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City of Oakland, Public Works Agency
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Semiannual Groundwater Monitoring Report, July 1, 2013 through December 31, 2013

Municipal Service Center
7101 Edgewater Drive
Oakland, California

Fuel Leak Case RO293

January 2014

CITY OF OAKLAND

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January 31, 2014

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Subject: City of Oakland, Municipal Service Center 7101 Edgewater Drive Oakland, California Fuel Leak Case RO293
Semiannual Groundwater Monitoring Report, July 1 through December 31, 2013,

Dear Mr. Nowell:

Enclosed is the Semiannual Groundwater Monitoring Report for the City of Oakland, Municipal Service Center 7101 Edgewater Drive in Oakland, California Fuel Leak Case RO293 ("the Site"). This report describes the groundwater monitoring activities conducted in July 2013 that are intended to represent the period of July 1 through December 31, 2013, the "reporting period".

I certify under penalty of law that this document and all attachments are prepared by ARCADIS under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions or comments, please call Mr. Ron Goloubow of ARCADIS at (510) 501-1789 or me at (510) 238-6361.

Sincerely,

Gopal Nair
Environmental Specialist

Enclosure

ARCADIS

Ron Goloubow
Principal Geologist

Semiannual Groundwater Monitoring Report, July 1, 2013 through December 31, 2013

Municipal Service Center
7101 Edgewater Drive
Oakland, California
Fuel Leak Case RO293

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Date:
January 2014

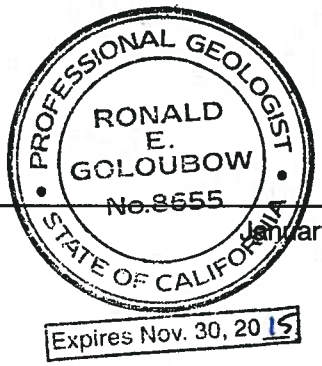
Tables

Figures

Appendices

Certification

All hydrogeologic and geologic information, conclusions, and recommendations in this document have been prepared under the supervision of and reviewed by an ARCADIS U.S., Inc., California Professional Geologist.*



Ron Goloubow
Principal Geologist
California Professional Geologist (8655)

January 31, 2014

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1. Introduction

This semiannual groundwater monitoring report presents the results for the groundwater monitoring that was conducted during the period from July 1, 2013 through December 31, 2013 ("the semiannual monitoring period") at the Municipal Service Center (MSC), located at 7101 Edgewater Drive in Oakland, California Fuel Leak Case RO293 ("the Site"; Figure 1). The groundwater monitoring event was conducted from July 17 through 19, 2013 ("the July monitoring event") by ARCADIS U.S., Inc. (ARCADIS) in accordance with Assignment No. G08-LFR-08.

This report summarizes the monitoring activities conducted during the July monitoring event and includes the analytical results, distribution of contaminants in groundwater, and conclusions. The July monitoring event is the first monitoring event to take place since June 2012. The groundwater monitoring was conducted in accordance with the revised groundwater monitoring plan (ARCADIS 2011b) and the additional monitoring described below.

As requested by representatives of the Alameda County Department of Environmental Health (ACDEH) during the meeting that took place on July 5, 2013 the following activities were also conducted during this monitoring event:

- Samples were collected from wells RW-B2, RW-B3, RW-C5, and RW-D6 to assess groundwater quality in areas where elevated concentration of benzene had previously been detected.

- Samples collected from eight wells were submitted for the analysis of semi-volatile organic compounds SVOCs using EPA test method 8270.

Currently, the case is being reviewed by representatives of the ACEH to assess the current site conditions. The scope and schedule for future groundwater monitoring events will be assessed after the ACEH completes their review.

2. Site Background and Corrective Action Measures

Eighteen 2-inch-diameter groundwater monitoring wells (MW-1 through MW-18) were installed on and off site to depths ranging from approximately 13 feet below ground surface (bgs) to 20 feet bgs, from 1989 to 2003. These wells have been monitored periodically since their installation. Wells MW-3 and MW-4 were abandoned and sealed in 1999 (Ninyo & Moore 2004). In addition, six 6-inch-diameter wells (TBW-1 through

TBW 6) were installed during the backfilling of the excavation of former fuel hydrant lines in the early 1990s. Wells TBW-1 through TBW-4 were abandoned and sealed in June 2007 by Baseline Environmental Consulting ("Baseline").

Eighteen 4-inch-diameter remediation wells (RW- serial wells) and four 2-inch-diameter test/observation wells (OB- serial wells) were installed on site to depths ranging from 13 feet bgs to 17 feet bgs, in December 2001 and January 2002 by others, according to Uribe & Associates' ("Uribe's") "Test/Observation Well Installation Report, U & A Project 291-03," dated April 2, 2002 (Uribe 2002). Seven of the wells (RW-A1, RW-A2, OB-A1, and RW-B1 through RW-B4) were installed in the vicinity of the former USTs located on the south side of the Site (see Figure 2). . Fifteen wells (RW-C1 through RW-C7, OB-C1, RW-D1 through RW-D5), OB-D1, and OB-D2) were installed in the vicinity of the former USTs located towards the northern side of the Site (see Figure 2). Six additional remediation wells (RW-6 through RW-11, 6-inch-diameter) were installed in the northern side of the Site in March 2007 by URS Corporation. Each well, except OB-A1, was surveyed subsequent to the installation event. The well locations are shown on Figures 2 and 3.

According to the "Second Quarter 2003 Monitoring Report" (Uribe 2003), approximately 10,000 gallons of a groundwater/free product mixture were removed from on-site wells RW-B3 and RW-B4 (northern side of the Site) in September and October 2002, using a trailer-mounted, dual-phase extraction (DPE) unit with a 10-horsepower vacuum pump. Additionally, approximately 10,000 gallons of liquid were removed from wells RW C3, RW-C4, RW-C5, and RW-C7 (northern side of the Site) through five daily extractions over a two-month period. The liquid was pumped into a 21,000-gallon aboveground storage tank to allow separation of oil from water and drained through three 2,000-pound granular-activated carbon filters (in series). After filtration, the wastewater was discharged into a local storm drain. A National Pollutant Discharge Elimination System (NPDES) permit was issued prior to discharge.

Within the same time period, hydrogen peroxide was injected periodically into wells OB-Al, RW-Al, RW-A2, TBW-3, and TBW-4, MW-16 and MW-17 (south side of the Site); and MW-5 (active tank area) to promote in situ bioremediation. In each injection event, typically 5 to 10 gallons of 7% hydrogen peroxide water solution was injected into each well, followed by another 5 to 10 gallons of water to disperse the hydrogen peroxide into the water-yielding interval. Hydrogen peroxide was injected approximately quarterly into RW-C1 through RW-C7 (north side of the Site) from July 2004 through January 2009. To enhance natural attenuation, hydrogen peroxide was also injected into all remediation wells (RW-series wells) approximately quarterly from

March 2010 through November 2012 (after the DPE system was shut down in December 2009).

Construction of an extraction system to remove separate-phase hydrocarbons (SPH) towards the northern portion of the Site began in March 2006. Seven existing wells (RW-D1, RW-D2, RW-D3, RW-D4, RW-D5, TBW-5, and RW-1) were converted to extraction wells by URS Corporation (see Figures 2 and 3). The extraction system was completed in April 2006, and the system began operation in mid-May 2006. The seven wells were equipped with both total fluid recovery pneumatic pumps and vacuum lines for liquid and soil-vapor extraction (DPE). Groundwater extracted from the seven wells was treated through an oil/water separator, followed by three 2,000-pound liquid-phase activated carbon units in series, and was discharged into the local storm drain via an NPDES permit. Recovered product was sent off site for recycling. Extracted soil vapor was treated through a thermal oxidizer and discharged into the atmosphere via a permit issued by the Bay Area Air Quality Management District. Six additional wells were installed in the northern portion of the Site in March 2007 (RW-D6, RW-D7, RW-D8, RW-D9, RW-D10, and RW-D11) and were connected to the extraction system for DPE remediation on June 11, 2007 (see Figures 2 and 3). In addition, six existing wells in the northern portion of the Site (RW-C2, RW-C4 through RW-C7, and OB-C1) were connected to the DPE system in May 2009, and extraction from these wells commenced on May 26, 2009 (see Figures 2 and 3).

With the concurrence of the ACEH, the extraction remediation system was shut down on December 23, 2009, after meeting its design objective (i.e., complete removal of SPH). Quarterly remediation system performance reports were submitted separately from this monitoring report to ACEH and the Regional Water Quality Control Board – San Francisco Bay Region (RWQCB).

A number of monitoring wells have also been eliminated from the monitoring program since their installation. Monitoring wells MW-3 and MW-4 have been abandoned and sealed (Ninyo & Moore 2004). Wells TBW-1, TBW-2, TBW-3, and TBW-4 were abandoned and sealed by Baseline in June 2007.

3. Groundwater Monitoring Activities

3.1 Field Activities

During the July 2013 monitoring event, ARCADIS personnel measured depth to groundwater and depth to SPH using an electric oil/water interface probe in the

following wells: MW-1, MW-2, MW 5 through MW-11, MW-13 through MW-17, TBW-5, TBW-6, RW-1, RW-A1, RW-A2, OB-A1, RW-B1 through RW-B4, RW-C1 through RW-C7, OB-C1, RW-D1 through RW-D11, OB-D1, and OB-D2. Monitoring well MW-12 was inaccessible as there was a large cargo container on top of it, thus no depth to groundwater or SPH measurements were measured at this well. Depth to water and depth to SPH measurements were conducted on July 17, 2013. SPH was not detected in any of the measured wells (see Table1).

During the groundwater and SPH depth measurements, the oil/water interface probe was cleaned with liquinox and distilled water before use at each well to avoid potential cross-contamination. Current and historical product thickness measurements, depth-to-groundwater measurements, and groundwater elevations calculated from groundwater measurements are presented in Table 1. Monitoring and remediation well locations are shown on Figures 2 and 3.

On July 17 through July 19, 2013, ARCADIS personnel collected groundwater samples from monitoring wells MW-1, MW-5, MW-6, MW-10, MW-13, MW 14, and MW-17. Samples were also collected from remediation wells RW-A2, RW-B1 through RW-B4, RW-C5 through RW-C7, RW-D5, RW-D6, RW-D8, RW-D9, and RW-1.

Prior to sample collection, a clean, disposable, polyvinyl chloride (PVC) sampling bailer was used to purge a minimum of three well-casing volumes of groundwater from each of the seven monitoring and 13 remediation wells sampled during the July monitoring event. All wells were allowed to recover to at least 80 percent of their original static groundwater levels before they were sampled, or were allowed at least two hours of recovery time, whichever came first. Dissolved oxygen, temperature, pH, conductivity, and oxidation-reduction potential were measured for each well volume purged. Additionally, characteristics of the water (color, turbidity, odor, sheen) were noted on the field data sheets, which are included in Appendix B.

After the wells were purged, samples were collected using the disposable PVC bottom-discharging bailer that was used to purge the well. The samples were transferred from the bailer to the appropriate sample containers, labeled, and placed in an ice chilled cooler containing “wet ice”, under chain-of-custody protocol. The samples were secured in the cooler and transported to Curtis & Tompkins, Ltd., Analytical Laboratories (C&T), a California Department of Health Services-certified environmental laboratory located in Berkeley, California. Purge and decontamination water generated during sampling activities was transferred into an on-site storage tank that was part of the on-site extraction and treatment system maintained by the City of Oakland.

3.2 Sample Analyses

Groundwater samples collected during the July monitoring event were analyzed by C&T for the following parameters:

- total petroleum hydrocarbons (TPH) as gasoline (TPHg) using U.S. Environmental Protection Agency (U.S. EPA) Method 8260B
- TPH as kerosene (TPHk), TPH as diesel (TPHd), and TPH as motor oil (TPHmo) using U.S. EPA Method 8015B, with a silica-gel cleanup
- the aromatic hydrocarbons benzene, toluene, ethylbenzene, and total xylenes (collectively known as BTEX) and methyl tertiary-butyl ether (MTBE) using U.S. EPA Method 8260B

4. Monitoring Results

Current laboratory analytical results and historical results are presented in Table 1. Copies of laboratory data sheets and chain-of-custody documents are included in Appendix C.

4.1 Shallow Groundwater Elevations

Depth to groundwater was measured on July 17, 2013 using a Solinst oil/water interface meter (Table 1). Prior to groundwater measurements, the well caps were removed from each well to allow the water column within each well to come into equilibrium with atmospheric pressure. Groundwater elevations were determined using well elevation survey data included in the “Second Quarter 2003 Monitoring Report” (Uribe 2003).

Groundwater elevations measured in the monitoring wells ranged from 0.48 feet mean sea level (msl) at MW-17 to 5.34 feet msl at MW-11 (Figure 2). Groundwater flow direction, measured between wells MW-1 and MW-10, is toward the northwest in the northern section of the Site at approximately 0.006 foot/foot (ft/ft), and toward the southwest (measured between wells MW-6 and MW-17) at approximately 0.024 ft/ft in the southern portion of the Site. The groundwater elevation was slightly higher at remediation well RW-A1 (groundwater elevation of 6.64 feet msl), located in the southern portion of the Site (Figure 3). The variation in the groundwater gradient may be due to differences in lithologic characteristics in the subsurface or preferential

pathways (possibly due to backfilled utility trenches and underground storage tank pits). The groundwater flow direction for this sampling period is very similar to the direction of groundwater flow at the Site as reported in previous ARCADIS monitoring reports.

4.2 Occurrence of Separate-Phase Hydrocarbons

SPH was not observed in any wells in July 2013 and the results of the SPH measurements are presented in Table 1. Although no SPH or sheen was observed in any of the site wells, an odor of hydrocarbon/fuel was noted in the following five wells (see Appendix B and Figure 2). Note: MW-6 is a monitoring well

- MW-6, RW-A2, RW-B2, RW-B4, and RW-D5

SPH has not been detected in any of the monitoring wells and remediation wells since the shutdown of the DPE system in December 2009.

4.3 Contaminant Distribution in Groundwater

During the July 2013 sampling event, groundwater samples were collected from seven monitoring wells (MW-1, MW-5, MW-6, MW-10, MW-13, MW-14 and MW-17) and from 13 remediation wells (RW-A2, RW-B1, RW-B2, RW-B3, RW-B4, RW-C5, RW-C6, RW-C7, RW-D5, RW-D6, RW-D8, RW-D9, and RW-1). Analytical data from the July 2013 groundwater monitoring event is presented in Table 1, along with historical analytical results. The laboratory analytical data report is included in Appendix C of this report. Historical data for volatile organic compounds, semivolatile organic compounds, leaking underground fuel tank metals, and other metals detected in groundwater samples collected at the Site are provided in Appendix D (Tables D-1, D-2, D-3, and D-4, respectively).

The following sections summarize the analytical data collected in the July 2013 monitoring event as well as chemical concentration trends within monitoring wells that exceed the applicable screening criteria. Concentration trends for remediation wells are not discussed in this report because samples have not been collected from these wells on a regular basis.

For quality assurance/quality control (QA/QC) purposes, ARCADIS collected two duplicate samples during the July 2013 monitoring event and analyzed them for TPHg, TPHk, TPHd, TPHmo, BTEX, and MTBE. Duplicate samples were collected from

remediation wells RW-B1 and RW-D6. The analytical results for the duplicate samples collected were consistent with corresponding primary samples collected, with the exception of TPHmo at well RW-B1. The concentration of TPHmo at well RW-B1 primary sample was detected above the laboratory reporting limit, while its corresponding duplicate sample did not contain TPHmo above the laboratory reporting limit.

4.3.1 Screening Criteria

In the June 12, 2009 semiannual monitoring report, LFR Inc. (LFR) recommended that groundwater quality results be compared to the RWQCB Environmental Screening Levels (ESLs) for Groundwater (groundwater is not a current or potential drinking water resource; RWQCB 2013; Table F-1b; listed below) because they are the most applicable screening criteria for the current site conditions. The groundwater quality results had previously been compared to the San Francisco Airport Ecological Protection Zone (SFAEPZ) Tier I Standard and the RWQCB ESL for Surface Water Screening Levels Marine Habitats. These standards/screening levels (listed below) both relate to the quality of the water in San Francisco Bay but not groundwater.

Analyte	Previous Screening Criteria		Recommended Screening Criteria
	SFAEPZ Tier 1 Standard (µg/l)	ESL Surface Water (Table F-2b) (µg/l)	ESL Groundwater (Table F-1b) (µg/l)
Benzene	71	71	27
Toluene	NA	40	130
Ethylbenzene	29,000	30	43
Total Xylenes	NA	100	100
MTBE	NA	180	1,800
TPHg	3,700	210	500
TPHd	640	210	640

Analyte	Previous Screening Criteria		Recommended Screening Criteria
	SFAEPZ Tier 1 Standard (µg/l)	ESL Surface Water (Table F-2b) (µg/l)	ESL Groundwater (Table F-1b) (µg/l)
TPHmo	640	210	640
TPHk	NA	NA	640

Notes:
µg/l = micrograms per liter
NA = screening criteria not previously applied to analyte

4.3.2 Benzene

Benzene concentrations were detected above the laboratory analytical reporting limit (LRL) in groundwater samples collected from three of the seven monitoring wells sampled during the July 2013 monitoring event (see Table 1 and Figure 3). Benzene was detected in samples collected from monitoring wells MW-5, MW-6, and MW-10 at 0.65 µg/l, 160.0 µg/l, and 8.9 µg/l, respectively.

Benzene was detected above its LRL in 11 of the 13 groundwater samples collected from remediation wells during the July monitoring event. Benzene concentrations in the remediation wells ranged from 14.0 µg/l (RW-D8) to 2,200 µg/l (RW-B4).

The RWQCB ESL Groundwater Screening Level (groundwater is not a current or potential drinking water resource) for benzene is 27 µg/l (RWQCB 2013; Table F-1b). The benzene concentrations in nine remediation wells (RW-B1 through RW-B4, RW-C5, RW-C6, RW-D5, RW-D6, and RW-D9) and one monitoring well (MW-6) during the July monitoring event were above the RWQCB ESL for benzene (see Figure 3).

The benzene concentrations in monitoring wells sampled during the July monitoring event displayed relatively stable concentration trends over the last four monitoring events. However, groundwater samples collected from well MW-6 show a slight and steady increase in benzene concentrations since November 2008 (96 µg/l to 160 µg/l (detected in July 2013).

4.3.3 Toluene

Toluene was detected above its LRL in the groundwater sample collected from one of the seven monitoring wells sampled during the July monitoring event. The toluene concentration detected in monitoring well MW-6 was 4.7 µg/l. The toluene concentrations in monitoring wells sampled during the July monitoring event have displayed relatively stable concentration trends over the last four monitoring events (see Table 1).

Toluene was detected above its LRL in 11 of the 13 groundwater samples collected from remediation wells during the July monitoring event. Toluene concentrations in the remediation wells ranged from 0.68 µg/l (RW-C7) to 2,000 µg/l (RW-B2).

The RWQCB ESL Groundwater Screening Level (groundwater is not a current or potential drinking water resource) for toluene is 130 µg/l (RWQCB 2013; Table F-1b). With the exception of remediation well RW-B2, toluene concentrations were below the ESL of 130 µg/l in all monitoring and remediation wells during the July monitoring event (see Table 1).

4.3.4 Ethylbenzene

Ethylbenzene was detected above its LRL in the groundwater sample collected from one of the seven monitoring wells sampled during the July monitoring event. Ethylbenzene was detected in monitoring well MW-5 at a concentration of 20.0 µg/l.

Ethylbenzene was detected above its LRL in 10 of the 13 groundwater samples collected from remediation wells during the July monitoring event. Ethylbenzene concentrations in the remediation wells ranged from 5.4 µg/l (RW-D9) to 210 µg/l (RW-B4).

The RWQCB ESL Groundwater Screening Level (groundwater is not a current or potential drinking water resource) for ethylbenzene is 43 µg/l (RWQCB 2013; Table F 1b). The ethylbenzene concentration was detected above its ESL of 43 µg/l in five remediation wells (RW-B2, RW-B3, RW-B4, RW-C6, and RW-D6) during the July monitoring event.

Well MW-5 was the only monitoring well sampled in July containing ethylbenzene (20.0 µg/l) above its LRL. This ethylbenzene concentration is relatively consistent with

previous monitoring events, and has significantly decreased from the concentration detected in the sample collected in April 2010 (240 µg/l).

4.3.5 Total Xylenes

Total xylenes were detected above the LRL in the groundwater samples collected from three of the seven monitoring wells sampled during the July monitoring event. Total xylenes were detected in monitoring wells MW-1, MW-5, and MW-6 at concentrations of 0.66 µg/l, 3.63 µg/l, and 4.6 µg/l, respectively.

