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

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

SECOND QUARTER 2004 GROUNDWATER MONITORING REPORT

240 W. MACARTHUR BOULEVARD OAKLAND, CALIFORNIA

Prepared for:

MR. GLEN FOX-WING
OAKLAND AUTO MUSEUM
OAKLAND, CALIFORNIA

July 2004

Stellar Environmental Solutions

Geomatrix Consultants, Inc.

★ **Stellar Environmental Solutions**

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

July 12, 2004

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

Subject: Second Quarter 2004 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 2004 groundwater monitoring event (the 23rd 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

REGISTERED GEOLOGIST
BRUCE M. RUCKER
No. 6814
Exp. 9/04
STATE OF CALIFORNIA

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

cc: Mr. Glen Poy-Wing, Property Owner

SECOND QUARTER 2004 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 12, 2004

Project No. 2003-43

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1.0 INTRODUCTION

PROJECT BACKGROUND

The subject property, located at 240 W. MacArthur Boulevard, Oakland, Alameda County, California, is owned by Glen Poy-Wing and his wife of Oakland Auto Works, for whom Stellar Environmental Solutions, Inc. (SES) has provided environmental consulting services since July 2003. The site has undergone contaminant investigations and remediation since 1991 (discussed below). A list of all known environmental reports is included in Section 6.0, References and Bibliography. This report presents finding for the 23rd 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 – San Francisco Bay Region (RWQCB). There are no Alameda County Health or RWQCB cleanup orders for the site; however, all site work has been conducted under oversight of Alameda County Health. In our August 2003 review of the Alameda County Health case file, we determined that all known technical reports for the site were included in that file.

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

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

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

SCOPE OF REPORT

This report discusses the following activities, conducted between April 1 and June 30, 2004:

- The 23rd groundwater monitoring and sampling event, conducted on June 15, 2004.

SITE DESCRIPTION

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

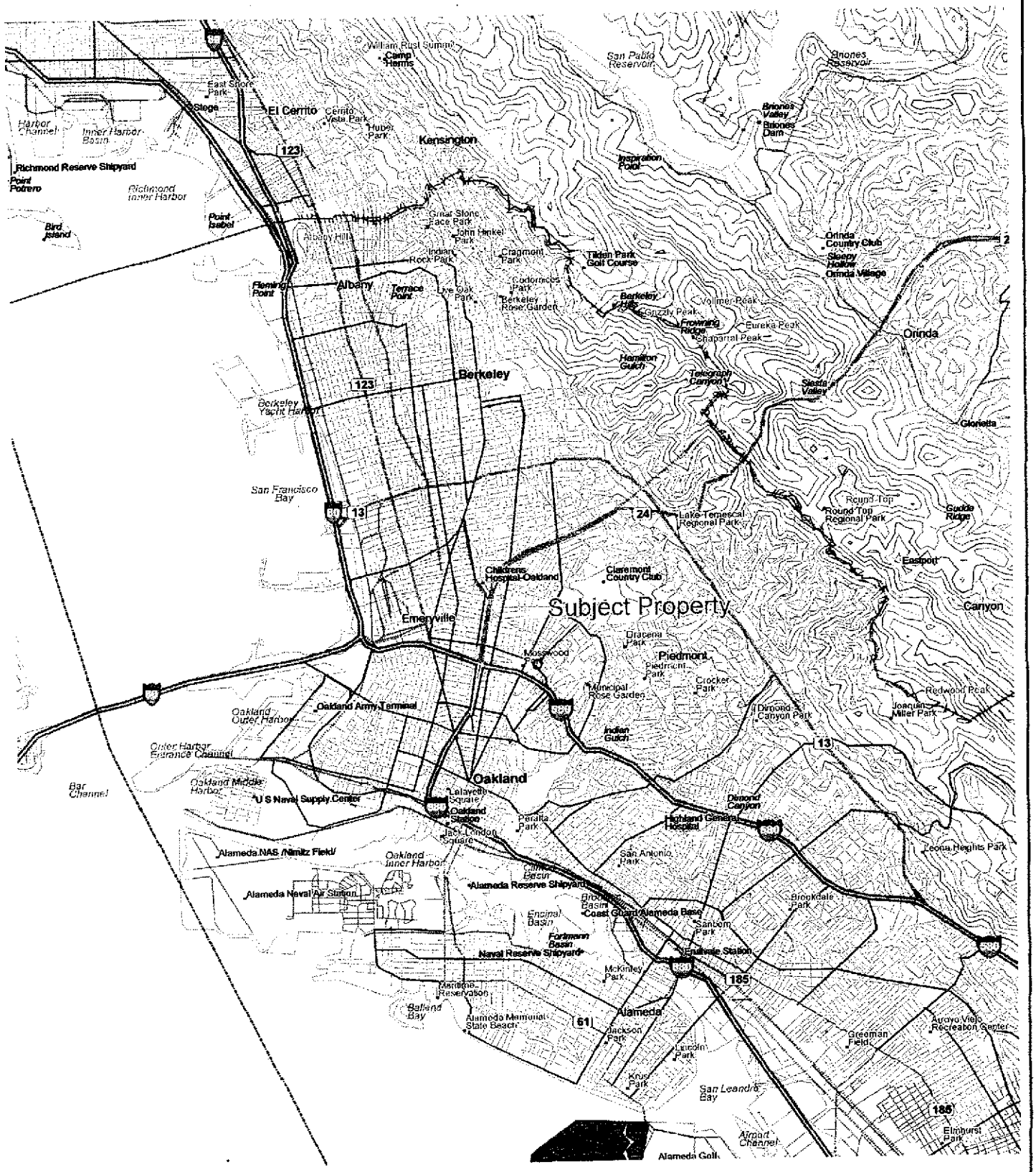
Adjacent land use includes: a Shell-branded service station (*to the south*); W. MacArthur Boulevard (*to the west*); Howe Street (*to the north*); and a paved driveway, then a multi-story (with basement) health services building (*to the east*).

HISTORICAL ENVIRONMENTAL ACTIVITIES

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

Historical remediation and site characterization activities include:

- **Pre-1991**: Three 10,000-gallon gasoline UFSTs from a former Gulf service station occupancy were removed prior to 1991 (there is no available documentation regarding their removals).
- **1991:** A waste oil sump was removed. Limited overexcavation was conducted, and there was no evidence of residual soil contamination, with the exception of 360 mg/kg of petroleum oil & grease (Mittelhauser Corporation, 1991b).
- **1996:** A 350-gallon waste oil UST was removed. Elevated levels of diesel and oil & grease were detected in confirmation soil samples. Subsequent overexcavation was conducted, and there was no evidence of residual soil contamination (All Environmental, Inc., 1997a).



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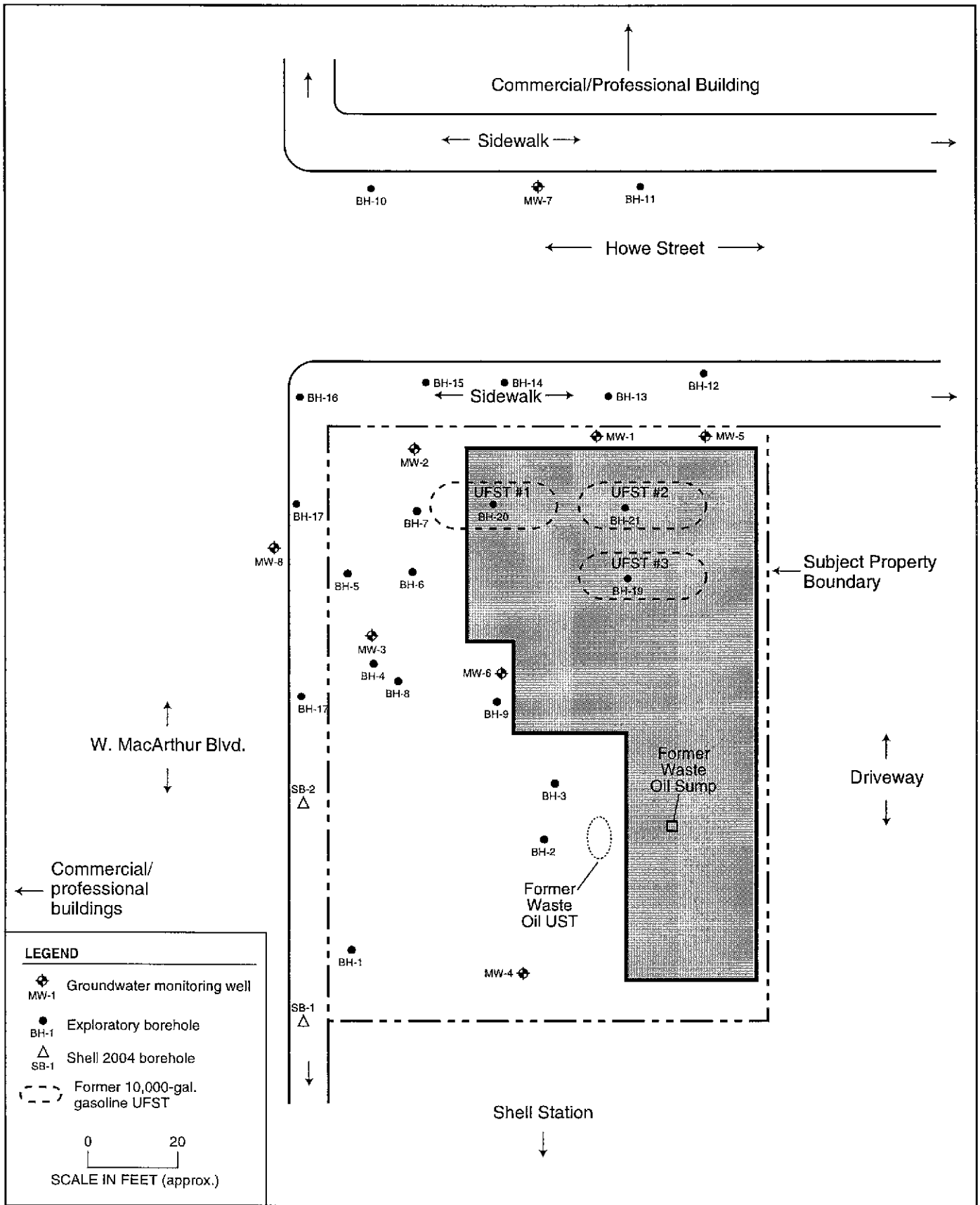
SITE LOCATION ON U.S.G.S. TOPOGRAPHIC MAP

240 W. MacArthur Blvd. Oakland, CA	By: MJC	AUGUST 2003	★ Stellar Environmental Solutions, Inc. Geoscience & Engineering Consulting
	Figure 1		

2003-43-01



SITE PLAN WITH BOREHOLE AND GROUNDWATER WELL LOCATIONS

240 W. MacArthur Blvd. Oakland, CA	By: MJC	MAY 2004
	Figure 2	

★ Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

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- **January 1997:** In accordance with a request by Alameda County Health, a subsurface investigation was conducted (All Environmental, Inc., 1997b). Six exploratory boreholes were advanced to a maximum depth of 20 feet, and soil samples were collected.
- **August 1997:** Additional site characterization was conducted, which included sampling three boreholes, installing four groundwater monitoring wells, and conducting the initial groundwater sampling event.
- **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 gasoline and 25.6 mg/kg benzene (AEC, 2001b).
- **October 2001**: Short-term (less than 1-day duration) groundwater and vapor extraction from five wells was conducted over 4 days (AEC, 2001e) (referred to by that consultant as "Hi-Vac" process).
- **2003:** A sensitive receptor and vicinity water well survey was conducted.
- **April 2004**. Additional site characterization was conducted, including: advancing and sampling 12 exploratory boreholes; analyzing 64 soil and 12 grab-groundwater sample results; and further evaluating site hydrogeology and contaminant extent and magnitude.

2.0 PHYSICAL SETTING

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

TOPOGRAPHY AND SURFACE WATER DRAINAGE

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

LITHOLOGY

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.

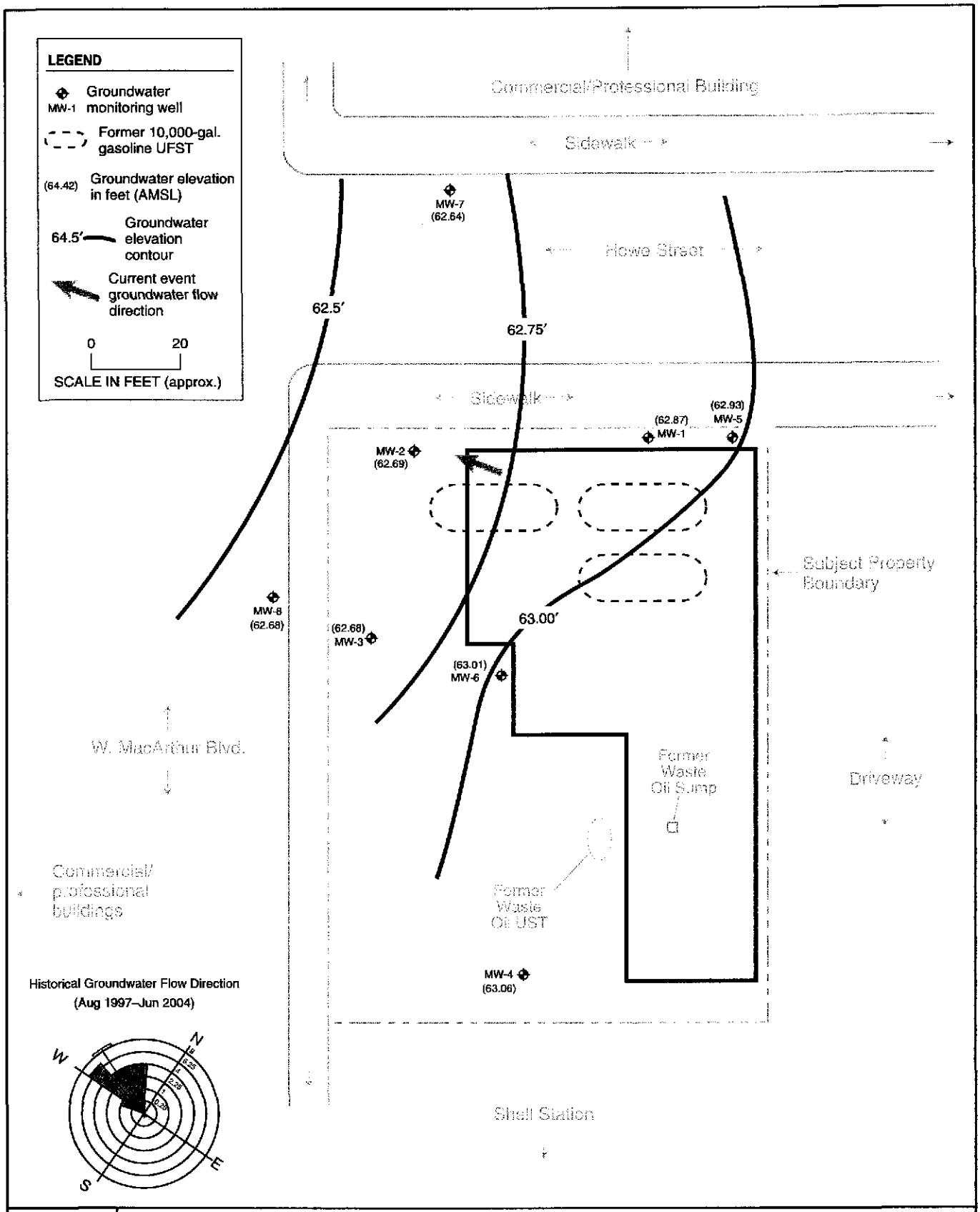
GROUNDWATER HYDROLOGY

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 4 is a groundwater elevation map that shows elevations and contours from the current (June 2004) groundwater monitoring event. Groundwater flow direction in this event was to the west. A generally westward (with a slight southern component) groundwater flow direction has also been measured at the adjacent Shell-branded service station (Cambria Environmental Technology, 2003). Groundwater gradient in the June 2004 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 17, 2004

240 W. MacArthur Blvd. Oakland, CA	By: MJC	JUNE 2004	Stellar Environmental Solutions, Inc. Geoscience & Engineering Consulting
	Figure 3		

2003-43-81

- 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 2004 GROUNDWATER MONITORING AND SAMPLING

This section presents the groundwater sampling and analytical methods for the current event (Second Quarter 2004), conducted on June 17, 2004. 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 June 2004 groundwater sampling event involved the collection of one set of "post-purge" samples from all wells, in accordance with recent revisions to the quarterly monitoring program approved by Alameda County Health. Specific activities for this event included:

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

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

Groundwater monitoring well water level measurements, sampling, and field analyses were conducted by Blaine Tech Services (San Jose, California) on June 17, 2004, under the direct 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 [a] June 17, 2004	Groundwater Elevation [b] June 17, 2004
		Depth (feet)	Elevation (feet)		
MW-1	25	19.5 to 24.5	54.5 to 49.5	16.28	62.87
MW-2	25	14.5 to 24.5	64.2 to 54.2	15.76	62.69
MW-3	25	14.5 to 24.5	63.4 to 53.4	14.90	62.68
MW-4	25	14.5 to 24.5	63.6 to 53.6	14.68	63.06
MW-5	20	9 to 19	70.6 to 60.6	16.43	62.93
MW-6	20	9 to 19	69.7 to 59.7	15.42	62.01
MW-7	20	9 to 19	69.6 to 59.6	15.63	62.64
MW-8	20	9 to 19	67.7 to 57.7	13.71	62.68

Notes:

[a] Pre-purge measurement, feet below top of well casing.

[b] Pre-purge measurement, feet above mean sea level.

