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SECOND SEMIANNUAL 2011 GROUNDWATER MONITORING, ANNUAL SUMMARY, AND PRODUCT EXTRACTION REPORT

EMERYBAY CONDO PHASE I PARKING GARAGE
6400 CHRISTIE AVENUE
EMERYVILLE, CALIFORNIA

Prepared for:

EMERYBAY COMMERCIAL ASSOCIATION
EMERYVILLE, CA 94608

October 2011

STELLAR
ENVIRONMENTAL SOLUTIONS, INC.
GEOSCIENCE & ENGINEERING CONSULTING

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Prepared for:

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6475 CHRISTIE AVENUE, SUITE 550
EMERYVILLE, CA 94608

Prepared by:

STELLAR ENVIRONMENTAL SOLUTIONS, INC.
2198 SIXTH STREET
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October 27, 2011

Project No. 2007-65

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October 27, 2011

Mr. Mark Detterman
Hazardous Materials Specialist
Alameda County Department of Environmental Health
Local Oversight Program
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Subject: Second Semiannual 2011 Groundwater Monitoring, Annual Summary, and Product Extraction Report--EmeryBay Phase I Condo Parking Garage 6400 Christie Avenue, Emeryville, California

Dear Mr. Detterman:

Enclosed is the Stellar Environmental Solutions, Inc. report summarizing the site activities conducted between in 2011 at the above referenced site. This report is being submitted on behalf of the owner and Responsible Party, Emerybay Commercial Association. The subject site activities included an active product extraction event, two quarterly passive product removal events, and the second semiannual 2011 groundwater monitoring event.

While historical monitoring at the subject site had been sporadic, quarterly sampling conducted in 2008 firmly established hydrological and contaminant trends; therefore, in November 2009, the Alameda County Department of Environmental Health (ACEH) and the Responsible Party agreed that the sampling schedule would be reduced to semiannual events. This report summarizes the 16th sampling event conducted at the site since 1988. In accordance with regulatory requirements, an electronic copy of this report has been uploaded to ACEH and to the State Water Resources Control Board's GeoTracker system.

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,

Richard S. Makdisi, R.G., R.E.A.
Principal Geochemist/President

Ms. Kathryn Collins
Emerybay Commercial Association

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1.0 INTRODUCTION

PROJECT BACKGROUND

The subject property, located at 6400 Christie Avenue in Emeryville, California, is owned by the Emerybay Commercial Association, for which Stellar Environmental Solutions, Inc. (Stellar Environmental) provides environmental consulting services. The site has undergone fuel tank-related investigations and remediation since 1988 (by Stellar Environmental since 2007). All known environmental documents for the subject property are listed in the References and Bibliography section (Section 7.0) of this report. Previous remediation and investigation activities are described below.

SITE AND VICINITY DESCRIPTION

The project site is located at 6400 Christie Avenue in Emeryville, California (see Figure 1). The project site, which slopes to the south, is wholly developed with an open ground-floor parking area and apartment complex known as the Emery Bay Phase I Condos and parking garage. The area of monitoring and product extraction is primarily located in the northeastern portion of the parking garage. Figure 2 is a site plan. The site is bordered to the east by the Emery Bay Phase II Condos and parking garage, to the north by 65th Avenue, beyond Christie Avenue and to the west by the Bay Center Offices, and to the south by 64th Avenue. The surrounding area is developed with apartment complexes, offices, and commercial stores.

PREVIOUS INVESTIGATIONS

Historical groundwater well analytical results are presented in Appendix A, and are discussed in detail in Section 5.0 of this report.

The subject property parcel was developed as early as 1958 with the Garrett Motor Freight Station, associated with Delta Lines, Inc. The Delta Lines complex contained an “Oil and Gas” building, located at the site of the present-day Emery Bay Phase I Condo complex and parking garage. The building remained on the property until 1986, when it was demolished to build the present-day structures. Twelve underground fuel storage tanks (UFSTs) containing diesel and gasoline were removed from the Emery Bay Phase I and Phase II Condo complex parcels in 1987, at which time soil and groundwater contamination was discovered.

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SITE LOCATION ON AERIAL PHOTO

6400 Christie Ave.
Emeryville, CA

By: MJC | JANUARY 2008

Figure 1

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2007-65-01

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SITE PLAN AND ADJACENT LAND USE

6400 Christie Ave. Emeryville, CA	By: MJC	JANUARY 2008
	Figure 2	

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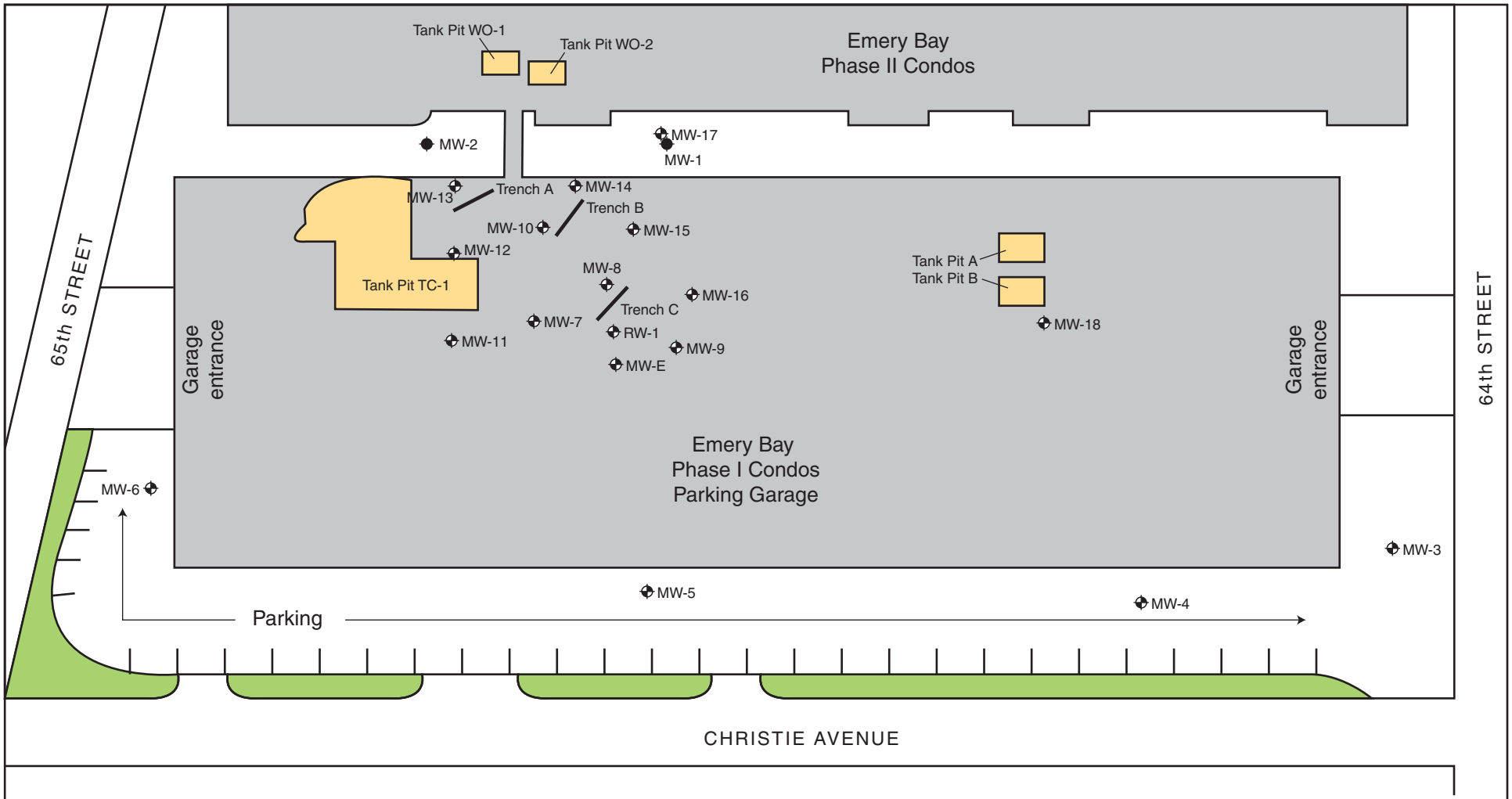
2007-65-07

The subsurface contamination originated from the trucking terminal that was operated by the Garrett Freight Line and Delta Lines, and existed at the site of the Bay Center Apartments before its development in the late 1980s. Site investigations identified a total of 12 UFSTs in three areas of the trucking terminal. These UFST areas were referred to as: 1) Tank Pits A and B (each containing one 10,000-gallon diesel tank); 2) Tank Pit TC-1 (four 12,000-gallon diesel tanks, two 10,000-gallon diesel tanks, and one 6,000-gallon gasoline tank); and 3) Tank Pit WO-1 and WO-2 (one 6,000-gallon tank, one 4,000-gallon tank, and one 1,000-gallon tank). Nine UFSTs were located beneath the current footprint of the Emery Bay Phase I Condo complex, while three were beneath the Emery Bay Phase II Condo complex. Figure 2 shows the historical locations where the tanks were removed.

To address the contamination in the garage area of the Emery Bay Phase I Condo complex, a light non-aqueous phase liquid (LNAPL) groundwater pump-and-treat system was installed by Groundwater Technology, Inc. (GTI) in 1989. The system extracted approximately 1 million gallons of groundwater, yielding approximately 100 gallons of LNAPL from recovery well RW-1 from July 1990 to March 1991. Three monitoring wells had previously been installed in 1985. GTI installed (and repaired) several more monitoring wells between 1987 and 1990, for a total of seven monitoring wells and one extraction well by 1990. The system and groundwater monitoring wells were designed and monitored as a condition of discharge permits granted by the East Bay Municipal Utility District (EBMUD) and the Bay Area Air Quality Management District (BAAQMD). The first groundwater monitoring event for MW-1 through MW-6 occurred in December 1988. The second monitoring event, which also included MW-E and RW-1, was conducted in March 1989. Subsequently, the groundwater extraction system operated by GTI was closed in late 1990 when corrosion and other mechanical problems caused the system to fail. Recovery of LNAPL continued manually on RW-1 until 1991, and a third groundwater sampling event occurred in February 1991. In 1994, the GTI recovery system was abandoned. Appendix A contains the historical analytical results. Figure 3 shows the locations of the monitoring wells and trenches.

No groundwater monitoring events had occurred at the site between 1991 and 2004, when PES Environmental, Inc. (PES) was retained to evaluate and implement remediation of the residual contamination at the TC-1 (former location of seven UFSTs) Emery Bay Phase I Condo complex area. (Note: Harding Lawson Associates conducted soil and groundwater sampling on the Phase II Apartment complex area during this time, but not for the purpose of product extraction or remediation.) In 2004, PES installed an additional 10 groundwater monitoring wells (monitoring wells MW-1 and MW-2 were either abandoned or paved over with asphalt during construction), bringing the current total to 17 monitoring wells and 1 extraction well in the Phase I parking garage area. The first groundwater monitoring event for the current wells was conducted in March 2004, and the second event was conducted in December 2006.



LEGEND

- Monitoring well
- Monitoring well (presumed abandoned)
- Trench location
- Historical tank pit area
- Landscaping

0 60

SCALE: 1/2" = 60 FEET

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MONITORING WELL AND TRENCH LOCATIONS

6400 Christie Ave., Emeryville, CA

Figure 3

by: MJC | JANUARY 2008

2007-65-02

A previous Stellar Environmental report (Stellar Environmental, 2007) fully discusses previous site remediation and investigations, site geology and hydrogeology, and residual site contamination. Tabular summaries of historical groundwater well water elevations and analytical results are included in Appendix A.

OBJECTIVES AND SCOPE OF WORK

This report discusses the following activities conducted/coordinated by Stellar Environmental in the current annual monitoring period:

- LNAPL passive product extraction from Trenches A and C, and active product extraction on select groundwater monitoring wells, trench sump wells, and recovery well RW-1
- Collection of water levels in site wells to determine groundwater flow direction
- Sampling of site wells for contaminant analysis
- Evaluation of hydrochemical and groundwater elevation trends in the context of plume stability and case closure assessment

REGULATORY OVERSIGHT

ACEH is the lead regulatory agency for the case, acting as a Local Oversight Program for the Regional Water Quality Control Board (Water Board). There are currently 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 #2799), and the case officer was Ms. Barbara Jakub. In a November 2008 meeting with the Responsible Party (represented by Ms. Sarah Irving), Stellar Environmental (represented by Ms. Teal Glass and Mr. Richard Makdisi), and ACEH (represented by Ms. Jakub and Ms. Donna Drogas), it was agreed that quarterly sampling could be reduced to a semiannual schedule with the stipulation that an indoor air and preferential pathway study be completed. Stellar Environmental submitted a letter on November 24, 2008 to ACEH documenting the change in sampling frequency. The Indoor Air Survey and Preferential Pathway Report (Stellar Environmental, 2009b) was submitted to ACEH April 6, 2009. An additional Indoor Air Survey was conducted in March 2010 and submitted to ACEH in April 2010 to document the conditions observed in the February 2009 survey. On April 21, 2010, Stellar Environmental was informed that a new case officer, Mark Detterman, had been assigned to the site.

The case has been assigned No. SLT2O05561 in the Water Board's GeoTracker system. Electronic uploads of required data/reports are submitted to both agencies.

2.0 PHYSICAL SETTING

The following evaluation of the physical setting of the site—including topography, drainage, and geologic and hydrogeologic conditions—is based on previous (1986 through 2006) site investigations conducted by others, and site inspections and subsurface data collection by Stellar Environmental in 2007 and 2008.

TOPOGRAPHY AND DRAINAGE

The mean elevation of the property is about 13 feet above mean sea level, and the general topographic gradient in the vicinity of the property is to the southwest, although the regional gradient is to the west-southwest.

The nearest receiving water body is San Francisco Bay, located approximately 700 feet to the west of the subject property. East of the site lies the Oakland Hills, which rise to an elevation of approximately 1,000 feet and are situated 2.5 miles east of the subject property. The subject property is not listed within a 100- or 500-year flood zone.

Storm drains from the roof collect storm runoff for discharge onto the asphalt-paved parking lots. Drainage collected in storm sewers from the parking lot and from Christie, 64th, and 65th Streets discharges into San Francisco Bay. Stellar Environmental has noted several storm drains, in the parking lot area and on the surrounding streets.

GEOLOGY

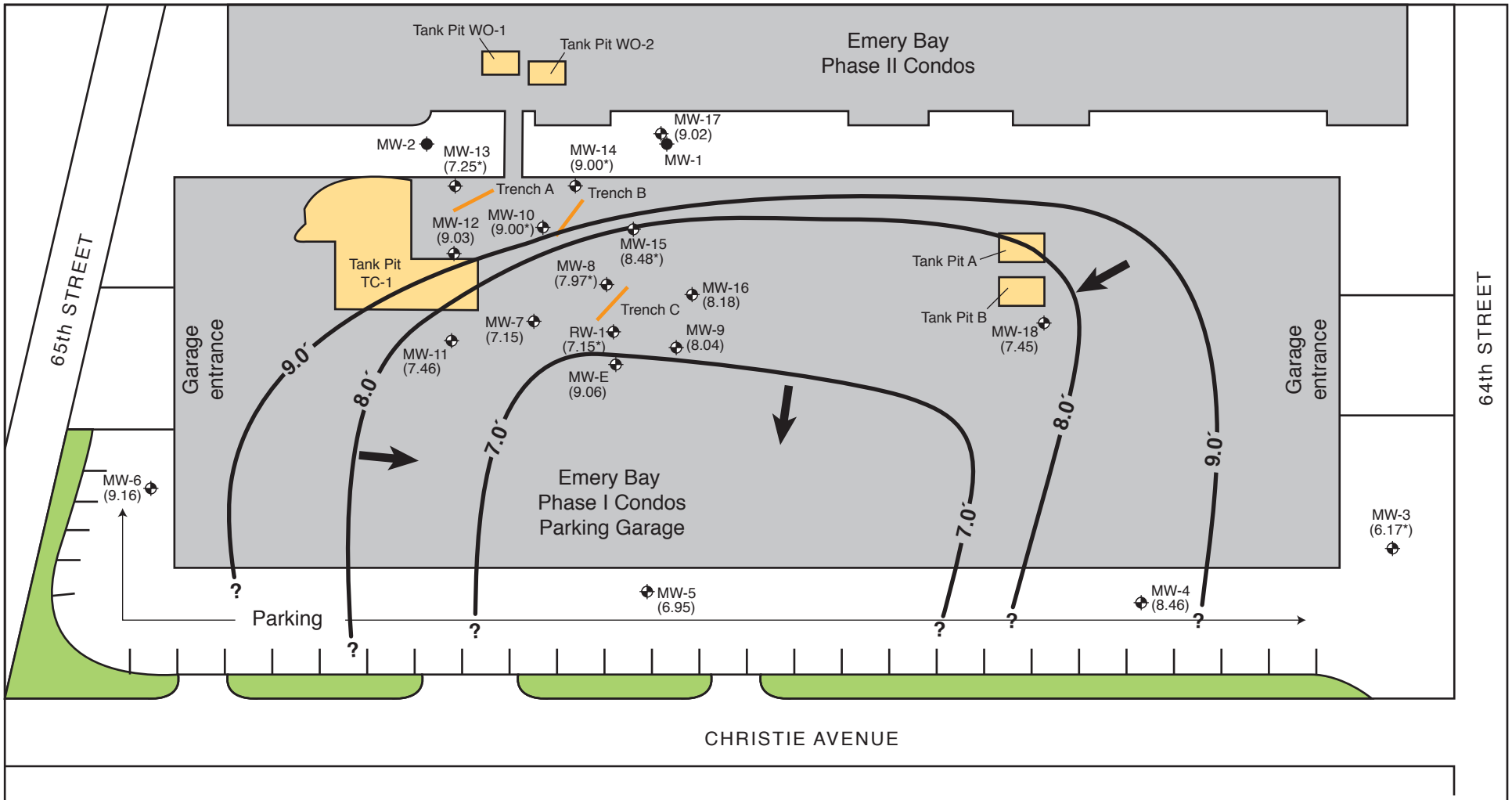
The subject property area is underlain with material mapped "Qhbm," designated Early Pleistocene alluvium, that is moderately consolidated, deeply weathered, poorly sorted, irregularly interbedded clay, silt, sand, and gravel. A geotechnical survey conducted in 1985 revealed that the upper 15 to 20 feet of soil consists of a combination of fill and soft bay sediment. The upper 1 to 2½ feet of soil is generally pavement and imported fill. This is underlain by approximately 20 feet of firm soil consisting of primarily dense silty sand with intermittent layers of silty and sandy clay. Stiff to very stiff clay lies a depth of approximately 40 feet and extends to the depth of the borings, approximately 101.5 feet (Geomatrix, 1988).

The closest major fault, the Hayward Fault, is located about 3 miles east of the property. While the site is located in a seismically active area, it is not within an Alquist-Priolo Special Studies active fault zone, the legislatively defined zone of restricted land use 200 feet around an active fault due to the high probability of ground rupture.

GROUNDWATER HYDROLOGY

Regulatory agency records indicate that the direction of shallow groundwater flow in the site vicinity is to the west-northwest, toward San Francisco Bay. However, water levels and flow direction in this area are influenced by tidal patterns, and the groundwater gradient measured during the September 2010 monitoring event ranged from the southwest (on the northern portion of the site) to the west (on the central portion of the site) to the northwest (on the southern portion of the site). The apparent "sink" around monitoring well MW-5 may also possibly be a result of the top of casing vertical elevation reflecting a slight survey error. According to current and historical water level data obtained from onsite monitoring wells, depth to groundwater ranges from approximately 6 to 11 feet below ground surface (bgs). Groundwater elevations during the September 2011 event ranged from 6.17 to 9.16 feet above mean sea level. The average groundwater gradient was 0.001 foot/foot.

Figure 4 is a groundwater elevation map from the recent groundwater-monitoring event (activities discussed in Section 4.0).



LEGEND

- Monitoring well
- Monitoring well (presumed abandoned)
- Trench location
- Groundwater elevation contour in feet amsl
- Historical tank pit area
- Landscaping
- Inferred direction of groundwater flow
- Extrapolated groundwater elevation contour
- * Groundwater elevation not used in determining contour due to the presence of free product
- NM = Depth to groundwater could not be measured due to the presence of tar

0 40

SCALE: 1/2" = 40 FEET

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GROUNDWATER ELEVATION MAP — September 30, 2011

6400 Christie Ave., Emeryville, CA

Figure 4

by: MJC | OCTOBER 2011

2007-65-52

3.0 SEPTEMBER 2011 GROUNDWATER MONITORING AND SAMPLING ACTIVITIES

This section presents the groundwater sampling and analytical methods for the most recent event. Table 1 summarizes monitoring well construction and groundwater monitoring data. Groundwater analytical results are summarized in Section 4.0.

SAMPLING METHODS AND ACTIVITIES

Activities for this event include:

- Measuring static water levels in all 18 wells
- Collecting post-purge groundwater samples from the 18 wells for laboratory analysis of the following contaminants:
  - benzene, toluene, ethyl benzene, and xylenes (BTEX)
  - methyl tertiary-butyl ether (MTBE)
  - total petroleum hydrocarbons as gasoline (TPHg)
  - total petroleum hydrocarbons as diesel (TPHd)

The site monitoring well sampling locations are shown on Figure 3. Well construction information and water level data are summarized in Table 1. Appendix B contains the groundwater monitoring field records.

CURRENT MONITORING EVENT

Blaine Tech Services conducted groundwater monitoring well water level measurements, purging, sampling, and field analyses on September29 and 30 under the supervision of Stellar Environmental personnel. Groundwater sampling was conducted in accordance with State of California guidelines for sampling dissolved analytes in groundwater associated with leaking UFSTs. As the first task of the monitoring event, static water levels and free product levels were measured in the 18 wells using an electric water level indicator. The depth of free product was recorded, and the water level was adjusted to reflect the groundwater elevation.

Table 1
Groundwater Monitoring Well Construction and Groundwater Elevation Data
6400 Christie Avenue, Emeryville, California

Well	Well Depth (feet bgs)	Screened Interval	Top of Well Casing Elevation [(a)]	Depth to Free Product (TOC)	Thickness of Free Product (feet)	Groundwater Elevation (September 29, 2011)
MW-3	25	5 to 20	16.65	10.83	NM	6.17
MW-4	25	5 to 20	16.29	NA	NA	8.46
MW-5	25	5 to 20	16.72	NA	NA	6.95
MW-6	25	5 to 20	16.82	NA	NA	9.16
MW-7	20	5 to 20	17.73	NA	NA	7.15
MW-8	16	5 to 16	17.84	9.55	0.32	7.97
MW-9	20	5 to 20	17.84	NA	NA	8.04
MW-10	20	5 to 20	17.83	8.78	0.05	9.00
MW-11	20	5 to 20	17.76	NA	NA	7.46
MW-12	20	5 to 20	17.83	NA	NA	9.03
MW-13	20	5 to 20	17.66	9.64	0.77	7.25
MW-14	20	5 to 20	17.60	8.55	0.05	9.00
MW-15	20	5 to 20	17.80	NA	NA	8.48
MW-16	20	5 to 20	17.74	NA	NA	8.18
MW-17	20	5 to 20	18.17	NA	NA	9.02
MW-18	20	5 to 20	16.35	NA	NA	7.45
MW-E	47	7 to 40	17.47	NA	NA	9.06
RW-1	30	unknown	16.70	9.74	0.01	6.95
TA-E	11-13	6-8 to 11-13	17.20	NM	NM	NM
TA-M	11-13	6-8 to 11-13	17.21	NM	NM	NM
TA-W	11-13	6-8 to 11-13	17.28	NM	NM	NM
TB-E	11-13	6-8 to 11-13	17.24	NM	NM	NM
TB-M	11-13	6-8 to 11-13	17.30	NM	NM	NM
TB-W	11-13	6-8 to 11-13	17.33	NM	NM	NM
TC-E	11-13	6-8 to 11-13	17.07	NM	NM	NM
TC-M	11-13	6-8 to 11-13	17.37	NM	NM	NM
TC-W	11-13	6-8 to 11-13	17.32	NM	NM	NM

Notes:

[(a)] Relative to mean sea level.

[(b)] Depth to groundwater and/or of free product could not be determined because free product density would not allow a clear delineation.

bgs = below ground surface
TOC = below top of casing
NA = not applicable (no free product in well)
NM = depth to groundwater and/or free product could not be determined due to the presence of tar

MW-3 through MW-6 and MW-E are 2-inch PVC. MW-7 through MW-18 are ¾-inch PVC. RW-1 is 10-inch PVC.

Approximately 36 gallons of purge water and equipment decontamination rinse water from the current groundwater sampling event was containerized onsite in a labeled 55-gallon drum. In addition, approximately 1,015 gallons of groundwater yielding approximately 2.50 gallons of free product was removed during the September 2011 active product removal event as wells as 0.5 gallon removed passively from the skimmers. All purged groundwater and free product from the active product removal event were containerized in the 1,100-gallon onsite aboveground storage tank (AST). On October 14, 2011, Evergreen Oil, Inc. vacuumed and transported all of the water and product to its recycling facility under manifest number 003774348 (EPA Generator ID No. CAL000331636). Appendix F contains a copy of the manifest

4.0 REGULATORY CONSIDERATIONS, ANALYTICAL RESULTS, AND DISCUSSION OF FINDINGS

This section presents the analytical results of the most recent monitoring event and summarizes the relevant regulatory considerations. Appendix C contains the certified analytical laboratory report and chain-of-custody record.

REGULATORY CONSIDERATIONS

As specified in the East Bay Plain Groundwater beneficial Use Evaluation Report by the San Francisco Bay Region Water Board (Water Board, 1999), all groundwater is considered a potential source of drinking water unless otherwise indicated by the Water Board, and is assumed to ultimately discharge to a surface water body and potentially impact aquatic organisms. The subject property is listed as occurring within Zone B, designated as groundwater that is unlikely to be used as a drinking water resource. The basin is shallow in this area, with depths of less than 300 feet. Groundwater in this area is used for backyard irrigation, industrial supply, and commercial irrigation. There is a low likelihood that this water will be used as a public water supply in the near future.

The Water Board publishes Environmental Screening Levels (ESLs) for residential and commercial/industrial properties where groundwater is/is not a potential drinking water resource. As stipulated in the ESL document (Water Board, 2008), ESLs are not cleanup criteria; rather, they are conservative screening-level criteria designed to be protective of both drinking water resources and aquatic environments. The groundwater ESLs are composed of one or more components—including ceiling value, human toxicity, indoor air impacts, and aquatic life protection. Exceedance of ESLs suggests that additional remediation and/or investigation (e.g., monitoring plume stability to demonstrate no risk to sensitive receptors where drinking water is not threatened) may be warranted. Because the subject property is a residential property where groundwater is not a potential drinking water resource, the contaminant levels at the site will be compared to the ESLs for these criteria.

Contaminants detected above the ESLs during this sampling event include gasoline, diesel, benzene, toluene, ethylbenzene, and total xylenes. In general, concentrations of gasoline have either decreased or showed no change in the majority of the wells from the last sampling event; however,

concentrations of diesel have decreased in a majority of the wells. However, historic diesel highs were observed in two of the wells (MW-6 and MW-14).

GROUNDWATER SAMPLE RESULTS

Table 2 and Figure 5 summarize the contaminant analytical results of the current monitoring event samples.

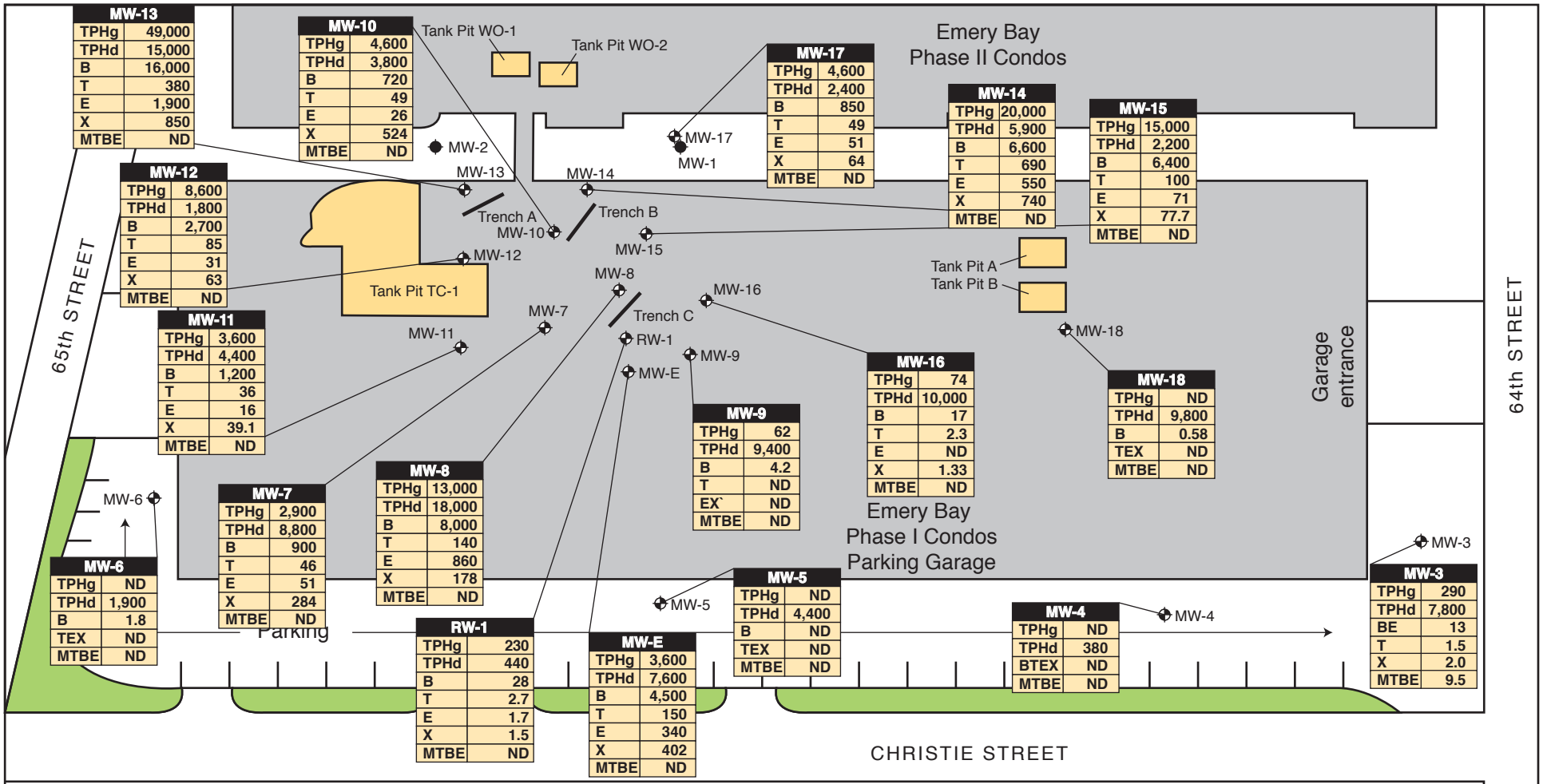
Table 2
Groundwater Sample Analytical Results – September 29 and 30, 2011
6400 Christie Avenue, Emeryville, California

Well ID	Analytical Results						
	TPHg	TPHd	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-3	**290**	**7,800**	13	1.5	<0.5	2.0	9.5
MW-4	<50	**380**	<0.5	<0.5	<0.5	<0.5	<2.0
MW-5	<50	**4,400**	<0.5	<0.5	<0.5	<0.5	<2.0
MW-6	<50	**1,900**	1.8	<0.5	<0.5	<0.5	<2.0
MW-7	**2,900**	**8,000**	**900**	46	**51**	**284**	<2.0
MW-8	**13,000**	**18,000**	**8,000**	**140**	**860**	**178**	<2.0
MW-9	62	**9,400**	4.2	<0.5	<0.5	<0.5	<2.0
MW-10	**4,600**	**3,800**	**720**	49	26	52.4	<2.0
MW-11	**3,600**	**4,400**	**1,200**	36	9.6	19.9	<2.0
MW-12	**8,600**	**1,800**	**2,700**	85	31	63	<2.0
MW-13	**49,000**	**15,000**	**16,000**	**380**	**1,900**	**850**	<2.0
MW-14	**20,000**	**5,900**	**6,600**	**690**	**550**	**740**	<2.0
MW-15	**15,000**	**2,200**	**6,400**	100	**71**	77.7	<2.0
MW-16	74	**10,000**	17	2.3	<0.5	1.33	<2.0
MW-17	**4,600**	**2,400**	**850**	49	**51**	64	<2.0
MW-18	<50	**9,800**	0.58	<0.5	<0.5	<0.5	<2.0
MW-E	**3,600**	**7,600**	**4,500**	**150**	**340**	**402**	<2.0
RW-1	**230**	**440**	**28**	2.7	1.7	1.5	<2.0
ESLs [(a)]	**100 / 210**	**100 / 210**	**1.0 / 46**	**40 / 130**	**30 / 43**	**20 / 100**	**5.0 / 1,800**

Notes:

[(a)] Water Board Environmental Screening Levels for residential sites where groundwater is/is not a drinking water resource (Water Board, 2008).

MTBE = methyl tertiary-butyl ether
TPHd = total petroleum hydrocarbons – diesel range (equivalent to total extractable hydrocarbons – diesel range)
TPHg = total petroleum hydrocarbons – gasoline range (equivalent to total volatile hydrocarbons – gasoline range)
All concentrations are expressed in micrograms per liter (µg/L), equivalent to parts per billion (ppb).
Results listed in **bold-face type** are at or above the ESLs where groundwater is not a drinking water resource.



LEGEND

- Monitoring well
- Monitoring well (presumed abandoned)
- Trench location
- Historical tank pit area
- Landscaping

TPHg = Total petroleum hydrocarbons as gasoline
TPHd = Total petroleum hydrocarbons as diesel
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total xylenes
ND = Below the laboratory detection limit
MTBE = Methyl Tertiary Butyl Ether

All concentrations in micrograms per liter (μg/L)

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GROUNDWATER MONITORING WELL ANALYTICAL RESULTS – September 2011
6400 Christie Ave., Emeryville, CA

Figure 5

by: MJC | OCTOBER 2011

2007-65-53

Petroleum Hydrocarbon Contaminants

During the September 2011 sampling event, several wells had reported hydrocarbon concentrations greatly in excess of the Water Board ESLs. However, hydrocarbon concentrations in wells can be significantly affected by the purging of accumulated hydrocarbons product, so large swings in concentration (both reductions and increases) could be seen due to this occurrence.

Gasoline was detected in MW-3, MW-7, MW-8, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-17, MW-E, and RW-1 above the ESL where groundwater is not a drinking water resource (210 micrograms per liter [µg/L]). Gasoline was also detected in MW-9 and MW-16, but at concentrations below the ESL. The highest concentration (49,000 µg/L) was observed in MW-13. This concentration is well below the 2,700,000 µg/L maximum concentration observed during the December 2008 event, and below both the 86,000 µg/L observed last quarter (March 2011) and the 1,700,000 µg/L observed the same time last year.

Figure 6 shows an isoconcentration contour map of TPHg concentrations in groundwater based on the September 2011 monitoring well analytical results. Figure 8 plots the change in diesel concentrations in the two downgradient wells (MW-5 and MW-6) from February 1991 (the terminus of the pump-and-treat system) to the September 2011 sampling event. Figure 9 plots the change in diesel concentrations in source area wells MW-11 and MW-12 from their first sampling event in December 2006 to the September 2011 sampling event. Figure 10 plots the change in crossgradient wells MW-18 and MW-3 from December 2006 to date.

Increases in gasoline concentrations compared to the previous March 2011 monitoring event were observed in wells MW-7, MW-10, MW-11, MW-14, MW-15, and MW-16; and decreases were observed in wells MW-3, MW-8, MW-9, MW-12, MW-13, MW-17, MW-18, MW-E, and RW-1. The concentrations in perimeter wells MW-4, MW-5, and MW-6 remained the same. When comparing the concentrations to the September 2010 sampling event, wells MW-7, MW-8, MW-10, MW-11, MW-12, MW-14, MW-15, MW-17, and MW-E had showed increases and perimeter well MW-5 remained the same. The remaining eight wells had decreases in the gasoline concentration.

Diesel was detected in all site wells above the ESL of 210 µg/L (where groundwater is not a drinking water resource). The highest concentration (18,000 µg/L) was observed in MW-8. Increased diesel concentrations compared to the previous March 2011 monitoring event were observed in wells MW-3, MW-7, MW-8, MW-11, MW-13, MW-14, MW-16, and MW-E; and decreases were observed in wells MW-4, MW-5, MW-9, MW-10, MW-12, MW-15, MW-17, MW-18 and RW-1. When comparing the concentrations to the September 2010 sampling event, wells MW-3, MW-6, MW-8, MW-9, MW-10, MW-14, MW-16, MW-18, and MW-E exhibited increases; wells MW-4, MW-5, MW-7, MW-11, MW-12, MW-13, MW-15, MW-17, and RW-18 showed

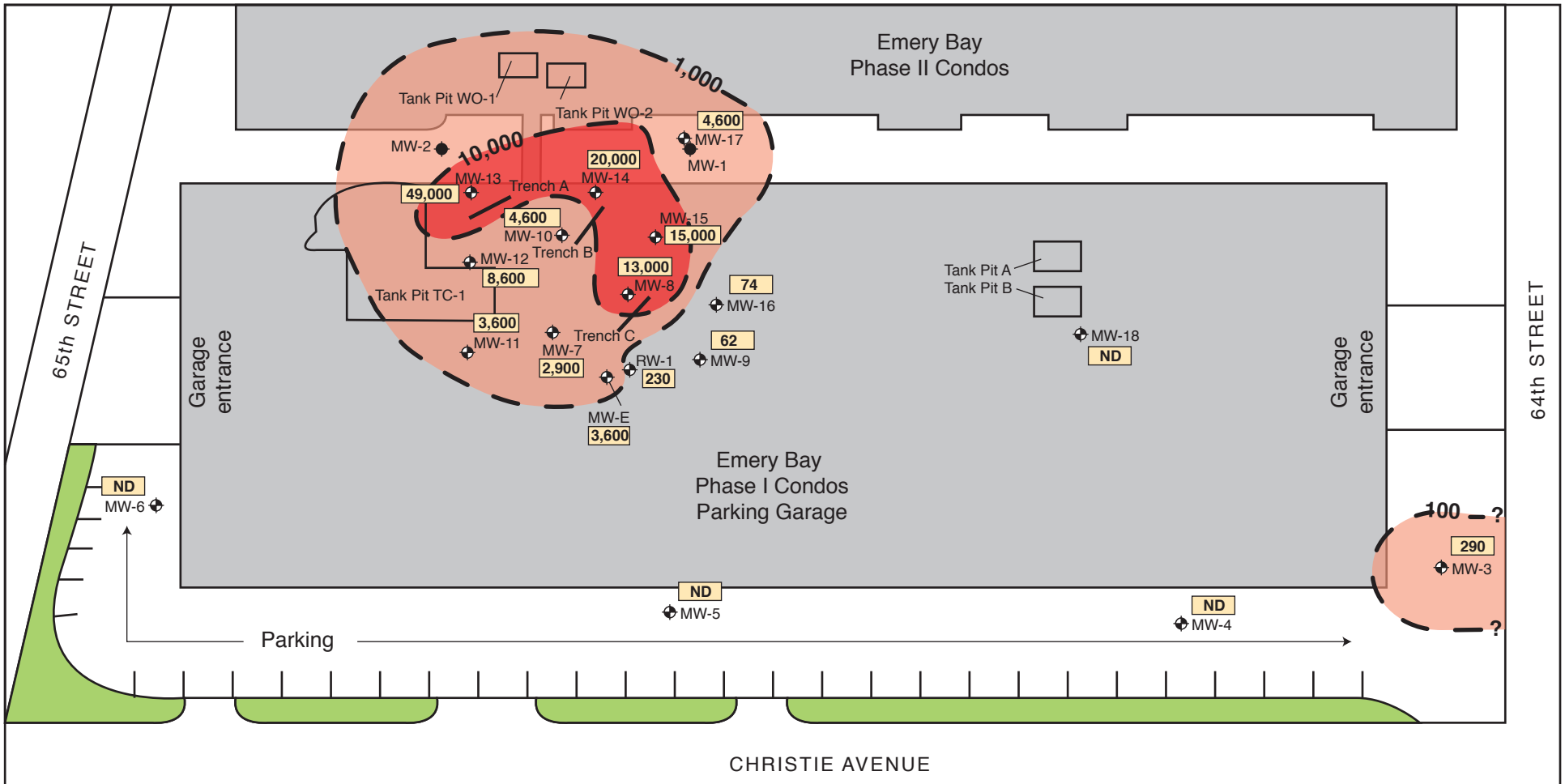
decreases. Figure 7 is an isoconcentration contour map of TPHd concentrations in groundwater based on the September 2011 monitoring well analytical results.

Benzene concentrations exceeded the benzene ESL of 46 µg/L (where groundwater is not a likely drinking water resource) in MW-7, MW-8, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-17, and MW-E. Benzene was also reported in MW-3, MW-6, MW-9, MW-16, MW-18, and RW-1 but at concentrations below the ESL.

Toluene was detected above the ESL of 130 µg/L in monitoring wells MW-8, MW-13, MW-14, and MW-E. Ethylbenzene was detected above the 43-µg/L ESL (where groundwater is not a drinking water resource) in monitoring wells MW-7, MW-8, MW-13, MW-14, MW-15, MW-17, and MW-E. Total xylene concentrations in monitoring wells MW-7, MW-8, MW-13, MW-14, and MW-E were above the 100-µg/L ESL where groundwater is not a drinking water resource. MTBE was detected below the ESL of 1,800 µg/L in MW-3.

