


STELLAR ENVIRONMENTAL SOLUTIONS, INC.  
 2198 SIXTH STREET, SUITE 201, BERKELEY, CA 94711  
 TEL: 510.644.3123 ★ FAX: 510.644.3859

Alameda County  
 JUL 14 2005  
 Environmental Health

TRANSMITTAL MEMORANDUM

<b>TO:</b> LOCAL OVERSIGHT PROGRAM ENVIRONMENTAL HEALTH SERVICES ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY 1131 HARBOR BAY PARKWAY ALAMEDA, CALIFORNIA 94502-6577	<b>DATE:</b> JULY 12, 2005
<b>ATTENTION:</b> MR. DON HWANG	<b>FILE:</b> SES 2003-43
<b>SUBJECT:</b> OAKLAND AUTO WORKS 240 W. MACARTHUR BLVD OAKLAND, CALIFORNIA ALAMEDA COUNTY HEALTH FUEL LEAK CASE NO. R00000142	
<b>WE ARE SENDING:</b> <input checked="" type="checkbox"/> HEREWITH	<input type="checkbox"/> UNDER SEPARATE COVER
<input checked="" type="checkbox"/> VIA MAIL	<input type="checkbox"/> VIA
<b>THE FOLLOWING:</b> SECOND QUARTER 2005 GROUNDWATER MONITORING REPORT (1 COPY)	
<input type="checkbox"/> AS REQUESTED	<input type="checkbox"/> FOR YOUR APPROVAL
<input type="checkbox"/> FOR REVIEW	<input checked="" type="checkbox"/> FOR YOUR USE
<input type="checkbox"/> FOR SIGNATURE	<input type="checkbox"/> FOR YOUR FILES
<b>COPY TO:</b> MR. GLEN POY-WING, PROPERTY OWNER	<b>BY:</b> BRUCE RUCKER 

**SECOND QUARTER 2005  
GROUNDWATER  
MONITORING REPORT**

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

*Prepared for:*

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

**July 2005**

**STELLAR**

**GROUNDWATER MONITORING REPORT**

**STELLAR ENVIRONMENTAL SOLUTIONS, INC.**

July 8, 2005

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

**Alameda County**  
**JUL 14 2005**  
**Environmental Health**

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

Dear Mr. Hwang:

Enclosed is the Stellar Environmental Solutions, Inc. (SES) report summarizing recent activities conducted at the referenced site. This report presents the findings of the Second Quarter 2005 groundwater monitoring event (the 27<sup>th</sup> site groundwater monitoring event since August 1997).

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

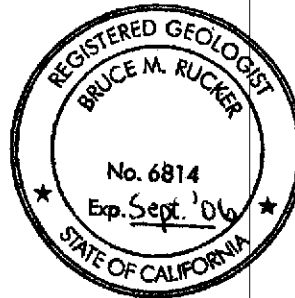
Sincerely,



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



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



cc: Mr. Glen Poy-Wing, property owner

**SECOND QUARTER 2005  
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**

**July 8, 2005**

Project No. 2003-43

# TABLE OF CONTENTS

---

	Page
1.0 INTRODUCTION .....	1
Project Background.....	1
Regulatory Status .....	1
Scope of Report.....	2
Site Description.....	2
Historical Environmental Activities.....	2
2.0 PHYSICAL SETTING .....	6
Topography and Surface Water Drainage.....	6
Lithology .....	6
Groundwater Hydrology .....	7
3.0 JUNE 2005 GROUNDWATER MONITORING AND SAMPLING.....	10
4.0 REGULATORY CONSIDERATIONS, ANALYTICAL RESULTS AND FINDINGS .....	12
Regulatory Considerations.....	12
Groundwater Sample Analytical Methods .....	13
Groundwater Sample Results .....	14
Quality Control Sample Analytical Results .....	21
5.0 SUMMARY, CONCLUSIONS, AND PROPOSED ACTIONS.....	22
Summary and Conclusions.....	22
Proposed Actions .....	23
6.0 REFERENCES AND BIBLIOGRAPHY .....	24
7.0 LIMITATIONS .....	28

## 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

## 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.....	11
Table 2 Groundwater Sample Analytical Results – June 14, 2005 Hydrocarbons, BTEX, and MTBE 240 W. MacArthur Boulevard, Oakland, California.....	15
Table 3 Groundwater Sample Analytical Results – June 14, 2005 Lead Scavengers and Fuel Oxygenates 240 W. MacArthur Boulevard, Oakland, California.....	16

<b>Figures</b>	<b>Page</b>
Figure 1 Site Location Map .....	3
Figure 2 Site Plan .....	4
Figure 3 Groundwater Elevation Map – June 14, 2005.....	8
Figure 4 Gasoline Isoconcentration Contours – June 2005.....	17
Figure 5 Diesel Isoconcentration Contours – June 2005.....	18
Figure 6 Benzene Isoconcentration Contours – June 2005 .....	19
Figure 7 MTBE Isoconcentration Contours – June 2005.....	20

## **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 6.0, References and Bibliography. This report presents findings for the 27<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 Health Department (Alameda County Health) is the lead regulatory agency for the case, acting as a Local Oversight Program (LOP) for the Regional Water Quality Control Board (Water Board). There are no Alameda County Health or Water Board cleanup orders for the site; however, all site work has been conducted under oversight of Alameda County Health. In our August 2003 review of the Alameda County Health case file, we determined that all known technical reports for the site were included in that file.

The previous consultant requested site closure in March 2003 (AEC, 2003a). Alameda County Health denied that request and, in a letter dated April 16, 2003, requested additional site characterization prior to considering case closure. That work was subsequently conducted by SES, 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). Alameda County Health has not yet responded to that workplan.

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

analytical data from groundwater monitoring events conducted by SES (beginning in August 2003). Beginning January 1, 2005, portable data format (pdf) electronic copies of site technical reports were uploaded to GeoTracker, along with hard-copy reports submitted to Alameda County Health. As of July 1, 2005, pdf uploads have entirely replaced hard-copy submittals.

In December 2004, the owner submitted to Alameda County Health a workplan for interim corrective action (focusing on soil vapor extraction to reduce source area contaminant mass). Alameda County Health has not responded to that workplan.

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

## **SCOPE OF REPORT**

This report discusses the following work, conducted between April 1 and June 30, 2005:

- 27<sup>th</sup> groundwater monitoring and sampling event, conducted on June 14, 2005.

## **SITE DESCRIPTION**

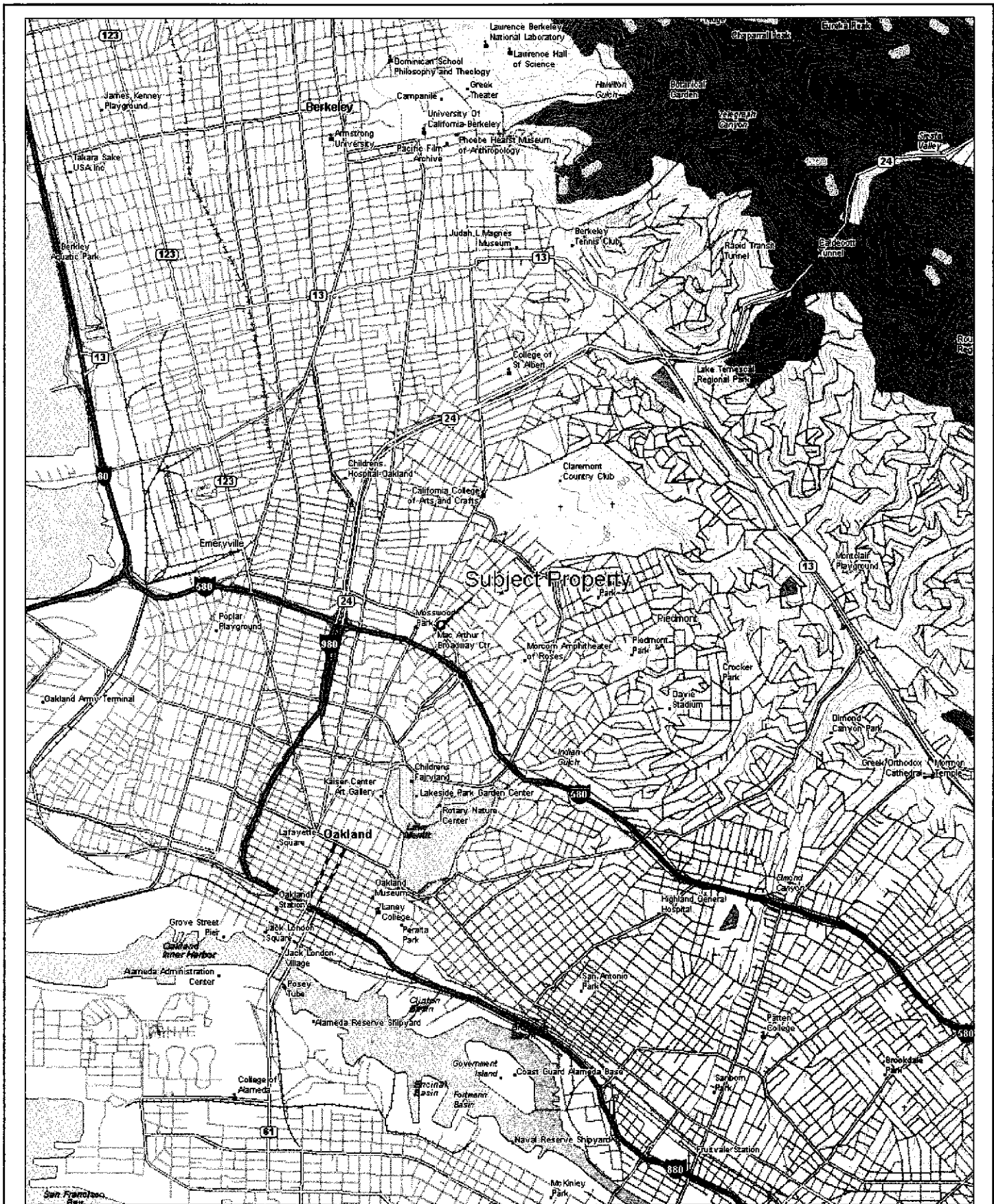
The project site is located at 240 W. MacArthur Boulevard in Oakland, California (see Figure 1). The rectangular-shaped project site is approximately 14,000 square feet (140 feet long by 100 feet wide), and is oriented with its long axis parallel to W. MacArthur Boulevard (approximately northwest-southeast).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

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

## **HISTORICAL ENVIRONMENTAL ACTIVITIES**

This section summarizes historical (prior to the current quarter) environmental remediation and site characterization activities, based on documentation provided by the current property owners as well as Alameda County Health files. Figure 2 shows the site plan with the current groundwater well and former underground fuel storage tank (UFST) locations.





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

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

**By: MJC**

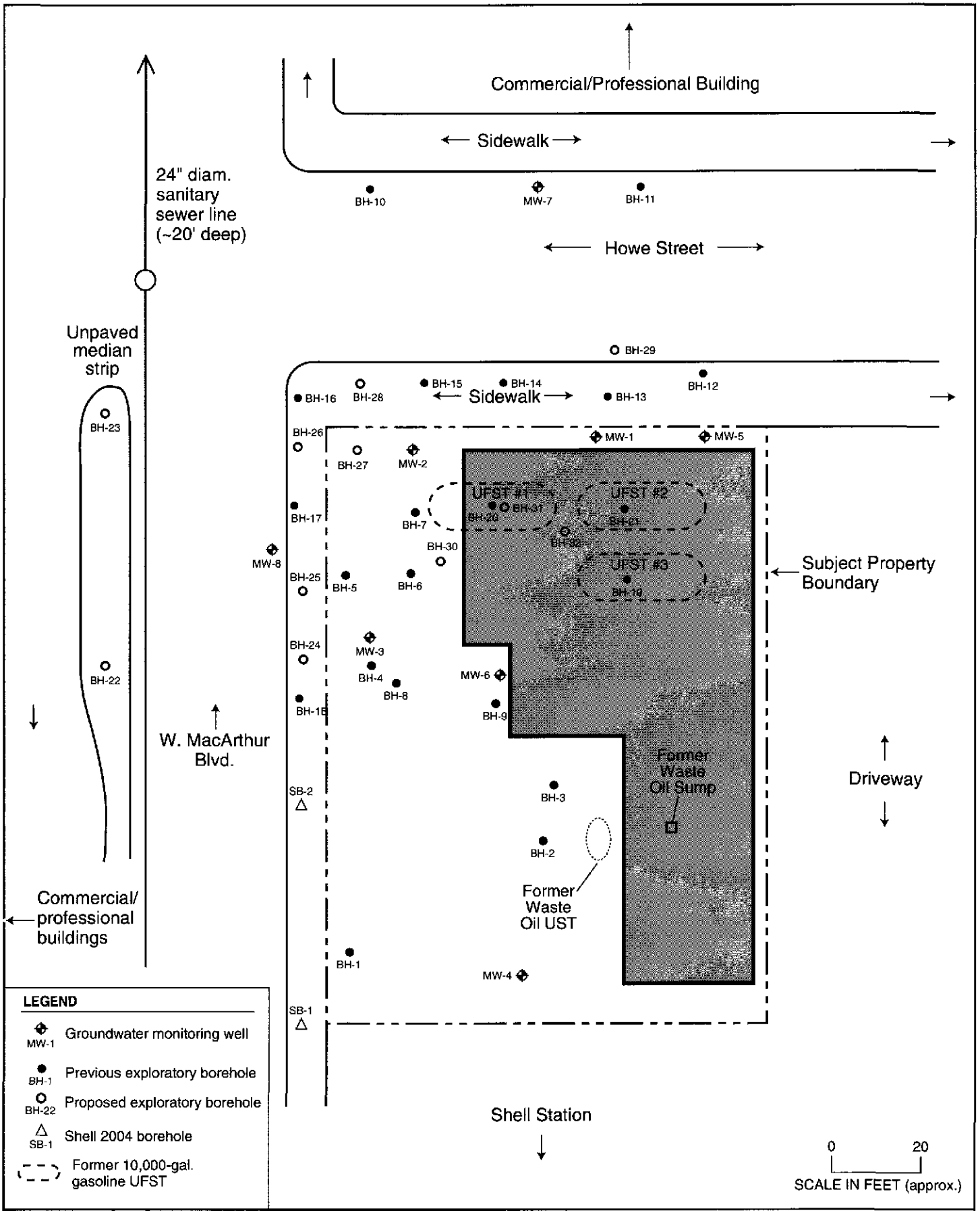
**APRIL 2004**

**★ Stellar Environmental Solutions, Inc.**

**Figure 1**

**Geoscience & Engineering Consulting**

2003-43-01



**LEGEND**

- Groundwater monitoring well  
MW-1
- Previous exploratory borehole  
BH-1
- Proposed exploratory borehole  
BH-22
- Shell 2004 borehole  
SB-1
- Former 10,000-gal. gasoline UFST

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

240 W. MacArthur Blvd.  
Oakland, CA

By: MJC

JANUARY 2005

**Figure 2**

**★ Stellar Environmental Solutions, Inc.**  
Geoscience & Engineering Consulting

2003-43-94



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 UST was removed. Elevated levels of diesel and oil & grease were detected in confirmation soil samples. Subsequent overexcavation was conducted, and there was no evidence of residual soil contamination (All Environmental, Inc., 1997a).
- **January 1997.** In accordance with a request by Alameda County Health, a subsurface investigation was conducted (All Environmental, Inc., 1997b). Six exploratory boreholes were advanced to a maximum depth of 20 feet, and soil samples were collected.
- **August 1997.** Additional site characterization was conducted; this included sampling three boreholes, installing four groundwater monitoring wells, and conducting 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 12 exploratory boreholes; analyzing 64 soil and 12 grab-groundwater sample results; and further evaluating site hydrogeology and contaminant extent and magnitude.