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

Wastewater (purge water and equipment decontamination rinseate) was containerized in a labeled, 55-gallon steel drum that will be temporarily stored on site. This non-hazardous water will continue to be accumulated 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. 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.

REGULATORY CONSIDERATIONS

Environmental Screening Levels

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

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

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

Table 2
Groundwater Sample Analytical Results – June 17, 2004
Hydrocarbons, BTEX and MTBE
240 W. MacArthur Boulevard, Oakland, California [a]

Well	TVHg	TEHd	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-1	9,300	4,000	1,700	75	92	350	6.0
MW-2	1,200	370	42	0.7	2.6	0.9	170
MW-3	5,400	1,100	150	30	45	66	130
MW-4	*< 50*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	0.9
MW-5	12,000	1,700	920	240	260	1,150	*< 3.1*
MW-6	710	830	14	0.7	5.2	6.6	*< 0.5*
MW-7	*< 50*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
MW-8	320	68	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	120
RWQCB Environmental Screening Levels [b]							
	NLP	NLP	1.0	40	30	20	5.0
Drinking Water Standards [c]							
	100	100	1.0 [d]	40	30	13	5.0

Notes:

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

[b] For commercial/industrial sites where known or potential drinking water resource is threatened.

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

[d] State of California Primary MCL.

MTBE = Methyl *tertiary*-butyl ether
TEHd = Total extractable hydrocarbons - diesel range
TVHg = Total volatile hydrocarbons - gasoline range

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

Sensitive Receptors

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

Table 3
Groundwater Sample Analytical Results – June 17, 2004
Lead Scavengers and Fuel Oxygenates
240 W. MacArthur Boulevard, Oakland, California [a]

Well	EDC	EDB	TBA	DIPE
MW-1	*< 5.0*	*< 5.0*	270	*< 5.0*
MW-2	2.0	*< 0.5*	190	1.1
MW-3	*< 0.5*	*< 0.5*	130	1.9
MW-4	*< 0.5*	*< 0.5*	*< 10*	*< 0.5*
MW-5	*< 3.1*	*< 3.1*	120	*< 3.1*
MW-6	19	*< 0.5*	54	1.0
MW-7	*< 0.5*	*< 0.5*	*< 10*	*< 0.5*
MW-8	*< 0.5*	*< 0.5*	61	1.0
Drinking Water Standards [b]				
	NLP	NLP	NLP	NLP
RWQCB Environmental Screening Levels [c]				
	0.5	0.05	12	NLP

Notes:

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

[b] Drinking water standards are State of California Secondary Maximum Contaminant Levels (MCLs) – Proposed, unless specified otherwise.

[c] For commercial/industrial sites where known/potential drinking water resource is threatened.

DIPE – Isopropyl Ether
EDB = Ethylene dibromide (1,2-dibromoethane)
EDC = Ethylene dichloride (1,2-dichloroethane)
TBA = *tertiary*-Butyl Alcohol

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

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

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

1. The RWQCB has completed the "East Bay Plain Groundwater Basin Beneficial Use Evaluation Report" (RWQCB, 1999) that delineates three types of areas with regard to

beneficial uses of groundwater: Zone A (significant drinking water resource), Zone B (groundwater unlikely to be used as drinking water resource), and Zone C (shallow groundwater proposed for designation as Municipal Supply Beneficial Use). The subject site falls within Zone A.

2. A site-specific exemption can be obtained from the RWQCB. Such an exemption has not been obtained for this site.

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

GROUNDWATER SAMPLE ANALYTICAL METHODS

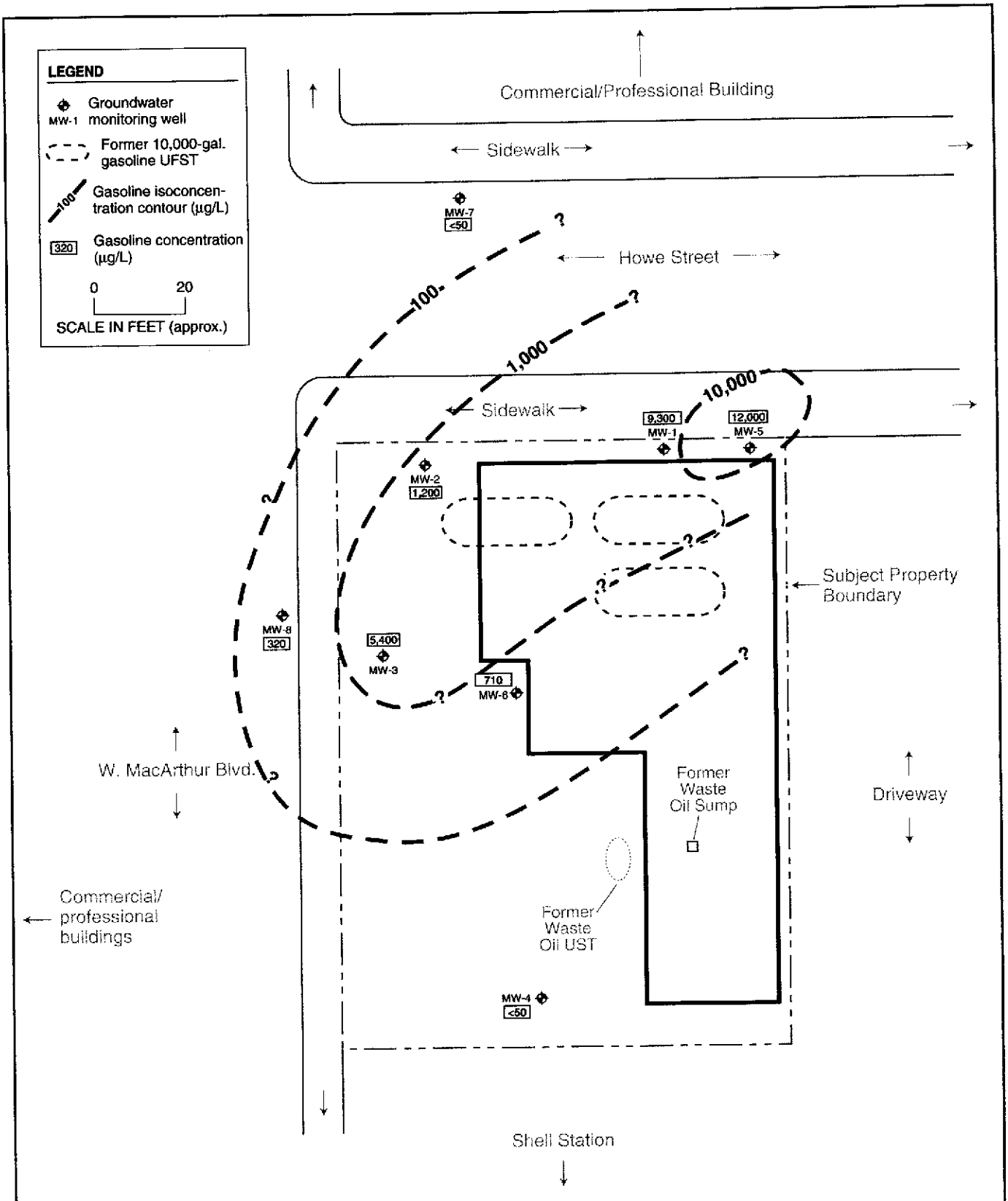
Groundwater samples were analyzed in accordance with the methods proposed in the SES technical workplan. Analytical methods included:

- Total volatile hydrocarbons – gasoline range (TVHg), by EPA Method 8015B (all wells);
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) and methyl *tertiary*-butyl ether (MTBE), by EPA Method 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); and
- Total extractable hydrocarbons – diesel range (TEHd), by EPA Method 8015M (all wells except MW-4 and MW-7, which historically have never detected diesel).
- Fuel oxygenates by EPA Method 8260B (this analysis added for this event at the request of Alameda County Health).

GROUNDWATER SAMPLE RESULTS

Gasoline and Diesel

Figure 4 shows gasoline isoconcentration contours for the recent event. Gasoline was detected in all site wells except MW-4 and MW-7, with concentrations between 320 µg/L (well MW-8) and 12,000 µg/L (well MW-5). All of the gasoline concentrations exceeded the 100 µg/L ESL



GASOLINE ISOCONCENTRATION CONTOURS (JUNE 2004)

240 W. MacArthur Blvd. Oakland, CA	By: MJC	JULY 2004	Stellar Environmental Solutions, Inc. Geoscience & Engineering Consulting
	Figure 4		

2003-43-82

criterion. The gasoline plume extends laterally along the Howe Street side of the property, and to the east (by onsite well MW-4). To the south, the plume extends somewhat offsite into W. MacArthur Blvd. Well MW-5, at the northern corner of the site, near the original source area, had the highest gasoline concentration, as it has historically. The gasoline plume 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 lesser levels than gasoline. Diesel concentrations ranged from 68 µg/L (well MW-8) to 4,000 µg/L (well MW-1), with all concentrations except MW-8 exceeding the 100 µg/L ESL criterion. The lateral extent of the diesel plume is constrained onsite in all directions, except along the Howe Street side of the property, where diesel concentrations appear to extend (likely not more than several dozen feet) into Howe Street. The diesel plume configuration is generally the same as for gasoline.

Benzene, Toluene, Ethylbenzene, and Total Xylenes

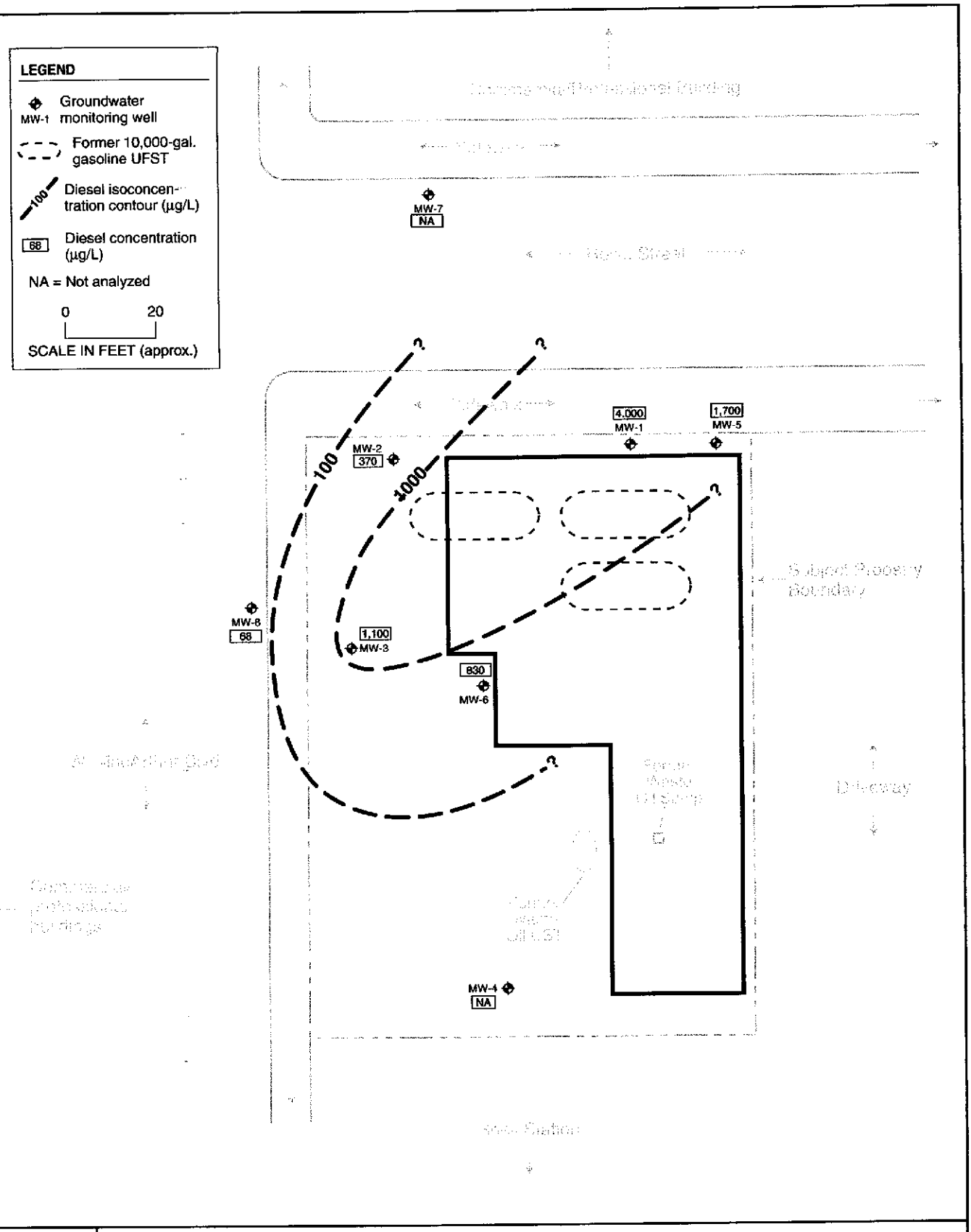
Benzene was detected in five of the eight site wells, at concentrations ranging from 14 µg/L to 1,700 µg/L. Figure 6 shows benzene isoconcentration contours for the recent event. Maximum benzene concentrations were detected in wells MW-1 and MW-5, as historically has been the case. The lateral extent of the benzene plume is constrained onsite in all directions, except along the Howe Street side of the property where benzene extends into Howe Street. The benzene plume configuration is generally the same as for gasoline and diesel.

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

Methyl *tertiary*-Butyl Ether

Figure 7 shows MTBE isoconcentration contours for the recent event. MTBE was detected in five of the eight site wells, at concentrations ranging from 0.9 µg/L to 170 µg/L. MTBE concentrations above 100 µg/L were present in wells MW-2, MW-3, and MW-8. The lateral extent of the MTBE plume is constrained onsite in all directions except to the south, where MTBE concentrations above 100 µg/L extends into MacArthur Boulevard.

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



DIESEL ISOCONCENTRATION CONTOURS (JUNE 2004)