Quality Control Sample Analytical Results

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



LEGEND

- Monitoring well
- Monitoring well (presumed abandoned)
- Trench location
- 84 — Total petroleum hydrocarbons as gasoline concentration in micrograms per liter (µg/L)
- Historical tank pit area
- Landscaping
- 100 — Gasoline isoconcentration contour

0 60

SCALE: 1/2" = 60 FEET

N

STELLAR ENVIRONMENTAL SOLUTIONS, INC
GEOSCIENCE & ENGINEERING CONSULTING

TOTAL PETROLEUM HYDROCARBON PLUME AS GASOLINE

6400 Christie Ave., Emeryville, CA

Figure 6

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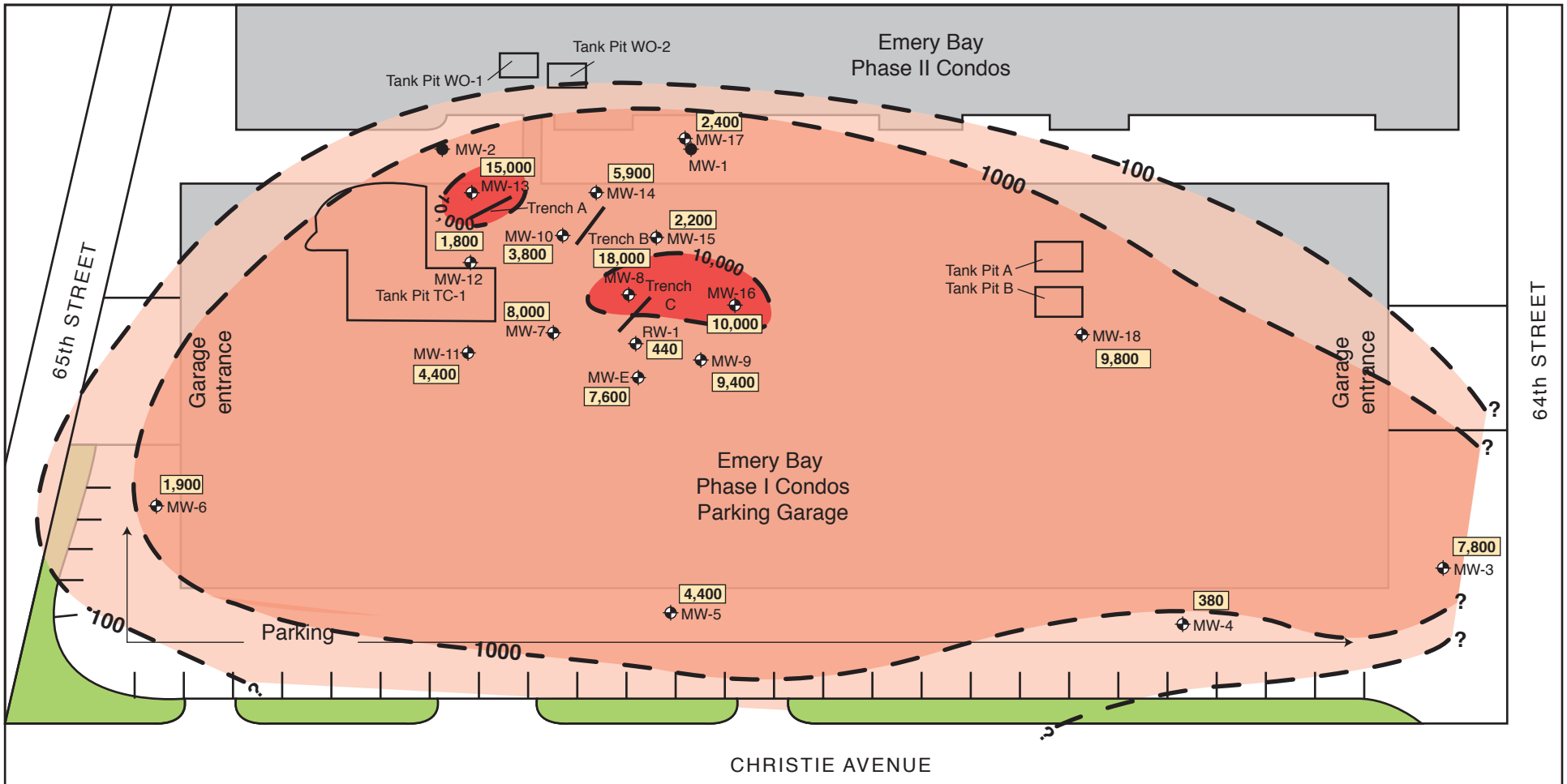
2007-65-54



LEGEND

- Monitoring well
- Monitoring well (presumed abandoned)
- Trench location
- 1,100 — Total petroleum hydrocarbons as diesel concentration in micrograms per liter (µg/L)
- Historical tank pit area
- Landscaping
- 100 — Diesel isoconcentration contour

0 60

SCALE: 1/2" = 60 FEET

N

STELLAR ENVIRONMENTAL SOLUTIONS, INC
GEOSCIENCE & ENGINEERING CONSULTING

TOTAL PETROLEUM HYDROCARBON PLUME AS DIESEL

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Figure 7

by: MJC | OCTOBER 2011

2007-65-55

Figure 8
Historical Groundwater Analytical Results
Total Petroleum Hydrocarbons as Diesel (TPHd)
Downgradient Wells MW-5 and MW-6
February 1991 - September 2011

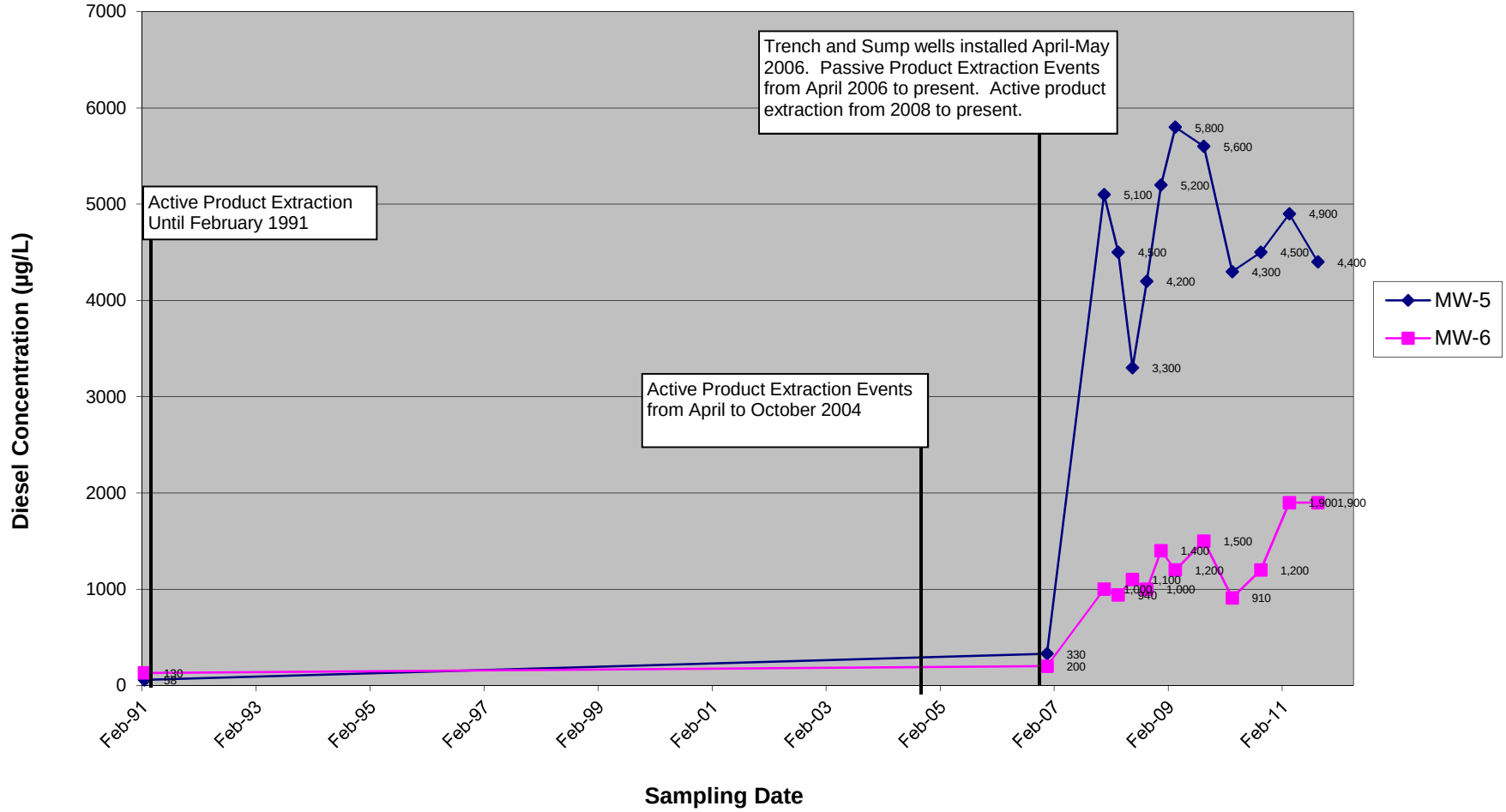


Figure 9
Historical Groundwater Analytical Results
Total Petroleum Hydrocarbons as Diesel (TPHd)
Source Wells MW-11 and MW-12
December 2006 - September 2011

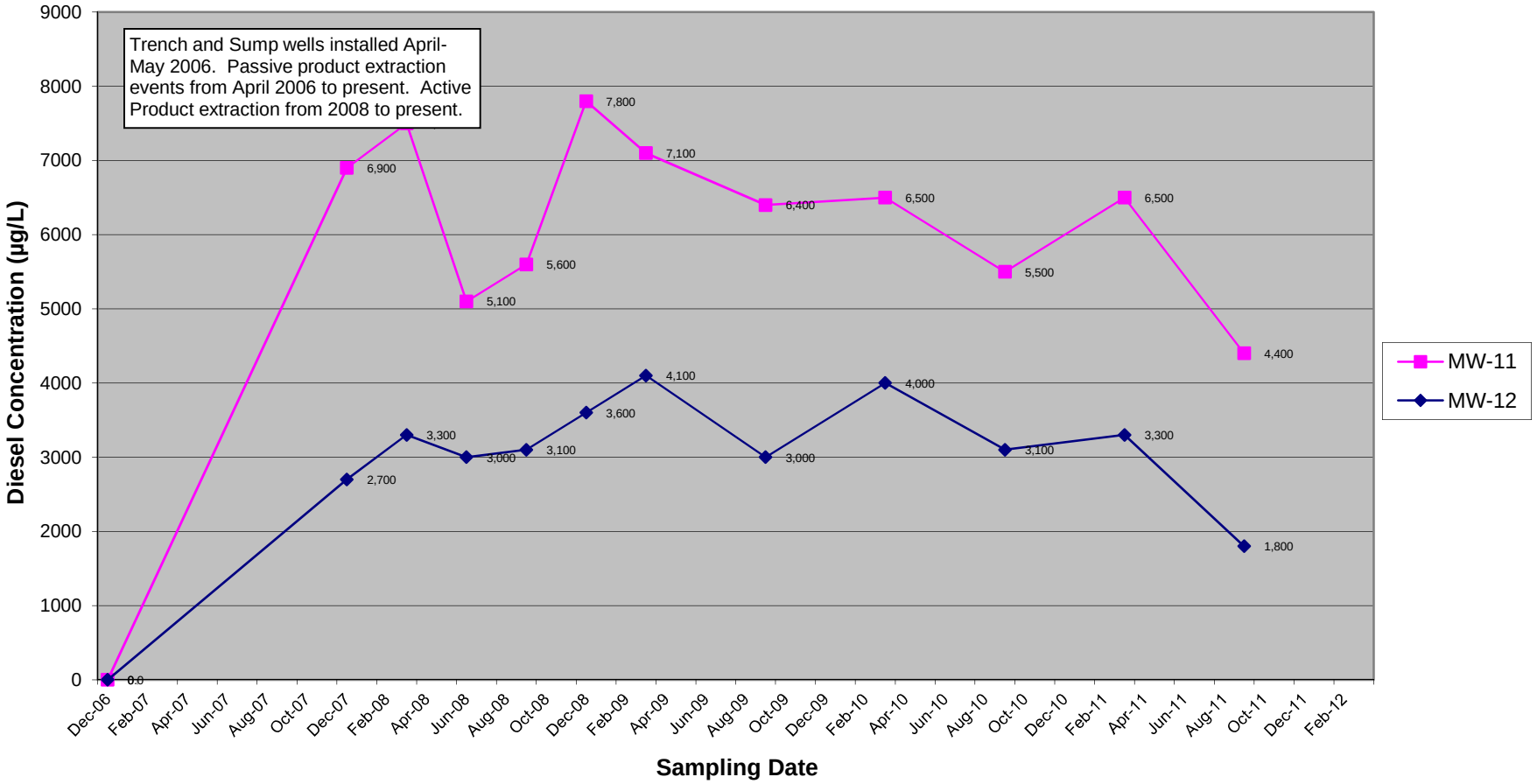
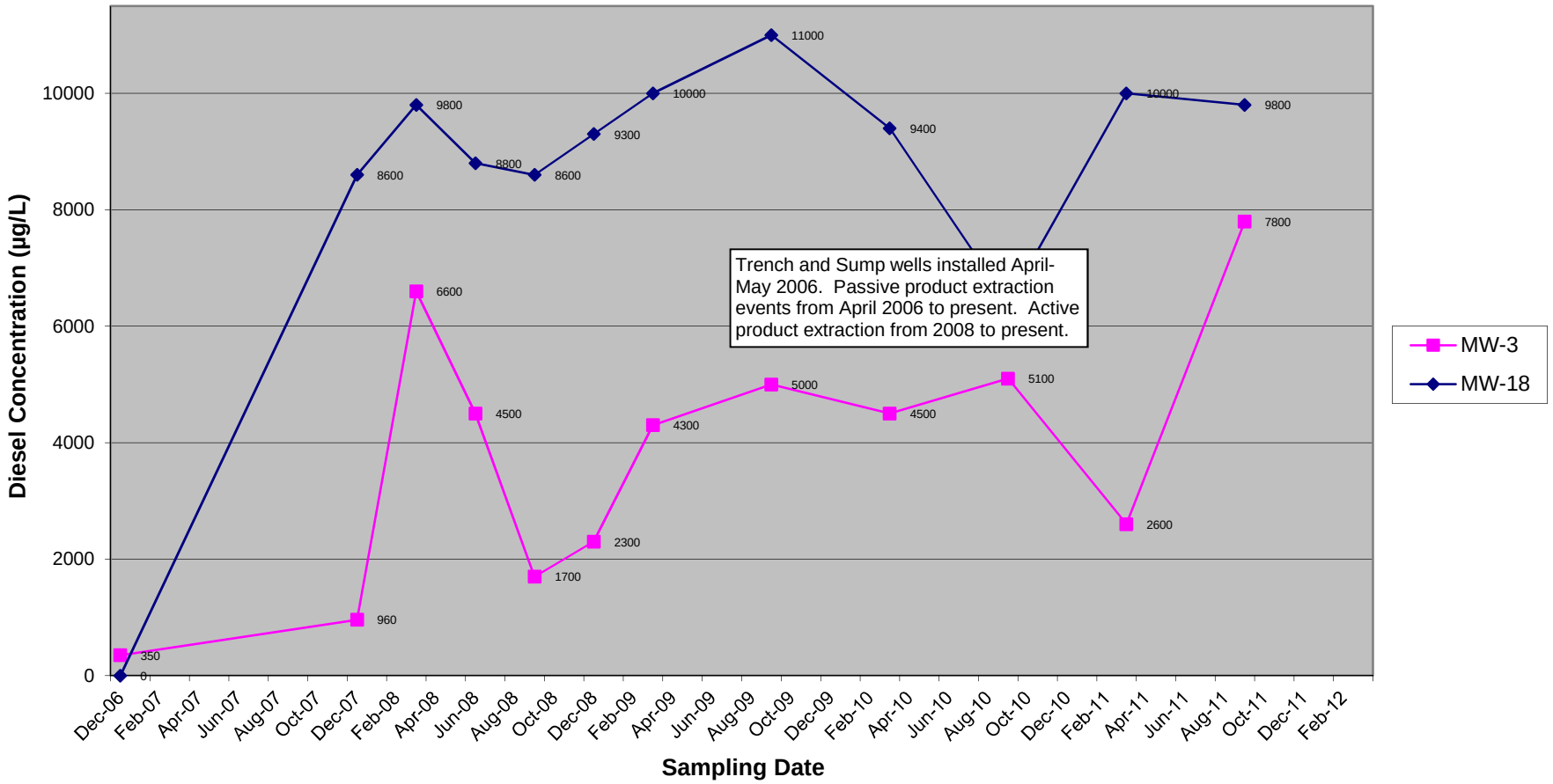


Figure 10
Historical Groundwater Analytical Results
Total Petroleum Hydrocarbons as Diesel (TPHd)
Crossgradient Well MW-3 and MW-18
December 2006 - September 2011



5.0 FREE-PHASE HYDROCARBON PRODUCT REMEDIATION SYSTEM

This section describes the extraction of the historical free product in the Emery Bay Phase I Condo parking garage, the construction details of the current LNAPL remediation system located on the northeastern portion of the garage, and the most recent product removal activities conducted on March 2011 and September 27 and 28, 2011 (immediately prior to the sampling event).. Tables 3 and 4 summarize the product removed during the passive and active product removal events, respectively. Appendix E summarizes historical product removal.

LNAPL REMEDIATION SYSTEM CONSTRUCTION

In an attempt to maximize free product removal, PES constructed three trenches, each containing three sump wells, in the northeastern area of the Emery Bay Phase I Condo parking garage. Historically, this area has had the highest concentrations of contamination and accumulation of free product. The trenches (TA, TB, and TC) extend to depths of approximately 12.5 to 13 feet bgs, while the collection sumps (TA-W, TA-M, TA-E, TB-W, TB-M, TB-E, TC-W, TC-M, and TC-E) extend to approximately 11 to 13 feet bgs. The sumps were constructed using 10-inch-diameter schedule 40 polyvinyl chloride (PVC) casing. Blank casing was used from approximately 0.5 feet bgs to between 6 and 8 feet bgs. Slotted 0.06-inch PVC was used from between 6 and 8 feet bgs to 6 inches from the total depth of the trench. The trenches were then backfilled with high-porosity, high-permeability gravel designed to promote LNAPL migration (PES, 2007). Passive skimmers, manufactured by QED Environmental Systems (of Oakland, California) were then placed in each of the sumps in Trench A and in one of the sumps (TC-E) in Trench C.

The skimmers operate by floating on the surface of the water. Water and free product collect in a filtration reservoir, which allows water to pass through. A tube connected to the reservoir then filters the collected free product into a collection reservoir located below the water surface. The reservoir can be emptied by opening a valve located on the bottom of the cylindrical shaped reservoir. Each of these skimmers is attached to the sump lid by a rope, and can be removed and transferred to another sump as needed.

HISTORICAL FREE PRODUCT EXTRACTION

As mentioned under the "Previous Investigations" subsection in Section 1.0, in approximately 1986, contaminated soil and groundwater were discovered during the removal of 12 UFSTs from the Emery Bay Phase I and Phase II parcels. To dewater the excavation during the Phase I and Phase II Condo construction, a groundwater extraction and remediation system was installed by GTI in 1988. Approximately 1 million gallons of water yielding 100 gallons of hydrocarbon product was removed from RW-1 during its operation (PES, 2007). However, corrosion and other mechanical problems caused the system to fail in 1991, and it was decommissioned in 1994. In February 2008, Stellar Environmental removed all of the old parts of the system from the well vault.

In 2004, PES began manual extraction on RW-1, and was reported to have removed approximately 48 gallons of LNAPL (PES, 2004a) in one day—although it appears to be clear by the better defined recovery in 2008 and 2009 that the volume of free product indicated to have been recovered at that well appears unrealistically high, most likely reflecting a mixture of hydrocarbon product mixed with water. To attempt to accelerate free product removal, PES constructed a new LNAPL hydrocarbon remediation system (described below) between April and May 2004 (PES, 2007). Several extraction events were conducted by PES from May 2004 through March 2007; the extraction events yielded a total of approximately 51 gallons of LNAPL. No extraction events were conducted by PES in 2005; approximately 50 gallons of hydrocarbons was removed in 2006; and approximately 0.6 gallon of hydrocarbons was removed by PES between January and November 2007. In November and December 2007, after Stellar Environmental was retained for the project, the skimmer system only yielded 2.82 gallons. Figure 11 graphs the comparison of free product extraction on a yearly basis.

No historical product extraction reports were provided to Stellar Environmental by the previous owner or by PES. Therefore, there is little to no information on how active product extraction occurred during 2004 and 2006. Based on better defined recovery in 2008 through 2011 the volume of free product indicated to have been recovered by the system during 2004 and 2006 appears unrealistically high, suggesting again that free-phase project mixed with water was reported as free-phase product recovery.

ACTIVE AND PASSIVE PRODUCT REMOVAL EVENTS

Historical yield from the trench recovery system has been unproductive, with the 1-liter passive skimmer collection reservoirs not filling up completely, or filling up with water rather than product. The highest hydrocarbon product yield has occurred from active pumping on recovery well RW-1 or at various other wells. Table 3 shows the allocation of free product removed from the collection skimmers in Trenches A and C. Table 4 shows the total amount of product actively removed by pumping based on the total amount of groundwater/product removed in September 2011.

Stellar Environmental conducted both passive and active product removal events during the 2 days prior (September 27 and 28) to the groundwater sampling event (September 29 and 30) to determine the recharge rate of free product in wells. A total of approximately 1,015 gallons of groundwater yielding approximately 2.50 gallons (Table 4) of free product were removed during the September 2011 active product removal event, in addition to 0.50 gallons (Table 3) removed passively from the skimmers.

Table 3
Passive Trench Product Extraction from Skimmer
September 27 and 28, 2011

Trench ID	Number of Skimmers in Well	Total Product Removed (gallons)	
		March 28, 2011	September 27, 2011
TA-E	2	0.06	NM
TA-M	2	0.06	0.25
TA-W	2	0.02	0.25
TB-E	0	NM	NM
TB-M	0	NM	NM
TB-W	0	NM	NM
TC-E	1	NM	NM
TC-M	0	NM	NM
TC-W	0	NM	NM
Total Product Removed		**0.14**	**0.50**

Notes:
NM = Not measured. No skimmer was located in the well, or no product was present.

Table 4
Active Product Extraction – September 27 and 28, 2011

Well	Total Gallons of Product Removed	Well	Total Gallons of Product Removed
MW-3	0.2	MW-17	0
MW-4	0	MW-18	0
MW-5	0	MW-E	0
MW-6	0	RW-1	0.5
MW-7	0	TA-E	0
MW-8	0.3	TA-M	0.45
MW-9	0	TA-W	0.25
MW-10	0	TB-E	0.1
MW-11	0	TB-M	0.1
MW-12	0	TB-W	0.1
MW-13	0.2	TC-E	0
MW-14	0	TC-M	0.1
MW-15	0	TC-W	0.1
MW-16	0.1		
		Total	**2.50**

Notes:

NP = not purged

Product removal estimates are based on the total amount of free product measured in the purge tank (2.50 gallons) per total amount of groundwater purged (1,015 gallons), which yields 0.002 gallon of product per 1 gallon of purge water

The active removal activities occurred as follows:

- On September 27, 2011, Stellar Environmental removed a total of 0.25 gallon from the skimmers in trench well TA-W and then 100 gallons of groundwater actively. The skimmers in trench well TA-M contained 0.25 gallons. Stellar Environmental removed 100 gallons actively. Both skimmers in trench well TA-E were filled with only water. Fifty gallons were removed actively from this well. Stellar Environmental removed 50 gallons actively from each of the trench wells TB-W, TB-M and TB-E. There are no skimmers in these trenches. The only skimmer in the TC trench wells is in TC-E; this was filled with only water. Stellar Environmental removed 50 gallons actively from each of the trench wells TC-E, TC-W, and TC-M. Stellar Environmental removed 20 gallons from MW-8, 0.5 gallon from MW-7, 43 gallon from MW-11, 1 gallon from MW-9, 2 gallons from MW-16, 6 gallon from MW-E, and 20 gallons from MW-17.

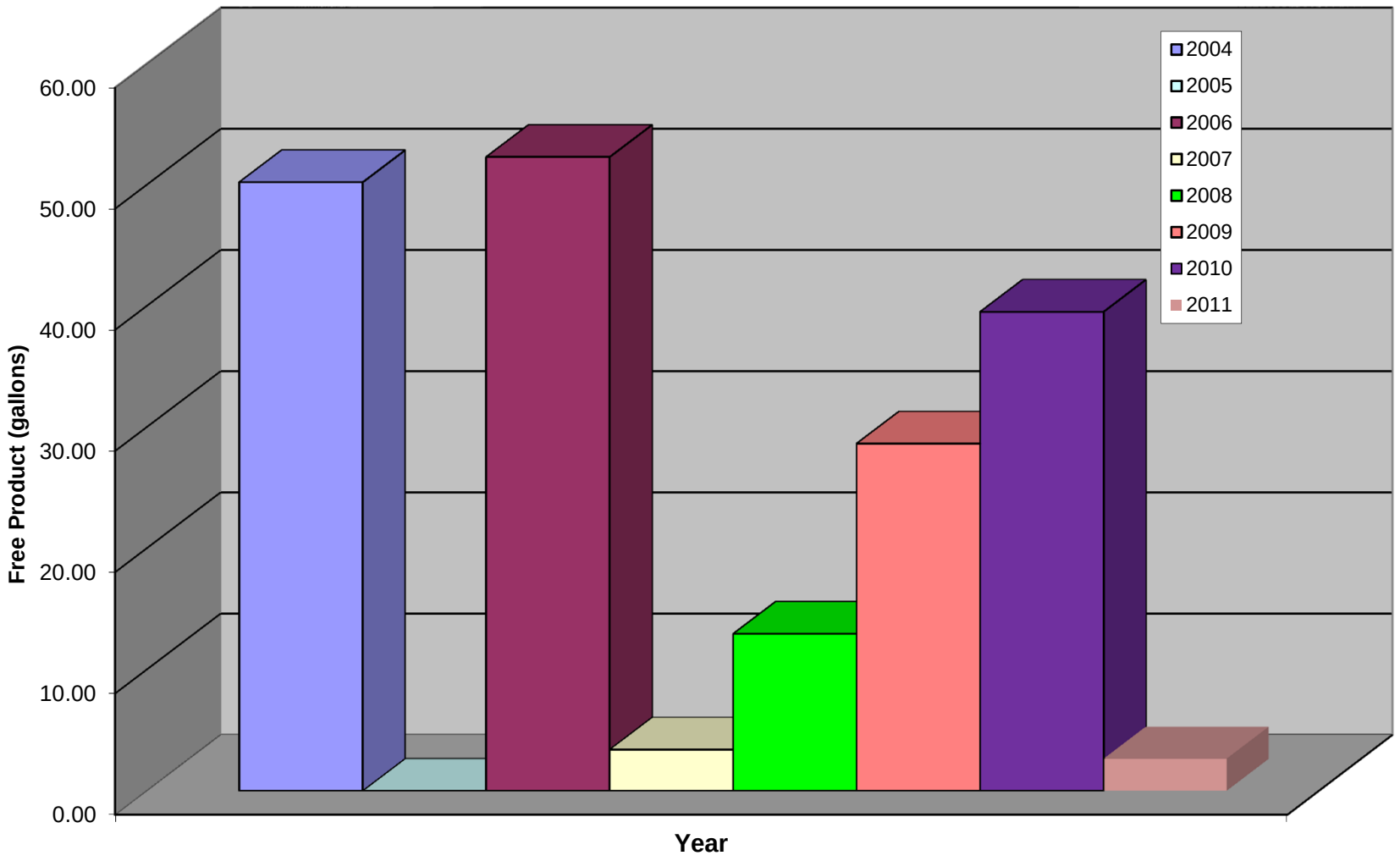
- On September 28, 2011 Stellar Environmental removed 1.3 gallons from well MW-13, 20 gallons from MW-12, 20 gallons from MW-10, 5 gallons from MW-14, 20 gallons from MW-15, 80 gallons from trench well TA-M, 20 gallons from MW-6, 10 gallons from MW-5, 10 gallons from MW-4, 10 gallons from MW-3, 200 gallons from RW-1, and, 15 gallons from MW-8.

All of the purge water and free product extracted during these events was containerized onsite in the 1,100-gallon AST located in the northeastern-gated area of the garage. On October 14, 2011, Evergreen Oil vacuumed and transported the water to its recycling facility in Newark, California. The waste manifest is included in Appendix F. A table containing the amount of product removed per well to date is included in Appendix E.

DISCUSSION

As mentioned under the "Historical Free Product Extraction" subsection of this chapter, no product extraction was conducted by PES in 2005. "Product" removal in 2006 was reported at a significant 52 gallons by PES; however, it was not achieved through collection from the trench hydrocarbon skimmers, but rather through active pumping; in addition, the "product" referred to by PES appears to actually have been a mixture of petroleum product and water. The PES report provides no documentation (e.g., manifests) of the removal of actual recovered petroleum product. The recovery by PES from the start of 2007 through October 2007 (when Stellar Environmental assumed environmental consulting activities) was limited to 0.6 gallon collected from the skimmers.

Figure 11
Total Free Product Extracted Per Year
6400 Christie Avenue, Emeryville, CA



In addition, there had been no removal of free product from well RW-1 since 2004, at which time approximately 50 gallons of free-floating product was indicated to have been removed by active pumping. The majority of this petroleum product apparently was removed by active pumping and removal activities rather than from the trench well skimmers. Much of this "product"is likely to have been a mixture of water and hydrocarbons. Figure 11 is bar graph showing the total amount of product removed per date.

Thus, we conclude that the trench recovery system on its own has never been particularly effective. In 2007, passive extraction of free product through trench well skimmers removed only 3.41 gallons. Stellar Environmental removed approximately 5.65 gallons of free product from these passive skimmers during the 2008 removal events and 3.36 gallons were removed in 2009. Approximately 12.95 gallons were removed by active pumping on wells during 2008. Approximately 28.65 gallons of free product were removed by active pumping on wells in 2009. Approximately 39.52 gallons of free product were removed by active pumping on wells in 2010. Approximately 2.65 gallons of free product were removed by active pumping on wells in 2011.

As demonstrated by the analytical data, active pumping on certain wells has generally reduced gasoline concentrations; however, wells not included in the pumping schedule showed a lesser or no decrease. Diesel concentrations seem to be less affected by active pumping, even in wells that were included in the pumping schedule, such as RW-1. More active remediation will likely be required on this site to reduce the concentrations to levels acceptable to the regulatory community and to achieve eventual regulatory closure. However, with the exception of the current program of LNAPL removal from the skimmers and wells, no additional active remedies are proposed until a more cost-effective and productive method of removal is found.

6.0 SUMMARY, CONCLUSIONS, AND PROPOSED ACTIONS

FINDINGS AND CONCLUSIONS

- The subject property parcel was developed as early as 1958 with the Motor Freight Station, associated with Delta Lines, Inc. The Delta Lines complex contained an "Oil and Gas" building, located at the site of the present-day Emery Bay Phase I Condo complex and parking garage. In 1986, the building was demolished, and 12 UFSTs containing diesel and gasoline were removed from the Emery Bay Phase I and Phase II Condo complex parcels. Soil and groundwater contamination was discovered.
- In response to the contamination, a LNAPL groundwater pump-and-treat system was installed in 1989, but failed in 1991. Active pumping of free product began again in 2004, and a product extraction system consisting of passive product removal was installed in 2006. Groundwater monitoring events have been sporadically conducted since 1988; quarterly groundwater monitoring events were conducted for the first time in 2008. The quarterly sampling was reduced to semiannual frequency in 2009.
- The site currently contains 17 monitoring wells, 1 recovery well, and 9 product extraction trench wells. This is the 16th sampling event conducted since 1988.
- Site geological conditions consist of a combination of fill and soft bay sediment to between 15 and 20 feet bgs, covered by approximately 1 to 2½ feet of pavement and imported fill. This is underlain by approximately 20 feet of firm soil consisting of primarily dense silty sand with intermittent layers of silty and sandy clay. Stiff to very stiff clay extends from a depth of approximately 40 feet to approximately 102 feet.
- The groundwater direction during this monitoring event was found to range from the south (on the northern portion of the site) to the west (on the central portion of the site) to the northwest (on the southern portion of the site).
- Groundwater elevations during the September 2011 event ranged from 6.17 to 9.16 feet above mean sea level. The average groundwater gradient was 0.001 foot/foot.
- Current contaminants of concern include TPHg, TPHd, and BTEX. Current groundwater concentrations exceeded the ESLs for these contaminants.
- Gasoline was detected in MW-3, MW-7, MW-8, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-17, MW-E, and RW-1 above the ESL where groundwater <u>is not</u> a

drinking water resource (210 micrograms per liter [µg/L]). Gasoline was also detected in MW-9 and MW-16, but at concentrations below the ESL. The highest concentration (49,000 µg/L) was observed in MW-13. This concentration is well below the 2,700,000 µg/L maximum concentration observed during the December 2008 event, and also below both the 86,000 µg/L observed last quarter (March 2010) and the 1,700,000 µg/L observed the same time last year.

- Increases in gasoline concentrations compared to the previous March 2011 monitoring event were observed in wells MW-7, MW-10, MW-11, MW-14, MW-15, and MW-16; and decreases were observed in wells MW-3, MW-8, MW-9, MW-12, MW-13, MW-17, MW-18, MW-E, and RW-1. The concentrations in perimeter wells MW-4, MW-5, and MW-6 remained the same. When comparing the concentrations to the September 2010 sampling event, wells MW-7, MW-8, MW-10, MW-11, MW-12, MW-14, MW-15, MW-17, and MW-E had showed increases and perimeter well MW-5 remained the same. The remaining eight wells had decreases in the gasoline concentration.
- Diesel was detected in all site wells above the ESL of 210 µg/L (where groundwater is not a drinking water resource). The highest concentration (18,000 µg/L) was observed in MW-8. Increased diesel concentrations compared to the previous March 2011 monitoring event were observed in wells MW-3, MW-7, MW-8, MW-11, MW-13, MW-14, MW-16, and MW-E; and decreases were observed in wells MW-4, MW-5, MW-9, MW-10, MW-12, MW-15, MW-17, MW-18 and RW-1. When comparing the concentrations to the September 2010 sampling event, wells MW-3, MW-6, MW-8, MW-9, MW-10, MW-14, MW-16, MW-18, and MW-E exhibited increases; wells MW-4, MW-5, MW-7, MW-11, MW-12, MW-13, MW-15, MW-17, and RW-18 showed decreases.
- Benzene concentrations exceeded the benzene ESL of 46 µg/L (where groundwater is not a likely drinking water resource) in MW-7, MW-8, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-17, and MW-E. Benzene was also reported in MW-3, MW-6, MW-9, MW-16, MW-18, and RW-1 but at concentrations below the ESL.
- Toluene was detected above the ESL of 130 µg/L in monitoring wells MW-8, MW-13, MW-14, and MW-E.
- Ethylbenzene was detected above the 43-µg/L ESL (where groundwater is not a drinking water resource) in monitoring wells MW-7, MW-8, MW-13, MW-14, MW-15, MW-17, and MW-E.
- Total xylene concentrations in monitoring wells MW-7, MW-8, MW-13, MW-14, and MW-E were above the 100-µg/L ESL where groundwater is not a drinking water resource.
- MTBE was detected below the ESL of 1,800 µg/L in MW-3.

- Stellar Environmental conducted passive skimmer product removal on the trench wells during the March and September 2011 removal events. A total of approximately 0.64 gallons were removed from trench wells TA-E, TA-M, TA-W, and TC-E.
- A total of approximately 1,015 gallons of groundwater yielding approximately 2.50 gallons (Table 4) of free product were removed during the September 2011 active product removal event, in addition to 0.50 gallons (Table 3) removed passively from the skimmers.
- The trench recovery system, where free product is designed to collect in 1-liter skimmers, is effective in removing small amounts of free product, but is not effective in decreasing the size of the plume overall. Active pumping at various wells appears to have some effect in lowering gasoline concentrations; however, it does not appear to be affecting the concentrations of diesel (which appear to be steadily increasing).

RECOMMENDATIONS

- Groundwater monitoring should be continued on a semiannual basis to document plume stability and manage contaminant concentrations over time.
- Both active and passive free product removal events should be continued to ascertain their effectiveness in managing the plume on site and reducing the plume size over time. Active product removal is being conducted on a semiannual basis immediately prior to the sampling event. Passive product removal from the skimmers is being conducted on a quarterly basis.
- Emergent best available technologies shall continue to be evaluated, as a new technology might cost-effectively remediate the site to move it toward full regulatory closure.
- Electronic uploads to ACEH's ftp system and the State Water Board's GeoTracker system should be continued as required.

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8.0 LIMITATIONS

This report has been prepared for the exclusive use of Emerybay Commercial Association, their authorized representatives and assigns, and the regulatory agencies. No reliance on this report shall be made by anyone other than those for whom it was prepared.

The findings and conclusions presented in this report are based on a review of previous investigators' findings at the site, as well as site investigations conducted by SES in 2007, 2008, and 2009. This report has been prepared in accordance with generally accepted methodologies and standards of practice. The SES personnel who performed this limited remedial investigation are qualified to perform such investigations and have accurately reported the information available, but cannot attest to the validity of that information. No warranty, expressed or implied, is made as to the findings, conclusions, and recommendations included in the report.