To date, a total of 27 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 inspections and groundwater monitoring data collected by SES since 2003.

### **TOPOGRAPHY AND SURFACE WATER DRAINAGE**

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

### **LITHOLOGY**

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 was approximately 20 to 21 feet bgs, predominantly in a saturated, loose, clayey sand. The saturated portion of this clayey sand constitutes the bottom of the unit; the saturated zone is approximately 0.5 to 2.5 feet thick, underlain in all boreholes by a cohesive, non-water-bearing clay. The top of this clay was consistently at a depth between approximately 21 and 23 feet. Of the 12 boreholes, 9 were

advanced at least 1.5 feet into this clay before terminating (and not encountering visible moisture or sand). One of the boreholes was advanced deeper, documenting a thickness of at least 4.5 feet. The lithologic data (supported by soil sample analytical data) strongly suggest that this clay unit inhibits downward migration of groundwater contamination.

The site lithology is consistent with that documented at the adjacent Shell service station site. Specifically, 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 subsequent (March 2004) Shell boreholes SB-1 and SB-2 (between the Shell wells and the subject property) all terminated at 20 feet bgs, which was too shallow to encounter the underlying clay unit.

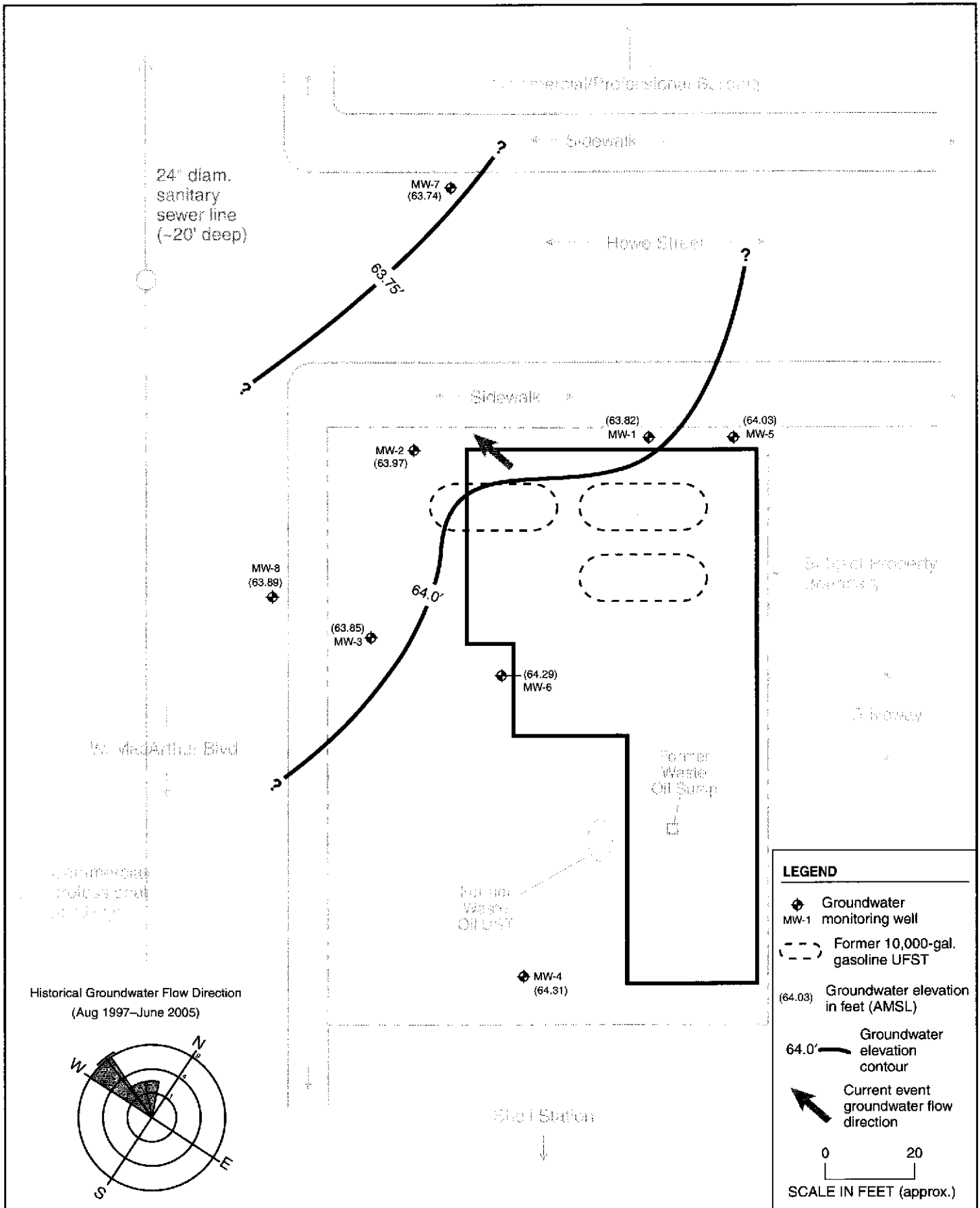
## **GROUNDWATER HYDROLOGY**

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

Following the September 26, 2003 well surveying, SES evaluated groundwater flow direction of events (from October 2001 to March 2003), finding groundwater flow to be generally westward, with a slight northern component in some events. Figure 3 is a groundwater elevation map that shows elevations and contours from the current (June 2005) groundwater monitoring event. Groundwater flow direction in this event was to the west. A generally westward (with a slight southern component) groundwater flow direction has also been measured at the adjacent Shell-branded service station (Cambria Environmental Technology, 2004). Subject property groundwater gradient in the current event was relatively flat, at approximately 0.005 feet/foot. Historical groundwater gradient has varied between approximately 0.002 feet/foot and 0.008 feet/foot, averaging approximately 0.005 feet/foot.

Figure 3 includes a rose diagram that shows historical groundwater flow direction measured at the site. The rose diagram is a histogram that has been wrapped around a circle and has the following characteristics:

- Each wedge represents a 15-degree arc of groundwater flow direction.
- The length of each wedge (circle radius) represents the number of sampling events with data falling within the 15-degree arc.



**GROUNDWATER ELEVATION MAP—June 14, 2005**

240 W. MacArthur Blvd.  
Oakland, CA

By: MJC

JUNE 2005

**Figure 3**

**Stellar Environmental Solutions, Inc.**  
Geoscience & Engineering Consulting

- 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.

### **3.0 JUNE 2005 GROUNDWATER MONITORING AND SAMPLING**

---

This section presents the groundwater sampling and analytical methods for the current event (Second Quarter 2005), conducted on June 14, 2005. Table 1 summarizes monitoring well construction and groundwater monitoring data. Groundwater analytical results are presented and discussed in Section 5.0. Monitoring and sampling protocols were in accordance with the SES technical workplan (SES, 2003) submitted to Alameda County Health, and subsequent technical revision requested by Alameda County Health. The groundwater sampling event involved the collection of one set of “post-purge” samples from all wells, in accordance with recent revisions to the quarterly monitoring program approved by Alameda County Health. Specific activities for this event included:

- Measuring static water levels and field measurement of “pre-purge” groundwater samples for hydrogeochemical parameters (temperature, pH, electrical conductivity, turbidity, and dissolved oxygen) in the eight site wells; and
- Collecting “post-purge” groundwater samples from the eight onsite wells for field measurement of the aforementioned hydrogeochemical parameters, and for offsite laboratory analyses for contaminants of concern.

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

Groundwater monitoring well water level measurements, sampling, and field analyses were conducted by Blaine Tech Services (San Jose, California) 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).

As the first monitoring task, static water levels were measured in the eight site wells using an electric water level indicator. Grab-groundwater samples were then collected from each well (using a new disposable bailer) and field-analyzed for aquifer stability parameters—including temperature, pH, electrical conductivity, turbidity, and dissolved oxygen.



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

Well	Well Depth (feet bgs)	Well Screened Interval		Groundwater Level Depth <sup>(a)</sup> June 14, 2005	Groundwater Elevation <sup>(b)</sup> June 14, 2005
		Depth (feet)	Elevation (feet)		
MW-1	25	19.5 to 24.5	54.5 to 49.5	15.53	63.82
MW-2	25	14.5 to 24.5	64.2 to 54.2	14.48	63.97
MW-3	25	14.5 to 24.5	63.4 to 53.4	13.73	63.85
MW-4	25	14.5 to 24.5	63.6 to 53.6	13.43	64.31
MW-5	20	9 to 19	70.6 to 60.6	15.33	64.03
MW-6	20	9 to 19	69.7 to 59.7	14.14	64.29
MW-7	20	9 to 19	69.6 to 59.6	14.53	63.74
MW-8	20	9 to 19	67.7 to 57.7	12.50	63.89

Notes:

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

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

Each well was then purged (by hand bailing with a new disposable bailer) of three wetted casing volumes, and aquifer stability parameters (pH, temperature, electrical conductivity, and turbidity) were measured between each purging. When measurements indicated that representative formation water was entering the well, a groundwater sample set was collected from each well with the purging bailer. These samples were field-measured for pH, temperature, electrical conductivity, turbidity, and dissolved oxygen. Samples were then transferred to appropriate sampling containers (40-ml VOA vials with hydrochloric acid preservative, and 1-liter amber glass jars), labeled, and placed in coolers with "blue ice." All groundwater samples were managed under chain-of-custody procedures from the time of sample collection until samples were received in the laboratory.

Approximately 40 gallons of wastewater (purge water and equipment decontamination rinseate) was containerized in a labeled, 55-gallon steel drum that will be 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 (URL) Program, utilizes a similar ESL approach in evaluating whether active remediation is necessary at sites proposed for redevelopment. This program is not currently applicable to the site, as no redevelopment is proposed.

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

#### **Sensitive Receptors**

Risk evaluation commonly includes the identification of sensitive receptors, including vicinity groundwater supply wells. As discussed in a previous report (SES, 2004c), the California Department of Water Resources identified only one groundwater supply well within 1,500 feet of

the site. Based on its distance and upgradient location relative to the site, there is no reasonable potential for this well to intercept shallow groundwater emanating from the subject property.

As specified in the Water Board's San Francisco Bay Region Water Quality Control Plan, 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 (wells MW-1, MW-5, and MW-6—the only wells with detectable concentrations in the previous monitoring event);
- 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 SAMPLE RESULTS

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 six of the eight wells (not in MW-4 or MW-7). Detected concentrations ranged from 150 micrograms per liter ( $\mu\text{g/L}$ ) (well MW-6) to 21,000  $\mu\text{g/L}$  (well MW-1). All of the gasoline concentrations exceeded the 100  $\mu\text{g/L}$  ESL criterion. The gasoline plume extends to the south along the Howe Street side of the property, and to the east (toward well MW-4). To the south, the plume extends somewhat offsite into W. MacArthur Boulevard. Wells MW-1 and MW-5, at the northern corner of the site (near the original source area) had the highest gasoline concentration, as they have historically. The gasoline plume also extends offsite to the north (beneath Howe Street).

Figure 5 shows diesel isoconcentration contours for the recent event. Diesel was detected in all six of the wells analyzed for diesel, but is of secondary concern relative to gasoline, with concentrations historically at significantly lower levels than gasoline. Diesel concentrations ranged from 500  $\mu\text{g/L}$  (well MW-2) to 6,800  $\mu\text{g/L}$  (well MW-1), with all concentrations exceeding the 100  $\mu\text{g/L}$  ESL criterion. The diesel plume footprint is similar to that of the gasoline plume. Diesel is present offsite under Howe Street (to the north) and under W. MacArthur Boulevard (to the west).

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

Figure 6 shows benzene isoconcentration contours for the recent event. Benzene was detected in five of the six wells for which benzene was analyzed, at concentrations ranging from 6.8  $\mu\text{g/L}$  (MW-8) to 1,900  $\mu\text{g/L}$  (MW-1). Maximum benzene concentrations were detected in source area wells MW-1 and MW-5, as historically has been the case. The lateral extent of the benzene plume is constrained to the east, and extends under Howe Street to the north (up to approximately 10  $\mu\text{g/L}$ ), and under W. MacArthur Boulevard to the west and south (up to 73  $\mu\text{g/L}$ ). The benzene plume configuration is generally the same as for gasoline and diesel.

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

**Table 2**  
**Groundwater Sample Analytical Results – June 14, 2005**  
**Hydrocarbons, BTEX, and MTBE <sup>(a)</sup>**  
**240 W. MacArthur Boulevard, Oakland, California**

Well	TVHg	TEHd	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-1	21,000	6,800	1,900	270	320	2,800	< 13
MW-2	1,600	500	14	< 0.5	1.8	0.68	66
MW-3	4,200	1,800	49	4.5	23	16.2	66
MW-4	< 50	NA	NA	NA	NA	NA	NA
MW-5	16,000	4,100	1,100	260	380	1,590	< 7.1
MW-6	150	1,100	< 0.5	< 0.5	< 0.5	0.77	28
MW-7	< 50	NA	NA	NA	NA	NA	NA
MW-8	510	63	6.8	< 0.5	2.4	5.31	< 0.5
<b>Environmental Screening Levels <sup>(b)</sup></b>							
	NLP	NLP	1.0	40	30	20	5.0
<b>Drinking Water Standards <sup>(c)</sup></b>							
	100	100	1.0 <sup>(d)</sup>	40	30	13	5.0

**Notes:**

- <sup>(a)</sup> All concentrations in  $\mu\text{g/L}$ , equivalent to parts per billion (ppb).
- <sup>(b)</sup> For commercial/industrial sites where a known or potential drinking water resource is threatened.
- <sup>(c)</sup> Drinking water standards are State of California Secondary Maximum Contaminant Levels – Proposed, unless specified otherwise.
- <sup>(d)</sup> State of California Primary Maximum Contaminant Levels.

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

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

**Methyl *tertiary*-Butyl Ether**

Figure 7 shows MTBE isoconcentration contours for the recent event. MTBE was detected in three of the six site wells for which MTBE was analyzed, at concentrations ranging from 28  $\mu\text{g/L}$  (MW-6) to 66  $\mu\text{g/L}$  (MW-2 and MW-3). 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), with only low concentrations present in source area wells MW-1 and MW-5 (elevated detection limits were necessary in these two wells).

