

**RECEIVED**

2:59 pm, Apr 30, 2008

Alameda County  
Environmental Health

**FIRST QUARTER 2008  
GROUNDWATER MONITORING  
REPORT**

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

*Prepared for:*

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

**April 2008**

**FIRST QUARTER 2008  
GROUNDWATER MONITORING  
REPORT**

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

*Prepared for:*

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

*Prepared by:*

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

**April 25, 2008**

Project No. 2003-43

April 25, 2008

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

Subject: First Quarter 2008 Groundwater Monitoring Report  
Oakland Auto Works Facility – 240 W. MacArthur Boulevard, Oakland, California  
Alameda County Environmental Health Department Fuel Leak Case No. RO0000142

Dear Mr. Wickham:

Enclosed is the Stellar Environmental Solutions, Inc. report summarizing recent activities conducted at the referenced site. This report presents the findings of the First Quarter 2007 groundwater monitoring event (the 38<sup>th</sup> site groundwater monitoring event since August 1997).

This report was uploaded to both the State Water Board's GeoTracker system and the Alameda County Environmental Health Department's Electronic Upload ftp system.

We declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

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

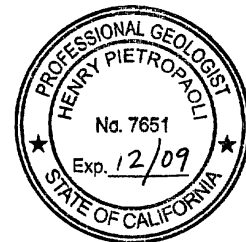
Sincerely,



Henry Pietropaoli, R.G., R.E.A.  
Project Manager



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



cc: Mr. Glen Poy-Wing, property owner and Responsible Party

# TABLE OF CONTENTS

---

	<b>Page</b>
1.0 INTRODUCTION .....	1
Project Background.....	1
Regulatory Status .....	1
Scope of Report.....	2
Site Description.....	2
Historical Environmental Activities.....	5
2.0 PHYSICAL SETTING .....	7
Topography and Surface Water Drainage.....	7
Lithology .....	7
Groundwater Hydrology .....	8
3.0 MARCH 2008 GROUNDWATER MONITORING AND SAMPLING.....	11
4.0 REGULATORY CONSIDERATIONS, ANALYTICAL RESULTS AND FINDINGS .....	13
Regulatory Considerations.....	13
Groundwater Sample Analytical Methods.....	14
Groundwater Sample Results.....	15
Quality Control Sample Analytical Results .....	22
5.0 SUMMARY, CONCLUSIONS, AND PROPOSED ACTIONS.....	23
Summary and Conclusions.....	23
Proposed Actions .....	25
7.0 REFERENCES AND BIBLIOGRAPHY .....	26
8.0 LIMITATIONS .....	31

## **Appendices**

- Appendix A Current Event Groundwater Monitoring Field Records
- Appendix B Current Event Analytical Laboratory Report and Chain-of-Custody Record
- Appendix C Historical Groundwater Monitoring Well Analytical Data
- Appendix D Historical Groundwater Elevation Data

## TABLES AND FIGURES

---

<b>Tables</b>	<b>Page</b>
Table 1 Groundwater Monitoring Well Construction and Groundwater Elevation Data 240 W. MacArthur Boulevard, Oakland, California.....	12
Table 2 Groundwater Sample Analytical Results –March 28, 2008 Hydrocarbons, BTEX, and MTBE.....	16
Table 3 Groundwater Sample Analytical Results – March 28, 2008 Lead Scavengers and Fuel Oxygenates.....	16

<b>Figures</b>	<b>Page</b>
Figure 1 Site Location Map .....	3
Figure 2 Site Plan .....	4
Figure 3 Groundwater Elevation Map – March 28, 2008 .....	9
Figure 4 Gasoline Isoconcentration Contours – March 2008 .....	17
Figure 5 Diesel Isoconcentration Contours – March 2008 .....	18
Figure 6 Benzene Isoconcentration Contours – March 2008.....	20
Figure 7 MTBE Isoconcentration Contours – March 2008 .....	21

## **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 finding for the 38<sup>th</sup> 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 Environmental Department of Environmental Health (ACEH) is the lead regulatory agency for the case, acting as a Local Oversight Program (LOP) for the Regional Water Quality Control Board (Water Board). There are no ACEH or Water Board cleanup orders for the site; however, all site work has been conducted under oversight of ACEH. In our August 2003 review of the ACEH case file, we determined that all known technical reports for the site were included in the case file to that point.

The previous consultant requested site closure in March 2003 (AEC, 2003a). ACEH received 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, and was summarized in our April 2004 Soil and Groundwater Investigation Report (SES, 2004c). In December 2004, SES submitted a workplan for interim remedial action (including additional site characterization and an evaluation of soil vapor extraction as an interim corrective action). ACEH responded to that workplan in its March 2006 letter (Water Board, 2006), approving the work (with minor technical revisions). The December 2004 workplan was implemented in May 2007 and presented in a separate technical report, dated August 1, 2007. ACEH responded in its

letter dated August 24, 2007 requesting a workplan for the installation and operation of a soil vapor extraction (SVE) system. The SVE system design was submitted by SES to ACEH, and was approved by ACEH in its letter dated October 5, 2007; the letter included a request for a SVE System Start-Up Report by March 10, 2008. Implementation of SVE remediation has been delayed indefinitely by the property owner due to financial considerations. The delay has been tentatively approved by ACEH who has requested to be kept apprised of the situation every 6 months. Quarterly groundwater monitoring is still being conducted on an uninterrupted basis at the site.

The site is in compliance with State Water Resources Control Board's "GeoTracker" requirements for uploading of technical data and reports. In addition, electronic copies of technical documentation reports published since the Second Quarter of 2005 have been uploaded to ACEH's 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 work conducted between January 1<sup>st</sup> and March 31, 2008 (i.e., the 38<sup>th</sup> groundwater monitoring and sampling event, conducted on March 28, 2008).

## **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*).

Figure 1 shows the site location. Figure 2 shows the site plan and locations of current groundwater monitoring well, previous investigative borings and former underground fuel storage tanks (UFSTs).





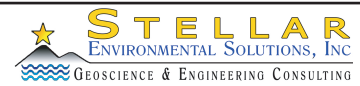
**SITE LOCATION ON U.S.G.S. TOPOGRAPHIC MAP**

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

By: MJC

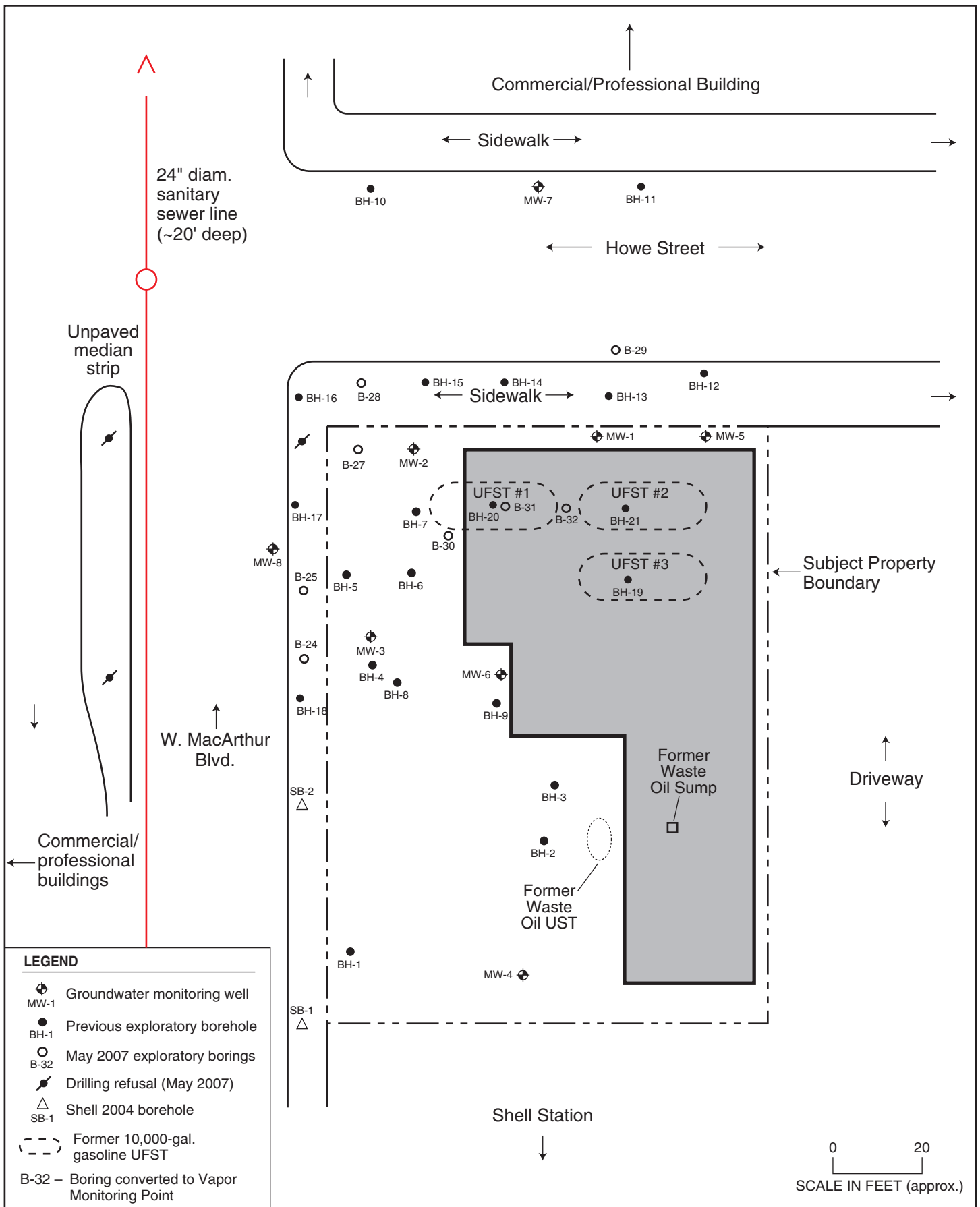
APRIL 2007

**Figure 1**



2008-43-01





**SITE PLAN WITH BOREHOLE AND GROUNDWATER WELL LOCATIONS**

240 W. MacArthur Blvd.  
Oakland, CA

By: MJC

JUNE 2007

**Figure 2**



2008-43-155

## 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 ACEH files.

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 the 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 milligrams per kilogram (mg/kg) of petroleum oil & grease (Mittelhauser Corporation, 1991b).
- **1996.** A 350-gallon waste oil UFST 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 ACEH, 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. This included sampling of three boreholes, installation of four groundwater monitoring wells, and the initial groundwater sampling event.
- **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 of 12 exploratory boreholes; analysis of 64 soil and 12 grab-groundwater sample results; and further evaluation of site hydrogeology and contaminant extent and magnitude.
- **June 2004 to present.** Quarterly groundwater monitoring.

- **May to June 2007.** Additional site characterization and interim remedial action evaluation. This included eight exploratory boreholes; analysis of 8 soil-gas, 18 soil, and 8 grab-groundwater samples; and a 6-hour SVE pilot test.
- **September 2007.** A workplan for installation and operation of a full SVE system was submitted to ACEH on September 28, 2007.
- **October 2007** ACEH has requested submittal of a SVE System Start-Up Report by March 10, 2008.
- **February 2008.** ACEH agreed to a delay of the implementation of SVE remediation due to the property owner's financial considerations resulting from a marriage separation. ACEH who has requested to be kept apprised of the situation every 6 months.

To date, a total of 38 groundwater monitoring events have been conducted at the site.

## **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 investigations 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 the subject property.

### **LITHOLOGY**

A previous SES report included geologic cross-sections through the area of historical investigations (SES, 2004c). The following summarizes site lithologic conditions.

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 and all May 2007 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

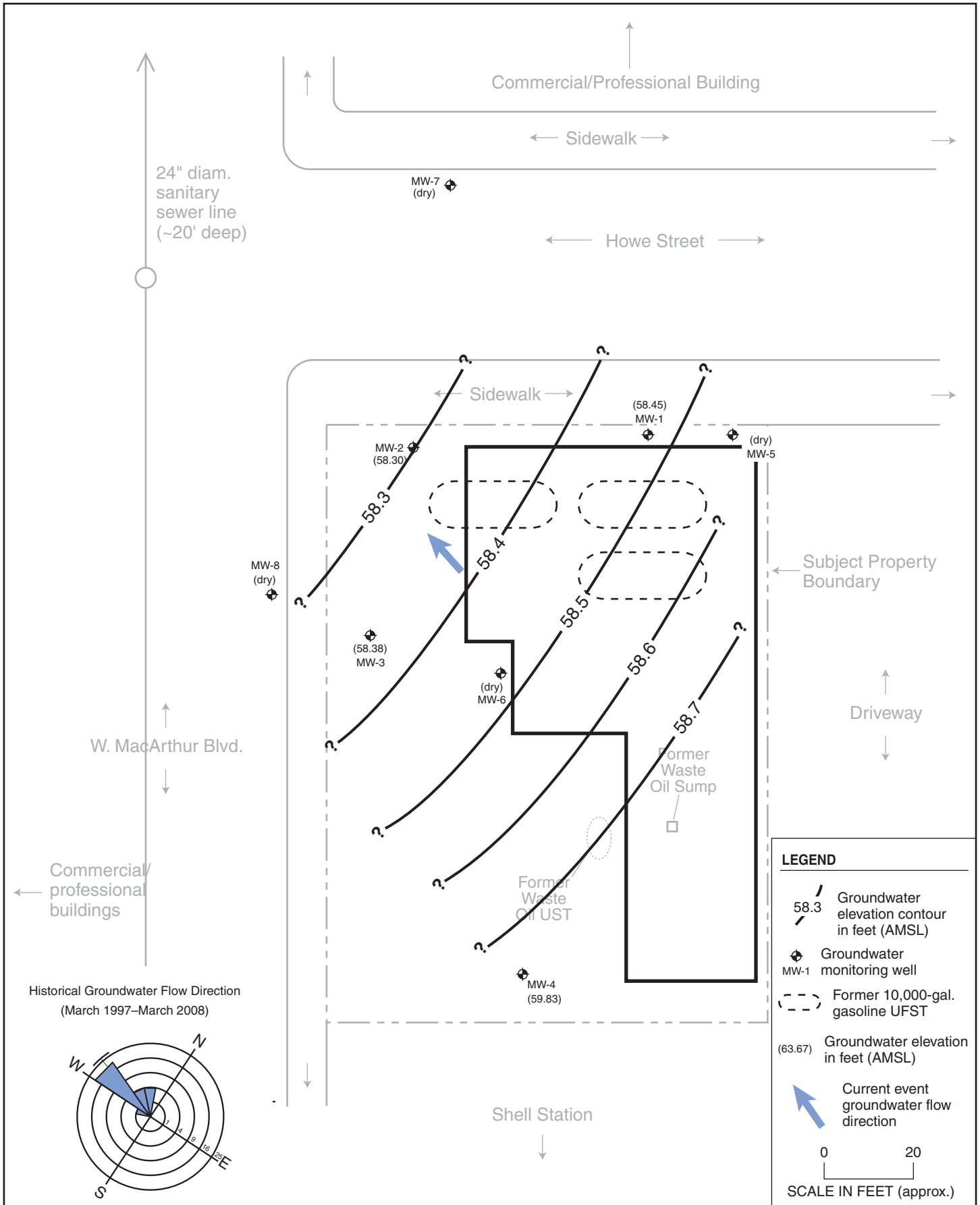
this clay was consistently at a depth of approximately 21 to 23 feet. Of the 12 boreholes in the April 2004 investigation, 9 were advanced at least 1.5 feet into this clay before terminating (and not encountering visible moisture or sand). Two boreholes B31 and B32 were advanced to 32 feet bgs in the May 2007 investigation and showed this clay extending from its upper reach of 21 to 23 feet bgs to 32 feet bgs. One of the boreholes in the April 2004 investigation was advanced deeper, documenting a thickness of at least 4.5 feet. The lithologic data (supported by soil sample analytical data from both the 2004 and 2007 investigations) 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, those boreholes have documented the thin upper, water-bearing zone underlain by the likely non-water-bearing clay unit. In three of the four Shell well boreholes, 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 more shallow sitewide saturated zone. The (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 15 and 25 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 current (March 2008) groundwater monitoring event. Due to low groundwater levels encountered during the March 2008 event, data from four of the site monitoring wells (MW-5, MW-6, MW-7, and MW-8) could not be reliably used in the construction of the Figure 3 groundwater elevation map. These are the third lowest groundwater elevations recorded since monitoring began in 1997. Groundwater flow direction in this event was generally to the west, although the data suggest local variations. 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, 2004). Subject property groundwater gradient in the current event ranged between approximately 0.002 and 0.01 feet/foot. Historical groundwater gradient has varied between approximately 0.002 and 0.008 feet/foot, averaging approximately 0.005 feet/foot. The slightly steeper gradient (higher than the historical average) measured during this event indicate recharging conditions resulting from the current rainfall season.



