FIRST SEMIANNUAL 2010 GROUNDWATER MONITORING REPORT

2836 UNION STREET
OAKLAND, CALIFORNIA

Prepared for:

ESTATE OF LARRY M. WADLER
2525 MANDELA PARKWAY
OAKLAND, CA 94607

May 2010

STELLAR
ENVIRONMENTAL SOLUTIONS, INC.
GEOSCIENCE & ENGINEERING CONSULTING

FIRST SEMIANNUAL 2010 GROUNDWATER MONITORING REPORT

2836 UNION STREET
OAKLAND, CALIFORNIA

Prepared for:

ESTATE OF LARRY M. WADLER
2525 MANDELA PARKWAY
OAKLAND, CA 94607

Prepared by:

STELLAR ENVIRONMENTAL SOLUTIONS, INC.
2198 SIXTH STREET, SUITE 201
BERKELEY, CALIFORNIA 94710

May 7, 2010

STELLAR
ENVIRONMENTAL SOLUTIONS, INC.

2198 SIXTH STREET, SUITE 201·BERKELEY, CA 94710
TEL: (510)644-3123 · FAX: (510)644-3859
GEOSCIENCE & ENGINEERING CONSULTING

May 7, 2010

Ms. Barbara Jakub
Alameda County Environmental Health Care Services Agency
Department of Environmental Health – Local Oversight Program
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Subject: First Semiannual 2010 Groundwater Monitoring Report: Former Modern Mail Service, 2836 Union Street, Oakland, California, Alameda County Environmental Health Department Fuel Leak Case No. RO2901

Dear Ms. Jakub:

On behalf of the property owner and "Responsible Party" (Estate of Lawrence M. Wadler), Stellar Environmental Solutions, Inc. (SES) is submitting this First Semiannual 2010 Groundwater Monitoring Report for the former Modern Mail Service Facility at 2836 Union Street, Oakland, California. This report documents the First Semiannual 2010 groundwater monitoring event related to petroleum contamination from a former underground fuel storage tank. This is the 13th consecutive groundwater monitoring event conducted at this site. This report has been uploaded to ACEH and to the State Water Resources Control Board's GeoTracker system.

In addition, the analytical laboratory reported an error in their instrument calibration resulting in errors in the October 2009 laboratory reports that were included with the Second Semiannual 2009 Groundwater Monitoring Report. There were small discrepancies between the erroneous and corrected data that did not effect the report conclusions, however the historical data tables have been corrected and the corrected laboratory reports and an explanatory letter from the laboratory is included in Appendix D.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report are true and correct to the best of my knowledge. If you have any questions regarding this report, please contact us at (510) 644-3123.

Sincerely,

Teal Glass, R.E.A.
Environmental Scientist

Elana Aabas
Property Estate Trustee

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

TABLE OF CONTENTS

Appendices

TABLES AND FIGURES

1.0 INTRODUCTION

PROJECT BACKGROUND

Stellar Environmental Solutions, Inc. (SES) was contracted by Mr. Lawrence Wadler (property owner currently referred to as the Estate of Lawrence Wadler) to conduct corrective actions related to soil and groundwater contamination associated with a 10,000-gallon underground fuel storage tank (UFST) at 2836 Union Street in Oakland, California. A list of all known environmental reports is included in Section 6.0.

This report discusses the first semiannual 2010 sampling activities conducted on April 22, 2010. Figure 1 shows the site location. Figure 2 shows the site plan with the locations of groundwater wells, borings, and the former UFST.

SITE DESCRIPTION AND HISTORY

The approximately 7,200-square foot rectangular subject property is developed with one approximately 1,500-square foot two-story building. A narrow driveway borders the building to the north, and the rear of the property is undeveloped (paved). Adjacent uses include:

- A residence (to the north);
- A paved parking area (to the east);
- A residence (to the south); and
- A sidewalk, then Union Street, then a moving company (to the west).

The property operated as an express courier facility (Modern Mail Services, Inc.) between 1951 and 2003. One 10,000-gallon gasoline UFST was installed in the late 1970s. The UFST operated under an Alameda County Environmental Health permit (permit No. STID 4065) until it was removed in 1998. The tank closure report was submitted to the Oakland Fire Department (Golden Gate Tank Removal, 1998).

An initial site characterization conducted by SES in November 2005, which included the advancement of four borings, revealed gasoline and associated aromatic hydrocarbons at elevated levels in both soil and groundwater. That investigation was summarized in a technical report (SES, 2005b).

3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096

1000 ft Scale: 1 : 43,750 Detail: 12-2 Datum: WGS84

N

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

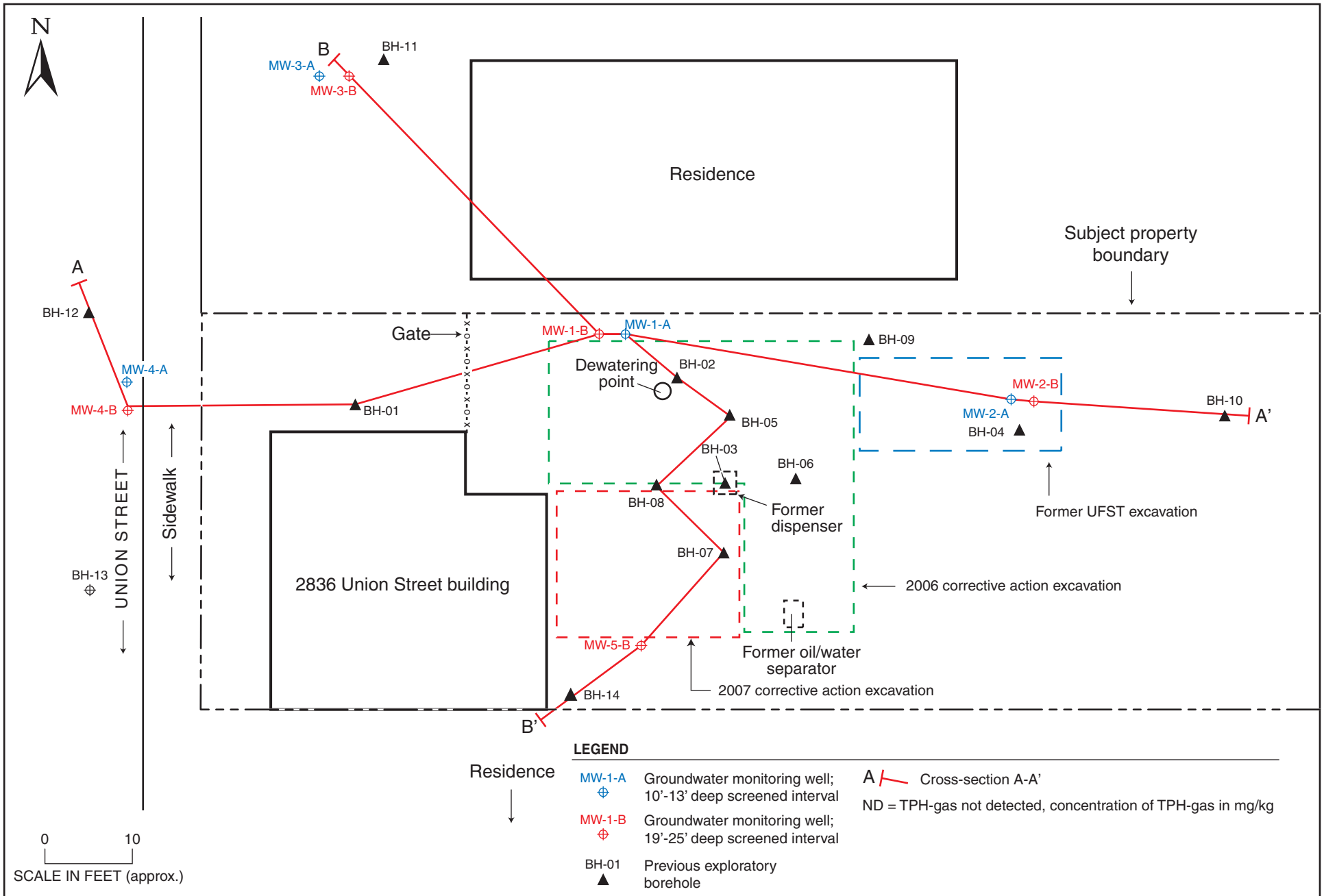
2836 Union Street
Oakland, CA

By: MJC | NOVEMBER 2005

Figure 1

STELLAR ENVIRONMENTAL SOLUTIONS, INC
GEOSCIENCE & ENGINEERING CONSULTING

2005-65-01



STELLAR ENVIRONMENTAL SOLUTIONS, INC
GEOSCIENCE & ENGINEERING CONSULTING

SITE PLAN SHOWING LOCATIONS OF SOIL BORINGS AND MONITORING WELLS
2836 Union Street, Oakland, CA

Figure 2

by: MJC | NOVEMBER 2008

2005-65-72

Additional site investigations in April 2006 involved the advancement of nine exploratory boreholes to determine the areal and vertical extent of soil and groundwater contamination. Site data indicated the presence of petroleum hydrocarbons in soil and groundwater. Actions such as groundwater monitoring, and the removal of any remaining (accessible) contaminated soils by excavation, were recommended as an interim corrective action. The April 2006 investigation is summarized in a technical report (SES, 2006b).

A corrective action which implemented the April 2006 recommendations was conducted between September and December 2006. This involved the installation of ten monitoring wells, the advancement of one soil boring, the removal of 398 tons of contaminated soil, and the pumping of 5,100 gallons of contaminated groundwater from the backfilled excavation. Some residual contaminated soil was inaccessible for removal, and remained beneath the onsite building. Removal of this portion of the building and the previously inaccessible soil was conducted in November 2007. This corrective action was effective in removing 212 tons of contaminated soil; and included purging contaminated groundwater and applying Oxygen Reducing Compound (ORC) Advanced™ product into the open excavation. Monitoring well MW-5A was destroyed by excavation during the November 2007 activity. These investigations are summarized in SES technical reports (SES, 2006d and 2007f). The site wells have been monitored quarterly since October 2006. At the request of ACEH, a "Preferential Pathway Utility and Well Survey" was conducted during the fourth quarter of 2008, the results of which are discussed in another technical report (SES 2008e). The frequency of groundwater monitoring was reduced in 2009 from a quarterly to semiannual basis as per the ACEH directive letter, dated July 24, 2009.

REGULATORY STATUS

The Alameda County Environmental Health Care Services Agency, Department of Environmental Health Services (ACEH) is the lead regulatory agency for the case, acting as a Local Oversight Program (LOP) for the Regional Water Quality Control Board – San Francisco Bay Region (Water Board). There are no ACEH or Water Board cleanup orders for the site; however, all site work has been conducted under the oversight of ACEH. ACEH assigned the site to its fuel leak case system (RO#2901), and the case officer assigned was Mr. Barney Chan. Mr. Chan transferred to another ACEH department in 2007 and the current case officer, Ms. Barbara Jakub was assigned to the case in the summer of 2008.

The case has been assigned No. T0600105641 in the Water Board's GeoTracker system. Electronic uploads of required data/reports are submitted to both agencies. The site has been granted a Letter of Commitment, and has been receiving financial reimbursement from the California Underground Storage Tank Cleanup Fund.

2.0 PHYSICAL SETTING

TOPOGRAPHY AND DRAINAGE

The mean elevation of the property is approximately 18 feet above mean sea level (amsl), and the general topographic gradient in the site vicinity is slight and to the west-southwest (toward San Francisco Bay). The site itself has no discernible slope. The nearest downgradient (to the west) permanent surface water body is the Airport Channel of San Leandro Bay (which is connected to San Francisco Bay), approximately 2 miles west of the subject property. According to the commercially available database, the site is not located within a flood zone or wetland.

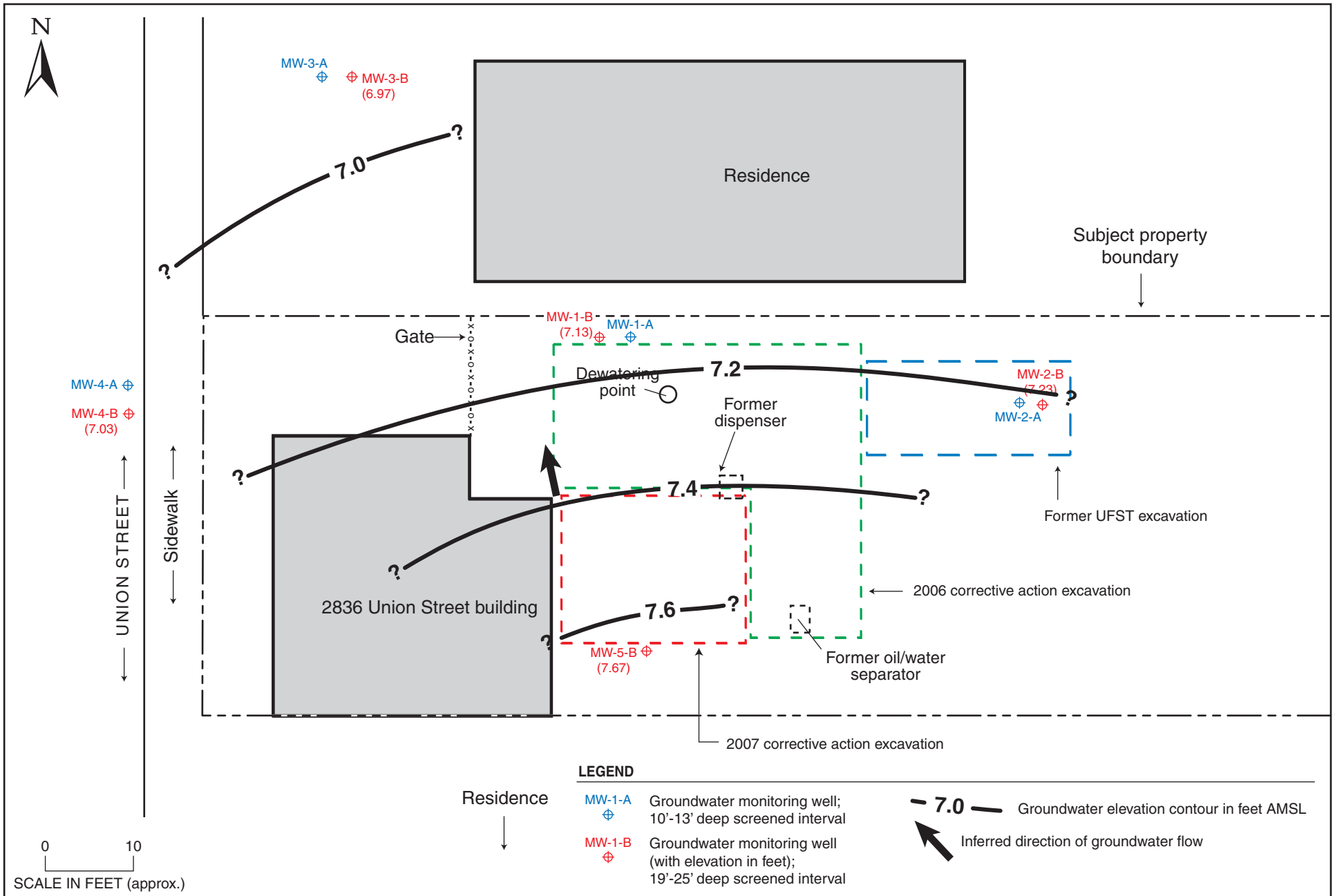
LITHOLOGY AND HYDROGEOLOGY

The predominant soil type in all site boreholes was generally firm and plastic silty clay. Several of the boreholes had no obvious sand or gravel units, although minor amounts of sand and gravel were occasionally present in the overall clay matrix. Groundwater occurred in these units with higher sandy-gravel than clay content. Local heterogeneities in shallow lithology and groundwater levels are typical of the alluvial deposits in this area.

Local groundwater flow direction is generally to the west (toward San Francisco Bay and following local topography) in this area of west Oakland. Groundwater in the immediate vicinity of the former UFST occurs at a depth of less than 10 feet, and appears to be under semi-confining conditions, rising from approximately 20 feet below ground surface to as high as 6 feet below grade such that groundwater is in contact with residual contaminated soil. The groundwater contaminant plume has not been fully delineated, but appears to have an elliptical configuration with the long axis trending east to west-northwest.

GROUNDWATER FLOW DIRECTION

Figure 3 is a groundwater elevation map based on the April 22, 2010 groundwater elevation measurements. The groundwater gradient during this event was approximately 0.005 feet/foot across the site with a flow direction toward the northwest. The groundwater gradient has varied since October 2006 between approximately 0.001 feet/foot and 0.01 feet/foot, averaging approximately 0.005 feet/foot.



STELLAR ENVIRONMENTAL SOLUTIONS, INC
GEOSCIENCE & ENGINEERING CONSULTING

GROUNDWATER ELEVATION MAP (B-WELLS)

2836 Union Street, Oakland, CA

Figure 3

by: MJC | MAY 2010

2005-65-82

3.0 FIRST SEMIANNUAL 2010 GROUNDWATER MONITORING

This section presents the groundwater sampling and analytical methods for the most recent event (first semiannual 2010), conducted on April 22, 2010.

GROUNDWATER MONITORING

Groundwater monitoring well water level measurements, sampling, and field analyses were conducted by SES on April 22, 2010. To minimize the potential for cross-contamination, wells were purged and sampled using new disposable tubing at each well. Any equipment used was decontaminated between wells.

As the first monitoring task, static water levels were measured in the nine site wells using an electric water level indicator. Monitoring well MW-5A was destroyed by excavation during the November 2007 corrective action and thus is no longer available for monitoring. The wells were then sampled with a peristaltic pump, during which the groundwater quality parameters of temperature, pH, conductivity, turbidity, and dissolved oxygen were field-measured using daily-calibrated instruments. Approximately 6 gallons of sampling purge water was generated and containerized onsite, and will be disposed of at later date after subsequent monitoring events and additional purge water has accumulated. The samples were placed in an ice chest with ice at approximately 4°C and transported to the analytical laboratory under chain-of-custody the same day. Laboratory analysis was conducted by Curtis and Tompkins, Ltd. (Berkeley, California), an analytical laboratory certified by the State of California Environmental Laboratory Accreditation Program (ELAP).

The locations of all site monitoring wells are shown on Figure 2. Well construction information and groundwater elevation data are summarized in Table 1. Appendix A contains the groundwater monitoring field records for the current event. Appendix B outlines SES's standard sampling protocol for groundwater. Groundwater analytical results are presented and discussed in Section 4.0. Historical groundwater elevation data and analytical results are contained in Appendix D.

Table 1
Monitoring Well Groundwater Elevation Data – April 22, 2010
2836 Union Street, Oakland, California

Well	Well Depth Below TOC	Rim Elevation	TOC Elevation	Groundwater Elevation (4/22/10)
MW-1A	12.59	12.52	12.25	6.51
MW-1B	22.52	12.48	12.05	7.13
MW-2A	12.69	13.06	12.82	8.00
MW-2B	24.59	13.16	12.96	7.23
MW-3A	13.06	11.76	11.59	5.92
MW-3B	25.06	12.10	11.95	6.97
MW-4A	12.28	11.25	11.02	6.87
MW-4B	24.32	11.25	11.04	7.03
MW-5B	25.39	12.57	12.38	7.67

Notes:

TOC = top of casing

Wells are 1-inch diameter.

All elevations are in feet above mean sea level.

4.0 REGULATORY CONSIDERATIONS, ANALYTICAL RESULTS, AND DISCUSSION OF FINDINGS

REGULATORY CONSIDERATIONS AND SCREENING LEVELS

The Water Board has established Environmental Screening Levels (ESLs) for evaluating the likelihood of environmental impact. ESLs are conservative screening-level criteria for soil and groundwater, designed to be generally protective of both drinking water resources and aquatic environments; they incorporate both environmental and human health risk considerations. ESLs are not cleanup criteria (i.e., health-based numerical values or disposal-based values). Rather, they are used as a preliminary guide in determining whether additional remediation and/or investigation may be warranted. Exceedance of ESLs suggests that additional investigation and/or remediation is warranted.

Different ESLs are published for commercial/industrial vs. residential land use, for sites where groundwater is a potential drinking water resource vs. is not a drinking water resource, and the type of receiving water body. A Water Board-published map of the East Bay shows areas where groundwater is, and is not, a potential drinking water resource.

The appropriate ESLs for the subject site are based on the following:

- Residential land use (due to the residences adjoining the property) and commercial/ industrial use (for the subject property itself). Note that, for both soil and groundwater contaminants, all ESLs for the site contaminants are the same for both residential and commercial/industrial land use.
- Groundwater <u>is</u> a potential drinking water resource. In our professional opinion, the appropriate ESLs for the subject site are *commercial/industrial land use* and *groundwater is a potential drinking water resource.* This is based on both the property zoning status (commercial/industrial) and the designation of this area of Oakland as "Zone A – Significant Drinking Water Resource (Water Board, 1999).
- The receiving body for groundwater discharge is an estuary (San Francisco Bay).

The State of California has also promulgated drinking water standards (Maximum Contaminant Levels [MCLs]) for some of the site contaminants. Drinking water standards may also be utilized by regulatory agencies to evaluate the potential risk associated with groundwater

contamination. For the site contaminants, MCLs are generally the same as the ESLs (except that there is no MCL for gasoline).

Once ESLs or drinking water standards are exceeded, the need for, and/or type of additional investigative and corrective actions are generally driven by the potential risk associated with the contamination. Minimum regulatory criteria generally applied to fuel leak cases in groundwater include:

- The contaminant source has been removed, including reasonably accessible contaminated soils that pose a long-term impact to groundwater;
- The extent of residual contamination has been fully characterized to obtain sufficient lithologic and hydrogeologic understanding (generally referred to as a Site Conceptual Model);
- Groundwater wells have been installed and are monitored periodically to evaluate groundwater contaminant concentrations and hydrochemical trends;
- The stability of the contaminant plume has been evaluated to determine whether it is moving or increasing in concentration; and
- A determination has been made as to whether the residual contamination poses an unacceptable risk to sensitive receptors.

As stated above, ESLs are used as a preliminary guide in determining whether additional remediation or other action is warranted. Exceeding ESLs may warrant additional actions, such as monitoring plume stability to demonstrate no risk to sensitive receptors in the case of sites where drinking water is not threatened.

ANALYTICAL METHODS

The initial site characterization documented contamination by the following LUFT-related constituents: gasoline; benzene toluene, ethyl benzene, and xylenes (BTEX); and methyl *tertiary*-butyl ether (MTBE). In addition, several other contaminants were analyzed (as required by ACEH)—ethanol; fuel oxygenates (*tertiary*-butyl alcohol [TBA], di-isopropyl ether [DIPE], ethyl *tertiary*-butyl ether [ETBE], and *tertiary*-amyl methyl ether [TAME]); and lead scavengers (1,2-dichloroethane [EDC] and 1,2-dibromoethane [EDB]). Fuel oxygenates and lead scavengers were analyzed in monitoring wells for which there were no data, or in those that showed previous laboratory detectable concentrations for these constituents.

Groundwater samples were analyzed using the following methods for:

- Total volatile hydrocarbons (TVH) gasoline range by EPA Method 8015M;
- BTEX and MTBE by EPA Method 8260;

- TBA, DIPE, ETBE, and TAME by EPA Method 8260B (in accordance with ACEH requirement); and
- EDC and EDB by EPA Method 8260B (in accordance with ACEH requirement).

All groundwater samples were analyzed by Curtis & Tompkins, Ltd. (Berkeley, California) which maintains current ELAP certifications for all the analytical methods utilized in this investigation.

Field parameters including temperature, pH, conductivity, turbidity, and dissolved oxygen were measured using a Horiba U22 meter, which was calibrated the same day of sample collection.

QUALITY CONTROL SAMPLE ANALYTICAL RESULTS

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

ANALYTICAL RESULTS AND DISTRIBUTION OF CONTAMINANTS

Tables 2 and 3 summarize the groundwater monitoring analytical results for TVHg, and associated constituents and the dissolved oxygen field measurements. Table 3 presents the analytic results of the fuel oxygenates and lead scavengers analyses. The certified analytical results and chain of custody record are contained in Appendix C. Historical groundwater-monitoring analytical results are contained in Appendix D.

Groundwater Analytical Results

TVH as gasoline was detected above the ESL of 100 micrograms per liter (µg/L) in monitoring wells MW-1B, MW-2A, MW-3B and MW-4B. TVH as gasoline was also detected in monitoring well MW-5B but below the ESL. No other monitoring wells had detections of TVH as gasoline above the laboratory detection limit.

MTBE was detected above its ESL of 5.0 µg/L in wells MW-1A, MW-1B, MW-2B, MW-3A and MW-4A. MTBE was also detected in wells MW-2A and MW-5B, but at levels below the ESL. MTBE was not found above the laboratory detection limit in any of the other wells sampled.

Benzene was found above the ESL of 1.0 µg/L in well MW-2B. Benzene was not found above the laboratory detection limit in any other of the wells sampled. Ethylbenzene was detected in well MW-2B but at a level below the ESL. Toluene and total xylenes were not found above the laboratory detection limit in any of the wells sampled.

The lead scavenger 1,2-dichloroethane (EDC) was detected above the ESL of 0.5 µg/L in well MW-1A and MW-1B. EDC was not detected above the laboratory detection limit in any of the other wells sampled. Tertiary-amyl methyl ether (TAME) was detected in well MW-5B but at a level below the ESL. There were no detections of 1,2-dibromethane (EDB), ethyl tertiary butyl ether (ETBE), isopropyl ether (DIPE), or tertiary butyl alcohol (TBA) above the laboratory detection limits in any of the groundwater monitoring wells sampled during this event.

Figure 4 is an isoconcentration contour map of TVH as gasoline in groundwater based on the April 2010 monitoring well analytical results. The plume geometry indicates a west-by-northwest migrational pattern, which is in line with general groundwater flow direction in this area. Wells MW-3B and MW-4B still show relatively high, persistent, concentrations.

