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FIRST SEMIANNUAL 2011 GROUNDWATER MONITORING AND PRODUCT EXTRACTION REPORT

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

Prepared for:

**EMERYBAY COMMERCIAL ASSOCIATION
EMERYVILLE, CA 94608**

May 2011

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GROUNDWATER MONITORING AND
PRODUCT EXTRACTION REPORT**

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EMERYVILLE, CALIFORNIA**

Prepared for:

**EMERYBAY COMMERCIAL ASSOCIATION
6475 CHRISTIE AVENUE, SUITE 550
EMERYVILLE, CA 94608**

Prepared by:

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

May 6, 2011

Project No. 2007-65

May 6, 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: First Semiannual 2011 Groundwater Monitoring & Product Extraction Report
EmeryBay Phase I Condo Parking Garage
6400 Christie Avenue, Emeryville, California

Dear Ms. Jakub:

Enclosed is the Stellar Environmental Solutions, Inc. report summarizing the site activities conducted between January 2011 and March 2011 at the referenced site. This report is being submitted on behalf of the owner and Responsible Party, Emerybay Commercial Association. The subject site activities included a product extraction event and the first semiannual 2011 groundwater monitoring event.

This report summarizes the 15th sampling event conducted at the site since 1988. The plume underlying the open parking garage appears stable when compared to the last two March semiannual events, with the main residual contamination concentrated around wells MW-8, MW-12, MW-14, MW-15 and MW-18. 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.

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

Sincerely,



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



Ms. Kathryn Collins
Emerybay Commercial Assoc.



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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 outlined in the final subsection of this chapter.

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.



Image courtesy of the U.S. Geological Survey



SITE LOCATION ON AERIAL PHOTO

**6400 Christie Ave.
Emeryville, CA**

By: MJC

JANUARY 2008

Figure 1



2007-565-01



SITE PLAN AND ADJACENT LAND USE

6400 Christie Ave.
Emeryville, CA

By: MJC

JANUARY 2008

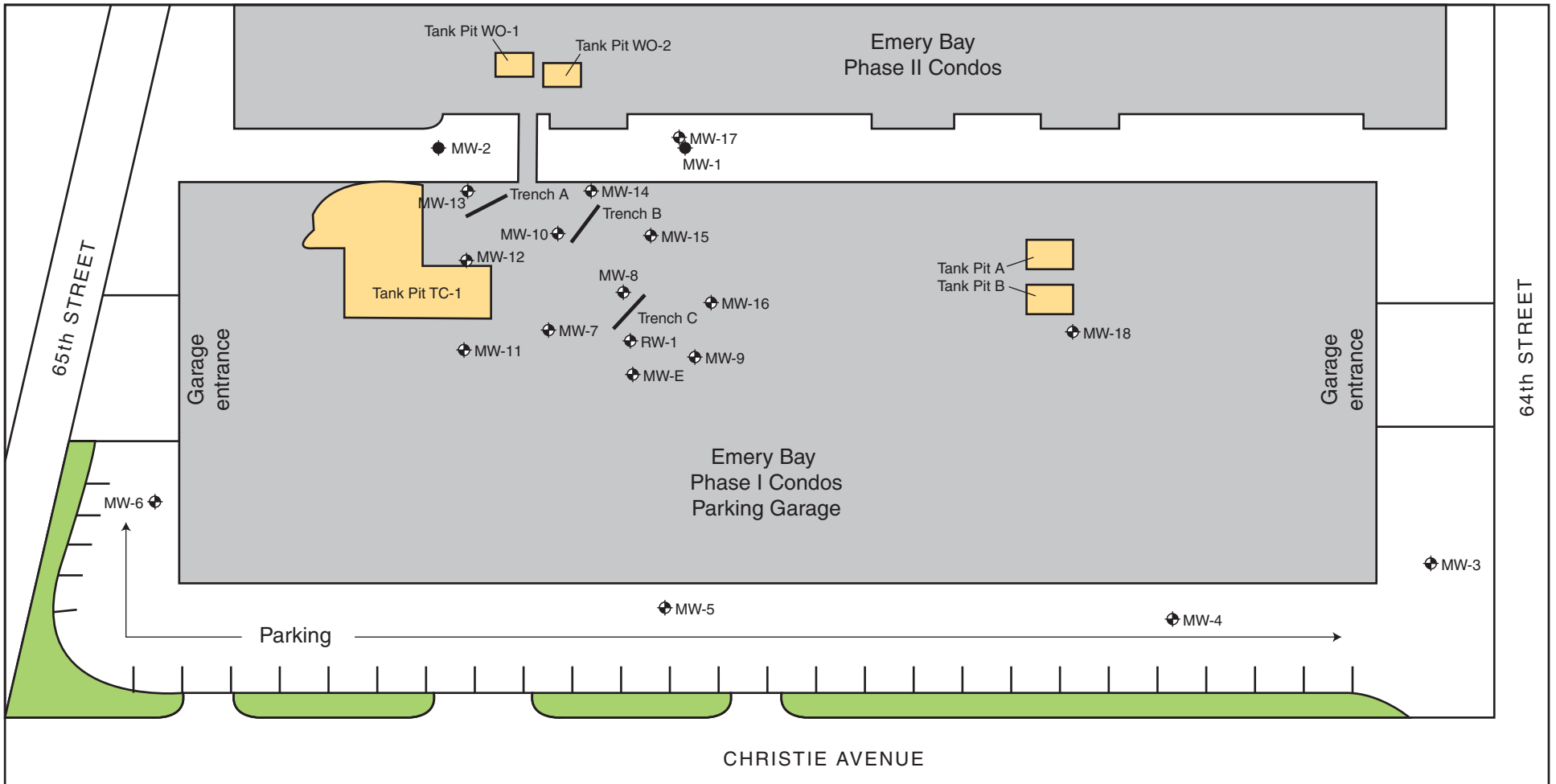
Figure 2



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 remediate the hydrocarbon contamination beneath 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 one 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 one extraction well in the Phase I parking garage



LEGEND

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

0 60
SCALE: 1/2" = 60 FEET



MONITORING WELL AND TRENCH LOCATIONS
6400 Christie Ave., Emeryville, CA

Figure 3

by: MJC

JANUARY 2008

area. The first groundwater monitoring event for the current wells was conducted in March 2004, and the second event was conducted in December 2006. 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 Appendices D and A, respectively.

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

Alameda Department of Environmental Health (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 is currently Mr. Mark Detterman (whom replaced Ms. Barbara Jakub of ACEH in mid 2010). 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 on April 6, 2009. Stellar Environmental conducted an additional indoor air survey in the ground floor office area on March 22, 2010. The results were presented in a separate report, which was submitted to ACEH on April 6, 2010 (Stellar Environmental, 2010).

The case has been assigned No. SLT2005561 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 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 2 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

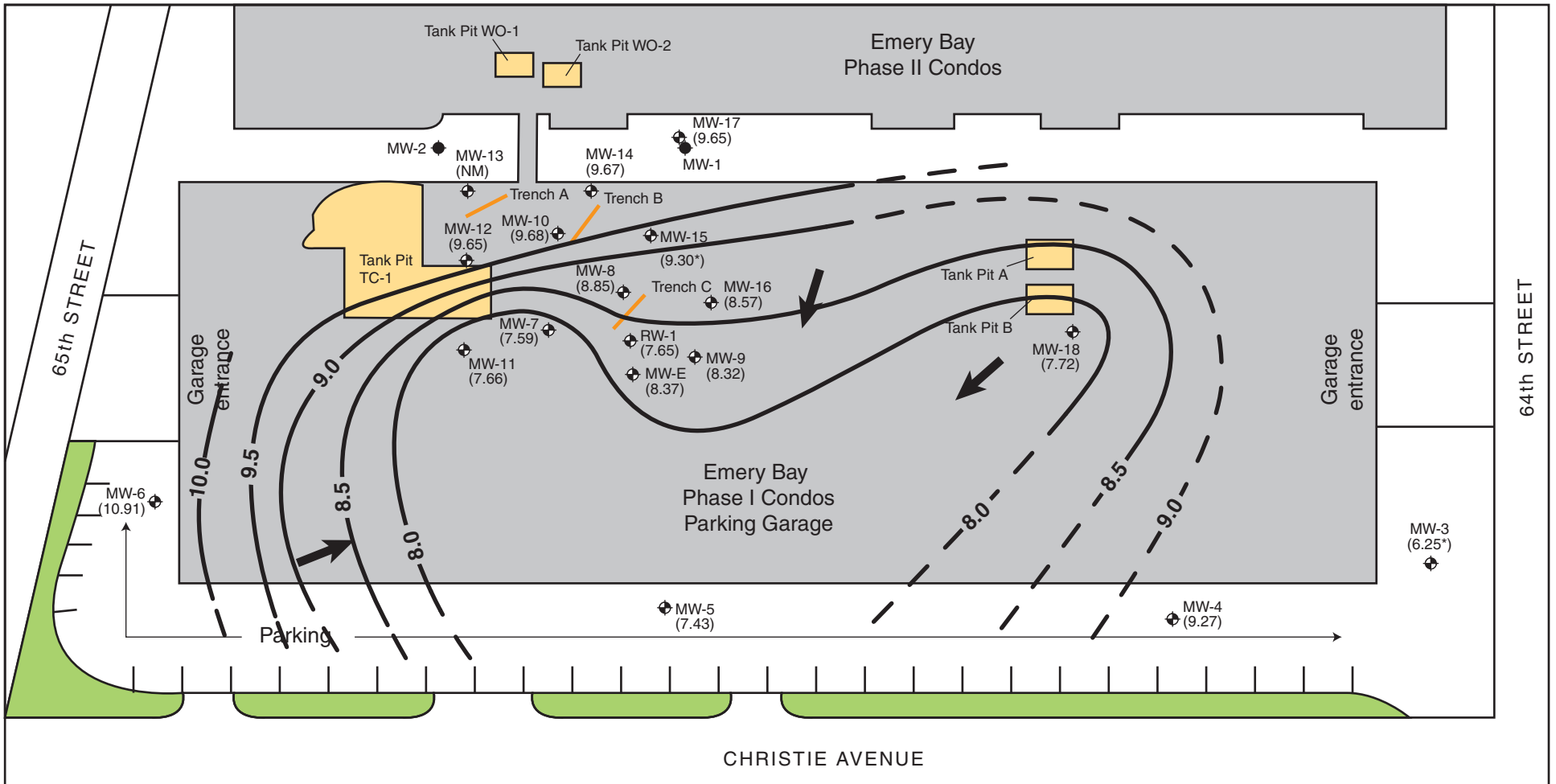
fault zone, the legislatively defined zone of restricted land use 200 feet around an active fault due to the high probability of ground rupture.

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, natural topography modifications and the historical LNAPL, resulting in a relatively slow moving and stable plume pattern.

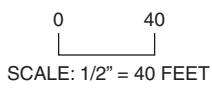
The groundwater gradient measured during the March 2011 monitoring event ranged from the southwest (on the northern portion of the site) to the west (on the central portion of the site) to the northwest (on the southern portion of the site). According to current and historical water level data obtained from onsite monitoring wells, depth to groundwater ranges from approximately 6 to 11 feet below ground surface (bgs). Groundwater elevations during the March 2011 event ranged from 6.25 to 10.91 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



GROUNDWATER ELEVATION MAP — March 30, 2011
6400 Christie Ave., Emeryville, CA

Figure 4

by: MJC APRIL 2011

2007-65-48



3.0 MARCH 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 level measurements, purging, sampling, and field analyses on March 30 and 31 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
March 30, 2011
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 (March 30, 2011)
MW-3	25	5 to 20	16.65	NM	NM	6.25
MW-4	25	5 to 20	16.29	NP	NP	9.27
MW-5	25	5 to 20	16.72	NP	NP	7.43
MW-6	25	5 to 20	16.82	NP	NP	10.91
MW-7	20	5 to 20	17.73	NP	NP	7.59
MW-8	16	5 to 16	17.84	8.89	0.01	8.85
MW-9	20	5 to 20	17.84	NP	NP	8.32
MW-10	20	5 to 20	17.83	8.14	0.01	9.68
MW-11	20	5 to 20	17.76	NP	NP	7.66
MW-12	20	5 to 20	17.83	NP	NP	9.65
MW-13	20	5 to 20	17.66	9.90	NM	NM
MW-14	20	5 to 20	17.60	7.92	0.01	9.67
MW-15	20	5 to 20	17.80	NM	NM	9.30
MW-16	20	5 to 20	17.74	NP	NP	8.57
MW-17	20	5 to 20	18.17	8.50	0.02	9.65
MW-18	20	5 to 20	16.35	NP	NP	7.72
MW-E	47	7 to 40	17.47	NP	NP	8.37
RW-1	30	unknown	16.70	9.04	0.01	7.65
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

NP = 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 50 gallons of purge water and equipment decontamination rinse water from the current groundwater sampling event was containerized in the onsite 1,100 gallon above ground storage tank (AST) located in a locked fenced area on the northeast corner of the property. In addition, 959 gallons of water and 16.55 gallons of product were removed/purged from select wells during the active product removal; 0.14 gallon was removed by passive product removal.

On April 8, 2011, Evergreen Oil, Inc. vacuumed and transported the water to its recycling facility under manifest number 0070039851 (EPA ID No. CAD980887418). Appendix F contains copies of the manifest and recycling certificate.

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 likely 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 likely 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 and diesel have decreased as compared to both the previous quarter and the same quarter last year.

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 – March 30 and 31, 2011
6400 Christie Avenue, Emeryville, California

Well ID	Analytical Results						
	TPHg	TPHd	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-3	540	2,600	47	28	7.6	11.8	17
MW-4	<50	590	<0.5	<0.5	<0.5	<0.5	2.4
MW-5	<50	4,900	1.2	<0.5	<0.5	<0.5	5.9
MW-6	<50	1,900	1.3	<0.5	<0.5	<0.5	3.9
MW-7	630	8,100	160	5.3	14	65	<2.0
MW-8	19,000	8,800	8,100	130	890	149	<2.0
MW-9	150	11,000	5.9	0.61	<0.5	0.54	5.5
MW-10	3,700	4,500	1,200	81	25	46.4	<2.0
MW-11	3,400	6,500	1,300	22	9.6	19.9	<2.0
MW-12	15,000	3,300	7,900	180	200	127	<2.0
MW-13	86,000	13,000	44,000	400	3,200	912	<2.0
MW-14	16,000	2,800	6,600	1,600	450	600	<2.0
MW-15	11,000	3,200	5,600	88	110	66.1	<2.0
MW-16	64	9,900	13	1.6	<0.5	2.3	16
MW-17	6,100	3,900	1,100	44	55	70	<2.0
MW-18	68	10,000	5.5	1.1	<0.5	1.3	17
MW-E	4,400	5,900	2,600	46	64	90	<2.0
RW-1	310	810	15	4.4	2.5	3.9	8.8
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).

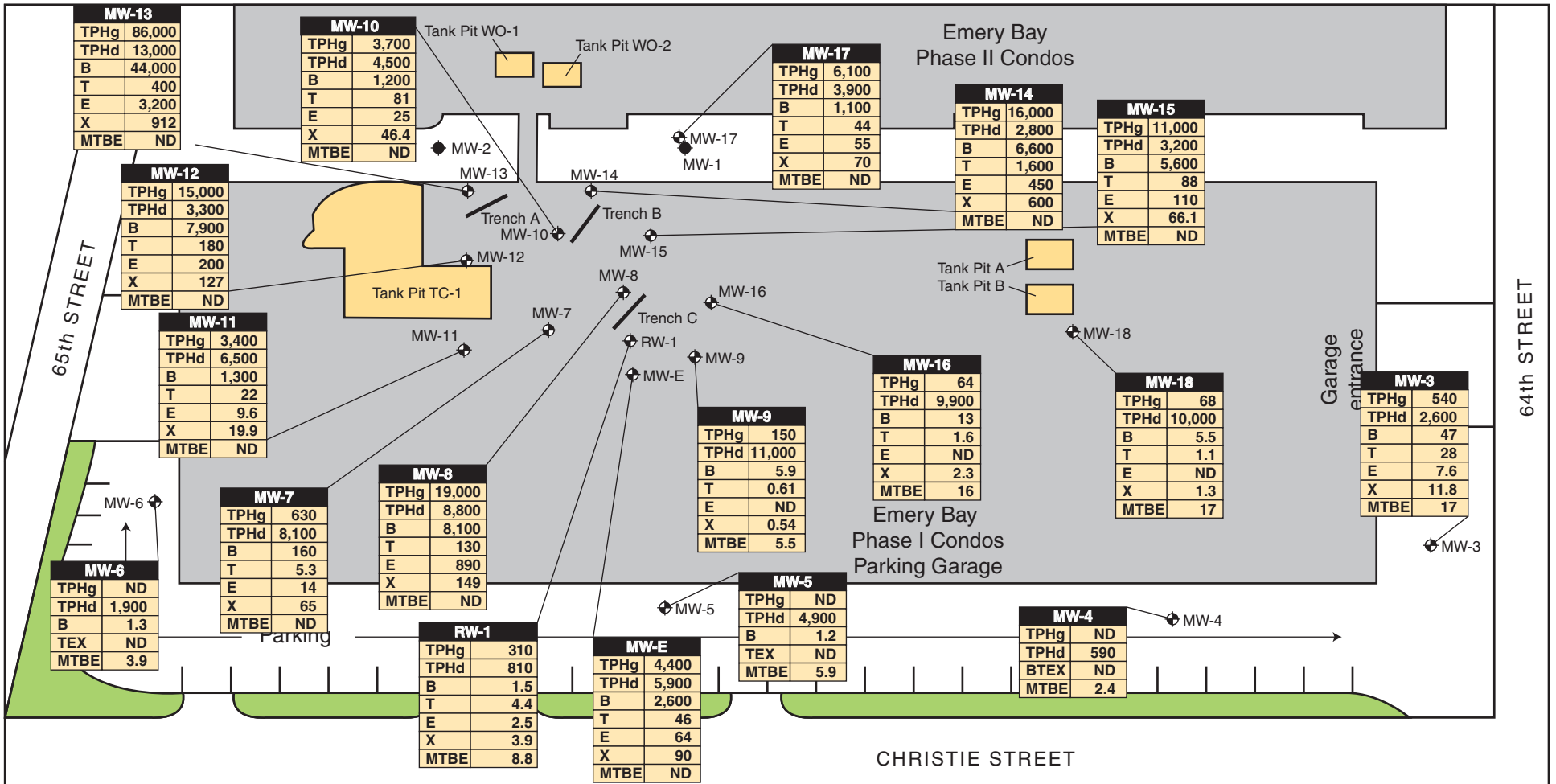
MTBE = methyl tertiary-butyl ether

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)



GROUNDWATER MONITORING WELL ANALYTICAL RESULTS

6400 Christie Ave., Emeryville, CA

Figure 5

by: MJC

APRIL 2011

Hydrocarbon Contaminants

During the March 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.

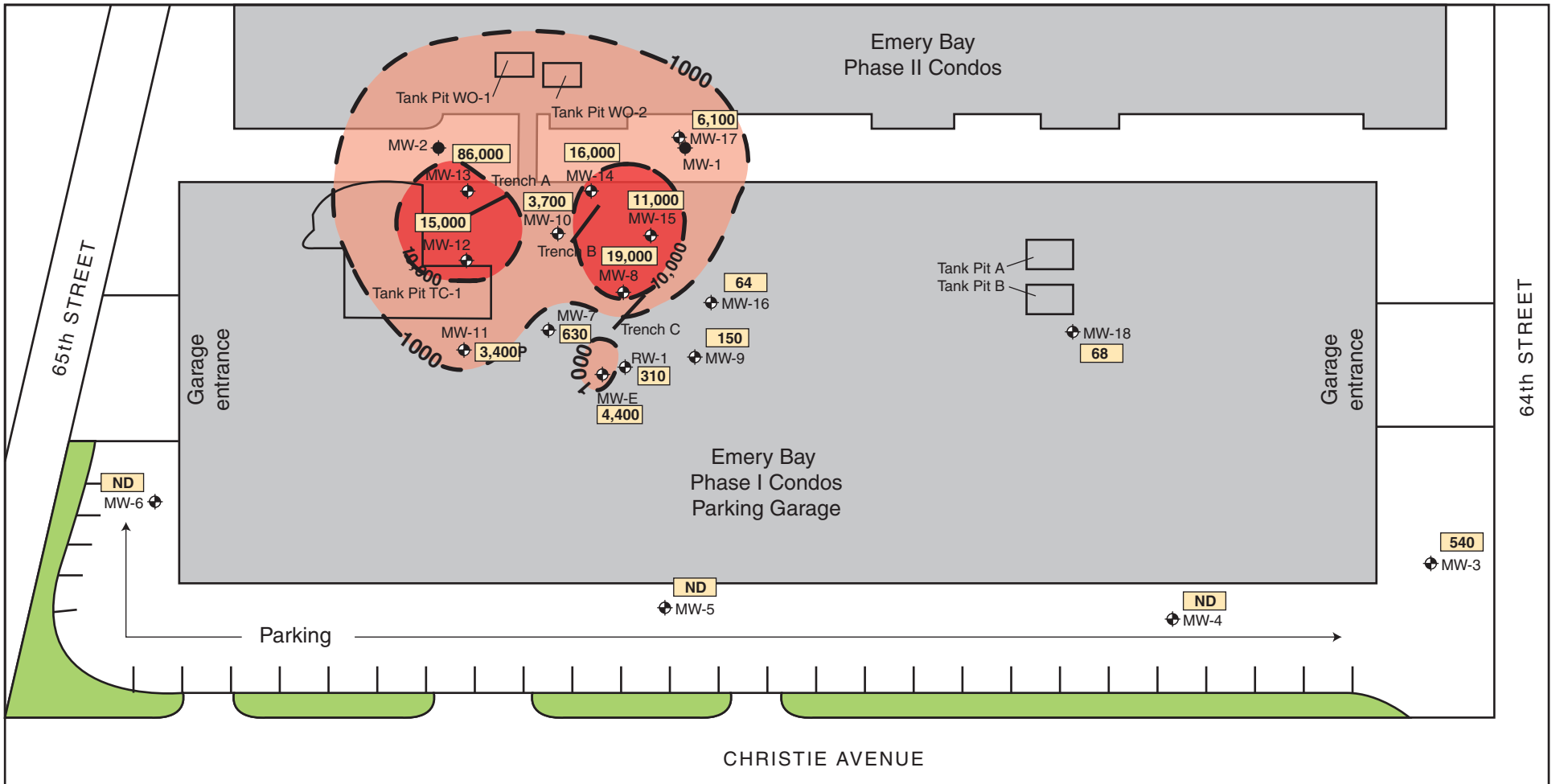
Figure 6 shows an isoconcentration contour map of TPHg concentrations in groundwater based on the April 2011 monitoring well analytical results. Increases in March 2011 compared to the March 2010 monitoring event were observed in wells MW-3, MW-8, MW-10, MW-12, MW-14, MW-15, MW-17, MW-18 and MW-E. The remaining wells either remained below laboratory detection limits (in the perimeter wells MW-4, MW-5 and MW-6) or exhibited a decrease. The higher than average rainfall in the 2011 winter season may have contributed to the results observed.

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 likely drinking water resource (210 micrograms per liter [$\mu\text{g/L}$]). Gasoline was also detected in MW-9, MW-16, and MW-18 but at concentrations below the ESL.

Diesel was detected in all site wells above the ESL of 210 $\mu\text{g/L}$ (where groundwater is not a likely drinking water resource).

The highest concentrations of TVHg (86,000 $\mu\text{g/L}$) and TEHd (13,000 $\mu\text{g/L}$) observed during this event were in MW-13. The concentration of hydrocarbons in well MW-13 has decreased significantly below the historic high concentrations of 2,700,000 $\mu\text{g/L}$ TVHg and 3,100,000 $\mu\text{g/L}$ TEHd observed in this well. The decrease is attributed to the effective LNAPL recovery in 2010 and 2011. However, the average concentration of TEHd and TVHg has remained approximately the same compared to March 2010. While not nearly as significant in percent reduction as observed in MW-13, monitoring wells MW-3, MW-8, MW-12, and MW-15 showed decreased hydrocarbon concentrations in March 2011 as compared to March 2010. The concentrations in MW-3, MW-14, and MW-17, while above the March 2010 values, were below their historic maxima.

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



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



2007-65-50

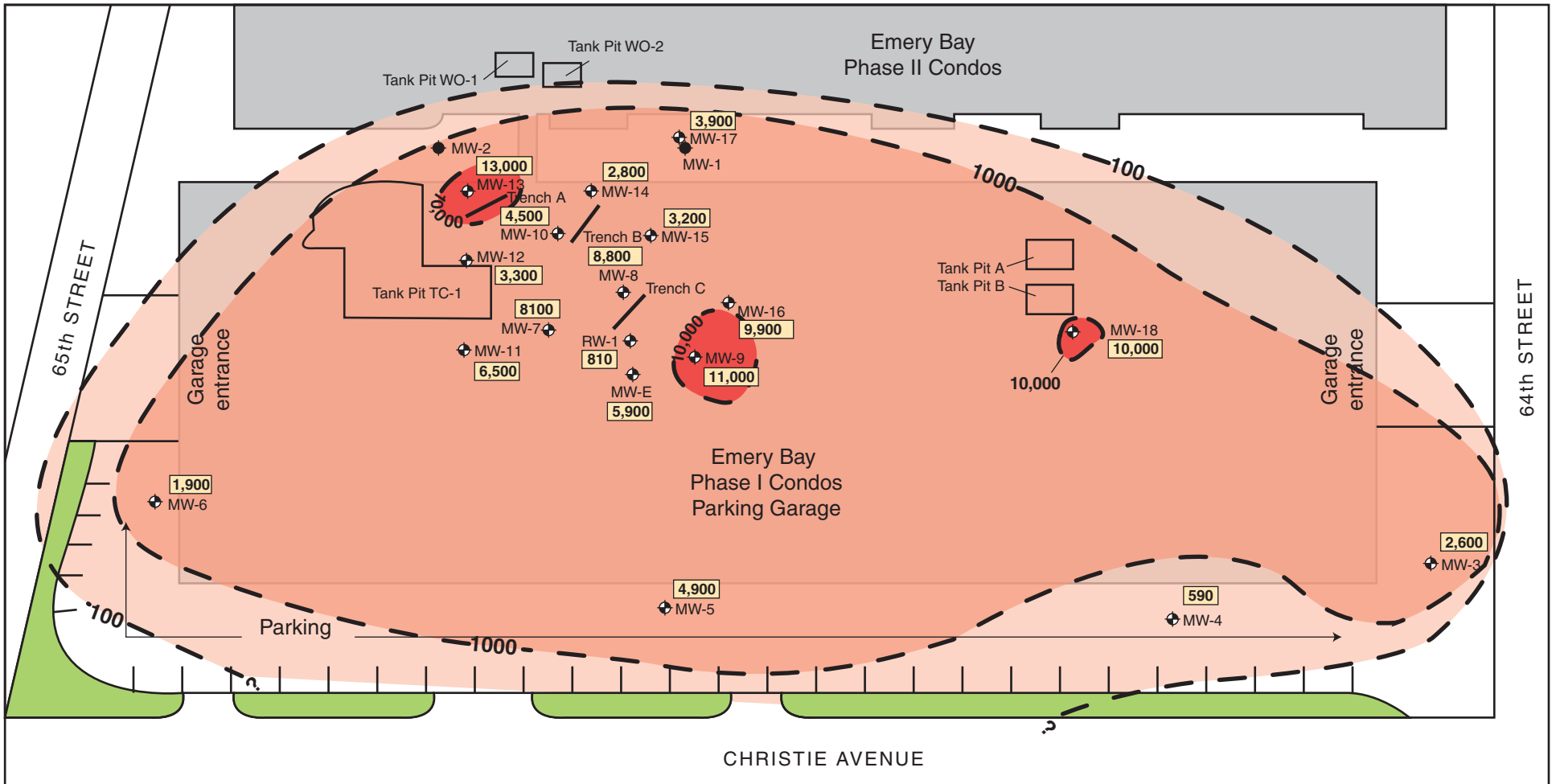


TOTAL PETROLEUM HYDROCARBON PLUME AS GASOLINE
6400 Christie Ave., Emeryville, CA

Figure 6

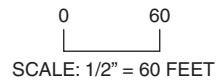
by: MJC

APRIL 2011



LEGEND

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



TOTAL PETROLEUM HYDROCARBON PLUME AS DIESEL
6400 Christie Ave., Emeryville, CA

Figure 7

by: MJC

APRIL 2011

In monitoring wells MW-3, MW-7, MW-8, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-17, and MW-E concentrations of benzene exceeded the ESL of 46 µg/L where groundwater is not a drinking water resource. Benzene was also detected in MW-5, MW-6, MW-9, MW-16, MW-18 and RW-1 but at concentrations below the ESL.