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

APPENDIX A

Historical Groundwater Well Analytical Results

TABLE A
Historical Groundwater Monitoring Well Groundwater Analytical Results
Petroleum and Aromatic Hydrocarbons (µg/L)
6400 Christie Avenue, Emeryville, California

MW-1									
Sampling Event No.	**Date Sampled**	**TEH-d**	**TVH-g**	**TEH-mo**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
1	Dec-88	380	17,000	NA	8,600	940	250	570	NA
2	May-89	130	24,000	NA	16,000	2,100	300	1,200	NA
3	Feb-91	<10	22,000	NA	6,800	3,500	410	2,000	NA
Monitoring well abandoned - date unclear									

MW-2									
Sampling Event No.	**Date Sampled**	**TEH-d**	**TVH-g**	**TEH-mo**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
1	Dec-88	72	22	NA	<0.5	<0.5	<0.5	<0.5	NA
2	May-89	40	18	NA	<0.5	<0.5	<0.5	<0.5	NA
3	Feb-91	83	<10	NA	<0.3	<0.3	<0.3	<0.6	NA
Monitoring well abandoned - date unclear									

MW-3									
Sampling Event No.	**Date Sampled**	**TEH-d**	**TVH-g**	**TEH-mo**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
1	Dec-88	<10	4,200	NA	77	1,400	140	560	NA
2	May-89	110	1,800	NA	64	250	61	110	NA
3	Feb-91	NS	NS	NS	NS	NS	NS	NS	NS
4	Mar-04	3,400	440	3,900	<0.5	<0.5	1.5	<1.0	9.7
5	Dec-06	350	280	230	<0.5	<0.5	<0.5	<0.5	2.0
6	Dec-07	960	150	NA	0.54	0.54	<0.5	<0.5	<2.0
7	Mar-08	6,600	450	NA	<0.5	<0.5	1.8	2.0	4.3
8	Jun-08	4,500	440	NA	<0.5	<0.5	4.0	2.0	9.5
9	Sep-08	1,700	280	NA	<0.5	<0.5	1.0	<0.5	<2.0
10	Dec-08	2,300	240	NA	<0.5	<0.5	1.1	<0.5	<2.0
11	Mar-09	4,300	260	NA	1.3	<0.5	1.8	0.5	2.9
12	Sep-09	5,000	300	NA	2.5	<0.5	<0.5	<0.5	<2.0
13	Mar-10	4,500	230	670	1.7	<0.5	1.0	<0.5	2.7
14	Sep-10	5,100	470	NA	<0.5	0.64	<0.5	1.6	2.9
15	Mar-11	2,600	540	NA	47	28	7.6	11.8	17
16	Sep-11	7,800	290	NA	13	1.5	<0.50	2.0	9.5

MW-4									
Sampling Event No.	**Date Sampled**	**TEH-d**	**TVH-g**	**TEH-mo**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
1	Dec-88	<10	100	NA	2.0	1.0	<0.5	2.0	NA
2	May-89	60	18	NA	1.0	<0.5	<0.5	<0.5	NA
3	Feb-91	<10	<10	NA	<0.3	<0.3	<0.3	<0.6	NA
4	Mar-04	NS	NS	NS	NS	NS	NS	NS	NS
5	Dec-06	<50	50	<200	<0.5	<0.5	<0.5	<0.5	<1.0
6	Dec-07	710	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0
7	Mar-08	680	57	NA	<0.5	<0.5	<0.5	<0.5	<2.0
8	Jun-08	620	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0
9	Sep-08	440	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0
10	Dec-08	730	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0
11	Mar-09	940	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0
12	Sep-09	660	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0
13	Mar-10	680	<50	380	<0.5	<0.5	<0.5	<0.5	<2.0
14	Sep-10	770	71	NA	<0.5	<0.5	<0.5	<0.5	<2.0
15	Mar-11	590	<50	NA	<0.5	<0.5	<0.5	<0.5	2.4
16	Sep-11	380	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0

MW-5									
Sampling Event No.	**Date Sampled**	**TEH-d**	**TVH-g**	**TEH-mo**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
1	Dec-88	530	890	NA	<1.0	<1.0	1.0	3.0	NA
2	May-89	90	5.0	NA	1.0	<0.5	<0.5	<0.5	NA
3	Feb-91	58	<10	NA	0.6	<0.3	<0.3	<0.6	NA
4	Mar-04	NS	NS	NS	NS	NS	NS	NS	NS
5	Dec-06	330	<25	<200	0.6	<0.5	<0.5	<0.5	<1.0
6	Dec-07	5,100	1.3	NA	1.3	<0.5	<0.5	1.23	<2.0
7	Mar-08	4,500	<50	NA	0.53	<0.5	<0.5	<0.5	<2.0
8	Jun-08	3,300	<50	NA	0.64	<0.5	<0.5	<0.5	<2.0
9	Sep-08	4,200	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0
10	Dec-08	5,200	<50	NA	0.61	<0.5	<0.5	<0.5	<2.0
11	Mar-09	5,800	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0
12	Sep-09	5,600	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0
13	Mar-10	4,300	<50	5,400	4.9	<0.5	<0.5	<0.5	<2.0
14	Sep-10	4,500	<50	NA	0.58	<0.5	<0.5	<0.5	2.0
15	Mar-11	4,900	<50	NA	1.3	<0.5	<0.5	<0.5	5.9
16	Sep-11	4,400	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0

MW-6									
Sampling Event No.	**Date Sampled**	**TEH-d**	**TVH-g**	**TEH-mo**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
1	Dec-88	<10	52	NA	1.0	<0.5	<0.5	<0.5	NA
2	May-89	140	31	NA	1.0	<0.5	<0.5	<0.5	NA
3	Feb-91	130	40	NA	0.8	<0.3	<0.3	<0.6	NA
4	Mar-04	NS	NS	NS	NS	NS	NS	NS	NS
5	Dec-06	200	43	<200	1.1	<0.5	<0.5	<0.5	<1.0
6	Dec-07	1,000	<50	NA	0.98	0.81	<0.5	0.5	<2.0
7	Mar-08	940	<50	NA	0.87	1.0	<0.5	<0.5	<2.0
8	Jun-08	1,100	56	NA	0.92	<0.5	<0.5	<0.5	2.9
9	Sep-08	1,000	<50	NA	0.91	<0.5	<0.5	<0.5	<2.0
10	Dec-08	1,400	<50	NA	1	<0.5	<0.5	<0.5	<2.0
11	Mar-09	1,200	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0
12	Sep-09	1,500	<50	NA	0.79	<0.5	<0.5	<0.5	<2.0
13	Mar-10	910	<50	1,500	1.9	<0.5	<0.5	<0.5	<2.0
14	Sep-10	1,200	72	NA	1.0	<0.5	<0.5	<0.5	<2.0
15	Mar-11	1,900	<50	NA	1.3	<0.5	<0.5	<0.5	3.9
16	Sep-11	1,900	<50	NA	1.8	<0.5	<0.5	<0.5	<2.0

MW-7									
Sampling Event No.	**Date Sampled**	**TEH-d**	**TVH-g**	**TEH-mo**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
Installed in March 2004									
1	Mar-04	1,600	490	1,900	240	100	14	56	<2.5
2	Dec-06	420	<25	470	<0.5	<0.5	<0.5	<0.5	<1.0
3	Dec-07	6,300	3,100	NA	640	28	48	231	<10
4	Mar-08	7,000	360	NA	140	5.8	11	58	<2.0
5	Jun-08	5,400	1,700	NA	480	15	28	139	<2.0
6	Sep-08	9,400	1,200	NA	330	12	21	88	<2.0
7	Dec-08	8,700	2,200	NA	640	100	43	185	<4.0
8	Mar-09	8,700	1,700	NA	510	33	47	220	<10
9	Sep-09	6,800	620	NA	310	9.5	27	117	<10
10	Mar-10	8,700	330	6,800	68	2.2	10	31.6	<2.0
11	Sep-10	10,000	1,300	NA	580	54	35	163	<20
12	Mar-11	8,100	630	NA	160	5.3	14	65	<2.0
13	Sep-11	8,000	2,900	NA	900	46	51	284	<2.0

MW-8									
Sampling Event No.	**Date Sampled**	**TEH-d**	**TVH-g**	**TEH-mo**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
Installed in March 2004									
1	Mar-04	140,000	51,000	56,000	19,000	720	2,400	3,300	<50
2	Dec-06	2,400	29,000	<380	13,000	<100	640	500	<200
3	Dec-07	5,900	30,000	NA	11,000	180	650	561	<100
4	Mar-08	21,000	47,000	NA	10,000	260	1,200	458	<2.0
5	Jun-08	7,300	27,000	NA	9,300	140	790	290	<2.0
6	Sep-08	13,000	35,000	NA	11,000	190	900	402	<100
7	Dec-08	7,600	19,000	NA	6,800	110	380	236	<50
8	Mar-09	10,000	22,000	NA	9,400	200	640	358	<50
9	Sep-09	9,200	26,000	NA	8,600	100	630	230	170
10	Mar-10	11,000	19,000	1,900	6,200	120	830	149	<2.0
11	Sep-10	7,600	7,800	NA	8,800	110	620	212	<100
12	Mar-11	8,800	19,000	NA	8,100	130	890	149	<2.0
13	Sep-11	18,000	13,000	NA	8,000	140	860	178	<2.0

MW-9									
Sampling Event No.	**Date Sampled**	**TEH-d**	**TVH-g**	**TEH-mo**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
Installed in March 2004									
1	Mar-04	1,300	95	1,500	4.7	0.68	<0.5	<1.0	<0.5
2	Dec-06	<50	92	<200	2.8	<0.5	<0.5	<0.5	<1.0
3	Dec-07	8,400	84	NA	4.7	1.1	<0.5	1.9	<2.0
4	Mar-08	8,600	100	NA	4.1	1.1	<0.5	<0.5	2.0
5	Jun-08	5,900	98	NA	4.9	<0.5	<0.5	<0.5	2.3
6	Sep-08	9,300	130	NA	4.6	<0.5	<0.5	<0.5	<50
7	Dec-08	7,800	95	NA	4.0	0.54	<0.5	<0.5	<2.0
8	Mar-09	9,400	130	NA	4.6	<0.5	<0.5	<0.5	<2.0
9	Sep-09	8,200	98	NA	4.0	<0.5	<0.5	<0.5	<2.0
10	Mar-10	6,500	140	4,000	5.2	<0.5	<0.5	<0.5	<2.0
11	Sep-10	6,400	170	NA	4.8	0.77	<0.5	<0.5	<2.0
12	Mar-11	11,000	150	NA	5.9	0.61	<0.5	0.5	<2.0
13	Sep-11	9,400	62	NA	4.2	<0.5	<0.5	<0.5	<2.0

MW-10									
Sampling Event No.	**Date Sampled**	**TEH-d**	**TVH-g**	**TEH-mo**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
Installed in March 2004									
1	Mar-04	840,000	14,000	<100,000	4,000	77	200	120	<50
2	Dec-06	19,000	12,000	<4,000	4,600	42	90	52	<50
3	Dec-07	4,700	13,000	NA	5,300	96	42	86	<50
4	Mar-08	280,000	10,000	NA	2,600	50	37	58.7	22
5	Jun-08	4,800	10,000	NA	3,800	62	24	61	<2.0
6	Sep-08	4,700	1,200	NA	350	11	3.4	11	<2.0
7	Dec-08	3,200	2,900	NA	550	45	15	56	<20
8	Mar-09	6,200	8,200	NA	890	46	78	130	<20
9	Sep-09	6,100	1,400	NA	1,200	35	19	31	<20
10	Mar-10	3,900	7,800	960	1,200	46	34	56	54
11	Sep-10	3,500	3,400	NA	1,500	47	18	44	<40
12	Mar-11	4,500	3,700	NA	1,200	81	25	46.4	<2.0
13	Sep-11	3,800	4,600	NA	720	49	26	52.4	<2.0

MW-11									
Sampling Event No.	**Date Sampled**	**TEH-d**	**TVH-g**	**TEH-mo**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
Installed in May 2004									
1	Dec-06	<50	920	<200	26	4.5	1.8	5.4	<1.0
2	Dec-07	6,900	1,500	NA	320	44	53	140	<2.0
3	Mar-08	7,500	1,200	NA	120	7.6	10	24.9	3.0
4	Jun-08	5,100	2,000	NA	190	11	7.7	16.3	<2.0
5	Sep-08	5,600	2,200	NA	260	20	34	60	<2.0
6	Dec-08	7,800	2,100	NA	270	14	7.6	15.6	<2.0
7	Mar-09	7,100	1,400	NA	200	6.4	7.3	10.4	<2.0
8	Sep-09	6,400	1,900	NA	320	13	9.8	15.2	2.0
9	Mar-10	6,500	1,600	6,900	150	<0.5	3.9	12.8	2.9
10	Sep-10	5,500	1,300	NA	330	15	9.2	17.3	<2.0
11	Mar-11	6,500	3,400	NA	1300	22	9.6	19.9	<2.0
12	Sep-11	4,400	3,600	NA	1200	36	16	39.1	<2.0

MW-12									
Sampling Event No.	**Date Sampled**	**TEH-d**	**TVH-g**	**TEH-mo**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
Installed in May 2004									
1	Dec-06	<50	19,000	<200	9,100	51	<50	110	<100
2	Dec-07	2,700	17,000	NA	8,000	110	25	115	<40
3	Mar-08	3,300	33,000	NA	9,200	140	85	116	<2.0
4	Jun-08	3,000	17,000	NA	6,600	95	50	110	<2.0
5	Sep-08	3,100	14,000	NA	6,200	79	18	83	<10
6	Dec-08	3,600	19,000	NA	7,900	140	72	124	<50
7	Mar-09	4,100	14,000	NA	6,100	150	130	111	<40
8	Sep-09	3,000	1,900	NA	4,500	80	14	51	<40
9	Mar-10	4,000	15,000	1,900	6,200	110	73	101	<2.0
10	Sep-10	3,100	4,900	NA	5,900	97	47	73	<100
11	Mar-11	3,300	15,000	NA	7,900	180	200	127	<2.0
12	Sep-11	1,800	8,600	NA	2,700	85	31	63	<2.0

MW-13									
Sampling Event No.	**Date Sampled**	**TEH-d**	**TVH-g**	**TEH-mo**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
Installed in April 2004									
1	Dec-06	12,000	87,000	2,100	18,000	470	2,400	3,500	<400
2	Dec-07	NA	68,000	NA	19,000	650	1,700	2,440	<100
3	Mar-08	1,100,000	98,000	NA	19,000	820	2,300	3,190	<100
4	Jun-08	71,000	44,000	NA	12,000	510	1,600	1,950	<2.0
5	Sep-08	440,000	52,000	NA	<100	500	1,600	1,500	<100
6	Dec-08	1,100,000	2,700,000	NA	23,000	<250	40,000	45,000	<1,000
7	Mar-09	2,000,000	330,000	NA	25,000	1,300	6,400	8,500	<1,000
8	Sep-09	38,000	1,400,000	NA	19,000	2,500	19,000	21,300	<1,000
9	Mar-10	15,000	43,000	670	12,000	310	1,600	1,140	<2,500
10	Sep-10	3,100,000	1,700,000	NA	21,000	2,300	30,000	17,200	7,000
11	Mar-11	13,000	86,000	NA	7,900	180	200	127	<2.0
12	Sep-11	15,000	49,000	NA	16,000	380	1900	850	<2.0

MW-14									
Sampling Event No.	**Date Sampled**	**TEH-d**	**TVH-g**	**TEH-mo**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
Installed in April 2004									
1	Dec-06	<50	8,300	<200	3,700	240	230	260	<50
2	Dec-07	2,600	6,800	NA	3,100	150	220	168	<20
3	Mar-08	4,400	18,000	NA	4,400	330	340	245	<2.0
4	Jun-08	2,600	7,700	NA	2,600	180	200	141	<2.0
5	Sep-08	2,500	4,100	NA	1,300	50	80	61	<10
6	Dec-08	2,800	2,300	NA	830	27	45	30.7	<10
7	Mar-09	3,200	13,000	NA	4,300	870	260	283	<50
8	Sep-09	2,100	550	NA	630	14	28	17	<20
9	Mar-10	3,900	6,700	3,100	2,400	400	140	185	<20
10	Sep-10	2,500	2,000	NA	1,700	44	98	89	<40
11	Mar-11	2,800	16,000	NA	6,600	1600	450	600	<2.0
12	Sep-11	5,900	20,000	NA	6,600	690	550	740	<2.0

MW-15									
Sampling Event No.	**Date Sampled**	**TEH-d**	**TVH-g**	**TEH-mo**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
Installed in April 2004									
1	Dec-06	<50	9,200	<200	3,700	<25	60	57	<50
2	Dec-07	3,300	8,100	NA	3,000	48	28	44.5	<20
3	Mar-08	3,000	13,000	NA	3,600	66	210	59.5	<64
4	Jun-08	2,900	15,000	NA	5,800	61	230	56.4	<2.0
5	Sep-08	3,400	18,000	NA	7,800	73	270	59.9	<10
6	Dec-08	3,000	20,000	NA	7,600	95	300	84.2	<50
7	Mar-09	3,400	17,000	NA	7,200	91	170	60	<50
8	Sep-09	2,700	2,300	NA	6,200	71	68	42	<50
9	Mar-10	3,700	14,000	910	5,900	74	170	69	<2.0
10	Sep-10	3,500	5,800	NA	8,100	95	170	71	<100
11	Mar-11	3,200	11,000	NA	5,600	88	110	66.1	<2.0
12	Sep-11	2,200	15,000	NA	6,400	100	71	77.7	<2.0

MW-16									
Sampling Event No.	**Date Sampled**	**TEH-d**	**TVH-g**	**TEH-mo**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
Installed in April 2004									
1	Dec-06	<50	190	<200	11.0	1.4	<0.5	<0.5	<1.0
2	Dec-07	8,500	71	NA	13	2.6	<0.5	1.46	<2.0
3	Mar-08	12,000	60	NA	11	0.73	<0.5	<0.5	<2.0
4	Jun-08	10,000	120	NA	13	2.2	<0.5	<0.5	2
5	Sep-08	8,200	64	NA	9.9	1.9	<0.5	<0.5	<2.0
6	Dec-08	8,800	60	NA	11	2.8	<0.5	0.53	<2.0
7	Mar-09	14,000	78	NA	12	2.3	<0.5	<0.5	<2.0
8	Sep-09	10,000	51	NA	9.3	1.6	<0.5	<0.5	2.2
9	Mar-10	12,000	70	4,700	12	2.1	0.56	1.35	<2.0
10	Sep-10	9,800	77	NA	12	1.9	<0.5	0.55	2
11	Mar-11	9,900	64	NA	13	1.6	<0.5	2.3	16
12	Sep-11	10,000	74	NA	17	2.3	<0.5	1.33	<2.0

MW-17									
Sampling Event No.	**Date Sampled**	**TEH-d**	**TVH-g**	**TEH-mo**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
Installed in April 2004									
1	Dec-06	<50	14,000	<200	3,400	1,100	480	<0.5	<1.0
2	Dec-07	2,900	5,000	NA	1,100	260	110	206	<10
3	Mar-08	3,100	6,800	NA	1,200	110	91	94	21
4	Jun-08	2,900	7,200	NA	1,100	45	75	66	<2.0
5	Sep-08	3,300	5,500	NA	900	63	69	69	<10
6	Dec-08	3,200	7,100	NA	1,100	530	190	390	<10
7	Mar-09	3,000	5,400	NA	770	150	87	161	<2.0
8	Sep-09	3,000	2,200	NA	120	3.1	11	1.6	<2.0
9	Mar-10	3,400	5,000	1,900	910	66	73	93	<2.0
10	Sep-10	2,800	3,500	NA	1,400	62	46	76	<40
11	Mar-11	3,900	6,100	NA	1,100	44	55	70	<2.0
12	Sep-11	2,400	4,600	NA	850	49	51	64	<2.0

MW-18									
Sampling Event No.	**Date Sampled**	**TEH-d**	**TVH-g**	**TEH-mo**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
Installed in May 2004									
1	Dec-06	<50	120	<200	22	6.2	3.2	6.2	<2.0
2	Dec-07	8,600	<50	NA	0.98	<0.5	<0.5	<0.5	<2.0
3	Mar-08	9,800	<50	NA	0.52	<0.5	<0.5	<0.5	2.0
4	Jun-08	8,800	<50	NA	<0.5	<0.5	<0.5	<0.5	3.1
5	Sep-08	8,600	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0
6	Dec-08	9,300	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0
7	Mar-09	10,000	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0
8	Sep-09	11,000	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0
9	Mar-10	9,400	<50	2,700	<0.5	<0.5	<0.5	<0.5	<2.0
10	Sep-10	6,400	1,800	NA	2200	45	64.0	78.0	<50
11	Mar-11	10,000	68	NA	5.5	1.1	<0.5	1.3	17
12	Sep-11	9,800	<50	NA	0.58	<0.5	<0.5	<0.5	<2.0

MW-E									
Sampling Event No.	**Date Sampled**	**TEH-d**	**TVH-g**	**TEH-mo**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
1	Dec-88	100	5,400	NA	3,200	690	97	330	NA
2	May-89	NS	NS	NS	NS	NS	NS	NS	NS
3	Feb-91	NS	NS	NS	NS	NS	NS	NS	NS
4	Mar-04	470	810	<500	340	6.1	2.2	7.7	<1.0
5	Dec-06	280	1,900	<200	910	<10	10	<10	<20
6	Dec-07	6,900	7,000	NA	3,300	50	51	80	<20
7	Mar-08	6,300	2,700	NA	780	17	20	20.9	12
8	Jun-08	5,200	7,400	NA	2,900	43	85	50	<2.0
9	Sep-08	7,800	11,000	NA	3,800	170	130	257	<50
10	Dec-08	9,400	9,100	NA	3,400	110	180	182	<50
11	Mar-09	5,600	850	NA	270	7.5	13	17.5	<2.0
12	Sep-09	6,200	540	NA	1,200	22	37	37.2	<2.0
13	Mar-10	3,800	2,400	5,100	1,000	20	37	26.9	4.9
14	Sep-10	6,600	1,800	NA	2,200	45	64	78	<50
15	Mar-11	5,900	4,400	NA	2,600	46	64	90	<50
16	Sep-11	7,600	3,600	NA	4,500	150	340	402	<2.0

RW-1									
Sampling Event No.	**Date Sampled**	**TEH-d**	**TVH-g**	**TEH-mo**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
1	Dec-88	NS	NS	NS	NS	NS	NS	NS	NS
2	May-89	NS	NS	NS	NS	NS	NS	NS	NS
3	Feb-91	NS	NS	NS	NS	NS	NS	NS	NS
4	Mar-04	NS	NS	NS	NS	NS	NS	NS	NS
5	Dec-06	<50	640	<200	100	1.3	2	1.6	<1.0
6	Dec-07	2,100	770	NA	110	<0.5	3.8	1.96	<2.0
7	Mar-08	11,000	890	NA	100	4.2	4.4	2.0	<2.0
8	Jun-08	1,500	1,200	NA	290	4.8	10	4.8	<2.0
9	Sep-08	1,900	1,400	NA	280	9.8	10	6.7	<2.0
10	Dec-08	54,000	1,100,000	NA	500	<250	3,200	530	<1,000
11	Mar-09	2,800	950	NA	180	3.6	13	3	<2.0
12	Sep-09	770	350	NA	120	3.1	11	2	<2.0
13	Mar-10	810	200	<300	<0.5	<0.5	<0.5	<0.5	<2.0
14	Sep-10	980	860	NA	170	4.0	5.6	2.8	8.0
15	Mar-11	810	310	NA	15	4.4	2.5	3.9	8.8
16	Sep-11	440	230	NA	28	2.7	1.7	1.5	<2.0

Notes:

The 1988, 1989, and 1991 sampling events were conducted by Groundwater Technology, Inc.

The 2004 and 2006 sampling events were conducted by PES Environmental.

NS = Not sampled

NA = Not analyzed for this constituent

All concentrations shown in µg/L

APPENDIX B

Groundwater Monitoring
Field Data Sheets

WELL GAUGING DATA

Project # 110929-MW1 Date 9/29/11 Client STEARNS

Site 65TH & BAY ST, EMERYVILLE, CA

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or ~~TOC~~	Notes
MW-3	1023	2	ODOR SHEEN	10.83	unknown	-	10.84	—		VERY THICK SPH
MW-4	0944	2					7.83	24.87		
MW-5	0942	2					9.77	24.83		
MW-6	0953	2					7.66	23.31		
MW-7	1014	3/4					10.58	19.87		
MW-8	0943	3/4	SHEEN ODOR	9.55	0.32		9.87	—		THICK SPH
MW-9	1020	3/4					9.80	19.68		
MW-10	0949	3/4	SHEEN ODOR	8.78	0.05		8.83	—		THICK SPH
MW-11	1026	3/4					10.30	19.68		
MW-12	1032	3/4	ODOR				8.80	19.00		
MW-13	0956	3/4	SHEEN ODOR	9.64	0.77		10.41	—		THICK SPH
MW-14	1002	3/4	SHEEN ODOR	8.55	0.05		8.60	—		THICK SPH
MW-15	1008	3/4	ODOR				9.32	18.89		
MW-16	1057	3/4					9.56	19.08		
MW-17	1006	3/4					9.15	19.50		
MW-18	0931	3/4					8.90	19.57		
MW-2	0958	2					8.41	45.14	↓	

WELL GAUGING DATA

Project # 110929-WW1 Date 9/29/11 Client STELLAR

Site 65th & BAY ST, EMERYVILLE, CA

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
RW-1	1030	10	SHEEN ODOR	9.74	0.01		9.75	—	TOC	THICK SHEEN

WELLHEAD INSPECTION CHECKLIST

Date 9/29/11 Client STELLAR

Site Address 65TH & BAY ST, EMERYVILLE, CA

Job Number 110929-MW1 Technician MW / CK

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Debris Removed From Wellbox	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)
MW-3	X							
MW-4	X							
MW-5	X							
MW-6	X							
MW-7							X	
MW-8	X							
MW-9							X	
MW-10							X	
MW-11	X							
MW-12							X	
MW-13	X							
MW-14	X							
MW-15							X	
MW-16	X							
MW-17							X	
MW-18	X							

NOTES: MW-10: 1/2 BOLTS MISSING (5/16") MW-15: 3/2 BOLTS MISSING (9/16").
MW-17: 1/2 BOLTS. MW-7: 1/2 BOLTS, MW-9: 2/2 BOLTS MISSING.
MW-12: 1/2 BOLTS.

WELLHEAD INSPECTION CHECKLIST

Date 9/29/11 Client STELLAR

Site Address 65TH & BAY ST, EMERYVILLE, CA

Job Number 110929-WW1 Technician WW

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Debris Removed From Wellbox	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)
MW-E							X	
RW-1							X	

NOTES: MW-E: 2/2 SCREWS MISSING. RW-1: 1/2 TABS STRIPPED (3/4") (VAULT).

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME	STERLING C BAY CTR. APTS. 65 TH & BAY ST, EMERYVILLE, CA			PROJECT NUMBER	110929-1000 1		
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
HACH 2100P TURBIDIMETER	10117020909	9/29/11 0849	NTU: <0.1; 20; 100; 800	NTU: <0.1; 20; 100; 800	YES	—	MM
MYRON L ULTRAMETER 2	6209577	9/29/11 0850	PH: 4, 7, 10 cond. 3900 µS	PH: 7.00; 10.00 4.00 cond. 3900 µS	YES	21.1°C	MM
HACH 2100P TURBIDIMETER	09120C039146	9/29/11 1100	NTU: <0.1; 20 100; 800	NTU: <0.1, 20 100; 800	YES	—	MM
MYRON L ULTRAMETER 2	6223842	9/29/11 1100	PH, 4, 7, 10 COND. 3900 µS	PH, 3.98, 7.04 9.98 3899 µS	YES YES	23.2°C	CK

W[illegible]L MONITORING DATA SHE[illegible]

Project #: 110929-MW1	Client: STELLAR
Sampler: MW	Date: 9/30/11
Well I.D.: MW-3	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth (TD): —	Depth to Water (DTW): 10.84
Depth to Free Product: 10.83	Thickness of Free Product (feet): 0.01
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: —	

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

Sampling Method: Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: new tubing

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

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

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	DTP / DTW Observations
1157	START PURGE @			100	mL/min	10.84 / 10.85
1200	(MW) STOP				300mL	11.23 / 11.24
1203	STOP	PURGE			600mL	11.24 / 11.25
						* THICK SHEEN; odor

Did well dewater? Yes (No) ~~Gallons~~ actually evacuated: 600 mL

Sampling Date: 9/30/11 Sampling Time: 1210 Depth to Water: 11.25

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

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

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

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

WELL MONITORING DATA SHEET

Project #: 110929-WW1	Client: STELLAR ENV.
Sampler: BC	Date: 9/29/11
Well I.D.: MW-4	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 24.87	Depth to Water (DTW): 7.83
Depth to Free Product: ____	Thickness of Free Product (feet): ____
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.24	

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

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

2.7 (Gals.) X	3	= 8.1 Gals.
1 Case Volume	Specified Volumes	Calculated Volume

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

Time	Temp (°F or °C)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1124	65.3	7.21	1246	45	2.7	
1128	65.2	7.22	1262	52	5.4	
1132	65.2	7.21	1261	47	8.1	

Did well dewater? Yes (No) Gallons actually evacuated: 8.1

Sampling Date: 9/29/11 Sampling Time: 1136 Depth to Water: 7.85

Sample I.D.: MW-4 Laboratory: Kiff CalScience Other CTT

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

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

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

WELL MONITORING DATA SHEET

Project #: 110929-WW1	Client: STELLAR ENV.
Sampler: CK	Date: 9/29/11
Well I.D.: MW-5	Well Diameter: (2) 3 4 6 8
Total Well Depth (TD): 24.83	Depth to Water (DTW): 9.77
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.78	

Purge Method: Bailer / (Disposable Bailer) / Positive Air Displacement / Electric Submersible / Waterra / Peristaltic / Extraction Pump / Other

Sampling Method: ~~Bailer~~ (@) / (Disposable Bailer) / Extraction Port / Dedicated Tubing / Other

1 Case Volume	Specified Volumes	Calculated Volume
2.4 (Gals.) X	3	= 7.2 Gals.

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

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1156	66.0	7.81	2541	343	2.4	
1204	65.9	7.82	2452	546	4.8	
1212	65.8	7.84	2421	721	7.2	

Did well dewater? Yes (No) Gallons actually evacuated: 7.2

Sampling Date: 9/29/11 Sampling Time: 1235 Depth to Water: 12.60

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

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: See COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

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

WELL MONITORING DATA SHEET

Project #: 110929-WW1	Client: STELLAR ENV.
Sampler: CK	Date: 9/29/11
Well I.D.: MW-6	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth (TD): 23.31	Depth to Water (DTW): 7.66
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.79	

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

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

2.5 (Gals.) X	3	= 7.5 Gals.
1 Case Volume	Specified Volumes	Calculated Volume

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

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1250	64.8	11.04	1466	113	2.5	
1256	64.7	11.06	1483	72	5.0	
1302	64.6	11.08	1496	74	7.5	

Did well dewater? Yes (No) Gallons actually evacuated: 7.5

Sampling Date: 9/29/11 Sampling Time: 1305 Depth to Water: 7.74

Sample I.D.: MW-6 Laboratory: Kiff CalScience Other CET

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

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

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

WELL MONITORING DATA SHEET

Project #: 110929-WW1	Client: STELLAR ENV.
Sampler: CK	Date: 9/29/11
Well I.D.: MW-7	Well Diameter: 2 3 4 6 8 3/4
Total Well Depth (TD): 19.87	Depth to Water (DTW): 10.58
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.44	

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

Sampling Method: Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: NEW TUBING

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

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other 3/4	radius² * 0.163 0.02

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1402	61.6	8.23	12.07	829	0.2	
1405	61.4	8.21	11.78	270	0.4	
1408	61.4	8.20	11.66	124	0.6	

Did well dewater? Yes (No) Gallons actually evacuated: 0.6

Sampling Date: 9/29/11 Sampling Time: 1420 Depth to Water: 12.34

Sample I.D.: MW-7 Laboratory: Kiff CalScience Other CTL

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

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

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

WELL MONITORING DATA SHEET

Project #: 110929-MW1	Client: STELLAR
Sampler: WW	Date: 9/29/11
Well I.D.: MW-8	Well Diameter: 2 3 4 6 8 3/4
Total Well Depth (TD):	Depth to Water (DTW): 9.87
Depth to Free Product: 9.55	Thickness of Free Product (feet): 0.32
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: —	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic (circled), Extraction Pump, Other______

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing, Other: new tubing

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

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

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1228	START	PURGE	@ 200	ml/min		odor
1234	STOP	PURGE			1200 ml	
*UNABLE TO FIT INTERFACE PROBE DURING PURGE						

Did well dewater? Yes **No** (circled)   ~~Gallons~~ ml actually evacuated: 1200 ml

Sampling Date: 9/29/11   Sampling Time: 1245   Depth to Water: 9.97

Sample I.D.: MW-8   Laboratory: Kiff CalScience Other CET

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

EB I.D. (if applicable): @ Time   Duplicate I.D. (if applicable):

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

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

W L MONITORING DATA SH .

Project #: 110929-mw1	Client: Stellar
Sampler: MW	Date: 9/30/11
Well I.D.: MW-9	Well Diameter: 2 3 4 6 8 3/4
Total Well Depth (TD): 19.68	Depth to Water (DTW): 9.80
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.78	

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

Sampling Method: Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: new tubing

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

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

Time	Temp (°F or (°C))	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1019	17.0	9.71	2452	230	0.2	odor
1020	16.4	9.64	2875	132	0.4	"
1021	16.1	9.62	2951	122	0.6	"

Did well dewater? Yes (No) Gallons actually evacuated: 0.6 gal

Sampling Date: 9/30/11 Sampling Time: 1030 Depth to Water: 11.50

Sample I.D.: MW-9 Laboratory: Kiff CalScience Other CET

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

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

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

WELL MONITORING DATA SHEET

Project #: 110929-mw1	Client: Stellar
Sampler: MW	Date: 9/29/11
Well I.D.: MW-10	Well Diameter: 2 3 4 6 8 3/4
Total Well Depth (TD):	Depth to Water (DTW): 8.33
Depth to Free Product: 8.28	Thickness of Free Product (feet): 0.05
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: —	

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

Sampling Method: Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: new tubing

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

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

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1246	START	PURGE	C	150 ml/min		odor
1252	STOP	PURGE			900 ml	
* UNABLE TO GAUGE DURING PURGE, INTERFACE PROBE NOT FIT.						

Did well dewater? Yes No — Gallons actually evacuated: 900 ml

Sampling Date: 9/29/11 — Sampling Time: 1300 — Depth to Water: SPH

Sample I.D.: MW-10 — Laboratory: Kiff CalScience Other CET

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: Pb WC

EB I.D. (if applicable): @ Time — Duplicate I.D. (if applicable):

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

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

WELL MONITORING DATA SHEET

Project #: 110929-MW1	Client: STELLAR
Sampler: MW	Date: 9/30/11
Well I.D.: MW-11	Well Diameter: 2 3 4 6 8 3/4
Total Well Depth (TD): 19.68	Depth to Water (DTW): 10.30
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: ~~PVC~~ Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.18	

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; ~~Peristaltic~~; Extraction Pump; Other

Sampling Method: Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: new tubing

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

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

Time	Temp (°F or ~~°C~~)	pH	Cond. (mS or ~~µS~~)	Turbidity (NTUs)	Gals. Removed	Observations
1043	16.1	8.13	2043	28	0.2	odor
1044	15.6	7.94	2040	17	0.4	"
1045	15.4	7.90	2042	10	0.6	"

Did well dewater? Yes ~~No~~ Gallons actually evacuated: 0.6

Sampling Date: 9/30/11 Sampling Time: 1050 Depth to Water: 10.38

Sample I.D.: MW-11 Laboratory: Kiff CalScience Other CET

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

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

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

W L MONITORING DATA SHI

Project #: 110929-WW1	Client: STEUART
Sampler: WW	Date: 9/30/11
Well I.D.: MW-12	Well Diameter: 2 3 4 6 8 3/4
Total Well Depth (TD): 19.00	Depth to Water (DTW): 9.80
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.84	

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

Sampling Method: Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: new tubing

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

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

Time	Temp (°F or (°C))	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1101	15.8	8.02	1394	66	0.2	odor
1102	15.3	7.79	1317	41	0.4	"
1103	15.2	7.75	1271	27	0.6	"

Did well dewater? Yes (No) Gallons actually evacuated: 0.6

Sampling Date: 9/30/11 Sampling Time: 1110 Depth to Water: 9.80

Sample I.D.: MW-12 Laboratory: Kiff CalScience Other CT

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: See COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

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

WELL MONITORING DATA SHEET

Project #: 110929-MW1	Client: Stauber
Sampler: WW	Date: 9/29/11
Well I.D.: MW-13	Well Diameter: 2 3 4 6 8 3/4
Total Well Depth (TD):	Depth to Water (DTW): 10.41
Depth to Free Product: 9.64	Thickness of Free Product (feet): 0.77
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

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

Sampling Method: Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: new tubing

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

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

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1303	START PURGE @		200	ml/min		odor
1309	STOP	PURGE			1200 ml	
* UNABLE TO GAUGE DURING PURGE W/ INTERFACE PROBE; WILL NOT FIT						

Did well dewater? Yes (No) ~~Gallons~~ actually evacuated: 1200 ml

Sampling Date: 9/29/11 Sampling Time: 1315 Depth to Water: SPH

Sample I.D.: MW-13 Laboratory: Kiff CalScience Other CET

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: SEE COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

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

W[illegible]L MONITORING DATA SHE[illegible]

Project #: 113929-WW1	Client: STRUCTURE
Sampler: WW	Date: 9/29/11
Well I.D.: MW-14	Well Diameter: 2 3 4 6 8 3/4
Total Well Depth (TD):	Depth to Water (DTW): 9.60
Depth to Free Product: 9.55	Thickness of Free Product (feet): 0.05
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: —	

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

Sampling Method: Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: new tubing

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

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

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1335	START	PURGE	@ 200		ml/min	odor
1341	STOP	PURGE			1200ml	
X UNABLE TO FIT INTERFACE PROBE DURING PURGE						

Did well dewater? Yes (No) Gallons actually evacuated: 1200 mL

Sampling Date: 9/29/11 Sampling Time: 1350 Depth to Water: SPH

Sample I.D.: MW-14 Laboratory: Kiff CalScience Other CAT

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: SEE COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

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

W[illegible]L MONITORING DATA SHE[illegible]

Project #: 110929-ww1	Client: STERLING
Sampler: WW	Date: 9/30/11
Well I.D.: MW-15	Well Diameter: 2 3 4 6 8 3/4
Total Well Depth (TD): 18.89	Depth to Water (DTW): 9.32
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.23	

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

Sampling Method: Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: new tubing

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

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

Time	Temp (°F or (°C))	pH	Cond. (mS or ~~uS~~)	Turbidity (NTUs)	Gals. Removed	Observations
1142	15.3	8.19	1136	8	0.2	Odor
1143	15.5	7.62	1122	6	0.4	"
1144	15.4	7.59	1153	5	0.6	"

Did well dewater? Yes (No) Gallons actually evacuated: 0.6

Sampling Date: 9/30/11 Sampling Time: 1150 Depth to Water: 9.32

Sample I.D.: MW-15 Laboratory: Kiff CalScience Other CET

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: See COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

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

W LL MONITORING DATA SHI .

Project #: 11092 9-ww1	Client: Stellar
Sampler: ww	Date: 9/20/11
Well I.D.: MW-16	Well Diameter: 2 3 4 6 8 3/4
Total Well Depth (TD): 19.08	Depth to Water (DTW): 9.56
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.46	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, ~~Peristaltic~~ (circled), Extraction Pump, Other

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing, Other: new tubing

0.2 (Gals.) X 3 = 0.6 Gals.
1 Case Volume / Specified Volumes / Calculated Volume

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

Time	Temp (°F or (°C))	pH	Cond (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1118	16.1	10.07	~~3.782~~ 3713 ms	62	0.2	odor, brown
1119	15.8	10.14	3815 ms	43	0.4	" , "
1120	15.7	10.15	3834	23	0.6	" "

Did well dewater? Yes (No) Gallons actually evacuated: 0.6

Sampling Date: 9/20/11 Sampling Time: 1125 Depth to Water: 9.72

Sample I.D.: MW-16 Laboratory: Kiff CalScience Other GT

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

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

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

WELL MONITORING DATA SHEET

Project #: 110929-WW1	Client: STELLAR ENV.
Sampler: CK	Date: 9/29/11
Well I.D.: MW-17	Well Diameter: 2 3 4 6 8 3/4
Total Well Depth (TD): 19.50	Depth to Water (DTW): 9.15
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.22	

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

Sampling Method: Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: NEW TUBING

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

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other 3/4"	radius² * 0.163 0.082

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1326	62.6	7.55	1173	75	0.2	CLEAR
1328	62.5	7.54	1173	24	0.4	"
1330	62.5	7.55	1174	18	0.6	"

Did well dewater? Yes (No) Gallons actually evacuated: 0.6

Sampling Date: 9/29/11 Sampling Time: 1340 Depth to Water: 9.15

Sample I.D.: MW-17 Laboratory: Kiff CalScience Other CT

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: See COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

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

WELL MONITORING DATA SHEET

Project #: 110929-MW1	Client: Stellar
Sampler: MW	Date: 9/29/11
Well I.D.: MW-1B	Well Diameter: 2 3 4 6 8 3/4
Total Well Depth (TD): 19.57	Depth to Water (DTW): 8.90
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.03	

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

Sampling Method: Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: new tubing

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

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

3/4" = 0.2

Time	Temp (°F or (°C))	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1108	15.6	7.73	558	>1000	0.2	
1109	15.4	7.53	648	>1,000	0.4	
1110	15.4	7.43	720	>1000	0.6	

Did well dewater? Yes (No) Gallons actually evacuated: 0.6

Sampling Date: 9/29/11 Sampling Time: 1115 Depth to Water: 1142 10.48

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

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: See oc

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

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

WELL MONITORING DATA SHEET

Project #: 110929-WW1	Client: Stellar
Sampler: MW	Date: 9/29/11
Well I.D.: MW-2	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 45.14	Depth to Water (DTW): 8.41
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: ~~PVC~~ Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 15.76	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, ~~Waterra~~, ~~Peristaltic~~, Extraction Pump, Other ____

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing, Other: new tubing

1 Case Volume	Specified Volumes	Calculated Volume
5.9 (Gals.) X	3 =	17.7 Gals.

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

Time	Temp (°F or ~~°C~~)	pH	Cond. (mS or ~~uS~~)	Turbidity (NTUs)	Gals. Removed	Observations
1208	16.2	8.41	3209	>1000	5.9	
WELL	DEWATERED @ 7.4 GALS					
1400	16.3	8.33	3230	851	—	

Did well dewater? ~~Yes~~ No Gallons actually evacuated: 7.4

Sampling Date: 9/29/11 Sampling Time: 1400 Depth to Water: 8.41

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

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

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

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

WELL MONITORING DATA SHEET

Project #: 110929-WW1	Client: STRUCTURE
Sampler: WW	Date: 9/30/11
Well I.D.: RW-1	Well Diameter: 2 3 4 6 8 10
Total Well Depth (TD): —	Depth to Water (DTW): 9.75
Depth to Free Product: 9.74	Thickness of Free Product (feet): 0.01
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: —	

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

Sampling Method: Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: new tubing

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

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

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	DTP / DTW Observations
1223	START PURGE			150	mL/min	9.74 / 9.75
1226					450 mL	9.74 / 9.75
1229	STOP PURGE				900 mL	9.74 / 9.75

Did well dewater? Yes (No) Gallons actually evacuated: 900 mL

Sampling Date: 9/30/11 Sampling Time: 1235 Depth to Water: 9.75

Sample I.D.: RW-1 Laboratory: Kiff CalScience Other CAT

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

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

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

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

APPENDIX C

Analytical Laboratory Report and Chain-of-Custody Record


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 231440
ANALYTICAL REPORT

Stellar Environmental Solutions	Project : 2007-65
2198 6th Street	Location : Bay Center Apartment
Berkeley, CA 94710	Level : II

Sample ID	Lab ID
MW-4	231440-001
MW-5	231440-002
MW-6	231440-003
MW-7	231440-004
MW-8	231440-005
MW-10	231440-006
MW-13	231440-007
MW-14	231440-008
MW-17	231440-009
MW-18	231440-010
MW-E	231440-011

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: 10/12/2011
Project Manager

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**231440**
Client:	**Stellar Environmental Solutions**
Project:	**2007-65**
Location:	**Bay Center Apartment**
Request Date:	**09/29/11**
Samples Received:	**09/29/11**

This data package contains sample and QC results for eleven water samples, requested for the above referenced project on 09/29/11. The samples were received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B and EPA 8021B):

Low response was observed for MTBE in the CCV analyzed 10/07/11 08:25; affected data was qualified with "b". Low surrogate recoveries were observed for bromofluorobenzene (FID) in MW-18 (lab # 231440-010) and the method blank for batch 179700. Low surrogate recovery was observed for bromofluorobenzene (PID) in the method blank for batch 179703. No other analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B):

No analytical problems were encountered.