Contaminant concentrations in general have increased since the October 2009 sampling event as is generally observed during this time of year. However, with the exception of a slight increase observed in well MW-2A, contaminant concentrations have decreased since the sampling event in April 2009.

Table 2
Groundwater Sample Analytical Results – April 22, 2010
TVHg, BTEX, and MTBE,
2836 Union Street, Oakland, California

Sample	TVHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	DO_2
Monitoring Wells							
MW-1A	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	**28**	3,400
MW-1B	**760**	*<0.5*	*<0.5*	*<0.5*	*<0.5*	**5.8**	600
MW-2A	**210**	*<0.5*	*<0.5*	*<0.5*	*<0.5*	3.1	500
MW-2B	*<50*	**3.2**	*<0.5*	0.68	*<0.5*	**86**	1,100
MW-3A	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	**25**	9,500
MW-3B	**4,800**	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<5.0*	300
MW-4A	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	**16**	6,900
MW-4B	**3,700**	*<4.2*	*<4.2*	*<4.2*	*<4.2*	*<4.2*	500
MW-5B	90	*<0.5*	*<0.5*	*<0.5*	*<0.5*	4.9	7,900
Groundwater ESLs	100 / 210	1.0 / 46	40 / 130	30 / 43	20 / 100	5 / 1,800	NLP

Notes:
ESLs = Water Board Environmental Screening Levels for commercial/industrial sites where groundwater *is/is not* a potential drinking water resource. Sample concentrations in **bold-face** type exceed the ESL criterion where groundwater is a potential drinking water resource.
MTBE = methyl tertiary-butyl ether; TVHg = total volatile hydrocarbons as gasoline ; DO_2 = dissolved oxygen
NA = not analyzed for this constituent; NS = not sampled, insufficient sample amount; NLP = no level published
All concentrations are in micrograms per liter (µg/L).
NS = Not sampled. Insufficient water for sampling.

Table 3
Groundwater Sample Analytical Results – April 22, 2010
Lead Scavengers and Fuel Oxygenates
2836 Union Street, Oakland, California

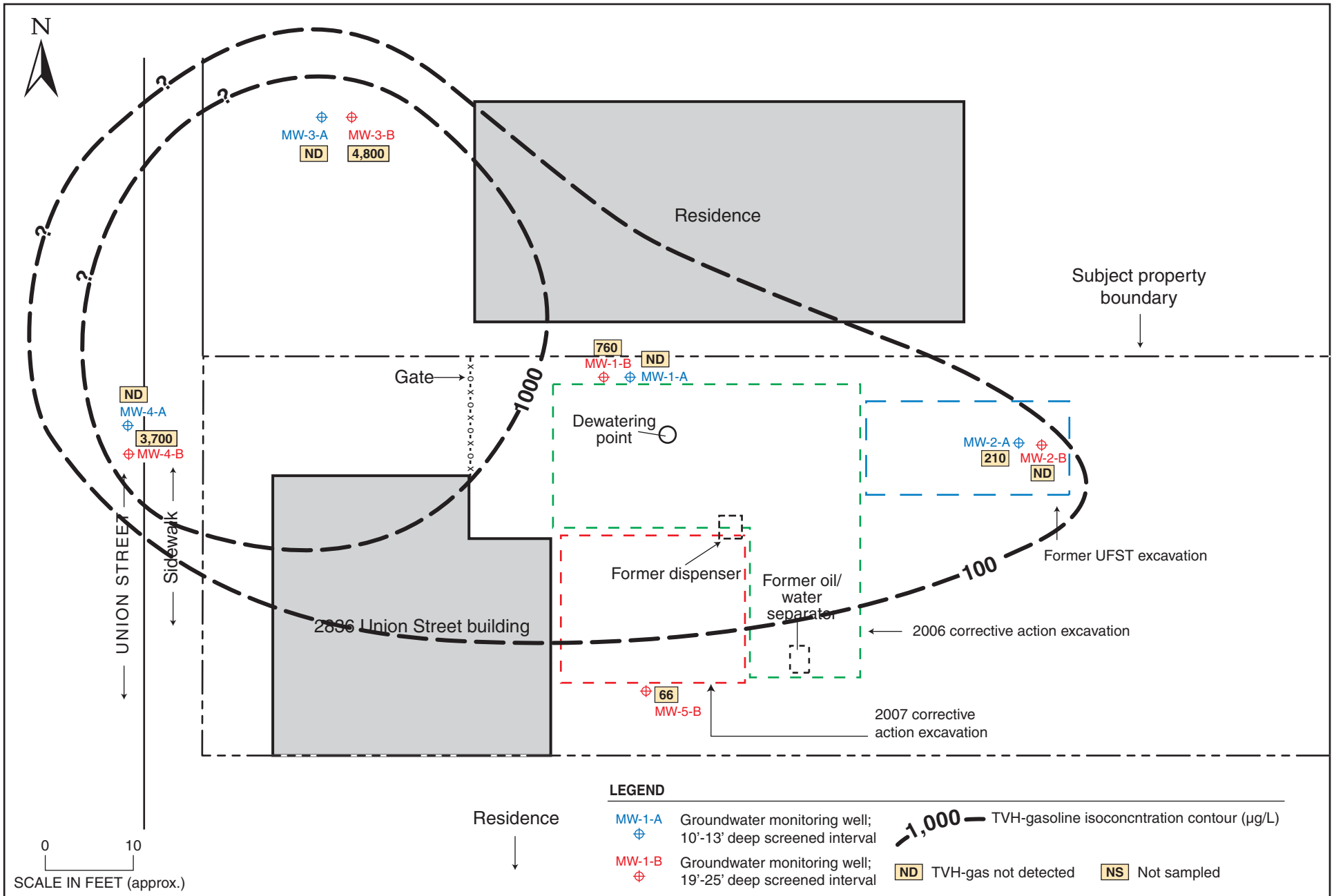
Sample I.D.	EDC	EDB	ETBE	DIPE	TAME	TBA
Groundwater Analyses (µg/L)						
MW-1A	**3.5**	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
MW-1B	**1.7**	*<1.0*	*<1.0*	*<1.0*	*<1.0*	*<20*
MW-2A	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
MW-2B	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
MW-3A	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
MW-3B	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
MW-4A	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
MW-4B	*<4.2*	*<4.2*	*<4.2*	*<4.2*	*<4.2*	*<83*
MW-5B	*<0.5*	*<0.5*	*<0.5*	*<0.5*	4.9	*<10*
Groundwater ESLs	0.5 / 690	0.05 / 510	NLP	NLP	NLP	12/ 18,000

Notes:
ESLs = Water Board Environmental Screening Levels for residential sites where groundwater *is/is not* considered a potential drinking water resource. Sample concentrations in **bold-face** type exceed the ESL criterion where groundwater is a potential drinking water resource.
EDB = ethylene dibromide ; EDC = ethylene dichloride ; ETBE = ethyl tertiary-butyl ether; DIPE = isopropyl ether
TAME = tertiary-amyl methyl ether; TBA = tertiary-butyl alcohol;
NA = not analyzed for this constituent; NS = not sampled; NLP = no level published
All concentrations are in micrograms per liter (µg/L).

Dissolved Oxygen

Dissolved oxygen (DO) is the most thermodynamically-favored electron acceptor used in aerobic biodegradation of hydrocarbons. Active aerobic biodegradation of petroleum hydrocarbon compounds requires at least 1 to 2 milligrams per liter (mg/L) of DO in groundwater. During aerobic biodegradation, DO levels are reduced in the hydrocarbon plume as respiration occurs. Therefore, DO levels that vary inversely to hydrocarbon concentrations are consistent with the occurrence of aerobic biodegradation.

DO concentrations, shown in Table 3, were measured in wells during the current event and ranged from 0.3 mg/L to 9.5 mg/L. Only four wells; MW-1A, MW-3A, MW-4A, and MW-5B contained concentrations of DO above the 2 mg/L. This indicates that the November 2007 ORC™ treatment is diminishing in its effectiveness to release oxygen in the subsurface formation. The wells showing the highest TVH-gasoline concentrations, MW-3B (4,800 µg/L TVHg) and MW-4B (3,700 µg/L TVHg) also have the lowest DO, at 0.3 and 0.5 mg/L, respectively.



STELLAR ENVIRONMENTAL SOLUTIONS, INC
GEOSCIENCE & ENGINEERING CONSULTING

TVH-GASOLINE PLUME — APRIL 22, 2010, B-ZONE WELLS

2836 Union Street, Oakland, CA

Figure 4

by: MJC | MAY 2010

2005-65-83

5.0 EVALUATION OF HYDROCHEMICAL TRENDS AND PLUME STABILITY

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

CONTAMINANT SOURCE ASSESSMENT

One 10,000-gallon gasoline UFST was installed in the late 1970s. The UFST operated under Alameda County Environmental Health permit (Permit No. STID 4065) until its removal in 1998.

Site soil and groundwater have been contaminated by gasoline and associated aromatic hydrocarbons. Soil analytical results show that soil contamination begins at a depth of approximately 6 to 7 feet, and does not extend deeper than approximately 11 feet.

Soil contamination above ESL criteria appears to be constrained on site in the area of MW-1A and MW-1B where it can not be removed due to the property boundary.

While past corrective actions removed a substantial mass of contamination, shallow groundwater will continue to be slightly impacted by the remaining residual soil contamination by desorption from soil into groundwater.

As was shown by historical soil boring sample analysis, the dissolved phase hydrocarbon contamination in the groundwater does not appear to be adsorbing onto downgradient soils.

The mass of unsaturated zone soil contamination has been removed to the extent practical, and subsequent groundwater monitoring results indicate there is no remaining significant residual contamination present in site soils.

WATER LEVEL TRENDS

Appendix D contains historical groundwater elevations. The data support the following conclusions:

- Groundwater elevations in all wells show a general correlation to rainy versus dry seasonal trends. Decreases in elevation are seen from approximately April through December, followed by an increase from December through April. This is a common seasonal trend observed in the upper water-bearing zone in the Bay Area region.
- The range of water level elevations in the B-wells, screened from approximately 19 to 25 feet bgs, has varied by less than 2 feet and no substantial differences in elevations (beyond the seasonal fluctuations) have been noted since October 2006.
- The A-wells, screened from approximately 10 to 13 feet bgs, exhibit very slow recharge. These well are screened across units that are not laterally continuous and have not been used in the construction of the site groundwater elevation maps or the calculation of groundwater gradient. They have been used primarily to monitor shallow contamination.
- Groundwater at the site occurs at a depth of less than 10 feet and appears to be under at least semi-confining conditions. In previous investigation borings, the groundwater exhibited a rise from approximately 20 feet bgs to as high as 6 feet below grade, such that groundwater is in contact with residual contaminated soil.
- Historical groundwater flow direction has been predominantly to the west-northwest with minor deviations produced by local dewatering of contaminated water.
- Subject property groundwater gradient in previous events has been relatively flat, and was observed during this event at an average of 0.005 feet/foot. Historical groundwater gradient (since October 2006) has varied between approximately 0.001 feet/foot and 0.01 feet/foot, averaging approximately 0.005 feet/foot.

HYDROCHEMICAL TRENDS

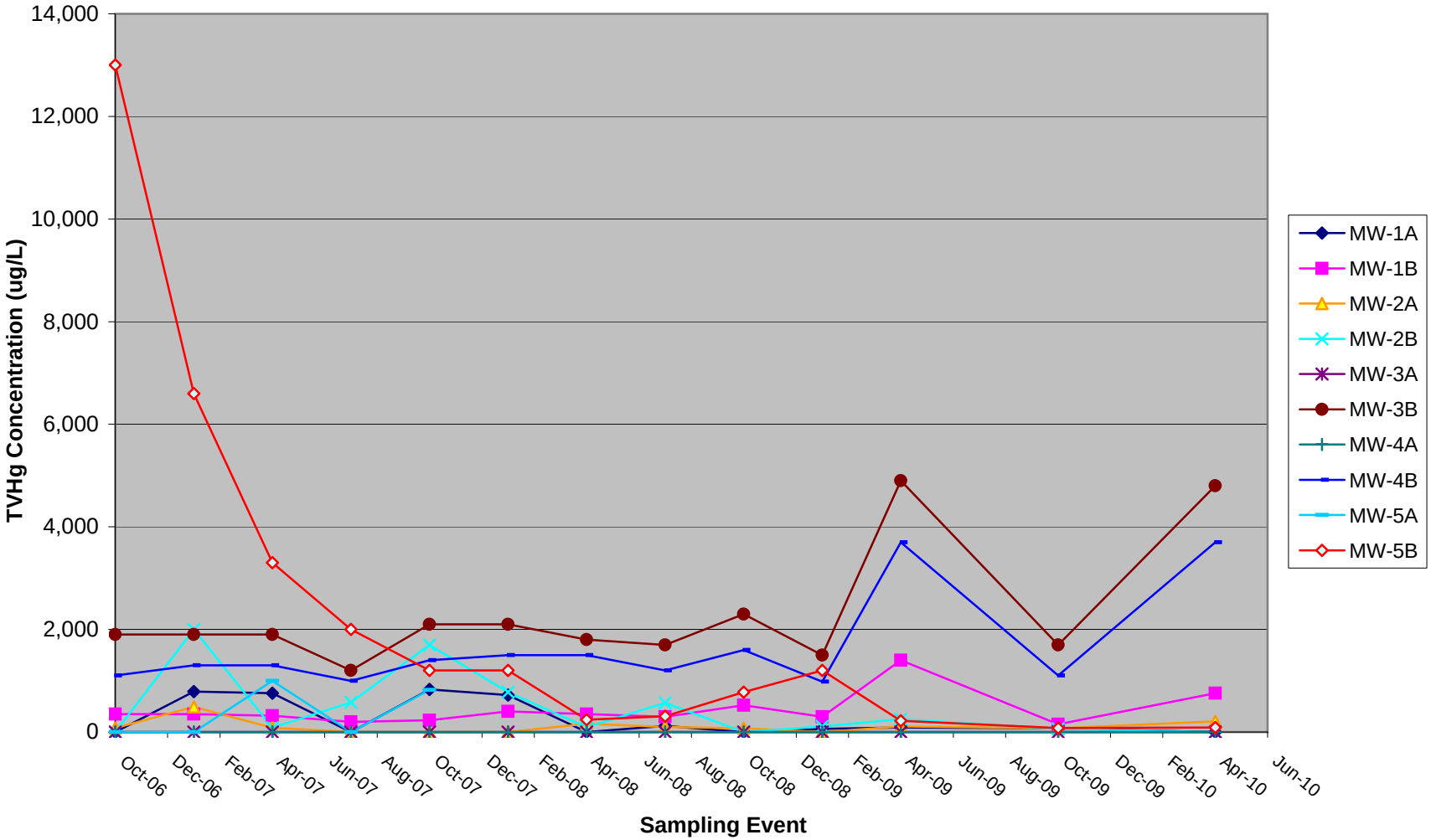
The contaminants of concern (those above regulatory ESLs) have been determined to be TVH as gasoline, benzene, MTBE and EDC. Historical groundwater analytical results are included in Appendix D.

Gasoline

Figure 5 show hydrochemical trend data for gasoline in the site wells. Source area wells MW-1A and MW-5B and historical source wells MW-2A and MW-2B have shown an overall trend of decreasing gasoline concentrations since monitoring began in October 2006. This is most likely a direct response to the removal of contaminated soil during the 1998 UFST excavation and subsequent 2006 and 2007 corrective action excavations.

In general, downgradient wells MW-3B and MW-4B and source area well MW-1B have shown a general increase in gasoline concentrations. This indicates that the ORC injection remedy did not diffuse that far downgradient. However, during this event, a decrease was exhibited as

Figure 5: Historical Groundwater Analytical Results
Total Volatile Hydrocarbons as Gasoline (TVHg)
October 2006 - April 2010



compared to this time last year. An increase was observed as compared to the last October 2009 event. Downgradient wells MW-3A and MW-4A have not had gasoline concentrations above the laboratory detection limit since monitoring began. This indicates that while the source area contamination has been removed, dissolved phase contamination is present in the deeper aquifer (represented by the B wells screened from approximately 19 to 25 feet bgs). The wells showing the highest TVH-gasoline concentrations, MW-3B (4,800 µg/L TVHg) and MW-4B (3,700 µg/L TVHg), also have the lowest DO at 0.3 and 0.5 mg/L, respectively.

Benzene

Historically well MW-1A (located downgradient of the former UST dispenser) has contained the highest benzene concentration. However, during this event, no benzene was detected above the laboratory detection limit in this well. Well MW-B, located just downgradient of this well, contained the only benzene detection during this monitoring event. This is the first time benzene has been detected in this well, indicating that the concentration may be attenuating across the site. Benzene has not been detected above the laboratory detection limit in any of the other wells (with the exception of MW-5A which was destroyed in November 2007) since their installation in 2006.MTBE and EDC

Concentrations of MTBE have remained relatively stable in all of the wells in which it has been detected. MTBE has been detected at relatively higher concentrations in the shallower A-wells and has been the only detected contaminant in wells, MW-3A, MW-4A downgradient from the source area, demonstrating its high soluble mobility. EDC has been consistently detected in onsite wells MW-1B, MW-2B, and MW-3A since monitoring began. However, during this event detection were only noted in wells MW-1A and MW-1B.

Dissolved Oxygen

Dissolved oxygen (DO) ranged from 300 µg/L (MW-3B) to 9,500 µg/L (MW-3A), which indicates the ORC is migrating downgradient of the former release zone. The wells showing the highest TVH as gasoline concentrations, MW-3B (4,800 µg/L TVHg) and MW-4B (3,700 µg/L TVHg), also have the lowest DO, at 0.3 and 0.5 mg/L, respectively.

PLUME GEOMETRY AND MIGRATION INDICATIONS

The groundwater contaminate plume has not been fully delineated, but appears to be in elliptical configuration with its long axis trending east by west-northwest.

As discussed in detail in Section 4.0, the contaminant plume in groundwater (gasoline, benzene and MTBE concentrations above ESL criteria) has an approximate maximum extent within the

100 µg/L TVHg isoconcentration contour of approximately 130 feet long by 60 feet wide in the October 2008 monitoring event, with a generally northwest-southeast longitudinal axis.

Contaminant concentrations of TVH as gasoline and MTBE above ESL criteria extend off site to the north-northwest (under Union Street). The MTBE plume shows generally the same configuration. The downgradient limits of the plume are inferred to extend offsite approximately 20 west and 40 feet north. The plume extends offsite about 20 feet in the south direction while the eastern upgradient limit of the plume is constrained on site.

The plume geometry has not varied substantially since monitoring began in October 2006, although seasonal fluctuations in contaminant concentrations have been observed. While benzene appears to be remaining relatively stable or decreasing, overall, increasing gasoline concentrations in downgradient wells suggest that downgradient migration of this constituent could be occurring.

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

CLOSURE CRITERIA ASSESSMENT AND PROPOSED ACTIONS

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

The contaminant source has been removed (i.e., the source of the discharge and obviously-contaminated soil). This criterion has been met. The UFST and associated piping and dispenser and residual soil contamination sources have been removed to the extent possible and borehole and excavation soil sampling have shown that the substantial mass of that will act as an ongoing source of groundwater contamination has been removed.

The groundwater contaminant plume is well characterized, and is stable or reducing in magnitude and extent. As discussed above, in our professional opinion, this criterion has not been entirely met, and continued groundwater monitoring will be needed to evaluate the effect of the November 2007 groundwater dewatering, contaminated soil excavation and ORC® application in order to demonstrate plume stability.

If residual contamination (soil or groundwater) exists, there is no reasonable risk to sensitive receptors (i.e., contaminant discharge to surface water or water supply wells) or to site occupants. This criterion has been met by conducting a Risk-Based Corrective Action (RBCA) assessment which modeled the fate and transport of residual

contamination in the context of potential impacts to sensitive receptors (e.g., water wells, residential land use). SES completed this investigation in December 2008 and it was determined that there are no potential sensitive receptors which could be impacted by the groundwater plume.

6.0 SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

SUMMARY AND CONCLUSIONS

- One 10,000-gallon gasoline UFST was installed in the late 1970s. The UFST operated under an Alameda County permit until its removal in 1998.
- A preliminary investigation was conducted in August 2005, additional site characterization investigations were conducted in October 2005 and April 2006, and corrective action entailing contaminated soil excavation and the installation of ten monitoring wells was conducted in September through October 2006. The remaining accessible contaminated soil was removed in November 2007 from beneath the former garage building, and the excavation area was treated with ORC™ product. The November 2007 corrective action also entailed destruction by excavation of monitoring well MW-5A.
- The primary source (UFST) and secondary source (contaminated soil) have been remediated by excavation. All known accessible residual contaminated soil has been excavated from this site. Residual TVH as gasoline soil contamination (790 to 270 mg/kg) above regulatory ESLs was documented during the October 2006 corrective action along the northern property boundary, but was inaccessible for removal over the property line.
- The subject property groundwater gradient measured approximately 0.005 feet/foot during this April 2010 event and was found to flow to the northwest, consistent with historical groundwater data.
- TVH as gasoline was detected above the ESL of 100 micrograms per liter (µg/L) in monitoring wells MW-1B, MW-2A, MW-3B, and MW-4B. TVH as gasoline was also detected in monitoring well MW-5B but below the ESL.
- MTBE was detected above its ESL of 5.0 µg/L in wells MW-1A, MW-1B, MW-2B, and MW-3A. MTBE was also detected in wells MW-2A and MW-5B, but below the ESL.
- Benzene was found above the ESL of 1.0 µg/L in well MW-2B. Benzene was not found above the laboratory detection limit in any other of the wells sampled.
- Ethylbenzene was also detected in well MW-2B, but at a level below the ESL.

- Toluene and total xylenes were not found above the laboratory detection limit in any of the wells sampled.
- The lead scavenger 1,2-dichloroethane (EDC) was detected above the ESL of 0.5 µg/L in wells MW-1A and MW-1B. EDC was not detected above the laboratory detection limit in any of the other wells sampled.
- Tertiary-amyl methyl ether (TAME) was detected in well MW-5B. There is no ESL for TAME.
- There were no detections of 1,2-dibromethane (EDB), ethyl tertiary butyl ether (ETBE), isopropyl ether (DIPE), or tertiary butyl alcohol (TBA) above the laboratory detection limits in any of the groundwater monitoring wells sampled during this event.
- Contaminant concentrations in general have increased since the October 2009 sampling event as is generally observed during this time of year. However, with the exception of a slight increase observed in well MW-2A, contaminant concentrations have decreased since the sampling event in April 2009.
- DO concentrations were measured in wells during the current event and ranged from 0.3 mg/L to 9.5 mg/L. Only four wells; MW-1A, MW-3A, MW-4A, and MW-5B contained concentrations of DO above the 2 mg/L. This indicates that the November 2007 ORC™ treatment is diminishing in its effectiveness to release oxygen in the subsurface formation.
- The wells showing the highest TVH-gasoline concentrations, MW-3B (4,800 µg/L TVHg) and MW-4B (3,700 µg/L TVHg) also have the lowest DO, at 0.3 and 0.5 mg/L, respectively.
- The groundwater contaminate plume has not been fully delineated, but appears to be in elliptical configuration with its long axis trending east by west-northwest.
- It has been 29 months since the November 2007 corrective action excavation and application of ORC™. While the ORC™ treatment appears to have been effective in lowering contaminant concentrations in the source area, historical maximum TVHg concentrations observed in all wells except MW-5B in the 2009 sampling events suggest that additional treatment may be necessary to remediate contamination that has migrated away from the source area. At the current groundwater velocity, it is likely that elevated (above regulatory ESLs) contaminant concentrations in these wells will persist for at least 4 to 6 years.

RECOMMENDATIONS

- A remedial action workplan should be developed with the concurrence of ACEH to control continued offsite hydraulic migration of petroleum hydrocarbon contamination in

groundwater. The workplan should include injection of ORC™ or a similar compound in the vicinity and depth intervals represented by wells MW-3B and MW-4B to mitigate the persistent TVHg groundwater concentrations in these downgradient wells. In addition, injection of an ORC™ product is recommended to treat areas of the residual source contamination that exist on the northern subject property boundary in the vicinity of well MW-1B and to a lesser extent east of well MW-2A. An additional remedial measure consisting of limited excavation-backfill groundwater purging would result in some measure of mass recovery and should also be considered.

- SES recommends following up with ACEH following its receipt of this report, to discuss the requirements to move the site toward regulatory closure.
- We recommend that all future technical reports be provided to the appropriate regulatory agencies, including electronic uploads ACEH's "ftp" system and the State Water Board's GeoTracker system.
- Continued semiannual groundwater monitoring of site wells should be continued as requested by ACEH to evaluate the magnitude and stability of the contaminant plume over time, and to determine whether site closure criteria can be met.
- Reimbursement requests should continue to be submitted under the State of California Tank Cleanup Fund.

7.0 REFERENCES

Alameda County Environmental Health, 2006. Letter approving technical workplan for corrective action investigation at 2836 Union Street, Oakland, California. March 20.

Alameda County Environmental Health, 2009. Correspondence directing reduction in groundwater monitoring frequency from quarterley to semiannual at 2836 Union Street, Oakland, California. July 24.

BP Oil – Environmental Technology Branch, 1993. TPH in Soil Primer (Analysis of Total Petroleum Hydrocarbons in Soil). September 1.

Golden Gate Tank Removal, 1998. Tank Closure Report – 2836 Union Street, Oakland, California. July 31.

Lawrence Livermore National Laboratory, 1995. California Leaking Underground Fuel Tank Historical Case Analyses (UCRL-AR-121762).

Regional Water Quality Control Board – San Francisco Bay Region (Water Board), 1999. East Bay Plains Beneficial Use Study, San Francisco Bay. June 15.

Regional Water Quality Control Board – San Francisco Bay Region (Water Board), 2008. Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater. May.

Stellar Environmental Solutions, Inc. (SES), 2005a. Workplan for Initial Site Characterization – 2836 Union Street, Oakland, California. October 25.