**GROUNDWATER ELEVATION MAP—March 28, 2008**

240 W. MacArthur Blvd.  
Oakland, CA

By: MJC

APRIL 2008

**Figure 3**



Figure 3 contains 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.

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

Appendix D contains historical site groundwater monitoring well elevation data.



### **3.0 MARCH 2008 GROUNDWATER MONITORING AND SAMPLING**

---

This section presents the groundwater sampling and analytical methods for the current event (First Quarter 2008), conducted on March 28, 2008. 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 ACEH, and subsequent technical revision requested by ACEH. The 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 ACEH.

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; and
- Collecting “post-purge” groundwater samples from four of the eight onsite wells for field measurement of the aforementioned hydrogeochemical parameters, and for offsite laboratory analyses for contaminants of concern.

Four of the eight monitoring wells could not be sampled due to seasonally lowered groundwater levels that resulted from the low seasonal rainfall in 2007-2008. 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) under the supervision of SES personnel. To minimize the potential for cross-contamination, wells were purged and sampled in order of increasing contamination (based on the previous quarter analytical results).

**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 <sup>(a)</sup> March 28, 2008	Groundwater Elevation <sup>(b)</sup> March 28, 2008
		Depth (feet)	Elevation (feet)		
MW-1	25	19.5 to 24.5	54.5 to 49.5	20.70	58.45
MW-2	25	14.5 to 24.5	64.2 to 54.2	20.15	58.30
MW-3	25	14.5 to 24.5	63.4 to 53.4	19.20	58.38
MW-4	25	14.5 to 24.5	63.6 to 53.6	17.91	59.83
MW-5	20	9 to 19	70.6 to 60.6	Dry	NR
MW-6	20	9 to 19	69.7 to 59.7	Dry	NR
MW-7	20	9 to 19	69.6 to 59.6	Dry	NR
MW-8	20	9 to 19	67.7 to 57.7	Dry	NR

Notes:

<sup>(a)</sup> Pre-purge measurement, feet below top of well casing.

<sup>(b)</sup> Pre-purge measurement, feet above mean sea level

NR = not recorded (dry or only residual water in silt trap)

As the first monitoring task, static water levels were measured in the eight site wells using an electric water level indicator. Each well was then purged of three wetted casing volumes, and aquifer stability parameters 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. 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.

Approximately 9.9 gallons of wastewater (purge water and equipment decontamination rinseate) was containerized in a labeled, 55-gallon steel drum and temporarily stored onsite. This non-hazardous water will continue to be accumulated onsite 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.

### **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. Exceedance of ESLs suggests that additional remediation and/or investigation may be warranted, such as monitoring plume stability to demonstrate no risk to sensitive receptors in the case of sites where drinking water is not threatened.

The City of Oakland, via its Urban Land Redevelopment 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 being proposed.

For all site contaminants with published drinking water standards—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 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.

As specified in the *San Francisco Bay Region Water Quality Control Plan* (Water Board, 2004), all groundwaters are considered potential sources of drinking water unless otherwise approved by the Water Board, and are assumed to ultimately discharge to a surface water body and potentially impact aquatic organisms. In the case of groundwater contamination, ESLs are published for two scenarios: groundwater is a source of drinking water, and groundwater is not a source of drinking water. Qualifying for the higher ESLs (applicable to groundwater is not a source of drinking water) requires meeting one of the following two criteria:

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

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

## **GROUNDWATER SAMPLE ANALYTICAL METHODS**

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

- Total volatile hydrocarbons – gasoline range (TVHg), by EPA Method 8015B (all wells);
- BTEX and MTBE, by EPA Method 8260B;
- The lead scavengers 1,2-dichloroethane (EDC) and 1,2-dibromoethane (EDB), by EPA Method 8260B (all wells except MW-4 and MW-7, which historically have had little or no site-sourced contamination);
- 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.

Groundwater samples were analyzed in accordance with the methods proposed in the SES technical workplan. The analytical results for the current event indicate no significant differences from historical analytical results.

## **GROUNDWATER SAMPLE RESULTS**

Four of the eight monitoring wells could not be sampled during this event because of insufficient water due to seasonally lowered groundwater levels. Tables 2 and 3 summarize the contaminant analytical results of the current monitoring event. Appendix B contains the certified analytical laboratory report and chain-of-custody record. Appendix C contains historical site groundwater monitoring well analytical data.

### **Gasoline and Diesel**

Figure 4 shows gasoline isoconcentration contours for the recent event. Gasoline was detected in all four of the wells sampled. Detected concentrations ranged from 120 micrograms per liter ( $\mu\text{g/L}$ ) in well MW-4 to 2,300  $\mu\text{g/L}$  in well MW-1. All of the gasoline concentrations (except for MW-4) exceeded the 210- $\mu\text{g/L}$  ESL criterion.

The gasoline concentrations in Fourth Quarter 2008 compared to Fourth Quarter 2007 show a slight decrease in the gasoline concentrations at the monitoring well near the source area (MW-1). There was a slight increase in the downgradient well MW-3 since the previous sampling in December 2007. Gasoline is known to be present offsite under Howe Street (to the northwest) and under W. MacArthur Boulevard (to the southwest). The current quarter historical high TPHg and increasing concentration trend in MW-4 is suspected to be migrating from the adjacent Shell contaminant plume to the southeast.

Figure 5 shows diesel isoconcentration contours for the recent event. Diesel was detected in all of the wells in which it was analyzed for with concentrations ranging from 1,000 to 9,600  $\mu\text{g/L}$ , exceeding the 210- $\mu\text{g/L}$  ESL criterion in all three of the wells in which it was sampled for. This First Quarter 2008 event is notable for having historical high diesel concentrations of 9,600  $\mu\text{g/L}$  and 3,800  $\mu\text{g/L}$  detected in downgradient wells MW-3 and MW-2, respectively. Water level have dropped significantly over the past year and some of the diesel in solution likely sorbed into the newly enlarged vadose zone as it dropped. The subsequent recent recharge may account for the higher dissolved concentration. No new input into the system is likely a factor.

The diesel plume footprint has historically been similar to that of the gasoline plume but somewhat smaller, and of secondary concern relative to gasoline, with concentrations historically at significantly lower levels than gasoline.. Diesel is known to be present offsite under Howe Street (to the northwest) and under W. MacArthur Boulevard (to the southwest).

**Table 2**  
**Groundwater Sample Analytical Results – March 28, 2008**  
**Hydrocarbons, BTEX, and MTBE**

Well	TVHg	TEHd	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-1	<b>2,300</b>	<b>1000</b>	<b>77</b>	<2.5	8.2	10	<2.5
MW-2	<b>1,100</b>	<b>3800</b>	<b>13</b>	0.9	0.9	2.3	<b>61</b>
MW-3	<b>1,700</b>	<b>9,600</b>	<b>19</b>	<0.5	<0.5	0.6	<b>100</b>
MW-4	120	NA	NA	NA	NA	NA	NA
MW-5	NS	NS	NS	NS	NS	NS	NS
MW-6	NS	NS	NS	NS	NS	NS	NS
MW-7	NS	NA	NA	NA	NA	NA	NA
MW-8	NS	NS	NS	NS	NS	NS	NS
<b>ESLs</b>	210 / 500	210 / 500	1.0 / 870	150 / 650	300 / 400	420 / 420	13 / 500

Notes:

ESLs = Water Board Environmental Screening Levels for commercial/industrial sites where groundwater *is/is not* a potential drinking water resource  
 MTBE = methyl *tertiary*-butyl ether; TEHd = total extractable hydrocarbons - diesel range; TVHg = total volatile hydrocarbons - gasoline range  
 NA = not analyzed for this contaminant; NS = not sampled  
 All concentrations are expressed in micrograms per liter (µg/L), equivalent to parts per billion (ppb).  
 Samples in **bold-face** type exceed the ESL commercial/industrial criterion where groundwater is considered a potential drinking water resource.

**Table 3**  
**Groundwater Sample Analytical Results – March 28, 2008**  
**Lead Scavengers and Fuel Oxygenates**

Well	EDC	DIPE	TBA
MW-1	<b>4.6</b>	<2.5	66
MW-2	<b>1.4</b>	17	87
MW-3	<b>1.9</b>	8.3	74
MW-4	NA	NA	NA
MW-5	NS	NS	NS
MW-6	NS	NS	NS
MW-7	NA	NA	NA
MW-8	NS	NS	NS
<b>ESLs</b>	0.5 / 690	NLP	NLP/500

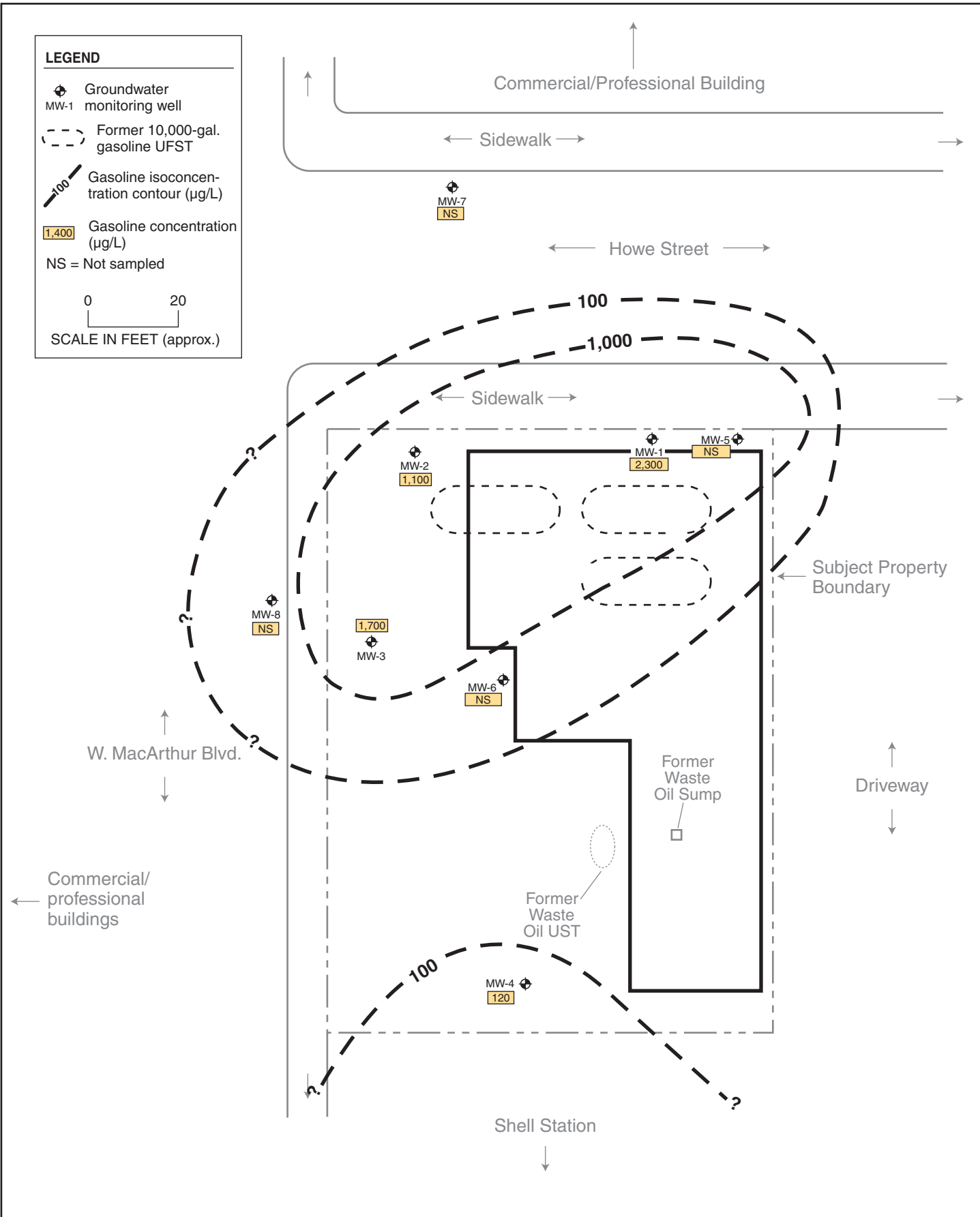
Notes:

ESLs = Water Board Environmental Screening Levels for commercial/industrial sites where groundwater *is/is not* considered a drinking water resource.  
 Samples in **bold-face** type exceed the ESL commercial/industrial criterion where groundwater is considered a potential drinking water resource.  
 DIPE = isopropyl ether; EDC = ethylene dichloride (1,2-dichloroethane); TBA = *tertiary*-butyl alcohol  
 The table includes only detected fuel oxygenates and lead scavengers; contaminants analyzed for and not detected include EDB, ETBE, and TAME.  
 NA = not analyzed for this contaminant; NS = not sampled; NLP = no level published.  
 All concentrations are expressed in micrograms per liter (µg/L), equivalent to parts per billion (ppb).

**LEGEND**

- Groundwater monitoring well
- Former 10,000-gal. gasoline UFST
- Gasoline isoconcentration contour ( $\mu\text{g/L}$ )
- Gasoline concentration ( $\mu\text{g/L}$ )
- NS = Not sampled

0      20  
SCALE IN FEET (approx.)