231440

Chain of Custody Record

Lab job no. ______
Date 9/29/11
Page 1 of 1

Laboratory: C&T
Address: 2323 FIFTH ST, BERKELEY, CA
Project Owner:
Site Address: 6400 CHRISTIE AVE, BERKELEY, CA
Project Name: BAY CENTER APARTMENT
Project Number: 2007-65

Method of Shipment: LAB COURIER
Shipment No.:
Airbill No.:
Cooler No.:
Project Manager: ~~[illegible]~~ R. MAKDISI
Telephone No.: (510) 644-3123
Fax No.: (510) 644-3859
Samplers: (Signature) [signature]

Analysis Required: TEH-D (8015), TPH-G (8015), BTEX + MTBE

	Field Sample Number	Location/Depth	Date	Time	Sample Type	Type/Size of Container	Preservation: Cooler	Preservation: Chemical	Filtered	No. of Containers	TEH-D (8015)	TPH-G (8015)	BTEX + MTBE	Remarks
1	MW-4		9/29/11	1136		4 HCl VOAs + 2 500mL Ambers		HCl / NP			X	X	X	
2	MW-5		↓	1235		↓		↓			X	X	X	
3	MW-6		↓	1305		↓		↓			X	X	X	
4	MW-7		↓	[illegible]		↓		↓			X	X	X	
5	MW-8		↓	1245		↓		↓			X	X	X	
6	MW-10		↓	1300		↓		↓			X	X	X	
7	MW-13		↓	1315		↓		↓			X	X	X	
8	MW-14		↓	1350		↓		↓			X	X	X	
9	MW-17		↓	1340		↓		↓			X	X	X	
10	MW-18		↓	1115		↓		↓			X	X	X	
11	MW-6		↓	1400		↓		↓			X	X	X	

Relinquished by:	Date	Received by:	Date	Relinquished by:	Date	Received by:	Date
Signature [signature]	9/29/11	Signature [signature]	9/29/11	Signature		Signature	
Printed WILLIAM WONG BLAINE TECH	Time	Printed Trey Bobi[illegible]	Time	Printed	Time	Printed	Time
Company SERVICES	3:40	Company CEIT	3:40	Company		Company	

Turnaround Time: STANDARD
Comments: EDF REQUIRED
GLOBAL ID # SLT20Ø5561

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

2000-00-01

★ Stellar Environmental Solutions

on ice [illegible]

2198 Sixth Street #201, Berkeley, CA 94710

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 23440 Date Received 9/29/11 Number of coolers 2
Client STELLAR Project 2007-65

Date Opened 9/29/11 By (print) I. CHOY (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: * Notify PM if temperature exceeds 6°C
Type of ice used: ☒ Wet (melted ice) ☐ Blue/Gel ☐ None Temp(°C)
☒ 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. Did you check preservatives for all bottles for each sample? YES NO (N/A)
16. Did you document your preservative check? YES NO (N/A)
17. Did you change the hold time in LIMS for unpreserved VOAs? YES NO (N/A)
18. Are bubbles > 6mm absent in VOA samples? YES (NO) N/A
19. Was the client contacted concerning this sample delivery? YES (NO)
If YES, Who was called? By Date:

COMMENTS
18) -011 1 of 4 VOAs rec'd w/ bubbles

Rev 8, 6/11

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	231440	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Matrix:	Water	Sampled:	09/29/11
Units:	ug/L	Received:	09/29/11

Field ID:	MW-4	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	179700
Lab ID:	231440-001	Analyzed:	10/06/11

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
Bromofluorobenzene (FID)	79	78-123	EPA 8015B
Bromofluorobenzene (PID)	92	80-120	EPA 8021B

Field ID:	MW-5	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	179700
Lab ID:	231440-002	Analyzed:	10/06/11

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
Bromofluorobenzene (FID)	81	78-123	EPA 8015B
Bromofluorobenzene (PID)	94	80-120	EPA 8021B

*= Value outside of QC limits; see narrative
C= Presence confirmed, but RPD between columns exceeds 40%
NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	231440	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Matrix:	Water	Sampled:	09/29/11
Units:	ug/L	Received:	09/29/11

Field ID:	MW-6	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	179700
Lab ID:	231440-003	Analyzed:	10/06/11

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	ND	2.0	EPA 8021B
Benzene	1.8	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
Bromofluorobenzene (FID)	85	78-123	EPA 8015B
Bromofluorobenzene (PID)	98	80-120	EPA 8021B

Field ID:	MW-7	Lab ID:	231440-004
Type:	SAMPLE		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed	Analysis
Gasoline C7-C12	2,900	500	10.00	179752	10/07/11	EPA 8015B
MTBE	ND	2.0	1.000	179700	10/06/11	EPA 8021B
Benzene	900	5.0	10.00	179752	10/07/11	EPA 8021B
Toluene	46	5.0	10.00	179752	10/07/11	EPA 8021B
Ethylbenzene	51	5.0	10.00	179752	10/07/11	EPA 8021B
m,p-Xylenes	230	5.0	10.00	179752	10/07/11	EPA 8021B
o-Xylene	54	5.0	10.00	179752	10/07/11	EPA 8021B

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed	Analysis
Bromofluorobenzene (FID)	82	78-123	10.00	179752	10/07/11	EPA 8015B
Bromofluorobenzene (PID)	101	80-120	10.00	179752	10/07/11	EPA 8021B

Field ID:	MW-8	Lab ID:	231440-005
Type:	SAMPLE		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed	Analysis
Gasoline C7-C12	23,000	1,300	25.00	179752	10/07/11	EPA 8015B
MTBE	ND	2.0	1.000	179700	10/06/11	EPA 8021B
Benzene	8,000	13	25.00	179752	10/07/11	EPA 8021B
Toluene	140	13	25.00	179752	10/07/11	EPA 8021B
Ethylbenzene	860	13	25.00	179752	10/07/11	EPA 8021B
m,p-Xylenes	150	13	25.00	179752	10/07/11	EPA 8021B
o-Xylene	28	13	25.00	179752	10/07/11	EPA 8021B

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed	Analysis
Bromofluorobenzene (FID)	89	78-123	25.00	179752	10/07/11	EPA 8015B
Bromofluorobenzene (PID)	106	80-120	25.00	179752	10/07/11	EPA 8021B

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ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	231440	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Matrix:	Water	Sampled:	09/29/11
Units:	ug/L	Received:	09/29/11

Field ID: MW-10 Lab ID: 231440-006
Type: SAMPLE

Analyte	Result	RL	Diln Fac	Batch#	Analyzed	Analysis
Gasoline C7-C12	4,600	500	10.00	179752	10/07/11	EPA 8015B
MTBE	ND	2.0	1.000	179700	10/06/11	EPA 8021B
Benzene	720	5.0	10.00	179752	10/07/11	EPA 8021B
Toluene	49 C	5.0	10.00	179752	10/07/11	EPA 8021B
Ethylbenzene	26	5.0	10.00	179752	10/07/11	EPA 8021B
m,p-Xylenes	43	5.0	10.00	179752	10/07/11	EPA 8021B
o-Xylene	9.4	5.0	10.00	179752	10/07/11	EPA 8021B

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed	Analysis
Bromofluorobenzene (FID)	85	78-123	10.00	179752	10/07/11	EPA 8015B
Bromofluorobenzene (PID)	102	80-120	10.00	179752	10/07/11	EPA 8021B

Field ID: MW-13 Lab ID: 231440-007
Type: SAMPLE

Analyte	Result	RL	Diln Fac	Batch#	Analyzed	Analysis
Gasoline C7-C12	49,000	5,000	100.0	179752	10/07/11	EPA 8015B
MTBE	ND	2.0	1.000	179703	10/06/11	EPA 8021B
Benzene	16,000	50	100.0	179752	10/07/11	EPA 8021B
Toluene	380	50	100.0	179752	10/07/11	EPA 8021B
Ethylbenzene	1,900	50	100.0	179752	10/07/11	EPA 8021B
m,p-Xylenes	730	50	100.0	179752	10/07/11	EPA 8021B
o-Xylene	120	50	100.0	179752	10/07/11	EPA 8021B

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed	Analysis
Bromofluorobenzene (FID)	85	78-123	100.0	179752	10/07/11	EPA 8015B
Bromofluorobenzene (PID)	101	80-120	100.0	179752	10/07/11	EPA 8021B

Field ID: MW-14 Lab ID: 231440-008
Type: SAMPLE

Analyte	Result	RL	Diln Fac	Batch#	Analyzed	Analysis
Gasoline C7-C12	20,000	1,000	20.00	179752	10/07/11	EPA 8015B
MTBE	ND	2.0	1.000	179703	10/06/11	EPA 8021B
Benzene	6,600	10	20.00	179752	10/07/11	EPA 8021B
Toluene	690	10	20.00	179752	10/07/11	EPA 8021B
Ethylbenzene	550	10	20.00	179752	10/07/11	EPA 8021B
m,p-Xylenes	530	10	20.00	179752	10/07/11	EPA 8021B
o-Xylene	210	10	20.00	179752	10/07/11	EPA 8021B

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed	Analysis
Bromofluorobenzene (FID)	87	78-123	20.00	179752	10/07/11	EPA 8015B
Bromofluorobenzene (PID)	104	80-120	20.00	179752	10/07/11	EPA 8021B

*= Value outside of QC limits; see narrative
C= Presence confirmed, but RPD between columns exceeds 40%
NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	231440	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Matrix:	Water	Sampled:	09/29/11
Units:	ug/L	Received:	09/29/11

Field ID: MW-17 Lab ID: 231440-009
Type: SAMPLE

Analyte	Result	RL	Diln Fac	Batch#	Analyzed	Analysis
Gasoline C7-C12	4,600	250	5.000	179752	10/07/11	EPA 8015B
MTBE	ND	2.0	1.000	179703	10/06/11	EPA 8021B
Benzene	850	2.5	5.000	179752	10/07/11	EPA 8021B
Toluene	49	2.5	5.000	179752	10/07/11	EPA 8021B
Ethylbenzene	51	2.5	5.000	179752	10/07/11	EPA 8021B
m,p-Xylenes	50	2.5	5.000	179752	10/07/11	EPA 8021B
o-Xylene	14	2.5	5.000	179752	10/07/11	EPA 8021B

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed	Analysis
Bromofluorobenzene (FID)	90	78-123	5.000	179752	10/07/11	EPA 8015B
Bromofluorobenzene (PID)	108	80-120	5.000	179752	10/07/11	EPA 8021B

Field ID: MW-18 Lab ID: 231440-010
Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RL	Batch#	Analyzed	Analysis
Gasoline C7-C12	ND	50	179752	10/07/11	EPA 8015B
MTBE	ND	2.0	179703	10/06/11	EPA 8021B
Benzene	0.58	0.50	179752	10/07/11	EPA 8021B
Toluene	ND	0.50	179752	10/07/11	EPA 8021B
Ethylbenzene	ND	0.50	179752	10/07/11	EPA 8021B
m,p-Xylenes	ND	0.50	179752	10/07/11	EPA 8021B
o-Xylene	ND	0.50	179752	10/07/11	EPA 8021B

Surrogate	%REC	Limits	Batch#	Analyzed	Analysis
Bromofluorobenzene (FID)	69 *	78-123	179752	10/07/11	EPA 8015B
Bromofluorobenzene (PID)	82	80-120	179752	10/07/11	EPA 8021B

Field ID: MW-E Lab ID: 231440-011
Type: SAMPLE

Analyte	Result	RL	Diln Fac	Batch#	Analyzed	Analysis
Gasoline C7-C12	3,600	1,000	20.00	179752	10/07/11	EPA 8015B
MTBE	ND	2.0	1.000	179703	10/06/11	EPA 8021B
Benzene	4,500	10	20.00	179752	10/07/11	EPA 8021B
Toluene	150	10	20.00	179752	10/07/11	EPA 8021B
Ethylbenzene	340	10	20.00	179752	10/07/11	EPA 8021B
m,p-Xylenes	330	10	20.00	179752	10/07/11	EPA 8021B
o-Xylene	72	10	20.00	179752	10/07/11	EPA 8021B

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed	Analysis
Bromofluorobenzene (FID)	85	78-123	20.00	179752	10/07/11	EPA 8015B
Bromofluorobenzene (PID)	103	80-120	20.00	179752	10/07/11	EPA 8021B

*= Value outside of QC limits; see narrative
C= Presence confirmed, but RPD between columns exceeds 40%
NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	231440	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Matrix:	Water	Sampled:	09/29/11
Units:	ug/L	Received:	09/29/11

Type: BLANK
Lab ID: QC612140
Diln Fac: 1.000

Batch#: 179700
Analyzed: 10/06/11

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
Bromofluorobenzene (FID)	71 *	78-123	EPA 8015B
Bromofluorobenzene (PID)	84	80-120	EPA 8021B

Type: BLANK
Lab ID: QC612150
Diln Fac: 1.000

Batch#: 179703
Analyzed: 10/05/11
Analysis: EPA 8021B

Analyte	Result	RL
MTBE	ND	2.0

Surrogate	Result	%REC	Limits
Bromofluorobenzene (FID)	NA		
Bromofluorobenzene (PID)		21 *	80-120

Type: BLANK
Lab ID: QC612344
Diln Fac: 1.000

Batch#: 179752
Analyzed: 10/06/11

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
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
Bromofluorobenzene (FID)	78	78-123	EPA 8015B
Bromofluorobenzene (PID)	89	80-120	EPA 8021B

*= Value outside of QC limits; see narrative
C= Presence confirmed, but RPD between columns exceeds 40%
NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	231440	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Matrix:	Water	Batch#:	179700
Units:	ug/L	Analyzed:	10/06/11
Diln Fac:	1.000		

Type: BS Lab ID: QC612137

Analyte	Spiked	Result	%REC	Limits	Analysis
MTBE	10.00	9.452	95	78-122	EPA 8021B
Benzene	10.00	9.795	98	80-120	EPA 8021B
Toluene	10.00	10.19	102	80-120	EPA 8021B
Ethylbenzene	10.00	10.30	103	80-120	EPA 8021B
m,p-Xylenes	10.00	10.81	108	80-120	EPA 8021B
o-Xylene	10.00	10.65	107	80-120	EPA 8021B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	83	78-123	EPA 8015B
Bromofluorobenzene (PID)	99	80-120	EPA 8021B

Type: BSD Lab ID: QC612138

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analysis
MTBE	10.00	9.573	96	78-122	1	21	EPA 8021B
Benzene	10.00	9.958	100	80-120	2	20	EPA 8021B
Toluene	10.00	10.25	102	80-120	1	20	EPA 8021B
Ethylbenzene	10.00	10.76	108	80-120	4	20	EPA 8021B
m,p-Xylenes	10.00	10.57	106	80-120	2	20	EPA 8021B
o-Xylene	10.00	10.71	107	80-120	1	20	EPA 8021B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	83	78-123	EPA 8015B
Bromofluorobenzene (PID)	99	80-120	EPA 8021B

RPD= Relative Percent Difference

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	231440	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC612139	Batch#:	179700
Matrix:	Water	Analyzed:	10/06/11
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits	Analysis
Gasoline C7-C12	1,000	902.2	90	80-120	EPA 8015B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	89	78-123	EPA 8015B
Bromofluorobenzene (PID)	102	80-120	EPA 8021B

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	231440	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65	Analysis:	EPA 8021B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC612149	Batch#:	179703
Matrix:	Water	Analyzed:	10/05/11
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
MTBE	10.00	10.65	107	78-122

Surrogate	%REC	Limits
Bromofluorobenzene (PID)	81	80-120

Curtis & Tompkins, Ltd.

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	231440	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Batch#:	179752

Type: BS Analyzed: 10/06/11
Lab ID: QC612341

Analyte	Spiked	Result	%REC	Limits	Analysis
Benzene	10.00	8.599	86	80-120	EPA 8021B
Toluene	10.00	8.741	87	80-120	EPA 8021B
Ethylbenzene	10.00	9.079	91	80-120	EPA 8021B
m,p-Xylenes	10.00	9.520	95	80-120	EPA 8021B
o-Xylene	10.00	9.671	97	80-120	EPA 8021B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	83	78-123	EPA 8015B
Bromofluorobenzene (PID)	98	80-120	EPA 8021B

Type: BSD Analyzed: 10/07/11
Lab ID: QC612342

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analysis
Benzene	10.00	8.435	84	80-120	2	20	EPA 8021B
Toluene	10.00	8.771	88	80-120	0	20	EPA 8021B
Ethylbenzene	10.00	8.864	89	80-120	2	20	EPA 8021B
m,p-Xylenes	10.00	9.388	94	80-120	1	20	EPA 8021B
o-Xylene	10.00	9.225	92	80-120	5	20	EPA 8021B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	80	78-123	EPA 8015B
Bromofluorobenzene (PID)	96	80-120	EPA 8021B

RPD= Relative Percent Difference

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

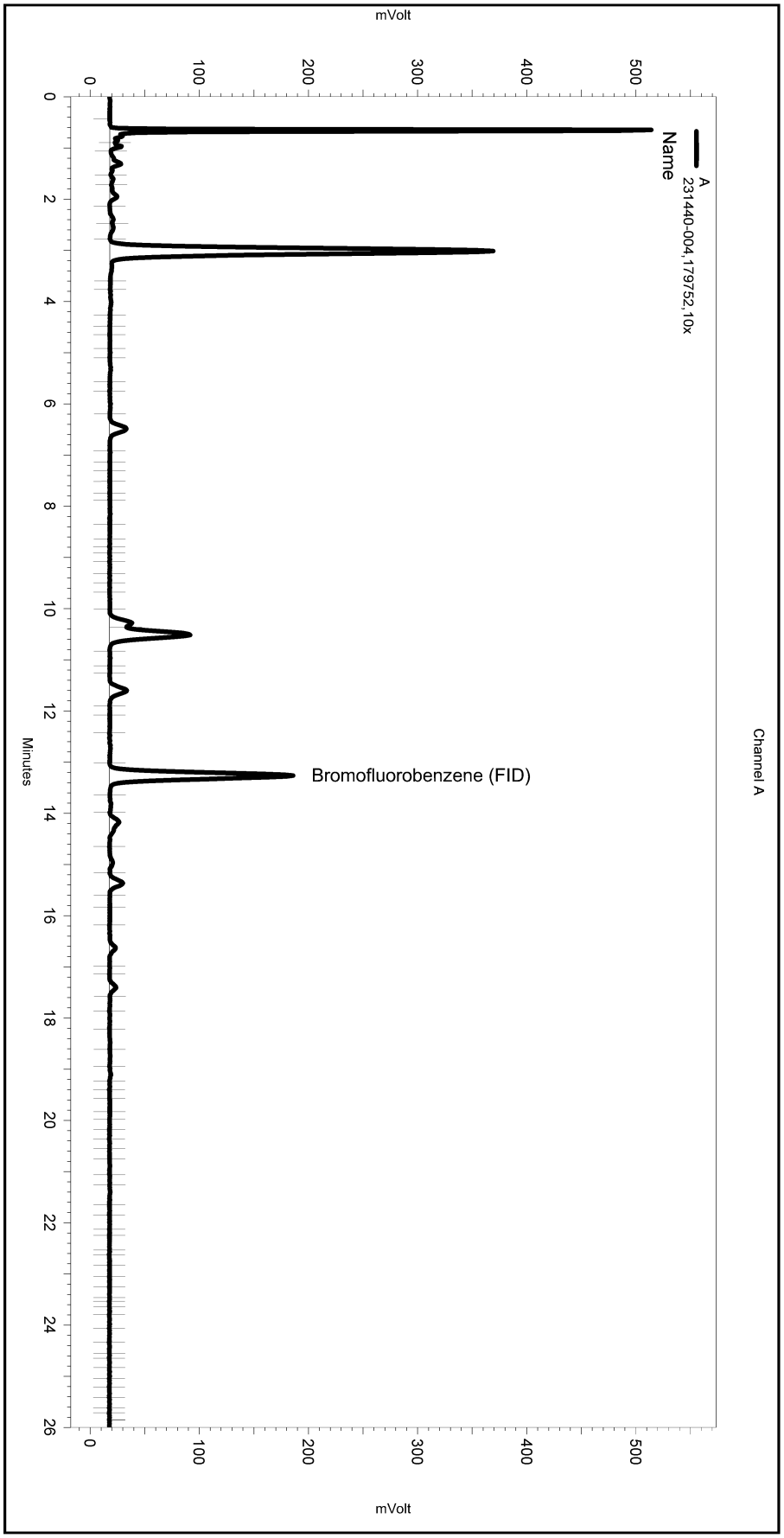
Lab #:	231440	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC612343	Batch#:	179752
Matrix:	Water	Analyzed:	10/06/11
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits	Analysis
Gasoline C7-C12	1,000	867.8	87	80-120	EPA 8015B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	85	78-123	EPA 8015B
Bromofluorobenzene (PID)	102	80-120	EPA 8021B

Sequence File: **\\Lims\gdrive\ezchrom\Projects\GC05\Sequence\279.seq**
Sample Name: **231440-004,179752,10x**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC05\Data\279-026**
Instrument: GC05 Vial: N/A Operator: lims2k3\tvh3
Method Name: \\Lims\gdrive\ezchrom\Projects\GC05\Method\tvhbtxe278.met

Software Version 3.1.7
Run Date: 10/7/2011 11:46:22 AM
Analysis Date: 10/7/2011 12:15:05 PM
Sample Amount: 5 Multiplier: 5
Vial & pH or Core ID: b1.0



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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: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10048\279-026_BF58.tmp

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
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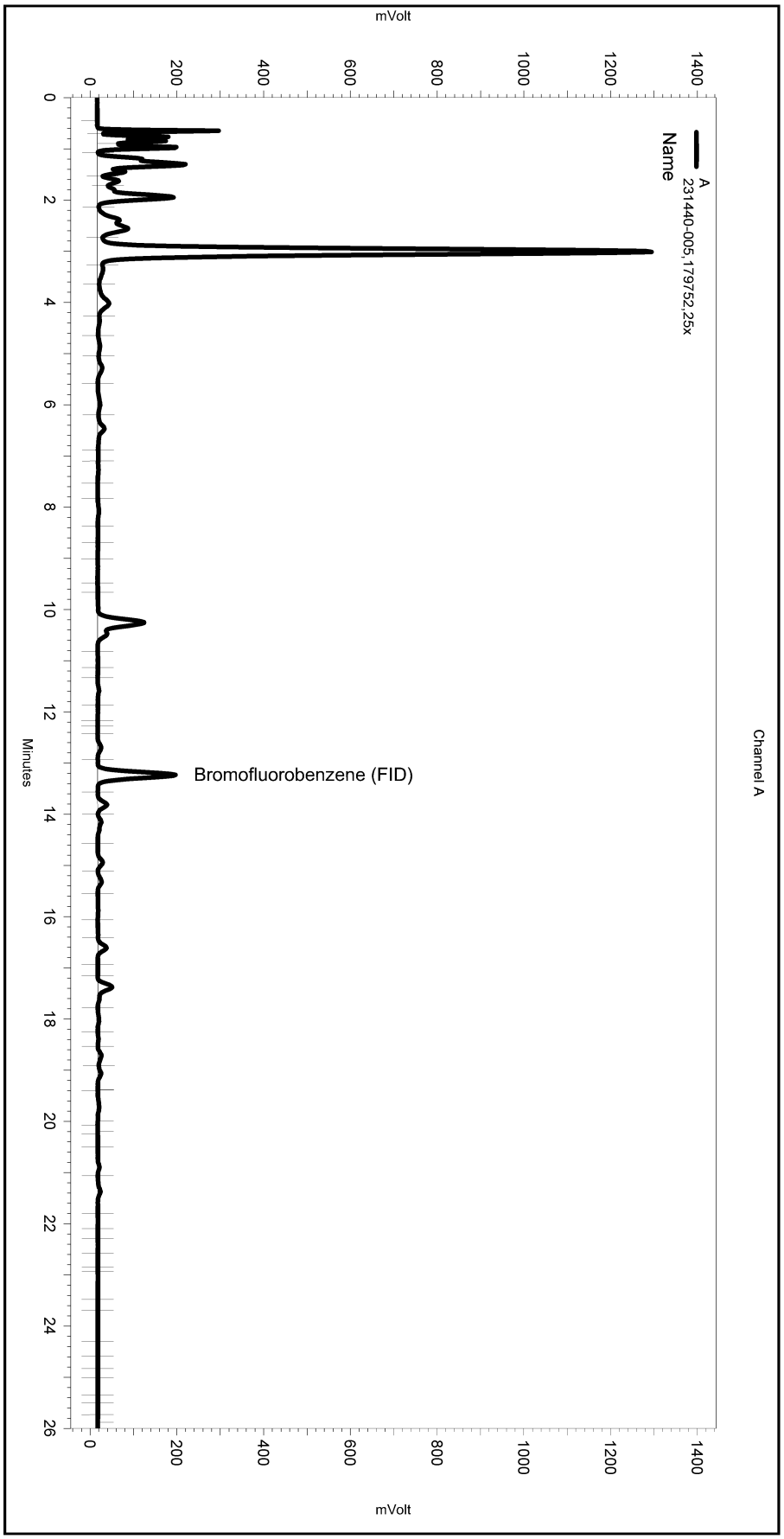
Sequence File: **\\Lims\gdrive\ezchrom\Projects\GC05\Sequence\279.seq**
Sample Name: **231440-005,179752,25x**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC05\Data\279-012**
Instrument: GC05 Vial: N/A Operator: lims2k3\tvh3
Method Name: \\Lims\gdrive\ezchrom\Projects\GC05\Method\tvhbtxe278.met

Software Version 3.1.7
Run Date: 10/7/2011 2:56:06 AM
Analysis Date: 10/7/2011 3:24:49 AM
Sample Amount: 5 Multiplier: 5
Vial & pH or Core ID: b1.0



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Integration Events

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

Manual Integration Fixes

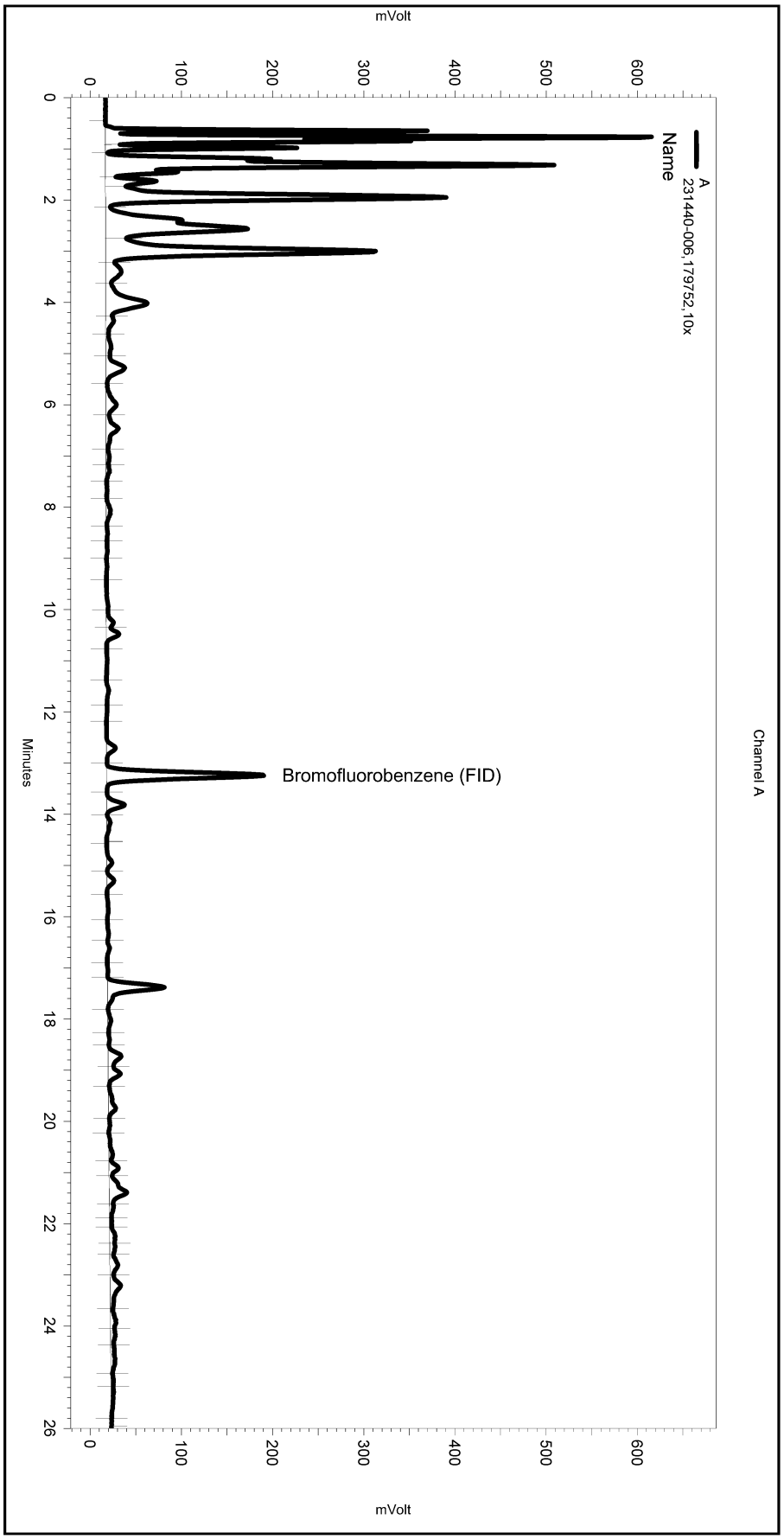
Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10048\279-012_BF49.tmp

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

None

Sequence File: **\\Lims\gdrive\ezchrom\Projects\GC05\Sequence\279.seq**
Sample Name: **231440-006,179752,10x**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC05\Data\279-013**
Instrument: GC05 Vial: N/A Operator: lims2k3\tvh3
Method Name: \\Lims\gdrive\ezchrom\Projects\GC05\Method\tvhbtxe278.met

Software Version 3.1.7
Run Date: 10/7/2011 3:32:40 AM
Analysis Date: 10/7/2011 4:01:25 AM
Sample Amount: 5 Multiplier: 5
Vial & pH or Core ID: b1.0



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Integration Events

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

Manual Integration Fixes

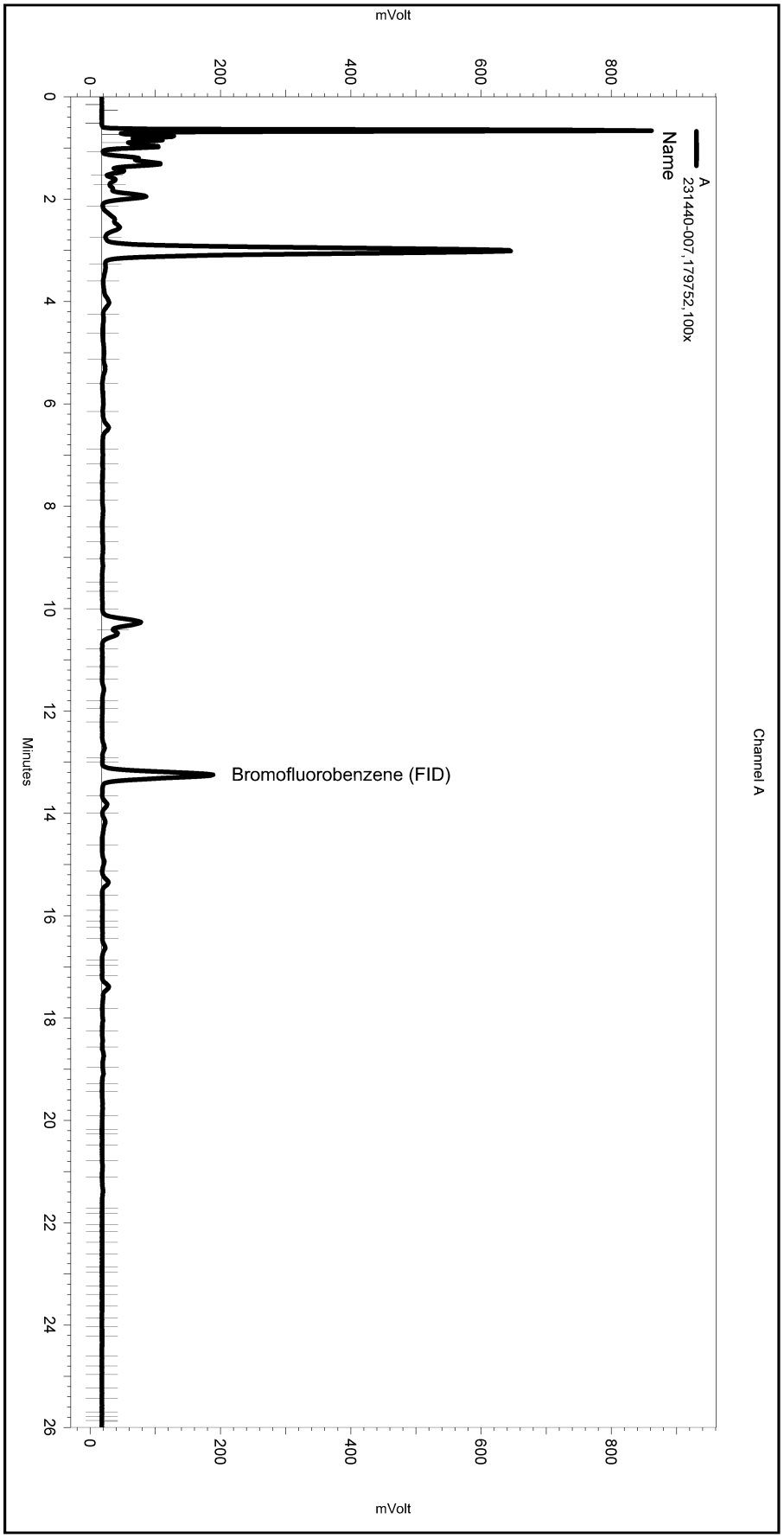
Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10048\279-013_BF4A.tmp

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

None

Sequence File: **\\Lims\gdrive\ezchrom\Projects\GC05\Sequence\279.seq**
Sample Name: **231440-007,179752,100x**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC05\Data\279-025**
Instrument: GC05 Vial: N/A Operator: lims2k3\tvh3
Method Name: \\Lims\gdrive\ezchrom\Projects\GC05\Method\tvhbtxe278.met

Software Version 3.1.7
Run Date: 10/7/2011 10:51:23 AM
Analysis Date: 10/7/2011 11:20:07 AM
Sample Amount: 5 Multiplier: 5
Vial & pH or Core ID: b1.0



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Integration Events

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

Manual Integration Fixes

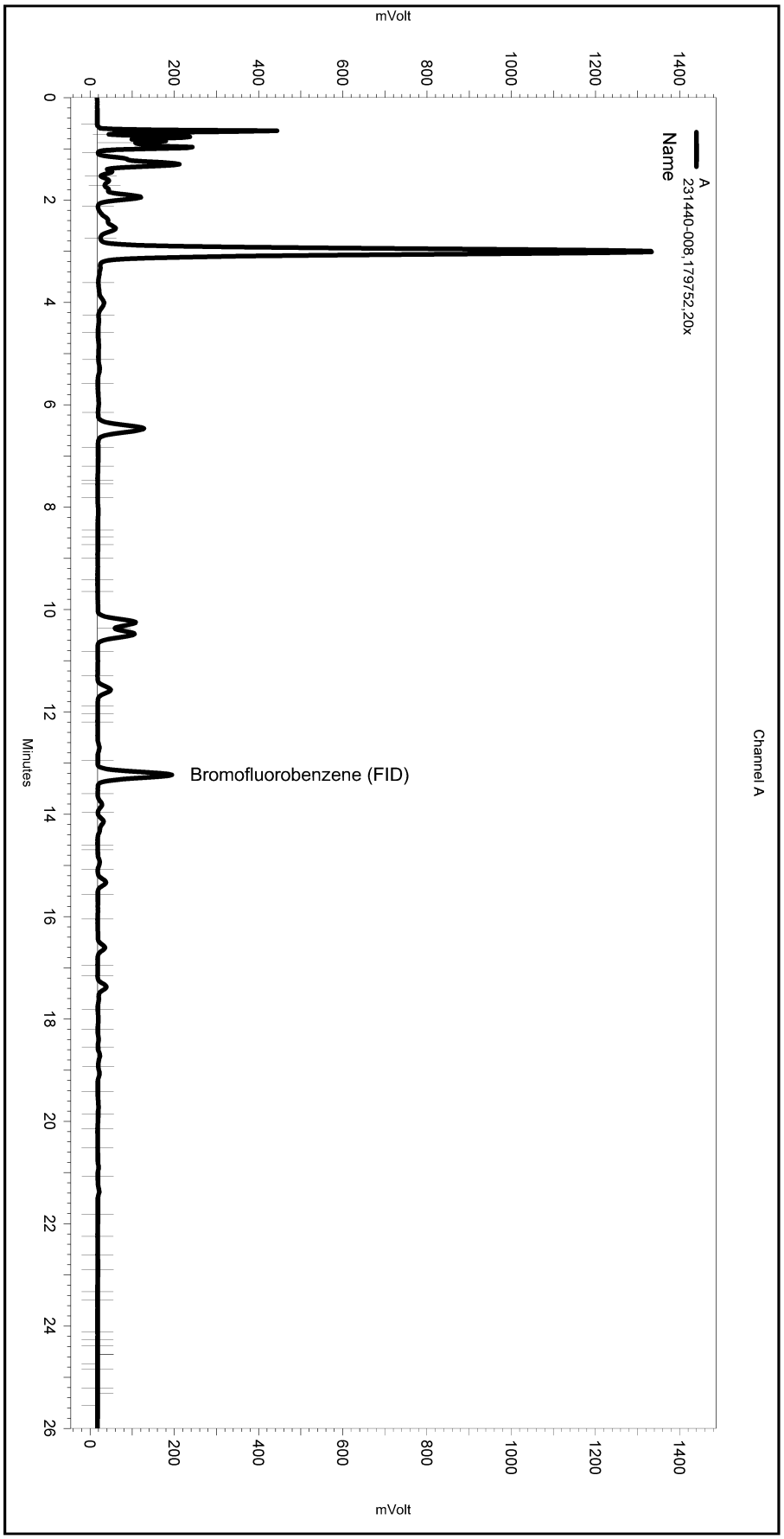
Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10048\279-025_BF56.tmp

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

None

Sequence File: **\\Lims\gdrive\ezchrom\Projects\GC05\Sequence\279.seq**
Sample Name: **231440-008,179752,20x**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC05\Data\279-016**
Instrument: GC05 Vial: N/A Operator: lims2k3\tvh3
Method Name: \\Lims\gdrive\ezchrom\Projects\GC05\Method\tvhbtxe278.met

Software Version 3.1.7
Run Date: 10/7/2011 5:22:20 AM
Analysis Date: 10/7/2011 5:51:03 AM
Sample Amount: 5 Multiplier: 5
Vial & pH or Core ID: b1.0



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Integration Events

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

Manual Integration Fixes

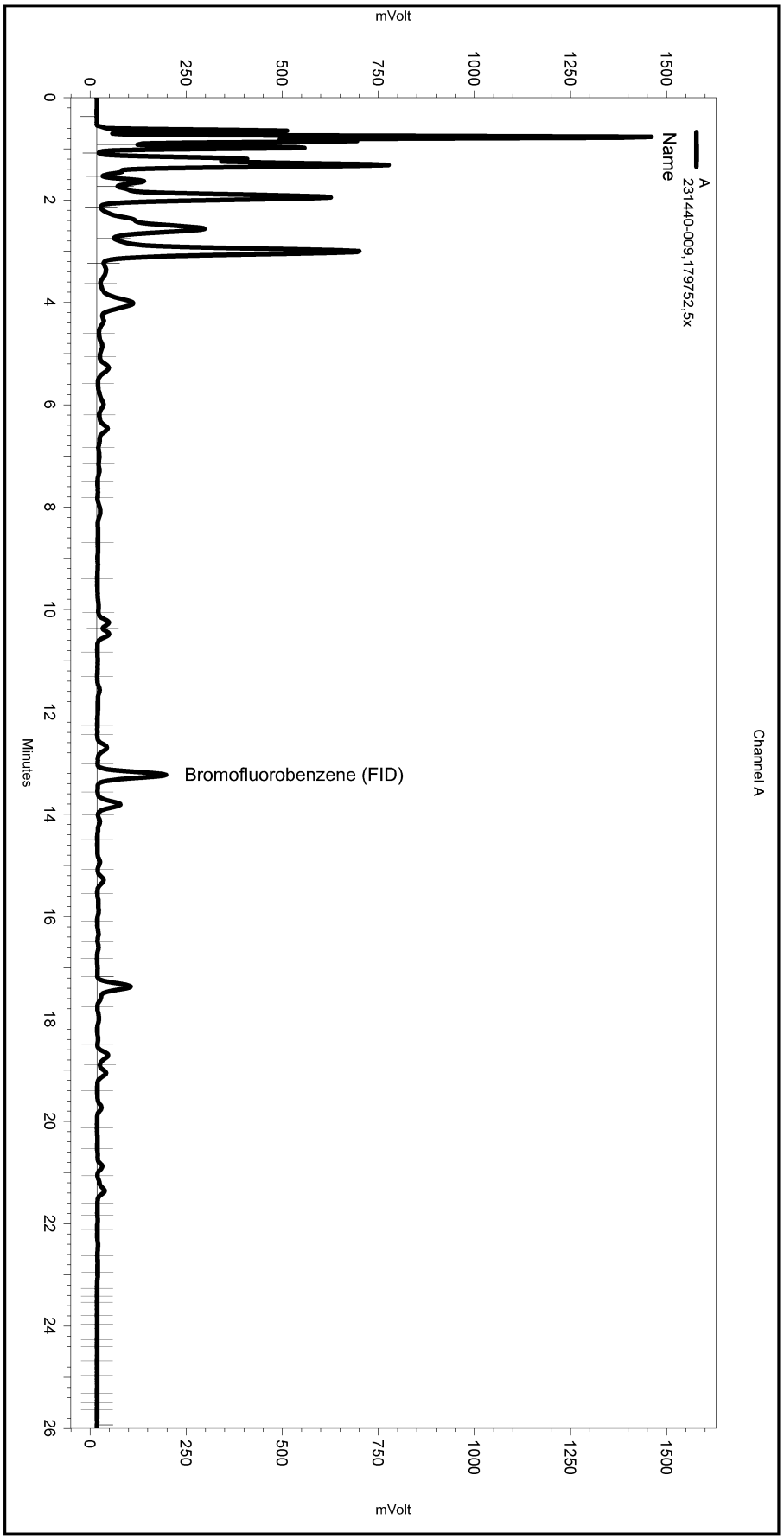
Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10048\279-016_BF4D.tmp

