 2004) Shell boreholes SB-1 and SB-2 (between the Shell wells and the subject property) all terminated at 20 feet bgs, which was too shallow to encounter the underlying clay unit.

GROUNDWATER HYDROLOGY

The number and positioning of the existing eight site monitoring wells is currently adequate to evaluate the general groundwater flow direction and gradient. Four of the wells (MW-1, MW-2, MW-3, and MW-4) are screened between approximately 25 and 15 feet bgs, and the other four (MW-5, MW-6, MW-7, and MW -8) are screened at a depth of 10 to 20 feet.

Figure 3 is a groundwater elevation map that shows elevations and contours from the most recent (December 2005) groundwater monitoring event. Groundwater flow direction in this event was to the west. A generally westward (with a slight southern component) groundwater flow direction has also been measured at the adjacent Shell-branded service station (Cambria Environmental Technology, 2003). Groundwater gradient in the December 2005 event was relatively flat, at approximately 0.005 feet/foot. Figure 3 includes a rose diagram that shows historical groundwater flow direction measured at the site. The rose diagram is a histogram that has been wrapped around a circle, and has the following characteristics:

- Each wedge represents a 15-degree arc of groundwater flow direction.
- The length of each wedge (circle radius) represents the number of sampling events with data falling within the 15-degree arc.
- The bold black line from the center of the circle to the outer edge is the mean groundwater flow direction.
- The arcs extending to either side of the mean groundwater flow direction line represent the 95-degree confidence interval of the data.



GROUNDWATER ELEVATION MAP—December 19, 2005

**240 W. MacArthur Blvd.
Oakland, CA**

By: MJC

JANUARY 2006

Figure 3



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. Section 5.0 discusses historical groundwater elevations and flow direction trends.

3.0 DECEMBER 2005 GROUNDWATER MONITORING AND SAMPLING

This section presents the groundwater sampling and analytical methods for the most recent event (Fourth Quarter 2005), conducted on December 19, 2005. 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. The December 2005 groundwater sampling event involved the collection of one set of “post-purge” samples from all wells, in accordance with recent revisions to the quarterly monitoring program approved by Alameda County Health. 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 “post-purge” groundwater samples from the eight onsite wells for field measurement of the aforementioned hydrogeochemical parameters, and for offsite laboratory analyses for contaminants of concern.

The locations of all site monitoring wells 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 indicated that they are 4-inch-diameter. Appendix A contains the groundwater monitoring field records for the current event.

Groundwater monitoring well water level measurements, sampling, and field analyses were conducted by Blaine Tech Services (San Jose, California) on December 19, 2005, under the direct supervision of SES personnel. To minimize the potential for cross-contamination, wells were purged and sampled in order of anticipated increasing contamination (based on analytical results from the previous quarter).

As the first monitoring task, 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 a new disposable bailer) and field-analyzed for aquifer stability parameters—including temperature, pH, electrical conductivity, turbidity, and dissolved oxygen.

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

Well	Well Depth (feet bgs)	Well Screened Interval		Groundwater Level Depth ^(a) December 19, 2005	Groundwater Elevation ^(b) December 19, 2005
		Depth (feet)	Elevation (feet)		
MW-1	25	19.5 to 24.5	54.5 to 49.5	15.67	63.48
MW-2	25	14.5 to 24.5	64.2 to 54.2	14.88	63.57
MW-3	25	14.5 to 24.5	63.4 to 53.4	13.94	63.64
MW-4	25	14.5 to 24.5	63.6 to 53.6	13.83	63.91
MW-5	20	9 to 19	70.6 to 60.6	15.81	63.55
MW-6	20	9 to 19	69.7 to 59.7	14.90	63.53
MW-7	20	9 to 19	69.6 to 59.6	14.88	63.39
MW-8	20	9 to 19	67.7 to 57.7	12.75	63.64

Notes:

^(a) Pre-purge measurement, feet below top of well casing.

^(b) Pre-purge measurement, feet above mean sea level.

Each well was then purged (by hand bailing with a new disposable bailer or with a submersible pump) 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 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. Samples were then 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.” All groundwater samples were managed under chain-of-custody procedures from the time of sample collection until samples were received in the laboratory.

Wastewater (purge water and equipment decontamination rinseate) was containerized in a labeled, 55-gallon steel drum that will be temporarily stored on site. This non-hazardous water will continue to be accumulated on site until it is cost-effective to coordinate its disposal, at which time it will be profiled and disposed of at a permitted wastewater treatment facility.

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. Tables 2 and 3 summarize the contaminant analytical results of the most recent monitoring event. Appendix B 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 Water Board 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. Where one or more ESLs are exceeded, additional remediation and/or investigation may be warranted. The decision about the type and extent of remediation—if any—is generally based, among other factors, on the degree to which the analytes of concern have exceeded their respective ESLs, the potential for sensitive receptors, and whether a source area remains where mass contamination can be efficiently captured. Remediation can take the form of an active plan to remove subsurface contamination or a passive monitoring of natural attenuation to track plume stability and 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.

Table 2
Groundwater Sample Analytical Results – December 19, 2005
Hydrocarbons, BTEX and MTBE
240 W. MacArthur Boulevard, Oakland, California ^(a)

Well	TVHg	TEHd	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-1	4,300	3,000	500	22	72	228	5.5
MW-2	1,300	800	4.9	0.6	0.7	0.8	74
MW-3	3,200	1,800	29	1.3	6.6	5.6	80
MW-4	< 50	NA	NA	NA	NA	NA	NA
MW-5	9,600	3,600	270	80	110	710	< 1.7
MW-6	240	890	3.6	< 0.5	0.7	2.4	0.5
MW-7	< 50	NA	NA	NA	NA	NA	NA
MW-8	65	57	< 0.5	< 0.5	< 0.5	< 1.0	29
Water Board Environmental Screening Levels ^(b)							
	NLP	NLP	1.0	40	30	20	5.0
Drinking Water Standards ^(c)							
	100	100	1.0 ^(d)	40	30	13	5.0

Notes:

- ^(a) All concentrations in micrograms per liter (µg/L), equivalent to parts per billion (ppb).
- ^(b) For commercial/industrial sites where known or potential drinking water resource is threatened.
- ^(c) Drinking water standards are State of California Secondary Maximum Contaminant Levels (MCLs) – proposed, unless specified otherwise.
- ^(d) State of California Primary MCL.

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

NA = Not analyzed for this contaminant.
 NLP = No level published.

Analytes in **bold face** exceed ESLs or drinking water standards.

For all site contaminants with published drinking water standards—i.e., benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl *tertiary*-butyl ether (MTBE)—the drinking water standards are equal to or greater than the published ESLs.

Sensitive Receptors

Risk evaluation commonly includes the identification of sensitive receptors, including vicinity groundwater supply wells. As discussed in a previous report (SES, 2004c), the California Department of Water Resources identified only one groundwater supply well within 1,500 feet of the site. Based on its distance and upgradient location relative to the site, there is no reasonable potential for this well to intercept shallow groundwater emanating from the subject property.

Table 3
Groundwater Sample Analytical Results – December 19, 2005
Lead Scavengers and Fuel Oxygenates
240 W. MacArthur Boulevard, Oakland, California ^(a)

Well	EDC	EDB	TBA	DIPE
MW-1	< 1.3	< 1.3	100	< 3.6
MW-2	< 0.5	< 0.5	54	1.0
MW-3	< 0.7	< 0.7	67	1.2
MW-4	NA	NA	NA	NA
MW-5	< 1.7	< 1.7	< 33	< 1.7
MW-6	13	< 0.5	30	0.9
MW-7	NA	NA	NA	NA
MW-8	< 0.5	< 0.5	27	0.5
Water Board Environmental Screening Levels ^(b)				
	0.5	0.05	12	NLP
Drinking Water Standards ^(c)				
	NLP	NLP	NLP	NLP

Notes:

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

^(b) For commercial/industrial sites where known/potential drinking water resource is threatened.

^(c) Drinking water standards are State of California Secondary Maximum Contaminant Levels (MCLs) – proposed, unless specified otherwise.

DIPE = di-isopropyl ether

EDB = ethylene dibromide (1,2-dibromoethane)

EDC = ethylene dichloride (1,2-dichloroethane)

TBA = *tertiary*-butyl alcohol

NA = Not analyzed for this contaminant.

NLP = No level published.

Analytes in **bold face** exceed drinking water standards.

Table includes only detected fuel oxygenates. Appendix B contains the full list of analytical compounds.

As specified in the Water Board’s San Francisco Bay Region Water Quality Control Plan, all groundwater is considered a potential source of drinking water unless otherwise approved by the Water Board, and is 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 following two criteria:

1. The Water Board's "East Bay Plain Groundwater Basin Beneficial Use Evaluation Report" (Water Board, 1999) 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). Because the subject site falls within Zone A, this criterion has not been met.
2. A site-specific exemption may be obtained from the Water Board. Such an exemption has not been obtained for this site; thus, this criterion has not been met.

As discussed below, multiple groundwater contaminants have been detected in excess of ESLs, for both groundwater beneficial scenarios (groundwater *is* and *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);
- BTEX and MTBE, by EPA Method 8260B (all wells except MW-4 and MW-7);
- The lead scavengers 1,2-dichloroethane (EDC) and 1,2-dibromoethane (EDB), by EPA Method 8260B (all wells except MW-4 and MW-7);
- Total extractable hydrocarbons – diesel range (TEHd), by EPA Method 8015M (all wells except MW-4 and MW-7, which historically have never detected diesel); and
- Fuel oxygenates, by EPA Method 8260B (all wells except MW-4 and MW-7).

GROUNDWATER SAMPLE RESULTS

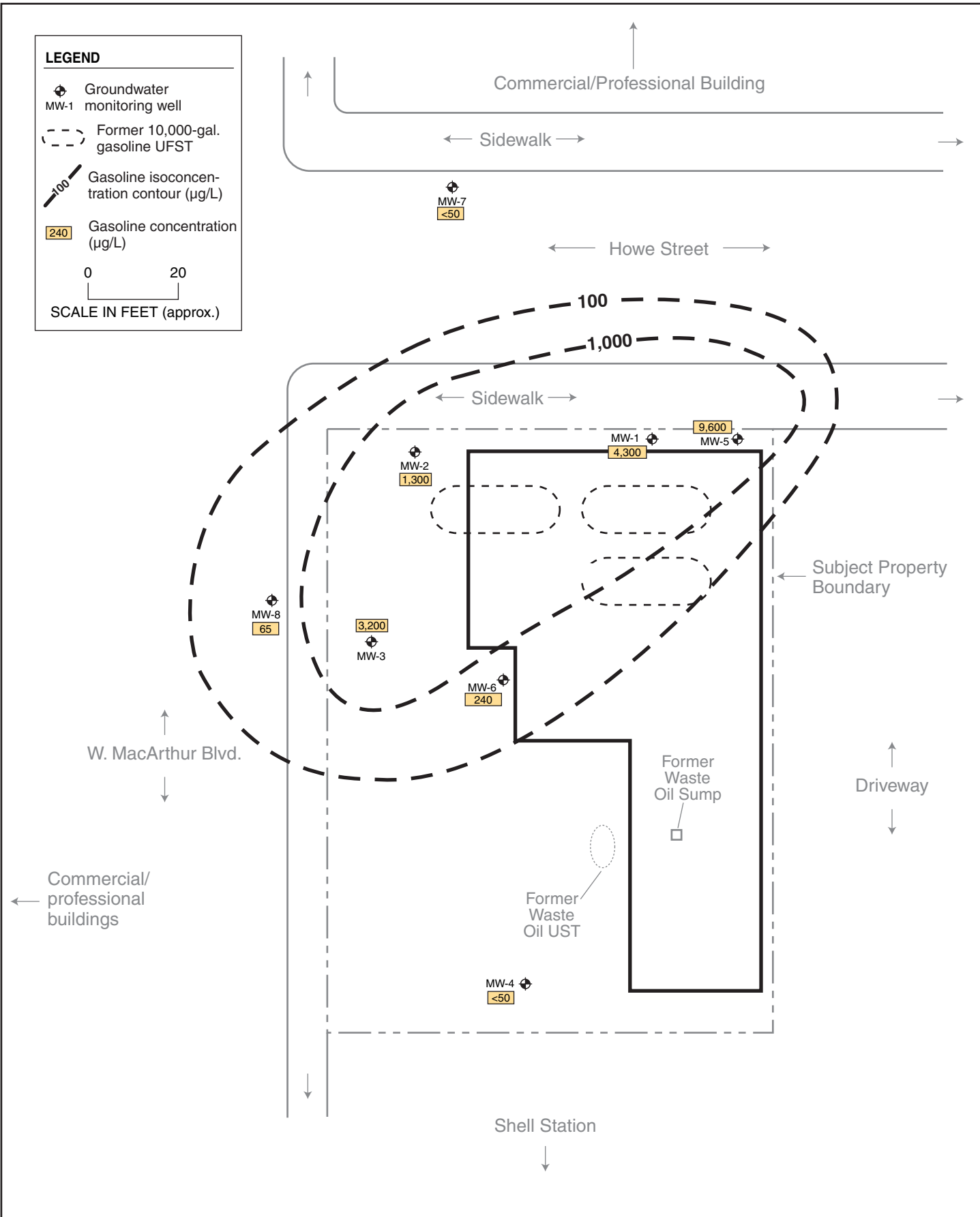
Gasoline and Diesel

Figure 4 shows gasoline isoconcentration contours for the recent event. Gasoline was detected in all site wells, except MW-4 and MW-7, with concentrations between 65 µg/L (well MW-8) and 9,600 µg/L (well MW-5). The center of contaminant mass is near source area wells MW-1 and MW-5. All detected gasoline concentrations exceeded the 100-µg/L ESL criterion, with the exception of 65 µg/L in well MW-8. The longitudinal axis of the gasoline plume is oriented

LEGEND

- Groundwater monitoring well
- Former 10,000-gal. gasoline UFST
- Gasoline isoconcentration contour ($\mu\text{g/L}$)
- Gasoline concentration ($\mu\text{g/L}$)

0 20
SCALE IN FEET (approx.)



GASOLINE ISOCONCENTRATION CONTOURS (DECEMBER 2005)

240 W. MacArthur Blvd.
Oakland, CA

By: MJC

JANUARY 2006

Figure 4



2003-43-123



approximately north-south, with a concentration of 65 µg/L extending offsite (beneath W. MacArthur Boulevard). The north-northwestern limit of the gasoline plume appears to be underneath Howe Street, and the eastern limit is constrained on site. The exact northern (upgradient) limit of the plume is not known, but is likely no more than 20 to 30 feet off site.

Figure 5 shows diesel isoconcentration contours for the recent event. The plume orientation is similar to the gasoline plume. With the exception of one well (MW-6), diesel concentrations are generally less than the respective gasoline concentrations in individual wells. Diesel concentrations ranged from 57 µg/L (well MW-8) to 3,600 µg/L (well MW-5), with all concentrations except MW-8 exceeding the 100-µg/L ESL criterion. The diesel plume configuration closely mirrors the gasoline plume, with the center of contaminant mass near the source area and a southward longitudinal axis.