**GASOLINE ISOCONCENTRATION CONTOURS (MARCH 2008)**

240 W. MacArthur Blvd.  
Oakland, CA

By: MJC

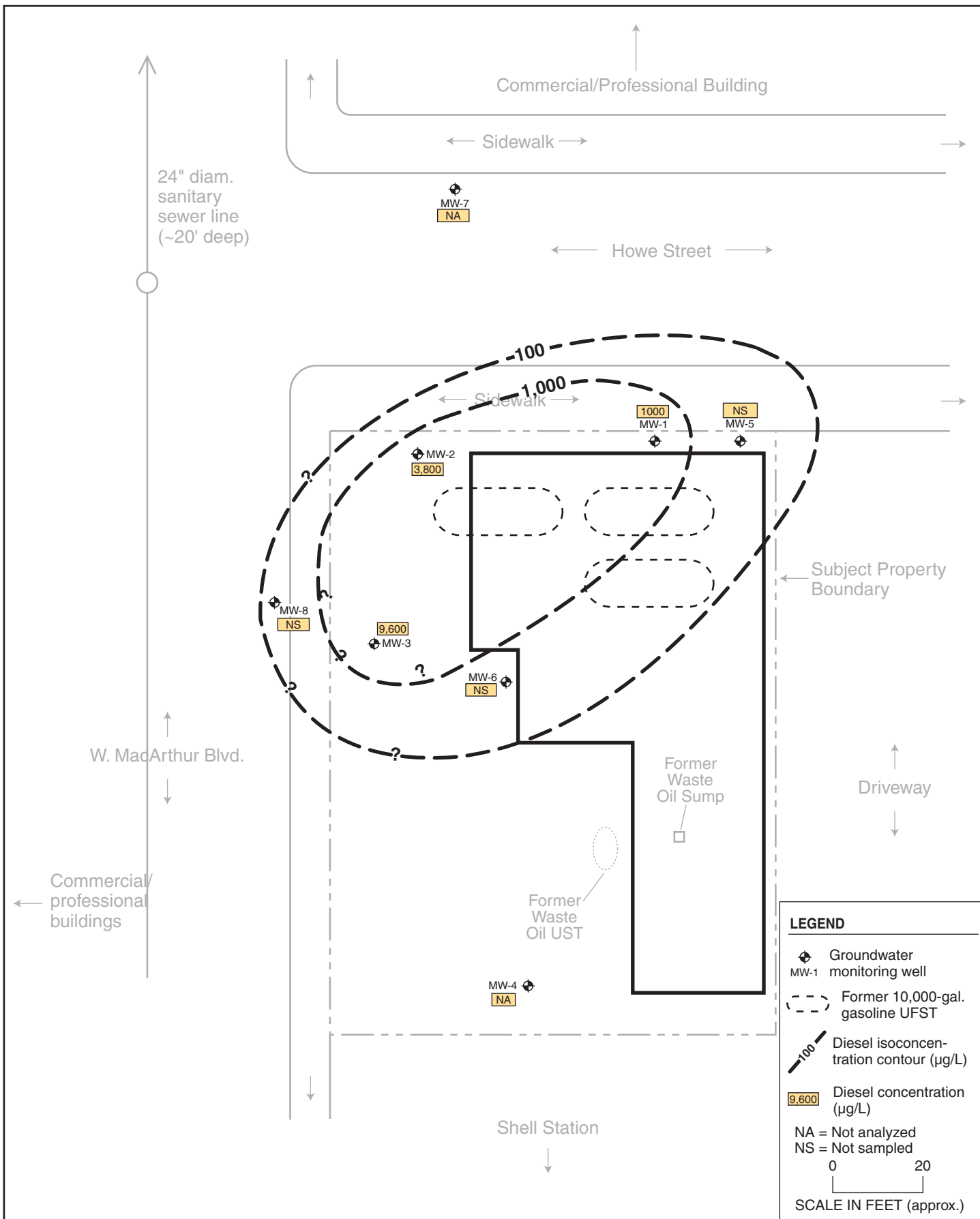
APRIL 2008

**Figure 4**



2008-43-188





### DIESEL ISOCONCENTRATION CONTOURS (MARCH 2008)

240 W. MacArthur Blvd.  
Oakland, CA

By: MJC

APRIL 2008

Figure 5



## **Benzene, Toluene, Ethylbenzene, and Total Xylenes**

Figure 6 shows benzene isoconcentration contours for the recent event. Benzene was detected in all three of the wells in which it was analyzed—at concentrations of 77 µg/L in MW-1, 13 µg/L in MW-2, and 19 µg/L in MW-3. All concentrations were in excess of the 1.0-µg/L ESL criterion, with the maximum benzene concentration detected in source area well MW-1, as historically has been the case. The lateral extent of the benzene plume was constrained onsite in three directions in the current event; however, it is known to extend under Howe Street to the northwest (historical concentrations up to approximately 100 µg/L). The benzene plume configuration is generally the same as for gasoline and diesel.

Trace concentrations of toluene, ethylbenzene, and total xylenes were also detected during this event but below ESL criteria. Historically, these analytes are detected in generally the same wells in which benzene is detected.

## **Methyl tertiary-Butyl Ether**

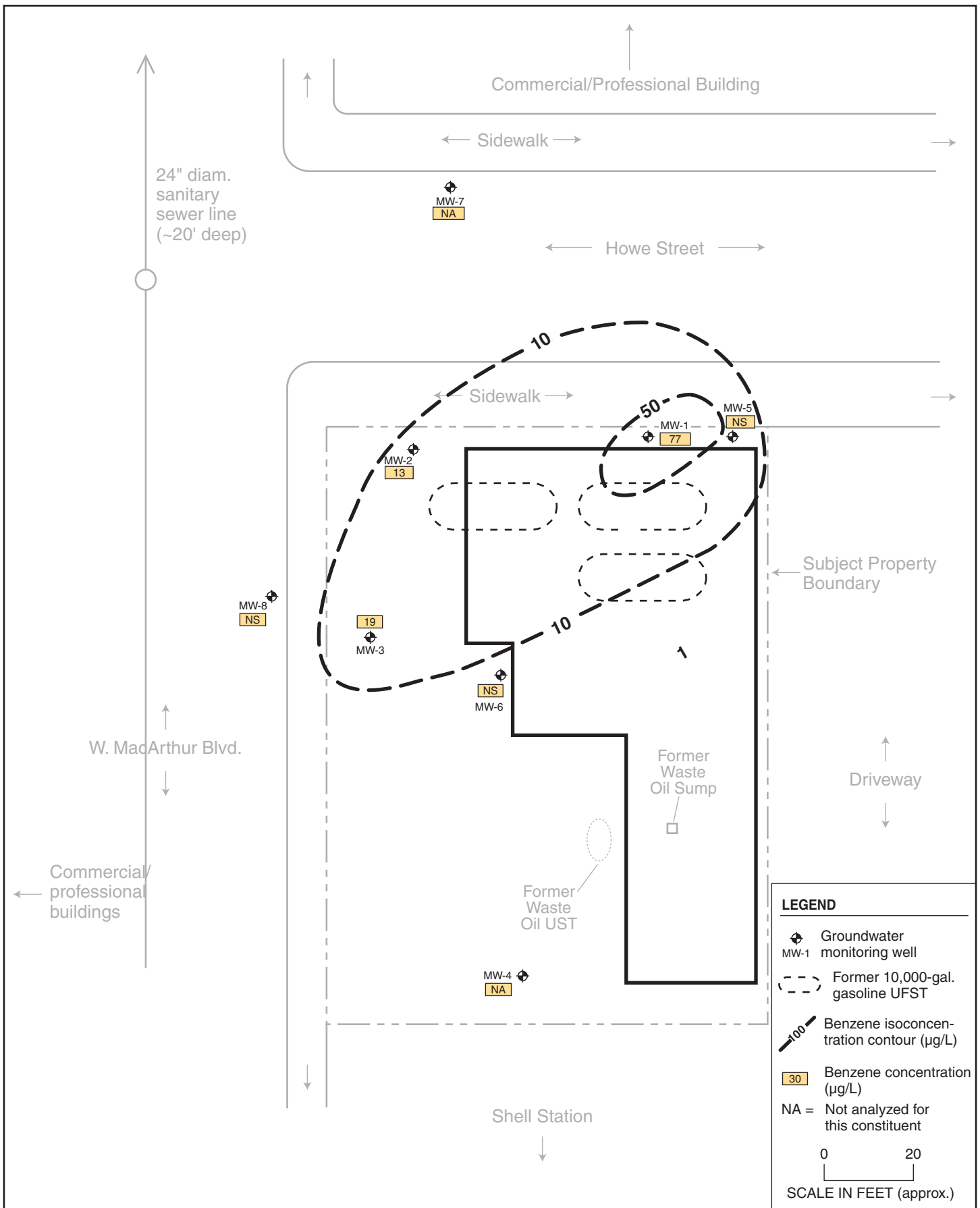
Figure 7 shows MTBE isoconcentration contours for the recent event. MTBE was detected above the regulatory ESLs in both of the three wells in which it was detected, in MW-2 (61µg/L) and MW-3 (100 µg/L). The center of mass of the MTBE plume has migrated downgradient from the source area to the southern side of the property (adjacent to W. MacArthur Boulevard).

The lateral extent of the MTBE plume was constrained onsite in three directions in the current event; however, it is known to extend to the west underneath W. MacArthur Boulevard. As discussed in previous reports (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.

## **Lead Scavengers and Fuel Oxygenates**

The lead scavenger EDC was in excess of its' ESL criteria in all three wells in which it was detected during this event. The lead scavenger EDB was not detected in any of the three wells in which were analyzed for during this event.

Two fuel oxygenates were detected during the current event. DIPE was detected in two of the three wells in which it was analyzed for—at 17 µg/L in MW-2, and 8.3 µg/L in MW-3. TBA was detected in all three wells in which it was analyzed for—at 66 µg/L in MW-1, 87 µg/L in MW-2, and 74 µg/L in MW-3. No other fuel oxygenates were detected.



### BENZENE ISOCONCENTRATION CONTOURS (MARCH 2008)

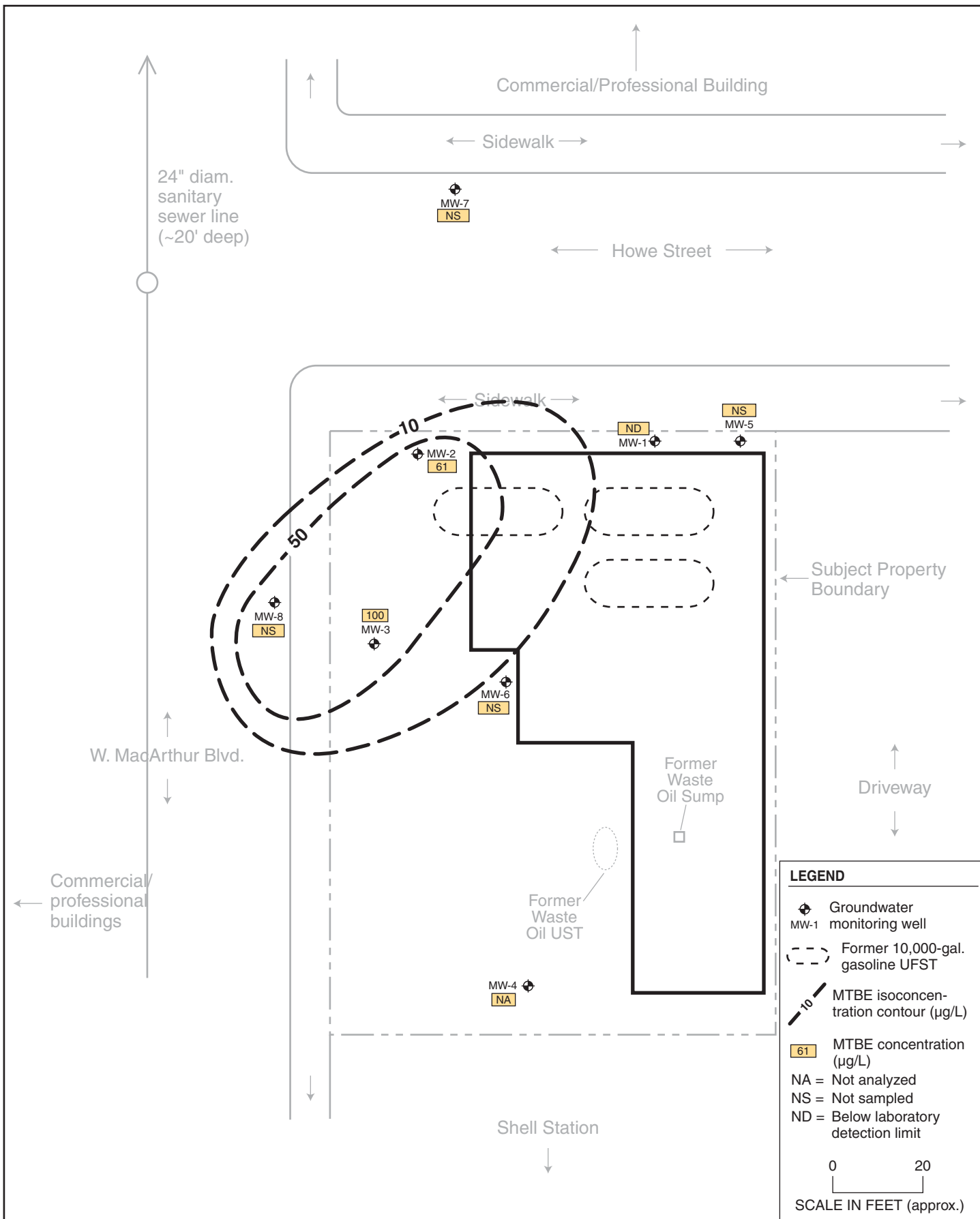
240 W. MacArthur Blvd.  
Oakland, CA

By: MJC

APRIL 2008

Figure 6





**MTBE ISOCONCENTRATION CONTOURS (MARCH 2008)**

240 W. MacArthur Blvd.  
Oakland, CA

By: MJC

APRIL 2008

**Figure 7**



## **Summary of Groundwater Contamination**

The low rainfall in the 2006-2007 year resulted in the lowest site water level elevations since the initiation of groundwater elevation monitoring in 2001 with a resultant significant decrease in gasoline and diesel concentrations observed in the monitoring wells sampled which attributed to a portion of the dissolved mass of contamination absorbing onto the newly created vadose zone. Concentration in all wells except source well MW-3 showed a decreasing trend in 2007.

Contaminant concentrations in general have since begun to increase in the source monitoring wells as water elevations have risen with the increased rainfall during the 2007-2008 season. This increase in concentration is attributed to desorption of contaminant mass into the newly saturated vadose zone.

In the current Q1-2008 groundwater monitoring event, the maximum concentrations of gasoline and benzene were detected in well MW-1 (near the former UFSTs), while maximum historical concentrations of diesel were detected in downgradient wells MW-3 and MW-2. These anomalously high concentrations may be reflecting a rebound pulse from this seasonal groundwater recharge.

Maximum concentrations of MTBE were historically detected in downgradient wells (adjacent to W. MacArthur Boulevard), indicating that the center of mass of MTBE has migrated downgradient. Groundwater contamination is known to extend offsite to the northwest southwest (beneath Howe Street and W. MacArthur Boulevard). Discussion of contaminant trends is limited for this event because historical low groundwater levels resulted in only four of the eight wells being sampled.

## **QUALITY CONTROL SAMPLE ANALYTICAL RESULTS**

Laboratory QC samples (e.g., method blanks, matrix spikes, surrogate spikes) 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 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 associated with the former onsite UFSTs.
- Sufficient site characterization has been conducted to evaluate the risks associated with residual soil contamination, and to evaluate corrective action options. The data indicate that, if remedial action is not implemented, residual site contamination will remain at elevated levels for many years and longer. A workplan for installation and operation of a SVE system has been submitted and approved by ACEH, however, implementation of the system has been postponed by the property owner.
- A total of 38 groundwater monitoring/sampling events have been conducted in the eight site wells between August 1997 and the current event. ACEH is the lead regulatory agency.
- Four of the eight monitoring wells (those screened above 20 feet bgs) could not be sampled during this monitoring event because of insufficient water due to low groundwater levels. This current quarter documented at the third lowest groundwater elevations recorded since monitoring began in 1997.
- Groundwater at the site appears to be slightly confined, with a flow direction ranging between northwest and west. Subject property groundwater gradient in the current event ranged between approximately 0.002 and 0.01 feet/foot. Historical groundwater gradient has varied between approximately 0.002 and 0.008 feet/foot, averaging approximately 0.005 feet/foot. The slightly steeper gradient (higher than the historical average) measured during the March 2008 event indicates recharging conditions resulting from the 2007-2008 rainfall season. Groundwater levels in wells that were reliably measurable (MW-1, MW-2, MW-3, and MW-4) rose an average of 1.87 feet since the previous quarter.
- Site water level elevations have begun to rise associated with the 2007-2008 rainfall season resulting in an increase in the gasoline and diesel concentrations in source area monitoring well MW-1. The increase in concentrations is attributed to desorption of the contaminant mass into the newly saturated vadose zone as water levels increase.