**Table 3**  
**Groundwater Sample Analytical Results – June 14, 2005**  
**Lead Scavengers and Fuel Oxygenates <sup>(a)</sup>**  
**240 W. MacArthur Boulevard, Oakland, California**

Well	EDC	DIPE	TBA
MW-1	< 13	< 13	< 250
MW-2	< 0.5	0.79	200
MW-3	< 0.5	1.4	160
MW-5	< 7.1	< 7.1	< 140
MW-6	< 0.5	< 0.5	26
MW-8	25	1.1	42
Drinking Water Standards <sup>(b)</sup>	NLP	NLP	NLP
ESLs <sup>(c)</sup>	0.5	NLP	12

**Notes:**

<sup>(a)</sup> All concentrations in  $\mu\text{g/L}$ , equivalent to parts per billion (ppb).

<sup>(b)</sup> Drinking water standards are State of California Secondary Maximum Contaminant Levels – Proposed, unless specified otherwise.

<sup>(c)</sup> For commercial/industrial sites where known/potential drinking water resource is threatened.

DIPE = isopropyl ether.

EDC = ethylene dichloride (1,2-dichloroethane).

TBA = tertiary-butyl alcohol

NLP = No level published.

Table includes only detected fuel oxygenates. Contaminants analyzed for and not detected include EDB, ETBE, and TAME.

The lateral extent of the MTBE plume was constrained onsite in all directions in the current event. 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

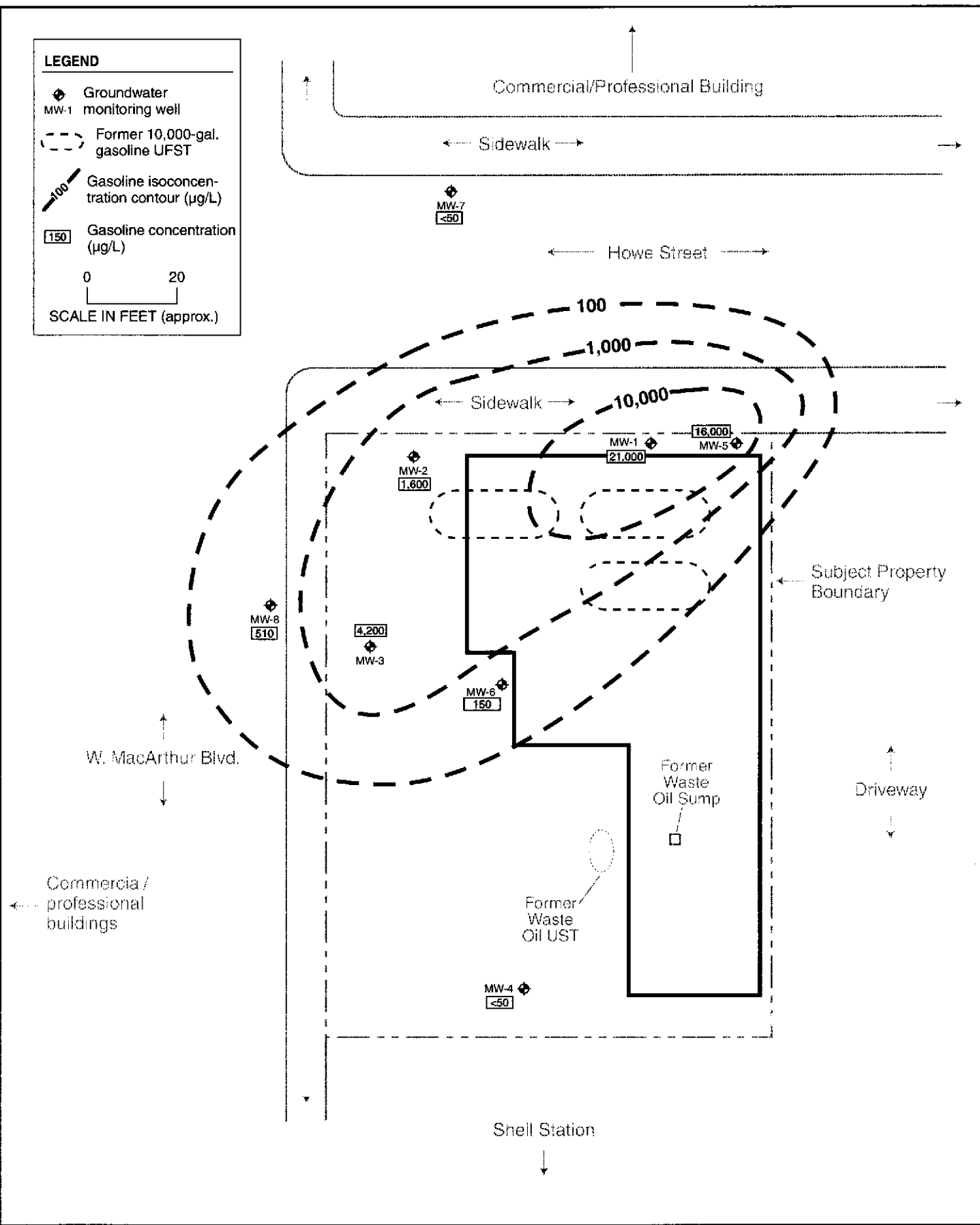
The lead scavenger EDC was detected in only one of the six site wells for which lead scavengers were analyzed: 25  $\mu\text{g/L}$  in MW-8. The lead scavenger EDB was not detected in any of the six wells.

Two fuel oxygenates were detected in the current event. DIPE was detected in three wells at concentrations between 0.79 and 1.4  $\mu\text{g/L}$ . TBA was detected in four wells at concentrations between 26 and 400  $\mu\text{g/L}$ . No other fuel oxygenates were detected.

**LEGEND**

- ◆ Groundwater monitoring well
- MW-1 Former 10,000-gal. gasoline UFST
- - - Gasoline isoconcentration contour ( $\mu\text{g/L}$ )
- 150 Gasoline concentration ( $\mu\text{g/L}$ )

0 20  
SCALE IN FEET (approx.)



**GASOLINE ISOCONCENTRATION CONTOURS (JUNE 2005)**

240 W. MacArthur Blvd.  
Oakland, CA

By: MJC

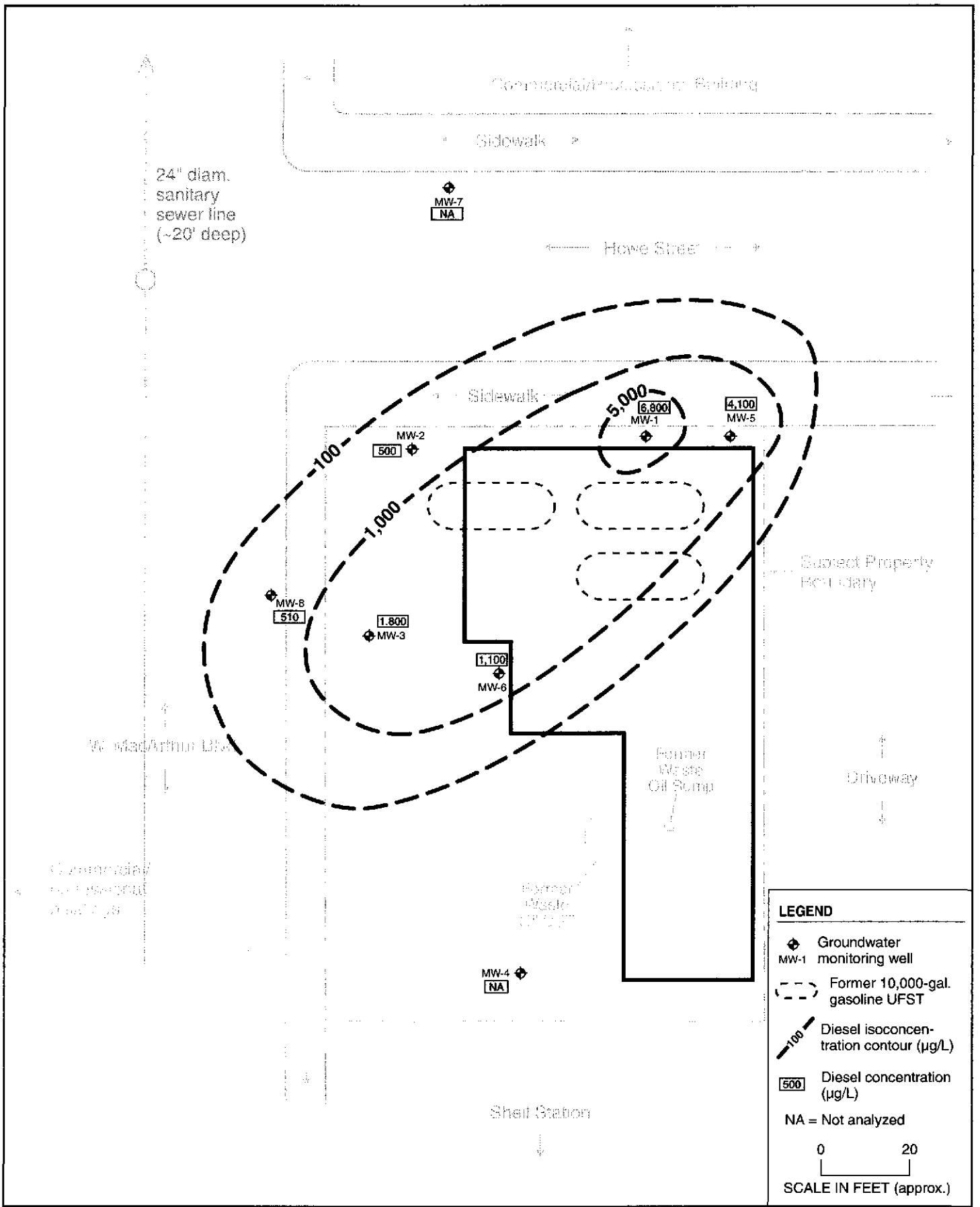
JUNE 2005

**Figure 4**

★ Stellar Environmental Solutions, Inc.  
Geoscience & Engineering Consulting

2003-43-116



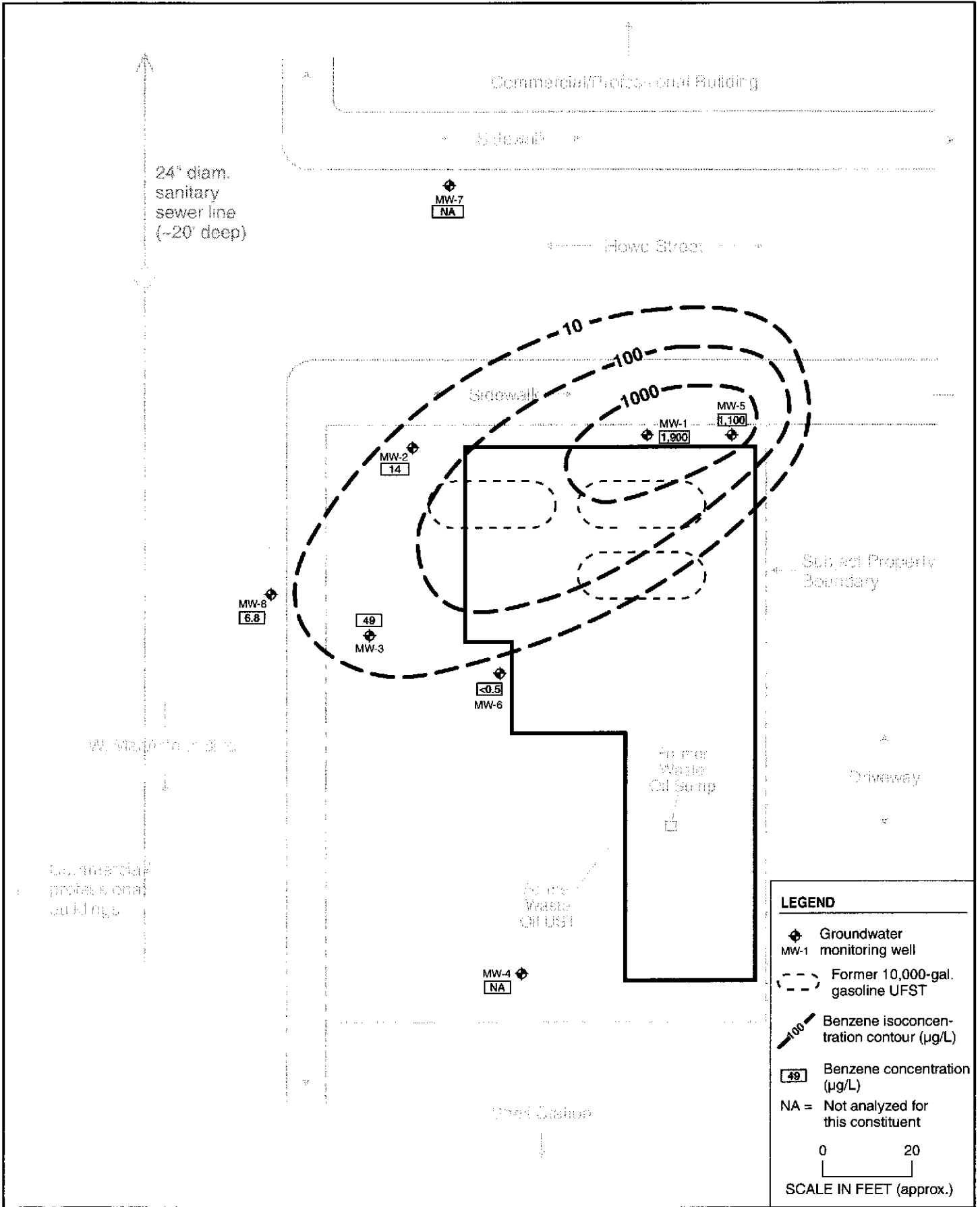


**LEGEND**

- Groundwater monitoring well
- Former 10,000-gal. gasoline UFST
- Diesel isoconcentration contour (µg/L)
- Diesel concentration (µg/L)
- NA = Not analyzed

0      20  
SCALE IN FEET (approx.)