Benzene, Toluene, Ethylbenzene, and Total Xylenes

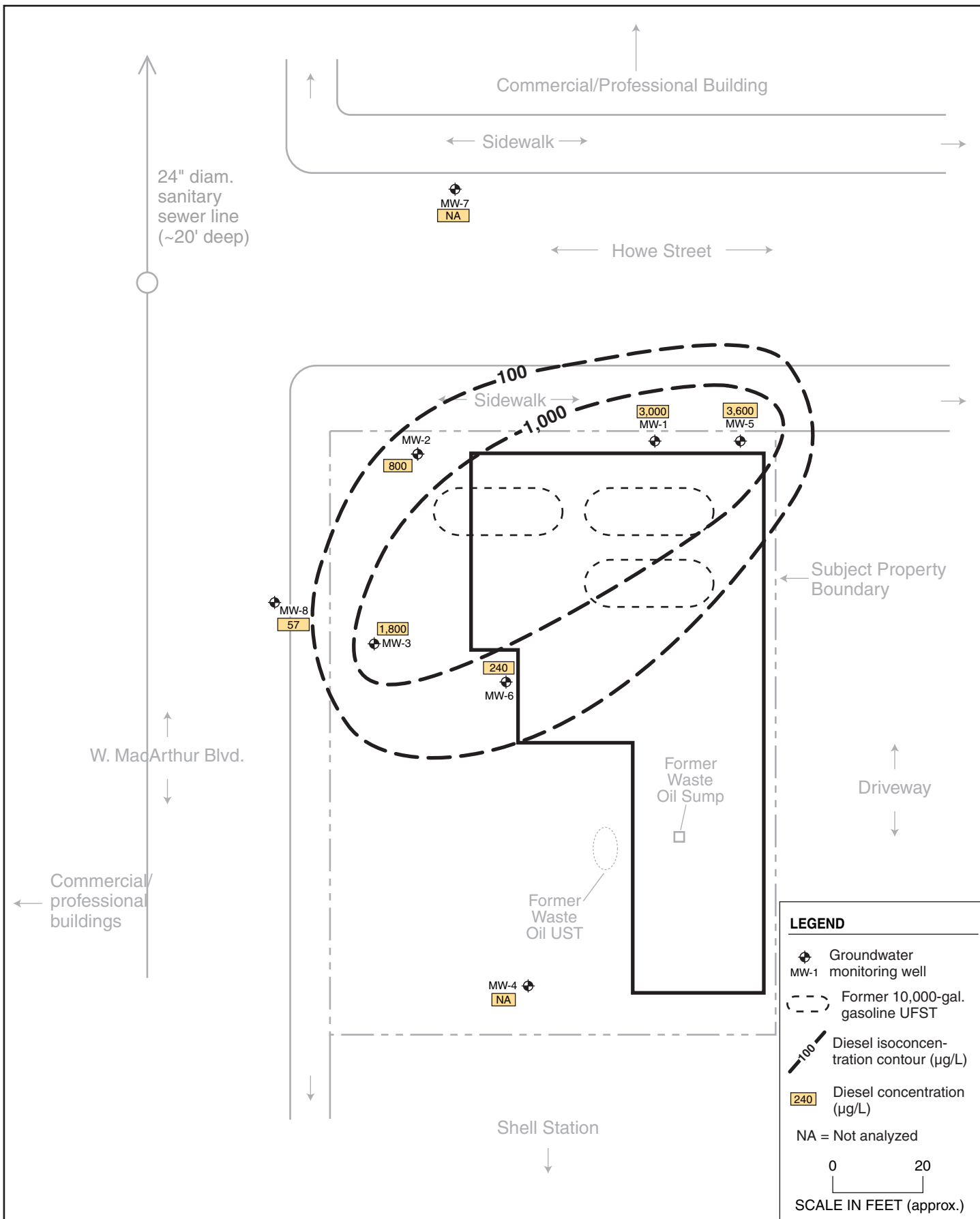
The principal BTEX contaminant, given its concentrations above ESLs, is benzene. The benzene plume shows a similar geometry as the gasoline and diesel plumes. Benzene was detected in five of the six wells for which it was analyzed, at concentrations ranging from 3.6 µg/L to 500 µg/L. Figure 6 shows benzene isoconcentration contours for the recent event. Benzene extends off site to the north (under Howe Street) and is constrained on site in other directions.

Toluene, ethylbenzene, and xylenes were detected in the same five wells in which benzene was detected, and contaminant concentrations exceeded respective ESL criteria in several of the wells.

Methyl tertiary-Butyl Ether

Figure 7 shows MTBE isoconcentration contours for the recent event. MTBE was detected in four of the six wells for which it was analyzed, at concentrations ranging from 5.5 µg/L to 80 µg/L. Unlike the distribution of gasoline, diesel, and benzene, the center of mass of MTBE contamination in groundwater appears to be near the downgradient (south) property line, with concentrations above 29 µg/L extending beneath W. MacArthur Boulevard. Little to no MTBE was present in the source area (near MW-1 and MW-5) in this groundwater monitoring event; with two notable exceptions (December 2003 and March 2002), MTBE has been higher at the downgradient wells compared to the source area wells.

As discussed in a previous report (SES, 2004c), MTBE appears to be migrating onto the subject property from the adjacent (to the east) Shell-branded service station. This contamination, however, is unrelated to the separate site-sourced MTBE contamination.



DIESEL ISOCONCENTRATION CONTOURS (DECEMBER 2005)

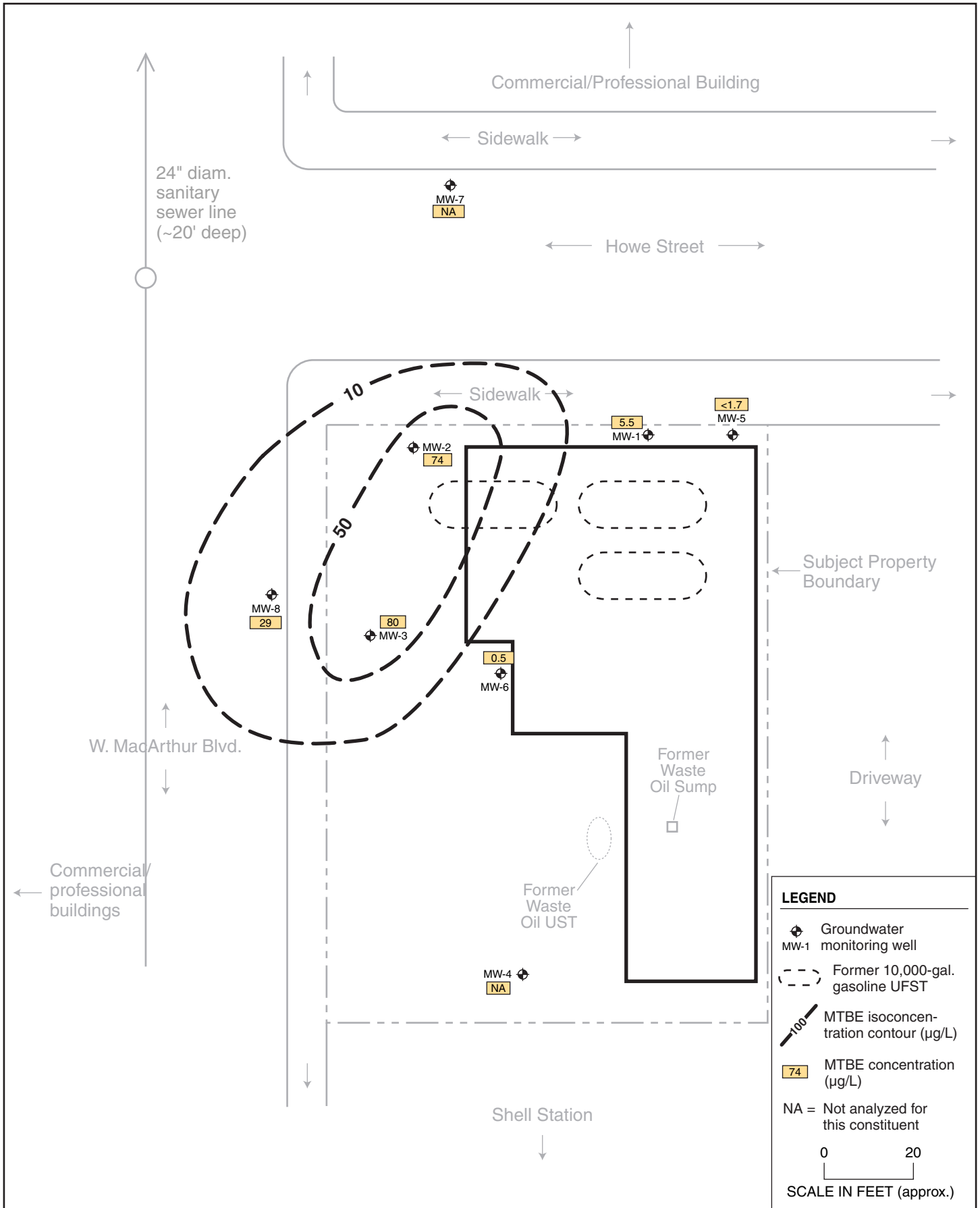
240 W. MacArthur Blvd.
Oakland, CA

By: MJC

JANUARY 2006

Figure 5





2003-43-126



MTBE ISOCONCENTRATION CONTOURS (DECEMBER 2005)

240 W. MacArthur Blvd.
Oakland, CA

By: MJC

JANUARY 2006

Figure 7



Lead Scavengers and Fuel Oxygenates

The lead scavenger EDC was detected only in MW-6, at a concentration of 13 µg/L (exceeding the 0.5-µg/L ESL criterion). EDB was not detected in any of the wells.

Two fuel oxygenates were detected: *tertiary*-butyl alcohol (TBA) and di-isopropyl ether (DIPE). TBA was detected in five of six wells for which it was analyzed, with concentrations ranging from 27 µg/L in well MW-8 to 100 µg/L in well MW-1 (all concentrations exceed the 12-µg/L ESL criterion). DIPE was detected in four wells, at a maximum concentration of 1.2 µg/L.

Summary

With the exception of EDC and MTBE, 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 above ESL criteria extends off site to the west-northwest and to the south (into Howe Street and W. MacArthur Boulevard, respectively).

QUALITY CONTROL SAMPLE ANALYTICAL RESULTS

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

5.0 EVALUATION OF HYDROCHEMICAL TRENDS AND PLUME STABILITY

This section evaluates the observed hydrologic and hydrochemical trends with regard to plume stability and contaminant migration. An assessment is made of the nature of residual contaminated soil that acts as a continued source of groundwater contamination. A conceptual model (incorporating site lithology, hydrogeology, and hydrochemistry) is presented to explain the spatial extent and magnitude of the dissolved hydrocarbon plume.

CONTAMINANT SOURCE ASSESSMENT

Three UFSTs were removed (i.e., discharge was discontinued) prior to 1991, although there is no documentation of conditions at the time of the removals nor whether any contaminated soil was removed at that time. Borehole soil sampling has provided data on the extent and magnitude of soil contamination in the vicinity of the former UFSTs (“source area”) and the outlying area (in the capillary fringe above the groundwater plume). A full discussion of residual soil contamination was presented in the SES June 2004 Soil and Groundwater Investigation Report (SES, 2004c). Appendix C contains key historical soil analytical results.

Source Area

A substantial mass of soil contamination is present at depths between approximately 13 feet bgs and 21 feet bgs (top of the underlying non-water-bearing clay unit) in the immediate vicinity of former UFSTs (BH-13, BH-19, BH-20 and BH-21); this mass has a footprint of approximately 40 feet by 40 feet. This source area contamination is almost certainly related to downward migration of contamination following UFST and/or piping leakage, and is responsible for the continued relatively elevated concentrations of gasoline, diesel, BTEX, and MTBE in groundwater in the wells and bores. No contamination was detected in the UFST excavation fill material. Soil contamination was detected in two of the three saturated zone soil samples, and no contamination was detected in the underlying clay samples.

Source area wells MW-1 and MW-5 historically showed evidence of separate-phase hydrocarbons (i.e., floating product). Limited “Hi-Vac” removal (short-term pumping) of contaminated groundwater from these wells in October 2001 appears to have removed the floating product, which has not been observed since that time.

Outlying Area Soil Contamination

Soil contamination has been detected in boreholes greater than 10 feet from the former UFSTs only to the southwest (BH-16, approximately 40 feet away) and to the south (BH-4 and BH-8, approximately 40 feet away). Intervening boreholes (MW-2, BH-7, and BH-15) showed low to no soil contamination. Low to no soil contamination was detected in boreholes other than those discussed above, even in the capillary fringe. Soil contamination above ESL criteria appears to be constrained on site, except for the apparently localized “hot spot” at BH-16 (southwest corner of property).

Consideration of potential sources (discrete former UFSTs), historical groundwater flow direction and water levels, and distribution suggests that the detected soil contamination is the result of leaks from at least two, and possibly three, former UFSTs. The unsaturated zone soil contamination to the south and southwest likely resulted from desorption from source area contaminated groundwater, the distribution of which is strongly influenced by localized lithologic and groundwater hydrologic controls. The contaminant mass in outlying area unsaturated zone soils is small relative to the source area.

Summary

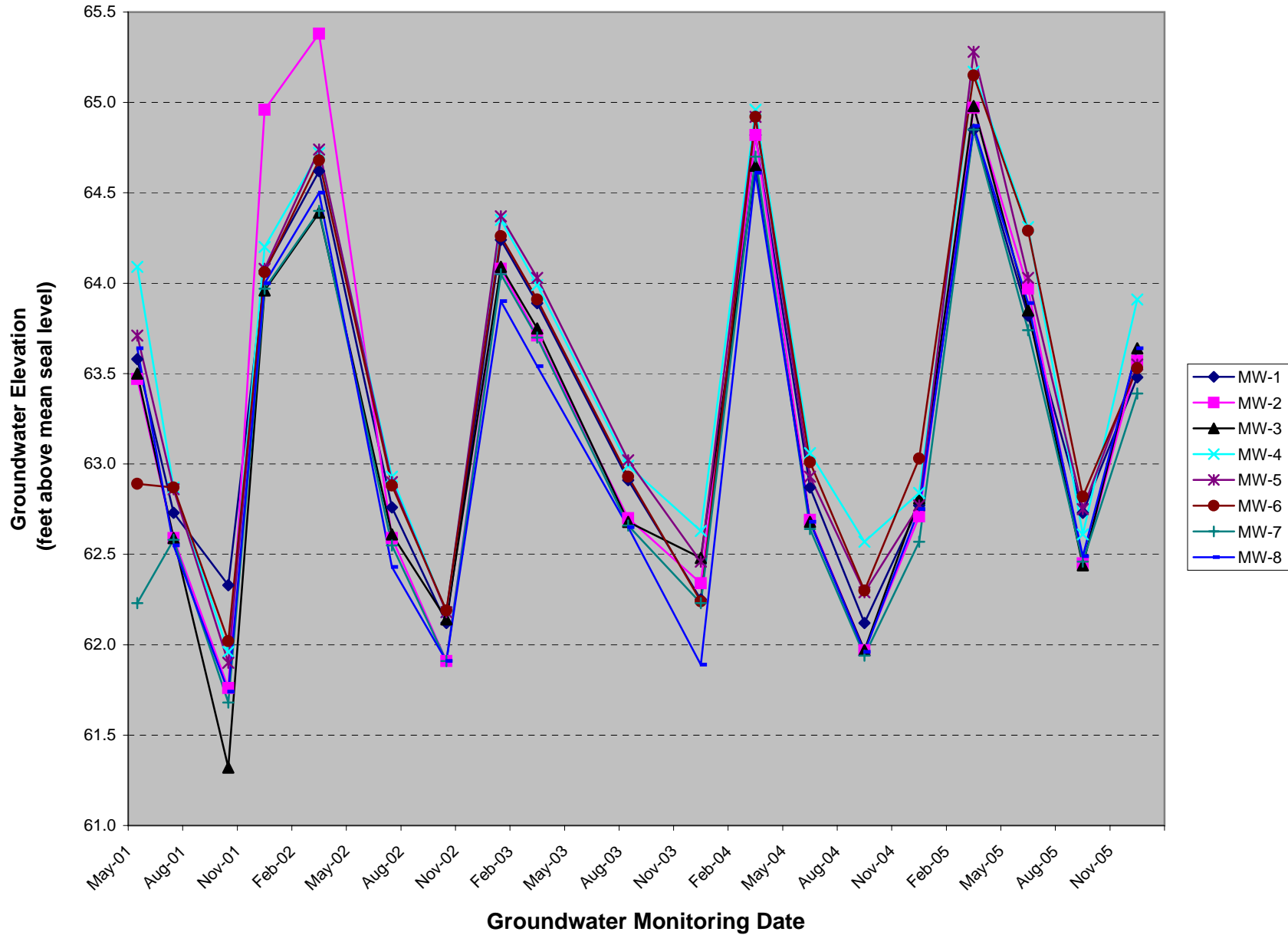
A substantial mass of unsaturated zone soil contamination is located beneath the subject property building and to the immediate south-southwest. While the contamination is largely constrained on site, it will continue to be a source of long-term groundwater contamination unless abated.

WATER LEVEL TRENDS

Appendix D contains historical groundwater elevation and gradient data. Figure 8 shows a trendline of site groundwater elevations in wells since May 2001. The data support the following conclusions:

- Groundwater elevations in all wells show a strong elevation change correlation with rainy versus dry season. Decreases in elevation are seen from approximately March through December, followed by an increase in March. This is a common seasonal trend observed in the upper water-bearing zone in the Bay Area region.
- The range of water level elevations (in a given year) has varied by approximately 3 feet, and no substantial differences in elevations (beyond the seasonal fluctuations) have been noted since 2001.
- Historical groundwater flow direction has been predominantly to the west-northwest.
- Historical groundwater gradient has varied between approximately 0.002 feet/foot and 0.008 feet/foot, averaging approximately 0.005 feet/foot.

**FIGURE 8: Historical Groundwater Elevations in Monitoring Wells
240 W. Macarthur Blvd., Oakland, CA**



HYDROCHEMICAL TRENDS

Historical groundwater analytical results are included in Appendix C.