Stellar Environmental Solutions, Inc. (SES), 2005b. Technical Documentation Report for Initial Site Characterization – 2836 Union Street, Oakland, California. December 14.

Stellar Environmental Solutions, Inc. (SES), 2005c. Workplan for Corrective Action Investigation – 2836 Union Street, Oakland, California. December 22.

Stellar Environmental Solutions, Inc. (SES), 2006a. Workplan for Groundwater Characterization and Interim Corrective Actions – 2836 Union Street, Oakland, California. May 3, 2006.

Stellar Environmental Solutions, Inc. (SES), 2006b. Corrective Action Investigation: 2836 Union Street, Oakland, California, Alameda County Environmental Health Case No. RO0002901. May 3.

Stellar Environmental Solutions, Inc. (SES), 2006c. Underground Fuel Storage Tank-Related Corrective Action Report – 2836 Union Street, Oakland, California, Alameda County Environmental Health Case No. RO0002901. May 3.

Stellar Environmental Solutions, Inc. (SES), 2006d. Underground Fuel Storage Tank-Related Corrective Action Report – 2836 Union Street, Oakland, California, Alameda County Environmental Health Case No. RO0002901. December 3.

Stellar Environmental Solutions, Inc. (SES), 2007a. First Quarter 2007 Groundwater Monitoring Report – 2836 Union Street, Oakland, California. February 6.

Stellar Environmental Solutions, Inc. (SES), 2007b. Second Quarter 2007 Groundwater Monitoring Report – 2836 Union Street, Oakland, California. April 6.

Stellar Environmental Solutions, Inc. (SES), 2007c. Third Quarter 2007 Groundwater Monitoring Report – 2836 Union Street, Oakland, California. July 23.

Stellar Environmental Solutions, Inc. (SES), 2007d. Work Plan for Additional Interim Corrective Actions – 2836 Union Street, Oakland, California. August 31.

Stellar Environmental Solutions, Inc. (SES), 2007e. Fourth Quarter 2007 Groundwater Monitoring Report – 2836 Union Street, Oakland, California. December 18.

Stellar Environmental Solutions, Inc. (SES), 2007f. Underground Fuel Storage Tank-Related Corrective Action Report – 2836 Union Street, Oakland, California. December 31.

Stellar Environmental Solutions, Inc. (SES), 2008a. First Quarter 2008 Groundwater Monitoring Report – 2836 Union Street, Oakland, California. January 31.

Stellar Environmental Solutions, Inc. (SES), 2008b. Second Quarter 2008 Groundwater Monitoring Report – 2836 Union Street, Oakland, California. April 25.

Stellar Environmental Solutions, Inc. (SES), 2008c. Third Quarter 2008 Groundwater Monitoring Report – 2836 Union Street, Oakland, California. July 24.

Stellar Environmental Solutions, Inc. (SES), 2008d. Fourth Quarter 2008 Groundwater Monitoring Report and Annual Summary Report– 2836 Union Street, Oakland, California. November 5.

Stellar Environmental Solutions, Inc. (SES), 2008e. Preferential Pathway and Offsite Utility and Well Survey Report, 2836 Union Street, Oakland, California. December 4.

Stellar Environmental Solutions, Inc. (SES), 2009a. First Quarter 2009 Groundwater Monitoring Report – 2836 Union Street, Oakland, California. January 22.

Stellar Environmental Solutions, Inc. (SES), 2009b. Second Quarter 2009 Groundwater Monitoring Report – 2836 Union Street, Oakland, California. May 7.

Stellar Environmental Solutions, Inc. (SES), 2009c. Second Semiannual 2009 Groundwater Monitoring Report – 2836 Union Street, Oakland, California. November 5.

8.0 LIMITATIONS

This report has been prepared for the exclusive use by the Estate of Mr. Lawrence Wadler (subject property owner), the regulatory agencies, and their authorized assigns and/or representatives. 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 solely on the findings of the investigations discussed herein. This report has been prepared in accordance with generally accepted methodologies and standards of practice of the area. The personnel performing this assessment 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.

APPENDIX A

GROUNDWATER MONITORING AND SAMPLING FIELD REPORT

STELLAR
ENVIRONMENTAL SOLUTIONS, INC.
2198 SIXTH STREET, SUITE 201 · BERKELEY, CA 94710
TEL: (510)644-3123 · FAX: (510)644-3859
GEOSCIENCE & ENGINEERING CONSULTING

WELL MONITORING DATA SHEET

Project #: 2005-65	Client: Wadler Trust
Sampler: TG	Start Date: 4-22-10
Well I.D.: MW-1A	Well Diameter: (circle one) 2 3 4 6 3/4"
Total Well Depth: Before 12.43 After	Depth to Water: Before 5.74 After
Depth to Free Product: —	Thickness of Free Product (feet): —
Measurements referenced to: (PVC) Grade	Other:

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2" 3/4" = 0.023	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

0.15 (1 Case Volume) x 3 (Specified Volumes) = 0.46 gallons

Purging: Bailer
Disposable Bailer
Middleburg
Electric Submersible
(Extraction Pump)
Other

Sampling: Bailer
Disposable Bailer
Extraction Port
Other new tubing

DO
2.2
3.4

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1111	16.90	7.38	0.12	47	0.2	
1113	17.17	6.91	0.12	100	0.4	

Did Well Dewater? Y If yes, gals. 0.41 Gallons Actually Evacuated: 0.5

Sampling Time: 1300 Sampling Date: 4-22-10

Sample I.D.: MW-1A Laboratory: C&T

Analyzed for: (TPH-G M BTEX) TPH-D OTHER:
(Circle) + Oxygenates

Duplicate I.D.: — Cleaning Blank I.D.: —

Analyzed for: TPH-G BTEX TPH-D OTHER:
(Circle)

STELLAR
ENVIRONMENTAL SOLUTIONS, INC.
2198 SIXTH STREET, SUITE 201 · BERKELEY, CA 94710
TEL: (510)644-3123 · FAX: (510)644-3859
GEOSCIENCE & ENGINEERING CONSULTING

WELL MONITORING DATA SHEET

Project #: 2005-65	Client: Wadler Trust
Sampler: TG	Start Date: 4.22.10
Well I.D.: MW-1B	Well Diameter: (circle one) 2 3 4 6 3/4"
Total Well Depth: Before 22.5 After	Depth to Water: Before 4.92 After
Depth to Free Product: —	Thickness of Free Product (feet): —
Measurements referenced to: (PVC) Grade	Other:

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2" 3/4" = 0.023	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

0.4 (1 Case Volume) x 3 (Specified Volumes) = 1.2 gallons

Purging: Bailer
Disposable Bailer
Middleburg
Electric Submersible
(Extraction Pump)
Other

Sampling: Bailer
Disposable Bailer
Extraction Port
Other new tubing

DO	TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
0.6	1122	17.11	6.80	0.14	69	0.4	
0.8	1124	17.19	6.75	0.14	110	0.8	
0.6	1126	17.28	6.68	0.15	100	1.2	

Did Well Dewater? N If yes, gals. — Gallons Actually Evacuated: 1.3

Sampling Time: 1127 Sampling Date: 4.22.10

Sample I.D.: MW-1B Laboratory: C+T

Analyzed for: (TPH-G) (BTEX) TPH-D OTHER:
(Circle)
+ oxygenates

Duplicate I.D.: — Cleaning Blank I.D.: —

Analyzed for: TPH-G BTEX TPH-D OTHER:
(Circle)
—

STELLAR
ENVIRONMENTAL SOLUTIONS, INC.
2198 SIXTH STREET, SUITE 201 · BERKELEY, CA 94710
TEL: (510)644-3123 · FAX: (510)644-3859
GEOSCIENCE & ENGINEERING CONSULTING

WELL MONITORING DATA SHEET

Project #: 2005-65	Client: Wadler Trust
Sampler: TG	Start Date: 4-22-10
Well I.D.: MW-2A	Well Diameter: (circle one) 2 3 4 6 3/4"
Total Well Depth: Before 12.75 After	Depth to Water: Before 4.82 After
Depth to Free Product: —	Thickness of Free Product (feet): —
Measurements referenced to: (PVC) Grade Other:	

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2" 3/4"=0.023	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

1 Case Volume	x	Specified Volumes	=	gallons
0.18	x	3	=	0.55

Purging: Bailer
Disposable Bailer
Middleburg
Electric Submersible
(Extraction Pump)
Other

Sampling: Bailer
Disposable Bailer
Extraction Port
Other New Tubing

DO	TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
0.9	0950	16.74	6.41	0.13	7	0.2	
0.7	0951	16.77	6.73	0.13	7	0.4	
0.5	0952	16.83	6.87	0.13	5	0.6	

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: 0.6

Sampling Time: 0953 Sampling Date: 4-22-10

Sample I.D.: MW-2A Laboratory: C+T

Analyzed for: (TPH-G) (BTEX) TPH-D OTHER:
(Circle)

Duplicate I.D.: — Cleaning Blank I.D.: —

Analyzed for: TPH-G BTEX TPH-D OTHER:
(Circle)
—

STELLAR
ENVIRONMENTAL SOLUTIONS, INC.
2198 SIXTH STREET, SUITE 201 · BERKELEY, CA 94710
TEL: (510)644-3123 · FAX: (510)644-3859
GEOSCIENCE & ENGINEERING CONSULTING

WELL MONITORING DATA SHEET

Project #: 2005-65	Client: Wadler Trust
Sampler: TG	Start Date: 4-22-10
Well I.D.: MW-2B	Well Diameter: (circle one) 2 3 4 6 3/4"
Total Well Depth: Before 24.61 After	Depth to Water: Before 5.73 After
Depth to Free Product: —	Thickness of Free Product (feet): —
Measurements referenced to: (PVC) Grade	Other:

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2" 3/4" = 0.023	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

0.43 (1 Case Volume) x 3 (Specified Volumes) = 1.3 gallons

Purging: Bailer
Disposable Bailer
Middleburg
~~Electric Submersible~~
(Extraction Pump)
Other

Sampling: Bailer
Disposable Bailer
Extraction Port
Other new tubing

DO

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
0.7 1007	17.41	7.19	0.11	52	0.4	
1.1 1010	17.83	6.91	0.16	72	0.8	

Did Well Dewater? Y If yes, gals. 1 Gallons Actually Evacuated: 1.1

Sampling Time: 1332 Sampling Date: 4-22-10

Sample I.D.: MW-2B Laboratory: C&T

Analyzed for: (TPH-G) BTEX TPH-D OTHER:
(Circle)
+ oxygenates

Duplicate I.D.: — Cleaning Blank I.D.: —

Analyzed for: TPH-G BTEX TPH-D OTHER:
(Circle)
—

STELLAR
ENVIRONMENTAL SOLUTIONS, INC.
2198 SIXTH STREET, SUITE 201 · BERKELEY, CA 94710
TEL: (510)644-3123 · FAX: (510)644-3859
GEOSCIENCE & ENGINEERING CONSULTING

WELL MONITORING DATA SHEET

Project #: 2005-65	Client: Wadler Trust
Sampler: TG	Start Date: 4-22-10
Well I.D.: MW-3A	Well Diameter: (circle one) 2 3 4 6 3/4"
Total Well Depth: Before 12.96 After	Depth to Water: Before 5.67 After
Depth to Free Product: —	Thickness of Free Product (feet): —
Measurements referenced to: (PVC) Grade	Other:

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2" 3/4" = 0.023	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

0.17 (1 Case Volume) x 3 (Specified Volumes) = 0.5 gallons

Purging: Bailer
Disposable Bailer
Middleburg
Electric ~~Submersible~~
~~Extraction~~ Pump
Other

Sampling: Bailer
Disposable Bailer
Extraction Port
Other new tubing

DO

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1.6 1220	15.73	6.98	0.16	130	0.2	
7.8 1223	16.49	7.02	0.16	110	0.4	
9.5 1227	17.63	7.57	0.16	180	0.5	

Did Well Dewater? N If yes, gals. — Gallons Actually Evacuated: 0.6

Sampling Time: 1228 Sampling Date: 4-22-10

Sample I.D.: MW-3A Laboratory: C+T

Analyzed for: (TPH-G) (BTEX) TPH-D OTHER:
(Circle)
+ oxygenates

Duplicate I.D.: — Cleaning Blank I.D.: —

Analyzed for: TPH-G BTEX TPH-D OTHER:
(Circle)
—

STELLAR
ENVIRONMENTAL SOLUTIONS, INC.
2198 SIXTH STREET, SUITE 201 · BERKELEY, CA 94710
TEL: (510)644-3123 · FAX: (510)644-3859
GEOSCIENCE & ENGINEERING CONSULTING

WELL MONITORING DATA SHEET

Project #: 2005-65	Client: Wadler Trust
Sampler: TG	Start Date: 4-22-10
Well I.D.: MW-3B	Well Diameter: (circle one) 2 3 4 6 3/4"
Total Well Depth: Before 25.03 After	Depth to Water: Before 4.98 After
Depth to Free Product: —	Thickness of Free Product (feet): —
Measurements referenced to: (PVC) Grade Other:	

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3" 3/4"=0.023	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

0.46 (1 Case Volume) x 3 (Specified Volumes) = 1.4 gallons

Purging: Bailer / Disposable Bailer / Middleburg / Electric Submersible / (Extraction Pump) / Other

Sampling: Bailer / Disposable Bailer / Extraction Port / Other New Tubing

DO

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
0.4 1236	16.88	6.94	0.11	140	0.5	
0.4 1238	16.87	6.82	0.11	100	1.0	
0.3 1240	16.88	6.76	0.14	96	1.4	

Did Well Dewater? N If yes, gals. — Gallons Actually Evacuated: 1.5

Sampling Time: 1242 Sampling Date: 4-22-10

Sample I.D.: MW-3B Laboratory: C&T

Analyzed for: (TPH-G) BTEX TPH-D OTHER: (Circle)

Duplicate I.D.: — Cleaning Blank I.D.: —

Analyzed for: TPH-G BTEX TPH-D OTHER: (Circle)

STELLAR
ENVIRONMENTAL SOLUTIONS, INC.
2198 SIXTH STREET, SUITE 201 · BERKELEY, CA 94710
TEL: (510)644-3123 · FAX: (510)644-3859
GEOSCIENCE & ENGINEERING CONSULTING

WELL MONITORING DATA SHEET

Project #: 2005-65	Client: Wadler Trust
Sampler: TG	Start Date: 4-22-10
Well I.D.: MW-4A	Well Diameter: (circle one) 2 3 4 6 3/4"
Total Well Depth: Before 12.12 After	Depth to Water: Before 4.15 After
Depth to Free Product: —	Thickness of Free Product (feet): —
Measurements referenced to: (PVC) Grade Other:	

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3" 3/4" = 0.023	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

0.18 (1 Case Volume) x 3 (Specified Volumes) = 0.55 gallons

Purging: Bailer / Disposable Bailer / Middleburg / Electric Submersible / (Extraction Pump) / Other

Sampling: Bailer / Disposable Bailer / Extraction Port / Other new tubing

DO

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
5.5 1150	16.49	6.86	0.11	130	0.2	
6.9 1152	17.21	7.02	0.11	120	0.4	

Did Well Dewater? Y If yes, gals. 0.5 Gallons Actually Evacuated: 0.6

Sampling Time: 1342 Sampling Date: 4-22-10

Sample I.D.: MW-4A Laboratory: C+T

Analyzed for: (TPH-G) (BTEX) TPH-D OTHER: (Circle)

Duplicate I.D.: — Cleaning Blank I.D.: —

Analyzed for: TPH-G BTEX TPH-D OTHER: (Circle)

—

STELLAR
ENVIRONMENTAL SOLUTIONS, INC.
2198 SIXTH STREET, SUITE 201 · BERKELEY, CA 94710
TEL: (510)644-3123 · FAX: (510)644-3859
GEOSCIENCE & ENGINEERING CONSULTING

WELL MONITORING DATA SHEET

Project #: 2005-65	Client: Wadler Trust
Sampler: TG	Start Date: 4-22-10
Well I.D.: MW-4B	Well Diameter: (circle one) 2 3 4 6 3/4"
Total Well Depth: Before 24.27 After	Depth to Water: Before 4.01 After
Depth to Free Product: —	Thickness of Free Product (feet): —
Measurements referenced to: (PVC) Grade	Other:

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2" 3/4"=0.023	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

0.47 (1 Case Volume) x 3 (Specified Volumes) = 1.4 gallons

Purging: Bailer, Disposable Bailer, Middleburg, Electric Submersible, Extraction Pump, Other_____

Sampling: Bailer, Disposable Bailer, Extraction Port, Other_____

DO

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
0.5 1201	17.37	6.90	0.11	86	0.5	
0.7 1204	17.38	6.77	0.50	61	1.0	
0.5 1206	17.39	6.73	0.30	66	1.4	

Did Well Dewater? N If yes, gals. — Gallons Actually Evacuated: 1.5

Sampling Time: 1207 Sampling Date: 4-22-10

Sample I.D.: MW-4B Laboratory: C&T

Analyzed for: (TPH-G) BTEX TPH-D OTHER:

Duplicate I.D.: — Cleaning Blank I.D.: —

Analyzed for: TPH-G BTEX TPH-D OTHER:
—

STELLAR
ENVIRONMENTAL SOLUTIONS, INC.
2198 SIXTH STREET, SUITE 201 · BERKELEY, CA 94710
TEL: (510)644-3123 · FAX: (510)644-3859
GEOSCIENCE & ENGINEERING CONSULTING

WELL MONITORING DATA SHEET

Project #: 2005-65	Client: Wadler Trust
Sampler: TG	Start Date: 4-22-10
Well I.D.: MW-5B	Well Diameter: (circle one) 2 3 4 6 3/4"
Total Well Depth: Before 25.3 After	Depth to Water: Before 4.71 After
Depth to Free Product: —	Thickness of Free Product (feet): —
Measurements referenced to: (PVC) Grade	Other:

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3" 3/4=0.023	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

0.47 (1 Case Volume) x 3 (Specified Volumes) = 1.42 gallons

Purging: Bailer, Disposable Bailer, Middleburg, Electric Submersible, (Extraction Pump), Other ____

Sampling: Bailer, Disposable Bailer, Extraction Port, Other new tubing

DO

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
0.8 1028	17.05	6.91	0.11	91	0.5	
7.4 1031	17.27	6.95	0.11	110	1.0	
7.9 1036	17.26	6.98	0.11	100	1.5	

Did Well Dewater? N If yes, gals. — Gallons Actually Evacuated: 1.6

Sampling Time: 1037 Sampling Date: 4.22-10

Sample I.D.: MW-5B Laboratory: C&T

Analyzed for: (TPH-G) (BTEX) TPH-D OTHER:
(Circle)
+ oxygenates

Duplicate I.D.: — Cleaning Blank I.D.: —

Analyzed for: TPH-G BTEX TPH-D OTHER:
(Circle)
—

Chain of Custody Record

Lab job no. _____

Date _____

Page 1 of 1

Laboratory: Curtis and Tompkins, Ltd.
Address: 2323 Fifth Street, Berkeley, California 94710, 510-486-0900

Method of Shipment: Hand Delivery
Shipment No.: ----------
Airbill No.: ----------
Cooler No.: _____

Project Owner: Wadler Trust
Site Address: 2836 Union Street, Oakland, California
Project Name: Union Street GWM
Project Number: 2005-65

Project Manager: Richard Makdisi
Telephone No.: (510) 644-3123
Fax No.: (510) 644-3859
Samplers: (Signature)

Field Sample Number	Location/ Depth	Date	Time	Sample Type	Type/Size of Container	Preservation: Cooler	Preservation: Chemical	Filtered	No. of Containers	Analysis Required: TVH & MBTEX	Analysis Required: Oxygenates by 8260B	Remarks
MW-1A	N/A	4/22/10	1300	water	(a)	yes	(a)	no	~~12~~ 24	X	X	Run TVH & MBTEX 1st
MW-1B			1127						6	X	X	
MW-2A			0953						3	X		
MW-2B			1332						6	X	X	
MW-3A			1228						~~24~~ 24	X	X	Run TVH & MBTEX 1st
MW-3B			1212						3	X		
MW-4A			1342						~~12~~ 24	X		Run TVH & MBTEX 1st
MW-4B			1207						3	X		
~~MW-5A~~ MW-5B			1037						6	X	X	

Relinquished by:	Date	Received by:	Date	Relinquished by:	Date	Received by:	Date
Signature:	4/22/10	Signature:	4/22/10	Signature:		Signature:	
Printed: Teal Glass	Time: 1550	Printed: Pat Gonzalez	Time: 15:50	Printed:	Time	Printed:	Time
Company: Stellar Environmental		Company: CET		Company:		Company:	

Turnaround Time: Standard - EDF Needed
GID T0600105641

Comments:
(a) - HCl in VOA vials

2000-00-01

APPENDIX B

SES GROUNDWATER STANDARD SAMPLING PROTOCOLS

APPENDIX B
SES GROUNDWATER STANDARD SAMPLING PROTOCOLS

SAMPLING AND ANALYSIS PERSONNEL

Sampling and analysis is conducted by Blaine Tech Services, a subcontractor to SES, which uses appropriately trained personnel to perform the water level measurements, sampling, and analyses of key natural attenuation indicators.

SUMMARY OF SAMPLING PROCEDURES

Activities that will occur during groundwater sampling are summarized as follows:

- Pre-arrangement with testing laboratory
- Assembly and preparation of equipment and supplies
- Groundwater sampling
  - water-level measurements
  - immiscible material measurements (with an interface probe, if applicable)
  - visual inspection of borehole water
  - well bore evacuation
  - sampling
- Sample preservation and shipment
  - sample preparation
  - onsite measurement of parameters using direct read instruments
  - sample labeling
- Completion of sample records
- Completion of chain-of-custody records
- Samples placed in chilled cooler
- Sample shipment

Detailed sampling and analysis procedures are presented in the following sections.

ARRANGEMENTS WITH ANALYTICAL LABORATORY

Prior to sampling, arrangements will be made with an analytical laboratory to conduct the sample analyses. Samples will be analyzed by Curtis and Tompkins, Ltd. (C&T), an analytical laboratory in Berkeley, California. C&T has the required Department of Toxic Substances Control (DTSC) certification to perform the analyses, and will provide a sufficient number of sample containers for the wells to be sampled and the blanks to be included. C&T will determine the proper type and size for the containers based on the analyses requested. For samples requiring chemical preservation, preservatives will be added to containers by the C&T prior to shipping containers to the facility. Shipping containers (ice chests with adequate container padding) will be sent to the facility with the sample containers.

PREPARATION FOR SAMPLING

Prior to the sampling episode, equipment to be used will be assembled and its operating condition verified, calibrated (if required), and properly cleaned (if required). In addition, all record-keeping materials will be prepared.

Equipment Calibration

Where appropriate, equipment will be calibrated according to the manufacturer's specifications prior to field use. This applies to the equipment for making onsite chemical measurements of pH, conductivity, water temperature, and photoionization detector (PID).

Equipment Cleaning

Portions of sampling and test equipment that will come into contact with the sample will be thoroughly cleaned before use. Such equipment includes water-level probe, bailers, lifting line, and other equipment or portions thereof that may be immersed. The procedure for cleaning non-dedicated equipment is as follows:

- Clean with potable water and phosphate-free detergent;
- Rinse with potable water;
- Rinse with distilled or deionized water; and
- Air dry the equipment prior to use.

Any deviations from these procedures will be documented in the permanent record of the sampling event.

Laboratory-supplied sample containers will be cleaned and sealed by the laboratory before shipping. The type of container provided and the method of container cleaning should be in the laboratory's permanent record of the sampling event.

Sampling equipment to be disposed of after use will be cleaned with potable water and phosphate-free detergent before disposal as solid waste. Rinse water will be stored in properly labeled 55-gallon drums for proper disposal, pending receipt of laboratory results of groundwater and soil sample analyses with assistance from SES.

SAMPLING PROCEDURES

Special care will be exercised to prevent contamination of the groundwater and extracted samples during the sampling activities. Contamination of a sample can occur through contact with improperly cleaned equipment. Cross-contamination of the groundwater can occur through insufficient cleaning of equipment between wells. Pre-cleaned disposable sampling equipment will be rinsed with distilled water prior to use. Sampling equipment and sample containers will be thoroughly cleaned before and after field use and between uses at different sampling locations according to the procedures discussed above. In addition to the use of properly cleaned equipment, two further precautions will be taken:

- A new pair of clean, disposable latex (or similar) gloves will be worn each time a different well is sampled.
- Sample collection activities will progress from the least affected (upgradient) area to the most affected (downgradient) area. Wells described as “background” or “upgradient” wells will be sampled first.

The following paragraphs present procedures for the several activities that comprise groundwater sample acquisition. These activities will be performed in the same order as presented below. Exceptions to this procedure will be noted in the permanent sampling record.

Preparation of Location

Prior to starting the sampling procedure, the area around the well will be cleared of foreign materials, such as brush, rocks, debris, etc. A clean (new) disposable plastic sheet will be placed around the well casing so that the sheet is flat on the ground. The sheet will be placed such that the flush-mount well projects through the center of the sheet. This preparation will prevent sampling equipment from inadvertently contacting the ground or exterior parts of the well.

Water-Level Measurement

The first sampling operation is water-level measurement. An electrical probe or a weighted tape will be used to measure the depth to groundwater below the datum to the nearest 0.01 foot. The datum, usually the top of the inner casing (inside and below the protective steel cover), will be described in the monitoring well records. A permanent mark or scribe will be marked on the inner casing.

If the wells to be sampled are closely spaced, the water levels at all of the closely-spaced wells will be measured before any of the wells are evacuated. The water-level probe or weighted tape will be cleaned with phosphate-free detergent in distilled water and with a distilled water rinse between usage at different wells.

Total Depth Measurement

Once the water level and immiscible material thickness is measured and recorded, the water-level probe or weighted tape will be slowly lowered to the bottom of the well. The depth to the bottom will be measured and recorded. The probe or tape will then be slowly withdrawn from the well. The bottom of the probe or tape will be observed after withdrawal to determine any evidence of viscous, heavy contaminants. Descriptions (and measurements, if possible) of such materials will be made from observation of the probe or tape.