**BENZENE ISOCONCENTRATION CONTOURS (JUNE 2005)**

240 W. MacArthur Blvd. Oakland, CA

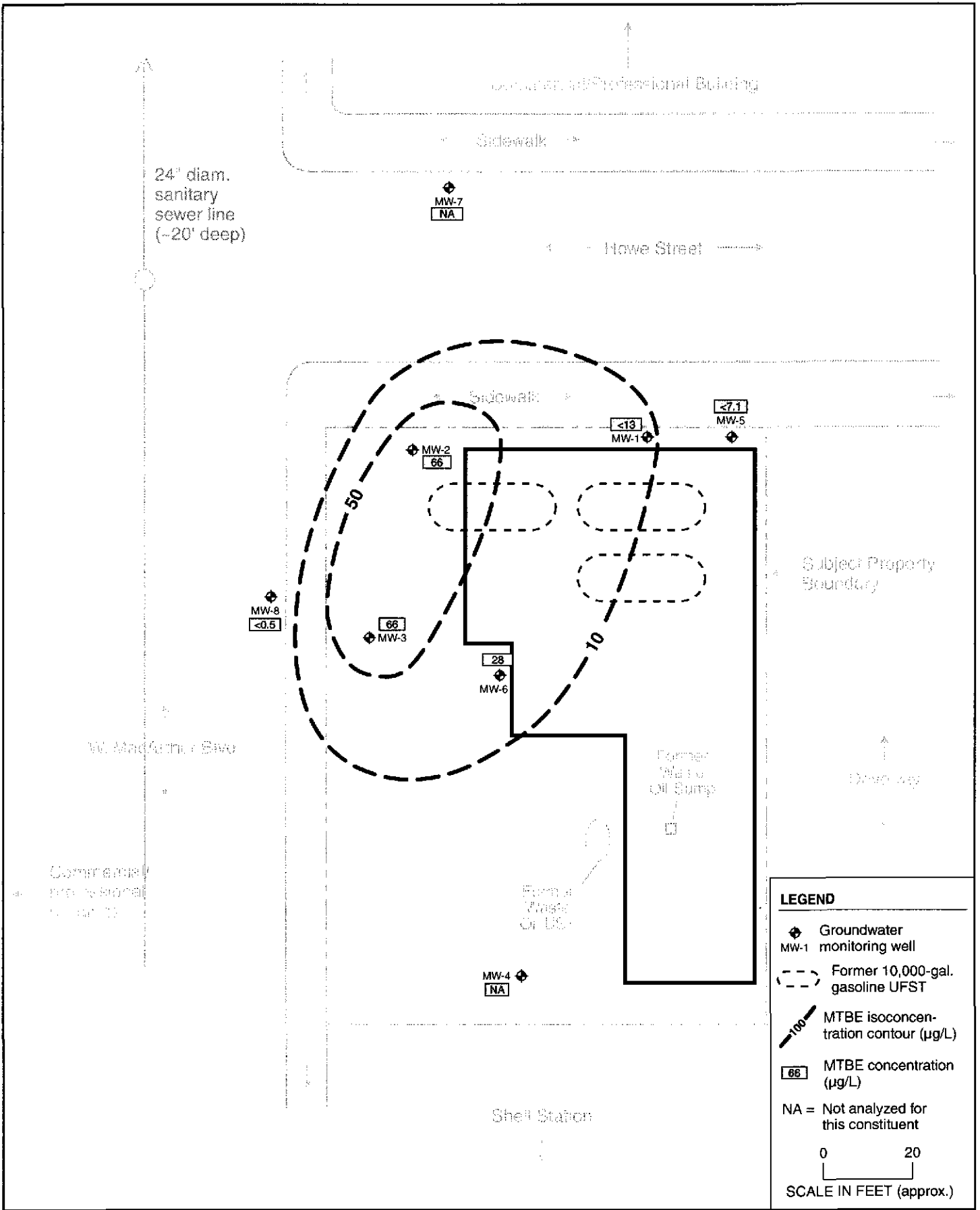
By: MJC

JUNE 2005

**Figure 6**

**Stellar Environmental Solutions, Inc.**  
Geoscience & Engineering Consulting

2003-43-113



**LEGEND**

- ◆ Groundwater monitoring well
- Former 10,000-gal. gasoline UFGST
- MTBE isoconcentration contour (µg/L)
- 66 MTBE concentration (µg/L)
- NA = Not analyzed for this constituent

0 20  
SCALE IN FEET (approx.)

**MTBE ISOCONCENTRATION CONTOURS (JUNE 2005)**

240 W. MacArthur Blvd.  
Oakland, CA

By: MJC

JUNE 2005

**Figure 7**

**Stellar Environmental Solutions, Inc.**  
Geoscience & Engineering Consulting

2003-43-115



## **Summary of Groundwater Contamination**

Maximum concentrations of gasoline and diesel were detected in wells MW-5 and MW-1, located in the northeastern corner of the property (near the former UFSTs). Maximum concentrations of MTBE were detected in downgradient wells MW-2 and MW-3 (adjacent to W. MacArthur Boulevard), indicating that the center of mass of MTBE has migrated downgradient. Groundwater contamination extends offsite to the south and west (beneath Howe Street and W. MacArthur Boulevard).

## **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 C).

## **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 resulting from leaking UFSTs that were reportedly removed. Alameda County Health is the lead regulatory agency.
- A total of 27 groundwater monitoring/sampling events have been conducted in the eight site wells between August 1997 and the current event.
- Additional site characterization (exploratory borehole drilling and sampling) in 2004 provided additional data on the extent and magnitude of residual soil and groundwater contamination.
- Groundwater at the site appears to be slightly confined, with a flow direction ranging between northwest and west, with a relatively flat hydraulic gradient averaging approximately 0.005 ft/ft. The groundwater flow direction and gradient were within the historical range.
- 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.
- As stipulated by Alameda County Health, analysis for lead scavengers will continue to be conducted in wells MW-1, MW-5, and MW-6. 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 lead scavengers in all wells except MW-4 and MW-7.
- 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 a limited distance) beneath Howe Street and W. MacArthur Boulevard.

- 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 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 groundwater contamination to the eastern corner of the subject property. This contamination is unrelated to the separate, site-sourced MTBE groundwater contamination in the northern and western portions of the subject property.
- 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 corrective action is not conducted, residual site contamination will remain at elevated levels for at least several years and likely longer.
- In December 2004, the property owner submitted to Alameda County Health a workplan for interim remedial action (focusing on soil vapor extraction to reduce source area contaminant mass). Alameda County Health has not yet responded to that workplan.

## **PROPOSED ACTIONS**

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

- Implement the SES-recommended December 2004 Additional Site Characterization and Interim Remedial Action Workplan as soon as it is approved by Alameda County Health.
- Continue the program of quarterly groundwater sampling and reporting, with the objectives of obtaining site closure and continuing reimbursement requests under the State of California Petroleum UST Cleanup Fund.
- Continue the modified quarterly groundwater monitoring program to include analysis for fuel oxygenates and lead scavengers in all wells except MW-4 and MW-7.
- Continue to make required Electronic Data Format uploads to the Water Board's GeoTracker database.

## 6.0 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.
- AEC, 2003b. 2<sup>nd</sup> Quarter Groundwater Sampling Report (2003) – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. April 30.
- 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.
- AEC, 2002c. 2<sup>nd</sup> Quarter Groundwater Sampling Report (2002) – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. July 17.
- AEC, 2002d. 4<sup>th</sup> Quarter Groundwater Sampling Report (2002) – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. November 11.
- AEC, 2001a. December 2000 Quarterly Groundwater Sampling Report – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. January.
- AEC, 2001b. Additional Soil and Groundwater Assessment – 240 W. MacArthur Boulevard, Oakland, County of Alameda, California. March.
- AEC, 2001c. May 2001 Quarterly Groundwater Sampling Report – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. May 27.
- AEC, 2001d. July 2001 Quarterly Groundwater Sampling Report – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. August 31.
- AEC, 2001e. Summary “Hi-Vac” Workplan – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. September 11.

- AEC, 2001f. October 2001 Quarterly Groundwater Sampling and Summary "Hi-Vac" Report – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. December 15.
- AEC, 2000a. Quarterly Groundwater Sampling Report – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. August 11.
- AEC, 2000b. Additional Groundwater Assessment Workplan for Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, County of Alameda, California. October.
- AEC, 1999. Quarterly Groundwater Sampling Report – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. January 22.
- AEC, 1998a. Second Quarterly Groundwater Sampling Report – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. April 2.
- AEC, 1998b. Request for Site Closure – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. June 29.
- AEC, 1998c. Third Quarterly Groundwater Sampling Report – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. August 2.
- AEC, 1998d. Fourth Quarterly Groundwater Sampling Report – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. November 6.
- AEC, 1997a. Subsurface Soil and Groundwater Investigation Workplan for Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. June.
- AEC, 1997b. Continuing Soil and Groundwater Assessment for Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. August.
- 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), 2005. Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater. February.
- Stellar Environmental Solutions, Inc. (SES), 2005a. Fourth Quarter 2004 Groundwater Monitoring and Annual Summary Report, 240 W. MacArthur Boulevard, Oakland, California. January 18.
- SES, 2005b. First Quarter 2005 Groundwater Monitoring Report, 240 W. MacArthur Boulevard, Oakland, California. March 31.
- SES, 2004a. Fourth Quarter 2003 Groundwater Monitoring Report, 240 W. MacArthur Boulevard, Oakland, California. January 12.
- SES, 2004b. First Quarter 2004 Groundwater Monitoring Report, 240 W. MacArthur Boulevard, Oakland, California. April 12.
- 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.
- SES, 2004e. Third Quarter 2004 Groundwater Monitoring Report, 240 W. MacArthur Boulevard, Oakland, California. October 11.



SES, 2004f. Workplan for Additional Site Characterization and Interim Remedial Action, 240 W. MacArthur Boulevard, Oakland, California. December 27.

SES, 2003a. Workplan for Additional Site Characterization, 240 W. MacArthur Boulevard, Oakland, California. August 20.

SES, 2003b. Third Quarter 2003 Groundwater Monitoring Report, 240 W. MacArthur Boulevard, Oakland, California. September 5.

SES, 2003c. Amended Workplan for Additional Site Characterization, 240 W. MacArthur Boulevard, Oakland, California. December 10.

## 7.0 LIMITATIONS

---

This report has been prepared for the exclusive use of the current property owners (Mr. and Mrs. Glen Poy-Wing, d.b.a. Oakland Auto Works) their representatives, and the regulators. No reliance on this report shall be made by anyone other than those for whom it was prepared.

The findings and conclusions presented in this report are based on the review of previous investigators' findings at the site, as well as site activities conducted by SES since August 2003. This report provides neither a certification nor guarantee that the property is free of hazardous substance contamination. This report has been prepared in accordance with generally accepted methodologies and standards of practice of the area. The SES personnel who performed this limited remedial investigation are qualified to perform such investigations and have accurately reported the information available, but cannot attest to the validity of that information. No warranty, expressed or implied, is made as to the findings, conclusions, and recommendations included in the report.

The findings of this report are valid as of the present. Site conditions may change with the passage of time, natural processes, or human intervention, which can invalidate the findings and conclusions presented in this report. As such, this report should be considered a reflection of the current site conditions as based on the investigation and remediation completed.

# WELLHEAD INSPECTION CHECKLIST

Date 6/14/05 Client Stellar EPL

Site Address 240 W. MacArthur Blvd., Oakland

Job Number 050614-NTP Technician NIT

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)
KW-1	✓							
KW-2	✓							
KW-3	✓							
KW-4	✓							
KW-5	✓							
KW-6	✓							
KW-7								
KW-8	✓							

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

WELL GAUGING DATA

Project # OSD014-MTZ Date 6/14/05 Client Stellar Env.

Site 240 W. MacArthur Blvd., Oakland

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC
MW-1	2					15.53	24.40	
MW-2	2					14.48	24.30	
MW-3	2					13.73	24.30	
MW-4	2					13.43	23.95	
MW-5	2					15.33	20.05	
MW-6	2					14.14	20.28	
MW-7	2					14.53	19.90	
MW-8	2					12.50	19.60	

## WELL MONITORING DATA SHEET

Project #: <u>050614-MW</u>	Client: <u>Stellar Env</u>
Sampler: <u>MT</u>	Date: <u>6/14/05</u>
Well I.D.: <u>MW-1</u>	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): <u>24.40</u>	Depth to Water (DTW): <u>15.53</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>17.30</u>	

Purge Method: Disposible Bailer      Waterra      Sampling Method: Disposible Bailer  
 Positive Air Displacement      Peristaltic      Extraction Port  
 Electric Submersible      Extraction Pump      Dedicated Tubing  
 Other \_\_\_\_\_      Other \_\_\_\_\_

<u>1.4</u> (Gals.) X	<u>3</u>	<u>=</u>	<u>4.2</u> Gals.
I Case Volume	Specified Volumes		Calculated Volume

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

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1210	69.9	7.3	1236	>1000	1.4	Strong odor, sludge
1213	70.3	7.2	1250	>1000	2.9	" "
1217	70.7	7.2	1247	>1000	4.2	" " "
						FE=2.0

Did well dewater? Yes  No  Gallons actually evacuated: 4.2

Sampling Date: 6/14/05 Sampling Time: 1220 Depth to Water: 15.99

Sample I.D.: MW-1 Laboratory: Kiff CalScience Other CHT

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: Refer to 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:	6.6	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:		mV

## WELL MONITORING DATA SHEET

Project #: <u>050614-MT2</u>	Client: <u>Stellar Env</u>
Sampler: <u>RT</u>	Date: <u>6/14/05</u>
Well I.D.: <u>11007</u>	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): <u>24.30</u>	Depth to Water (DTW): <u>14.48</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>VSI</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>16.44</u>	

Purge Method: <u>Bailer</u> <u>Disposable Bailer</u> Positive Air Displacement Electric Submersible	Watterra Peristaltic Extraction Pump Other _____	Sampling Method: <u>Bailer</u> <u>Disposable Bailer</u> Extraction Port Dedicated Tubing Other: _____
--	---	---

$\underline{1.6} \text{ (Gals.)} \times \underline{3} = \underline{4.8} \text{ Gals.}$ 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
<u>1107</u>	<u>68.9</u>	<u>7.1</u>	<u>1080</u>	<u>&gt;1000</u>	<u>1.6</u>	<u>dry</u>
<u>1103</u>	<u>68.6</u>	<u>7.2</u>	<u>1083</u>	<u>&gt;1000</u>	<u>3.2</u>	<u>"</u>
<u>1107</u>	<u>68.5</u>	<u>7.2</u>	<u>1053</u>	<u>&gt;1000</u>	<u>4.8</u>	<u>"</u>
						<u>FL<sup>2</sup> = 1.0</u>

Did well dewater?    Yes    No                      Gallons actually evacuated: 4.8

Sampling Date: 6/14/05    Sampling Time: 1115                      Depth to Water: 16.40

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

Analyzed for: TVH-6 BTEX MTBE TPH-D    Oxygenates (5)    Other: Refer to 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	<u>Post-purge:</u>	1.3	mg/L
------------------	------------	------	--------------------	-----	------

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

## WELL MONITORING DATA SHEET

Project #: <u>050614-NW</u>	Client: <u>Stellar Env</u>
Sampler: <u>MT</u>	Date: <u>6/14/05</u>
Well I.D.: <u>MW-3</u>	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): <u>24.30</u>	Depth to Water (DTW): <u>13.73</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>VSI</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>15.94</u>	

Purge Method: <u>Bailer</u> <u>Disposable Bailer</u> Positive Air Displacement Electric Submersible	Waters: <u>Peristaltic</u> Extraction Pump Other _____	Sampling Method: <u>Bailer</u> <u>Disposable Bailer</u> Extraction Port Dedicated Tubing Other: _____
--	--	---

$\frac{1.7 \text{ (Gals.)} \times 3}{\text{Specified Volumes}} = \frac{5.1}{\text{Calculated Volume}} \text{ Gals.}$	<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
<u>11:33</u>	<u>67.9</u>	<u>7.0</u>	<u>976</u>	<u>&gt;1000</u>	<u>1.7</u>	
<u>11:36</u>	<u>68.1</u>	<u>7.1</u>	<u>1000</u>	<u>&gt;1000</u>	<u>3.4</u>	
<u>11:39</u>	<u>68.3</u>	<u>7.1</u>	<u>1021</u>	<u>&gt;1000</u>	<u>5.1</u>	
						<u>FL<sup>2</sup> = 1.2</u>