Total xylenes were detected above the LRL in 11 of the 13 groundwater samples collected from remediation wells during the July monitoring event. Total xylenes concentrations in the remediation wells ranged from 3.82 µg/l (RW-C7) to 1,080 µg/l (RW-B2).

The RWQCB ESL Groundwater Screening Level (groundwater is not a current or potential drinking water resource) for total xylenes is 100 µg/l (RWQCB 2013; Table F-1b). The concentrations of total xylenes detected in monitoring wells during the July monitoring event were well below the ESL of 100 µg/l. The total xylenes concentrations were above the RWQCB ESL of 100 µg/l in five remediation wells (RW-B2, RW-B4, RW-C6, RW-D6, and RW-D8) during the July monitoring event.

The total xylenes concentrations in monitoring wells sampled during the July monitoring event were below the ESL for total xylenes and displayed relatively stable concentration trends over time (see Table 1).

4.3.6 MTBE

MTBE was detected above its LRL in the groundwater samples collected from two of the seven monitoring wells sampled during the July monitoring event. MTBE was detected in monitoring wells MW-5 (42.0 µg/l) and MW-6 (2.7 µg/l).

MTBE was only detected above its LRL in one of the 13 groundwater samples collected from remediation wells sampled during the July monitoring event. MTBE was detected in well RW-C6 at a concentration of 1.2 µg/l.

The RWQCB ESL Groundwater Screening Level (groundwater is not a current or potential drinking water resource) for MTBE is 1,800 µg/l (RWQCB 2013; Table F 1b). Concentrations of MTBE were not detected above the ESL of 1,800 µg/l in any

samples collected from the monitoring or remediation wells during the July monitoring event.

The MTBE concentrations in monitoring wells sampled during the July monitoring event displayed relatively stable concentration trends over time (see Table 1).

4.3.7 TPHg

TPHg was detected above its LRL in groundwater samples collected from three of the seven monitoring wells sampled during the July monitoring event. TPHg was detected in monitoring wells MW-1, MW-5, and MW-6 at concentrations of 200 µg/l, 2,000 µg/l, and 380 µg/l, respectively.

TPHg was detected above its LRL in 10 of the 13 groundwater samples collected from remediation wells during the July monitoring event. TPHg concentrations in the remediation wells ranged from 120 µg/l (RW-C7) to 9,700 µg/l (RW-B2) see Figure 3.

The RWQCB ESL Groundwater Screening Level (groundwater is not a current or potential drinking water resource) for TPHg is 500 µg/l (RWQCB 2013; Table F-1b). The TPHg concentrations in one monitoring well (MW-5) and nine remediation wells (RW-B2, RW-B3, RW-B4, RW-C5, RW-C6, RW-D5, RW-D6, RW-D8, and RW-D9) during the July monitoring event were above the RWQCB ESL for TPHg see Figure 3.

Although the TPHg concentration detected in the sample collected from monitoring well MW-5 exceeded the ESL during the July monitoring event, the concentration has remained relatively stable over time (see Table 1 and Figure 3).

4.3.8 TPHd

TPHd was reported above its LRL in groundwater samples collected from six of the seven monitoring wells sampled during the July monitoring event. TPHd concentrations in monitoring wells ranged from 55 µg/l at MW-10, to 2,100 µg/l at MW-6 see Figure 3.

TPHd was detected above its LRL in 12 of the 13 groundwater samples collected from remediation wells during the July monitoring event. TPHd concentrations in the remediation wells ranged from 93 µg/l (RW-D9) to 3,600 µg/l (RW-B4).

The RWQCB ESL Groundwater Screening Level (groundwater is not a current or potential drinking water resource) for TPHd (middle distillates) is 640 µg/l (RWQCB

2013; Table F-1b). The TPHd concentrations in one monitoring well (MW-6) and five remediation wells (RW-B3, RW-B4, RW-C6, RW-D6, and RW-D8) during the July monitoring event were above the RWQCB ESL for TPHd see Figure 3.

TPHd concentrations in monitoring wells sampled during the July monitoring event displayed relatively stable concentration trends over the last few monitoring events.

4.3.9 TPHmo

TPHmo was reported above its LRL in the groundwater sample collected from two of the seven monitoring wells sampled during the July monitoring event. TPHmo was detected in monitoring wells MW-6 and MW-13 at concentrations of 360 µg/l and 330 µg/l, respectively see Figure 3.

TPHmo was detected above its LRL in six of the 13 groundwater samples collected from remediation wells during the July monitoring event. TPHmo concentrations in the remediation wells ranged from 340 µg/l (RW-C7) to 790 µg/l (RW-D8).

The RWQCB ESL Groundwater Screening Level (groundwater is not a current or potential drinking water resource) for TPHmo (middle distillates) is 640 µg/l (RWQCB 2013; Table F-1b). Only one remediation well (RW-D8) during the July monitoring event was above the RWQCB ESL for TPHmo see Figure 3.

TPHmo concentrations in monitoring wells sampled during the July monitoring event displayed relatively stable concentration trends over the last few monitoring events.

4.3.10 TPHk

TPHk was reported above its LRL in groundwater samples collected from three of the seven monitoring wells sampled during the July monitoring event. TPHk was detected in monitoring wells MW-1, MW-5, and MW-6 at concentrations of 76 µg/l, 530 µg/l, and 1,700 µg/l, respectively.

TPHk was detected above its LRL in 12 of the 13 groundwater samples collected from remediation wells during the July monitoring event. TPHk concentrations in the remediation wells ranged from 76 µg/l (RW-B1) to 3,900 µg/l (RW-B4).

The RWQCB ESL Groundwater Screening Level (groundwater is not a current or potential drinking water resource) for TPHk (middle distillates) is 640 µg/l (RWQCB

2013; Table F-1b). The TPHk concentration in one monitoring well (MW-6) and five remediation wells (RW-B3, RW-B4, RW-C6, RW-D6, and RW-D8) during the July monitoring event were above the RWQCB ESL for TPHk see Figure 3.

In the July monitoring events, the TPHk concentration in monitoring well MW-6 exceeded the ESL for TPHk, but was consistent with the last sampling event. The TPHk concentration in MW-5 was less than half the concentrations detected in the samples collected during the 2010, 2011, and 2012 monitoring events.

4.3.11 Naphthalene and other SVOCs

Naphthalene was reported above its LRL in groundwater samples collected from six of theeight monitoring wells sampled during the July monitoring event. Naphthalene was detected in wells MW-6, MW-13, RW-C6 RW-C7 RW-D6, RW-D9, RW-B4, and RW-D8 at concentrations ranging from 1.8 to 150 µg/L.

Low concentrations (less than 1.0 µg/L) of fluoranthene pyrene, benzo(a)anthracene, chrysene, and benzo(b)fluoranthene were detected in samples collected from wells MW-6 and MW-13. Slightly higher concentrations of these SVOCs including pyrene (70 µg/L), chrysene (44 µg/L), benzo(b)fluoranthene (56 µg/L), and benzo(a)pyrene (37 µg/L) were detected in the sample collected from well RW-D8. These were the highest concentrations of SVOCs detected during this monitoring event.

5. Laboratory Quality Assurance and Quality Control

A laboratory QA/QC review was performed on the laboratory analytical data to evaluate the quality and usability of the analytical results. The following sections summarize the QA/QC review.

5.1 Method Holding Times

The procedures used to extract and analyze the collected samples were reviewed by ARCADIS personnel and were found to be within the appropriate holding times for all samples.

5.2 Blanks

One field blank (MW-1-FB) and one trip blank (TB071913) sample were also submitted to the laboratory and placed on Hold, pending the analytical results of the well groundwater samples. Blank samples were eventually not analyzed.

Additionally, laboratory method blank results were reviewed for detection of target analytes. No analytes were detected in the method blanks above the LRL during the July monitoring event.

5.3 Laboratory Control Samples

Laboratory quality control samples were analyzed by C&T for TPHg, TPHd, TPHk, TPHmo, and BTEX. All samples were within the percentage recovery range required by the laboratory during the July monitoring event.

5.4 Surrogates

All surrogates, including o-terphenyl for TPHd, TPHk, and TPHmo and bromofluorobenzene, 1,2 dichloroethane d4, dibromofluoromethane, and toluene-d8 for TPHg, BTEX, and MTBE, were used for laboratory QA/QC analysis. All of the surrogates were within the acceptable laboratory recovery limits during the July monitoring event.

5.5 False-Positive Petroleum Hydrocarbon Identification

Qualifiers were reported in the laboratory analytical reports and noted in Table 1.

6. Findings and Conclusions

The following summarizes the data collected during the July 2013 monitoring events.

- In the July monitoring event, groundwater elevations in the monitoring wells ranged from 0.48 feet msl at MW-17 to 5.34 feet msl at MW-11. The direction of shallow groundwater flow is toward the northwest in the northern section of the Site at a horizontal gradient of 0.006 ft/ft, and toward the southwest in the southern portion of the Site at 0.024 ft/ft (see Figure 2). A slight groundwater mound was observed in the vicinity of well RW-A1in the southern portion of the Site. This groundwater

high is probably the result of higher subsurface permeability in areas of excavation backfill.

- SPH was not observed in any wells where depth to SPH was measured during the July monitoring event.

- In the July monitoring event, benzene was detected above the LRL in three of the seven monitoring wells and 11 of the 13 remediation wells sampled. Of these detections, benzene concentrations exceeded the RWQCB ESL Groundwater Screening Level (groundwater is not a current or potential drinking water resource) for benzene of 27 µg/l in one monitoring well (MW-6), and nine remediation wells (RW-B1 through RW-B4, RW-C5, RW-C6, RW-D5, RW-D6, and RW-D9). The highest concentrations of benzene were detected in the samples collected from the wells located towards the southern side of the Site (see Figure 3).

- In the July monitoring event, toluene was detected above the LRL in one of the seven monitoring wells and 11 of the 13 remediation wells sampled. Only one concentration of toluene exceeded the RWQCB ESL Groundwater Screening Level (groundwater is not a current or potential drinking water resource) for toluene of130 µg/l, which was a sample collected from remediation well RW-B2.

- In the July monitoring event, ethylbenzene was detected above the LRL in one of the seven monitoring wells and 10 of the 13 remediation wells sampled. Of these detections, ethylbenzene concentrations exceeded the RWQCB ESL Groundwater Screening Level (groundwater is not a current or potential drinking water resource) for ethylbenzene of 43 µg/l in five remediation wells (RW-B2, RW-B3, RW-B4, RW-C6, and RW-D6).

- In the July monitoring event, total xylenes were detected above the LRL in three of the seven monitoring wells and 11 of the 13 remediation wells sampled. Of these detections, total xylenes concentrations exceeded the RWQCB ESL Groundwater Screening Level (groundwater is not a current or potential drinking water resource) for total xylenes of 100 µg/l in five remediation wells (RW-B2, RW-B4, RW-C6, RW-D6, and RW-D8).

- In the July monitoring event, MTBE was detected above the LRL in two of the seven monitoring wells and one of the 13 remediation wells sampled. No concentrations of MTBE exceeded the RWQCB ESL Groundwater Screening

Level (groundwater is not a current or potential drinking water resource) for MTBE of 1,800 µg/l.

- In the July monitoring event, TPHg was detected above the LRL in three of the seven monitoring wells and 10 of the 13 remediation wells sampled. Of these detections, TPHg concentrations exceeded the RWQCB ESL Groundwater Screening Level (groundwater is not a current or potential drinking water resource) for TPHg of 500 µg/l in one monitoring well (MW-5) and nine remediation wells (RW-B2, RW-B3, RW-B4, RW-C5, RW-C6, RW-D5, RW-D6, RW-D8, and RW-D9) (see Figure 3).

- In the July monitoring event, TPHd was detected above the LRL in six of the seven monitoring wells and 12 of the 13 remediation wells sampled. Of these detections, TPHd concentrations exceeded the RWQCB ESL Groundwater Screening Level (groundwater is not a current or potential drinking water resource) for TPHd of 640 µg/l in one monitoring well (MW-6) and five remediation wells (RW-B3, RW-B4, RW-C6, RW-D6, and RW-D8) (see Figure 3).

- In the July monitoring event, TPHmo was detected above the LRL in two of the seven monitoring wells and six of the 13 remediation wells. Only one remediation well (RW-D8) exceeded the RWQCB ESL Groundwater Screening Level (groundwater is not a current or potential drinking water resource) for TPHmo of 640 µg/l (see Figure 3).

- In the July monitoring event, TPHk was detected above the LRL in three of the seven monitoring wells and 12 of the 13 remediation wells sampled. Of these detections, TPHk concentrations exceeded the RWQCB ESL Groundwater Screening Level (groundwater is not a current or potential drinking water resource) for TPHk of 640 µg/l in one monitoring well (MW-6) and five remediation wells (RW-B3, RW-B4, RW-C6, RW-D6, and RW-D8) (see Figure 3).

The chemical concentrations for samples collected from monitoring wells located on and off site have generally displayed a stable or decreasing trend over time (Table 1). The chemical concentration trends in the monitoring wells sampled over the last four quarters have generally been stable, with the exception of monitoring well MW-6, which shows a slight and steady increase in benzene concentrations since November 2008 (Table 1).

7. Limitations

The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard of care exercised by environmental consultants performing similar work in the project area. No other warranty, expressed or implied, is made regarding the professional opinions presented in this report. Please note this study did not include an evaluation of geotechnical conditions or potential geologic hazards.

Our conclusions, recommendations, and opinions are based on an analysis of the observed site conditions and the referenced literature. It should be understood that the conditions of a site can change with time as a result of natural processes or the activities of man at the site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which ARCADIS has no control.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. ARCADIS should be contacted if the reader requires any additional information or has questions regarding the content, interpretations presented, or completeness of this document.

8. Selected References and Related Documents

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ARCADIS

Tables

Table 1
Summary of Groundwater Analytical Data, Petroleum Hydrocarbons
Municipal Service Center
7101 Edgewater Drive, Oakland, California

Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
MW-1														
10/4/89	10.20	---	---	8020		---	---	---	540	65	26	14	22	---
10/4/89	10.20	---	---	8240		---	---	---	---	120	46	43	78	---
4/27/93	10.20	---	---	8020		---	---	---	<1,000	<1.0	<1.0	<1.0	<1.0	---
4/19/95	10.20	---	---	8020		---	---	---	3,200	880	15	23	21	---
7/27/95	10.20	4.62	5.58	8020		---	---	---	980	130	3.6	1.4	5.6	---
11/20/95	10.20	6.08	4.12	8020		---	---	---	400	99	2.8	1.1	4.6	---
2/21/96	10.20	4.62	5.58	8020		---	---	---	1,700	340	8.4	5.3	16	---
5/13/96	10.20	4.33	5.87	8020		---	---	---	7,300	2,000	30	42	38	---
8/27/96	10.20	5.25	4.95	8020		---	---	---	380	61	2.4	<0.5	4.2	---
2/23/98	10.20	1.75	8.45	8020		<50	<500	<50	820	160	4.9	3	9.7	---
8/19/98	10.20	4.78	5.42	8020	SGC	1,200	---	---	780	69	4.1	0.84	8.5	<5.0
11/11/98	10.20	5.64	4.56	---		---	---	---	---	---	---	---	---	---
2/23/99	10.20	3.41	6.79	8020	SGC	1,200	1,600	<50	1,100	190	5	3	12	<5.0
5/27/99	10.20	3.96	6.24	---		---	---	---	---	---	---	---	---	---
8/24/99	10.20	4.92	5.28	8020	SGC	640	1,900	<50	370	37	0.9	<0.5	1.9	<5.0
11/22/99	10.20	5.46	4.74	---		---								
1/18/00	10.05	5.41	4.64	---		---	---	---	---	---	---	---	---	---
1/19/00	10.05	---	---	8020	SGC	50	<200	<50	660	43	2.3	1.1	6	<5.0
5/11/00	10.05	4.63	5.42	---		---	---	---	---	---	---	---	---	---
8/24/00	10.05	5.07	4.98	---		---	---	---	---	---	---	---	---	---
8/25/00	10.05	---	---	8020	SGC	340	<250	290	480	53	1.4	<0.5	2.9	<5.0
11/28/00	10.05	5.60	4.45	---		---	---	---	---	---	---	---	---	---
2/27/01	10.05	3.95	6.10	8020	Filtered+SGC	270	<250	<61	1,500	110	6.3	<1.5	9.9	<15
5/17/01	10.05	4.00	6.05	---		---	---	---	---	---	---	---	---	---
8/16/01	10.05	4.17	5.88		Filtered+SGC	280	<200B	<100	4,000	640	9.7	5.7	13	<5.0
12/15/01	10.05	5.52	4.53	---		---	---	---	---	---	---	---	---	---
4/9/02	10.05	3.78	6.27	8021	SGC	1,100	1,000	---	2,000	320	5.38	3.08	6.24	<5
6/21/02	10.05	4.92	5.13	---		---	---	---	---	---	---	---	---	---
9/13/02	10.05	5.52	4.53	8021	SGC	88 b,c	<300	88	260	9.6	<0.5	<0.5	1.0	<2
4/22/03	10.05	4.41	5.64	8021B	SGC	570 L Y	<300	660	1,900 Z	400.0	9.6	5.4	8.1	<2.0
4/28/04	10.05	3.95	6.10	8260B	SGC	<100	<400	<100	154	20	<1.0	<1.0	2.3	<1.0
10/29/04	10.05	5.68	4.37	8260B	SGC	230 L Y	<300	240	340 H Z	6.4	0.6	<0.5	1.4	<0.5
9/2/05 [1]	10.05	4.35	5.70	8260B	SGC	140 L Y	<300	170	350	6.6	1.0	<0.5	2.3	<0.5
4/4/2006 [3]	10.05	2.24	7.81	8260B	SGC	830 L Y	<300	1,100 L Y	3,700	470	13	7.8	6.3	<3.6
9/6/06	10.05	4.98	5.07	8260B	SGC	3,400 H L	400 L	3,100 H	480	4.2	1.0	<0.5	1.9	<0.5
4/5/07	10.05	3.56	6.49	8260B	SGC	500 L Y	<300	490 L Y	1,500 Y	170	7.2	3.6	5.7	<1.3
10/2/07	10.05	5.59	4.46	8260B	SGC	600 Y	<300	710 Y	460 Y	6.1	1.1	<0.5	1.2	<0.5
3/20/08 [8]	10.05	3.53	6.52	8260B	SGC	1,000 Y	<300	960	1,600 Y	53	4.1	1.2	6.3	<0.5
11/21/08 [10]	10.05	5.48	4.57	8260B	SGC	110 Y	<300	87 Y	210 Y	2.4	0.52	<0.50	1.3	<0.50
4/1/09	10.05	3.30	6.75	8260B	SGC	480 Y	<300	540	1,300 Y	79	6.40	2.9	5.1	<0.50