Toluene was detected at or above the ESL of 130 µg/L in monitoring wells MW-8, MW-12, MW-13 and MW-14. Toluene was also detected in wells MW-3, MW-7, MW-9, MW-10, MW-11, MW-15, MW-16, MW-17, MW-18, MW-E and RW-1 but at levels below the ESL.

Ethylbenzene was detected above the 43-µg/L ESL (where groundwater is not a likely drinking water resource) in monitoring wells MW-8, MW-12, MW-13, MW-14, MW-15, MW-17 and MW-E. Ethylbenzene was also detected in MW-3, MW-7, MW-10, MW-1 and RW-1 but at levels below the ESL.

Total xylene concentrations in monitoring wells MW-8, MW-12, MW-13, and MW-14 were above the 100-µg/L ESL where groundwater is not a likely drinking water resource. Total xylenes were also detected in MW-3, MW-7, MW-9, MW-10, MW-11, MW-15, MW-16, MW-17, MW-18, MW-E and RW-1 but below the ESL.

MTBE was not detected above the ESL of 1,800 µg/L in any of the monitoring wells. MTBE was detected in MW-3, MW-4, MW-5, MW-6, MW-9, MW-16, MW-18 and RW-1 but below the ESL.

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).

5.0 FREE-PHASE HYDROCARBON PRODUCT REMEDICATION 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 28 and 29, 2011 (immediately prior to the sampling event). Table 3 summarizes the product removed from the skimmers during this event. 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 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.

Table 3
Passive Skimmer Product Extraction in Trenches– March 28, 2011

Trench ID	Number of Skimmers in Well	Total Product Removed (gallons)
TA-E	2	0.06
TA-M	2	0.06
TA-W	2	0.02
TB-E	0	NM
TB-M	0	NM
TB-W	0	NM
TC-E	1	0.0
TC-M	0	NM
TC-W	0	NM
Total Product Removed		0.15

Note:

NM = Not measured. No skimmer was located in the well.

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)—although it is unclear whether the removed material was pure product or product mixed with water. 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.

It should be noted that 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. The amount of free product removed during 2004 and 2006 appears to have been high, as only 100 gallons of free product was obtained from actively pumping over 1 million gallons of water continuously between 1989 and 1991.

MARCH 2011 PRODUCT REMOVAL EVENT

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.

The active product removal event was conducted on March 28 and 29, 2011, in which a total of 1,050 gallons of groundwater containing as estimated 15 gallons of LNAPL was purged from the site wells. The extracted groundwater included approximately 0.15 gallons of free product removed from the passive skimmers. Stellar Environmental calculated that an additional 2.3 pound of gasoline and diesel were removed with the dissolved fraction of the purged groundwater based on the analytical results from groundwater monitoring and sampling having an average TVHg concentration of 9,242 µg/L and an average TEHd concentration of 5,650 µg/L in site wells.

The removal activities occurred as follows:

- On March 28-29, 2011 Stellar Environmental removed 50 gallons of groundwater and product from TA-W and TA-M. Product was evident in these wells; however, the skimmers were filled with water (no product). The skimmers on TA-E contained 0.25 gallon of product and an additional 50 gallons of groundwater and product were removed actively. Stellar Environmental removed 50 gallons from TB-M. Stellar Environmental removed 25 gallons each from TB-E and TB-W. On trench well TC-E, 50 gallons were removed actively. Only water was present in the skimmer in this well. Stellar Environmental removed 50 gallons each from TC-M and TC-W. On recovery well RW-1, 200 gallons were removed actively. Stellar Environmental then removed 8 gallons from MW-3 before it dewatered.

- On March 28-29, 2011, a total of approximately 15 gallons of petroleum product was extrapolated to have been removed from the 1,050 gallons of liquid that was removed from all of the monitoring wells and former extraction wells. The petroleum product was estimated based on measured free-product accumulation in the storage tank. Significantly higher petroleum product removal was realized (about 15 gallons) from the individual project purging of the key wells prior to the sampling event than was product removal (about 0.2 gallons) from the “skimmers” designed for the product removal. Product removal was most pronounced at wells MW-3, MW-6, MW-8, MW-11, MW-12, MW-13, MW-15, and MW-17.
- 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 April 8, 2011, Evergreen Oil vacuumed and transported the water to its recycling facility in Newark, California. The waste manifest and recycling certificate are included in Appendix F.

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. 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 apparently 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 may also have been a mixture of water and hydrocarbons. 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. Approximately 10.34 gallons were removed by active pumping on wells during 2008.

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 a semiannual frequency in 2009.
- The site currently contains 17 monitoring wells, 1 recovery well, and 9 product extraction trench wells. This is the 15th 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 2 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 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).
- Groundwater elevations during the March 2011 event ranged from 6.25 to 10.91 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. MTBE was detected in MW-3, MW-4, MW-5, MW-6, MW-9, MW-16, MW-18 and RW-1 during this event; however, the concentrations were well below the applicable ESL.

- The highest concentrations of TVHg (86,000 µg/L) and TEHd (13,000 µg/L) were observed in MW-13. The concentration of hydrocarbons in well MW-13 has decreased significantly from the historic high concentrations of 2,700,000 µg/L TVHg and 3,100,000 µg/L TEHd observed in this well. The decrease is attributed to the effective LNAPL recovery in 2010 and 2011. However, the average concentration of TEHd and TVHg in the remaining site wells has remained about the same compared to March 2010.
- Monitoring wells MW-3, MW-8, MW-12 and MW-15 showed decreased diesel concentrations in March 2011 compared to March 2010. The concentrations in MW-3, MW-14, and MW-17, while above the March 2010 values, were below their historic maxima.
- Increases in gasoline concentrations compared to the March 2010 monitoring event were observed in wells MW-7, MW-9, MW-13, MW-16, MW-18 and RW-E. The remaining wells either remained below laboratory detection limits (in the perimeter wells MW-4, MW-5, and MW-6) or exhibited a decrease. Decreases were also observed in 5 of the 18 monitoring wells compared to the last semiannual event (September 2010).
- 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 likely drinking water resource (210 micrograms per liter [µg/L]). Gasoline was also detected in MW-9, MW-16 and MW-18 but at concentrations below the ESL.
- Benzene concentrations in monitoring wells MW-3, MW-7, MW-8, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-17, and MW-E exceeded the ESL of 46 µg/L where groundwater is not a drinking water resource. Benzene was also detected in MW-5, MW-6, MW-9, MW-16, MW-18 and RW-1 but at concentrations below the ESL.
- Toluene was detected at or above the ESL of 130 µg/L in monitoring wells MW-8, MW-12, MW-13 and MW-14. Toluene was also detected in wells MW-3, MW-7, MW-9, MW-10, MW-11, MW-15, MW-16, MW-17, MW-18, MW-E and RW-1 but at levels below the ESL.
- Ethylbenzene was detected above the 43-µg/L ESL (where groundwater is not a likely drinking water resource) in monitoring wells MW-8, MW-12, MW-13, MW-14, MW-15, MW-17 and MW-E. Ethylbenzene was also detected in MW-3, MW-7, MW-10, MW-1 and RW-1, but at levels below the ESL.
- Total xylene concentrations in monitoring wells MW-8, MW-12, MW-13, and MW-14 were above the 100-µg/L ESL where groundwater is not a likely drinking water resource. Total xylenes were also detected in MW-3, MW-7, MW-9, MW-10, MW-11, MW-15, MW-16, MW-17, MW-18, MW-E and RW-1 but below the ESL.

- MTBE was not detected above the ESL of 1,800 µg/L in any of the monitoring wells. MTBE was detected in MW-3, MW-4, MW-5, MW-6, MW-9, MW-16, MW-18 and RW-1 but below the ESL.
- Stellar Environmental conducted passive skimmer product removal on the trench wells during the March 2011 removal event. A total of approximately 0.06 gallons were removed from the each skimmer in trench wells TA-M and TA-E and 0.02 gallons was removed from the skimmer in trench well TA-W. The skimmer in trench well TC-E was filled with water.
- Stellar Environmental also conducted active product removal on the trench wells, source area wells, recovery well, and select monitoring wells during the March 2011 event. A total of approximately 1,050 gallons of groundwater that includes approximately 0.15 gallons of free product from the passive skimmers and 15 gallons of free-floating petroleum product from all the wells as estimated by the measurement of the free product layer on top of the 1,050 gallons in the purge water storage tank.
- 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 contaminant concentrations over time.
- Both active and passive free product removal events should be continued to ascertain their effectiveness in 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 semiannual basis.
- Emergent best available technologies should 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

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

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

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

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

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

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

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

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

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

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	7,900
11	Mar-11	3,300	15,000	NA	7,900	180	200	127	<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

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

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

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

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

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

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

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

WELLHEAD INSPECTION CHECKLIST

Date 3/30/11 Client STELLAR
 Site Address 65TH @ BAY STREETS, EMERYVILLE, CA
 Job Number 110330-~~110330~~WWS1 Technician J. PARLER / W. WONG

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			x				
MW-5	x							
MW-6	x							
MW-7							x	
MW-8	x							
MW-9							x	
MW-10							x	
MW-11	x						x	
MW-12							x	
MW-13	x							
MW-14	x							
MW-15	x							
MW-16	x							
MW-17							x	
MW-18	x							

NOTES: MW-11: 1/2 BOLTS MISSING (9/16"). MW-7: 1/2 BOLTS MISSING (9/16").
 MW-9: 2 1/2 BOLTS MISSING (9/16"). MW-12: 1/2 BOLTS MISSING (9/16"). MW-10: 1/2 BOLTS MISSING (9/16").
 MW-15: 1/2 TABS STRIPPED. MW-3/4/5/6: CRUSHED BOX.

WELL GAUGING DATA

Project # 110330-ww1 Date 3/30/11 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
MW-3	0930	2	YES	-	UNknown	-	10.40	-		VERY THICK SPH
MW-4	0900	2		-			7.02	24.85		
MW-5	0905	2		-			9.29	24.91		
MW-6	0900	2		-			5.91	23.31		
MW-7	0910	3/4	ODOR	-			10.14	19.86		
MW-8	0945	3/4	ODOR SHEEN	8.89	0.10		8.99	-		
MW-9	0914	3/4	ODOR	-			9.52	19.66		
MW-10	0958	3/4	SHEEN ODOR	8.14	0.01		8.15	-		
MW-11	0918	3/4		-			10.10	19.69		
MW-12	0925	3/4	ODOR	-			8.18	19.00		
MW-13	1002	3/4	SHEEN ODOR	9.90				-		SOUNDER COATED TO UNABLE TO PRODUCE WATER
MW-14	1003	3/4	SHEEN ODOR	7.92	0.01		7.93	-		
MW-15	1013	3/4	SHEEN ODOR	-			8.50	18.89		
MW-16	0930	3/4		-			9.17	19.10		
MW-17	0901	3/4	ODOR SHEEN	8.50	0.02		8.52	19.50		
MW-18	0936	3/4		-			8.63	19.59		
MW-E	0910	2		-			9.10	45.15		

WELL MONITORING DATA SHEET

Project #: 11033D-WW1	Client: STELLAR
Sampler: WW	Date: 3/31/11
Well I.D.: MW-3	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): —	Depth to Water (DTW): 10.40
Depth to Free Product:	Thickness of Free Product (feet): unknown
Referenced to: <u>PVC</u> 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

Waters
Peristaltic
 Extraction Pump
 Other _____

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

$\frac{\text{_____ (Gals.)} \times \text{_____}}{\text{Specified Volumes}} = \text{_____ Gals.}$ I Case Volume Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1138	START	PURGE	@	175 ml/min		heavy sheen, odor
1144	STOP	PURGE			1050 ml	

* UNABLE TO GAUGE WITH INTERFACE (VERY THICK PRODUCT)

Did well dewater? Yes No Gallons actually evacuated: 1050 mL

Sampling Date: 3/31/11 Sampling Time: 1150 Depth to ^{Product} Water: 10.51

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

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

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 #: 110330-ww1	Client: STELLAR
Sampler: ww	Date: 3/30/11
Well I.D.: MW-4	Well Diameter: (2) 3 4 6 8
Total Well Depth (TD): 24.85	Depth to Water (DTW): 7.02
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]: 10.59	

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

$2.9 \text{ (Gals.)} \times 3 = 8.7 \text{ Gals.}$ l Case Volume Specified Volumes Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1030	59.1 14.9	7.07	644	172	2.9	
1034	514.8	7.84	656	242	5.8	
1038	14.6	7.78	670	306	8.7	

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: 8.7	
Sampling Date: 3/30/11	Sampling Time: 1045	Depth to Water: 7.02
Sample I.D.: MW-4	Laboratory: Kiff CalScience	Other: CPT
Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5)	Other: see saw	
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 #: 110330-WW1	Client: STELLAZ
Sampler: JP	Date: 3/30/11
Well I.D.: MW-5	Well Diameter: ② 3 4 6 8 _____
Total Well Depth (TD): 24.81	Depth to Water (DTW): 9.29
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]: 12.39	

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: _____
--	--	---

$25 \text{ (Gals.)} \times 3 = 75 \text{ Gals.}$ I Case Volume Specified Volumes Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
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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) ①	pH	Cond. (mS or μS) ②	Turbidity (NTUs)	Gals. Removed	Observations
1039	16.9	7.80	2161	>1000	2.5	
1044	17.0	7.73	2196	>1000	8.0	
1048	17.1	7.80	2202	>1000	7.5	

Did well dewater? Yes No Gallons actually evacuated: 7.5

Sampling Date: 3/30/11 Sampling Time: 1100 Depth to Water: 10.0

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

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

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 #: 110330-WW1	Client: STELLARZ
Sampler: JP	Date: 3/30/11
Well I.D.: MW-6	Well Diameter: <u>2</u> 3 4 6 8 _____
Total Well Depth (TD): 23.31	Depth to Water (DTW): 5.91
Depth to Free Product: _____	Thickness of Free Product (feet): _____
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.31	

Purge Method: Bailer Disposable Bailer Waterra Peristaltic Extraction Pump Other _____
 Sampling Method: Bailer Disposable Bailer Extraction Port Dedicated Tubing Other: _____

$\underline{2.8} \text{ (Gals.)} \times \underline{3} = \underline{8.4} \text{ Gals.}$ 1 Case Volume Specified Volumes Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1221	14.9	10.98	1242	49	2.8	
1225	14.6	10.94	1271	42	5.6	
1229	14.4	10.88	1282	41	8.4	

Did well dewater? Yes No Gallons actually evacuated: 8.4

Sampling Date: 3/30/11 Sampling Time: 1235 Depth to Water: 6.02

Sample I.D.: MW-6 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 #: 110330-WW1	Client: STEUBER
Sampler: WW1	Date: 3/30/11
Well I.D.: MW-7	Well Diameter: 2 3 4 6 8 <u>3/4</u>
Total Well Depth (TD): 19.86	Depth to Water (DTW): 10.14
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>12.08</u>	

Purge Method: Bailer Disposable Bailer Positive Air Displacement Electric Submersible	Watera <u>Peristaltic</u> Extraction Pump Other _____	Sampling Method: Bailer Disposable Bailer Extraction Port Dedicated Tubing Other: <u>new tubing</u>
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$0.2 \text{ (Gals.)} \times 3 = 0.6 \text{ Gals.}$ 1 Case Volume Specified Volumes Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1246	15.6	8.30	10.75ms	227	0.2	brown, odor
1248	15.5	8.35	11.30ms	195	0.4	"
1250	15.1	8.30	11.26ms	181	0.6	"
* UNABLE TO GAUGE DTW DURING PURGE.						

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: 0.6	
Sampling Date: 3/30/11	Sampling Time: 1255	Depth to Water: 12.0
Sample I.D.: MW-7	Laboratory: Kiff CalScience Other: <u>ERT</u>	
Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5)	Other: <u>see saw</u>	
EB I.D. (if applicable): @ Time	Duplicate I.D. (if applicable):	
Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5)	Other:	
D.O. (if req'd): Pre-purge: _____ mg/L	Post-purge: _____ mg/L	
O.R.P. (if req'd): Pre-purge: _____ mV	Post-purge: _____ mV	

WELL MONITORING DATA SHEET

Project #: 110330-WW1	Client: STELLAR
Sampler: JP	Date: 3/30/11
Well I.D.: MW-9	Well Diameter: 2 3 4 6 8 3/4
Total Well Depth (TD): 19.66	Depth to Water (DTW): 9.52
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]: 11.55	

Purge Method: Bailer Water Sampling Method: Bailer

 Disposable Bailer Peristaltic Disposable Bailer

 Positive Air Displacement Extraction Pump Extraction Port

 Electric Submersible Other _____ Dedicated Tubing

Other: NEW TUBING

$\frac{0.2 \text{ (Gals.)} \times 3 \text{ Specified Volumes}}{1 \text{ Case Volume}} = 0.6 \text{ Gals. Calculated Volume}$	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F or C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1310	15.8	9.74	1936	31	0.2	
1320	15.6	9.69	2021	28	0.4	
1313	15.5	9.61	2100	28	0.6	

Did well dewater? Yes No Gallons actually evacuated: 0.6

Sampling Date: 3/30/11 Sampling Time: 1320 Depth to Water: 9.89

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

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

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 #: 110330-WW1	Client: <u>STELLAR</u>
Sampler: <u>JP</u>	Date: <u>3/30/11</u>
Well I.D.: <u>MW-11</u>	Well Diameter: 2 3 4 6 8 <u>3/4</u>
Total Well Depth (TD): <u>19.69</u>	Depth to Water (DTW): <u>10.10</u>
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>12.02</u>	

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

$\underline{0.2} \text{ (Gals.)} \times \underline{3} = \underline{0.6} \text{ Gals.}$ 1 Case Volume Specified Volumes Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1348	15.1	8.32	2224	73	0.2	
1351	14.9	8.19	2229	70	0.4	
1353	14.8	8.09	2222	77	0.6	

Did well dewater? Yes No Gallons actually evacuated: 0.6

Sampling Date: 3/30/11 Sampling Time: 1400 Depth to Water: 10.26

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

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

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 #: 110330-WW1	Client: STELLAR
Sampler: WW	Date: 3/31/11
Well I.D.: MW-13	Well Diameter: 2 3 4 6 8 <u>3/4</u>
Total Well Depth (TD): —	Depth to Water (DTW): <u>SOUNDER COATED</u> <u>UNABLE TO GAGE</u>
Depth to Free Product: <u>9.90</u>	Thickness of Free Product (feet): <u>THICK (HEAVILY)</u> <u>COATING OF SP</u>
Referenced to: <u>(EVC)</u> 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	Water <u>Peristaltic</u> Extraction Pump Other _____	Sampling Method: Bailer Disposable Bailer Extraction Port Dedicated Tubing Other: <u>new tubing</u>
--	---	---

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

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

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1006	START	PURGE	@	200 ml/min		heavy sheen, odor
1012	STOP	PURGE			1200ml	brown, globules
* UNABLE TO GAGE WELL DURING LOW FLOW PURGE						

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

Sampling Date: 3/31/11 Sampling Time: 1020 Depth to ^{Product}Water: 9.90

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

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

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 #: <u>110330-ww1</u>	Client: <u>STELLAR</u>
Sampler: <u>ww</u>	Date: <u>3/31/11</u>
Well I.D.: <u>MW-14</u>	Well Diameter: 2 3 4 6 8 <u>3/4</u>
Total Well Depth (TD): <u>—</u>	Depth to Water (DTW): <u>7.93</u>
Depth to Free Product: <u>7.92</u>	Thickness of Free Product (feet): <u>0.01</u>
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>—</u>	

Purge Method: Bailer
 Disposable Bailer
 Positive Air Displacement
 Electric Submersible

WATERA
Peristaltic
 Extraction Pump
 Other _____

Sampling Method: Bailer
 Disposable Bailer
 Extraction Port
 Dedicated Tubing

Other: new tubing

$\frac{\text{Gals. X}}{\text{Specified Volumes}} = \text{Gals.}$ Case Volume Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1030	<u>START</u>	<u>PURGE</u>	<u>0</u>	<u>200 ml/min</u>	<u>1200 ml</u>	<u>odor, sheen</u>
1036	<u>STOP</u>	<u>PURGE</u>				
<u>* UNABLE TO GAUGE WITH INTERFACE DURING LOW FLOW PURGE</u>						
Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Gallons actually evacuated: <u>1200 ml</u>				
Sampling Date: <u>3/31/11</u>		Sampling Time: <u>1045</u>		Depth to ^{PRODUCT} Water: <u>7.92</u>		
Sample I.D.: <u>MW-14</u>			Laboratory: Kiff CalScience Other <u>C&T</u>			
Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: <u>see SOW</u>						
EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):						
Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:						
D.O. (if req'd): Pre-purge:		mg/L		Post-purge:		mg/L
O.R.P. (if req'd): Pre-purge:		mV		Post-purge:		mV

WELL MONITORING DATA SHEET

Project #: 110830-ww1	Client: STELLAR
Sampler: ww	Date: 3/30/11
Well I.D.: MW-16	Well Diameter: 2 3 4 6 8 <u>3/4</u>
Total Well Depth (TD): 19.10	Depth to Water (DTW): 9.17
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.16	

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

$0.2 \text{ (Gals.)} \times 3 = 0.6 \text{ Gals.}$
 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
1311	15.1	9.96	4085	102	0.2	brown
1312	14.9	10.05	3964	59	0.4	"
1313	14.9	10.05	3934	46	0.6	"

Did well dewater? Yes No Gallons actually evacuated: 0.6

Sampling Date: 3/30/11 Sampling Time: 1320 Depth to Water: 9.30

Sample I.D.: MW-16 Laboratory: Kiff CalScience Other: C&T

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

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 #: <u>110330-ww1</u>	Client: <u>STENNER</u>
Sampler: <u>KW</u>	Date: <u>3/30/11</u>
Well I.D.: <u>MW-17</u>	Well Diameter: 2 3 4 6 8 <u>3/4</u>
Total Well Depth (TD): <u>19.50</u>	Depth to Water (DTW): <u>8.52</u>
Depth to Free Product: <u>8.50</u>	Thickness of Free Product (feet): <u>0.02</u>
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u> </u>	

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

$\frac{\text{(Gals.) X}}{\text{Specified Volumes}} = \text{Calculated Volume Gals.}$	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1207	BEGIN	PURGE	@ 200 ml/min			odor, sheen
1213	END	PURGE			1200 ml removed	
*UNABLE TO GUAGE W/ INTERFACE DURING PURGING.						

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>1200 ml</u>	
Sampling Date: <u>3/30/11</u>	Sampling Time: <u>1200</u>	Depth to Water: <u>8.52</u>
Sample I.D.: <u>MW-17</u>	Laboratory: Kiff CalScience Other <u>CAT</u>	
Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: <u>see saw</u>		
EB I.D. (if applicable): @ Time	Duplicate I.D. (if applicable):	
Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:		
D.O. (if req'd): Pre-purge: <u> </u> mg/L	Post-purge: <u> </u> mg/L	
O.R.P. (if req'd): Pre-purge: <u> </u> mV	Post-purge: <u> </u> mV	

WELL MONITORING DATA SHEET

Project #: 110330-ww1	Client: STELLAR
Sampler: ww	Date: 3/30/11
Well I.D.: MW-18	Well Diameter: 2 3 4 6 8 <u>3/4</u>
Total Well Depth (TD): 19.59	Depth to Water (DTW): 8.63
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.82	

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

0.2 (Gals.) X 0.3 = 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
1328	14.7	7.33	6965	944	0.2	odor
1330	14.7	7.33	6991	899	0.4	"
1332	14.6	7.33	7242	867	0.6	

Did well dewater? Yes No Gallons actually evacuated: 0.6

Sampling Date: 3/30/11 Sampling Time: 1340 Depth to Water: 10.11

Sample I.D.: MW-18 Laboratory: Kiff CalScience Other C&T

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

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 #: 110330-kw1	Client: STELLAR
Sampler: WW	Date: 3/31/11
Well I.D.: MW-E	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth (TD): 45.15	Depth to Water (DTW): 9.10
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 16.31	

Purge Method: Bailer Waterra Sampling Method: Bailer
 Disposable Bailer Peristaltic Disposable Bailer
 Positive Air Displacement Extraction Pump Extraction Port
 Electric Submersible Other _____ Dedicated Tubing
Other: new tubing

$5.8 \text{ (Gals.)} \times 3 = 17.4 \text{ Gals.}$ I Case Volume Specified Volumes Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
0855	15.9	7.88	3286	>1000	5.8	odor
WELL	DEWATERED @			8 GALS		
1210	16.5	7.84	3492	352	—	—

Did well dewater? Yes No Gallons actually evacuated: 8

Sampling Date: 3/31/11 Sampling Time: 1210 Depth to Water: 9.94

Sample I.D.: MW-E Laboratory: Kiff CalScience Other: CR

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

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 #: <u>11030-WW1</u>	Client: <u>STELLAR</u>
Sampler: <u>WW</u>	Date: <u>3/31/11</u>
Well I.D.: <u>RW-1</u>	Well Diameter: 2 3 4 6 8 <u>10</u>
Total Well Depth (TD): <u>—</u>	Depth to Water (DTW): <u>9.05</u>
Depth to Free Product: <u>9.04</u>	Thickness of Free Product (feet): <u>0.01</u>
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>—</u>	

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

$\frac{\text{_____ (Gals.)} \times \text{_____}}{\text{Specified Volumes}} = \text{_____ Gals.}$ 1 Case Volume Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1217	START					PURGE @ 200 ml/min
1223	STOP				1200 ml	HEAVY SHEEN

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>1200 ml</u>
Sampling Date: <u>3/31/11</u>	Sampling Time: <u>1230</u> Depth to Water ^{PRODUCT} <u>9.04</u>
Sample I.D.: <u>RW-1</u>	Laboratory: Kiff CalScience Other <u>CDT</u>
Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: <u>see saw</u>	
EB I.D. (if applicable): @ _____ Time	Duplicate I.D. (if applicable):
Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:	
D.O. (if req'd): Pre-purge: _____ mg/L	Post-purge: _____ 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 226992
ANALYTICAL REPORT

Stellar Environmental Solutions
2198 6th Street
Berkeley, CA 94710

Project : 2007-65
Location : Bay Center Apts
Level : II

Table with 2 columns: Sample ID and Lab ID. Lists various MW and RW samples and their corresponding Lab IDs.