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

None

Sequence File: **\\Lims\gdrive\ezchrom\Projects\GC05\Sequence\279.seq**
Sample Name: **231440-009,179752,5x**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC05\Data\279-017**
Instrument: GC05 Vial: N/A Operator: lims2k3\tvh3
Method Name: \\Lims\gdrive\ezchrom\Projects\GC05\Method\tvhbtxe278.met

Software Version 3.1.7
Run Date: 10/7/2011 5:58:51 AM
Analysis Date: 10/7/2011 6:27:35 AM
Sample Amount: 5 Multiplier: 5
Vial & pH or Core ID: b1.0



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Integration Events

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

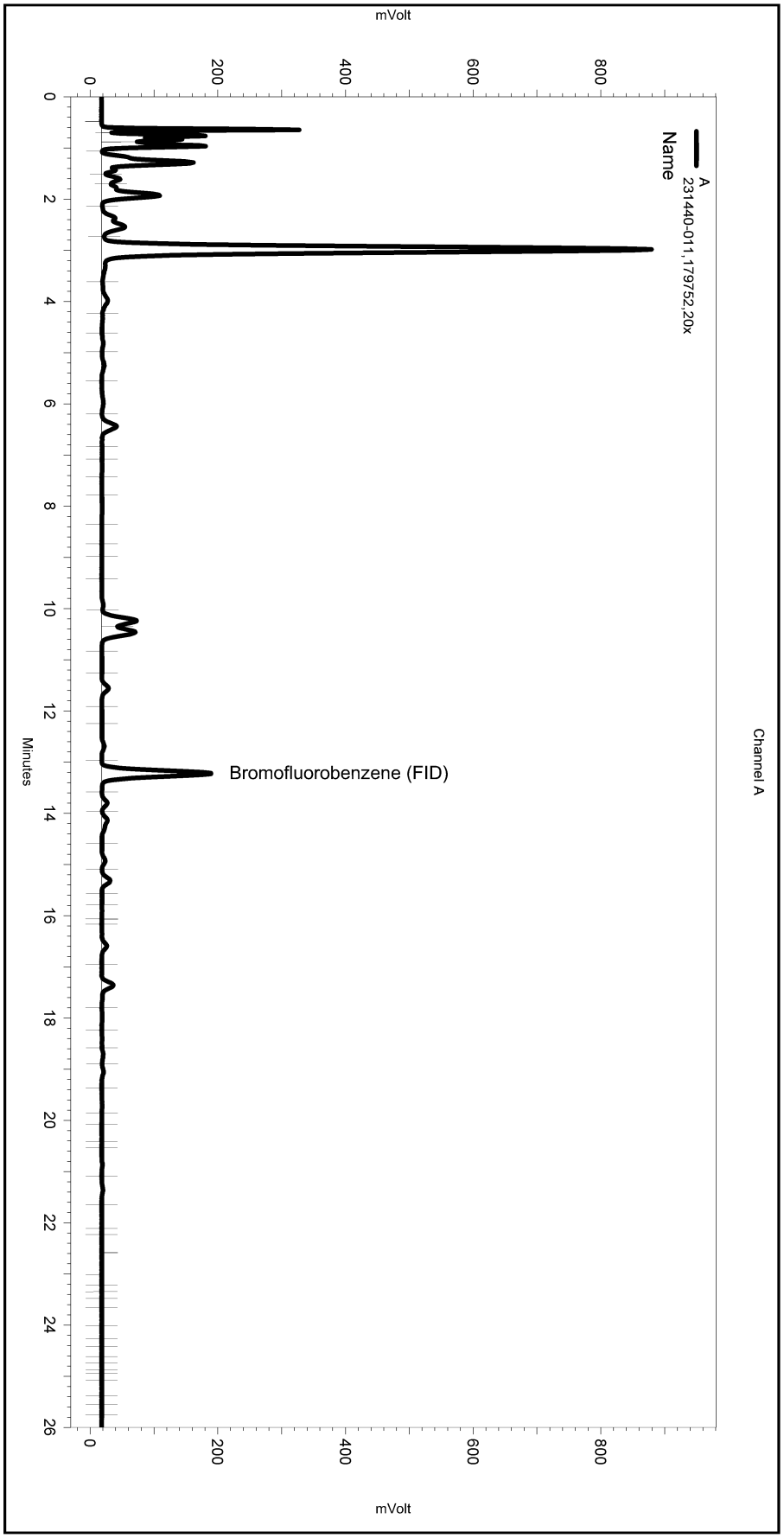
Manual Integration Fixes

Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10048\279-017_BF4E.tmp

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

Sequence File: **\\Lims\gdrive\ezchrom\Projects\GC05\Sequence\279.seq**
Sample Name: **231440-011,179752,20x**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC05\Data\279-019**
Instrument: GC05 Vial: N/A Operator: lims2k3\tvh3
Method Name: \\Lims\gdrive\ezchrom\Projects\GC05\Method\tvhbtxe278.met

Software Version 3.1.7
Run Date: 10/7/2011 7:12:06 AM
Analysis Date: 10/7/2011 7:40:49 AM
Sample Amount: 5 Multiplier: 5
Vial & pH or Core ID: b1.0



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Integration Events

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

Manual Integration Fixes

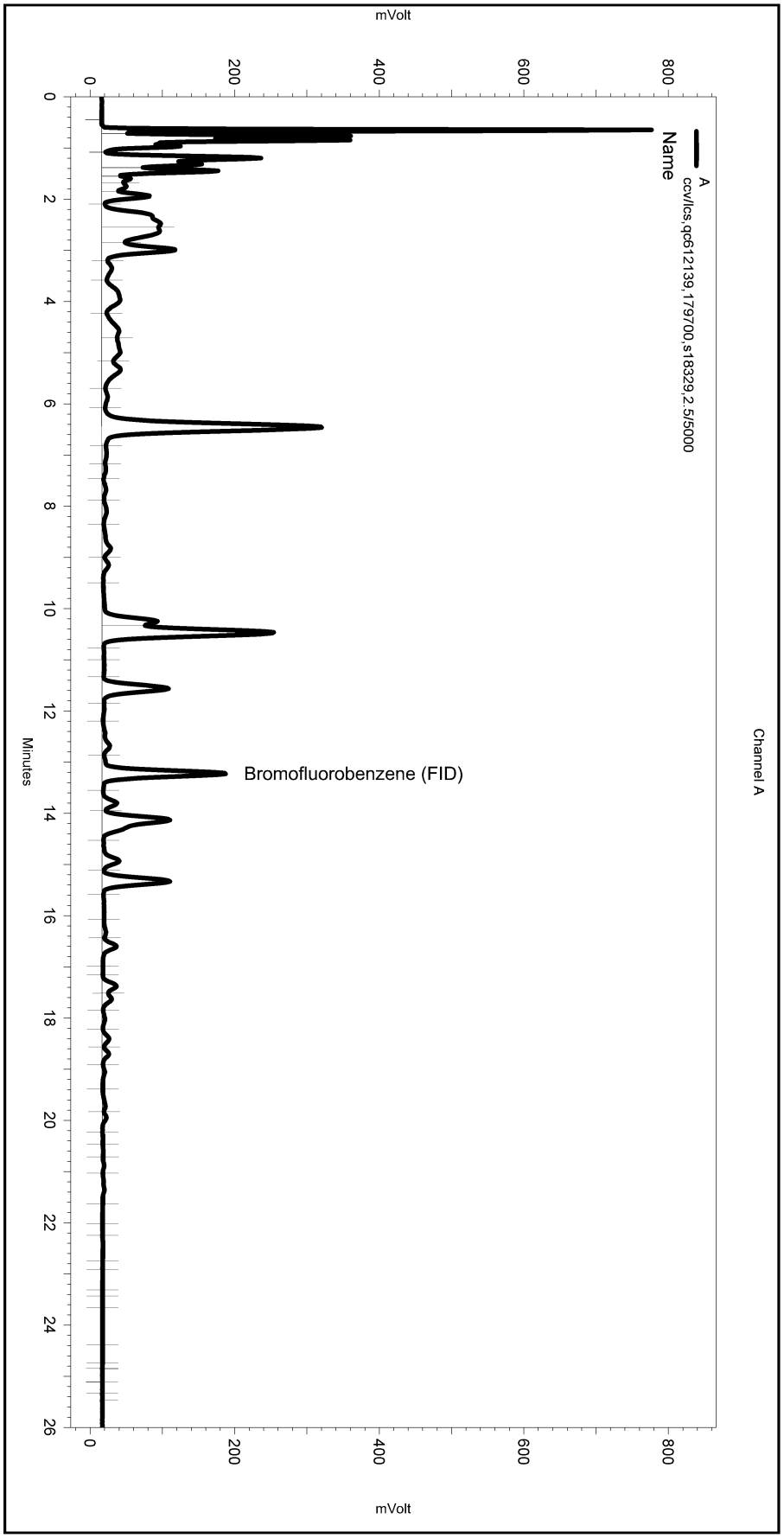
Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10048\279-019_BF50.tmp

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

None

Sequence File: **\\Lims\gdrive\ezchrom\Projects\GC05\Sequence\278.seq**
Sample Name: **ccv/lcs,qc612139,179700,s18329,2.5/5000**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC05\Data\278-017**
Instrument: GC05 Vial: N/A Operator: lims2k3\tvh3
Method Name: \\Lims\gdrive\ezchrom\Projects\GC05\Method\tvhbtxe278.met

Software Version 3.1.7
Run Date: 10/6/2011 5:23:45 AM
Analysis Date: 10/6/2011 5:52:27 AM
Sample Amount: 5 Multiplier: 5
Vial & pH or Core ID: {Data Description}



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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: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10048\278-017_BF2D.tmp

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

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	231440	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2007-65	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	09/29/11
Units:	ug/L	Received:	09/29/11
Diln Fac:	1.000		

Field ID:	MW-4	Batch#:	179524
Type:	SAMPLE	Prepared:	09/30/11
Lab ID:	231440-001	Analyzed:	10/03/11

Analyte	Result	RL
Diesel C10-C24	380 Y	50

Surrogate	%REC	Limits
o-Terphenyl	109	68-120

Field ID:	MW-5	Batch#:	179524
Type:	SAMPLE	Prepared:	09/30/11
Lab ID:	231440-002	Analyzed:	10/03/11

Analyte	Result	RL
Diesel C10-C24	4,400 Y	50

Surrogate	%REC	Limits
o-Terphenyl	90	68-120

Field ID:	MW-6	Batch#:	179524
Type:	SAMPLE	Prepared:	09/30/11
Lab ID:	231440-003	Analyzed:	10/06/11

Analyte	Result	RL
Diesel C10-C24	1,900 Y	50

Surrogate	%REC	Limits
o-Terphenyl	92	68-120

Field ID:	MW-7	Batch#:	179797
Type:	SAMPLE	Prepared:	10/07/11
Lab ID:	231440-004	Analyzed:	10/10/11

Analyte	Result	RL
Diesel C10-C24	8,000	50

Surrogate	%REC	Limits
o-Terphenyl	78	68-120

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

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	231440	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2007-65	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	09/29/11
Units:	ug/L	Received:	09/29/11
Diln Fac:	1.000		

Field ID:	MW-8	Batch#:	179524
Type:	SAMPLE	Prepared:	09/30/11
Lab ID:	231440-005	Analyzed:	10/03/11

Analyte	Result	RL
Diesel C10-C24	18,000 Y	50

Surrogate	%REC	Limits
o-Terphenyl	101	68-120

Field ID:	MW-10	Batch#:	179524
Type:	SAMPLE	Prepared:	09/30/11
Lab ID:	231440-006	Analyzed:	10/03/11

Analyte	Result	RL
Diesel C10-C24	3,800 Y	50

Surrogate	%REC	Limits
o-Terphenyl	98	68-120

Field ID:	MW-13	Batch#:	179524
Type:	SAMPLE	Prepared:	09/30/11
Lab ID:	231440-007	Analyzed:	10/03/11

Analyte	Result	RL
Diesel C10-C24	15,000 Y	50

Surrogate	%REC	Limits
o-Terphenyl	104	68-120

Field ID:	MW-14	Batch#:	179524
Type:	SAMPLE	Prepared:	09/30/11
Lab ID:	231440-008	Analyzed:	10/03/11

Analyte	Result	RL
Diesel C10-C24	5,900 Y	50

Surrogate	%REC	Limits
o-Terphenyl	97	68-120

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

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	231440	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2007-65	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	09/29/11
Units:	ug/L	Received:	09/29/11
Diln Fac:	1.000		

Field ID:	MW-17	Batch#:	179524
Type:	SAMPLE	Prepared:	09/30/11
Lab ID:	231440-009	Analyzed:	10/03/11

Analyte	Result	RL
Diesel C10-C24	2,400 Y	50

Surrogate	%REC	Limits
o-Terphenyl	86	68-120

Field ID:	MW-18	Batch#:	179524
Type:	SAMPLE	Prepared:	09/30/11
Lab ID:	231440-010	Analyzed:	10/03/11

Analyte	Result	RL
Diesel C10-C24	9,800 Y	50

Surrogate	%REC	Limits
o-Terphenyl	69	68-120

Field ID:	MW-E	Batch#:	179524
Type:	SAMPLE	Prepared:	09/30/11
Lab ID:	231440-011	Analyzed:	10/04/11

Analyte	Result	RL
Diesel C10-C24	7,600 Y	50

Surrogate	%REC	Limits
o-Terphenyl	92	68-120

Type:	BLANK	Prepared:	09/30/11
Lab ID:	QC611416	Analyzed:	10/03/11
Batch#:	179524		

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
o-Terphenyl	99	68-120

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

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	231440	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2007-65	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	09/29/11
Units:	ug/L	Received:	09/29/11
Diln Fac:	1.000		

Type:	BLANK	Prepared:	10/07/11
Lab ID:	QC612539	Analyzed:	10/10/11
Batch#:	179797		

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
o-Terphenyl	107	68-120

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

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	231440	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2007-65	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	179524
Units:	ug/L	Prepared:	09/30/11
Diln Fac:	1.000	Analyzed:	10/03/11

Type: BS Lab ID: QC611417

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,503	100	61-120

Surrogate	%REC	Limits
o-Terphenyl	110	68-120

Type: BSD Lab ID: QC611418

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,524	101	61-120	1	20

Surrogate	%REC	Limits
o-Terphenyl	110	68-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	231440	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2007-65	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC612540	Batch#:	179797
Matrix:	Water	Prepared:	10/07/11
Units:	ug/L	Analyzed:	10/10/11

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	1,927	77	61-120

Surrogate	%REC	Limits
o-Terphenyl	101	68-120

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	231440	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2007-65	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	179797
MSS Lab ID:	231634-001	Sampled:	10/05/11
Matrix:	Water	Received:	10/05/11
Units:	ug/L	Prepared:	10/07/11
Diln Fac:	1.000	Analyzed:	10/11/11

Type: MS Cleanup Method: EPA 3630C
Lab ID: QC612541

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	21.98	2,500	1,933	76	33-140

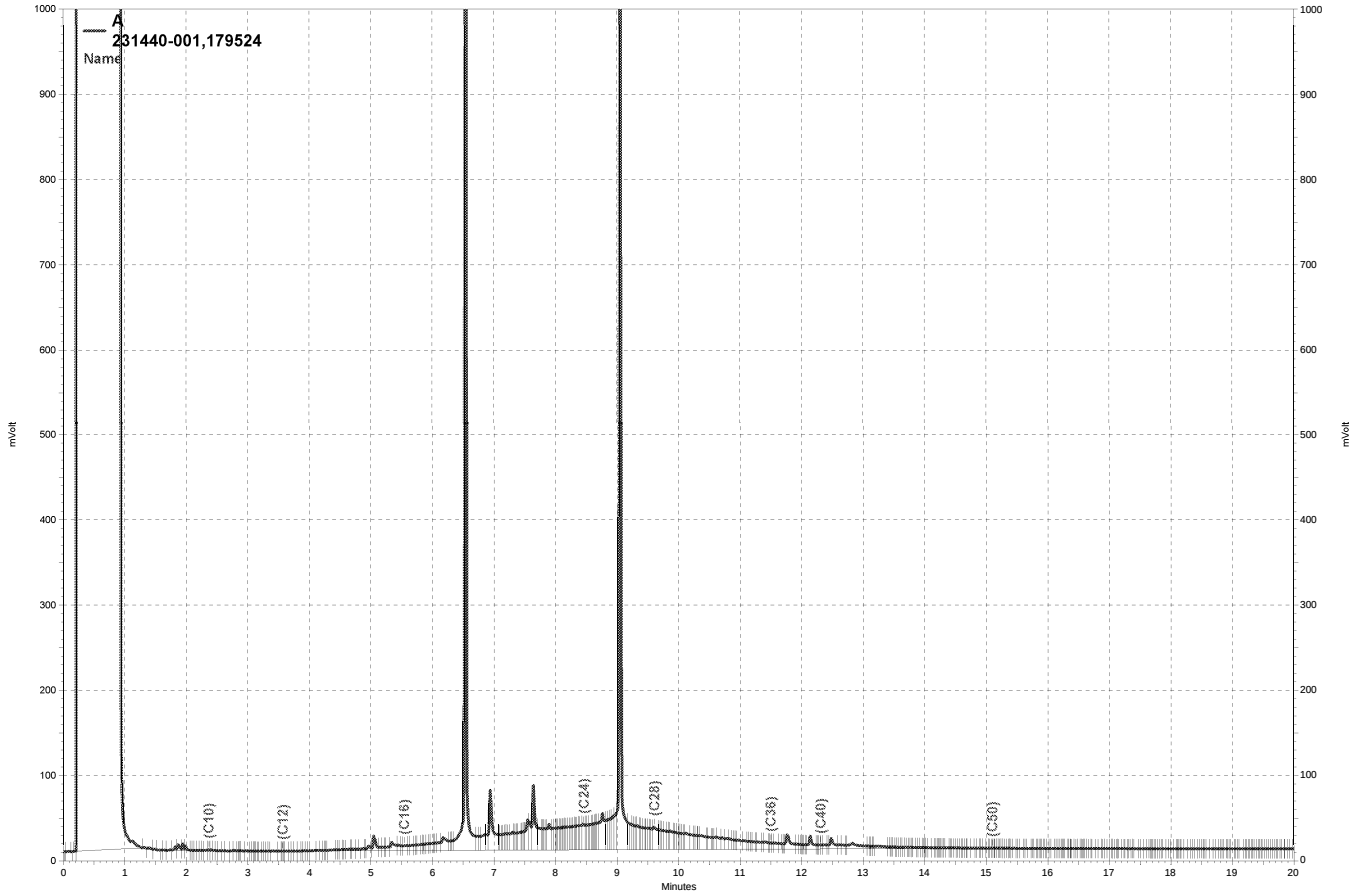
Surrogate	%REC	Limits
o-Terphenyl	93	68-120

Type: MSD Cleanup Method: EPA 3630C
Lab ID: QC612542

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,057	81	33-140	6	30

Surrogate	%REC	Limits
o-Terphenyl	99	68-120

RPD= Relative Percent Difference



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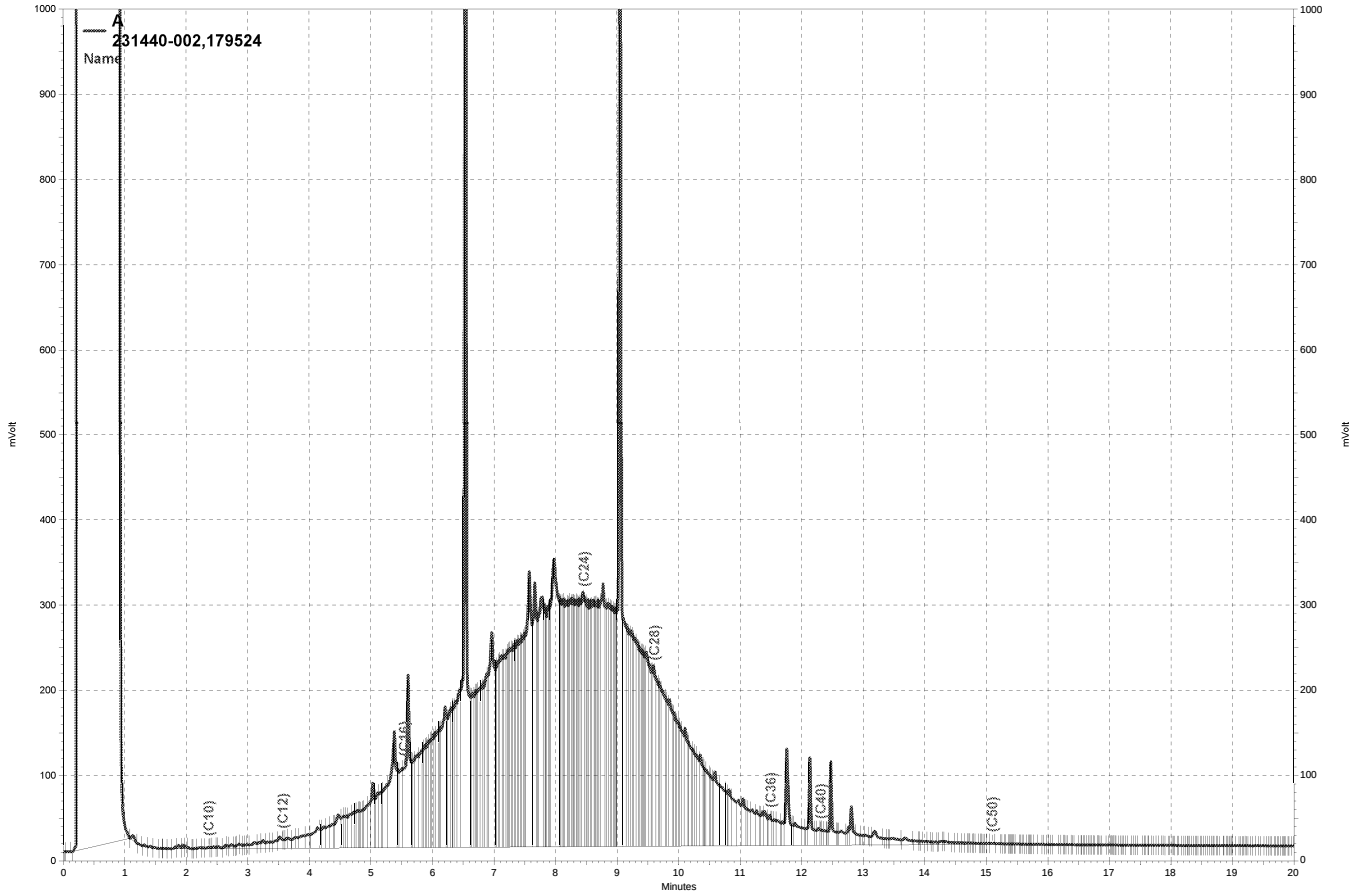

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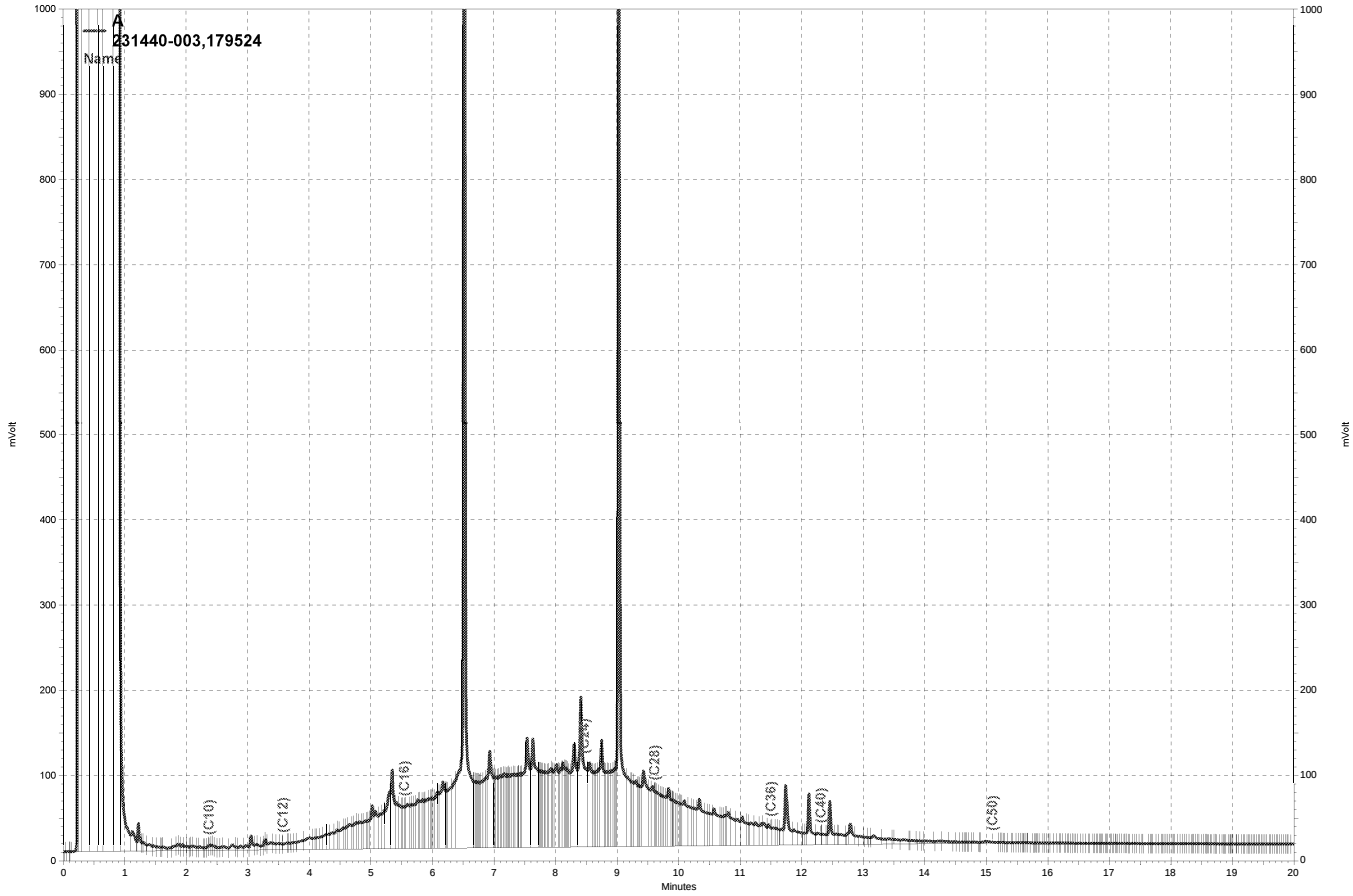

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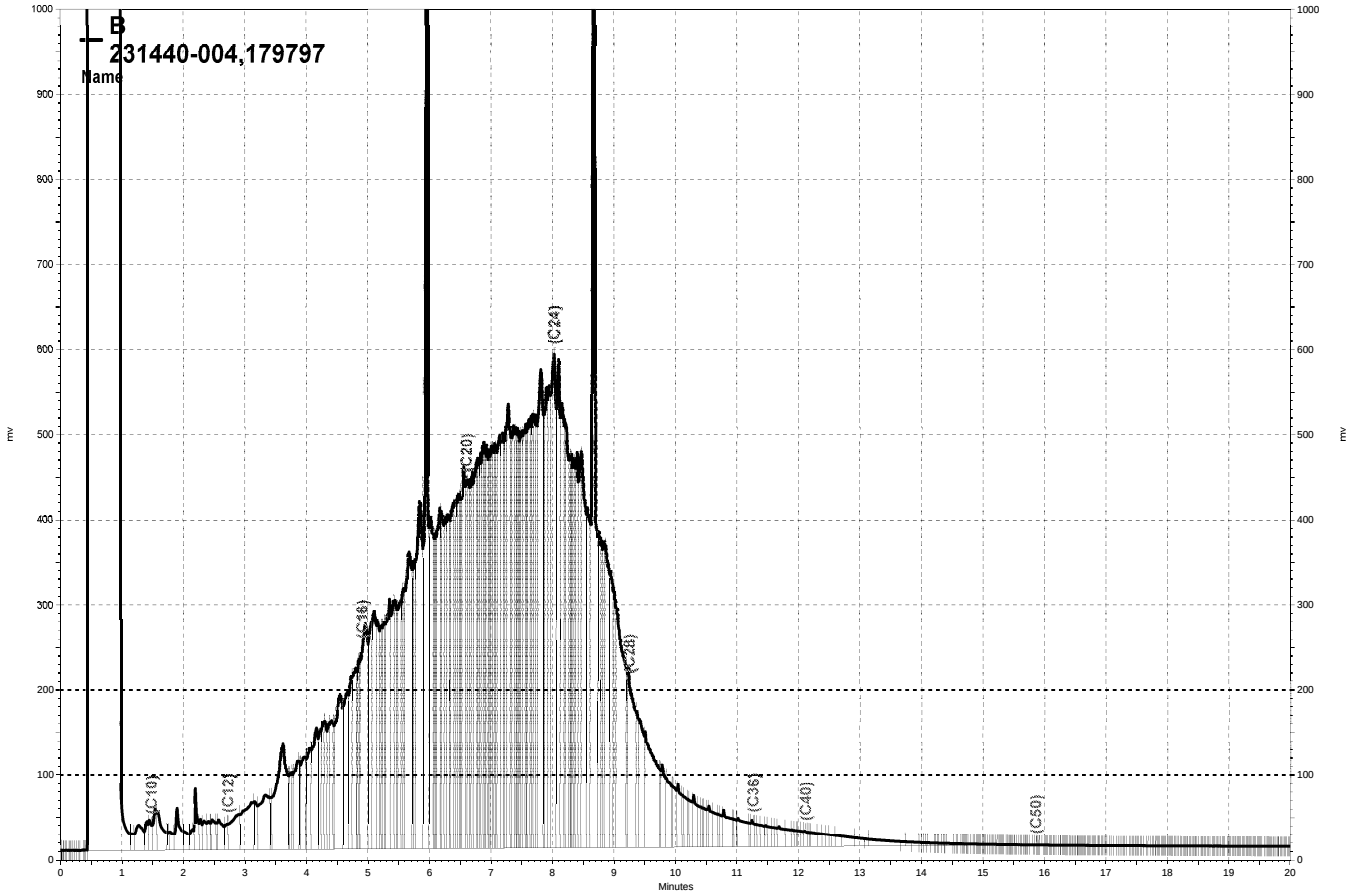

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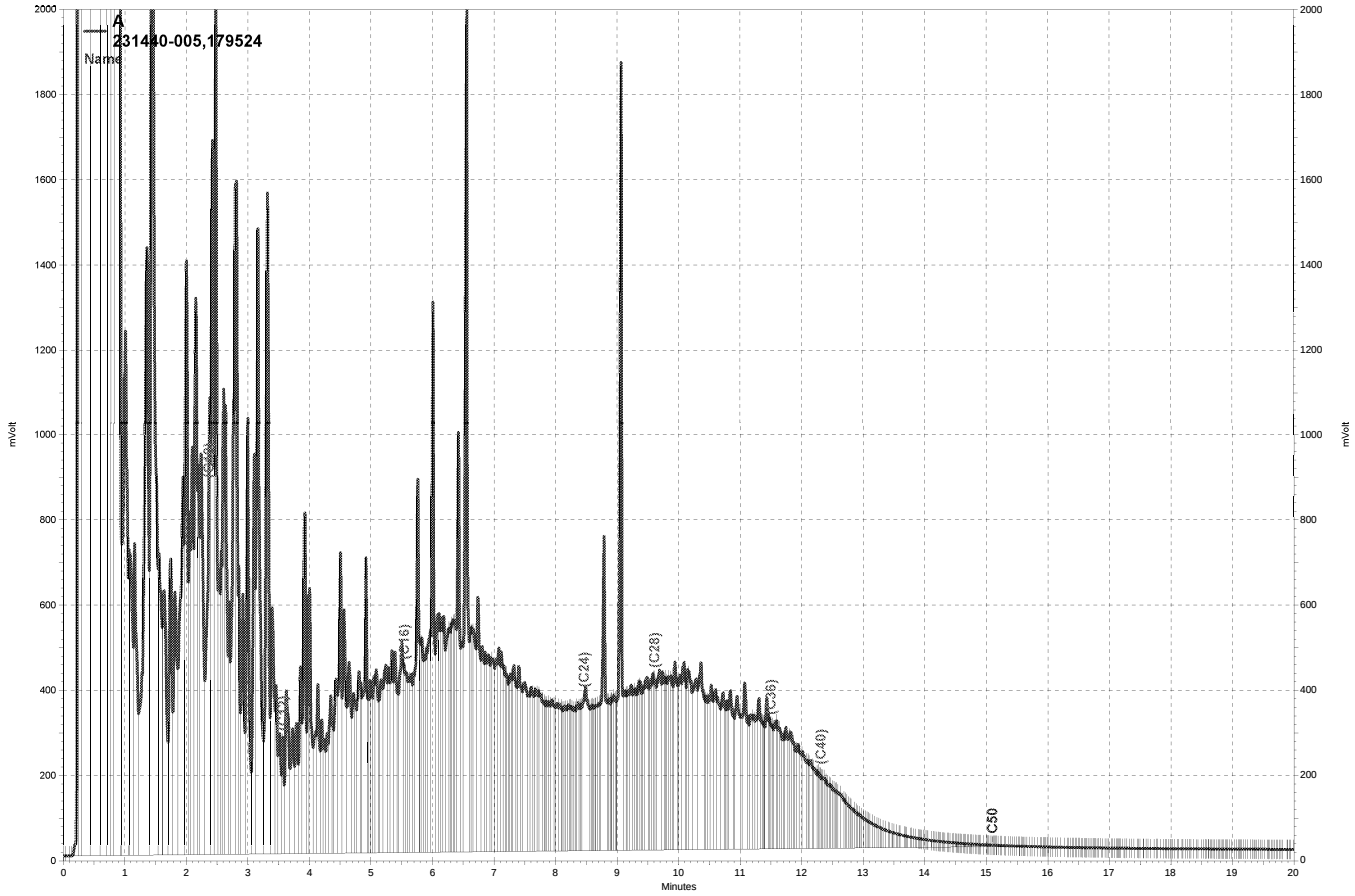

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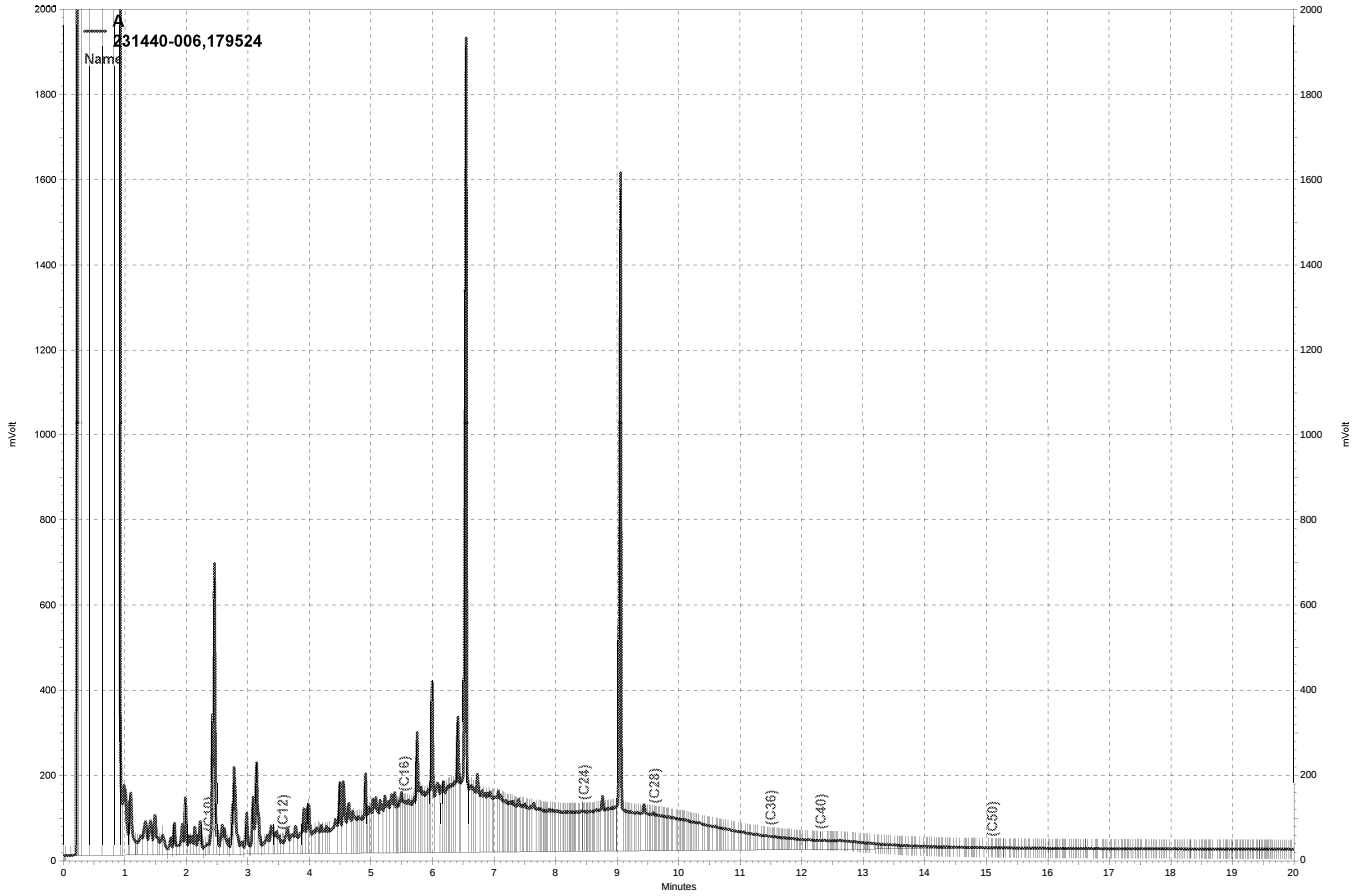

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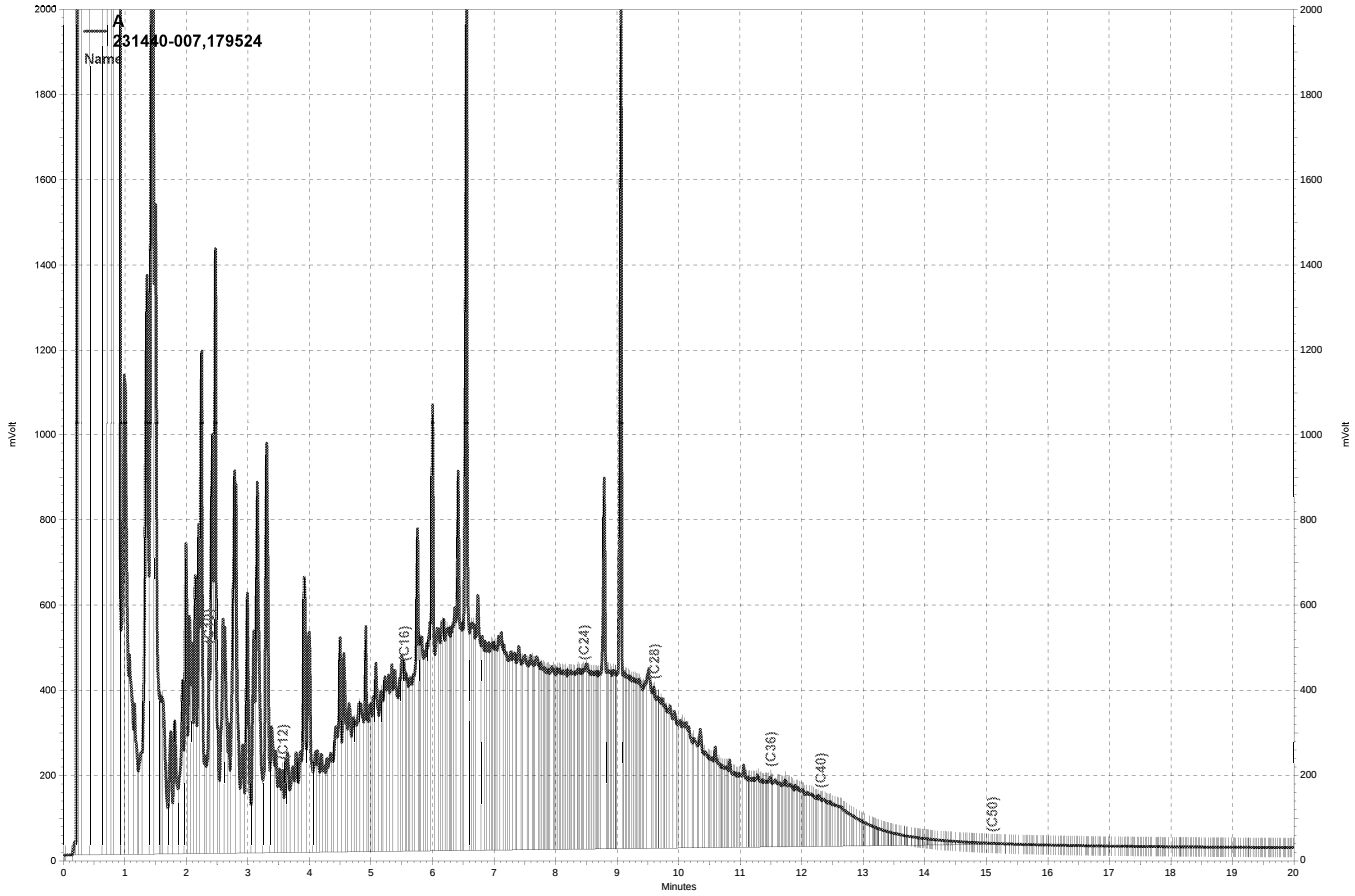