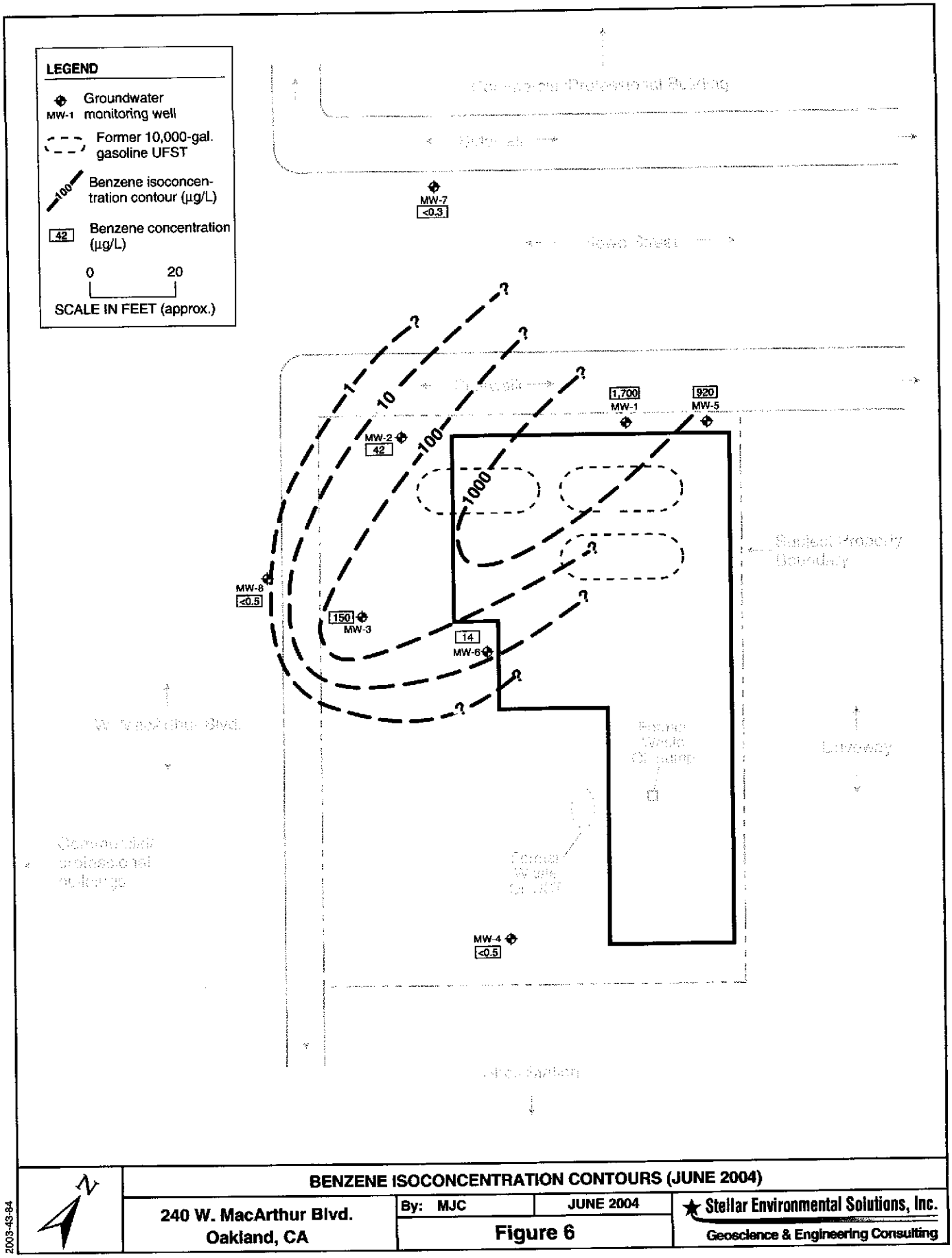
240 W. MacArthur Blvd.
Oakland, CA

By: MJC | JULY 2004

Figure 5

Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

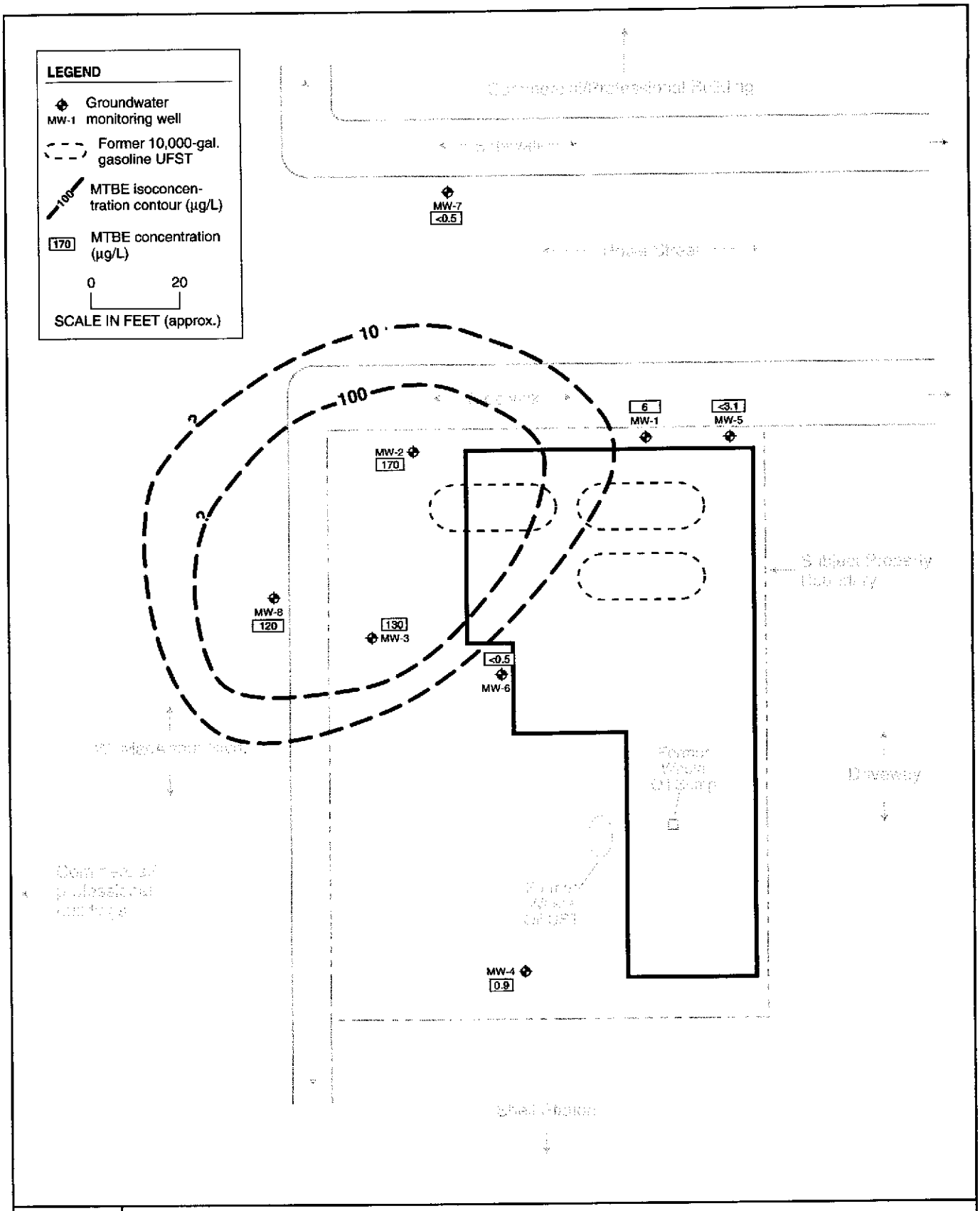
2003-43-83



2003-43-84

BENZENE ISOCONCENTRATION CONTOURS (JUNE 2004)

240 W. MacArthur Blvd. Oakland, CA	By: MJC	JUNE 2004	Stellar Environmental Solutions, Inc. Geoscience & Engineering Consulting
	Figure 6		



MTBE ISOCONCENTRATION CONTOURS (JUNE 2004)

240 W. MacArthur Blvd. Oakland, CA	By: MJC	JULY 2004	Stellar Environmental Solutions, Inc. Geoscience & Engineering Consulting
	Figure 7		

2003-43-B5

Lead Scavengers and Fuel Oxygenates

Alameda County Health requested in its May 3, 2004 letter that two lead scavengers (EDB and EDC) be analyzed in selected wells (MW-1, MW-5, and MW-6). In the current event, all wells were sampled for both analytes. EDC was detected in two of the site wells, at concentrations of 2 µg/L (MW-2) and 19 µg/L (MW-6). The MW-2 concentration is below the RWQCB ESL criterion. EDB was not detected in any of the wells.

The Alameda County Health letter stipulated that all groundwater samples in the current event be analyzed for fuel oxygenates, and analysis for fuel oxygenates should be continued in wells with detections. Only two fuel oxygenates were detected: TBA and DIPE. TBA was detected in six of the eight site wells, at a maximum concentration of 270 µg/L. DIPE was detected in four of the eight site wells, at a maximum concentration of 1.9 µg/L. The only wells without detected fuel oxygenates were MW-4 and MW-7.

Summary

With the exception of EDC, maximum contaminant concentrations were detected in wells MW-5 or MW-1, located in the northeastern corner of the property (near the former UFSTs) which appears to be the center of the groundwater contaminant mass. Groundwater contamination extends offsite to the south and west (into Howe Street and MacArthur Boulevard).

QUALITY CONTROL SAMPLE ANALYTICAL RESULTS

Laboratory QC samples (e.g., method blanks, matrix spikes, surrogate spikes, etc.) were analyzed by the laboratory in accordance with requirements of each analytical method. All laboratory QC sample results and sample holding times were within the acceptance limits of the methods (Appendix 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 23 groundwater monitoring/sampling events have been conducted in the eight site wells between August 1997 and June 2004 (the most recent event).
- Additional site characterization (exploratory borehole drilling and sampling) in 2004 provided additional data on the extent and magnitude of residual soil and groundwater contamination.
- 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 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.
- Per Alameda County Health, analysis for lead scavengers is to be conducted in future events 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. Since lead scavengers and fuel oxygenates are analyzed by the same method at no additional cost, an appropriate revision to the groundwater monitoring program would be analysis for lead scavengers and fuel oxygenates in all wells except MW-4 and MW-7.
- Maximum groundwater contamination is located in the northern corner of the site (near wells MW-1 and MW-5). Groundwater contamination above ESL criteria extends offsite (likely a limited distance) beneath Howe Street and 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 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. Alameda County Health has not yet indicated if residual contamination risks warrant conducting corrective action (active remediation) and/or additional investigation.
- 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.
- If corrective action is deemed warranted, the appropriate next step would be to evaluate corrective action options and determine the most feasible method. The findings should be submitted to Alameda County Health for its evaluation. Implementation of additional work should be conducted following Alameda County Health directives.

PROPOSED ACTIONS

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

- Continue the program of quarterly groundwater sampling and reporting, with the objectives of obtaining site closure and continuing reimbursement requests under the State of California Petroleum UST Cleanup Fund.
- Modify the quarterly groundwater monitoring program to include analysis for fuel oxygenates and lead scavengers in all wells except MW-4 and MW-7.
- Continue to upload Electronic Data Format analytical and water level results to the California GeoTracker database.
- Follow up with Alameda County Health on its review of the previous Soil and Groundwater Investigation Report and this quarterly report, specifically with regard to whether corrective action and/or additional site characterization, beyond continued groundwater monitoring, will be required.

6.0 REFERENCES AND BIBLIOGRAPHY

Advanced Environmental Concepts, Inc. (AEC), 2003a. 1st Quarter Groundwater Sampling Report (2003) – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. March 7.

AEC, 2003b. 2nd 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. 2nd Quarter Groundwater Sampling Report (2002) – Former Vogue Tyres Facility – 240 W. MacArthur Boulevard, Oakland, California. July 17.

AEC, 2002d. 4th 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., 2003. Third Quarter 2003 Monitoring Report, Shell-branded Service Station, 230 W. MacArthur Boulevard, Oakland, California. December 2.

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, 2003. Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater (Interim Final – July 2003).

Stellar Environmental Solutions, Inc. (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, 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 6-17-04 Client Stellar

Site Address Oakland Auto Works

Job Number 040617-DW-1 Technician Dave W.

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

NOTES: MW-4 - Bolts loose (too short?)

MW-3 - Bolts loose

MW-1 - no bolts

SPH or Purge Water Drum Log

nt: Stellar Environmental

Address: 240 W. MacArthur Oakland

ATUS OF DRUM(S) UPON ARRIVAL

Date	12/3/03	~~3/11/04~~	6/17/04			
nber of drum(s) empty:	0					
nber of drum(s) 1/4 full:			1			
nber of drum(s) 1/2 full:		1				
nber of drum(s) 3/4 full:						
nber of drum(s) full:			1			
al drum(s) on site:		1	2			
the drum(s) properly labeled?		Yes	yes			
m ID & Contents:		Purgewater	purge water			
y drum(s) are partially or totally d, what is the first use date:	1	12/3/03				

ou add any SPH to an empty or partially filled drum, drum must have at least 20 gals. of Purgewater or DI Water.

rum contains SPH, the drum MUST be steel AND labeled with the appropriate label.

BTS drums MUST be labeled appropriately.

ATUS OF DRUM(S) UPON DEPARTURE

Date	12/3/03	3/11/04	6/17/04			
nber of drums empty:						
nber of drum(s) 1/4 full:	1	1				
nber of drum(s) 1/2 full:						
nber of drum(s) 3/4 full:			1			
nber of drum(s) full:		1	1			
al drum(s) on site:	1	2	2			
the drum(s) properly labeled?	Yes	Yes	yes			
m ID & Contents:	Purgewater	Purgewater	~~7~~			

CATION OF DRUM(S)

scribe location of drum(s): Behind Dumpsters along Fenceline of property

NAL STATUS

mber of new drum(s) left on site event	1	1	0			
te of Inspection:	12/3/03	3/11/04	6/17/04			
m(s) labelled properly:	yes	Y	y			
gged by BTS Field Tech:	AC	MD	DW			
	MJ	MN	R			

WELL GAUGING DATA

Project # 040617-BW-1 Date 6-17-04 Client Stellar

Site Oakland Auto Works

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	odor				16.28	24.40		
mw-2	2					15.76	24.35		
mw-3	2					14.90	24.30		
mw-4	2				14.68	~~13.71~~	~~19.95~~ 24.18		
mw-5	2					16.43	20.03		
mw-6	2					15.42	20.15		
mw-7	2					15.63	20.00		
mw-8	2					13.71	19.95		

WELL MONITORING DATA SHEET

Project #: 040617-DW-1	Client: Stellar
Sampler: DW	Date: 6-17-04
Well I.D.: MW-1	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 24.40	Depth to Water (DTW): 16.28
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 18.30	

Purge Method: Bailer; (X) Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: Bailer; (X) Disposable Bailer; Extraction Port; Dedicated Tubing; Other: _____

1.2 (Gals.) X 3 = 3.6 Gals.
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	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
12:12	65.8	6.6	1258	>1000	1.2	gray/odor/sheen
12:14	65.6	6.6	1292	>1000	2.4	" "
12:16	65.7	6.5	1330	>1000	3.6	" "
						Fe^{2+} = 3.6

Did well dewater? Yes (No) Gallons actually evacuated: 3.6

Sampling Date: 6-17-04 Sampling Time: 12:21 Depth to Water: 18.10

Sample I.D.: MW-1 Laboratory: Kiff CalScience Other (C&T)

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

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

WELL MONITORING DATA SHEET

Project #: 040617-DW-1	Client: Stellar
Sampler: DW	Date: 6-17-04
Well I.D.: MW-2	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 24.35	Depth to Water (DTW): 15.76
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 17.47	

Purge Method: Bailer / X Disposable Bailer / Positive Air Displacement / Electric Submersible / Waterra / Peristaltic / Extraction Pump / Other_____

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

1.4 (Gals.) X 3 = 4.2 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
11:20	67.0	6.6	650	>1000	1.4	gray/odor
11:22	67.3	6.6	681	>1000	2.8	" "
11:24	67.2	6.7	686	>1000	4.2	" "
						Fe^{2+}: 2.8

Did well dewater? Yes (No) Gallons actually evacuated: 4.2

Sampling Date: 6-17-04 Sampling Time: 11:30 Depth to Water: 17.40

Sample I.D.: MW-2 Laboratory: Kiff CalScience Other_____

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

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

WELL MONITORING DATA SHEET

Project #: 040617-DW-1	Client: Stellar
Sampler: DW	Date: 6-17-04
Well I.D.: MW-3	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 24.30	Depth to Water (DTW): 14.90
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 16.78	

Purge Method: Bailer; X Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

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

1.5 (Gals.) X 3 = 4.5 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
11:46	67.8	6.7	794	>1000	1.5	gray/odor
11:48	67.9	6.6	809	>1000	3.0	" "
11:50	67.7	6.7	788	>1000	4.5	" "
						Fe^{2+} = 2.6

Did well dewater? Yes (No) Gallons actually evacuated: 4.5

Sampling Date: 6-17-04 Sampling Time: 11:55 Depth to Water: 16.70

Sample I.D.: MW-3 Laboratory: Kiff CalScience Other (C+T)

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

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

WELL MONITORING DATA SHEET

Project #: 040617-DW-1	Client: Stellar
Sampler: DW	Date: 6-17-04
Well I.D.: MW-4	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth (TD): 24.18	Depth to Water (DTW): 14.68
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 16.58	

Purge Method: Bailer / X Disposable Bailer / Positive Air Displacement / Electric Submersible / Waterra / Peristaltic / Extraction Pump / Other_____

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

1.5 (Gals.) X 3 = 4.5 Gals.
Purge 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	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
9:27	67.0	6.5	676	844	1.5	Brown
9:30	67.0	6.4	663	>1000	3.0	"
9:32	66.8	6.4	644	>1000	4.5	"
						$Fe^{2+} = 0$

Did well dewater? Yes (No) Gallons actually evacuated: 4.5

Sampling Date: 6-17-04 Sampling Time: 09:35 Depth to Water: 16.50

Sample I.D.: MW-4 Laboratory: Kiff CalScience Other (C+T)

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

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

WELL MONITORING DATA SHEET

Project #: 040616-DW-1	Client: Stellar
Sampler: DW	Date: 6-17-04
Well I.D.: MW-5	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth (TD): 20.03	Depth to Water (DTW): 16.43
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 17.15	

Purge Method: Bailer; X Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

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

0.6 (Gals.) X 3 = 1.8 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
12:35	68.0	6.8	945	>1000	0.6	gray/odor/sheen
12:37	66.1	6.8	912	>1000	1.2	" "
12:39	65.6	6.7	838	>1000	1.8	" "
						Fe^{2+} = 2.8

Did well dewater? Yes (No) Gallons actually evacuated: 1.8

Sampling Date: 6-17-04 Sampling Time: 12:45 Depth to Water:

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

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

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

WELL MONITORING DATA SHEET

Project #: 040617-DW-1	Client: Stellar
Sampler: DW	Date: 6-17-04
Well I.D.: MW-6	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth (TD): 20.15	Depth to Water (DTW): 15.42
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 16.36	

Purge Method: Bailer; X Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

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

0.8 (Gals.) X 3 = 2.4 Gals.
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	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
10:25	67.5	6.6	1013	398	0.8	cloudy / odor
10:27	67.1	6.7	1038	>1000	1.6	gray / " "
10:29	67.4	6.7	1043	>1000	2.4	" "
						Fe^{2+} = 1.6

Did well dewater? Yes (No) Gallons actually evacuated: 2.4

Sampling Date: 6-17-04 Sampling Time: 10:34 Depth to Water: 16.36

Sample I.D.: MW-6 Laboratory: Kiff CalScience Other C+T

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

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

WELL MONITORING DATA SHEET

Project #: 040617-DW-1	Client: Stellar
Sampler: DW	Date: 6-17-04
Well I.D.: MW-7	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth (TD): 20.00	Depth to Water (DTW): 15.63
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 16.50	

Purge Method: Bailer; X Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

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

0.7 (Gals.) X 3 = 2.1 Gals.
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	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
9:55	67.3	6.7	806	>1000	0.7	Brown
9:57	67.7	6.6	832	>1000	1.4	"
9:58	67.7	6.6	833	>1000	2.1	"
						Fe2+ = 0

Did well dewater? Yes (No) Gallons actually evacuated: 2.1

Sampling Date: 6-17-04 Sampling Time: 10:03 Depth to Water: 15.75

Sample I.D.: MW-7 Laboratory: Kiff CalScience Other C+T

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

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

WELL MONITORING DATA SHEET

Project #: 040617-DW-1	Client: Stellar
Sampler: DW	Date: 6-17-04
Well I.D.: MW-8	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 19.95	Depth to Water (DTW): 13.71
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.95	

Purge Method: Bailer; X Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

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

1 (Gals.) X 3 = 3 Gals.
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	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
10:55	66.9	7.0	573	>1000	1	Brown
10:57	67.1	6.9	511	>1000	2	"
10:59	67.2	6.8	530	>1000	3	"
						$Fe^{2+} = 0$

Did well dewater? Yes (No) Gallons actually evacuated: 3

Sampling Date: 6-17-04 Sampling Time: 11:05 Depth to Water: 14.95

Sample I.D.: MW-8 Laboratory: Kiff CalScience Other C+T

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

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:	0.7 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

ANALYTICAL REPORT

Prepared for:

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

Date: 24-JUN-04
Lab Job Number: 172962
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

Curtis & Tompkins, Ltd.