- This First Quarter 2008 event detected historical high diesel concentrations of 9,600 µg/L and 3,800 µg/L in downgradient wells MW-3 and MW-2, respectively. These anomalously high concentrations may be reflecting a rebound pulse from seasonal groundwater recharge.
- The groundwater plume geometry is typical of what has been observed in previous monitoring events. Seasonal effects do not appear to change the plume migration direction.
- 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.
- The greatest concentrations of gasoline, diesel, and benzene in groundwater are located in the northern corner of the site (near the source area). Maximum groundwater contamination by MTBE was detected in the downgradient portion of the property, indicating that the center of mass of these contaminants has migrated downgradient. Groundwater contamination above ESL criteria extends offsite (likely no more than 25 feet) beneath Howe Street and W. MacArthur Boulevard.
- As stipulated by ACEH, analysis for lead scavengers will continue to be conducted in wells MW-1, MW-5, and MW-6 (provided there is sufficient water). Fuel oxygenates were detected in those wells, and in MW-2, MW-3, and MW-8. Because lead scavengers and fuel oxygenates are analyzed by the same method at no additional cost, the responsible party has elected to continue analysis for lead scavengers and fuel oxygenates in all wells except MW-4 and MW-7.
- A previous water well survey identified no vicinity water wells with the potential to intercept site-sourced groundwater contamination.
- Potential preferential pathways identified include deep sanitary sewer lines beneath Howe Street and W. MacArthur Boulevard (adjacent to the subject property). Based on the historical detection of gasoline and MTBE in well MW-7 (beyond the Howe Street deep utilities), it appears unlikely that the Howe Street deep utilities are acting as a preferential pathway for site-sourced groundwater contamination. The influence of deep utilities beneath W. MacArthur Boulevard is not known.
- The adjacent Shell service station is contributing minor MTBE and gasoline groundwater contamination to the eastern corner of the subject property. This contamination is unrelated to the separate, site-sourced MTBE and gasoline groundwater contamination in the northern and western portions of the subject property. The current quarter historical high TPHg and increasing concentration trend in MW-4 is suspected to be migrating from the adjacent Shell contaminant plume to the southeast.



- The lower than average groundwater level elevations continue to present excellent conditions for maximizing contaminant mass recovery through the proposed SVE system.
- The site is currently receiving reimbursements from the California Tank Fund.

## **PROPOSED ACTIONS**

The Responsible Party proposes to implement the following actions to address regulatory concerns:

- Because of the historical high concentration of diesel detected in downgradient well MW-3, SES recommends analyzing monitoring well MW-6 for TEH-diesel during the next monitoring event to investigate the extent of diesel contamination.
- ACEH requested a SVE System Start-Up Report be submitted by March 10, 2008, however, implementation of SVE remediation has been delayed indefinitely by the property owner due to financial/personal considerations. The delay has been verbally approved by the ACEH case officer Mr. Jerry Wickham, who has requested to be kept apprised of the situation every 6 months.
- SES recommends that the SVE be installed and operated to remove source area subsurface contamination and move the site toward regulatory closure.
- Quarterly groundwater monitoring of site wells should be continued to monitor the stability of the contaminant plume.
- Required Electronic Data Format uploads should continued to be made to the GeoTracker database, and electronic copies of technical reports should be uploaded to ACEH's ftp system.
- Reimbursement requests should continue to be submitted under the State of California Petroleum UST Cleanup Fund. In the event the property is sold, the current Responsibility Party will coordinate with the new Responsibility Party to transfer Tank Fund eligibility.

## 7.0 REFERENCES AND BIBLIOGRAPHY

---

- Advanced Environmental Concepts, Inc. (AEC), 2003a. 1<sup>st</sup> Quarter Groundwater Sampling Report (2003) – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. March 7.
- Advanced Environmental Concepts, Inc. (AEC), 2003b. 2<sup>nd</sup> Quarter Groundwater Sampling Report (2003) – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. April 30.
- Advanced Environmental Concepts, Inc. (AEC), 2002a. December 2001 Quarterly Groundwater Sampling Report – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. January 30.
- AEC, 2002b. March 2002 Quarterly Groundwater Sampling Report – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. April 19.
- Advanced Environmental Concepts, Inc. (AEC), 2002c. 2<sup>nd</sup> Quarter Groundwater Sampling Report (2002) – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. July 17.
- Advanced Environmental Concepts, Inc. (AEC), 2002d. 4<sup>th</sup> Quarter Groundwater Sampling Report (2002) – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. November 11.
- Advanced Environmental Concepts, Inc. (AEC), 2001a. December 2000 Quarterly Groundwater Sampling Report – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. January.
- Advanced Environmental Concepts, Inc. (AEC), 2001b. Additional Soil and Groundwater Assessment – 240 W. MacArthur Boulevard, Oakland, County of Alameda, California. March.
- Advanced Environmental Concepts, Inc. (AEC), 2001c. May 2001 Quarterly Groundwater Sampling Report – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. May 27.

- Advanced Environmental Concepts, Inc. (AEC), 2001d. July 2001 Quarterly Groundwater Sampling Report – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. August 31.
- Advanced Environmental Concepts, Inc. (AEC), 2001e. Summary “Hi-Vac” Workplan – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. September 11.
- Advanced Environmental Concepts, Inc. (AEC), 2001f. October 2001 Quarterly Groundwater Sampling and Summary “Hi-Vac” Report – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. December 15.
- Advanced Environmental Concepts, Inc. (AEC), 2000a. Quarterly Groundwater Sampling Report – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. August 11.
- Advanced Environmental Concepts, Inc. (AEC), 2000b. Additional Groundwater Assessment Workplan for Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, County of Alameda, California. October.
- Advanced Environmental Concepts, Inc. (AEC), 1999. Quarterly Groundwater Sampling Report – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. January 22.
- Advanced Environmental Concepts, Inc. (AEC), 1998a. Second Quarterly Groundwater Sampling Report – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. April 2.
- Advanced Environmental Concepts, Inc. (AEC), 1998b. Request for Site Closure – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. June 29.
- Advanced Environmental Concepts, Inc. (AEC), 1998c. Third Quarterly Groundwater Sampling Report – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. August 2.
- Advanced Environmental Concepts, Inc. (AEC), 1998d. Fourth Quarterly Groundwater Sampling Report – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. November 6.
- Advanced Environmental Concepts, Inc. (AEC), 1997a. Subsurface Soil and Groundwater Investigation Workplan for Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. June.

- Advanced Environmental Concepts, Inc. (AEC), 1997b. Continuing Soil and Groundwater Assessment for Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. August.
- Advanced Environmental Concepts, Inc. (AEC), 1997c. First Quarterly Groundwater Sampling Report – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. December 21.
- All Environmental, Inc., 1997a. Underground Storage Tank Removal and Excavation, Transport and Disposal of Contaminated Soil Report – 240 W. MacArthur Boulevard, Oakland, California. January 3.
- All Environmental, Inc., 1997b. Phase II Subsurface Investigation Report – 240 W. MacArthur Boulevard, Oakland, California. February 14.
- All Environmental, Inc., 1997c. Soil and Groundwater Investigation Workplan – 240 W. MacArthur Boulevard, Oakland, California. April 15.
- Cambria Environmental Technology, Inc., 2004. Second Quarter 2004 Monitoring Report, Shell-branded Service Station, 230 W. MacArthur Boulevard, Oakland, California. July 29.
- Guidici, 2003. Supervisor, City of Oakland Public Works Department – Sewer Maintenance. Personal communication to Joe Dinan of SES. September 8.
- Mittelhauser Corporation, 1991a. Magnetic Survey for Underground Utilities and Recommendations at 240 W. MacArthur Boulevard, Oakland, California. February 21.
- Mittelhauser Corporation, 1991b. Sump Removal and Waste Oil Cleanup at 240 W. MacArthur Boulevard, Oakland, California. April 9.
- Regional Water Quality Control Board (Water Board), 1999. East Bay Plain Groundwater Basin Beneficial Use Evaluation Report.
- Regional Water Quality Control Board (Water Board), 2005. Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater. February.
- Regional Water Quality Control Board (Water Board), 2004. Water Quality Control Plan, Triennial Review. Water Board Staff Report. November 5.

- Regional Water Quality Control Board – San Francisco Bay Region (Water Board), 2007. Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater. November.
- Stellar Environmental Solutions, Inc. (SES), 2003a. Workplan for Additional Site Characterization, 240 W. MacArthur Boulevard, Oakland, California. August 20.
- Stellar Environmental Solutions, Inc. (SES), 2003b. Third Quarter 2003 Groundwater Monitoring Report, 240 W. MacArthur Boulevard, Oakland, California. September 5.
- Stellar Environmental Solutions, Inc. (SES), 2003c. Amended Workplan for Additional Site Characterization, 240 W. MacArthur Boulevard, Oakland, California. December 10.
- Stellar Environmental Solutions, Inc. (SES), 2004a. Fourth Quarter 2003 Groundwater Monitoring Report, 240 W. MacArthur Boulevard, Oakland, California. January 12.
- Stellar Environmental Solutions, Inc. (SES), 2004b. First Quarter 2004 Groundwater Monitoring Report, 240 W. MacArthur Boulevard, Oakland, California. April 12.
- Stellar Environmental Solutions, Inc. (SES), 2004c. Soil and Groundwater Investigation Report, 240 W. MacArthur Boulevard, Oakland, California. June 8.
- SES, 2004d. Second Quarter 2004 Groundwater Monitoring Report, 240 W. MacArthur Boulevard, Oakland, California. July 12.
- Stellar Environmental Solutions, Inc. (SES), 2004e. Third Quarter 2004 Groundwater Monitoring Report, 240 W. MacArthur Boulevard, Oakland, California. October 11.
- Stellar Environmental Solutions, Inc. (SES), 2004f. Workplan for Additional Site Characterization and Interim Remedial Action, 240 W. MacArthur Boulevard, Oakland, California. December 27.
- Stellar Environmental Solutions, Inc. (SES), 2005a. Fourth Quarter 2004 Groundwater Monitoring and Annual Summary Report, 240 W. MacArthur Boulevard, Oakland, California. January 18.
- Stellar Environmental Solutions, Inc. (SES), 2005b. First Quarter 2005 Groundwater Monitoring Report, 240 W. MacArthur Boulevard, Oakland, California. March 31.
- Stellar Environmental Solutions, Inc. (SES), 2005c. Second Quarter 2005 Groundwater Monitoring Report, 240 W. MacArthur Boulevard, Oakland, California. July 8.

Stellar Environmental Solutions, Inc. (SES), 2005d. Third Quarter 2005 Groundwater Monitoring Report, 240 W. MacArthur Boulevard, Oakland, California. October 12.

Stellar Environmental Solutions, Inc. (SES), 2006a. Fourth Quarter 2005 Groundwater Monitoring and Annual Summary Report, 240 W. MacArthur Boulevard, Oakland, California. January 18.

Stellar Environmental Solutions, Inc. (SES), 2006b. First Quarter 2006 Groundwater Monitoring Report, 240 W. MacArthur Boulevard, Oakland, California. April 21.

Stellar Environmental Solutions, Inc. (SES), 2006c. Second Quarter 2006 Groundwater Monitoring Report, 240 W. MacArthur Boulevard, Oakland, California. July 11

Stellar Environmental Solutions, Inc. (SES), 2006d. Third Quarter 2006 Groundwater Monitoring Report, 240 W. MacArthur Boulevard, Oakland, California. September 29.

Stellar Environmental Solutions, Inc. (SES), 2007a. Fourth Quarter 2006 Groundwater Monitoring and Annual Summary Report, 240 W. MacArthur Boulevard, Oakland, California. January 16.

Stellar Environmental Solutions, Inc. (SES), 2007b. First Quarter 2007 Groundwater Monitoring Report, 240 W. MacArthur Boulevard, Oakland, California. May 4.

Stellar Environmental Solutions, Inc. (SES), 2007c. Second Quarter 2007 Groundwater Monitoring Report, 240 W. MacArthur Boulevard, Oakland, California. July 11.

Stellar Environmental Solutions, Inc. (SES), 2007d. Corrective Action Assessment Report, 240 W. MacArthur Boulevard, Oakland, California. August 1.

Stellar Environmental Solutions, Inc. (SES), 2007e. Workplan for Soil Vapor Extraction System Installation and Operation – Oakland Auto Works – 240 W. MacArthur Blvd., Oakland, CA. September 28.

Stellar Environmental Solutions, Inc. (SES), 2007f. Third Quarter 2007 Groundwater Monitoring Report, 240 W. MacArthur Boulevard, Oakland, California. October 1.

Stellar Environmental Solutions, Inc. (SES), 2008. Fourth Quarter 2007 Groundwater Monitoring and Annual Summary Report, 240 W. MacArthur Boulevard, Oakland, California. January 30.

## 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 3/28/08 Client Stellar Env.

Site Address 240 MacArthur Blvd., Oakland

Job Number 080328-451 Technician GF

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-4		2/2 tabs stripped						
<del>MW-7</del>		<del>unable to gauge well parked over</del>						
MW-8	X							
MW-6	X							
MW-2	X							
MW-3		2/2 tabs stripped						
MW-1		2/2 tabs stripped						
MW-5		1/2 bolts missing						
MW-7	X							

NOTES: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## WELL GAUGING DATA

Project # 080328-KF1 Date 3/28/08 Client Stellar Env.