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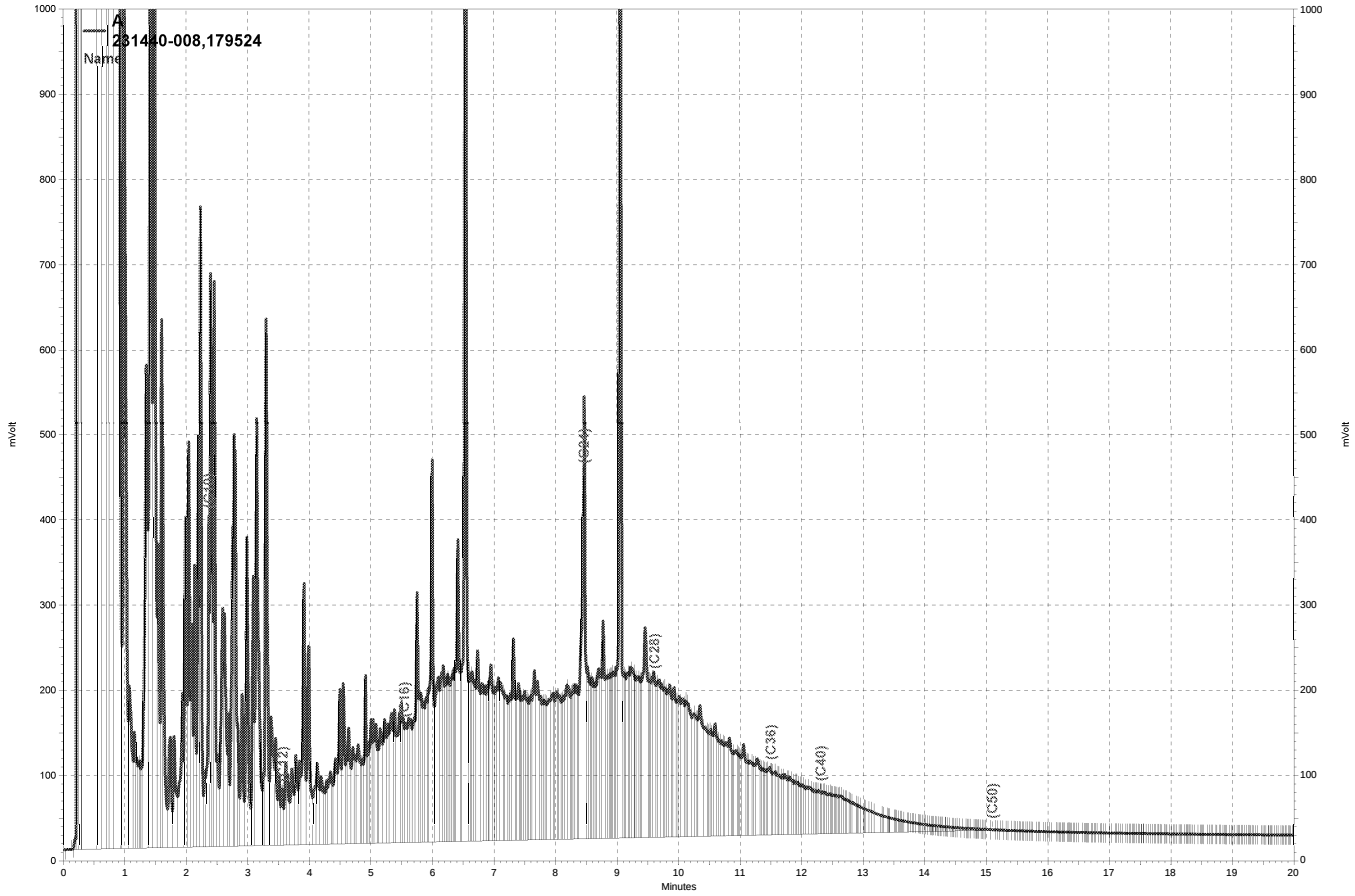

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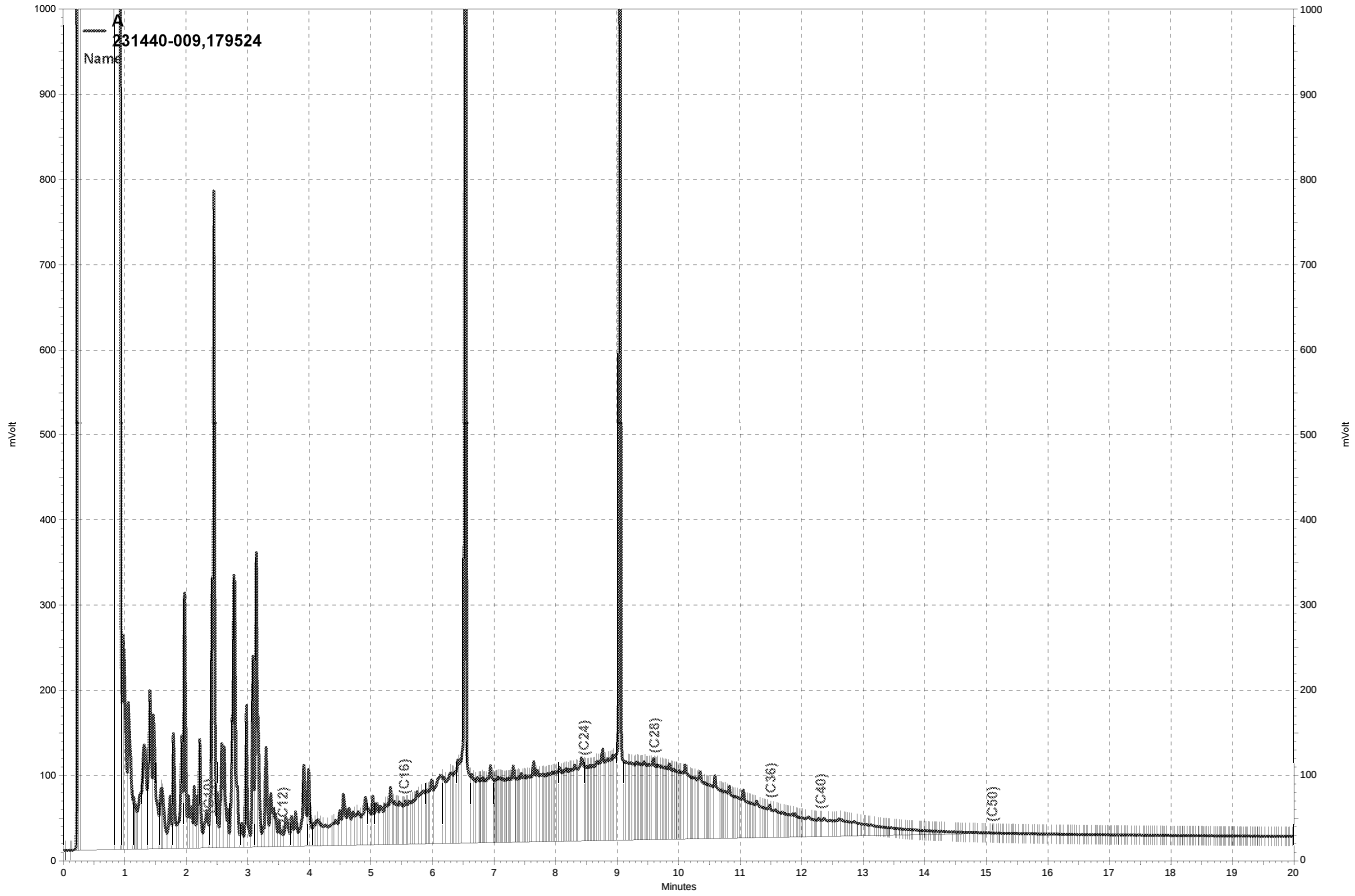

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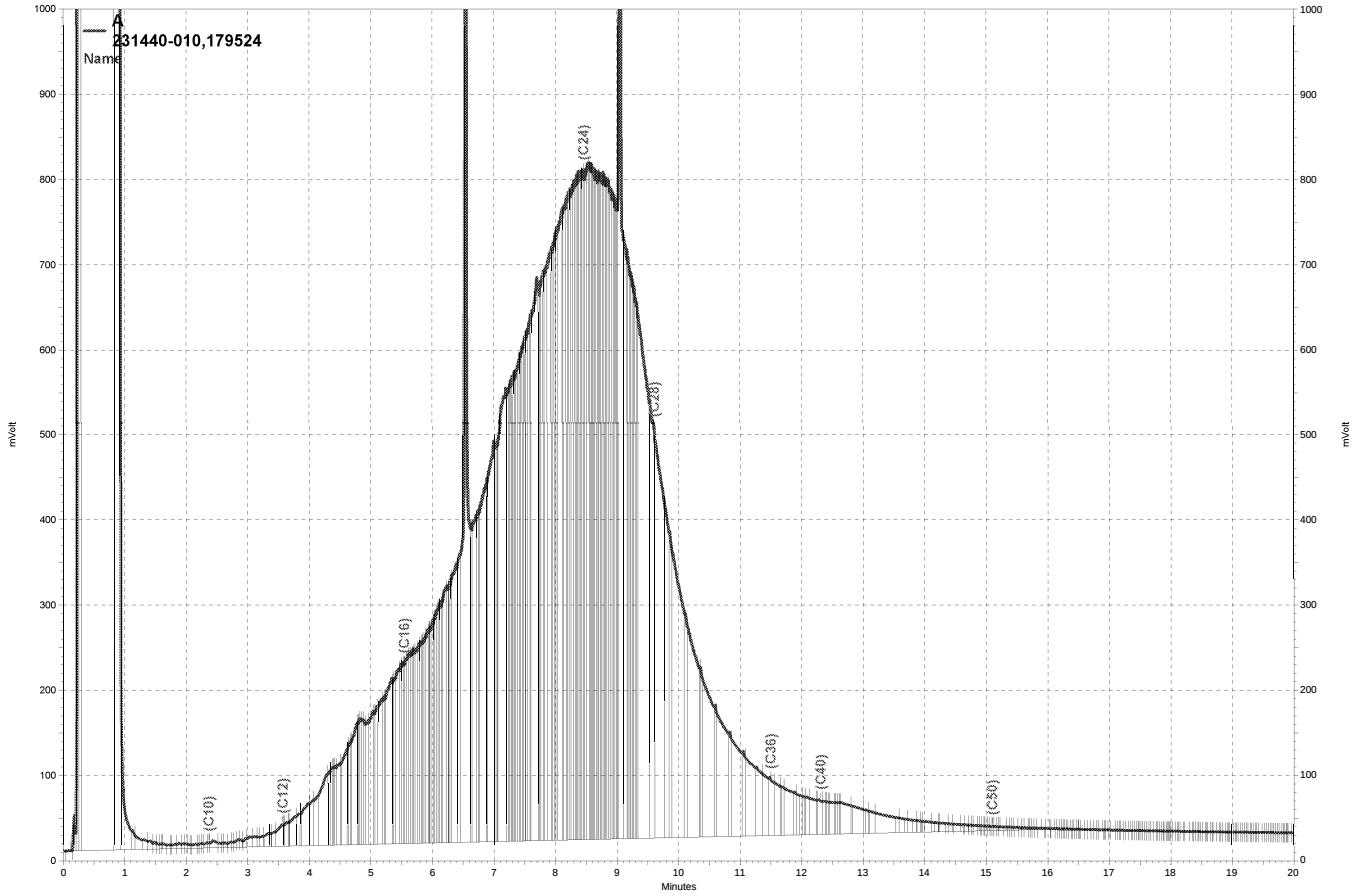

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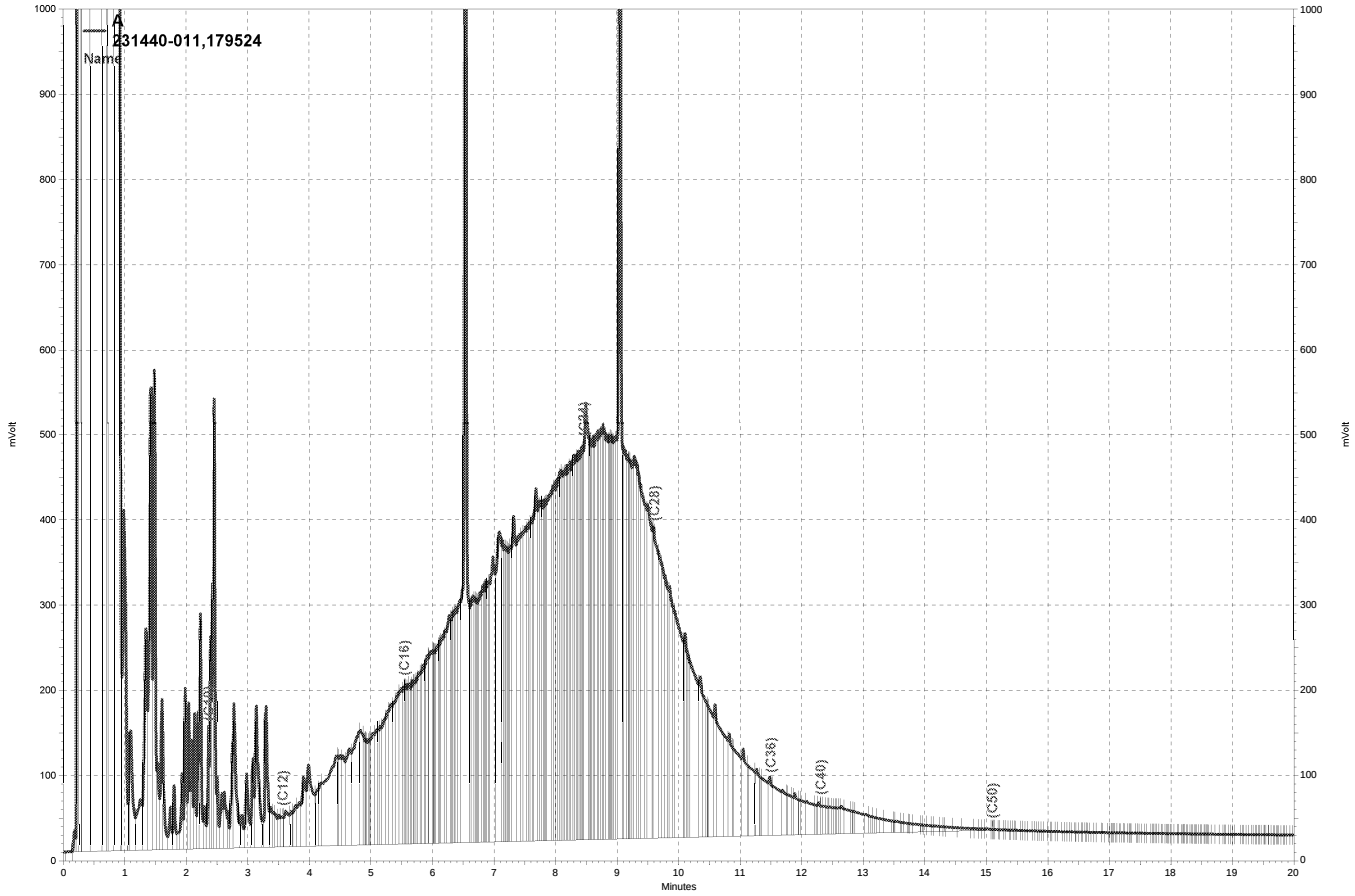

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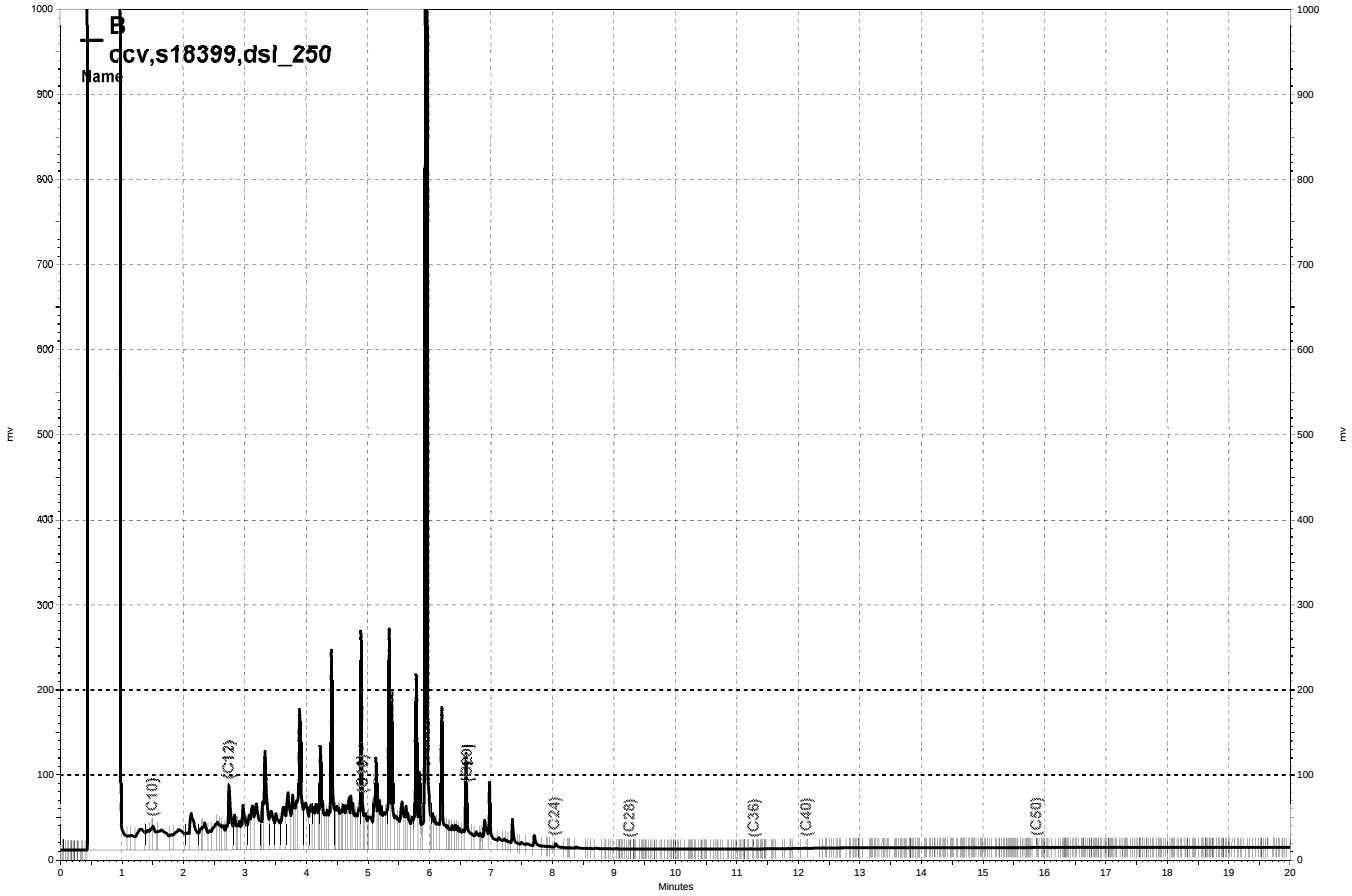

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Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

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

Laboratory Job Number 231471
ANALYTICAL REPORT

Stellar Environmental Solutions	Project : 2007-65
2198 6th Street	Location : Bay Center Apartment
Berkeley, CA 94710	Level : II

Sample ID	Lab ID
MW-3	231471-001
MW-9	231471-002
MW-11	231471-003
MW-12	231471-004
MW-15	231471-005
MW-16	231471-006
RW-1	231471-007

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: 10/10/2011
Project Manager

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**231471**
Client:	**Stellar Environmental Solutions**
Project:	**2007-65**
Location:	**Bay Center Apartment**
Request Date:	**09/30/11**
Samples Received:	**09/30/11**

This data package contains sample and QC results for seven water samples, requested for the above referenced project on 09/30/11. The samples were received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B and EPA 8021B):
Low response was observed for MTBE in the CCV analyzed 10/07/11 08:25; affected data was qualified with "b". No other analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B):
No analytical problems were encountered.

Chain of Custody Record

23147

Lab job no. ______
Date 9/30/11
Page 1 of 1

Laboratory: C & T
Address: 2323 FIFTH ST, BERKELEY, CA
Project Owner: ______
Site Address: 6400 CHRISTIE AVE, BERKELEY, CA
Project Name: BAY CENTER APARTMENT
Project Number: 2007-65

Method of Shipment: LAB COURIER
Shipment No. ______
Airbill No. ______
Cooler No. ______
Project Manager: ~~TERAL GUNGE~~ R. MAKDISI
Telephone No. (510) 644-3123
Fax No. (510) 644-3859
Samplers: *(Signature)* [signature]

	Field Sample Number	Location/ Depth	Date	Time	Sample Type	Type/Size of Container	Preservation: Cooler	Preservation: Chemical	Filtered	No. of Containers	TEH-D (8015)	TPH-G (8015)	BTEX + MTBE	Remarks
1	MW-3		9/30/11	1210		VOA 40mL / Amber 500mL glass		HCl / NP		5	X	X	X	
2	MW-9		↓	1030		↓		↓		↓	X	X	X	
3	MW-11		↓	1050		↓		↓		↓	X	X	X	
4	MW-12		↓	1110		↓		↓		↓	X	X	X	
5	MW-15		↓	1150		↓		↓		↓	X	X	X	
6	MW-16		↓	1125		↓		↓		↓	X	X	X	
7	RW-1		↓	1235		↓		↓		↓	X	X	X	

Relinquished by:	Date / Time	Received by:	Date / Time
Signature: [signature] Printed: WILLIAM WONG Company: BLAINE TECH SERVICES	9/30/11 1400	Signature: [signature] Printed: Pat Gonzalez Company: C & T	9/30/11 1400
Signature: ______ Printed: ______ Company: ______	Date / Time	Signature: ______ Printed: ______ Company: ______	Date / Time
Signature: ______ Printed: ______ Company: ______	Date / Time	Signature: ______ Printed: ______ Company: ______	Date / Time

Turnaround Time: STANDARD
Comments: EDF REQUIRED
GLOBAL ID # SLT20055561

2000-00-01

★ Stellar Environmental Solutions — 2198 Sixth Street #201, Berkeley, CA 94710

COOLER RECEIPT CHECKLIST Curtis & Tompkins, Ltd.

Login # 231471 Date Received 9/30/11 Number of coolers 1
Client STELLAR Project 2007-65

Date Opened 9/30/11 By (print) I. CHOI (sign) [signature]
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: * Notify PM if temperature exceeds 6°C

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

☐ 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. Did you check preservatives for all bottles for each sample? _____ YES NO (N/A)
16. Did you document your preservative check? _____ YES NO (N/A)
17. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO (N/A)
18. Are bubbles > 6mm absent in VOA samples? _____ (YES) NO N/A
19. Was the client contacted concerning this sample delivery? _____ YES (NO)
If YES, Who was called? _____ By _____ Date: _____

COMMENTS

_____
_____
_____
_____
_____
_____

Rev 8, 6/11

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	231471	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Matrix:	Water	Sampled:	09/30/11
Units:	ug/L	Received:	09/30/11
Batch#:	179752		

Field ID:	MW-3	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	10/07/11
Lab ID:	231471-001		

Analyte	Result	RL	Analysis
Gasoline C7-C12	290	50	EPA 8015B
MTBE	9.5	2.0	EPA 8021B
Benzene	13	0.50	EPA 8021B
Toluene	1.5 C	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	2.0	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	92	78-123	EPA 8015B
Bromofluorobenzene (PID)	107	80-120	EPA 8021B

Field ID:	MW-9	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	10/07/11
Lab ID:	231471-002		

Analyte	Result	RL	Analysis
Gasoline C7-C12	62	50	EPA 8015B
MTBE	ND	2.0	EPA 8021B
Benzene	4.2	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
Bromofluorobenzene (FID)	84	78-123	EPA 8015B
Bromofluorobenzene (PID)	100	80-120	EPA 8021B

C= Presence confirmed, but RPD between columns exceeds 40%
b= See narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	231471	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Matrix:	Water	Sampled:	09/30/11
Units:	ug/L	Received:	09/30/11
Batch#:	179752		

Field ID:	MW-11	Diln Fac:	5.000
Type:	SAMPLE	Analyzed:	10/07/11
Lab ID:	231471-003		

Analyte	Result	RL	Analysis
Gasoline C7-C12	3,600	250	EPA 8015B
MTBE	ND	10	EPA 8021B
Benzene	1,200	2.5	EPA 8021B
Toluene	36	2.5	EPA 8021B
Ethylbenzene	16	2.5	EPA 8021B
m,p-Xylenes	30	2.5	EPA 8021B
o-Xylene	9.1	2.5	EPA 8021B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	85	78-123	EPA 8015B
Bromofluorobenzene (PID)	106	80-120	EPA 8021B

Field ID:	MW-12	Lab ID:	231471-004
Type:	SAMPLE		

Analyte	Result	RL	Diln Fac	Analyzed	Analysis
Gasoline C7-C12	8,600	50	1.000	10/08/11	EPA 8015B
MTBE	ND	40	20.00	10/07/11	EPA 8021B
Benzene	2,700	10	20.00	10/07/11	EPA 8021B
Toluene	85	10	20.00	10/07/11	EPA 8021B
Ethylbenzene	31	0.50	1.000	10/08/11	EPA 8021B
m,p-Xylenes	52	0.50	1.000	10/08/11	EPA 8021B
o-Xylene	11	0.50	1.000	10/08/11	EPA 8021B

Surrogate	%REC	Limits	Diln Fac	Analyzed	Analysis
Bromofluorobenzene (FID)	94	78-123	1.000	10/08/11	EPA 8015B
Bromofluorobenzene (PID)	112	80-120	1.000	10/08/11	EPA 8021B

Field ID:	MW-15	Lab ID:	231471-005
Type:	SAMPLE		

Analyte	Result	RL	Diln Fac	Analyzed	Analysis
Gasoline C7-C12	15,000	1,000	20.00	10/07/11	EPA 8015B
MTBE	ND	40	20.00	10/07/11	EPA 8021B
Benzene	6,400	10	20.00	10/07/11	EPA 8021B
Toluene	100	10	20.00	10/07/11	EPA 8021B
Ethylbenzene	71	10	20.00	10/07/11	EPA 8021B
m,p-Xylenes	71	10	20.00	10/07/11	EPA 8021B
o-Xylene	6.7	0.50	1.000	10/08/11	EPA 8021B

Surrogate	%REC	Limits	Diln Fac	Analyzed	Analysis
Bromofluorobenzene (FID)	90	78-123	20.00	10/07/11	EPA 8015B
Bromofluorobenzene (PID)	109	80-120	20.00	10/07/11	EPA 8021B

C= Presence confirmed, but RPD between columns exceeds 40%
b= See narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	231471	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Matrix:	Water	Sampled:	09/30/11
Units:	ug/L	Received:	09/30/11
Batch#:	179752		

Field ID:	MW-16	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	10/07/11
Lab ID:	231471-006		

Analyte	Result	RL	Analysis
Gasoline C7-C12	74	50	EPA 8015B
MTBE	ND	2.0	EPA 8021B
Benzene	17	0.50	EPA 8021B
Toluene	2.3	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	0.73	0.50	EPA 8021B
o-Xylene	0.60	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	84	78-123	EPA 8015B
Bromofluorobenzene (PID)	102	80-120	EPA 8021B

Field ID:	RW-1	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	10/07/11
Lab ID:	231471-007		

Analyte	Result	RL	Analysis
Gasoline C7-C12	230	50	EPA 8015B
MTBE	ND	2.0	EPA 8021B
Benzene	28	0.50	EPA 8021B
Toluene	2.7	0.50	EPA 8021B
Ethylbenzene	1.7	0.50	EPA 8021B
m,p-Xylenes	1.5	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	82	78-123	EPA 8015B
Bromofluorobenzene (PID)	97	80-120	EPA 8021B

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC612344	Analyzed:	10/06/11

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	ND b	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
Bromofluorobenzene (FID)	78	78-123	EPA 8015B
Bromofluorobenzene (PID)	89	80-120	EPA 8021B

C= Presence confirmed, but RPD between columns exceeds 40%
b= See narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	231471	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Matrix:	Water	Sampled:	09/30/11
Units:	ug/L	Received:	09/30/11
Batch#:	179752		

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC612513	Analyzed:	10/07/11

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
Bromofluorobenzene (FID)	81	78-123	EPA 8015B
Bromofluorobenzene (PID)	97	80-120	EPA 8021B

C= Presence confirmed, but RPD between columns exceeds 40%
b= See narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	231471	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Batch#:	179752

Type: BS Analyzed: 10/06/11
Lab ID: QC612341

Analyte	Spiked	Result	%REC	Limits	Analysis
MTBE	10.00	8.877	89	78-122	EPA 8021B
Benzene	10.00	8.599	86	80-120	EPA 8021B
Toluene	10.00	8.741	87	80-120	EPA 8021B
Ethylbenzene	10.00	9.079	91	80-120	EPA 8021B
m,p-Xylenes	10.00	9.520	95	80-120	EPA 8021B
o-Xylene	10.00	9.671	97	80-120	EPA 8021B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	83	78-123	EPA 8015B
Bromofluorobenzene (PID)	98	80-120	EPA 8021B

Type: BSD Analyzed: 10/07/11
Lab ID: QC612342

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analysis
MTBE	10.00	8.281 b	83	78-122	7	21	EPA 8021B
Benzene	10.00	8.435	84	80-120	2	20	EPA 8021B
Toluene	10.00	8.771	88	80-120	0	20	EPA 8021B
Ethylbenzene	10.00	8.864	89	80-120	2	20	EPA 8021B
m,p-Xylenes	10.00	9.388	94	80-120	1	20	EPA 8021B
o-Xylene	10.00	9.225	92	80-120	5	20	EPA 8021B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	80	78-123	EPA 8015B
Bromofluorobenzene (PID)	96	80-120	EPA 8021B

b= See narrative
RPD= Relative Percent Difference

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	231471	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC612343	Batch#:	179752
Matrix:	Water	Analyzed:	10/06/11
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits	Analysis
Gasoline C7-C12	1,000	867.8	87	80-120	EPA 8015B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	85	78-123	EPA 8015B
Bromofluorobenzene (PID)	102	80-120	EPA 8021B

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	231471	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Field ID:	MW-4	Batch#:	179752
MSS Lab ID:	231440-001	Sampled:	09/29/11
Matrix:	Water	Received:	09/29/11
Units:	ug/L	Analyzed:	10/08/11
Diln Fac:	1.000		

Type: MS Lab ID: QC612345

Analyte	MSS Result	Spiked	Result	%REC	Limits	Analysis
Gasoline C7-C12	23.10	2,000	1,924	95	66-120	EPA 8015B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	99	78-123	EPA 8015B
Bromofluorobenzene (PID)	114	80-120	EPA 8021B

Type: MSD Lab ID: QC612346

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analysis
Gasoline C7-C12	2,000	1,899	94	66-120	1	25	EPA 8015B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	100	78-123	EPA 8015B
Bromofluorobenzene (PID)	115	80-120	EPA 8021B

RPD= Relative Percent Difference

Sequence File: **\\Lims\gdrive\ezchrom\Projects\GC05\Sequence\279.seq**
Sample Name: **231471-001,179752**
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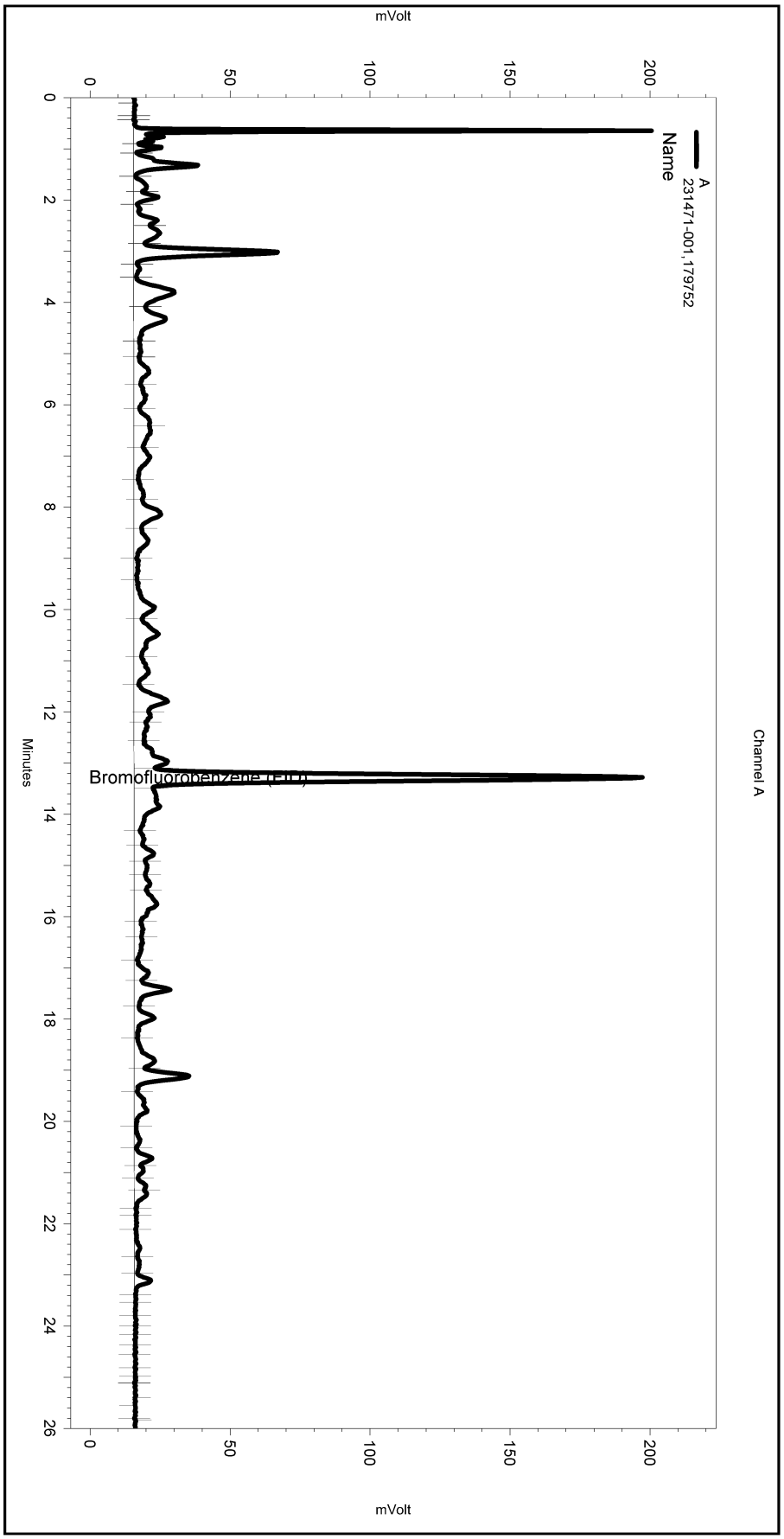
Instrument: GC05 Vial: N/A Operator: lims2k3\tvh3
Method Name: \\Lims\gdrive\ezchrom\Projects\GC05\Method\tvhbtxe278.met

Software Version 3.1.7
Run Date: 10/7/2011 9:41:25 PM
Analysis Date: 10/7/2011 10:10:07 PM
Sample Amount: 5 Multiplier: 5
Vial & pH or Core ID: b1.0



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No items selected for this section

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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: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10048\279-039_BF68.tmp

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

None

Sequence File: **\\Lims\gdrive\ezchrom\Projects\GC05\Sequence\279.seq**
Sample Name: **231471-002,179752**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC05\Data\279-040**
Instrument: GC05 Vial: N/A Operator: lims2k3\tvh3
Method Name: \\Lims\gdrive\ezchrom\Projects\GC05\Method\tvhbtxe278.met

Software Version 3.1.7
Run Date: 10/7/2011 10:17:55 PM
Analysis Date: 10/7/2011 10:46:38 PM
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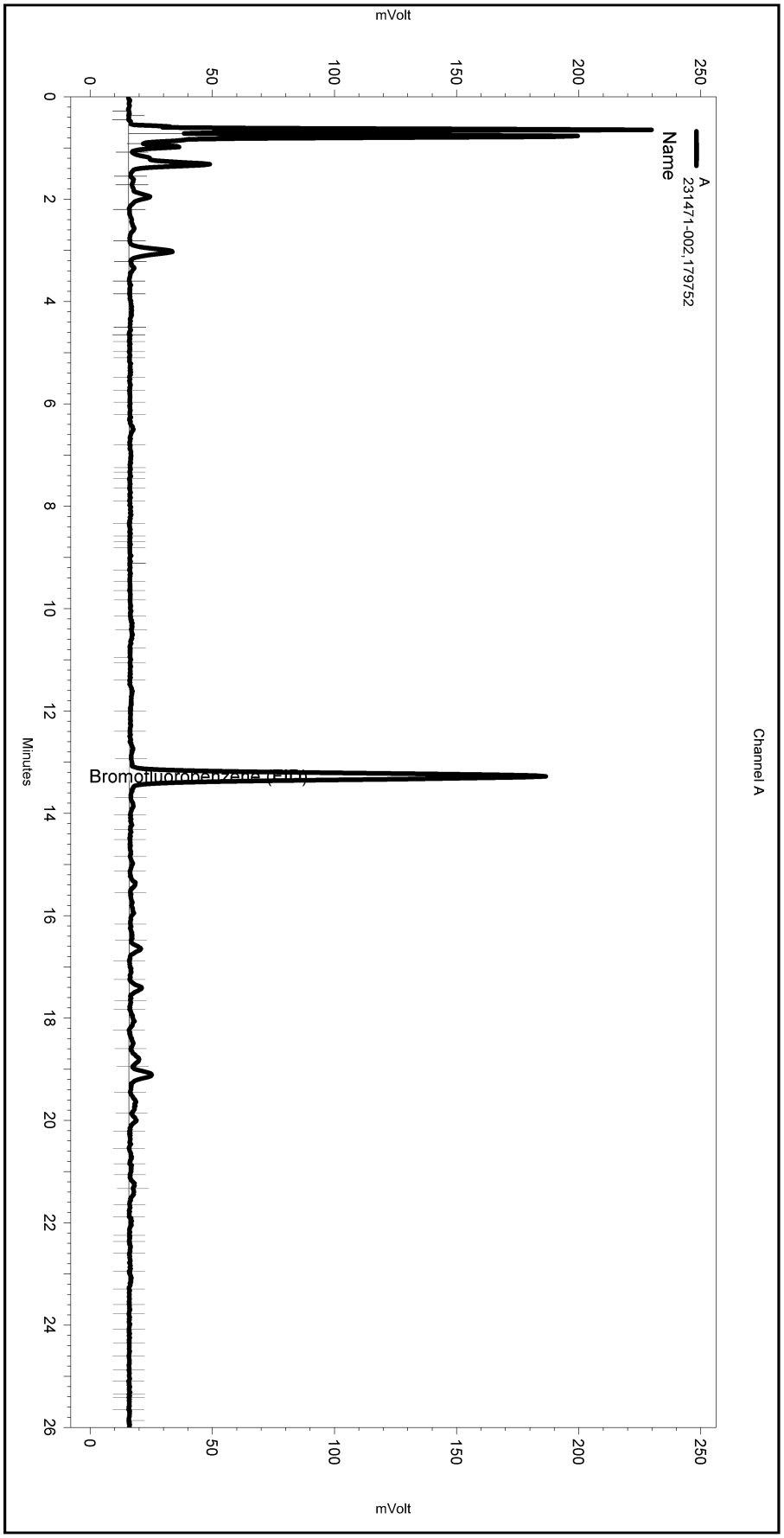
Vial & pH or Core ID: b1.0



---< 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: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10048\279-040_BF69.tmp