Laboratory Numbers: **172962**
Client: **Stellar Environmental Solutions**
Location: **Oakland Auto Works**

Sampled Date: **06/17/04**
Received Date: **06/18/04**

CASE NARRATIVE

This hardcopy data package contains sample and QC results for eight water samples, which were received from the site referenced above on June 18, 2004. The samples were received cold and intact.

TVH/BTXE:
High surrogate recoveries were observed for sample MW-3 (CT# 172962-003) as a result of hydrocarbons coeluting with the surrogates. No other analytical problems were encountered.

TEH by (EPA 8015B):
No analytical problems were encountered.

VOC by (EPA 8260B):
No analytical problems were encountered.

Chain of Custody Record

Lab job no. _____
Date 6-17-04
Page 1 of 1

Laboratory Curtis & Tompkins
Address 2323 Fifth St
Berkeley, CA

Project Owner Stellar Env. Sol.
Site Address 240 W. MacArthur
Oakland, CA
Project Name Oakland Auto Works
Project Number 040617-DW-1

Method of Shipment _____
Shipment No. _____
Airbill No. _____
Cooler No. _____
Project Manager Bruce Ruzicka
Telephone No. (510) 644-3123
Fax No. (510) 644-3859
Samplers: (Signature) _____

Field Sample Number	Location/ Depth	Date	Time	Sample Type	Type/Size of Container	Preservation: Cooler	Preservation: Chemical	Filtered	No. of Containers	Analysis Required: TVH-G (8015m)	Analysis Required: TEH-D (8015m)	Analysis Required: BTEX + MTBE (EPA 8260)	Analysis Required: EDC 1,2 DCA by 8260	Remarks
1 MW-1		6-17	1221	W	2 L Amber 3 HCl VOAs		HCl		5	X	X	X	X	
2 MW-2			1130		〃		〃		5	X	X	X	X	
3 MW-3			1155		〃		〃		5	X	X	X	X	
4 MW-4			0958		3 HCl VOA's				3	X		X	X	
5 MW-5			1245		2 L Amber 3 HCl VOA's				5	X	X	X	X	
6 MW-6			1034		〃				5	X	X	X	X	
7 MW-7			1003		3 HCl VOAs				3	X		X	X	
8 MW-8			1105		2 L Amber 3 HCl VOA's				5	X	X	X	X	

Relinquished by:	Date	Received by:	Date	Relinquished by:	Date	Received by:	Date
Signature David C Walter	6/18/04	Signature Ricky Cramer	6/18/04	Signature		Signature	
Printed David C Walter	Time 1406	Printed Ricky Cramer	Time 1406	Printed	Time	Printed	Time
Company BTS		Company Curtis & Tompkins		Company		Company	

Turnaround Time: _____
Comments: _____

Relinquished by:	Date	Received by:	Date
Signature		Signature	
Printed	Time	Printed	Time
Company		Company	

2000-00-01

★ Stellar Environmental Solutions

2198 Sixth Street #201, Berkeley, CA 94710

rec'd intact cold rc

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	06/17/04
Units:	ug/L	Received:	06/18/04

Field ID:	MW-1	Diln Fac:	20.00
Type:	SAMPLE	Batch#:	92141
Lab ID:	172962-001	Analyzed:	06/22/04

Analyte	Result	RL
Gasoline C7-C12	9,300	1,000

Surrogate	%REC	Limits
Trifluorotoluene (FID)	97	74-142
Bromofluorobenzene (FID)	98	80-139

Field ID:	MW-2	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	92109
Lab ID:	172962-002	Analyzed:	06/20/04

Analyte	Result	RL
Gasoline C7-C12	1,200 L Y	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	129	74-142
Bromofluorobenzene (FID)	108	80-139

Field ID:	MW-3	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	92109
Lab ID:	172962-003	Analyzed:	06/20/04

Analyte	Result	RL
Gasoline C7-C12	5,400	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	195 *	74-142
Bromofluorobenzene (FID)	146 *	80-139

Field ID:	MW-4	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	92109
Lab ID:	172962-004	Analyzed:	06/20/04

Analyte	Result	RL
Gasoline C7-C12	ND	50

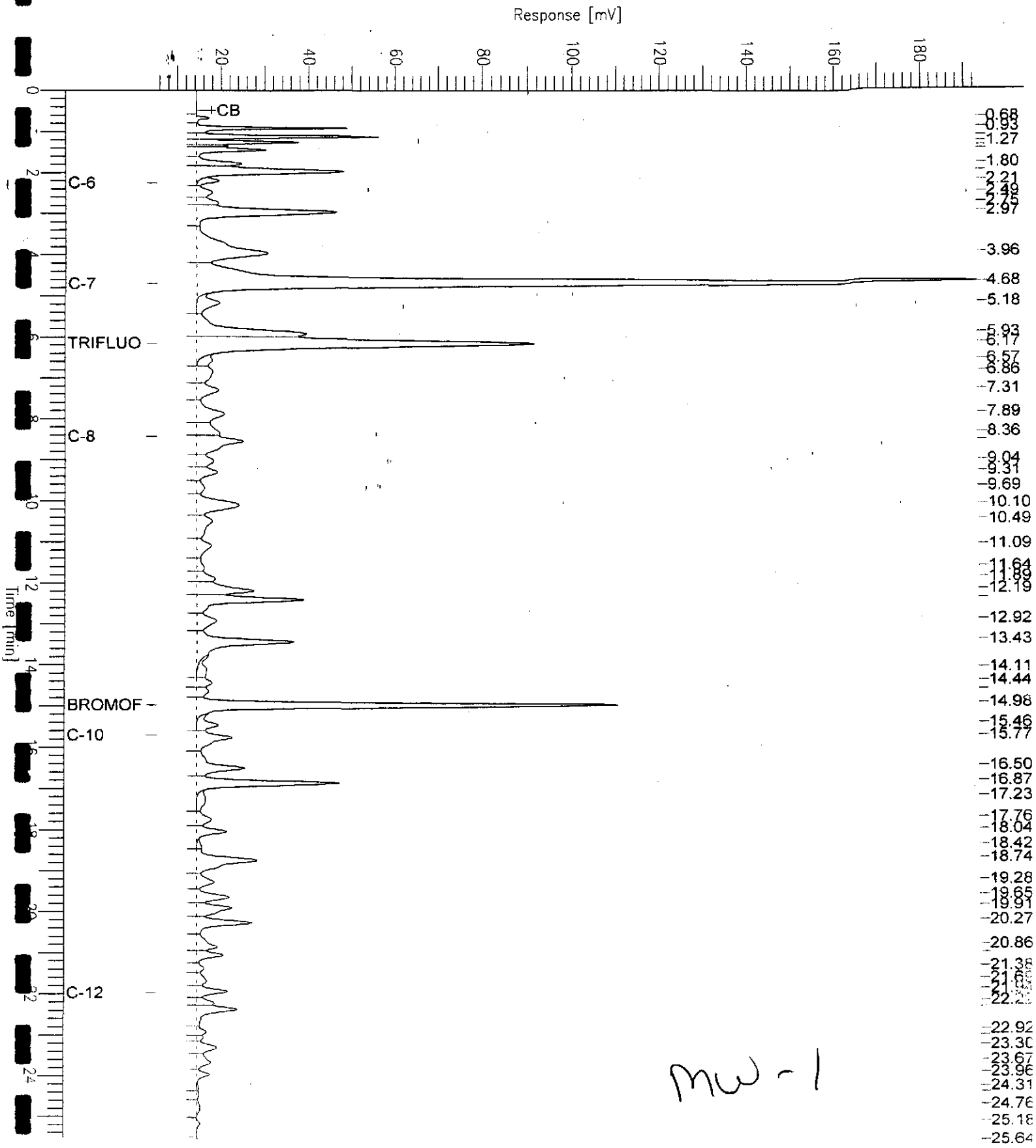
Surrogate	%REC	Limits
Trifluorotoluene (FID)	88	74-142
Bromofluorobenzene (FID)	95	80-139

*= Value outside of QC limits; see narrative
L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

GC07 TVH 'A' Data File RTX 502

[redacted]ple Name : 172962-001,92141
[redacted]eName : G:\GC07\DATA\173A015.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.00 min
[redacted]e Factor: 1.0 Plot Offset: 5 mV

Sample #: a1.0 Page 1 of 1
Date : 6/22/04 12:39 AM
Time of Injection: 6/22/04 12:13 AM
Low Point : 5.41 mV High Point : 192.75 mV
Plot Scale: 187.3 mV

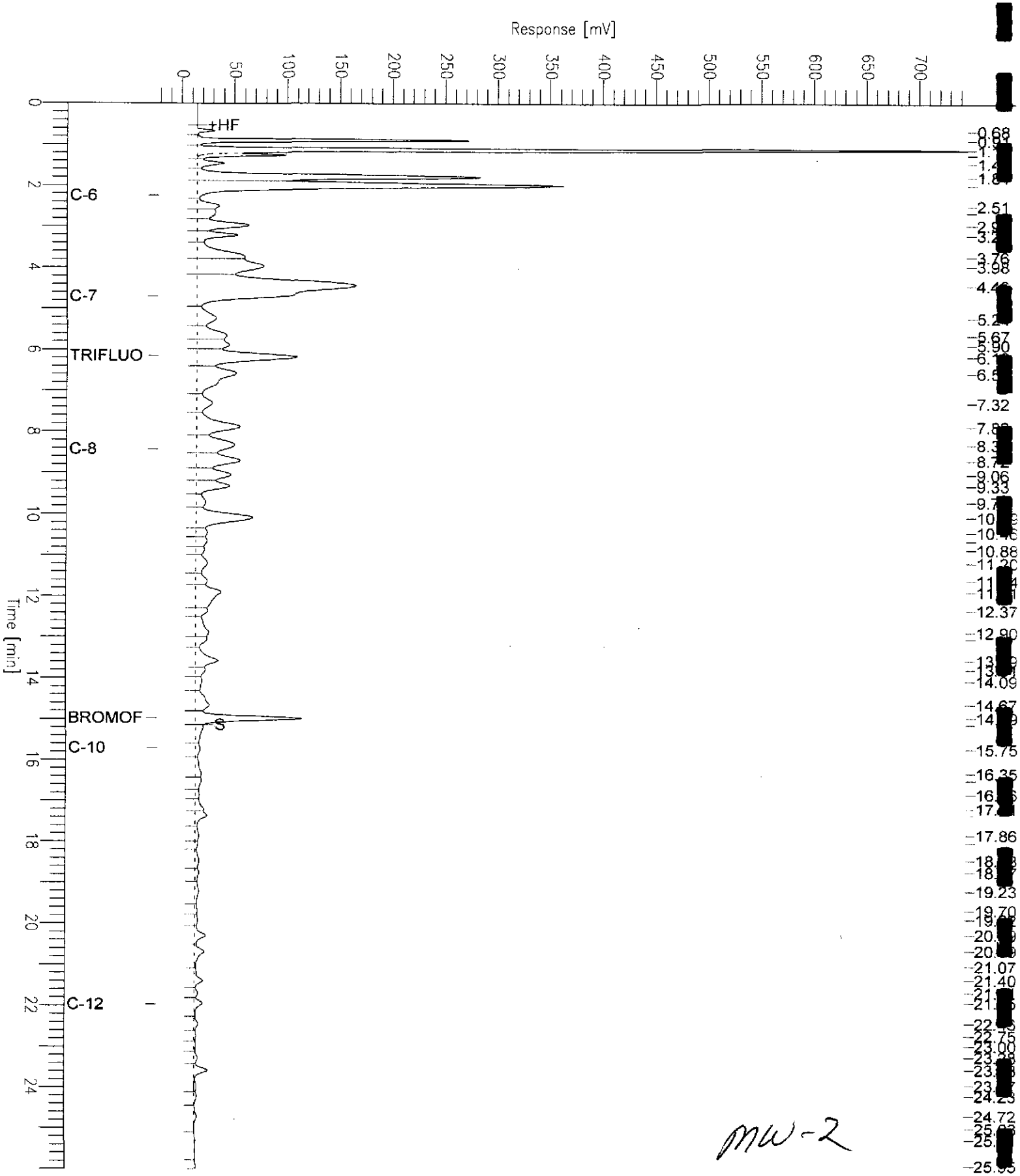


MW-1

GC07 TVH 'A' Data File RTX 502

Sample Name : mss,172962-002,92109,tvh only
FileName : G:\GC07\DATA\172A007.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.00 min
Scale Factor: 1.0 Plot Offset: -22 mV

Sample #: b1.0 Page 1 of 1
Date : 6/21/04 09:14 AM
Time of Injection: 6/20/04 04:40 PM
Low Point : -22.03 mV High Point : 745.47 mV
Plot Scale: 767.5 mV

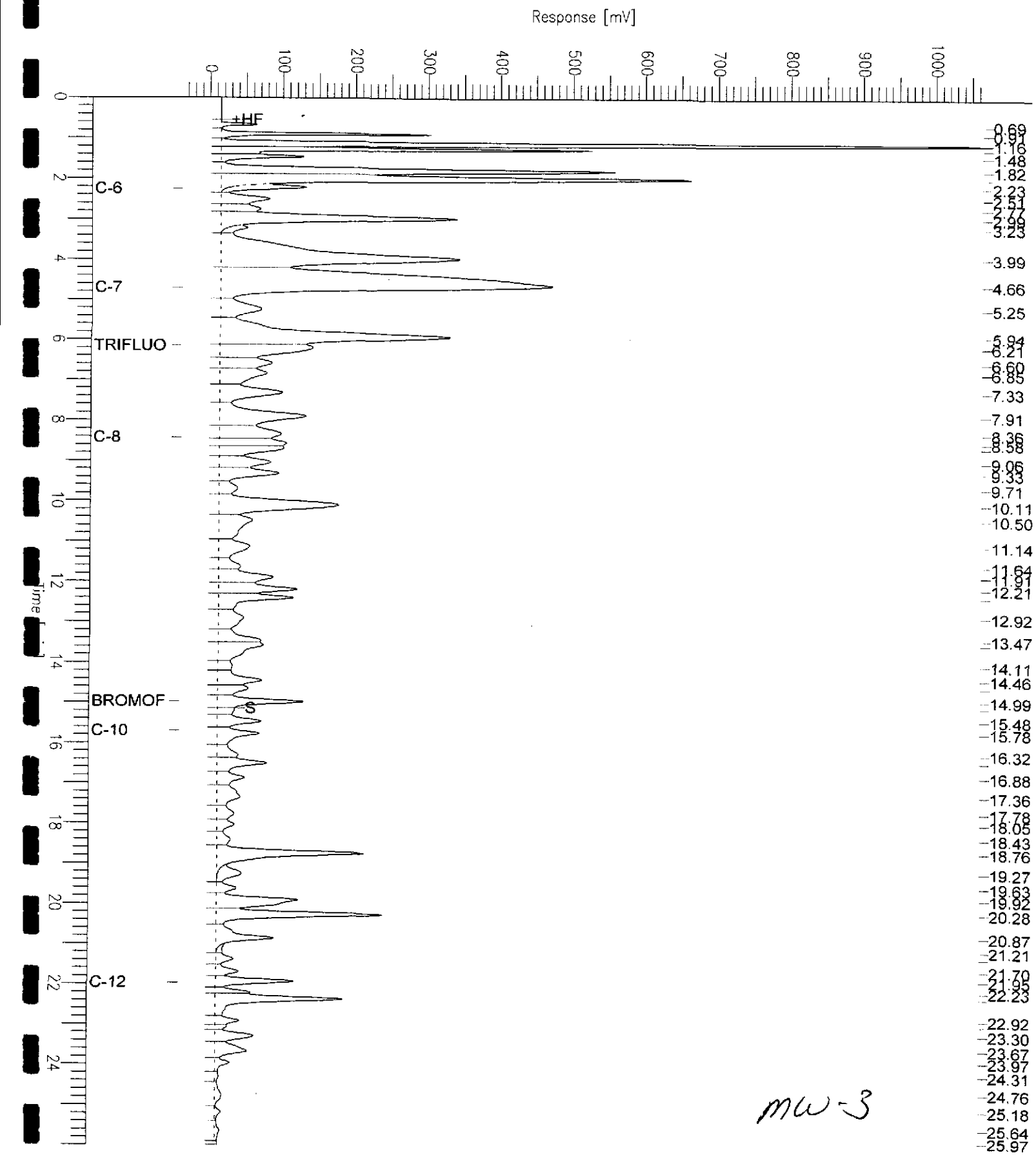


MW-2

GC07 TVH 'A' Data File RTX 502

Sample Name : 172962-003,92109,tvh only
FileName : G:\GC07\DATA\172A017.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.00 min
Scale Factor: 1.0 Plot Offset: -38 mV

Sample #: bl.0 Page 1 of 1
Date : 6/21/04 09:14 AM
Time of Injection: 6/20/04 10:31 PM
Low Point : -37.86 mV High Point : 1064.47 mV
Plot Scale: 1102.3 mV



MW-3

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	06/17/04
Units:	ug/L	Received:	06/18/04

Field ID:	MW-5	Diln Fac:	20.00
Type:	SAMPLE	Batch#:	92141
Lab ID:	172962-005	Analyzed:	06/22/04

Analyte	Result	RL
Gasoline C7-C12	12,000	1,000

Surrogate	%REC	Limits
Trifluorotoluene (FID)	94	74-142
Bromofluorobenzene (FID)	94	80-139

Field ID:	MW-6	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	92109
Lab ID:	172962-006	Analyzed:	06/21/04

Analyte	Result	RL
Gasoline C7-C12	710	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	98	74-142
Bromofluorobenzene (FID)	113	80-139

Field ID:	MW-7	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	92109
Lab ID:	172962-007	Analyzed:	06/21/04

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	85	74-142
Bromofluorobenzene (FID)	94	80-139