Gasoline

Figures 9 and 10 show hydrochemical trend data for gasoline in source area wells (MW-1 and MW-5) and downgradient wells, respectively, for the past 4 years of monitoring.

Source area wells MW-1 and MW-5 showed an overall trend of increased gasoline concentration between December 2001 and June 2005, followed by a decrease in the most recent (December 2005) event. Historically, MW-5 has displayed higher gasoline concentrations than MW-1; however, during the June and September 2005 monitoring event, the concentrations of gasoline in MW-1 exceeded that of MW-5. Gasoline concentrations have generally shown the expected seasonal trend of higher concentrations in the high-water (rainy) period and lower concentrations in the low-water (dry) period.

Downgradient wells MW-2, MW-6, and MW-8 have shown a relatively stable gasoline concentration over the previous 4 years of monitoring, with some seasonal variations within particular years. Downgradient well MW-3 showed a trend of decreasing gasoline concentrations from December 2001 to June 2002, then increasing concentrations until December 2003, then a decrease and subsequent stabilization in past eight monitoring events. All downgradient well gasoline concentrations in the current event are between the historical site minima and maxima for individual wells.

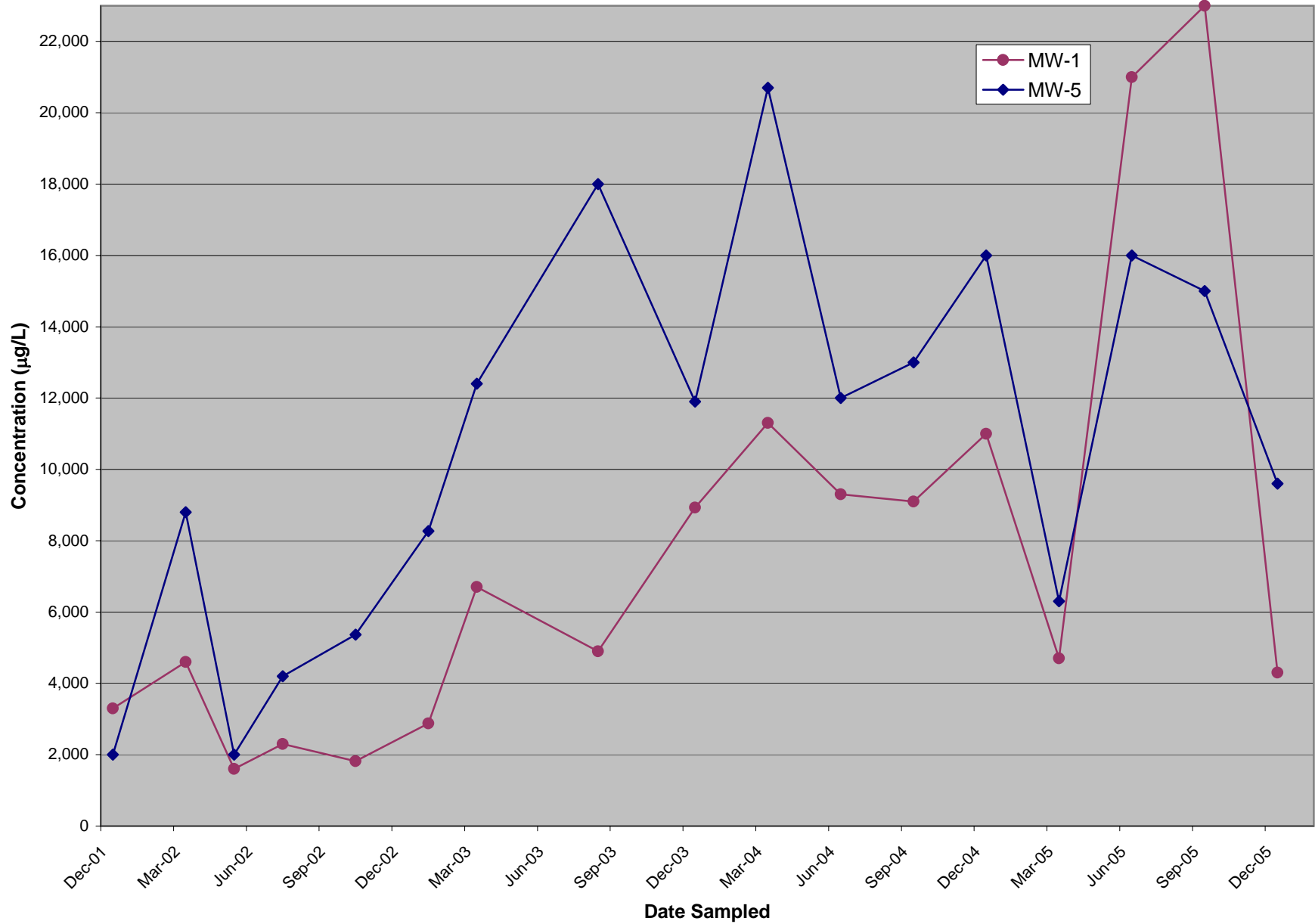
Diesel

Figures 11 and 12 show hydrochemical trend data for diesel in source area wells and downgradient wells, respectively, for the past 2½ years of monitoring.

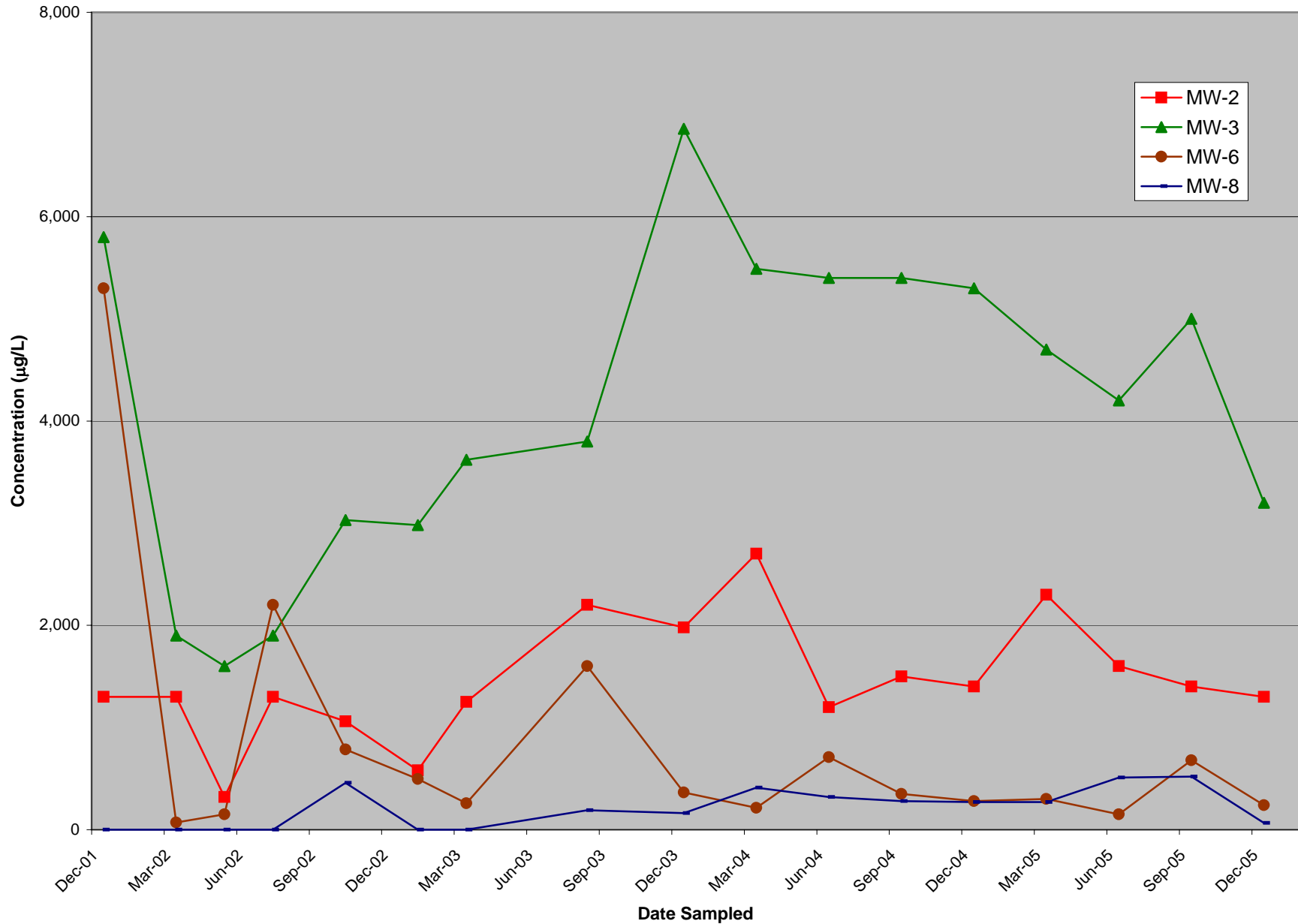
Source area wells MW-1 and MW-5 have shown substantial variations (generally correlating with seasonal variations in groundwater elevations) in diesel concentrations. Similar to the gasoline trend, MW-5 has historically displayed higher diesel concentrations than MW-1. Diesel concentrations in both MW-1 and MW-5 in the most recent event are between the historical site maxima and minima for those wells.

Downgradient wells MW-2, MW-3, and MW-6 have shown substantial variations in diesel concentration. In general, a substantial decrease was observed from August 2003 to December 2003, followed by similar concentrations in the subsequent event, followed by a general increase from March 2004 to historical maxima or near maxima in December 2004. Following the December 2004 there was a general decrease in diesel concentrations until September 2005, and

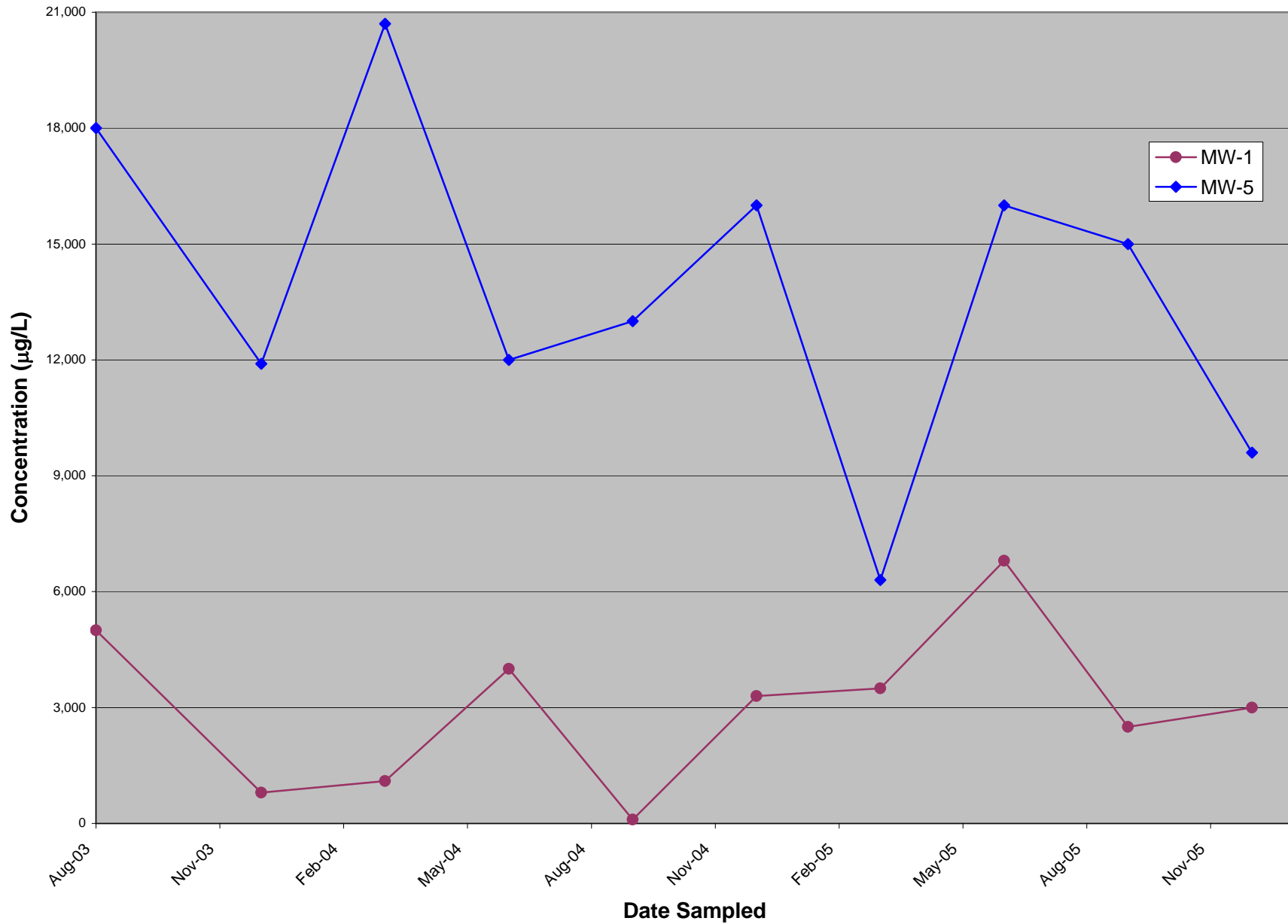
**Figure 9: Gasoline Hydrochemical Trends
Source Area Wells
240 W. MacArthur Blvd, Oakland, California**



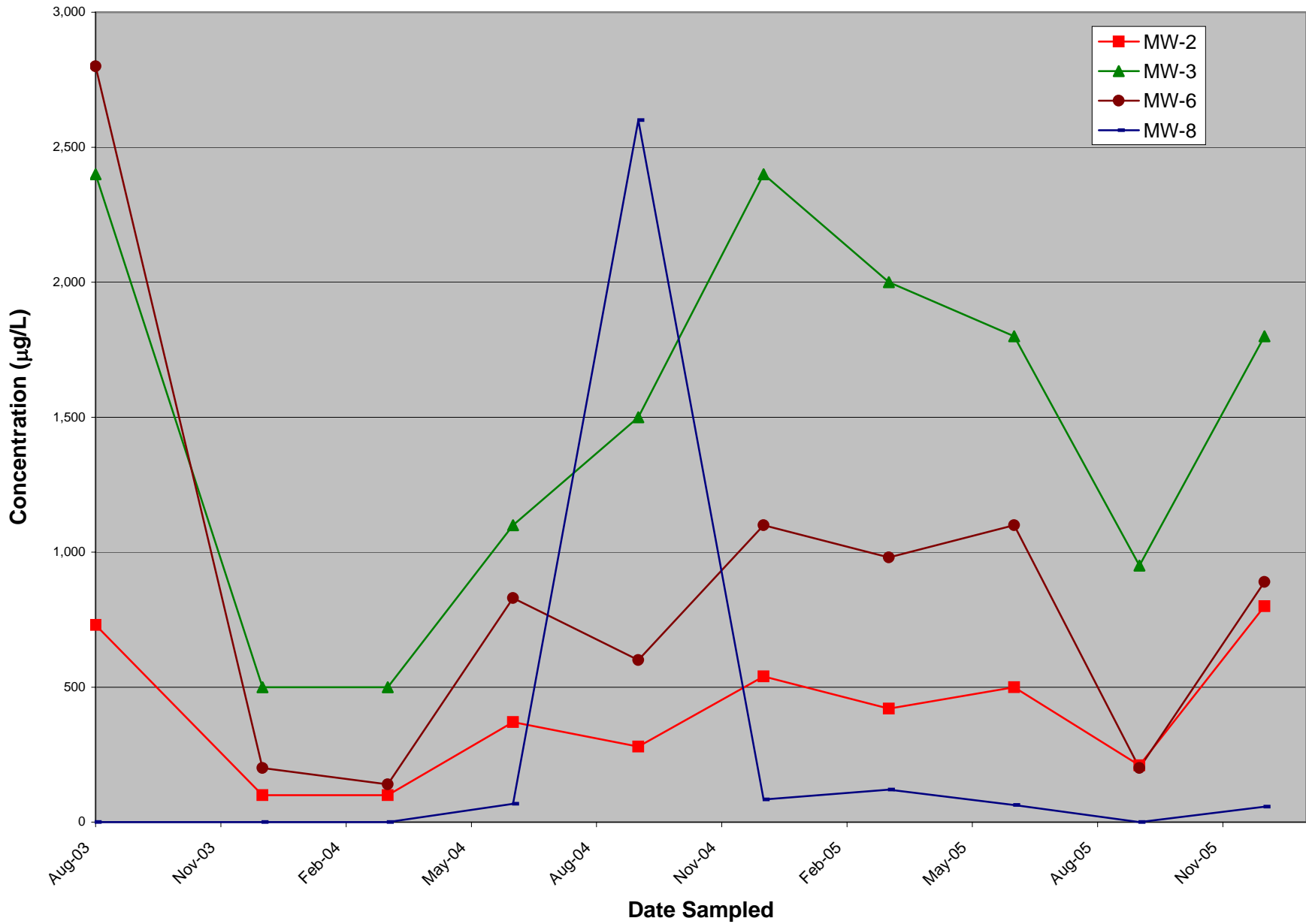
**Figure 10: Gasoline Hydrochemical Trends
Downgradient Wells
240 W. MacArthur Blvd, Oakland, California**



**Figure 11: Diesel Hydrochemical Trends
Source Area Wells
240 W. MacArthur Blvd, Oakland, California**



**Figure 12: Diesel Hydrochemical Trends
Downgradient Wells
240 W. MacArthur Blvd, Oakland, California**



concentrations increased again in the December 2005 event. Well MW-8 (the most downgradient well) has historically shown low to non-detect diesel concentrations, with the exception of an apparently anomalous measurement of approximately 2,500 milligrams per liter (mg/L) in September 2004, and then a return to a concentration of less than 100 mg/L in the most recent event.

