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	TRANSMITTAL ME	EMORANDUM
Env AL/ Ser 113	CAL OVERSIGHT PROGRAM VIRONMENTAL HEALTH SERVICE AMEDA COUNTY HEALTH CARE RVICES AGENCY B1 HARBOR BAY PARKWAY AMEDA, CALIFORNIA 94502-657	
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 SEN	DING: HEREWITH	☐ UNDER SEPARATE COVER
	Via Mail	□ Via
THE FOLLOW	ING: THIRD QUARTER 2004 G	ROUNDWATER MONITORING REPORT
	☐ As REQUESTE	ED ☐ FOR YOUR APPROVAL
	☐ FOR REVIEW	FOR YOUR USE
	□ For signatu	FOR YOUR FILES
0 2	R. GLEN POY-WING AKLAND AUTO WORKS 40 WEST MCARTHUR BLVD. AKLAND, CA 94711	BY: BRUCE RUCKER

October 11, 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:

Third Quarter 2004 Groundwater Monitoring Report

Oakland Auto Works Facility - 240 W. MacArthur Boulevard, Oakland, California

No. 6814 Exp. 9/05

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 Third Quarter 2004 groundwater monitoring event (the 24th site groundwater monitoring event since August 1997).

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

Sincerely,

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

Project Manager

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

Principal

cc: Mr. Glen Poy-Wing, Property Owner

THIRD 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

October 11, 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 24th 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, and was summarized in our April 2004 Soil and Groundwater Investigation Report (SES, 2004c). Alameda County Health has not yet responded to that report.

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

analytical data from groundwater monitoring events conducted by SES (beginning in August 2003.

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

SCOPE OF REPORT

This report discusses the following activities, conducted between July 1 and September 30, 2004:

■ 24th groundwater monitoring and sampling event, September 13, 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.

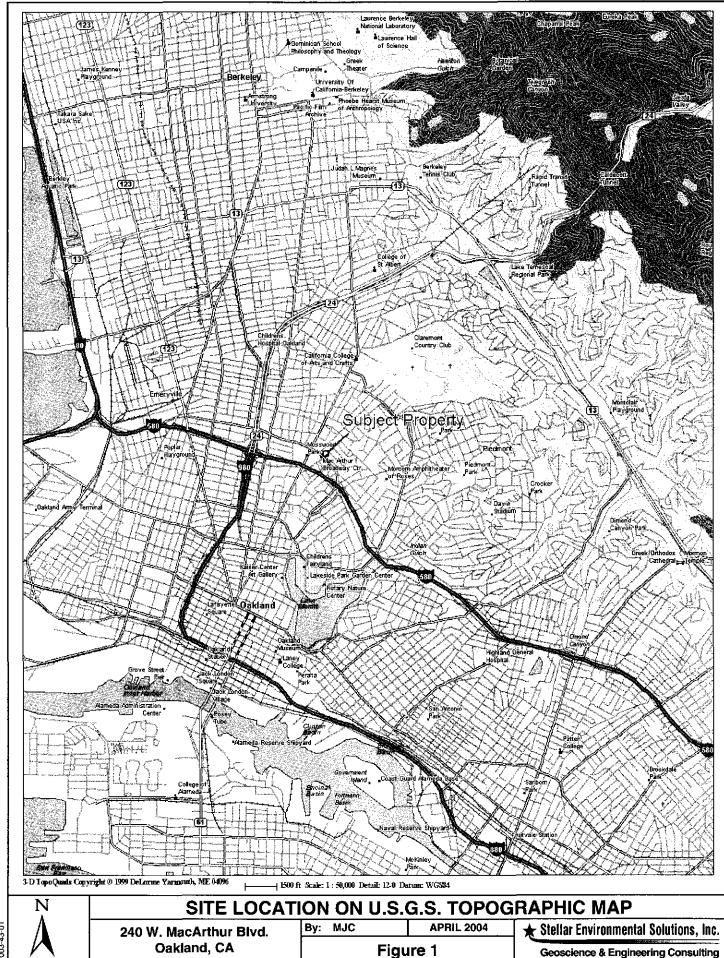
Adjacent land use includes: a Shell-branded service station (to the south); W. MacArthur Boulevard (to the west); Howe Street (to the north); and a paved driveway, then a multi-story (with basement) health services building (to the east).

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.

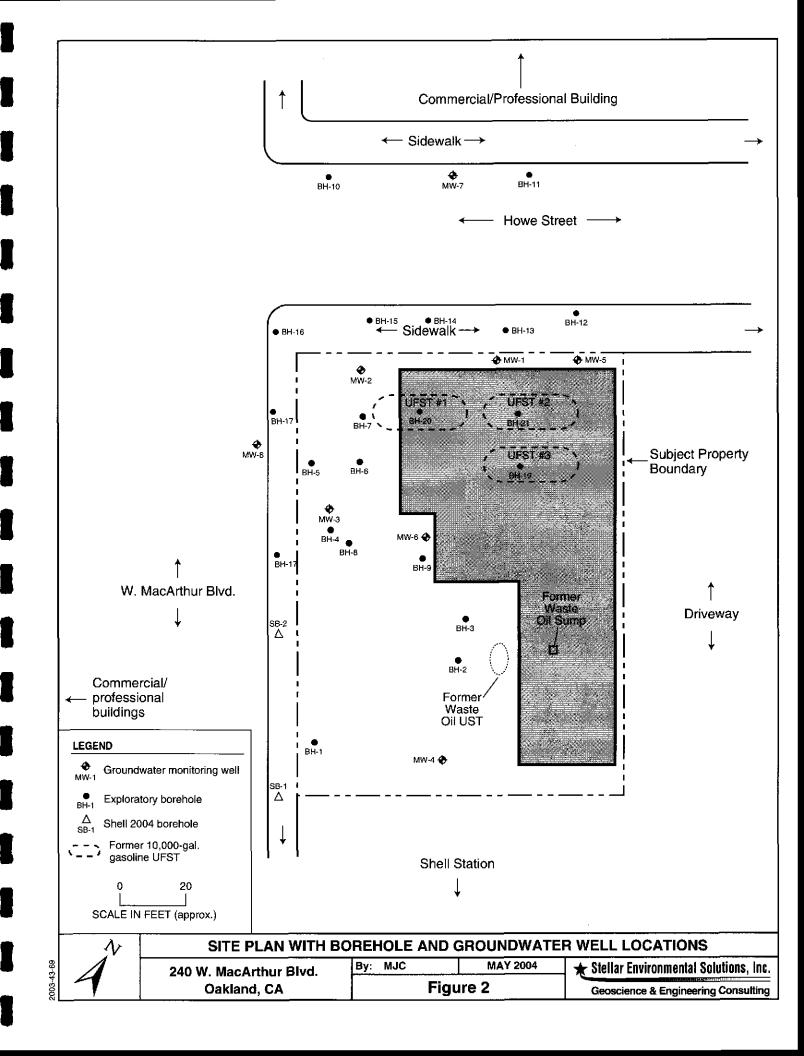
Historical remediation and site characterization activities include:

- 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).



Oakland, CA

Geoscience & Engineering Consulting



- 1996. A 350-gallon waste oil UST was removed. Elevated levels of diesel and oil & grease were detected in confirmation soil samples. Subsequent overexcavation was conducted, and there was no evidence of residual soil contamination (All Environmental, Inc., 1997a).
- January 1997. In accordance with a request by Alameda County Health, a subsurface investigation was conducted (All Environmental, Inc., 1997b). Six exploratory boreholes were advanced to a maximum depth of 20 feet, and soil samples were collected.
- August 1997. Additional site characterization was conducted, which included sampling three boreholes, installing four groundwater monitoring wells, and conducting the initial groundwater sampling event.
- 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.

To date, a total of 24 groundwater monitoring events have been conducted at the site.

2.0 PHYSICAL SETTING

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

TOPOGRAPHY AND SURFACE WATER DRAINAGE

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

LITHOLOGY

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

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

Depth to groundwater in all onsite April 2004 boreholes was approximately 20 to 21 feet bgs, predominantly in a saturated, loose, clayey sand. The saturated portion of this clayey sand constitutes the bottom of the unit; the saturated zone is approximately 0.5 to 2.5 feet thick, underlain in all boreholes by a cohesive, non-water-bearing clay. The top of this clay was consistently at a depth between approximately 21 and 23 feet. Of the 12 boreholes, 9 were

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

The site lithology is consistent with that documented at the adjacent Shell service station site. Specifically, those boreholes have documented the thin upper, water-bearing zone underlain by the likely non-water-bearing clay unit. In three of the four Shell well boreholes, that clay unit was at least 2 feet thick. In one of the well boreholes, the clay unit was underlain by a saturated clayey sand unit (from approximately 22 to 25.5 feet bgs, which was underlain by a non-waterbearing 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.

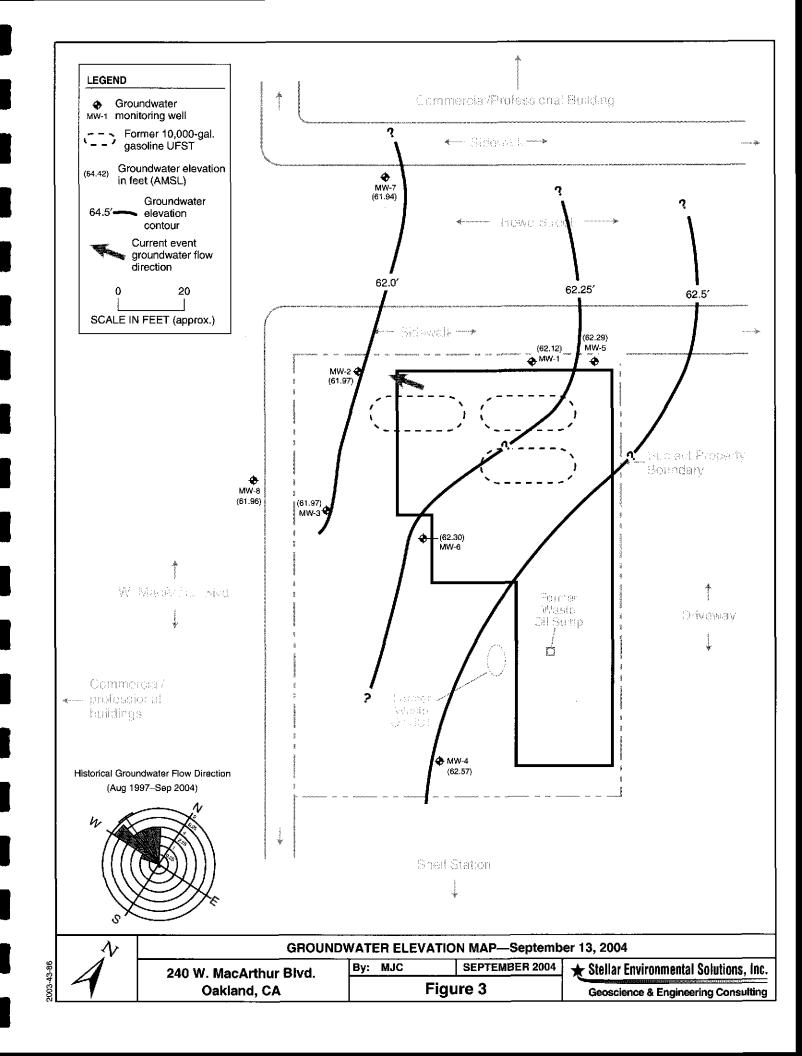
GROUNDWATER HYDROLOGY

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 (September 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, 2004). Subject property groundwater gradient in the September 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.



- 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 SEPTMEBER 2004 GROUNDWATER MONITORING AND SAMPLING

This section presents the groundwater sampling and analytical methods for the current event (Third Quarter 2004), conducted on September 13, 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 September 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 September 13, 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

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

		Well Screen	ed Interval	Groundwater	Groundwater Elevation (b) September 13, 2004	
Well	Well Depth (feet bgs)	Depth (feet)	Elevation (feet)	Level Depth ^(a) September 13, 2004		
MW-1	25	19.5 to 24.5	54.5 to 49.5	17.03	62.12	
MW-2	25	14.5 to 24.5	64.2 to 54.2	16.48	61.97	
MW-3	25	14.5 to 24.5	63.4 to 53.4	15.61	61.97	
MW-4	25	14.5 to 24.5	63.6 to 53.6	15.17	62.57	
MW-5	20	9 to 19	70.6 to 60.6	17.07	62.29	
MW-6	20	9 to 19	69.7 to 59.7	16.13	62.3	
MW-7	20	9 to 19	69.6 to 59.6	16.33	61.94	
MW-8	20	9 to 19	67.7 to 57.7	14.43	61.96	

Notes:

(using a new disposable bailer) and field-analyzed for aquifer stability parameters—including temperature, pH, electrical conductivity, turbidity, and dissolved oxygen.

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.

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

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

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.

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

Table 2
Groundwater Sample Analytical Results – September 13, 2004
Hydrocarbons, BTEX, and MTBE ^(a)
240 W. MacArthur Boulevard, Oakland, California

Well	TVHg	TEHd	Benzene	Toluene	Ethyl- benzene	Total Xylenes	мтве			
MW-1	9,100	97	920	19	82	201	7.2			
MW-2	1,500	280	14	< 0.5	< 0.5	0.6	130			
MW-3	5,400	1,500	70	3.2	16	12.7	110			
MW-4	< 50	NA.	< 0.5	< 0.5	< 0.5	< 0.5	2.3			
MW-5	13,000	1,900	580	240	260	1,260	< 4.2			
MW-6	350	600	< 0.5	2.4	< 0.5	< 0.5	< 0.5			
MW-7	< 50	NA.	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5			
MW-8	280	2,600	< 0.5	< 0.5	< 0.5	< 0.5	120			
RWQCB Environmental Screening Levels (b)										
	NLP	NLP	1.0	40	30	20	5.0			
Drinking Wa	ater Standards	(c)								
	100	100	1.0 ^(d)	40	30	13	5.0			

Notes:

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.

Department of Water Resources identified only one groundwater supply well within 1,500 feet of the site. Based on its distance and upgradient location relative to the site, there is no reasonable potential for this well to intercept shallow groundwater emanating from the subject property.

As specified in the 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

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

⁽b) For commercial/industrial sites where a 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.

Table 3
Groundwater Sample Analytical Results – September 13, 2004
Lead Scavengers and Fuel Oxygenates ^(a)
240 W. MacArthur Boulevard, Oakland, California

Well	EDC	EDB	TBA	DIPE
MW-1	< 5.0	< 5.0	120	< 5.0
MW-2	1.2	< 0.5	130	0.9
MW-3	< 0.5	< 0.5	82	1.5
MW-4	< 0.5	< 0.5	< 10	< 0.5
MW-5	18	< 4.2	87	< 4.2
MW-6	31	< 0.5	43	1.0
MW-7	< 0.5	< 0.5	< 10	< 0.5
MW-8	< 1.0	< 1.0	96	1.1
Drinking Water S	Standards ^(b)		·····	
	NLP	NLP	NLP	NLP
RWQCB Enviror	nmental Screening Leve	ls ^(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.

(e) 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.

NLP = No level published.

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

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);
- Total extractable hydrocarbons diesel range (TEHd), by EPA Method 8015M (all wells except MW-4 and MW-7, which historically have never detected diesel); and
- Fuel oxygenates by EPA Method 8260B.

GROUNDWATER SAMPLE RESULTS

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 280 μ g/L (well MW-8) and 13,000 μ g/L (well MW-5). All of the gasoline concentrations exceeded the 100- μ g/L ESL criterion. The gasoline plume extends to the south along the Howe Street side of the property, and to the east (toward well MW-4). To the south, the plume extends somewhat offsite into W. MacArthur Boulevard. 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).

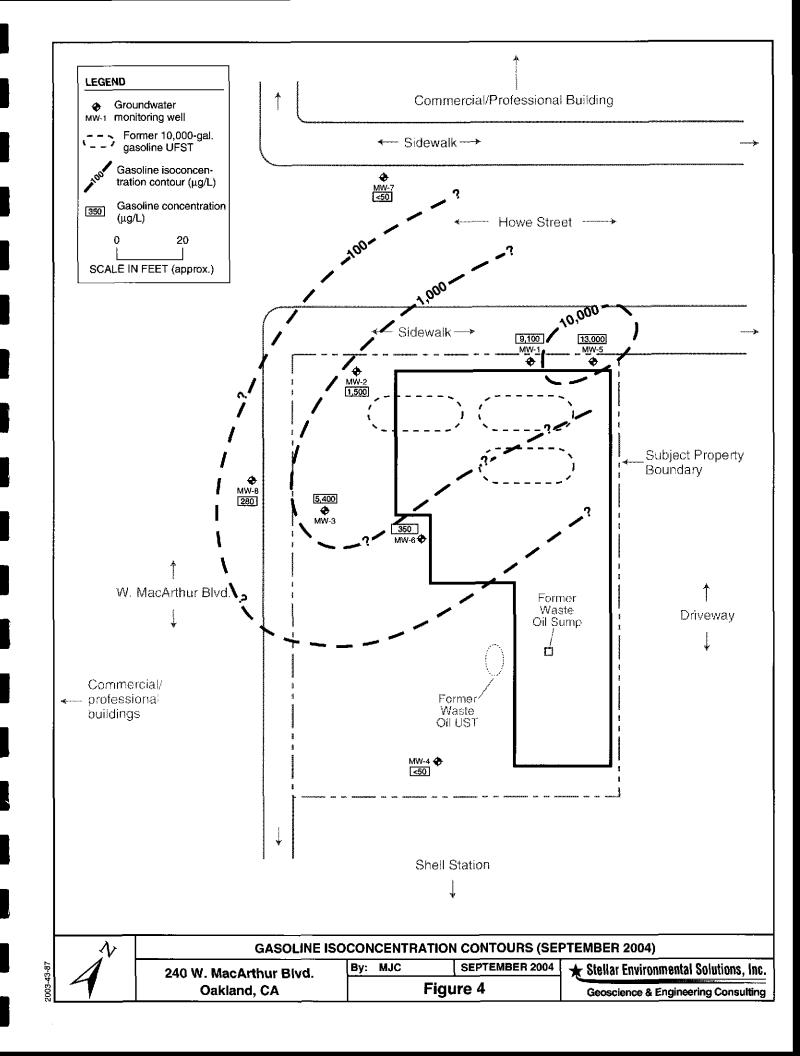


Figure 5 shows diesel isoconcentration contours for the recent event. Diesel was detected in all six of the wells analyzed for diesel, but is of secondary concern relative to gasoline, with concentrations historically at significantly lesser levels than gasoline. Diesel concentrations ranged from 97 μ g/L (well MW-1) to 5,400 μ g/L (well MW-8), with all concentrations except MW-1 exceeding the 100 μ g/L ESL criterion. The center of mass of the diesel plume appears to have migrated downgradient from the source area to well MW-3. The diesel plume footprint is similar to that of the gasoline plume. Diesel is present offsite under Howe Street (to the north) and under W. MacArthur Boulevard (to the west).

Benzene, Toluene, Ethylbenzene, and Total Xylenes

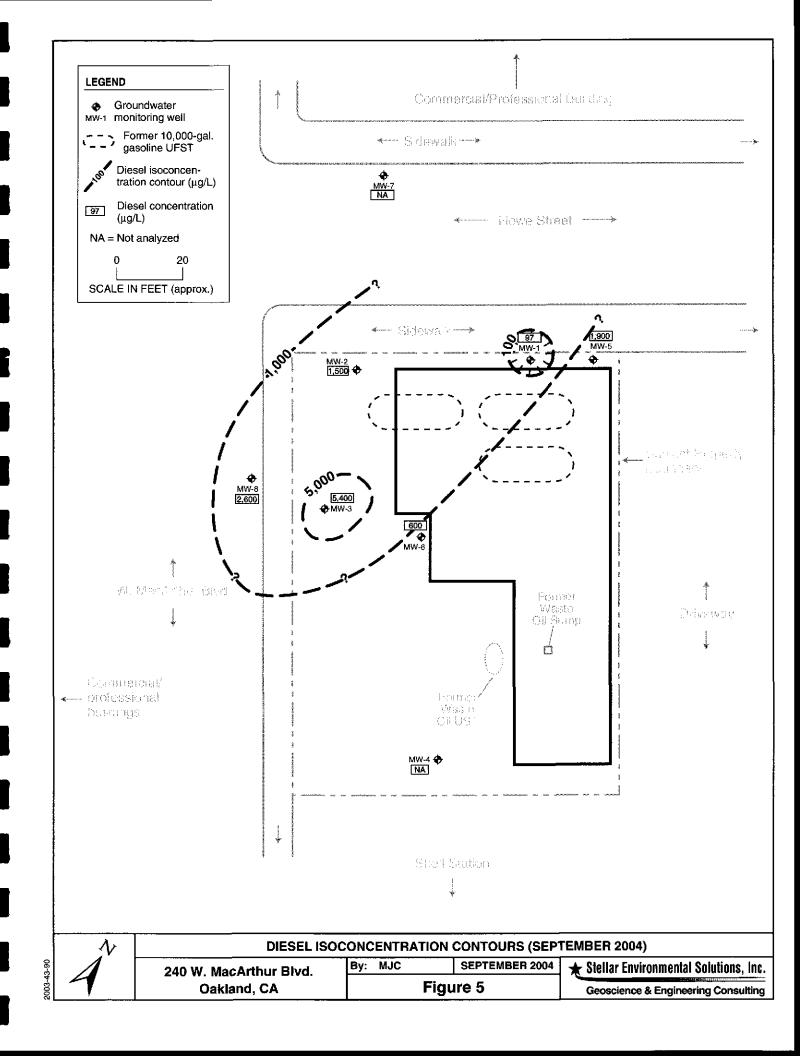
Benzene was detected in four of the eight site wells, at concentrations ranging from $14 \mu g/L$ to $920 \mu g/L$. Figure 6 shows benzene isoconcentration contours for the recent event. Maximum benzene concentrations were detected in wells MW-1 and MW-5, as historically has been the case. The lateral extent of the benzene plume is constrained to the east. Current event well data and April 2004 borehole grab-groundwater data indicate that benzene extends across Howe Street to the north (approximately 1 to $3 \mu g/L$), and under W. MacArthur Boulevard to the west and south (up to $73 \mu g/L$). The benzene plume configuration is generally the same as for gasoline and diesel.