Field ID:	MW-8	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	92109
Lab ID:	172962-008	Analyzed:	06/20/04

Analyte	Result	RL
Gasoline C7-C12	320 L Y	50

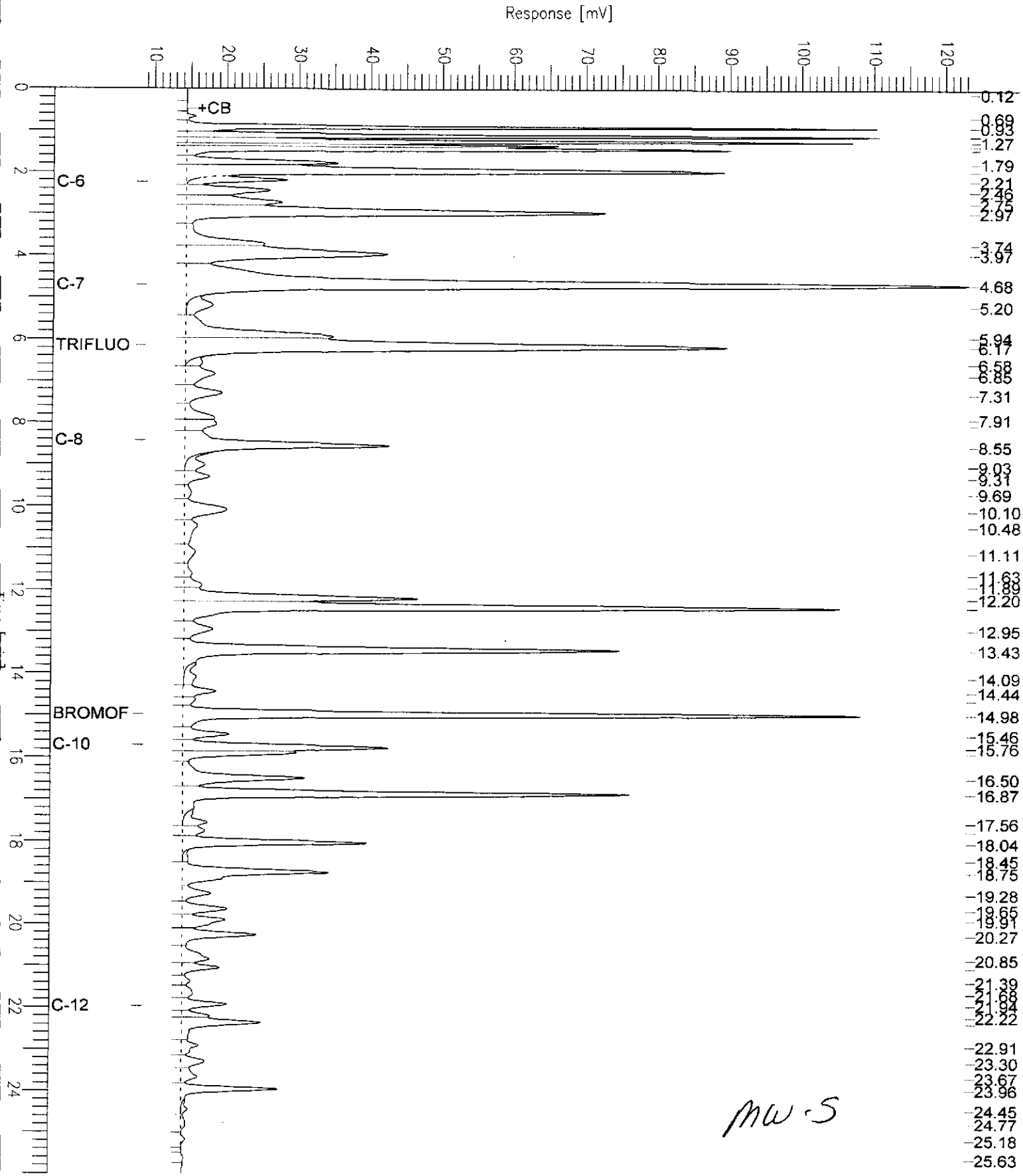
Surrogate	%REC	Limits
Trifluorotoluene (FID)	100	74-142
Bromofluorobenzene (FID)	97	80-139

*= Value outside of QC limits; see narrative
L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

GC07 TVH 'A' Data File RTX 502

Sample Name : 172962-005,92141
FileName : G:\GC07\DATA\173A016.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.00 min
Scale Factor: 1.0 Plot Offset: 9 mV

Sample #: a1.0 Page 1 of 1
Date : 6/22/04 01:14 AM
Time of Injection: 6/22/04 12:48 AM
Low Point : 8.87 mV High Point : 123.36 mV
Plot Scale: 114.5 mV

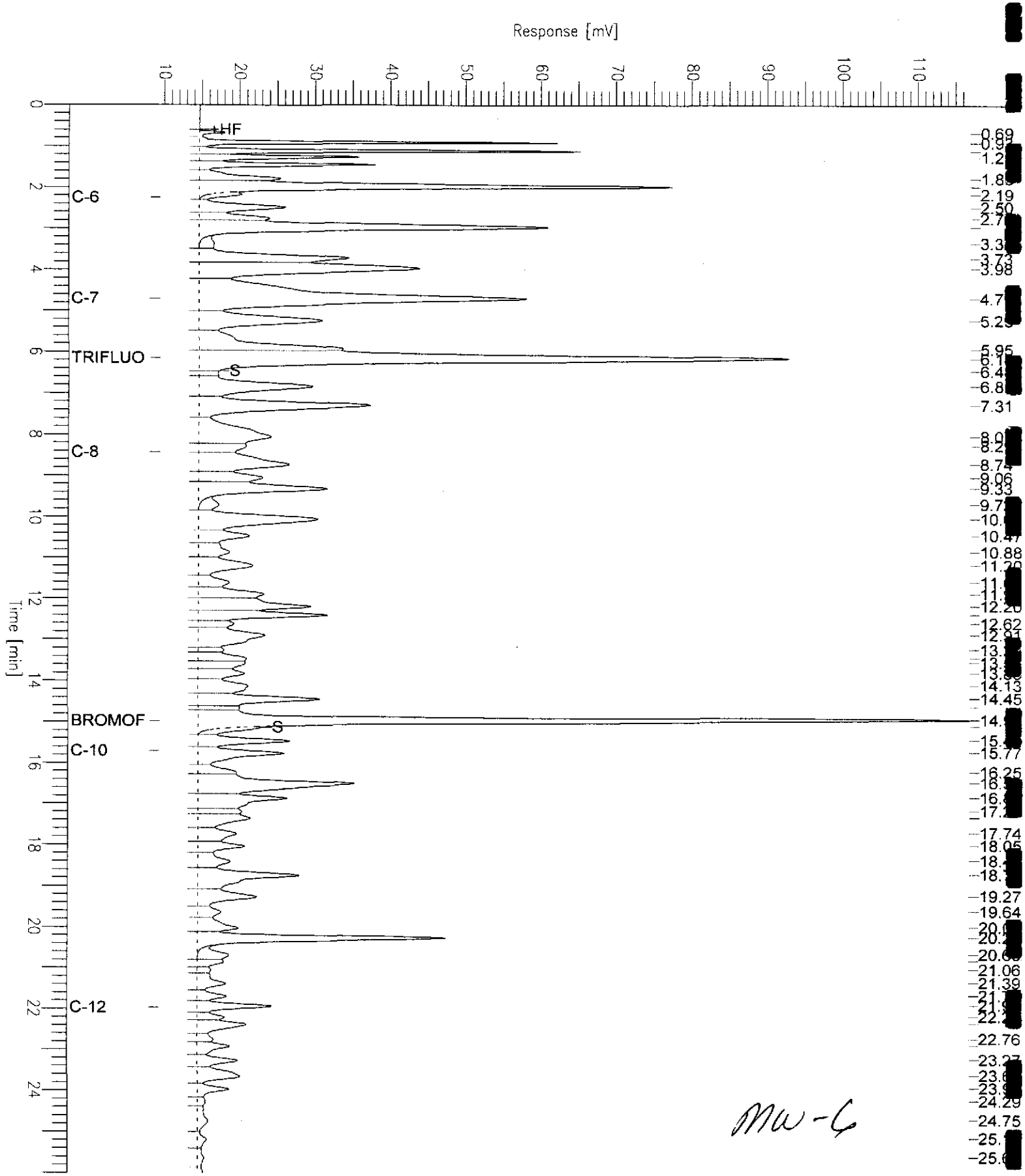


MW-5

GC07 TVH 'A' Data File RTX 502

Sample Name : 172962-006,92109,tvh only
FileName : G:\GC07\DATA\172A020.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.00 min
Scale Factor: 1.0 Plot Offset: 9 mV

Sample #: b1.0 Page 1 of 1
Date : 6/21/04 09:15 AM
Time of Injection: 6/21/04 12:17 AM
Low Point : 9.49 mV High Point : 116.97 mV
Plot Scale: 107.5 mV

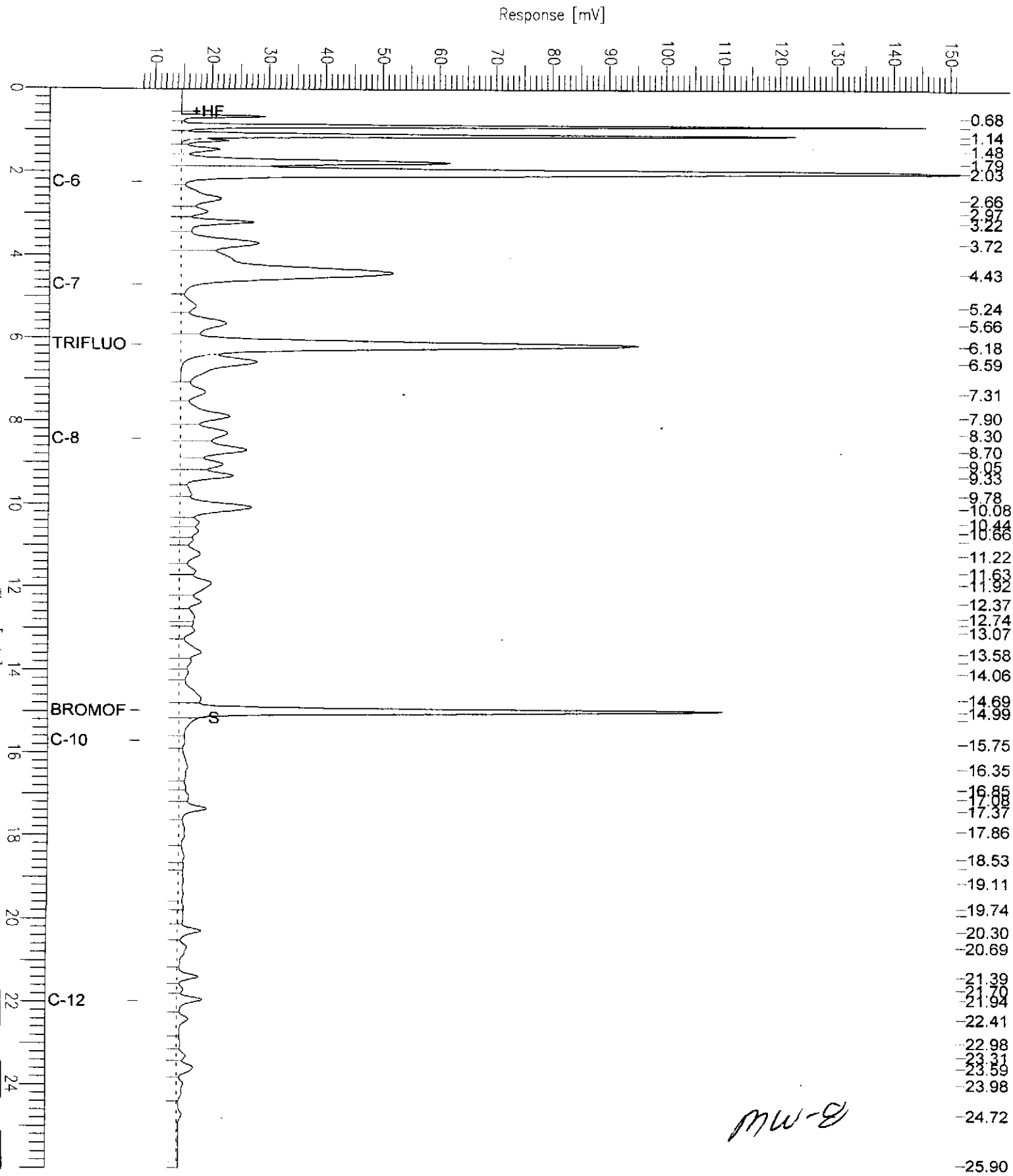


MW-6

GC07 TVH 'A' Data File RTX 502

Sample Name : 172962-008,92109,tvh only
FileName : G:\GC07\DATA\172A019.raw
ethod : TVHBTXE
tart Time : 0.00 min End Time : 26.00 min
Scale Factor: 1.0 Plot Offset: 8 mV

Sample #: bl.0 Page 1 of 1
Date : 6/21/04 09:14 AM
Time of Injection: 6/20/04 11:42 PM
Low Point : 7.78 mV High Point : 151.78 mV
Plot Scale: 144.0 mV

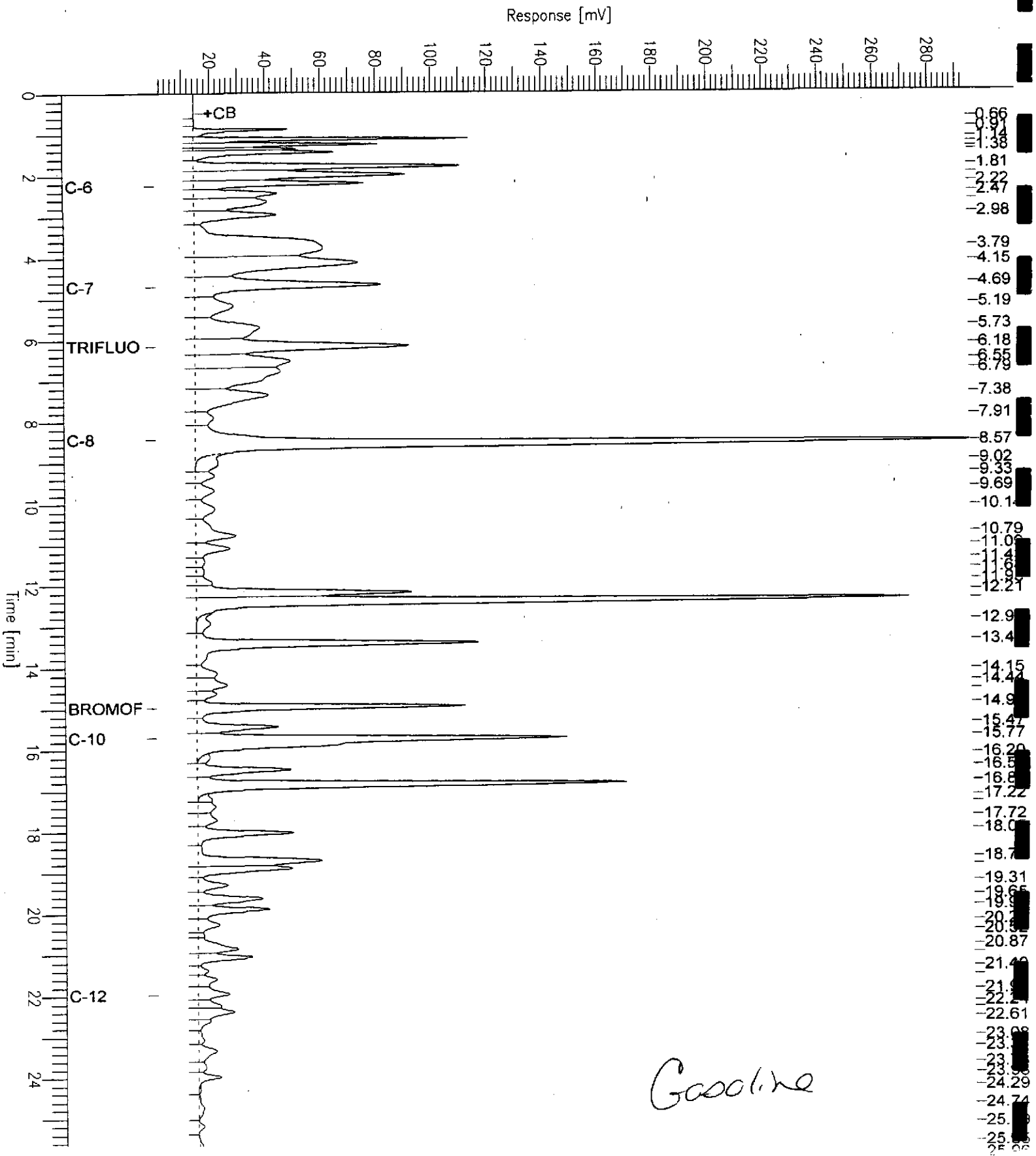


MW-8

GC07 TVH 'A' Data File RTX 502

Sample Name : ccv/lcs,qc254891,92141,04ws1035,5/5000
FileName : G:\GC07\DATA\173A001.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.00 min
Scale Factor: 1.0 Plot Offset: 0 mV

Sample #: Page 1 of 1
Date : 6/21/04 04:30 PM
Time of Injection: 6/21/04 04:04 PM
Low Point : 0.42 mV High Point : 293.95 mV
Plot Scale: 293.5 mV



Gasoline

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	06/17/04
Units:	ug/L	Received:	06/18/04

Type:	BLANK	Batch#:	92109
Lab ID:	QC254778	Analyzed:	06/20/04
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	84	74-142
Bromofluorobenzene (FID)	87	80-139