Site 240 MacArthur Blvd, Oakland

Well ID	Time	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 <u>POC</u>	Notes
MW-4	0838	2					17.91	23.80	↓	
<del>MW-7</del>	<del>0910</del>	<del>2</del>	Unable to gauge.				<del>19.89</del>	<del>19.94</del>		
MW-8	0910	2				19.89	19.94			
MW-6	0844	2				19.87	20.06			
MW-2	0850	2				20.15	24.30			
MW-3	0854	2				19.20	24.25			
MW-1	0858	2	NO SPH DETECTED			20.70	24.36			
MW-5	0903	2				19.95	20.04			
MW-7	0948	2				19.93	19.97			

# WELL MONITORING DATA SHEET

Project #: <u>080328-KF1</u>	Client: <u>Stellar</u>
Sampler: <u>ICF</u>	Date: <u>3/28/08</u>
Well I.D.: <u>MW-1</u>	Well Diameter: <u>(2)</u> 3 4 6 8 _____
Total Well Depth (TD): <u>24.36</u>	Depth to Water (DTW): <u>20.70</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 <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: _____
--	--	---

$\frac{0.6 \text{ (Gals.)} \times 3}{\text{Specified Volumes}} = \frac{1.8 \text{ Gals.}}{\text{Calculated Volume}}$	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <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>radius<sup>2</sup> * 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 <sup>2</sup> * 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 <sup>2</sup> * 0.163														

Time	Temp (°F or °C)	pH	Cond. (mS or <u>µS</u> )	Turbidity (NTUs)	Gals. Removed	Observations
1053	18.3	7.02	629	462	0.6	cloudy, odor
1055	18.6	6.54	629	373	1.2	" "
1057	18.5	6.48	645	71000	1.8	" "

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>1.8</u>
Sampling Date: <u>3/28/08</u> Sampling Time: <u>1100</u> Depth to Water: <u>22.12</u>	
Sample I.D.: <u>MW-1</u> Laboratory: Kiff CalScience Other: <u>C&amp;T</u>	
Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: <u>See COC</u>	
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	

# WELL MONITORING DATA SHEET

Project #: 080328-KFI	Client: Stellar
Sampler: <del>EF</del>	Date: 3/28/08
Well I.D.: MW-2	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): 24.30	Depth to Water (DTW): 20.15
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 <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: _____
--	--	---

$0.7$ (Gals.) X $3$ = $2.1$ 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>radius<sup>2</sup> * 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 <sup>2</sup> * 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 <sup>2</sup> * 0.163														

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1004	19.5	6.69	619	>1000	0.7	gray, odor
1006	19.7	6.55	668	>1000	1.4	" "
1008	19.7	6.58	662	>1000	2.1	" "

Did well dewater? Yes  No  Gallons actually evacuated: 2.1

Sampling Date: 3/28/08    Sampling Time: 1010    Depth to Water: 20.17

Sample I.D.: MW-2    Laboratory: Kiff    CalScience    Other: C&T

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

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

## WELL MONITORING DATA SHEET

Project #: <u>080328-KF1</u>	Client: <u>Stellar</u>
Sampler: <u>KF</u>	Date: <u>3/28/08</u>
Well I.D.: <u>MW-3</u>	Well Diameter: <u>(2)</u> 3 4 6 8 _____
Total Well Depth (TD): <u>24.25</u>	Depth to Water (DTW): <u>19.20</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 <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: _____
--	--	---

$0.8 \text{ (Gals.)} \times 3 = 2.4 \text{ Gals.}$ I Case Volume                      Specified Volumes                      Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <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>radius<sup>2</sup> * 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 <sup>2</sup> * 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 <sup>2</sup> * 0.163														

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1028	20.8	6.60	729	71000	0.8	gray, odor
1030	20.3	6.57	727	847	1.0	" "
1032	20.2	6.54	729	71000	2.4	" "

Did well dewater?    Yes     No                      Gallons actually evacuated: 2.4

Sampling Date: 3/28/08    Sampling Time: 1035                      Depth to Water: 19.30

Sample I.D.: MW-3                      Laboratory:    Kiff    CalScience    Other CST

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

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

## WELL MONITORING DATA SHEET

Project #: 080328-KF1	Client: Stellar
Sampler: <u>BF</u>	Date: 3/28/08
Well I.D.: MW-4	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): 23.80	Depth to Water (DTW): 17.91
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 <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: _____
--	--	---

0.9	3	= 2.7
(Gals.) X	Specified Volumes	Calculated Volume
1 Case Volume		

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

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
0926	18.8	6.88	567	>1000	0.9	Brown
0928	19.3	6.47	458	>1000	1.8	Brown
0930	19.2	6.20	456	>1000	2.7	Brown
0932	19.2	6.18	458	>1000	3.6	Brown

Did well dewater? Yes  No  Gallons actually evacuated: 3.6

Sampling Date: 3/28/08 Sampling Time: 0935 Depth to Water: 20.11

Sample I.D.: MW-4 Laboratory: Kiff CalScience Other: C&T

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

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
--------------------	------------	----	-------------	----

## WELL MONITORING DATA SHEET

Project #: <u>080328-KF1</u>	Client: <u>Stellar</u>
Sampler: <u>KF</u>	Date: <u>3/28/08</u>
Well I.D.: <u>MW-5</u>	Well Diameter: <u>(2)</u> 3 4 6 8 <u>   </u>
Total Well Depth (TD): <u>20.04</u>	Depth to Water (DTW): <u>19.95</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       Waterra  
 Disposable Bailer       Peristaltic  
 Positive Air Displacement       Extraction Pump  
 Electric Submersible       Other \_\_\_\_\_

Sampling Method:  Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing  
 Other: \_\_\_\_\_

\_\_\_\_\_ (Gals.) X \_\_\_\_\_ = \_\_\_\_\_ 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 <sup>2</sup> * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
	<u>* Insufficient water.</u>					
	<u>unable to sample.</u>					

Did well dewater?    Yes    No    Gallons actually evacuated: \_\_\_\_\_

Sampling Date: \_\_\_\_\_    Sampling Time: \_\_\_\_\_    Depth to Water: \_\_\_\_\_

Sample I.D.: \_\_\_\_\_    Laboratory:    Kiff    CalScience    Other \_\_\_\_\_

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



## WELL MONITORING DATA SHEET

Project #: 080328-KF1	Client: Stellar
Sampler: KF	Date: 3/28/08
Well I.D.: MW-6	Well Diameter: <input checked="" type="radio"/> 2   3   4   6   8   ___
Total Well Depth (TD): 20.06	Depth to Water (DTW): 19.87
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="checkbox"/> PVC   Grade	D.O. Meter (if req'd):      YSI      HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

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

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

_____ (Gals.) X _____	= _____ Gals.	
1 Case Volume	Specified Volumes	Calculated Volume

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
	* insufficient water unable to sample					

Did well dewater?    Yes    No	Gallons actually evacuated: _____	
Sampling Date: _____	Sampling Time: _____	Depth to Water: _____
Sample I.D.: _____	Laboratory:    Kiff    CalScience    Other _____	
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	

# WELL MONITORING DATA SHEET

Project #: 080328-KF1	Client: Stellar
Sampler: KF	Date: 3/28/08
Well I.D.: MW-7	Well Diameter: (2) 3 4 6 8
Total Well Depth (TD): 19.97	Depth to Water (DTW): 19.93
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC 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	Waterra Peristaltic Extraction Pump Other _____	Sampling Method: Bailer Disposable Bailer Extraction Port Dedicated Tubing Other: _____
--	--	---

\_\_\_\_\_ (Gals.) X \_\_\_\_\_ = \_\_\_\_\_ 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 <sup>2</sup> * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
						insufficient water. unable to sample.

Did well dewater?    Yes    No                      Gallons actually evacuated: \_\_\_\_\_

Sampling Date: \_\_\_\_\_                      Sampling Time: \_\_\_\_\_                      Depth to Water: \_\_\_\_\_

Sample I.D.: \_\_\_\_\_                      Laboratory: Kiff    CalScience    Other \_\_\_\_\_

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

## WELL MONITORING DATA SHEET

Project #: <u>080328-KF1</u>	Client: <u>Stellar</u>
Sampler: <u>KF</u>	Date: <u>3/28/08</u>
Well I.D.: <u>MW-8</u>	Well Diameter: <u>(2)</u> 3 4 6 8 _____
Total Well Depth (TD): <u>19.94</u>	Depth to Water (DTW): <u>19.89</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~~ ~~Waterra~~ ~~Peristaltic~~ ~~Extraction Pump~~ ~~Other \_\_\_\_\_~~

Sampling Method: ~~Bailer~~ ~~Disposable Bailer~~ ~~Extraction Port~~ ~~Dedicated Tubing~~ ~~Other: \_\_\_\_\_~~

_____ (Gals.) X _____	=	_____ 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 <sup>2</sup> * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
						<u>* insufficient water unable to sample</u>

Did well dewater?    Yes    No	Gallons actually evacuated: _____
Sampling Date: _____	Sampling Time: _____
Sample I.D.: _____	Depth to Water: _____
Laboratory: Kiff    CalScience    Other _____	
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

## SPH or Purge Water Drum Log

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

STATUS OF DRUM(S) UPON ARRIVAL						
Date	6/22/07	9/14/07	12/19/07	3/28/08		
Number of drum(s) empty:	0	2	2	2		
Number of drum(s) 1/4 full:	1					
Number of drum(s) 1/2 full:	<del>2</del> 1					
Number of drum(s) 3/4 full:	0					
Number of drum(s) full:	1	1	1	1		
Total drum(s) on site:	3	3	3	3		
Are the drum(s) properly labeled?	Y	Y	Y	Y		
Drum ID & Contents:	Purge H <sub>2</sub> O	Soil cuttings	Purge & soil	→		
If any drum(s) are partially or totally filled, what is the first use date:			2			

- 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	6/22/07	9/18/07	12/19/07	3/28/08		
Number of drums empty:	0		1	1		
Number of drum(s) 1/4 full:	0	1	1	1		
Number of drum(s) 1/2 full:	1					
Number of drum(s) 3/4 full:	1					
Number of drum(s) full:	1	1	1	1		
Total drum(s) on site:	3	3	3	3		
Are the drum(s) properly labeled?	Y	Y	Y	Y		
Drum ID & Contents:	Purge H <sub>2</sub> O	Soil cuttings	Purge & soil	→		

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

FINAL STATUS						
Number of new drum(s) left on site this event	0	0	0	0		
Date of inspection:	6/22/07	<del>9/14/07</del>	12/19/07	3/28/08		
Drum(s) labelled properly:	Y	Y	Y	Y		
Logged by BTS Field Tech:	<i>[Signature]</i>	PCJ	KJR	<i>[Signature]</i>		
Office reviewed by:	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>			

## **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

Laboratory Job Number 202342  
ANALYTICAL REPORT



Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number: 202342  
Client: Stellar Environmental Solutions  
Project: 2003-43  
Location: Oakland Auto Works  
Request Date: 04/01/08  
Samples Received: 04/01/08

Stellar Environmental Solutions      Project : 2003-43  
2198 6th Street                              Location : Oakland Auto Works  
Berkeley, CA 94710                            Level : II

Sample ID	Lab ID
MW-1	202342-001
MW-2	202342-002
MW-3	202342-003
MW-4	202342-004

This hardcopy data package contains sample and QC results for four water samples, requested for the above referenced project on 04/01/08. The samples were received cold and intact.

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

High surrogate recoveries were observed for trifluorotoluene (FID) in MW-1 (lab # 202342-001) and MW-3 (lab # 202342-003), due to interference from coeluting hydrocarbon peaks. High surrogate recovery was observed for bromofluorobenzene (FID) in MW-3 (lab # 202342-003), 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.

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. This report may be reproduced only in its entirety.

Signature: Troy Baker  
Project Manager

Date: 04/17/2008

Signature: Tim Morris  
Quality Assurance Director

Date: 04/17/2008





Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	202342	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-43	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC436950	Batch#:	136939
Matrix:	Water	Analyzed:	04/10/08
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	913.7	91	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	124	69-140
Bromofluorobenzene (FID)	111	73-144

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	202342	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-43	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	136939
MSS Lab ID:	202470-001	Sampled:	04/07/08
Matrix:	Water	Received:	04/07/08
Units:	ug/L	Analyzed:	04/10/08
Diln Fac:	1.000		

Type: MS Lab ID: QC436954

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	28.02	2,000	1,544	76	67-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	130	69-140
Bromofluorobenzene (FID)	115	73-144

Type: MSD Lab ID: QC436955

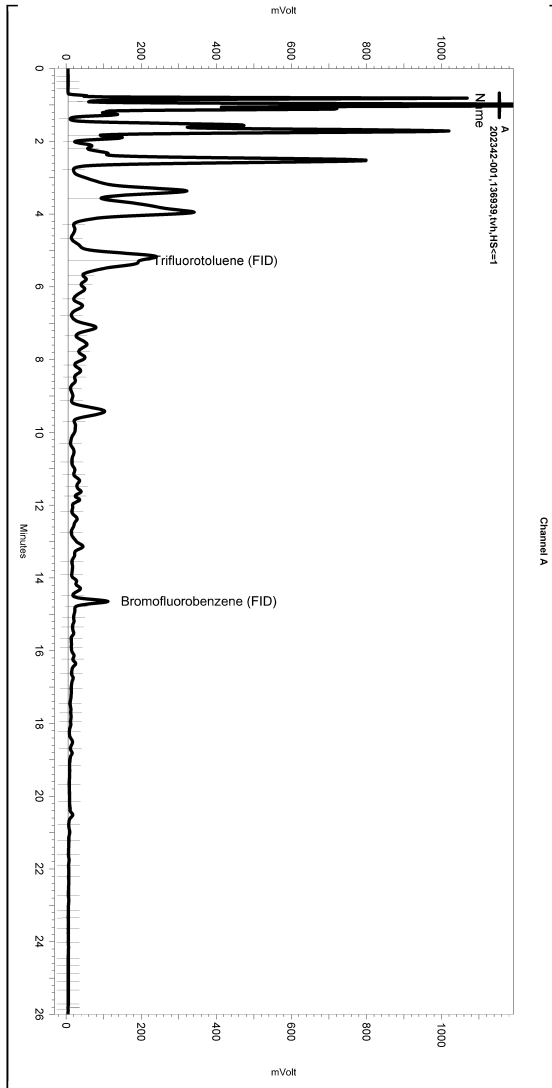
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,681	83	67-120	9	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	130	69-140
Bromofluorobenzene (FID)	118	73-144



Sequence File: \\Lims\gdrive\ezchrom\Projects\GC05\Sequence\101.seq  
 Sample Name: 202342-001,136939,tvh,HS<=1  
 Data File: \\Lims\gdrive\ezchrom\Projects\GC05\Data\101\_008  
 Instrument: GC05 (Offline) Vial: N/A Operator: Tvh 2, Analyst (lms2k3\tvh2)  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC05\Method\tvhbx094.met

Software Version 3.1.7  
 Run Date: 4/10/2008 2:36:21 PM  
 Analysis Date: 4/11/2008 8:25:34 AM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: a1.3



---< General Method Parameters ---

No items selected for this section

< A >

No items selected for this section

Integration Events

Enabled Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes Width	0	0.2	
Yes Threshold	0	50	

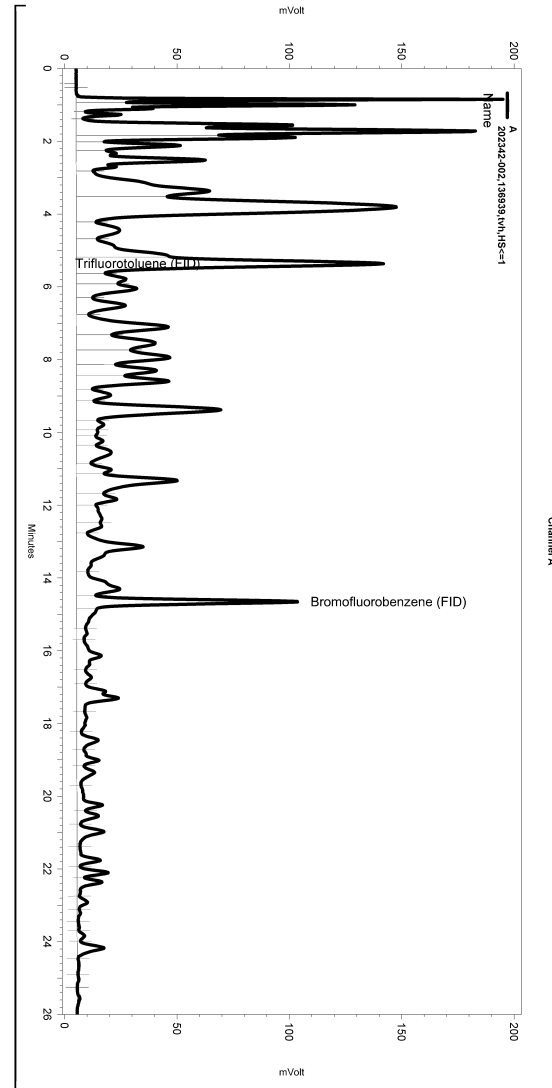
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC05\Data\101\_008