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: [Handwritten Signature]
Project Manager

Date: 04/07/2011

CASE NARRATIVE

Laboratory number: 226992
Client: Stellar Environmental Solutions
Project: 2007-65
Location: Bay Center Apts
Request Date: 03/31/11
Samples Received: 03/31/11

This data package contains sample and QC results for eighteen water samples, requested for the above referenced project on 03/31/11. The samples were received cold and intact.

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

MW-7 (lab # 226992-004) had pH greater than 2. No other analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B):

No analytical problems were encountered.

Chain of Custody Record

220992

Laboratory CYT
 Address 2323 FIFTH ST
BERKELEY, CA

Method of Shipment LAB COURIER

Lab Job no. _____
 Date 3/30/11
 Page 1 of 2

Project Owner _____
 Site Address 6400 CHRISTIE AVE
BERKELEY, CA

Cooler No. R. MAKDISI
 Project Manager [Signature]

Project Name BAY CENTER APARTMENT
 Project Number 2007-65

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		Analysis Required										Remarks								
						Cooler	Chemical																			
1	MW-4	3/30/11	1045	W	4 HCL VODS 2 500 mL amber NP																					
2	MW-5		1100																							
3	MW-6		1235																							
4	MW-7		1255																							
5	MW-9		1320																							
6	MW-11		1400																							
7	MW-12		1420																							
8	MW-16		1320																							
9	MW-17		1220																							
10	MW-18		1340																							

Filtered
 No. of Containers
 TEH-D (8015)
 TPH-G (8015)
 BTEX + MTBE

Relinquished by: <u>[Signature]</u> Signature _____ Printed <u>WILLIAM WONG</u> <u>BLAINE TECH</u> <u>SERVICES</u> Company _____	Date <u>3/30/11</u> Time _____	Received by: <u>[Signature]</u> Signature _____ Printed <u>Tracy</u> <u>Curtis [Signature]</u> Company _____	Date <u>3/30/11</u> Time <u>2:20pm</u>	Relinquished by: _____ Signature _____ Printed _____ Company _____	Date _____ Time _____	Received by: _____ Signature _____ Printed _____ Company _____	Date _____ Time _____		
Turnaround Time: <u>STANDARD</u> Comments: <u>EDF REQUIRED</u> <u>GLOBAL ID # SLT 2005561</u>				Relinquished by: _____ Signature _____ Printed _____ Company _____				Received by: _____ Signature _____ Printed _____ Company _____	

2000-00-01

Chain of Custody Record

226992

Lab job no. _____
 Date 3/31/11
 Page 2 of 2

Laboratory CYT Method of Shipment LAB COURIER
 Address 2323 FIFTH ST Shipment No. _____
BERKELEY, CA Airbill No. _____
 Project Owner _____ Cooler No. R. MAKDISI
 Site Address 6400 CHRISTIE AVE Project Manager [Signature]
BERKELEY, CA Telephone No. (510) 644-3123
 Project Name BAY CENTER APARTMENT Fax No. (510) 644-3859
 Project Number 2007-65 Samplers: (Signature) [Signature]

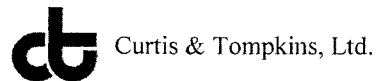
Field Sample Number	Location/Depth	Date	Time	Sample Type	Type/Size of Container	Preservation		Filtered	No. of Containers	Analysis Required				Remarks
						Cooler	Chemical							
11	MW-3	3/31/11	1150	W	4 FICI vials + 2 500 mL NP amber				0	0	0			
12	MW-8		0925						0	0	0			
13	MW-10		0950						0	0	0			
14	MW-13		1020						0	0	0			
15	MW-14		1045						0	0	0			
16	MW-15		1125						0	0	0			
17	MW-E		1210						0	0	0			
18	RW-1		1230						0	0	0			

TEH-D (8015)
 TPH-G (8015)
 BTEX Y M T B E

Relinquished by: Signature <u>[Signature]</u> Printed <u>BLAINE TECH SERVICES</u> Company <u>SEALVICS</u>	Date <u>3/31/11</u> Time _____	Received by: Signature <u>[Signature]</u> Printed <u>Troy B...</u> Company <u>CD</u>	Date <u>3/31/11</u> Time _____	Relinquished by: Signature _____ Printed _____ Company _____	Date _____ Time _____	Received by: Signature _____ Printed _____ Company _____	Date _____ Time _____		
Turnaround Time: <u>STANDARD</u> Comments: <u>EDF REQUIRED</u> <u>GLOBAL ID # SLT 2005561</u>				Relinquished by: Signature _____ Printed _____ Company _____				Date _____ Time _____	

2000-00-01

COOLER RECEIPT CHECKLIST



Login # 226992 Date Received 3/31/11 Number of coolers 2
Client Stellar Environmental Project Bay Center Apartment
Date Opened 3/31/11 By (print) R. Paris (sign) [Signature]
Date Logged in [Arrow] By (print) [Arrow] (sign) [Arrow]

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

2A. Were custody seals present? ... YES (circle) on cooler on samples NO
How many Name Date

2B. Were custody seals intact upon arrival? YES NO N/A

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe)

- Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels

7. Temperature documentation:

Type of ice used: Wet Blue/Gel None Temp(C)

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. Are bubbles > 6mm absent in VOA samples? YES NO N/A

18. Was the client contacted concerning this sample delivery? YES NO

If YES, Who was called? By Date:

COMMENTS

Blank lines for handwritten comments.

Curtis & Tompkins Laboratories Analytical Report

Lab #: 226992	Location: Bay Center Apts
Client: Stellar Environmental Solutions	Prep: EPA 5030B
Project#: 2007-65	
Matrix: Water	Sampled: 03/30/11
Units: ug/L	Received: 03/31/11

Field ID: MW-4 Diln Fac: 1.000
 Type: SAMPLE Batch#: 173350
 Lab ID: 226992-001 Analyzed: 04/01/11

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	2.4	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)	101	75-130	EPA 8015B
Bromofluorobenzene (PID)	94	58-121	EPA 8021B

Field ID: MW-5 Diln Fac: 1.000
 Type: SAMPLE Batch#: 173350
 Lab ID: 226992-002 Analyzed: 04/01/11

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	5.9	2.0	EPA 8021B
Benzene	1.2 C	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)	98	75-130	EPA 8015B
Bromofluorobenzene (PID)	89	58-121	EPA 8021B

Field ID: MW-6 Diln Fac: 1.000
 Type: SAMPLE Batch#: 173350
 Lab ID: 226992-003 Analyzed: 04/01/11

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	3.9	2.0	EPA 8021B
Benzene	1.3 C	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)	103	75-130	EPA 8015B
Bromofluorobenzene (PID)	95	58-121	EPA 8021B

C= Presence confirmed, but RPD between columns exceeds 40%
 Y= Sample exhibits chromatographic pattern which does not resemble standard
 ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	226992	Location:	Bay Center Apts
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC586099	Batch#:	173350
Matrix:	Water	Analyzed:	04/01/11
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits	Analysis
Gasoline C7-C12	1,000	987.8	99	75-126	EPA 8015B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	100	75-130	EPA 8015B
Bromofluorobenzene (PID)	104	58-121	EPA 8021B

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	226992	Location:	Bay Center Apts
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Field ID:	MW-4	Batch#:	173350
MSS Lab ID:	226992-001	Sampled:	03/30/11
Matrix:	Water	Received:	03/31/11
Units:	ug/L	Analyzed:	04/02/11
Diln Fac:	1.000		

Type: MS Lab ID: QC586100

Analyte	MSS Result	Spiked	Result	%REC	Limits	Analysis
Gasoline C7-C12	36.99	2,000	1,832	90	68-120	EPA 8015B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	104	75-130	EPA 8015B
Bromofluorobenzene (PID)	106	58-121	EPA 8021B

Type: MSD Lab ID: QC586101

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analysis
Gasoline C7-C12	2,000	1,839	90	68-120	0	26	EPA 8015B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	108	75-130	EPA 8015B
Bromofluorobenzene (PID)	111	58-121	EPA 8021B

RPD= Relative Percent Difference

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	226992	Location:	Bay Center Apts
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC586261	Batch#:	173394
Matrix:	Water	Analyzed:	04/04/11
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits	Analysis
MTBE	10.00	10.26	103	67-136	EPA 8021B
Benzene	10.00	10.03	100	74-121	EPA 8021B
Toluene	10.00	10.42	104	75-122	EPA 8021B
Ethylbenzene	10.00	10.65	106	75-122	EPA 8021B
m,p-Xylenes	10.00	10.55	105	76-123	EPA 8021B
o-Xylene	10.00	10.02	100	73-127	EPA 8021B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	103	75-130	EPA 8015B
Bromofluorobenzene (PID)	108	58-121	EPA 8021B

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	226992	Location:	Bay Center Apts
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC586262	Batch#:	173394
Matrix:	Water	Analyzed:	04/04/11
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits	Analysis
Gasoline C7-C12	1,000	977.3	98	75-126	EPA 8015B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	99	75-130	EPA 8015B
Bromofluorobenzene (PID)	107	58-121	EPA 8021B

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	226992	Location:	Bay Center Apts
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Field ID:	ZZZZZZZZZZ	Batch#:	173394
MSS Lab ID:	227012-001	Sampled:	03/24/11
Matrix:	Water	Received:	04/01/11
Units:	ug/L	Analyzed:	04/05/11
Diln Fac:	1.000		

Type: MS Lab ID: QC586266

Analyte	MSS Result	Spiked	Result	%REC	Limits	Analysis
Gasoline C7-C12	12.43	2,000	1,820	90	68-120	EPA 8015B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	101	75-130	EPA 8015B
Bromofluorobenzene (PID)	109	58-121	EPA 8021B

Type: MSD Lab ID: QC586267

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analysis
Gasoline C7-C12	2,000	1,866	93	68-120	2	26	EPA 8015B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	103	75-130	EPA 8015B
Bromofluorobenzene (PID)	109	58-121	EPA 8021B

RPD= Relative Percent Difference

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	226992	Location:	Bay Center Apts
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC586418	Batch#:	173436
Matrix:	Water	Analyzed:	04/05/11
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits	Analysis
Toluene	10.00	9.922	99	75-122	EPA 8021B
m,p-Xylenes	10.00	9.372	94	76-123	EPA 8021B

Surrogate	%REC	Limits	Analysis
Bromofluorobenzene (FID)	96	75-130	EPA 8015B
Bromofluorobenzene (PID)	88	58-121	EPA 8021B

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	226992	Location:	Bay Center Apts
Client:	Stellar Environmental Solutions	Prep:	EPA 5030B
Project#:	2007-65		
Field ID:	ZZZZZZZZZZ	Diln Fac:	100.0
MSS Lab ID:	227026-005	Batch#:	173436
Matrix:	Water	Sampled:	04/04/11
Units:	ug/L	Received:	04/04/11

Type: MS Lab ID: QC586419

Analyte	MSS Result	Spiked	Result	%REC	Limits	Analyzed	Analysis
Toluene	9,999	2,000	9,779	-11 NM	38-148	04/06/11	EPA 8021B
m,p-Xylenes	5,932	2,000	6,847	46	45-138	04/06/11	EPA 8021B

Surrogate	%REC	Limits	Analyzed	Analysis
Bromofluorobenzene (FID)	101	75-130	04/05/11	EPA 8015B
Bromofluorobenzene (PID)	92	58-121	04/05/11	EPA 8021B

Type: MSD Lab ID: QC586420

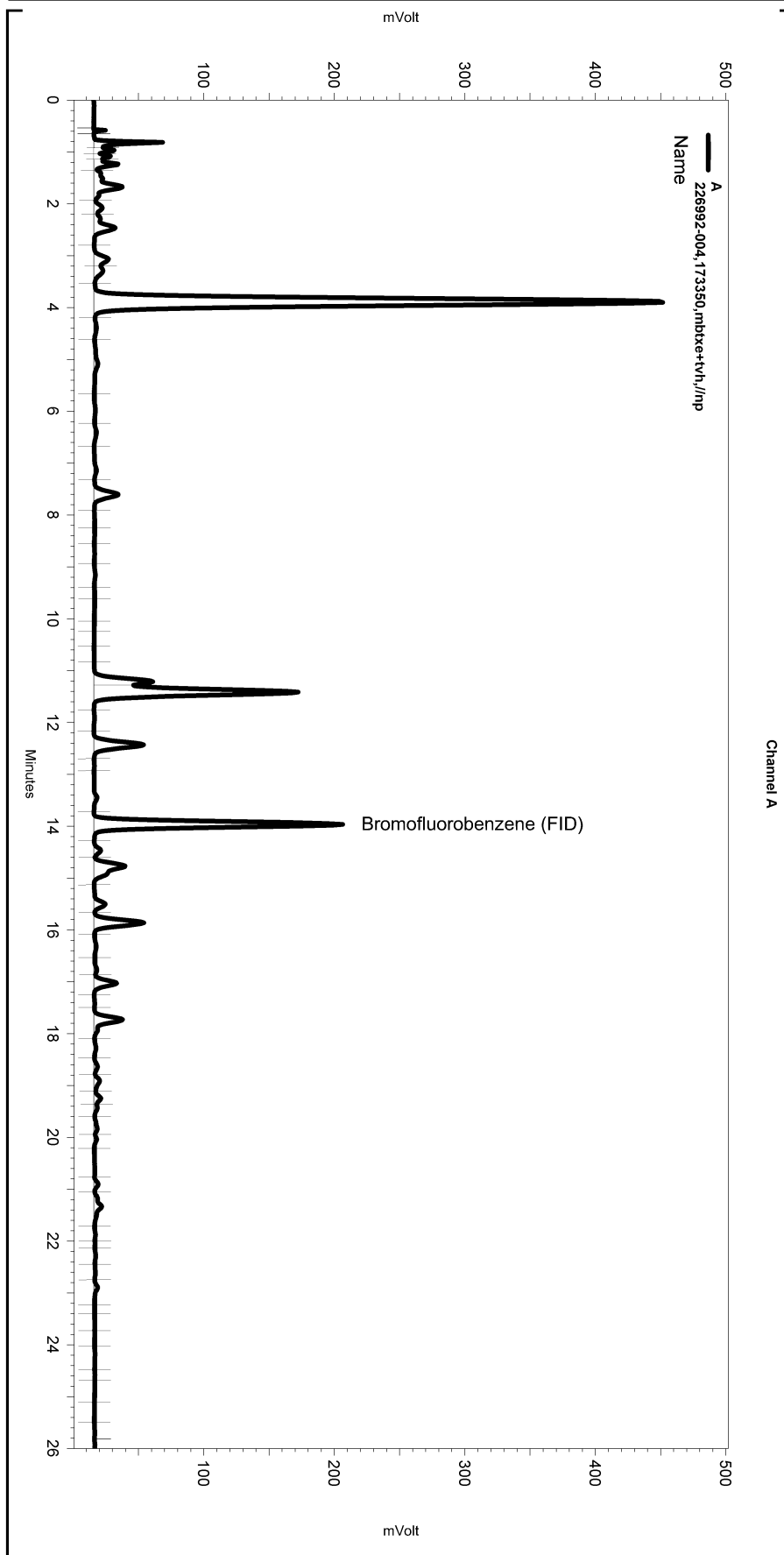
Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analyzed	Analysis
Toluene	2,000	10,460	23 NM	38-148	7	30	04/06/11	EPA 8021B
m,p-Xylenes	2,000	7,339	70	45-138	7	30	04/06/11	EPA 8021B

Surrogate	%REC	Limits	Analyzed	Analysis
Bromofluorobenzene (FID)	103	75-130	04/05/11	EPA 8015B
Bromofluorobenzene (PID)	94	58-121	04/05/11	EPA 8021B

 NM= Not Meaningful: Sample concentration > 4X spike concentration
 RPD= Relative Percent Difference

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\091.seq
 Sample Name: 226992-004,173350,mbtxe+tvh,\\np
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\091-012
 Instrument: GC19 (Offline) Vial: N/A Operator: Tvh 1. Analyst (lims2k3\tvh1)
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbtxe068.met

Software Version 3.1.7
 Run Date: 4/1/2011 9:11:01 PM
 Analysis Date: 4/5/2011 4:41:39 PM
 Sample Amount: 5 Multiplier: 5
 Vial & pH or Core ID: a7.0



---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

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

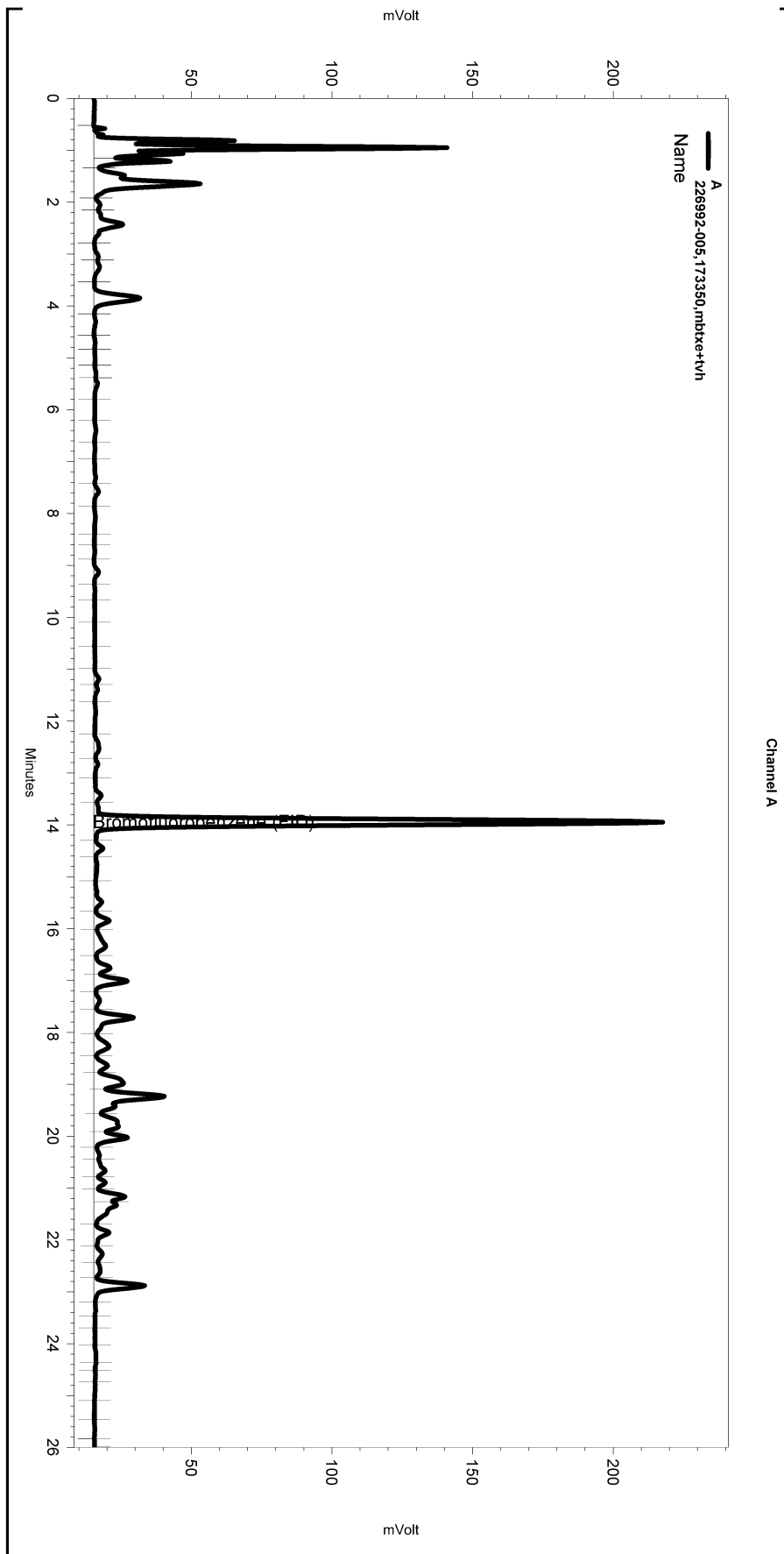
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\091-012

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Lowest Point Horizontal Baseli	0.179	25.753	0

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\091.seq
 Sample Name: 226992-005,173350,mbtxe+tvh
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\091-013
 Instrument: GC19 (Offline) Vial: N/A Operator: Tvh 1. Analyst (lims2k3\tvh1)
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbtxe068.met

Software Version 3.1.7
 Run Date: 4/1/2011 9:48:39 PM
 Analysis Date: 4/5/2011 4:43:04 PM
 Sample Amount: 5 Multiplier: 5
 Vial & pH or Core ID: a1.0



 ---< General Method Parameters >-----

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

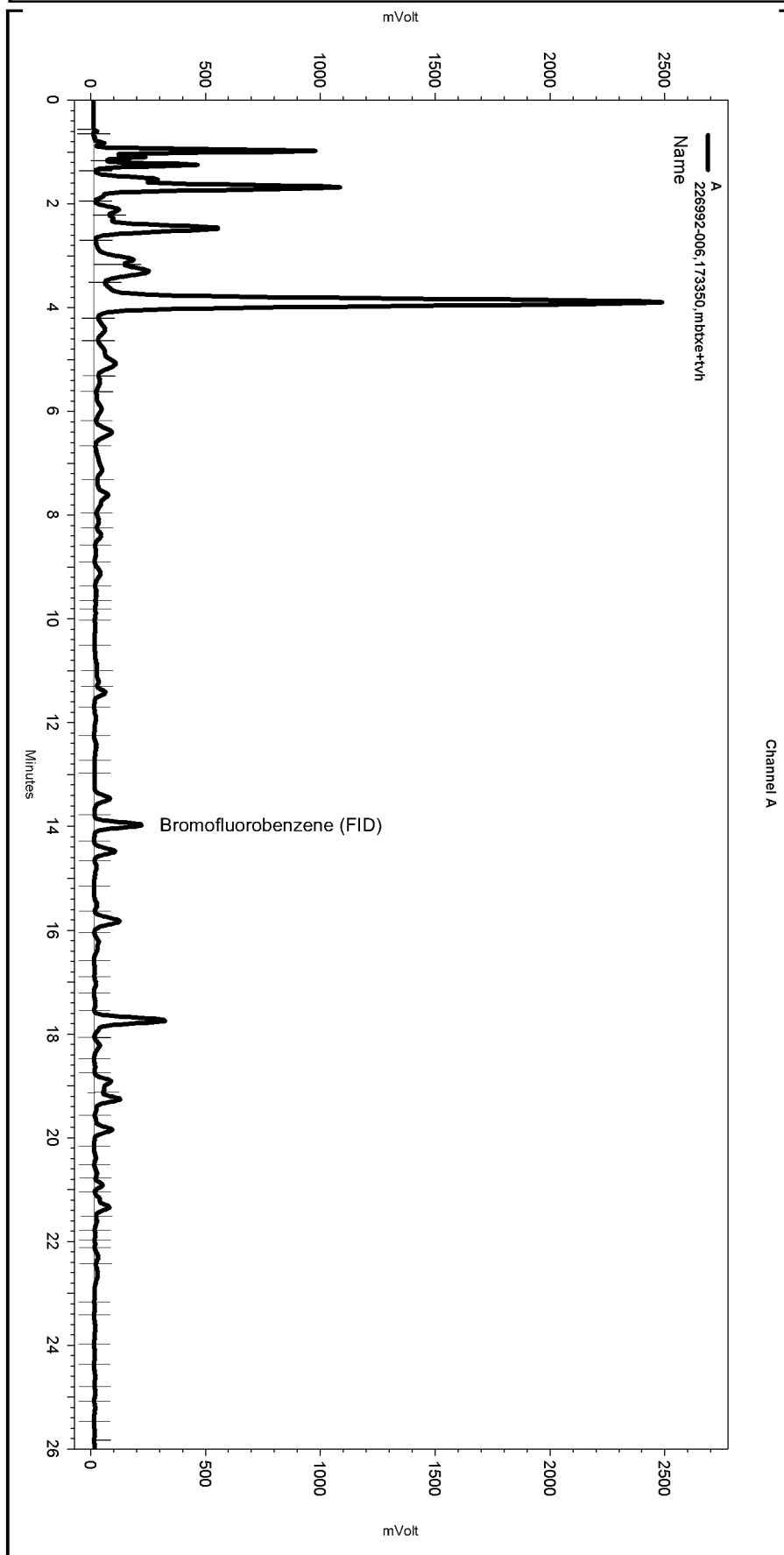
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\091-013

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Lowest Point Horizontal Baseli	0.379	25.886	0

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\091.seq
 Sample Name: 226992-006,173350,mbtXe+tvh
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\091-014
 Instrument: GC19 (Offline) Vial: N/A Operator: Tvh 2. Analyst (lims2k3\tvh2)
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\TVHBTXE068.met

Software Version 3.1.7
 Run Date: 4/1/2011 10:26:14 PM
 Analysis Date: 4/7/2011 11:37:58 AM
 Sample Amount: 5 Multiplier: 5
 Vial & pH or Core ID: a1.0