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Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
10/30/09	10.05	4.52	5.53	8260B	SGC	810Y	<300	820Y	1,800Y	59	9.40	3.5	10.7	<0.50
4/8/10	10.05	2.90	7.15	8260B	SPH: None; Odor	210 Y	<300	190 Y	380	2.4	0.71	<0.50	1.6	<0.50
10/19/10	10.05	5.48	4.57	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	10.05	4.91	5.14	---	SPH: None	---	---	---	---	---	---	---	---	---
9/13/11	10.05	---	---	8260B	SGC	110 Y	<300	120	200	<0.5	<0.5	<0.5	0.54	<0.50
12/21/11	10.05	4.63	5.42	---	SPH: None	---	---	---	---	---	---	---	---	---
12/22/11	10.05	---	---	8260B	SGC	100 Y	<310	120 Y	230	0.53	<0.50	<0.50	0.69	<0.50
3/28/12	10.05	3.05	7	---	SPH: None	---	---	---	---	---	---	---	---	---
3/29/12	10.05	---	---	8260B	SGC	70 Y	<300	82	140	1	<0.50	<0.50	0.50	<0.50
6/26/12	10.05	4.23	5.82	---	SPH: None	---	---	---	---	---	---	---	---	---
6/27/12	10.05	---	---	8260B	SGC	150 Y	<310	120 Y	130	0.58	<0.50	<0.50	<0.50	<0.50
6/27/2012 dup	---	---	---	8260B	SGC	<50	<300	55 Y	120	<0.50	<0.50	<0.50	<0.50	<0.50
7/18/13	10.05	4.91	5.14	8260B	SPH; None; SGC	75 Y	<300	76.0	200	<0.50	<0.50	<0.50	0.66	<0.50
MW-2														
10/4/89	10.47	---	---	8020		---	---	---	<30	<0.3	<0.3	<0.3	<0.3	---
10/4/89	10.47	---	---	8240		---	---	---	---	2	<2.0	<2.0	<2.0	---
4/27/93	10.47	---	---	8020		---	---	---	<1,000	<1.0	<1.0	<1.0	<1.0	---
4/19/95	10.47	---	---	8020		---	---	---	<50	1.8	<0.5	<0.5	<0.5	---
7/27/95	10.47	6.22	4.25	8020		---	---	---	<50	2.3	<0.5	<0.5	<0.5	---
11/20/95	10.47	7.49	2.98	8020		---	---	---	<50	2.2	<0.5	<0.5	<0.5	---
2/12/96	10.47	6.68	3.79	8020		---	---	---	<50	1.7	<0.5	<0.5	0.5	---
5/13/96	10.47	6.32	4.15	8020		---	---	---	---	2	<0.5	<0.5	<0.5	---
8/27/96	10.47	6.84	3.63	8020		---	---	---	---	2.4	<0.5	<0.5	<0.5	---
2/24/98	10.47	5.44	5.03	8020		<50	<500	<50	---	1.6	<0.5	<0.5	<0.5	---
8/19/98	10.47	6.56	3.91	8020	SGC	330	---	---	<50	4.1	3.4	0.8	2.6	<5.0
11/11/98	10.47	7.37	3.10	---		---	---	---	---	---	---	---	---	---
2/23/99	10.47	8.68	1.79	8020	SGC	200	900	<50	<50	3.5	0.6	0.6	1.2	<5.0
5/27/99	10.47	5.20	5.27	---		---	---	---	---	---	---	---	---	---
8/24/99	10.47	6.75	3.72	8020	SGC	140	700	<50	<50	2.6	<0.5	<0.5	<0.5	<5.0
11/22/99	10.47	7.58	2.89	---		---	---	---	---	---	---	---	---	---
1/18/00	10.47	7.41	3.06	8020	SGC	60 a	660	<50	<50	2.1	<0.5	<0.5	<0.5	<5.0
5/11/00	10.47	6.43	4.04	---		---	---	---	---	---	---	---	---	---
8/24/00	10.47	8.91	1.56	8020	SGC	170	440	130	<50	2.4	<0.5	<0.5	<0.5	<5.0
11/28/00	10.47	7.35	3.12	---		---	---	---	---	---	---	---	---	---
2/27/01	10.47	6.70	3.77	8020	Filtered+SGC	<59	<240	<59	<50	3.6	<0.5	<0.5	<0.5	<5
5/17/01	10.47	6.90	3.57	---		---	---	---	---	---	---	---	---	---
8/16/01	10.47	6.95	3.52		Filtered+SGC	<50	200B	<100	<50	<0.5	<0.5	<0.5	<0.5	<5.0
12/15/01	10.47	7.21	3.26	---		---	---	---	---	---	---	---	---	---
4/5/02	10.47	6.02	4.45	8021	SGC	200	400	---	<50	2.9	<0.5	<0.5	<0.5	<5
6/21/02	10.47	8.07	2.40	---		---	---	---	---	---	---	---	---	---
9/17/02	10.47	7.12	3.35	8021	SGC	<50	<300	<50	<50	2.1	<0.5	<0.5	<0.5	<2

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4/23/03	10.47	6.36	4.11	8021B	SGC	<50	<300	<50	<50	1.6	<.50	<.50	<.50	<2.0
4/28/04	10.47	5.99	4.48	8260B	SGC	<100	<400	<100	<100	<0.5	<1.0	<1.0	1.3	<1.0
9/1/05 (1)	10.47	6.08	4.39	8260B	SGC	<50	<300	<50	<50	2.8	<0.5	<0.5	<0.5	0.8
4/4/2006 (3)	10.47	4.96	5.51	8260B	SGC	<50	<300	<50	<50	2.1	<0.5	<0.5	0.5	0.5
9/6/06	10.47	9.31	1.16	---	---	---	---	---	---	---	---	---	---	---
4/5/07	10.47	9.21	1.26	8260B	SGC	<50	<300	<50	<50	1.6	<0.5	<0.5	<0.5	<0.5
10/2/07	10.47	10.81	-0.34	---	---	---	---	---	---	---	---	---	---	---
3/20/08 (8)	10.47	12.36	-1.89	8260B	SGC	<50	<300	<50	<50	1.5	<0.5	<0.5	<0.5	<0.5
11/18/08	10.47	11.07	-0.60	8260B	---	---	---	---	---	---	---	---	---	---
4/1/09	10.47	10.80	-0.33	8260B	SGC	<50	<300	<50	<50	1.3	<0.5	<0.5	<0.5	<0.5
4/1/09 dup	---	---	---	8260B	SGC	<50	<300	<50	<50	1.5	<0.5	<0.5	<0.5	<0.5
10/29/09	10.47	9.88	0.59	---	---	---	---	---	---	---	---	---	---	---
4/8/10	10.47	8.00	2.47	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	10.47	7.02	3.45	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	10.47	6.67	3.80	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	10.47	7.12	3.35	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	10.47	6.53	3.94	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	10.47	6.1	4.37	---	SPH: None	---	---	---	---	---	---	---	---	---
7/17/13	10.47	6.87	3.6	---	SPH; None	---	---	---	---	---	---	---	---	---
MW-3														
10/4/89	---	---	---	8020		---	---	---	<30	<0.3	<0.3	<0.3	<0.3	---
10/4/89	---	---	---	8240		---	---	---	---	<2.0	<2.0	<2.0	<2.0	---
2/23/98	---	---	---	---		<50	<500	<50	---	---	---	---	---	---
11/11/98	---	5.83	---	---		---	---	---	---	---	---	---	---	---
2/23/99	---	---	---	---	Submerged	---	---	---	---	---	---	---	---	---
5/27/99	---	1.68	---	---		---	---	---	---	---	---	---	---	---
8/24/99	---	4.76	---	---		---	---	---	---	---	---	---	---	---
11/22/99	---	6.46	---	---		---	---	---	---	---	---	---	---	---
11/22/99	---	---	---	---	Destroyed	---	---	---	---	---	---	---	---	---

Table 1
Summary of Groundwater Analytical Data, Petroleum Hydrocarbons
Municipal Service Center
7101 Edgewater Drive, Oakland, California

Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
MW-4														
10/4/89	7.89	---	---	8020		---	---	---	<30	<0.3	<0.3	<0.3	<0.3	---
10/4/89	7.89	---	---	8240		---	---	---	---	<2.0	<2.0	<2.0	<2.0	---
11/11/98	7.89	6.25	1.64	---		---	---	---	---	---	---	---	---	---
2/23/99	7.89	3.10	4.79	---		---	---	---	---	---	---	---	---	---
5/27/99	7.89	4.03	3.86	---		---	---	---	---	---	---	---	---	---
8/24/99	7.89	5.07	2.82	---		---	---	---	---	---	---	---	---	---
11/22/99	7.89	6.32	1.57	---		---	---	---	---	---	---	---	---	---
11/22/99	---	---	---	---	Destroyed	---	---	---	---	---	---	---	---	---
MW-5														
12/13/91	11.15	---	---	8020		1,900	---	---	13,000	1,500	190	970	2,500	---
12/13/91	11.15	---	---	8020	Dup	---	---	---	16,000	1,400	180	870	2,500	---
12/13/91	11.15	---	---	8240		---	---	---	---	1,800	<250	1,000	3,800	---
12/13/91	11.15	---	---	8240	Dup	---	---	---	---	1,600	<250	980	3,500	---
4/27/93	11.15	---	---	8240		12,000	---	---	35,000	2,100	<1.0	1,800	2,700	---
4/19/95	11.15	---	---	8240		880	4,700	---	14,000	490	51	610	1,200	---
7/27/95	11.15	6.29	4.86	8240		590	5,000	---	22,000	1,300	54	1,500	2,400	---
11/20/95	11.15	6.98	4.17	8020		<50	<50	<50	8,900	430	31	610	880	---
2/21/96	11.15	5.97	5.18	8020		480	<50	<50	1,000	540	65	700	970	---
5/13/96	11.15	6.25	4.90	8020		<50	<50	<50	5,900	430	26	580	760	---
5/13/96	11.15	---	---	8020	Dup	<50	<50	<50	7,300	360	22	49	640	---
8/27/96	11.15	6.40	4.75	8020		2,000	<51	<51	6,600	430	27	600	650	---
8/27/96	11.15	---	---	8020	Dup	6,600	<51	<51	6,300	410	25	580	620	---
2/23/98	11.15	4.22	6.93	8020		<50	<500	<50	740	19	1.4	41	34	---
8/19/98	11.15	6.14	5.01	8020		1,400	<250	1700	5,800	500	25	730	300	5,900
8/19/98	11.15	6.14	5.01	8260	SGC	---	---	---	---	---	---	---	---	6,700
11/11/98	11.15	6.51	4.64	---		---	---	---	---	---	---	---	---	---
2/23/99	11.15	3.59	7.56	8020	SGC	2,000	700	<50	6,700	300	26	800	690	1,600
5/27/99	11.15	5.71	5.44	---		---	---	---	---	---	---	---	---	---
8/24/99	11.15	6.02	5.13	8020	SGC	220	2,000	<50	2,100 e	190 e	5.5	340 e	78	380 e
11/22/99	11.15	6.16	4.99	---		---	---	---	---	---	---	---	---	---
1/18/00	11.15	6.60	4.55	---		---	---	---	---	---	---	---	---	---
1/19/00	11.15	---	---	8020	SGC	100	320	<50	3,000	66 e	6.3	400 e	90	300 E (1,300)
5/11/00	11.15	5.62	5.53	---		---	---	---	---	---	---	---	---	---
8/24/00	11.15	6.32	4.83	8020	SGC	4,800	560	6,600	12,000	220	21	430	91	1,200 (1,400)
11/28/00	11.15	6.47	4.68	---		---	---	---	---	---	---	---	---	---
2/27/01	11.15	4.40	6.75	8020	Filtered+SGC	230	<250	<61	6,300	150	7	350	55	830
5/17/01	11.15	5.77	5.38	8020	Filtered+SGC	190	<200	<50	7,500	140	7	580	101	170
8/16/01	11.15	4.87	6.28		Filtered+SGC	320	500B	<100	2,300	46	<5	110	24	850
12/15/01	11.15	5.50	5.65	---		---	---	---	---	---	---	---	---	---
4/9/02	11.15	5.15	6.00	8021	SGC	480	260	---	8,000	110	5.95	650	53.9	166

Table 1
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Municipal Service Center
7101 Edgewater Drive, Oakland, California

Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
6/21/02	11.15	6.01	5.14	8021	SGC	200 a,b,c	<300	190	4,600	130	33	380	56	440
9/12/02	11.15	6.40	4.75	8021	SGC	620 b,c	<300	650	4,000 J	120	<0.5	260	16	580
4/22/03	11.15	4.69	6.46	8021B	SGC	1600 L Y	<300	1800	6000	91	<1.0	870	59.4	150 C
4/28/04	11.15	5.70	5.45	8260B	SGC	<650	<400	<810	4780	34	<1.0	560	44	47
10/29/04	11.15	5.73	5.42	8260B	SGC	840 L Y	<300	940	3000	18	2.1	280	16.1	94
9/2/05 (1)	11.15	6.08	5.07	8260B	SGC	510 L Y	<300	640	1600	13	1.4	55	8.6	92
4/5/06 (3)	11.15	3.64	7.51	8260B	SGC	840 L Y	<300	850 H	3,400	14	2.1	280	13	31
9/6/06	11.15	6.21	4.94	8260B	SGC	340 Y	<300	400 Y	2000	8.3	1.1	8.2	6.8	50
4/5/07	11.15	5.31	5.84	8260B	SGC	340 L Y	<300	310 L Y	3,100 Y	9.3	<2.0	230	13	38
10/2/07	11.15	6.51	4.64	8260B	SGC	400 Y	<300	440	3,000 Y	11	1.4	100	6.8	46
3/20/08 (8)	11.15	5.37	5.78	8260B	SGC	1,400 Y	<300	1,400	4,100 Y	8.4	1.7	270	12	23
11/21/08 (10)	11.15	6.51	4.64	8260B	SGC	660 Y	<300	690 Y	2,600	11	1.7	240	6.5	20
4/2/09 (12)	11.15	4.89	6.26	8260B	SGC	730 Y	<300	840	4,800 Y	8.8	2.5	380	13.3	15
10/30/09	11.15	5.86	5.29	8260B	SGC	1,100Y	<300	1,100Y	3,100	5.2	<1.7	200	8.1	23
10/30/09dup	---	---	---	8260B	Dup	600Y	<300	620Y	3,300	5.3	<1.7	210	8.7	20
4/8/10	11.15	4.16	6.99	8260B	SPH: None	1300 Y	<300	1400 Y	4,500	6.5	2.4	240	12	8.4
10/19/10	11.15	6.44	4.71	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	11.15	5.98	5.17	---	SPH: None	---	---	---	---	---	---	---	---	---
9/14/11	11.15	---	---	8260B	SGC	1,200 Y	<300	1,400	2,900	3.20	1.0	62	7.48	12
12/21/11	11.15	5.86	5.29	---	SPH: None	---	---	---	---	---	---	---	---	---
12/22/11	11.15	---	---	8260B	SGC	1,400 Y	<310	1,600 Y	2,800	1.50	0.75	65	5.74	9.9
3/28/12	11.15	2.28	8.87	---	SPH: None; odor	---	---	---	---	---	---	---	---	---
3/30/12	11.15	---	---	8260B	SGC	1,100 Y	<300	1,300	3,700	1.9	1.3	95	8.9	1.9
6/26/12	11.15	5.51	5.64	---	SPH: None	---	---	---	---	---	---	---	---	---
6/27/12	11.15	---	---	8260B	SGC	1,000 Y	<300	1,200	4,100	2.1	1.3	80	9.5	7.6
7/18/13	11.15	5.93	5.22	8260B	SGC; Odor	470 Y	<290	530	2,000	0.65	<0.63	20	3.63	42
MW-6														
12/13/91	10.98	---	---	8020		520	---	---	780	110	2.7	<2.5	5.5	---
12/13/91	10.98	---	---	8240		---	---	---	---	95	5	<5	<5	---
4/27/93	10.98	---	---	8020		<1,000	---	---	<1,000	430	4	5	10	---
4/19/95	10.98	---	---	8020		6,700	---	---	5,700	40	<0.8	3.9	29	---
4/19/95	10.98	---	---	8020	Dup	3,700	---	---	3,000	310	3.1	2.7	100	---
7/27/95	10.98	7.09	3.89	8020		3,900	---	---	6,100	430	15	200	600	---
7/27/95	10.98	---	---	8020	Dup	2,600	---	---	6,300	420	15	200	600	---
11/20/95	10.98	7.89	3.09	8020		850	---	---	6,800	160	4.6	8	240	---
11/20/95	10.98	---	---	8020	Dup	---	---	---	3,600	130	11	4.4	200	---
2/21/96	10.98	7.40	3.58	8020	Filtered+SGC	1,700	---	---	2,800	230	2.8	3.8	44	---
2/21/96	10.98	---	---	8020	Dup	2,500	---	---	2,200	280	3	4	4.6	---
5/13/96	10.98	7.10	3.88	8020		400	<50	<50	3,100	430	12	5.2	67	---
8/27/96	10.98	7.42	3.56	8020		3,100	---	---	4,200	300	9.3	110	110	---

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Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
8/19/98	10.98	---	---	---	SPH: 0.125 ft.	---	---	---	---	---	---	---	---	---
11/11/98	10.98	7.09	3.93	---	SPH: 0.05 ft.	---	---	---	---	---	---	---	---	---
2/23/99	10.98	7.31	3.67	---	SPH: NM	---	---	---	---	---	---	---	---	---
5/27/99	10.98	6.91	4.25	---	SPH: 0.20 ft.	---	---	---	---	---	---	---	---	---
8/24/99	10.98	7.46	3.72	---	SPH: 0.03 ft.	---	---	---	---	---	---	---	---	---
11/22/99	10.98	7.96	3.15	---	SPH: 0.16 ft.	---	---	---	---	---	---	---	---	---
1/18/00	10.98	8.08	3.05	---	SPH: 0.19 ft.	---	---	---	---	---	---	---	---	---
5/11/00	10.98	7.52	4.47	---	SPH: 0.01 ft.	---	---	---	---	---	---	---	---	---
8/24/00	10.98	7.50	3.53	---	SPH: 0.06 ft.	---	---	---	---	---	---	---	---	---
11/28/00	10.98	6.39	4.62	---	SPH: 0.04 ft.	---	---	---	---	---	---	---	---	---
2/26/01	10.98	7.80	3.50	8020	SPH: 0.40 ft., f	820	<240	<60	6,100	181	<5	14.2	<5	<50
2/26/01	10.98	---	---	8260B		---	---	---	---	270	3	9	3	(19)
5/17/01	10.98	7.57	3.66	---	SPH: 0.32 ft.	---	---	---	---	---	---	---	---	---
8/16/01	10.98	7.75	3.49		SPH: 0.32 ft., f	740	200B	<100	4,200	360	4.6	13	12	14
12/15/01	10.98	7.58	3.40	---	SPH: 0.07 ft.	---	---	---	---	---	---	---	---	---
4/3/02	10.98	6.92	4.06	---	SPH: 0.11 ft.	---	---	---	---	---	---	---	---	---
6/21/02	10.98	7.05	3.93	---	SPH: 0.19 ft.	---	---	---	---	---	---	---	---	---
9/12/02	10.98	7.22	4.02	---	SPH: 0.33 ft.	---	---	---	---	---	---	---	---	---
4/22/03	10.98	4.71	6.27	---	SPH: 0.16 ft.	---	---	---	---	---	---	---	---	---
4/28/04	10.98	5.09	5.89		SPH: 0.23 ft.	---	---	---	---	---	---	---	---	---
10/27/04	10.98	6.12	4.86	--	SPH: product on probe	---	---	---	---	---	---	---	---	---
8/31/05	10.98	6.11	4.87	--	SPH: 0.95 ft.	---	---	---	---	---	---	---	---	---
3/27/06	10.98	4.11	---	--	SPH: 0.57 ft.	---	---	---	---	---	---	---	---	---
9/6/06	10.98	5.42	5.56	8260B	SPH: 0.01 ft.	180 Y	<300	200 Y	1,300	330	3.9	<1.7	3.7	4.8
9/6/06	10.98	---	---	8260B	Dup	2,400 H L	<300	2,300 H	1,200	350	3.6	<1.3	3.4	4.7
4/4/07	10.98	4.37	6.61	8260B	SGC	3,300	<300	3,000 H	1,400 H Y	520	<4.2	<4.2	<4.2	4.5
10/2/07	10.98	7.25	3.73	8260B	SGC	2,400	340 Y	2000	890 Y	270	3.8	5.5	3	7.8
3/20/08 [8]	10.98	6.59	4.39	8260B	SPH: Residual Product noted while bailing/ SGC	7,200	820	5,900	1,100 Y	500	3.5	5.9	3.1	7.7
11/21/08 [10]	10.98	6.06	4.92	8260B	SPH: Residual Product noted while bailing/ SGC	1,500 Y	<300	1,200 Y	450 Y	96	1.9	<0.50	1.2	5.7
4/1/09	10.98	4.48	6.50	---	SPH: 0.03 ft.	---	---	---	---	---	---	---	---	---
10/30/09	10.98	6.97	4.01	8260B	SGC	1,200Y	<300	1,000Y	560Y	98	4.1	3.0	4.76	5.0
4/8/10	10.98	4.20	6.78	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	10.98	5.88	5.10	8260B	SPH: None; SGC	400	<300	420	620	100	1.7	<1.0	2.0 B1	3.3
10/19/10 dup	---	---	---	8260B	SGC	370	<300	400	610	110	1.6	<1.0	1.4 B1	3.1
9/12/11	10.98	5.62	5.36	---	SPH: None	---	---	---	---	---	---	---	---	---
9/14/11	10.98	---	---		SGC	1,800 Y	<300	1,600	690	140	4.6	0.82	4.38	2.9
12/21/11	10.98	5.5	5.48	---	SPH: None	---	---	---	---	---	---	---	---	---