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>5.1</u>	
Sampling Date: <u>6/14/05</u>	Sampling Time: <u>11:45</u>	Depth to Water: <u>15.61</u>
Sample I.D.: <u>MW-3</u>	Laboratory: Kiff CalScience Other <u>CMT</u>	
Analyzed for: <u>TPH-G</u> <u>BTEX</u> <u>MTBE</u> <u>TPH-D</u>	Oxygenates (5) Other: <u>Refer to CDC</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	<u>Post-purge:</u> <u>1.0</u> mg/L	
O.R.P. (if req'd): Pre-purge: _____ mV	Post-purge: _____ mV	

## WELL MONITORING DATA SHEET

Project #: <u>050614-INT</u>	Client: <u>Stellar Env</u>
Sampler: <u>MT</u>	Date: <u>6/14/05</u>
Well I.D.: <u>1.7</u>	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): <u>23.95</u>	Depth to Water (DTW): <u>13.43</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>VSI</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>15.54</u>	

Purge Method: <u>Bailer</u> <u>Disposable Bailer</u> Positive Air Displacement Electric Submersible	Water Peristaltic Extraction Pump Other _____	Sampling Method: <u>Bailer</u> <u>Disposable Bailer</u> Extraction Port Dedicated Tubing Other: _____
--	--	---

$1.7 \text{ (Gals.)} \times 3 = 5.1 \text{ Gals.}$	<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														
1 Case Volume	Specified Volumes	Calculated Volume															

Time	Temp (F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
<u>0915</u>	<u>105.8</u>	<u>6.7</u>	<u>1059</u>	<u>&gt;1000</u>	<u>1.7</u>	
<u>0918</u>	<u>106.0</u>	<u>6.9</u>	<u>1077</u>	<u>&gt;1000</u>	<u>3.4</u>	
<u>0920</u>	<u>100.1</u>	<u>6.8</u>	<u>1090</u>	<u>&gt;1000</u>	<u>5.1</u>	
						<u>Free D</u>

Did well dewater? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>5.1</u>	
Sampling Date: <u>6/14/05</u>	Sampling Time: <u>0925</u>	Depth to Water: <u>15.50</u>
Sample I.D.: <u>MW-A</u>	Laboratory: Kiff CalScience	Other: <u>CHT</u>
Analyzed for: <u>TPH-G</u> BTEX MTBE TPH-D Oxygenates (5)	Other: <u>Refer to CAC</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	<u>Post-purge:</u> <u>3.7</u> mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____ mV



## WELL MONITORING DATA SHEET

Project #: <u>050614-MT</u>	Client: <u>Stellar Env</u>
Sampler: <u>MT</u>	Date: <u>6/14/05</u>
Well I.D.: <u>110-6</u>	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): <u>10.00</u>	Depth to Water (DTW): <u>15.33</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>VSI</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>16.26</u>	

Purge Method: Disposable Bailer      Waterra      Sampling Method: Disposable Bailer  
 Positive Air Displacement      Peristaltic      Extraction Port  
 Electric Submersible      Extraction Pump      Dedicated Tubing  
 Other \_\_\_\_\_      Other \_\_\_\_\_

$\frac{0.7 \text{ (Gals.)} \times 3}{1 \text{ Case Volume Specified Volumes}} = \frac{2.1 \text{ Gals.}}{\text{Calculated Volume}}$	<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
1229	71.3	6.9	912	>1000	0.7	Odor
1231	71.1	7.1	900	>1000	1.4	"
1234	71.0	7.1	920	>1000	2.1	"
						F23 = 2.0

Did well dewater? Yes  No  Gallons actually evacuated: 2.1

Sampling Date: 6/14/05      Sampling Time: 1240      Depth to Water: 16.50

Sample I.D.: 110-5      Laboratory: Kiff CalScience Other CHT

Analyzed for: TPH-G BTEX MTBE TPH-D      Oxygenates (5)      Other: Refer to 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:	1.0	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:		mV

**WELL MONITORING DATA SHEET**

Project #: <b>050614-MT</b>	Client: <b>Stellar Env</b>
Sampler: <b>MT</b>	Date: <b>6/14/05</b>
Well I.D.: <b>1W-6</b>	Well Diameter: <b>②</b> 3 4 6 8 ____
Total Well Depth (TD): <b>20.28</b>	Depth to Water (DTW): <b>14.14</b>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <b>PVC</b> Grade	D.O. Meter (if req'd): <b>YSI</b> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <b>15.37</b>	

Purge Method: Bailer  Waterra  Sampling Method: Bailer   
 Disposable Bailer  Peristaltic  Disposable Bailer   
 Positive Air Displacement  Extraction Pump  Extraction Port   
 Electric Submersible  Other \_\_\_\_\_ 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

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

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
<b>0937</b>	<b>67.0</b>	<b>6.8</b>	<b>1108</b>	<b>&gt;1000</b>	<b>1</b>	
<b>0939</b>	<b>67.3</b>	<b>6.9</b>	<b>1100</b>	<b>&gt;1000</b>	<b>2</b>	
<b>0941</b>	<b>67.4</b>	<b>6.9</b>	<b>1101</b>	<b>&gt;1000</b>	<b>3</b>	
						<b>F2 = 1</b>

Did well dewater? Yes  No  Gallons actually evacuated: **3**

Sampling Date: **6/14/05**    Sampling Time: **0945**    Depth to Water: **15.60**

Sample I.D.: **1W-6**    Laboratory: Kiff CalScience Other **CST**

Analyzed for: **TPH-G** **BTEX** **MTBE** **TPH-D** Oxygenates (5) Other: **Refer to CAC**

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

## WELL MONITORING DATA SHEET

Project #: <u>050614-MT</u>	Client: <u>Stellar Env</u>
Sampler: <u>MT</u>	Date: <u>6/14/05</u>
Well I.D.: <u>1.75</u>	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): <u>19.90</u>	Depth to Water (DTW): <u>14.53</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>VSI</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>15.60</u>	

Purge Method: <u>Bailer</u> Disposable Bailer Positive Air Displacement Electric Submersible	Waterra Peristaltic Extraction Pump Other _____	Sampling Method: <u>Bailer</u> Disposable Bailer Extraction Port Dedicated Tubing Other: _____
---	--	--

$\frac{0.9}{\text{I Case Volume}} \times \frac{3}{\text{Specified Volumes}} = \frac{2.7}{\text{Calculated Volume}} \text{ Gals.}$	<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 (For °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
0715						Vehicle Parked over well
0930						Vehicle still Parked over well
0955	68.7	6.9	730	>1000	0.9	
0958	69.0	7.0	726	>1000	1.8	
1601	68.9	7.0	725	>1000	2.7	FE <sub>2</sub> =45

Did well dewater? Yes <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>2.7</u>	
Sampling Date: <u>6/14/05</u>	Sampling Time: <u>1010</u>	Depth to Water: <u>15.60</u>
Sample I.D.: <u>MU-7</u>	Laboratory: Kiff CalScience Other <u>CHT</u>	
Analyzed for: <u>TPH-G</u> BTEX MTBE TPH-D Oxygenates (5) Other: <u>Refer to CDC</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: <u>1.2</u> mg/L	
O.R.P. (if req'd): Pre-purge: _____ mV	Post-purge: _____ mV	

## WELL MONITORING DATA SHEET

Project #: <u>050614-MT</u>	Client: <u>Stellar Env</u>
Sampler: <u>MT</u>	Date: <u>6/14/05</u>
Well I.D.: <u>MW-8</u>	Well Diameter: <u>2</u> 3 4 6 8 _____
Total Well Depth (TD): <u>19.60</u>	Depth to Water (DTW): <u>12.50</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>VSI</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>13.92</u>	

Purge Method: <u>Bailer</u> <u>Disposable Bailer</u> Positive Air Displacement Electric Submersible	Watterra Peristaltic Extraction Pump Other _____	Sampling Method: <u>Bailer</u> <u>Disposable Bailer</u> Extraction Port Dedicated Tubing Other: _____
--	---	---

$\frac{1.1}{1} \text{ (Gals.)} \times \frac{3}{1} = 3.3 \text{ Gals.}$	<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														
1 Case Volume	Specified Volumes	Calculated Volume															

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
<u>1022</u>	<u>68.0</u>	<u>7.1</u>	<u>432</u>	<u>&gt;1000</u>	<u>1.1</u>	
<u>1025</u>	<u>67.8</u>	<u>7.0</u>	<u>440</u>	<u>&gt;1000</u>	<u>2.2</u>	
<u>1029</u>	<u>67.10</u>	<u>7.1</u>	<u>483</u>	<u>&gt;1000</u>	<u>3.3</u>	
						<u>FEPA-B</u>

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>3.3</u>	
Sampling Date: <u>6/14/05</u>	Sampling Time: <u>1035</u>	Depth to Water: <u>13.90</u>
Sample I.D.: <u>MW-8</u>	Laboratory: Kiff CalScience	Other: <u>CHT</u>
Analyzed for: <u>TPH-G</u> <u>BTEX</u> <u>MTBE</u> <u>TPH-D</u>	Oxygenates (5)	Other: <u>Refer to 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: <u>1.6</u> mg/L	
O.R.P. (if req'd): Pre-purge: _____ mV	Post-purge: _____ mV	



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

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


A N A L Y T I C A L   R E P O R T

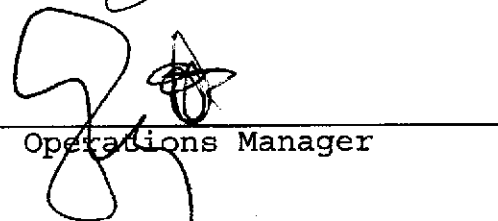
Prepared for:

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

Date: 22-JUN-05  
Lab Job Number: 180051  
Project ID: STANDARD  
Location: Oakland Auto Works

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

Reviewed by:   
Project Manager

Reviewed by:   
Operations Manager

This package may be reproduced only in its entirety.



**CASE NARRATIVE**

Laboratory number: 180051  
Client: Stellar Environmental Solutions  
Location: Oakland Auto Works  
Request Date: 06/15/05  
Samples Received: 06/15/05

This hardcopy data package contains sample and QC results for eight water samples, requested for the above referenced project on 06/15/05. The samples were received cold and intact.

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

No analytical problems were encountered.

**TPH-Extractables by GC (EPA 8015B):**

No analytical problems were encountered.

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

No analytical problems were encountered.

# Chain of Custody Record

Laboratory Curios & Tompkins  
 Address 2323 Fifth St.  
OAKLAND, CA

Method of Shipment LAB COURIER

Project Owner STELLAR ENV. SOL.  
 Site Address 240 W. MACARTHUR BLVD.  
OAKLAND, CA

Shipment No. \_\_\_\_\_

Airbill No. \_\_\_\_\_

Cooler No. \_\_\_\_\_

Project Name OAKLAND AND WORKS  
 Project Number 050014-MR

Project Manager BRUCE RUCKER

Telephone No. (510) 644-3123

Fax No. (510) 644-3859

Samplers: (Signature) [Signature]

Lab job no. \_\_\_\_\_

Date 6/14/05

Page 1 of 1

Field Sample Number	Location/Depth	Date	Time	Sample Type	Type/Size of Container	Preservation		Filtered	No. of Containers	Analyte Required					Remarks
						Cooler	Chemical			TVH-9 (BOLIN)	TEH-D (BOLIN)	BTEX, MTBE, EDB	5 ORGANICS (BOLIN)	PC (BOLIN)	
1 ✓ MW-1		6/14/05	2200	W	Apert lined	X	HCL		5	X	X	X	X		
2 ✓ MW-2			1115		↓	X			5	X	X	X	X		
3 ✓ MW-3			1145		↓	X			5	X	X	X	X		
4 ✓ MW-4			0925		40ml	X	HCL		3	X					
5 ✓ MW-5			1245		mixed	X			5	X	X	X	X		
6 ✓ MW-6			0945		Mixed	X			5	X	X	X	X		
7 ✓ MW-7			1010		40ml	X	HCL		3	X					
8 ✓ MW-8			1035		Mixed	X			5	X	X	X	X		

-1 ✓  
-2 ✓  
-3 ✓  
-4 ✓  
-5 ✓  
-6 ✓  
-7 ✓  
-8 ✓

Relinquished by: Signature <u>[Signature]</u> Printed <u>Mike Tyl</u> Company <u>Blumetech</u>	Date <u>6/15/05</u> Time <u>14:30</u>	Received by: Signature <u>[Signature]</u> Printed <u>Ricky Grant</u> Company <u>CST</u>	Date <u>6/15/05</u> Time <u>14:30</u>	Relinquished by: Signature _____ Printed _____ Company _____	Date _____ Time _____	Received by: Signature _____ Printed _____ Company _____	Date _____ Time _____		
Turnaround Time: _____ Comments: _____				Relinquished by: Signature _____ Printed _____ Company _____				Received by: Signature _____ Printed _____ Company _____	

2000-00-01

rec'd intact cold RC

**Total Volatile Hydrocarbons**

Lab #:	180051	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	06/14/05
Units:	ug/L	Received:	06/15/05
Diln Fac:	1.000	Analyzed:	06/16/05
Batch#:	103010		

Field ID: MW-4                      Lab ID: 180051-004  
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	99	63-141
Bromofluorobenzene (FID)	102	79-139

Field ID: MW-7                      Lab ID: 180051-007  
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	101	63-141
Bromofluorobenzene (FID)	105	79-139

Type: BLANK                              Lab ID: QC297729

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	96	63-141
Bromofluorobenzene (FID)	96	79-139



## Batch QC Report

**Total Volatile Hydrocarbons**

Lab #:	180051	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC297731	Batch#:	103010
Matrix:	Water	Analyzed:	06/16/05
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	1,912	96	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	138	63-141
Bromofluorobenzene (FID)	116	79-139

## Batch QC Report

**Total Volatile Hydrocarbons**

Lab #:	180051	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	103010
MSS Lab ID:	180063-001	Sampled:	06/15/05
Matrix:	Water	Received:	06/16/05
Units:	ug/L	Analyzed:	06/17/05
Diln Fac:	1.000		

Type: MS Lab ID: QC297841

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	298.2	2,000	1,926	81	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	127	63-141
Bromofluorobenzene (FID)	102	79-139

Type: MSD Lab ID: QC297842

Analyte	Spiked	Result	%REC	Limits	RPD	L
Gasoline C7-C12	2,000	1,944	82	80-120	1	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	128	63-141
Bromofluorobenzene (FID)	103	79-139

### Total Extractable Hydrocarbons

Lab #: 180051	Location: Oakland Auto Works
Client: Stellar Environmental Solutions	Prep: EPA 3520C
Project#: STANDARD	Analysis: EPA 8015B
Matrix: Water	Sampled: 06/14/05
Units: ug/L	Received: 06/15/05
Diln Fac: 1.000	Prepared: 06/16/05
Batch#: 103034	