Benzene

Figure 13 shows hydrochemical trend data for benzene in key site wells for the past 4 years of monitoring.

Source area wells MW-1 and MW-5 have shown substantial variations in benzene concentrations—an overall increase in concentration over time, with generally higher concentrations in the wet season and lower concentrations in the dry season. Benzene concentrations generally have been comparable between MW-1 and MW-5. Historical maximum benzene concentrations were observed in June 2005 (MW-5) and September 2005 (MW-1), followed by a decrease to near historical minima in the most recent event.

Downgradient wells MW-2, MW-3, and MW-6 have all shown a relatively stable benzene concentration trend, with the most recent concentrations comparable to those in December 2001.

MTBE

Figure 14 shows hydrochemical trend data for MTBE in key site wells for the past 4 years of monitoring.

Source area wells MW-1 and MW-5 have shown substantial variations in MTBE concentrations, with generally the same trend of higher concentrations in the wet season and lower concentrations in the dry season. Following historical maximum concentrations in December 2003, MTBE concentrations in MW-1 and MW-5 decreased to low or non-detectable concentrations by June 2004, and have remained there since.

Downgradient wells MW-2 and MW-3 have shown substantial variations in MTBE concentration over the 3 years of monitoring, with the expected higher concentrations in the rainy season. MTBE concentrations have shown a declining trend since December 2003, and in the most recent event are approximately 200 percent lower than in December 2001. MTBE concentrations in MW-8 (the most downgradient well) also have shown substantial variations in concentration, and showed an increasing trend from August 2003 through September 2004 before exhibiting an overall decreasing trend in MTBE concentration. MTBE has not been detected in downgradient well MW-6 above 5 µg/L since October 2002, with the exception of a reported concentration of 28 µg/L in June 2005; the reported MTBE concentration in the

Figure 13: Benzene Hydrochemical Trends
240 W. MacArthur Blvd, Oakland, California

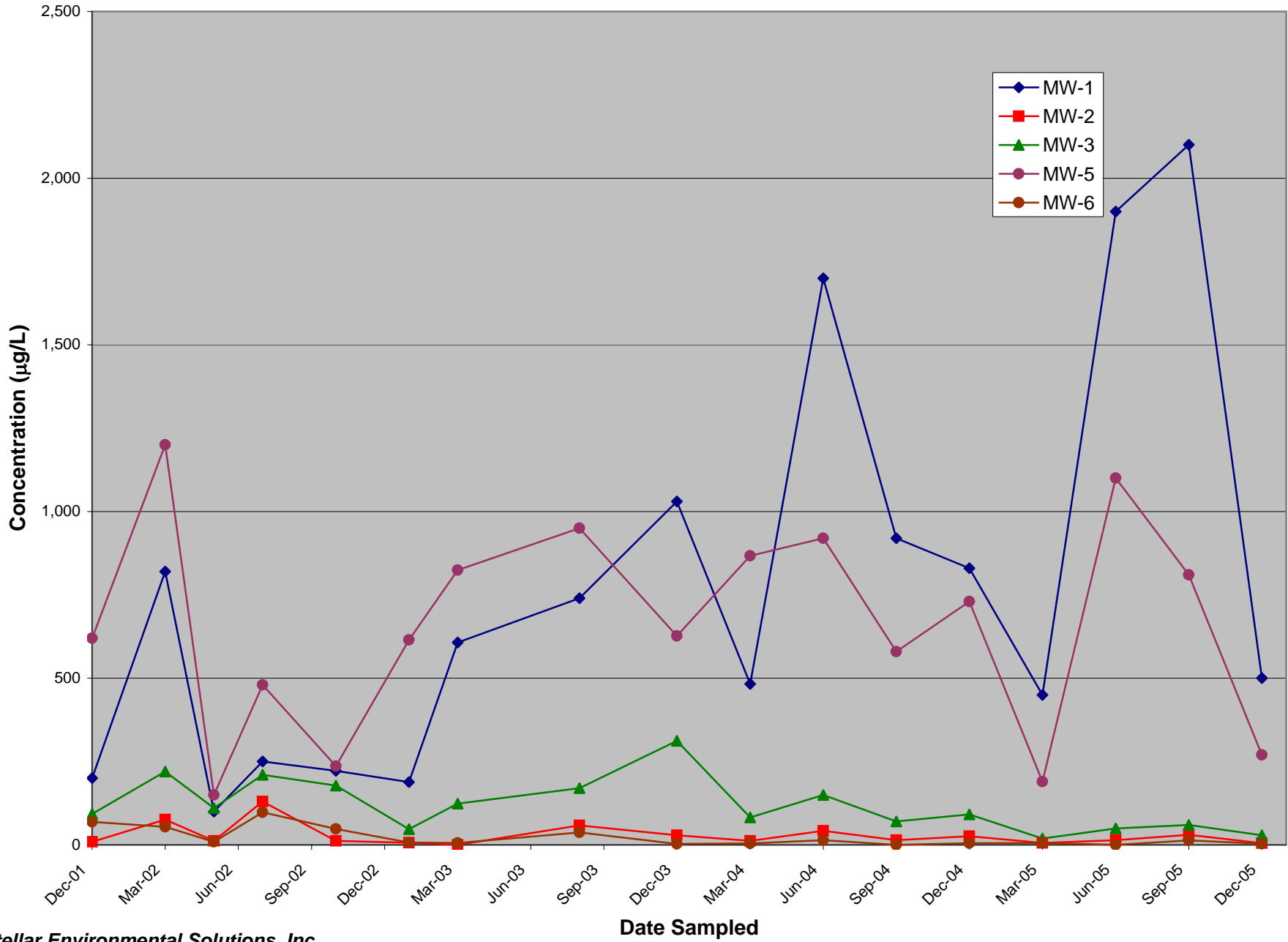
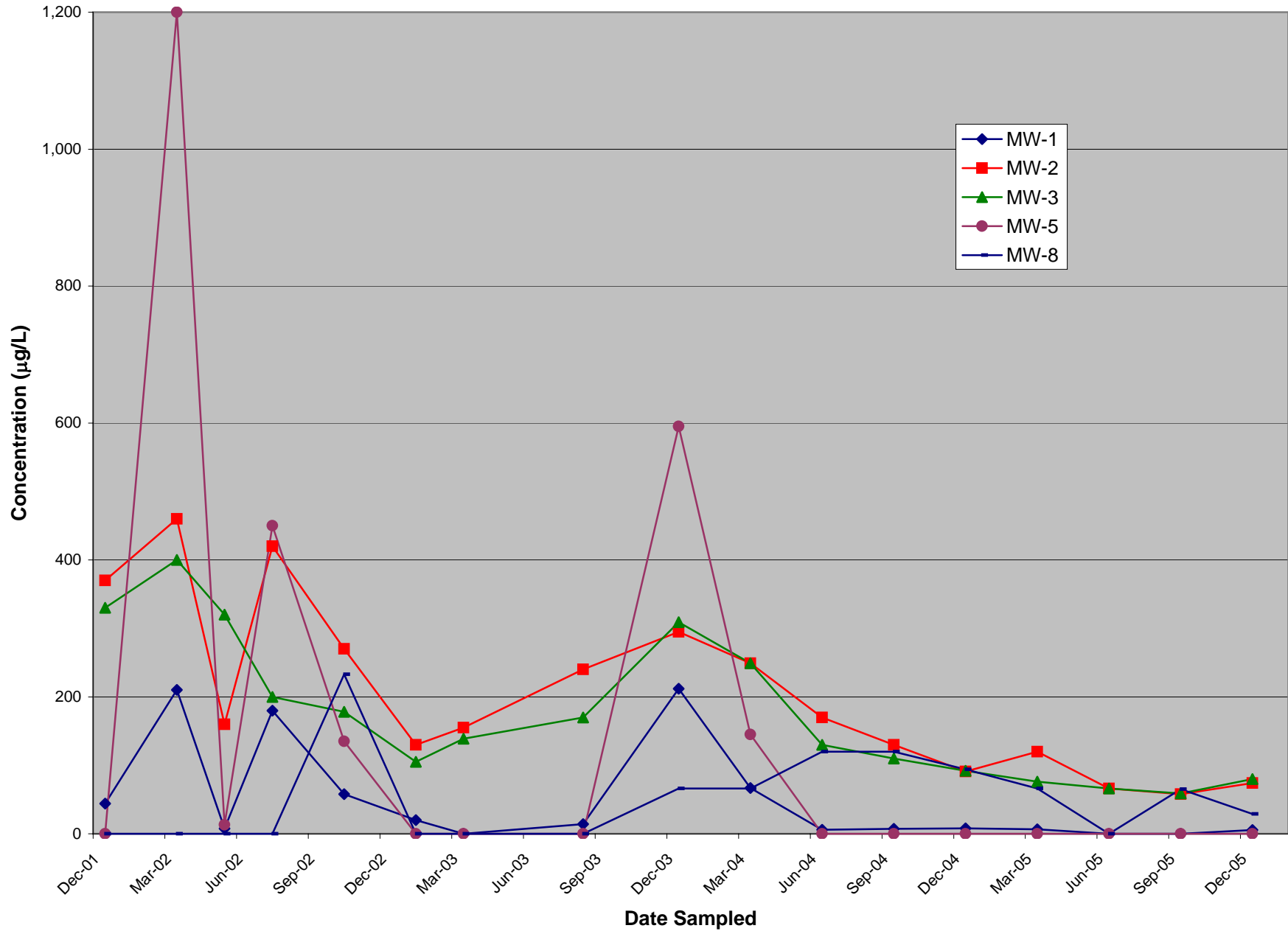


Figure 14: MTBE Hydrochemical Trends
240 W. MacArthur Blvd, Oakland, California



following September 2005 event was less than 0.5 µg/L. The data indicate that the center of MTBE mass in the plume has migrated beyond the source area to the downgradient (southern) portion of the property.

PLUME GEOMETRY AND MIGRATION INDICATIONS

As discussed in detail in Section 4.0, the contaminant plume in groundwater (gasoline, diesel, and BTEX concentrations above ESL criteria) has a maximum extent within the isoconcentration contours of approximately 160 feet long by 120 feet wide in the December 2005 monitoring event, with a generally north-south longitudinal axis. The source area, represented by wells MW-1 and MW-5, show concentrations of gasoline and benzene remaining high and trending upward in concentration over the past 4 years.

Contaminant concentrations above ESL criteria extend off site to the north-northwest (under Howe Street), and for gasoline extend underneath W. Macarthur Boulevard to the south. The MTBE plume shows generally the same configuration, except that it is situated downgradient from the source area. The northern (upgradient) limit of the plume is inferred to be within 10 to 20 feet of the former UFSTs. The eastern limit of the plume is constrained on site.

The plume geometry has not varied substantially over the past 4 years of monitoring, although seasonal fluctuations in contaminant concentrations have been observed. Increasing diesel and MTBE concentrations in downgradient wells MW-8, MW-2, and MW-3 suggest that the center of contaminant mass for these constituents is moving slowly downgradient. Relatively stable gasoline and benzene concentrations in downgradient wells suggest that downgradient migration of these constituents is not occurring.

Groundwater contaminant migration appears to be controlled locally by hydrogeologic conditions. Based on our experience, it is likely that the contaminant concentrations attenuate to below ESL criteria no more than 50 feet off site. However, continued quarterly groundwater monitoring in site wells is warranted to confirm that groundwater contaminant concentrations do not increase and/or there is no indication of significant plume migration.

CLOSURE CRITERIA ASSESSMENT AND PROPOSED ACTIONS

The Water Board generally requires that the following criteria be met before issuing regulatory closure of contaminant cases:

1. ***The contaminant source has been removed (i.e., the source of the discharge and obviously-contaminated soil).*** This criterion has not been met. While the UFSTs have been removed, borehole soil sampling has shown a substantial mass of residual source area soil contamination that will act as an ongoing source of groundwater contamination. As discussed below, the property owner has proposed to Alameda County Health to

implement a soil vapor extraction system as an interim remedial action to reduce contaminant mass.

2. ***The groundwater contaminant plume is well characterized, and is stable or reducing in magnitude and extent.*** As discussed above, in our professional opinion, this criterion has not been met, and continued groundwater monitoring will be needed to demonstrate plume stability.
3. ***If residual contamination (soil or groundwater) exists, there is no reasonable risk to sensitive receptors (i.e., contaminant discharge to surface water or water supply wells) or to site occupants.*** This criterion is generally met by conducting a Risk-Based Corrective Action (RBCA) assessment that models the fate and transport of residual contamination in the context of potential impacts to sensitive receptors (e.g., water wells, residential land use). While no downgradient water wells have been identified, a deep sanitary sewer line is located approximately 40 feet from the downgradient property line. It is possible that this line could act as a preferential pathway for migration of site-sourced groundwater contamination. However, it is highly unlikely that contaminated groundwater that might be entrained in the line backfill material would migrate to the nearest surface water body.

Based on the results of our June 2004 Soil and Groundwater Investigation, Alameda County Health requested a workplan for additional site characterization to further define the lateral extent and magnitude of site contamination (this was submitted to the County in December 2004). As part of that workplan, the property owner proposed evaluating (and implementing if results are favorable) the installation of a soil vapor extraction system to reduce unsaturated zone soil contamination, as well as continuing the established quarterly groundwater monitoring program. Reducing source area (and outlying area) soil contamination should reduce the potential for offsite migration of groundwater contamination by removing contaminant mass, and should reduce the overall time to achieve regulatory closure.

6.0 SUMMARY, CONCLUSIONS, AND PROPOSED ACTIONS

SUMMARY AND CONCLUSIONS

- The site has undergone site investigations and remediation since 1991 (SES has been involved since August 2003) to address soil and groundwater contamination resulting from leaking UFSTs that were reportedly removed. Alameda County Health is the lead regulatory agency.
- A total of 29 groundwater monitoring/sampling events have been conducted in the eight site wells between August 1997 and December 2005 (the most recent event).
- Additional site characterization (exploratory borehole drilling and sampling) in 2004 provided additional data on the extent and magnitude of residual soil and groundwater contamination.
- A substantial mass of residual unsaturated zone soil contamination is present in the source area, and will continue to be a long-term source of groundwater contamination unless abated. Soil (and groundwater) contamination appears to be constrained to the upper water-bearing zone, and has not impacted the underlying non-water-bearing zone (beginning at approximately 21 feet deep).
- Groundwater at the site appears to be slightly confined, with a flow direction ranging between northwest and west and a relatively flat hydraulic gradient averaging approximately 0.005 feet/foot.
- The primary site chemicals of concern, with regard to concentrations and risk issues, are gasoline, benzene, and MTBE. Diesel, aromatic hydrocarbons, lead scavengers, and fuel oxygenates are present at lesser concentrations and over a smaller area.
- Maximum groundwater contamination is located in the northern corner of the site, near the former UFSTs. There has been no evidence of separate-phase (i.e., floating product) petroleum in source area wells since 2001. Groundwater contamination above ESL criteria extends offsite (likely a limited distance) beneath Howe Street and W. MacArthur Boulevard.
- Increasing diesel and MTBE concentrations in downgradient wells suggest that the center of mass of contamination in groundwater may be migrating downgradient.

- A previous water well survey identified no vicinity water wells with the potential to intercept site-sourced groundwater contamination. A deep sanitary sewer line beneath W. MacArthur Boulevard could be acting as a preferential contaminant migration pathway.
- The adjacent Shell service station is contributing minor MTBE groundwater contamination to the eastern corner of the subject property. This contamination is unrelated to the separate, site-sourced MTBE groundwater contamination in the northern and western portions of the subject property.
- At the request of Alameda County Health, a workplan was submitted in December 2004 for additional site characterization, and for interim remedial action (likely soil vapor extraction) to reduce contaminant mass, the potential for migration, and the overall duration of the investigation.