---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

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

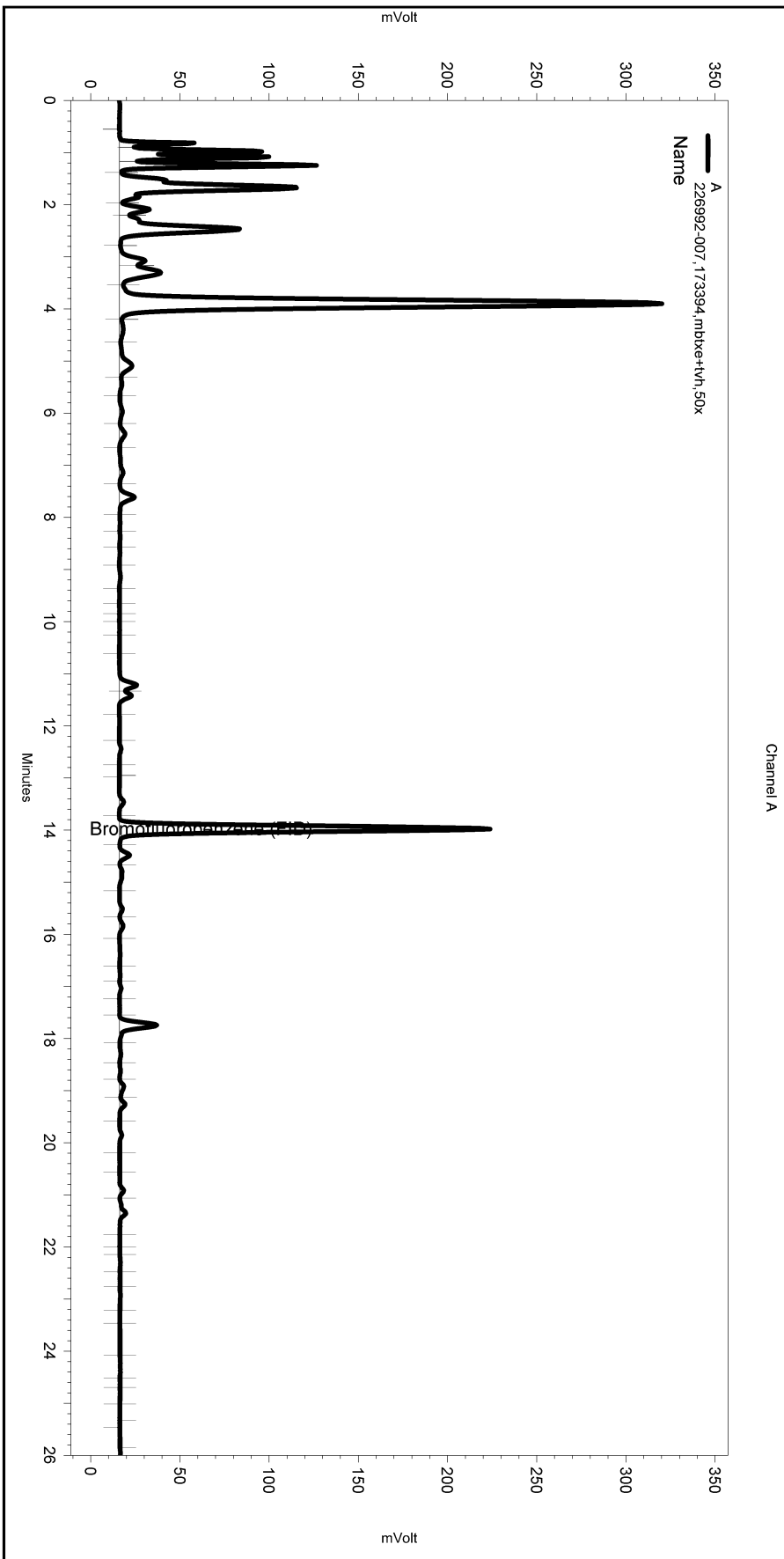
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\091-014

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

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\094.seq
 Sample Name: 226992-007,173394,mbtxe+tvh,50x
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\094-017
 Instrument: GC19 Vial: N/A Operator: lims2k3\tvh3
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbtxe068.met

Software Version 3.1.7
 Run Date: 4/4/2011 10:33:04 PM
 Analysis Date: 4/4/2011 11:02:13 PM
 Sample Amount: 5 Multiplier: 5
 Vial & pH or Core ID: b1.0



---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

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

Manual Integration Fixes

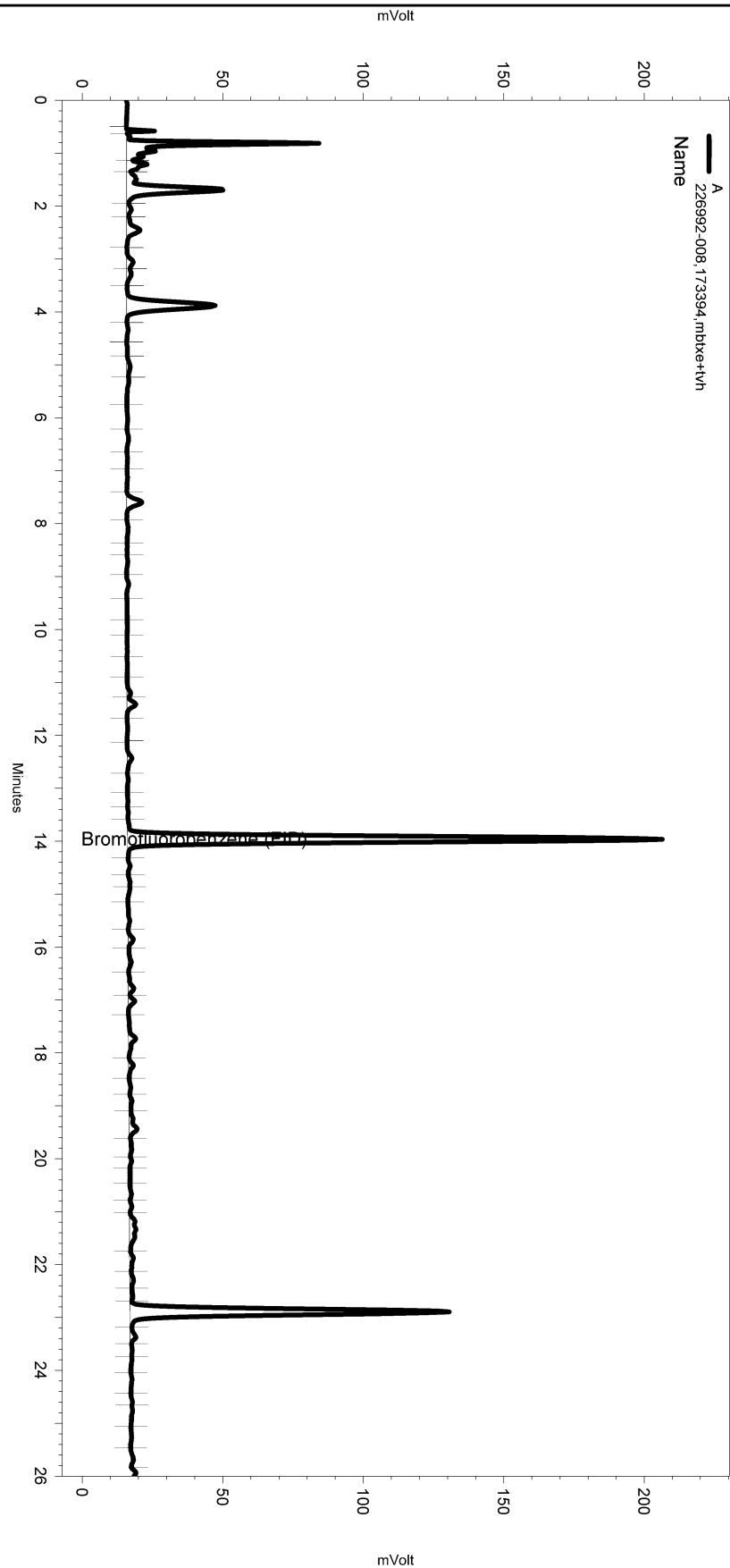
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Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
None				

Channel A

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\094.seq
 Sample Name: 226992-008,173394,mbtxe+tvh
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\094-018
 Instrument: GC19 Vial: N/A Operator: lims2k3\tvh3
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbtxe068.met

Software Version 3.1.7
 Run Date: 4/4/2011 11:10:39 PM
 Analysis Date: 4/4/2011 11:39:47 PM
 Sample Amount: 5 Multiplier: 5
 Vial & pH or Core ID: b1.0



---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

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

Manual Integration Fixes

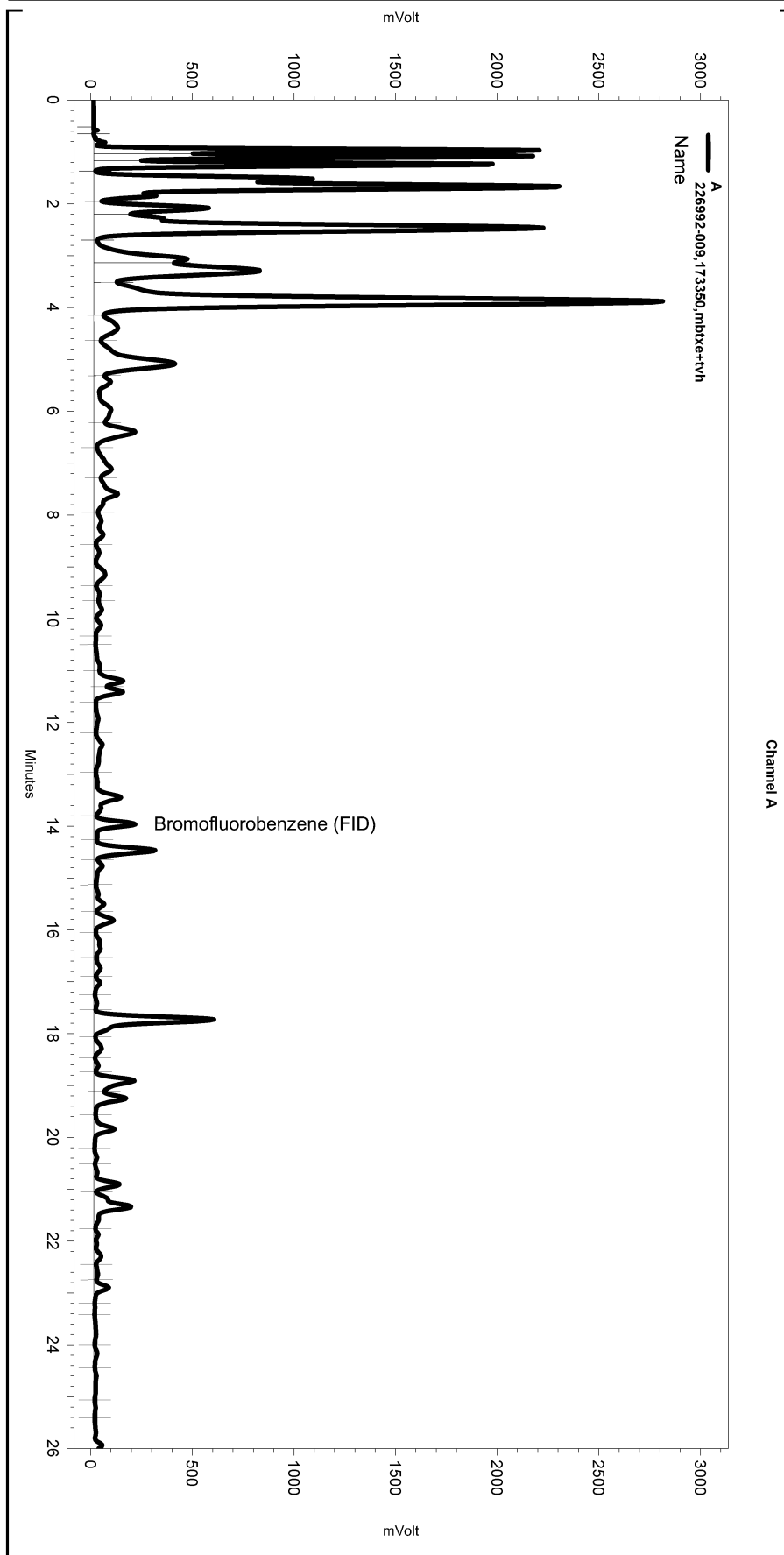
Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10050\094-018_023E.tmp

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

Channel A

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\091.seq
 Sample Name: 226992-009,173350,mbtxe+tvh
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\091-022
 Instrument: GC19 (Offline) Vial: N/A Operator: Tvh 1. Analyst (lims2k3\tvh1)
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbtxe068.met

Software Version 3.1.7
 Run Date: 4/2/2011 3:27:04 AM
 Analysis Date: 4/5/2011 4:56:31 PM
 Sample Amount: 5 Multiplier: 5
 Vial & pH or Core ID: a1.0



 ---< General Method Parameters >-----

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

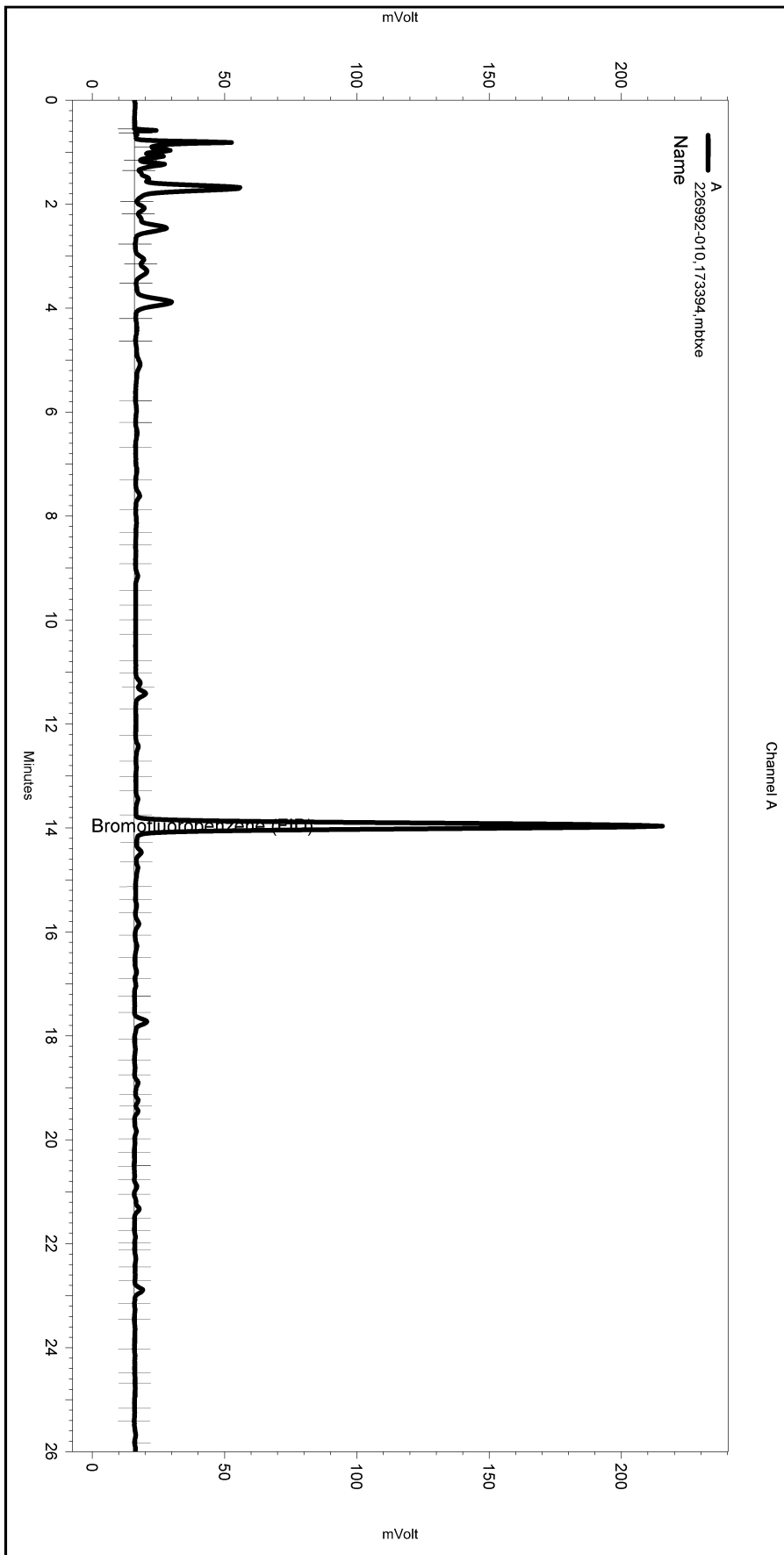
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\091-022

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Lowest Point Horizontal Baseli	0.58	26.017	0

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\094.seq
 Sample Name: 226992-010,173394,mbtxe
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\094-020
 Instrument: GC19 Vial: N/A Operator: lims2k3\tvh3
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbtxe068.met

Software Version 3.1.7
 Run Date: 4/5/2011 12:25:57 AM
 Analysis Date: 4/5/2011 12:55:02 AM
 Sample Amount: 5 Multiplier: 5
 Vial & pH or Core ID: b1.0



---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

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

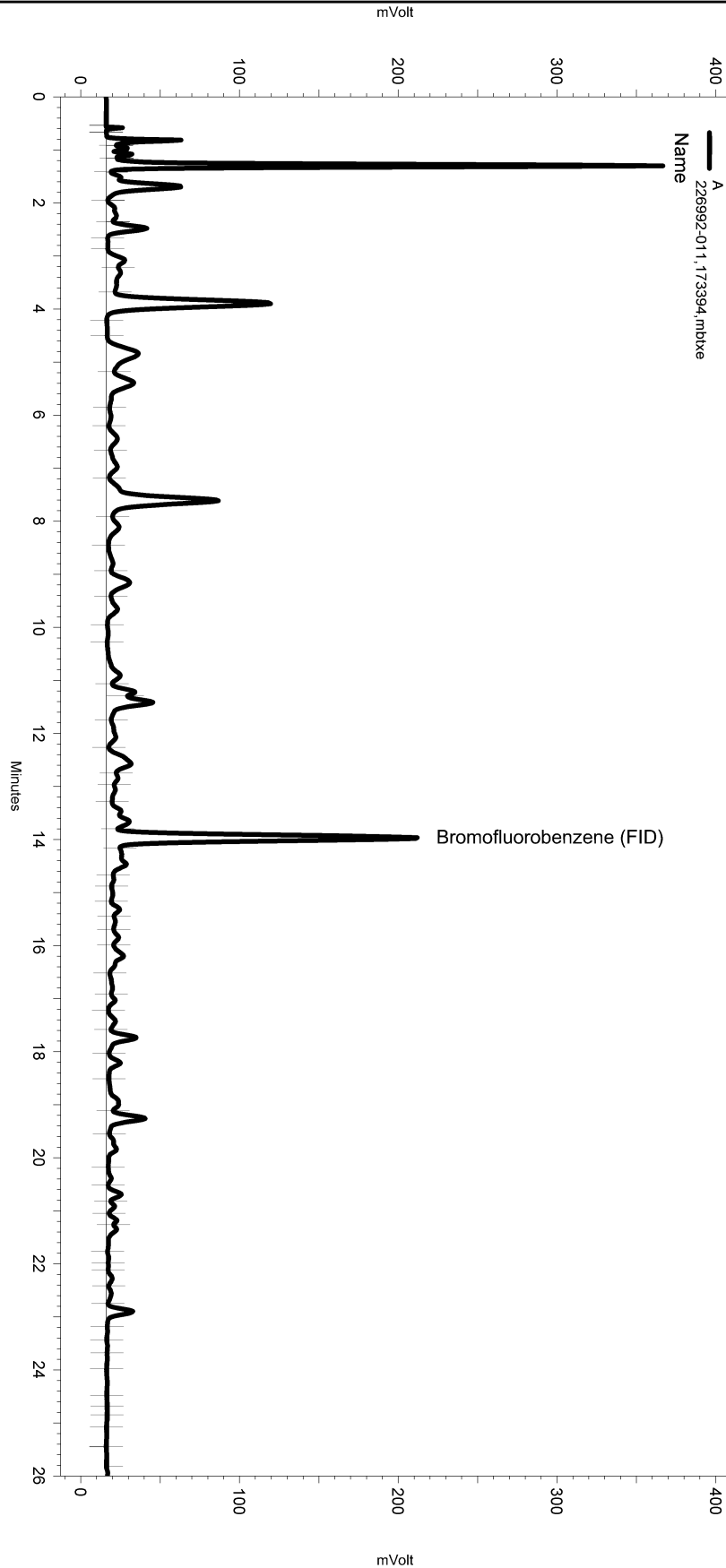
Manual Integration Fixes

Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10050\094-020_0240.tmp

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

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\094.seq
 Sample Name: 226992-011,173394,mbtxe
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\094-021
 Instrument: GC19 Vial: N/A Operator: lims2k3\tvh3
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbx068.met

Software Version 3.1.7
 Run Date: 4/5/2011 1:03:35 AM
 Analysis Date: 4/5/2011 1:32:43 AM
 Sample Amount: 5 Multiplier: 5
 Vial & pH or Core ID: b1.0



Channel A

---< 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

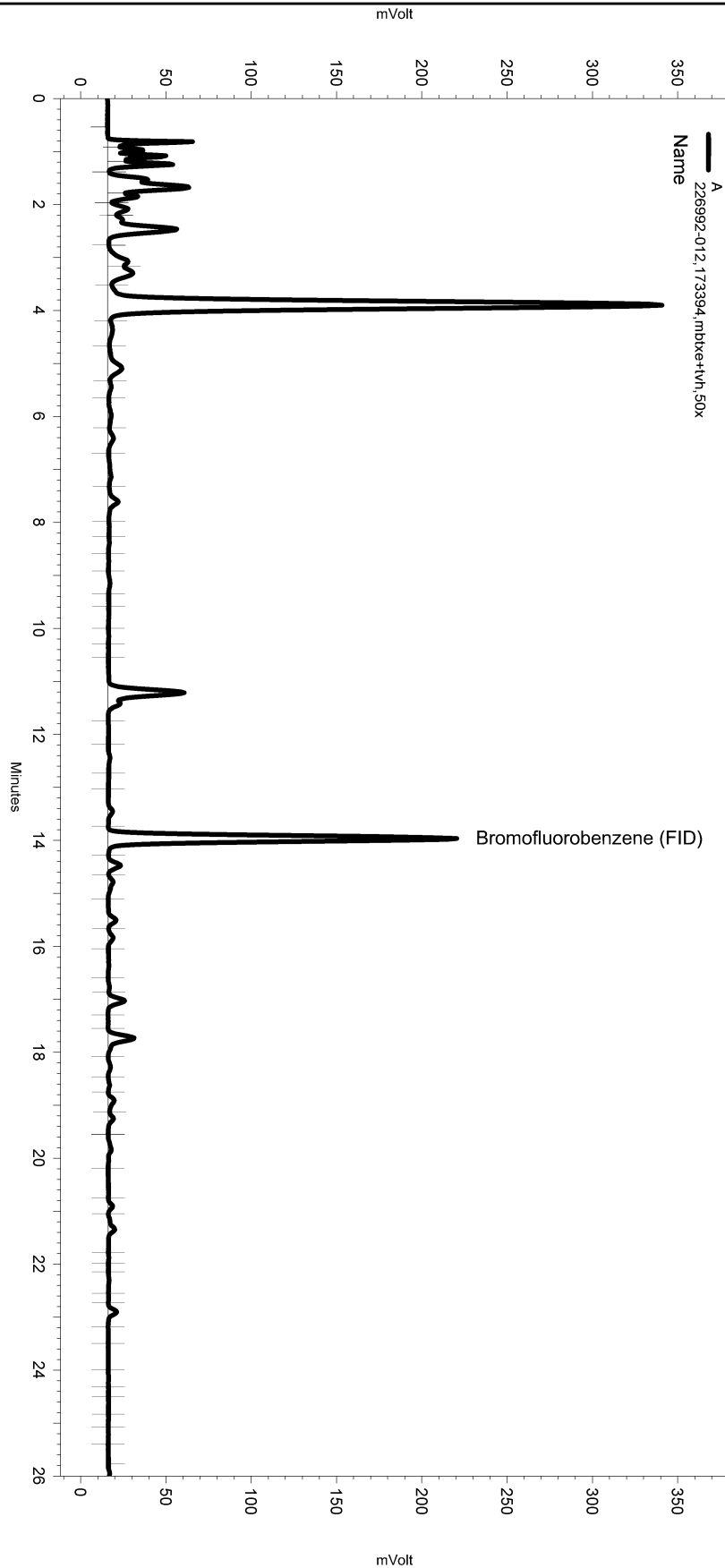
Manual Integration Fixes

Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10050\094-021_0241.tmp

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

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\094.seq
 Sample Name: 226992-012,173394,mbtxe+tvh,50x
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\094-022
 Instrument: GC19 Vial: N/A Operator: lims2k3\tvh3
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbtxe068.met

Software Version 3.1.7
 Run Date: 4/5/2011 1:41:11 AM
 Analysis Date: 4/5/2011 2:10:19 AM
 Sample Amount: 5 Multiplier: 5
 Vial & pH or Core ID: b1.0



---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

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

Manual Integration Fixes

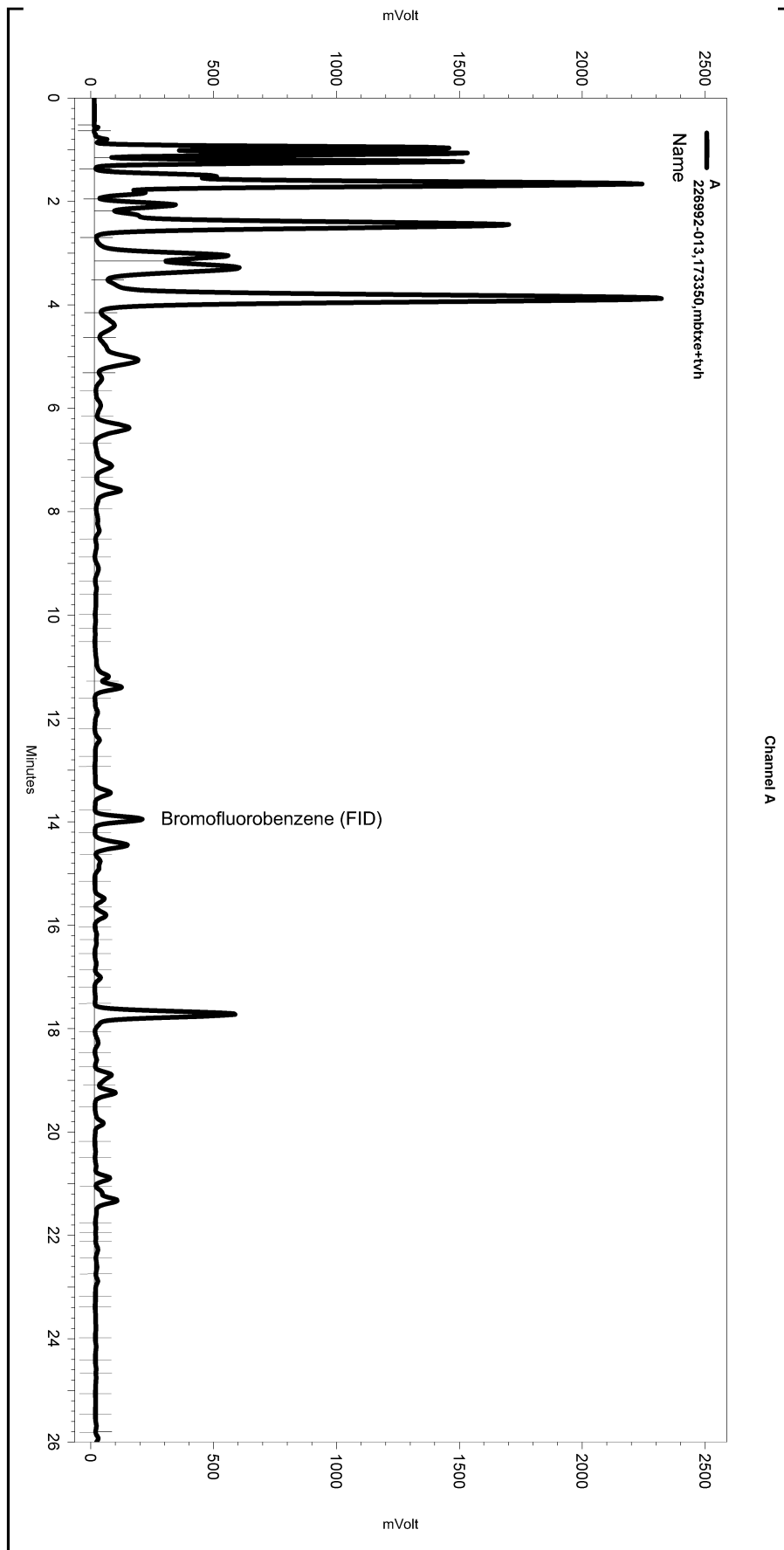
Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10050\094-022_0242.tmp