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Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
3/28/12	10.98	4.38	6.6	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	10.98	4.71	6.27	---	SPH: None	---	---	---	---	---	---	---	---	---
7/19/13	10.98	5.67	5.31	8260B	SGC; Odor	2,100 Y	360	1,700	380	160	4.7	<1.7	4.6	2.7
MW-7														
12/13/91	11.51	---	---	8020		<50	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
12/13/91	11.51	---	---	8240		---	---	---	---	<5	<5	<5	<5	---
4/27/93	11.51	---	---	8240		<1,000	---	---	<1,000	<1.0	<1.0	<1.0	<1.0	---
4/19/95	11.51	---	---	8240		<50	<1,000	---	<50	<2.0	<2.0	<2.0	<2.0	---
7/27/95	11.51	6.87	4.64	8240		<50	<1,000	---	<50	<2.0	<2.0	<2.0	<2.0	---
11/20/95	11.51	8.48	3.03	8020		<50	---	---	<50	<0.5	<0.5	<0.5	1.5	---
2/21/96	11.51	6.29	5.22	8020		<50	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
5/13/96	11.51	6.95	4.56	8020		<50	---	---	---	<0.5	<0.5	<0.5	<0.5	---
8/27/96	11.51	6.80	4.71	8020		---	---	---	---	<0.5	<0.5	<0.5	<0.5	---
8/19/98	11.51	6.88	4.63	---		---	---	---	---	---	---	---	---	---
11/11/98	11.51	7.40	4.11	---		---	---	---	---	---	---	---	---	---
2/23/99	11.51	5.57	5.94	8020		<50	<200	<50	80	<0.5	<0.5	<0.5	1	<5.0
5/27/99	11.51	6.56	4.95	---		---	---	---	---	---	---	---	---	---
8/24/99	11.51	6.29	5.22	8020	SGC	<50	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	5
11/22/99	11.51	6.80	4.71	---		---	---	---	---	---	---	---	---	---
1/18/00	11.51	7.31	4.20	---		---	---	---	---	---	---	---	---	---
1/19/00	11.51	---	---	8020	SGC	<50	<200	<50	54	1.5	1.5	2.4	3.8	<5.0
5/11/00	11.51	6.41	5.10	---		---	---	---	---	---	---	---	---	---
8/24/00	11.51	7.11	4.40	8020		<50	<250	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
11/28/00	11.51	7.30	4.21	---		---	---	---	---	---	---	---	---	---
2/27/01	11.51	5.75	5.76	8020	Filtered+SGC	<50	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	<5
5/17/01	11.51	6.65	4.86	---		---	---	---	---	---	---	---	---	---
8/16/01	11.51	5.97	5.54		Filtered+SGC	<50	600B	<100	<50	<0.5	<0.5	<0.5	<0.5	<5
12/15/01	11.51	6.43	5.08	---		---	---	---	---	---	---	---	---	---
4/8/02	11.51	6.17	5.34	8021	SGC	80	<200	---	<50	<0.5	0.5	0.6	<0.5	<5
6/21/02	11.51	6.75	4.76	8021	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	3.3
9/12/02	11.51	7.05	4.46	8021	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	2.6
4/22/03	11.51	6.24	5.27	8021B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	4 C
4/28/04	11.51	6.61	4.90	8260B	SGC	<100	<400	<100	<100	1.6	<1.0	<1.0	<1.0	<1.0
9/2/05 [1]	11.51	6.56	4.95	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	3.2
4/5/06 [3]	11.51	4.58	6.93	8260B	SGC	<50	<300	<50	<50	2.7	<0.5	<0.5	<0.5	<0.5
9/6/06	11.51	6.67	4.84	---	---	---	---	---	---	---	---	---	---	---
4/5/07	11.51	6.13	5.38	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	2.7
10/2/07	11.51	7.07	4.44	---	---	---	---	---	---	---	---	---	---	---
3/20/08 [8]	11.51	6.24	5.27	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	2.7
3/20/08 dup	---	---	---	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	2.6

Table 1
Summary of Groundwater Analytical Data, Petroleum Hydrocarbons
Municipal Service Center
7101 Edgewater Drive, Oakland, California

Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
11/18/08	11.51	7.40	4.11	---	---	---	---	---	---	---	---	---	---	---
4/2/09 (12)	11.51	6.95	4.56	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	1.3
10/29/09	11.51	6.60	4.91	---	SPH: None	---	---	---	---	---	---	---	---	---
4/8/10	11.51	5.11	6.4	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	11.51	7.05	4.46	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	11.51	6.60	4.91	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	11.51	6.68	4.83	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	11.51	4.32	7.19	---	SPH: None; odor	---	---	---	---	---	---	---	---	---
6/26/12	11.51	6.3	5.21	---	SPH: None	---	---	---	---	---	---	---	---	---
7/17/13	11.51	6.76	4.75	---	SPH: None	---	---	---	---	---	---	---	---	---
MW-8														
11/20/96	12.22	---	---	8020		880	---	---	<50	0.66	<0.5	<0.5	<0.5	---
11/20/97	12.22	9.59	2.63	8020		200	---	---	<50	<0.5	<0.5	<0.5	<0.5	2
2/24/98	12.22	8.42	3.80	8020		<50	<500	<50	<50	<0.5	<0.5	<0.5	<0.5	---
6/8/98	12.22	9.57	2.65	8020		1,200	1,000	<50	<50	<0.5	<0.5	<0.5	<0.5	---
8/19/98	12.22	9.49	2.73	8020	SGC	<50	<250	<50	<50	1.6	3.4	1	2.8	<5.0
11/11/98	12.22	9.64	2.58	8020	SGC	<50	<200	<50	<50	0.9	0.8	0.6	2.3	<5.0
2/23/99	12.22	11.53	0.69	8020		700	1,500	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
5/27/99	12.22	9.65	2.57	8020		<50	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
8/24/99	12.22	9.62	2.60	8020	SGC	70	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
11/22/99	12.22	9.64	2.58	8020	SGC	57	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
1/18/00	12.22	8.31	3.91	8020	SGC	<50	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
5/11/00	12.22	9.69	2.53	8020	SGC	<50	<200	<50	<50	<0.5	1.3	<0.5	2.1	<5.0
8/24/00	12.22	9.40	2.82	---		---	---	---	---	---	---	---	---	---
8/25/00	12.22	---	---	8020	SGC	85	<250	<50	<50					
11/28/00	12.22	9.40	2.83	8020	SGC	<50	910	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
2/27/01	12.22	9.50	2.72	8020	Filtered+SGC	<50	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
5/17/01	12.22	9.71	2.51	---		---	---	---	---	---	---	---	---	---
5/18/01	12.22	---	---	8020	Filtered+SGC	<50	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
8/16/01	12.22	9.80	2.42		Filtered+SGC	<50	<200	<100	<50	<0.5	<0.5	<0.5	<0.5	<5
12/15/01	12.22	9.28	2.94	8021	SGC	390	1,300	<50	<50	<0.5	<0.5	<0.5	<0.5	<5
4/8/02	12.22	9.55	2.67	8021	SGC	440	800	---	<50	<0.5	<0.5	<0.5	<0.5	<5
6/21/02	12.22	9.71	2.51	---		---	---	---	---	---	---	---	---	---
9/18/02	12.22	9.86	2.36	8021	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<2
4/22/03	12.22	9.54	2.68	8021B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<2
4/28/04	12.22	---	---	---		---	---	---	---	---	---	---	---	---
10/27/04	12.22	NM(4)	---	---		---	---	---	---	---	---	---	---	---
4/5/06 (3)	12.22	8.73	3.49	8260B	SGC	54 Y	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
9/6/06	12.22	9.50	2.72	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
4/3/07	12.22	9.58	2.64	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5

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7101 Edgewater Drive, Oakland, California

Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
10/3/07	12.22	9.54	2.68	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
3/21/08 [8]	12.22	9.61	2.61	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/19/08 [10]	12.22	9.58	2.64	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
4/2/09 [12]	12.22	9.54	2.68	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
10/30/09	12.22	9.67	2.55	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
4/8/10	12.22	9.57	2.65	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	12.22	9.61	2.61	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	12.22	9.61	2.61	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	12.22	8.97	3.25	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	12.22	9.4	2.82	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	12.22	9.62	2.6	---	SPH: None	---	---	---	---	---	---	---	---	---
7/17/13	12.22	9.62	2.6	---	SPH: None	---	---	---	---	---	---	---	---	---
MW-9														
11/20/96	10.77	---	---	8020		1,900	---	---	240	21	0.81	1.8	2.2	---
11/20/97	10.77	7.91	2.86	8020		---	---	---	300	20	<0.5	<0.5	1.8	<1.0
2/24/98	10.77	6.11	4.66	8020		<50	<500	<50	2,200	540	5.6	1.6	4.9	---
6/8/98	10.77	7.14	3.63	8020		1,800	890	<50	840	450	6.1	3.3	5.3	---
8/19/98	10.77	7.88	2.89	8020	SGC	190	<250	160	740	370	8.6	0.99	7.3	<5.0
11/11/98	10.77	8.23	2.54	8020	SGC	<50	230	<50	700	130	4.3	<0.5	3.9	<5.0
2/23/99	10.77	6.65	4.12	8020		1,100	3,700	<50	1,100	620	9.7	1.5	7.7	<5.0
5/27/99	10.77	7.70	3.07	8020	SGC	70	300	<50	950	470	11	1.5	9.2	<5.0
8/24/99	10.77	8.12	2.65	8020	SGC	890	1,700	<50	290	45	2.8	<0.5	3	<5.0
11/22/99	10.77	8.33	2.44	8020	SGC	1,000	6,000	<50	170	12	1.8	<0.5	2	<5.0
1/18/00	10.77	8.63	2.14	8020	SGC	200 a	2,300	<50	160	5.7	1.9	0.6	4.2	<5.0
5/11/00	10.77	7.70	3.07	8020	SGC	180 a	980	<100	1,050	280	7.0	<2.5	5.9	<25
8/24/00	10.77	8.31	2.46	---		---	---	---	---	---	---	---	---	---
8/25/00	10.77	---	---	8020	SGC	580	2,200	170	180	23	2.4	<0.5	2.7	<5.0
11/28/00	10.77	8.45	2.32	8020	SGC	200	1,600	<50	130	1.9	<0.5	<0.5	<0.5	<5.0
11/28/00	10.77	8.45	2.32	---	Filtered+SGC	<50	<200	<50	---	---	---	---	---	---
2/26/01	10.77	6.40	4.37	8020	Filtered+SGC	120	<200	<50	142	33	1.8	<0.5	<0.5	<5.0
5/17/01	10.77	9.88	0.89	---		---	---	---	---	---	---	---	---	---
5/18/01	10.77	---	---	8020	Filtered+SGC	<50	<200	<50	74	4.6	<0.5	<0.5	<0.5	<5.0
8/16/01	10.77	8.05	2.72		Filtered+SGC	<50	<200	<100	70	0.62	<0.5	<0.5	<0.5	<5
12/16/01	10.77	7.75	3.02	8021	SGC	1,400	4,100	<50	210	15	1.6	<0.5	2.2	<5
4/5/02	10.77	7.50	3.27	8021	SGC	870	1,000	---	1,498	367	11	2.1	7.8	<5
6/20/02	10.77	8.27	2.50	8021	SGC	<50	<300	<50	430	180	5.7	2.4	4.15	<2
9/18/02	10.77	8.25	2.52	8021	SGC	63 b,c	<300	60	250	49	5.8	<0.5	3.1	<2
4/22/03	10.77	7.25	3.52	8021B	SGC	<50	<300	<50	69	4.1 C	<0.5	<0.5	0.9	<2
4/28/04	10.77	---	---	---		---	---	---	---	---	---	---	---	---
10/27/04	10.77	NM[4]	---	---		---	---	---	---	---	---	---	---	---

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Municipal Service Center
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Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
9/6/06	10.77	8.44	2.33	8260B	SGC	210 Y	<300	150 Y	240	58	5.3	<0.5	5.68	<0.5
4/3/07	10.77	8.28	2.49	8260B	SGC	180 H Y	<300	140 H	240 Z	27	4.2	<0.5	5.32	<0.5
4/3/07	10.77	---	---	8260B	Dup	190 H Y	<300	160 H	260 Z	28	4.5	<0.5	5.87	<0.5
10/3/07	10.77	8.58	2.19	8260B	SGC	110 Y	<300	110 Y Z	240 Y	1	2.4	<0.5	3.53	<0.5
3/20/08 [8]	10.77	8.46	2.31	8260B	SGC	170 Y	<300	150 Y	230	65	4.2	<0.5	5.13	<0.5
3/20/08 dup	---	---	---	8260B	SGC	190 Y	<300	180 Y	250	66	4.4	<0.5	5.5	<0.5
11/21/08 [10]	10.77	8.63	2.14	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
4/2/09 [12]	10.77	8.08	2.69	8260B	SGC	130 Y	380	53 Y	70 Y	82	1.4	<0.50	1.0	<0.50
10/30/09	10.77	8.91	1.86	8260B	SGC	220Y	<300	130Y	<50	<0.50	<0.50	<0.50	0.61	<0.50
4/8/10	10.77	7.37	3.4	8260B	SPH: None	110 Y, F	<300	52 Y, F	---	---	---	---	---	---
4/8/10 dup	---	---	---	8260B		250 Y, F	<300	170 Y, F	---	---	---	---	---	---
4/29/10	10.77	7.3	3.47	8260B	SPH: None	90 Y, F	<300	<50	87	5.0	1.2	<0.50	1.8	<0.50
4/29/10 dup	---	---	---	8260B		<50 F	<300	<50	98	4.9	1.2	<0.50	1.7	<0.50
10/19/10	10.77	8.37	2.40	8260B	SPH: None; SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	0.51 B1	<0.50
9/12/11	10.77	8.04	2.73	8260B	SPH: None; SGC	180 Y	500	<50	68	0.99	0.84	<0.50	1.1	<0.50
12/21/11	10.77	8.09	2.68	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	10.77	7.2	3.57	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	10.77	7.71	3.06	---	SPH: None	---	---	---	---	---	---	---	---	---
7/17/13	10.77	8.19	2.58	---	SPH: None	---	---	---	---	---	---	---	---	---

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Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
MW-10														
11/20/96	10.59	---	---	8020		940	---	---	<50	49	0.59	0.54	1.2	---
11/20/97	10.59	7.70	2.89	8020		---	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
2/24/98	10.59	4.39	6.20	8020		<50	<500	<50	<50	<0.5	<0.5	<0.5	<0.5	---
6/8/98	10.59	6.94	3.65	8020		500	<500	<50	<50	7.3	<0.5	<0.5	<0.5	---
8/19/98	10.59	6.99	3.60	8020	SGC	240	520	110	<50	<0.5	<0.5	<0.5	<0.5	<5.0
11/11/98	10.59	7.57	3.02	8020	SGC	<50	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
2/23/99	10.59	5.51	5.08	8020		170	1,200	<50	<50	1.3	<0.5	<0.5	<0.5	<5.0
5/27/99	10.59	6.72	3.87	8020	SGC	<50	<200	<50	350	170	1.5	0.5	2.3	<5.0
8/24/99	10.59	7.27	3.32	8020	SGC	140	300	<50	380	160 e	<0.5	<0.5	2.6	<5.0
11/22/99	10.59	7.71	2.88	8020	SGC	570	3,400	<50	110	5.1	<0.5	<0.5	0.72	<5.0
1/18/00	10.59	7.77	2.82	---		---	---	---	---	---	---	---	---	---
1/19/00	10.59	---	---	8020	SGC	120 a,b	1,200	<50	100	<0.5	<0.5	0.8	<0.5	<5.0
5/11/00	10.59	7.00	3.59	8020	SGC	110 a	990	<50	145	1.62	0.5	0.5	0.9	<5.0
8/24/00	10.59	7.31	3.28	---		---	---	---	---	---	---	---	---	---
8/25/00	10.59	---	---	8020	SGC	430	1,300	110	<50	1.0	<0.5	<0.5	<0.5	<5.0
11/28/00	10.59	7.90	2.69	8020	SGC	220	1,500	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
2/27/01	10.59	5.80	4.79	8020	Filtered+SGC	85	<230	<57	<50	1.3	<0.5	<0.5	<0.5	<5.0
5/17/01	10.59	6.27	4.32	---		---	---	---	---	---	---	---	---	---
5/18/01	10.59	---	---	8020	Filtered+SGC	<50	<200	<50	<50	0.7	<0.5	<0.5	<0.5	<5.0
8/16/01	10.59	8.75	1.84		Filtered+SGC	<50	<200	<100	<50	<0.5	<0.5	<0.5	<0.5	<5
12/16/01	10.59	6.97	3.62	8021	SGC	410	2,100	<50	<50	2.4	<0.5	<0.5	<0.5	<5
4/8/02	10.59	6.51	4.08	8021	SGC	220	300	---	<50	1.1	<0.5	<0.5	<0.5	<5
6/20/02	10.59	8.10	2.49	8021	SGC	1,100 a,c	6,200	<50	120	34	<0.5	<0.5	<0.5	<2
9/17/02	10.59	7.66	2.93	8021	SGC	150 a,c	880	<50	130 a,c,j	32	<0.5	2.3	<0.5	<2
4/22/03	10.59	6.81	3.78	8021B	SGC	<50	<300	<50	51	1.0 C	<.50	1.2	<.50	<2
4/28/04	10.59	6.70	3.89	8260B	SGC	<100	<400	<100	114	14	<1.0	6.9	5.2	3.5
10/28/04	10.59	6.98	3.61	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
9/1/05 [1]	10.59	6.76	3.83	8260B	SGC	<50	<300	<50	110	2.4	<0.5	<0.5	0.7	<0.5
4/5/06 [3]	10.59	4.86	5.73	8260B	SGC	<50	<300	<50	<50	2.1	<0.5	<0.5	<0.5	<0.5
9/6/06	10.59	9.01	1.58	8260B	SGC	98 H Y	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
4/4/07	10.59	8.99	1.60	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/3/07	10.59	9.78	0.81	8260B	SGC	<50	<300	<50	<50	30	<0.5	<0.5	<0.5	<0.5
3/21/08 [8]	10.59	10.20	0.39	8260B	SGC	<50	<300	<50	<50	3.9	<0.5	<0.5	<0.5	<0.5
11/19/08 [10]	10.59	9.55	1.04	8260B	SGC	<50	<300	<50	<50	11	<0.50	<0.50	<0.50	<0.50
11/19/08 dup	---	---	---	8260B	SGC	<50	<300	<50	<50	11	<0.50	<0.50	<0.50	<0.50
4/1/09	10.59	7.52	3.07	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
10/30/09	10.59	8.80	1.79	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
4/8/10	10.59	6.23	4.36	---	SPH: None	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
10/19/10	10.59	7.38	3.21	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	10.59	7.05	3.54	---	SPH: None	---	---	---	---	---	---	---	---	---

Table 1
Summary of Groundwater Analytical Data, Petroleum Hydrocarbons
Municipal Service Center
7101 Edgewater Drive, Oakland, California

Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
9/14/11	10.59	---	---	8260B	SGC	<50	<300	<50	<50	24	<0.50	<0.50	<0.50	<0.50
12/21/11	10.59	7.13	3.46	---	SPH: None	---	---	---	---	---	---	---	---	---
12/22/11	10.59	---	---	8260B	SGC	<50	<300	<50	<50	2.6	<0.50	<0.50	<0.50	<0.50
3/28/12	10.59	5.6	4.99	---	SPH: None	---	---	---	---	---	---	---	---	---
3/29/12	10.59	---	---	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
6/26/12	10.59	6.71	3.88	---	SPH: None	---	---	---	---	---	---	---	---	---
6/27/12	10.59	---	---	8260B	SGC	<50	<300	<50	<50	10	<0.50	<0.50	<0.50	<0.50
7/18/13	10.59	7.23	3.36	8260B	SPH: None; SGC	55 Y	<290	<49	<50	8.9	<0.50	<0.50	<0.50	<0.50
MW-11														
1/18/00	11.60	7.08	4.52	---		---	---	---	---	---	---	---	---	---
1/19/00	11.60	---	---	8020	SGC	<50	500	<50	220	<0.5	<0.5	<0.5	<0.5	<5.0
5/11/00	11.60	5.95	5.65	8020	SGC	<50	430	<50	600	23	2.1	18	15	<5.0
8/24/00	11.60	6.58	5.02	8020		<50	<250	<50	110	5.9	<0.5	0.73	0.64	<5.0
11/28/00	11.60	6.91	4.69	8020	SGC	<50	<200	<50	180	4	<0.5	1.9	<0.5	<5.0
2/27/01	11.60	5.65	5.95	8020	Filtered+SGC	86	<240	<60	720	29	5.2	38	36	<5.0
5/17/01	11.60	6.85	4.75	8020	Filtered+SGC	<50	<200	<50	720	36	3.4	15	18	9.7
8/16/01	11.60	6.01	5.59		Filtered+SGC	<50	500B	<100	110	4.8	<0.5	1.4	<0.5	<5
12/15/01	11.60	6.26	5.34	8021	SGC	200	300	<50	170	1.7	0.6	2.4	1.8	<2
4/5/02	11.60	5.47	6.13	8021	SGC	160	<200	---	330	8.9	2.0	6.9	8.7	<5
6/21/02	11.60	6.17	5.43	8021	SGC	<50	<300	<50	280	16	1.8	8.7	9.6	3.6
9/12/02	11.60	6.60	5.00	8021	SGC	<50	<300	<50	93	<0.5	<0.5	1.1	<0.5	2.1
4/24/03	11.60	5.71	5.89	8021B	SGC	<50	<300	<50	320	21	2.1	12	6.13	8.9
4/28/04	11.60	5.92	5.68	8260B	SGC	<100	<400	<100	360	18	<1.0	6.5	4.5	4
10/27/04	11.60	6.59	5.01	8260B	SGC	---	---	---	---	---	---	---	---	---
9/2/05 [1]	11.60	6.22	5.38	8260B	SGC	<50	<300	<50	85	<0.5	<0.5	<0.5	<0.5	4.5
4/4/06 [3]	11.60	4.17	7.43	8260B	SGC	71 L Y	<300	75 L Y	230	5.7	0.9	14	7.0	6.5
4/4/06	11.60	---	---	8260B	dup	<50	<300	55 L Y	220	6.5	1.0	15	7.3	7.4
9/6/06	11.60	6.46	5.14	---	---	---	---	---	---	---	---	---	---	---
4/5/07	11.60	5.60	6.00	8260B	SGC	66 Y	<300	55 Y	270 Y	9.6	0.7	7.3	2.4	11
10/2/07	11.60	6.83	4.77	---	---	---	---	---	---	---	---	---	---	---
3/20/08 [8]	11.60	6.83	4.77	8260B	SGC	<50	<300	<50	160	3.5	<0.5	5.4	0.92	13
11/18/08	11.60	7.00	4.60	---	---	---	---	---	---	---	---	---	---	---
4/2/09 [12]	11.60	5.24	6.36	8260B	SGC	<50	<300	<50	94 Y	0.98	<0.50	2.9	<0.50	13
10/29/09	11.60	6.33	5.27	8260B	SGC	---	---	---	---	---	---	---	---	---
4/8/10	11.60	4.51	7.09	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	11.60	6.67	4.93	---	SPH: None	---	---	---	---	---	---	---	---	---