Field ID: MW-1	Lab ID: 180051-001
Type: SAMPLE	Analyzed: 06/17/05

Analyte	Result	RL
Diesel C10-C24	6,800 L Y	50

Surrogate	%REC	Limits
Hexacosane	94	55-143

Field ID: MW-2	Lab ID: 180051-002
Type: SAMPLE	Analyzed: 06/17/05

Analyte	Result	RL
Diesel C10-C24	500 L Y	50

Surrogate	%REC	Limits
Hexacosane	84	55-143

Field ID: MW-3	Lab ID: 180051-003
Type: SAMPLE	Analyzed: 06/17/05

Analyte	Result	RL
Diesel C10-C24	1,800 L Y	50

Surrogate	%REC	Limits
Hexacosane	96	55-143

Field ID: MW-5	Lab ID: 180051-005
Type: SAMPLE	Analyzed: 06/17/05

Analyte	Result	RL
Diesel C10-C24	4,100 L Y	50

Surrogate	%REC	Limits
Hexacosane	103	55-143

Field ID: MW-6	Lab ID: 180051-006
Type: SAMPLE	Analyzed: 06/17/05

Analyte	Result	RL
Diesel C10-C24	1,100 L Y	50

Surrogate	%REC	Limits
Hexacosane	93	55-143

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

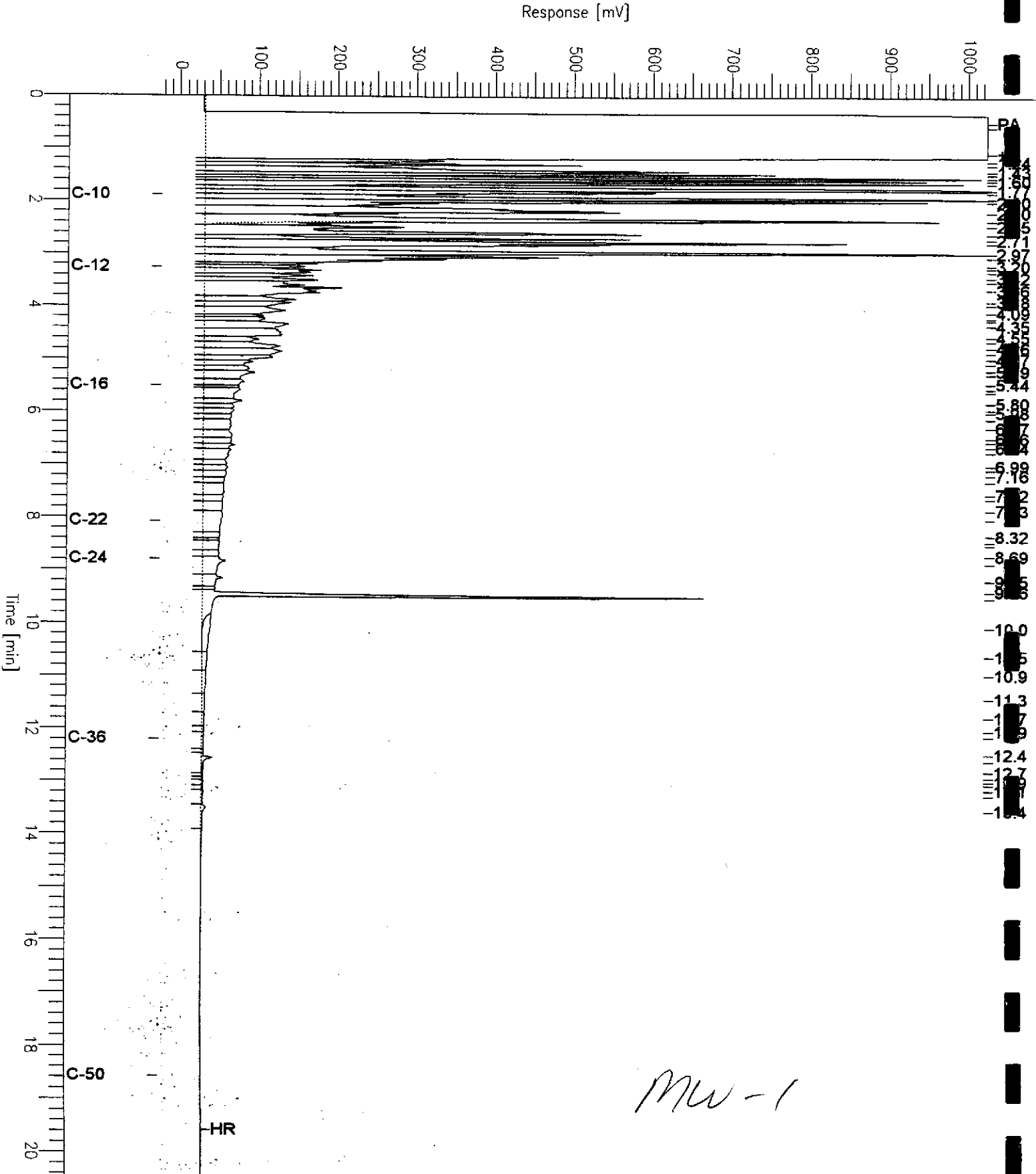
# Chromatogram

Sample Name : 180051-001,103034  
FileName : G:\GC11\CHA\168A018.RAW  
Method : ATEH156S.MTH  
Start Time : 0.00 min  
Scale Factor: 0.0

End Time : 20.46 min  
Plot Offset: -24 mV

Sample #: 103034  
Date : 6/18/05 09:25 AM  
Time of Injection: 6/17/05 09:21 PM  
Low Point : -23.71 mV  
Plot Scale: 1047.7 mV  
High Point : 1024.00 mV