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

Channel A

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\091.seq
 Sample Name: 226992-013,173350,mbtxe+tvh
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\091-026
 Instrument: GC19 (Offline) Vial: N/A Operator: Tvh 1. Analyst (lims2k3\tvh1)
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbtxe068.met

Software Version 3.1.7
 Run Date: 4/2/2011 5:57:19 AM
 Analysis Date: 4/5/2011 5:41:24 PM
 Sample Amount: 5 Multiplier: 5
 Vial & pH or Core ID: a1.0



---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

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

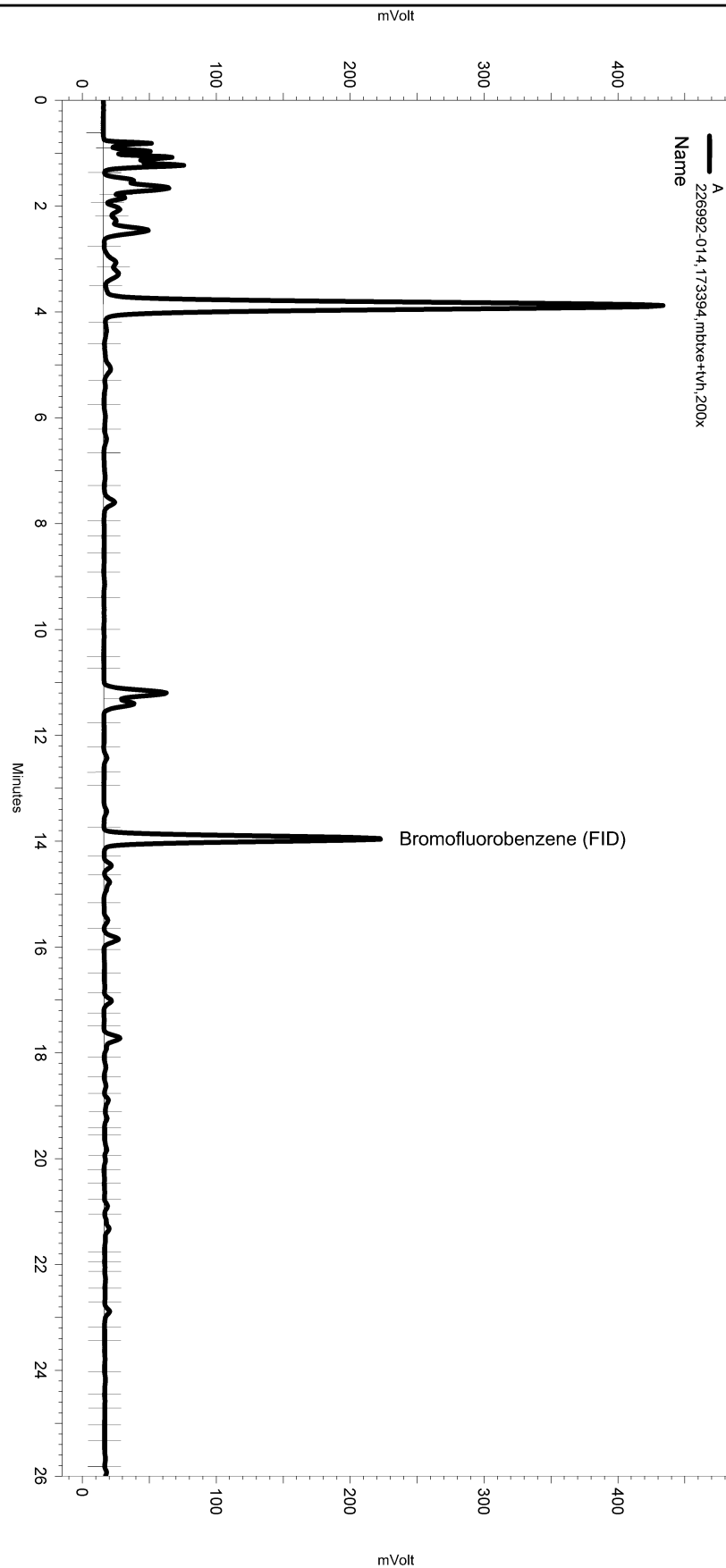
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\091-026

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Lowest Point Horizontal Baseli	0.179	25.886	0

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\094.seq
 Sample Name: 226992-014,173394,mbtxe+tvh,200x
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\094-027
 Instrument: GC19 Vial: N/A Operator: lims2k3\tvh3
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbtxe068.met

Software Version 3.1.7
 Run Date: 4/5/2011 4:48:59 AM
 Analysis Date: 4/5/2011 5:18:02 AM
 Sample Amount: 5 Multiplier: 5
 Vial & pH or Core ID: b



Channel A

---< 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

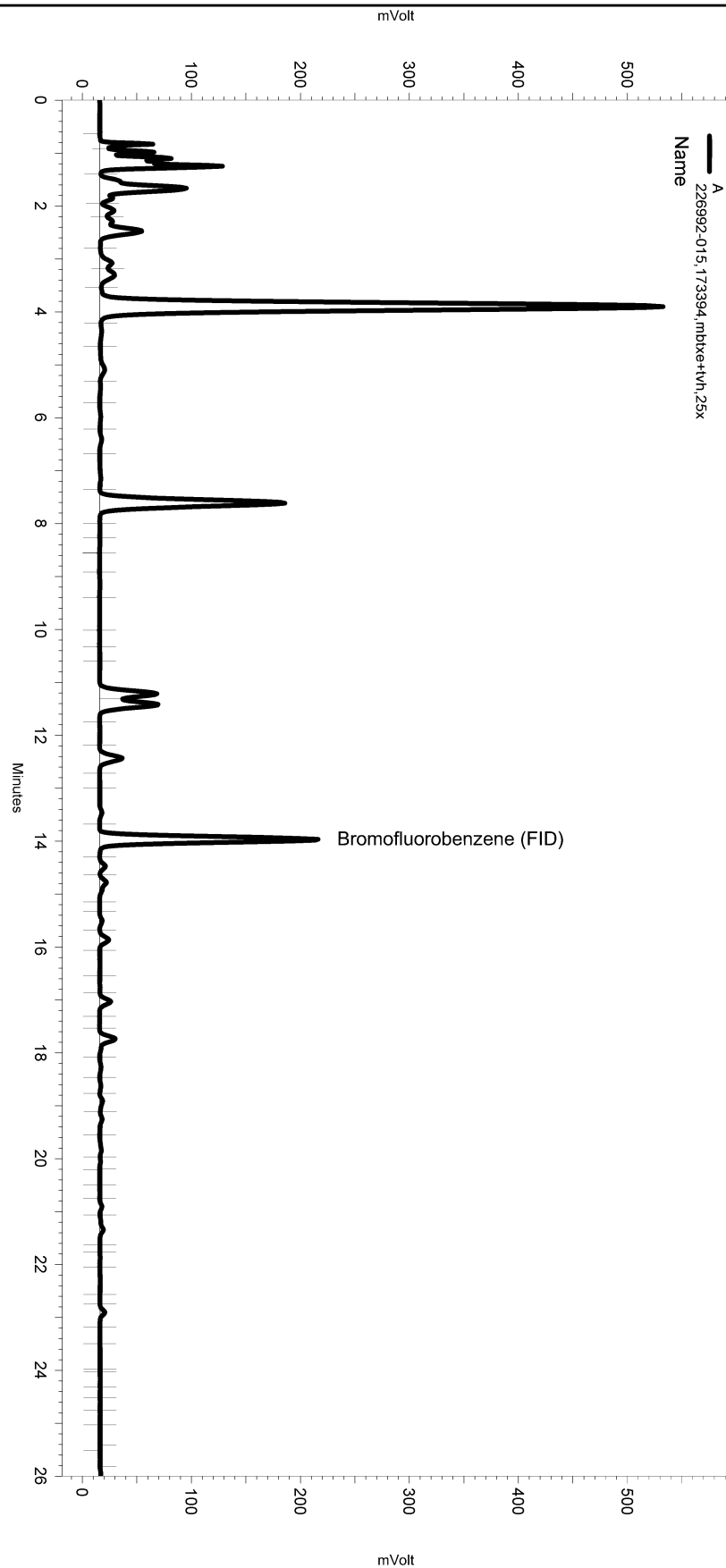
Manual Integration Fixes

Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10050\094-027_0247.tmp

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

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\094.seq
 Sample Name: 226992-015,173394,mbtxe+tvh,25x
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\094-028
 Instrument: GC19 Vial: N/A Operator: lims2k3\tvh3
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbtxe068.met

Software Version 3.1.7
 Run Date: 4/5/2011 5:26:37 AM
 Analysis Date: 4/5/2011 5:55:45 AM
 Sample Amount: 5 Multiplier: 5
 Vial & pH or Core ID: b



Channel A

---< General Method Parameters >---

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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

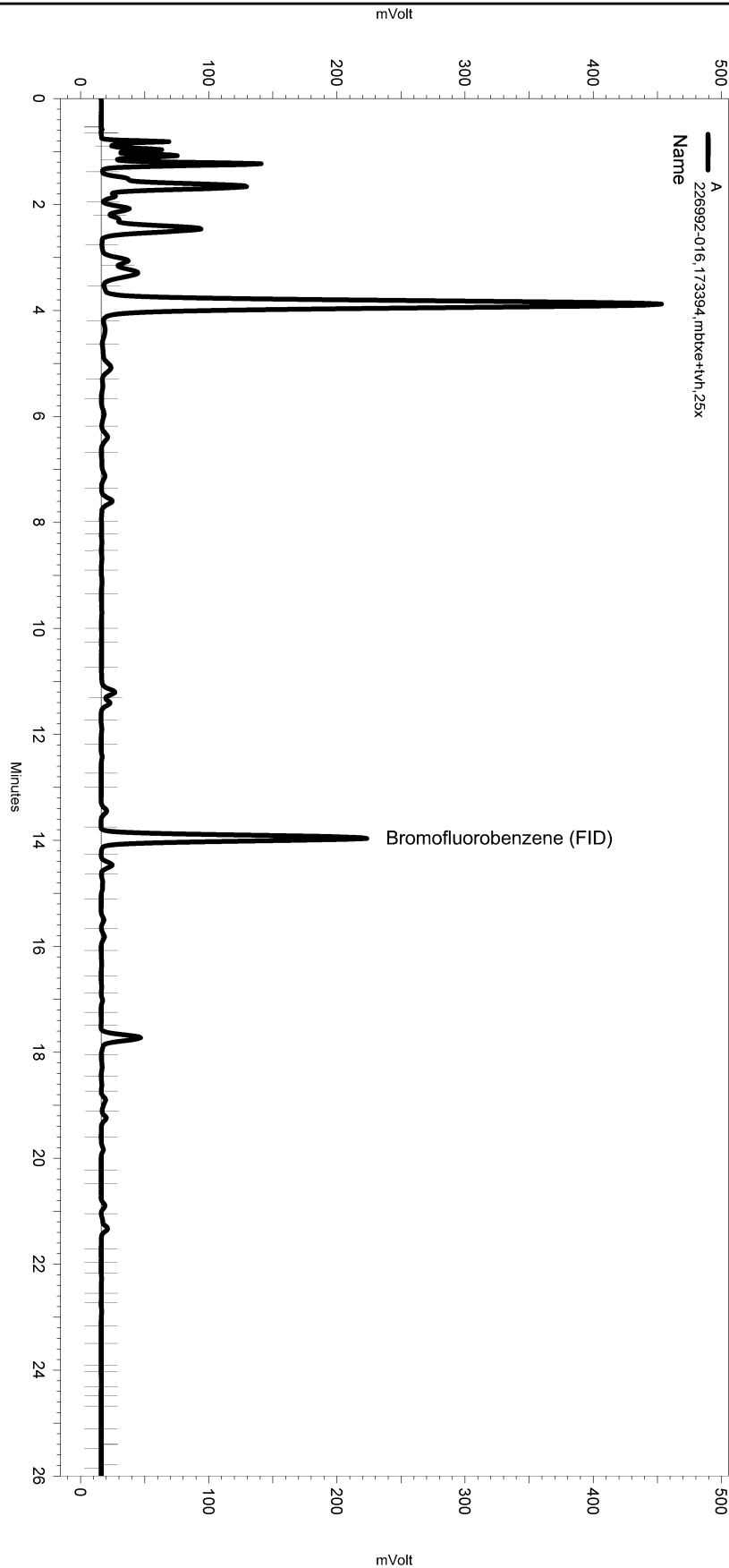
Manual Integration Fixes

Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10050\094-028_0248.tmp

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
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Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\094.seq
 Sample Name: 226992-016,173394,mbtxe+tvh,25x
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\094-029
 Instrument: GC19 Vial: N/A Operator: lims2k3\tvh3
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbtxe068.met

Software Version 3.1.7
 Run Date: 4/5/2011 6:04:15 AM
 Analysis Date: 4/5/2011 6:33:19 AM
 Sample Amount: 5 Multiplier: 5
 Vial & pH or Core ID: b



Channel A

---< General Method Parameters >---

No items selected for this section

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Integration Events

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

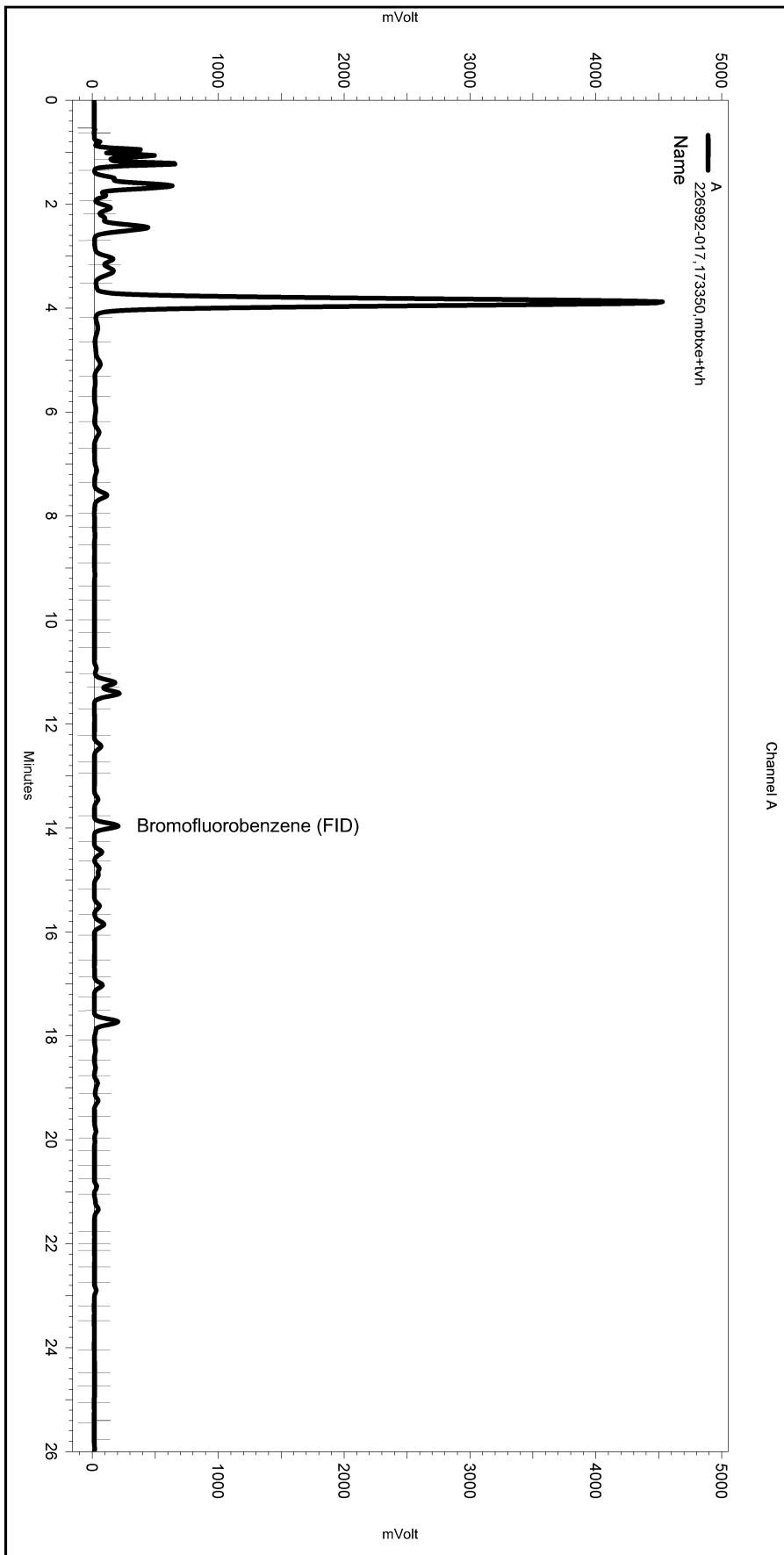
Manual Integration Fixes

Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10050\094-029_0249.tmp

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

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\091.seq
 Sample Name: 226992-017,173350,mbtxe+tvh
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\091-029
 Instrument: GC19 Vial: N/A Operator: lims2k3\tvh3
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbtxe068.met

Software Version 3.1.7
 Run Date: 4/2/2011 7:50:06 AM
 Analysis Date: 4/2/2011 8:19:14 AM
 Sample Amount: 5 Multiplier: 5
 Vial & pH or Core ID: a1.0



---< General Method Parameters >---

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Integration Events

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Yes	Threshold	0	0	50

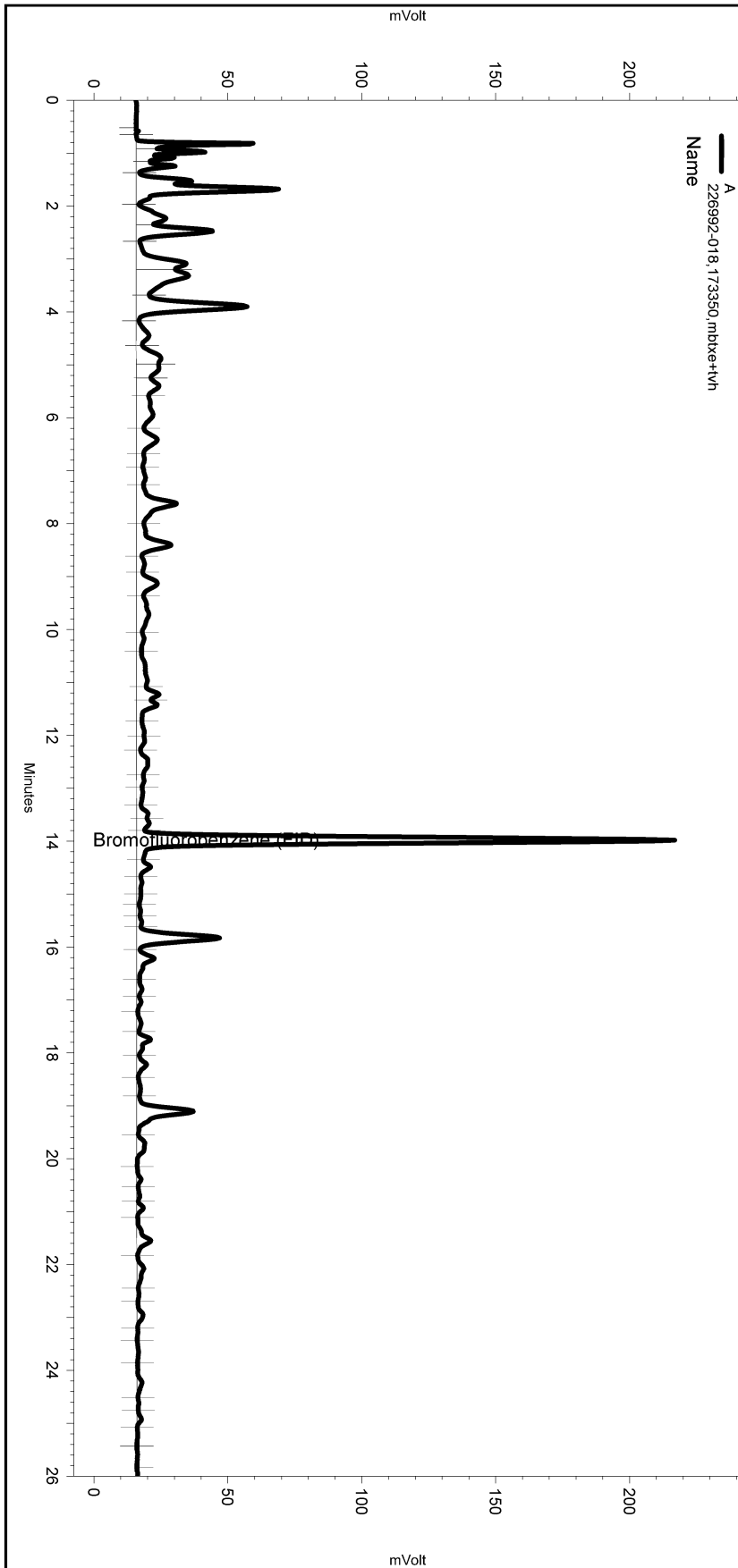
Manual Integration Fixes

Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10050\091-029_0226.tmp

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
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Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\091.seq
 Sample Name: 226992-018,173350,mbtxe+tvh
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\091-030
 Instrument: GC19 Vial: N/A Operator: lims2k3\tvh3
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbtxe068.met

Software Version 3.1.7
 Run Date: 4/2/2011 8:27:41 AM
 Analysis Date: 4/2/2011 8:56:49 AM
 Sample Amount: 5 Multiplier: 5
 Vial & pH or Core ID: a1.0



Channel A

---< General Method Parameters >---

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Integration Events

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

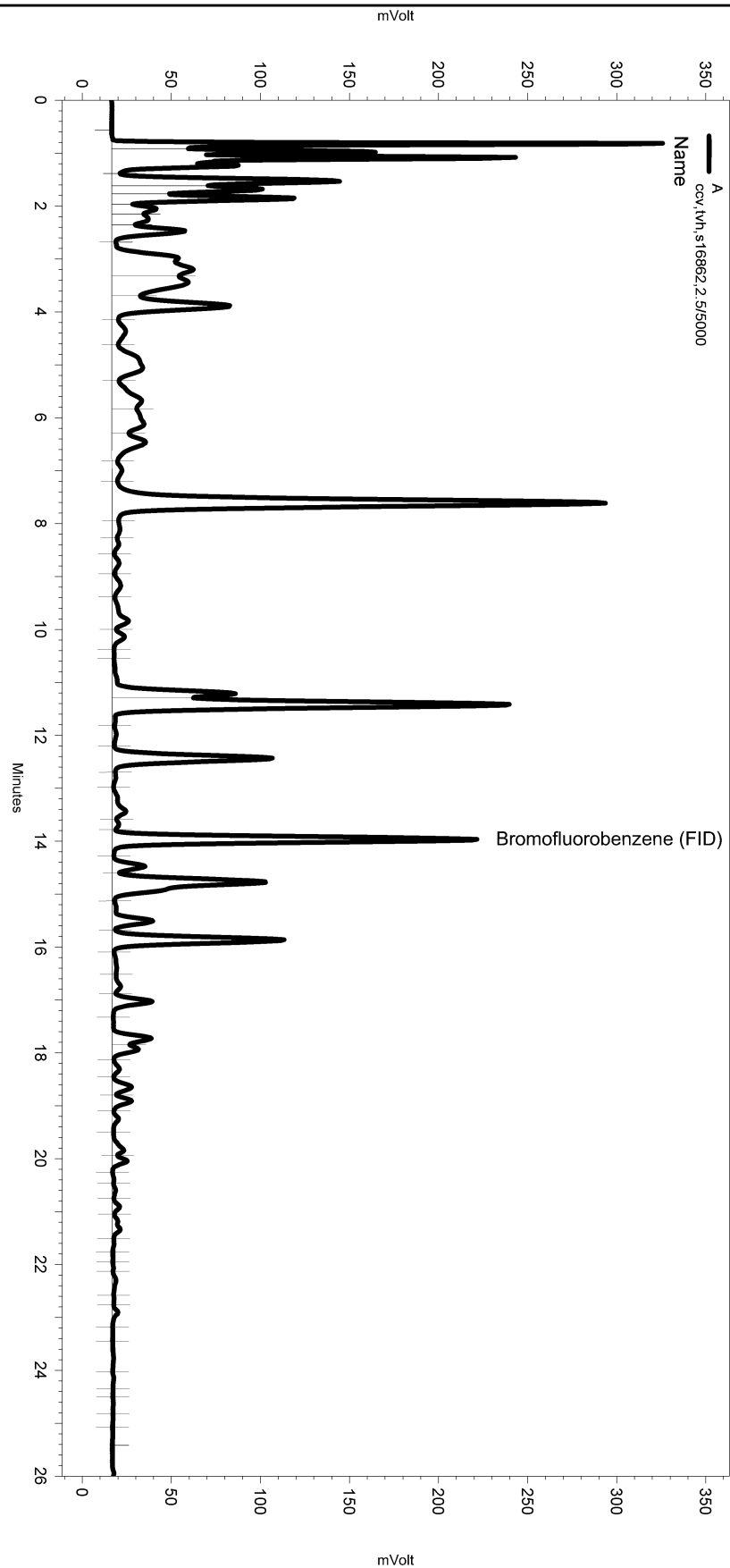
Manual Integration Fixes

Data File: C:\Documents and Settings\All Users\Application Data\ChromatographySystem\Recovery Data\Instrument.10050\091-030_0227.tmp