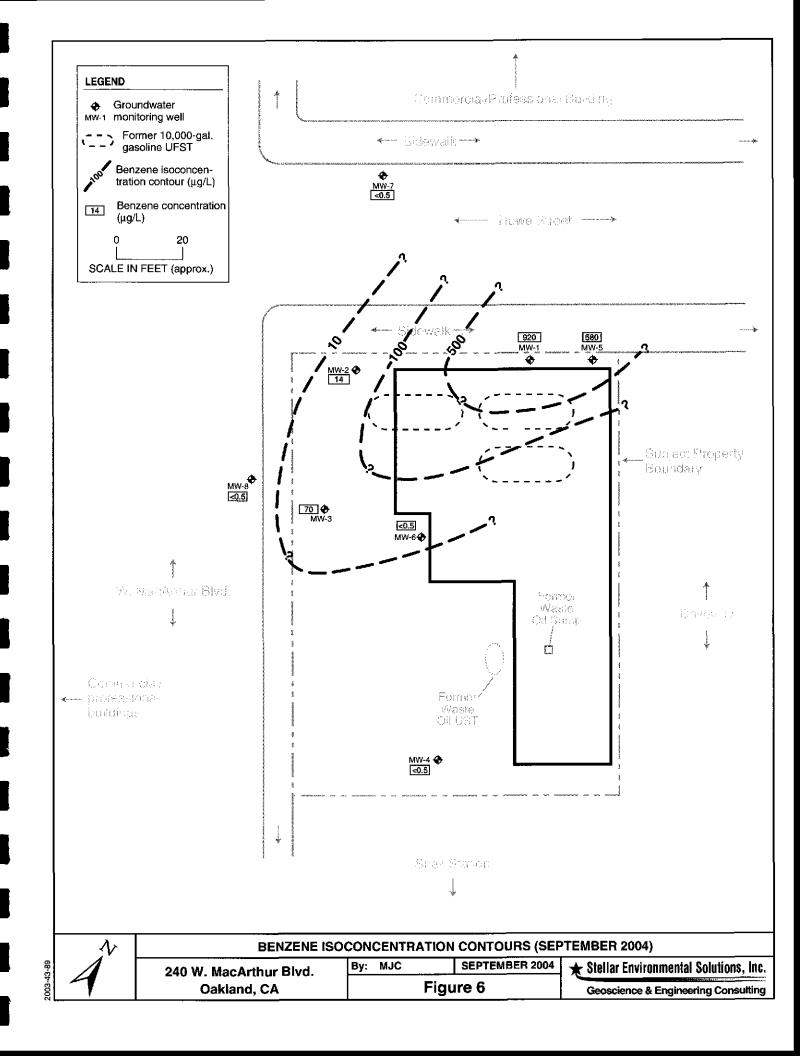
Toluene, ethylbenzene, and xylenes were detected in generally the same wells in which benzene was detected, and contaminant concentrations exceeded respective ESL criteria in several of the wells.

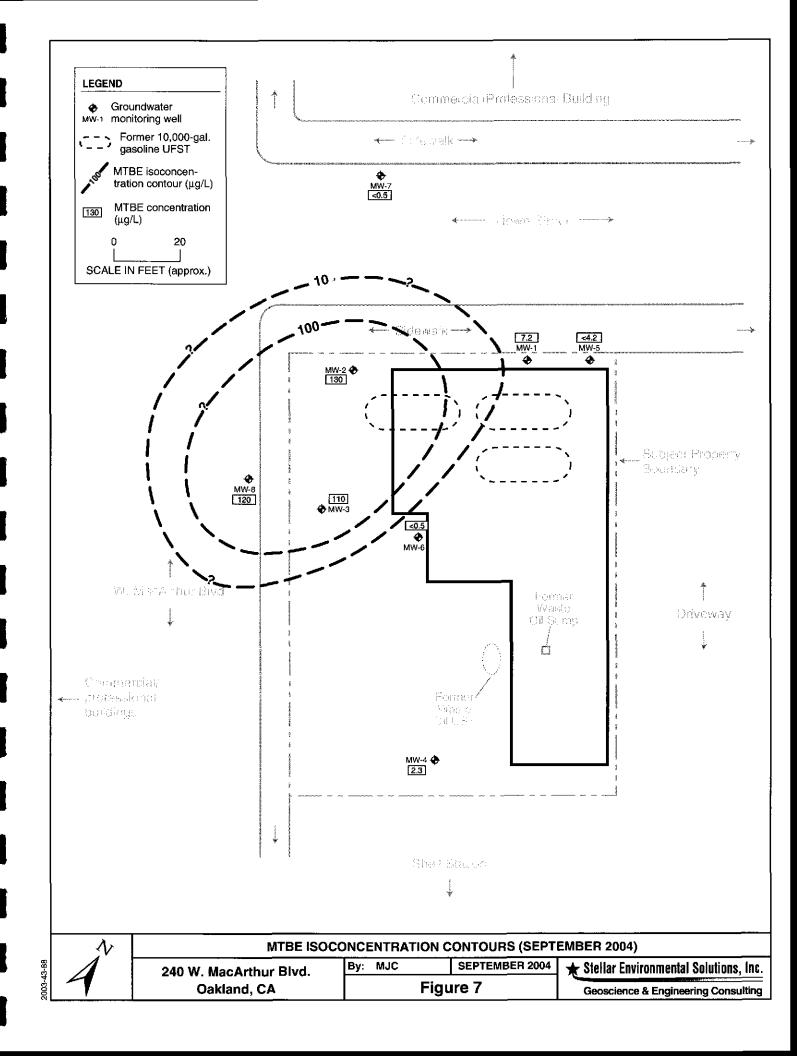
Methyl tertiary-Butyl Ether

Figure 7 shows MTBE isoconcentration contours for the recent event. MTBE was detected in five of the eight site wells, at concentrations ranging from 2.3 μ g/L to 130 μ g/L. MTBE concentrations above 100 μ g/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 μ g/L extends into W. MacArthur Boulevard. The center of mass of the MTBE plume has migrated downgradient from the source area to the southern side of the property (adjacent to W. MacArthur Boulevard).

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







Lead Scavengers and Fuel Oxygenates

In its May 3, 2004 letter, Alameda County Health requested 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 three of the site wells, at concentrations between 1.2 μ g/L (MW-2) and 31 μ g/L (MW-6), all in excess of the 0.5- μ g/L ESL criterion. EDB was not detected in any of the wells.

The Alameda County Health letter stipulated that all groundwater samples from the June 2004 event be analyzed for fuel oxygenates, and that analysis for fuel oxygenates be continued in wells with detections. Only two fuel oxygenates have been detected: TBA and DIPE. In the current event, TBA was detected in six of the eight site wells, at a maximum concentration of $130 \mu g/L$. DIPE was detected in four of the eight site wells, at a maximum concentration of $1.5 \mu g/L$. The only wells without detected fuel oxygenates were MW-4 and MW-7.

Summary

Maximum concentrations of gasoline and benzene were detected in wells MW-5 or MW-1, located in the northeastern corner of the property (near the former UFSTs). Maximum concentrations of diesel and MTBE were detected in downgradient wells (adjacent to W. MacArthur Boulevard), indicating that the center of mass of these contaminants has migrated downgradient. Groundwater contamination extends offsite to the south and west (into Howe Street and W. 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 24 groundwater monitoring/sampling events have been conducted in the eight site wells between August 1997 and September 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.
- As stipulated by Alameda County Health, analysis for lead scavengers will continue to be conducted in wells MW-1, MW-5, and MW-6. Fuel oxygenates were detected in those wells, and in MW-2, MW-3, and MW-8. Because lead scavengers and fuel oxygenates are analyzed by the same method at no additional cost, the responsible party has elected to continue analysis for lead scavengers and fuel oxygenates lead scavengers in all wells except MW-4 and MW-7.
- The greatest concentrations of gasoline and benzene in groundwater are located in the northern corner of the site (near the source area). Maximum groundwater contamination by diesel and MTBE was detected in the downgradient portion of the property, indicating that the center of mass of these contaminants has migrated downgradient. Groundwater contamination above ESL criteria extends offsite (likely a limited distance) beneath Howe Street and W. MacArthur Boulevard.
- A previous water well survey identified no vicinity water wells with the potential to intercept site-sourced groundwater contamination.

- Potential preferential pathways identified include deep sanitary sewer lines beneath Howe Street and W. MacArthur Boulevard (adjacent to the subject property). Based on the detection of gasoline and MTBE in well MW-7 (beyond the Howe Street deep utilities), it appears unlikely that the Howe Street deep utilities are acting as a preferential pathway for site-sourced groundwater contamination. The influence of deep utilities beneath W. MacArthur Boulevard is not known.
- The adjacent Shell service station is contributing minor MTBE groundwater contamination to the eastern corner of the subject property. This contamination is unrelated to the separate, site-sourced MTBE groundwater contamination in the northern and western portions of the subject property.
- Sufficient site characterization has been conducted to evaluate the risks associated with residual soil contamination, and to evaluate corrective action options. 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.
- Continue the modified quarterly groundwater monitoring program to include analysis for fuel oxygenates and lead scavengers in all wells except MW-4 and MW-7.
- Continue to 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.

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7.0 LIMITATIONS

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

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

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

WELL GAUGING DATA	WELL	GAT	IGNIG	DATA
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Project#_	040913-MDY Date_	9/	13/00/ Client	Stellar	-
	yow, MacArthu				

	 j			Thickness	Volume of				
	Well	•	Depth to	of	Immiscibles			Survey	
	Size	Sheen /		Immiscible		Depth to water		Point: TOB	
Well ID	(in.)	Odor	Liquid (ft.)	Liquid (ft.)	(ml)	(ft.)	hottom (ft.)	0/100	
/we-/	2	Øe√				17,03	24.36		
Mer-2	2					16,48	24.3))	
Mrs 3	7					15.61	74.25		
mu y	2					15.17	24.29		
MW-5	2	edox	,			17.07	.20.09		<u> </u>
MME	2					16.13	20.15		
₹′	2					16.33	19.96		-3" "1"
MW-7	2					14,43	19,98	+	·
							·		
						·			
								1	

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WELLHEAD INSPECTION CHECKLIST

Date 9/13 Site Address Job Number	04	_ Client	Ste	llar	En	UI.		·
Site Address	240 0	U, Me	acAr'	thur	Blue	y Ca	Klaud	
Job Number	040913-	-m0,	1	Ted	chnician	MO)	
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)
mu-							D	02.0.17
MW-Z	レ							
mw-z	/							
MW-4	/							
Mw .5	~							
MG 6	/							
Men-7	1							
mur-8	_/							
NOTES:	D No (30)	143						
	<u></u>		<u> </u>	· · ·			·	·
		· · · · · · · · · · · · · · · · · · ·	· · .	<u> </u>				
		<u> </u>			-	 		

WELL MONITORING DATA SHEET

Project #:	64091	3-1/40	4	Client:	5	tellar	-3	Cakland outo	
Sampler:	M		λ ₀ .	Date: 9/13/04					
Well I.D.:	M	WI		Well Di	ameter:	② 3	4	6 8	
Total Well I	Depth (TD): <u>`</u> 2'	4,36	Depth to	Water	(DTW)		7.03	
Depth to Fre	e Product			Thickne	ss of Fr	ee Prodi	ict (feet);	
Referenced to: Grade D.O. Meter (if req'd): SI HACH									
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:									
Purge Method: Bailer Waterra Sampling Method: Bailer Disposable Bailer Peristaltic Disposable Bailer Positive Air Displacement Extraction Pump Electric Submersible Other Other:									
1.5		``	3 6	\ [*]	Vell Diameter 1"	<u>Multiplier</u> 0.04 0.16	4" 6"	0,65 1.47	
1 Case Volume	Jals.) X	Fied Volum	$= \frac{2 \cdot 6}{\text{Calculated Vo}}$	_Gals. lume	2" 3"	0.18	Other	radius ² * 0.163	
Time 1558 1600	Temp (°F or ©) 20,5 20,1	6.5	Cond. (mS or (LS)) 936 /017	 	- 1	Gals. Re	2	Observations Cloudy, adam Cloudy, adam	
1609	/7,1	6.5	7/0_				us Fr	- 4	
Did well de	water?	Yes (No	Gallons	actuall	y evacua	ated:	3.6	
Sampling D	ate: 9//	3/04	Sampling Tim	e: <i>16</i>	/0	Depth t	o Water	:: <i>1</i> 8, <i>5</i> 0	
Sample I.D	.: <i>'M</i>	W-/		Laborat	ory:	Kiff C	alScience	Other Cf	
Analyzed for	or: TPH-G	BTEX	MTBE TPH-D	Oxygena	tes (5)	Other:	Sec	-scope	
EB I.D. (if	applicable):	@ Time	Duplica	ite I.D.	(if appli	cable):		
Analyzed for	or: TPH-G	BTEX	мтве трн-р	Oxygena	ites (5)	Other:			
D.O. (if rec	ı'd): P	re-purge:		mg/L	<u> </u>	ost purge	:	^{mg} /L	
O.R.P. (if r	eq'd): P	re-purge:		пV	F	ost-purge):	mV	

WELL MONITORING DATA SHELL

Project #:	0400	713-NV	ከ ዛ	Client:	510	llar ox	sakland auto				
Sampler:	MO	•		Date:	9/12	100/					
Well I.D.:	MW - 2	2		Well Diameter 2 3 4 6 8							
Total Well I			4.31	Depth to Water (DTW): \(\alpha \) /6, \(\frac{1}{8} \)							
Depth to Fre	ee Product			Thickness of Free Product (feet):							
Referenced	to:	PVC	Grade	D.O. Me	ter (if 1	req'd):	YSI HACH				
DTW with 8	80% Recha	arge [(H	eight of Water	Column	c 0.20)	+ DTW]:	18,05				
_	Bailer Disposable Ba Positive Air I Electric Subm	Displaceme	nt Extrac Other	Waterra Peristaltic ction Pump		Sampling Metho	Qisposable Bailer Extraction Port Dedicated Tubing				
1 Case Volume	Gals.) X Speci	3 fied Volum	$\frac{3}{\text{Calculated Vo}}$	_ Gals.	l" 2" 3"	0.04 4" 0.16 6"	ther midius * 0.163				
Time	Temp	pН	Cond. (mS or μS)	Turbic (NTU	-	Gals. Remove	d Observations				
1505	21,7	6.9	684	188	<u> </u>	1,3	Cloudy, addr				
1510	21.3	6.7	693	7/2		2.6	11				
1514	21,1	6.7	695	710	00	3.9	Cloudy, odo.				
		·				FOROUS I	con=1.8				
						•					
Did well de	water?	Yes (No	Gallons	actuall	y evacuated:	3.9				
Sampling D	Date: 0//	3/04	Sampling Tim	ie: (52	0	Depth to Wa	ter: 16.53				
Sample I.D.	: /N	w2		Laborato	ory:	Kiff CalScie	nce Other C+I				
Analyzed fo	or: TPH-G	BTEX	MTBE TPH-D	Oxygenate	es (5)	Other: 5τ	e Scope				
EB I.D. (if	applicable)):	@ Time	Duplicat	e I.D.	(if applicable):				
Analyzed for	or: TPH-G	втех	MTBE TPH-D	Oxygenat	es (5)	Other:					
D.O. (if req	'd): P	re-purge:		mg/ _L	P	ost-purge:	0.7 ""				
O.R.P. (if re	eq'd): P	re-purge:		mV	F	ost-purge:	mV				

WELL MONITORING DATA SHEET

Project #:	0409	13-M	4) 4	Client:	5.fc	llar@a	ak(and)				
Sampler:	MD			Date:	9/13	/orl					
Well I.D.:	MW-	3		Well Diameter: ② 3 4 6 8							
Total Well I	Depth (TD): 7	24.25	Depth to Water (DTW): 2475 (5.6)							
Depth to Fro	ee Product	•		Thicknes	ss of Fi	ree Product (fee	et):				
Referenced	· · · · · · · · · · · · · · · · · · ·	PV	Grade	D.O. Me	ter (if	req'd):	YSI) HACH				
DTW with 8	30% Rech	arge [(H	eight of Water	Column 2	x 0.20)	+ DTW]:	17,34				
Purge Method:	Bailer Ssposable Bailer Beitive Air I Electric Subm	ailer Displaceme		Waterra Peristaltic tion Pump		Sampling Method: Other:	Disposable Bailer Extraction Port Dedicated Tubing				
				<u>W</u> t	ell Diameter		Diameter Multiplier 0,65				
1 Case Volume	Gals.) X Speci	3 fied Volum	$\frac{1}{\text{les}} = \frac{4.7}{\text{Calculated Vo}}$	Gals.	1" 2" 3"	0.04 4" 0.16 6" 0.37 Other	1.47				
Time	Temp	pН	Cond. (mS or (£\$)	Turbid (NTU	- I	Gals. Removed	Observations				
1533	22,3	7.0	802	7/00	00	1,4	Cloudy, odor				
1535	21.9	6.7	801	710	60	7,8	<i>il'</i>				
1538	721	6.7	791	7/9	000	4,2	cloudyour				
						Ferrous Fron	1=2,4				
		·									
Did well de	water?	Yes (N ₀	Gallons a	actually	y evacuated:	4.2				
Sampling D	ate: 9 17	3(04)	Sampling Time	e: /54.	5	Depth to Wate	r: 15,61				
Sample I.D.	: 1	NW-3		Laborato	ry:	Kiff CalScience	Other_CTT				
Analyzed fo	or: TPH-G	BTEX	MTBE TPH-D	Oxygenate	es (5)	Other: Scc	Soge				
EB I.D. (if a	applicable)):	@ Time	Duplicate	e I.D. ((if applicable):					
Analyzed fo	or: TPH-G	втех	MTBE TPH-D	Oxygenate	es (5)	Other:					
D.O. (if req	'd): Pi	e-purge:		mg/L	P	ost-purge:	Oi y mg/L				
O.R.P. (if re	eq'd): Pi	e-purge:		mV	P	ost-purge:	m∇				

		W	ELL MONIT	ORING DATA	SHELT						
Project #:	0409/3	-M)i		Client: Sfc	llar@C	okland					
Sampler:	M			Date: 9/13/04							
Well I.D.:	Mu			Well Diameter 2 3 4 6 8							
Total Well I	Depth (TD): 15	AT 24,29	Depth to Water	(DTW): Z	4.29 15,17					
Depth to Fre	ee Product	: ~	,	Thickness of F	ree Product (fee	t):					
Referenced	to:	(PVC)	Grade	D.O. Meter (if:	req'd): (YSI HACH					
DTW with 8	30% Recha	urge [(H	leight of Water	Column x 0.20)	+ DTW]:	16.99					
· ·	Bailer Disposable Bailer Positive Air I Electric Subm	Displaceme		Waterra Peristaltic	Sampling Method: Other:	Bailer Disposable Bailer Extraction Port Dedicated Tubing					
1 Case Volume	fals.) X	3 Fied Volun	$\frac{1}{\text{ces}} = \frac{4.5}{\text{Calculated Vo}}$	Gols. June	Multiplier Well D 0.04 4" 0.16 6" 0.37 Other	iameter Multiplier 0.65 1.47 radius ² * 0.163					
Time	Temp (°F or Ĝ	pН	Cond. (mS or (μS)	Turbidity (NTUs)	Gals. Removed	Observations					
1303	22,2	6.3	540	71000	1.5	closery, tan					
1306	210	6.Z	545	71000	3	'ul					
1309	20.7	6.2	571	7/200	4,5	dowly, tan					
					Ferrious Fire	n = 0.0					
		:			*	*					
Did well de	water?	Yes	No)	Gallons actuall	y evacuated:	4.5					
Sampling D	ate: 9/1	3/04	Sampling Time	: 13th 13Z	Depth to Water	r: <i>16.99</i>					
Sample I.D.	: //	we	/	Laboratory:	Kiff CalScience	Other GT					
Analyzed fo	r: TPH-G	BTEX	MTBE TPH-D	Oxygenates (5)	Other: See	Soft					
EB I.D. (if a	pplicable)	:	@ Time	Duplicate I.D. ((if applicable):	,					
Analyzed fo	or: TPH-G	BTEX	MTBE TPH-D	Oxygenates (5)	Other:						

mV

D.O. (if req'd):

O.R.P. (if req'd):

Pre-purge:

Pre-purge:

Post-purge:

Post-purge:

WELL MONITORING DATA SHEET

Project #:	04091	3-M)	14	Client:	Ste	(lar	@	ookland					
Sampler:	M		,	Date:	9/1	3/04							
Well I.D.:	Mw	-5		Well D	iameter:	2 3	4_	6 8					
Total Well I	Depth (TD)): Z	90,09	Depth to Water (DTW): 17.07									
Depth to Fre	e Product:	,		Thickne	Thickness of Free Product (feet):								
Referenced t	to:	PVO	Grade	D.O. M	eter (if i	req'd):		YSI HACH					
DTW with 8	30% Recha	rge [(H	eight of Water	Column	x 0.20)	+DTW]	:	1767					
	Bailer Bis posable Ba Positive Air E Electric Subm	isplaceme	nt Extrac Other	Waterra Peristaltic tion Pump	Well Diamete	Sampling Sampling	Other:	Bailer Disposable Bailer Extraction Port Dedicated Tubing					
<u> </u>	Sals.) X	3 Tied Volum	es Calculated Vo	Gals.	1" 2" 3"	0.04 0.16 0.37	4" 6" Other	0.65 1.47 rndius ² * 0.163					
Time	Temp (°F or	pH	Cond. (mS or as)	1	oidity 'Us)	Gals. Rei	noved	Observations					
1621	70,6	66	900	66	$\widehat{\mathfrak{I}}$	0.	5	clardy, shows, Do					
1623	19,8	66	834	7.	(000)	/	<u>'</u>	111					
1625	704	66	834	7	1000	1.	5	Chody Sheen on					
						Feel	005 1	ron=3.8					
Did well de	water?	Yes (No)	Gallon	s actuall	y evacua	ted:	105					
Sampling D	ate: 9/	3/04	Sampling Tim	e: <i>[6]</i>	30	Depth to	Water	r: 17.45					
Sample I.D.	: alu	5-5		Labora	tory:	Kiff Ca	IScience	Other CF/					
Analyzed fo	or: TPH-G	BTEX	мтве т рн-D	Oxygena	ates (5)	Other:	Sec	Scape					
EB I.D. (if a	applicable)):	@ Time	Duplic	ate I.D.	(if applic	able):						
Analyzed fo	or: TPH-G	втех	MTBE TPH-D	Oxygen	ates (5)	Other:							
D.O. (if req	'd): P	re-purge:		mg/L	7	ost-purge:		0.9 mg/L					
O.R.P. (if re	eq'd): Pr	re-purge:		mV	P	ost-purge:		mV					

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WELL MONITORING DATA SHEET

Project #:	0409	713-1	M)4	Client:	5te	lor tavi	r. a Coklund Auto				
Sampler:	MO			Date:	9/1	3/4					
Well I.D.:	MM	-6	Non	Well Diameter: 3 3 4 6 8							
Total Well 1	Depth (TD): 	# 20.15	Depth to Water (DTW): 25 16,13							
Depth to Fre	ee Product	:	•	Thickness of Free Product (feet):							
Referenced	to:	PV	Grade	D.O. M	leter (if	req'd):	YSI HACH				
DTW with 8	80% Rech	arge [(H	leight of Water	Colum	1 x 0.20)) + DTW]:	16.93				
Purge Method:	Bailer Disposable Bailer Positive Air I Electric Subm	Displaceme		Waterra Peristaltic tion Pump		Sampling Method Other	Disposable Bailer Extraction Port Dedicated Tubing				
O, 6 (C	ials.) X	5 fied Volum	= //S Calculated Vo	_ Gals.	Well Diamete 1" 2" 3"	r Multiplier Well 0.04 4" 0.16 6" 0.37 Othe	Diameter Multiplier				
]		<u> </u>]				
Time	Temp	pН	Cond. (mS or µS)	1	oidity (TUs)	Gals. Removed	Observations				
14/2	218	62	1052	7	\QQQ	i6	C/OUDY, Octor				
1415	21.5	68	1055	7	(000)	1,2	11/				
1417	21.4	6.7	1057	70	vod	18	Cloudy, odor				
				-		FUlio-5 Iro	= 0.8				
						NW-17.7					
Did well dev	water?	Yes	WS.	Gallons	s actuall	y evacuated:	1,8				
Sampling D	ate: 9/1	3/04	Sampling Time	e: <i>170</i>	00)	Depth to Wate	er: 16.55				
Sample I.D.	: <u>' </u>	mura	? ?	Labora	tory:	Kiff CalScience	e Other <u>C+T</u>				
Analyzed fo	т: трн-с	втех	MTBE TPH-D	Oxygena	ates (5)	Other: Srr	Scope				
EB I.D. (if a	pplicable)	:	@ Time	Duplica	ate I.D. ((if applicable):	,				
Analyzed fo	r: TPH-G	BTEX	MTBE TPH-D	Oxygena	ates (5)	Other:					
D.O. (if req'	d): Pr	e-purge:		աñ\ ^r	P	ost-purge:	Or T mg/L				
O.R.P. (if re	eq'd): Pr	e-purge:		mV	P	ost-purge:	mV				

WELL MONITORING DATA SHELL

Project #:	09091	3-M	14	Client:	51916	4/ (8) C-6	ek (ava
Sampler:	n M)			Date:	9/13	104	
Well I.D.:	Min	1-7		Well D	iameter:	<u> 3 4</u>	6 8
Total Well I	Depth (TD)): /9	1,96	Depth t	o Water	(DTW): /	6,33
Depth to Fre	ee Product		programme of the second	Thickn	ess of Fi	ree Product (fee	et):
Referenced	to:	PVC	Grade	D.O. M	leter (if	req'd): <	YSI HACH
DTW with 8	30% Recha	rge [(H	eight of Water	Columr	x 0.20)	+ DTW]:	17.06
Purge Method:	Bailer Disposable Ba Positive Air D Electric Subm	isplaceme		Waterra Peristaltic tion Pump		Sampling Method: Other:	Disposable Bailer Extraction Port Dedicated Tubing
6 (C	Gals.) X Specil	Fied Volum	es Calculated Vo	_Gals.	Well Diamete 1" 2" 3"	r Multiplier Well 1 0.04 4" 0.16 6" 0.37 Other	Dinmeter Multiplier 0.65 1.47 radius ² * 0.163
Time	Temp	pН	Cond. (mS or μS)		oidity (TUs)	Gals. Removed	Observations
1347	21.5	6.9	756	7	/60G	ι6	Chudy fun
1349	21,1	6.7	793	7/	1000	1,2	cl
1351	21,0	66	804	70	000	1.8	Cloudy, tal
						FUNEYS IN	~= 2.4
				:			
Did well de	water?	Yes (No)	Gallon	s actuall	y evacuated:	1.8
Sampling D	ate: 9/13	3/04	Sampling Time	a:	1400	Depth to Wate	r: 17,06
Sample I.D.	: M	W-7	-	Labora	tory:	Kiff CalScience	Other C+T
Analyzed fo	or: TPH-G	втех	MTBE TPH-D	Oxygena	ates (5)	Other: 50 - 5	ape
EB I.D. (if a	applicable)	:	@ Time	Duplic	ate I.D.	(if applicable):	
Analyzed for	or: TPH-G	втех	МТВЕ ТРН-D	Oxygen		Other:	
D.O. (if req	'd): Pr	e-purge:		^ը /Ը	P	ost-purge:	2.6 mg/L
O.R.P. (if re	eq'd): Pr	e-purge:		mV	P	ost-purge:	mV

WELL MONITORING DATA SHEET

Project #:	040	2913-	MY	Client:	GAC	1016	<u> </u>	De lo q			
Sampler:	ALL	8=	M)	Date:	9/1	3/04					
Well I.D.:	m	w-8		Well D	iameter:	2 3	4	6 8			
Total Well I	Depth (TD): /	7.90	Depth to Water (DTW): /4.43							
Depth to Fre	ee Product	:		Thickness of Free Product (feet):							
Referenced	to:	PVC	Grade	D.O. M	leter (if	req'd):	(YSI HACH			
DTW with 8	30% Recha	arge [(H	leight of Water	Colum	ı x 0.20)	+ DTW] :	15.54			
Purge Method:	Builer Disposable Ba Positive Air I Electric Subm	Displaceme		Waterra Peristaltic tion Pump		Sampling	Method: Other:	Bailer Disposable Bailer Extraction Port Dedicated Tubing			
O. (Case Volume	Jals.) X	3 fied Volun	$= \frac{2.7}{\text{Calculated Vo}}$	Gals.	Well Diamete t" 2" 3"	r Multipiier 0.04 0.16 0.37	Well D 4" 6" Other	figracter Multiplier 0.65 1.47 radius ² * 0.163			
Time	Temp	рН	Cond. (mS or (15)	1	oidity TUs)	Gals. Re	moved	Observations			
1432	21.8	7.1	913	7	(000)	0.	9	y			
1434	21,4	68	504	7/9	pac,	lit	3	ι([′]			
1436	21.2	68	542	7/	1000	7.	7	ckidy			
						Francius	From	~=0.0			
Did well de	water?	Yes C	No	Gallons	actuall	y evacua	ted: -	7.7			
Sampling D	ate: 9/13	3/04	Sampling Time	e: (4	10	Depth to	Water	:: 15.21			
Sample I.D.	: pu	<u>8-ٺر</u>		Labora	tory:	Kiff Ca	Science	Other Ct/			
Analyzed fo	r: TPH-G	BTEX	MTBE TPH-D	Oxygena	ites (5)	Other:	Sec	Scope			
EB I.D. (if a	pplicable)) :	@ Time	Duplic	ate I.D. ((if applic	able):				
Analyzed fo	r: TPH-G	BTEX	MTBE TPH-D	Oxygena		Other:					
D.O. (if req'	d): Pr	e-purge:		mg/ _L	.P	ost-purge:		1.3 mg/L			
O.R.P. (if re	q'd): Pr	e-purge:		mV	P	ost-purge:		mV			

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Project Owner STELLAR Site Address 2.98 STOTH ST ROCKBERT, CA Project Name OFCHIST Amp L Project Number OFO7/3 MD4 Field Sample Number Death Date		Pro Tel	implers: (Signature)	3123 3859		- - - - /		Parloy ON	To the state of th	2000				1	T /	//	1		//	Remark	5	
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NW-5	630		3000521Land		/		5	X	×	X	4	╂╼╌╂				-	\vdash	 		·		
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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: 20-SEP-04

Lab Job Number: 174642

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:

perazions Manager

This package may be reproduced only in its entirety.

NELAP # 01107CA

Page 1 of _59



CASE NARRATIVE

Laboratory number: 174642

Client: Stellar Environmental Solutions

Location: Oakland Auto Works

Request Date: 09/14/04 Samples Received: 09/14/04

This hardcopy data package contains sample and QC results for eight water samples, requested for the above referenced project on 09/14/04. The samples were received cold and intact.

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

Response exceeding the instrument's linear range was observed for trifluorotoluene (FID) in MW-3 (lab # 174642-003); affected data was qualified with "b". High surrogate recoveries were observed for trifluorotoluene (FID) in MW-2 (lab # 174642-002) and MW-3 (lab # 174642-003), due to interference from coeluting hydrocarbon peaks. High surrogate recovery was observed for bromofluorobenzene (FID) in MW-3 (lab # 174642-003), due to interference from coeluting hydrocarbon peaks. No other analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B):

No analytical problems were encountered.

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

High surrogate recovery was observed for bromofluorobenzene in the method blank for batch 94737. No other analytical problems were encountered.

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Field Sample Number	Location/	Date	Time	Sample Type	Type/Size	of Container	Pri	eservation Chemical	7/		1	V	† D	$\frac{1}{2}$	7 /		/	Ι,	/ ,	Ι.			
(NW-1	Depth	1/13/04	Y: fo	iype	3vex	SZILAM	1	- Cricinal	1	5	×	X	y	У				Í					
/WW-2		1 1	1520			s 11KAmi		,	A.	塔		X	1	У									
m-3			1545			21 Ambo		/		5	χ	K	×	K									
ms-4_			1325			244		7		3	X	É	7	ĸ									
mu-s			(30			2 / Lamb		/		5	X	K	x	4									
nw-6			l'Iric		1	12 KAN		-/		5	k	4	×	X			_						
nw-7			1	OD T	T " '	2 444		1		3	X	悪	7	X		_							
mu-8		V	1940	1	3000	SZ IDAN	Der _	*	_	5	X	¥	1 %	X		_							
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* Stellar Environmental Solutions

2198 Sixth Street #201, Berkeley, CA 94710



Total Volatile Hydrocarbons Oakland Auto Works 174642 Location: Lab #: EPA 5030B Stellar Environmental Solutions Client: Prep: EPA 8015B Analysis: STANDARD Project#: 09/13/04 Sampled: Matrix: Water 09/14/04 ug/L Received: Units: 94628 Batch#:

Field ID:

MW-1 SAMPLE

Type: Lab ID:

174642-001

Diln Fac: Analyzed: 20.00

09/16/04

Analyte Gasoline C7-C12 Result 9,100 ,000

*RBC Surrogate 101 70-141 Trifluorotoluene (FID) 100 80-143 Bromofluorobenzene (FID)

Field ID: Type:

MW-2

SAMPLE

Diln Fac:

1.000

Analyzed:

09/15/04

174642-002 Lab ID:

Result Analyte Gasoline C7-C12 1,500 L

Limite Surrogate 70-141 148 Trifluorotoluene (FID) 80-143 Bromofluorobenzene (FID) 120

Field ID:

Type: Lab ID: MW - 3SAMPLE

174642-003

Diln Fac:

1.000

Analyzed:

09/16/04

Analyte Result 5,400 L Y 50 Gasoline C7-C12

311594001240 212 * >LR b 70-141 151 * 80-143 Trifluorotoluene (FID) Bromofluorobenzene (FID)

Field ID:

Lab ID:

Type:

MW-4SAMPLE

174642-004

Diln Fac:

Analyzed:

1.000 09/15/04

Result RL Analyte Gasoline C7-C12 ND <u>50</u>

RECOMPANIES Surrogate Trifluorotoluene (FID) 96 70-141 105 80-143 Bromofluorobenzene (FID)

^{*=} Value outside of QC limits; see narrative L= Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

b= See narrative ND= Not Detected

RL= Reporting Limit

>LR= Response exceeds instrument's linear range Page 1 of 3

Sample Name : 174642-001,94628,tvh

leName : G:\GC07\DATA\259A029.raw

ethod : TVHBTXE

tart Time : 0.00 min Scale Factor: 1.0

.00 min End Time : 26.00 min

Plot Offset: 10 mV

Sample #: a1.0

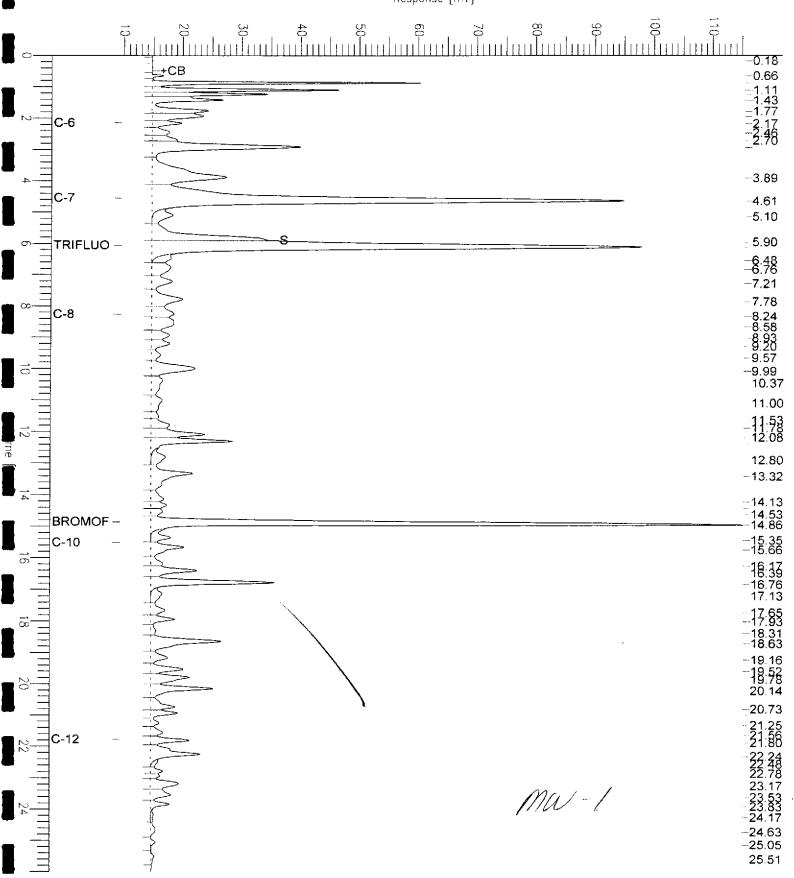
al.0 Page 1 of 1

Date : 9/16/04 10:29 AM

Time of Injection: 9/16/04 04:14 AM
Low Point: 9.63 mV High Point: 115.43 mV

Plot Scale: 105.8 mV





ample Name : 174642-002,94628,tvh ileName

: G:\GC07\DATA\259A021.raw

ethod : TVHBTXE

tart Time : 0.00 min cale Factor: 1.0

End Time : 26.00 min

Plot Offset: -1 mV

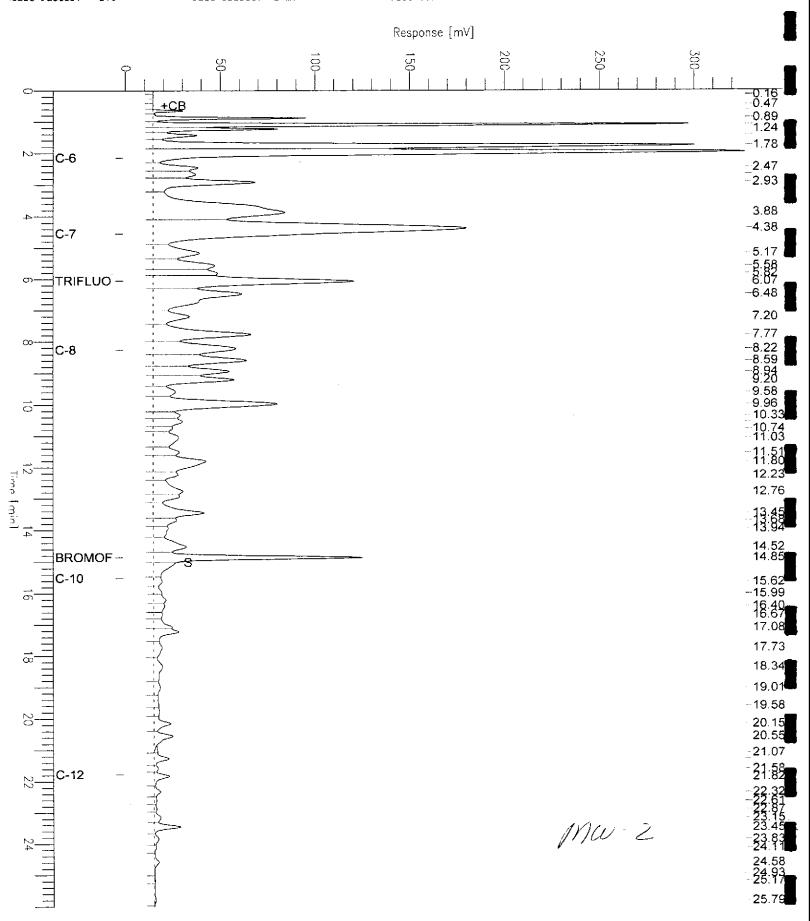
Sample #: a1.0 Date : 9/16/04 10:29 AM

Time of Injection: 9/15/04 11:34 PM

High Point : 326.91 mV Low Point : -1.15 mV

Page 1 of 1

Plot Scale: 328.1 mV



Bample Name : 174642-003,94628,tvh : G:\GC07\DATA\259A028.raw leName

: TVHBTXE eart Time : 0.00 min

thod

End Time : 26.00 min Plot Offset: -11 mV

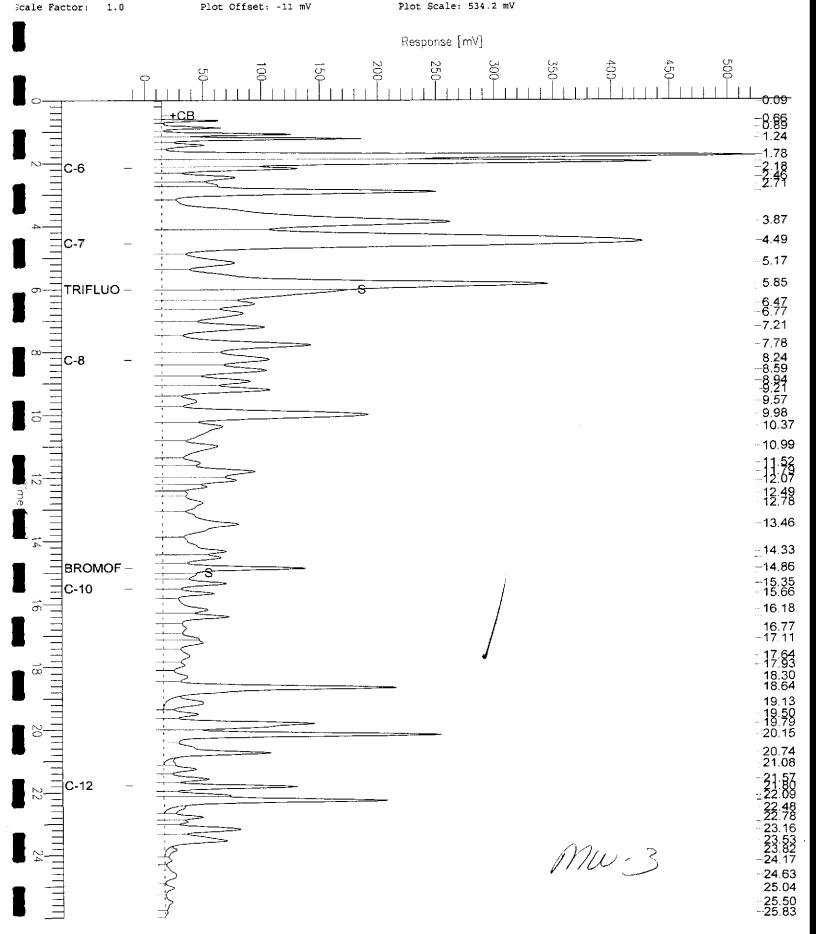
Sample #: a1.0

Page 1 of 1

Date: 9/16/04 10:29 AM Time of Injection: 9/16/04 03:39 AM

High Point : 523.41 mV Low Point : -10.82 mV

Plot Scale: 534.2 mV





Total Volatile Hydrocarbons Oakland Auto Works Lab #: 174642 Location: Prep: Analysis: EPA 5030B Stellar Environmental Solutions Client: EPA 8015B STANDARD Project#: Sampled: 09/13/04 Matrix: Water 09/14/04 Received: ug/L Units: Batch#: 94628