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

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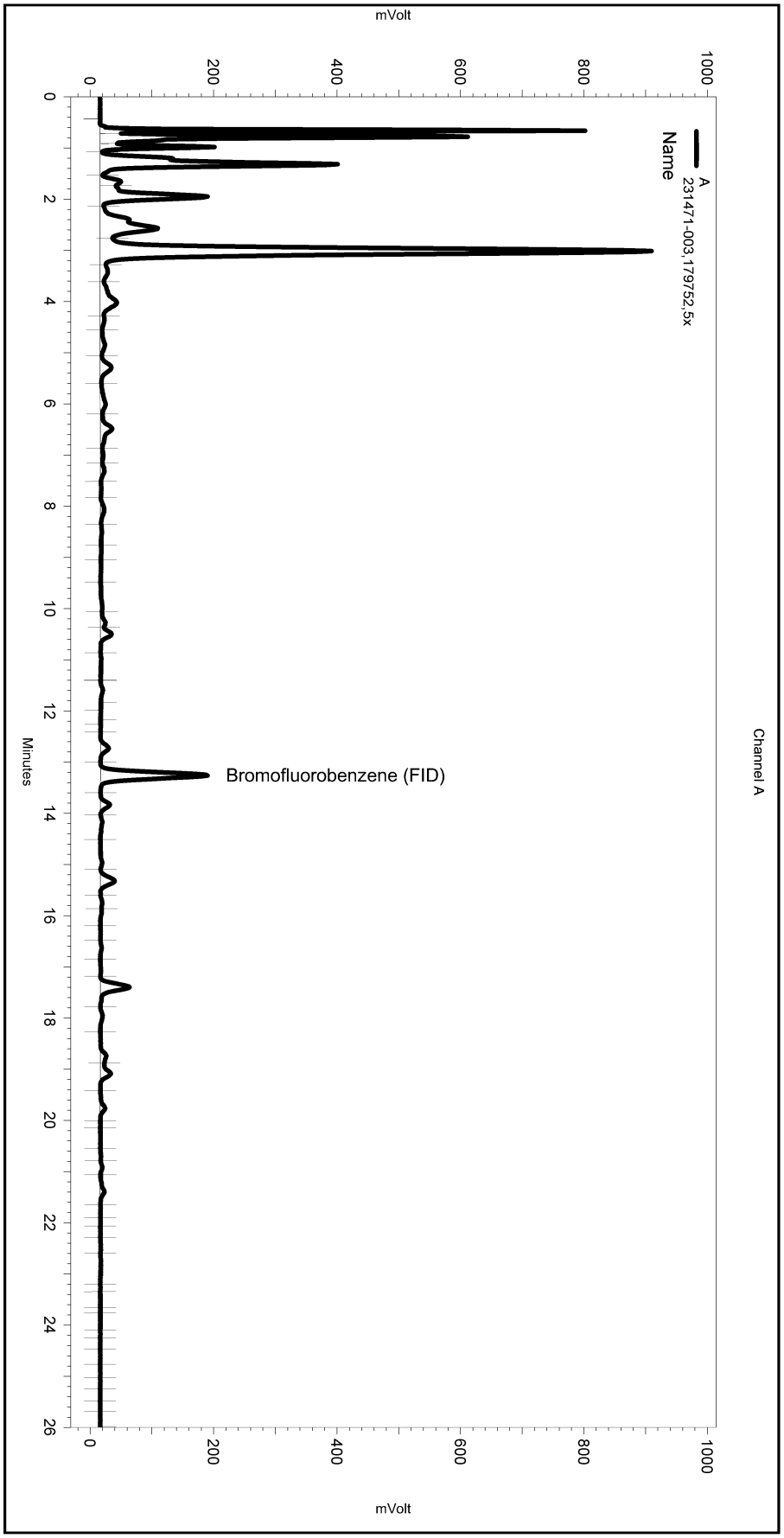
Sequence File: **\\Lims\gdrive\ezchrom\Projects\GC05\Sequence\279.seq**
Sample Name: **231471-003,179752,5x**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC05\Data\279-034**
Instrument: GC05 Vial: N/A Operator: lims2k3\tvh3
Method Name: \\Lims\gdrive\ezchrom\Projects\GC05\Method\tvhbtxe278.met

Software Version 3.1.7
Run Date: 10/7/2011 6:05:08 PM
Analysis Date: 10/7/2011 6:33:51 PM
Sample Amount: 5 Multiplier: 5
Vial & pH or Core ID: a1.0



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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: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10048\279-034_BF63.tmp

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

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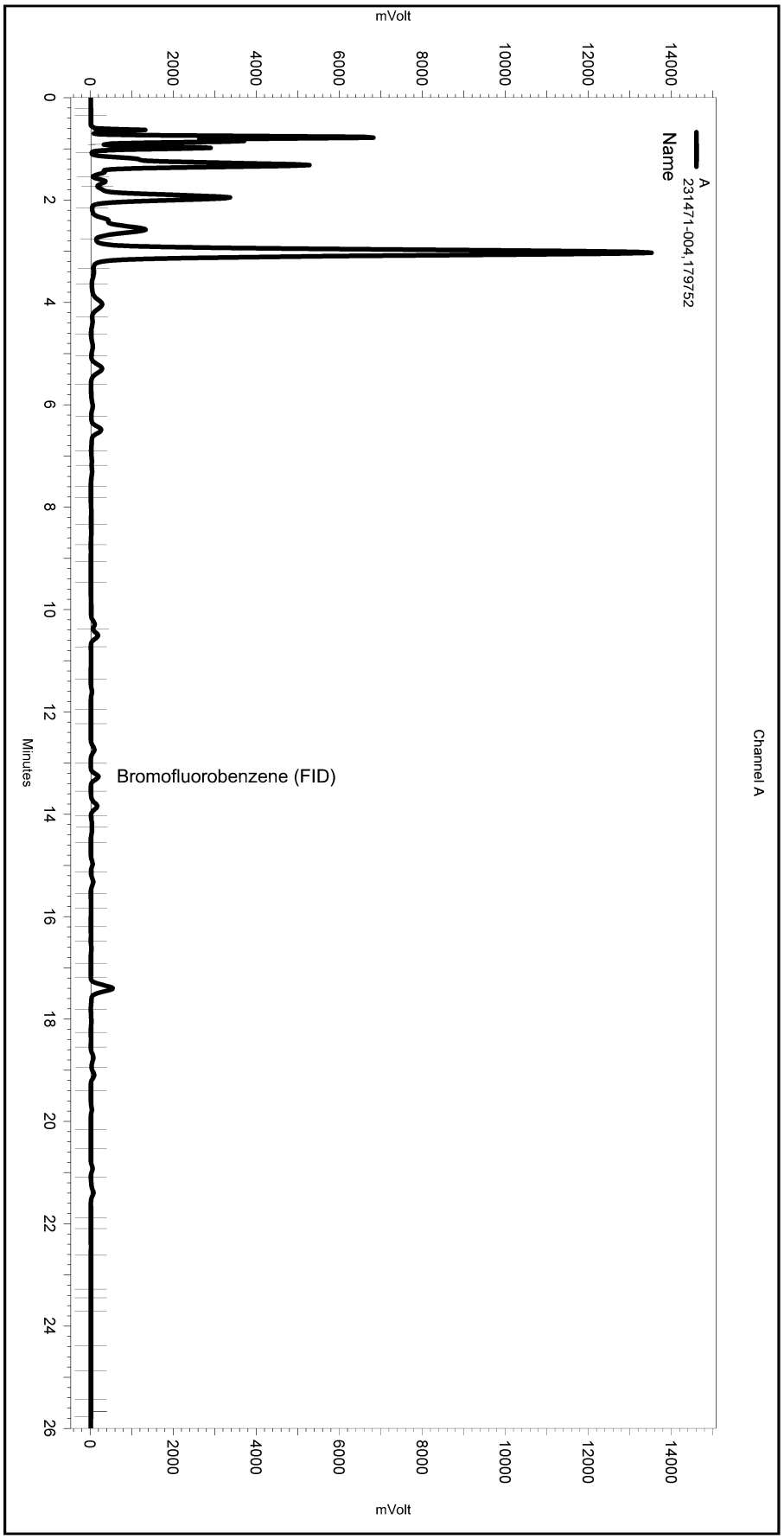
Sample Name: **231471-004,179752**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC05\Data\279-044**
Instrument: GC05 Vial: N/A Operator: lims2k3\tvh3
Method Name: \\Lims\gdrive\ezchrom\Projects\GC05\Method\tvhbtxe278.met

Software Version 3.1.7
Run Date: 10/8/2011 12:43:53 AM
Analysis Date: 10/8/2011 1:12:37 AM
Sample Amount: 5 Multiplier: 5
Vial & pH or Core ID: b1.0



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Integration Events

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Width	0	0	0.2
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Manual Integration Fixes

Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10048\279-044_BF6D.tmp

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
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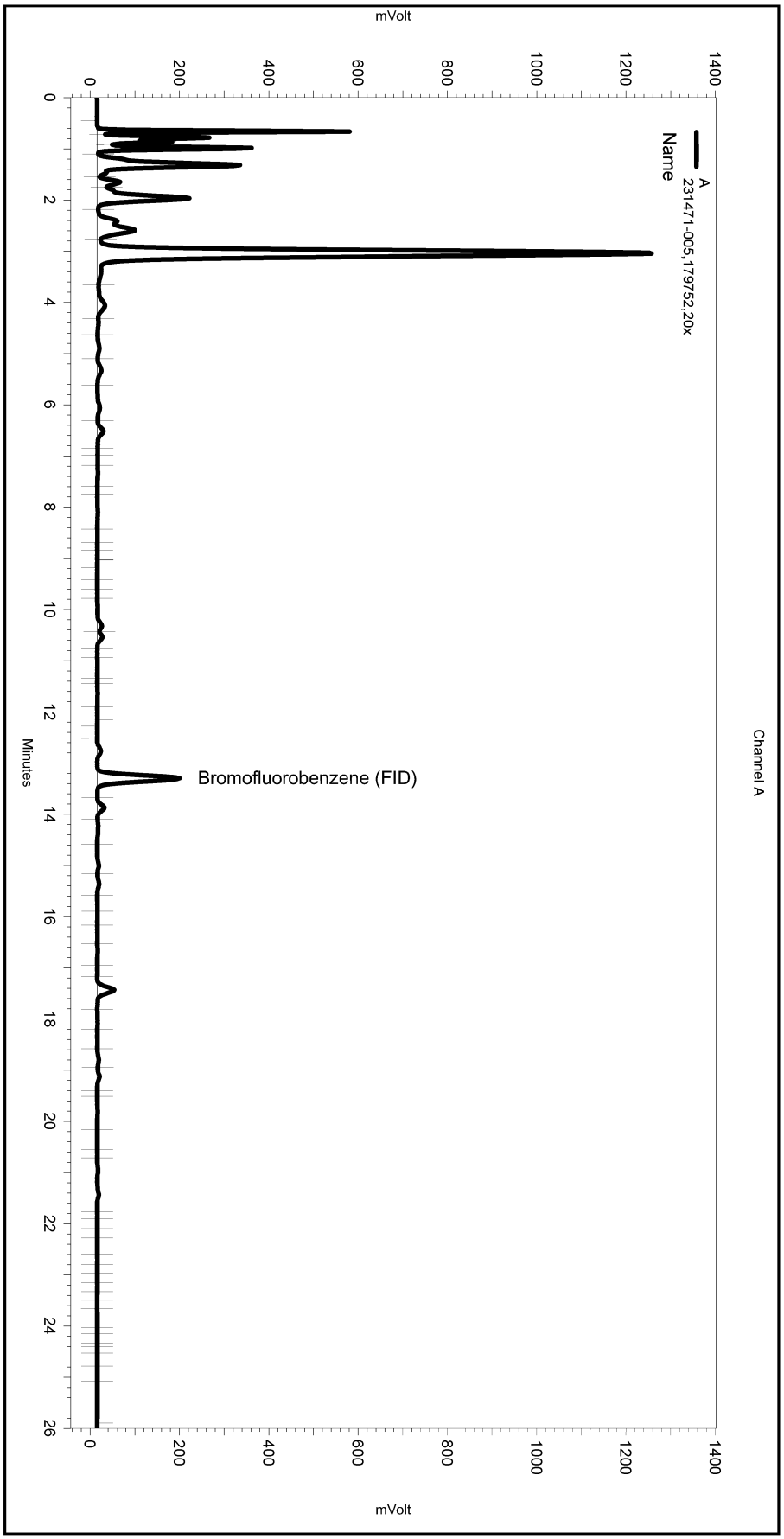
Sample Name: **231471-005,179752,20x**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC05\Data\279-038**
Instrument: GC05 Vial: N/A Operator: lims2k3\tvh3
Method Name: \\Lims\gdrive\ezchrom\Projects\GC05\Method\tvhbtxe278.met

Software Version 3.1.7
Run Date: 10/7/2011 9:04:52 PM
Analysis Date: 10/7/2011 9:33:34 PM
Sample Amount: 5 Multiplier: 5
Vial & pH or Core ID: a1.0



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Integration Events

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Yes	Threshold	0	0	50

Manual Integration Fixes

Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10048\279-038_BF67.tmp

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
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Sample Name: **231471-006,179752**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC05\Data\279-035**
Instrument: GC05 Vial: N/A Operator: lims2k3\tvh3
Method Name: \\Lims\gdrive\ezchrom\Projects\GC05\Method\tvhbtxe278.met

Software Version 3.1.7
Run Date: 10/7/2011 6:41:43 PM
Analysis Date: 10/7/2011 7:10:27 PM
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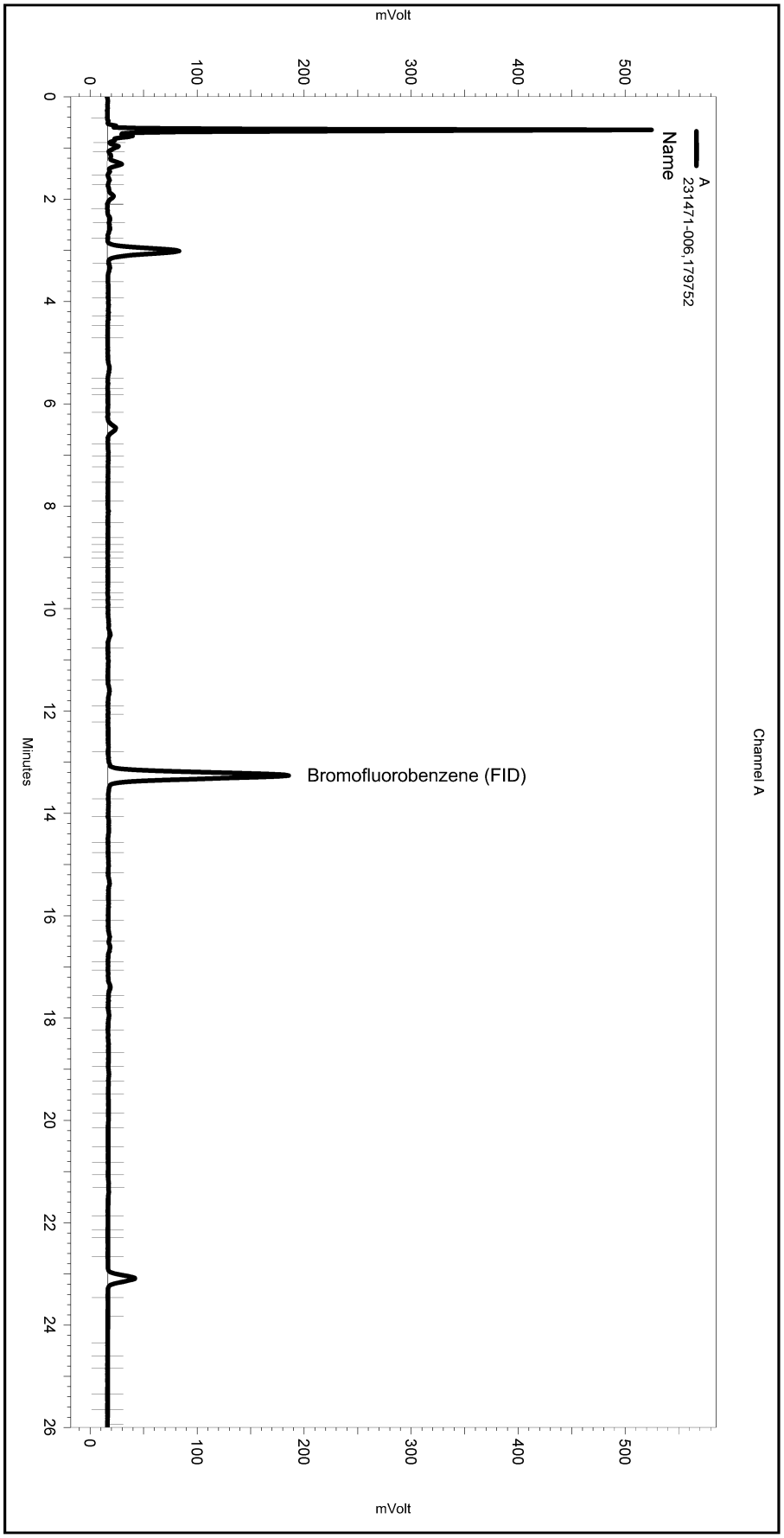
Vial & pH or Core ID: a1.0



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Integration Events

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Yes	Threshold	0	0	50

Manual Integration Fixes

Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10048\279-035_BF64.tmp

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Instrument: GC05 (Offline) Vial: N/A Operator: Tvh 1. Analyst (lims2k3\tvh1)
Method Name: \\Lims\gdrive\ezchrom\Projects\GC05\Method\tvhbtxe278.met

Software Version 3.1.7
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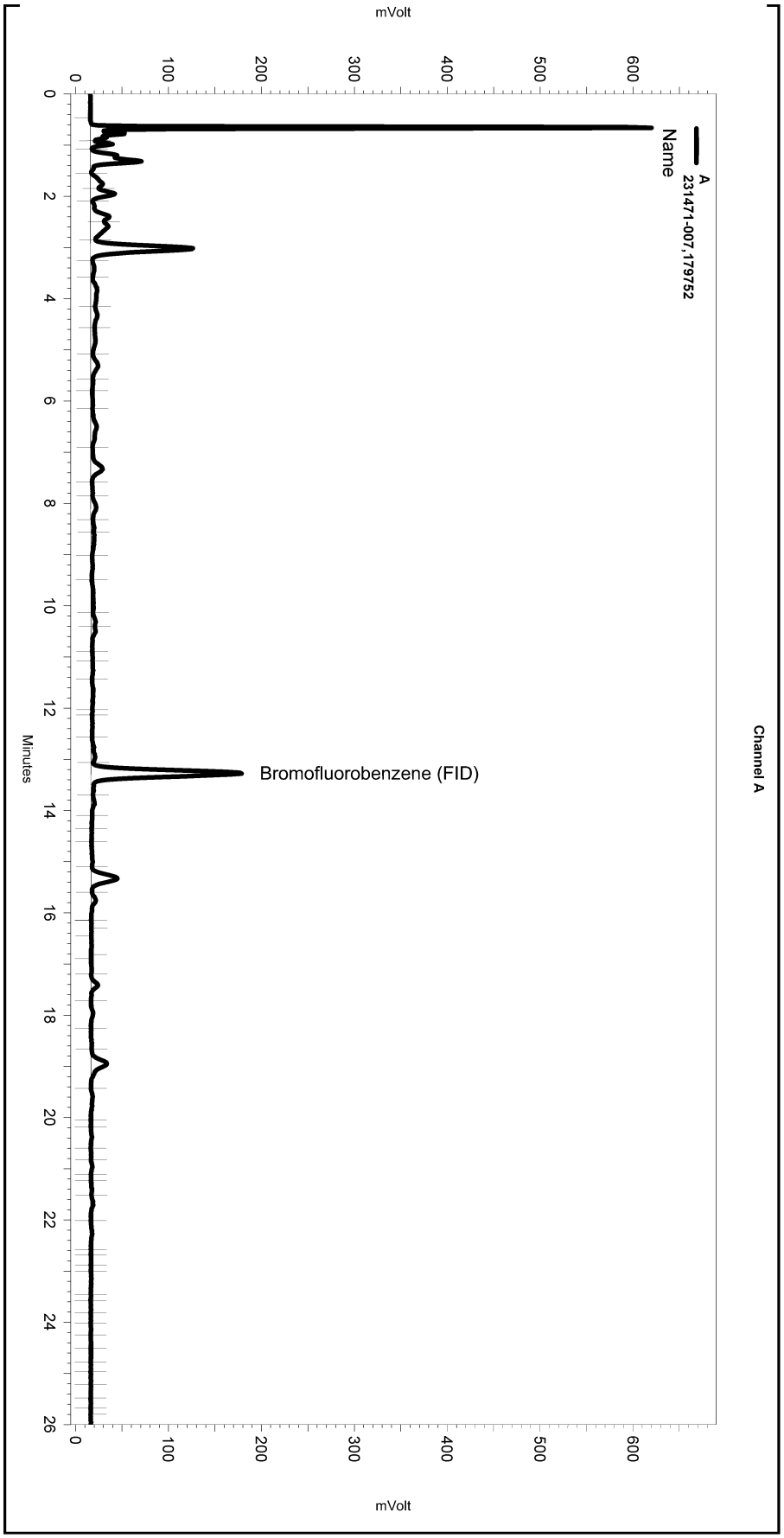
Vial & pH or Core ID: a1.0



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Integration Events

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Yes	Threshold	0	0	50

Manual Integration Fixes

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Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
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Sample Name: **ccv/lcs,qc612343,179752,s18329,2.5/5000**
Data File: **\\Lims\gdrive\ezchrom\Projects\GC05\Data\279-005**
Instrument: GC05 (Offline) Vial: N/A Operator: Tvh 1. Analyst (lims2k3\tvh1)
Method Name: \\Lims\gdrive\ezchrom\Projects\GC05\Method\tvhbtxe278.met

Software Version 3.1.7
Run Date: 10/6/2011 10:39:53 PM
Analysis Date: 10/7/2011 2:16:47 PM
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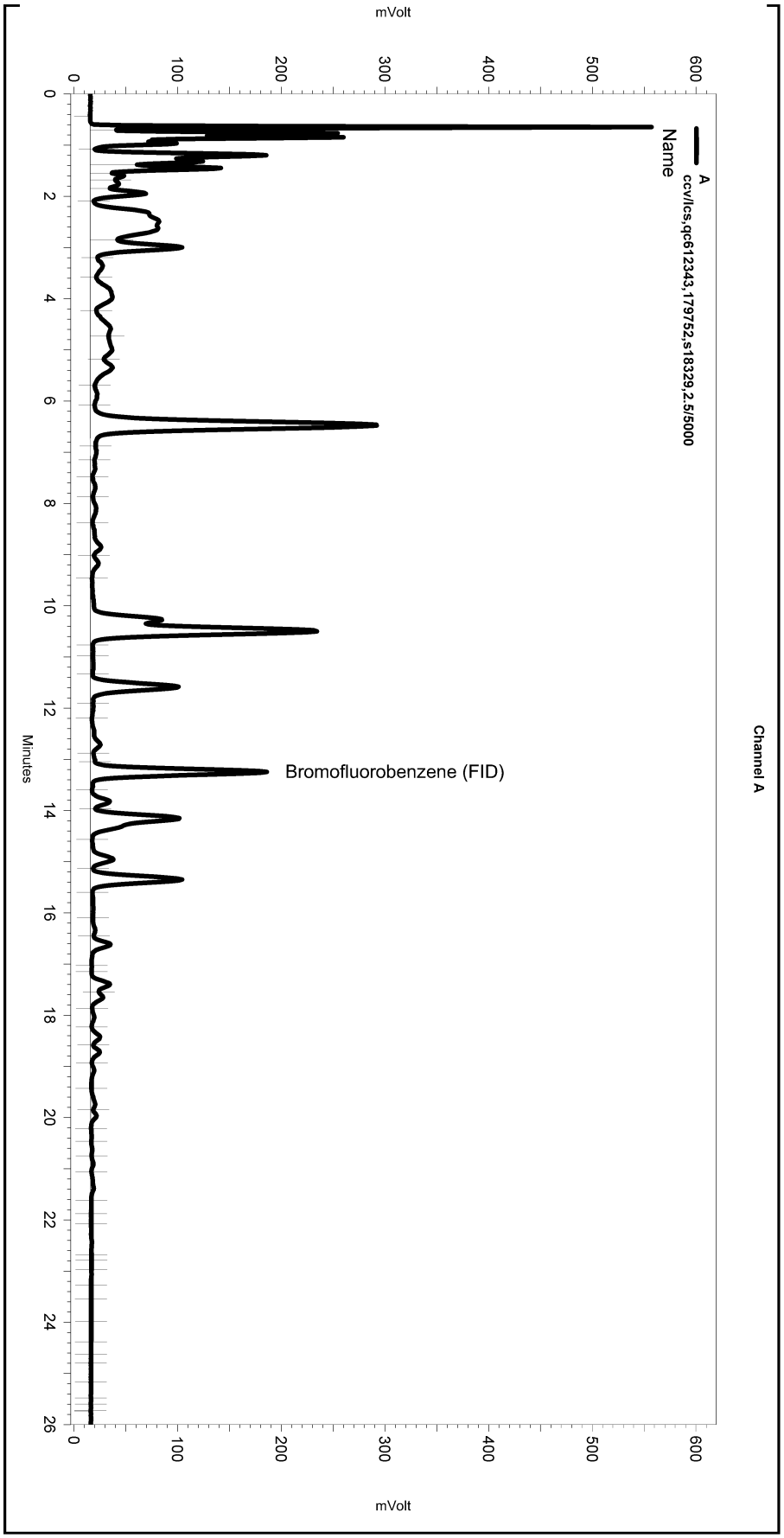
Vial & pH or Core ID: {Data Description}



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Integration Events

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Yes	Threshold	0	0	50

Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC05\Data\279-005

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Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	231471	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2007-65	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	09/30/11
Units:	ug/L	Received:	09/30/11
Diln Fac:	1.000	Prepared:	09/30/11
Batch#:	179524		

Field ID: MW-3 Lab ID: 231471-001
Type: SAMPLE Analyzed: 10/04/11

Analyte	Result	RL
Diesel C10-C24	7,800 Y	50

Surrogate	%REC	Limits
o-Terphenyl	96	68-120

Field ID: MW-9 Lab ID: 231471-002
Type: SAMPLE Analyzed: 10/04/11

Analyte	Result	RL
Diesel C10-C24	9,400 Y	50

Surrogate	%REC	Limits
o-Terphenyl	85	68-120

Field ID: MW-11 Lab ID: 231471-003
Type: SAMPLE Analyzed: 10/04/11

Analyte	Result	RL
Diesel C10-C24	4,400 Y	50

Surrogate	%REC	Limits
o-Terphenyl	91	68-120

Field ID: MW-12 Lab ID: 231471-004
Type: SAMPLE Analyzed: 10/04/11

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

Surrogate	%REC	Limits
o-Terphenyl	87	68-120

Field ID: MW-15 Lab ID: 231471-005
Type: SAMPLE Analyzed: 10/04/11

Analyte	Result	RL
Diesel C10-C24	2,200 Y	50

Surrogate	%REC	Limits
o-Terphenyl	93	68-120

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

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	231471	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2007-65	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	09/30/11
Units:	ug/L	Received:	09/30/11
Diln Fac:	1.000	Prepared:	09/30/11
Batch#:	179524		

Field ID: MW-16 Lab ID: 231471-006
Type: SAMPLE Analyzed: 10/04/11

Analyte	Result	RL
Diesel C10-C24	10,000 Y	50

Surrogate	%REC	Limits
o-Terphenyl	72	68-120

Field ID: RW-1 Lab ID: 231471-007
Type: SAMPLE Analyzed: 10/04/11

Analyte	Result	RL
Diesel C10-C24	440 Y	50

Surrogate	%REC	Limits
o-Terphenyl	96	68-120

Type: BLANK Analyzed: 10/03/11
Lab ID: QC611416

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
o-Terphenyl	99	68-120

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

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	231471	Location:	Bay Center Apartment
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2007-65	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	179524
Units:	ug/L	Prepared:	09/30/11
Diln Fac:	1.000	Analyzed:	10/03/11

Type: BS Lab ID: QC611417

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,503	100	61-120

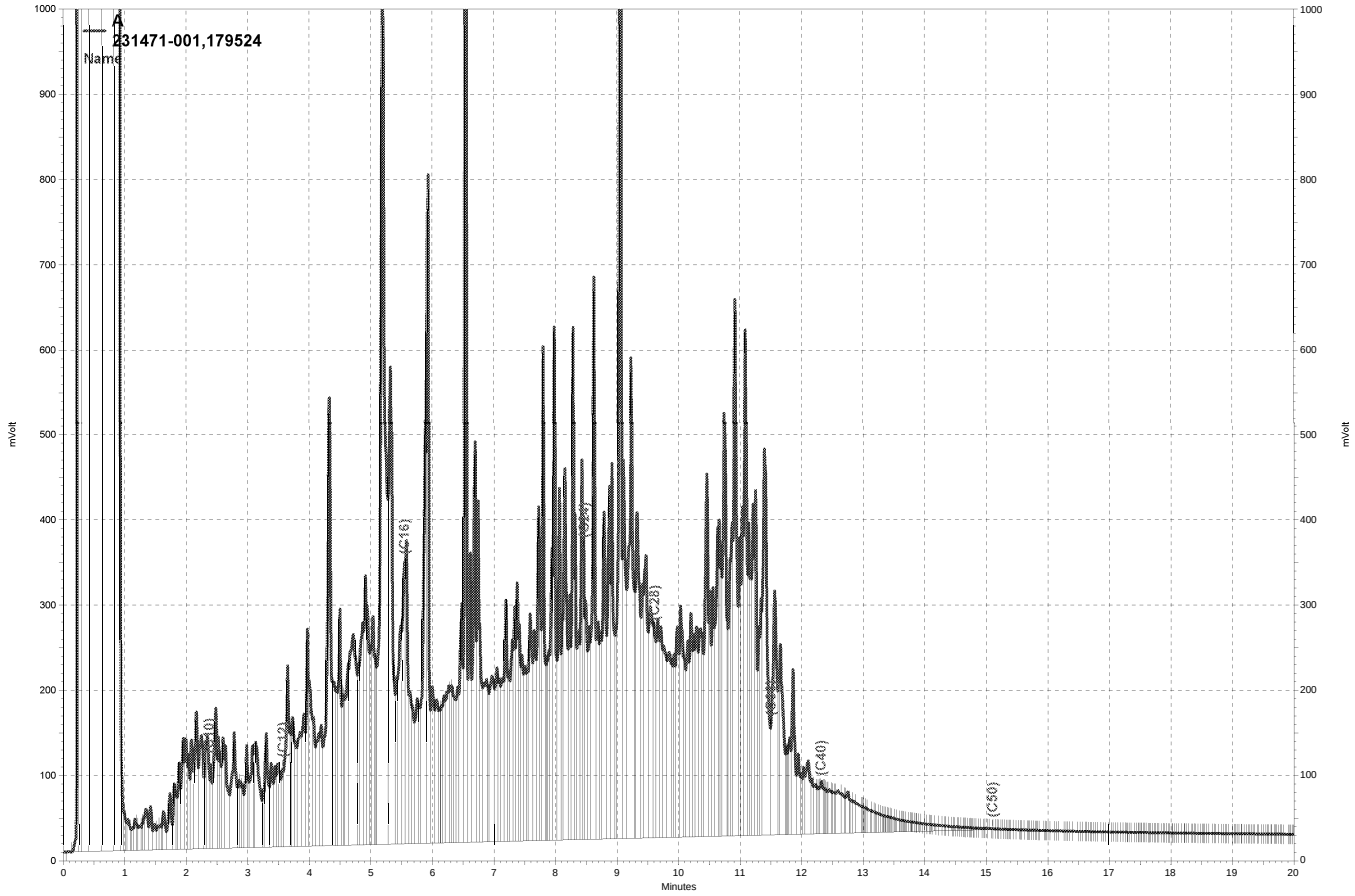
Surrogate	%REC	Limits
o-Terphenyl	110	68-120

Type: BSD Lab ID: QC611418

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,524	101	61-120	1	20

Surrogate	%REC	Limits
o-Terphenyl	110	68-120

RPD= Relative Percent Difference



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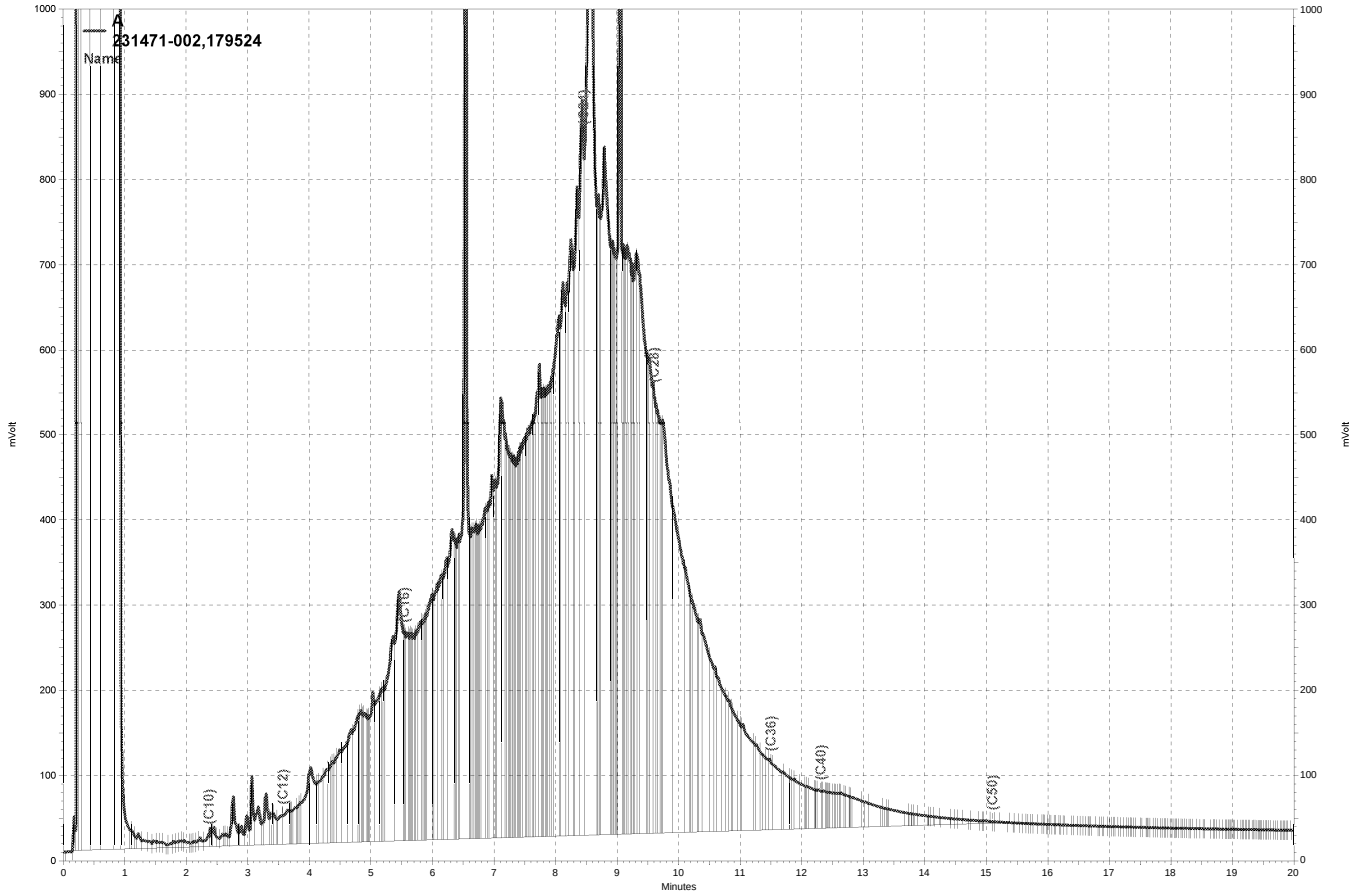

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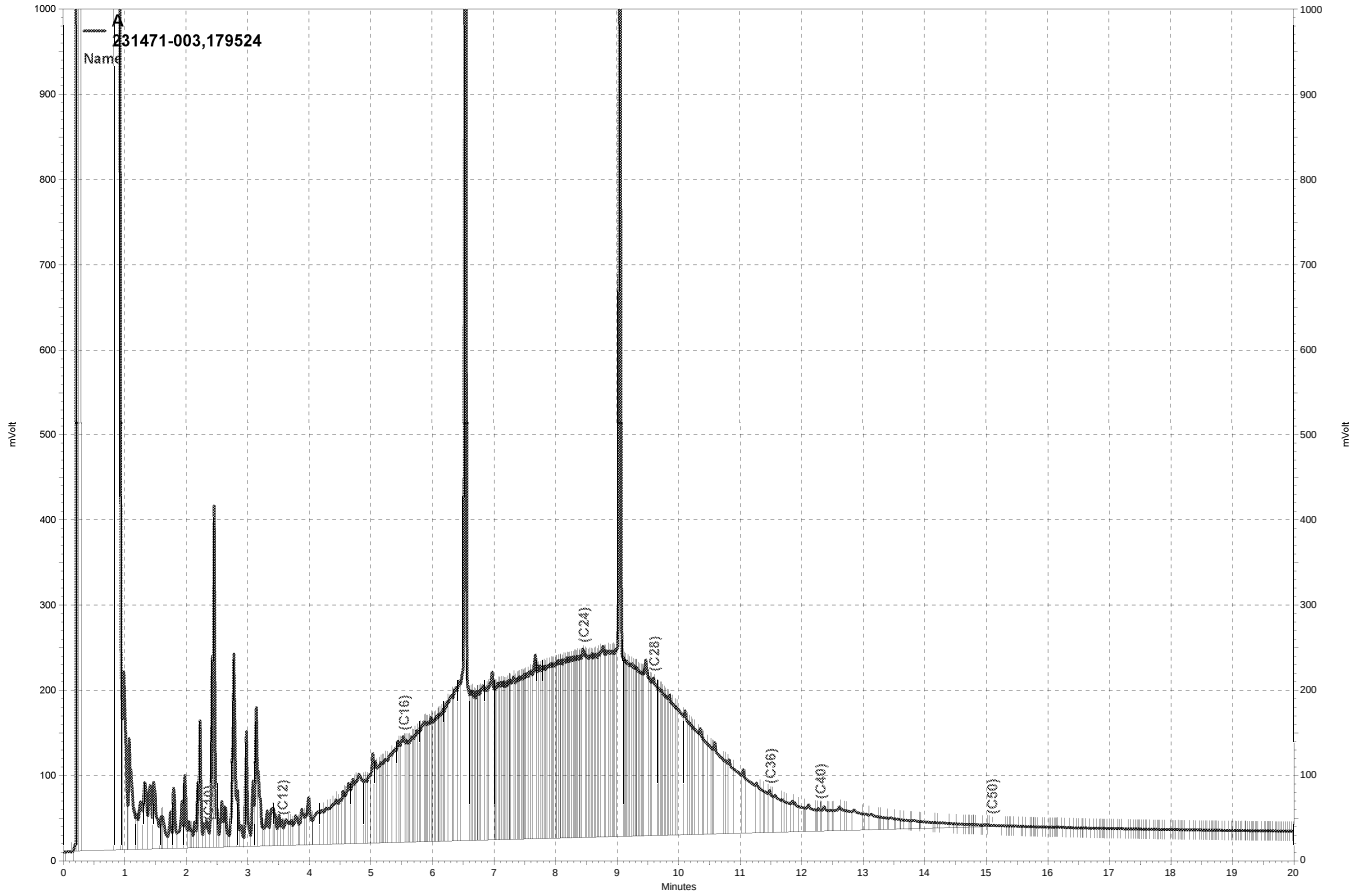

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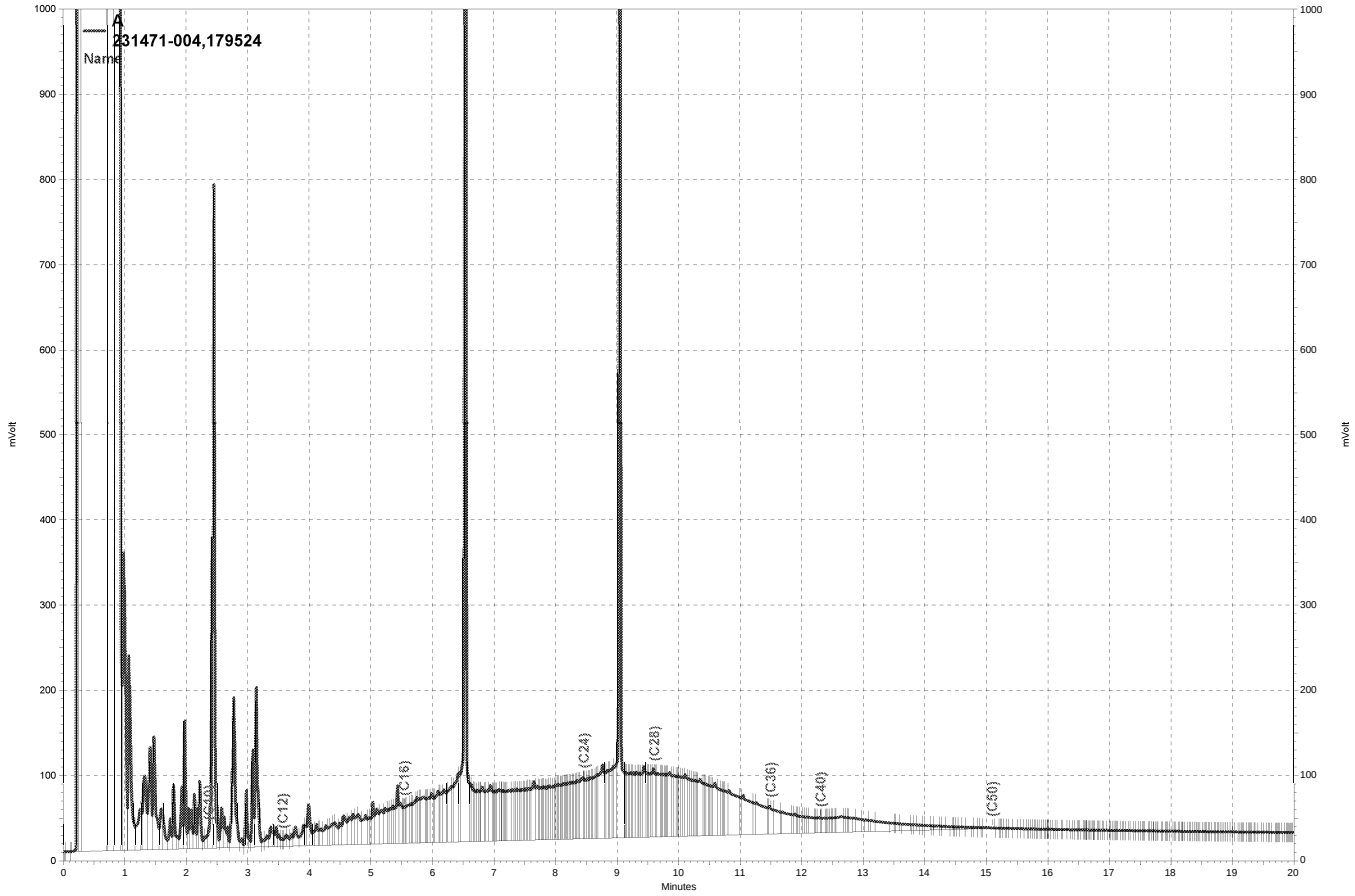