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

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC19\Sequence\091.seq
 Sample Name: ccv,tvh,s16862,2.5/5000
 Data File: \\Lims\gdrive\ezchrom\Projects\GC19\Data\091-003
 Instrument: GC19 Vial: N/A Operator: lims2k3\tvh3
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC19\Method\tvhbx068.met

Software Version 3.1.7
 Run Date: 4/1/2011 2:39:05 PM
 Analysis Date: 4/1/2011 3:08:13 PM
 Sample Amount: 5 Multiplier: 5
 Vial & pH or Core ID: {Data Description}



---< General Method Parameters >---

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.10050\091-003_020C.tmp

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

Channel A

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	226992	Location:	Bay Center Apts
Client:	Stellar Environmental Solutions	Prep:	EPA 3520C
Project#:	2007-65	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	173355
Units:	ug/L	Prepared:	04/01/11
Diln Fac:	1.000	Analyzed:	04/04/11

Type: BS Lab ID: QC586115

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	1,939	78	53-128

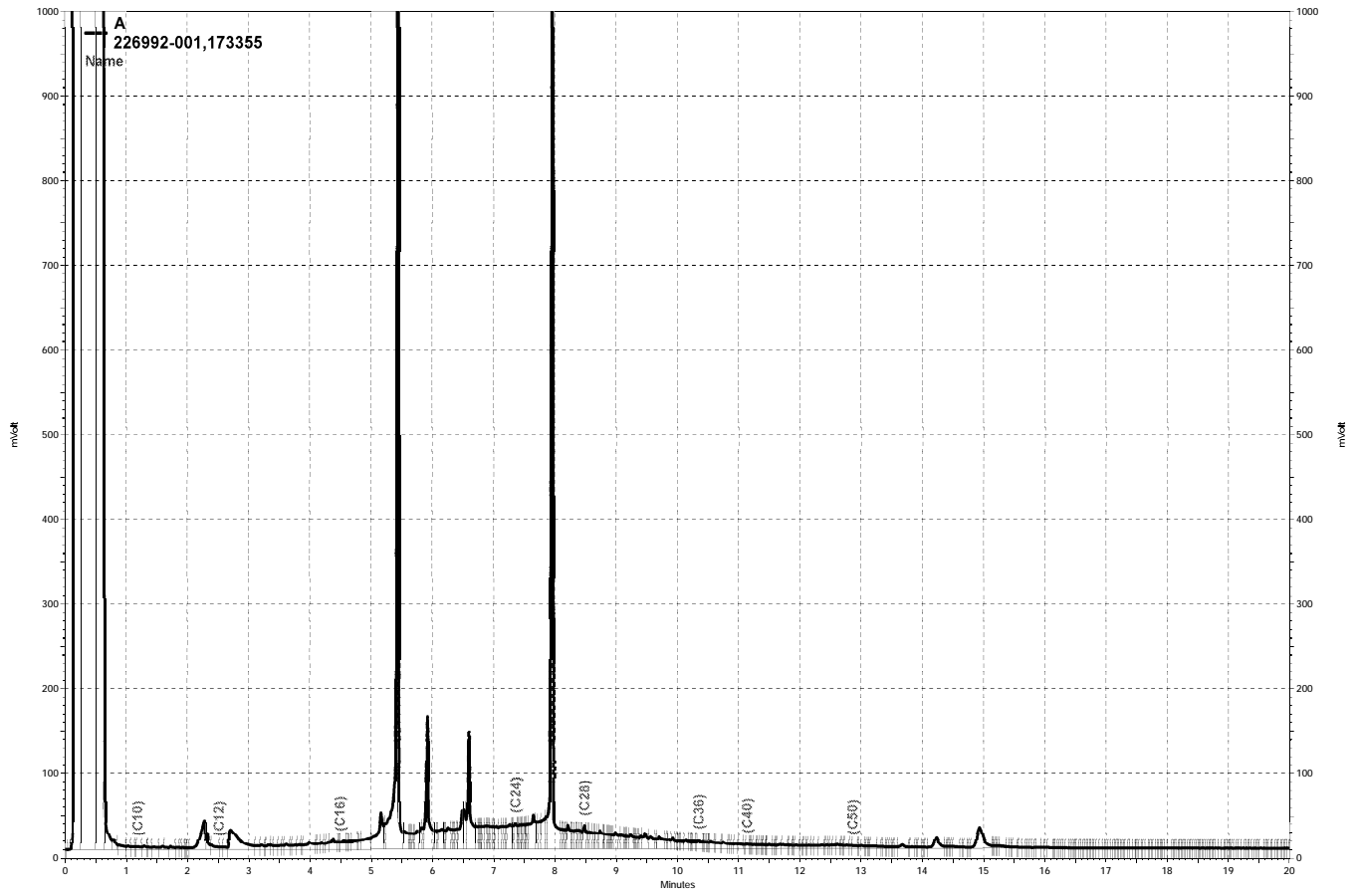
Surrogate	%REC	Limits
o-Terphenyl	98	60-129

Type: BSD Lab ID: QC586116

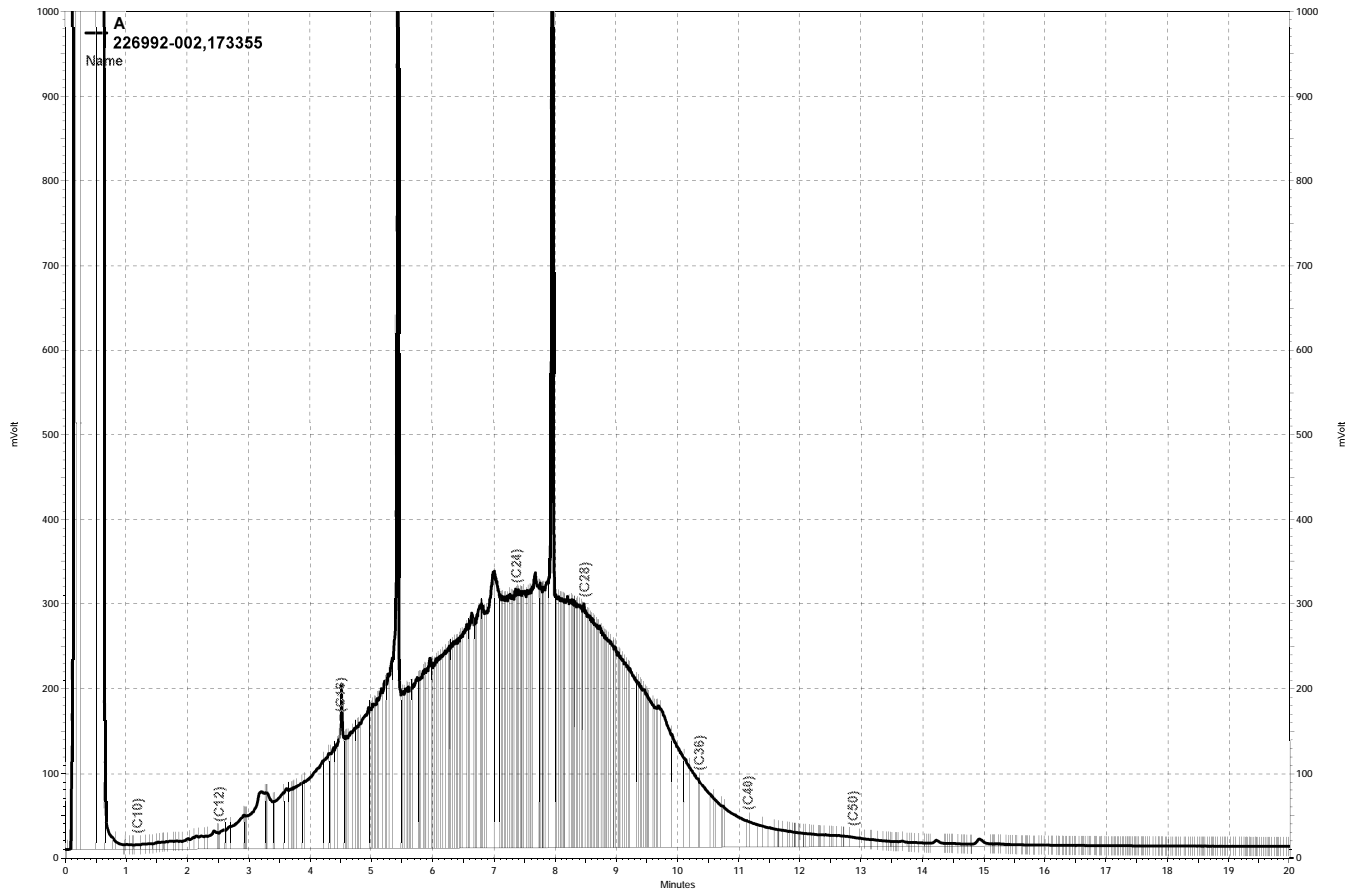
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	1,935	77	53-128	0	48