Visual Inspection of Well Water

Prior to well evacuation, a small quantity of water will be removed with a bailer that is not completely immersed. The recovered sample is representative of the top of the water column in the well casing. If immiscible materials are present as measured by the interface probe at the top of the water column, this technique can allow their detection. The water will be observed for the presence of any floating films or other indications of immiscible materials. Any sample odors will be noted. Observations regarding odor or visual evidence of immiscible materials will be recorded in the sampling record.

The well water sample will be discarded unless the site-specific protocol calls for retention of this sample. The sample will be placed in a labeled container for proper disposal.

Well Bore Evacuation

Water contained within and adjacent to the well casing can potentially reflect chemical interaction with the atmosphere (by diffusion of gases down the casing) or the well construction materials (through prolonged residence adjacent to the casing).

Observations of this water will be recorded during removal and prior to it being discarded. Onsite parameter measurements of the purged water, as described in this section, will indicate when water-quality parameters have stabilized, and also will be recorded.

The volume of water contained within the well bore at the time of sampling will be calculated, and 4 times the calculated water volume will be removed from the well and discarded. A bailer will be used for well evacuation. The volume of water to be evacuated will be calculated as follows:

Number of Bailers:

$$\text{Number of bailers} = 4 \times \frac{\text{Volume of water in well (Vw)}}{\text{Volume of bailer (Vb)}}$$

Volume of Water in Well:

$$Vw = \frac{3.142 \times dw^2 \times Lw}{4}$$

where: Vw = water volume in well (ft^3)
dw = inside diameter of well (ft)
Lw = length of water column in well (ft)

Volume of Water in Full Bailer:

$$Vb = \frac{3.142 \times db2 \times Lb}{4}$$

where: Vb = water volume in bailer (ft^3)
db = inside diameter of bailer (ft)
Lb = length of bailer (ft)

Wells that can be evacuated to a dry state will be evacuated completely; samples will be taken as soon as sufficient water for sampling is present. Sample compositing—sampling over a lengthy period by accumulating small volumes of water at different times to eventually obtain a sample of sufficient volume—will not be conducted.

Water produced during well evacuation will be contained in a suitable container and temporarily stored onsite pending proper disposal.

Some chemical and physical parameters in water can change significantly within a short time of sample acquisition. The following parameters cannot be accurately measured in a laboratory located more than a few hours from the facility, and will be measured onsite with portable equipment:

- pH
- Specific conductance
- Temperature
- Turbidity units

These parameters will be measured in unfiltered, unpreserved, "fresh" water, using the same sampling technique as for laboratory analyses. The measurements will be made in a clean glass container separate from those intended for laboratory analyses. The tested sample will be discarded after use. The measured values will be recorded in the sampling record.

Natural Attenuation Field Measurements

In addition to the meter reading above, following the indicators that groundwater has been purged sufficiently to represent water within the water bearing materials, natural attenuation parameters were measured by the Blaine Tech sampling personnel. These include meter readings for:

- Oxidation reduction potential;
- Dissolved oxygen; and
- Dissolved ferrous iron.

Sample Extraction

Natural attenuation parameters are measured before the water is purged and sampled. Care will be taken during insertion of sampling equipment to prevent undue disturbance of water in the well.

The pump or bailer will be lowered into the water gently to prevent splashing, and extracted gently to prevent creation of an excessive vacuum in the well. The sample will be transferred directly into the appropriate container. While pouring water from a bailer, the water will be carefully poured down the inside of the sample bottle to prevent significant aeration of the sample. Unless other instructions are given by the analytical laboratory, the sample containers will be completely filled so that no air space remains in the container. Excess water taken during sampling will be placed in a container for proper disposal.

SAMPLE HANDLING

Sample Preservation

Water samples will be properly prepared for transportation to the laboratory by refrigeration and chemical preservation, as necessary. The laboratory providing sample containers will add any necessary chemical preservatives to the sealed containers provided prior to shipment.

Container and Labels

Glass containers and appropriate container lids will be provided by the laboratory. The containers will be filled and container lids tightly closed. Sample container lids will be sealed so as to make obvious any seal tampered with or broken. The label will be firmly attached to the container side (rather than the lid). The following information will be written with permanent marker on the label:

- Facility name;
- Sample identification;
- Sample type (groundwater, surface water, etc.);
- Sampling date;
- Sampling time; and
- Preservatives added, and sample collector's initials.

Sample Shipment

In most instances, the concentration and type of compounds present in the groundwater are considered by the U.S. Department of Transportation to be non-hazardous. Thus, the following packaging and labeling requirements for the sample materials are appropriate for shipping the sample to the testing laboratory:

- Package sample so that is does not leak, spill, or vaporize from its packaging
- Label package with:
  - sample collector's name, address, and telephone number
  - laboratory's name, address, and telephone number
  - description of sample
  - quantity of sample
  - date of shipment

To comply with packaging regulations and prevent damage to expensive groundwater samples, SES will follow packaging and shipping instructions supplied by the certified testing laboratory.

Chain-of-Custody Control

After samples are obtained, chain-of-custody procedures will be followed to establish a written record concerning sample movement between the sampling site and the testing laboratory. Each shipping container will contain a chain-of-custody form to be completed by the sampling personnel packing the samples. The chain-of-custody form for each container will be completed in triplicate. One copy of this form will be maintained at the site; the other two copies will remain at the laboratory. One of the laboratory copies will become a part of the permanent record for the sample and will be returned with the sample analyses.

The record will contain the following minimum information:

- Collector's sample number
- Signature of collector
- Date and time of collection
- Place and address of collection
- Material type
- Preservatives added
- Analyses requested
- Signatures involved in the chain of possession
- Inclusive dates of possession

The shipping container will be sealed so as to make obvious any seal tampered with or broken. The chain-of-custody documentation will be placed inside the container so that it is immediately apparent to the laboratory personnel receiving the container, but could not be damaged or lost during shipping.

SAMPLING RECORDS

To provide complete documentation of sampling, detailed records containing the following information will be maintained during sampling:

- Sample location (facility name)
- Sample identification (name and sample number)
- Sample location map or detailed sketch
- Date and time of sampling

- Sampling method
- Field observations of sample appearance and odor
- Weather conditions
- Samples identification
- Any other significant information

APPENDIX C

CERTIFIED ANALYTICAL LABORATORY REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 219672
ANALYTICAL REPORT

Stellar Environmental Solutions	Project : 2005-65
2198 6th Street	Location : Wadler Trust
Berkeley, CA 94710	Level : II

Sample ID	Lab ID
MW-1A	219672-001
MW-1B	219672-002
MW-2A	219672-003
MW-2B	219672-004
MW-3A	219672-005
MW-3B	219672-006
MW-4A	219672-007
MW-4B	219672-008
MW-5B	219672-009

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 signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____ Date: 04/29/2010
Project Manager

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**219672**
Client:	**Stellar Environmental Solutions**
Project:	**2005-65**
Location:	**Wadler Trust**
Request Date:	**04/22/10**
Samples Received:	**04/22/10**

This data package contains sample and QC results for nine water samples, requested for the above referenced project on 04/22/10. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):
MW-1B (lab # 219672-002), MW-3B (lab # 219672-006), and MW-4B (lab # 219672-008) were diluted due to high non-target analytes. No other analytical problems were encountered.

Chain of Custody Record

Lab job no. 219672
Date
Page 1 of 1

Laboratory Curtis and Tompkins, Ltd.
Address 2323 Fifth Street
Berkeley, California 94710
510-486-0900

Project Owner Wadler Trust
Site Address 2836 Union Street
Oakland, California
Project Name Union Street GWM
Project Number 2005-65

Method of Shipment Hand Delivery
Shipment No.
Airbill No.
Cooler No.
Project Manager Richard Makdisi
Telephone No. (510) 644-3123
Fax No. (510) 644-3859
Samplers: (Signature)

by Pat Garry 4/22/10 MS TOU

Analysis Required

Field Sample Number	Location/ Depth	Date	Time	Sample Type	Type/Size of Container	Preservation: Cooler	Preservation: Chemical	Filtered	No. of Containers	TVH & MBTEX	Oxygenates by 8260B	Remarks
1 MW-1A	N/A	4/22/10	1300	water	(a)	yes	(a)	no	6	X	X	Run TVH & MBTEX 1st
2 MW-1B			1127						6	X	X	
3 MW-2A			0953						3	X		
4 MW-2B			1332						6	X	X	
5 MW-3A			1228						~~2~~ 6	X	X	Run TVH & MBTEX 1st
6 MW-3B			1210						3	X		
7 MW-4A			1342						~~1~~ 3	X		Run TVH & MBTEX 1st
8 MW-4B			1207						3	X		
9 ~~MW-5A~~ MW-5B			1037						6	X	X	

Relinquished by:	Date	Received by:	Date
Signature	4/22/10	Signature	4/22/10
Printed Teal Glass	Time 1550	Printed Pat Gonzalez	Time 15:50
Company Stellar Environmental		Company CET	

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

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

Turnaround Time: Standard - EDF Needed
GID T0600105641

Comments: (a) - HCl in VOA vials

2000-00-01

★ Stellar Environmental Solutions

2198 Sixth Street #201, Berkeley, CA 94710

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 219672 Date Received 4/22/10 Number of coolers 1
Client SES Project WADLEIGH TRUST

Date Opened 4/22/10 By (print) M. VILLANUEVA (sign)
Date Logged in ✓ By (print) ✓ (sign) ✓

1. Did cooler come with a shipping slip (airbill, etc)_____ YES (NO)
Shipping info_____

2A. Were custody seals present? ... ☐ YES (circle) on cooler on samples ☐ (NO)
How many _____ Name_____ Date_____
2B. Were custody seals intact upon arrival? _____ YES NO (N/A)
3. Were custody papers dry and intact when received?_____ (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form)___ (YES) NO
6. Indicate the packing in cooler: (if other, describe)_____

☑ Bubble Wrap ☑ Foam blocks ☑ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation:

Type of ice used: ☑ Wet ☐ Blue/Gel ☐ None Temp(°C) 6.0

☐ Samples Received on ice & cold without a temperature blank

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present?_____ YES (NO)
If YES, what time were they transferred to freezer?_____
9. Did all bottles arrive unbroken/unopened?_____ (YES) NO
10. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
11. Are sample labels present, in good condition and complete? _____ (YES) NO
12. Do the sample labels agree with custody papers? _____ (YES) NO
13. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
14. Are the samples appropriately preserved? _____ (YES) NO N/A
15. Are bubbles > 6mm absent in VOA samples? _____ (YES) NO N/A
16. Was the client contacted concerning this sample delivery? _____ YES (NO)
If YES, Who was called?_____ By_____ Date:_____

COMMENTS
#1 RCVD 6 VOAs
#4 RCVD 4 VOAs

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	219672	Location:	Wadler Trust
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8260B
Field ID:	MW-1A	Batch#:	162381
Lab ID:	219672-001	Sampled:	04/22/10
Matrix:	Water	Received:	04/22/10
Units:	ug/L	Analyzed:	04/25/10
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	28	0.50
1,2-Dichloroethane	3.5	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	93	81-124
1,2-Dichloroethane-d4	102	73-140
Toluene-d8	98	88-113
Bromofluorobenzene	94	80-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	219672	Location:	Wadler Trust
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8260B
Field ID:	MW-1B	Batch#:	162340
Lab ID:	219672-002	Sampled:	04/22/10
Matrix:	Water	Received:	04/22/10
Units:	ug/L	Analyzed:	04/23/10
Diln Fac:	2.000		

Analyte	Result	RL
Gasoline C7-C12	760 Y Z	100
tert-Butyl Alcohol (TBA)	ND	20
Isopropyl Ether (DIPE)	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	1.0
MTBE	5.8	1.0
1,2-Dichloroethane	1.7	1.0
Benzene	ND	1.0
Toluene	ND	1.0
1,2-Dibromoethane	ND	1.0
Ethylbenzene	ND	1.0
m,p-Xylenes	ND	1.0
o-Xylene	ND	1.0

Surrogate	%REC	Limits
Dibromofluoromethane	96	81-124
1,2-Dichloroethane-d4	105	73-140
Toluene-d8	98	88-113
Bromofluorobenzene	94	80-127

Y= Sample exhibits chromatographic pattern which does not resemble standard
Z= Sample exhibits unknown single peak or peaks
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	219672	Location:	Wadler Trust
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8260B
Field ID:	MW-2A	Batch#:	162340
Lab ID:	219672-003	Sampled:	04/22/10
Matrix:	Water	Received:	04/22/10
Units:	ug/L	Analyzed:	04/23/10
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	210 Y	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	3.1	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	93	81-124
1,2-Dichloroethane-d4	102	73-140
Toluene-d8	99	88-113
Bromofluorobenzene	95	80-127

Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	219672	Location:	Wadler Trust
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8260B
Field ID:	MW-2B	Batch#:	162340
Lab ID:	219672-004	Sampled:	04/22/10
Matrix:	Water	Received:	04/22/10
Units:	ug/L	Analyzed:	04/23/10
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	86	0.50
1,2-Dichloroethane	ND	0.50
Benzene	3.2	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	0.68	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	97	81-124
1,2-Dichloroethane-d4	101	73-140
Toluene-d8	98	88-113
Bromofluorobenzene	96	80-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	219672	Location:	Wadler Trust
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8260B
Field ID:	MW-3A	Batch#:	162340
Lab ID:	219672-005	Sampled:	04/22/10
Matrix:	Water	Received:	04/22/10
Units:	ug/L	Analyzed:	04/23/10
Diln Fac:	1.000		

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

Surrogate	%REC	Limits
Dibromofluoromethane	94	81-124
1,2-Dichloroethane-d4	103	73-140
Toluene-d8	99	88-113
Bromofluorobenzene	96	80-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	219672	Location:	Wadler Trust
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8260B
Field ID:	MW-3B	Batch#:	162340
Lab ID:	219672-006	Sampled:	04/22/10
Matrix:	Water	Received:	04/22/10
Units:	ug/L	Analyzed:	04/23/10
Diln Fac:	10.00		

Analyte	Result	RL
Gasoline C7-C12	4,800 Y Z	500
tert-Butyl Alcohol (TBA)	ND	100
Isopropyl Ether (DIPE)	ND	5.0
Ethyl tert-Butyl Ether (ETBE)	ND	5.0
Methyl tert-Amyl Ether (TAME)	ND	5.0
MTBE	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Toluene	ND	5.0
1,2-Dibromoethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	99	81-124
1,2-Dichloroethane-d4	105	73-140
Toluene-d8	97	88-113
Bromofluorobenzene	98	80-127

Y= Sample exhibits chromatographic pattern which does not resemble standard
Z= Sample exhibits unknown single peak or peaks
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	219672	Location:	Wadler Trust
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8260B
Field ID:	MW-4A	Batch#:	162381
Lab ID:	219672-007	Sampled:	04/22/10
Matrix:	Water	Received:	04/22/10
Units:	ug/L	Analyzed:	04/25/10
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	16	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	93	81-124
1,2-Dichloroethane-d4	101	73-140
Toluene-d8	99	88-113
Bromofluorobenzene	92	80-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	219672	Location:	Wadler Trust
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8260B
Field ID:	MW-4B	Batch#:	162381
Lab ID:	219672-008	Sampled:	04/22/10
Matrix:	Water	Received:	04/22/10
Units:	ug/L	Analyzed:	04/26/10
Diln Fac:	8.333		

Analyte	Result	RL
Gasoline C7-C12	3,700 Y Z	420
tert-Butyl Alcohol (TBA)	ND	83
Isopropyl Ether (DIPE)	ND	4.2
Ethyl tert-Butyl Ether (ETBE)	ND	4.2
Methyl tert-Amyl Ether (TAME)	ND	4.2
MTBE	ND	4.2
1,2-Dichloroethane	ND	4.2
Benzene	ND	4.2
Toluene	ND	4.2
1,2-Dibromoethane	ND	4.2
Ethylbenzene	ND	4.2
m,p-Xylenes	ND	4.2
o-Xylene	ND	4.2

Surrogate	%REC	Limits
Dibromofluoromethane	98	81-124
1,2-Dichloroethane-d4	106	73-140
Toluene-d8	100	88-113
Bromofluorobenzene	97	80-127

Y= Sample exhibits chromatographic pattern which does not resemble standard
Z= Sample exhibits unknown single peak or peaks
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline by GC/MS

Lab #:	219672	Location:	Wadler Trust
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8260B
Field ID:	MW-5B	Batch#:	162381
Lab ID:	219672-009	Sampled:	04/22/10
Matrix:	Water	Received:	04/22/10
Units:	ug/L	Analyzed:	04/25/10
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	90 Y	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	4.9	0.50
MTBE	82	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	93	81-124
1,2-Dichloroethane-d4	102	73-140
Toluene-d8	98	88-113
Bromofluorobenzene	95	80-127

Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Gasoline by GC/MS

Lab #:	219672	Location:	Wadler Trust
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	162340
Units:	ug/L	Analyzed:	04/23/10
Diln Fac:	1.000		

Type: BS Lab ID: QC541745

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	101.6	81	36-156
Isopropyl Ether (DIPE)	25.00	22.09	88	54-139
Ethyl tert-Butyl Ether (ETBE)	25.00	21.99	88	64-133
Methyl tert-Amyl Ether (TAME)	25.00	21.91	88	73-124
MTBE	25.00	21.30	85	61-123
1,2-Dichloroethane	25.00	25.03	100	66-141
Benzene	25.00	26.23	105	81-122
Toluene	25.00	26.88	108	82-122
1,2-Dibromoethane	25.00	23.74	95	81-122
Ethylbenzene	25.00	26.18	105	86-125
m,p-Xylenes	50.00	54.21	108	83-127
o-Xylene	25.00	27.57	110	81-122

Surrogate	%REC	Limits
Dibromofluoromethane	98	81-124
1,2-Dichloroethane-d4	100	73-140
Toluene-d8	100	88-113
Bromofluorobenzene	95	80-127

Type: BSD Lab ID: QC541746

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	111.8	89	36-156	10	23
Isopropyl Ether (DIPE)	25.00	22.82	91	54-139	3	11
Ethyl tert-Butyl Ether (ETBE)	25.00	22.38	90	64-133	2	11
Methyl tert-Amyl Ether (TAME)	25.00	23.16	93	73-124	6	11
MTBE	25.00	22.58	90	61-123	6	11
1,2-Dichloroethane	25.00	25.76	103	66-141	3	12
Benzene	25.00	26.85	107	81-122	2	12
Toluene	25.00	26.86	107	82-122	0	12
1,2-Dibromoethane	25.00	25.12	100	81-122	6	11
Ethylbenzene	25.00	27.11	108	86-125	4	12
m,p-Xylenes	50.00	54.91	110	83-127	1	13
o-Xylene	25.00	28.01	112	81-122	2	12

Surrogate	%REC	Limits
Dibromofluoromethane	96	81-124
1,2-Dichloroethane-d4	100	73-140
Toluene-d8	98	88-113
Bromofluorobenzene	96	80-127

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Gasoline by GC/MS

Lab #:	219672	Location:	Wadler Trust
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	162340
Units:	ug/L	Analyzed:	04/23/10
Diln Fac:	1.000		

Type: BS Lab ID: QC541747

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,016	102	74-124

Surrogate	%REC	Limits
Dibromofluoromethane	95	81-124
1,2-Dichloroethane-d4	100	73-140
Toluene-d8	99	88-113
Bromofluorobenzene	97	80-127

Type: BSD Lab ID: QC541748

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	1,036	104	74-124	2	13

Surrogate	%REC	Limits
Dibromofluoromethane	93	81-124
1,2-Dichloroethane-d4	99	73-140
Toluene-d8	97	88-113
Bromofluorobenzene	94	80-127

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Gasoline by GC/MS

Lab #:	219672	Location:	Wadler Trust
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC541749	Batch#:	162340
Matrix:	Water	Analyzed:	04/23/10
Units:	ug/L		

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

Surrogate	%REC	Limits
Dibromofluoromethane	92	81-124
1,2-Dichloroethane-d4	100	73-140
Toluene-d8	100	88-113
Bromofluorobenzene	93	80-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Gasoline by GC/MS

Lab #:	219672	Location:	Wadler Trust
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC541903	Batch#:	162381
Matrix:	Water	Analyzed:	04/25/10
Units:	ug/L		

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

Surrogate	%REC	Limits
Dibromofluoromethane	90	81-124
1,2-Dichloroethane-d4	100	73-140
Toluene-d8	99	88-113
Bromofluorobenzene	94	80-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Gasoline by GC/MS

Lab #:	219672	Location:	Wadler Trust
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	162381
Units:	ug/L	Analyzed:	04/25/10
Diln Fac:	1.000		

Type: BS Lab ID: QC541904

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	100.0	85.94	86	36-156
Isopropyl Ether (DIPE)	20.00	16.03	80	54-139
Ethyl tert-Butyl Ether (ETBE)	20.00	16.59	83	64-133
Methyl tert-Amyl Ether (TAME)	20.00	18.17	91	73-124
MTBE	20.00	16.77	84	61-123
1,2-Dichloroethane	20.00	18.77	94	66-141
Benzene	20.00	21.00	105	81-122
Toluene	20.00	21.52	108	82-122
1,2-Dibromoethane	20.00	20.10	101	81-122
Ethylbenzene	20.00	21.51	108	86-125
m,p-Xylenes	40.00	44.12	110	83-127
o-Xylene	20.00	22.05	110	81-122

Surrogate	%REC	Limits
Dibromofluoromethane	92	81-124
1,2-Dichloroethane-d4	97	73-140
Toluene-d8	99	88-113
Bromofluorobenzene	94	80-127

Type: BSD Lab ID: QC541905

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	100.0	81.58	82	36-156	5	23
Isopropyl Ether (DIPE)	20.00	15.86	79	54-139	1	11
Ethyl tert-Butyl Ether (ETBE)	20.00	16.12	81	64-133	3	11
Methyl tert-Amyl Ether (TAME)	20.00	17.27	86	73-124	5	11
MTBE	20.00	16.42	82	61-123	2	11
1,2-Dichloroethane	20.00	18.40	92	66-141	2	12
Benzene	20.00	20.46	102	81-122	3	12
Toluene	20.00	20.51	103	82-122	5	12
1,2-Dibromoethane	20.00	19.01	95	81-122	6	11
Ethylbenzene	20.00	20.87	104	86-125	3	12
m,p-Xylenes	40.00	42.45	106	83-127	4	13
o-Xylene	20.00	21.02	105	81-122	5	12

Surrogate	%REC	Limits
Dibromofluoromethane	92	81-124
1,2-Dichloroethane-d4	97	73-140
Toluene-d8	98	88-113
Bromofluorobenzene	94	80-127

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Gasoline by GC/MS

Lab #:	219672	Location:	Wadler Trust
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	162381
Units:	ug/L	Analyzed:	04/25/10
Diln Fac:	1.000		

Type: BS Lab ID: QC541906

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	900.0	848.4	94	74-124

Surrogate	%REC	Limits
Dibromofluoromethane	90	81-124
1,2-Dichloroethane-d4	100	73-140
Toluene-d8	100	88-113
Bromofluorobenzene	93	80-127

Type: BSD Lab ID: QC541907

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	900.0	912.1	101	74-124	7	13

Surrogate	%REC	Limits
Dibromofluoromethane	90	81-124
1,2-Dichloroethane-d4	103	73-140
Toluene-d8	96	88-113
Bromofluorobenzene	92	80-127

RPD= Relative Percent Difference

Data File: \\Gcmsserver\DD\chem\MSVOA08.i\042310.b\HDN26TVH.D

Date : 23-APR-2010 23:08

Client ID: DYNA P&T

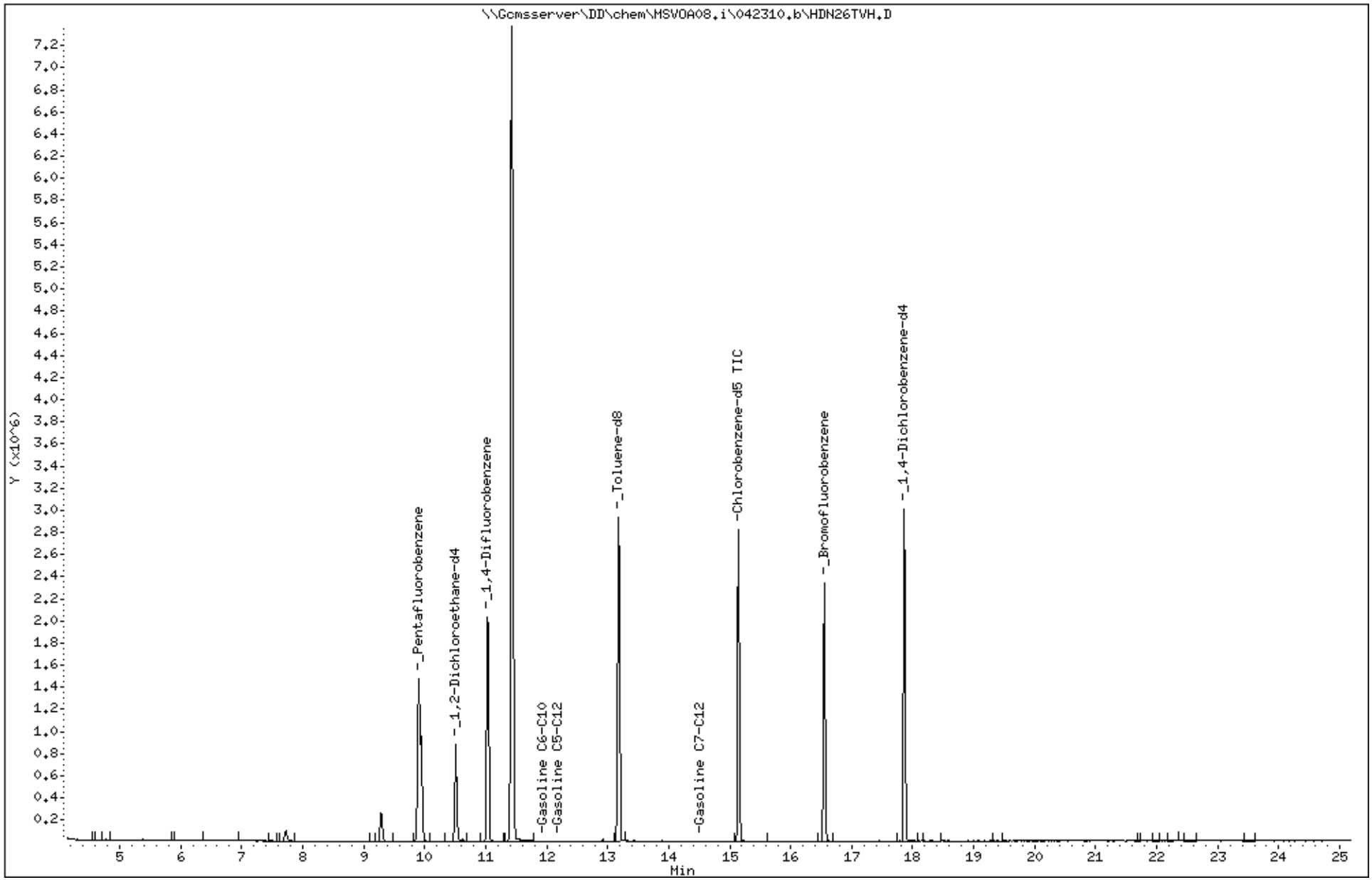
Instrument: MSVOA08.i

Sample Info: S,219672-002

Operator: VOC

Column phase:

Column diameter: 2.00



Data File: \\Gcmsserver\DD\chem\MSVOA08.i\042310.b\HDN22TVH.D

Date : 23-APR-2010 20:38

Client ID: DYNA P&T

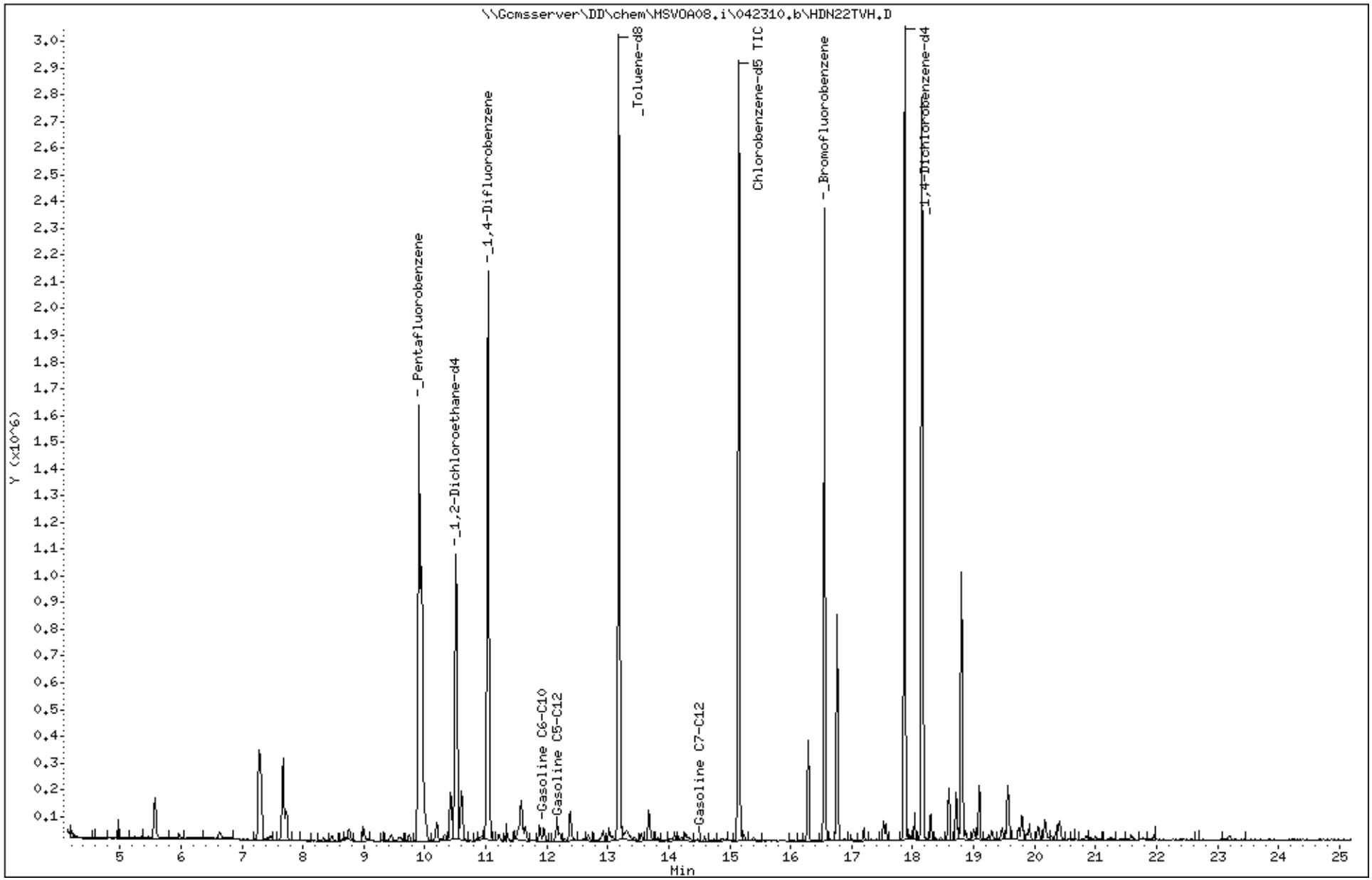
Instrument: MSVOA08.i

Sample Info: S,219672-003

Operator: VOC

Column phase:

Column diameter: 2.00



Data File: \\Gcmsserver\DD\chem\MSVOA08.i\042310.b\HDN27TVH.D

Date : 23-APR-2010 23:46

Client ID: DYNA P&T

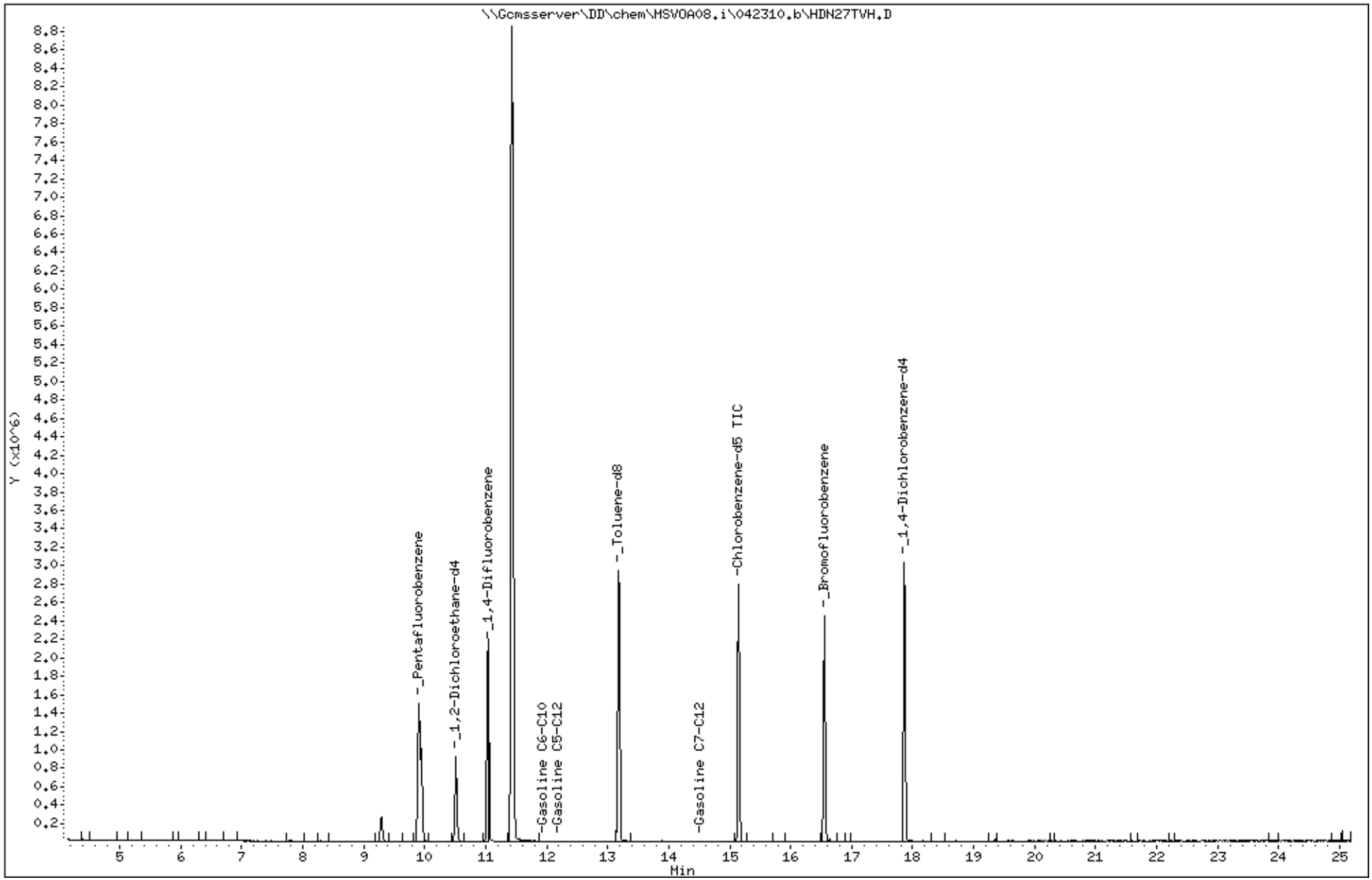
Instrument: MSVOA08.i

Sample Info: S,219672-006

Operator: VOC

Column phase:

Column diameter: 2.00



Data File: \\Gcmsserver\DD\chem\MSVOA08.i\042510.b\HDP24TVH.D

Date : 26-APR-2010 00:03

Client ID: DYNA P&T

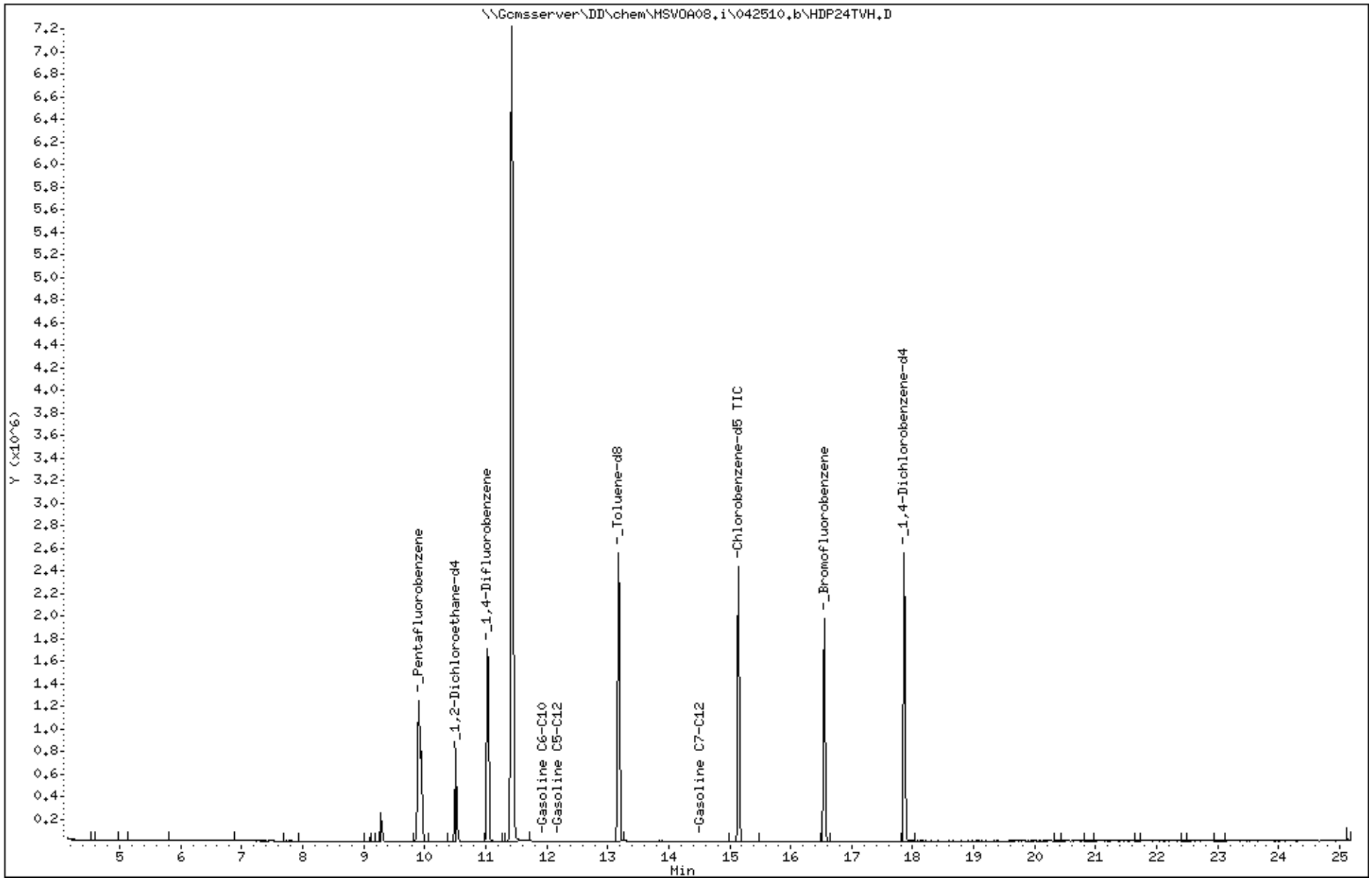
Instrument: MSVOA08.i

Sample Info: S,219672-008

Operator: VOC

Column phase:

Column diameter: 2.00



Data File: \\Gcmsserver\DD\chem\MSVOA08.i\042510.b\HDP18TVH.D

Date : 25-APR-2010 20:15

Client ID: DYNA P&T

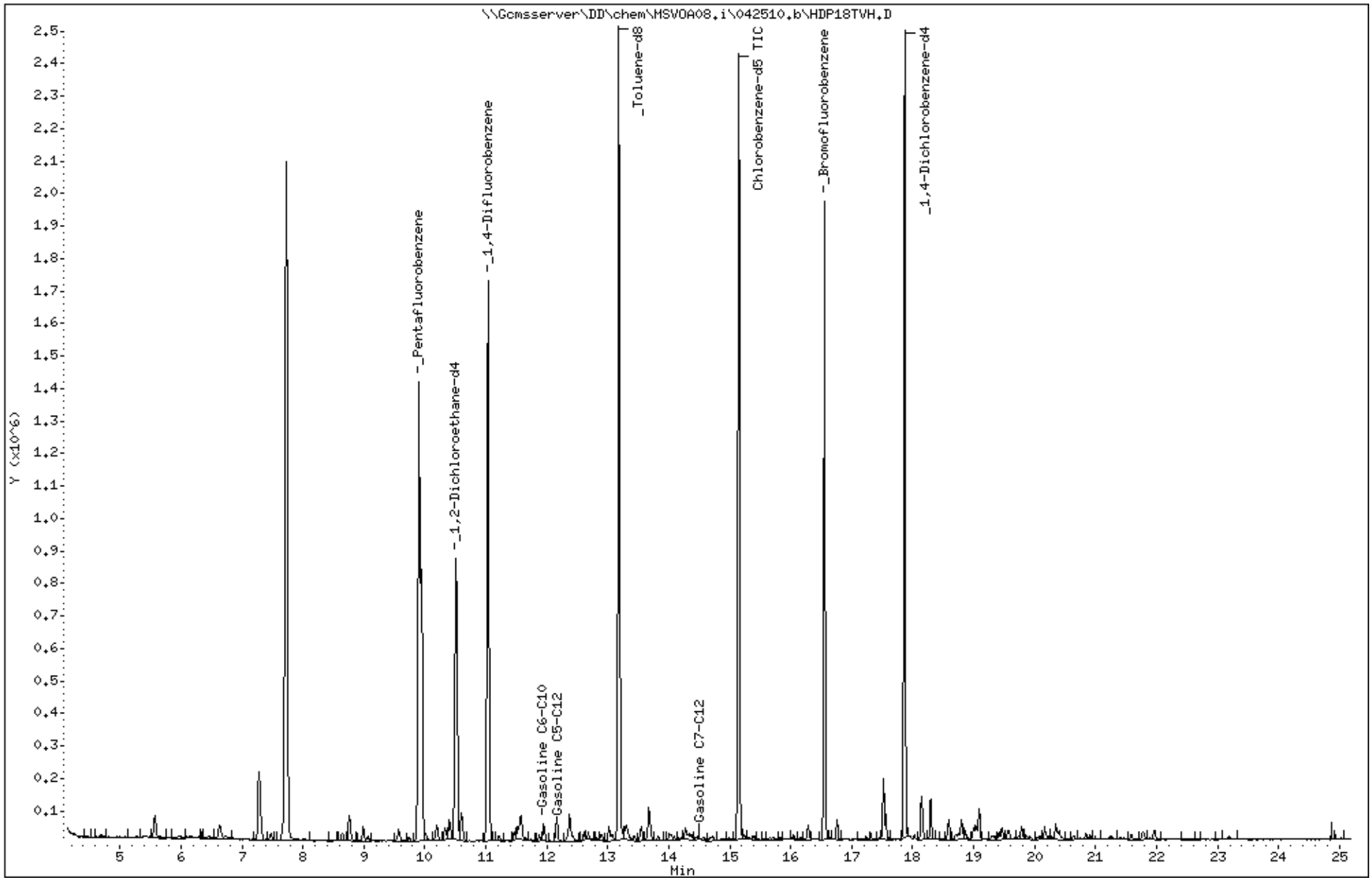
Instrument: MSVOA08.i

Sample Info: S,219672-009

Operator: VOC

Column phase:

Column diameter: 2.00



Data File: \\Gcmsserver\DD\chem\MSVOA08.i\042310.b\HDN06TVH.D

Date : 23-APR-2010 10:46

Client ID: DYNA P&T

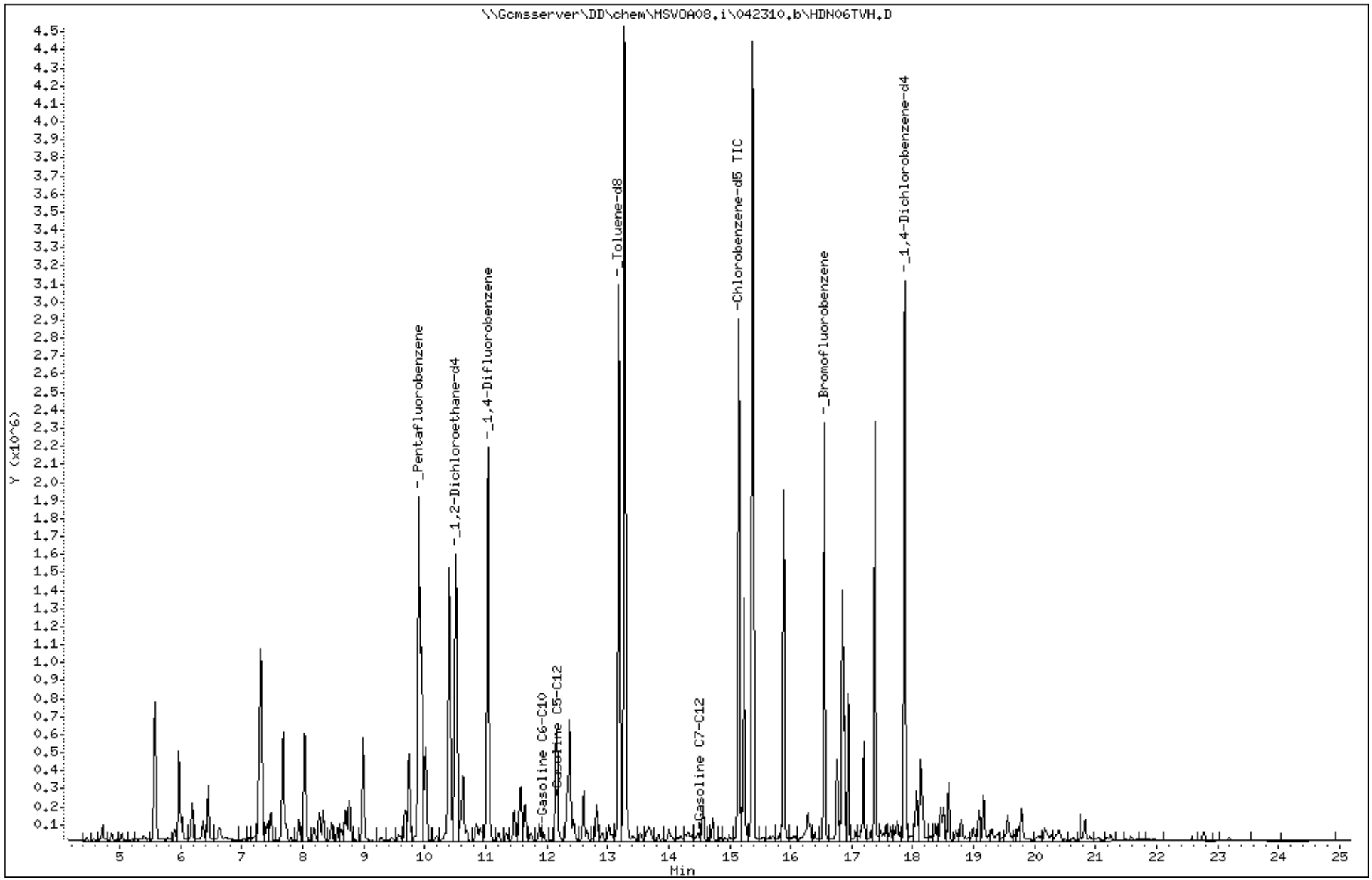
Instrument: MSVOA08.i

Sample Info: CCV/BS,QC541747

Operator: VOC

Column phase:

Column diameter: 2.00



LETTER FROM ANALYTICAL LABORATORY AND REVISED OCTOBER 22, 2009 ANALYTICAL RESULTS

CURTIS & TOMPKINS, LTD.
2323 Fifth St., Berkeley, CA 94710

To: Richard Makdisi
From: Dr. Bruce Godfrey, Lab Director
Subject: Data Processing Error Affecting Reported TVH Results

You are receiving this letter because you or someone in your organization submitted samples to C&T recently for Total Volatile Hydrocarbon (TVH) analysis. An error in the calibration program used for processing TVH (or Gasoline Range Organics, GRO) data from a single gas chromatograph (GC) was discovered during a routine analyst review. Correcting this error requires C&T to reprocess and re-report values for determinations of a number of samples reported from this GC.

We have completed a thorough investigation along with a data and systems review, the results of which indicate the error was accidental and limited to a single GC. The affected data set has been identified, all samples have been reprocessed, and new reports have been generated for those samples with changes in the values for determined TVH residues. We have reviewed our procedures and implemented changes to prevent this and similar errors from occurring in the future.

We regret this error, and apologize to our clientele for reporting compromised values for TVH/GRO measurements and for the need to report revised results. We take pride in producing accurate results, and we have the integrity to admit we made a mistake and the courage to correct it transparently.

Please don't hesitate to call the laboratory if you have any questions regarding this issue.

Sincerely,

C. Bruce Godfrey, Ph.D.
Lab Director

SDG: 215050, 215154, 215953


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 215953
ANALYTICAL REPORT

Stellar Environmental Solutions	Project : 2005-65
2198 6th Street	Location : USTCF Claim No. 018639
Berkeley, CA 94710	Level : II

Sample ID	Lab ID
MW-1A	215953-001
MW-1B	215953-002
MW-2A	215953-003
MW-2B	215953-004
MW-3B	215953-005
MW-4B	215953-006
MW-5B	215953-007

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 signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____ Date: 10/30/2009
Project Manager

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**215953**
Client:	**Stellar Environmental Solutions**
Project:	**2005-65**
Location:	**USTCF Claim No. 018639**
Request Date:	**10/22/09**
Samples Received:	**10/22/09**

This data package contains sample and QC results for seven water samples, requested for the above referenced project on 10/22/09. The samples were received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B and EPA 8021B):
High surrogate recovery was observed for trifluorotoluene (PID) in MW-4B (lab # 215953-006); the corresponding bromofluorobenzene (PID) surrogate recovery was within limits, and no target analytes were detected in the sample. No other analytical problems were encountered.

Volatile Organics by GC/MS (EPA 8260B):
MW-1B (lab # 215953-002) was diluted due to high non-target analytes. No other analytical problems were encountered.