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.
- Continue to make required Electronic Data Format uploads to the State Water Resources Control Board's GeoTracker database, and upload an electronic copy of technical reports to Alameda County Health's ftp system.
- Implement the workplan submitted to Alameda County Health in December 2004 for additional site characterization and interim remedial action.

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8.0 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.

APPENDIX A

Current Event Groundwater Monitoring Field Records

WELLHEAD INSPECTION CHECKLIST

Date 12/19/05 Client Stellar
 Site Address 240 W. MacArthur Oakland
 Job Number 051219-PA-1 Technician DA+SL

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Debris Removed From Wellbox	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)
MW-1							X	
MW-2	X							
MW-3							x	
MW-4	X							
MW-5	X							
MW-6	X							
MW-7		x					x	
MW-8	X							

NOTES: MW-6: notch in casing may let in surface runoff
MW-3: 2 1/2 tabs stripped
MW-1 Missing 2 of 2 bolts

WELL GAUGING DATA

Project # 057219-DA1 Date 12/19/15 Client Stellar

Site 240 W. MacArthur Oakland

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC
MW-1	2	heavy sheen				15.67	24.40	
MW-2	2					14.88	24.15	
MW-3	2					13.94	24.04	
MW-4	2					13.83	23.95	
MW-5	2					15.81	19.99	
MW-6	2					14.90	20.00	
MW-7	2					14.88	19.85	
MW-8	2					12.75	19.79	
								∪

WELL MONITORING DATA SHEET

Project #: <u>057219-DA1</u>	Client: <u>Stellz</u>
Sampler: <u>DA+SL</u>	Date: <u>12/19/05</u>
Well I.D.: <u>MW-2</u>	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): <u>24.15</u>	Depth to Water (DTW): <u>14.88</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer <input checked="" type="checkbox"/> Disposable Bailer Positive Air Displacement Electric Submersible	Waterra Peristaltic Extraction Pump Other _____	Sampling Method: Bailer <input checked="" type="checkbox"/> Disposable Bailer Extraction Port Dedicated Tubing Other: _____
--	--	---

$1.5 \text{ (Gals.)} \times 3 = 4.5 \text{ Gals.}$ 1 Case Volume Specified Volumes Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F or °C)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	Gals. Removed	Observations
1052	66.5	7.1	661	71000	1.5	cloudy, slight odor
1054	67.0	6.8	660	71000	3	"
1056	67.2	6.7	657	71000	4.5	"
						Fe ²⁺ = 2.8 mg/L

Did well dewater? Yes No Gallons actually evacuated: 4.5

Sampling Date: 12/19/05 Sampling Time: 1100 Depth to Water: —

Sample I.D.: MW-2 Laboratory: Kiff CalScience Other CHT

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: _____

EB I.D. (if applicable): _____ @ _____ Time Duplicate I.D. (if applicable): _____

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: _____

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
				0.1
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: <u>051219-DA1</u>	Client: <u>Stellar</u>
Sampler: <u>SL+DA</u>	Date: <u>12/19/15</u>
Well I.D.: <u>MW-4</u>	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): <u>13.83</u>	Depth to Water (DTW): <u>23.95</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer Disposable Bailer Positive Air Displacement Electric Submersible Other _____

Waterra Peristaltic Extraction Pump Other _____

Sampling Method: Bailer Disposable Bailer Extraction Port Dedicated Tubing Other: _____

1.6 (Gals.) X 3 = 4.8 Gals.
 I Case Volume Specified Volumes Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F or °C)	pH	Cond (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
0956	64.6	6.9	514	71000	2	tan, cloudy
0958	66.4	6.9	471	71000	4	"
1000	66.9	6.8	488	71000	5	"
			Fe ²⁺ = 0			

Did well dewater? Yes No Gallons actually evacuated: 5

Sampling Date: 12/19/15 Sampling Time: 1003 Depth to Water: 5

Sample I.D.: MW-4 Laboratory: Kiff CalScience Other: CT

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge: <u>0.4</u>	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: <u>051219-DA1</u>	Client: <u>Stellar</u>
Sampler: <u>PA</u>	Date: <u>12/19/05</u>
Well I.D.: <u>MW-5</u>	Well Diameter: <u>(2)</u> 3 4 6 8 _____
Total Well Depth (TD): <u>19.99</u>	Depth to Water (DTW): <u>15.81</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): <u>(YSI)</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>—</u>	

Purge Method: Bailer <input checked="" type="checkbox"/> Disposable Bailer Positive Air Displacement Electric Submersible	Waterra Peristaltic Extraction Pump Other _____	Sampling Method: Bailer <input checked="" type="checkbox"/> Disposable Bailer Extraction Port Dedicated Tubing Other: _____
--	--	---

$0.7 \text{ (Gals.)} \times 3 = 2.1 \text{ Gals.}$ 1 Case Volume Specified Volumes Calculated Volume	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Well Diameter</th> <th style="text-align: left;">Multiplier</th> <th style="text-align: left;">Well Diameter</th> <th style="text-align: left;">Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
11.10	64.9	6.7	528	402	0.7	odor sheen
11.12	65.5	6.7	515	373	1.4	
11.13	65.4	6.7	516	516 386	2.1	
			$Fe^{2+} = 2.6 \text{ mg/L}$			

Did well dewater? Yes No Gallons actually evacuated: 2.1

Sampling Date: 12/19/05 Sampling Time: 11.20 Depth to Water: —

Sample I.D.: MW-5 Laboratory: Kiff CalScience Other C+T

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

EB I.D. (if applicable): _____ @ _____ Time Duplicate I.D. (if applicable): _____

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

497

WELL MONITORING DATA SHEET

Project #: <u>051219-DA1</u>	Client: <u>Stellar</u>
Sampler: <u>DA+SL</u>	Date: <u>12/19/05</u>
Well I.D.: <u>MW-7</u>	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): <u>19.85</u>	Depth to Water (DTW): <u>14.88</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer Disposable Bailer Positive Air Displacement Electric Submersible Other _____

Waterra Peristaltic Extraction Pump Other _____

Sampling Method: Bailer Disposable Bailer Extraction Port Dedicated Tubing Other: _____

0.8 (Gals.) X 3 = 2.4 Gals.
 1 Case Volume Specified Volumes Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
0909	66.4	7.7	826	>1000	0.8	brown
0911	68.0	6.9	782	>1000	1.6	"
0913	68.0	6.7	762	>1000	2.4	"
			Fe ²⁺ = 0			

Did well dewater? Yes No Gallons actually evacuated: 2.4

Sampling Date: 12/19/05 Sampling Time: 0915 Depth to Water:

Sample I.D.: MW-7 Laboratory: Kiff CalScience Other CAT

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

1.6

SPH or Purge Water Drum Log

Client: Stellar Env.
 Site Address: 240 W. MacArthur Blvd., Oakland

STATUS OF DRUM(S) UPON ARRIVAL						
Date	6/14/05	9/19/05	12/19/05			
Number of drum(s) empty:						
Number of drum(s) 1/4 full:	1	1				
Number of drum(s) 1/2 full:						
Number of drum(s) 3/4 full:			1			
Number of drum(s) full:	4	4	4			
Total drum(s) on site:	5	5				
Are the drum(s) properly labeled?	Yes	Y	Y			
Drum ID & Contents:	H ₂ O	H ₂ O →				
If any drum(s) are partially or totally filled, what is the first use date:						

- If you add any SPH to an empty or partially filled drum, drum must have at least 20 gals. of Purgewater or DI Water.
- If drum contains SPH, the drum MUST be steel AND labeled with the appropriate label.
- All BTS drums MUST be labeled appropriately.

STATUS OF DRUM(S) UPON DEPARTURE						
Date	6/14/05	9/19/05	12/19/05			
Number of drums empty:						
Number of drum(s) 1/4 full:			1			
Number of drum(s) 1/2 full:						
Number of drum(s) 3/4 full:	1	1				
Number of drum(s) full:	4	4 5	5			
Total drum(s) on site:	5	5	6			
Are the drum(s) properly labeled?	Yes	Y	Y			
Drum ID & Contents:	H ₂ O	H ₂ O →				

LOCATION OF DRUM(S)
 Describe location of drum(s): Next to Dumpster

FINAL STATUS						
Number of new drum(s) left on site this event		2	1			
Date of inspection:	6/14/05	9/19/05	12/19/05			
Drum(s) labelled properly:	Yes	Y	Y			
Logged by BTS Field Tech:	WJ	WJ	PA			
Office reviewed by:	R	9/22/05	R			

Chain of Custody Record

Laboratory Curtis and Tompkins, Ltd. Method of Shipment Hand Delivery
 Address 2323 Fifth Street Shipment No. _____
Berkeley, California 94710 Airbill No. _____
510-486-0900 Cooler No. _____
 Project Owner Mr. Glen Poy-Wing Project Manager Bruce Rucker
 Site Address 240 W. MacArthur Blvd. Telephone No. (510) 644-3123
Oakland, California Fax No. (510) 644-3859
 Project Name Oakland Auto Works Samplers: (Signature) RSLane
 Project Number 2003-43

Lab job no. _____
 Date 12/19/05
 Page 1 of _____

Filtered
 No. of Containers
 TVH - GAS (BOLISM)
 TEL - Diesel (BOLISM)
 BTX/MTHX/EDB
 (oxy's) (C9H 0260)

Field Sample Number	Location/Depth	Date	Time	Sample Type	Type/Size of Container	Preservation		Analysis Required										Remarks								
						Cooler	Chemical																			
MW-1		12/19/05	1130	W	VOAS/liter	yes	HCl/NP	5	X	X	X															
MW-2			1100		VOAS/liter	yes	HCl/NP	5	X	X	X															
MW-3			1045		VOAS/liter	yes	HCl/NP	5	X	X	X															
MW-4			1003		VOAS	yes	HCl	3	X																	
MW-5			1120		VOAS/liter	yes	HCl/NP	5	X	X	X															
MW-6			1021		VOAS/liter	yes	HCl/NP	5	X	X	X															
MW-7			0915		VOAS	yes	HCl	3	X																	
MW-8			0940		VOAS/liter	yes	HCl/NP	5	X	X	X															

Relinquished by: <u>RSLane</u> Signature: _____ Printed: <u>RSLane</u> Company: <u>Blaine Tech</u>	Date: <u>12/19/05</u> Time: <u>1353</u>	Received by: <u>Ken Shih</u> Signature: _____ Printed: <u>KEN SHIH</u> Company: <u>BLAINE TECH</u>	Date: <u>12/19/05</u> Time: <u>1353</u>	Relinquished by: _____ Signature: _____ Printed: _____ Company: _____	Date: <u>12/20/05</u> Time: <u>1358</u>	Received by: <u>Ricky Grams</u> Signature: _____ Printed: <u>Ricky Grams</u> Company: <u>CAT</u>	Date: <u>12/20/05</u> Time: <u>1358</u>
Turnaround Time: <u>5 Day TAT</u> Comments: _____ _____ _____				Relinquished by: _____ Signature: _____ Printed: _____ Company: _____		Received by: _____ Signature: _____ Printed: _____ Company: _____	

2000-00-01

intact cold RC

APPENDIX B

Current Event Analytical Laboratory Report and Chain-of-Custody Record



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

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

A N A L Y T I C A L R E P O R T

Prepared for:

Stellar Environmental Solutions
2198 6th Street
Suite 201
Berkeley, CA 94710

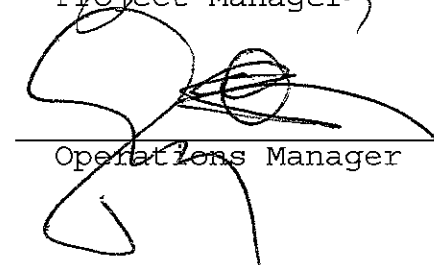
Date: 03-JAN-06
Lab Job Number: 183952
Project ID: 2004-43
Location: Oakland Auto Works

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

Reviewed by:


Project Manager

Reviewed by:


Operations Manager

This package may be reproduced only in its entirety.

CASE NARRATIVE

Laboratory number: 183952
Client: Stellar Environmental Solutions
Project: 2004-43
Location: Oakland Auto Works
Request Date: 12/20/05
Samples Received: 12/20/05

This hardcopy data package contains sample and QC results for eight water samples, requested for the above referenced project on 12/20/05. The samples were received cold and intact.

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

High surrogate recoveries were observed for bromofluorobenzene (FID) and trifluorotoluene (FID) in a number of samples, due to interference from coeluting hydrocarbon peaks. No other analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B):

No analytical problems were encountered.

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

No analytical problems were encountered.

Chain of Custody Record

Lab job no. 83952
 Date 12/19/15
 Page 1 of 1

Laboratory Curtis and Tompkins, Ltd. Method of Shipment Hand Delivery
 Address 2323 Fifth Street Shipment No. _____
Berkeley, California 94710 Airbill No. _____
510-486-0900 Cooler No. _____
 Project Owner Mr. Glen Poy-Wing Project Manager Bruce Rucker
 Site Address 240 W. MacArthur Blvd. Telephone No. (510) 644-3123
Oakland, California Fax No. (510) 644-3859
 Project Name Oakland Auto Works Samplers: (Signature) RSLane
 Project Number 2003-43

Filtered	No. of Containers	Analysis Required										Remarks	
		VH-VIS (P&S)	TDH - Diesel (P&S)	BTEX/MTBE/EDB (P&S)	PCB (P&S)	PAH (P&S)	TOC (P&S)	NO3 (P&S)	NO2 (P&S)	NH4 (P&S)	PH (P&S)		TEMP (P&S)
		X	X	X	X	X	X	X	X	X	X		
		X	X	X	X	X	X	X	X	X	X		
		X	X	X	X	X	X	X	X	X	X		
		X	X										
		X	X	X	X	X	X	X	X	X	X		
		X	X	X	X	X	X	X	X	X	X		
		X	X										
		X	X	X	X	X	X	X	X	X	X		

-10
-7
-3
-4
-5
-6
-7
-8

Field Sample Number	Location/Depth	Date	Time	Sample Type	Type/Size of Container	Preservation		Cooler	Chemical	Filtered	No. of Containers	VH-VIS (P&S)	TDH - Diesel (P&S)	BTEX/MTBE/EDB (P&S)	PCB (P&S)	PAH (P&S)	TOC (P&S)	NO3 (P&S)	NO2 (P&S)	NH4 (P&S)	PH (P&S)	TEMP (P&S)			
						Cooler	Chemical																		
MW-1		12/19/15	11:30	W	VO2S/liter	yes	HCl/NP	yes	HCl/NP	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
MW-2			11:00		VO2S/liter	yes	HCl/NP	yes	HCl/NP	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
MW-3			10:45		VO2S/liter	yes	HCl/NP	yes	HCl/NP	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
MW-4			10:03		VO2S	yes	HCl	yes	HCl	X	X														
MW-5			11:20		VO2S/liter	yes	HCl/NP	yes	HCl/NP	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
MW-6			10:21		VO2S/liter	yes	HCl/NP	yes	HCl/NP	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
MW-7			09:15		VO2S	yes	HCl	yes	HCl	X	X														
MW-8			09:40		VO2S/liter	yes	HCl/NP	yes	HCl/NP	X	X	X	X	X	X	X	X	X	X	X	X	X	X		

Relinquished by: <u>RSLane</u> Signature: _____ Printed: <u>RSLane</u> Company: <u>Blainetech</u>	Date: <u>12/19/15</u> Time: <u>1353</u>	Received by: <u>Ken Shih</u> Signature: _____ Printed: <u>KEN SHIH</u> Company: <u>BLAINE TECH</u>	Date: <u>12/19/15</u> Time: <u>1333</u>	Relinquished by: <u>Ricky Grams</u> Signature: _____ Printed: <u>RICKY GRAMS</u> Company: <u>BLAINE TECH</u>	Date: <u>12/20/15</u> Time: <u>1358</u>	Received by: <u>Ricky Grams</u> Signature: _____ Printed: <u>Ricky Grams</u> Company: <u>CT</u>	Date: <u>12/20/15</u> Time: <u>1358</u>
--	--	---	--	---	--	--	--

Turnaround Time: 5 Day TAT

Comments: 1 vo2 Broken for MW-1

2000-00-01

intact cold RC

Total Volatile Hydrocarbons

Lab #: 183952	Location: Oakland Auto Works
Client: Stellar Environmental Solutions	Prep: EPA 5030B
Project#: 2004-43	Analysis: EPA 8015B
Matrix: Water	Batch#: 108913
Units: ug/L	Sampled: 12/19/05
Diln Fac: 1.000	Received: 12/20/05