Surrogate	%REC	Limits
o-Terphenyl	97	60-129

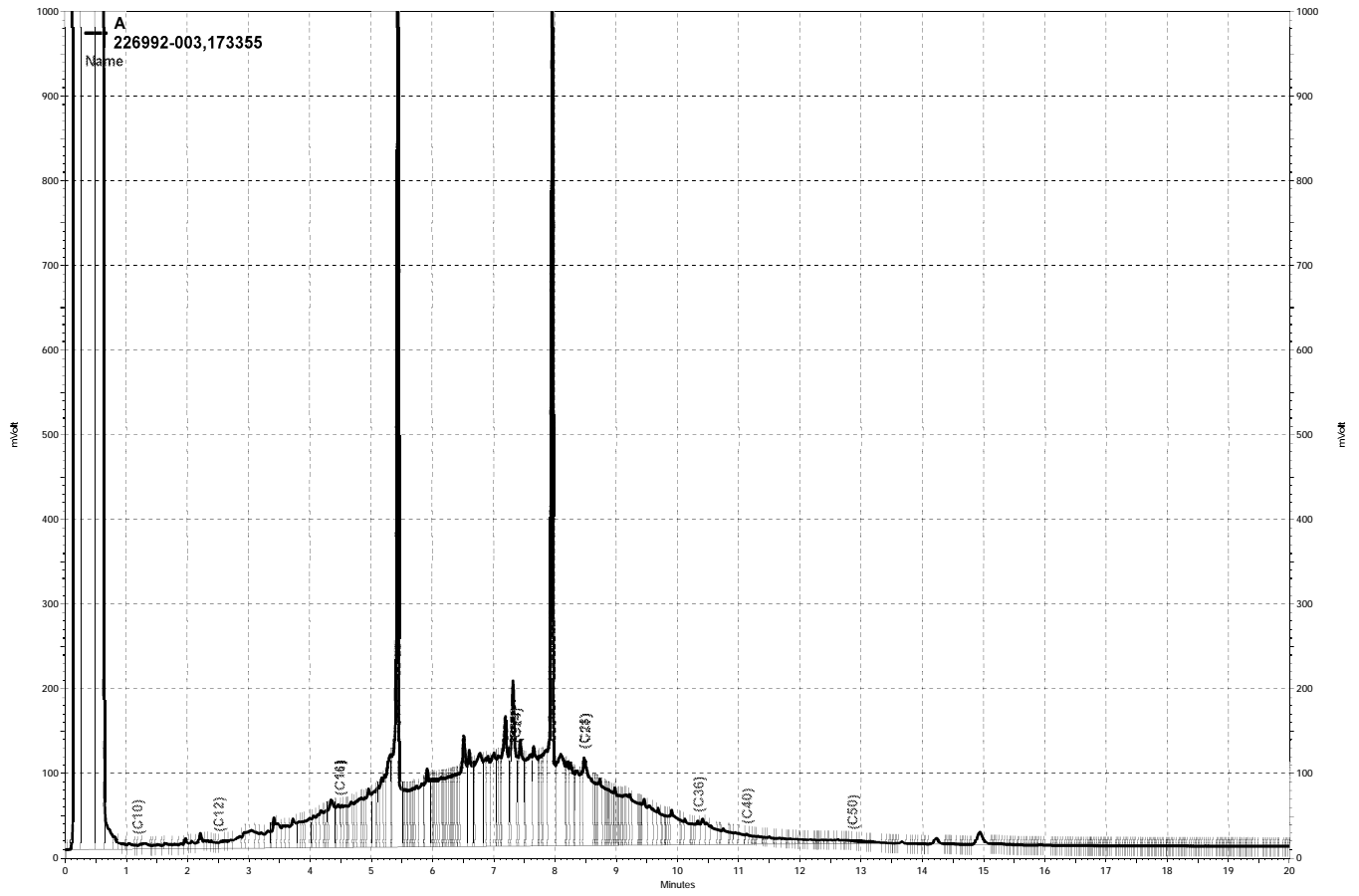
RPD= Relative Percent Difference



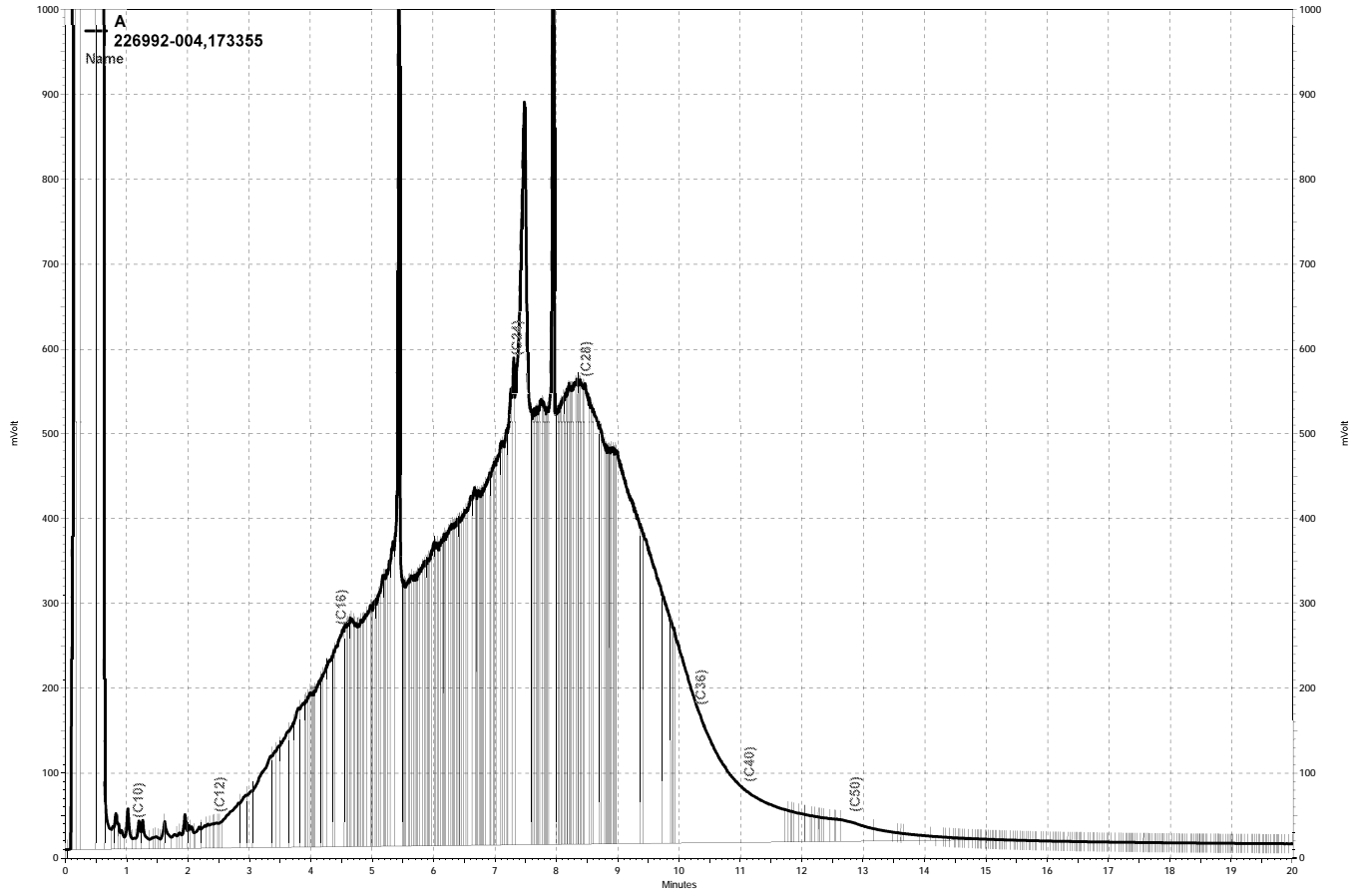
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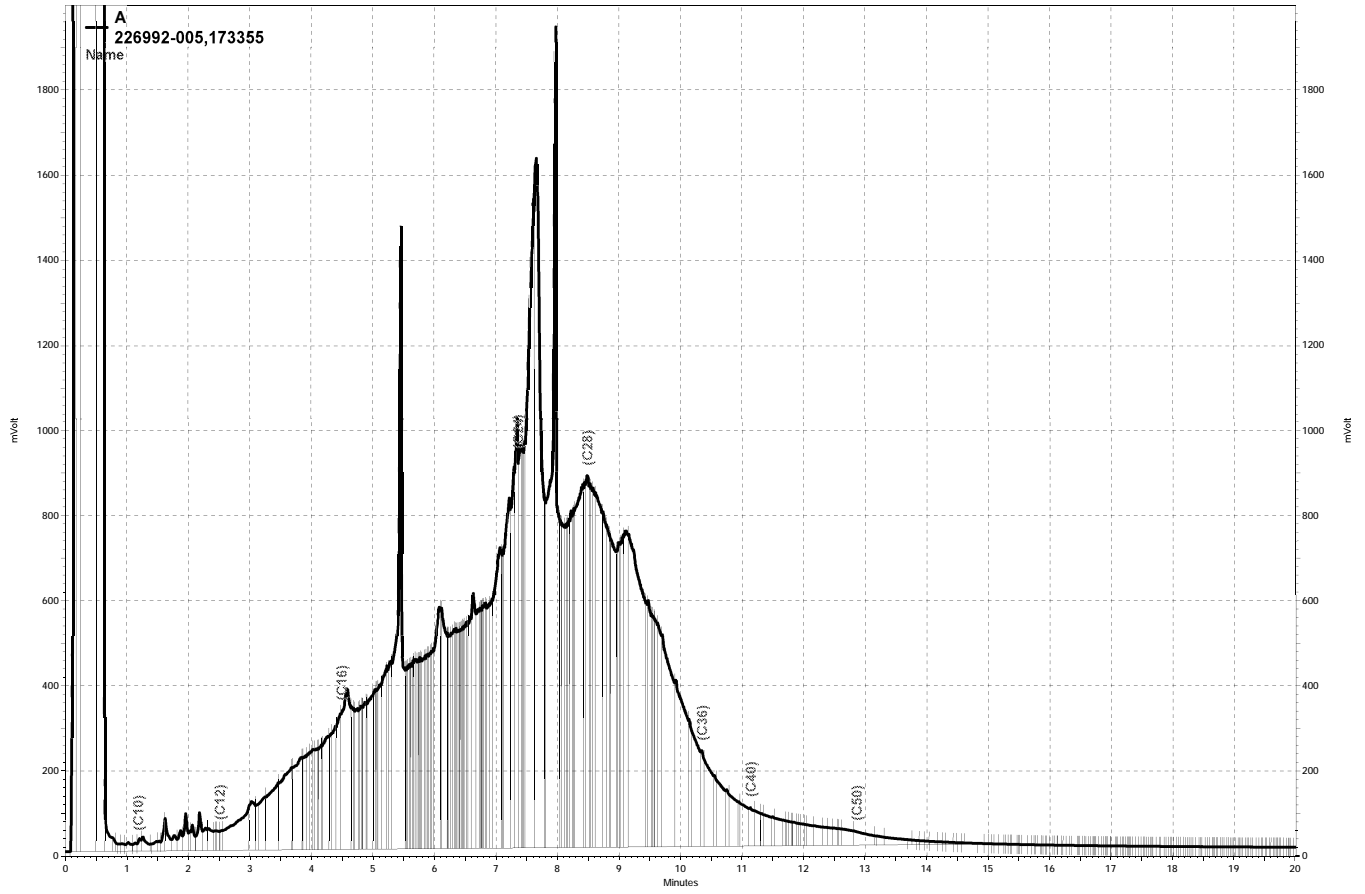
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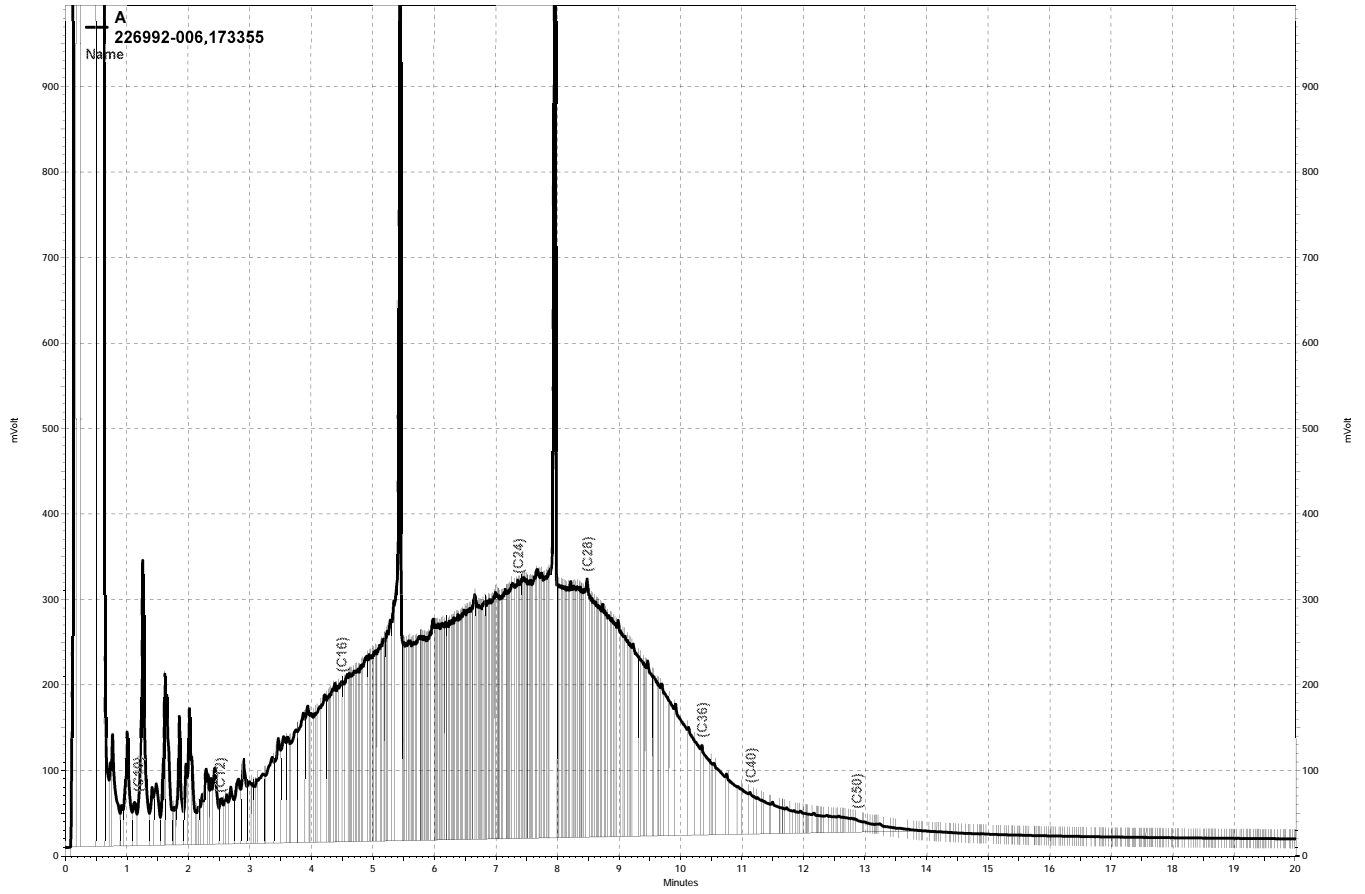
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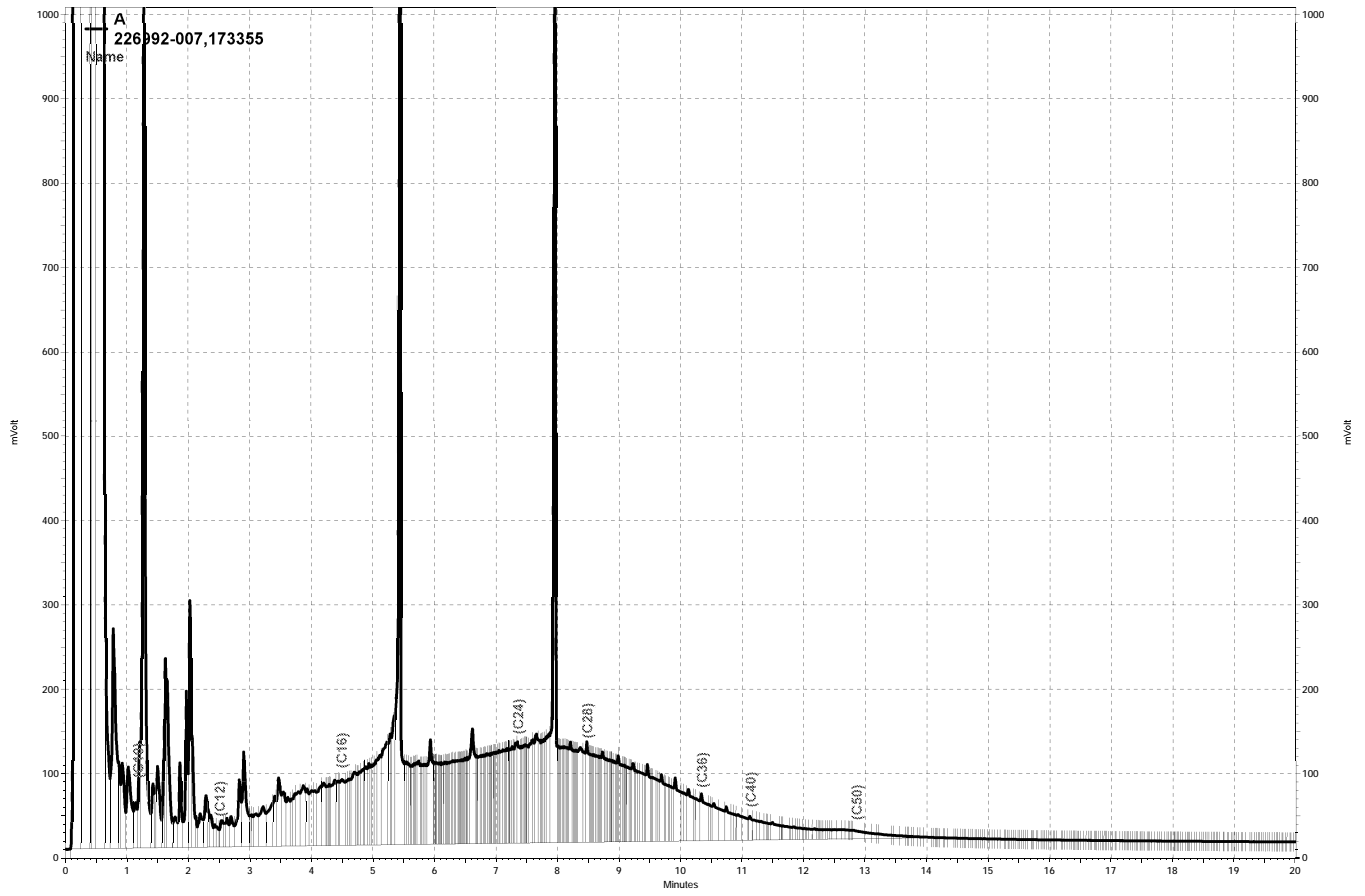
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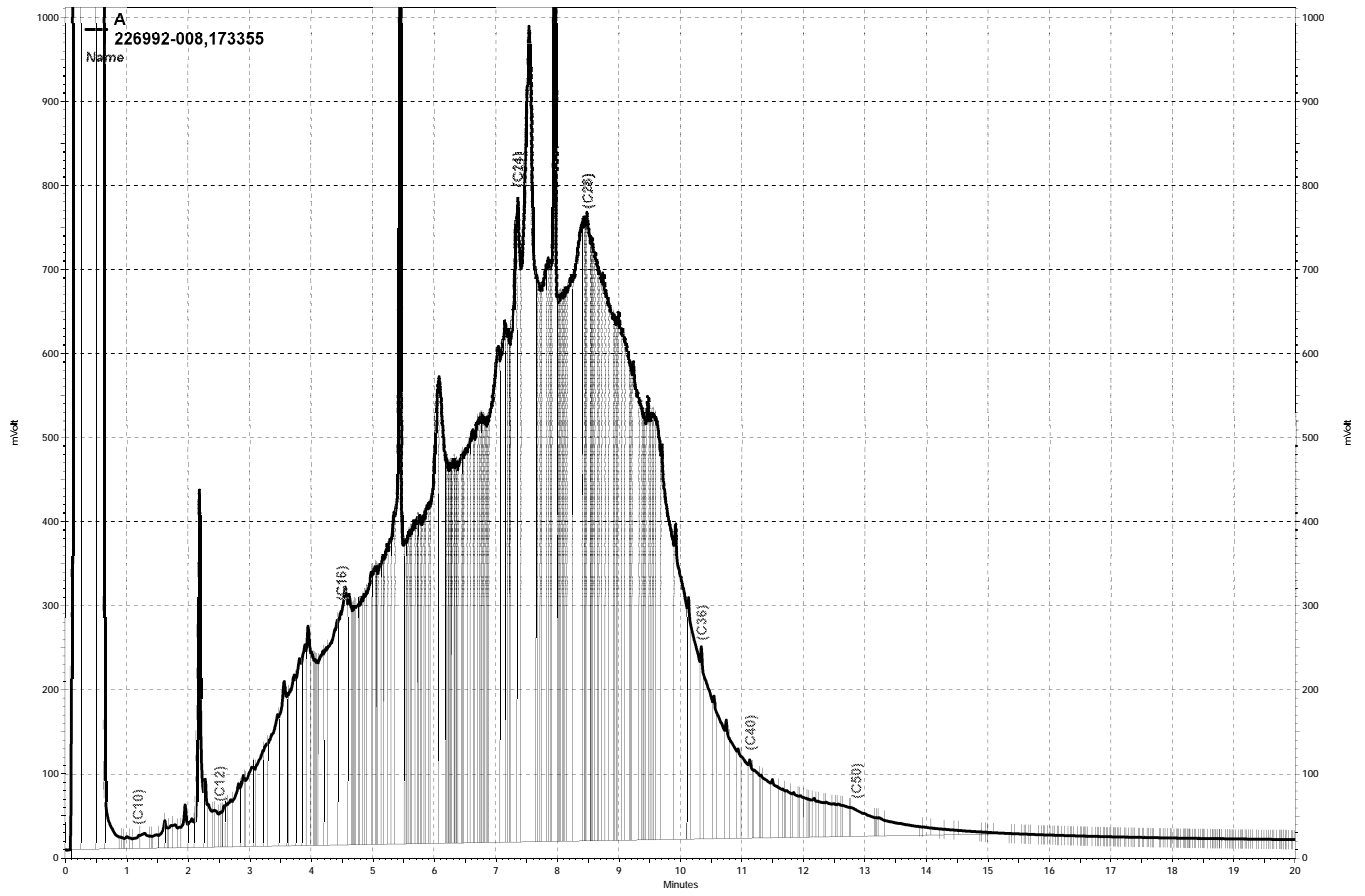
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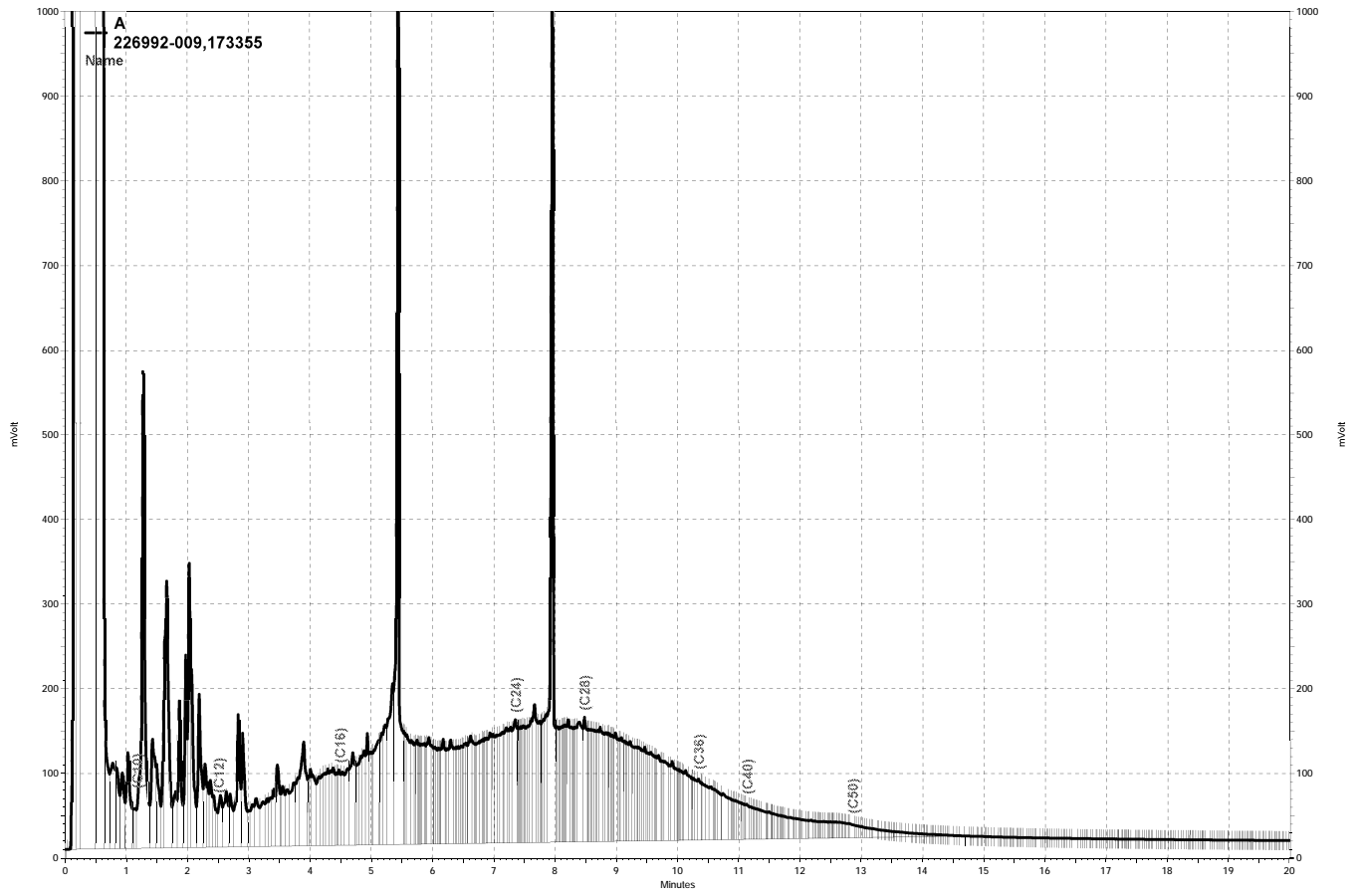
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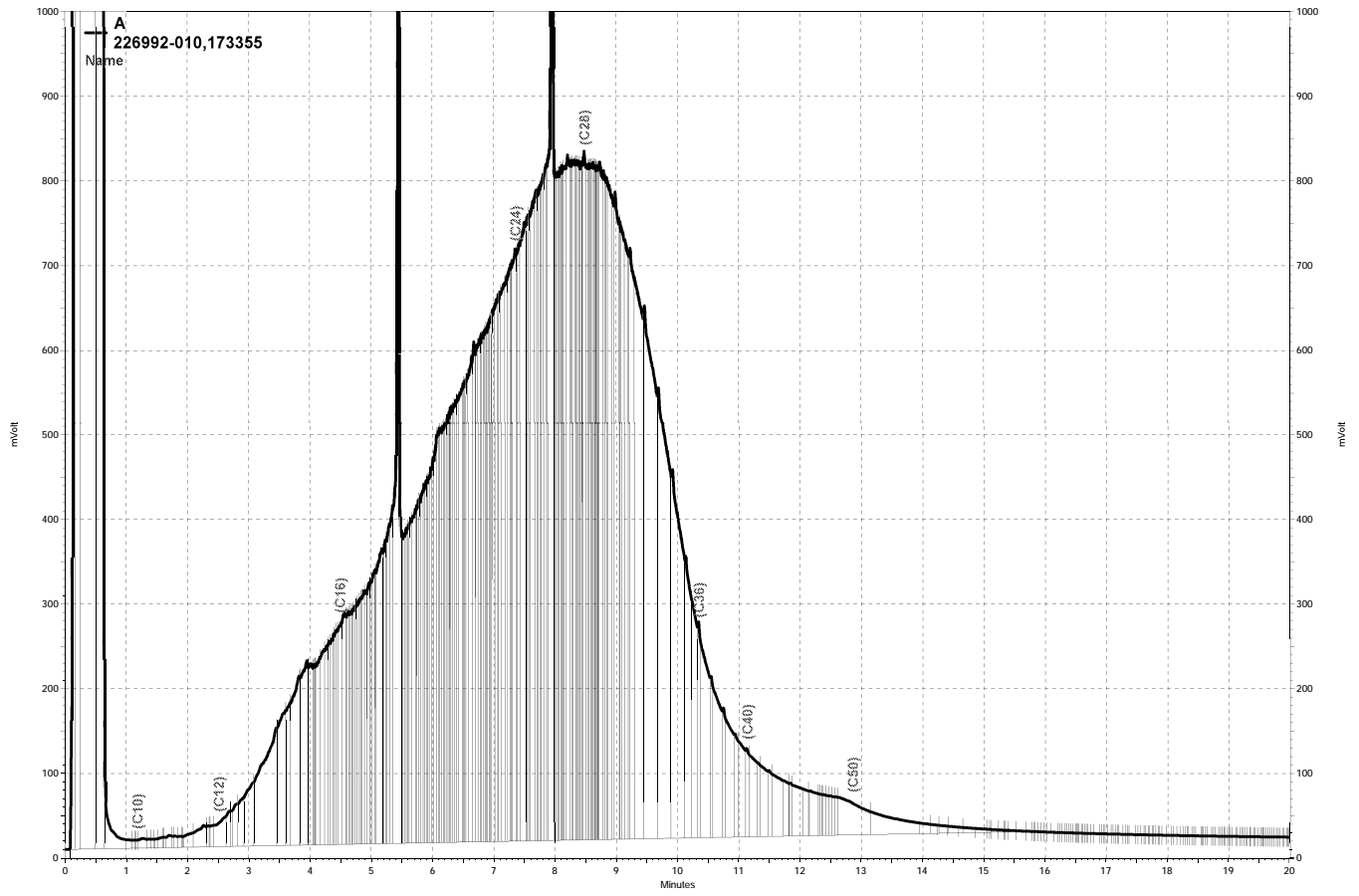
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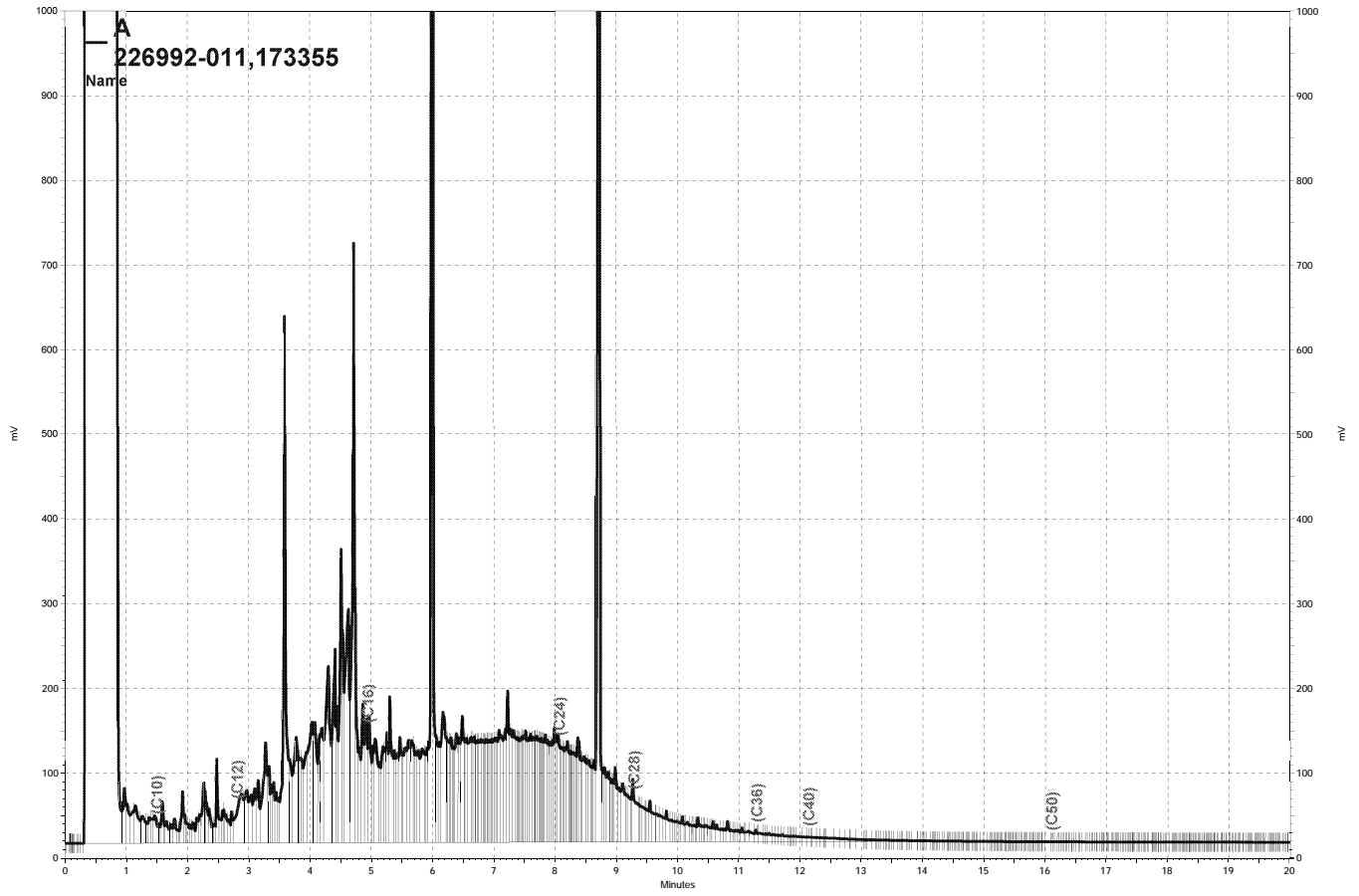
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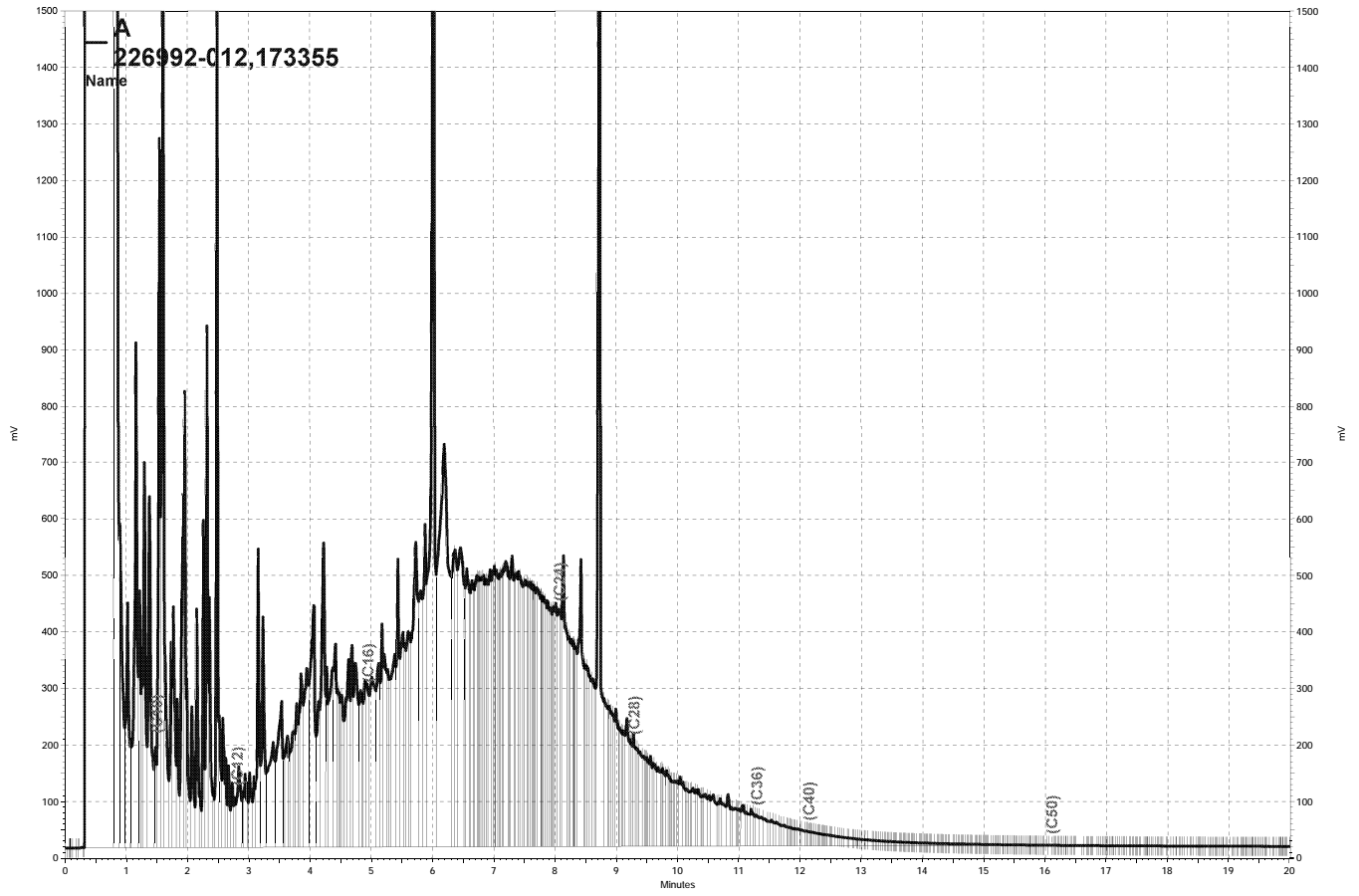
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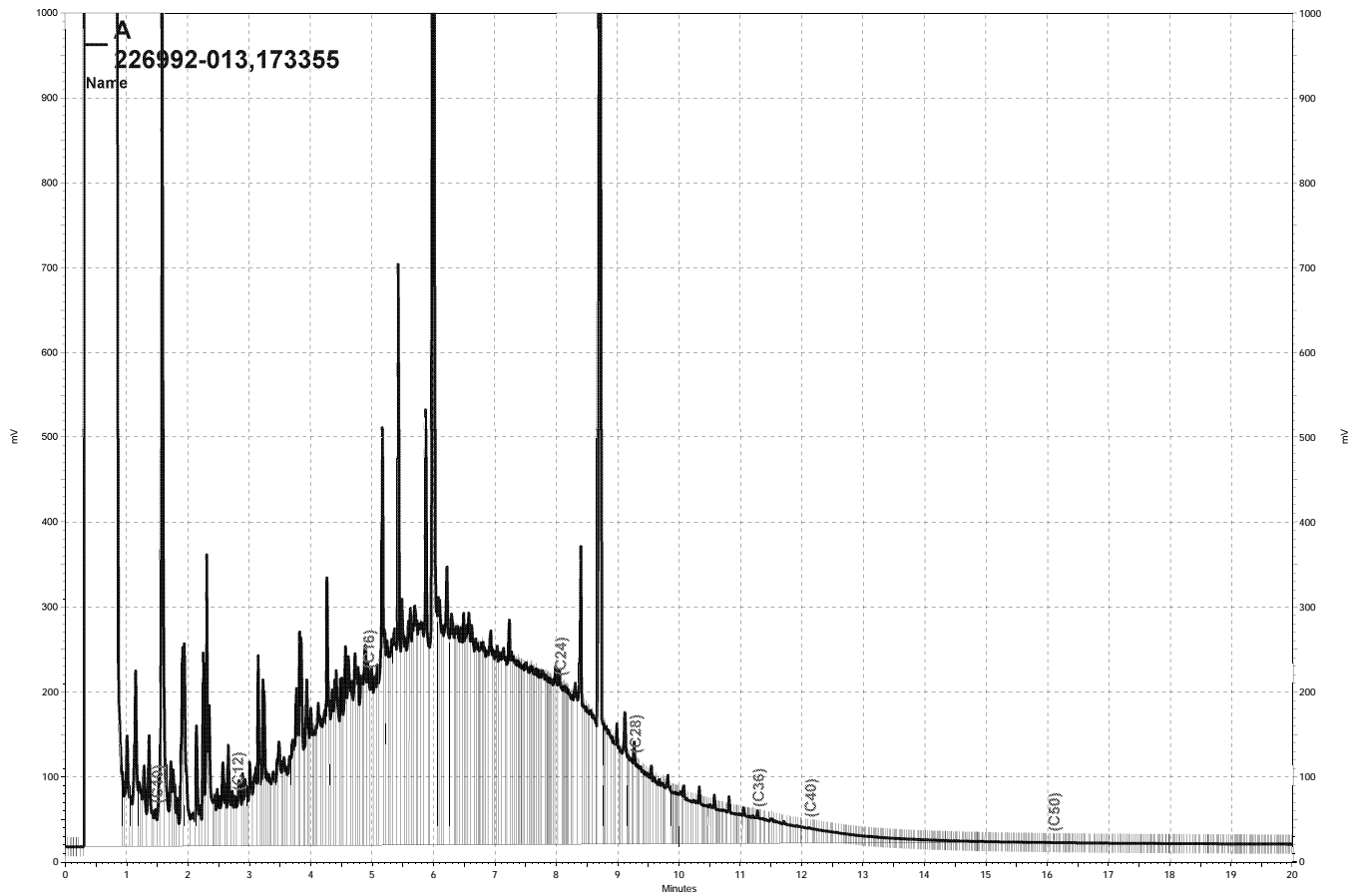
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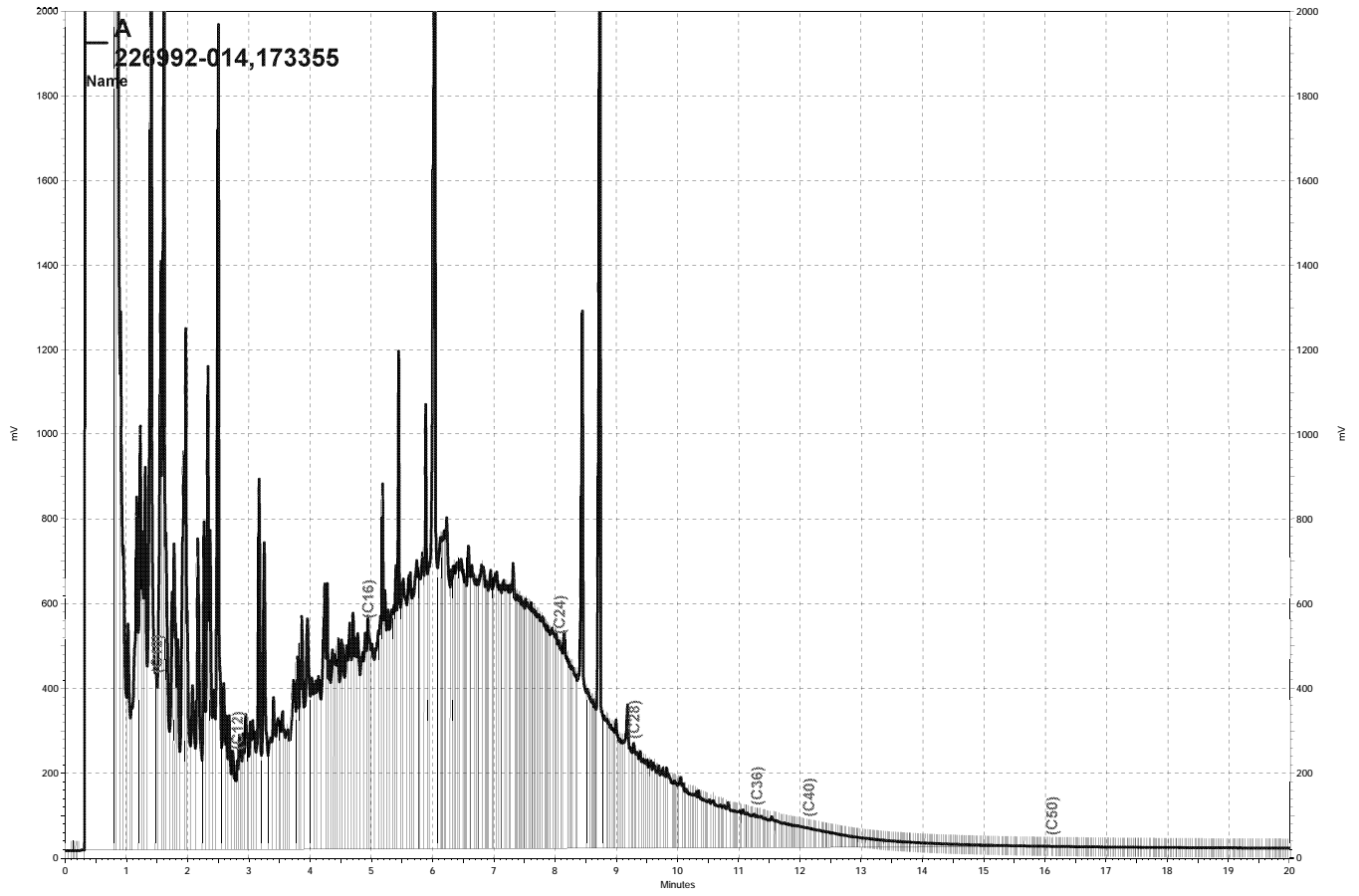
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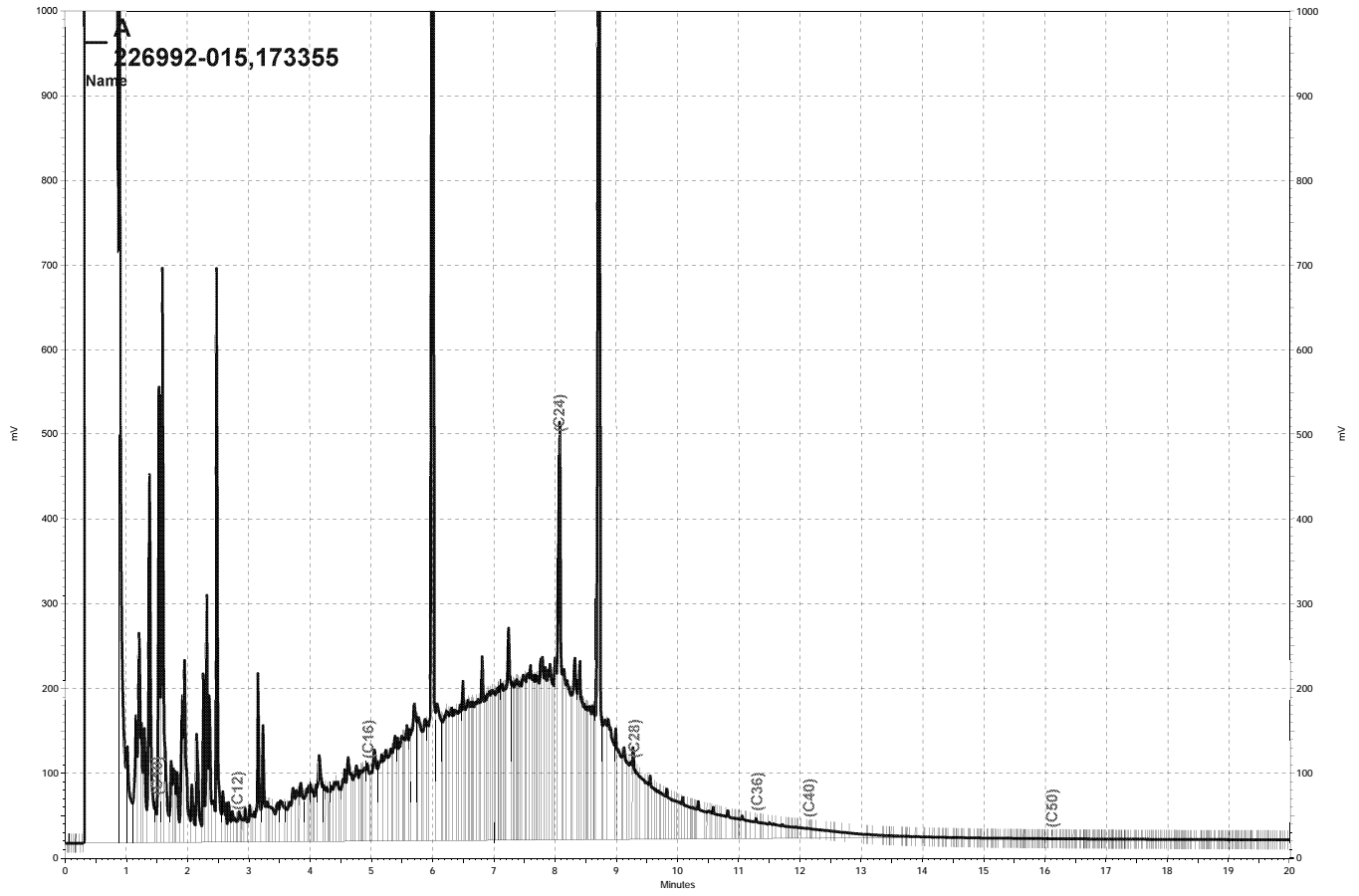
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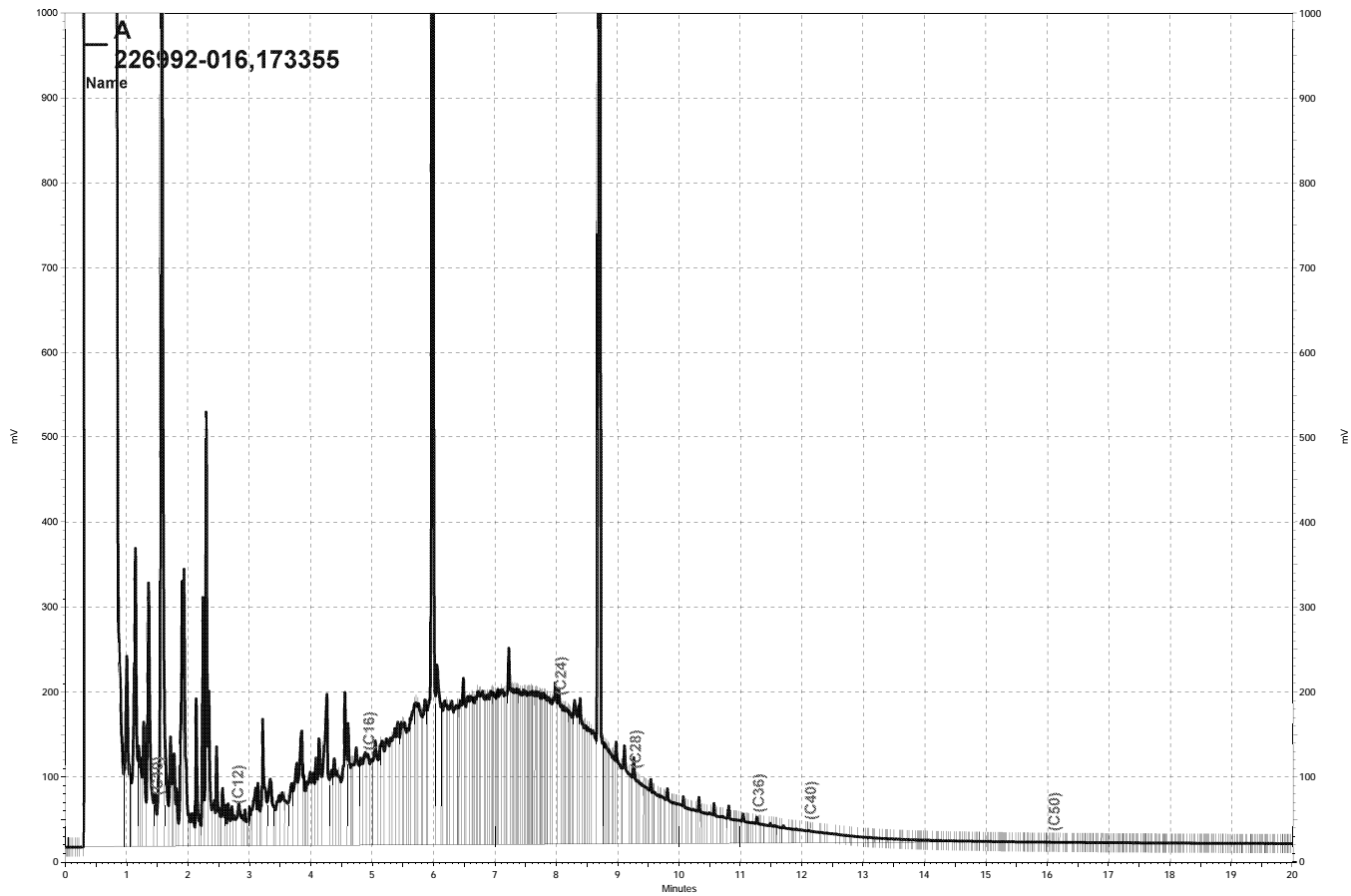
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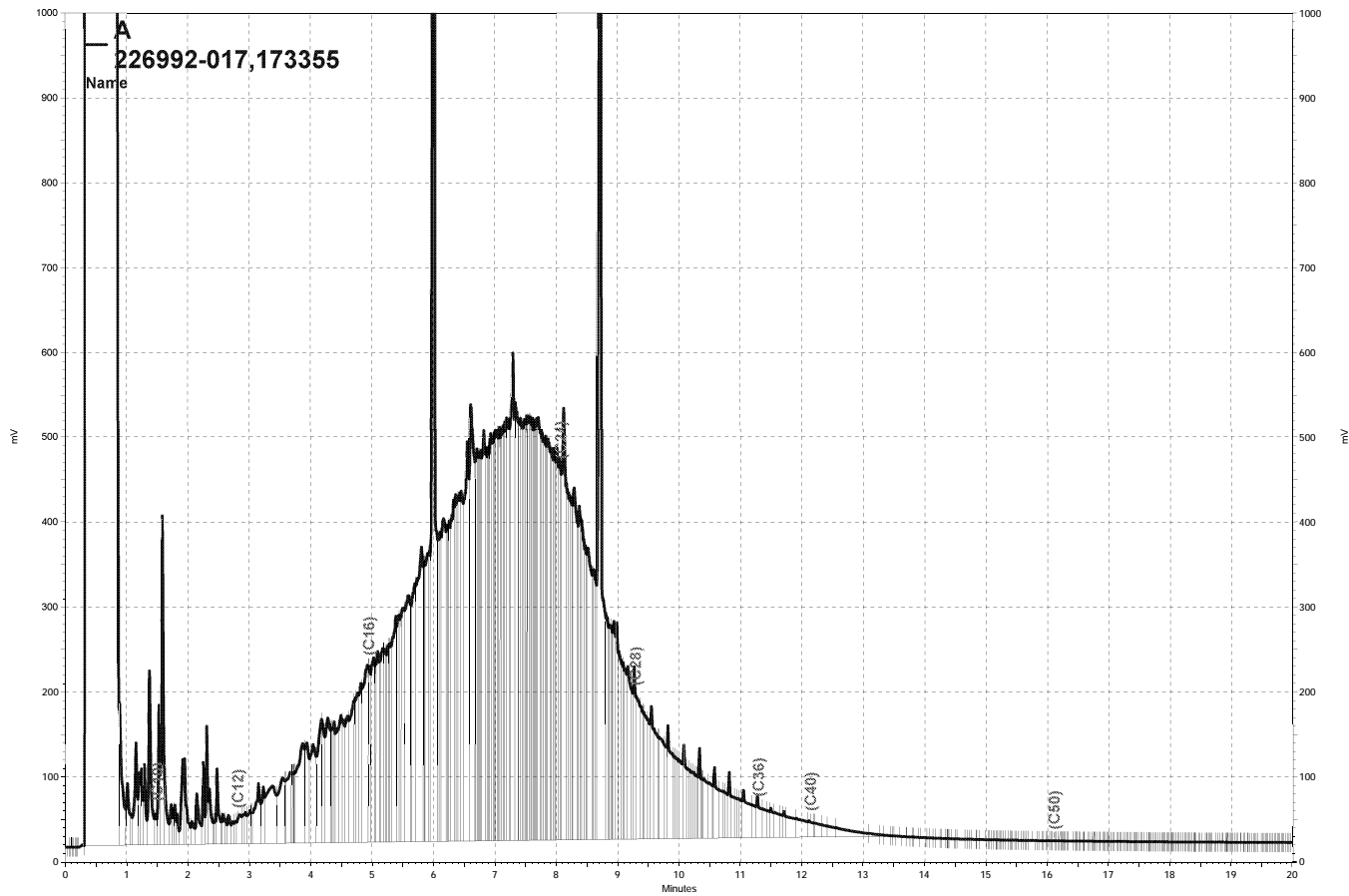
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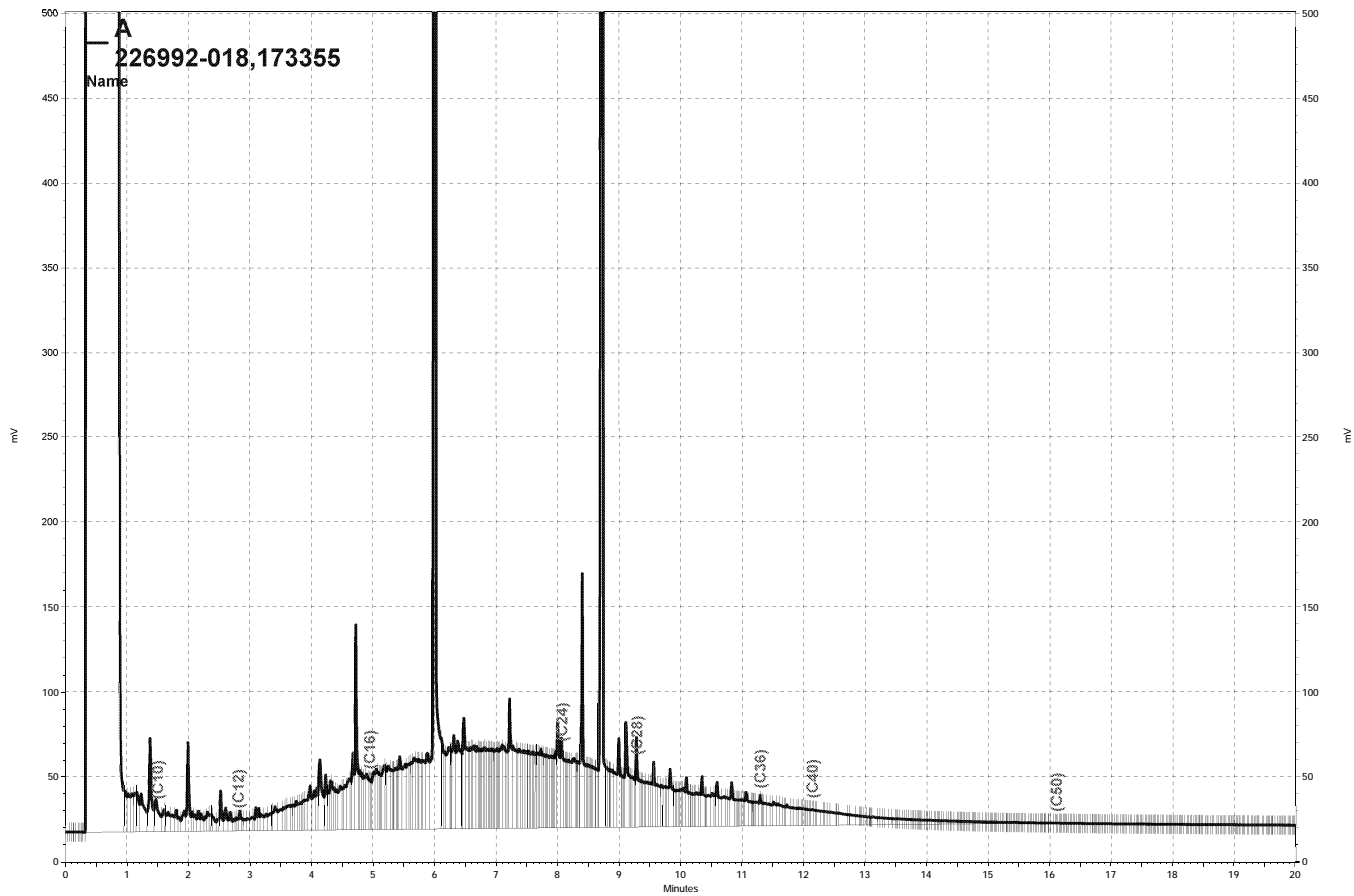
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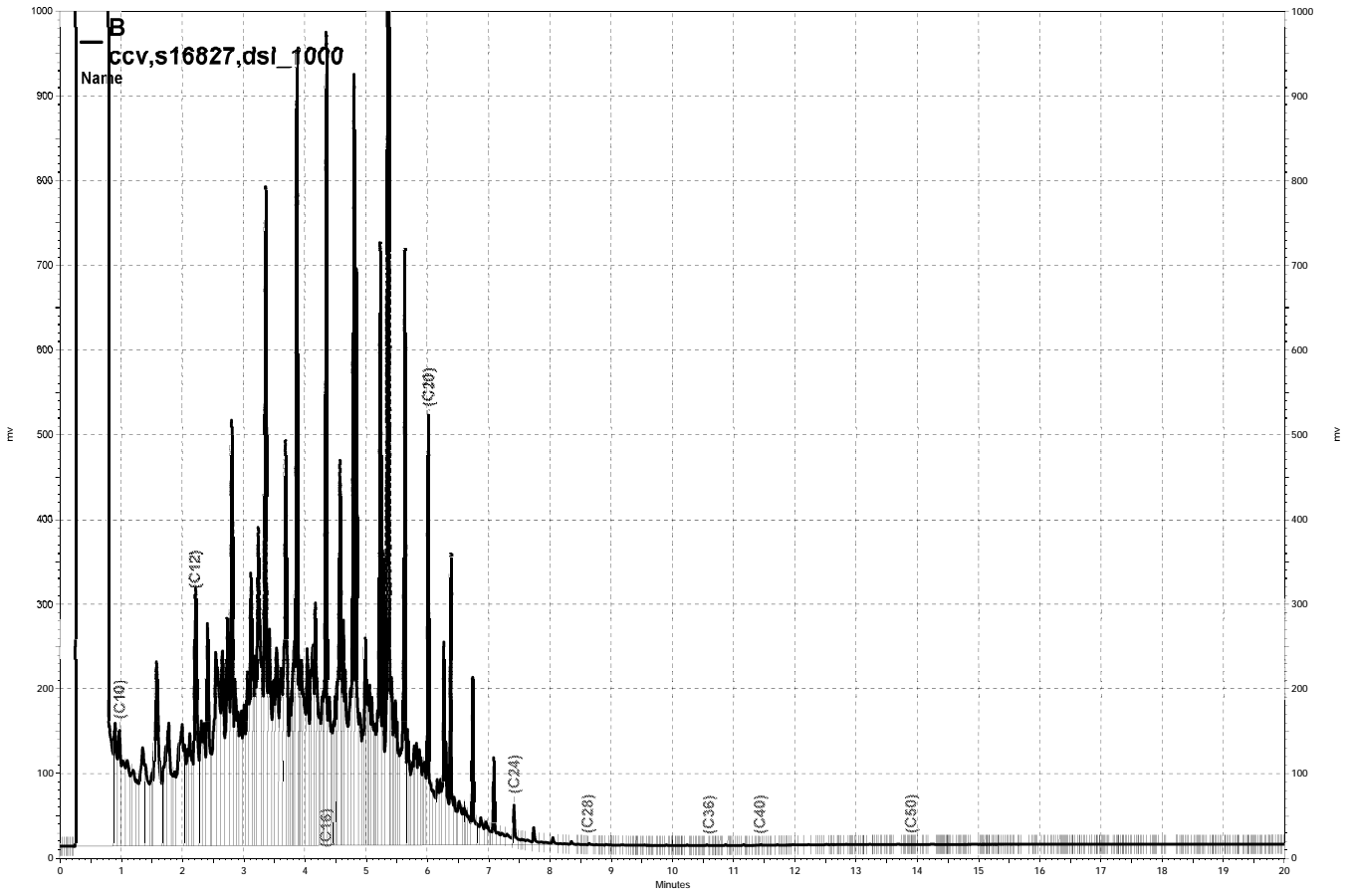
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— \\Lims\gdrive\ezchrom\Projects\GC15B\Data\094b007, B