Chain of Custody Record

Lab job no. 25953

Date

Page 1 of 1

Laboratory Curtis and Tompkins, Ltd.
Address 2323 Fifth Street
Berkeley, California 94710
510-486-0900

Project Owner Estate of Lawrence Wadler
Site Address 2836 Union Street
Oakland, CA

Project Name USTCF Claim No. 018639
Project Number 2005-65

Method of Shipment Hand Delivery
Shipment No.
Airbill No.
Cooler No.
Project Manager Richard Makdisi
Telephone No. (510) 644-3123
Fax No. (510) 644-3859
Samplers: (Signature)

	Field Sample Number	Location/ Depth	Date	Time	Sample Type	Type/Size of Container	Preservation: Cooler	Preservation: Chemical	No. of Containers	Filtered	TVHg MBTEX Oxygenates by 8260B	Remarks
1	MW-1A	1A	10-22-09	1550	W	VOA	yes	HCL	2	X	X	Run TVHg MBTEX 1st then GASOL
2	MW-1B	1B		1350					6	X	X	
3	MW-2A	2A		1324					3	X		
4	MW-2B	2B		1005					6	X	X	
	~~MW-3A~~	~~3A~~								X	X	
5	MW-3B	3B		1520					3	X		
	~~MW-4A~~	~~4A~~		1630						X		
6	MW-4B	4B		1450					3	X		
7	MW-5B	5B		1412					6	X	X	

Relinquished by:	Date	Received by:	Date	Relinquished by:	Date	Received by:	Date
Signature	10.22 09	Signature		Signature		Signature	
Printed Hallglass	Time 1517	Printed Tracy Bibb	Time	Printed	Time	Printed	Time
Company Stellar Environmental		Company CET		Company		Company	

Turnaround Time: 5 Day TAT - Standard

Comments: Global ID: T0600105641

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

2000-00-01

★ Stellar Environmental Solutions

2198 Sixth Street #201, Berkeley, CA 94710

Cal & Intl

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 215953 Date Received 10/22/09 Number of coolers 1
Client SES Project USTCF CLAIM NO. 018639

Date Opened 10/22/09 By (print) M. VILLANUEVA (sign) [signature]
Date Logged in 10/23/09 By (print) [signature] (sign) [signature]

1. Did cooler come with a shipping slip (airbill, etc) _____ YES (NO)
Shipping info _____

2A. Were custody seals present? ... ☐ YES (circle) on cooler on samples ☐ (NO)
How many _____ Name _____ Date _____
2B. Were custody seals intact upon arrival? _____ YES NO (N/A)
3. Were custody papers dry and intact when received? _____ (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) ___ (YES) NO
6. Indicate the packing in cooler: (if other, describe) _____

☑ Bubble Wrap ☐ Foam blocks ☑ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation:

Type of ice used: ☑ Wet ☐ Blue/Gel ☐ None Temp(°C) 2.4

☐ Samples Received on ice & cold without a temperature blank

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES (NO)
If YES, what time were they transferred to freezer? _____
9. Did all bottles arrive unbroken/unopened? _____ (YES) NO
10. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
11. Are sample labels present, in good condition and complete? _____ (YES) NO
12. Do the sample labels agree with custody papers? _____ (YES) NO
13. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
14. Are the samples appropriately preserved? _____ (YES) NO N/A
15. Are bubbles > 6mm absent in VOA samples? _____ (YES) NO N/A
16. Was the client contacted concerning this sample delivery? _____ YES NO
If YES, Who was called? _____ By _____ Date: _____

COMMENTS

_____
_____
_____
_____
_____
_____
_____
_____

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	215953	Location:	USTCF Claim No. 018639
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65		
Matrix:	Water	Sampled:	10/22/09
Units:	ug/L	Received:	10/22/09

Field ID:	MW-1A	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	156521
Lab ID:	215953-001	Analyzed:	10/27/09

Analyte	Result	RL	Analysis
Gasoline C7-C12	72 Y	50	EPA 8015B
MTBE	110	2.0	EPA 8021B
Benzene	1.5	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	94	48-162	EPA 8015B
Bromofluorobenzene (FID)	116	52-158	EPA 8015B
Trifluorotoluene (PID)	88	21-180	EPA 8021B
Bromofluorobenzene (PID)	95	26-167	EPA 8021B

Field ID:	MW-1B	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	156521
Lab ID:	215953-002	Analyzed:	10/27/09

Analyte	Result	RL	Analysis
Gasoline C7-C12	150	50	EPA 8015B
MTBE	8.5	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	94	48-162	EPA 8015B
Bromofluorobenzene (FID)	97	52-158	EPA 8015B
Trifluorotoluene (PID)	92	21-180	EPA 8021B
Bromofluorobenzene (PID)	94	26-167	EPA 8021B

*= Value outside of QC limits; see narrative
Y= Sample exhibits chromatographic pattern which does not resemble standard
Z= Sample exhibits unknown single peak or peaks
NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	215953	Location:	USTCF Claim No. 018639
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65		
Matrix:	Water	Sampled:	10/22/09
Units:	ug/L	Received:	10/22/09

Field ID:	MW-2A	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	156521
Lab ID:	215953-003	Analyzed:	10/27/09

Analyte	Result	RL	Analysis
Gasoline C7-C12	75 Y	50	EPA 8015B
MTBE	ND	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	94	48-162	EPA 8015B
Bromofluorobenzene (FID)	96	52-158	EPA 8015B
Trifluorotoluene (PID)	84	21-180	EPA 8021B
Bromofluorobenzene (PID)	91	26-167	EPA 8021B

Field ID:	MW-2B	Lab ID:	215953-004
Type:	SAMPLE	Diln Fac:	1.000

Analyte	Result	RL	Batch#	Analyzed	Analysis
Gasoline C7-C12	65	50	156521	10/27/09	EPA 8015B
MTBE	22	2.0	156440	10/24/09	EPA 8021B
Benzene	ND	0.50	156521	10/27/09	EPA 8021B
Toluene	ND	0.50	156521	10/27/09	EPA 8021B
Ethylbenzene	ND	0.50	156521	10/27/09	EPA 8021B
m,p-Xylenes	ND	0.50	156521	10/27/09	EPA 8021B
o-Xylene	ND	0.50	156521	10/27/09	EPA 8021B

Surrogate	%REC	Limits	Batch#	Analyzed	Analysis
Trifluorotoluene (FID)	98	48-162	156521	10/27/09	EPA 8015B
Bromofluorobenzene (FID)	116	52-158	156521	10/27/09	EPA 8015B
Trifluorotoluene (PID)	89	21-180	156521	10/27/09	EPA 8021B
Bromofluorobenzene (PID)	95	26-167	156521	10/27/09	EPA 8021B

*= Value outside of QC limits; see narrative
Y= Sample exhibits chromatographic pattern which does not resemble standard
Z= Sample exhibits unknown single peak or peaks
NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	215953	Location:	USTCF Claim No. 018639
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65		
Matrix:	Water	Sampled:	10/22/09
Units:	ug/L	Received:	10/22/09

Field ID: MW-3B
Type: SAMPLE
Lab ID: 215953-005

Analyte	Result	RL	Diln Fac	Batch#	Analyzed	Analysis
Gasoline C7-C12	1,700 Y Z	100	2.000	156598	10/29/09	EPA 8015B
MTBE	ND	2.0	1.000	156440	10/24/09	EPA 8021B
Benzene	ND	0.50	1.000	156521	10/27/09	EPA 8021B
Toluene	ND	0.50	1.000	156521	10/27/09	EPA 8021B
Ethylbenzene	ND	0.50	1.000	156521	10/27/09	EPA 8021B
m,p-Xylenes	ND	0.50	1.000	156521	10/27/09	EPA 8021B
o-Xylene	ND	0.50	1.000	156521	10/27/09	EPA 8021B

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed	Analysis
Trifluorotoluene (FID)	104	48-162	2.000	156598	10/29/09	EPA 8015B
Bromofluorobenzene (FID)	105	52-158	2.000	156598	10/29/09	EPA 8015B
Trifluorotoluene (PID)	90	21-180	1.000	156521	10/27/09	EPA 8021B
Bromofluorobenzene (PID)	90	26-167	1.000	156521	10/27/09	EPA 8021B

Field ID: MW-4B
Type: SAMPLE
Lab ID: 215953-006

Analyte	Result	RL	Diln Fac	Batch#	Analyzed	Analysis
Gasoline C7-C12	1,100 Y Z	100	2.000	156598	10/29/09	EPA 8015B
MTBE	ND	2.0	1.000	156440	10/24/09	EPA 8021B
Benzene	ND	0.50	1.000	156521	10/27/09	EPA 8021B
Toluene	ND	0.50	1.000	156521	10/27/09	EPA 8021B
Ethylbenzene	ND	0.50	1.000	156521	10/27/09	EPA 8021B
m,p-Xylenes	ND	0.50	1.000	156521	10/27/09	EPA 8021B
o-Xylene	ND	0.50	1.000	156521	10/27/09	EPA 8021B

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed	Analysis
Trifluorotoluene (FID)	104	48-162	2.000	156598	10/29/09	EPA 8015B
Bromofluorobenzene (FID)	104	52-158	2.000	156598	10/29/09	EPA 8015B
Trifluorotoluene (PID)	181 *	21-180	1.000	156440	10/24/09	EPA 8021B
Bromofluorobenzene (PID)	89	26-167	1.000	156440	10/24/09	EPA 8021B

*= Value outside of QC limits; see narrative
Y= Sample exhibits chromatographic pattern which does not resemble standard
Z= Sample exhibits unknown single peak or peaks
NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	215953	Location:	USTCF Claim No. 018639
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65		
Matrix:	Water	Sampled:	10/22/09
Units:	ug/L	Received:	10/22/09

Field ID:	MW-5B	Lab ID:	215953-007
Type:	SAMPLE	Diln Fac:	1.000

Analyte	Result	RL	Batch#	Analyzed	Analysis
Gasoline C7-C12	76	50	156521	10/27/09	EPA 8015B
MTBE	71	2.0	156440	10/24/09	EPA 8021B
Benzene	ND	0.50	156521	10/27/09	EPA 8021B
Toluene	ND	0.50	156521	10/27/09	EPA 8021B
Ethylbenzene	ND	0.50	156521	10/27/09	EPA 8021B
m,p-Xylenes	ND	0.50	156521	10/27/09	EPA 8021B
o-Xylene	ND	0.50	156521	10/27/09	EPA 8021B

Surrogate	%REC	Limits	Batch#	Analyzed	Analysis
Trifluorotoluene (FID)	93	48-162	156521	10/27/09	EPA 8015B
Bromofluorobenzene (FID)	93	52-158	156521	10/27/09	EPA 8015B
Trifluorotoluene (PID)	78	21-180	156521	10/27/09	EPA 8021B
Bromofluorobenzene (PID)	85	26-167	156521	10/27/09	EPA 8021B

Type:	BLANK	Batch#:	156440
Lab ID:	QC518162	Analyzed:	10/24/09
Diln Fac:	1.000	Analysis:	EPA 8021B

Analyte	Result	RL
MTBE	ND	2.0

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)		100	21-180
Bromofluorobenzene (PID)		96	26-167

*= Value outside of QC limits; see narrative
Y= Sample exhibits chromatographic pattern which does not resemble standard
Z= Sample exhibits unknown single peak or peaks
NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	215953	Location:	USTCF Claim No. 018639
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65		
Matrix:	Water	Sampled:	10/22/09
Units:	ug/L	Received:	10/22/09

Type:	BLANK	Batch#:	156521
Lab ID:	QC518489	Analyzed:	10/27/09
Diln Fac:	1.000		

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	ND	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	90	48-162	EPA 8015B
Bromofluorobenzene (FID)	96	52-158	EPA 8015B
Trifluorotoluene (PID)	84	21-180	EPA 8021B
Bromofluorobenzene (PID)	94	26-167	EPA 8021B

Type:	BLANK	Batch#:	156598
Lab ID:	QC518809	Analyzed:	10/28/09
Diln Fac:	1.000		

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	98	48-162	EPA 8015B
Bromofluorobenzene (FID)	93	52-158	EPA 8015B
Trifluorotoluene (PID)	90	21-180	EPA 8021B
Bromofluorobenzene (PID)	87	26-167	EPA 8021B

*= Value outside of QC limits; see narrative
Y= Sample exhibits chromatographic pattern which does not resemble standard
Z= Sample exhibits unknown single peak or peaks
NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	215953	Location:	USTCF Claim No. 018639
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8021B
Matrix:	Water	Batch#:	156440
Units:	ug/L	Analyzed:	10/24/09
Diln Fac:	1.000		

Type: BS Lab ID: QC518163

Analyte	Spiked	Result	%REC	Limits
MTBE	10.00	10.05	101	36-168

Surrogate	%REC	Limits
Trifluorotoluene (PID)	94	21-180
Bromofluorobenzene (PID)	94	26-167

Type: BSD Lab ID: QC518164

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	10.00	9.063	91	36-168	10	35

Surrogate	%REC	Limits
Trifluorotoluene (PID)	102	21-180
Bromofluorobenzene (PID)	102	26-167

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	215953	Location:	USTCF Claim No. 018639
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8021B
Matrix:	Water	Batch#:	156521
Units:	ug/L	Analyzed:	10/27/09
Diln Fac:	1.000		

Type: BS Lab ID: QC518490

Analyte	Spiked	Result	%REC	Limits
MTBE	10.00	8.808	88	36-168
Benzene	10.00	9.350	93	69-121
Toluene	10.00	10.03	100	64-132
Ethylbenzene	10.00	10.44	104	64-136
m,p-Xylenes	10.00	10.46	105	63-138
o-Xylene	10.00	10.40	104	64-135

Surrogate	%REC	Limits
Trifluorotoluene (PID)	90	21-180
Bromofluorobenzene (PID)	101	26-167

Type: BSD Lab ID: QC518491

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	10.00	8.017	80	36-168	9	35
Benzene	10.00	9.843	98	69-121	5	24
Toluene	10.00	10.07	101	64-132	0	27
Ethylbenzene	10.00	10.26	103	64-136	2	27
m,p-Xylenes	10.00	10.15	101	63-138	3	32
o-Xylene	10.00	9.888	99	64-135	5	27

Surrogate	%REC	Limits
Trifluorotoluene (PID)	80	21-180
Bromofluorobenzene (PID)	90	26-167

RPD= Relative Percent Difference

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	215953	Location:	USTCF Claim No. 018639
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC518492	Batch#:	156521
Matrix:	Water	Analyzed:	10/27/09
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,011	101	73-121

Surrogate	%REC	Limits
Trifluorotoluene (FID)	113	48-162
Bromofluorobenzene (FID)	106	52-158

Curtis & Tompkins, Ltd.

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	215953	Location:	USTCF Claim No. 018639
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8015B
Field ID:	MW-2A	Batch#:	156521
MSS Lab ID:	215953-003	Sampled:	10/22/09
Matrix:	Water	Received:	10/22/09
Units:	ug/L	Analyzed:	10/27/09
Diln Fac:	1.000		

Type: MS Lab ID: QC518493

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	75.36	2,000	2,018	97	49-129

Surrogate	%REC	Limits
Trifluorotoluene (FID)	128	48-162
Bromofluorobenzene (FID)	111	52-158

Type: MSD Lab ID: QC518494

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,066	100	49-129	2	19

Surrogate	%REC	Limits
Trifluorotoluene (FID)	128	48-162
Bromofluorobenzene (FID)	110	52-158

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	215953	Location:	USTCF Claim No. 018639
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC518812	Batch#:	156598
Matrix:	Water	Analyzed:	10/28/09
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	977.4	98	73-121

Surrogate	%REC	Limits
Trifluorotoluene (FID)	117	48-162
Bromofluorobenzene (FID)	101	52-158

Curtis & Tompkins, Ltd.

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	215953	Location:	USTCF Claim No. 018639
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	156598
MSS Lab ID:	216061-012	Sampled:	10/27/09
Matrix:	Water	Received:	10/27/09
Units:	ug/L	Analyzed:	10/29/09
Diln Fac:	1.000		

Type: MS Lab ID: QC518813

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	40.60	2,000	2,033	100	49-129

Surrogate	%REC	Limits
Trifluorotoluene (FID)	121	48-162
Bromofluorobenzene (FID)	108	52-158

Type: MSD Lab ID: QC518814

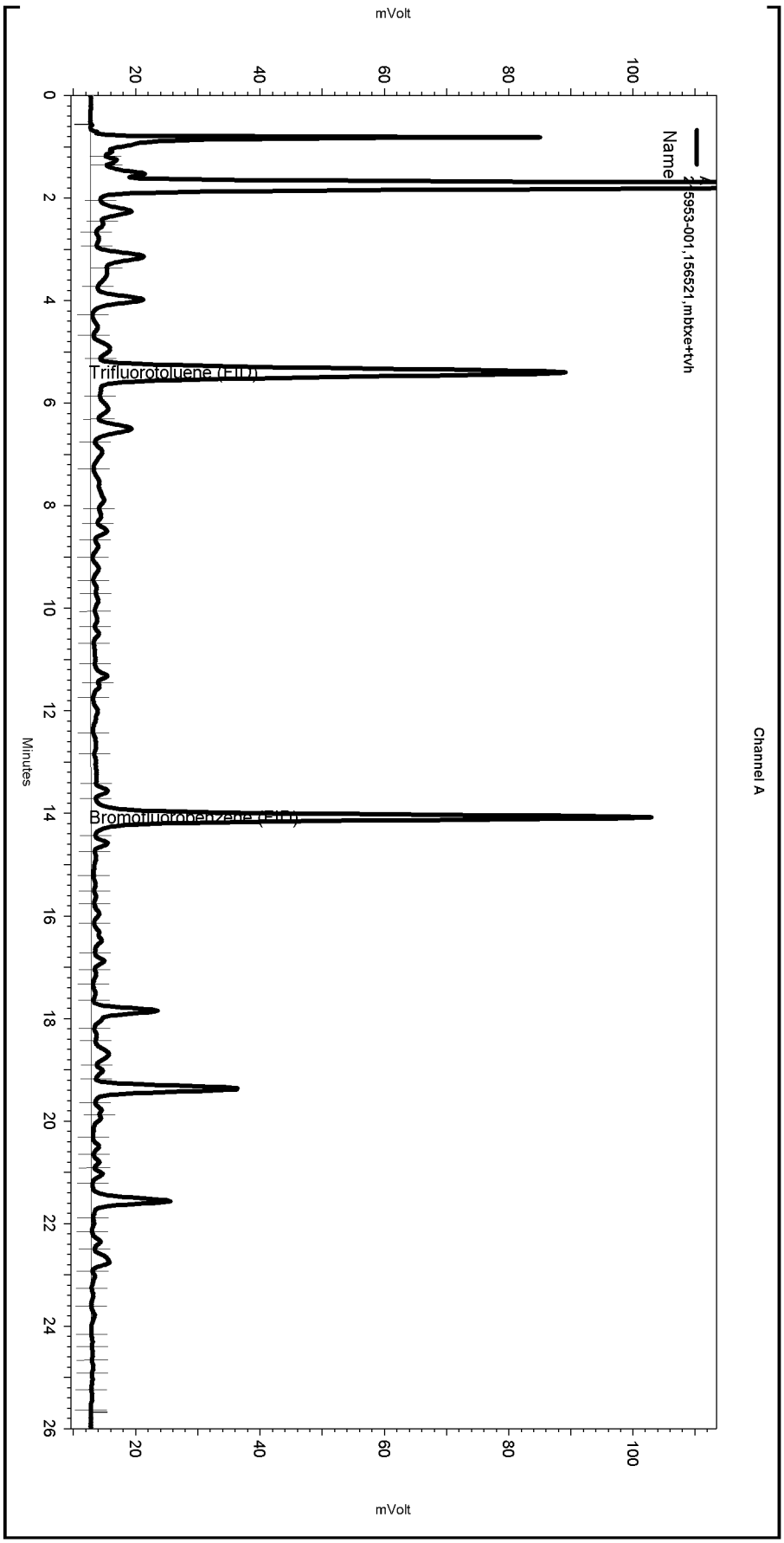
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,028	99	49-129	0	19

Surrogate	%REC	Limits
Trifluorotoluene (FID)	124	48-162
Bromofluorobenzene (FID)	108	52-158

RPD= Relative Percent Difference

Sequence File: **\\Lims\gdrive\ezchrom\Projects\GC19\Sequence\300.seq**
Sample Name: **215953-001,156521,mbtxe+tvh**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC19\Data\300_009**
Instrument: GC19 (Offline) Vial: N/A Operator: Tvh 2. Analyst (lims2k3\tvh2)
Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbtxe295.met

Software Version 3.1.7
Run Date: 10/27/2009 1:25:47 PM
Analysis Date: 1/22/2010 7:54:21 AM
Sample Amount: 5 Multiplier: 5
Vial & pH or Core ID: b1.0



---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

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

Manual Integration Fixes

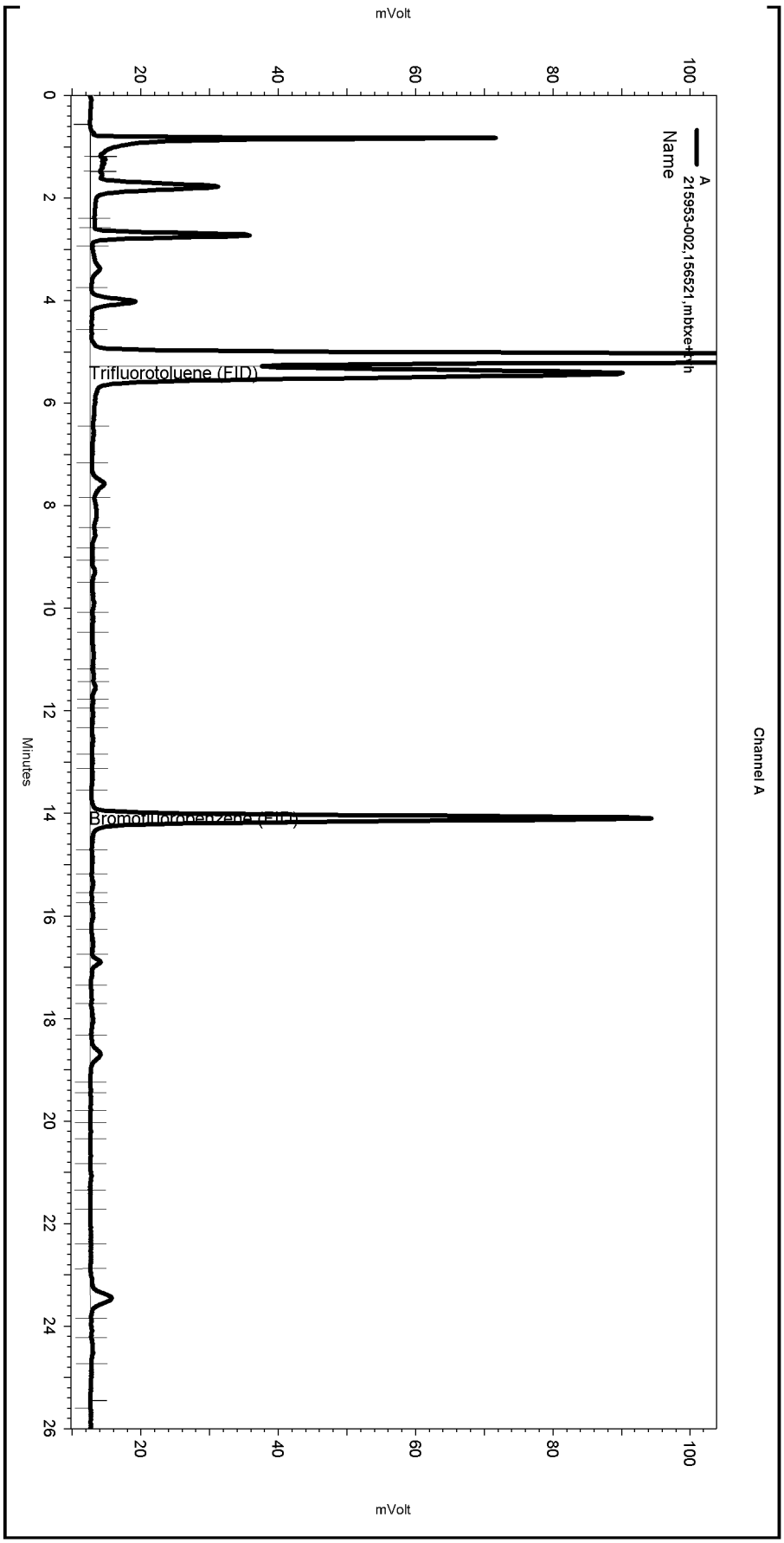
Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\300_009

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value

None

Sequence File: **\\Lims\gdrive\ezchrom\Projects\GC19\Sequence\300.seq**
Sample Name: **215953-002,156521,mbtxe+tvh**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC19\Data\300_010**
Instrument: GC19 (Offline) Vial: N/A Operator: Tvh 2. Analyst (lims2k3\tvh2)
Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbtxe295.met

Software Version 3.1.7
Run Date: 10/27/2009 2:03:28 PM
Analysis Date: 1/22/2010 7:54:27 AM
Sample Amount: 5 Multiplier: 5
Vial & pH or Core ID: f1.0