Field ID: MW-1	Lab ID: 183952-001
Type: SAMPLE	Analyzed: 12/21/05

Analyte	Result	RL
Gasoline C7-C12	4,300	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	135	62-141
Bromofluorobenzene (FID)	208 *	78-134

Field ID: MW-2	Lab ID: 183952-002
Type: SAMPLE	Analyzed: 12/21/05

Analyte	Result	RL
Gasoline C7-C12	1,300	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	171 *	62-141
Bromofluorobenzene (FID)	132	78-134

Field ID: MW-3	Lab ID: 183952-003
Type: SAMPLE	Analyzed: 12/21/05

Analyte	Result	RL
Gasoline C7-C12	3,200	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	152 *	62-141
Bromofluorobenzene (FID)	144 *	78-134

*= Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	183952	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2004-43	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC321932	Batch#:	108913
Matrix:	Water	Analyzed:	12/21/05
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	1,751	88	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	113	62-141
Bromofluorobenzene (FID)	101	78-134

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	183952	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2004-43	Analysis:	EPA 8015B
Field ID:	MW-2	Batch#:	108913
MSS Lab ID:	183952-002	Sampled:	12/19/05
Matrix:	Water	Received:	12/20/05
Units:	ug/L	Analyzed:	12/22/05
Diln Fac:	1.000		

Type: MS Lab ID: QC321998

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,251	2,000	2,862	81	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	134	62-141
Bromofluorobenzene (FID)	137 *	78-134

Type: MSD Lab ID: QC321999

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,900	82	80-120	1	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	132	62-141
Bromofluorobenzene (FID)	142 *	78-134

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Total Extractable Hydrocarbons

Lab #:	183952	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2004-43	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	12/19/05
Units:	ug/L	Received:	12/20/05
Diln Fac:	1.000	Prepared:	12/21/05
Batch#:	108939		

Field ID:	MW-8	Lab ID:	183952-008
Type:	SAMPLE	Analyzed:	12/28/05

Analyte	Result	RL
Diesel C10-C24	57 L Y	50

Surrogate	%REC	Limits
Hexacosane	102	60-135

Type:	BLANK	Analyzed:	12/27/05
Lab ID:	QC322027	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
Hexacosane	92	60-135

H= Heavier hydrocarbons contributed to the quantitation
 L= Lighter hydrocarbons contributed to the quantitation
 Y= Sample exhibits chromatographic pattern which does not resemble standard
 ND= Not Detected
 RL= Reporting Limit
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Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	183952	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2004-43	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	108939
Units:	ug/L	Prepared:	12/21/05
Diln Fac:	1.000		

Type: BS Analyzed: 12/27/05
 Lab ID: QC322028 Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,286	91	53-138

Surrogate	%REC	Limits
Hexacosane	86	60-135

Type: BSD Analyzed: 12/28/05
 Lab ID: QC322029 Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,078	83	53-138	10	36

Surrogate	%REC	Limits
Hexacosane	92	60-135

BTXE & Oxygenates			
Lab #:	183952	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2004-43	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	108972
Lab ID:	183952-001	Sampled:	12/19/05
Matrix:	Water	Received:	12/20/05
Units:	ug/L	Analyzed:	12/23/05
Diln Fac:	7.143		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	100	71
MTBE	5.5	3.6
Isopropyl Ether (DIPE)	ND	3.6
Ethyl tert-Butyl Ether (ETBE)	ND	3.6
1,2-Dichloroethane	ND	3.6
Benzene	500	3.6
Methyl tert-Amyl Ether (TAME)	ND	3.6
Toluene	22	3.6
1,2-Dibromoethane	ND	3.6
Ethylbenzene	72	3.6
m,p-Xylenes	140	3.6
o-Xylene	88	3.6

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-121
1,2-Dichloroethane-d4	97	80-125
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-124

BTXE & Oxygenates			
Lab #:	183952	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2004-43	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	108972
Lab ID:	183952-002	Sampled:	12/19/05
Matrix:	Water	Received:	12/20/05
Units:	ug/L	Analyzed:	12/22/05
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	54	10
MTBE	74	0.5
Isopropyl Ether (DIPE)	1.0	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	4.9	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
Toluene	0.6	0.5
1,2-Dibromoethane	ND	0.5
Ethylbenzene	0.7	0.5
m,p-Xylenes	0.8	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-121
1,2-Dichloroethane-d4	98	80-125
Toluene-d8	100	80-120
Bromofluorobenzene	105	80-124

BTXE & Oxygenates			
Lab #:	183952	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2004-43	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	108917
Lab ID:	183952-003	Sampled:	12/19/05
Matrix:	Water	Received:	12/20/05
Units:	ug/L	Analyzed:	12/22/05
Diln Fac:	1.429		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	67	14
MTBE	80	0.7
Isopropyl Ether (DIPE)	1.2	0.7
Ethyl tert-Butyl Ether (ETBE)	ND	0.7
1,2-Dichloroethane	ND	0.7
Benzene	29	0.7
Methyl tert-Amyl Ether (TAME)	ND	0.7
Toluene	1.3	0.7
1,2-Dibromoethane	ND	0.7
Ethylbenzene	6.6	0.7
m,p-Xylenes	4.8	0.7
o-Xylene	0.8	0.7

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-121
1,2-Dichloroethane-d4	98	80-125
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-124

BTXE & Oxygenates			
Lab #:	183952	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2004-43	Analysis:	EPA 8260B
Field ID:	MW-5	Batch#:	108972
Lab ID:	183952-005	Sampled:	12/19/05
Matrix:	Water	Received:	12/20/05
Units:	ug/L	Analyzed:	12/23/05
Diln Fac:	3.333		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	33
MTBE	ND	1.7
Isopropyl Ether (DIPE)	ND	1.7
Ethyl tert-Butyl Ether (ETBE)	ND	1.7
1,2-Dichloroethane	ND	1.7
Benzene	270	1.7
Methyl tert-Amyl Ether (TAME)	ND	1.7
Toluene	80	1.7
1,2-Dibromoethane	ND	1.7
Ethylbenzene	110	1.7
m,p-Xylenes	440	1.7
o-Xylene	270	1.7

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-121
1,2-Dichloroethane-d4	95	80-125
Toluene-d8	100	80-120
Bromofluorobenzene	100	80-124

BTXE & Oxygenates			
Lab #:	183952	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2004-43	Analysis:	EPA 8260B
Field ID:	MW-6	Batch#:	108972
Lab ID:	183952-006	Sampled:	12/19/05
Matrix:	Water	Received:	12/20/05
Units:	ug/L	Analyzed:	12/22/05
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	30	10
MTBE	0.5	0.5
Isopropyl Ether (DIPE)	0.9	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
1,2-Dichloroethane	13	0.5
Benzene	3.6	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
Toluene	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethylbenzene	0.7	0.5
m,p-Xylenes	1.8	0.5
o-Xylene	0.6	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-121
1,2-Dichloroethane-d4	98	80-125
Toluene-d8	101	80-120
Bromofluorobenzene	107	80-124

BTXE & Oxygenates			
Lab #:	183952	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2004-43	Analysis:	EPA 8260B
Field ID:	MW-8	Batch#:	108972
Lab ID:	183952-008	Sampled:	12/19/05
Matrix:	Water	Received:	12/20/05
Units:	ug/L	Analyzed:	12/22/05
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	27	10
MTBE	29	0.5
Isopropyl Ether (DIPE)	0.5	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
Toluene	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-121
1,2-Dichloroethane-d4	97	80-125
Toluene-d8	101	80-120
Bromofluorobenzene	108	80-124

Batch QC Report

BTXE & Oxygenates			
Lab #:	183952	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2004-43	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	108917
Units:	ug/L	Analyzed:	12/21/05
Diln Fac:	1.000		

Type: BS Lab ID: QC321944

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	154.8	124	66-138
MTBE	25.00	24.85	99	72-120
Isopropyl Ether (DIPE)	25.00	28.21	113	74-121
Ethyl tert-Butyl Ether (ETBE)	25.00	29.15	117	77-123
1,2-Dichloroethane	25.00	24.58	98	77-120
Benzene	25.00	26.00	104	80-120
Methyl tert-Amyl Ether (TAME)	25.00	24.39	98	77-120
Toluene	25.00	25.97	104	80-120
1,2-Dibromoethane	25.00	26.03	104	80-120
Ethylbenzene	25.00	25.76	103	80-120
m,p-Xylenes	50.00	55.21	110	80-121
o-Xylene	25.00	28.54	114	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-121
1,2-Dichloroethane-d4	96	80-125
Toluene-d8	100	80-120
Bromofluorobenzene	84	80-124

Type: BSD Lab ID: QC321945

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	166.4	133	66-138	7	25
MTBE	25.00	25.85	103	72-120	4	20
Isopropyl Ether (DIPE)	25.00	28.73	115	74-121	2	20
Ethyl tert-Butyl Ether (ETBE)	25.00	29.44	118	77-123	1	20
1,2-Dichloroethane	25.00	23.68	95	77-120	4	20
Benzene	25.00	25.46	102	80-120	2	20
Methyl tert-Amyl Ether (TAME)	25.00	22.96	92	77-120	6	20
Toluene	25.00	24.81	99	80-120	5	20
1,2-Dibromoethane	25.00	25.70	103	80-120	1	20
Ethylbenzene	25.00	25.88	104	80-120	0	20
m,p-Xylenes	50.00	54.56	109	80-121	1	20
o-Xylene	25.00	26.41	106	80-120	8	20

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-121
1,2-Dichloroethane-d4	91	80-125
Toluene-d8	100	80-120
Bromofluorobenzene	92	80-124

Batch QC Report

BTXE & Oxygenates			
Lab #:	183952	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2004-43	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC321946	Batch#:	108917
Matrix:	Water	Analyzed:	12/21/05
Units:	ug/L		

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

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-121
1,2-Dichloroethane-d4	91	80-125
Toluene-d8	99	80-120
Bromofluorobenzene	113	80-124

ND= Not Detected

RL= Reporting Limit

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Batch QC Report

BTXE & Oxygenates			
Lab #:	183952	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2004-43	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC322156	Batch#:	108972
Matrix:	Water	Analyzed:	12/22/05
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	125.3	100	66-138
MTBE	25.00	24.07	96	72-120
Isopropyl Ether (DIPE)	25.00	24.80	99	74-121
Ethyl tert-Butyl Ether (ETBE)	25.00	27.43	110	77-123
1,2-Dichloroethane	25.00	23.76	95	77-120
Benzene	25.00	23.30	93	80-120
Methyl tert-Amyl Ether (TAME)	25.00	23.43	94	77-120
Toluene	25.00	23.73	95	80-120
1,2-Dibromoethane	25.00	24.43	98	80-120
Ethylbenzene	25.00	23.61	94	80-120
m,p-Xylenes	50.00	47.02	94	80-121
o-Xylene	25.00	24.31	97	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-121
1,2-Dichloroethane-d4	96	80-125
Toluene-d8	99	80-120
Bromofluorobenzene	102	80-124

Batch QC Report

BTXE & Oxygenates			
Lab #:	183952	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2004-43	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC322157	Batch#:	108972
Matrix:	Water	Analyzed:	12/22/05
Units:	ug/L		

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

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-121
1,2-Dichloroethane-d4	97	80-125
Toluene-d8	100	80-120
Bromofluorobenzene	107	80-124

ND= Not Detected

RL= Reporting Limit

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Batch QC Report

BTXE & Oxygenates			
Lab #:	183952	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2004-43	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC322158	Batch#:	108972
Matrix:	Water	Analyzed:	12/22/05
Units:	ug/L		

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

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-121
1,2-Dichloroethane-d4	96	80-125
Toluene-d8	100	80-120
Bromofluorobenzene	109	80-124

ND= Not Detected

RL= Reporting Limit

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Batch QC Report

BTXE & Oxygenates			
Lab #:	183952	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2004-43	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	108972
MSS Lab ID:	183902-004	Sampled:	12/14/05
Matrix:	Water	Received:	12/19/05
Units:	ug/L	Analyzed:	12/22/05
Diln Fac:	12.50		

Type: MS Lab ID: QC322163

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	769.0	1,563	2,368	102	70-145
MTBE	<0.6509	312.5	307.1	98	74-121
Isopropyl Ether (DIPE)	<0.3436	312.5	321.8	103	78-125
Ethyl tert-Butyl Ether (ETBE)	<0.4260	312.5	359.2	115	78-124
1,2-Dichloroethane	<0.6949	312.5	312.6	100	78-121
Benzene	<0.3417	312.5	302.9	97	78-120
Methyl tert-Amyl Ether (TAME)	<0.7124	312.5	295.5	95	78-120
Toluene	<0.6565	312.5	300.0	96	78-120
1,2-Dibromoethane	<0.8689	312.5	306.4	98	80-120
Ethylbenzene	<1.374	312.5	289.2	93	77-120
m,p-Xylenes	<2.445	625.0	579.3	93	74-120
o-Xylene	<1.595	312.5	307.5	98	74-120

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-121
1,2-Dichloroethane-d4	96	80-125
Toluene-d8	100	80-120
Bromofluorobenzene	103	80-124

Type: MSD Lab ID: QC322164

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	1,563	2,472	109	70-145	4	22
MTBE	312.5	308.8	99	74-121	1	20
Isopropyl Ether (DIPE)	312.5	325.2	104	78-125	1	20
Ethyl tert-Butyl Ether (ETBE)	312.5	359.5	115	78-124	0	20
1,2-Dichloroethane	312.5	305.2	98	78-121	2	20
Benzene	312.5	297.5	95	78-120	2	20
Methyl tert-Amyl Ether (TAME)	312.5	296.2	95	78-120	0	20
Toluene	312.5	293.7	94	78-120	2	20
1,2-Dibromoethane	312.5	312.1	100	80-120	2	20
Ethylbenzene	312.5	282.4	90	77-120	2	20
m,p-Xylenes	625.0	570.0	91	74-120	2	20
o-Xylene	312.5	299.6	96	74-120	3	20

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-121
1,2-Dichloroethane-d4	95	80-125
Toluene-d8	100	80-120
Bromofluorobenzene	105	80-124

APPENDIX C

Historical Analytical Results

TABLE C-1
Historical Groundwater Monitoring Well Groundwater Analytical Results
Petroleum and Aromatic Hydrocarbons (µg/L)
240 W. MacArthur Boulevard, Oakland, Alameda, California

MW-1									
Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
Yes	1	Aug-97	1,140	< 1,000	110	16	15	112	NA
Yes	2	Dec-97	ND	NA	ND	ND	ND	31	NA
Yes	3	Mar-98	370	NA	8.9	< 0.5	< 0.5	2.2	18
Yes	4	Jul-98	6,400	NA	1,300	23	3.7	58	97
Yes	5	Oct-98	2,500	NA	360	44	1.3	150	< 0.5
Yes	6	Jan-99	2,700	NA	1,200	28	140	78	130
(a)	7	Jun-00	27,000	NA	5,200	500	320	3,100	1,300
(a)	8	Dec-00	976,000	NA	2,490	1,420	3,640	10,100	< 150
(a)	9	Feb-01	NA	NA	NA	NA	NA	NA	NA
(a)	10	May-01	20,000	NA	2,900	310	230	1,900	< 30
(a)	11	Jul-01	92,000	NA	2,900	580	2,800	20,000	560
Pre"hi-vac"	12	Oct 22-01	20,000	NA	3,700	560	410	4,600	2,600
Post "hi-vac"	12	Oct 26-01	< 0.05	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
(a)	13	Dec-01	3,300	NA	200	12	5.7	43	44
No	14	Mar-02	4,600	NA	820	4.4	100	300	210
No	15	May-02	1,600	NA	100	23	20	190	7.7
No	16	Jul-02	2,300	NA	250	15	13	180	180
No	17	Oct-02	1,820	NA	222	16	< 0.3	59	58
No	18	Jan-03	2,880	NA	188	< 50	< 50	157	20
No	19	Mar-03	6,700	NA	607	64	64	288	< 0.18
No	20	Aug-03	4,900	5,000	740	45	85	250	14
Pre-Purge	21	Dec-03	5,060	400	654	11	79	92	129
Post-Purge	21	Dec-03	8,930	800	1,030	55	127	253	212
Yes	22	Mar-04	11,300	1,100	483	97	122	452	67
Yes	23	Jun-04	9,300	4,000	1,700	75	92	350	6.0
Yes	24	Sep-04	9,100	97	920	19	82	201	7.2
Yes	25	Dec-04	11,000	3,300	830	21	74	118	7.9
Yes	26	Mar-05	4,700	3,500	450	28	42	97	6.7
Yes	27	Jun-05	21,000	6,800	1,900	270	320	2,800	< 13
Yes	28	Sep-05	23,000	2,500	2,100	100	200	880	< 2.5
Yes	29	Dec-05	4,300	3,000	500	22	72	228	5.5