Field ID:

Type:

Lab ID:

MW-5 SAMPLE

174642-005

Diln Fac: Analyzed: 20.00

09/16/04

Analyte Gasoline C7-C12 Result <u>1,000</u> 13,000

daima ka Suzrogate Trifluorotoluene (FID) 100 70-141 98 80-143 Bromofluorobenzene (FID)

Field ID:

Type:

MW-6 SAMPLE

Diln Fac:

Analyzed:

1.000

09/16/04

174642-006 Lab ID:

Result Analyte 50 350 L Gasoline C7-C12

Surrogate 70-141 Trifluorotoluene (FID) 80-143 107 Bromofluorobenzene (FID)

Field ID:

Type: Lab ID:

MW - 7

SAMPLE

174642-007

Diln Fac:

Analyzed:

1.000

09/15/04

Analyte Result Gasoline C7-C12

RREC Limits Surrogate 91 Trifluorotoluene (FID) 70-141 100 80-143 Bromofluorobenzene (FID)

Field ID:

Type: Lab ID: 8-WM SAMPLE

174642-008

Diln Fac:

Analyzed:

1.000

09/16/04

Result Analyte 50 280 L Y Gasoline C7-C12

Surrogate	REC	Limits
Trifluorotoluene (FID)	104	70-141
Bromofluorobenzene (FID)	105	80-143

^{*=} Value outside of QC limits; see narrative L= Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard

b= See narrative ND≈ Not Detected

RL≈ Reporting Limit

>LR= Response exceeds instrument's linear range Page 2 of 3

Sample Name : 174642-005,94628,tvh

ileName : G:\GC07\DATA\259A030.raw

ethod : TVHBTXE

End Time : 26.00 min art Time : 0.00 min

Scale Factor: 1.0 Plot Offset: 10 mV

Page 1 of 1 Sample #: al.0

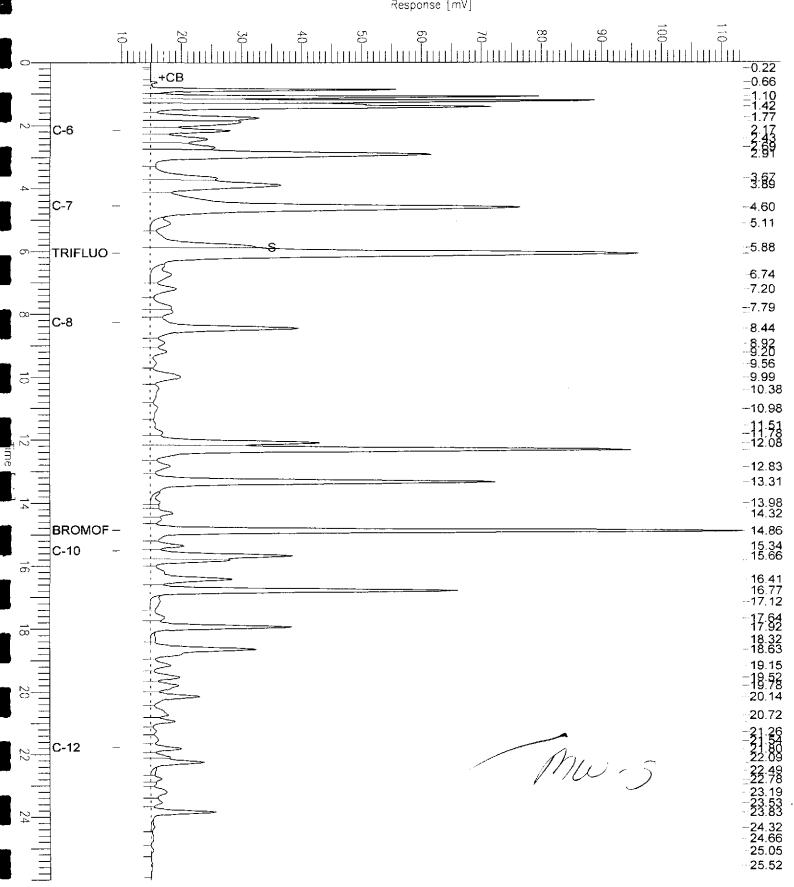
Date: 9/16/04 10:29 AM

Time of Injection: 9/16/04 04:49 AM

Low Point : 9.84 mV High Point : 113.61 mV

Plot Scale: 103.8 mV





Sample Name : 174642-006,94628,tvh ?ileName : G:\GC07\DATA\259A026.raw

: TVHBTXE 4ethod

Scale Factor:

3tart Time : 0.00 min

1.0

End Time : 26.00 min

Plot Offset: 9 mV

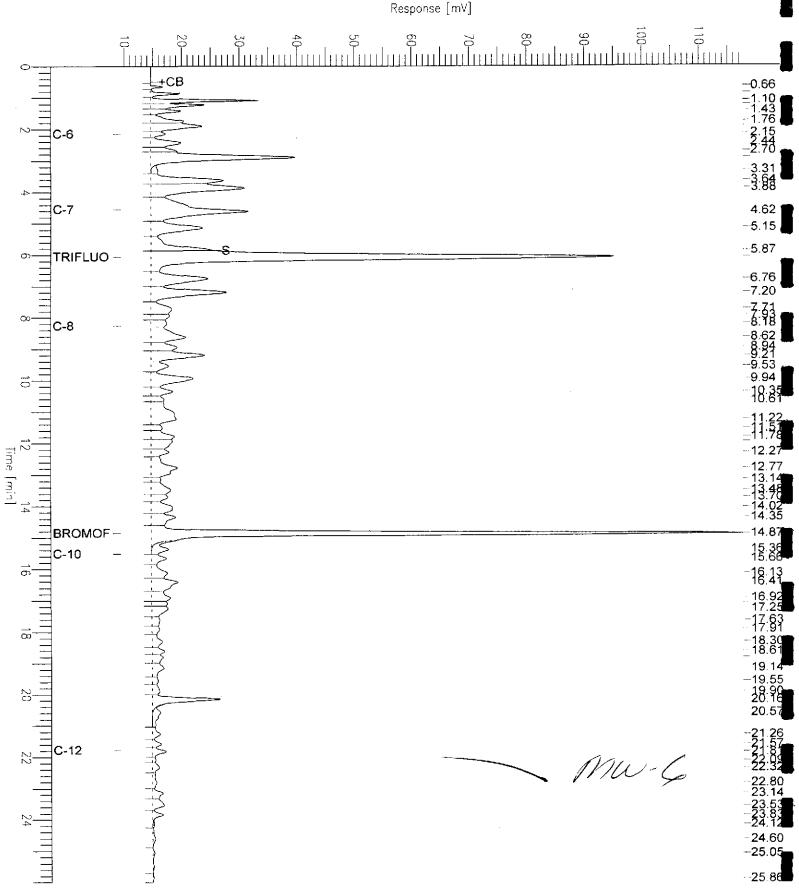
Sample #: a1.0

Page 1 of 1 Date: 9/16/04 10:29 AM

Time of Injection: 9/16/04 02:29 AM

High Point: 117.70 mV Low Point : 9.41 mV

Plot Scale: 108.3 mV



ample Name : 174642-008,94628,tvh leName : G:\GC07\DATA\259A027.raw

: TVHETXE

End Time : 26.00 min

art Time : 0.00 min cale Factor: 1.0

thod

Plot Offset: 7 mV

Sample #: a1.0

Date: 9/16/04 03:29 AM

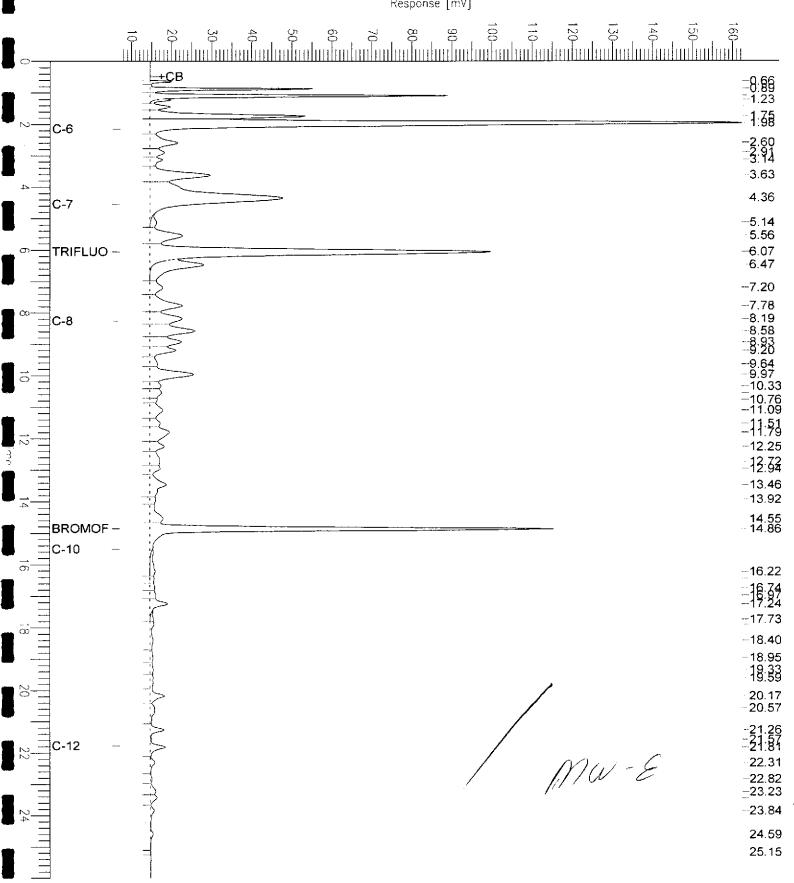
Time of Injection: 9/16/04 03:03 AM

High Point : 162.33 mV Low Point : 7.20 mV

Page 1 of 1

Plot Scale: 155.1 mV





Sample Name : ccv/lcs,qc264775,94628,04ws1636,5/5000

: g:\gc07\data\259a002.raw FileName

Method : TVHBTXE

Start Time : 0.00 min

Plot Offset: 0 mV

End Time : 26.00 min

Sample #:

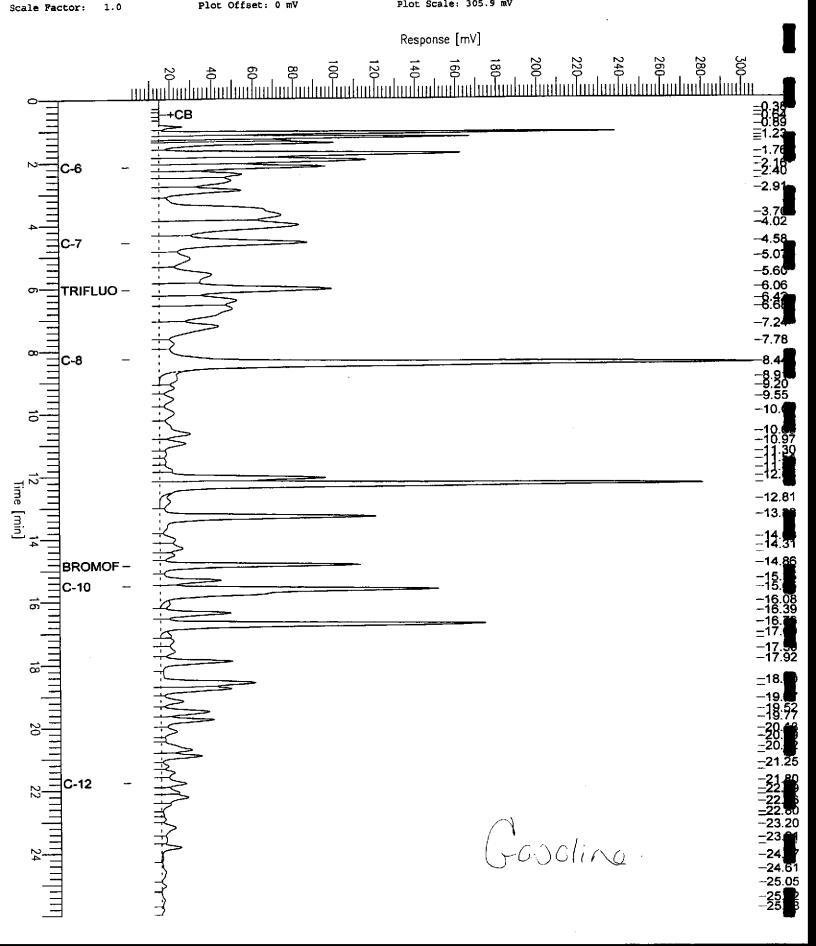
Page 1 of 1

Date : 9/15/04 02:02 PM

Time of Injection: 9/15/04 12:10 PM Low Point : 0.30 mV

High Point : 306.21 mV

Plot Scale: 305.9 mV





Total Volatile Hydrocarbons 174642 Stellar Environmental Solutions STANDARD Lab #: Location: Oakland Auto Works EPA 5030B Prep: Analysis: Client: EPA 8015B 09/13/04 09/14/04 Project#: Sampled: Water Matrix: ug/L 94628 Units: Received: Batch#:

'ype: Lab ID: BLANK QC264774

Diln Fac: Analyzed:

1.000 09/15/04

Analyte		RL	
Gasoline C7-C12	ND	50	

Surrogate	%REC	1556 \$ 65.	
Trifluorotoluene (FID)	89	70-141	
Bromofluorobenzene (FID)	93	80- <u>143</u>	

^{*=} Value outside of QC limits; see narrative L= Lighter hydrocarbons contributed to the quantitation Y= Sample exhibits chromatographic pattern which does not resemble standard

b= See narrative ND= Not Detected

RL= Reporting Limit

>LR= Response exceeds instrument's linear range Page 3 of 3



Batch QC Report

	Total Volati	ile Hydrocarbo	M8
Lab #:	174642	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	: STANDARD	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC264775	Batch#:	94628
Matrix:	Water	Analyzed:	09/15/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	2,277	114	80-120
<u> </u>				

Surrogate	%RE(Limits
Trifluorotoluene (FID)	109	70-141
Bromofluorobenzene (FID)	98	80-143



Batch QC Report

	Total Volat	ile Hydrocarbo	ing
	10021 7010.	3220 11/1200000	
Lab #:	174642	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	94628
MSS Lab ID	: 174661-007	Sampled:	09/10/04
Matrix:	Water	Received:	09/14/04
Units:	ug/L	Analyzed:	09/16/04
Dìln Fac:	1.000		

MS

Lab ID: QC264777

Analyte	MSS Result	Spiked	Result	4 RJ	(4) primite
Gasoline C7-C12	8.377	2,000	1,987	99	80-120

Surrogate	%REC	Limits	
Trifluorotoluene (FID)	110	70-141	
Bromofluorobenzene (FI	D) 102	80-143	

Type:

MSD

Lab ID: QC264778

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,997	99	80-120	1	20

Surrogat	8	%REC_	Limits
	FID)	105	70-141
Bromofluorobenzene	(FID)	100	80-143



Total Extractable Hydrocarbons Oakland Auto Works Lab #: 174642 Location: Client: EPA 3520C Stellar Environmental Solutions Prep: EPA 8015B 09/13/04 Project#: STANDARD <u> Analysis:</u> Sampled: Matrix: Water 09/14/04 Received: Units: ug/L 09/16/04 1.000 Prepared: Diln Fac: <u> Analyzed:</u> 09/17/04 94684 <u>Batch#:</u>

ield ID: ype:

MW-1

SAMPLE

Lab ID:

174642-001

RL Analyte 50 Diesel Cl0-C24

Surrogate *REC 53-143 Hexacosane

'ield ID: 'ype:

MW-2

SAMPLE

Lab ID:

174642-002

Analyte Result 50 280 L Y Diesel C10-C24

Surrogate Limits Hexacosane 53-143

'ield ID:

MW - 3

Lab ID:

174642-003

SAMPLE 'ype:

Analyte Result 1,500 L 50 Diesel C10-C24

Surrogate 53-143 Hexacosane

?ield ID:

Type:

MW-5

SAMPLE

Lab ID:

174642-005

Result Analyte 50

1,900 L Y Diesel Cl0-C24

RRC Limits Surrogate 53-143 Hexacosane 84

ield ID: Cype:

MW-6 SAMPLE Lab ID:

174642-006

Result RL Analyte Diesel Clo-C24 600 L Y 50

Surrogate &REC Limits Hexacosane

L= Lighter hydrocarbons contributed to the quantitation

Y= Sample exhibits chromatographic pattern which does not resemble standard TD= Not Detected

REPORTING Limit Page 1 of 2

Sample Name : 174642-001,94684

: G:\GC11\CHA\260A058.RAW

ethod : ATEH244S.MTH

tart Time : 0.01 min Scale Factor: 0.0

End Time : 20.45 min

Plot Offset: 11 mV

Sample #: 94684

Date: 9/19/04 12:49 PM

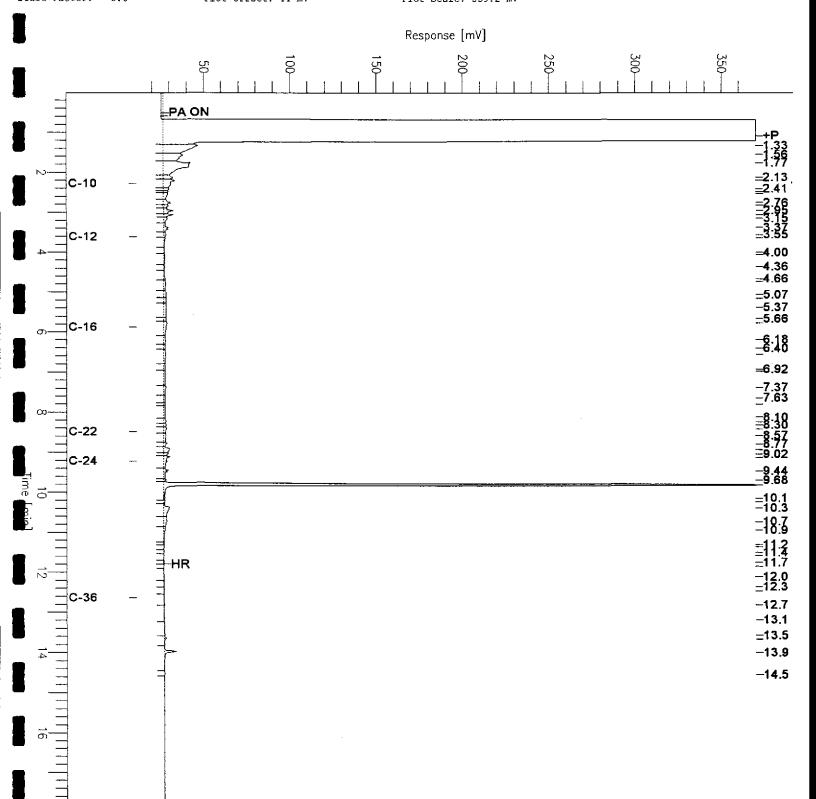
Time of Injection: 9/17/04 08:13 PM

Low Point : 10.82 mV

High Point : 369.99 mV Plot Scale: 359.2 mV

Page 1 of 1

mw-l



Sample Name : 174642-002,94684

: G:\GC11\CHA\260A059.RAW

: ATEH244S.MTH Method

Start Time : 0.01 min Scale Factor:

End Time : 20.45 min

Plot Offset: 11 mV

Sample #: 94684

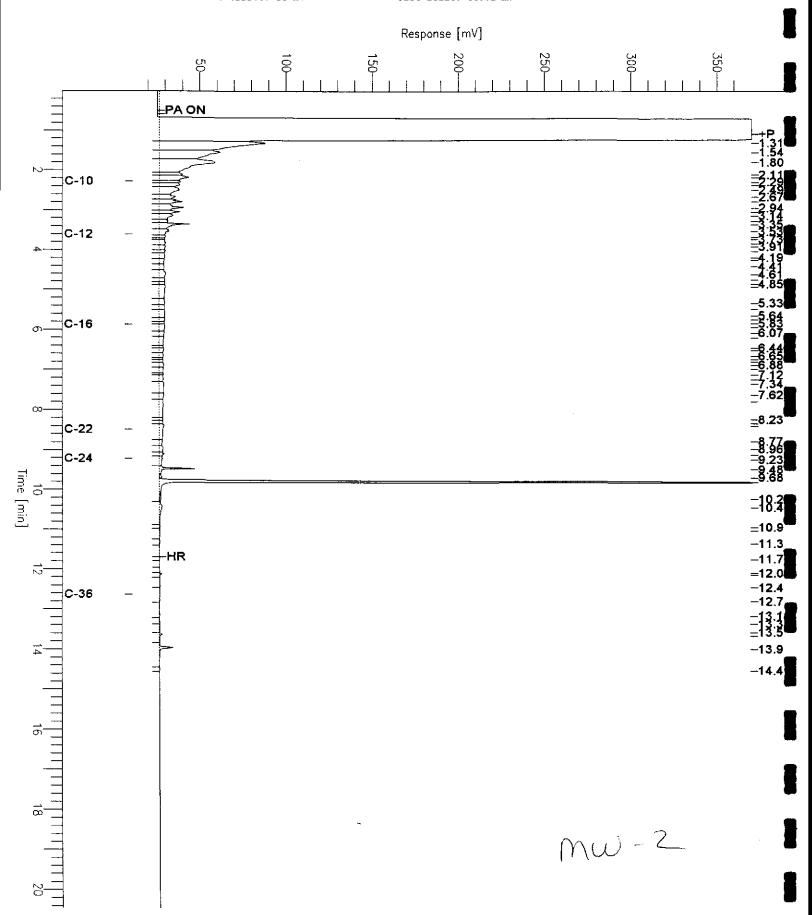
Date: 9/19/04 12:49 PM Time of Injection: 9/17/04 08:43 PM