Type:	BLANK	Batch#:	92141
Lab ID:	QC254890	Analyzed:	06/21/04
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	84	74-142
Bromofluorobenzene (FID)	91	80-139

*= Value outside of QC limits; see narrative
L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC254780	Batch#:	92109
Matrix:	Water	Analyzed:	06/20/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	1,945	97	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	100	74-142
Bromofluorobenzene (FID)	94	80-139

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC254891	Batch#:	92141
Matrix:	Water	Analyzed:	06/21/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	2,070	104	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	98	74-142
Bromofluorobenzene (FID)	97	80-139

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8015B
Field ID:	MW-2	Batch#:	92109
MSS Lab ID:	172962-002	Sampled:	06/17/04
Matrix:	Water	Received:	06/18/04
Units:	ug/L	Analyzed:	06/21/04
Diln Fac:	1.000		

Type: MS Lab ID: QC254784

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,232	2,000	3,219	99	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	135	74-142
Bromofluorobenzene (FID)	120	80-139

Type: MSD Lab ID: QC254785

Analyte	Spiked	Result	%REC	Limits	RPD	Li
Gasoline C7-C12	2,000	3,121	94	80-120	3	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	136	74-142
Bromofluorobenzene (FID)	125	80-139

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	92141
MSS Lab ID:	172973-005	Sampled:	06/18/04
Matrix:	Water	Received:	06/18/04
Units:	ug/L	Analyzed:	06/21/04
Diln Fac:	1.000		

Type: MS Lab ID: QC254892

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	11.23	2,000	1,899	94	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	95	74-142
Bromofluorobenzene (FID)	95	80-139

Type: MSD Lab ID: QC254893

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,931	96	80-120	2	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	95	74-142
Bromofluorobenzene (FID)	95	80-139

RPD= Relative Percent Difference

8.0

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	STANDARD	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	06/17/04
Units:	ug/L	Received:	06/18/04
Diln Fac:	1.000	Prepared:	06/19/04
Batch#:	92107		

Field ID: MW-1 Lab ID: 172962-001
Type: SAMPLE Analyzed: 06/21/04

Analyte	Result	RL
Diesel C10-C24	4,000 L Y	50

Surrogate	%REC	Limits
Hexacosane	114	53-142

Field ID: MW-2 Lab ID: 172962-002
Type: SAMPLE Analyzed: 06/21/04

Analyte	Result	RL
Diesel C10-C24	370 Y	50

Surrogate	%REC	Limits
Hexacosane	101	53-142

Field ID: MW-3 Lab ID: 172962-003
Type: SAMPLE Analyzed: 06/21/04

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

Surrogate	%REC	Limits
Hexacosane	97	53-142

Field ID: MW-5 Lab ID: 172962-005
Type: SAMPLE Analyzed: 06/21/04

Analyte	Result	RL
Diesel C10-C24	1,700 L Y	50

Surrogate	%REC	Limits
Hexacosane	101	53-142

Field ID: MW-6 Lab ID: 172962-006
Type: SAMPLE Analyzed: 06/21/04

Analyte	Result	RL
Diesel C10-C24	830 Y	50

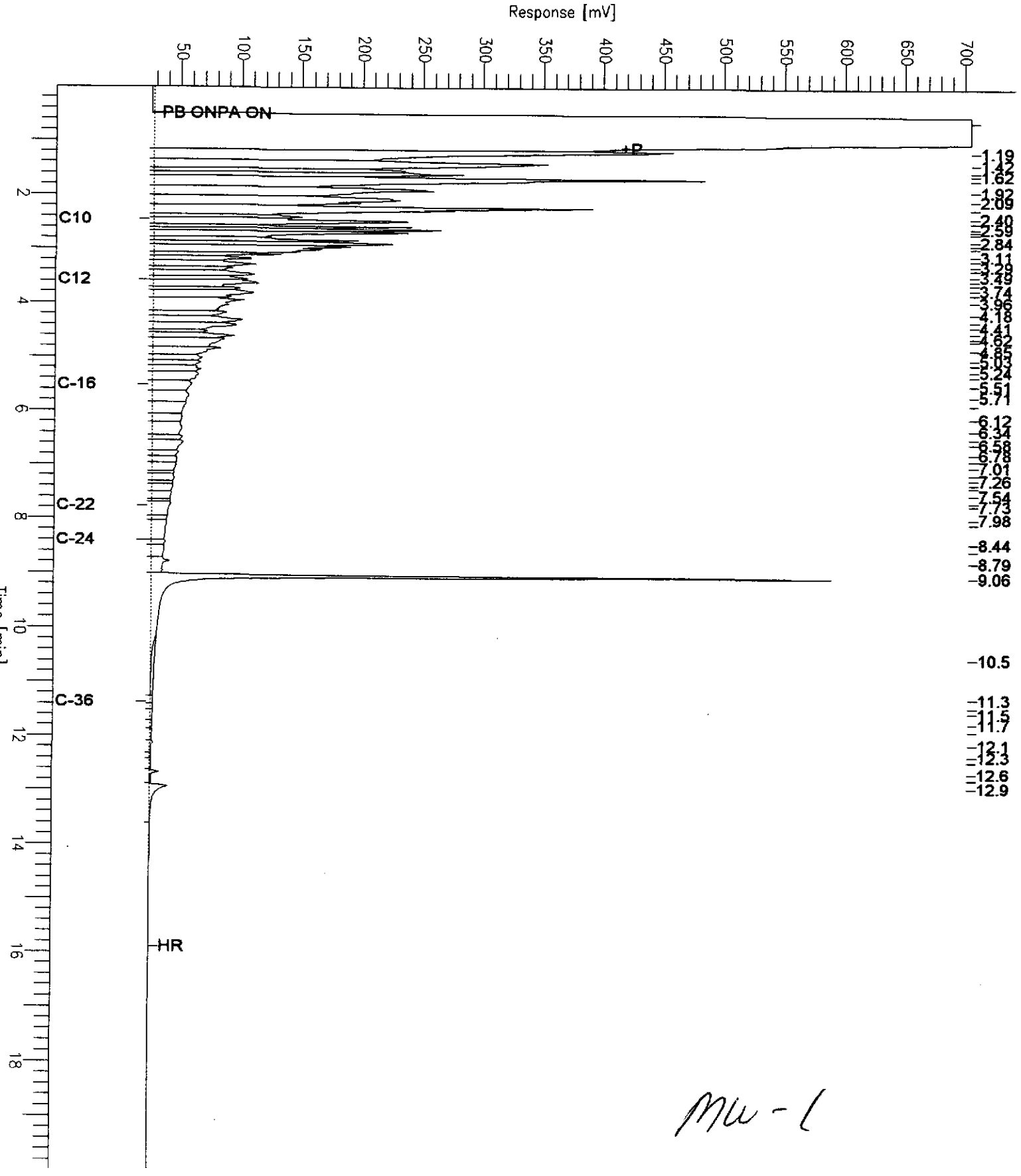
Surrogate	%REC	Limits
Hexacosane	101	53-142

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

92107 mfj 6/21/04 Chromatogram

Sample Name : 172962-001, 92017
FileName : G:\GC15\CHB\173B009.RAW
Method : BTEH167S.MTH
Start Time : 0.01 min End Time : 19.99 min
Scale Factor: 0.0 Plot Offset: 23 mV

Sample #: 92017 Page 1 of 1
Date : 6/21/04 01:01 PM
Time of Injection: 6/21/04 12:23 PM
Low Point : 23.48 mV High Point : 705.35 mV
Plot Scale: 681.9 mV



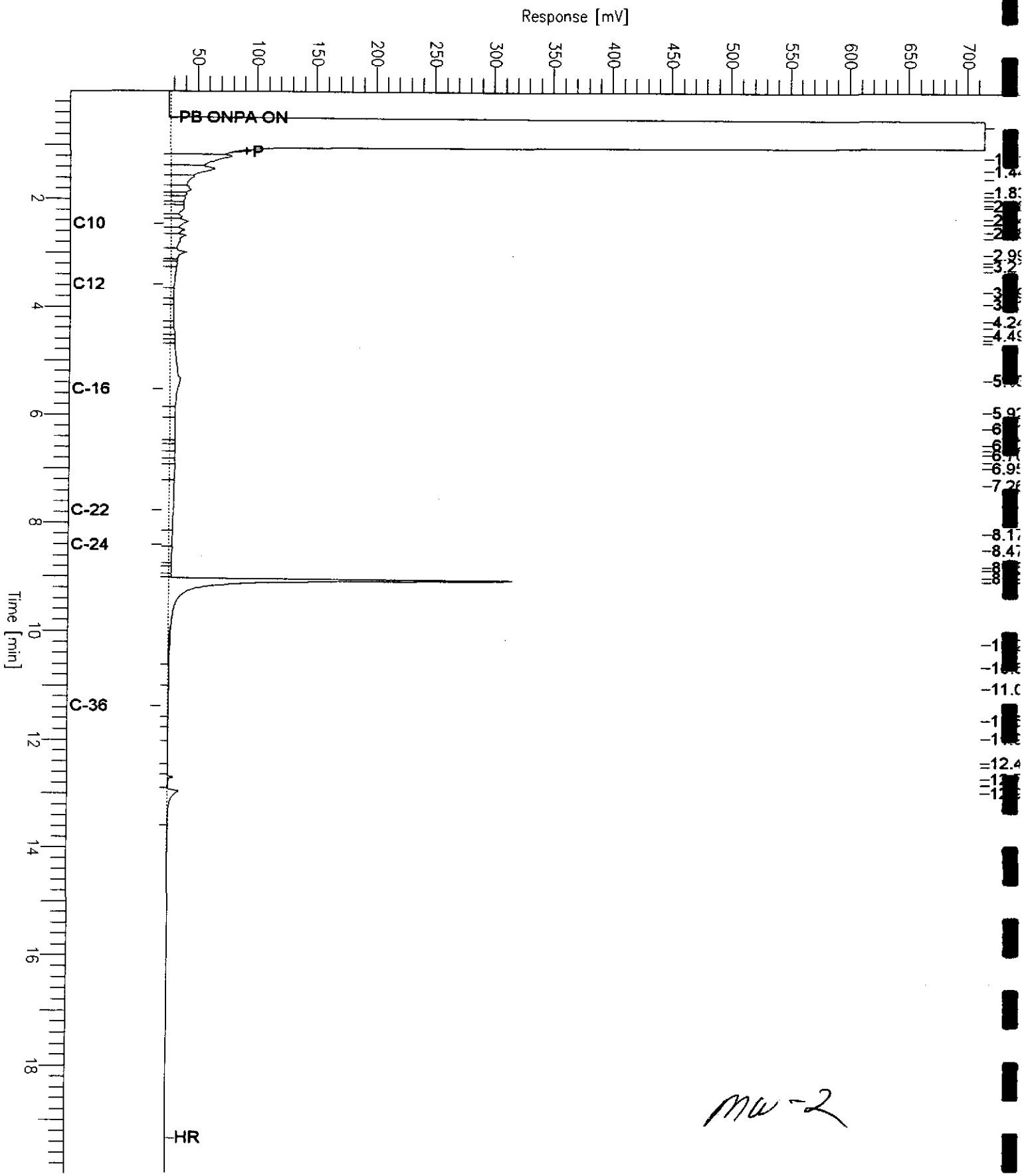
MW-1

Chromatogram

92107 mds 6/21/04

Sample Name : 172962-002, ~~92017~~
FileName : G:\GC15\CHB\173B010.RAW
Method : BTEH167S.MTH
Start Time : 0.01 min End Time : 19.99 min
Scale Factor: 0.0 Plot Offset: 21 mV

Sample #: 92017 Page 1 of 1
Date : 6/21/04 02:40 PM
Time of Injection: 6/21/04 12:51 PM
Low Point : 20.74 mV High Point : 713.80 mV
Plot Scale: 693.1 mV

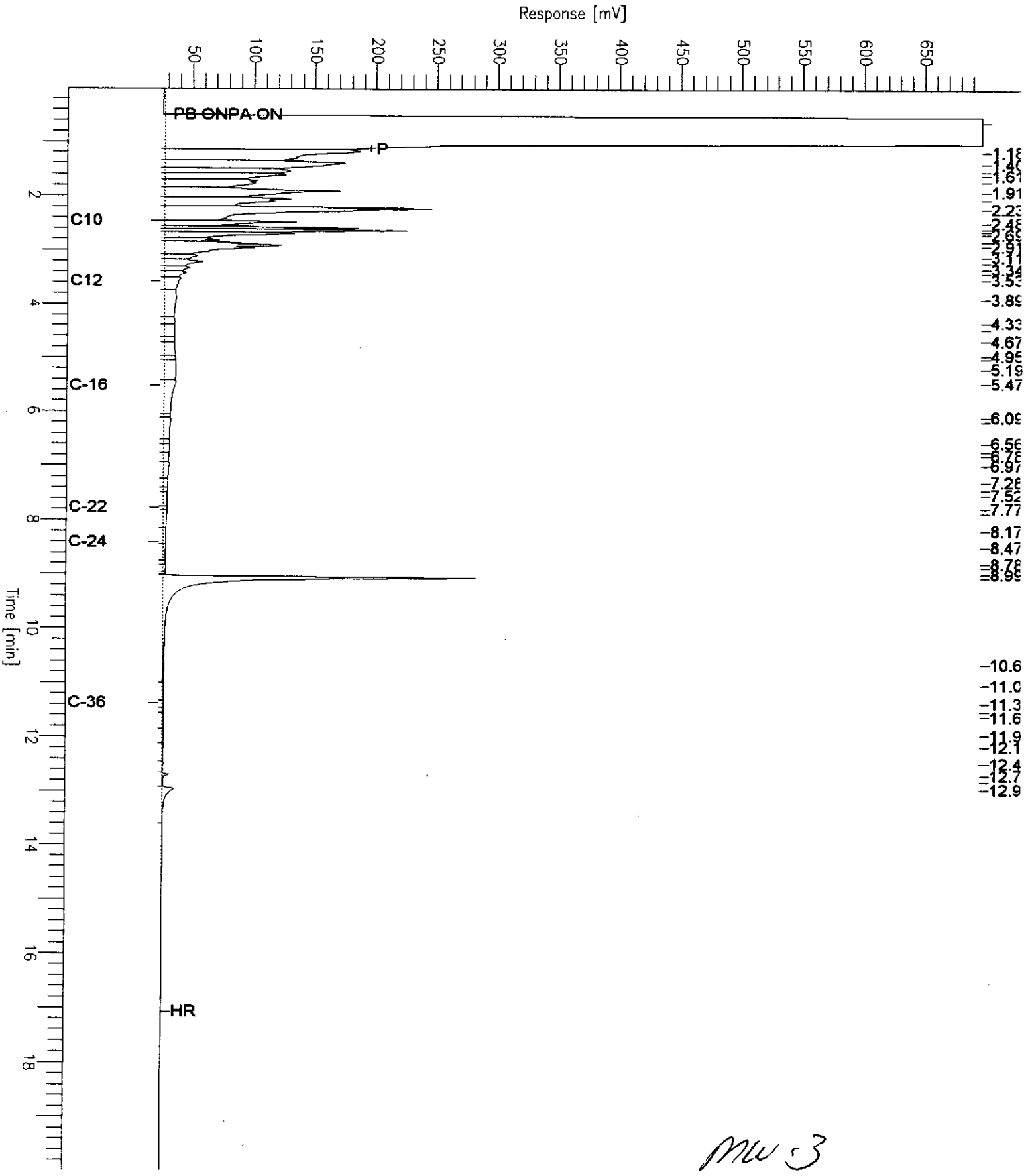


mw-2

92107 MD 6/21/04 Chromatogram

Sample Name : 172962-003, 92017
FileName : G:\GC15\CHB\173B011.RAW
Method : BTEH167S.MTH
Start Time : 0.01 min End Time : 19.99 min
Scale Factor: 0.0 Plot Offset: 23 mV

Sample #: 92017 Page 1 of 1
Date : 6/21/04 02:40 PM
Time of Injection: 6/21/04 01:20 PM
Low Point : 23.44 mV High Point : 697.01 mV
Plot Scale: 673.6 mV