Enabled Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes Split Peak	5.284	0	0
Yes Split Peak	14.79	0	0

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC05\Sequence\101.seq  
 Sample Name: 202342-002,136939,tvh,HS<=1  
 Data File: \\Lims\gdrive\ezchrom\Projects\GC05\Data\101\_009  
 Instrument: GC05 (Offline) Vial: N/A Operator: Tvh 2, Analyst (lms2k3\tvh2)  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC05\Method\tvhbx094.met

Software Version 3.1.7  
 Run Date: 4/10/2008 3:11:53 PM  
 Analysis Date: 4/11/2008 8:58:59 AM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: b1.3



---< General Method Parameters ---

No items selected for this section

< A >

No items selected for this section

Integration Events

Enabled Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes Width	0	0.2	
Yes Threshold	0	50	

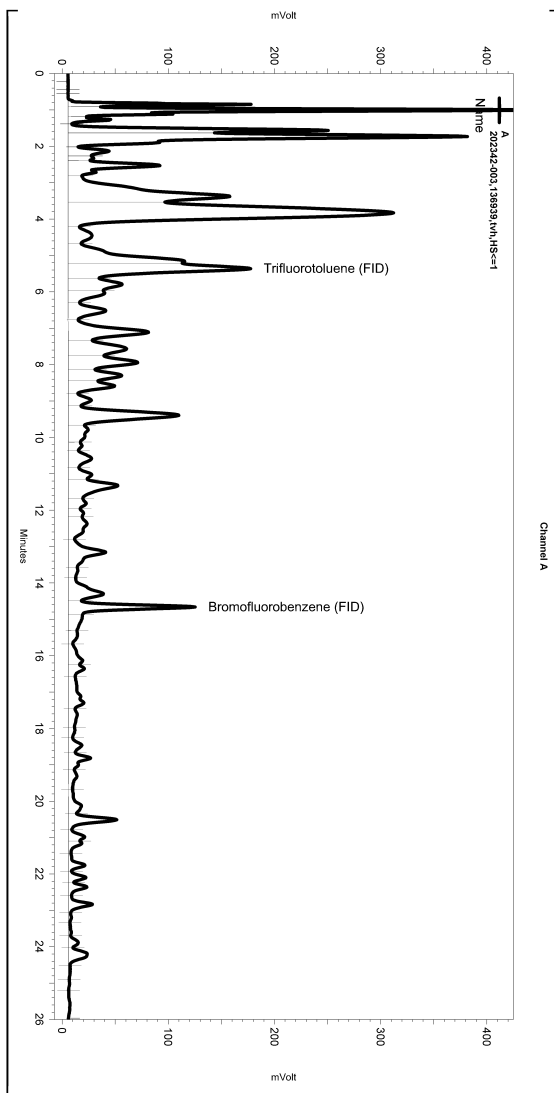
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC05\Data\101\_009

Enabled Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes Split Peak	5.179	0	0
Yes Split Peak	14.836	0	0

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC05\Sequence\101.seq  
 Sample Name: 202342-003,136939,tvh,HS<=1  
 Data File: \\Lims\gdrive\ezchrom\Projects\GC05\Data\101\_010  
 Instrument: GC05 (Offline) Vial: N/A Operator: Tvh 2, Analyst (lms2k3\tvh2)  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC05\Method\TVHBOX094.met

Software Version 3.1.7  
 Run Date: 4/10/2008 3:47:29 PM  
 Analysis Date: 4/11/2008 8:59:40 AM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: a1.3



---< General Method Parameters --->

No items selected for this section

---< A --->

No items selected for this section

Integration Events

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Width	0	0.2	
Yes	Threshold	0	50	

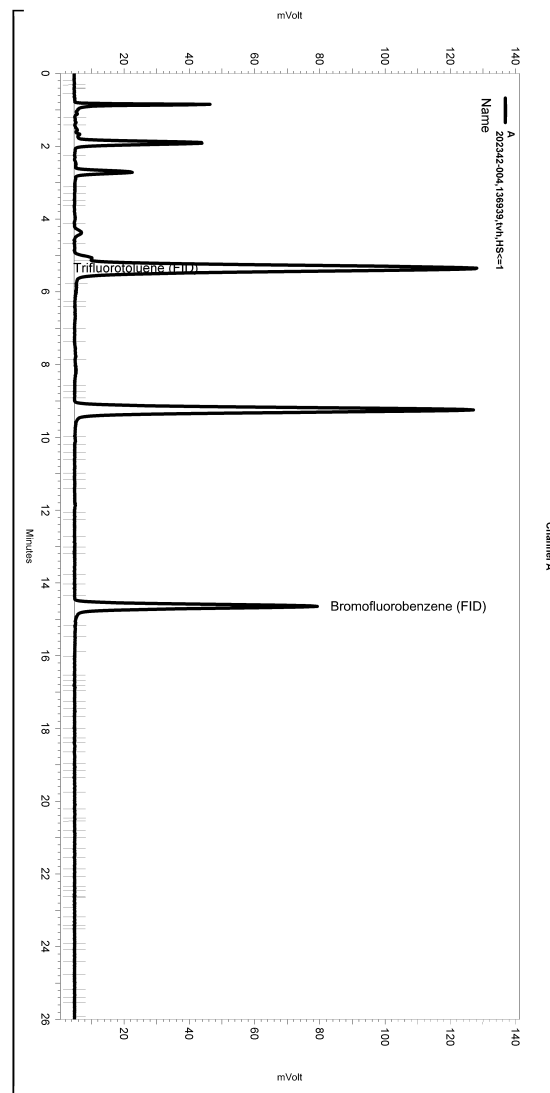
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC05\Data\101\_010

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Split Peak	5.222	0	0
Yes	Split Peak	14.875	0	0

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC05\Sequence\101.seq  
 Sample Name: 202342-004,136939,tvh,HS<=1  
 Data File: \\Lims\gdrive\ezchrom\Projects\GC05\Data\101\_018  
 Instrument: GC05 (Offline) Vial: N/A Operator: Tvh 2, Analyst (lms2k3\tvh2)  
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC05\Method\TVHBOX094.met

Software Version 3.1.7  
 Run Date: 4/10/2008 8:36:42 PM  
 Analysis Date: 4/11/2008 9:01:02 AM  
 Sample Amount: 5 Multiplier: 5  
 Vial & pH or Core ID: a1.3



---< General Method Parameters --->

No items selected for this section

---< A --->

No items selected for this section

Integration Events

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Width	0	0.2	
Yes	Threshold	0	50	

Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC05\Data\101\_018

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Split Peak	5.133	0	0





Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	202342	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2003-43	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC436268	Batch#:	136775
Matrix:	Water	Prepared:	04/05/08
Units:	ug/L	Analyzed:	04/11/08

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	1,996	80	61-120

Surrogate	%REC	Limits
Hexacosane	105	63-130

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	202342	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2003-43	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	136775
MSS Lab ID:	202237-004	Sampled:	03/24/08
Matrix:	Water	Received:	03/26/08
Units:	ug/L	Prepared:	04/05/08
Diln Fac:	1.000	Analyzed:	04/11/08

Type: MS Cleanup Method: EPA 3630C  
 Lab ID: QC436269

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	15.89	2,500	1,554	62	58-126

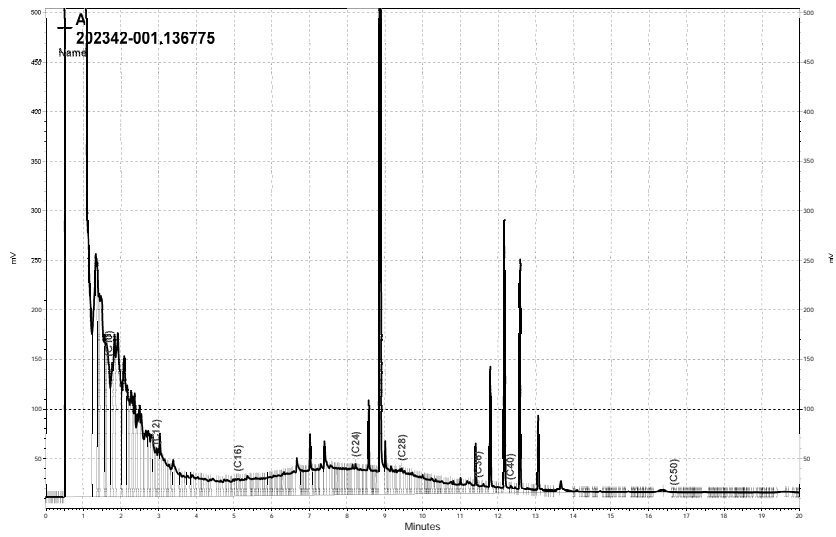
Surrogate	%REC	Limits
Hexacosane	84	63-130

Type: MSD Cleanup Method: EPA 3630C  
 Lab ID: QC436270

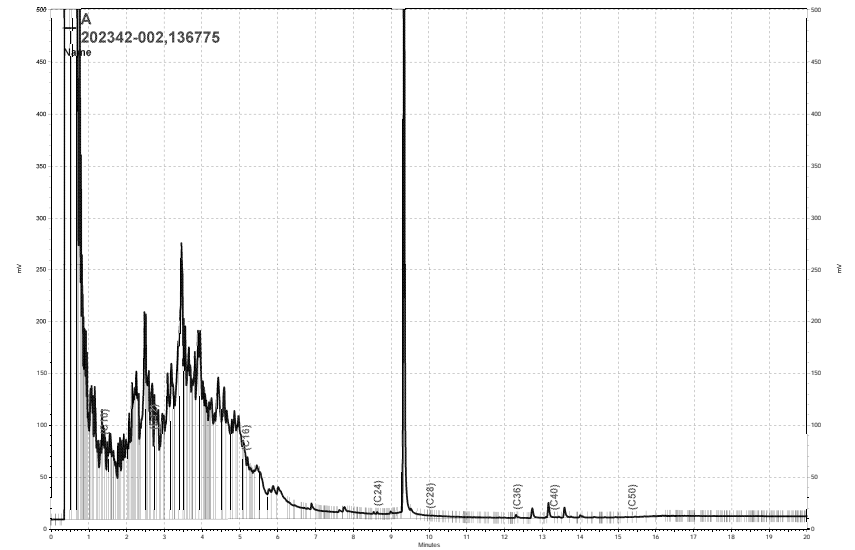
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	1,553	61	58-126	0	31

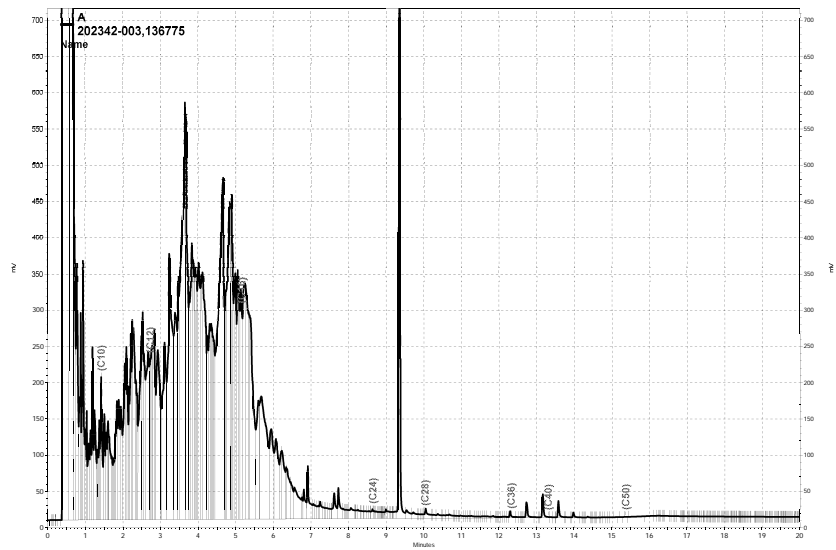
Surrogate	%REC	Limits
Hexacosane	83	63-130



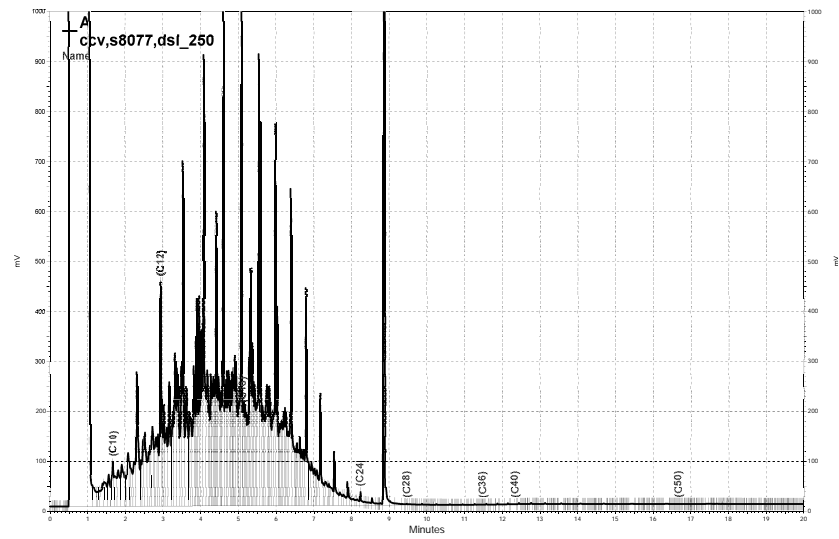
\\Lims\gdrive\ezchrom\Projects\GC17A\Data\099a086, A



\\Lims\gdrive\ezchrom\Projects\GC26\Data\106a008, A



\\lims\gdrive\ezchrom\Projects\GC26\Data\101a079, A



\\lims\gdrive\ezchrom\Projects\GC17A\Data\099a075, A



BTXE & Oxygenates			
Lab #:	202342	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-43	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	136698
Lab ID:	202342-001	Sampled:	03/28/08
Matrix:	Water	Received:	04/01/08
Units:	ug/L	Analyzed:	04/04/08
Diln Fac:	5.000		

BTXE & Oxygenates			
Lab #:	202342	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-43	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	136851
Lab ID:	202342-002	Sampled:	03/28/08
Matrix:	Water	Received:	04/01/08
Units:	ug/L	Analyzed:	04/08/08
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	66	50
MTBE	ND	2.5
Isopropyl Ether (DIPE)	ND	2.5
Ethyl tert-Butyl Ether (ETBE)	ND	2.5
1,2-Dichloroethane	4.6	2.5
Benzene	77	2.5
Methyl tert-Amyl Ether (TAME)	ND	2.5
Toluene	ND	2.5
1,2-Dibromoethane	ND	2.5
Ethylbenzene	8.2	2.5
m,p-Xylenes	10	2.5
o-Xylene	ND	2.5

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	87	10
MTBE	61	0.5
Isopropyl Ether (DIPE)	17	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
1,2-Dichloroethane	1.4	0.5
Benzene	13	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
Toluene	0.9	0.5
1,2-Dibromoethane	ND	0.5
Ethylbenzene	0.9	0.5
m,p-Xylenes	2.3	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-123
1,2-Dichloroethane-d4	102	76-138
Toluene-d8	96	80-120
Bromofluorobenzene	96	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	110	80-123
1,2-Dichloroethane-d4	109	76-138
Toluene-d8	104	80-120
Bromofluorobenzene	116	80-120