---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

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

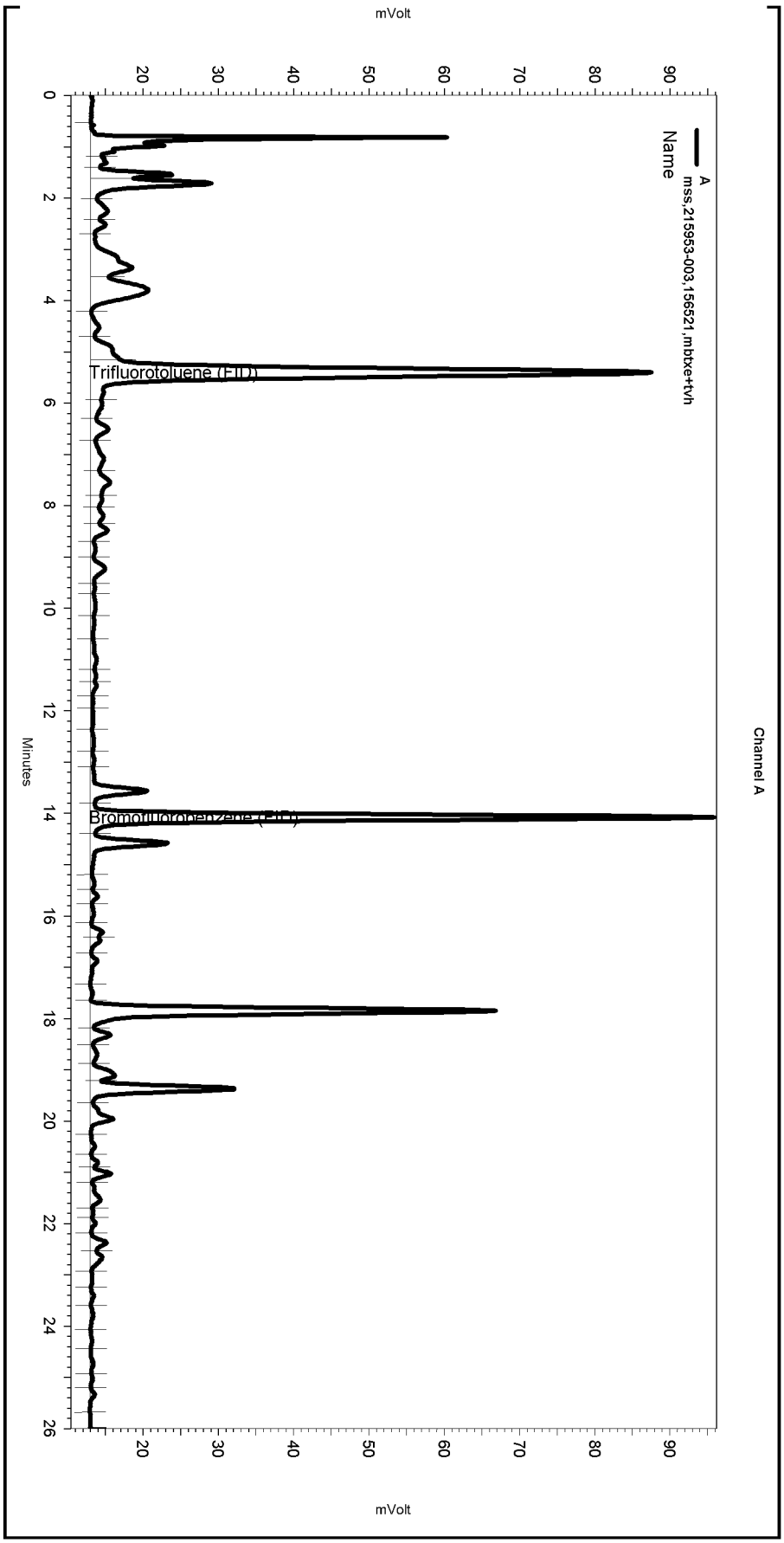
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\300_010

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
None				

Sequence File: **\\Lims\gdrive\ezchrom\Projects\GC19\Sequence\300.seq**
Sample Name: **mss,215953-003,156521,mbtxe+tvh**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC19\Data\300_006**
Instrument: GC19 (Offline) Vial: N/A Operator: Tvh 2. Analyst (lims2k3\tvh2)
Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbtxe295.met

Software Version 3.1.7
Run Date: 10/27/2009 11:33:04 AM
Analysis Date: 1/22/2010 7:53:58 AM
Sample Amount: 5 Multiplier: 5
Vial & pH or Core ID: b1.0



---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

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

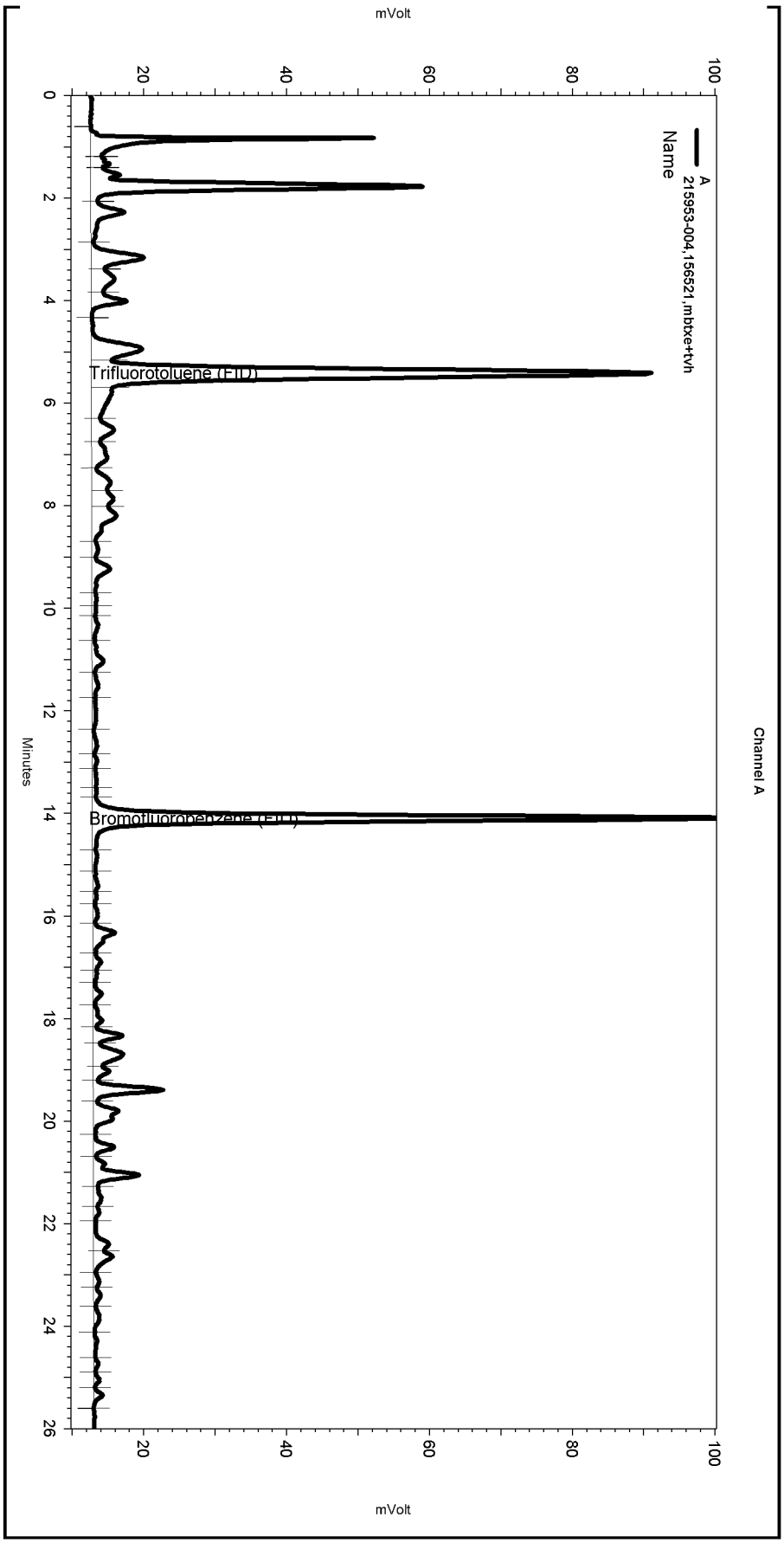
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\300_006

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Split Peak	5.154	0	0

Sequence File: **\\Lims\gdrive\ezchrom\Projects\GC19\Sequence\300.seq**
Sample Name: **215953-004,156521,mbtxe+tvh**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC19\Data\300_016**
Instrument: GC19 (Offline) Vial: N/A Operator: Tvh 2. Analyst (lims2k3\tvh2)
Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbtxe295.met

Software Version 3.1.7
Run Date: 10/27/2009 5:49:07 PM
Analysis Date: 1/22/2010 7:55:04 AM
Sample Amount: 5 Multiplier: 5
Vial & pH or Core ID: e1.0



---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

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

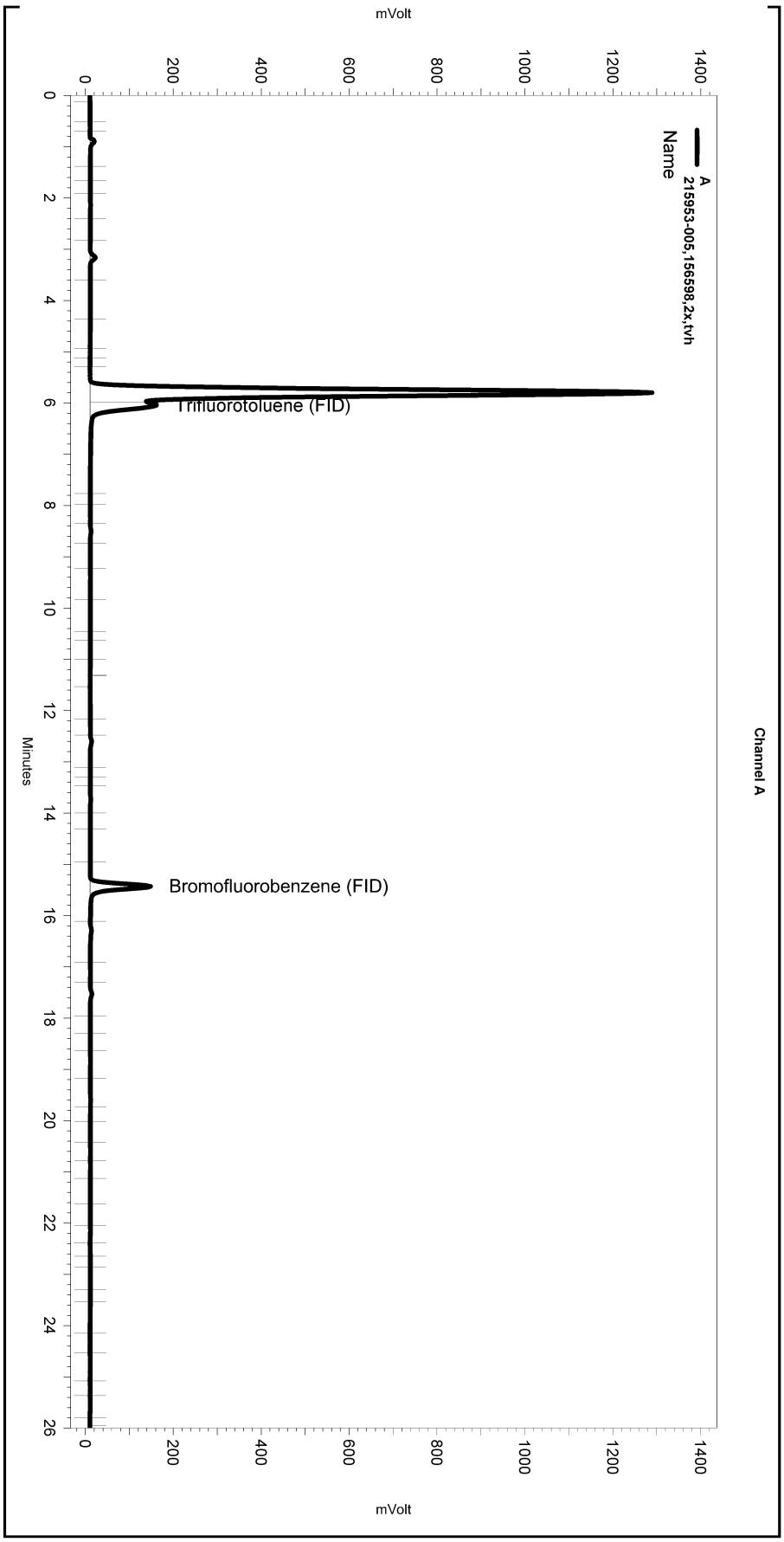
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\300_016

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Split Peak	5.693	0	0

Sequence File: **\\Lims\gdrive\ezchrom\Projects\GC07\Sequence\301.seq**
Sample Name: **215953-005,156598,2x,tvh**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC07\Data\301_025**
Instrument: GC07 (Offline) Vial: N/A Operator: Tvh 1. Analyst (lims2k3\tvh1)
Method Name: \\Lims\gdrive\ezchrom\Projects\GC07\Method\tvhbtxe294.met

Software Version 3.1.7
Run Date: 10/29/2009 1:45:21 AM
Analysis Date: 10/29/2009 1:17:38 PM
Sample Amount: 5 Multiplier: 5
Vial & pH or Core ID: c1.0



---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

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

Manual Integration Fixes

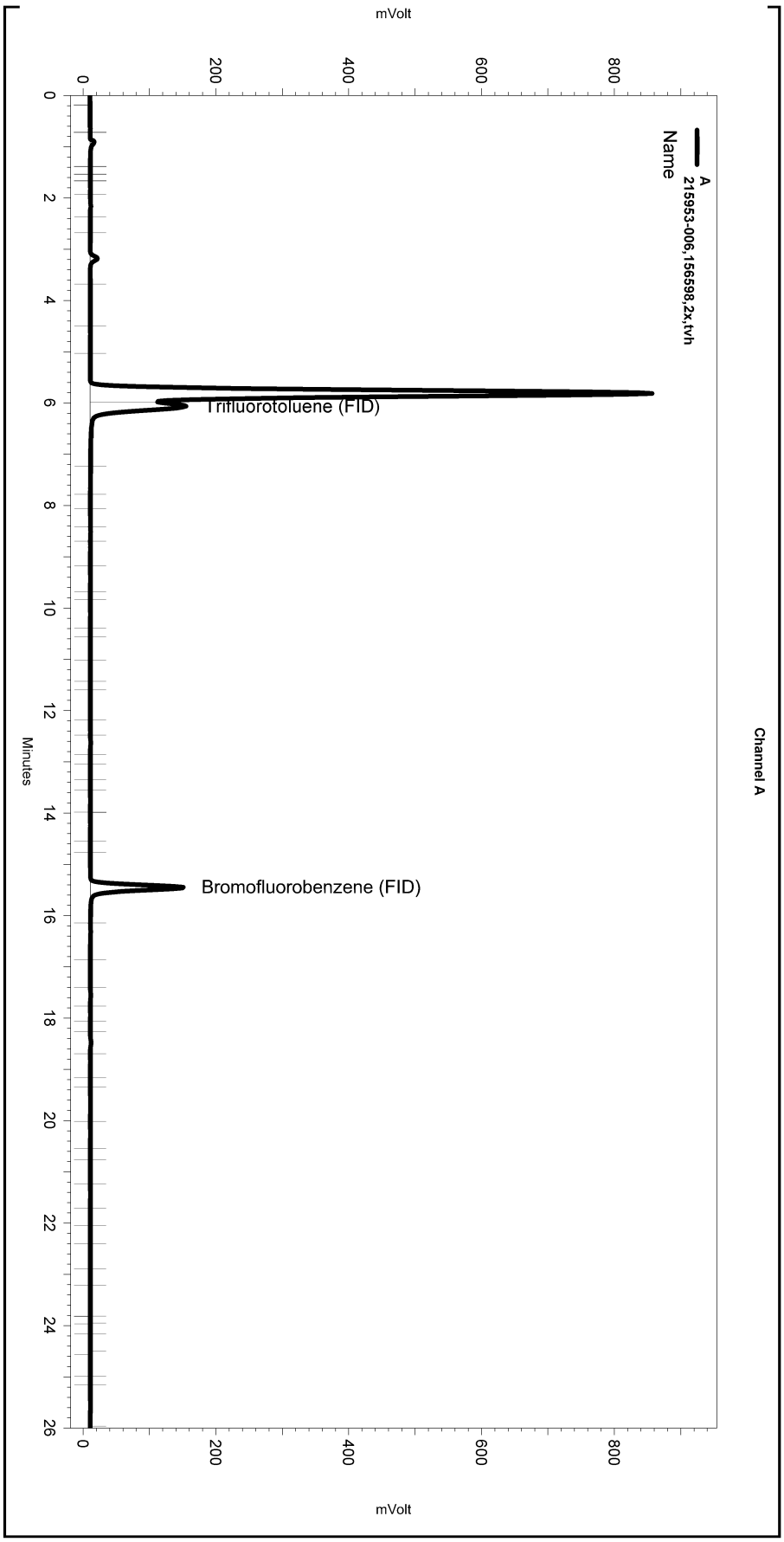
Data File: \\Lims\gdrive\ezchrom\Projects\GC07\Data\301_025

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value

None

Sequence File: **\\Lims\gdrive\ezchrom\Projects\GC07\Sequence\301.seq**
Sample Name: **215953-006,156598,2x,tvh**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC07\Data\301_026**
Instrument: GC07 (Offline) Vial: N/A Operator: Tvh 1. Analyst (lims2k3\tvh1)
Method Name: \\Lims\gdrive\ezchrom\Projects\GC07\Method\tvhbtxe294.met

Software Version 3.1.7
Run Date: 10/29/2009 2:21:21 AM
Analysis Date: 10/29/2009 1:17:44 PM
Sample Amount: 5 Multiplier: 5
Vial & pH or Core ID: c1.0



---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

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

Manual Integration Fixes

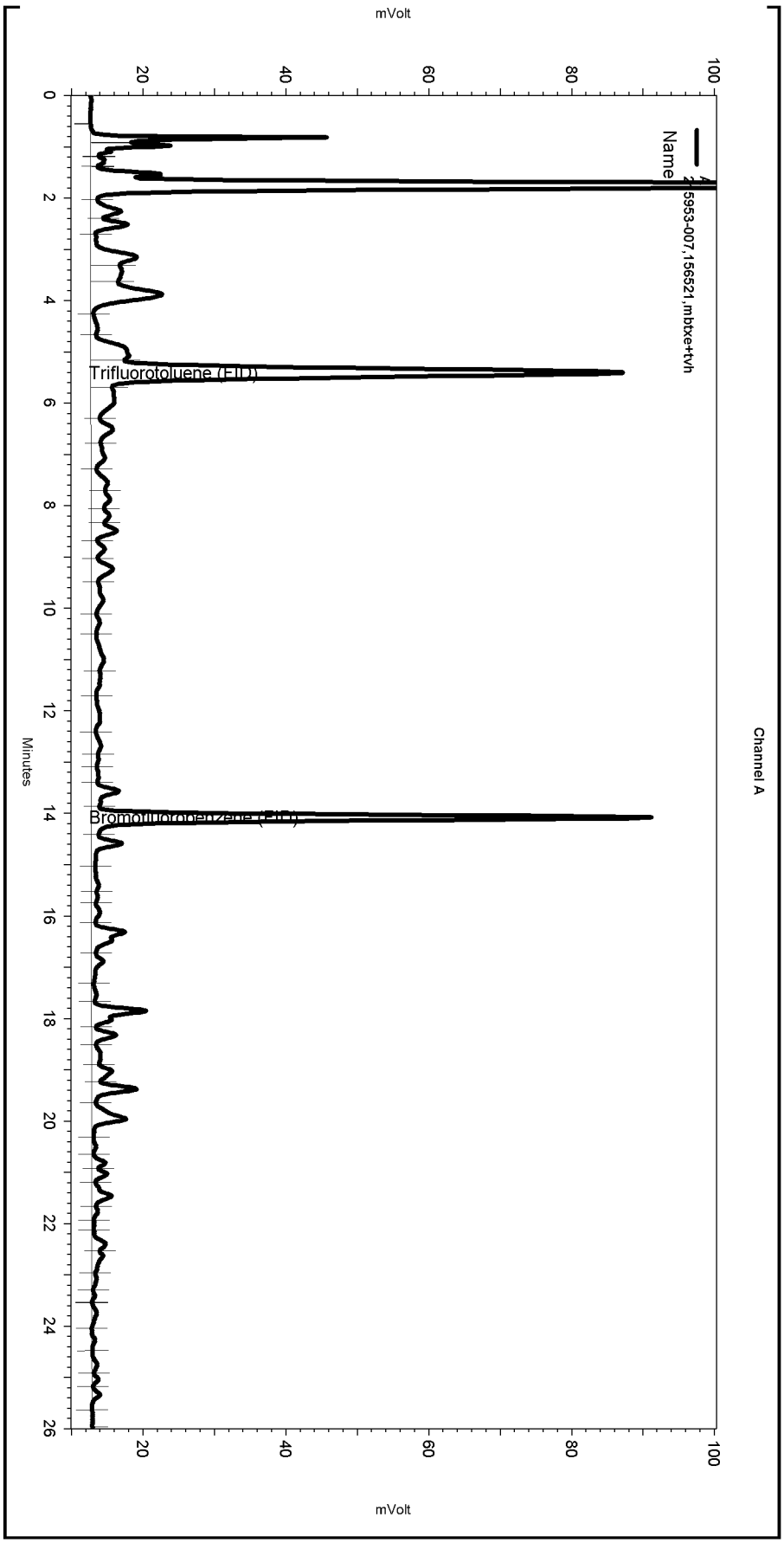
Data File: \\Lims\gdrive\ezchrom\Projects\GC07\Data\301_026

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value

None

Sequence File: **\\Lims\gdrive\ezchrom\Projects\GC19\Sequence\300.seq**
Sample Name: **215953-007,156521,mbtxe+tvh**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC19\Data\300_019**
Instrument: GC19 (Offline) Vial: N/A Operator: Tvh 2. Analyst (lims2k3\tvh2)
Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbtxe295.met

Software Version 3.1.7
Run Date: 10/27/2009 7:41:52 PM
Analysis Date: 1/22/2010 7:55:23 AM
Sample Amount: 5 Multiplier: 5
Vial & pH or Core ID: e1.0



---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

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

Manual Integration Fixes

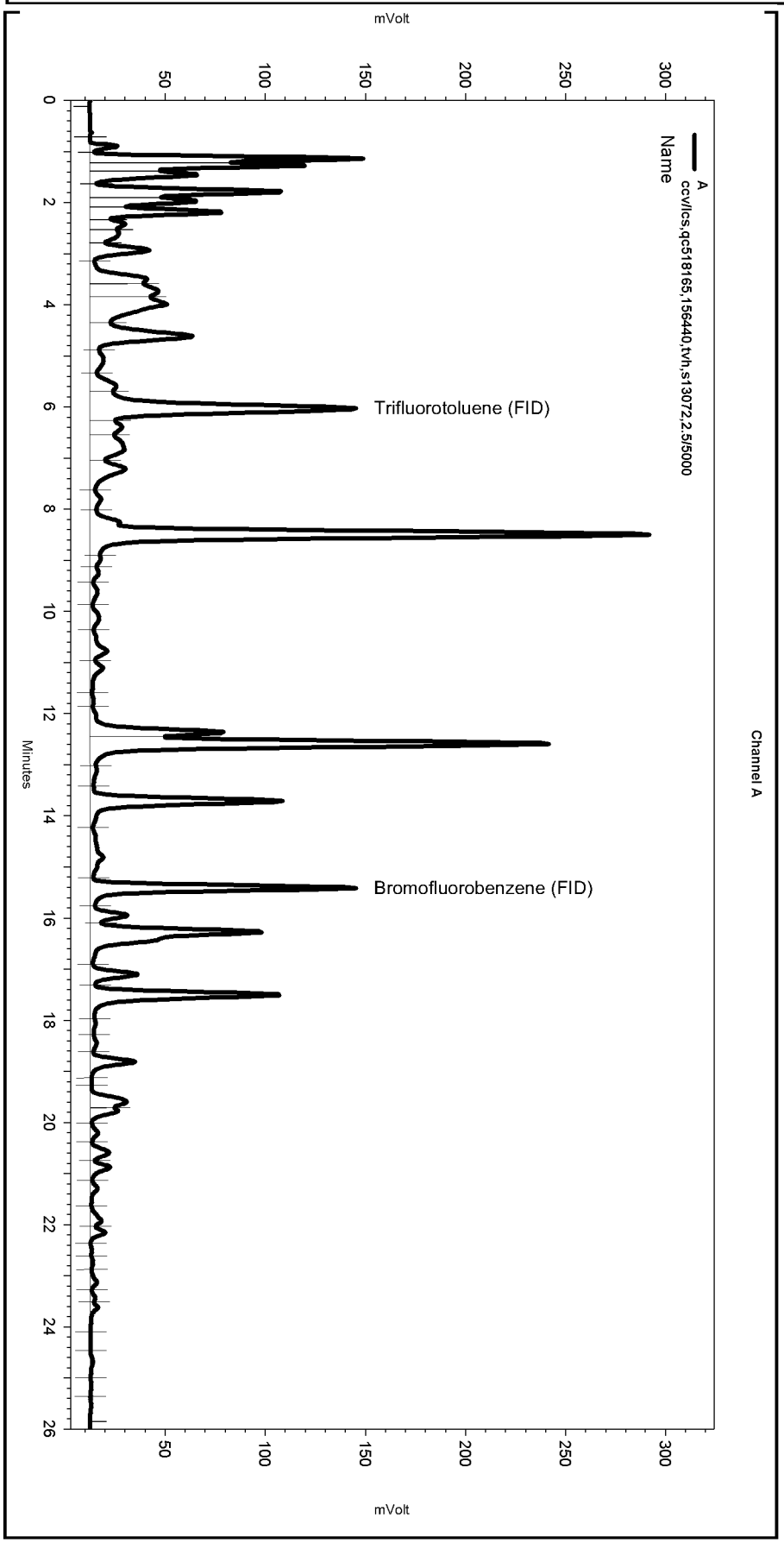
Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\300_019

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value

None

Sequence File: **\\Lims\gdrive\ezchrom\Projects\GC07\Sequence\297.seq**
Sample Name: **ccv/lcs,qc518165,156440,tvh,s13072,2.5/5000**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC07\Data\297_005**
Instrument: GC07 (Offline) Vial: N/A Operator: Tvh 2. Analyst (lims2k3\tvh2)
Method Name: \\Lims\gdrive\ezchrom\Projects\GC07\Method\tvhbtxe294.met

Software Version 3.1.7
Run Date: 10/24/2009 10:11:04 AM
Analysis Date: 10/26/2009 7:35:27 AM
Sample Amount: 5 Multiplier: 5
Vial & pH or Core ID: {Data Description}



---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

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

Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC07\Data\297_005

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
None				

Curtis & Tompkins, Ltd.