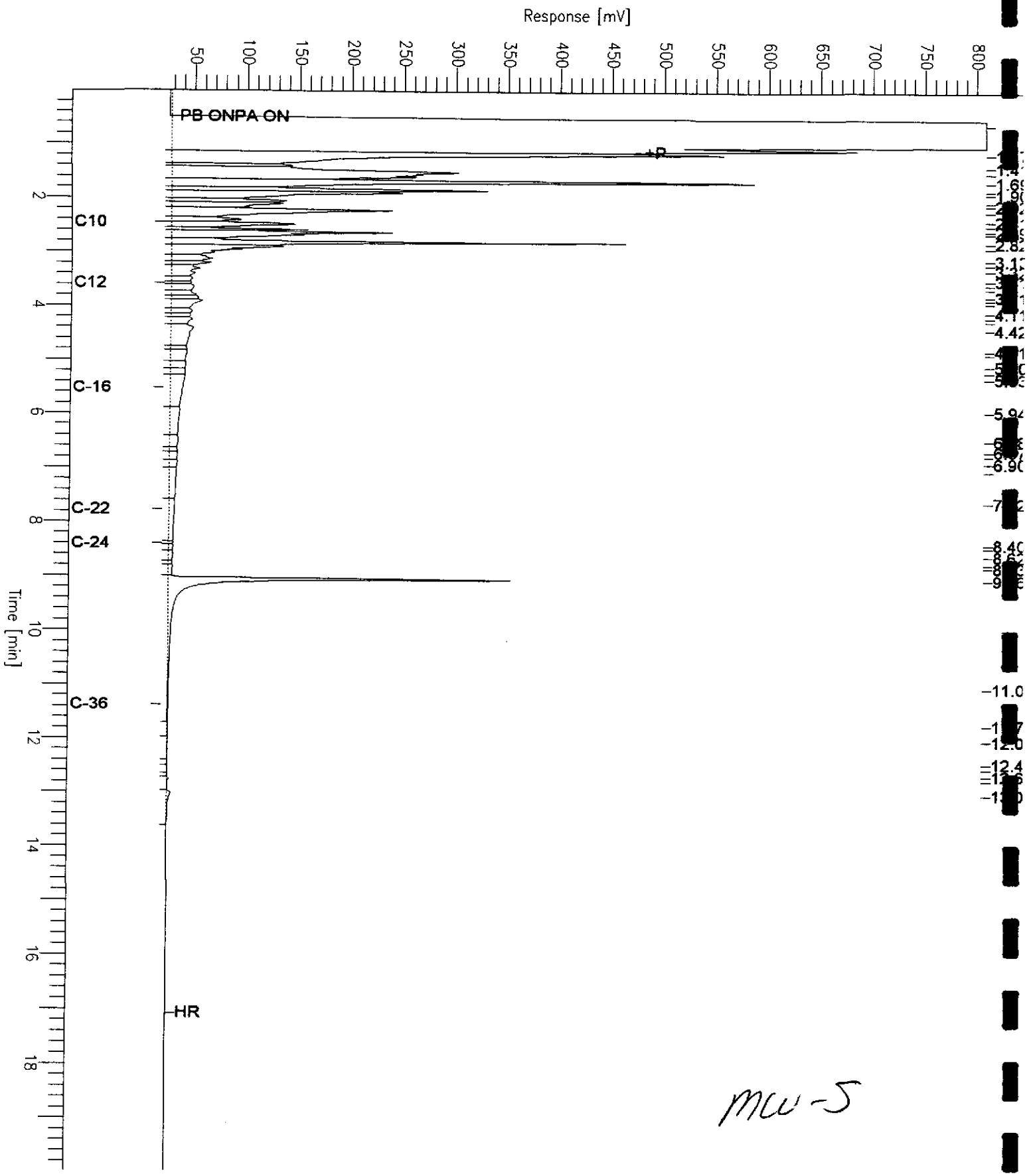
MW 3

92107 mlb 6/21/04

Chromatogram

Sample Name : 172962-005, 92017
FileName : G:\GC15\CHB\173B012.RAW
Method : BTEH167S.MTH
Start Time : 0.01 min End Time : 19.99 min
Scale Factor: 0.0 Plot Offset: 21 mV

Sample #: 92107 Page 1 of 1
Date : 6/21/04 02:41 PM
Time of Injection: 6/21/04 01:50 PM
Low Point : 20.57 mV High Point : 808.82 mV
Plot Scale: 788.2 mV



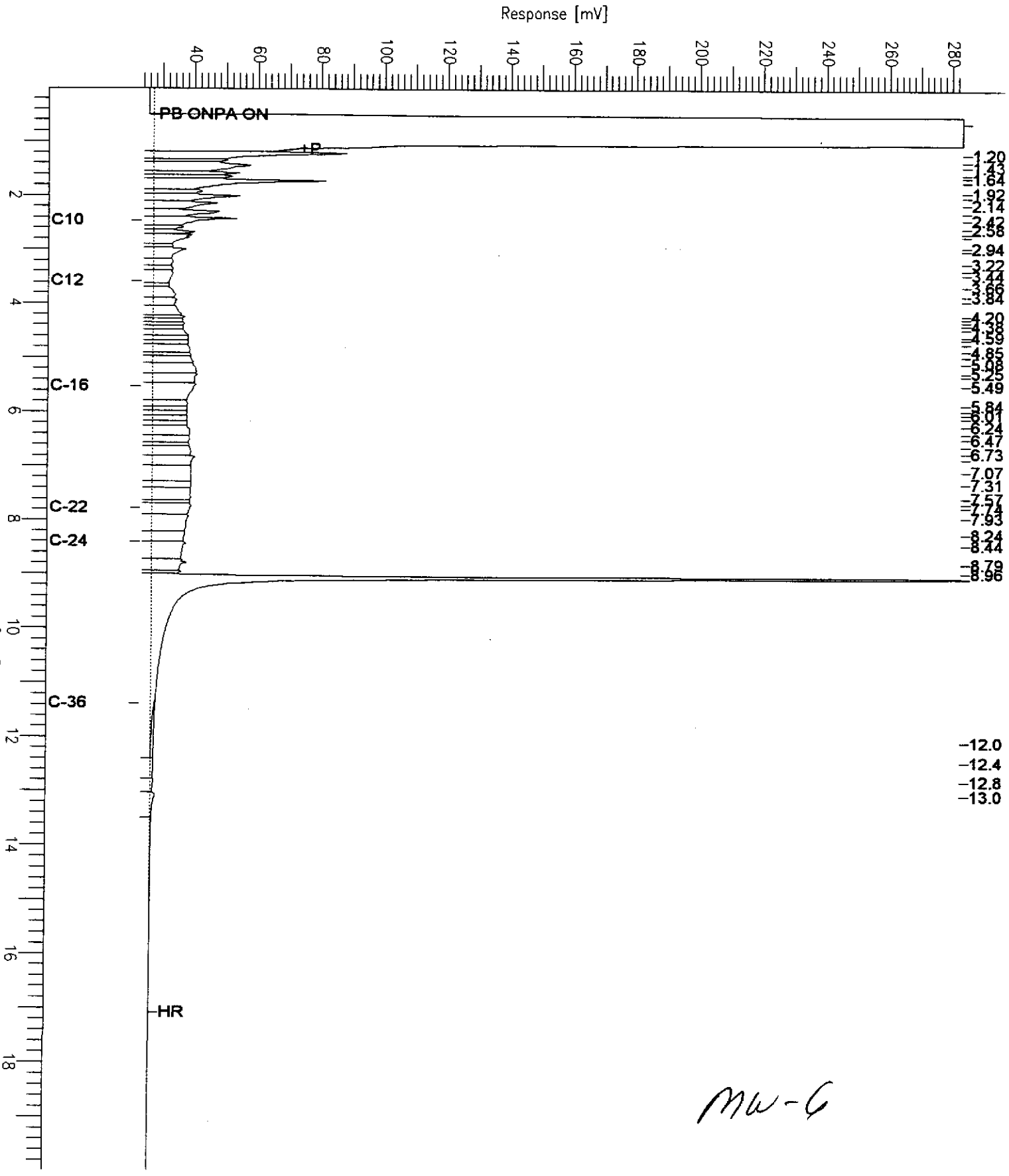
MW-5

Chromatogram

92107 MB 6/21/04

Sample Name : 172962-006, ~~92017~~
FileName : G:\GC15\CHB\173B013.RAW
Method : BTEH167S.MTH
Start Time : 0.01 min End Time : 19.99 min
Scale Factor: 0.0 Plot Offset: 23 mV

Sample #: 92107 Page 1 of 1
Date : 6/21/04 02:42 PM
Time of Injection: 6/21/04 02:19 PM
Low Point : 23.21 mV High Point : 283.28 mV
Plot Scale: 260.1 mV



MW-6

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	STANDARD	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	06/17/04
Units:	ug/L	Received:	06/18/04
Diln Fac:	1.000	Prepared:	06/19/04
Batch#:	92107		

Field ID:	MW-8	Lab ID:	172962-008
Type:	SAMPLE	Analyzed:	06/21/04

Analyte	Result	RL
Diesel C10-C24	68 Y	50

Surrogate	%REC	Limits
Hexacosane	89	53-142

Type:	BLANK	Analyzed:	06/20/04
Lab ID:	QC254772	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	50

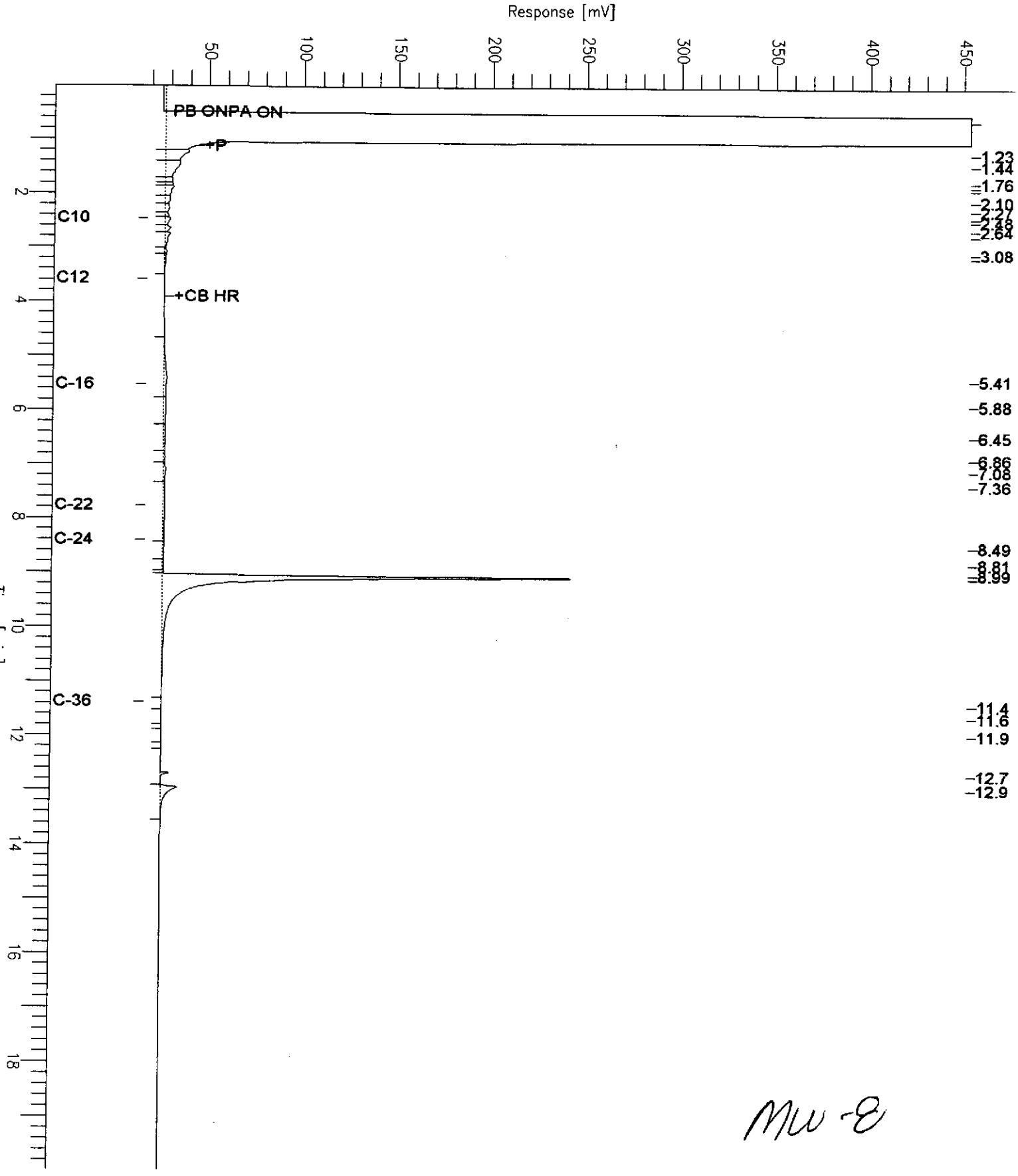
Surrogate	%REC	Limits
Hexacosane	106	53-142

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

92107 MBS 6/21/04 Chromatogram

Sample Name : 172962-008, 92017
FileName : G:\GC15\CHB\173B014.RAW
Method : BTEH167S.MTH
Start Time : 0.01 min End Time : 19.99 min
Scale Factor: 0.0 Plot Offset: 18 mV

Sample #: 92107 Page 1 of 1
Date : 6/21/04 03:16 PM
Time of Injection: 6/21/04 02:48 PM
Low Point : 17.57 mV High Point : 453.61 mV
Plot Scale: 436.0 mV

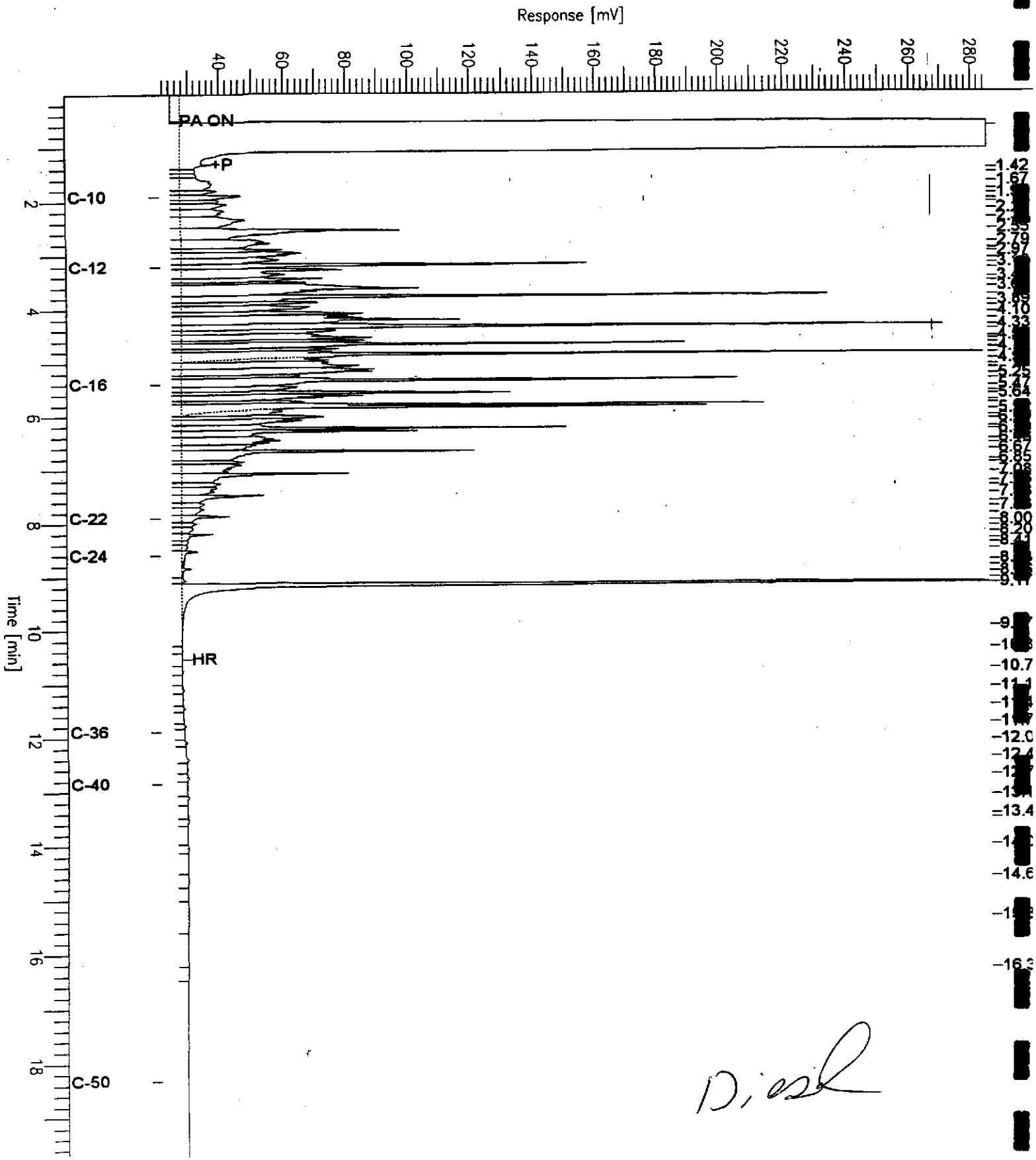


MW-8

Chromatogram

Sample Name : ccv,04ws0894,dsl
FileName : G:\GC17\CHA\172A002.RAW
Method : ATEH168.MTH
Start Time : 0.01 min End Time : 19.99 min
Scale Factor: 0.0 Plot Offset: 21 mV

Sample #: 500mg/L Page 1 of 1
Date : 6/20/04 01:43 PM
Time of Injection: 6/20/04 01:02 PM
Low Point : 20.88 mV High Point : 285.08 mV
Plot Scale: 264.2 mV



Diesel

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	STANDARD	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	92107
Units:	ug/L	Prepared:	06/19/04
Diln Fac:	1.000	Analyzed:	06/20/04

Type: BS Cleanup Method: EPA 3630C
Lab ID: QC254773

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,417	97	57-128

Surrogate	%REC	Limits
Hexacosane	107	53-142

Type: BSD Cleanup Method: EPA 3630C
Lab ID: QC254774

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,767	111	57-128	14	38

Surrogate	%REC	Limits
Hexacosane	121	53-142

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	92211
Lab ID:	172962-001	Sampled:	06/17/04
Matrix:	Water	Received:	06/18/04
Units:	ug/L	Analyzed:	06/24/04
Diln Fac:	10.00		

Analyte	Result	RL
MTBE	6.0	5.0
Benzene	1,700	5.0
Toluene	75	5.0
Ethylbenzene	92	5.0
m,p-Xylenes	190	5.0
o-Xylene	160	5.0

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	108	80-120

RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	92211
Lab ID:	172962-002	Sampled:	06/17/04
Matrix:	Water	Received:	06/18/04
Units:	ug/L	Analyzed:	06/23/04
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	170	0.5
Benzene	42	0.5
Toluene	0.7	0.5
Ethylbenzene	2.6	0.5
m,p-Xylenes	0.9	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	103	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	109	80-120