Page 1 of 1



# Chromatogram

Sample Name : 180051-002,103034

Sample #: 103034

Page 1 of 1

FileName : G:\GC11\CHA\168A021.RAW

Date : 6/18/05 09:27 AM

Method : ATEH156S.MTH

Time of Injection: 6/17/05 10:49 PM

Start Time : 0.01 min

End Time : 20.45 min

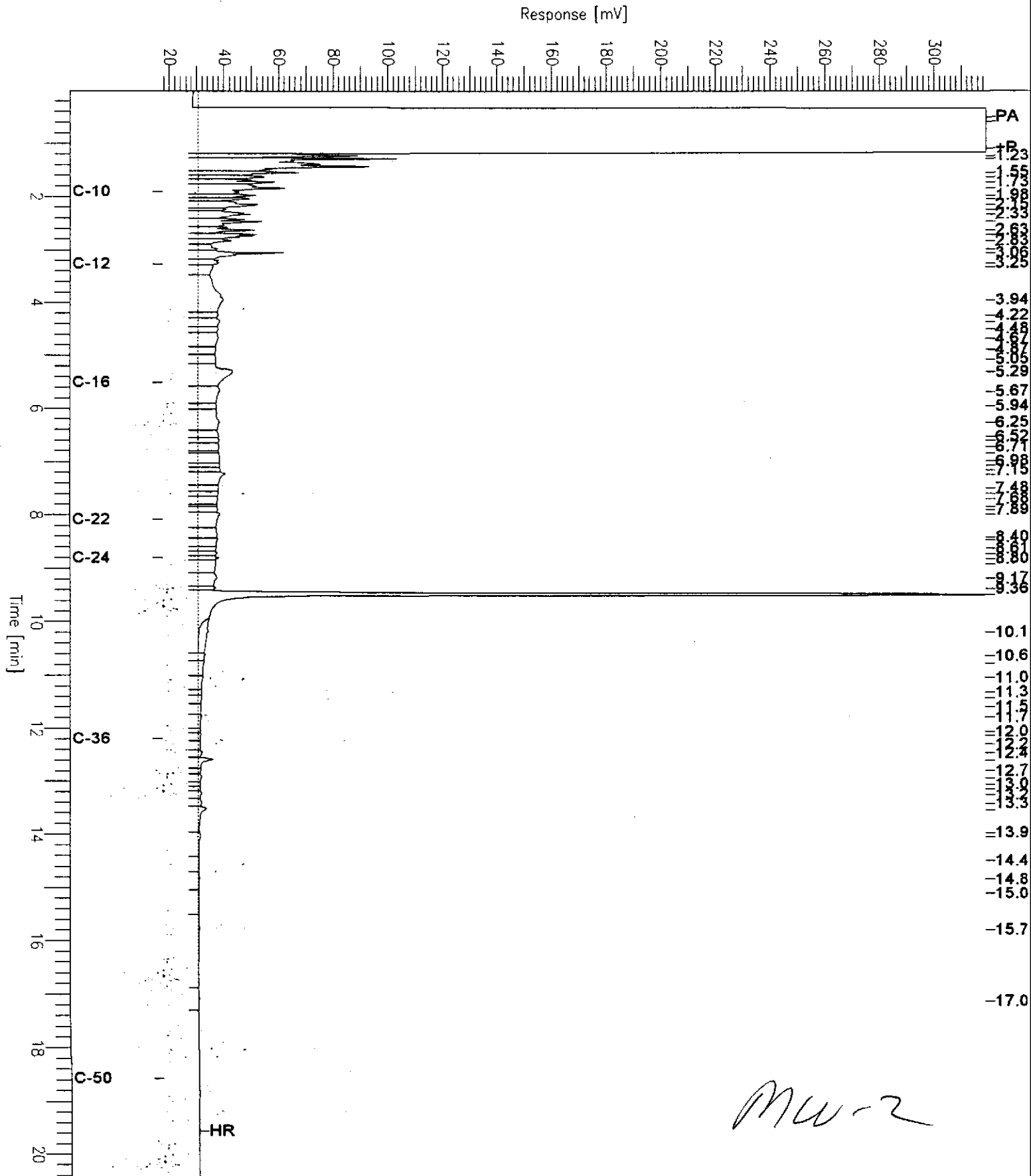
Low Point : 17.56 mV

High Point : 319.08 mV

Scale Factor: 0.0

Plot Offset: 18 mV

Plot Scale: 301.5 mV



*MW-2*

# Chromatogram

Sample Name : 180051-003,103034

Sample #: 103034

Page 1 of 1

FileName : G:\GC11\CHA\168A022.RAW

Date : 6/18/05 09:27 AM

Method : ATEH156S.MTH

Time of Injection: 6/17/05 11:19 PM

Start Time : 0.01 min

End Time : 20.45 min

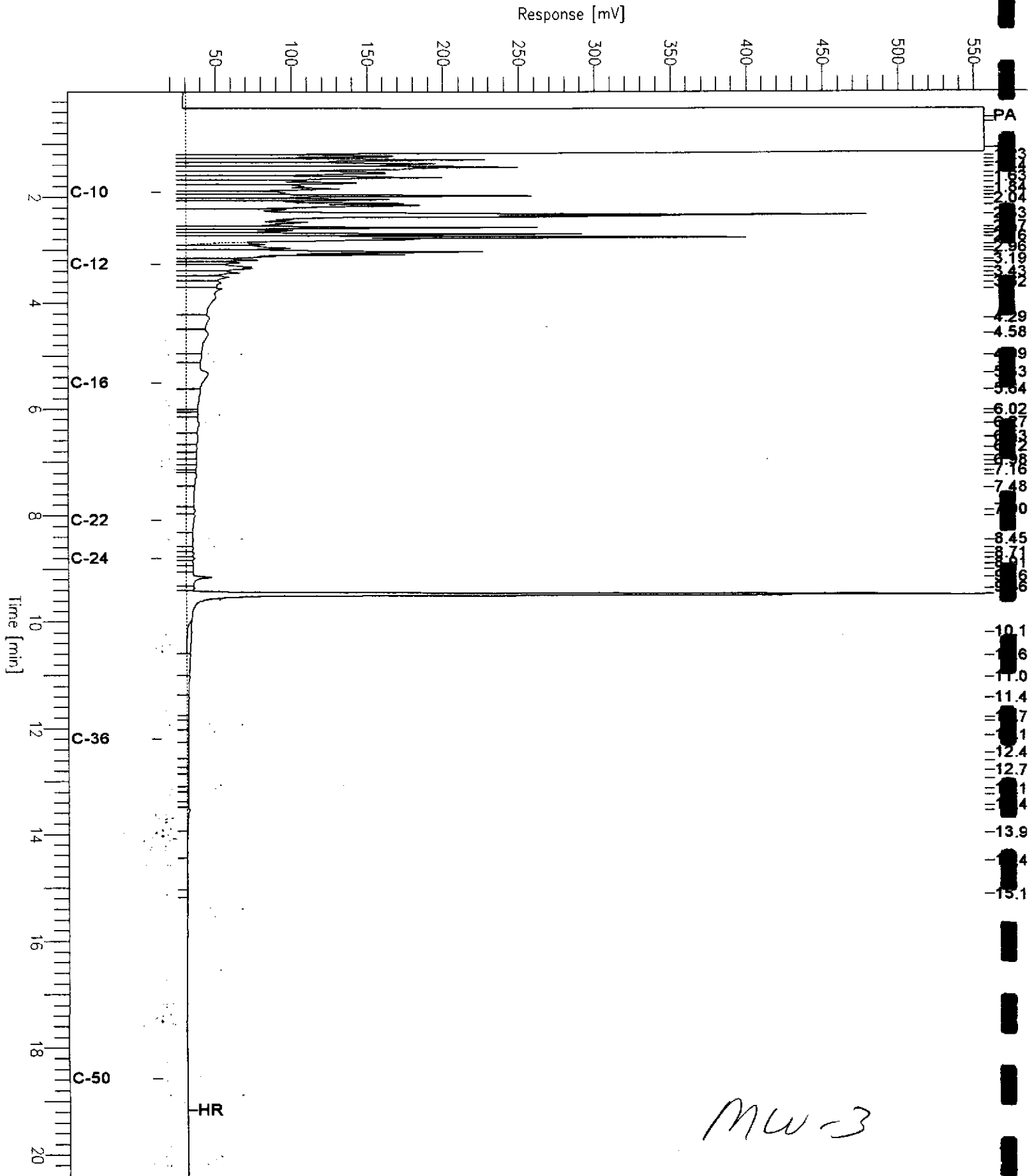
Low Point : 13.89 mV

High Point : 556.58 mV

Scale Factor: 0.0

Plot Offset: 14 mV

Plot Scale: 542.7 mV



MW-3

# Chromatogram

Sample Name : 180051-005,103034

Sample #: 103034

Page 1 of 1

FileName : G:\GC11\CHA\168A023.RAW

Date : 6/18/05 09:27 AM

Method : ATEH156S.MTH

Time of Injection: 6/17/05 11:48 PM

Start Time : 0.00 min

End Time : 20.46 min

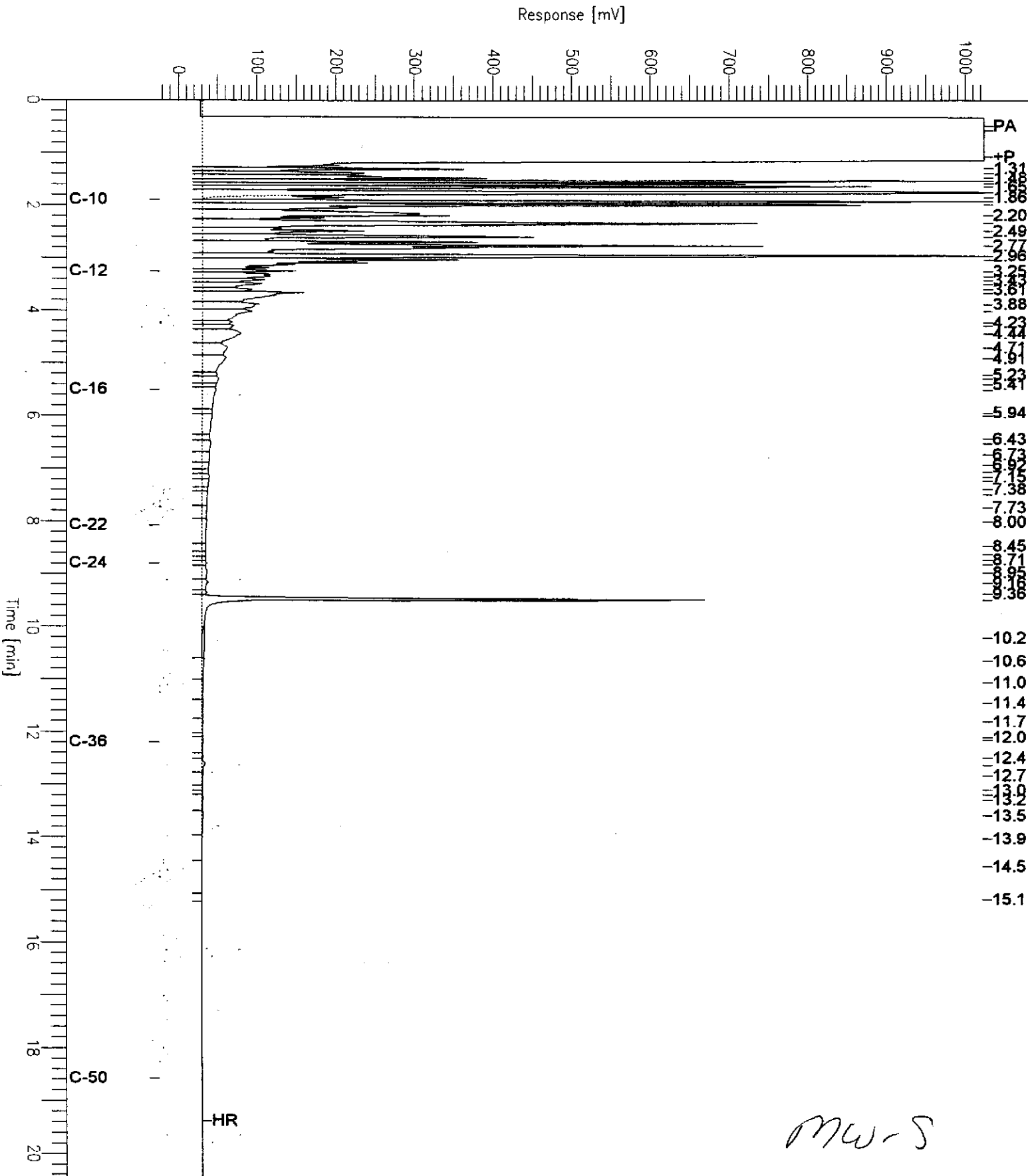
Low Point : -23.92 mV

High Point : 1024.00 mV

Scale Factor: 0.0

Plot Offset: -24 mV

Plot Scale: 1047.9 mV



MW-S

# Chromatogram

Sample Name : 180051-006,103034

Sample #: 103034

Page 1 of 1

FileName : G:\GC11\CHA\168A014.RAW

Date : 6/18/05 09:24 AM

Method : ATEH156S.MTH

Time of Injection: 6/17/05 07:24 PM

Start Time : 0.01 min End Time : 20.45 min

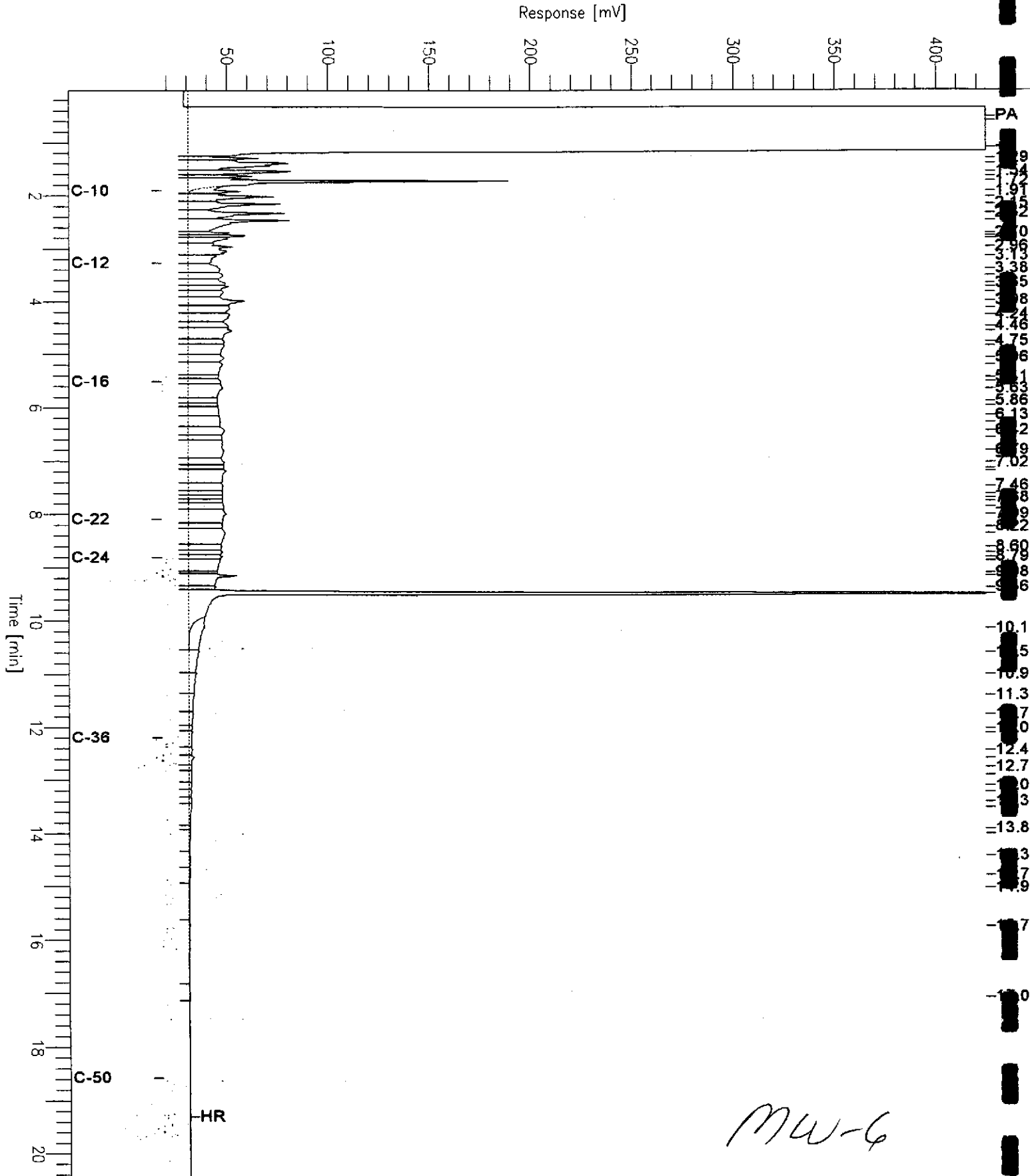
Low Point : 17.68 mV

High Point : 424.68 mV

Scale Factor: 0.0

Plot Offset: 18 mV

Plot Scale: 407.0 mV



MW-6





**Total Extractable Hydrocarbons**

Lab #:	180051	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	STANDARD	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	06/14/05
Units:	ug/L	Received:	06/15/05
Diln Fac:	1.000	Prepared:	06/16/05
Batch#:	103034		

Field ID:	MW-8	Lab ID:	180051-008
Type:	SAMPLE	Analyzed:	06/18/05

Analyte	Result	RL
Diesel C10-C24	63 L Y	50

Surrogate	%REC	Limits
Hexacosane	80	55-143

Type:	BLANK	Analyzed:	06/17/05
Lab ID:	QC297816		

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
Hexacosane	106	55-143

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

# Chromatogram

Sample Name : 180051-008,103034

Sample #: 103034

Page 1 of 1

FileName : G:\GC11\CHA\168A024.RAW

Date : 6/18/05 09:28 AM

Method : ATEH156S.MTH

Time of Injection: 6/18/05 12:17 AM

Start Time : 0.01 min

End Time : 20.45 min

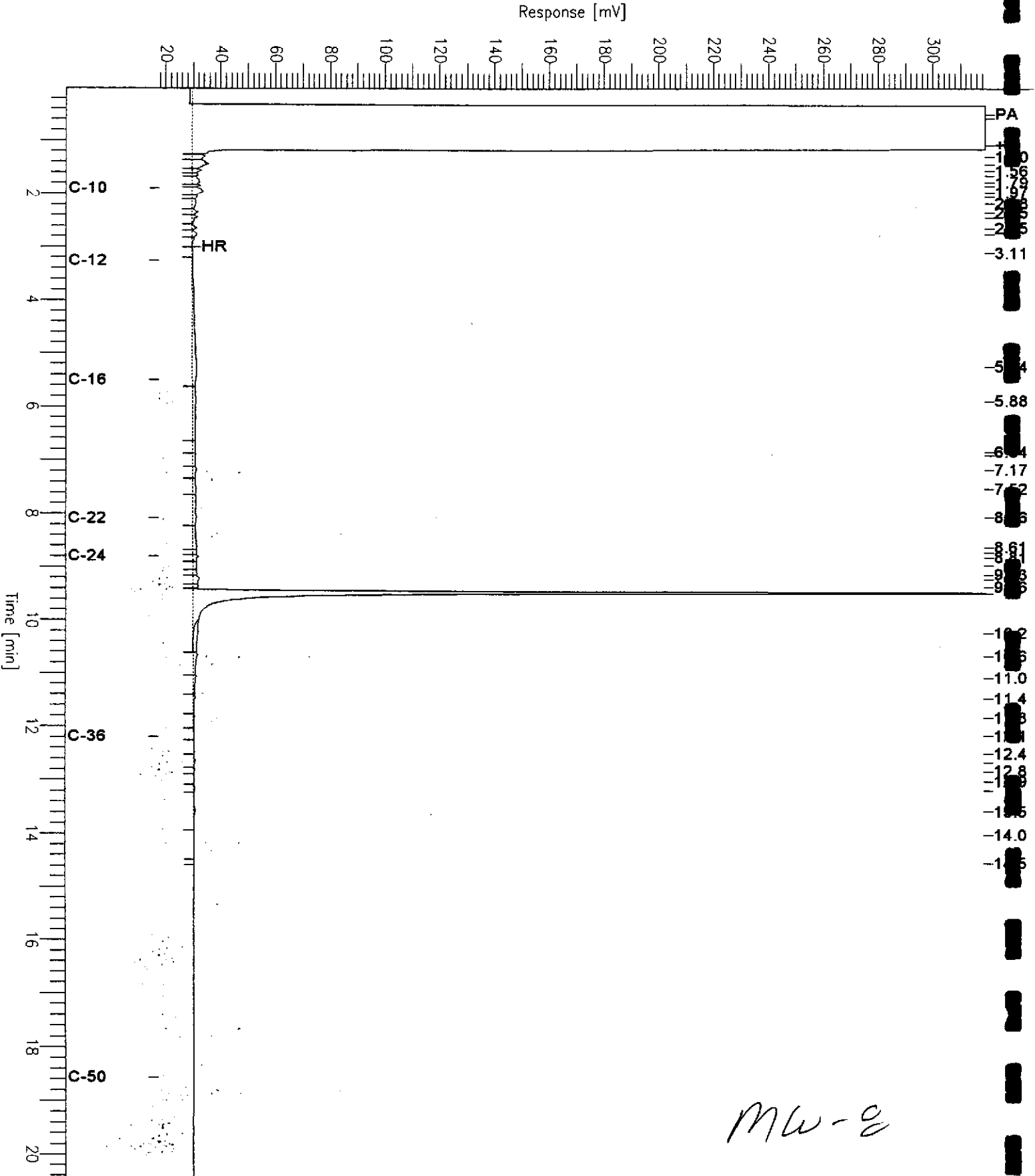
Low Point : 17.59 mV

High Point : 319.11 mV

Scale Factor: 0.0

Plot Offset: 18 mV

Plot Scale: 301.5 mV



MW-2

# Chromatogram

Sample Name : ccv,S776,ds1  
File Name : G:\GC11\CHA\168A003.RAW  
Method : ATEH156S.MTH  
Inlet Time : 0.01 min  
Scale Factor : 0.0

End Time : 20.45 min  
Plot Offset : 25 mV

Sample #: 500mg/L

Date : 6/17/05 11:18 AM

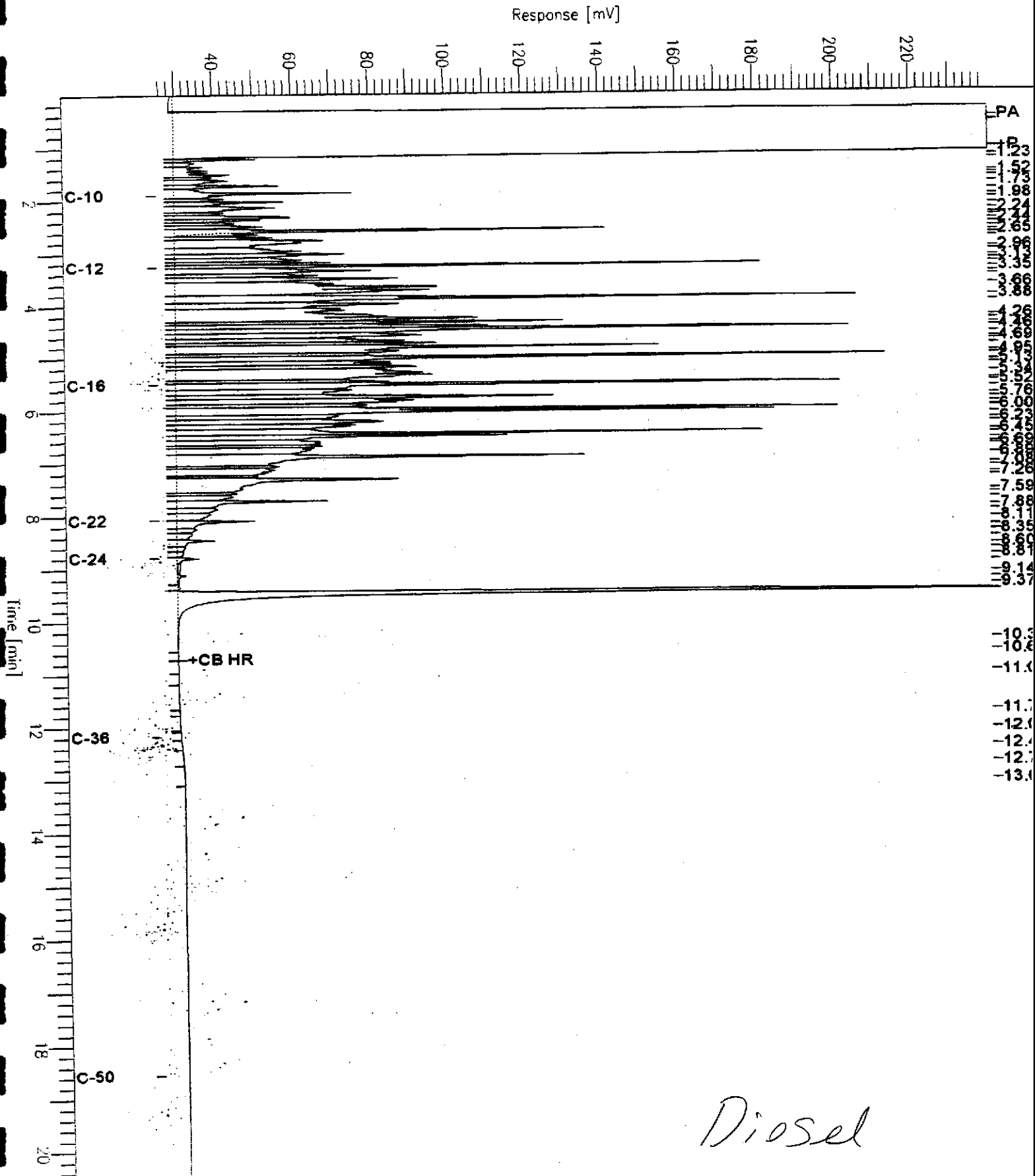
Time of Injection: 6/17/05 10:19 AM

Low Point : 25.14 mV

Plot Scale: 214.9 mV

Page 1 of 1

High Point : 246.00 mV



*Diesel*



Batch QC Report

**Total Extractable Hydrocarbons**

Lab #:	180051	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	STANDARD	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	103034
Units:	ug/L	Prepared:	06/16/05
Diln Fac:	1.000	Analyzed:	06/17/05