Low Point : 10.80 mV

High Point : 369.98 mV

Page 1 of 1

Plot Scale: 359.2 mV



Sample Name : 174642-003,94684

: G:\GC11\CHA\260A060.RAW

ethod : ATEH244S.MTH

tart Time : 0.01 min Scale Factor: 0.0

End Time : 20.45 min Plot Offset: 15 mV

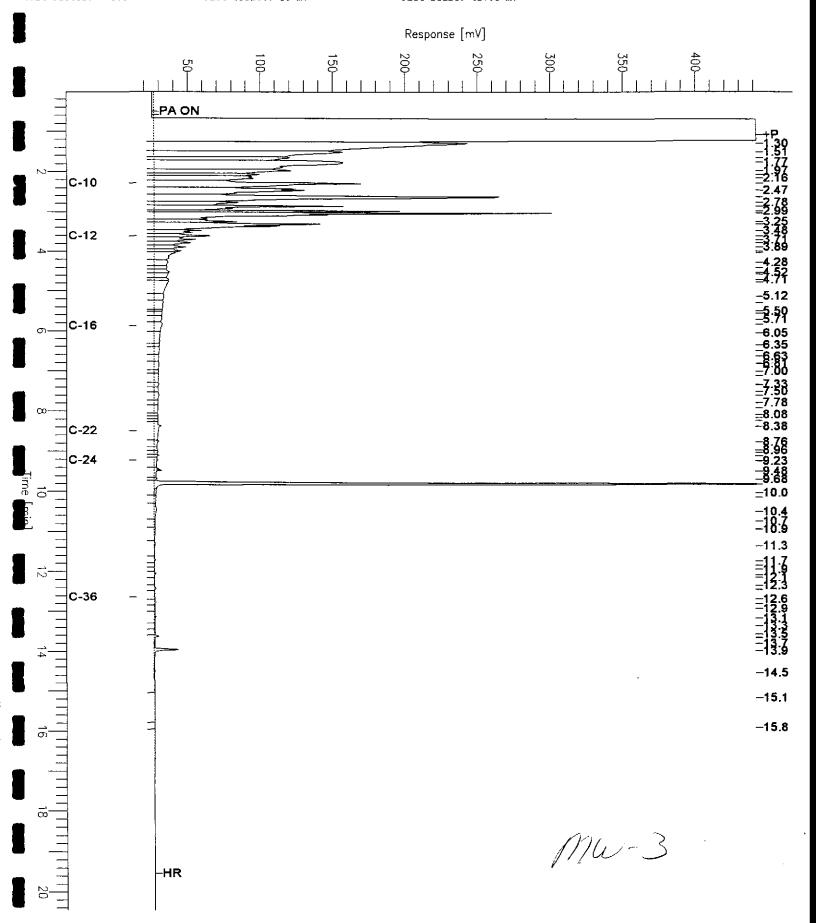
Page 1 of 1 Sample #: 94684

Date: 9/19/04 12:50 PM

Time of Injection: 9/17/04 09:12 PM

High Point : 441.80 mV Low Point : 14.54 mV

Plot Scale: 427.3 mV



Sample Name: 174642-005,94684

: G:\GC11\CHA\260A061.RAW FileName

: ATEH244S.MTH

Start Time : 0.01 min Scale Factor: 0.0

End Time : 20.45 min

Plot Offset: -1 mV

Sample #: 94684 Date: 9/19/04 12:50 PM

Time of Injection: 9/17/04 09:41 PM

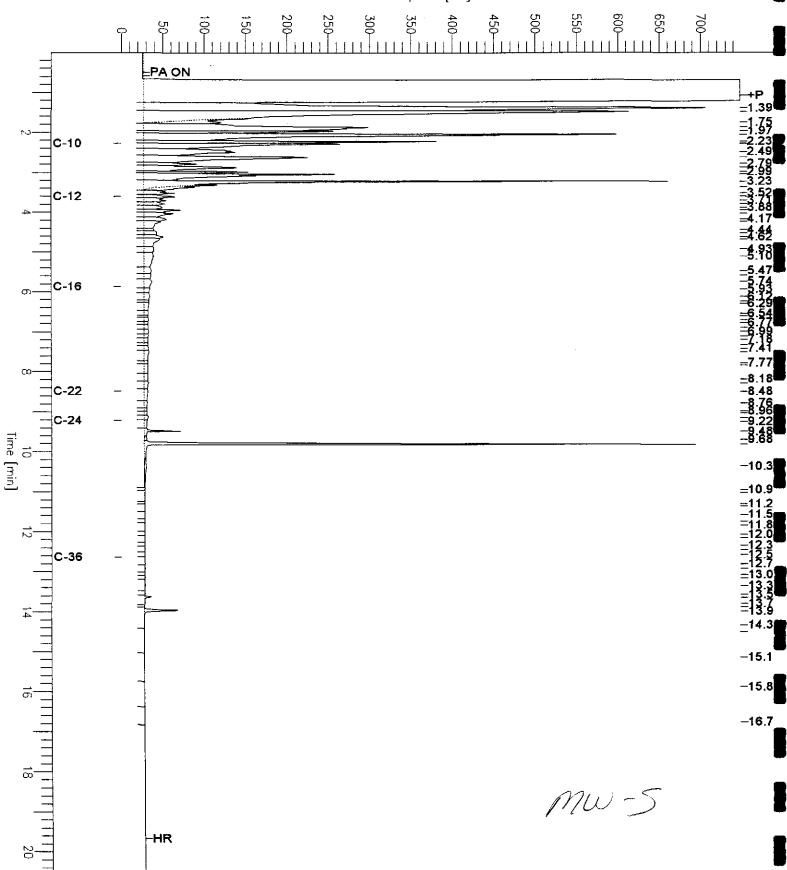
Low Point : -0.70 mV

High Point: 747.95 mV

Page 1 of 1

Plot Scale: 748.6 mV





Sample Name: 174642-006,94684

: G:\GC11\CHA\260A062.RAW LleName

: ATEH244S.MTH

art Time : 0.01 min Scale Factor: 0.0

End Time : 20.45 min Plot Offset: 11 mV

Sample #: 94684

Date: 9/19/04 12:51 PM

Time of Injection: 9/17/04 10:11 PM

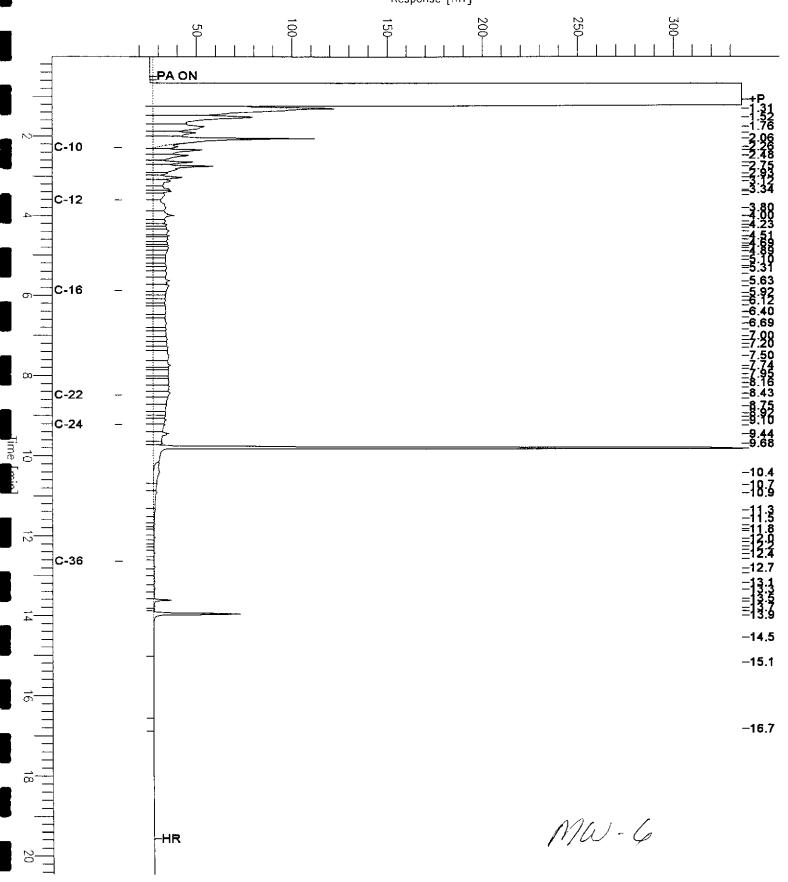
Low Point : 10.75 mV

Plot Scale: 325.2 mV

High Point: 335.93 mV

Page 1 of 1







Total Extractable Hydrocarbons 174642 Oakland Auto Works Location: Lab #: EPA 3520C Stellar Environmental Solutions Prep: Client: EPA 8015B Project#: STANDARD Analysis: 09/13/04 09/14/04 09/16/04 Sampled: Matrix: Water Units: ug/L Received: Prepared: 1.000 Diln Fac: 09/17/04 Batch#: 94684 <u> Analyzed:</u>

'ield ID: 'ype: 8-WM

SAMPLE

Lab ID:

174642-008

Analyte	Result	RI
Diesel C10-C24	2,600 L Y	50

Surrogate *REC Limits
Hexacosane 112 53-143

'ype: .ab ID: BLANK

QC264988

Cleanup Method: EPA 3630C

Anais	te Result		
Diesel Cl0-C24	ND	50	

Surrogate %REC Limits
Hexacosane 100 53-143

L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit
Page 2 of 2

Sample Name : 174642-008,94684

lleName : G:\GC11\CHA\260A063.RAW

ethod : ATEH244S.MTH

Part Time : 0.01 min Scale Factor: 0.0 End Time : 20.45 min

Plot Offset: 3 mV

Sample #: 94684

Date: 9/19/04 12:52 PM

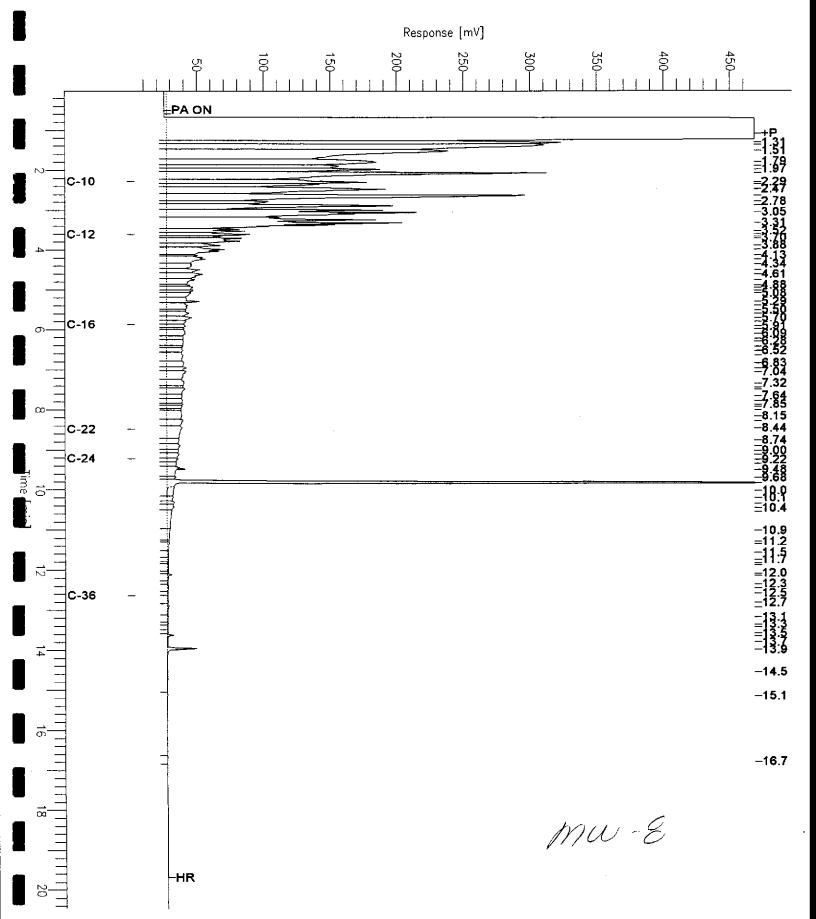
Time of Injection: 9/17/04 10:40 PM

Low Point : 3.18 mV

High Point : 468.29 mV

Page 1 of 1

Plot Scale: 465.1 mV



le Name : ccv,04ws1621,dsl

0.0

: G:\GC13\CHB\261B003.RAW Name

od t Time : 0.01 min

e Factor:

: BTEH247S.MTH

: 19.99 min End Time

Plot Offset: 25 mV

Sample #: 500mg/L Date : 9/17/04 11:16 AM

Time of Injection: 9/17/04 10:53 AM

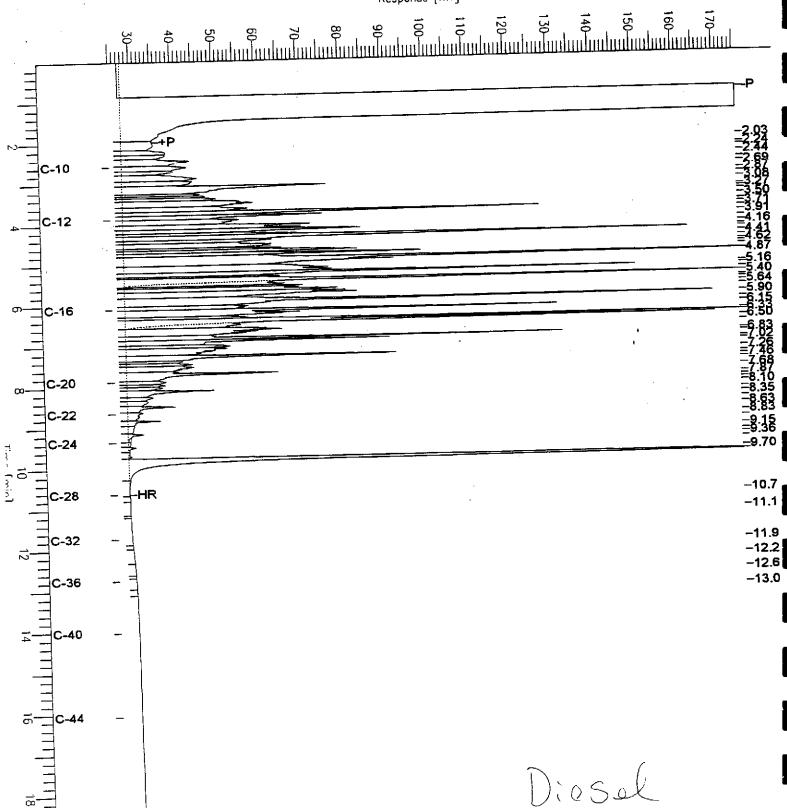
Low Point : 24.96 mV

High Point : 175.56 mV

Page 1 of 1

Plot Scale: 150.6 mV







Batch QC Report

Total Extractable Hydrocarbons

ab #: 174642 Location: Oakland Auto Works

EPA 3520C lient: Stellar Environmental Solutions Prep: Project#: STANDARD Analysis: EPA 8015B

atrix: Water Batch#: 94684 nits: ug/L Prepared: 09/16/04 Diln Fac: 1.000 09/17/04 Analyzed:

уре:

ВŞ

Cleanup Method: EPA 3630C

b ID: QC264989

%REC Limits Analyte Spiked Result iesel C10-C24 2,500 2,453 98 51-131

Surrogate %REC Limits

92 53-143 <u>H</u>exacosane

BSD

Cleanup Method: EPA 3630C

QC264990 ID:

A nalyte	Spiked	Result	%REC	Limits	RPD) Lim
iesel C10-C24	2,500	2,460	98	51-131	0	42

Surrogate %REC Limits exacosane 86 53-143



	Purgeable Am	comatics by GC	:/ms
Lab #: 17	74642	Location:	Oakland Auto Works
	tellar Environmental Solutions	Prep:	EPA 5030B
	TANDARD	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	94737
Lab ID:	174642-001	Sampled:	09/13/04
Matrix:	Water	Received:	09/14/04
Units:	ug/L	Analyzed:	09/20/04
Diln Fac:	10.00		

Analyte	Result	RL	
MTBE	7.2	5.0	
Benzene	920	5.0	
Toluene	19	5.0	
Chlorobenzene	ND	5.0	
Ethylbenzene	82	5.0	
m,p-Xylenes	140	5.0	
o-Xylene	61	5.0	
1,3-Dichlorobenzene	ND	5.0	
1,4-Dichlorobenzene	ND	5.0	
1,2-Dichlorobenzene	ND	5.0	

Surrogate	%REC	Limits		
1,2-Dichloroethane-d4	104	80-120	 	
Toluene-d8	105	80-120		•
Bromofluorobenzene	106	80-122	 	·



	Pu	rgeable Aroma	itics by	gc/ms
T - 1 - 4	174642		ion	Oakland Auto Works
Lab #:	174642		ocation:	
Client:	Stellar Environmental	Solutions I	rep:	EPA 5030B
Project#:	STANDARD	P	malysis:	EPA 8260B
Field ID:	MW-2	E	Batch#:	94710
Lab ID:	174642-002	9	Sampled:	09/13/04
Matrix:	Water	F	Received:	09/14/04
Units:	ug/L	P	malyzed:	09/18/04
Diln Fac:	1.000			

Analyte	Result	RL
MTBE	130	0.5
Benzene	14	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	0.6	. 0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	86	80-120
Toluene-d8	95	80-120
Bromofluorobenzene	116	80-122



	Purgeable An	romatics by GC	J/MS
Lab #:	174642	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	1, 2224,7	Batch#:	94710
Lab ID:	174642-003	Sampled:	09/13/04
Matrix:	Water	Received:	09/14/04
Units:	ug/L	Analyzed:	09/18/04
Diln Fac:			

Analyte	Result	RL
MTBE	110	0.5
Benzene	70	0.5
Toluene	3.2	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	16	0.5
m,p-Xylenes	9.6	0.5
o-Xylene	3.1	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits	
1,2-Dichloroethane-d4	86	80-120	
Toluene-d8	98	80-120	
Bromofluorobenzene	109	80-122	



	Purgeable A	romatics by GO	:/MS
Lab #:	174642	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	94662
Lab ID:	174642-004	Sampled:	09/13/04
Matrix:	Water	Received:	09/14/04
Units:	ug/L	Analyzed:	09/17/04
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	2.3	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

1,2-Dichloroethane-d4 85 80-120	
Toluene-d8 96 80-120	
Bromofluorobenzene 119 80-122	



	Purgeable An	comatics by GC	Z/MS
Lab #: 1	74642	Location:	Oakland Auto Works
i	tellar Environmental Solutions	Prep:	EPA 5030B
1	TANDARD	Analysis:	EPA 8260B
Field ID:	MW-5	Batch#:	94716
Lab ID:	174642-005	Sampled:	09/13/04
Matrix:	Water	Received:	09/14/04
Units:	ug/L	Analyzed:	09/17/04
Diln Fac:	8.333	-	

Analyte	Result	RL	
MTBE	ND	4.2	
Benzene	580	4.2	
Toluene	240	4.2	
Chlorobenzene	ND	4.2	
Ethylbenzene	260	4.2	
m,p-Xylenes	750	4.2	
o-Xylene	510	4.2	
1,3-Dichlorobenzene	ND	4.2	
1,4-Dichlorobenzene	ND	4.2	
1,2-Dichlorobenzene	ND	4.2	

Surrogate	%REC	Limits	
1,2-Dichloroethane-d4	104	80-120	
Toluene-d8	101	80-120	
Bromofluorobenzene	102	80-122	



Purgeable A	romatics by GC	/ms
Lab #: 174642	Location:	Oakland Auto Works
Client: Stellar Environmental Solutions	Prep:	EPA 5030B
Project#: STANDARD	Analysis:	EPA 8260B
Field ID: MW-6	Batch#:	94716
Lab ID: 174642-006	Sampled:	09/13/04
Matrix: Water	Received:	09/14/04
Units: ug/L	Analyzed:	09/17/04
Diln Fac: 1.000		

	Result	RL
Analyte	Result	
MTBE	ND	0.5
Benzene	2.4	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	0.8	0.5
m,p-Xylenes	ИD	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	106	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	105	80-122



	Purgeable Ar	romatics by GC	!/MS
Lab #: 17	74642	Location:	Oakland Auto Works
	tellar Environmental Solutions	Prep:	EPA 5030B
	TANDARD	Analysis:	EPA 8260B
Field ID:	MW - 7	Batch#:	94676
Lab ID:	174642-007	Sampled:	09/13/04
Matrix:	Water	Received:	09/14/04
Units:	ug/L	Analyzed:	09/16/04
Diln Fac:	1.000	-	

Analyte	Result	Ri	
MTBE	ND	0.5	
Benzene	ND	0.5	
Toluene	ND	0.5	
Chlorobenzene	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylenes	ND	0.5	
o-Xylene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	·