ND= Not Detected
RL= Reporting Limit

10.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	92211
Lab ID:	172962-003	Sampled:	06/17/04
Matrix:	Water	Received:	06/18/04
Units:	ug/L	Analyzed:	06/24/04
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	130	0.5
Benzene	150	0.5
Toluene	30	0.5
Ethylbenzene	45	0.5
m,p-Xylenes	49	0.5
o-Xylene	17	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	103	80-124
Toluene-d8	102	80-120
Bromofluorobenzene	98	80-120

RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	92178
Lab ID:	172962-004	Sampled:	06/17/04
Matrix:	Water	Received:	06/18/04
Units:	ug/L	Analyzed:	06/22/04
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	0.9	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	118	80-120

ND= Not Detected
RL= Reporting Limit

12.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	MW-5	Batch#:	92211
Lab ID:	172962-005	Sampled:	06/17/04
Matrix:	Water	Received:	06/18/04
Units:	ug/L	Analyzed:	06/24/04
Diln Fac:	6.250		

Analyte	Result	RL
MTBE	ND	3.1
Benzene	920	3.1
Toluene	240	3.1
Ethylbenzene	260	3.1
m,p-Xylenes	690	3.1
o-Xylene	460	3.1

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	80-124
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	MW-6	Batch#:	92211
Lab ID:	172962-006	Sampled:	06/17/04
Matrix:	Water	Received:	06/18/04
Units:	ug/L	Analyzed:	06/24/04
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	14	0.5
Toluene	0.7	0.5
Ethylbenzene	5.2	0.5
m,p-Xylenes	5.8	0.5
o-Xylene	0.8	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	112	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	MW-7	Batch#:	92178
Lab ID:	172962-007	Sampled:	06/17/04
Matrix:	Water	Received:	06/18/04
Units:	ug/L	Analyzed:	06/22/04
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	119	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	MW-8	Batch#:	92178
Lab ID:	172962-008	Sampled:	06/17/04
Matrix:	Water	Received:	06/18/04
Units:	ug/L	Analyzed:	06/22/04
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	120	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	101	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	117	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC255025	Batch#:	92178
Matrix:	Water	Analyzed:	06/22/04
Units:	ug/L		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	117	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC255144	Batch#:	92211
Matrix:	Water	Analyzed:	06/23/04
Units:	ug/L		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	119	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC255145	Batch#:	92211
Matrix:	Water	Analyzed:	06/23/04
Units:	ug/L		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	112	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	92178
Units:	ug/L	Analyzed:	06/22/04
Diln Fac:	1.000		

Type: BS Lab ID: QC255023

Analyte	Spiked	Result	%REC	Limits
MTBE	50.00	50.03	100	76-123
Benzene	25.00	23.41	94	80-120
Toluene	25.00	22.96	92	80-120
Ethylbenzene	25.00	22.99	92	80-121
m,p-Xylenes	50.00	42.63	85	80-122
o-Xylene	25.00	21.59	86	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	101	80-124
Toluene-d8	99	80-120
Bromofluorobenzene	111	80-120

Type: BSD Lab ID: QC255024

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	50.00	47.49	95	76-123	5	20
Benzene	25.00	24.56	98	80-120	5	20
Toluene	25.00	24.05	96	80-120	5	20
Ethylbenzene	25.00	24.07	96	80-121	5	20
m,p-Xylenes	50.00	45.75	92	80-122	7	20
o-Xylene	25.00	23.38	94	80-120	8	20

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	80-124
Toluene-d8	99	80-120
Bromofluorobenzene	105	80-120

PD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC255143	Batch#:	92211
Matrix:	Water	Analyzed:	06/23/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
MTBE	50.00	49.64	99	76-123
Benzene	25.00	23.57	94	80-120
Toluene	25.00	23.12	92	80-120
Ethylbenzene	25.00	22.89	92	80-121
m,p-Xylenes	50.00	41.84	84	80-122
o-Xylene	25.00	21.18	85	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	110	80-120

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	92211
MSS Lab ID:	172930-005	Sampled:	06/17/04
Matrix:	Water	Received:	06/17/04
Units:	ug/L	Analyzed:	06/23/04
Diln Fac:	125.0		

Type: MS Lab ID: QC255177

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<8.500	6,250	6,513	104	77-120
Benzene	56.36	3,125	3,337	105	80-120
Toluene	1,443	3,125	5,119	118	80-120
Ethylbenzene	58.50	3,125	3,319	104	80-120
m,p-Xylenes	206.6	6,250	6,436	100	80-120
o-Xylene	80.31	3,125	3,207	100	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	80-124
Toluene-d8	101	80-120
Bromofluorobenzene	105	80-120

Type: MSD Lab ID: QC255178

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	6,250	5,765	92	77-120	12	20
Benzene	3,125	2,810	88	80-120	17	20
Toluene	3,125	4,507	98	80-120	13	20
Ethylbenzene	3,125	2,786	87	80-120	17	20
m,p-Xylenes	6,250	5,257	81	80-120	20	20
o-Xylene	3,125	2,654	82	80-120	19	20

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	80-124
Toluene-d8	99	80-120
Bromofluorobenzene	108	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Gasoline Oxygenates by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Sampled:	06/17/04
Units:	ug/L	Received:	06/18/04

Field ID:	MW-1	Diln Fac:	10.00
Type:	SAMPLE	Batch#:	92211
Lab ID:	172962-001	Analyzed:	06/24/04

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	270	100
MTBE	6.0	5.0
Isopropyl Ether (DIPE)	ND	5.0
Ethyl tert-Butyl Ether (ETBE)	ND	5.0
Methyl tert-Amyl Ether (TAME)	ND	5.0
1,2-Dichloroethane	ND	5.0
1,2-Dibromoethane	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-120
1,2-Dichloroethane-d4	100	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	108	80-120

Field ID:	MW-2	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	92211
Lab ID:	172962-002	Analyzed:	06/23/04

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	190	10
MTBE	170	0.5
Isopropyl Ether (DIPE)	1.1	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	2.0	0.5
1,2-Dibromoethane	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-120
1,2-Dichloroethane-d4	103	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	109	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline Oxygenates by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Sampled:	06/17/04
Units:	ug/L	Received:	06/18/04

Field ID:	MW-3	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	92211
Lab ID:	172962-003	Analyzed:	06/24/04

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	130	10
MTBE	130	0.5
Isopropyl Ether (DIPE)	1.9	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-120
1,2-Dichloroethane-d4	103	80-124
Toluene-d8	102	80-120
Bromofluorobenzene	98	80-120

Field ID:	MW-4	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	92178
Lab ID:	172962-004	Analyzed:	06/22/04

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	0.9	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-120
1,2-Dichloroethane-d4	99	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	118	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline Oxygenates by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Sampled:	06/17/04
Units:	ug/L	Received:	06/18/04

Field ID:	MW-5	Diln Fac:	6.250
Type:	SAMPLE	Batch#:	92211
Lab ID:	172962-005	Analyzed:	06/24/04

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	120	63
MTBE	ND	3.1
Isopropyl Ether (DIPE)	ND	3.1
Ethyl tert-Butyl Ether (ETBE)	ND	3.1
Methyl tert-Amyl Ether (TAME)	ND	3.1
1,2-Dichloroethane	ND	3.1
1,2-Dibromoethane	ND	3.1

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-120
1,2-Dichloroethane-d4	100	80-124
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-120

Field ID:	MW-6	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	92211
Lab ID:	172962-006	Analyzed:	06/24/04

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	54	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	1.0	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	19	0.5
1,2-Dibromoethane	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-120
1,2-Dichloroethane-d4	99	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	112	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline Oxygenates by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Sampled:	06/17/04
Units:	ug/L	Received:	06/18/04

Field ID:	MW-7	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	92178
Lab ID:	172962-007	Analyzed:	06/22/04

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-120
1,2-Dichloroethane-d4	100	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	119	80-120

Field ID:	MW-8	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	92178
Lab ID:	172962-008	Analyzed:	06/22/04

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	61	10
MTBE	120	0.5
Isopropyl Ether (DIPE)	1.0	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-120
1,2-Dichloroethane-d4	101	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	117	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline Oxygenates by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Sampled:	06/17/04
Units:	ug/L	Received:	06/18/04

Type:	BLANK	Batch#:	92178
Lab ID:	QC255025	Analyzed:	06/22/04
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-120
1,2-Dichloroethane-d4	100	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	117	80-120

Type:	BLANK	Batch#:	92178
Lab ID:	QC255026	Analyzed:	06/22/04
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-120
1,2-Dichloroethane-d4	101	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	117	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline Oxygenates by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Sampled:	06/17/04
Units:	ug/L	Received:	06/18/04

Type:	BLANK	Batch#:	92211
Lab ID:	QC255144	Analyzed:	06/23/04
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-120
1,2-Dichloroethane-d4	100	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	119	80-120

Type:	BLANK	Batch#:	92211
Lab ID:	QC255145	Analyzed:	06/23/04
Diln Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-120
1,2-Dichloroethane-d4	100	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	112	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Gasoline Oxygenates by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	92178
Units:	ug/L	Analyzed:	06/22/04
Diln Fac:	1.000		

Type: BS Lab ID: QC255023

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	137.3	110	80-140
MTBE	50.00	50.03	100	76-123
Isopropyl Ether (DIPE)	25.00	25.12	100	80-124
Ethyl tert-Butyl Ether (ETBE)	25.00	25.59	102	80-120
Methyl tert-Amyl Ether (TAME)	25.00	24.15	97	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-120
1,2-Dichloroethane-d4	101	80-124
Toluene-d8	99	80-120
Bromofluorobenzene	111	80-120

Type: BSD Lab ID: QC255024

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	114.8	92	80-140	18	20
MTBE	50.00	47.49	95	76-123	5	20
Isopropyl Ether (DIPE)	25.00	25.30	101	80-124	1	20
Ethyl tert-Butyl Ether (ETBE)	25.00	25.38	102	80-120	1	20
Methyl tert-Amyl Ether (TAME)	25.00	23.61	94	80-120	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-120
1,2-Dichloroethane-d4	99	80-124
Toluene-d8	99	80-120
Bromofluorobenzene	105	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Gasoline Oxygenates by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC255143	Batch#:	92211
Matrix:	Water	Analyzed:	06/23/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	148.0	118	80-140
MTBE	50.00	49.64	99	76-123
Isopropyl Ether (DIPE)	25.00	24.74	99	80-124
Ethyl tert-Butyl Ether (ETBE)	25.00	25.32	101	80-120
Methyl tert-Amyl Ether (TAME)	25.00	24.44	98	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-120
1,2-Dichloroethane-d4	100	80-124
Toluene-d8	100	80-120
Bromofluorobenzene	110	80-120

Curtis & Tompkins, Ltd.

Batch QC Report

Gasoline Oxygenates by GC/MS

Lab #:	172962	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	92211
MSS Lab ID:	172930-005	Sampled:	06/17/04
Matrix:	Water	Received:	06/17/04
Units:	ug/L	Analyzed:	06/23/04
Diln Fac:	125.0		

Type: MS Lab ID: QC255177

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<8.500	6,250	6,513	104	77-120

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-120
1,2-Dichloroethane-d4	99	80-124
Toluene-d8	101	80-120
Bromofluorobenzene	105	80-120

Type: MSD Lab ID: QC255178

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	6,250	5,765	92	77-120	12	20

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-120
1,2-Dichloroethane-d4	100	80-124
Toluene-d8	99	80-120
Bromofluorobenzene	108	80-120

RPD= Relative Percent Difference

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

Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
MW-1									
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

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

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	1	170

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

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

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

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

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

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*

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

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*

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

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*

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

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	412	*< 100*	*1.2*	*< 0.3*	1.7	3.9	66

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).

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

Well I.D.	Sampling Event No.	Date Sampled	EDB	EDC	1,2,4-TMB	1,3,5-TMB	t-Butanol	TBA	DIPE	Naphthalene	cis-1,2-DCE	TCE	PCE	Others
	7	Jun-00	< 5.0	< 5.0	51	< 5	< 1,000	< 1000	< 50	<5	< 5	< 5	< 5	ND
	14	Mar-02	< 1.0	< 1.0	< 1	1.6	< 10	NA	< 2	< 1	< 1	< 1	< 1	ND
	18	Jan-03	< 50	< 50	150	< 50	NA	68	< 10	< 50	< 50	< 50	< 50	ND
MW-1	19	Mar-03	< 0.26	< 0.17	373	< 0.49	NA	< 10	< 0.29	< 0.88	< 0.30	< 0.23	< 0.36	ND
	20	Aug-03	< 1.0	7.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	21	Dec-03	< 5.0	< 5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	< 0.26	< 0.17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 5.0	< 5.0	NA	NA	NA	270	< 5.0	NA	NA	NA	NA	NA
	7	Jun-00	< 0.5	< 0.5	< 0.5	< 0.5	< 100	< 100	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	ND
	14	Mar-02	< 1.0	< 1.0	< 1	< 1	220	NA	< 2	< 1	< 1	< 1	< 1	ND
	18	Jan-03	< 5	< 5	< 5	< 5	NA	34	< 1	< 5	24	< 5	< 5	ND
	19	Mar-03	< 0.26	< 0.17	< 0.49	< 0.26	NA	94	< 0.29	< 0.88	15	< 0.23	< 0.36	ND
MW-2	21	Dec-03	< 0.6	< 0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	20	Aug-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	21	Dec-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 0.5	2.0	NA	NA	NA	190	1.1	NA	NA	NA	NA	NA
	7	Jun-00	< 0.5	< 0.5	< 0.5	< 0.5	< 100	< 100	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	ND
	14	Mar-02	< 1.0	< 1.0	1.8	4.7	180	NA	< 2	2.2	< 1	< 1	< 1	ND
	18	Jan-03	< 5	< 5	< 5	5.0	NA	76	< 1	< 5	21	< 5	< 5	(a)
	19	Mar-03	< 0.26	< 0.17	< 0.49	< 0.26	NA	< 10	< 0.29	< 0.88	24	< 0.23	< 0.36	ND
MW-3	20	Aug-03	< 0.5	< 0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	21	Dec-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 0.5	< 0.5	NA	NA	NA	130	1.9	NA	NA	NA	NA	NA
	7	Jun-00	< 0.5	< 0.5	< 0.5	< 0.5	< 100	< 100	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	ND
	14	Mar-02	< 1.0	< 1.0	< 1	< 1	< 10	NA	< 2	< 1	2.9	3.7	5.0	ND
	18	Jan-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
MW-4	19	Mar-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	20	Aug-03	< 0.5	< 0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	21	Dec-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 0.5	< 0.5	NA	NA	NA	< 10	< 0.5	NA	NA	NA	NA	NA
	14	Mar-02	< 1.0	< 1.0	< 1	2.7	640	NA	< 2	< 1	< 1	< 1	< 1	ND
	18	Jan-03	< 50	< 50	512	122	NA	< 100	< 10	120	< 50	< 50	< 50	ND
	19	Mar-03	< 0.26	< 0.17	554	107	NA	< 10	< 0.29	251	< 0.3	< 0.23	< 0.36	(b)
MW-5	20	Aug-03	< 2.0	6.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	21	Dec-03	< 5.0	< 5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	< 0.26	< 0.17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 3.1	< 3.1	NA	NA	NA	120	< 3.1	NA	NA	NA	NA	NA
	14	Mar-02	< 1.0	< 1.0	< 1	2.2	< 10	NA	< 2	1.6	< 1	< 1	< 1	ND
	18	Jan-03	< 5.0	< 5.0	13	< 5	NA	46	< 1	< 5	< 5	< 5	< 5	ND
	19	Mar-03	< 0.26	6.9	< 0.49	< 0.26	NA	40	< 0.29	< 0.88	< 0.3	< 0.23	< 0.36	(c.)
	20	Aug-03	< 0.5	12.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-6	21	Dec-03	< 5.0	11 / 17.1 [d]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	< 0.26	31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 0.5	19	NA	NA	NA	54	1.0	NA	NA	NA	NA	NA
	14	Mar-02	< 1.0	< 1.0	< 1	< 1	< 10	NA	< 2	< 1	< 1	< 1	< 1	ND
	18	Jan-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	19	Mar-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
MW-7	20	Aug-03	< 0.5	< 0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	21	Dec-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 0.5	< 0.5	NA	NA	NA	< 10	< 0.5	NA	NA	NA	NA	NA
	14	Mar-02	< 1.0	< 1.0	< 1	< 1	< 10	NA	< 2	< 1	< 1	< 1	< 1	ND
	18	Jan-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	19	Mar-03	< 0.26	< 0.17	< 0.49	< 0.26	NA	< 10	< 0.29	< 0.88	< 0.3	< 0.23	< 0.36	ND
MW-8	20	Aug-03	< 0.5	< 0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	21	Dec-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 0.5	< 0.5	NA	NA	NA	61	1.0	NA	NA	NA	NA	NA

Notes:

Table includes only detected contaminants.

EDB = Ethylene dibromide, aka 1,2-Dibromoethane (lead scavenger)
EDC = Ethylene dichloride, aka 1,2-Dichloroethane (lead scavenger)
PCE = Tetrachloroethylene
TCE = Trichloroethyene
DCE = Dichloroethylene
TMB = Trimethylbenzene
DIPE = Isopropyl Ether (a.k.a. di-isopropyl ether)
TBA = Tertiary butyl alcohol
NLP = No Level Published
NA = Not analyzed for this constituent. ND = Not Detected

(a) Also detected were: n-propylbenzene (5.4 µg/L); p-Isopropyltoluene (14 µg/L); sec-Butylbenzene (7.2 µg/L)
(b) Also detected were: isopropylbenzene (38 µg/L); n-Butylbenzene (20 µg/L); n-propylbenzene (36 µg/L); p-Isopropyltoluene (14 µg/L).
(c.) Also detected were: isopropylbenzene (3.4 µg/L); n-propylbenzene (2.3 µg/L).
(d) Pre-purge / post-purge sampling, conducted in same event.