Table 1
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Municipal Service Center
7101 Edgewater Drive, Oakland, California

Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
9/12/11	11.60	6.28	5.32	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	11.60	6.22	5.38	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	11.60	3.69	7.91	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	11.60	5.68	5.92	---	SPH: None	---	---	---	---	---	---	---	---	---
7/17/13	11.60	6.26	5.34	---	SPH: None	---	---	---	---	---	---	---	---	---
MW-12														
1/18/00	10.43	8.11	2.32	---		---	---	---	---	---	---	---	---	---
1/19/00	10.43	---	---	8020	SGC	1,800 a	11,000	<50	200	<0.5	3.4	1.5	8.4	<5.0
5/11/00	10.43	6.78	3.65	8020	SGC	2,400 a	4,900	<100	370	<0.5	<0.5	<0.5	0.9	<5.0
8/24/00	10.43	7.56	2.87	---		---	---	---	---	---	---	---	---	---
8/25/00	10.43	---	---	8020	SGC	3,500	5,000	3,700	170	<0.5	<0.5	<0.5	<0.5	<5.0
11/28/00	10.43	8.13	2.30	8020	SGC	2,100	14,000	<50	290	<0.5	<0.5	<0.5	<0.5	<5.0
11/28/00	10.43	8.13	2.30	---	Filtered+SGC	50	<200	<50	---	---	---	---	---	---
2/27/01	10.43	6.00	4.43	8020	Filtered+SGC	320	<250	66	110	1.4	<0.5	<0.5	<0.5	<5.0
5/17/01	10.43	7.01	3.42	8020	Filtered+SGC	<50	<200	<50	220	<0.5	<0.5	<0.5	<0.5	<5.0
8/16/01	10.43	8.47	1.96	8020	Filtered+SGC	200	300B	<100	160	<0.5	<0.5	<0.5	<0.5	<5
4/8/02	10.43	6.65	3.78	8021	SGC	500	500	---	180	<0.5	<0.5	0.7	<1.5	<5
6/21/02	10.43	7.10	3.33	8021	SGC	1,100 a,b,c	3,000 h	640	180	<0.5	<0.5	0.63	1.62	<2
9/17/02	10.43	7.75	2.68	8021	SGC	220 a,b,c	360	190	130	<0.5	<0.5	<0.5	<0.5	<2
4/22/03	10.43	6.60	3.83	8021B	SGC	140 L Y	<300	120	150	<0.5	<0.5	<0.5	<0.5	<2
4/28/04	10.43	6.60	3.83	8260B	SGC	<550	1,020	<100	<100	<0.5	<1.0	<1.0	<1.0	<1.0
10/29/04	10.43	7.87	2.56	8260B	SGC	240 H L Y	460	180	170 H	<0.5	<0.5	<0.5	<0.5	<0.5
9/2/05 [1]	10.43	7.04	3.39	8260B	SGC	<50	<300	<50	170	<0.5	<0.5	<0.5	<0.5	<0.5
9/2/05 [1]	10.43	7.04	3.39	8260B	SGC	110 L Y	<300	120	150	<0.5	<0.5	<0.5	<0.5	<0.5
4/4/06 [3]	10.43	4.49	5.94	8260B	SGC	110 Y	<300	110 Y	110	<0.5	<0.5	<0.5	<0.5	<0.5
9/6/06	10.43	7.43	3.00	8260B	SGC	230 Y	<300	200 Y	120	<0.5	<0.5	<0.5	<0.5	<0.5
4/5/07	10.43	6.58	3.85	8260B	SGC	340 H Y	360 H L	230 H Y	160 Y	<0.5	<0.5	<0.5	<0.5	<0.5
10/2/07	10.43	8.14	2.29	8260B	SGC	290 Y	<300	230	160 Y	<0.5	<0.5	<0.5	<0.5	<0.5
3/19/08	10.43	6.45	3.98	8260B	SGC	620 Y	340	430	130 Y	<0.5	<0.5	<0.5	<0.5	<0.5
11/21/08 [10]	10.43	8.27	2.16	8260B	SGC	170 Y	<300	120 Y	59 Y	<0.50	<0.50	<0.50	<0.50	<0.50
4/1/09	10.43	6.30	4.13	8260B	SGC	330 Y	<300	300	100 Y	<0.50	<0.50	<0.50	<0.50	<0.50
10/29/09	10.43	7.73	2.70	8260B	SGC	280Y	<300	220Y	160Y	<0.50	<0.50	<0.50	<0.50	<0.50
4/8/10	10.43	6.07	4.36	8260B	SPH: None	320 Y	<300	250	140	<0.50	<0.50	<0.50	<0.50	<0.50
10/19/10	10.43	7.85	2.58	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	10.43	7.33	3.10	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	10.43	7.56	2.87	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	10.43	6.64	3.79	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	10.43	6.81	3.62	---	SPH: None	---	---	---	---	---	---	---	---	---
7/17/13	10.43	---	---	---	SPH: None	---	---	---	---	---	---	---	---	---

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Municipal Service Center
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Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
MW-13														
1/18/00	11.34	9.63	1.71	8020	SGC	8,800 a	120,000	<50	<50	<0.5	0.8	<0.5	<0.5	<5.0
5/11/00	11.34	10.12	1.22	8020	SGC	11,000 a	110,000	<500	70	1.6	5.4	1.2	7.6	<5.0
8/24/00	11.34	10.22	1.12	---		---	---	---	---	---	---	---	---	---
8/25/00	11.34	---	---	8020	SGC	3,100	13,000	1,200	<50	<0.5	<0.5	<0.5	<0.5	<5.0
11/28/00	11.34	10.50	0.84	8020	SGC	2,400	36,000	<1300	<50	<0.5	<0.5	<0.5	<0.5	<5.0
11/28/00	11.34	10.50	0.84	---	Filtered+SGC	280	1,100	<50	---	---	---	---	---	---
2/26/01	11.34	9.60	1.74	8020	Filtered+SGC	100	<260	<64	<50	<0.5	<0.5	<0.5	<0.5	<5.0
5/17/01	11.34	10.10	1.24	---		---	---	---	---	---	---	---	---	---
5/18/01	11.34	---	---	8020	Filtered+SGC	<50	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
8/16/01	11.34	10.50	0.84		Filtered+SGC	<50	300B	<100	<50	<0.5	<0.5	<0.5	<0.5	<5
12/16/01	11.34	9.43	1.91	8021	SGC	1,900	18,000	<250	<50	<0.5	<0.5	<0.5	<0.5	<5
4/8/02	11.34	10.24	1.10	8021	SGC	440	900	---	<50	<0.5	<0.5	<0.5	<0.5	<5
6/20/02	11.34	10.75	0.59	8021	SGC	270 a,c	1,500 h	<50	<50	<0.5	<0.5	<0.5	<0.5	<2
9/18/02	11.34	10.60	0.74	8021	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<2
4/22/03	11.34	10.46	0.88	8021B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.0
4/28/04	11.34	10.22	1.12	8260B	SGC	<100	799	<100	<100	<0.5	<1.0	<1.0	<1.0	<1.0
10/28/04	11.34	9.50	1.84	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
9/1/05 [1]	11.34	9.56	1.78	8260B	SGC	<50	320	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
4/5/06 [3]	11.34	7.86	3.48	8260B	SGC	180 H Y	910	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
9/6/06	11.34	10.53	0.81	8260B	SGC	150 H Y	730	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
4/4/07	11.34	9.73	1.61	8260B	SGC	58 H Y	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/3/07	11.34	10.18	1.16	8260B	SGC	120 Y	460	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
3/20/08 [8]	11.34	9.54	1.80	8260B	SGC	53 Y	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/21/08 [10]	11.34	10.41	0.93	8260B	SGC	120 Y	630	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
4/2/09 [12]	11.34	10.41	0.93	8260B	SGC	110 Y	610	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
10/30/09	11.34	9.65	1.69	8260B	SGC	81Y	650	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
4/8/10	11.34	9.96	1.38	8260B	SPH: None	61 Y	330	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
10/19/10	11.34	9.50	1.84	8260B	SPH: None; SGC	150 Y	940	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
9/12/11	11.34	10.33	1.01	8260B	SPH: None; SGC	51 Y	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
12/21/11	11.34	10.01	1.33	8260B	SPH: None; SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
3/28/12	11.34	10.43	0.91	---	SPH: None	---	---	---	---	---	---	---	---	---
3/29/12	11.34	---	---	8260B	SGC	170 Y	1,100	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
6/26/12	11.34	10.41	0.93	---	SPH: None	---	---	---	---	---	---	---	---	---
6/27/12	11.34	---	---	8260B	SGC	310 Y	2,000	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
7/18/13	11.34	10.38	0.96	8260B	SPH; None; SGC	64 Y	330	<49	<50	<0.50	<0.50	<0.50	<0.50	<0.50

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Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
MW-14														
1/18/00	10.05	7.37	2.68	8020	SGC	1,700 a	22,000	<50	120	<0.5	<0.5	<0.5	<0.5	<5.0
5/11/00	10.05	6.73	3.32	8020	SGC	360 a	4,300	<100	120	<0.5	<0.5	<0.5	0.5	<5.0
8/24/00	10.05	7.30	2.75	---		---	---	---	---	---	---	---	---	---
8/25/00	10.05	---	---	8020	SGC	1,000	3,100	460	90	6.3	<0.5	<0.5	<0.5	<5.0
11/28/00	10.05	7.40	2.65	8020	SGC	380	6,400	<250	140	7.4	<0.5	<0.5	<0.5	<5.0
11/28/00	10.05	7.40	2.65	---	Filtered+SGC	<50	<200	<50	---	---	---	---	---	---
2/26/01	10.05	6.20	3.85	8020	Filtered+SGC	150	<230	<58	73	2.3	<0.5	<0.5	<0.5	<5.0
5/17/01	10.05	7.74	2.31	---		---	---	---	---	---	---	---	---	---
5/18/01	10.05	---	---	8020	Filtered+SGC	120	<200	<50	100	11	<0.5	<0.5	<0.5	<5.0
8/16/01	10.05	7.85	2.20		Filtered+SGC	<50	<200	<100	60	<0.5	<0.5	<0.5	<0.5	<5
12/16/01	10.05	6.60	3.45	8021	SGC	1,110	3,000	<50	<50	<0.5	<0.5	<0.5	<0.5	<5
4/9/02	10.05	6.58	3.47	8021	SGC	870	1,100	---	250	<0.5	<0.5	<0.5	<0.5	<5
6/20/02	10.05	7.52	2.53	8021	SGC	<50	310 h	<50	<50	<0.5	<0.5	<0.5	<0.5	<2
9/18/02	10.05	7.55	2.50	8021	SGC	<50	<300	<50	<50	1.3	<0.5	0.80	<0.5	<2
4/22/03	10.05	6.71	3.34	8021B	SGC	<50	<300	<50	61	4.2	<0.5	1.0	<0.5	12.0
4/28/04	10.05	6.81	3.24	8260B	SGC	<230	<400	<100	241	1.4	<1.0	<1.0	<1.0	<1.0
10/28/04	10.05	6.99	3.06	8260B	SGC	<50	<300	<50	56	3.5	<0.5	<0.5	<0.5	0.5
10/28/04	10.05	---	---	8260B	dup	<50	<300	<50	53	1.9	<0.5	<0.5	<0.5	<0.5
9/1/05 [1]	10.05	7.60	2.45	8260B	SGC	<50	<300	<50	79	6.7	<0.5	<0.5	<0.5	0.7
4/5/06 [3]	10.05	5.91	4.14	8260B	SGC	50 Y	<300	<50	<50	1.7	<0.5	<0.5	<0.5	<0.5
9/6/06	10.05	7.70	2.35	8260B	SGC	140 H Y	<300	79 H Y	60	<0.5	<0.5	<0.5	<0.5	0.51
4/4/07	10.05	7.52	2.53	8260B	SGC	100 H Y	<300	50 H Y	<50	<0.5	<0.5	<0.5	<0.5	<0.5
4/4/07	10.05	---	---	8260B	Dup	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/3/07	10.05	8.45	1.60	8260B	SGC	61 Y	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
3/20/08 [8]	10.05	7.80	2.25	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/21/08 [10]	10.05	8.45	1.60	8260B	SGC	150 Y	660	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
4/2/09 [12]	10.05	7.20	2.85	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
10/30/09	10.05	9.11	0.94	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
4/8/10	10.05	6.62	3.43	8260B	SPH: None	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
10/19/10	10.05	7.23	2.82	8260B	SPH: None; SGC	210	<300	110	54	<0.50	<0.50	<0.50	<0.50	<0.50
9/12/11	10.05	7.11	2.94	8260B	SPH: None; SGC	63 Y	<300	<50	72	<0.50	<0.50	<0.50	<0.50	<0.50
12/21/11	10.05	7.00	3.05	8260B	SPH: None; SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
3/28/12	10.05	6.51	3.54	---	SPH: None	---	---	---	---	---	---	---	---	---
3/29/12	10.05	---	---	8260B	SGC	56 Y	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
6/26/12	10.05	6.92	3.13	---	SPH: None	---	---	---	---	---	---	---	---	---
6/27/12	10.05	---	---	8260B	SGC	69 Y	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
7/18/13	10.05	7.26	2.79	8260B	SPH; None; SGC	80 Y	<290	<49	<50	<0.50	<0.50	<0.50	<0.50	<0.50

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Municipal Service Center
7101 Edgewater Drive, Oakland, California

Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
MW-15														
1/18/00	12.36	10.56	1.80	8020	SGC	12,000 a	89,000	<50	110	3.8	2.1	1	4.6	<5.0
5/11/00	12.36	10.03	2.33	8020	SGC	120 a	590	<50	90	0.9	0.9	<0.5	3.3	<5.0
8/24/00	12.36	10.22	2.14	---		---	---	---	---	---	---	---	---	---
8/25/00	12.36	---	---	8020	SGC	1,900	8,600	1,000	<50	1.9	<0.5	<0.5	1.5	<5.0
11/28/00	12.36	10.30	2.06	8020	SGC	2,500	36,000	<1300	80	1.7	<0.5	<0.5	1.6	<5.0
11/28/00	12.36	10.30	2.06	---	Filtered+SGC	73	<200	<50	---	---	---	---	---	---
2/26/01	12.36	9.30	3.06	8020	Filtered+SGC	190	<240	<60	55	0.6	<0.5	<0.5	0.5	<5.0
5/17/01	12.36	10.09	2.27	---		---	---	---	---	---	---	---	---	---
5/18/01	12.36	---	---	8020	Filtered+SGC	210	<230	<57	66	1.5	<0.5	<0.5	2.1	<5.0
8/16/01	12.36	10.20	2.16		Filtered+SGC	<50	500 B	<100	<50	<0.5	<0.5	<0.5	2.4	<5
12/16/01	12.36	9.80	2.56	8021	SGC	3,800	15,000	<250	<50	<0.5	<0.5	<0.5	2	<5
4/5/02	12.36	9.58	2.78	8021	SGC	1,000	1,400	---	<50	<0.5	<0.5	<0.5	2.3	<5
6/20/02	12.36	10.24	2.12	8021	SGC	670 a,c	2,700 h	95 c,i	<50	0.83	<0.5	<0.5	2.20	<2
9/18/02	12.36	9.89	2.47	8021	SGC	70 a,c	<300	<50	<50	<0.5	<0.5	1.5	1.71	<2
4/22/03	12.36	9.55	2.81	8021B	SGC	<50	<300	<50	<50	1 C	<.50	1.4	1.9	<2
4/28/04	12.36	9.68	2.68	8260B	SGC	<250	567	<100	<100	<0.5	<1.0	<1.0	<1.0	2.8
10/28/04	12.36	9.58	2.78	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	2.2	<0.5
9/1/05 [1]	12.36	9.56	2.80	8260B	SGC	420 Y	<300	120 H Y	55	<0.5	<0.5	<0.5	2.0	<0.5
4/5/06 [3]	12.36	8.76	3.60	8260B	SGC	300 H Y	760	87 H Y	<50	<0.5	<0.5	<0.5	2.4	<0.5
9/6/06	12.36	9.98	2.38	8260B	SGC	220 H Y	400	80 H Y	<50	<0.5	<0.5	<0.5	2.06	<0.5
4/3/07	12.36	10.05	2.31	8260B	SGC	130 H Y	<300	63 H Y	<50	<0.5	<0.5	<0.5	2.38	<0.5
10/3/07	12.36	10.16	2.20	8260B	SGC	150 Y	550	<50	55 Y	<0.5	<0.5	<0.5	1.96	<0.5
3/20/08 [8]	12.36	10.08	2.28	8260B	SGC	88 Y	<300	<50	<50	<0.5	<0.5	<0.5	2.02	<0.5
11/19/08 [10]	12.36	10.28	2.08	8260B	SGC	110 Y	<300	<50	<50	<0.50	<0.50	<0.50	1.78	<0.50
4/2/09 [12]	12.36	9.91	2.45	8260B	SGC	85 Y	<300	<50	<50	<0.50	<0.50	<0.50	0.82	<0.50
10/30/09	12.36	10.24	2.12	8260B	SGC	110Y	<300	<50	81Y	<0.50	<0.50	<0.50	2.41	<0.50
4/8/10	12.36	9.59	2.77	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	12.36	10.21	2.15	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	12.36	9.96	2.40	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	12.36	10.04	2.32	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	12.36	9.67	2.69	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	12.36	9.82	2.54	---	SPH: None	---	---	---	---	---	---	---	---	---
7/17/13	12.36	10.1	2.26	---	SPH: None	---	---	---	---	---	---	---	---	---

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Municipal Service Center
7101 Edgewater Drive, Oakland, California

Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
MW-16														
1/18/00	13.57	10.22	3.43	---	SPH: 0.1 ft.	---	---	---	---	---	---	---	---	---
5/11/00	13.57	13.31	0.27	---	SPH: 0.01 ft.	---	---	---	---	---	---	---	---	---
8/24/00	13.57	8.91	4.66	---	SPH: NM	---	---	---	---	---	---	---	---	---
11/28/00	13.57	13.05	0.86	---	SPH: 0.42 ft.	---	---	---	---	---	---	---	---	---
2/26/01	13.57	13.10	0.79	---	SPH: 0.40 ft.	---	---	---	---	---	---	---	---	---
5/17/01	13.57	12.62G	---	---	SPH: NM	---	---	---	---	---	---	---	---	---
8/16/01	13.57	11.94G	---	---	SPH: NM	---	---	---	---	---	---	---	---	---
12/15/01	13.57	NM	---	---	SPH: NM	---	---	---	---	---	---	---	---	---
4/3/02	13.57	12.88	0.69	---		---	---	---	---	---	---	---	---	---
6/21/02	12.22	NM	---	---	SPH: NM	---	---	---	---	---	---	---	---	---
4/22/03	12.22				Well cap stuck									
4/28/04	12.22	12.48	-0.26	8260B	SGC	<230	1030	<260	2000	150	<1.0	46	<1.0	<1.0
10/28/04	12.22	11.97	0.25	8260B	SGC	450 L Y	<300	480	1100	18	1.7	29	1.7	<0.5
8/31/05	12.22	12.09	0.13	---	SPH: None	---	---	---	---	---	---	---	---	---
4/5/06 [3]	12.22	3.80	8.42	8260B	SGC	95 H Y	420	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
9/6/06	12.22	---	---	---	Dry	---	---	---	---	---	---	---	---	---
4/4/07 [5]	12.22	10.72	1.5	8260B	SGC	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/3/07	12.22	10.92	1.3	8260B	SGC	2,300 Y	4300	1700	480 Y	31	1.7	4.5	1.6	<0.5
3/19/08 [9]	12.22	10.72	1.5	---	---	---	---	---	---	---	---	---	---	---
11/19/08 [10]	12.22	12.33	-0.11	8260B	SGC	52,000 Y	110,000	31,000	150 Y	21	1.7	2.7	1.1	<0.50
4/2/09 [12]	12.22	11.25	0.97	8260B	SGC	---	---	---	59 Y	<0.5	<0.5	<0.5	<0.5	<0.5
10/30/09	12.22	11.37	0.85	8260B	SGC	5,600Y	12,000	4,100Y	590	59	3.5	3.1	3.03	<0.50
4/8/10	12.22	10.45	1.77	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	12.22	10.98	1.24	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	12.22	10.75	1.47	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	12.22	10.66	1.56	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	12.22	12.52	-0.3	---	Dry	---	---	---	---	---	---	---	---	---
6/26/12	12.22	10.58	1.64	---	SPH: None	---	---	---	---	---	---	---	---	---
7/13/13	12.22	---	---	---	Dry	---	---	---	---	---	---	---	---	---
MW-17														
1/18/00	9.86	5.35	4.51	8020	SGC	850 a	21,000	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
5/11/00	9.86	9.85	0.01	8020	SGC	150 a	2,900	<100	<50	<0.5	<0.5	<0.5	<0.5	<5.0
8/24/00	9.86	8.59	1.27	---		---	---	---	---	---	---	---	---	---
8/25/00	9.86	---	---	8020	SGC	190	610	71	<50	0.58	<0.5	<0.5	<0.5	<5.0
11/28/00	9.86	9.25	0.61	8020	SGC	<250	2,400	<250	<50	<0.5	<0.5	<0.5	<0.5	<5.0
11/28/00	9.86	9.25	0.61	---	Filtered+SGC	<50	<200	<50	---	---	---	---	---	---
2/26/01	9.86	9.40	0.46	8020	Filtered+SGC	<50	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
5/17/01	9.86	8.32	1.54	---		---	---	---	---	---	---	---	---	---
5/18/01	9.86	---	---	8020	Filtered+SGC	<50	<200	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0

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Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
8/16/01	9.86	10.35	-0.49		Filtered+SGC	<50	400B	<100	<50	<0.5	<0.5	<0.5	<0.5	<5.0
12/16/01	9.86	8.01	1.85	8021	SGC	940	1,000	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
4/9/02	9.86	9.76	0.10	8021	SGC	590	880	---	60	<0.5	<0.5	1.6	<0.5	<5.0
6/21/02	9.86	9.79	0.07	8021	SGC	99 a,c	650 h	<50	<50	<0.5	<0.5	<0.5	<0.5	<2
9/18/02	9.86	8.25	1.61	8021	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<2
4/23/03	9.86	9.75	0.11	8021B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<2
4/28/04	9.86	8.90	0.96	8260B	SGC	<100	<400	<100	<100	<0.5	<1.0	2.4	<1.0	<1.0
10/28/04	9.86	8.32	1.54	`	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
9/1/05 [1]	9.86	8.38	1.48	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
4/5/06 [3]	9.86	6.86	3.00	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
9/6/06	9.86	9.85	0.01	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
4/3/07	9.86	7.67	2.19	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/3/07	9.86	7.97	1.89	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/3/07 dup	---	---	---	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
3/20/08 [8]	9.86	6.70	3.16	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/19/08 [10]	9.86	9.53	0.33	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
4/2/09 [12]	9.86	9.56	0.30	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
10/30/09	9.86	7.21	2.65	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
4/8/10	9.86	9.15	0.71	8260B	SPH: None	<50	<300	<50	77	2.3	<0.50	2.2	<0.50	<0.50
10/19/10	9.86	6.82	3.04	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	9.86	9.34	0.52	8260B	SPH: None; SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
12/21/11	9.86	8.58	1.28	8260B	SPH: None; SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
3/28/12	9.86	9.98	-0.12	---	SPH: None	---	---	---	---	---	---	---	---	---
3/29/12	9.86	---	---	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
6/26/12	9.86	9.58	0.28	---	SPH: None	---	---	---	---	---	---	---	---	---
6/27/12	9.86	---	---	8260B	SGC	59 Y	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
7/18/13	9.86	9.38	0.48	8260B	SPH; None; SGC	<49	<290	<49	<50	<0.50	<0.50	<0.50	<0.50	<0.50
MW-18														
4/24/03	---	6.49		8021B	SGC	<50	<300	<50	<50	<0.5	<0.5	2.4	<0.5	<2
					Developed to monitor a utility trench, not sampled									
4/28/04	---													
8/31/05	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3/27/06	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9/6/06	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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Municipal Service Center
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Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
TBW-1														
2/23/99	---	6.25	---	---	SPH: 0.10 ft.	---	---	---	---	---	---	---	---	---
5/27/99	---	5.29	---	---	SPH: 0.01 ft.	---	---	---	---	---	---	---	---	---
8/24/99	---	6.99	---	---	SPH: 0.18 ft.	---	---	---	---	---	---	---	---	---
11/22/99	---	---	---	---	Inaccessible	---	---	---	---	---	---	---	---	---
1/18/00	---	---	---	---	Inaccessible	---	---	---	---	---	---	---	---	---
5/11/00	---	6.90	---	---	SPH: 0.10 ft.	---	---	---	---	---	---	---	---	---
8/24/00	---	7.12	---	---	SPH: NM	---	---	---	---	---	---	---	---	---
11/28/00	---	7.75	---	---	SPH: 0.36 ft.	---	---	---	---	---	---	---	---	---
2/27/01	---	9.06	---	---	SPH: 0.51 ft.	---	---	---	---	---	---	---	---	---
5/17/01	---	6.98	---	---	SPH: 0.28 ft.	---	---	---	---	---	---	---	---	---
8/16/01	---	6.62	---	---	SPH: 0.66 ft., f	1,100	700B	< 100	17,000	2,100	75	730	850	< 1
12/15/01	---	6.86	---	---	SPH 0.35 ft.	---	---	---	---	---	---	---	---	---
4/3/02	---	6.14	---	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/02	---	7.52	---	---	SPH: None	---	---	---	---	---	---	---	---	---
4/22/03	---	6.41	---	---	SPH: None	---	---	---	---	---	---	---	---	---
4/28/04	---	6.33	---	---	SPH: None	---	---	---	---	---	---	---	---	---
10/28/04	---	NM	---	---		---	---	---	---	---	---	---	---	---
8/31/05	---	6.50	---	---	Well cap smashed 6"	---	---	---	---	---	---	---	---	---
3/27/06	---	5.20	---	---	SPH: None	---	---	---	---	---	---	---	---	---
9/6/06	---	NM	---	---	---	---	---	---	---	---	---	---	---	---
4/4/07	---	8.26	---	---	---	---	---	---	---	---	---	---	---	---
10/2/07	---	NM	---	---	Abandoned	---	---	---	---	---	---	---	---	---
TBW-2														
6/21/02	---	8.28	---	---		**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
4/22/03	---	6.70	---	---	SPH globules	---	---	---	---	---	---	---	---	---
4/28/04	---	6.61	---	---	SPH: None	---	---	---	---	---	---	---	---	---
10/28/04	---	7.31	---	---	SPH: None	---	---	---	---	---	---	---	---	---
8/31/05	---	NM	---	---		---	---	---	---	---	---	---	---	---
3/27/06	---	NM[(4)]	---	---		---	---	---	---	---	---	---	---	---
9/6/06	---	NM[(4)]	---	---	---	---	---	---	---	---	---	---	---	---
4/4/07	---	NM[(4)]	---	---	---	---	---	---	---	---	---	---	---	---
10/2/07	---	NM	---	---	Abandoned	---	---	---	---	---	---	---	---	---

Table 1
Summary of Groundwater Analytical Data, Petroleum Hydrocarbons
Municipal Service Center
7101 Edgewater Drive, Oakland, California

Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
TBW-3														
8/19/98	---	2.67	---	8020	SGC	810,000	---	---	920	3.2	<0.5	<0.5	0.77	<10
8/19/98	---	2.67	---	8260		---	---	---	---	---	---	---	---	<5.0
2/23/98	---	1.25	---	8020		3,800	3,000	<50	110	1.6	<0.5	<0.5	<0.5	<5.0
5/27/99	---	---	---	---	DTW: NM	---	---	---	---	---	---	---	---	---
8/24/99	---	3.25	---	---	SPH globules	---	---	---	---	---	---	---	---	---
11/22/99	---	3.68	---	---		---	---	---	---	---	---	---	---	---
1/18/00	9.92	3.73	6.19	---	SPH globules	---	---	---	---	---	---	---	---	---
5/11/00	9.92	2.07	7.85	---		---	---	---	---	---	---	---	---	---
8/24/00	9.92	2.82	7.10	---	SPH: sheen	44,000	13,000	34,000	570	4.7	<0.5	<0.5	<0.5	<5.0
11/28/00	9.92	---	---	---		---	---	---	---	---	---	---	---	---
2/27/01	9.92	1.29	8.63	8020	Filtered+SGC	560	<230	<57	120	1.5	<0.5	<0.5	<0.5	<5.0
5/17/01	9.92	2.47	7.45	---		---	---	---	---	---	---	---	---	---
8/16/01	9.92	1.81	8.11		Filtered+SGC	1,500	400B	<100	180	<0.5	<0.5	<0.5	<0.5	<1
12/15/01	9.92	2.52	---	---	SPH: 0.02 ft.	---	---	---	---	---	---	---	---	---
4/3/02	9.92	1.50	---	---	SPH: None	---	---	---	---	---	---	---	---	---
6/21/02	9.92	2.37	7.55	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/02	9.92	3.48	6.44	---	SPH: None	---	---	---	---	---	---	---	---	---
4/22/03	9.92	1.45	8.47	---	Sheen	---	---	---	---	---	---	---	---	---
4/28/04	9.92	2.26	7.66	---	SPH: None	---	---	---	---	---	---	---	---	---
10/28/04	9.92	3.42	6.50	---	Sheen	---	---	---	---	---	---	---	---	---
8/31/05	9.92	2.99	6.93	---	SPH: None	---	---	---	---	---	---	---	---	---
3/27/06	9.92	0.49	9.43	---	SPH: None	---	---	---	---	---	---	---	---	---
9/6/06	9.92	3.42	6.50	---	SPH:0.01 ft.	---	---	---	---	---	---	---	---	---
4/4/07	9.92	1.93	7.99											
10/2/07	---	NM	---	---	Abandoned	---	---	---	---	---	---	---	---	---
TBW-4														
2/27/01	---	1.35	---	8020	Filtered+SGC	410	<230	<57	250	1.9	<0.5	<0.5	<0.5	<5.0
5/17/01	---	2.52	---	---		**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
8/16/01	---	1.88	---	---	Filtered+SGC	2,600	700B	<100	390	<0.5	<0.5	<0.5	<0.5	<5
6/21/02	---	2.32	---	---		---	---	---	---	---	---	---	---	---
4/22/03	---	1.41	---	---	Sheen	---	---	---	---	---	---	---	---	---
4/28/04	---	2.21	---	---		---	---	---	---	---	---	---	---	---
10/27/04	---	3.37	---	---	Sheen	---	---	---	---	---	---	---	---	---
8/31/05	---	2.92	---	---		---	---	---	---	---	---	---	---	---
3/27/06	---	0.49	---	---	SPH: None	---	---	---	---	---	---	---	---	---
9/6/06	---	3.37	---	---	SPH:0.01 ft.	---	---	---	---	---	---	---	---	---
4/4/07	---	1.88	---	---	---	---	---	---	---	---	---	---	---	---
10/2/07	---	NM	---	---	Abandoned	---	---	---	---	---	---	---	---	---
TBW-5														

Table 1
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Municipal Service Center
7101 Edgewater Drive, Oakland, California

Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
2/23/99	---	9.72	---	---	SPH: 1.45 ft.	---	---	---	---	---	---	---	---	---
5/27/99	---	7.03	---	---	SPH: 1.13 ft.	---	---	---	---	---	---	---	---	---
8/24/99	---	6.52	---	---	SPH: 1.33 ft.	---	---	---	---	---	---	---	---	---
11/22/99	---	8.31	---	---	SPH: 1.29 ft.	---	---	---	---	---	---	---	---	---
1/18/00	10.22	6.20	4.74	---	SPH: 0.90 ft.	---	---	---	---	---	---	---	---	---
5/11/00	10.22	9.41	1.05	---	SPH: 0.30 ft.	---	---	---	---	---	---	---	---	---
8/24/00	10.22	9.62	0.81	---	SPH: 0.26 ft.	---	---	---	---	---	---	---	---	---
11/28/00	10.22	10.25	0.34	---	SPH: 0.46 ft.	---	---	---	---	---	---	---	---	---
2/27/01	10.22	9.06	1.45	---	SPH: 0.36 ft.	---	---	---	---	---	---	---	---	---
5/17/01	10.22	8.75	1.47	---	SPH: 0.67 ft.	---	---	---	---	---	---	---	---	---
8/16/01	10.22	8.32	2.51	8020	SPH: 0.76 ft., f	550	400B	< 100	30,000	2,900	100	1,500	5,100	< 1
12/15/01	10.22	9.09	1.13	---	SPH: 0.36 ft.	---	---	---	---	---	---	---	---	---
4/3/02 [6]														
6/21/02	10.22	7.87	2.35	---	SPH: 0.03 ft.	---	---	---	---	---	---	---	---	---
9/12/01	10.22	7.26	2.97	---	SPH: 0.01 ft.	---	---	---	---	---	---	---	---	---
4/22/03	10.22	6.22	4.00	---	SPH: 0.06 ft.	---	---	---	---	---	---	---	---	---
4/28/04	10.22	6.26	3.96	---	SPH: 0.21 ft.	---	---	---	---	---	---	---	---	---
10/27/04	10.22	3.62	6.60	---	SPH: None	---	---	---	---	---	---	---	---	---
8/31/05	10.22	6.41	---	---	SPH: 0.30 ft.	---	---	---	---	---	---	---	---	---
3/27/06	10.22	NM[2]	---	---		---	---	---	---	---	---	---	---	---
9/6/06	10.22	NM[2]	---	---	---	---	---	---	---	---	---	---	---	---
4/4/07	10.22	NM[2]	---	---	---	---	---	---	---	---	---	---	---	---
10/2/07	---	NM	---	---	SPH: viscous residual	---	---	---	---	---	---	---	---	---
3/19/08	---	NM	---	---	SPH: None	---	---	---	---	---	---	---	---	---
11/18/08	10.22	9.32	0.9	---	---	---	---	---	---	---	---	---	---	---
4/1/09	---	NM	---	---	NA	---	---	---	---	---	---	---	---	---
10/29/09	10.22	8.50	1.72	---	---	---	---	---	---	---	---	---	---	---
4/8/10	10.22	5.54	4.68	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	10.22	6.91	3.31	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	10.22	6.55	3.67	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	10.22	6.75	3.47	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	10.22	5.21	5.01	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	10.22	6.07	4.15	---	SPH: None	---	---	---	---	---	---	---	---	---
7/17/13	10.22	6.68	3.54	---	Odor	---	---	---	---	---	---	---	---	---

Table 1
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Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
TBW-6														
2/23/99	---	2.09	---	8020		160	600	<50	60	<0.5	<0.5	<0.5	<0.5	<5.0
5/27/99	---	3.31	---	---		---	---	---	---	---	---	---	---	---
8/24/99	---	7.29	---	8020	SGC	180	400	<50	130	<0.5	<0.5	<0.5	<0.5	<5.0
11/22/99	---	4.37	---	---		---	---	---	---	---	---	---	---	---
1/18/00	9.49	3.83	5.66	---		---	---	---	---	---	---	---	---	---
1/19/00	9.49	---	---	8020	SGC	55 C	<200	<50	170	0.6	<0.5	<0.5	<0.5	<5.0
5/11/00	9.49	2.51	6.98	---		---	---	---	---	---	---	---	---	---
8/24/00	9.49	4.34	5.15	---		---	---	---	---	---	---	---	---	---
8/25/00	9.49	---	---	8020	SGC	320	<250	200	<50	<0.5	<0.5	<0.5	<0.5	<5.0
11/28/00	9.49	4.74	4.75	---		---	---	---	---	---	---	---	---	---
2/27/01	9.49	2.30	7.19	8020	Filtered+SGC	<57	<230	<57	<50	<0.5	<0.5	<0.5	<0.5	<5.0
5/17/01	9.49	3.35	6.14	---		---	---	---	---	---	---	---	---	---
8/16/01	9.49	3.85	5.64		Filtered+SGC	<50	<200	<100	<50	<0.5	<0.5	<0.5	<0.5	<5
12/15/01	9.49	3.96	5.53	---		---	---	---	---	---	---	---	---	---
4/3/02	9.49	2.51	6.98	---		---	---	---	---	---	---	---	---	---
6/21/02	9.49	3.58	5.91	---		---	---	---	---	---	---	---	---	---
9/12/02	9.49	6.07	4.56	---	SPH: 1.42 ft.	---	---	---	---	---	---	---	---	---
4/23/03	9.49	2.42	7.07	---		---	---	---	---	---	---	---	---	---
4/28/04	9.49	3.21	6.28	---		---	---	---	---	---	---	---	---	---
10/27/04	9.49	4.49	5.00	---	SPH: None	---	---	---	---	---	---	---	---	---
8/31/05	9.49	4.43	---	---	SPH: 0.52 ft.	---	---	---	---	---	---	---	---	---
3/27/06	9.49	1.90	7.59	---	SPH: None	---	---	---	---	---	---	---	---	---
9/6/06	9.49	4.33	5.16	---	SPH:0.01 ft.	---	---	---	---	---	---	---	---	---
4/4/07	9.49	3.08	6.41	---	---	---	---	---	---	---	---	---	---	---
10/2/07	9.49	4.98	4.51	---	SPH: None	---	---	---	---	---	---	---	---	---
3/19/08	9.49	3.16	6.33	---	SPH: None	---	---	---	---	---	---	---	---	---
11/18/08	9.49	5.32	4.17	---	SPH: None	---	---	---	---	---	---	---	---	---
4/1/09	9.49	2.87	6.62	---	SPH: sheen	---	---	---	---	---	---	---	---	---
10/29/09	---	---	---	---	No Access	---	---	---	---	---	---	---	---	---
4/8/10	9.49	1.87	7.62	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	9.49	4.79	4.70	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	9.49	4.17	5.32	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	9.49	3.81	5.68	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	9.49	1.45	8.04	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	9.49	3.54	5.95	---	SPH: None	---	---	---	---	---	---	---	---	---
7/17/13	9.49	4.16	5.33	---	SPH: None	---	---	---	---	---	---	---	---	---