Surrogate	%RBC	Limits	
1,2-Dichloroethane-d4	110	80-120	
Toluene-d8	103	80-120	
Bromofluorobenzene	103	80-122	



	Purgeable An	romatics by GO	:/MS
Lab #:	174642	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	MW-8	Batch#:	94716
Lab ID:	174642-008	Sampled:	09/13/04
Matrix:	Water	Received:	09/14/04
Units:	ug/L	Analyzed:	09/17/04
Diln Fac:	2.000		

200000000000000000000000000000000000000			
Analyte	Result	RL	
MTBE	120	1.0	
Benzene	ND	1.0	
Toluene	ND	1.0	
Chlorobenzene	ND	1.0	
Ethylbenzene	ND	1.0	
m,p-Xylenes	ND	1.0	
o-Xylene	ND	1.0	
1,3-Dichlorobenzene	ND	1.0	
1,4-Dichlorobenzene	ND	1.0	
1,2-Dichlorobenzene	ND	1.0	•

Surrogate	%REC	Limits	
1,2-Dichloroethane-d4	104	80-120	
Toluene-d8	103	80-120	
Bromofluorobenzene	106	80-122	<u></u>



	Purgeable A	romatics by GC	:/MS
Lab #: 174	642	Location:	Oakland Auto Works
	llar Environmental Solutions	Prep:	EPA 5030B
	MDARD	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC264891	Batch#:	94662
Matrix:	Water	Analyzed:	09/16/04
Units:	ug/L	-	

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	82	80-120
Toluene-d8	96	80-120
Bromofluorobenzene	117	80-122



	Purgeable Ar	omatics by G	C/MS
Lab #:	174642	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC264892	Batch#:	94662
Matrix:	Water	Analyzed:	09/16/04
Units:	ug/L		

Analyte	Result	RL	
MTBE	ND	0.5	
Benzene	ND	0.5	
Toluene	ND	0.5	
Chlorobenzene	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylenes	ND	0.5	
o-Xylene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	

Surrogate	%RBC	Limits
1,2-Dichloroethane-d4	82	80-120
Toluene-d8	96	80-120
Bromofluorobenzene	118	80-122



	Purgeable A:	romatics by GC	J/MS
Lab #:	174642	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	: STANDARD	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC264950	Batch#:	94676
Matrix:	Water	Analyzed:	09/16/04
Units:	ug/L	-	

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits		
1,2-Dichloroethane-d4	102	80-120		
Toluene-d8	104	80-120		
Bromofluorobenzene	104	80-122		



	±		
	Purgeable A	comatics by GC	C/MS
Lab #:	174642	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Type: Lab ID:	QC265104	Batch#:	94710
Matrix:	Water	Analyzed:	09/17/04
Units:	ug/L		

			000000000000000000000000000000000000000
Analyte	Result	RL	
MTBE	ND	0.5	
Benzene	ND	0.5	
Toluene	ND	0.5	
Chlorobenzene	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylenes	ND	0.5	
o-Xylene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	

Surrogate	%REC	Limits	
1,2-Dichloroethane-d4	82	80-120	
Toluene-d8	95	80-120	
Bromofluorobenzene	120	80-122	



	Purgeable An	romatics by GC	?/MS
Lab #:	174642	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC265133	Batch#:	94716
Matrix:	Water	Analyzed:	09/17/04
Units:	ug/L		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits	
1,2-Dichloroethane-d4	104	80-120	
Toluene-d8	105	80-120	
Bromofluorobenzene	102	80-122	



	Purqeable Ar	omatics by GO	C/MS
Lab #:	174642	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC265225	Batch#:	94737
Matrix:	Water	Analyzed:	09/20/04
Units:	ug/L		

	<u>-</u>		****
Analyte		RL	
MTBE	ND	0.5	
Benzene	ND	0.5	
Toluene	ND	0.5	
Chlorobenzene	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylenes	ND	0.5	
o-Xylene	ND	0.5	
1,3-Dichlorobenzene	ND	0.5	
1,4-Dichlorobenzene	ND	0.5	
1,2-Dichlorobenzene	ND	0.5	•

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	104	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	124 *	80-122

 $[\]star=$ Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit



	Purgeable A	romatics by GC	:/MS
Lab #:	174642	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC264890	Batch#:	94662
Matrix:	Water	Analyzed:	09/16/04
Units:	ug/L		

Analyte	Spiked	Result	%RE	C Limits	
MTBE	50.00	43.58	87	74-128	
Benzene	25.00	24.50	98	79~120	
Toluene	25.00	24.36	97	80-120	
Chlorobenzene	25.00	24.58	98	80-120	
Ethylbenzene	25.00	23.32	93	80-121	
m,p-Xylenes	50.00	41.99	84	80-120	
o-Xylene	25.00	21.08	84	80-120	

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	81	80-120
Toluene-d8	95	80-120
Bromofluorobenzene	113	80-122



	Purgeable A	romatics by GC	/MS
Lab #:	174642	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	22222222	Batch#:	94662
MSS Lab II	9: 174639-001	Sampled:	09/13/04
Matrix:	Water	Received:	09/14/04
Units:	ug/L	Analyzed:	09/16/04
Diln Fac:	1.000		
)			

MS

Lab ID:

QC264893

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<0.06800	50.00	45.12	90	73-120
Benzene	<0.04900	25.00	24.67	99	77-120
Toluene	<0.06300	25.00	24.32	97	72-120
Chlorobenzene	<0.03000	25.00	24.32	97	80-120
Ethylbenzene	<0.04600	25.00	23.44	94	73-120
m,p-Xylenes	<0.1600	50.00	42.66	85	71-120
o-Xylene	<0.06200	25.00	21.63	87	67-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	83	80-120
Toluene-d8	95	80-120
Bromofluorobenzene	113	80-122

Type:

MSD

Analyte	Spiked	Result	*REC	Limite	RPE	Lim
MTBE	50.00	44.64	89	73-120	1	20
Benzene	25.00	25.08	100	77-120	2	20
Toluene	25.00	24.94	100	72-120	3	20
Chlorobenzene	25.00	24.90	100	80-120	2	20
Ethylbenzene	25.00	24.35	97	73-120	4	20
m,p-Xylenes	50.00	45.25	90	71-120	6	20
o-Xylene	25.00	22.78	91	67-120	5	20

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	84	80-120
Toluene-d8	96	80-120
Bromofluorobenzene	111	80-122
		



	Purgeable A	romatics by GC	?/MS
Lab #:	174642	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	94676
Units:	\mathtt{ug}/\mathtt{L}	Analyzed:	09/16/04
Diln Fac:	1.000		

Type:

BS

Lab ID: QC264948

Analyte	Spiked	Result	%REC	Limits
MTBE	50.00	44.67	89	74-128
Benzene	25.00	24.17	97	79-120
Toluene	25.00	24.62	98	80-120
Chlorobenzene	25.00	23.96	96	80-120
Ethylbenzene	25.00	24.62	98	80-121
m,p-Xylenes	50.00	49.86	100	80-120
o-Xylene	25.00	23.99	96	80-120

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

Type:

BSD

Analyte	Spiked	Result	%RE(C Limits	EPI) Lim
MTBE	50.00	46.00	92	74-128	3	20
Benzene	25.00	23.01	92	79-120	5	20
Toluene	25.00	24.16	97	80-120	2	20
Chlorobenzene	25.00	23.51	94	80-120	2	20
Ethylbenzene	25.00	24.16	97	80-121	2	20
m,p-Xylenes	50.00	46.98	94	80-120	6	20
o-Xylene	25.00	24.32	97	80-120	1	20

Surrogate	*REC	Limite	
1,2-Dichloroethane-d4	100	80-120	
Toluene-d8	101	80-120	
Bromofluorobenzene	100	80-122	



Purgeable Aromatics by GC/MS

Lab #: 174642 Location: Oakland Auto Works

Client: Stellar Environmental Solutions Prep: EPA 5030B Project#: STANDARD Analysis: EPA 8260B

Matrix: Water Batch#: 94710

Units: ug/L Analyzed: 09/17/04
Diln Fac: 1.000

Type:

BS

Lab ID:

QC265102

_		Result	%RE(Limits	8000000
Analyte	Spiked		0,000,000,000,000,000,000		
MTBE	50.00	45.60	91	74-128	
Benzene	25.00	24.63	99	79-120	
Toluene	25.00	24.22	97	80-120	
Chlorobenzene	25.00	24.57	98	80-120	
Ethylbenzene	25.00	23.01	92	80-121	
m,p-Xylenes	50.00	41.27	83	80-120	
o-Xylene	25.00	20.65	83	80-120	

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	83	80-120
Toluene-d8	95	80-120
Bromofluorobenzene	115	80-122

Type:

BSD

Lab ID:

QC265103

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	50.00	44.38	89	74-128	3	20
Benzene	25.00	25.39	102	79-120	3	20
Toluene	25.00	25.35	101	80-120	5	20
Chlorobenzene	25.00	25.52	102	80-120	4	20
Ethylbenzene	25.00	24.56	98	80-121	7	20
m,p-Xylenes	50.00	45.20	90	80-120	9	20
o-Xylene	25.00	22.72	91	80-120	10	20_

Surrogate	%REC	Limite
1,2-Dichloroethane-d4	82	80-120
Toluene-d8	95	80-120
Bromofluorobenzene	111	80-122



	Purgeable An	comatics by GC	е/ив
Lab #:	174642	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	94716
Units:	ug/L	Analyzed:	09/17/04
Diln Fac:	1.000		

Type:

BS

Lab ID: QC265131

Analyte	Spiked	Result	%RBC	Limits	
MTBE	50.00	46.08	92	74-128	
Benzene	25.00	25.52	102	79-120	
Toluene	25.00	25.80	103	80-120	
Chlorobenzene	25.00	25.53	102	80-120	
Ethylbenzene	25.00	26.83	107	80-121	
m,p-Xylenes	50.00	53.17	106	80-120	
o-Xylene	25.00	25.99	104	80-120	

Surrogate	%REC	Limits	
1,2-Dichloroethane-d4	102	80-120	
Toluene-d8	102	80-120	
Bromofluorobenzene	102	80-122	

Type:

BSD

Analyte	Spiked	Result	%REC	Limits	RPD	Lin
MTBE	50.00	45.37	91	74-128	2	20
Benzene	25.00	23.27	93	79-120	9	20
Toluene	25.00	24.88	100	80-120	4	20
Chlorobenzene	25.00	24.25	97	80-120	5	20
Ethylbenzene	25.00	24.09	96	80-121	11	20
m, p-Xylenes	50.00	48.57	97	80-120	9	20
o-Xylene	25.00	24.34	97	80-120	7	20

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



Purgeable Ar	comatics by GC	C/MS
174642	Location:	Oakland Auto Works
Stellar Environmental Solutions	Prep:	EPA 5030B
STANDARD	Analysis:	EPA 8260B

94737 Batch#: Matrix: Water 09/20/04 Units: Analyzed: ug/L

Diln Fac: 1.000

Project#: STANDARD

Type:

Lab #:

Client:

BS

Lab ID:

QC265223

Analyte	Spiked	Result	%REC	Limits
MTBE	50.00	51.54	103	74-128
Benzene	25.00	26.55	106	79-120
Toluene	25.00	27.46	110	80-120
Chlorobenzene	25.00	25.91	104	80-120
Ethylbenzene	25.00	27.53	110	80-121
m,p-Xylenes	50.00	54.86	110	80-120
o-Xylene	25.00	26.93	108	80-120

Surrogate	%REC	Limits	
1,2-Dichloroethane-d4	109	80-120	
Toluene-d8	104	80-120	
Bromofluorobenzene	102	80-122	

BSD

Lab ID:

QC265224

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	50.00	51.06	102	74-128	1	20
Benzene	25.00	25.80	103	79-120	3	20
Toluene	25.00	26.68	107	80-120	3	20
Chlorobenzene	25.00	25.43	102	80-120	2	20
Ethylbenzene	25.00	26.80	107	80-121	3	20
m,p-Xylenes	50.00	53.05	106	80-120	3	20
o-Xylene	25.00	26.13	105	80-120	3	20
					•	,

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	107	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	102	80-122



Gasoline Oxygenates by GC/MS Oakland Auto Works 174642 Location: Lab #: Prep: Analysis: EPA 5030B Client: Stellar Environmental Solutions **EPA 8260B** Project#: STANDARD 09/13/04 Sampled: Received: Matrix: Water 09/14/04 uq/L Units:

Field ID: Type: Lab ID:

MW-1SAMPLE 174642-001

Diln Fac: Batch#: Analyzed: 10.00 94737 09/20/04

Analyte	Result	3.5	
tert-Butyl Alcohol (TBA)	120	100	
MTBE	7.2	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	101	80-120	
1,2-Dichloroethane-d4	104	80-120	•
Toluene-d8	105	80-120	
Bromofluorobenzene	106	80-122	

Field ID: Type: Lab ID:

MW-2 SAMPLE 174642-002 Diln Fac: Batch#: Analyzed:

1.000 94710 09/18/04

Analyte		RL	
tert-Butyl Alcohol (TBA)	130	10	
MTBE	130	0.5	
Isopropyl Ether (DIPE)	0.9	0.5	
Ethyl tert-Butyl Ether (ETBE)	ND	0.5	
Methyl tert-Amyl Ether (TAME)	ND	0.5	
1,2-Dichloroethane	1.2	0.5	
1,2-Dibromoethane	ИD	0.5	

Surrogate	*REC	Limite	
Dibromofluoromethane	91	80-120	
1,2-Dichloroethane-d4	86	80-120	
Toluene-d8	95	80-120	
Bromofluorobenzene	116	80-122	

*= Value outside of QC limits; see narrative NA= Not Analyzed ND= Not Detected

RL= Reporting Limit Page 1 of 9



Gasoline Oxygenates by GC/MS Oakland Auto Works EPA 5030B 174642 Location: Lab #: Prep: Analysis: Sampled: Stellar Environmental Solutions Client: EPA 8260B 09/13/04 09/14/04 STANDARD Project#: Water Matrix: Units: uq/L Received:

1.000 Diln Fac: Field ID: MW-3 SAMPLE 94710 Batch#: Гуре: 09/18/04 Lab ID: 174642-003 Analyzed:

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	82	10	
MTBE	110	0.5	
Isopropyl Ether (DIPE)	1.5	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	88	80-120	
1,2-Dichloroethane-d4	86	80-120	
Toluene-d8	98	80-120	
Bromofluorobenzene	109	80-122	

1.000 Diln Fac: Field ID: Type: Lab ID: 94662 SAMPLE Batch#: 09/17/04 174642-004 Analyzed:

Analyte	Rest	ilt	RI
tert-Butyl Alcohol (TBA)	ND		10
MTBE		2.3	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	Limita
Dibromofluoromethane	90	80-120
1,2-Dichloroethane-d4	85	80-120
Toluene-d8	96	80-120
Bromofluorobenzene	119	80-122

RL= Reporting Limit Page 2 of 9

^{*=} Value outside of QC limits; see narrative

NA= Not Analyzed ND= Not Detected



Gasoline Oxygenates by GC/MS Oakland Auto Works EPA 5030B Lab #: 174642 Location: Prep: Analysis: Client: Stellar Environmental Solutions EPA 8260B 09/13/04 STANDARD Project#: Sampled: Matrix: Water Units: uq/L Received: 09/14/04

Field ID: Type: Lab ID:

MW-5 SAMPLE 174642-005 Diln Fac: Batch#: Analyzed:

8.333 94716 09/17/04

Analyte	Result	ĘB S	
tert-Butyl Alcohol (TBA)	87	83	
MTBE	ND	4.2	
Isopropyl Ether (DIPE)	ND	4.2	
Ethyl tert-Butyl Ether (ETBE)	ND	4.2	
Methyl tert-Amyl Ether (TAME)	ND	4.2	
1,2-Dichloroethane	18	4.2	
1,2-Dibromoethane	NDND_	4.2	

Surrogate	2507		
Dibromofluoromethane	104	80-120	
1,2-Dichloroethane-d4	104	80-120	
Toluene-d8	101	80-120	
Bromofluorobenzene	102	80-122	

Field ID: Type: Lab ID:

MW-6 SAMPLE 174642-006 Diln Fac: Batch#: Analyzed:

1.000 94716 09/17/04

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	43	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	31	0.5	
1,2-Dibromoethane	ND	0.5	

Surrogate	*REC	Limits	
Dibromofluoromethane	101	80-120	
1,2-Dichloroethane-d4	106	80-120	
Toluene-d8	100	80-120	i
Bromofluorobenzene	105	80-122	

*= Value outside of QC limits; see narrative

NA= Not Analyzed ND= Not Detected

RL= Reporting Limit Page 3 of 9



Gasoline Oxygenates by GC/MS Location: Oakland Auto Works 174642 Lab #: EPA 5030B Client: Stellar Environmental Solutions Prep: STANDARD Analysis: EPA 8260B Project#: 09/13/04 09/14/04 Sampled: Matrix: Water Units: uq/L <u>Received:</u>

Field ID: уре: Lab ID:

SAMPLE 174642-007

Diln Fac: Batch#: Analyzed:

1.000 94676 09/16/04

Result Analyte tert-Butyl Alcohol (TBA) ND 10 0.5 ND0.5 Isopropyl Ether (DIPE) Ethyl tert-Butyl Ether (ETBE) Methyl tert-Amyl Ether (TAME) ND 0.5 ND0.5 NDND 0.5 1,2-Dichloroethane 1,2-Dibromoethane ND

Surrogate	*REC	is in the
Dibromofluoromethane	100	80-120
1,2-Dichloroethane-d4	110	80-120
Toluene-d8	103	80-120
■ Bromofluorobenzene	103	80-122

Field ID: Гуре:

ab ID:

8 - WM SAMPLE 174642-008 Diln Fac: Batch#: Analyzed:

2.000 94716 09/17/04

Result Analyte tert-Butyl Alcohol (TBA) 20 96 1.0 120 Isopropyl Ether (DIPE)
Ethyl tert-Butyl Ether (ETBE)
Methyl tert-Amyl Ether (TAME) 1.0 1.1 ND 1.0 1.0 ND1.0 1,2-Dichloroethane ND 2-Dibromoethane 1.0

:	rrogate	*REC	Limits	
Dibromofluor		103	80-120	
1,2-Dichloro	ethane-d4	104	80-120	
Toluene-d8		103	80-120	
Bromofluorob	enzene	106	80-122	

*= Value outside of QC limits; see narrative

NA= Not Analyzed ND= Not Detected

RL= Reporting Limit Page 4 of 9



Gasoline Oxygenates by GC/MS Oakland Auto Works EPA 5030B Location: Lab #: 174642 Stellar Environmental Solutions Client: Prep: EPA 8260B 09/13/04 09/14/04 Analysis: Sampled: STANDARD Project#: Matrix: Water Units: uq/LReceived:

Type: Lab ID: Diln Fac:

BLANK OC264891 1.000

Batch#: Analyzed:

94662 09/16/04

Analyte	Result	RL	
tert-Butyl Alcohol (TBA)	ND	10	
MTBE	ND	0.5	•
Isopropyl Ether (DIPE)	ND	0.5	
Ethyl tert-Butyl Ether (E	TBE) ND	0.5	
Methyl tert-Amyl Ether (T	CAME) ND	0.5	
1,2-Dichloroethane	ND	0.5	
1,2-Dibromoethane	ND	0.5	· · · · · · · · · · · · · · · · · · ·

Surrogate	*REC	Limits	
Dibromofluoromethane	84	80-120	1
1,2-Dichloroethane-d4	82	80-120	•
Toluene-d8	96	80-120	
Bromofluorobenzene	117	80-122	

Type: Lab ID: Diln Fac:

BLANK OC264892 1.000 Batch#: Analyzed:

94662 09/16/04

Analyte	Resu	lt 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	86	80-120	
1,2-Dichloroethane-d4	82	80-120	
Toluene-d8	96	80-120	
Bromofluorobenzene	118	80-122	

^{*=} Value outside of QC limits; see narrative NA= Not Analyzed ND= Not Detected RL= Reporting Limit Page 5 of 9



Taration Oakland Auto Morks	Gasoline Ox	cygenates by GC	?/MS
	Lab #: 174642	Location:	Oakland Auto Works
Client: Stellar Environmental Solutions Prep: EPA 5030B		Prep:	
Project#: STANDARD Analysis: EPA 8260B	Project#: STANDARD	<u> Analysis:</u>	EPA 8260B
Matrix: Water Sampled: 09/13/04		Sampled:	09/13/04
Units: uq/L Received: 09/14/04	Units: uq/L	Received:	09/14/04

Type: Lab ID: Diln Fac:

BLANK QC264950 1.000

Batch#: Analyzed:

94676 09/16/04

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

Dibromofluoromethane 99 80-120 1,2-Dichloroethane-d4 102 80-120 Toluene-d8 104 80-120	Surrogate	*REC	Limits
	Dibromofluoromethane	99	80-120
Toluene-d8 104 80-120	1,2-Dichloroethane-d4	102	80-120
	Toluene-d8	104	80-120
Bromofluorobenzene 104 80-122	Bromofluorobenzene	104	80-122

Туре:

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

Surrogate	Resul	
Dibromofluoromethane	NA	
1,2-Dichloroethane-d4	NA	
Toluene-d8	NA	
Bromofluorobenzene	NA	

^{*=} Value outside of QC limits; see narrative NA= Not Analyzed ND= Not Detected RL= Reporting Limit Page 6 of 9