ND= Not Detected  
 RL= Reporting Limit

ND= Not Detected  
 RL= Reporting Limit



BTXE & Oxygenates			
Lab #:	202342	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-43	Analysis:	EPA 8260B
Field ID:	MW-3	Units:	ug/L
Lab ID:	202342-003	Sampled:	03/28/08
Matrix:	Water	Received:	04/01/08

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
tert-Butyl Alcohol (TBA)	74	10	1.000	136801	04/07/08
MTBE	100	2.0	4.000	136698	04/04/08
Isopropyl Ether (DIPE)	8.3	0.5	1.000	136801	04/07/08
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	1.000	136801	04/07/08
1,2-Dichloroethane	1.9	0.5	1.000	136801	04/07/08
Benzene	19	0.5	1.000	136801	04/07/08
Methyl tert-Amyl Ether (TAME)	ND	0.5	1.000	136801	04/07/08
Toluene	ND	0.5	1.000	136801	04/07/08
1,2-Dibromoethane	ND	0.5	1.000	136801	04/07/08
Ethylbenzene	ND	0.5	1.000	136801	04/07/08
m,p-Xylenes	0.6	0.5	1.000	136801	04/07/08
o-Xylene	ND	0.5	1.000	136801	04/07/08

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	110	80-123	1.000	136801	04/07/08
1,2-Dichloroethane-d4	110	76-138	1.000	136801	04/07/08
Toluene-d8	102	80-120	1.000	136801	04/07/08
Bromofluorobenzene	110	80-120	1.000	136801	04/07/08

Batch QC Report

BTXE & Oxygenates			
Lab #:	202342	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-43	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	136698
Units:	ug/L	Analyzed:	04/03/08
Diln Fac:	1.000		

Type: BS Lab ID: QC435925

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	129.7	104	55-158
MTBE	25.00	23.62	94	60-136
Isopropyl Ether (DIPE)	25.00	23.21	93	63-122
Ethyl tert-Butyl Ether (ETBE)	25.00	24.08	96	62-133
1,2-Dichloroethane	25.00	31.06	124	77-125
Benzene	25.00	23.69	95	80-120
Methyl tert-Amyl Ether (TAME)	25.00	24.95	100	69-137
Toluene	25.00	22.14	89	80-121
1,2-Dibromoethane	25.00	22.50	90	80-120
Ethylbenzene	25.00	24.72	99	80-124
m,p-Xylenes	50.00	47.21	94	80-128
o-Xylene	25.00	23.43	94	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	109	80-123
1,2-Dichloroethane-d4	103	76-138
Toluene-d8	96	80-120
Bromofluorobenzene	94	80-120

Type: BSD Lab ID: QC435926

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	129.6	104	55-158	0	20
MTBE	25.00	23.33	93	60-136	1	20
Isopropyl Ether (DIPE)	25.00	22.95	92	63-122	1	20
Ethyl tert-Butyl Ether (ETBE)	25.00	23.34	93	62-133	3	20
1,2-Dichloroethane	25.00	30.13	121	77-125	3	20
Benzene	25.00	22.88	92	80-120	3	20
Methyl tert-Amyl Ether (TAME)	25.00	24.45	98	69-137	2	20
Toluene	25.00	21.60	86	80-121	2	20
1,2-Dibromoethane	25.00	22.22	89	80-120	1	20
Ethylbenzene	25.00	24.16	97	80-124	2	20
m,p-Xylenes	50.00	46.39	93	80-128	2	20
o-Xylene	25.00	22.58	90	80-123	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	109	80-123
1,2-Dichloroethane-d4	103	76-138
Toluene-d8	96	80-120
Bromofluorobenzene	92	80-120

ND= Not Detected  
 RL= Reporting Limit  
 Page 1 of 1

RPD= Relative Percent Difference  
 Page 1 of 1





Batch QC Report

BTXE & Oxygenates			
Lab #:	202342	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-43	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC435930	Batch#:	136698
Matrix:	Water	Analyzed:	04/03/08
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	109	80-123
1,2-Dichloroethane-d4	106	76-138
Toluene-d8	96	80-120
Bromofluorobenzene	96	80-120

ND= Not Detected  
 RL= Reporting Limit  
 Page 1 of 1



Batch QC Report

BTXE & Oxygenates			
Lab #:	202342	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-43	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC436371	Batch#:	136801
Matrix:	Water	Analyzed:	04/07/08
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	134.4	108	55-158
MTBE	25.00	25.06	100	60-136
Isopropyl Ether (DIPE)	25.00	26.68	107	63-122
Ethyl tert-Butyl Ether (ETBE)	25.00	25.89	104	62-133
1,2-Dichloroethane	25.00	25.24	101	77-125
Benzene	25.00	26.31	105	80-120
Methyl tert-Amyl Ether (TAME)	25.00	25.02	100	69-137
Toluene	25.00	26.35	105	80-121
1,2-Dibromoethane	25.00	24.69	99	80-120
Ethylbenzene	25.00	26.17	105	80-124
m,p-Xylenes	50.00	52.16	104	80-128
o-Xylene	25.00	25.30	101	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-123
1,2-Dichloroethane-d4	105	76-138
Toluene-d8	101	80-120
Bromofluorobenzene	109	80-120



Batch QC Report

BTXE & Oxygenates			
Lab #:	202342	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-43	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC436372	Batch#:	136801
Matrix:	Water	Analyzed:	04/07/08
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	106	80-123
1,2-Dichloroethane-d4	112	76-138
Toluene-d8	102	80-120
Bromofluorobenzene	112	80-120

ND= Not Detected  
 RL= Reporting Limit  
 Page 1 of 1

Batch QC Report

BTXE & Oxygenates			
Lab #:	202342	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-43	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	136801
MSS Lab ID:	202384-003	Sampled:	04/01/08
Matrix:	Water	Received:	04/03/08
Units:	ug/L	Analyzed:	04/07/08
Diln Fac:	1.000		

Type: MSS Lab ID: QC436381

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<2.000	125.0	149.7	120	66-153
MTBE	<0.1000	25.00	26.09	104	72-129
Isopropyl Ether (DIPE)	<0.1000	25.00	27.67	111	72-124
Ethyl tert-Butyl Ether (ETBE)	<0.1000	25.00	26.59	106	72-131
1,2-Dichloroethane	<0.1000	25.00	27.14	109	80-129
Benzene	<0.1000	25.00	27.51	110	80-122
Methyl tert-Amyl Ether (TAME)	<0.1000	25.00	26.73	107	76-128
Toluene	<0.1000	25.00	27.72	111	80-120
1,2-Dibromoethane	<0.1000	25.00	26.19	105	80-120
Ethylbenzene	<0.1000	25.00	26.93	108	80-123
m,p-Xylenes	<0.1671	50.00	53.87	108	80-126
o-Xylene	<0.1000	25.00	25.88	104	80-122

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-123
1,2-Dichloroethane-d4	106	76-138
Toluene-d8	103	80-120
Bromofluorobenzene	107	80-120

Type: MSD Lab ID: QC436382

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	159.0	127	66-153	6	23
MTBE	25.00	25.54	102	72-129	2	20
Isopropyl Ether (DIPE)	25.00	26.25	105	72-124	5	20
Ethyl tert-Butyl Ether (ETBE)	25.00	25.29	101	72-131	5	20
1,2-Dichloroethane	25.00	25.33	101	80-129	7	20
Benzene	25.00	24.81	99	80-122	10	20
Methyl tert-Amyl Ether (TAME)	25.00	25.11	100	76-128	6	20
Toluene	25.00	25.12	100	80-120	10	20
1,2-Dibromoethane	25.00	24.50	98	80-120	7	20
Ethylbenzene	25.00	24.27	97	80-123	10	20
m,p-Xylenes	50.00	47.60	95	80-126	12	20
o-Xylene	25.00	23.77	95	80-122	8	20

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-123
1,2-Dichloroethane-d4	106	76-138
Toluene-d8	100	80-120
Bromofluorobenzene	109	80-120

RPD= Relative Percent Difference  
 Page 1 of 1



Batch QC Report

BTXE & Oxygenates			
Lab #:	202342	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-43	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC436581	Batch#:	136851
Matrix:	Water	Analyzed:	04/08/08
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	110	80-123
1,2-Dichloroethane-d4	112	76-138
Toluene-d8	103	80-120
Bromofluorobenzene	113	80-120

ND= Not Detected  
 RL= Reporting Limit  
 Page 1 of 1

Batch QC Report

BTXE & Oxygenates			
Lab #:	202342	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2003-43	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	136851
Units:	ug/L	Analyzed:	04/08/08
Diln Fac:	1.000		

Type: BS Lab ID: QC436582

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	62.50	71.74	115	55-158
MTBE	12.50	12.57	101	60-136
Isopropyl Ether (DIPE)	12.50	13.83	111	63-122
Ethyl tert-Butyl Ether (ETBE)	12.50	13.18	105	62-133
1,2-Dichloroethane	12.50	13.09	105	77-125
Benzene	12.50	12.70	102	80-120
Methyl tert-Amyl Ether (TAME)	12.50	12.38	99	69-137
Toluene	12.50	12.65	101	80-121
1,2-Dibromoethane	12.50	11.89	95	80-120
Ethylbenzene	12.50	12.65	101	80-124
m,p-Xylenes	25.00	24.64	99	80-128
o-Xylene	12.50	11.97	96	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	109	80-123
1,2-Dichloroethane-d4	108	76-138
Toluene-d8	102	80-120
Bromofluorobenzene	112	80-120

Type: BSD Lab ID: QC436583

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	62.50	69.85	112	55-158	3	20
MTBE	12.50	12.49	100	60-136	1	20
Isopropyl Ether (DIPE)	12.50	14.12	113	63-122	2	20
Ethyl tert-Butyl Ether (ETBE)	12.50	13.38	107	62-133	1	20
1,2-Dichloroethane	12.50	13.06	104	77-125	0	20
Benzene	12.50	13.27	106	80-120	4	20
Methyl tert-Amyl Ether (TAME)	12.50	12.83	103	69-137	4	20
Toluene	12.50	12.58	101	80-121	1	20
1,2-Dibromoethane	12.50	11.94	96	80-120	0	20
Ethylbenzene	12.50	12.89	103	80-124	2	20
m,p-Xylenes	25.00	24.55	98	80-128	0	20
o-Xylene	12.50	12.14	97	80-123	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-123
1,2-Dichloroethane-d4	111	76-138
Toluene-d8	104	80-120
Bromofluorobenzene	110	80-120

RPD= Relative Percent Difference  
 Page 1 of 1

202342

# Chain of Custody Record

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

Lab job no. \_\_\_\_\_  
 Date 3/28/08  
 Page 1 of 1

	Field Sample Number	Location/Depth	Date	Time	Sample Type	Type/Size of Container	Preservation		Analysis Required	Remarks
							Cooler	Chemical		
1	MW-1		3/28/08	1100	W	HCl Vocs, Amber	yes	HCl		
2	MW-2			1010		HCl Vocs, 1L Amber	yes			
3	MW-3			1035		HCl Vocs, 1L Amber	yes			
4	MW-4			0935		HCl Vocs	yes			
							yes			
							yes			
							yes			

Filtered  
 No. of Containers  
 TVH-6 (Boils)  
 TEX-D (Boils)  
 BTDF + MTRF  
 EDB, EDC  
 5 OXYGENATES  
 82608

Relinquished by: Signature <u>[Signature]</u> Printed <u>K. Cordes</u> Company <u>BTS</u>	Date <u>3/28/08</u> Time <u>1720</u>	Received by: Signature <u>[Signature]</u> Printed <u>K. Cordes</u> Company <u>BTS</u>	Date <u>3/28</u> Time <u>1720</u>	Relinquished by: Signature <u>[Signature]</u> Printed <u>Michael Nwankata</u> Company <u>BTS</u>	Date <u>4/1/08</u> Time <u>1355</u>	Received by: Signature <u>[Signature]</u> Printed <u>ADAM GREENE</u> Company <u>Curtis Tompkins</u>	Date <u>4/1/08</u> Time <u>1355</u>
--	---	--	--------------------------------------	---	--	--	--

Turnaround Time: 5 Day TAT  
 Comments: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date \_\_\_\_\_  
 Signature \_\_\_\_\_  
 Printed \_\_\_\_\_ Time \_\_\_\_\_  
 Company \_\_\_\_\_  
 Received by: \_\_\_\_\_ Date \_\_\_\_\_  
 Signature \_\_\_\_\_  
 Printed \_\_\_\_\_ Time \_\_\_\_\_  
 Company \_\_\_\_\_

2000-00-01

## **APPENDIX C**

---

### **Historical Groundwater Monitoring Well Analytical Data**

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

Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
<b>MW-1</b>									
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
Yes	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
Yes	30	Mar-06	11,000	3,000	340	45	89	630	4.3
Yes	31	Jun-06	21,000	8,500	1,600	160	170	1,000	< 2.5
Yes	32	Sep-06	13,000	6,200	1,700	76	110	440	< 13
Yes	33	Dec-06	16,000	4,100	1,500	100	160	670	< 13
Yes	34	Mar-07	22,000	6,200	1,700	140	180	1,100	< 13
Yes	35	Jun-07	3,600	1,500	210	10	19	61	3.2
Yes	36	Sep-07	1,400	1,700	50	< 0.5	1.3	< 0.5	4.1
Yes	37	Dec-07	2,700	840	170	5.5	7.5	34.6	3.1
Yes	38	Mar-08	2,300	1,000	77	<2.5	8.2	10	<2.5

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

Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
<b>MW-2</b>									
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	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
Yes	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
Yes	30	Mar-06	1,300	400	3.2	< 0.7	< 0.7	< 1.4	120
Yes	31	Jun-06	1,400	1,200	33.0	1.3	3.5	< 1.6	84
Yes	32	Sep-06	8,300	1,600	67.0	4.1	4.6	15.4	64
Yes	33	Dec-06	1,500	940	22.0	2.9	2.6	3.5	67
Yes	34	Mar-07	1,200	760	65	1.9	3.7	1.6	59
Yes	35	Jun-07	2,900	1,000	67	3.2	14.0	7.5	49
Yes	36	Sep-07	NS	NS	NS	NS	NS	NS	NS
Yes	37	Dec-07	1,200	510	14	< 0.5	< 0.5	0.5	33
Yes	38	Mar-08	1,100	3,800	13	0.9	0.9	2.3	61

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

Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
<b>MW-3</b>									
Yes	1	Aug-97	8,500	< 1,000	450	30	53	106	NA
Yes	2	Dec-97	5,200	NA	180	6	5	9.3	NA
Yes	3	Mar-98	1,000	NA	6	< 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
Yes	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	10	3.7	76
Yes	27	Jun-05	4,200	1,800	49	4.5	23	16	66
Yes	28	Sep-05	5,000	950	60	3.1	12	26	59
Yes	29	Dec-05	3,200	1,800	29	1.3	6.6	5.6	80
Yes	30	Mar-06	4,100	1,200	24	1.1	8.5	3.4	99
Yes	31	Jun-06	4,000	1,400	89.0	8.4	14.0	16.7	75
Yes	32	Sep-06	6,100	2,600	190	15.0	24.0	59.0	51
Yes	33	Dec-06	4,500	2,000	110	4.0	7.3	19.1	47
Yes	34	Mar-07	3,800	2,400	90	3.7	9.8	11.1	51
Yes	35	Jun-07	4,500	2,100	8.9	1.4	14.0	4.0	77
Yes	36	Sep-07	4,000	NS	4.6	< 0.5	1.3	< 0.5	75
Yes	37	Dec-07	1,400	2,600	11.0	0.8	0.7	3.9	84
Yes	38	Mar-08	1,700	9,600	19.0	<0.5	<0.5	0.6	100