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 ^(c)	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 ^(c)	8.08	8.57
14	Sep-10	16.65	8.68 ^(c)	8.68	7.97
15	Mar-11	16.65	10.40	NM	6.25

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

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

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

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

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 ^(e)	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

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 ^(e)	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

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 ^(e)	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

MW-11					
Sampling Event No.	Date	TOC Elevation	DTW	DTP	GW Elevation
Installed May 2004					
1	Nov-06 ^(d)	17.76 ^(e)	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

MW-12					
Sampling Event No.	Date	TOC Elevation	DTW	DTP	GW Elevation
Installed between 2004-2006					
1	Nov-06 ^(d)	17.83 ^(e)	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

MW-13					
Sampling Event No.	Date	TOC Elevation	DTW	DTP	GW Elevation
Installed between 2004-2006					
1	Dec-06	17.66 ^(e)	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

MW-14					
Sampling Event No.	Date	TOC Elevation	DTW	DTP	GW Elevation
Installed between 2004-2006					
1	Nov-06 ^(d)	17.60 ^(e)	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

MW-15					
Sampling Event No.	Date	TOC Elevation	DTW	DTP	GW Elevation
Installed between 2004-2006					
1	Dec-06	17.80 ^(e)	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

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 ^(e)	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

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 ⁽⁶⁾	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

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 ⁽⁶⁾	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

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 ⁽⁴⁾	17.80	10.22	NP	7.58
6	Dec-07	17.47 ⁽⁶⁾	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

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 ^(e)	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

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

^(d) Wells resurveyed in May 1989

^(e) 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

Extraction Date	Well or Trench Location																				Total Extracted								
	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	
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	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	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	
2011 Total	0.15																												
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	25.23	28.32	2.45	2.97	2.27	4.77	2.89	2.89	190.23	

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



Evergreen Environmental Services

dedicated to the protection of the environment

WORK ORDER/SERVICE AGREEMENT

No 581767

To schedule a pickup, call
800-596-9455

Send payment to:

Sales Order # 0323462

6880 Smith Ave., Newark, CA EPA# CAD982413262
16540 S. San Pedro St., Carson, CA EPA# CAD982413262

Evergreen Oil, Inc.
Dept. LA 23234
Pasadena, CA 91185-3234

Date: 4-8-11

GENERATOR/JOB LOCATION

BILLING INFORMATION

NAME <u>Bay Center Apartments</u>	NAME <u>Stellar Environmental</u>	CASH <input type="checkbox"/> CHECK <input type="checkbox"/>
ADDRESS <u>6400 CHARISTIE ST</u>	ADDRESS <u>2198 Sixth St Ste 201</u>	CUSTOMER CODE NO. <u>SES007</u>
CITY STATE ZIP CO. <u>Emeryville CA 94604</u>	CITY STATE ZIP CO. <u>Berkeley CA 94710</u>	PO #
PHONE NO. <u>510 554</u>	PHONE NO. ()	PROFILE NO.
		CUSTOMER EPA ID NO. <u>CA1000331631</u>

PRODUCT	WASTE CODE	MANIFEST NUMBER	QUANTITY	UNITS	PRICE	AMOUNT
Used oil, Non-RCRA Hazardous Lubricating	CA221			Gal.		
Waste, Liquid Industrial	CA221			Gal.		
Used Automotive Antifreeze, Non-RCRA Hazardous Waste Liquid	CA134			Gal.		
RQ Waste Combustible Liquid, N.O.S. NA 1993 III (Oil contaminated with halogens)	CA221 F001/F002			Gal.		
Oil & Water, Non-RCRA Hazardous Waste Liquid	CA223	<u>00703985141</u>	<u>1050</u>	Gal.		<u>C</u>
Non Hazardous Water				Gal.		
Waste Solids and Sludges				Gal.		
Wash Out			<u>1</u>	Each		<u>C</u>
Pressure Washer/Steam Cleaner				Day		
Transportation			<u>2</u>	Hrs.		<u>C</u>
Fuel Surcharge				%		
Glycol Bulk 50/50/Specify Product				Gal.		
Glycol Bulk Conc./Specify Product				Gal.		

TEST: Clor D Tech 4000 ppm Clor D Tech 1000 Pass Fail

Retain sample # Required

Total Charges

Field Service Work Description:

Other:

Other:

Contract

TSDf

Consolidated Manifest

<input checked="" type="checkbox"/> Evergreen Oil, Inc. 6880 Smith Ave. Newark, CA 94560 CAD980887418	<input type="checkbox"/> Evergreen Oil, Inc. - Davis Road 30B Davis, CA 95616 CAD982446874	<input type="checkbox"/> Evergreen Oil, Inc. - Fresno 4139 N. Valentine Fresno, CA 93722 CAD982446882
<input type="checkbox"/> Evergreen Env. Svc. 16604 S. San Pedro Carson, CA 90746 CAD981696420	<input type="checkbox"/> Evergreen Oil, Inc. - Santa Maria 745 A West Betteravia Santa Maria, CA 93454 CAD982446858	

Source: Collection Station Government
 Marine Agricultural Industrial

DRIVER CHECKLIST

Time In _____ Time Out _____
 Tank/Drum Properly Labeled
 Accumulation Start Date Marked
 House Keeping - Tank/Drum Clean
 Other Services Checked: Oil, Filters/Drums, Antifreeze
 Called in other services needed Oil, Filters/Drums, Antifreeze

Generator certifies that it has established a program to reduce the volume or quantity & toxicity of the hazardous waste to the degree determined by generator to be economically practicable.

I hereby certify that I have read and have the authority to bind the above listed generator to the terms on the reverse side of this form.

IMPORTANT NOTICE REGARDING THE DISPOSITION OF YOUR OIL.

Per California Health and Safety Code Section 25250.9, Evergreen hereby advises customer that customer's shipment of used oil may be transported to a facility that is required to comply with federal regulations applicable to management of used oil, but that is not required to comply with the more stringent requirements applicable to hazardous waste management facilities. California facilities that handle or process used oil are required to meet those more stringent requirements, and some out-of-state facilities that process used oil also meet those requirements. These include more stringent leak detection and prevention requirements, engineering certifications of tank integrity, and financial assurances for closure and accidental releases. It is lawful to send used oil to out-of-state facilities that comply only with federal used oil management standards and not these more stringent requirements. This notification is for information purposes only.

IC Jesse Falcone 2204 4-8-11 Steve Bithman 4/8/2011
 Driver Signature Print Name Route # Date Generator's Signature Print Name Date