Gasoline Ox	rygenates by GC	
Lab #: 174642 Client: Stellar Environmental Solutions Project#: STANDARD	Location: Prep: Analysis:	Oakland Auto Works EPA 5030B EPA 8260B
Matrix: Water Units: ug/L	Sampled: Received:	09/13/04 09/14/04

Type: Lab ID: Diln Fac:

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OC265104 1.000

Batch#: 94710 Analyzed: 09/17/04

Analyte	Resu	t RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	ND	0.5
Isopropyl Ether (DIPE) Ethyl tert-Butyl Ether (ETBE)	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	2,507		
		A A A A A A A A A A A A A A A A A A A	
Dibromofluoromethane	86	80-120	
1,2-Dichloroethane-d4	82	80-120	
Toluene-d8	95	80-120	
Bromofluorobenzene	120	80-122	
DIOMOIIGOIO			

Type:

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tert-Butyl Alcohol (TBA) NA MTBE NA Isopropyl Ether (DIPE) NA Ethyl tert-Butyl Ether (ETBE) NA	
MTBE NA Isopropyl Ether (DIPE) NA	
Isopropyl Ether (DIPE) NA	
Debir Fore Duty Debor /PTDE NA	
Prulit refr-parit Pruet (Prop) - MY	
Metĥyl tert-Amŷl Ether (TAME) NA	
1,2-Ďichloroetĥane NA	
1,2-Dibromoethane NA	

Surrogate	Rei	n. k
Dibromofluoromethane	NA	
1,2-Dichloroethane-d4	AN	
Toluene-d8	NA	
Bromofluorobenzene	NA	
·		

^{*=} Value outside of QC limits; see narrative NA= Not Analyzed ND= Not Detected RL= Reporting Limit Page 7 of 9



Gasoline Oxygenates by GC/MS Lab #: Oakland Auto Works 174642 Location: EPA 5030B EPA 8260B Prep: Analysis: Sampled: Stellar Environmental Solutions Client: Project#: STANDARD 09/13/04 09/14/04 Water Matrix: Units: uq/L Received:

Type: Lab ID:

BLANK QC265133

Batch#: Analyzed:

94716 09/17/04

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 (1	ETBE) ND	0.5
Methyl tert-Amyl Ether (TAME) ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5

1,2-Dichloroethane-d4 104 80-120 Toluene-d8 105 80-120	Sire # 4(*)**; i= 0	EREC	Limits	
Toluene-d8 105 80-120	Dibromofluoromethane	100	80-120	
	1,2-Dichloroethane-d4	104	80-120	
Bromofluorobenzene 102 80-122	Toluene-d8	105	80-120	
	Bromofluorobenzene	102	80-122	

āb ID:

BLANK QC265225 1.000

Batch#: Analyzed: 94737 09/20/04

iln Fac:

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	104	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	124 *	80-122

*= Value outside of QC limits; see narrative

NA= Not Analyzed ND= Not Detected RL= Reporting Limit Page 8 of 9



	Gasoline Ox	ygenates by GC	C/NS
Lab #: 1	74642	Location:	Oakland Auto Works
Client: St	tellar Environmental Solutions	Prep:	EPA 5030B
Project#: S'	TANDARD	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC264890	Batch#:	94662
Matrix:	Water	Analyzed:	09/16/04
Units:	ug/L	_	

Analyte	Spiked	Result	%REC	Limits	
tert-Butyl Alcohol (TBA)	125.0	128.4	103	74-135	
MTBE	50.00	43.58	87	74-128	
Isopropyl Ether (DIPE)	25.00	22.01	88	80-120	
Ethyl tert-Butyl Ether (ETBE)	25.00	22.53	90	80-120	
Methyl tert-Amyl Ether (TAME)	25.00	23.04	92	80-120	

Surrogate	*REC	Limits
Dibromofluoromethane	86	80-120
1,2-Dichloroethane-d4	81	80-120
Toluene-d8	95	80-120
Bromofluorobenzene	113	80-122



		Gasoline Ожу	genates by G	C/MS
Lab #:	174642		Location:	Oakland Auto Works
Client:	Stellar	Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARI	o	Analysis:	EPA 8260B
Field ID:	2	ZZZZZZZZZ	Batch#:	94662
MSS Lab ID	: 1	174639-001	Sampled:	09/13/04
Matrix:	V	Nater	Received:	09/14/04
Units:	ι	ıg/L	Analyzed:	09/16/04
Diln Fac:	-	1.000		

MS

Lab ID: QC264893

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<8.600	125.0	129.7	104	53-153
MTBE	<0.06800	50.00	45.12	90	73-120
Isopropyl Ether (DIPE)	<0.04500	25.00	22.47	90	70-120
Ethyl tert-Butyl Ether (ETBE)	<0.06100	25.00	23.11	92	71-120
Methyl tert-Amyl Ether (TAME)	<0.06500	25.00	23.35	93	72-120

Surrogate	%REC	Limits	
Dibromofluoromethane	87	80-120	
1,2-Dichloroethane-d4	83	80-120	
Toluene-d8	95	80-120	
Bromofluorobenzene	113	80-122	

MSD

Analyte	Spiked	Result	*REC	: Limite	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	117.1	94	53-153	10	26
MTBE	50.00	44.64	89	73-120	1	20
Isopropyl Ether (DIPE)	25.00	22.24	89	70-120	1	20
Ethyl tert-Butyl Ether (ETBE)	25.00	22.67	91	71-120	2	20
Methyl tert-Amyl Ether (TAME)	25.00	23.18	93	72-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	87	80-120
1,2-Dichloroethane-d4	84	80-120
Toluene-d8	96	80-120
Bromofluorobenzene	111	80-122



		genates by GC	
Lab #:	174642	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	94676
Units:	ug/L	Analyzed:	09/16/04
Diln Fac:	1.000		

Type:

BS

Lab ID: QC264948

Analyte	Spiked	Result	4RE	Limite	
tert-Butyl Alcohol (TBA)	125.0	115.6	93	74-135	
MTBE	50.00	44.67	89	74-128	
Isopropyl Ether (DIPE)	25.00	24.05	96	80-120	
Ethyl tert-Butyl Ether (ETBE)	25.00	24.65	99	80-120	
Methyl tert-Amyl Ether (TAME)	25.00	23.24	93	80-120	

Surrogate	%REC	Limits		
Dibromofluoromethane	95	80-120		
1,2-Dichloroethane-d4	97	80-120		
Toluene-d8	100	80-120		
Bromofluorobenzene	98	80-122		

Type:

BSD

Analyte	Spiked	Result	%RE(7 Limits	RPI) Lim
tert-Butyl Alcohol (TBA)	125.0	124.1	99	74-135	7	25
MTBE	50.00	46.00	92	74-128	3	20
Isopropyl Ether (DIPE)	25.00	23.47	94	80-120	2	20
Ethyl tert-Butyl Ether (ETBE)	25.00	24.20	97	80-120	2	20
Methyl tert-Amyl Ether (TAME)	25.00	23.82	<u>9</u> 5	80-120	2	20

Dibromofluoromethane	Surrogate	%RI	C Limits	
Toluene-d8 101 80-120	Dibromofluoromethane	97	80-120	
	1,2-Dichloroethane-d4	100	80-120	
Bromofluorobenzene 100 80-122	Toluene-d8	101	80-120	
100 00 122	Bromofluorobenzene	100	80-122	



	Gasoline Oxy	genates by GO	?/MS
Lab #:	174642	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	94710
Units:	ug/L	Analyzed:	09/17/04
Diln Fac:	1.000	** ************************************	

Type:

BS

Lab ID: QC265102

Analyte	Spiked	Result	*REC	Limits
tert-Butyl Alcohol (TBA)	125.0	135.5	108	74-135
_	50.00	45.60	91	74-128
MTBE				80-120
Isopropyl Ether (DIPE)	25.00	21.78	87	
Ethyl tert-Butyl Ether (ETBE)	25.00	22.43	90	80-120
Methyl tert-Amyl Ether (TAME)	25.00	22.98	92	80-120

Surrogate	%REC	Limite
Dibromofluoromethane	88	80-120
1,2-Dichloroethane-d4	83	80-120
Toluene-d8	95	80-120
Bromofluorobenzene	115	80-122

Type:

BSD

Analyte	Spiked	Result	%REC	Limits	RPI	Lim
tert-Butyl Alcohol (TBA)	125.0	125.9	101	74-135	7	25
MTBE	50.00	44.38	89	74-128	3	20
Isopropyl Ether (DIPE)	25.00	21.80	87	80-120	0	20
Ethyl tert-Butyl Ether (ETBE)	25.00	22.28	89	80-120	1	20
Methyl tert-Amyl Ether (TAME)	25.00	22.95	92	80-120	0	20

Surrogate	%RBC	Limits
Dibromofluoromethane	86	80-120
1,2-Dichloroethane-d4	82	80-120
Toluene-d8	95	80-120
Bromofluorobenzene	111	80-122



	Gasoline Ox	genates by GC	:/мs
Lab #:	174642	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	94716
Units:	ug/L	Analyzed:	09/17/04
Diln Fac:	1.000		

Type:

BS

Lab ID: QC265131

Analyte	Spiked	Result	*REC	Limits	
tert-Butyl Alcohol (TBA)	125.0	117.2	94	74-135	
MTBE	50.00	46.08	92	74-128	
Isopropyl Ether (DIPE)	25.00	24.25	97	80-120	
Ethyl tert-Butyl Ether (ETBE)	25.00	25.55	102	80-120	
Methyl tert-Amyl Ether (TAME)	25.00	24.76	99	80-120	

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Surrogate	*REC	Limits		
Dibromofluoromethane	98	80-120	 	
1,2-Dichloroethane-d4	102	80-120		
Toluene-d8	102	80-120		
Bromofluorobenzene	102	80-122	 	

Type:

BSD

Analyte	Spiked	Result	%REC	Limits	RPI) Lin
tert-Butyl Alcohol (TBA)	125.0	124.2	99	74-135	6	25
MTBE	50.00	45.37	91	74-128	2	20
Isopropyl Ether (DIPE)	25.00	24.12	96	80-120	1	20
Ethyl tert-Butyl Ether (ETBE)	25.00	24.99	100	80-120	2	20
Methyl tert-Amyl Ether (TAME)	25.00	24.27	97	80-120	2	20

Surrogate	%REC	Limits	
Dibromofluoromethane	98	80-120	
1,2-Dichloroethane-d4	99	80-120	
Toluene-d8	100	80-120	i de la companya de
Bromofluorobenzene	102	80-122	



	Gasoline Oxy	genates by G	C/MS
Lab #:	174642	Location:	Oakland Auto Works
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	94737
Units:	ug/L	Analyzed:	09/20/04
Diln Fac:	1.000		

Type:

BS

Lab ID: QC265223

Analyte	Spiked	Result	%REC	Limita
tert-Butyl Alcohol (TBA)	125.0	124.2	99	74-135
MTBE	50.00	51.54	103	74-128
Isopropyl Ether (DIPE)	25.00	25.18	101	80-120
Ethyl tert-Butyl Ether (ETBE)	25.00	24.37	97	80-120
Methyl tert-Amyl Ether (TAME)	25.00	23.08	92	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-120
1,2-Dichloroethane-d4	109	80-120
Toluene-d8	104	80-120
Bromofluorobenzene	102	80-122

Type:

BSD

Analyte	Spiked	Result	%RBC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	111.4	89	74-135	11	25
MTBE	50.00	51.06	102	74-128	1	20
Isopropyl Ether (DIPE)	25.00	24.90	100	80-120	1	20
Ethyl tert-Butyl Ether (ETBE)	25.00	24.35	97	80-120	0	20
Methyl tert-Amyl Ether (TAME)	25.00	23.19	93	80-120	1	20

Surrogate	%RBC	Limits
Dibromofluoromethane	104	80-120
1,2-Dichloroethane-d4	107	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	102	80-122

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	МТВЕ
					MW-1				
Yes	1	Aug-97	1,140	< 1,000	110	16	15	112	
Yes	2	Dec-97	ND	- NA	ND	ND	ND	31	. ⊋. ÆMA
Yes	3	Mar-98	370	, NA	8.9	< 0.5	< 0.5	2.2	18
Yes	4	Jul-98	6,400	<u> </u>	1,300	23	3.7	58	97
Yes	5	Oct-98	2,500	: N A	360	44	1.3	150	< 0.5
Yes	6	Jan-99	2,700	∍MA	1,200	28	140	78	130
(a)	7	Jun-00	27,000	: MA	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	‡1. ∃XA	∃ MA	₩ MA	à BA	M	₩ T
(a)	10	May-01	20,000	+ NA	2,900	310	230	1,900	< 30
(a)	11	Jul-01	92,000	MA	2,900	580	2,800	20,000	560
Pre"hi-vac"	12	Oct 22-01	20,000) u=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	∵ <u>≕</u> , NA	200	12	5.7	43	44
No	14	Mar-02	4,600	-E MA	820	4.4	100	300	210
No	15	May-02	1,600	喜 MA	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	· · · · · · · · · ·	188	< 50	< 50	157	20
No	19	Mar-03	6,700		607	64	64	288	< 0.18
No	20	Aug-03	4,900	5,000	740	45	85	250	14
Pre-Purge	21	Dec-03	5,060	400	654	11	79	92	129
Post-Purge	21	Dec-03	8,930	800	1,030	55	127	253	212
Yes	22	Mar-04	11,300	1,100	483	97	122	452	67
Yes	23	Jun-04	9,300	4,000	1,700	75	92	350	6.0
Yes	24	Sep-04	9,100	97	920	19	82	201	7.2

	MW-2													
Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	МТВЕ					
Yes	1	Aug-97	5,350	< 1,000	108	36	33	144	MA WA					
Yes	2	Dec-97	1,600	AM ±	73	ND	ND	ND	NA NA					
Yes	3	Mar-98	3,400	MA	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		< 0.5	1.2	< 0.5	1	4,200					
Yes	6	Jan-99	2,900	A MA	160	8.9	6.9	78.4	2,100					
(a)	7	Jun-00	2,700	- NA F	200	17	30	16	680					
(a)	8	Dec-00	3,020	· · · · · · · · · · · · · · ·	56.7	< 1.5	< 1.5	< 3.0	3,040					
(a)	9	Feb-01	基 整	E MA	. NA	. NA	· · · · · · · · · · · · · · · · · · ·	±° NA	ž Z					
(a)	10	May-01	720	- M	49	< 3.0	4.6	< 3.0	380					
(a)	11	Jul-01	8,400	. 🚉 📈	350	44	77	78	550					
Pre"hi-vac"	12	Oct 22-01	850	A MA	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	MA.	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	≣ M A	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	,₃° :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					
Yes	24	Sep-04	1,500	280	14	< 0.5	< 0.5	1	130					

	MW-3													
Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	МТВЕ					
Yes	1	Aug-97	8,500	< 1,000	450	30	53	106	i zina					
Yes	2	Dec-97	5,200	= NA	180	6.0	5.0	9.3	T EZWA					
Yes	3	Маг-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	₃≟ 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	泉燈	445	< 7.5	23.8	< 7.5	603					
(a)	9	Feb-01	* W	XX	NA.	, ZYA	No.	ž EM	, A4					
(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	S MA	240	7.8	4.1	15	220					
Post "hi-vac"	12	Oct 26-01	1,900	i NA	200	16	51	30	290					
(a)	13	Dec-01	5,800	MA.	93	< 20	31	< 20	330					
No	14	Mar-02	1,900	皇 · 妻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	EMA	210	27	30	55	200					
No	17	Oct. 2002	3,030	, AM	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	Маг-04	5,490	500	82	34	46	49	249					
Yes	23	Jun-04	5,400	1,100	150	30	45	66	130					
Yes	24	Sep-04	5,400	1,500	70	3	16	13	110					

					MW-4				
Well Purged?	Sampling Event No.	Date Sampled	TVH-g	ТЕН-ф	Benzene	Toluene	Ethylbenzene	Total Xylenes	МТВЕ
Yes	1	Aug-97	< 500	< 1,000	< 0.5	< 0.5	< 0.5	< 1.5	₩ F WA
Yes	2	Dec-97	ND	NA	ND	ND	ND	ND	→ Em NA
Yes	3	Mar-98	< 50	MA.	< 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		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Yes	6	Jan-99	< 50		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
(a)	7	Jun-00	< 50	岩池	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
(a)	8	Dec-00	< 500		< 0.3	< 0.3	< 0.6	< 0.3	< 0.3
(a)	9	Feb-01	, NA	WA NA	囊. 🂆	i NA	E & M	± ;₩A	₩ NA
(a)	10	May-01	< 50	it. NA	1.2	< 0.3	0.55	1.2	2.9
(a)	11	Jul-01	< 5.0		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Pre"hi-vac"	12	Oct 22-01	< 5.0		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Post "hi-vac"	12	Oct 26-01	< 5.0		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
(a)	13	Dec-01	ND		ND	ND	ND	ND	ND
No	14	Mar-02	< 50		< <i>I</i>	< 1	< 1	< 1	< 1
No	15	May-02	< 50	建 ※	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
No	16	Jul-02	< 50	<u> </u>	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
No	17	Oct-02	< 100	<u> </u>	< 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	E 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	i NA	< 0.3	< 0.3	< 0.3	< 0.6	< 5.0
Post-Purge	21	Dec-03	63	- W	< 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	<u>.</u> ₩	< 0.5	< 0.5	< 0.5	< 0.5	0.9
Yes	24	Sep-04	< 50	∴ ≀NA	< 0.5	< 0.5	< 0.5	< 0.5	2.3

				· · · · · · · · · · · · ·	MW-5				
Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	МТВЕ
(a)	9	Feb-01	5,660	NA 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	畫 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	Мат-02	8,800	- NA	1,200	72	7.4	350	1,200
No	15	May-02	2,000	. E. 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 GERNA	236	45	23	39	135
No	18	Jan-03	8,270	NA	615	156	174	1,010	< 10
No	19	Mar-03	12,400		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	Маг-04	20,700	850	867	266	305	678	145
Yes	23	Jun-04	12,000	1,700	920	240	260	1,150	< 3.1
Yes	24	Sep-04	13,000	1,900	580	240	260	1,260	< 4.2

	MW-6														
Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	МТВЕ						
(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	. A	210	20	170	62	120						
(a)	13	Dec-01	5,300	.≧NA	69	5.6	14	17	< 2.0						
No	14	Mar-02	71	- j∙NA	54	4.2	27	17	8.5						
No	15	May-02	150	支煙	9.3	< 0.5	< 0.5	< 0.5	1.5						
No	16	Jul-02	2,200	K MA	98	32	46	150	66						
No	17	Oct-02	786	i. 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	Маг-03	258	E JNA	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	Маг-04	215	140	4.0	1.2	1.4	1.4	3.7						
Yes	23	Jun-04	710	830	14.0	0.7	5.2	6.6	< 0.5						
Yes	24	Sep-04	350	600	< 0.5	2.4	< 0.5	< 0.5	< 0.5						

					MW-7	<u></u>	*-		
Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	МТВЕ
(a)	9	Feb-01	ND	- NA	ND	ND	ND	ND	NE
(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		< 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	-E 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		< 0.3	< 0.3	< 0.3	< 0.6	< 5.0
No	18	Jan-03	. NA	− NA	∷, NA	NA NA	. NA	NA	i, Ale MA
No	19	Mar-03	< 15	. 💢 MA	< 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	M	< 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	Маг-04	86	, E.MA	< 0.3	< 0.3	< 0.3	< 0.6	57
Yes	23	Jun-04	< 50	j, NA	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Yes	24	Sep-04	< 50	NA.	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5

					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	NΑ	3.97	< 0.3	3.78	1.63	620
(a)	10	May-01	< 50	ŇA	< 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	< 0.4
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	E 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	· · · · · · · · · · · · · · · · · · ·	< 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	I.2	< 0.3	1.7	3.9	66
Yes	23	Jun-04	370	<100 ≤ ♀?	4.2 4.5	403	1.7	3.9 <	120
Yes	24	Sep-04	280	2,600		< 0.5	< 0.5		120

Notes:

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

[&]quot;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. Samplif Event N 7 114 18 MW-1 19 20 21 22 23 24 7 14 18 18 19 MW-2 21 22 23 24 7 14 18 18 19 MW-3 20 24 7 14 18 18 19 MW-3 20 21 22 23 24 7 14 18 18 19 MW-4 19 20 21 22 23 24 17 14 18 18 19 MW-5 20 21 22 23 24 24 19 19 MW-5 20 21 22 23 24 24 24 24 24 24 24 24 24 24 24 24 24		Date Sampled Jun-00 Mar-02 Jan-03 Mar-03 Dec-03 Mar-04 Jun-00 Mar-04 Jun-00 Mar-02 Jan-03 Dec-03 Aug-03 Dec-03 Aug-03 Dec-04 Aug-03 Dec-04 Aug-04 Jun-04 Sep-04 Jun-04	 EDB < 5.0 < 1.0 < 0.26 < 1.0 < 5.0 < 0.26 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 0.26 < 0.6 < 0.7 < 0.26 < 0.26<th>\$5.0 < 5.0 < 5.0 < 7.2 < 5.0 < 0.17 < 5.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.17 < 0.5 < 0.17 < 0.10 < 0.10</th><th>1,2,4 TMB 51 <1 150 373 AM NA NA NA NA NA < 0.5 < 1</th><th>1,3,5- TMB < 5 1.6 < 50 < 0.49 NA NA NA NA NA NA < 0.5</th><th>t-Butanol < 1,000 < 10</th><th>MATHEMATICAL STREET</th><th><pre></pre></th><th> Saphthalene < 5 < 1 < 50 < 0.88</th><th>cis-1,2- DCE < 5 < 1 < 50 < 0.30</th><th><pre></pre></th><th><pre></pre></th><th>Others ND ND ND ND ND</th>	\$5.0 < 5.0 < 5.0 < 7.2 < 5.0 < 0.17 < 5.0 < 0.17 < 5.0 < 0.17 < 5.0 < 0.17 < 5.0 < 0.17 < 5.0 < 0.17 < 5.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.17 < 0.5 < 0.17 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10 < 0.10	1,2,4 TMB 51 <1 150 373 AM NA NA NA NA NA < 0.5 < 1	1,3,5- TMB < 5 1.6 < 50 < 0.49 NA NA NA NA NA NA < 0.5	t-Butanol < 1,000 < 10	MATHEMATICAL STREET	<pre></pre>	Saphthalene < 5 < 1 < 50 < 0.88	cis-1,2- DCE < 5 < 1 < 50 < 0.30	<pre></pre>	<pre></pre>	Others ND ND ND ND ND
7 14 18 MW-1 19 20 21 21 22 23 24 7 14 18 18 19 MW-2 21 22 23 24 7 14 18 18 19 MW-3 20 21 21 22 23 24 7 14 18 18 19 MW-3 20 21 22 23 24 7 14 18 18 19 MW-4 19 20 21 21 22 23 24 14 18 18 19 MW-5 20 21 21 22 23 24 24 14 18 18 19 MW-5 20 21 22 23 24 24 24 24 24 24 24 24 24 24 24 24 24		Jun-00 Mar-02 Jan-03 Mar-03 Aug-03 Dec-03 Mar-04 Jun-04 Sep-04 Jun-02 Jan-03 Mar-03 Dec-03 Aug-03 Dec-03 Aug-03 Dec-04 Jun-04 Sep-04	< 1.0 < 50 < 0.26 < 1.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 0.5 < 1.0 < 0.5 < 1.0 < 5.0 < 6.0 < 7.0 <	<1.0 <50 <0.17 7.2 <5.0 <0.17 <5.0 <0.17 <5.0 <1.0 <0.17 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0	51 < 1 150 373 NA NA NA NA NA A A A A	< 5 1.6 < 50 < 0.49 NA NA NA NA	< 10 NA NA NA NA NA NA	-NA 68 < 10 NA NA	< 2 < 10 < 0.29	< 50 < 0.88	< 5 < 1 < 50 < 0.30	< 1 < 50	< 1 < 50	ND ND
18 MW-1 19 20 21 22 23 24 14 18 19 MW-5 20 21 22 23 24 14 18 19 MW-6 21 22 23 24 14 18 18 19 MW-6 21 22 23 24 24 24 27 27 27 28 28 28 28 28		Jan-03 Mar-03 Aug-03 Dec-03 Mar-04 Jun-00 Mar-02 Jan-03 Mar-03 Dec-03 Aug-03 Dec-03 Mar-04 Jun-04	< 500 < 0.26 < 1.00 < 0.26 < 5.00 < 0.26 < 5.00 < 5.00 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6 < 0.6	< 5.0 < 0.17 7.2 < 5.0 < 0.17 < 5.0 < 0.5 < 0.5 < 1.0 < 5.0	150 373 NA NA NA NA NA VA < 0.5	< 50 < 0.49 NA NA NA NA	NA NA NA NA NA	68 < 10 NA NA	< 10 < 0.29	< 50 < 0.88	< 50 < 0.30	< 50	< 50	ND
MW-1 19 20 21 22 23 24 7 14 18 18 19 MW-2 21 22 23 24 7 14 18 19 MW-3 20 21 22 23 24 7 14 18 18 19 MW-4 19 20 21 21 22 23 24 14 18 18 MW-4 19 20 21 21 22 23 24 14 18 18 19 MW-5 20 21 22 23 24 14 18 18 19 MW-5 20 20 MW-6 21 22 23 24 14 18 18 19 20 MW-6 21 22 23 24 14 18 18 19 20 MW-6 21 22 23 24 24 24 24 24 25 26 27 27 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20		Mar-03 Aug-03 Dec-03 Mar-04 Jun-04 Sep-04 Jun-00 Mar-02 Jan-03 Mar-03 Dec-03 Aug-03 Dec-03 Mar-04 Sep-04	<0.26 <1.0 <5.0 <5.0 <0.26 <5.0 <5.0 <5.0 <5.0 <0.5 <4.0 <5.0 <4.0 <4.0 <4.0 <4.0 <4.0 <4.0 <4.0 <4	< 0.17 7.2 < 5.0 < 0.17 < 5.0 < 5.0 < 5.0 < 0.5 < 1.0 < 5.0	373 NA NA NA NA NA VA < 0.5	< 0.49 NA NA NA NA NA	NA MA NA NA	< 10 NA NA	< 0.29	< 0.88	< 0.30			
20 21 22 23 24 7 14 18 19 MW-2 21 22 23 24 7 14 18 19 20 21 22 23 24 7 14 18 18 19 MW-3 20 21 22 23 24 7 14 18 18 19 MW-5 20 21 22 23 24 14 18 18 19 MW-5 20 21 22 23 24 14 18 18 19 MW-5 20 21 22 23 24 24 24 27 29 20 20 21 20 21 21 22 23 24 24 24 27 29 20 20 20 21 20 21 21 22 22 23 24 24 24 24 27 29 20 20 MW-6 21 20 20 MW-6 21 20 20 MW-6 21 22 22 23 24 24 24 24 24 24 24 24 24 24 24 24 24		Aug-03 Dec-03 Mar-04 Jun-04 Sep-04 Jun-00 Mar-02 Jan-03 Mar-03 Dec-03 Aug-03 Dec-03 Mar-04 Jun-04 Sep-04	< 1.0 < 5.0 < 0.26 < 5.0 < 5.0 < 5.0 < 0.5 < 1.0 < 5.6 < 0.26 < 0.6 MA	7.2 < 5.0 < 0.17 < 5.0 < 5.0 < 0.5 < 1.0 < 5	NA NA NA NA NA < 0.5	NA NA NA NA NA	MA NA NA	NA NA	⇒ •NA			< 0.23	< 0.50	
21 22 23 24 7 14 18 18 19 MW-2 21 22 23 24 7 14 18 18 19 20 21 22 23 24 14 18 MW-3 20 21 22 23 24 14 18 18 19 20 21 22 23 24 14 18 18 19 20 21 22 23 24 14 18 18 19 20 21 22 23 24 24 24 24 24 24 24 24 24 24 25 26 27 27 28 29 20 20 20 21 20 20 20 21 20 20 21 20 20 20 20 20 20 20 20 20 20 20 20 20		Dec-03 Mar-04 Jun-04 Sep-04 Jun-00 Mar-02 Jan-03 Mar-03 Dec-03 Dec-03 Mar-04 Jun-04 Sep-04	< 5.0 < 0.26 < 5.0 < 5.0 < 0.5 < 1.0 < 5 < 0.26 < 0.6	< 5.0 < 0.17 < 5.0 < 5.0 < 0.5 < 1.0	NA NA NA NA < 0.5	NA NA NA NA	NA NA NA	NA			A TOTAL	· · · NA	MA. NA	- NA
22 23 24 7 14 18 18 9 19 MW-2 21 22 23 24 7 14 18 18 19 MW-3 20 21 22 23 24 7 14 18 18 19 MW-4 19 20 20 21 21 22 23 24 14 18 18 19 MW-5 20 20 MW-6 21 22 23 24 14 18 18 19 MW-5 20 20 21 22 23 24 24 24 24 24 24 24 24 24 24 24 24 24		Mar-04 Jun-04 Sep-04 Jun-00 Mar-02 Jan-03 Mar-03 Dec-03 Aug-03 Dec-03 Mar-04 Jun-04 Sep-04	< 0.26 < 5.0 < 5.0 < 0.5 < 1.0 < 5 < 0.26 < 0.6	< 0.17 < 5.0 < 5.0 < 0.5 < 1.0 < 5	NA NA NA < 0.5	NA NA NA	NA NA		· NA	- × NA	NA.	· · · NA	T≡NA	. NA
24 7 14 18 19 MW-2 21 22 23 24 7 14 18 18 19 MW-3 20 21 22 23 24 7 14 18 MW-3 20 21 22 23 24 24 27 21 22 23 24 24 24 26 27 27 28 29 20 20 20 21 20 20 20 20 20 20 20 20 20 20 20 20 20		Sep-04 Jun-00 Mar-02 Jan-03 Mar-03 Dec-03 Aug-03 Dec-03 Mar-04 Jun-04 Sep-04	< 5.0 < 0.5 < 1.0 < 5 < 0.26 < 0.6	< 5.0 < 0.5 < 1.0 < 5	NA < 0.5	. NA		arrested transfer and	NA	-NA	······································	. NA	- NA	- NA
7 14 18 19 MW-2 21 20 21 21 22 23 33 24 7 14 18 19 MW-3 20 21 22 23 24 7 14 18 18 MW-4 19 20 21 22 23 24 14 18 18 19 MW-5 20 MW-6 21 22 23 24 14 18 18 19 20 MW-6 21 22 23 24 14 18 18 19 20 MW-6 21 22 23 24 14 18 18 19 20 MW-6 21 22 23 24 14 18 18 19 19 20 20 21 22 23 24 24 24 24 24 24 24 24 24 24 24 29 29 20 20 20 20 20 20 21 21 22 22 23 24 24 24 24 24 24 24 24 24 24 24 24 24		Jun-00 Mar-02 Jan-03 Mar-03 Dec-03 Aug-03 Dec-03 Mar-04 Jun-04 Sep-04	< 0.5 < 1.0 < 5 < 0.26 < 0.6	< 0.5 < 1.0 < 5	< 0.5	C. De Hi da Sandidila		270	< 5.0	. NA	- NA	NA.	NA.	NA.
MW-2 21 MW-2 21 20 21 21 22 23 24 7 14 18 18 19 MW-3 20 21 22 23 24 7 14 18 MW-4 19 20 21 22 23 24 14 18 MW-5 20 MW-5 20 MW-6 21 22 23 24 14 18 19 MW-7 20		Mar-02 Jan-03 Mar-03 Dec-03 Aug-03 Dec-03 Mar-04 Jun-04 Sep-04	< 1.0 < 5 < 0.26 < 0.6	< 1.0 < 5		< 11.5	NA	120	< 5.0	. NA	NA .	- NA	NA NA	NA ND
18 19 19 18 19 19 19 19		Jan-03 Mar-03 Dec-03 Aug-03 Dec-03 Mar-04 Jun-04 Sep-04	< 5 < 0.26 < 0.6	< 5	\ \ \ \ \	< 1	< 100 220	< 100 NA	< 5.0	< 0.5	< 0.5 < 1	< 0.5 < 1	< 0.5	ND DN
19 MW-2 21 20 21 22 23 24 7 14 18 18 19 MW-3 20 21 22 23 24 7 14 18 18 19 20 21 22 23 24 7 21 22 23 24 14 18 18 19 20 20 21 22 22 23 24 14 18 18 19 20 MW-5 20 21 22 23 24 24 14 18 18 19 20 MW-6 21 22 23 24 14 18 18 19 20 MW-6 21 22 23 24 14 18 18 19 20 MW-6 21 21 22 23 24 14 18 18 19 20 MW-6 21 21 22 23 24 14 18 18 19 20 MW-7 20 20 21 22 23 24 24 24 24 24 24 24 24 24 24 24 24 24		Mar-03 Dec-03 Aug-03 Dec-03 Mar-04 Jun-04 Sep-04	< 0.26 < 0.6 NA		< 5	< 5	NA.	34	1>	< 5	24	< 5	< 5	ND
20 21 21 22 23 24 7 14 18 19 MW-3 20 21 22 23 24 7 14 18 18 MW-4 19 20 21 21 22 23 24 14 18 18 19 MW-5 20 21 21 22 23 24 14 18 18 19 20 21 21 22 23 24 14 18 18 19 20 21 21 22 23 24 14 18 18 19 20 20 MW-6 21 21 22 23 24 14 18 18 19 19 20 20 21 21 22 23 24 24 24 24 24 24 24 24 24 29 20 20 20 21 21 22 22 23 24 24 24 29 20 20 MW-6 21 21 22 22 23 24 24 29 20 20 MW-6 21 20 20 MW-7 20 20 20 20 21 21 22 22 23 24 24 24 24 29 29 20 20 20 20 20 20 20 21 21 22 22 23 24 24 24 24 24 24 24 24 24 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20		Aug-03 Dec-03 Mar-04 Jun-04 Sep-04	NA NA		< 0.49	< 0.26	NA	94	< 0.29	< 0.88	15	< 0.23	< 0.36	ND
21 22 23 24 7 14 18 18 19 MW-3 20 21 22 23 24 7 14 18 MW-4 19 20 21 21 22 23 24 14 18 18 19 MW-5 20 21 21 22 23 24 14 18 18 19 MW-5 20 21 22 23 24 24 24 24 27 20 21 21 22 23 24 24 24 24 26 27 27 28 29 20 20 20 21 21 21 22 22 23 24 24 24 24 24 24 24 24 24 26 27 29 20 20 20 21 21 21 22 22 23 24 24 24 24 24 26 27 29 20 20 20 20 21 20 20 20 21 21 22 22 23 24 24 24 26 27 29 20 20 20 20 20 20 20 20 20 20 20 20 20		Dec-03 Mar-04 Jun-04 Sep-04	NA	< 0.6	TO NA	NA	- NA	·····NA	NA	/ NA	*. ÷=NA	• , / NA	NA	. ×NA
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MW-3 20 21 22 23 24 14 18 19 20 MW-6 21 22 23 24 14 18 19 20 MW-6 21 22 22 23 24 14 18 18 19 20 20 MW-6 21 22 22 23 24 24 24 24 24 24 24 25 25 25 25 25 25 25 25 25 25 25 25 25	1	Mar-02	< 1.0	< 1.0	1.8	4.7	180	NA	< 2	2.2	21	< 1 < 5	< 1 < 5	(a)
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21 22 23 24 7 14 18 MW-4 19 20 21 22 23 24 14 18 18 19 20 21 22 23 24 14 18 18 19 20 MW-6 21 22 23 24 14 18 18 19 19 19 19 19 19 19 19 19 19 19 19 19	1	Aug-03	< 0.20	< 0.5	NA.	N _A	a - NA	, Ata	AZ NA	. PMA	AL NA	NA	₹ NA	⇒ NA
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7 14 18 18 19 20 21 21 22 23 24 14 18 19 20 20 21 21 22 23 24 24 24 24 24 24 24 24 24 24 24 29 20 20 20 20 21 21 22 23 24 24 24 24 29 29 20 20 20 20 20 21 21 22 20 21 21 22 20 21 20 20 20 20 20 20 20 20 20 20 20 20 20	-	Jun-04	< 0.5	< 0.5	NA NA	·····NA	- ∸NA 1NA	130 82	1.9	M NA	NA NA	NA EV	NA NA	NA NA
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23 24 14 18 19 19 20 21 22 23 24 14 18 19 20 MW-6 21 22 23 34 14 18 19 19 19 19 19 19 19 19 19 19 19 19 19	┪	Mar-04	NA.	A NA	- NA	- NA	NA.	- ANA	- AA	- NA	→ MA	N/A	NA.	HA
14 18 19 19 19 19 10 10 20 21 22 23 24 14 18 19 20 10 20 10 10 21 22 23 24 14 18 19 19 19 10 10 11 18 18 19 19 19 10 10 10 10 10 10 10 10 10 10 10 10 10	┪	Jun-04	< 0.5	< 0.5	NA	NA	NA.	< 10	< 0.5		- NA	NA	. NA	NA.
18 19 19 20 21 22 23 24 14 18 19 20 MW-6 21 22 23 44 14 18 19 40 14 18 18 19 19 19 19 19 19 19 19 19 19 19 19 19		Sep-04	< 0.5	< 0.5	== NA	- 344 NA	NA.	< 10	< 0.5	/ S : NA	- NA	∍ NA	± NA	MA
19 MW-5 20 21 22 23 24 14 18 19 20 MW-6 21 22 23 24 14 18 19 19 20 19 19 20 19 19 20 19 21 21 21 23 24 14 18 19 20 20 20 20 20 20 20 20 20 20		Mar-02	< 1.0	< 1.0	< 1	2.7	640	- NA	< 2	120	< 1 < 50	< 1 < 50	< 1 < 50	ND ND
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22 23 24 14 18 19 20 MW-6 21 22 23 24 14 18 18 19 19 MW-7 20	┪	Aug-03	< 2.0	6.1		-NA	NA.	NA	AVA:	- ₽NA	· NA	NA	- NA	₩A.
23 24 14 18 19 20 MW-6 21 22 23 24 14 18 19 19 MW-7 20		Dec-03	< 5.0	< 5.0	NA	M	. NA	JOIA	NA.	= ₽NA	zawa NA	· · · · · · · · · · · · · · · · · · ·	— NA	aris. NA
24 14 18 19 20 MW-6 21 22 23 24 14 18 19 19 19 20 20 20 20 20 20 20 20 20 20 20 20 20	4	Mar-04	< 0.26	< 0.17	- NA	NA.	5 17VA	NA.	NA	₩ WA	ATT NA	- NA	- 744	NA
14 18 19 20 MW-6 21 22 23 24 14 18 18 19 MW-7 20	ᆉ	Jun-04 Sep-04	< 3.1 < 4.2	< 3.1 18	M M	AM.	- YA - WA	120 87	< 3.1 < 4.2	NA NA	E NA ≒= NA	NA NA	NA NA	- NA
19 20 MW-6 21 22 23 24 14 18 19 MW-7 20	_	Mar-02	< 1.0	< 1.0	< J	2.2	< 10	. NA	< 2	1.6	< 1	< 1	< 1	ND
20 MW-6 21 22 23 24 14 18 19 MW-7 20		Jan-03	< 5.6	< 5.0	13	< 5	- WA	46	< 3	< 5	< 5	< 5	< 5	ND
MW-6 21 22 23 24 14 18 19 MW-7 20		Mar-03	< 0.26	6.9	< 0.49	< 0.26	* NA	40	< 0.29	< 0.88	< 0.3	< 0.23	< 0.36	(c.)
22 23 24 14 18 19 MW-7 20		Aug-03 Dec-03	< 0.5 < 5.0	12.6		R. NA	Samuel Samuel Sales Samuel	. NA	.≝M	提 NA	* NA	NA	: NA	NA.
23 24 14 18 19 MW-7 20	4				NA.	⊕ MA	* * NA	- NA	₽NA.	_ A	· · ·NA	. NA	- NA	NA.
24 14 18 19 MW-7 20	- 1	Mar-04	< 0.26	31	- NA	** NA	NA.	s; -Na		± M	NA.	MA	NA	NA.
14 18 19 MW-7 20	-	Jun-04	< 0.5	19	== NA	- NA	: NA	54	1.0		章 M	→ NA	NA	NA.
18 19 MW-7 20		Sep-04	< 0.5	31	. ≅ MA	- NA	NA NA	43	1.0	= NA	· 漢· XA	× NA	NA NA	- NA
19 MW-7 20		Mar-02 Jan-03	< 1.0	< 1.0 ₩A	< 1 2-+NA	<] - NA	< 10 - NA	∴NA NA	< 2	< 1 -NA	< /i>	< /	< /	ND ND
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		Aug-03	< 0.5		. NA		i Na	NA		ia ≃M	- ∠ NA	· · · · · NA		
21		Dec-03	MA		- NA	NA		NA.	· XX		∗ NA		₩	- RA
22		Mar-04	NA Of		≃ NA	- NA			. NA	<u> M</u>	NA NA	NA NA	NA NA	NA VA
23		Jun-04	< 0.5 < 0.5	< 0.5	- NA NA	NA NA		< 10	< 0.5	NA NA		NA NA	NA NA	NA NA
14		Sep D4	< 1.0		< 1	< /	< 10	NA	< 2	< J	< 1	< 1	< 1	ND
18		Sep-04 Mar-02	,NA			. NA		. NA		······································		-NA	NA	ND
19		Sep-04 Mar-02 Ian-03	< 0.26	< 0.17	< 0.49	< 0.26	Z NA	< 10	< 0.29	< 0.88	< 0.3	< 0.23	< 0.36	ND
MW-8 20		Mar-02 Jan-03 Mar-03	< 0.5	< 0.5	NA.	F 24		NA.	T TAX	- MA		- NA	NA NA	NA NA
21		Mar-02 Jan-03 Mar-03 Aug-03	NA.	- W		NA NA		NA NA	- NA - NA	= NA	- NA NA	NA NA	NA NA	NA NA
23		Mar-02 Ian-03 Mar-03 Aug-03 Dec-03							1.0	- NA	NA NA	NA.	- NA	
24		Mar-02 Jan-03 Mar-03 Aug-03	= NA < 0.5		- Ala	N4	- NA	61	1.0			NA	. NA	VA

Notes: Table includes only detected contaminants.

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

DIPE = Isopropyl Ether (a.k.s. di-isopropyl ether)
TBA = Tertiary butyl alenhol
NLP = No Level Published

EDC = Ethylene dichloride, aka 1,2-Dichloruethane (lead scavenger)
PCE = Tetrachloroethylene
DCE = Dichloroethylene

TCE = Trichloroethyene TMB = Trimethylbenzene NA = Not analyzed for this constituent. ND = Not Detected

(a) Also detected were n-propythenzene (3.4 µg/L), p-Isopropythenzene (12 µg/L), see-Butythenzene (7.2 µg/L).

(b) Also detected were isopropythenzene (3.8 µg/L), n-Butythenzene (20 µg/L), n-propythenzene (3.6 µg/L), p-Isopropythenzene (14 µg/L).

(c) Also detected were isopropythenzene (3.4 µg/L), n-propythenzene (2.3 µg/L).

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