Type: BS Lab ID: QC297817

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,349	94	50-133

Surrogate	%REC	Limits
Hexacosane	102	55-143

Type: BSD Lab ID: QC297818

Analyte	Spiked	Result	%REC	Limits	RPD	UJ
Diesel C10-C24	2,500	2,129	85	50-133	10	40

Surrogate	%REC	Limits
Hexacosane	91	55-143

**Gasoline by GC/MS**

Lab #:	180051	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	103134
Lab ID:	180051-001	Sampled:	06/14/05
Matrix:	Water	Received:	06/15/05
Units:	ug/L	Analyzed:	06/21/05
Diln Fac:	25.00		

Analyte	Result	RL
Gasoline C7-C12	21,000	1,300
tert-Butyl Alcohol (TBA)	ND	250
Isopropyl Ether (DIPE)	ND	13
Ethyl tert-Butyl Ether (ETBE)	ND	13
Methyl tert-Amyl Ether (TAME)	ND	13
MTBE	ND	13
1,2-Dichloroethane	ND	13
Benzene	1,900	13
Toluene	270	13
1,2-Dibromoethane	ND	13
Ethylbenzene	320	13
m,p-Xylenes	1,800	13
o-Xylene	1,000	13

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-120
1,2-Dichloroethane-d4	94	80-122
Toluene-d8	97	80-120
Bromofluorobenzene	100	80-124

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



## Gasoline by GC/MS

Lab #:	180051	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	103134
Lab ID:	180051-002	Sampled:	06/14/05
Matrix:	Water	Received:	06/15/05
Units:	ug/L	Analyzed:	06/21/05
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	1,600 L	50
tert-Butyl Alcohol (TBA)	200	10
Isopropyl Ether (DIPE)	0.79	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	66	0.50
1,2-Dichloroethane	ND	0.50
Benzene	14	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	1.8	0.50
m,p-Xylenes	0.68	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-120
1,2-Dichloroethane-d4	97	80-122
Toluene-d8	99	80-120
Bromofluorobenzene	103	80-124

L= Lighter hydrocarbons contributed to the quantitation  
ND= Not Detected  
RL= Reporting Limit  
Page 1 of 1

## Gasoline by GC/MS

Lab #:	180051	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	103134
Lab ID:	180051-003	Sampled:	06/14/05
Matrix:	Water	Received:	06/15/05
Units:	ug/L	Analyzed:	06/21/05
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	4,200 H L	50
tert-Butyl Alcohol (TBA)	160	10
Isopropyl Ether (DIPE)	1.4	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	66	0.50
1,2-Dichloroethane	ND	0.50
Benzene	49	0.50
Toluene	4.5	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	23	0.50
m,p-Xylenes	13	0.50
o-Xylene	3.2	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	98	80-122
Toluene-d8	101	80-120
Bromofluorobenzene	99	80-124

H= Heavier hydrocarbons contributed to the quantitation

L= Lighter hydrocarbons contributed to the quantitation

ND= Not Detected

RL= Reporting Limit

Page 1 of 1

**Gasoline by GC/MS**

Lab #:	180051	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	MW-5	Batch#:	103134
Lab ID:	180051-005	Sampled:	06/14/05
Matrix:	Water	Received:	06/15/05
Units:	ug/L	Analyzed:	06/21/05
Diln Fac:	14.29		

Analyte	Result	RL
Gasoline C7-C12	16,000	710
tert-Butyl Alcohol (TBA)	ND	140
Isopropyl Ether (DIPE)	ND	7.1
Ethyl tert-Butyl Ether (ETBE)	ND	7.1
Methyl tert-Amyl Ether (TAME)	ND	7.1
MTBE	ND	7.1
1,2-Dichloroethane	ND	7.1
Benzene	1,100	7.1
Toluene	260	7.1
1,2-Dibromoethane	ND	7.1
Ethylbenzene	380	7.1
m,p-Xylenes	1,000	7.1
o-Xylene	590	7.1

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-120
1,2-Dichloroethane-d4	96	80-122
Toluene-d8	97	80-120
Bromofluorobenzene	100	80-124



## Gasoline by GC/MS

Lab #:	180051	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	MW-6	Batch#:	103098
Lab ID:	180051-006	Sampled:	06/14/05
Matrix:	Water	Received:	06/15/05
Units:	ug/L	Analyzed:	06/20/05
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	150	50
tert-Butyl Alcohol (TBA)	26	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	28	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	0.77	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-120
1,2-Dichloroethane-d4	99	80-122
Toluene-d8	98	80-120
Bromofluorobenzene	101	80-124

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



## Gasoline by GC/MS

Lab #:	180051	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	MW-8	Batch#:	103098
Lab ID:	180051-008	Sampled:	06/14/05
Matrix:	Water	Received:	06/15/05
Units:	ug/L	Analyzed:	06/20/05
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	510	50
tert-Butyl Alcohol (TBA)	42	10
Isopropyl Ether (DIPE)	1.1	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	25	0.50
Benzene	6.8	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	2.4	0.50
m,p-Xylenes	4.8	0.50
o-Xylene	0.51	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-120
1,2-Dichloroethane-d4	100	80-122
Toluene-d8	99	80-120
Bromofluorobenzene	102	80-124

## Batch QC Report

## Gasoline by GC/MS

Lab #:	180051	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC298059	Batch#:	103098
Matrix:	Water	Analyzed:	06/20/05
Units:	ug/L		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-120
1,2-Dichloroethane-d4	96	80-122
Toluene-d8	97	80-120
Bromofluorobenzene	102	80-124

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

## Batch QC Report

## Gasoline by GC/MS

Lab #:	180051	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC298188	Batch#:	103134
Matrix:	Water	Analyzed:	06/21/05
Units:	ug/L		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	96	80-122
Toluene-d8	98	80-120
Bromofluorobenzene	101	80-124

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

Batch QC Report

Gasoline by GC/MS

Lab #: 180051	Location: Oakland Auto Works
Client: Stellar Environmental Solutions	Prep: EPA 5030B
Project#: STANDARD	Analysis: EPA 8260B
Matrix: Water	Batch#: 103098
Units: ug/L	Analyzed: 06/20/05
Diln Fac: 1.000	

Type: BS Lab ID: QC298055

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	125.6	100	65-139
Isopropyl Ether (DIPE)	25.00	22.67	91	76-120
Ethyl tert-Butyl Ether (ETBE)	25.00	25.05	100	80-120
Methyl tert-Amyl Ether (TAME)	25.00	24.96	100	80-120
MTBE	25.00	22.64	91	72-129
1,2-Dichloroethane	25.00	24.05	96	75-120
Benzene	25.00	24.76	99	80-120
Toluene	25.00	25.03	100	80-120
1,2-Dibromoethane	25.00	24.66	99	80-120
Ethylbenzene	25.00	26.27	105	80-120
m,p-Xylenes	50.00	52.68	105	80-120
o-Xylene	25.00	26.52	106	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-120
1,2-Dichloroethane-d4	94	80-122
Toluene-d8	97	80-120
Bromofluorobenzene	100	80-124

Type: BSD Lab ID: QC298056

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	123.4	99	65-139	2	27
Isopropyl Ether (DIPE)	25.00	23.45	94	76-120	3	20
Ethyl tert-Butyl Ether (ETBE)	25.00	25.42	102	80-120	1	20
Methyl tert-Amyl Ether (TAME)	25.00	25.40	102	80-120	2	20
MTBE	25.00	23.05	92	72-129	2	20
1,2-Dichloroethane	25.00	24.43	98	75-120	2	20
Benzene	25.00	25.27	101	80-120	2	20
Toluene	25.00	25.67	103	80-120	3	20
1,2-Dibromoethane	25.00	24.87	99	80-120	1	20
Ethylbenzene	25.00	26.70	107	80-120	2	20
m,p-Xylenes	50.00	53.15	106	80-120	1	20
o-Xylene	25.00	26.74	107	80-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-120
1,2-Dichloroethane-d4	94	80-122
Toluene-d8	97	80-120
Bromofluorobenzene	100	80-124

## Batch QC Report

## Gasoline by GC/MS

Lab #:	180051	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	103098
Units:	ug/L	Analyzed:	06/20/05
Diln Fac:	1.000		

Type: BS Lab ID: QC298057

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	2,114	106	70-130

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-120
1,2-Dichloroethane-d4	96	80-122
Toluene-d8	98	80-120
Bromofluorobenzene	99	80-124

Type: BSD Lab ID: QC298058

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,191	110	70-130	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-120
1,2-Dichloroethane-d4	95	80-122
Toluene-d8	96	80-120
Bromofluorobenzene	98	80-124

## Batch QC Report

## Gasoline by GC/MS

Lab #:	180051	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	103134
Units:	ug/L	Analyzed:	06/21/05
Diln Fac:	1.000		

Type: BS Lab ID: QC298186

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	129.1	103	65-139
Isopropyl Ether (DIPE)	25.00	23.10	92	76-120
Ethyl tert-Butyl Ether (ETBE)	25.00	25.61	102	80-120
Methyl tert-Amyl Ether (TAME)	25.00	25.02	100	80-120
MTBE	25.00	23.25	93	72-129
1,2-Dichloroethane	25.00	24.28	97	75-120
Benzene	25.00	24.08	96	80-120
Toluene	25.00	25.18	101	80-120
1,2-Dibromoethane	25.00	24.67	99	80-120
Ethylbenzene	25.00	25.50	102	80-120
m,p-Xylenes	50.00	50.67	101	80-120
o-Xylene	25.00	25.53	102	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-120
1,2-Dichloroethane-d4	97	80-122
Toluene-d8	98	80-120
Bromofluorobenzene	100	80-124

Type: BSD Lab ID: QC298187

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	133.4	107	65-139	3	27
Isopropyl Ether (DIPE)	25.00	23.50	94	76-120	2	20
Ethyl tert-Butyl Ether (ETBE)	25.00	25.66	103	80-120	0	20
Methyl tert-Amyl Ether (TAME)	25.00	25.38	102	80-120	1	20
MTBE	25.00	23.31	93	72-129	0	20
1,2-Dichloroethane	25.00	24.64	99	75-120	1	20
Benzene	25.00	25.08	100	80-120	4	20
Toluene	25.00	25.83	103	80-120	3	20
1,2-Dibromoethane	25.00	24.83	99	80-120	1	20
Ethylbenzene	25.00	26.52	106	80-120	4	20
m,p-Xylenes	50.00	52.46	105	80-120	3	20
o-Xylene	25.00	25.89	104	80-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-120
1,2-Dichloroethane-d4	96	80-122
Toluene-d8	98	80-120
Bromofluorobenzene	100	80-124



## Batch QC Report

## Gasoline by GC/MS

Lab #:	180051	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	103134
Units:	ug/L	Analyzed:	06/21/05
Diln Fac:	1.000		

Type: BS Lab ID: QC298189

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	2,127	106	70-130

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-120
1,2-Dichloroethane-d4	97	80-122
Toluene-d8	97	80-120
Bromofluorobenzene	99	80-124

Type: BSD Lab ID: QC298190

Analyte	Spiked	Result	%REC	Limits	RPD	Li
Gasoline C7-C12	2,000	2,212	111	70-130	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-120
1,2-Dichloroethane-d4	97	80-122
Toluene-d8	97	80-120
Bromofluorobenzene	99	80-124



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

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

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

TABLE C-1 (continued)

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

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

TABLE C-1 (continued)

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

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

TABLE C-1 (continued)

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

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

TABLE C-1 (continued)

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

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

TABLE C-1 (continued)

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

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

TABLE C-1 (continued)

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

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

TABLE C-1 (continued)

MW-8									
Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
(a)	9	Feb-01	1,000	NA	3.97	< 0.3	3.78	1.63	620
(a)	10	May-01	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	4.4
(a)	11	Jul-01	< 5.0	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Pre"hi-vac"	12	Oct 22-01	< 5.0	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Post "hi-vac"	12	Oct 26-01	< 5.0	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
(a)	13	Dec-01	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
No	14	Mar-02	< 50	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
No	15	May-02	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
No	16	Jul-02	< 50	NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
No	17	Oct-02	458	NA	1.7	< 0.3	< 0.3	< 0.6	233
No	18	Jan-03	< 100	NA	< 0.3	< 0.3	< 0.3	< 0.6	< 5.0
No	19	Mar-03	< 15	NA	< 0.22	< 0.32	< 0.31	< 0.4	< 0.18
No	20	Jul-03	190	< 50	< 0.5	< 0.5	< 0.5	0.6	< 0.5
Pre-Purge	21	Dec-03	144	< 100	< 0.3	< 0.3	< 0.3	< 0.6	7.6
Post-Purge	21	Dec-03	163	< 100	< 0.3	< 0.3	< 0.3	< 0.6	66
Yes	22	Mar-04	412	< 100	1.2	< 0.3	1.7	3.9	66
Yes	23	Jun-04	320	68	< 0.5	< 0.5	< 0.5	< 0.5	120
Yes	24	Sep-04	280	2600	< 0.5	< 0.5	< 0.5	< 0.5	120
Yes	25	Dec-04	270	84	< 0.5	< 0.5	< 0.5	< 0.5	94
Yes	26	Mar-05	270	120	< 0.5	< 0.5	< 0.5	< 1.0	66
Yes	27	Jun-05	510	63	6.8	< 0.5	2.4	5.31	< 0.5

**Notes:**

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

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

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

NA = Not analyzed for this constituent in this event.

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