Gasoline Oxygenates by GC/MS

Lab #:	215953	Location:	USTCF Claim No. 018639
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8260B
Matrix:	Water	Sampled:	10/22/09
Units:	ug/L	Received:	10/22/09
Batch#:	156508	Analyzed:	10/27/09

Field ID: MW-1A
Type: SAMPLE
Lab ID: 215953-001
Diln Fac: 2.000

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	20
MTBE	140	1.0
Isopropyl Ether (DIPE)	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	1.0
1,2-Dichloroethane	ND	1.0
1,2-Dibromoethane	ND	1.0

Surrogate	%REC	Limits
Dibromofluoromethane	109	81-124
1,2-Dichloroethane-d4	107	73-140
Toluene-d8	98	88-113
Bromofluorobenzene	99	80-127

Field ID: MW-1B
Type: SAMPLE
Lab ID: 215953-002
Diln Fac: 2.000

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	20
MTBE	8.4	1.0
Isopropyl Ether (DIPE)	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	1.0
1,2-Dichloroethane	3.9	1.0
1,2-Dibromoethane	ND	1.0

Surrogate	%REC	Limits
Dibromofluoromethane	108	81-124
1,2-Dichloroethane-d4	107	73-140
Toluene-d8	98	88-113
Bromofluorobenzene	100	80-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline Oxygenates by GC/MS

Lab #:	215953	Location:	USTCF Claim No. 018639
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8260B
Matrix:	Water	Sampled:	10/22/09
Units:	ug/L	Received:	10/22/09
Batch#:	156508	Analyzed:	10/27/09

Field ID: MW-2B Lab ID: 215953-004
Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	26	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	4.4	0.5
1,2-Dibromoethane	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	109	81-124
1,2-Dichloroethane-d4	111	73-140
Toluene-d8	98	88-113
Bromofluorobenzene	99	80-127

Field ID: MW-5B Lab ID: 215953-007
Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	93	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	4.5	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	107	81-124
1,2-Dichloroethane-d4	110	73-140
Toluene-d8	99	88-113
Bromofluorobenzene	99	80-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline Oxygenates by GC/MS

Lab #:	215953	Location:	USTCF Claim No. 018639
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8260B
Matrix:	Water	Sampled:	10/22/09
Units:	ug/L	Received:	10/22/09
Batch#:	156508	Analyzed:	10/27/09

Type: BLANK Diln Fac: 1.000
Lab ID: QC518440

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	106	81-124
1,2-Dichloroethane-d4	109	73-140
Toluene-d8	98	88-113
Bromofluorobenzene	98	80-127

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Gasoline Oxygenates by GC/MS

Lab #:	215953	Location:	USTCF Claim No. 018639
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2005-65	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	156508
Units:	ug/L	Analyzed:	10/27/09
Diln Fac:	1.000		

Type: BS Lab ID: QC518441

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	133.6	107	36-156
MTBE	25.00	25.09	100	61-123
Isopropyl Ether (DIPE)	25.00	25.89	104	54-139
Ethyl tert-Butyl Ether (ETBE)	25.00	25.09	100	64-133
Methyl tert-Amyl Ether (TAME)	25.00	24.30	97	73-124

Surrogate	%REC	Limits
Dibromofluoromethane	108	81-124
1,2-Dichloroethane-d4	105	73-140
Toluene-d8	101	88-113
Bromofluorobenzene	99	80-127

Type: BSD Lab ID: QC518442

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	126.7	101	36-156	5	23
MTBE	25.00	25.40	102	61-123	1	11
Isopropyl Ether (DIPE)	25.00	26.40	106	54-139	2	11
Ethyl tert-Butyl Ether (ETBE)	25.00	25.71	103	64-133	2	11
Methyl tert-Amyl Ether (TAME)	25.00	24.47	98	73-124	1	11

Surrogate	%REC	Limits
Dibromofluoromethane	109	81-124
1,2-Dichloroethane-d4	102	73-140
Toluene-d8	100	88-113
Bromofluorobenzene	97	80-127

RPD= Relative Percent Difference

APPENDIX D

HISTORICAL GROUNDWATER ELEVATION AND ANALYTICAL DATA

TABLE A
Historical Groundwater Monitoring Well Data
2836 Union Street, Oakland, California

MW-1A										
Sampling Event No.	**Date Sampled**	**Depth to Groundwater (a)**	**Groundwater Elevation (b)**	**Dissolved Oxygen**	**TVH-g**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
1	Oct-06	dry	dry	*NA*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
2	Jan-07	9.80	2.45	*NA*	790	94	*< 0.5*	8.6	*< 0.5*	100
3	Apr-07	7.49	4.76	*NA*	760	63	*<0.5*	1.9	*<0.5*	150
4	Jul-07	7.16	5.09	*NA*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
5	Oct-07	7.29	4.96	*NA*	830	28	<0.7	13	<0.7	110
6	Jan-08	6.82	5.70	*NA*	720	8.1	*< 0.5*	*< 0.5*	*< 0.5*	130
7	Apr-08	6.32	5.70	*NA*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
8	Jul-08	8.25	4.00	*NA*	120	1.0	*<0.5*	*<0.5*	*<0.5*	86
9	Oct-08	9.04	3.21	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
10	Jan-09	7.00	5.25	*NA*	63	1.2	*<0.5*	*<0.5*	*<0.5*	77
11	Apr-09	5.62	6.63	7,100	89	8.7	*<0.5*	0.75	*<0.5*	150
12	Oct-09	7.62	4.63	1,700	72	1.5	*<0.5*	<0.5	*<0.5*	110
13	Apr-10	5.74	6.51	3,400	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	28

MW-1B										
Sampling Event No.	**Date Sampled**	**Depth to Groundwater (a)**	**Groundwater Elevation (b)**	**Dissolved Oxygen**	**TVH-g**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
1	Oct-06	7.44	4.56	*NA*	350	*<1.3*	*<1.3*	*<1.3*	*<1.3*	2.7
2	Jan-07	6.40	5.65	*NA*	350	*<1.3*	*<1.3*	*<1.3*	*<1.3*	3.6
3	Apr-07	6.42	5.63	*NA*	320	*<0.5*	*<0.5*	*<0.5*	*<0.5*	4.2
4	Jul-07	7.19	4.86	*NA*	200	*<1.3*	*<1.3*	*<1.3*	*<1.3*	3.2
5	Oct-07	7.10	4.95	*NA*	230	*<0.7*	*<0.7*	*<0.7*	*<0.7*	6.0
6	Jan-08	5.81	6.67	*NA*	400	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	6.2
7	Apr-08	6.82	5.23	*NA*	350	*<0.5*	*<0.5*	*<0.5*	*<0.5*	7.8
8	Jul-08	7.62	4.43	*NA*	300	*<0.5*	*<0.5*	*<0.5*	*<0.5*	8.4
9	Oct-08	8.21	3.84	3,600	520	*<0.5*	*<0.5*	*<0.5*	*<0.5*	5.9
10	Jan-09	6.89	5.16	6,160	300	*<0.5*	*<0.5*	*<0.5*	*<0.5*	7.5
11	Apr-09	6.27	5.78	6,000	1,400	*<1.0*	*<1.0*	*<1.0*	*<1.0*	7.7
12	Oct-09	7.32	4.73	700	150	*<0.5*	*<0.5*	*<0.5*	*<0.5*	8.5
12	Apr-10	4.92	7.13	600	760	*<0.5*	*<0.5*	*<0.5*	*<0.5*	5.8

MW-2A										
Sampling Event No.	**Date Sampled**	**Depth to Groundwater (a)**	**Groundwater Elevation (b)**	**Dissolved Oxygen**	**TVH-g**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
1	Oct-06	7.93	4.87	*NA*	80	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*
2	Jan-07	6.58	6.24	*NA*	490	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*
3	Apr-07	6.52	6.30	*NA*	83	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*
4	Jul-07	7.37	5.45	*NA*	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*
5	Oct-07	7.33	5.49	*NA*	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*
6	Jan-08	5.50	7.56	*NA*	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<2.0*
7	Apr-08	6.86	5.96	*NA*	160	*<0.5*	*<0.5*	*<0.5*	*<0.5*	3.0
8	Jul-08	7.70	5.12	*NA*	97	*<0.5*	*<0.5*	*<0.5*	*<0.5*	5.5
9	Oct-08	8.44	4.38	3,280	71	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<2.0*
10	Jan-09	6.99	5.83	2,120	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<2.0*
11	Apr-09	6.47	6.35	5,800	110	*<0.5*	*<0.5*	*<0.5*	*<0.5*	1.9
12	Oct-09	6.93	5.89	700	75	*<0.5*	*<0.5*	*<0.5*	*<0.5*	<2.0
13	Apr-10	4.82	8.00	500	210	*<0.5*	*<0.5*	*<0.5*	*<0.5*	3.1

Table A continued

MW-2B										
Sampling Event No.	**Date Sampled**	**Depth to Groundwater (a)**	**Groundwater Elevation (b)**	**Dissolved Oxygen**	**TVH-g**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
1	Oct-06	7.90	5.06	*NA*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
2	Jan-07	6.59	6.37	*NA*	2,000	*<0.5*	1.1	6.7	0.8	19
3	Apr-07	6.20	6.76	*NA*	84	*<0.5*	*<0.5*	*<0.5*	*<0.5*	18
4	Jul-07	7.33	5.63	*NA*	580	*<0.5*	*<0.5*	*<0.5*	*<0.5*	6.0
5	Oct-07	7.12	5.84	*NA*	1,700	*<0.5*	*<0.5*	*<0.5*	*<0.5*	83
6	Jan-08	5.51	7.65	*NA*	780	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	32
7	Apr-08	6.56	6.40	*NA*	92	*<0.5*	*<0.5*	*<0.5*	*<0.5*	2.4
8	Jul-08	7.78	5.18	*NA*	570	*<0.5*	*<0.5*	*<0.5*	0.72	17
9	Oct-08	8.62	4.34	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
10	Jan-09	7.03	5.93	2,160	110	*<0.5*	*<0.5*	*<0.5*	*<0.5*	27
11	Apr-09	6.21	6.75	5,800	250	*<0.5*	*<0.5*	*<0.5*	*<0.5*	30
12	Oct-09	8.03	4.93	1,400	65	*<0.5*	*<0.5*	*<0.5*	*<0.5*	22
13	Apr-10	5.73	7.23	1,100	*<50*	3.2	*<0.5*	0.68	*<0.5*	86

MW-3A										
Sampling Event No.	**Date Sampled**	**Depth to Groundwater (a)**	**Groundwater Elevation (b)**	**Dissolved Oxygen**	**TVH-g**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
1	Oct-06	dry	dry	*NA*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
2	Jan-07	6.32	5.27	*NA*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
3	Apr-07	5.75	5.84	*NA*	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	75
4	Jul-07	6.19	5.40	*NA*	NS	NS	NS	NS	NS	NS
5	Oct-07	6.50	5.09	*NA*	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*
6	Jan-08	5.69	6.07	*NA*	*<50*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	70
7	Apr-08	6.56	6.40	*NA*	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	77
8	Jul-08	6.73	4.86	*NA*	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	56
9	Oct-08	8.68	2.91	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
10	Jan-09	6.28	5.31	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
11	Apr-09	5.58	6.01	8,100	<50	*<0.5*	*<0.5*	*<0.5*	*<0.5*	52
12	Oct-09	6.89	4.70	7,100	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
13	Apr-10	5.67	5.92	9,500	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	25

MW-3B										
Sampling Event No.	**Date Sampled**	**Depth to Groundwater (a)**	**Groundwater Elevation (b)**	**Dissolved Oxygen**	**TVH-g**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
1	Oct-06	7.34	4.61	*NA*	1,900	*<10*	*<10*	*<10*	*<10*	*<10*
2	Jan-07	6.41	5.54	*NA*	1,900	*<8.3*	*<8.3*	*<8.3*	*<8.3*	*<8.3*
3	Apr-07	6.39	5.56	*NA*	1,900	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*
4	Jul-07	7.15	4.80	*NA*	1,200	*<2.0*	*<2.0*	*<2.0*	*<2.0*	*<2.0*
5	Oct-07	7.11	4.84	*NA*	2,100	*<7.1*	*<7.1*	*<7.1*	*<7.1*	*<7.1*
6	Jan-08	5.60	6.50	*NA*	2,100	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*<2.0*
7	Apr-08	6.77	5.18	*NA*	1,800	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<2.0*
8	Jul-08	7.50	4.45	*NA*	1,700	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<2.0*
9	Oct-08	8.11	3.84	1,490	2,300	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<2.0*
10	Jan-09	6.84	5.11	1,480	1,500	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<2.0*
11	Apr-09	6.24	5.71	5,300	4,900	*<0.5*	*<0.5*	*<0.5*	*<0.5*	<2.0
12	Oct-09	6.49	5.46	400	1,700	*<0.5*	*<0.5*	*<0.5*	*<0.5*	<2.0
13	Apr-10	4.98	6.97	300	4,800	*<0.5*	*<0.5*	*<0.5*	*<0.5*	<5.0

Table A continued

MW-4A										
Sampling Event No.	**Date Sampled**	**Depth to Groundwater (a)**	**Groundwater Elevation (b)**	**Dissolved Oxygen**	**TVH-g**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
1	Oct-06	9.74	1.28	*NA*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
2	Jan-07	5.64	5.38	*NA*	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	72
3	Apr-07	5.34	5.68	*NA*	*<50*	*<0.5*	*0.6*	*<0.5*	0.6	77
4	Jul-07	5.71	5.31	*NA*	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	64
5	Oct-07	6.09	4.93	*NA*	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	73
6	Jan-08	5.53	5.72	*NA*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
7	Apr-08	5.56	5.46	*NA*	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	61
8	Jul-08	6.30	4.34	*NA*	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	46
9	Oct-08	10.45	0.57	1,870	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	66
10	Jan-09	6.00	5.02	2,350	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	6.7
11	Apr-09	5.45	5.57	7,100	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	11
12	Oct-09	6.41	4.61	3,100	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
13	Apr-10	4.15	6.87	6,900	*<50*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	16

MW-4B										
Sampling Event No.	**Date Sampled**	**Depth to Groundwater (a)**	**Groundwater Elevation (b)**	**Dissolved Oxygen**	**TVH-g**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
1	Oct-06	6.63	4.41	*NA*	1,100	*<2.5*	*<2.5*	*<2.5*	*<2.5*	*<2.5*
2	Jan-07	5.55	5.49	*NA*	1,300	*<4.2*	*<4.2*	*<4.2*	*<4.2*	*<4.2*
3	Apr-07	5.45	5.59	*NA*	1,300	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*
4	Jul-07	6.28	4.76	*NA*	1,000	*<4.2*	*<4.2*	*<4.2*	*<4.2*	*<4.2*
5	Oct-07	6.13	4.91	*NA*	1,400	*<4.2*	*<4.2*	*<4.2*	*<4.2*	*<4.2*
6	Jan-08	4.81	6.44	*NA*	1,500	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<2.0*
7	Apr-08	5.90	5.14	*NA*	1,500	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<2.0*
8	Jul-08	6.70	4.34	*NA*	1,200	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<2.0*
9	Oct-08	7.24	3.80	1,960	1,600	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<2.0*
10	Jan-09	6.00	5.04	1,620	980	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<2.0*
11	Apr-09	5.35	5.69	5,200	3,700	*<4.2*	*<4.2*	*<4.2*	*<4.2*	<4.2
12	Oct-09	5.61	5.43	500	1,100	*<0.5*	*<0.5*	*<0.5*	*<0.5*	<2.0
13	Apr-10	4.01	7.03	500	3,700	*<4..2*	*<4..2*	*<4..2*	*<4..2*	*<4..2*

Table A continued

MW-5A										
Sampling Event No.	**Date Sampled**	**Depth to Groundwater (a)**	**Groundwater Elevation (b)**	**Dissolved Oxygen**	**TVH-g**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
1	Oct-06	9.60	2.82	*NA*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
2	Jan-07	6.72	6.10	*NA*	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
3	Apr-07	5.74	6.68	*NA*	1,000	6.6	*<0.5*	29	7.6	79
4	Jul-07	6.98	5.44	*NA*	NS	*NS*	*NS*	*NS*	*NS*	*NS*
5	Oct-07	8.32	4.10	*NA*	820	6.6	*<0.5*	6.6	1.8	78
Well Destoyed in November 2007										

MW-5B										
Sampling Event No.	**Date Sampled**	**Depth to Groundwater (a)**	**Groundwater Elevation (b)**	**Dissolved Oxygen**	**TVH-g**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
1	Oct-06	9.07	3.31	*NA*	13,000	9.6	0.6	21	1.9	37
2	Jan-07	6.45	5.93	*NA*	6,600	4.0	*<0.5*	10	1.0	22
3	Apr-07	6.45	5.93	*NA*	3,300	0.7	*<0.5*	2.7	*<0.5*	*<0.5*
4	Jul-07	7.15	5.23	*NA*	2,000	1.1	*<0.5*	2.2	*<0.5*	26
5	Oct-07	7.28	5.10	*NA*	1,200	*<0.5*	*<0.5*	*<0.5*	*<0.5*	45
6	Jan-08	4.94	7.63	*NA*	1,200	*<0.5*	*<0.5*	4.1	*<0.5*	69
7	Apr-08	6.51	5.87	*NA*	240	*<0.5*	*<0.5*	<0.5	*<0.5*	65
8	Jul-08	7.64	4.74	*NA*	310	*<0.5*	*<0.5*	<0.5	*<0.5*	68
9	Oct-08	8.24	4.14	1,670	780	*<0.5*	*<0.5*	<0.5	*<0.5*	84
10	Jan-09	6.93	5.45	3,210	1,200	*<0.5*	*<0.5*	<0.5	4.2	56
11	Apr-09	5.82	6.56	5,900	220	*<0.5*	*<0.5*	*<0.5*	*<0.5*	73
12	Oct-09	7.34	5.04	7,100	76	*<0.5*	*<0.5*	*<0.5*	*<0.5*	71
13	Apr-10	4.71	7.67	7,900	90	*<0.5*	*<0.5*	*<0.5*	*<0.5*	4.9

Notes:

All concentrations reported in micrograms per liter.

TVH-g = Total volatile hydrocarbons – gasoline range.

NA = Not analyzed for this constituent. NS = Not sampled

(a) Feet below top of casing

(b) Relative to mean sea level

TABLE B

Historical Groundwater Monitoring Well Groundwater Analytical Results

Lead Scavengers and Fuel Oxygenates (µg/L)

2836 Union Street, Oakland, California

MW-1A							
Sampling Event No.	**Date Sampled**	**EDC**	**EDB**	**ETBE**	**DIPE**	**TAME**	**TBA**
1	Oct-06	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
2	Jan-07	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*
3	Apr-07	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
4	Jul-07	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
5	Oct-07	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*
6	Jan-08	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
7	Apr-08	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
8	Jul-08	*<0.5*	*<0.5*	*<0.5*	*<0.5*	1	*<10*
9	Oct-08	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
10	Jan-09	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11	Apr-09	*<0.5*	*<0.5*	*<0.5*	*<0.5*	0.8	12
12	Oct-09	*<1.0*	*<1.0*	*<1.0*	*<1.0*	*<1.0*	*<20*
13	Apr-10	3.5	*<0.5*	*<0.5*	*<0.5*	<0.5	<10

MW-1B							
Sampling Event No.	**Date Sampled**	**EDC**	**EDB**	**ETBE**	**DIPE**	**TAME**	**TBA**
1	Oct-06	3.1	*<1.3*	*<1.3*	*<1.3*	*<1.3*	*<25*
2	Jan-07	3.3	*<1.3*	*<1.3*	*<1.3*	*<1.3*	*<25*
3	Apr-07	4.8	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
4	Jul-07	3.4	*<1.3*	*<1.3*	*<1.3*	*<1.3*	*<25*
5	Oct-07	3.3	*<1.3*	*<1.3*	*<1.3*	*<1.3*	*<25*
6	Jan-08	4.7	*<1.3*	*<1.3*	*<1.3*	*<1.3*	*<25*
7	Apr-08	4.7	*<1.3*	*<1.3*	*<1.3*	*<1.3*	*<25*
8	Jul-08	5.4	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
9	Oct-08	3	*<1.0*	*<1.0*	*<1.0*	*<1.0*	*<20*
10	Jan-09	4.4	*<1.0*	*<1.0*	*<1.0*	*<1.0*	*<20*
11	Apr-09	2.9	*<1.0*	*<1.0*	*<1.0*	*<1.0*	*<20*
12	Oct-09	3.9	*<1.0*	*<1.0*	*<1.0*	*<1.0*	*<20*
13	Apr-10	1.7	*<1.0*	*<1.0*	*<1.0*	*<1.0*	*<20*

MW-2A							
Sampling Event No.	**Date Sampled**	**EDC**	**EDB**	**ETBE**	**DIPE**	**TAME**	**TBA**
1	Oct-06	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
2	Jan-07	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
3	Apr-07	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
4	Jul-07	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
5	Oct-07	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
6	Jan-08	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
7	Apr-08	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
8	Jul-08	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
9	Oct-08	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
10	Jan-09	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11	Apr-09	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
12	Oct-09	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
13	Apr-10	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*

Table B continued

MW-2B							
Sampling Event No.	**Date Sampled**	**EDC**	**EDB**	**ETBE**	**DIPE**	**TAME**	**TBA**
1	Oct-06	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
2	Jan-07	4.1	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
3	Apr-07	6.9	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
4	Jul-07	1.4	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
5	Oct-07	4.1	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
6	Jan-08	3.9	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
7	Apr-08	3.9	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
8	Jul-08	1.3	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
9	Oct-08	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
10	Jan-09	4.3	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
11	Apr-09	2.4	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
12	Oct-09	4.4	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
13	Apr-10	<0.5	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*

MW-3A							
Sampling Event No.	**Date Sampled**	**EDC**	**EDB**	**ETBE**	**DIPE**	**TAME**	**TBA**
1	Oct-06	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
2	Jan-07	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
3	Apr-07	0.9	*<0.5*	*<0.5*	*<0.5*	*<0.5*	14
4	Jul-07	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
5	Oct-07	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
6	Jan-08	0.8	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
7	Apr-08	0.8	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
8	Jul-08	0.8	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
9	Oct-08	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
10	Jan-09	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
11	Apr-09	1.2	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
12	Oct-09	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
13	Apr-10	<0.5	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*

MW-3B							
Sampling Event No.	**Date Sampled**	**EDC**	**EDB**	**ETBE**	**DIPE**	**TAME**	**TBA**
1	Oct-06	*<10*	*<10*	*<10*	*<10*	*<10*	*<200*
2	Jan-07	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
3	Apr-07	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
4	Jul-07	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
5	Oct-07	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
6	Jan-08	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
7	Apr-08	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
8	Jul-08	*<6.3*	*<6.3*	*<6.3*	*<6.3*	*<6.3*	*<130*
9	Oct-08	*<5.0*	*<5.0*	*<5.0*	*<5.0*	*<5.0*	*<100*
10	Jan-09	*<5.0*	*<5.0*	*<5.0*	*<5.0*	*<5.0*	*<100*
11	Apr-09	*<5.0*	*<5.0*	*<5.0*	*<5.0*	*<5.0*	*<100*
12	Oct-09	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
13	Apr-10	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*

Table B continued

MW-4A							
Sampling Event No.	**Date Sampled**	**EDC**	**EDB**	**ETBE**	**DIPE**	**TAME**	**TBA**
1	Oct-06	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
2	Jan-07	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*
3	Apr-07	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
4	Jul-07	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
5	Oct-07	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
6	Jan-08	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
7	Apr-08	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
8	Jul-08	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
9	Oct-08	*<4.2*	*<4.2*	*<4.2*	*<4.2*	*<4.2*	*<83*
10	Jan-09	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
11	Apr-09	11	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
12	Oct-09	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
13	Apr-10	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*

MW-4B							
Sampling Event No.	**Date Sampled**	**EDC**	**EDB**	**ETBE**	**DIPE**	**TAME**	**TBA**
1	Oct-06	*<2.5*	*<0.5*	*<1*	*<1*	*<2.5*	*<50*
2	Jan-07	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
3	Apr-07	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
4	Jul-07	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
5	Oct-07	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
6	Jan-08	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
7	Apr-08	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
8	Jul-08	*<4.2*	*<4.2*	*<4.2*	*<4.2*	*<4.2*	*<83*
9	Oct-08	*<4.2*	*<4.2*	*<4.2*	*<4.2*	*<4.2*	*<83*
10	Jan-09	*<4.2*	*<4.2*	*<4.2*	*<4.2*	*<4.2*	*<83*
11	Apr-09	*<4.2*	*<4.2*	*<4.2*	*<4.2*	*<4.2*	*<83*
12	Oct-09	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
13	Apr-10	*<4.2*	*<4.2*	*<4.2*	*<4.2*	*<4.2*	*<83*

MW-5A							
Sampling Event No.	**Date Sampled**	**EDC**	**EDB**	**ETBE**	**DIPE**	**TAME**	**TBA**
1	Oct-06	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
2	Jan-07	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
3	Apr-07	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*4.3*	*<10*
4	Jul-07	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
5	Oct-07	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
Well Destoyed in November 2007							

MW-5B							
Sampling Event No.	**Date Sampled**	**EDC**	**EDB**	**ETBE**	**DIPE**	**TAME**	**TBA**
1	Oct-06	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*1.5*	*<10*
2	Jan-07	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
3	Apr-07	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
4	Jul-07	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
5	Oct-07	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<10*
6	Jan-08	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
7	Apr-08	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
8	Jul-08	*<0.5*	*<0.5*	*<0.5*	*<0.5*	3.3	*<10*
9	Oct-08	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*	*<0.5*
10	Jan-09	*<0.5*	*<0.5*	*<0.5*	*<0.5*	2.3	*<10*
11	Apr-09	*<0.5*	*<0.5*	*<0.5*	*<0.5*	3.5	*<10*
12	Oct-09	*<0.5*	*<0.5*	*<0.5*	*<0.5*	4.5	*<10*
13	Apr-10	*<0.5*	*<0.5*	*<0.5*	*<0.5*	4.9	*<10*

Notes:

NA = Not analyzed for this constituent. NS = Not sampled

EDB = Ethylene dibromide (1,2-dibromoethane). EDC = Ethylene dichloride (1,2-dichloroethane).

DIPE = isopropyl ether. ETBE = Ethyl-tertbutyl ether. TAME = Tert-amylmethylether

TBA = Tertiary butyl alcohol