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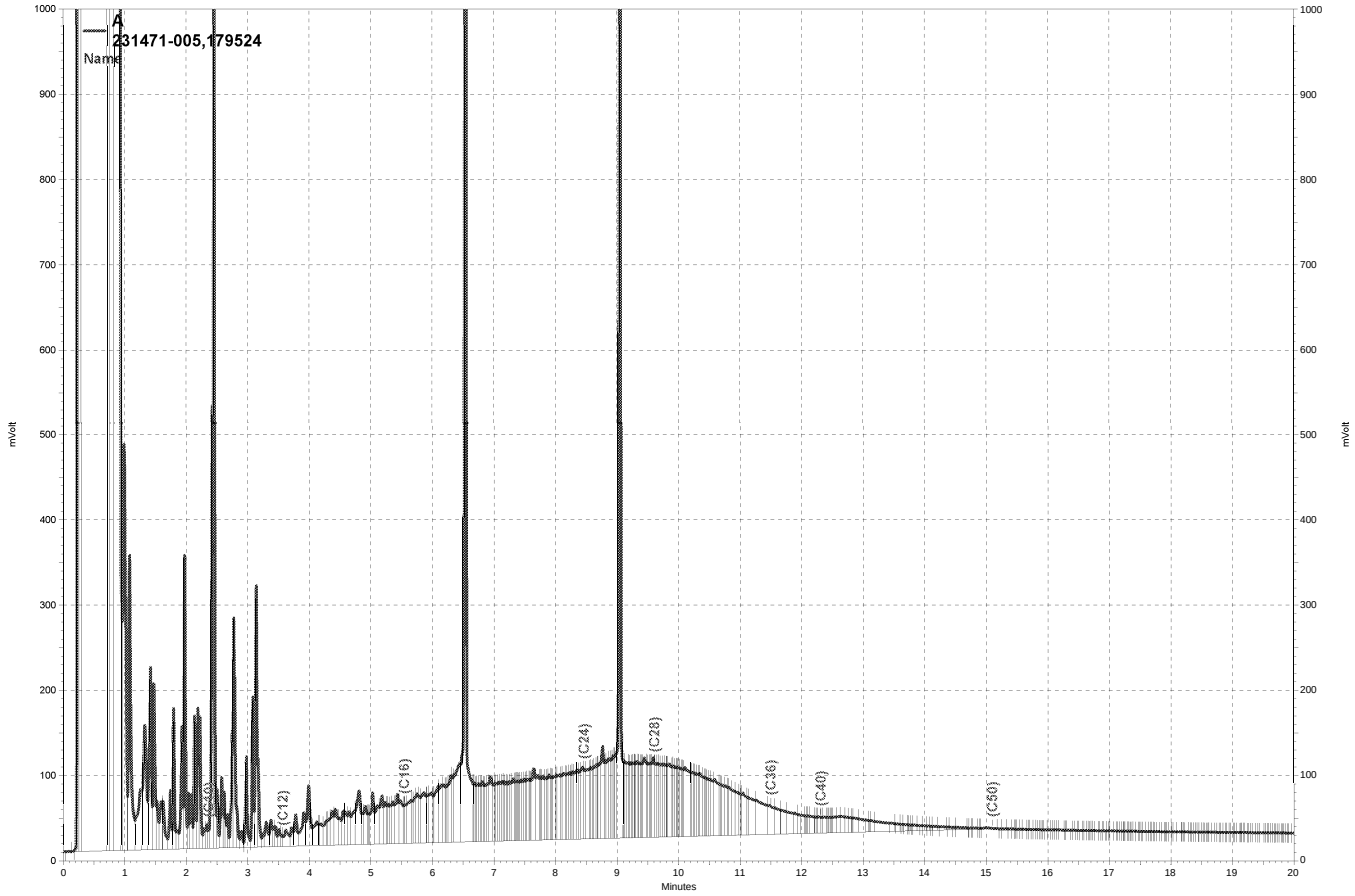

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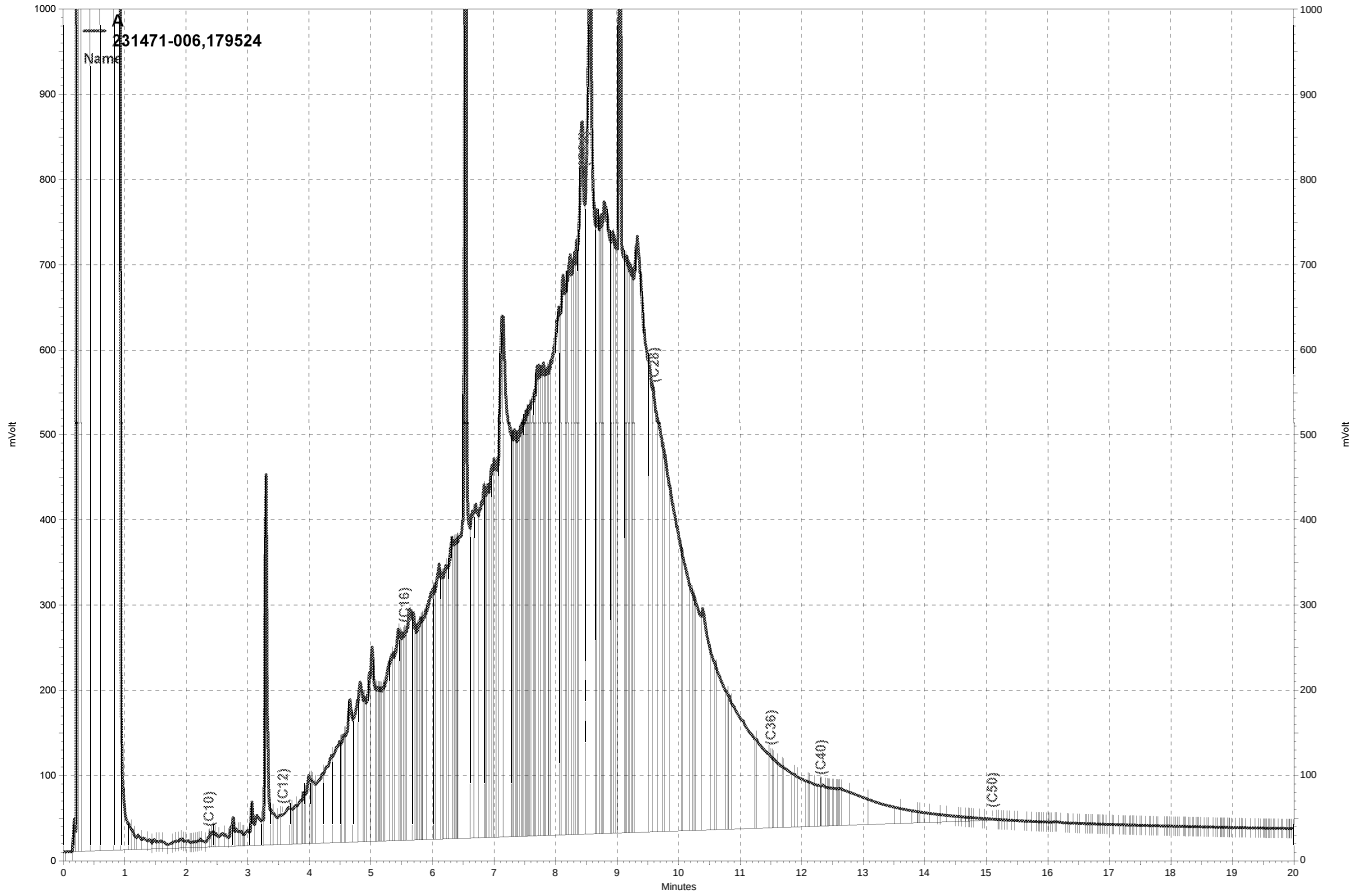

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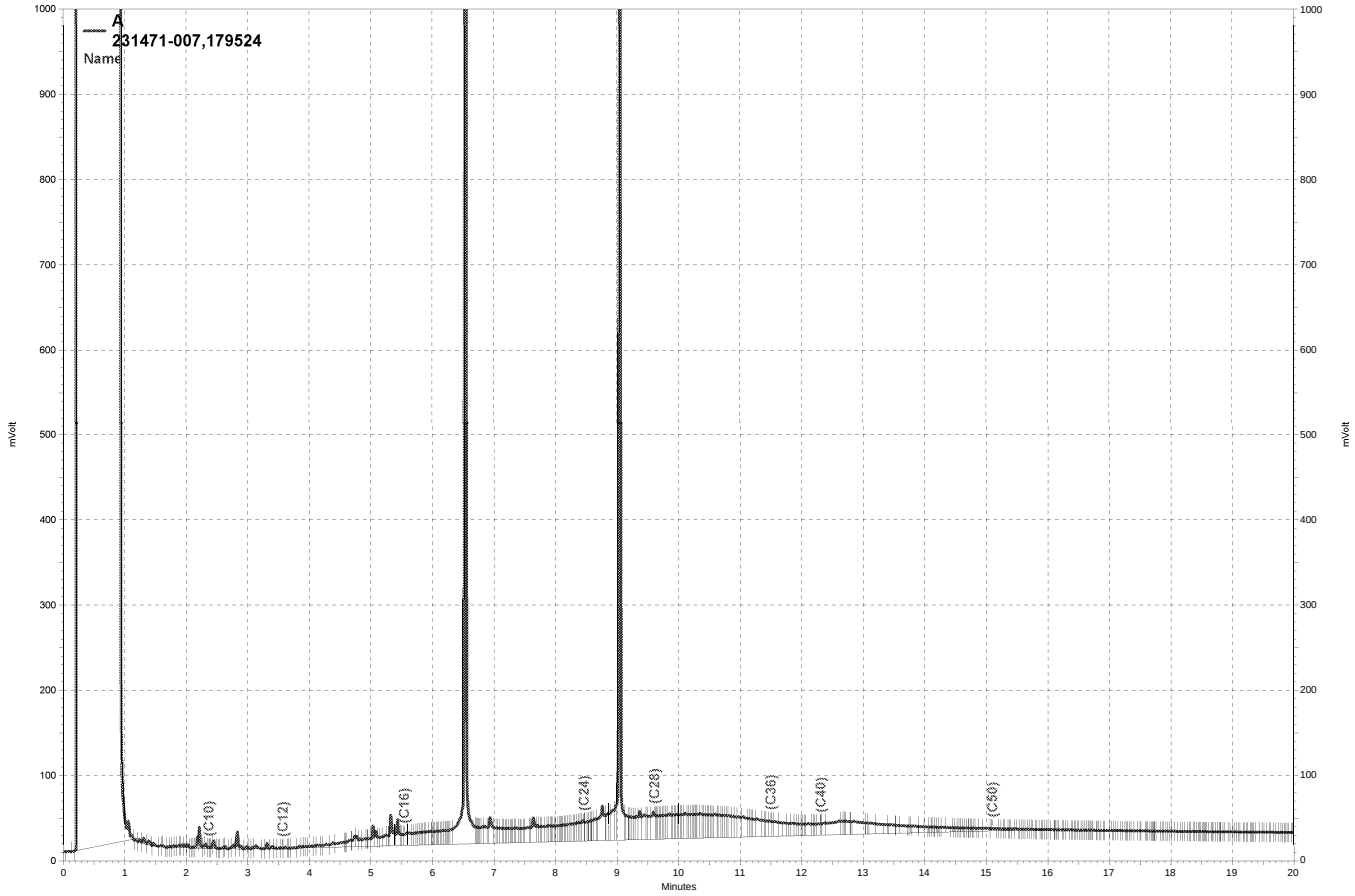

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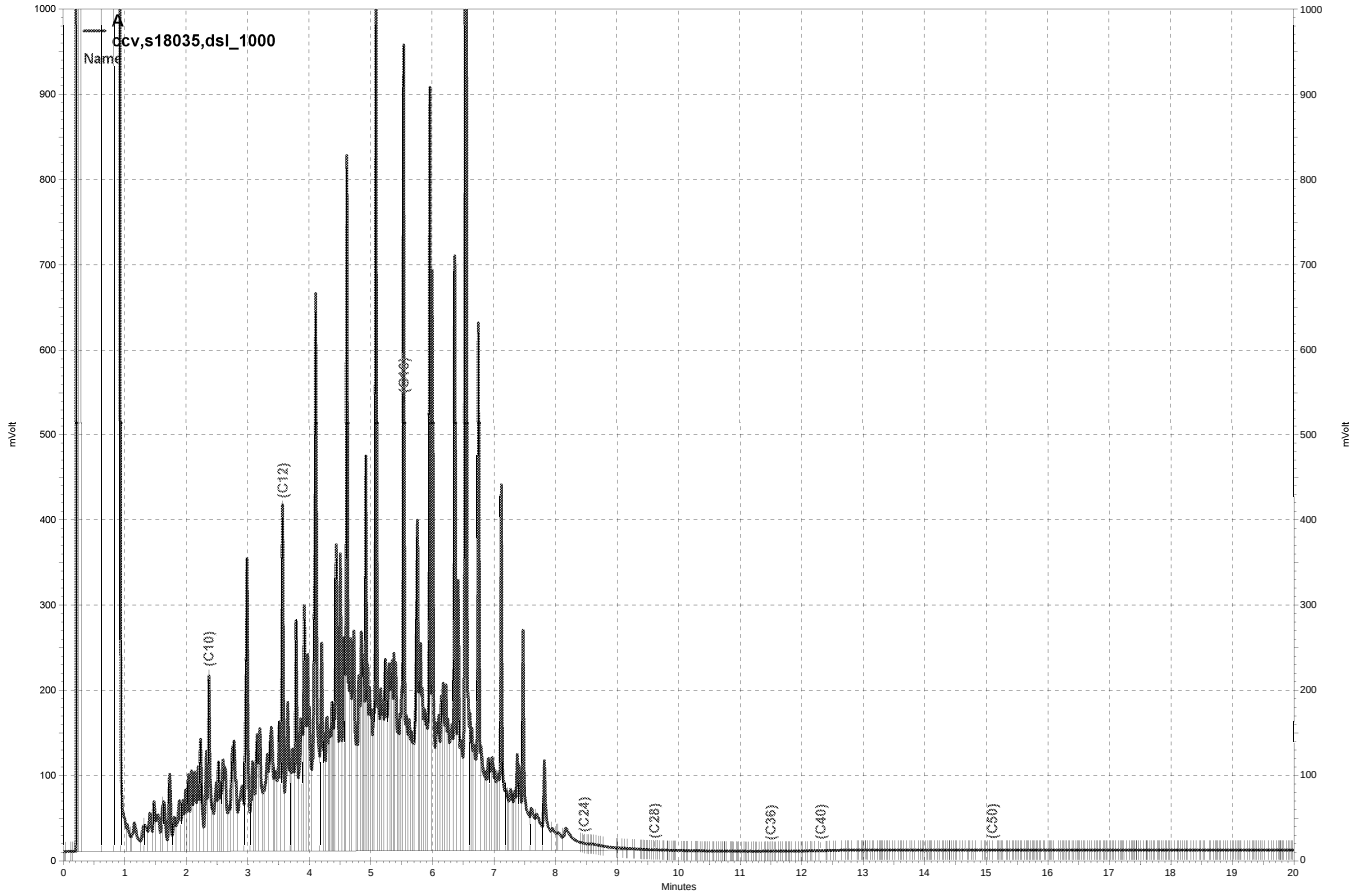

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APPENDIX D

Historical Groundwater Elevation Data

TABLE B
Historical Monitoring, Extraction, and Trench Well Elevations
6400 Christie Avenue, Emeryville, California

MW-1					
Sampling Event No.	**Date**	**TOC Elevation**	**DTW**	**DTP**	**GW Elevation**
1	Dec-88	14.39	9.60	NP	4.79
2	May-89	14.31[a]	8.73	NP	5.58
3	Feb-91	14.31	9.18	NP	5.13
Monitoring well abandoned - date unclear					

MW-2					
Sampling Event No.	**Date**	**TOC Elevation**	**DTW**	**DTP**	**GW Elevation**
1	Dec-88	14.36	9.64	NP	4.72
2	May-89	14.28[a]	8.78	NP	5.50
3	Feb-91	14.28	9.61	NP	4.67
Monitoring well abandoned - date unclear					

MW-3					
Sampling Event No.	**Date**	**TOC Elevation**	**DTW**	**DTP**	**GW Elevation**
1	Dec-88	14.53	8.93	trace	5.60
2	May-89	14.43[a]	8.69	NP	5.74
3	Feb-91	14.43	8.31	NP	6.12
4	Mar-04	16.96[b]	9.47	NP	7.49
5	Dec-06	NA	NA	NA	NA
6	Dec-07	16.65[c]	7.76 [e]	7.76	8.89
7	Mar-08	16.65	8.72	8.70	7.93
8	Jun-08	16.65	8.56	NP	8.09
9	Sep-08	16.65	9.27	7.95	7.38
10	Dec-08	16.65	8.36	7.49	8.29
11	Mar-09	16.65	7.94	NP	8.71
12	Sep-09	16.65	8.58	NP	8.07
13	Mar-10	16.65	8.08 [e]	8.08	8.57
14	Sep-10	16.65	8.68 [e]	8.68	7.97
15	Mar-11	16.65	10.40	NM	6.25
16	Sep-11	16.65	10.84	10.83	6.17

MW-4					
Sampling Event No.	**Date**	**TOC Elevation**	**DTW**	**DTP**	**GW Elevation**
1	Dec-88	14.21	8.29	NP	5.92
2	May-89	14.12[a]	7.75	NP	6.37
3	Feb-91	14.12	8.04	NP	6.08
4	Mar-04	16.74[b]	6.90	NP	7.49
5	Dec-06	NA	NA	NA	NA
6	Dec-07	16.29[c]	6.61	NP	9.68
7	Mar-08	16.29	7.24	NP	9.05
8	Jun-08	16.29	6.94	NP	9.35
9	Sep-08	16.29	6.85	NP	6.85
10	Dec-08	16.29	7.42	NP	8.87
11	Mar-09	16.29	6.90	NP	9.39
12	Sep-09	16.29	7.40	NP	8.89
13	Mar-10	16.29	7.08	NP	9.21
14	Sep-10	16.29	7.08	NP	9.21
15	Mar-11	16.29	7.02	NP	9.27
16	Sep-11	16.29	7.83	NP	8.46

MW-5					
Sampling Event No.	**Date**	**TOC Elevation**	**DTW**	**DTP**	**GW Elevation**
1	Dec-88	14.65	10.23	NP	4.42
2	May-89	14.56[a]	9.29	NP	5.27
3	Feb-91	14.56	10.04	NP	4.52
4	Mar-04	17.11[b]	9.10	NP	8.01
5	Dec-06	NA	NA	NA	NA
6	Dec-07	16.72[c]	9.66	NA	7.06
7	Mar-08	16.72	9.72	NP	7.00
8	Jun-08	16.72	9.72	NP	7.00
9	Sep-08	16.72	8.56	NP	8.16
10	Dec-08	16.72	9.75	NP	6.97
11	Mar-09	16.72	9.31	NP	7.41
12	Sep-09	16.72	9.79	NP	6.93
13	Mar-10	16.72	9.48	NP	7.24
14	Sep-10	16.72	9.90	NP	6.82
15	Mar-11	16.72	9.29	NP	7.43
16	Sep-11	16.72	9.77	NP	6.95

MW-6					
Sampling Event No.	**Date**	**TOC Elevation**	**DTW**	**DTP**	**GW Elevation**
1	Dec-88	14.75	8.10	NP	6.65
2	May-89	14.67[a]	7.58	NP	7.09
3	Feb-91	14.67	7.05	NP	7.62
4	Mar-04	17.22[b]	6.51	NP	10.71
5	Dec-06	NA	NA	NA	NA
6	Dec-07	16.82[c]	6.61	NP	10.21
7	Mar-08	16.82	7.02	NP	9.80
8	Jun-08	16.82	7.55	NP	9.27
9	Sep-08	16.82	6.06	NP	10.76
10	Dec-08	16.82	6.91	NP	9.91
11	Mar-09	16.82	6.45	NP	10.37
12	Sep-09	16.82	8.05	NP	8.77
13	Mar-10	16.82	6.66	NP	10.16
14	Sep-10	16.82	7.98	NP	8.84
15	Mar-11	16.82	5.91	NP	10.91
16	Sep-11	16.82	7.66	NP	9.16

MW-7					
Sampling Event No.	**Date**	**TOC Elevation**	**DTW**	**DTP**	**GW Elevation**
Installed March 2004					
1	Mar-04	18.09	9.93	NP	8.16
2	Dec-06	NA	NA	NA	NA
3	Dec-07	17.73[c]	10.30	NP	7.43
4	Mar-08	17.73	10.51	NP	7.22
5	Jun-08	17.73	10.50	NP	7.23
6	Sep-08	17.73	10.37	NP	7.36
7	Dec-08	17.73	10.60	NP	7.13
8	Mar-09	17.73	10.13	NP	7.60
9	Sep-09	17.73	10.61	NP	7.12
10	Mar-10	17.73	10.02	NP	7.71
11	Sep-10	17.73	10.59	NP	7.14
12	Mar-11	17.73	10.14	NP	7.59
13	Sep-11	17.73	10.58	NP	7.15

MW-8					
Sampling Event No.	**Date**	**TOC Elevation**	**DTW**	**DTP**	**GW Elevation**
Installed March 2004					
1	Mar-04	18.25	9.32	8.15	8.93
2	Nov-06[d]	16.96	10.59	NP	6.37
3	Dec-07	17.84[c]	9.42	NP	8.42
4	Mar-08	17.84	10.50	9.18	7.34
5	Jun-08	17.84	9.68	9.10	8.16
6	Sep-08	17.84	9.63	8.89	8.21
7	Dec-08	17.84	9.58	8.89	8.26
8	Mar-09	17.84	9.62	8.89	8.22
9	Sep-09	17.84	8.55 [e]	8.55	9.29
10	Mar-10	17.84	9.02 [e]	9.02	8.82
11	Sep-10	17.84	9.75	9.89	7.95
12	Mar-11	17.84	8.89	8.99	8.85
13	Sep-11	17.84	9.87	9.55	7.97

MW-9					
Sampling Event No.	**Date**	**TOC Elevation**	**DTW**	**DTP**	**GW Elevation**
Installed March 2004					
1	Mar-04	18.27	9.38	NP	8.89
2	Dec-06	NA	NA	NA	NA
3	Dec-07	17.84[c]	9.54	NP	8.30
4	Mar-08	17.84	9.77	NP	8.07
5	Jun-08	17.84	9.68	NP	9.27
6	Sep-08	17.84	9.30	NP	8.54
7	Dec-08	17.84	9.83	NP	8.01
8	Mar-09	17.84	9.37	NP	8.47
9	Sep-09	17.84	9.70	NP	8.14
10	Mar-10	17.84	9.46	NP	8.38
11	Sep-10	17.84	9.75	NP	8.09
12	Mar-11	17.84	9.52	NP	8.32
13	Sep-11	17.84	9.80	NP	8.04

MW-10					
Sampling Event No.	**Date**	**TOC Elevation**	**DTW**	**DTP**	**GW Elevation**
Installed March 2004					
1	Mar-04	18.21	9.87	8.24	8.34
2	Dec-06	18.21	9.30	8.86	8.91
3	Dec-07	17.83[c]	8.98 [e]	8.98	8.85
4	Mar-08	17.83	9.28	8.98	8.55
5	Jun-08	17.83	8.86	8.78	7.23
6	Sep-08	17.83	8.95	8.84	8.88
7	Dec-08	17.83	8.97	8.74	8.86
8	Mar-09	17.83	9.25	8.54	9.25
9	Sep-09	17.83	8.63	8.52	9.20
10	Mar-10	17.83	10.30	8.58	7.53
11	Sep-10	17.83	8.76	8.82	9.01
12	Mar-11	17.83	8.15	8.14	9.68
13	Sep-11	17.83	8.83	8.78	9.00

MW-11					
Sampling Event No.	**Date**	**TOC Elevation**	**DTW**	**DTP**	**GW Elevation**
Installed May 2004					
1	Nov-06[d]	17.76[c]	10.33	NP	7.43
2	Dec-07	17.76	10.27	NP	7.49
3	Mar-08	17.76	10.34	NP	7.42
4	Jun-08	17.76	10.20	NP	8.16
5	Sep-08	17.76	10.03	NP	7.73
6	Dec-08	17.76	10.34	NP	7.42
7	Mar-09	17.76	10.20	NP	7.56
8	Sep-10	17.76	10.25	NP	7.51
9	Mar-10	17.76	10.23	NP	7.53
10	Sep-10	17.76	10.24	NP	7.52
11	Mar-11	17.76	10.10	NP	7.66
12	Sep-11	17.76	10.30	NP	7.46

MW-12					
Sampling Event No.	**Date**	**TOC Elevation**	**DTW**	**DTP**	**GW Elevation**
Installed between 2004-2006					
1	Nov-06[d]	17.83[c]	9.37	NP	8.46
2	Dec-07	17.83	9.15	NP	8.68
3	Mar-08	17.83	9.11	NP	8.72
4	Jun-08	17.83	8.86	NP	8.97
5	Sep-08	17.83	8.76	NP	9.07
6	Dec-08	17.83	8.98	NP	8.85
7	Mar-09	17.83	8.50	NP	9.33
8	Sep-09	17.83	8.95	NP	8.88
9	Mar-10	17.83	8.66	NP	9.17
10	Sep-10	17.83	8.89	NP	8.94
11	Mar-11	17.83	8.18	NP	9.65
12	Sep-11	17.83	8.80	NP	9.03

MW-13					
Sampling Event No.	**Date**	**TOC Elevation**	**DTW**	**DTP**	**GW Elevation**
Installed between 2004-2006					
1	Dec-06	17.66[c]	9.81	9.44	7.85
2	Dec-07	17.66	9.95	9.39	7.71
3	Mar-08	17.66	10.02	9.54	7.64
4	Jun-08	17.66	9.86	9.45	7.80
5	Sep-08	17.66	10.34	9.54	7.32
6	Dec-08	17.66	10.54	9.65	7.12
7	Mar-09	17.66	9.26	9.14	8.40
8	Sep-09	17.66	9.91[e]	9.72	7.75
9	Mar-10	17.66	9.22[e]	9.22	8.44
10	Sep-10	17.66	9.40	10.18	7.48
11	Mar-11	17.66	9.90	NM	NM
12	Sep-11	17.66	10.41	9.64	7.25

MW-14					
Sampling Event No.	**Date**	**TOC Elevation**	**DTW**	**DTP**	**GW Elevation**
Installed between 2004-2006					
1	Nov-06[d]	17.60[c]	9.11	9.11(sheen)	8.49
2	Dec-07	17.60	8.86	8.84	8.74
3	Mar-08	17.60	8.91	8.88	8.69
4	Jun-08	17.60	8.66	8.62	8.94
5	Sep-08	17.60	8.64	NP	8.96
6	Dec-08	17.60	8.70	NP	8.90
7	Mar-09	17.60	9.25	NP	9.25
8	Sep-09	17.60	8.80	NP	8.80
9	Mar-10	17.60	8.42	NP	9.18
10	Sep-10	17.60	8.56	8.62	8.98
11	Mar-11	17.60	7.93	7.92	9.67
12	Sep-11	17.60	8.60	8.55	9.00

MW-15					
Sampling Event No.	**Date**	**TOC Elevation**	**DTW**	**DTP**	**GW Elevation**
Installed between 2004-2006					
1	Dec-06	17.80[c]	9.15	NP	8.65
2	Dec-07	17.80	9.30	NP	8.50
3	Mar-08	17.80	9.20	9.18	8.60
4	Jun-08	17.80	9.60	9.63	8.20
5	Sep-08	17.80	8.84	8.84[f]	8.96
6	Dec-08	17.80	9.19	8.36	8.61
7	Mar-09	17.80	8.70	NP	9.10
8	Sep-09	17.80	9.40 [e]	9.22	8.08
9	Mar-10	17.80	8.81 [e]	8.81	8.99
10	Sep-10	17.80	9.42	9.45	8.35
11	Mar-11	17.80	8.50	NM	9.30
12	Sep-11	17.80	9.32	NP	8.48

MW-16					
Sampling Event No.	**Date**	**TOC Elevation**	**DTW**	**DTP**	**GW Elevation**
Installed between 2004-2006					
1	Dec-06	NA	NA	NA	NA
2	Dec-07	17.74[c]	9.36	NP	8.38
3	Mar-08	17.74	9.88	NP	7.86
4	Jun-08	17.74	9.25	NP	7.80
5	Sep-08	17.74	9.07	NP	8.67
6	Dec-08	17.74	9.45	NP	8.29
7	Mar-09	17.74	8.88	NP	8.86
8	Sep-09	17.74	9.51	NP	8.23
9	Mar-10	17.74	8.92	NP	8.82
10	Sep-10	17.74	9.40	NP	8.34
11	Mar-11	17.74	9.16	NP	8.57
12	Sep-11	17.74	9.56	NP	8.18

MW-17					
Sampling Event No.	**Date**	**TOC Elevation**	**DTW**	**DTP**	**GW Elevation**
Installed between 2004-2006					
1	Dec-06	NA	NA	NA	NA
2	Dec-07	18.17[(c)]	9.40	9.32	8.77
3	Mar-08	18.17	9.34	9.18	8.83
4	Jun-08	18.17	8.98	8.97	9.19
5	Sep-08	18.17	9.21	7.92	8.96
6	Dec-08	18.17	9.25	9.11	8.92
7	Mar-09	18.17	8.89	NP	9.28
8	Sep-09	18.17	9.31	NP	8.86
9	Mar-10	18.17	8.93	NP	9.24
10	Sep-10	18.17	9.15	NP	9.02
11	Mar-11	18.17	8.52	8.50	9.65
12	Sep-11	18.17	9.15	NP	9.02

MW-18					
Sampling Event No.	**Date**	**TOC Elevation**	**DTW**	**DTP**	**GW Elevation**
Installed between 2004-2006					
1	Dec-06	NA	NA	NA	NA
2	Dec-07	16.35[(c)]	8.30	NP	8.05
3	Mar-04	16.35	8.34	NP	8.01
4	Jun-08	16.35	8.34	NP	8.20
5	Sep-08	16.35	8.48	NP	7.87
6	Dec-08	16.35	8.61	NP	7.74
7	Mar-09	16.35	7.75	NP	8.60
8	Sep-09	16.35	8.50	NP	7.85
9	Mar-10	16.35	7.97	NP	8.38
10	Sep-10	16.35	8.28	NP	8.07
11	Mar-11	16.35	8.63	NP	7.72
12	Mar-11	16.35	8.90	NP	7.45

MW-E					
Sampling Event No.	**Date**	**TOC Elevation**	**DTW**	**DTP**	**GW Elevation**
1	Dec-88	NM	NM	NM	NM
2	May-89	15.32	10.39	NP	4.93
3	Feb-91	NM	NM	NM	NM
4	Mar-04	17.80	9.92	NP	7.88
5	Nov-06[(d)]	17.80	10.22	NP	7.58
6	Dec-07	17.47[(c)]	10.03	NP	7.44
7	Mar-08	17.47	10.21	NP	7.26
8	Jun-08	17.47	10.20	NP	7.27
9	Sep-08	17.47	9.55	NP	7.92
10	Dec-08	17.47	10.32	NP	7.15
11	Mar-09	17.47	9.79	NP	7.68
12	Sep-09	17.47	10.22	NP	7.25
13	Mar-10	17.47	9.82	NP	7.65
14	Sep-10	17.47	10.11	NP	7.36
15	Mar-11	17.47	9.10	NP	8.37
16	Sep-11	17.47	8.41	NP	9.06

RW-1					
Sampling Event No.	**Date**	**TOC Elevation**	**DTW**	**DTP**	**GW Elevation**
1	Dec-88	NM	NM	NM	NM
2	May-89	14.54	10.17	10.14	4.37
3	Feb-91	14.54	11.46	10.85	3.57
4	Mar-04	18.32	7.20	5.62	11.12
5	Nov-06[d]	18.32	9.15	9.11	9.17
6	Dec-07	16.70[c]	9.53 [e]	9.53	7.17
7	Mar-08	16.70	8.99	8.92	7.71
8	Jun-08	16.70	8.95	8.87	7.75
9	Sep-08	16.70	NM[c]	NM[c]	NM[c]
10	Dec-08	16.70	NM	NM	NM
11	Mar-09	16.70	9.06 [e]	9.06	7.64
12	Sep-09	16.70	9.45 [e]	9.45	7.25
13	Mar-10	16.70	8.93 [e]	8.93	7.77
14	Sep-10	16.70	9.50	9.65	7.05
15	Mar-11	16.70	9.05	9.04	7.65
16	Sep-11	16.70	9.75	9.74	6.95

Notes:

The 1988, 1989, and 1991 water elevations were measured by Groundwater Technology, Inc.

The 2004 and 2006 water elevations were measured by PES Environmental.

NS = Not sampled

NP = No product

NM - Not measured

NA = data not available from the previous consultant for this event

TOC Elevation = Top of Casing Elevation

DTW = Depth to water from the top of the casing

DTP - Depth to product from the top of the casing

GW Elevation - Groundwater elevation as compared to mean sea level

[a] Wells resurveyed in May 1989

[b] New elevation recorded by PES. Date of survey unclear.

[c] Wells resurveyed by PES in April 2007

[d] no water level data available for the December 2006 sampling event

[e] Thickness of product interfered with determining oil/water interface.

[f] Depth to groundwater = depth to free product as difference could not be determined

APPENDIX E

Historical Product Extraction Data Table

Table D
Historical Trench and Monitoring Well Product Recovery
6400 Christie Avenue, Emeryville, CA

	Well or Trench Location																											
Extraction Date	**MW-3**	**MW-4**	**MW-5**	**MW-6**	**MW-7**	**MW-8**	**MW-9**	**MW-10**	**MW-11**	**MW-12**	**MW-13**	**MW-14**	**MW-15**	**MW-16**	**MW-17**	**MW-18**	**MW-E**	**RW-1**	**TA-E**	**TA-M**	**TA-W**	**TB-E**	**TB-M**	**TB-W**	**TC-E**	**TC-M**	**TC-W**	**Total Extracted**
Apr-04	---	---	---	---	---	1.00	---	1.00	---	---	---	---	---	---	---	---	---	19.75	---	---	---	---	---	---	---	---	---	21.75
May-04	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	22.5	---	---	---	---	---	---	---	---	---	22.50
Sep-04	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.74	---	---	---	---	---	---	---	---	---	0.74
Oct-04	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5.22	---	---	---	---	---	---	---	---	---	5.22
2004 Total																												**50.21**
Jan-05	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.00
Apr-06	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	3.3	---	---	---	---	---	---	3.30
Jun-06	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.9	9.2	10.3	---	---	---	---	---	---	28.40
Jul-06	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	3.6	5	5.3	---	---	---	---	---	---	13.90
Aug-06	---	---	---	---	---	0.8	---	0.8	---	---	1	0.2	0.2	---	---	---	---	---	0.2	0.2	0.4	---	---	---	---	---	---	3.80
Sep-06	---	---	---	---	---	---	---	0.8	---	---	0.2	0.3	---	---	---	---	---	---	0.6	---	0.6	---	---	---	---	---	---	2.50
Nov-06	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.2	---	---	---	---	---	---	---	---	0.20
Dec-06	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.2	---	---	---	---	---	---	---	---	0.20
2006 Total																												**52.30**
Jan-07	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.2	---	---	---	---	---	---	---	---	0.20
Feb-07	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.2	---	---	---	---	---	---	---	---	0.20
Mar-07	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.2	---	---	---	---	---	---	---	---	0.20
Nov-07	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.81	0.68	---	---	---	0.63	---	---	2.12
Dec-07	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.01	0.61	0.07	---	---	---	0.002	---	---	0.69
2007 Total																												**3.41**
Feb-08	0.03	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.45	0.08	0.06	0.18	0.04	0.06	0.06	0.08	0.05	0.05	1.14
Feb-08	---	---	0.05	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.45	0.15	0.15	0.30	---	---	---	---	---	---	1.10
Mar-08	---	---	---	0.02	0.002	0.02	0.001	0.04	0.02	0.03	0.004	0.01	0.02	0.01	0.01	0.003	0.012	0.3	0.09	0.06	0.09	---	---	---	0.06	---	---	0.80
Mar-08	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.002	0.008	---	---	---	---	---	---	0.01
May-08	0.09	---	---	---	---	---	---	0.075	---	0.075	0.019	0.009	---	---	0.13	---	---	1.397	0.866	1.466	1.431	---	---	---	---	---	---	5.56
Jun-08	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.15	0.11	0.57	---	---	---	---	---	---	0.83
Aug-08	0.12	---	---	---	---	---	---	0.048	---	0.024	0.009	---	---	---	---	---	---	0.75	0.9	1.6	0.7	0.3	0.3	---	0.15	---	---	4.90
Sep-08	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.03	0.09	0.048	---	---	---	---	---	---	0.17
Nov-08	0.078	---	---	---	---	0.009	---	---	---	0.06	0.009	---	---	0.003	0.06	---	---	0.6	0.1	0.03	---	0.06	0.06	0.06	0.06	0.09	0.09	1.37
Dec-08	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.0003	0.08	---	---	---	---	0.03	---	---	0.11
2008 Total																												**12.95**
Mar-09	0.279	---	---	---	---	0.378	---	0.369	---	0.261	0.007	0.023	0.117	---	0.342	---	0.023	1.800	0.750	0.950	1.010	0.153	0.153	0.153	0.653	0.153	0.153	7.73
Jun-09	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.5	---	---	---	---	---	---	---	---	0.50
Sep-09	0.286	---	---	---	0.022	0.418	---	0.176	0.308	0.176	0.088	0.007	0.176	0.088	0.176	0.022	0.066	7.15	1.4	1.1	1.2	1.1	1.1	1.1	1.1	1.1	1.1	19.46
Dec-09	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0	0.9	0.06	---	---	---	0	---	---	0.96
2009 Total																												**28.65**
Mar-10	0.14	---	---	---	0.01	0.18	0.02	0.60	---	0.60	0.03	0.10	0.69	0.04	0.30	0.02	---	8.00	1.30	1.00	1.00	0.50	1.00	0.50	1.00	1.00	1.00	19.03
Jun-10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.75	---	---	---	---	---	---	---	0.75
Sep-10	0.3	0.2	0.4	0.5	0.01	0.5	0.01	0.5	---	1.6	0.02	0.01	1.5	0.02	1.0	0.02	0.1	6.9	1.00	1.00	1.00	0.3	0.3	0.4	1.00	0.5	0.5	19.59
Dec-10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.10	0.00	0.05	---	---	---	0.00	---	---	0.15
2010 Total																												**39.52**
Mar-11	---	---	---	---	---	0.002	---	0.002	---	---	---	0.002	---	---	0.003	---	---	0.002	0.06	0.06	0.02	---	---	---	0	---	---	0.15
Sep-11	0.2	--	--	--	--	0.3	--	--	--	--	0.2	--	--	0.1	--	--	--	0.5	--	0.45	0.25	0.1	0.1	0.1	--	0.1	0.1	2.50
2011 Total																												**2.65**
Total Extracted	**1.32**	**0.20**	**0.45**	**0.52**	**0.04**	**3.31**	**0.03**	**4.41**	**0.33**	**2.83**	**1.39**	**0.66**	**2.70**	**0.16**	**2.02**	**0.07**	**0.20**	**76.01**	**21.79**	**25.68**	**28.57**	**2.45**	**2.97**	**2.27**	**4.77**	**2.89**	**2.89**	**190.93**

Note:

All free product quantities presented in gallons

Product extraction events conducted before November 2007 were completed by PES Environmental

APPENDIX F

Groundwater Disposal Documentation

"Generator mail a copy to : DTSC, P.O. Box 400, Sacramento, CA 95812-0400 within 30 days."

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
CAL000331636	1	1-800-424-9300	003774348 JJK

GENERATOR

5. Generator's Name and Mailing Address

BAY CENTER APARTMENTS
6400 CHRISTINE ST
EMERYVILLE, CA 94608

Generator's Phone: 510 644 3123

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name — U.S. EPA ID Number

EVERGREEN ENVIRONMENTAL SERVICES — CAD982413262

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

EVERGREEN OIL, INC.
6880 SMITH AVE.
NEWARK, CA 94560

Facility's Phone: 510-795-1400 — CAD980887418

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON-RCRA HAZARDOUS WASTE, LIQUID (OILY WATER)	1	TT	1100		223
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

A. 40173 ERG 171-8b1

Document # 117230

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name — Signature — Month Day Year: 10 14 2014

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name — Signature — Month Day Year: 10 14 14

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

GENERATOR'S INITIAL COPY