(table continued on next page; footnotes on final page)

TABLE C-1 (continued)

MW-2									
Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
Yes	1	Aug-97	5,350	< 1,000	108	36	33	144	NA
Yes	2	Dec-97	1,600	NA	73	ND	ND	ND	NA
Yes	3	Mar-98	3,400	NA	830	100	210	240	870
Yes	4	Jul-98	3,100	NA	25	2.2	< 0.5	0.9	1,900
Yes	5	Oct-98	4,300	NA	< 0.5	1.2	< 0.5	1	4,200
Yes	6	Jan-99	2,900	NA	160	8.9	6.9	78.4	2,100
(a)	7	Jun-00	2,700	NA	200	17	30	16	680
(a)	8	Dec-00	3,020	NA	56.7	< 1.5	< 1.5	< 3.0	3,040
(a)	9	Feb-01	NA	NA	NA	NA	NA	NA	NA
(a)	10	May-01	720	NA	49	< 3.0	4.6	< 3.0	380
(a)	11	Jul-01	8,400	NA	350	44	77	78	550
Pre"hi-vac"	12	Oct 22-01	850	NA	170	4.9	5.1	14	260
Post "hi-vac"	12	Oct 26-01	770	NA	86	5.5	9.6	8.5	310
(a)	13	Dec-01	1,300	NA	9.2	< 2.0	< 2.0	< 2.0	370
No	14	Mar-02	1,300	NA	76	3.8	21	15	460
No	15	May-02	320	NA	12	1.1	4.6	4.8	160
No	16	Jul-02	1,300	NA	130	1.0	9.4	5.6	420
No	17	Oct-02	1,060	NA	12	2.2	4.2	3.5	270
No	18	Jan-03	581	NA	6.5	< 5.0	< 5.0	< 5.0	130
No	19	Mar-03	1,250	NA	< 0.22	< 0.32	< 0.31	< 0.4	155
No	20	Aug-03	2,200	730	58	9.2	< 0.5	28	240
Pre-Purge	21	Dec-03	2,120	100	45	9.4	9.5	20	289
Post-Purge	21	Dec-03	1,980	100	29	22.0	7.4	13	295
Yes	22	Mar-04	2,700	100	12	16.0	9	12	249
Yes	23	Jun-04	1,200	370	42	0.7	2.6	0.9	170
Yes	24	Sep-04	1,500	280	14	< 0.5	< 0.5	0.6	130
Yes	25	Dec-04	1,400	540	26	1.1	1.8	3.5	91
Yes	26	Mar-05	2,300	420	5.3	< 1.0	3.7	< 2.0	120
Yes	27	Jun-05	1,600	500	14	< 0.5	1.8	0.68	66
Yes	28	Sep-05	1,400	210	30	1.3	12	26	58
Yes	29	Dec-05	1,300	800	4.9	0.6	0.7	0.8	74

(table continued on next page; footnotes on final page)

TABLE C-1 (continued)

MW-3									
Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
Yes	1	Aug-97	8,500	< 1,000	450	30	53	106	NA
Yes	2	Dec-97	5,200	NA	180	6.0	5.0	9.3	NA
Yes	3	Mar-98	1,000	NA	6.0	< 0.5	< 0.5	< 0.5	810
Yes	4	Jul-98	6,400	NA	490	57	23	78	220
Yes	5	Oct-98	2,100	NA	< 5.0	< 5.0	< 5.0	< 5.0	2,100
Yes	6	Jan-99	4,400	NA	450	65	26	42	1,300
(a)	7	Jun-00	1,700	NA	110	13	34	13	96
(a)	8	Dec-00	5,450	NA	445	< 7.5	23.8	< 7.5	603
(a)	9	Feb-01	NA	NA	NA	NA	NA	NA	NA
(a)	10	May-01	1,900	NA	180	12	< 3.0	19	330
(a)	11	Jul-01	10,000	NA	830	160	150	260	560
Pre"hi-vac"	12	Oct 22-01	1,400	NA	240	7.8	4.1	15	220
Post "hi-vac"	12	Oct 26-01	1,900	NA	200	16	51	30	290
(a)	13	Dec-01	5,800	NA	93	< 20	31	< 20	330
No	14	Mar-02	1,900	NA	220	16	31	24	400
No	15	May-02	1,600	NA	110	3.4	29	14	320
No	16	Jul-02	1,900	NA	210	27	30	55	200
No	17	Oct. 2002	3,030	NA	178	19	6.2	36	178
No	18	Jan-03	2,980	NA	47	< 5.0	7.6	6.3	105
No	19	Mar-03	3,620	NA	124	< 0.32	22	12	139
No	20	Aug-03	3,800	2,400	170	28	31	31	170
Pre-Purge	21	Dec-03	5,550	400	311	20	41	48	357
Post-Purge	21	Dec-03	6,860	500	312	20	55	58	309
Yes	22	Mar-04	5,490	500	82	34	46	49	249
Yes	23	Jun-04	5,400	1,100	150	30	45	66	130
Yes	24	Sep-04	5,400	1,500	70	3.2	16	13	110
Yes	25	Dec-04	5,300	2,400	91	7.4	21	19	92
Yes	26	Mar-05	4,700	2,000	19	1.1	9.9	3.7	76
Yes	27	Jun-05	4,200	1,800	49	4.5	23.0	16.2	66
Yes	28	Sep-05	5,000	950	60	3.1	12	25.8	59
Yes	29	Dec-05	3,200	1,800	29	1.3	6.6	5.6	80

(table continued on next page; footnotes on final page)

TABLE C-1 (continued)

MW-4									
Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
Yes	1	Aug-97	< 500	< 1,000	< 0.5	< 0.5	< 0.5	< 1.5	NA
Yes	2	Dec-97	ND	NA	ND	ND	ND	ND	NA
Yes	3	Mar-98	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Yes	4	Jul-98	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Yes	5	Oct-98	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Yes	6	Jan-99	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
(a)	7	Jun-00	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
(a)	8	Dec-00	< 500	NA	< 0.3	< 0.3	< 0.6	< 0.3	< 0.3
(a)	9	Feb-01	NA	NA	NA	NA	NA	NA	NA
(a)	10	May-01	< 50	NA	1.2	< 0.3	0.55	1.2	2.9
(a)	11	Jul-01	< 5.0	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Pre"hi-vac"	12	Oct 22-01	< 5.0	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Post "hi-vac"	12	Oct 26-01	< 5.0	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
(a)	13	Dec-01	ND	NA	ND	ND	ND	ND	ND
No	14	Mar-02	< 50	NA	< 1	< 1	< 1	< 1	< 1
No	15	May-02	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
No	16	Jul-02	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
No	17	Oct-02	< 100	NA	< 0.3	< 0.3	< 0.3	< 0.6	< 0.3
No	18	Jan-03	< 100	NA	< 0.3	< 0.3	< 0.3	< 0.6	14
No	19	Mar-03	< 15	NA	< 0.4	< 0.02	< 0.02	< 0.06	5.2
No	20	Aug-03	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Pre-Purge	21	Dec-03	71	NA	< 0.3	< 0.3	< 0.3	< 0.6	< 5.0
Post-Purge	21	Dec-03	63	NA	< 0.3	< 0.3	< 0.3	< 0.6	< 5.0
Yes	22	Mar-04	< 50	NA	< 0.3	< 0.3	< 0.3	< 0.6	< 5.0
Yes	23	Jun-04	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	0.9
Yes	24	Sep-04	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	2.3
Yes	25	Dec-04	< 50	NA	NA	NA	NA	NA	NA
Yes	26	Mar-05	< 50	NA	NA	NA	NA	NA	NA
Yes	27	Jun-05	< 50	NA	NA	NA	NA	NA	NA
Yes	28	Sep-05	< 50	NA	NA	NA	NA	NA	NA
Yes	29	Dec-05	< 50	NA	NA	NA	NA	NA	NA

(table continued on next page; footnotes on final page)

TABLE C-1 (continued)

MW-5									
Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
(a)	9	Feb-01	5,660	NA	76.9	21.1	47.3	312	< 0.3
(a)	10	May-01	22,000	NA	2,600	480	220	2,700	< 30
(a)	11	Jul-01	72,000	NA	3,500	1,100	4,300	22,000	2,500
Pre"hi-vac"	12	Oct 22-01	26,000	NA	2,800	980	6,000	950	2,300
Post "hi-vac"	12	Oct 26-01	17,000	NA	1,200	470	2,900	440	900
(a)	13	Dec-01	2,000	NA	620	190	110	910	< 20
No	14	Mar-02	8,800	NA	1,200	72	7.4	350	1,200
No	15	May-02	2,000	NA	150	38	21	260	13
No	16	Jul-02	4,200	NA	480	68	29	280	450
No	17	Oct-02	5,370	NA	236	45	23	39	135
No	18	Jan-03	8,270	NA	615	156	174	1,010	< 10
No	19	Mar-03	12,400	NA	824	195	213	1,070	< 0.18
No	20	Aug-03	18,000	10,000	950	290	330	1,820	< 2.0
Pre-Purge	21	Dec-03	12,800	600	1,140	327	354	1,530	682
Post-Purge	21	Dec-03	11,900	800	627	263	288	1,230	595
Yes	22	Mar-04	20,700	850	867	266	305	678	145
Yes	23	Jun-04	12,000	1,700	920	240	260	1,150	< 3.1
Yes	24	Sep-04	13,000	1,900	580	240	260	1,260	< 4.2
Yes	25	Dec-04	16,000	3,300	730	200	250	1,100	< 4.2
Yes	26	Mar-05	6,300	4,600	190	28	42	280	< 1.7
Yes	27	Jun-05	16,000	4,100	1,100	260	380	1,590	< 7.1
Yes	28	Sep-05	15,000	3,600	810	210	300	1,300	< 1.3
Yes	29	Dec-05	9,600	3,600	270	80	110	710	< 1.7

(table continued on next page; footnotes on final page)

TABLE C-1 (continued)

MW-6									
Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
(a)	9	Feb-01	1,340	NA	17	0.967	11.1	51.4	< 0.3
(a)	10	May-01	610	NA	15	0.97	< 0.5	46	< 0.5
(a)	11	Jul-01	2,500	NA	130	4.7	53	170	120
Pre"hi-vac"	12	Oct 22-01	280	NA	18	1.2	6.2	4.7	6.0
Post "hi-vac"	12	Oct 26-01	3,600	NA	210	20	170	62	120
(a)	13	Dec-01	5,300	NA	69	5.6	14	17	< 2.0
No	14	Mar-02	71	NA	54	4.2	27	17	8.5
No	15	May-02	150	NA	9.3	< 0.5	< 0.5	< 0.5	1.5
No	16	Jul-02	2,200	NA	98	32	46	150	66
No	17	Oct-02	786	NA	48	5.0	2.2	44	16
No	18	Jan-03	497	NA	6.8	< 5.0	< 5.0	11	< 1.0
No	19	Mar-03	258	NA	5.4	< 0.32	3.3	< 1.1	< 0.18
No	20	Aug-03	1,600	2,800	37	4.1	23	58	< 0.5
Pre-Purge	21	Dec-03	444	100	4.7	4.9	1.8	5.9	4.4
Post-Purge	21	Dec-03	365	200	2.5	3.8	1.4	6.1	< 5.0
Yes	22	Mar-04	215	140	4.0	1.2	1.4	1.4	3.7
Yes	23	Jun-04	710	830	14.0	0.7	5.2	6.6	< 0.5
Yes	24	Sep-04	350	600	< 0.5	2.4	< 0.5	< 0.5	< 0.5
Yes	25	Dec-04	280	1,100	4.9	< 0.5	1.4	4.4	< 0.5
Yes	26	Mar-05	300	980	5.4	< 0.5	3.3	2.3	< 0.5
Yes	27	Jun-05	150	1,100	< 0.5	< 0.5	< 0.5	0.77	28
Yes	28	Sep-05	680	200	13	0.9	7	13	< 0.5
Yes	29	Dec-05	240	890	3.6	< 0.5	0.7	2.4	0.5

(table continued on next page; footnotes on final page)

TABLE C-1 (continued)

MW-7									
Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
(a)	9	Feb-01	ND	NA	ND	ND	ND	ND	ND
(a)	10	May-01	< 50	NA	0.75	0.77	0.48	2.4	1.1
(a)	11	Jul-01	< 5.0	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Pre"hi-vac"	12	Oct 22-01	< 5.0	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Post "hi-vac"	12	Oct 26-01	6,000	NA	170	550	110	120	970
(a)	13	Dec-01	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	43
No	14	Mar-02	< 50	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
No	15	May-02	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
No	16	Jul-02	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
No	17	Oct-02	< 100	NA	< 0.3	< 0.3	< 0.3	< 0.6	< 5.0
No	18	Jan-03	NA	NA	NA	NA	NA	NA	NA
No	19	Mar-03	< 15	NA	< 0.04	< 0.02	< 0.02	< 0.06	< 0.03
No	20	Aug-03	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Pre-Purge	21	Dec-03	< 50	NA	< 0.3	< 0.3	< 0.3	< 0.6	< 5.0
Post-Purge	21	Dec-03	< 50	NA	< 0.3	< 0.3	< 0.3	< 0.6	< 5.0
Yes	22	Mar-04	86	NA	< 0.3	< 0.3	< 0.3	< 0.6	57
Yes	23	Jun-04	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Yes	24	Sep-04	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Yes	25	Dec-04	< 50	NA	NA	NA	NA	NA	NA
Yes	26	Mar-05	< 50	NA	NA	NA	NA	NA	NA
Yes	27	Jun-05	< 50	NA	NA	NA	NA	NA	NA
Yes	28	Sep-05	< 50	NA	NA	NA	NA	NA	NA
Yes	29	Dec-05	< 50	NA	NA	NA	NA	NA	NA

(table continued on next page; footnotes on final page)

TABLE C-1 (continued)

MW-8									
Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
(a)	9	Feb-01	1,000	NA	3.97	< 0.3	3.78	1.63	620
(a)	10	May-01	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	4.4
(a)	11	Jul-01	< 5.0	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Pre"hi-vac"	12	Oct 22-01	< 5.0	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Post "hi-vac"	12	Oct 26-01	< 5.0	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
(a)	13	Dec-01	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
No	14	Mar-02	< 50	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
No	15	May-02	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
No	16	Jul-02	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
No	17	Oct-02	458	NA	1.7	< 0.3	< 0.3	< 0.6	233
No	18	Jan-03	< 100	NA	< 0.3	< 0.3	< 0.3	< 0.6	< 5.0
No	19	Mar-03	< 15	NA	< 0.22	< 0.32	< 0.31	< 0.4	< 0.18
No	20	Jul-03	190	< 50	< 0.5	< 0.5	< 0.5	0.6	< 0.5
Pre-Purge	21	Dec-03	144	< 100	< 0.3	< 0.3	< 0.3	< 0.6	7.6
Post-Purge	21	Dec-03	163	< 100	< 0.3	< 0.3	< 0.3	< 0.6	66
Yes	22	Mar-04	412	< 100	1.2	< 0.3	1.7	3.9	66
Yes	23	Jun-04	320	68	< 0.5	< 0.5	< 0.5	< 0.5	120
Yes	24	Sep-04	280	2600	< 0.5	< 0.5	< 0.5	< 0.5	120
Yes	25	Dec-04	270	84	< 0.5	< 0.5	< 0.5	< 0.5	94
Yes	26	Mar-05	270	120	< 0.5	< 0.5	< 0.5	< 1.0	66
Yes	27	Jun-05	510	63	6.8	< 0.5	2.4	5.3	< 0.5
Yes	28	Sep-05	520	< 50	< 0.5	< 0.5	< 0.5	< 1.0	65
Yes	29	Dec-05	65	57	< 0.5	< 0.5	< 0.5	< 1.0	29

Notes:

(a) Data not available to SES as to whether the samples were collected "post-purge" or without purging.

"No Purge" means no purging was conducted before the groundwater sample was collected.

TVH-g = Total volatile hydrocarbons – gasoline range. TEH-d – Total extractable hydrocarbons – diesel range.

NA = Not analyzed for this constituent in this event.

ND = Not Detected (method reporting limit not specified in information available to SES).