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



Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
<b>MW-4</b>									
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
Yes	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
Yes	30	Mar-06	< 50	NA	NA	NA	NA	NA	NA
Yes	31	Jun-06	< 50	NA	NA	NA	NA	NA	NA
Yes	32	Sep-06	< 50	NA	NA	NA	NA	NA	NA
Yes	33	Dec-06	59	NA	NA	NA	NA	NA	NA
Yes	34	Mar-07	<50	NA	NA	NA	NA	NA	NA
Yes	35	Jun-07	57	NA	NA	NA	NA	NA	NA
Yes	36	Sep-07	70	NA	NA	NA	NA	NA	NA
Yes	37	Dec-07	90	NA	NA	NA	NA	NA	NA
Yes	38	Mar-08	120	NA	NA	NA	NA	NA	NA

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

Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
<b>MW-5</b>									
(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
Yes	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
Yes	30	Mar-06	9,800	5,100	240	47	97	590	< 2.0
Yes	31	Jun-06	28,000	4,900	920.0	250.0	350.0	1,480	< 2.0
Yes	32	Sep-06	12,000	2,400	580	170	230	980	< 3.6
Yes	33	Dec-06	15,000	3,400	510	160	260	1,190	<3.6
Yes	34	Mar-07	20,000	4,600	910	230	360	1,560	<3.6
No	35	Jun-07	NS	NS	NS	NS	NS	NS	NS
No	36	Sep-07	NS	NS	NS	NS	NS	NS	NS
No	37	Dec-07	NS	NS	NS	NS	NS	NS	NS
Yes	38	Mar-08	NS	NS	NS	NS	NS	NS	NS

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

Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
<b>MW-6</b>									
(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
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	23	58	< 0.5
Yes	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	6.6	13	< 0.5
Yes	29	Dec-05	240	890	3.6	< 0.5	0.7	2.4	0.5
Yes	30	Mar-06	530	950	8.3	< 0.5	4.0	2.1	0.6
Yes	31	Jun-06	460	1,300	8.3	< 0.5	1.4	2.6	< 0.5
Yes	32	Sep-06	530	730	10.0	0.8	4.1	7.5	< 0.5
Yes	33	Dec-06	500	750	7.5	< 0.5	2.6	2.5	< 0.5
Yes	34	Mar-07	430	530	7.1	< 0.5	1.7	0.8	< 0.5
No	35	Jun-07	NS	NS	NS	NS	NS	NS	NS
No	36	Sep-07	NS	NS	NS	NS	NS	NS	NS
No	37	Dec-07	NS	NS	NS	NS	NS	NS	NS
Yes	38	Mar-08	NS	NS	NS	NS	NS	NS	NS

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

Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
<b>MW-7</b>									
(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
Yes	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
Yes	30	Mar-06	< 50	NA	NA	NA	NA	NA	NA
Yes	31	Jun-06	< 50	NA	NA	NA	NA	NA	NA
Yes	32	Sep-06	< 50	NA	NA	NA	NA	NA	NA
Yes	33	Dec-06	< 50	NA	NA	NA	NA	NA	NA
Yes	34	Mar-07	< 50	NA	NA	NA	NA	NA	NA
No	35	Jun-07	NS	NA	NA	NA	NA	NA	NA
No	36	Sep-07	NS	NA	NA	NA	NA	NA	NA
No	37	Dec-07	NS	NA	NA	NA	NA	NA	NA
Yes	38	Mar-08	NS	NA	NA	NA	NA	NA	NA

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

Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
<b>MW-8</b>									
(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	Aug-03	190	< 50	< 0.5	< 0.5	< 0.5	0.6	< 0.5
Yes	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
Yes	30	Mar-06	140	120	< 0.5	< 0.5	< 0.5	0.6	24
Yes	31	Jun-06	710	170	< 0.5	< 0.5	< 0.5	< 1.0	81
Yes	32	Sep-06	330	260	< 0.5	< 0.5	< 0.5	< 0.5	44
Yes	33	Dec-06	63	< 50	< 0.5	< 0.5	< 0.5	< 0.5	21
Yes	34	Mar-07	250	130	< 0.5	< 0.5	< 0.5	0.5	5
Yes	35	Jun-07	320	150	5.2	< 0.5	< 0.5	0.7	89
Yes	36	Sep-07	NS	NS	NS	NS	NS	NS	NS
Yes	37	Dec-07	NS	NS	NS	NS	NS	NS	NS
Yes	38	Mar-08	NS	NS	NS	NS	NS	NS	NS

Notes:

(a) Data not available to SES as to whether the samples were collected "post-purge" or before 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 the 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
<b>MW-1</b>	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
	30	Mar-06	< 2.0	< 2.0	NA	NA	NA	83	< 2.0	NA	NA	NA	NA	NA
	31	Jun-06	< 2.5	< 2.5	NA	NA	NA	220	< 2.5	NA	NA	NA	NA	NA
	32	Sep-06	< 13	< 13	NA	NA	NA	320	< 13	NA	NA	NA	NA	NA
	33	Dec-06	< 13	< 13	NA	NA	NA	320	< 13	NA	NA	NA	NA	NA
	34	Mar-07	< 13	< 13	NA	NA	NA	< 250	< 13	NA	NA	NA	NA	NA
	35	Jun-07	< 1.7	< 1.7	NA	NA	NA	37	< 1.7	NA	NA	NA	NA	NA
	36	Sep-07	< 0.5	1.8	NA	NA	NA	66	< 0.5	NA	NA	NA	NA	NA
	37	Dec-07	< 1.0	< 1.0	NA	NA	NA	26	< 1.0	NA	NA	NA	NA	NA
	38	Mar-08	< 2.5	4.6	NA	NA	NA	66	< 2.5	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
<b>MW-2</b>	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	1.0	NA	NA	NA	NA	NA
	30	Mar-06	< 0.7	< 0.7	NA	NA	NA	56	1.2	NA	NA	NA	NA	NA
	31	Jun-06	< 0.8	1.4	NA	NA	NA	56	< 0.8	NA	NA	NA	NA	NA
	32	Sep-06	< 0.5	1.3	NA	NA	NA	59	0.8	NA	NA	NA	NA	NA
	33	Dec-06	< 0.5	1.3	NA	NA	NA	59	0.8	NA	NA	NA	NA	NA
	34	Mar-07	< 0.5	2.5	NA	NA	NA	65	1.2	NA	NA	NA	NA	NA
	35	Jun-07	< 0.5	< 0.5	NA	NA	NA	24	6.1	NA	NA	NA	NA	NA
	37	Dec-07	< 0.5	< 0.5	NA	NA	NA	21	3.4	NA	NA	NA	NA	NA
	38	Mar-08	< 0.5	1.4	NA	NA	NA	87	17.0	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
<b>MW-3</b>	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
	30	Mar-06	< 0.5	< 0.5	NA	NA	NA	29	1.0	NA	NA	NA	NA	NA
	31	Jun-06	< 0.5	< 0.5	NA	NA	NA	52	2.2	NA	NA	NA	NA	NA
	32	Sep-06	< 1.7	1.8	NA	NA	NA	53	1.7	NA	NA	NA	NA	NA
	33	Dec-06	< 1.7	1.8	NA	NA	NA	53	1.7	NA	NA	NA	NA	NA
	34	Mar-07	< 0.5	< 0.5	NA	NA	NA	37	1.9	NA	NA	NA	NA	NA
	35	Jun-07	< 0.5	< 0.5	NA	NA	NA	10	1.0	NA	NA	NA	NA	NA
	36	Sep-07	< 0.5	< 0.5	NA	NA	NA	49	1.9	NA	NA	NA	NA	
	37	Dec-07	< 0.5	< 0.5	NA	NA	NA	71	8.6	NA	NA	NA	NA	NA
	38	Mar-08	< 0.5	1.9	NA	NA	NA	74	8.3	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
<b>MW-4</b>	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
	30	Mar-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	31	Jun-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	32	Sep-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	33	Dec-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	34	Mar-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	36	Sep-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	37	Dec-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	38	Mar-08	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)
<b>MW-5</b>	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
	30	Mar-06	< 2.0	< 2.0	NA	NA	NA	< 2.0	< 2.0	NA	NA	NA	NA	NA
	31	Jun-06	< 2.0	10	NA	NA	NA	61	< 2.0	NA	NA	NA	NA	NA
	32	Sep-06	< 3.6	5.5	NA	NA	NA	76	< 3.6	NA	NA	NA	NA	NA
	33	Dec-06	< 3.6	5.5	NA	NA	NA	76	< 3.6	NA	NA	NA	NA	NA
	34	Mar-07	< 3.6	< 3.6	NA	NA	NA	< 71	< 3.6	NA	NA	NA	NA	NA
	35	Jun-07	NS	NS	NA	NA	NA	NS	NS	NA	NA	NA	NA	NA
	36	Sep-07	NS	NS	NA	NA	NA	NS	NS	NA	NA	NA	NA	NA
	37	Dec-07	NS	NS	NA	NA	NA	NS	NS	NA	NA	NA	NA	NA
	38	Mar-08	NS	NS	NA	NA	NA	NS	NS	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
<b>MW-6</b>	21	Dec-03	< 5.0	11 / 17.1 <sup>(d)</sup>	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
	30	Mar-06	< 0.50	15	NA	NA	NA	19	0.6	NA	NA	NA	NA	NA
	31	Jun-06	< 0.50	28	NA	NA	NA	53	1.3	NA	NA	NA	NA	NA
	32	Sep-06	< 0.50	11	NA	NA	NA	46	0.7	NA	NA	NA	NA	NA
	33	Dec-06	< 0.50	11	NA	NA	NA	46	0.7	NA	NA	NA	NA	NA
	34	Mar-07	< 0.5	10	NA	NA	NA	25	< 0.5	NA	NA	NA	NA	NA
	35	Jun-07	NS	NS	NA	NA	NA	NS	NS	NA	NA	NA	NA	NA
	36	Sep-07	NS	NS	NA	NA	NA	NS	NS	NA	NA	NA	NA	NA
	37	Dec-07	NS	NS	NA	NA	NA	NS	NS	NA	NA	NA	NA	NA
	38	Mar-08	NS	NS	NA	NA	NA	NS	NS	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	NA
	19	Mar-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
<b>MW-7</b>	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
	30	Mar-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	31	Jun-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	32	Sep-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	32	Sep-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	33	Dec-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	34	Mar-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	35	Jun-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	36	Sep-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	37	Dec-07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	38	Mar-08	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
<b>MW-8</b>	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	25.0	NA	NA	NA	42	1.1	NA	NA	NA	NA	NA
	28	Sep-05	< 0.50	< 0.5	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
	30	Mar-06	< 0.50	< 0.50	NA	NA	NA	17	0.6	NA	NA	NA	NA	NA
	31	Jun-06	< 0.50	< 0.50	NA	NA	NA	20	0.9	NA	NA	NA	NA	NA
	32	Sep-06	< 0.50	< 0.50	NA	NA	NA	12	< 0.50	NA	NA	NA	NA	NA
	33	Dec-06	< 0.50	< 0.50	NA	NA	NA	12	< 0.50	NA	NA	NA	NA	NA
	34	Mar-07	< 0.50	< 0.50	NA	NA	NA	< 10	< 0.50	NA	NA	NA	NA	NA
	35	Jun-07	< 0.5	< 0.5	NA	NA	NA	14	1.3	NA	NA	NA	NA	NA
	36	Sep-07	NS	NS	NA	NA	NA	NS	NS	NA	NA	NA	NA	NA
	37	Dec-07	NS	NS	NA	NA	NA	NS	NS	NA	NA	NA	NA	NA
	38	Mar-08	NS	NS	NA	NA	NA	NS	NS	NA	NA	NA	NA	NA

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 mg/L); p-Isopropyltoluene (14 mg/L); sec-Butylbenzene (7.2 mg/L)

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

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

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

NS = Not Sampled

## **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
	30	Mar-06	12.75	66.40
	31	Jun-06	14.60	64.55
	32	Sep-06	16.52	62.63
	33	Dec-06	15.89	63.26
	34	Mar-07	15.50	63.65
	35	Jun-07	20.90	58.25
	36	Sep-07	23.30	55.85
	37	Dec-07	22.51	56.64
	38	Mar-08	20.70	58.45

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
	30	Mar-06	12.20	66.25
	31	Jun-06	14.15	64.30
	32	Sep-06	16.00	62.45
	33	Dec-06	15.19	63.26
	34	Mar-07	14.78	63.67
	35	Jun-07	20.60	57.85
	36	Sep-07	23.80	54.65
	37	Dec-07	22.36	56.09
38	Mar-08	20.15	58.30	

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
	30	Mar-06	11.25	66.33
	31	Jun-06	13.27	64.31
	32	Sep-06	15.12	62.46
	33	Dec-06	14.34	63.24
	34	Mar-07	13.96	63.62
	35	Jun-07	19.60	57.98
	36	Sep-07	22.90	54.68
	37	Dec-07	21.45	56.13
	38	Mar-08	19.20	58.38

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
	30	Mar-06	10.90	66.84
	31	Jun-06	13.02	64.72
	32	Sep-06	15.16	62.58
	33	Dec-06	14.35	63.39
	34	Mar-07	13.85	63.89
	35	Jun-07	18.41	59.33
	36	Sep-07	19.36	58.38
	37	Dec-07	19.13	58.61
	38	Mar-08	17.91	59.83

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
	30	Mar-06	12.75	66.61
	31	Jun-06	14.65	64.71
	32	Sep-06	16.66	62.70
	33	Dec-06	16.10	63.26
	34	Mar-07	15.22	64.14
	35	Jun-07	19.29	60.07
	36	Sep-07	NM	dry
	37	Dec-07	NM	dry
	38	Mar-08	NM	dry

Notes:

(a) Feet below well top of casing.

(b) Relative to mean sea level.

NA = Data Not Available

NM = Not Measurable

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
	30	Mar-06	11.85	66.58
	31	Jun-06	13.73	64.70
	32	Sep-06	15.71	62.72
	33	Dec-06	15.15	63.28
	34	Mar-07	14.58	63.85
	35	Jun-07	19.40	59.03
	36	Sep-07	20.00	58.43 (dry)
	37	Dec-07	NM	dry
	38	Mar-08	NM	dry

Notes:

(a) Feet below well top of casing.

(b) Relative to mean sea level.

NA = Data Not Available

NM = Not Measurable

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
	30	Mar-06	13.00	65.27
	31	Jun-06	13.98	64.29
	32	Sep-06	15.82	62.45
	33	Dec-06	15.12	63.15
	34	Mar-07	14.66	63.61
	35	Jun-07	19.18	59.09
	36	Sep-07	19.96	dry
	37	Dec-07	NM	dry
	38	Mar-08	NM	dry

Notes:

(a) Feet below well top of casing.

(b) Relative to mean sea level.

NA = Data Not Available

NM = Not Measurable

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
	30	Mar-06	10.80	65.59
	31	Jun-06	12.10	64.29
	32	Sep-06	13.93	62.46
	33	Dec-06	13.12	63.27
	34	Mar-07	12.76	63.63
	35	Jun-07	18.40	57.99
	36	Sep-07	19.12	57.27 (dry)
	37	Dec-07	NM	dry
	38	Mar-08	NM	dry

Notes:

(a) Feet below well top of casing.

(b) Relative to mean sea level.

NA = Data Not Available

NM = Not Measurable

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