TABLE C-2
Historical Groundwater Monitoring Well Groundwater Analytical Results
Fuel Oxygenates and VOCs (µg/L)
240 W. MacArthur Boulevard, Oakland, California

Well I.D.	Sampling Event No.	Date Sampled	EDB	EDC	1,2,4-TMB	1,3,5-TMB	t-Butanol	TBA	DIPE	Naphthalene	cis-1,2-DCE	TCE	PCE	Others
	7	Jun-00	< 5.0	< 5.0	51	< 5	< 1,000	< 1000	< 50	< 5	< 5	< 5	< 5	ND
	14	Mar-02	< 1.0	< 1.0	< 1	1.6	< 10	NA	< 2	< 1	< 1	< 1	< 1	ND
	18	Jan-03	< 50	< 50	150	< 50	NA	68	< 10	< 50	< 50	< 50	< 50	ND
MW-1	19	Mar-03	< 0.26	< 0.17	373	< 0.49	NA	< 10	< 0.29	< 0.88	< 0.30	< 0.23	< 0.36	ND
	20	Aug-03	< 1.0	7.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	21	Dec-03	< 5.0	< 5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	< 0.26	< 0.17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 5.0	< 5.0	NA	NA	NA	270	< 5.0	NA	NA	NA	NA	NA
	24	Sep-04	< 5.0	< 5.0	NA	NA	NA	120	< 5.0	NA	NA	NA	NA	NA
	25	Dec-04	< 1.3	< 1.3	NA	NA	NA	< 25	< 1.3	NA	NA	NA	NA	NA
	26	Mar-05	< 0.50	< 0.50	NA	NA	NA	< 10	< 0.50	NA	NA	NA	NA	NA
	27	Jun-05	< 13	< 13	NA	NA	NA	< 250	< 13	NA	NA	NA	NA	NA
	28	Sep-05	< 2.5	6.5	NA	NA	NA	240	< 2.5	NA	NA	NA	NA	NA
	29	Dec-05	< 1.3	< 1.3	NA	NA	NA	100	< 3.6	NA	NA	NA	NA	NA

(table continued on next page)

Table C-2 Continued

Well I.D.	Sampling Event No.	Date Sampled	EDB	EDC	1,2,4-TMB	1,3,5-TMB	t-Butanol	TBA	DIPE	Naphthalene	cis-1,2-DCE	TCE	PCE	Others
	7	Jun-00	< 0.5	< 0.5	< 0.5	< 0.5	< 100	< 100	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	ND
	14	Mar-02	< 1.0	< 1.0	< 1	< 1	220	NA	< 2	< 1	< 1	< 1	< 1	ND
	18	Jan-03	< 5	< 5	< 5	< 5	NA	34	< 1	< 5	24	< 5	< 5	ND
	19	Mar-03	< 0.26	< 0.17	< 0.49	< 0.26	NA	94	< 0.29	< 0.88	15	< 0.23	< 0.36	ND
MW-2	21	Dec-03	< 0.6	< 0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	20	Aug-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	21	Dec-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 0.5	2.0	NA	NA	NA	190	1.1	NA	NA	NA	NA	NA
	24	Sep-04	< 0.5	1.2	NA	NA	NA	130	0.9	NA	NA	NA	NA	NA
	25	Dec-04	< 0.5	< 0.5	NA	NA	NA	< 10	0.8	NA	NA	NA	NA	NA
	26	Mar-05	< 1.0	< 1.0	NA	NA	NA	< 20	1.3	NA	NA	NA	NA	NA
	27	Jun-05	< 0.50	< 0.50	NA	NA	NA	200	0.79	NA	NA	NA	NA	NA
	28	Sep-05	< 0.50	0.6	NA	NA	NA	150	0.8	NA	NA	NA	NA	NA
	29	Dec-05	< 0.50	< 0.50	NA	NA	NA	54	1	NA	NA	NA	NA	NA

(table continued on next page)

Table C-2 Continued

Well I.D.	Sampling Event No.	Date Sampled	EDB	EDC	1,2,4-TMB	1,3,5-TMB	t-Butanol	TBA	DIPE	Naphthalene	cis-1,2-DCE	TCE	PCE	Others
	14	Mar-02	< 1.0	< 1.0	1.8	4.7	180	NA	< 2	2.2	< 1	< 1	< 1	ND
	18	Jan-03	< 5	< 5	< 5	5.0	NA	76	< 1	< 5	21	< 5	< 5	(a)
	19	Mar-03	< 0.26	< 0.17	< 0.49	< 0.26	NA	< 10	< 0.29	< 0.88	24	< 0.23	< 0.36	ND
MW-3	20	Aug-03	< 0.5	< 0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	21	Dec-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 0.5	< 0.5	NA	NA	NA	130	1.9	NA	NA	NA	NA	NA
	24	Sep-04	< 0.5	< 0.5	NA	NA	NA	82	1.5	NA	NA	NA	NA	NA
	25	Dec-04	< 0.7	< 0.7	NA	NA	NA	< 14	1.3	NA	NA	NA	NA	NA
	26	Mar-05	< 1.0	< 1.0	NA	NA	NA	< 20	1.1	NA	NA	NA	NA	NA
	27	Jun-05	< 0.5	< 0.5				160	1.4					
	28	Sep-05	< 0.5	1.5	NA	NA	NA	94	0.9	NA	NA	NA	NA	NA
	29	Dec-05	< 0.7	< 0.7	NA	NA	NA	67	1.2	NA	NA	NA	NA	NA

(table continued on next page)

Table C-2 Continued

Well I.D.	Sampling Event No.	Date Sampled	EDB	EDC	1,2,4-TMB	1,3,5-TMB	t-Butanol	TBA	DIPE	Naphthalene	cis-1,2-DCE	TCE	PCE	Others
	7	Jun-00	< 0.5	< 0.5	< 0.5	< 0.5	< 100	< 100	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	ND
	14	Mar-02	< 1.0	< 1.0	< 1	< 1	< 10	NA	< 2	< 1	2.9	3.7	5.0	ND
	18	Jan-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
MW-4	19	Mar-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	20	Aug-03	< 0.5	< 0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	21	Dec-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 0.5	< 0.5	NA	NA	NA	< 10	< 0.5	NA	NA	NA	NA	NA
	24	Sep-04	< 0.5	< 0.5	NA	NA	NA	< 10	< 0.5	NA	NA	NA	NA	NA
	25	Dec-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	26	Mar-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	27	Jun-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	28	Sep-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	29	Dec-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

(table continued on next page)

Table C-2 Continued

Well I.D.	Sampling Event No.	Date Sampled	EDB	EDC	1,2,4-TMB	1,3,5-TMB	t-Butanol	TBA	DIPE	Naphthalene	cis-1,2-DCE	TCE	PCE	Others
	14	Mar-02	< 1.0	< 1.0	< 1	2.7	640	NA	< 2	< 1	< 1	< 1	< 1	ND
	18	Jan-03	< 50	< 50	512	122	NA	< 100	< 10	120	< 50	< 50	< 50	ND
	19	Mar-03	< 0.26	< 0.17	554	107	NA	< 10	< 0.29	251	< 0.3	< 0.23	< 0.36	(b)
MW-5	20	Aug-03	< 2.0	6.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	21	Dec-03	< 5.0	< 5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	< 0.26	< 0.17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 3.1	< 3.1	NA	NA	NA	120	< 3.1	NA	NA	NA	NA	NA
	24	Sep-04	< 4.2	18	NA	NA	NA	87	< 4.2	NA	NA	NA	NA	NA
	25	Dec-04	< 4.2	< 4.2	NA	NA	NA	< 83	< 4.2	NA	NA	NA	NA	NA
	26	Mar-05	< 1.7	< 1.7	NA	NA	NA	< 33	< 1.7	NA	NA	NA	NA	NA
	27	Jun-05	< 7.1	< 7.1	NA	NA	NA	< 140	< 7.1	NA	NA	NA	NA	NA
	28	Sep-05	< 1.3	7.7	NA	NA	NA	87	< 0.50	NA	NA	NA	NA	NA
	29	Dec-05	< 1.7	< 1.7	NA	NA	NA	< 33	< 1.7	NA	NA	NA	NA	NA

(table continued on next page)

Table C-2 Continued

Well I.D.	Sampling Event No.	Date Sampled	EDB	EDC	1,2,4-TMB	1,3,5-TMB	t-Butanol	TBA	DIPE	Naphthalene	cis-1,2-DCE	TCE	PCE	Others
	14	Mar-02	< 1.0	< 1.0	< 1	2.2	< 10	NA	< 2	1.6	< 1	< 1	< 1	ND
	18	Jan-03	< 5.0	< 5.0	13	< 5	NA	46	< 1	< 5	< 5	< 5	< 5	ND
	19	Mar-03	< 0.26	6.9	< 0.49	< 0.26	NA	40	< 0.29	< 0.88	< 0.3	< 0.23	< 0.36	(c.)
	20	Aug-03	< 0.5	12.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-6	21	Dec-03	< 5.0	11 / 17.1 ^(d)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	< 0.26	31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 0.5	19	NA	NA	NA	54	1.0	NA	NA	NA	NA	NA
	24	Sep-04	< 0.5	31	NA	NA	NA	43	1.0	NA	NA	NA	NA	NA
	25	Dec-04	< 0.5	24	NA	NA	NA	32	0.7	NA	NA	NA	NA	NA
	26	Mar-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	27	Jun-05	< 0.50	< 0.50	NA	NA	NA	26	< 0.50	NA	NA	NA	NA	NA
	28	Sep-05	< 0.50	15	NA	NA	NA	43	0.7	NA	NA	NA	NA	NA
	29	Dec-05	< 0.50	13	NA	NA	NA	30	0.9	NA	NA	NA	NA	NA

(table continued on next page)

Table C-2 Continued

Well I.D.	Sampling Event No.	Date Sampled	EDB	EDC	1,2,4-TMB	1,3,5-TMB	t-Butanol	TBA	DIPE	Naphthalene	cis-1,2-DCE	TCE	PCE	Others
	14	Mar-02	< 1.0	< 1.0	< 1	< 1	< 10	NA	< 2	< 1	< 1	< 1	< 1	ND
	18	Jan-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	19	Mar-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
MW-7	20	Aug-03	< 0.5	< 0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	21	Dec-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 0.5	< 0.5	NA	NA	NA	< 10	< 0.5	NA	NA	NA	NA	NA
	24	Sep-04	< 0.5	< 0.5	NA	NA	NA	< 10	< 0.5	NA	NA	NA	NA	NA
	25	Dec-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	26	Mar-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	27	Jun-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	28	Sep-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	29	Dec-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

(table continued on next page)

Table C-2 Continued

Well I.D.	Sampling Event No.	Date Sampled	EDB	EDC	1,2,4-TMB	1,3,5-TMB	t-Butanol	TBA	DIPE	Naphthalene	cis-1,2-DCE	TCE	PCE	Others
	14	Mar-02	< 1.0	< 1.0	< 1	< 1	< 10	NA	< 2	< 1	< 1	< 1	< 1	ND
	18	Jan-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	19	Mar-03	< 0.26	< 0.17	< 0.49	< 0.26	NA	< 10	< 0.29	< 0.88	< 0.3	< 0.23	< 0.36	ND
MW-8	20	Aug-03	< 0.5	< 0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	21	Dec-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 0.5	< 0.5	NA	NA	NA	61	1.0	NA	NA	NA	NA	NA
	24	Sep-04	< 0.5	< 0.5	NA	NA	NA	96	1.1	NA	NA	NA	NA	NA
	25	Dec-04	< 0.5	< 0.5	NA	NA	NA	< 10	1.0	NA	NA	NA	NA	NA
	26	Mar-05	< 0.5	< 0.5	NA	NA	NA	< 10	0.6	NA	NA	NA	NA	NA
	27	Jun-05	< 0.50	25	NA	NA	NA	42	1.1	NA	NA	NA	NA	NA
	28	Sep-05	< 0.50	< 0.50	NA	NA	NA	120	1.4	NA	NA	NA	NA	NA
	29	Dec-05	< 0.50	< 0.50	NA	NA	NA	27	< 0.50	NA	NA	NA	NA	NA

(table continued on next page)

Table C-2 - Footnotes

Notes:

Table includes only detected contaminants.

EDB = Ethylene dibromide, aka 1,2-Dibromoethane (lead scavenger)

EDC = Ethylene dichloride, aka 1,2-Dichloroethane (lead scavenger)

PCE = Tetrachloroethylene

DCE = Dichloroethylene

TCE = Trichloroethylene

TMB = Trimethylbenzene

DIPE = Isopropyl Ether (a.k.a. di-isopropyl ether)

TBA = Tertiary butyl alcohol

NLP = No Level Published

NA = Not analyzed for this constituent. ND = Not Detected

(a) Also detected were: n-propylbenzene (5.4 µg/L); p-Isopropyltoluene (14 µg/L); sec-Butylbenzene (7.2 µg/L)

(b) Also detected were: isopropylbenzene (38 µg/L); n-Butylbenzene (20 µg/L); n-propylbenzene (36 µg/L); p-Isopropyltoluene (14 µg/L).

(c) Also detected were: isopropylbenzene (3.4 µg/L); n-propylbenzene (2.3 µg/L).

(d) Pre-purge / post-purge sampling, conducted in same event.

APPENDIX D

Historical Groundwater Elevation Data

Table D-1
Historical Water Levels in Monitoring Wells
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
	22	Mar-04	14.33	64.82
	23	Jun-04	16.28	62.87
	24	Sep-04	17.03	62.12
	25	Dec-04	16.38	62.77
	26	Mar-05	14.30	64.85
	27	Jun-05	15.53	63.82
	28	Sep-05	16.42	62.73
	29	Dec-05	15.67	63.48

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.

Table D-1 (continued)

Well I.D.	Sampling Event No.	Date Measured	Water Level Depth (a)	Water Level Elevation (b)
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
	22	Mar-04	13.83	64.82
	23	Jun-04	15.76	62.69
	24	Sep-04	16.48	61.97
	25	Dec-04	15.74	62.71
	26	Mar-05	13.48	64.97
	27	Jun-05	14.48	63.97
	28	Sep-05	16.00	62.45
	29	Dec-05	14.88	63.57

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.

Table D-1 (continued)

Well I.D.	Sampling Event No.	Date Measured	Water Level Depth (a)	Water Level Elevation (b)
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
	22	Mar-04	12.93	64.65
	23	Jun-04	14.90	62.68
	24	Sep-04	15.61	61.97
	25	Dec-04	14.77	62.81
	26	Mar-05	12.60	64.98
	27	Jun-05	13.73	63.85
	28	Sep-05	15.14	62.44
	29	Dec-05	13.94	63.64

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.

Table D-1 (continued)

Well I.D.	Sampling Event No.	Date Measured	Water Level Depth (a)	Water Level Elevation (b)
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
	22	Mar-04	12.78	64.96
	23	Jun-04	14.68	63.06
	24	Sep-04	15.17	62.57
	25	Dec-04	14.90	62.84
	26	Mar-05	12.57	65.17
	27	Jun-05	13.43	64.31
	28	Sep-05	15.13	62.61
	29	Dec-05	13.83	63.91

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.

Table D-1 (continued)

Well I.D.	Sampling Event No.	Date Measured	Water Level Depth (a)	Water Level Elevation (b)
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
	22	Mar-04	14.44	64.92
	23	Jun-04	16.43	62.93
	24	Sep-04	17.07	62.29
	25	Dec-04	16.59	62.77
	26	Mar-05	14.08	65.28
	27	Jun-05	15.33	64.03
28	Sep-05	16.61	62.75	
29	Dec-05	15.81	63.55	

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.

Table D-1 (continued)

Well I.D.	Sampling Event No.	Date Measured	Water Level Depth (a)	Water Level Elevation (b)
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
	22	Mar-04	13.51	64.92
	23	Jun-04	15.42	63.01
	24	Sep-04	16.13	62.30
	25	Dec-04	15.40	63.03
	26	Mar-05	13.28	65.15
	27	Jun-05	14.14	64.29
28	Sep-05	15.61	62.82	
29	Dec-05	14.90	63.53	

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.

Table D-1 (continued)

Well I.D.	Sampling Event No.	Date Measured	Water Level Depth (a)	Water Level Elevation (b)
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
	22	Mar-04	13.57	64.70
	23	Jun-04	15.63	62.64
	24	Sep-04	16.33	61.94
	25	Dec-04	15.70	62.57
	26	Mar-05	13.42	64.85
	27	Jun-05	14.53	63.74
28	Sep-05	15.81	62.46	
29	Dec-05	14.88	63.39	

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.

Table D-1 (continued)

Well I.D.	Sampling Event No.	Date Measured	Water Level Depth (a)	Water Level Elevation (b)
MW-8	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
	22	Mar-04	11.78	64.61
	23	Jun-04	13.71	62.68
	24	Sep-04	14.43	61.96
	25	Dec-04	13.64	62.75
	26	Mar-05	11.52	64.87
	27	Jun-05	12.50	63.89
	28	Sep-05	13.90	62.49
29	Dec-05	12.75	63.64	

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.