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Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
RW-A1														
4/22/03	---	1.81	---	---		---	---	---	---	---	---	---	---	---
4/28/04	10.09	2.52	7.57	---		---	---	---	---	---	---	---	---	---
10/27/04	10.09	3.03	7.06	---	SPH: None	---	---	---	---	---	---	---	---	---
8/31/05	10.09	3.31	6.78	---	SPH: None	---	---	---	---	---	---	---	---	---
3/27/06	10.09	0.62	9.47	---	SPH: None	---	---	---	---	---	---	---	---	---
9/6/06	10.09	3.52	6.57	---	SPH: None	---	---	---	---	---	---	---	---	---
4/3/07	10.09	2.93	7.16	---	---	---	---	---	---	---	---	---	---	---
10/2/07	10.09	NM[7]	---	---	---	---	---	---	---	---	---	---	---	---
3/19/08	10.09	3.16	6.93	---	SPH: None	---	---	---	---	---	---	---	---	---
11/20/08 [10]	10.09	4.49	5.60	8260B	SGC	56 Y	<300	<50	<50	8.8	<0.50	<0.50	<0.50	4.5
4/1/09	10.09	2.48	7.61	---	SPH: None	---	---	---	---	---	---	---	---	---
10/29/09	10.09	3.49	6.60	---	---	---	---	---	---	---	---	---	---	---
4/8/10	10.09	1.54	8.55	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	10.19	4.22	5.97	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	10.19	3.43	6.76	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	10.19	3.02	7.17	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	10.19	1.44	8.75	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	10.19	3.01	7.18	---	SPH: None	---	---	---	---	---	---	---	---	---
7/17/13	10.19	3.45	6.74	---	SPH: None	---	---	---	---	---	---	---	---	---
RW-A2														
4/22/03	---	1.22	---	---	Sheen	---	---	---	---	---	---	---	---	---
4/28/04	9.67	2.01	7.66	---		---	---	---	---	---	---	---	---	---
10/27/04	9.67	3.20	6.47	---	SPH: None	---	---	---	---	---	---	---	---	---
8/31/05	9.67	2.75	6.92	---	SPH: None	---	---	---	---	---	---	---	---	---
3/27/06	9.67	0.30	9.37	---	SPH: None	---	---	---	---	---	---	---	---	---
9/6/06	9.67	3.19	6.48	---	SPH: 0.01 ft.	---	---	---	---	---	---	---	---	---
4/4/07	9.67	1.70	7.97	8260B	SGC	200 Y	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/2/07	9.67	3.81	5.86	---	SPH: None	---	---	---	---	---	---	---	---	---
3/19/08	9.67	1.71	7.96	---	SPH: None	---	---	---	---	---	---	---	---	---
11/20/08 [10]	9.67	3.96	5.71	8260B	SGC	590 Y	<300	160 Y	<50	<0.50	<0.50	<0.50	<0.50	<0.50
4/1/09	9.67	1.58	8.09	---	SPH: None	---	---	---	---	---	---	---	---	---
10/29/09	9.67	2.89	6.78	---	---	---	---	---	---	---	---	---	---	---
4/8/10	9.67	0.93	8.74	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	9.67	3.72	5.95	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	9.67	2.94	6.73	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	9.67	2.24	7.43	---	SPH: None	---	---	---	---	---	---	---	---	---
12/22/11	9.67	---	---	8260B	SGC	360 Y	<300	84 Y	<50	<0.50	<0.50	<0.50	<0.50	<0.50
3/28/12	9.67	0.53	9.14	---	SPH: None	---	---	---	---	---	---	---	---	---
3/30/12	9.67	---	---	8260B	SGC	640	<300	170 Y	<50	<0.50	<0.50	<0.50	<0.50	<0.50

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Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
6/26/12	9.67	2.4	7.27	---	SPH: None	---	---	---	---	---	---	---	---	---
6/27/12	9.67	---	---	8260B	SGC	520 Y	<310	140 Y	<50	<0.50	<0.50	<0.50	<0.50	<0.50
7/19/13	9.67	3.18	6.49	8260B	SPH; None; SGC	420 Y	<290	110 Y	<50	<0.50	<0.50	<0.50	<0.50	<0.50
OB-A1														
4/22/03	---	2.24	---	---	SPH: .01 ft.	---	---	---	---	---	---	---	---	---
4/28/04	---	3.01	---	---	SPH: None	---	---	---	---	---	---	---	---	---
10/27/04	---	5.11	---	---	SPH: None (strong odor)	---	---	---	---	---	---	---	---	---
8/31/05	---	4.10	---	---	SPH: None	---	---	---	---	---	---	---	---	---
3/27/06	---	1.25	---	---	SPH: None	---	---	---	---	---	---	---	---	---
9/7/06	---	4.49	---	---		---	---	---	---	---	---	---	---	---
4/4/07	---	2.72	---	---	---	---	---	---	---	---	---	---	---	---
10/2/07	---	5.34	---	---	---	---	---	---	---	---	---	---	---	---
3/19/08	---	2.73	---	---	SPH: None	---	---	---	---	---	---	---	---	---
11/18/08	---	5.31	---	---	---	---	---	---	---	---	---	---	---	---
4/1/09	---	2.61	---	---	---	---	---	---	---	---	---	---	---	---
10/29/09	---	4.68	---	---	---	---	---	---	---	---	---	---	---	---
4/8/10	---	1.95	---	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	---	5.09	---	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	---	4.28	---	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	---	3.28	---	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	---	1.55	---	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	---	3.15	---	---	SPH: None	---	---	---	---	---	---	---	---	---
7/17/13	---	4.48	---	---	SPH: None	---	---	---	---	---	---	---	---	---
RW-B1														
4/22/03	---	7.26	---	---	Sheen	---	---	---	---	---	---	---	---	---
4/28/04	11.22	7.20	4.02	---	---	---	---	---	---	---	---	---	---	---
10/27/04	11.22	7.80	3.42	---	SPH: None	---	---	---	---	---	---	---	---	---
8/31/05	11.22	7.14	4.08	---	SPH: None	---	---	---	---	---	---	---	---	---
3/27/06	11.22	6.10	5.12	---	SPH: None	---	---	---	---	---	---	---	---	---
9/6/06	11.22	7.39	3.83	---	SPH:0.01 ft.	---	---	---	---	---	---	---	---	---
4/4/07	11.22	7.06	4.16	8260B	SGC	130 L	<300	100 H	220	410	23	9.4	16	6.3
10/2/07	11.22	7.70	3.52	---	SPH: None	---	---	---	---	---	---	---	---	---
3/19/08	11.22	7.06	4.16	---	SPH: None	---	---	---	---	---	---	---	---	---
11/18/08	11.22	7.90	3.32	---	SPH: None	---	---	---	---	---	---	---	---	---
4/1/09	11.22	7.15	4.07	---	SPH: None	---	---	---	---	---	---	---	---	---
10/29/09	11.22	7.76	3.46	---	---	---	---	---	---	---	---	---	---	---
4/8/10	11.22	6.78	4.44	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	11.22	7.66	3.56	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	11.22	7.45	3.77	---	SPH: None	---	---	---	---	---	---	---	---	---

Table 1
Summary of Groundwater Analytical Data, Petroleum Hydrocarbons
Municipal Service Center
7101 Edgewater Drive, Oakland, California

Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
12/21/11	11.22	7.61	3.61	---	SPH: None	---	---	---	---	---	---	---	---	---
12/22/11	11.22	---	---	8260B	SGC	120	<300	78	<310	530	35	7.9	18.5	<3.1
3/28/12	11.22	7.4	3.82	---	SPH: None	---	---	---	---	---	---	---	---	---
3/29/12	11.22	---	---	8260B	SGC	<50	<300	<50	330	750	45	12	31	4.3
6/26/12	11.22	7.11	4.11	8260B	SPH: None; SGC	130 Y	<300	90 Y	520	650	100	13	42	<5.0
7/19/13	11.22	7.49	3.73	8260B	SGC	150 Y	380	76	<500	610	42	13	26	<5.0
7/19/13	11.22	---	---	8260B	SPH: None; SGC	110 Y	<290	66	<500	630	44	14	26	<5.0
RW-B2														
4/22/03	---	7.29	---	---	Sheen, Odor	---	---	---	---	---	---	---	---	---
4/28/04	11.23	7.20	4.03	---		---	---	---	---	---	---	---	---	---
10/27/04	11.23	7.81	3.42	---	SPH: None	---	---	---	---	---	---	---	---	---
8/31/05	11.23	7.14	4.09	---	SPH: None	---	---	---	---	---	---	---	---	---
3/27/06	11.23	6.09	5.14	---	SPH: None	---	---	---	---	---	---	---	---	---
9/6/06	11.23	7.39	3.84	---	SPH: None	---	---	---	---	---	---	---	---	---
4/4/07	11.23	9.84	1.39	8260B	SGC	500 L Y	<300	500 L	11000	3400	2700	190	1100	<10
10/2/07	11.23	7.71	3.52	---	SPH: None	---	---	---	---	---	---	---	---	---
3/19/08	11.23	7.07	4.16	---	SPH: None (strong odor)	---	---	---	---	---	---	---	---	---
11/20/08 [10]	11.23	7.92	3.31	8260B	SGC	190 Y	<300	150 Y	7,900 Y	3,200	2,100	140	720	<25
4/1/09	11.23	7.16	4.07	---	SPH: None	---	---	---	---	---	---	---	---	---
10/29/09	11.23	7.78	3.45	---	---	---	---	---	---	---	---	---	---	---
4/8/10	11.23	6.80	4.43	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	11.23	7.67	3.56	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	11.23	7.47	3.76	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	11.23	7.63	3.60	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	11.23	7.39	3.84	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	11.23	7.14	4.09	---	SPH: None	---	---	---	---	---	---	---	---	---
7/19/13	11.23	7.47	3.76	8260B	SPH: None; SGC	240 Y	<290	260	9,700	2,100	2,000	170	1,080	<20
RW-B3														
4/22/03	---	9.90	---	---	visible Product	---	---	---	---	---	---	---	---	---
4/28/04	11.14	13.20	-2.06	---	SPH: 3.09	---	---	---	---	---	---	---	---	---
10/27/04	11.14	9.33	1.81	---	SPH: None	---	---	---	---	---	---	---	---	---
8/31/05	11.14	9.60	1.54	---	SPH: 0.01	---	---	---	---	---	---	---	---	---
3/27/06	11.14	9.08	2.06	---	SPH: None	---	---	---	---	---	---	---	---	---
9/6/06	11.14	9.61	1.53	---	SPH: None	---	---	---	---	---	---	---	---	---
4/4/07	11.14	9.84	1.30	8260B	SGC	3,600 L Y	880	4,000 L	7900	4300	130	520	357	<31
10/2/07	11.14	9.56	1.58	---	SPH: None	---	---	---	---	---	---	---	---	---
3/19/08	---	NM[7]	---	---	NM	---	---	---	---	---	---	---	---	---
11/18/08	11.14	9.57	1.57	---	---	---	---	---	---	---	---	---	---	---

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Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
4/1/09	11.14	9.80	1.34	---	---	---	---	---	---	---	---	---	---	---
10/29/09	11.14	9.61	1.53	---	---	---	---	---	---	---	---	---	---	---
4/8/10	11.14	9.61	1.53	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	11.14	9.50	1.64	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	11.14	9.40	1.74	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	11.14	9.44	1.70	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	11.14	9.73	1.41	---	SPH: None; odor	---	---	---	---	---	---	---	---	---
6/26/12	11.14	9.65	1.49	---	SPH: None	---	---	---	---	---	---	---	---	---
7/19/13	11.14	9.8	1.34	8260B	SGC; Odor	1,900 Y	600	2,000	2,900	1,900	28	67	20	<17
RW-B4														
4/22/03	---	10.55	---	---	SPH: .55 ft.	---	---	---	---	---	---	---	---	---
4/28/04	11.29	10.22	1.07	---	SPH: None	---	---	---	---	---	---	---	---	---
10/27/04	11.29	9.55	1.74	---	SPH: None	---	---	---	---	---	---	---	---	---
8/31/05	11.29	9.70	1.59	---	SPH: None	---	---	---	---	---	---	---	---	---
3/27/06	11.29	9.23	2.06	---	SPH: None	---	---	---	---	---	---	---	---	---
9/6/06	11.29	9.69	1.60	---	SPH: None	---	---	---	---	---	---	---	---	---
4/4/07	11.29	10.04	1.25	8260B	SGC	3,500 Y	360	4,000 L	16000	3200	150	460	1430	<8.3
10/2/07	11.29	9.72	1.57	---	SPH: None	---	---	---	---	---	---	---	---	---
3/19/08	11.29	9.87	1.42	---	SPH: None (odor)	---	---	---	---	---	---	---	---	---
11/20/08 (10)	11.29	9.75	1.54	8260B	SGC	3,100 Y	2,900	930	6,000 Y	3,100	100	270	679	<25
4/1/09	11.29	9.87	1.42	---	SPH: None	---	---	---	---	---	---	---	---	---
10/29/09	11.29	9.85	1.44	---	---	---	---	---	---	---	---	---	---	---
4/8/10	11.29	9.72	1.57	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	11.29	9.80	1.49	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	11.29	9.62	1.67	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	11.29	9.58	1.71	---	SPH: None	---	---	---	---	---	---	---	---	---
12/22/11	11.29	---	---	8260B	SGC	2,000 Y	<300 F	2,200	5,400	1,100	29	64	176	<5.0
12/22/11 dup	11.29	---	---	8260B	SGC	2,300 Y	830 F	2,600	5,600	1,100	30	63	198	<5.0
3/28/12	11.29	9.8	1.49	---	SPH: None; odor	---	---	---	---	---	---	---	---	---
3/29/12	11.29	---	---	8260B	SGC	2,400 Y	<300	3,000	7,900	1,900	40	140	338	<7.1
6/26/12	11.29	9.75	1.54	8260B	SPH: None; SGC	3,700	950	4,500	7,600	1,700	42	130	392	<13
7/19/13	11.29	9.91	1.38	8260B	SGC; Odor	3,600 Y	500	3,900	7,600	2,200	54	210	311	<13

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RW-C1														
4/24/03	---	8.34	---	---		---	---	---	---	---	---	---	---	---
4/28/04	10.44	8.00	2.44	---		---	---	---	---	---	---	---	---	---
10/27/04	10.44	7.59	2.85	---	SPH: None	---	---	---	---	---	---	---	---	---
8/31/05	10.44	5.81	4.63	---	SPH: None	---	---	---	---	---	---	---	---	---
3/27/06	10.44	1.94	8.50	---	SPH: None	---	---	---	---	---	---	---	---	---
9/6/06	10.44	6.71	3.73	---	SPH: 0.01 ft.	---	---	---	---	---	---	---	---	---
4/5/07	10.44	6.66	3.78	8260B	---	220 H Y	1300	63 H Y	<50	<0.50	<0.50	<0.50	<0.50	<0.50
10/2/07	10.44	8.48	1.96	---	SPH: 0.01 ft.	---	---	---	---	---	---	---	---	---
3/19/08	10.44	8.56	1.88	---	SPH: None	---	---	---	---	---	---	---	---	---
11/20/08 [(10)]	10.44	8.29	2.15	8260B	SGC	290 Y	1,200	76 Y	<50	6.4	<0.50	<0.50	0.51	<0.50
4/1/09	10.44	8.16	2.28	---	SPH: None	---	---	---	---	---	---	---	---	---
10/29/09	10.44	8.64	1.80	---	---	---	---	---	---	---	---	---	---	---
4/8/10	10.44	5.62	4.82	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	10.44	5.57	4.87	---	SPH: None	---	---	---	---	---	---	---	---	---
9/13/11	10.44	5.89	4.55	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	10.44	5.87	4.57	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	10.44	5.41	5.03	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	10.44	5.35	5.09	---	SPH: None	---	---	---	---	---	---	---	---	---
7/17/13	10.44	5.79	4.65	---	SPH: None	---	---	---	---	---	---	---	---	---
RW-C2														
4/24/03	---	6.22	---	---	SPH: .03 ft.	---	---	---	---	---	---	---	---	---
4/28/04	10.58	6.19	4.39	---	SPH: 0.06 ft	---	---	---	---	---	---	---	---	---
10/27/04	10.58	7.00	3.58	---	SPH: Present	---	---	---	---	---	---	---	---	---
8/31/05	10.58	6.30	4.28	---	SPH: 0.01 ft.	---	---	---	---	---	---	---	---	---
3/27/06	10.58	5.10	5.48	---	SPH: None	---	---	---	---	---	---	---	---	---
9/6/06	10.58	8.19	2.39	---	SPH: 0.12 ft.	---	---	---	---	---	---	---	---	---
4/4/07	10.58	8.28	2.30	---	---	---	---	---	---	---	---	---	---	---
10/2/07	10.58	9.75	0.83	---	SPH: 0.015 ft.	---	---	---	---	---	---	---	---	---
10/3/07	10.58	9.39	1.19	---	SPH: None	---	---	---	---	---	---	---	---	---
11/18/08	10.58	9.38	1.20	---	---	---	---	---	---	---	---	---	---	---
4/1/09	10.58	7.64	2.94	---	---	---	---	---	---	---	---	---	---	---
10/29/09	10.58	8.90	1.68	---	---	---	---	---	---	---	---	---	---	---
4/8/10	10.58	5.86	4.72	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	10.58	6.59	3.99	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	10.58	6.07	4.51	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	10.58	6.46	4.12	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	10.58	5.48	5.1	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	10.58	5.67	4.91	---	SPH: None	---	---	---	---	---	---	---	---	---
7/17/13	10.58	6.17	4.41	---	SPH: None	---	---	---	---	---	---	---	---	---

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Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
RW-C3														
4/24/03	---	6.36	---	---		---	---	---	---	---	---	---	---	---
4/28/04	10.71	6.25	4.46	---		---	---	---	---	---	---	---	---	---
10/27/04	10.71	7.10	3.61	---	SPH: None	---	---	---	---	---	---	---	---	---
8/31/05	10.71	6.39	4.32	---	SPH: None	---	---	---	---	---	---	---	---	---
3/27/06	10.71	5.30	5.41	---	SPH: None	---	---	---	---	---	---	---	---	---
9/6/06	10.71	8.10	2.61	---	SPH: 0.01 ft.	---	---	---	---	---	---	---	---	---
4/5/07	10.71	7.97	2.74	8260B	SPH: None	540 H L Y	360 H L	430 H L Y	520	13	14	32	54	<0.5
10/2/07	10.71	8.59	2.12	---	SPH: 0.01 ft.	---	---	---	---	---	---	---	---	---
3/19/08	10.71	8.38	2.33	---	SPH: None	---	---	---	---	---	---	---	---	---
11/20/08 [10]	10.71	8.61	2.10	8260B	SGC	720 Y [11]	1600 [11]	170 Y [11]	<50	1.1	<0.50	0.67	<0.50	<0.50
4/1/09	10.71	6.98	3.73	---	SPH: None	---	---	---	---	---	---	---	---	---
10/29/09	10.71	8.56	2.15	---	---	---	---	---	---	---	---	---	---	---
4/8/10	10.71	5.93	4.78	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	10.71	6.82	3.89	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	10.71	6.32	4.39	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	10.71	6.74	3.97	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	10.71	6.13	4.58	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	10.71	6	4.71	---	SPH: None	---	---	---	---	---	---	---	---	---
7/17/13	10.71	6.4	4.31	---	SPH: None	---	---	---	---	---	---	---	---	---
RW-C4														
4/22/03	---	7.15	---	---	Strong odor	---	---	---	---	---	---	---	---	---
4/28/04	11.32	6.95	4.37	---	SPH: 0.01 ft	---	---	---	---	---	---	---	---	---
10/27/04	11.32	7.45	3.87	---	SPH: None	---	---	---	---	---	---	---	---	---
8/31/05	11.32	6.71	4.61	---	SPH: None	---	---	---	---	---	---	---	---	---
3/27/06	11.32	6.47	4.85	---	SPH: None	---	---	---	---	---	---	---	---	---
9/6/06	11.32	8.16	3.16	---	SPH: 0.01 ft.	---	---	---	---	---	---	---	---	---
4/4/07	11.32	8.50	2.82	---	---	---	---	---	---	---	---	---	---	---
10/2/07	11.32	8.62	2.70	---	SPH: None	---	---	---	---	---	---	---	---	---
3/19/08	11.32	9.13	2.19	---	SPH: None	---	---	---	---	---	---	---	---	---
11/18/08	11.32	8.99	2.33	---	---	---	---	---	---	---	---	---	---	---
4/1/09	11.32	8.52	2.80	---	---	---	---	---	---	---	---	---	---	---
10/29/09	11.32	8.53	2.79	---	---	---	---	---	---	---	---	---	---	---
4/8/10	11.32	NM	---	---	Could not open	---	---	---	---	---	---	---	---	---
4/29/10	11.32	6.07	5.25	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	11.32	6.84	4.48	---	SPH: None	---	---	---	---	---	---	---	---	---
9/13/11	11.32	6.26	5.06	---	SPH: None	---	---	---	---	---	---	---	---	---
12/22/11	11.32	7.06	4.26	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	11.32	6.53	4.79	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	11.32	5.87	5.45	---	SPH: None	---	---	---	---	---	---	---	---	---
7/13/13	11.32	6.35	4.97	---	SPH: None	---	---	---	---	---	---	---	---	---

Table 1
Summary of Groundwater Analytical Data, Petroleum Hydrocarbons
Municipal Service Center
7101 Edgewater Drive, Oakland, California

Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
RW-C5														
4/22/03	---	6.46	---	---		---	---	---	---	---	---	---	---	---
4/28/04	10.79	6.39	4.40	---		---	---	---	---	---	---	---	---	---
10/27/04	10.79	7.21	3.58	---	SPH: Present	---	---	---	---	---	---	---	---	---
8/31/05	10.79	6.51	4.28	---	SPH: None	---	---	---	---	---	---	---	---	---
3/27/06	10.79	5.33	5.46	---	SPH: None	---	---	---	---	---	---	---	---	---
9/6/06	10.79	8.03	2.76	---	SPH: 0.01 ft.	---	---	---	---	---	---	---	---	---
4/4/07	10.79	8.27	2.52	8260B	SGC	3,800 Y	310	4,100 L	12000	3400	170	520	1300	<25
10/2/07	10.79	8.95	1.84	---	SPH: None	---	---	---	---	---	---	---	---	---
3/19/08	10.79	8.82	1.97	---	SPH: 0.01 ft.	---	---	---	---	---	---	---	---	---
11/20/08 [(10)]	10.79	8.92	1.87	8260B	SPH: None/ SGC	3,700 Y	430	3,300	5,800 Y	2,900	91	120	437	<20
11/20/08 dup	---	---	---	8260B	SGC: Oder	3,400 Y	<300	3,100	3,900 Y	2,700	78	91	358	<25
4/1/09	10.79	7.88	2.91	---	SPH: None	---	---	---	---	---	---	---	---	---
10/29/09	---	---	---	---	No Access	---	---	---	---	---	---	---	---	---
4/8/10	10.79	NM	---	---	Could not open	---	---	---	---	---	---	---	---	---
4/29/10	10.79	5.59	5.20	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	10.79	6.54	4.25	---	SPH: None, odor	---	---	---	---	---	---	---	---	---
9/13/11	10.79	6.04	4.75	---	SPH: None, odor	---	---	---	---	---	---	---	---	---
12/22/11	10.79	6.51	4.28	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	10.79	5.47	5.32	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	10.79	5.61	5.18	---	SPH: None	---	---	---	---	---	---	---	---	---
7/17/13	10.79	6.16	4.63	8260B	SGC; Odor	450 Y	<290	320	990	71	8.6	22	48	<0.50
RW-C6														
4/22/03	---	6.05	---	---	SPH: 0.07 ft.	---	---	---	---	---	---	---	---	---
4/28/04	10.31	6.30	4.01	---	SPH: 0.05 ft.	---	---	---	---	---	---	---	---	---
10/27/04	10.31	6.85	---	---	SPH: 0.15 ft.	---	---	---	---	---	---	---	---	---
8/31/05	10.31	6.81	---	---	SPH: 0.93 ft.	---	---	---	---	---	---	---	---	---
3/27/06	10.31	5.66	---	---	SPH: 0.96 ft.	---	---	---	---	---	---	---	---	---
9/6/06	10.31	7.96	2.35	---	SPH: 0.18ft.	---	---	---	---	---	---	---	---	---
4/4/07	10.31	NM[(4)]	---	---	---	---	---	---	---	---	---	---	---	---
10/2/07	10.31	8.45	1.86	---	SPH: residual	---	---	---	---	---	---	---	---	---
3/19/08	10.31	8.32	1.99	---	SPH: None	---	---	---	---	---	---	---	---	---
11/18/08	10.31	8.42	1.89	---	SPH: Oder	---	---	---	---	---	---	---	---	---
4/1/09	10.31	7.36	2.95	---	SPH: None	---	---	---	---	---	---	---	---	---
10/29/09	---	---	---	---	No Access	---	---	---	---	---	---	---	---	---
4/8/10	10.31	NM	---	---	Could not open	---	---	---	---	---	---	---	---	---
4/29/10	10.31	5.43	4.88	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	10.31	6.40	3.91	---	SPH: None	---	---	---	---	---	---	---	---	---
9/13/11	10.31	5.89	4.42	8260B	SPH: None, odor; SCG	870 Yb1	410 b1	760	2,500	270	54	18	420	<2.5

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Municipal Service Center
7101 Edgewater Drive, Oakland, California

Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
12/22/11	10.31	6.36	3.95	8260B	SPH: None; SCG	1,200	710	830	810	74	6.2	7.9	79	0.51
3/28/12	10.31	5.36	4.95	8260B	SPH: None; SCG	830	600	620	550	68	5.3	6.2	55	<0.50
6/26/12	10.31	5.5	4.81	8260B	SPH: None; SCG	2,700	2,000	2,000	1,000	89	8.5	9.1	101	<0.50
7/31/12	10.31	5.76	4.55	8260B	SPH: None; SCG	890 Y	410	790 Y	1,500	150	18	11	158	<0.50
7/17/13	10.31	6	4.31	8260B	SGC; Odor	940 Y	<290	920	2,600	400	17	47	263	1.2
RW-C7														
4/22/03	---	6.51	---	---	visible Product	---	---	---	---	---	---	---	---	---
4/28/04	10.12	6.60	3.52	---	SPH: 0.02 ft.	---	---	---	---	---	---	---	---	---
10/27/04	10.12	NM	---	---	---	---	---	---	---	---	---	---	---	---
8/31/05	10.12	NM	---	---	---	---	---	---	---	---	---	---	---	---
3/27/06	10.12	NM[4]	---	---	---	---	---	---	---	---	---	---	---	---
9/6/06	10.12	8.34	1.78	---	SPH: 0.01 ft.	---	---	---	---	---	---	---	---	---
4/4/07	10.12	NM[4]	---	---	---	---	---	---	---	---	---	---	---	---
10/2/07	10.12	9.01	1.11	---	SPH: None	---	---	---	---	---	---	---	---	---
3/19/08	10.12	8.85	1.27	---	SPH: None	---	---	---	---	---	---	---	---	---
11/18/08	10.12	8.97	1.15	---	---	---	---	---	---	---	---	---	---	---
4/1/09	10.12	7.89	2.23	---	SPH: 0.01 ft.	---	---	---	---	---	---	---	---	---
10/29/09	---	9.23	---	---	---	---	---	---	---	---	---	---	---	---
4/8/10	10.12	NM	---	---	Could not open	---	---	---	---	---	---	---	---	---
4/29/10	10.12	5.71	4.41	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	10.12	6.68	3.44	---	SPH: None	---	---	---	---	---	---	---	---	---
9/13/11	10.12	6.16	3.96	8260B	SPH: None; SCG	83 Yb1	<300	<50	150	3.1	<0.50	<0.50	<0.50	<0.50
12/22/11	10.12	6.62	3.50	8260B	SPH: None; SCG	8,100	1,700	5,900	380	8.3	<0.50	0.98	<0.50	<0.50
3/28/12	10.12	5.61	4.51	8260B	SPH: None; SCG	490	480	160 Y	<50	8.9	<0.50	<0.50	<0.50	<0.50
6/26/12	10.12	5.75	4.37	8260B	SPH: None; SCG	410	380 Y	150 Y	<50	0.7	<0.50	<0.50	1.55	<0.50
7/17/13	10.12	6.29	3.83	8260B	SPH: None; SCG	340 Y	340	110	120	21	0.68	<0.50	3.82	<0.50
OB-C1														
4/22/03	---	6.26	---	---		---	---	---	---	---	---	---	---	---
4/28/04	10.39	7.39	3.00	---	SPH: 1.27 ft.	---	---	---	---	---	---	---	---	---
10/27/04	10.39	8.06	2.33	---	SPH: 1.08 ft.	---	---	---	---	---	---	---	---	---
8/31/05	10.39	7.84	---	---	SPH: 1.55 ft.	---	---	---	---	---	---	---	---	---
3/27/06	10.39	6.15	---	---	SPH: 1.05 ft.	---	---	---	---	---	---	---	---	---
9/6/06	---	NM[4]	---	---	Buried	---	---	---	---	---	---	---	---	---
4/4/07	10.39	7.78	2.61	---	---	---	---	---	---	---	---	---	---	---
10/2/07	10.39	8.67	1.72	---	SPH: 0.02 ft.	---	---	---	---	---	---	---	---	---
3/19/08	10.39	8.49	1.90	---	SPH: 0.29 ft.	---	---	---	---	---	---	---	---	---
11/18/08	10.39	8.57	1.82	---	SPH: 0.03 ft.	---	---	---	---	---	---	---	---	---
4/1/09	10.39	7.96	2.43	---	SPH: 0.64 ft.	---	---	---	---	---	---	---	---	---
10/29/09	---	---	---	---	No Access	---	---	---	---	---	---	---	---	---

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Summary of Groundwater Analytical Data, Petroleum Hydrocarbons
Municipal Service Center
7101 Edgewater Drive, Oakland, California

Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
4/8/10	10.39	NM	---	---	Could not open	---	---	---	---	---	---	---	---	---
4/29/10	10.39	5.95	4.44	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	10.39	6.37	4.02	---	SPH: None	---	---	---	---	---	---	---	---	---
9/30/11[13]	10.39	NM	---	---	SPH: None	---	---	---	---	---	---	---	---	---
12/22/11	10.39	Dry	---	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	10.39	Dry	---	---	Total depth: 5.50 feet	---	---	---	---	---	---	---	---	---
6/26/12	10.39	Dry	---	---	Total depth: 5.45 feet	---	---	---	---	---	---	---	---	---
7/17/13	10.39	Dry	---	---	Total depth: 5.33 feet	---	---	---	---	---	---	---	---	---
RW-D1														
4/22/03	---	6.97	---	---		---	---	---	---	---	---	---	---	---
4/28/04	10.18	5.62	4.56	---		---	---	---	---	---	---	---	---	---
10/27/04	10.18	6.67	3.51	---	SPH: Present	---	---	---	---	---	---	---	---	---
8/31/05	10.18	5.75	---	---	SPH: 0.02 ft.	---	---	---	---	---	---	---	---	---
3/27/06	10.18	NM[2]	---	---	---	---	---	---	---	---	---	---	---	---
9/6/06	10.18	NM[2]	---	---	No Access	---	---	---	---	---	---	---	---	---
4/4/07	10.18	NM[2]	---	---	---	---	---	---	---	---	---	---	---	---
10/2/07	10.18	NM[2]	---	---	---	---	---	---	---	---	---	---	---	---
3/19/08	---	NM[2]	---	---	---	---	---	---	---	---	---	---	---	---
11/19/08	10.18	11.29	-1.11	6260B	SGC	11,000 Y	4,900	9,400	5,100 Y	270	85	150	710	<2.0
4/1/09	---	NM[2]	---	---	---	---	---	---	---	---	---	---	---	---
10/29/09	---	NM[2]	---	---	SPH: None	---	---	---	---	---	---	---	---	---
4/8/10	10.18	7.70	2.48	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	10.18	6.85	3.33	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	10.18	6.53	3.65	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	10.18	6.92	3.26	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	10.18	6.3	3.88	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	10.18	5.86	4.32	---	SPH: None	---	---	---	---	---	---	---	---	---
7/17/13	10.18	6.64	3.54	---	SPH: None	---	---	---	---	---	---	---	---	---
RW-D2														
4/22/03	---	7.15	---	---	SPH 1.25 ft.	---	---	---	---	---	---	---	---	---
4/28/04	10.33	7.45	2.88	---	SPH: 0.1 ft.	---	---	---	---	---	---	---	---	---
10/27/04	10.33	6.41	3.92	---	SPH: Present	---	---	---	---	---	---	---	---	---
8/31/05	10.33	8.44	---	---	SPH: 3.12 ft.	---	---	---	---	---	---	---	---	---
3/27/06	10.33	NM[2]	---	---	---	---	---	---	---	---	---	---	---	---
9/6/06	10.33	NM[2]	---	---	No Access	---	---	---	---	---	---	---	---	---
4/4/07	10.33	NM[2]	---	---	---	---	---	---	---	---	---	---	---	---
10/2/07	10.33	NM[2]	---	---	---	---	---	---	---	---	---	---	---	---
3/19/08	---	NM[2]	---	---	---	---	---	---	---	---	---	---	---	---

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Municipal Service Center
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Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
11/18/08	10.33	10.95	-0.62	---	---	---	---	---	---	---	---	---	---	---
4/1/09	---	NM(2)	---	---	---	---	---	---	---	---	---	---	---	---
10/29/09	---	NM(2)	---	---	SPH: None	---	---	---	---	---	---	---	---	---
4/8/10	10.33	7.21	3.12	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	10.33	6.35	3.98	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	10.33	6.02	4.31	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	10.33	6.42	3.91	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	10.33	5.79	4.54	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	10.33	5.36	4.97	---	SPH: None	---	---	---	---	---	---	---	---	---
7/17/13	10.33	6.15	4.18	---	SPH: None	---	---	---	---	---	---	---	---	---
RW-D3														
4/22/03	---	6.89	---	---	SPH: 1.58 ft.	---	---	---	---	---	---	---	---	---
4/28/04	10.07	8.18	1.89	---	SPH: 3.25 ft.	---	---	---	---	---	---	---	---	---
10/27/04	10.07	6.37	3.70	---	SPH: Present	---	---	---	---	---	---	---	---	---
8/31/05	10.07	7.72	---	---	SPH: 2.46	---	---	---	---	---	---	---	---	---
3/27/06	10.07	NM(2)	---	---	---	---	---	---	---	---	---	---	---	---
9/6/06	10.07	NM(2)	---	---	No Access	---	---	---	---	---	---	---	---	---
4/4/07	10.07	NM(2)	---	---	---	---	---	---	---	---	---	---	---	---
10/2/07	10.07	NM(2)	---	---	---	---	---	---	---	---	---	---	---	---
3/19/08	---	NM(2)	---	---	---	---	---	---	---	---	---	---	---	---
11/18/08	10.07	10.10	-0.03	---	---	---	---	---	---	---	---	---	---	---
4/1/09	---	NM(2)	---	---	---	---	---	---	---	---	---	---	---	---
10/29/09	---	NM(2)	---	---	SPH: None	---	---	---	---	---	---	---	---	---
4/8/10	10.07	7.43	2.64	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	10.07	6.97	3.10	---	SPH: None	---	---	---	---	---	---	---	---	---
9/13/11	10.07	6.64	3.43	8260B	SPH: None; SGC	100 Y	<300	110	780	140	46	13	69	<1.3
12/21/11	10.07	7.04	3.03	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	10.07	6.32	3.75	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	10.07	5.91	4.16	---	SPH: None	---	---	---	---	---	---	---	---	---
7/17/13	10.07	6.67	3.4	---	SPH: None	---	---	---	---	---	---	---	---	---
RW-D4														
4/22/03	---	8.11	---	---	SPH: 1.98 ft.	---	---	---	---	---	---	---	---	---
4/28/04	10.22	7.99	2.23	---	SPH: 2.09 ft.	---	---	---	---	---	---	---	---	---
10/27/04	10.22	6.49	3.73	---	SPH: Present	---	---	---	---	---	---	---	---	---
8/31/05	10.22	8.09	---	---	SPH: 2.12 ft.	---	---	---	---	---	---	---	---	---
3/27/06	10.22	NM(2)	---	---	---	---	---	---	---	---	---	---	---	---
9/6/06	10.22	NM(2)	---	---	No Access	---	---	---	---	---	---	---	---	---
4/4/07	10.22	NM(2)	---	---	---	---	---	---	---	---	---	---	---	---

Table 1
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Municipal Service Center
7101 Edgewater Drive, Oakland, California

Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
10/2/07	10.22	NM[2]	---	---	---	---	---	---	---	---	---	---	---	---
3/19/08	---	NM[2]	---	---	---	---	---	---	---	---	---	---	---	---
11/19/08 [10]	10.22	9.10	1.12	8260B	SGC	55,000	9,700	46,000	7,600 Y	210	17	270	280	<1.7
4/1/09	---	NM[2]	---	---	---	---	---	---	---	---	---	---	---	---
10/29/09	---	NM[2]	---	---	SPH: None	---	---	---	---	---	---	---	---	---
4/8/10	10.22	5.00	5.22	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	10.22	6.37	3.85	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	10.22	5.92	4.30	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	10.22	6.14	4.08	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	10.22	4.64	5.58	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	10.22	5.46	4.76	---	SPH: None	---	---	---	---	---	---	---	---	---
7/17/13	10.22	6.12	4.1	---	Odor	---	---	---	---	---	---	---	---	---
RW-D5														
4/22/03	---	6.04	---	---	SPH: 0.07 ft.	---	---	---	---	---	---	---	---	---
4/28/04	9.99	5.96	4.03	---	SPH: None	---	---	---	---	---	---	---	---	---
10/27/04	9.99	6.48	3.51	---	SPH: Present	---	---	---	---	---	---	---	---	---
8/31/05	9.99	7.02*	---	---	SPH: 1.01 ft.	---	---	---	---	---	---	---	---	---
3/27/06	9.99	NM[2]	---	---	---	---	---	---	---	---	---	---	---	---
9/6/06	9.99	NM[2]	---	---	No Access	---	---	---	---	---	---	---	---	---
4/4/07	9.99	NM[2]	---	---	---	---	---	---	---	---	---	---	---	---
10/2/07	9.99	NM[2]	---	---	---	---	---	---	---	---	---	---	---	---
3/19/08	---	NM[2]	---	---	---	---	---	---	---	---	---	---	---	---
11/18/08	9.99	9.45	0.54	---	---	---	---	---	---	---	---	---	---	---
4/1/09	---	NM[2]	---	---	---	---	---	---	---	---	---	---	---	---
10/29/09	---	NM[2]	---	---	SPH: None	---	---	---	---	---	---	---	---	---
4/8/10	9.99	4.97	5.02	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	9.99	6.30	3.69	---	---	---	---	---	---	---	---	---	---	---
9/12/11	9.99	5.89	4.10	---	SPH: None	---	---	---	---	---	---	---	---	---
9/13/11	9.99	---	---	8260B	SGC	230 YF	<300	210	810	1,100	11	21	26.9	<5.0
9/13/11 dup	9.99	---	---	8260B	SGC	320 YF	<300	260	800	1,200	12	19	24.1	<5.0
12/21/11	9.99	6.10	3.89	---	SPH: None	---	---	---	---	---	---	---	---	---
12/22/11	9.99	---	---	8260B	SGC	1,200	730	740	400	150	2.5	4.4	12.3	<0.50
3/28/12	9.99	4.57	5.42	---	SPH: None	---	---	---	---	---	---	---	---	---
3/29/12	9.99	---	---	8260B	SGC	270	<300	190	280	110	2.1	3.4	10.2	<1.0
3/29/12 dup	9.99	---	---	8260B	SGC	360	<300	250	280	100	2.3	3.2	10.1	<1.0
6/26/12	9.99	5.41	4.58	---	SPH: None	---	---	---	---	---	---	---	---	---

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Municipal Service Center
7101 Edgewater Drive, Oakland, California

Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
6/27/12	9.99	---	---	8260B	SGC	510	<310	360	390	820	6.1	4.4	6.7	<1.0
7/18/13	9.99	6.08	3.91	8260B	SPH: None; SCG	360 Y	<290	280	710	1,500	17	11	23.4	<5.0
RW-D6														
11/18/08	---	11.10	---	---	---	---	---	---	---	---	---	---	---	---
4/1/09	---	NM[2]	---	---	---	---	---	---	---	---	---	---	---	---
10/29/09	---	NM[2]	---	---	SPH: None	---	---	---	---	---	---	---	---	---
4/8/10	---	7.10	---	---	SPH: None; Odor	---	---	---	---	---	---	---	---	---
10/19/10	---	6.45	---	---	SPH: None; Odor	---	---	---	---	---	---	---	---	---
9/12/11	---	6.11	---	---	SPH: None	---	---	---	---	---	---	---	---	---
9/13/11	---	---	---	8260B	SGC	1100 Y	<300	1,300	8,700	580	100	200	480	<5.0
12/21/11	---	6.50	---	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	---	5.88	---	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	---	5.44	---	---	SPH: None	---	---	---	---	---	---	---	---	---
7/18/13	---	6.23	---	8260B	Odor; SCG	1,200 Y	360	1,300	5,300	860	120	94	720	<7.1
7/18/13	---	---	---	8260B	Odor; SCG	1,400 Y	340	1,400	4,900	800	120	83	650	<7.1
RW-D7														
11/19/08 [10]	---	9.62	---	8260B	SGC	54,000 Y	59,000	43,000	3,400	100	54	13	830	<3.1
4/1/09	---	NM[2]	---	---	---	---	---	---	---	---	---	---	---	---
10/29/09	---	NM[2]	---	---	SPH: None	---	---	---	---	---	---	---	---	---
4/8/10	---	5.55	---	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	---	6.45	---	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	---	5.99	---	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	---	6.61	---	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	---	3.53	---	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	---	5.62	---	---	SPH: None	---	---	---	---	---	---	---	---	---
7/17/13	---	6.22	---	---	Odor	---	---	---	---	---	---	---	---	---
RW-D8														
11/18/08	---	8.48	---	---	---	---	---	---	---	---	---	---	---	---
4/1/09	---	NM[2]	---	---	---	---	---	---	---	---	---	---	---	---
10/29/09	---	NM[2]	---	---	SPH: None	---	---	---	---	---	---	---	---	---
4/8/10	---	4.27	---	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	---	5.19	---	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	---	4.59	---	---	SPH: None	---	---	---	---	---	---	---	---	---
9/13/11	---	---	---	8260B	SGC	6,000 Y	11,000	5,000	790	14	1.5	2.8	49	<0.5
12/21/11	---	5.04	---	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	---	3.15	---	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	---	4.11	---	---	SPH: None	---	---	---	---	---	---	---	---	---
7/19/13	---	4.99	---	8260B	Odor; SCG	1,800 Y	790	1,700	4,200	14	15	14	450	<0.50

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Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
RW-D9														
11/18/08	---	9.70	---	---	---	---	---	---	---	---	---	---	---	---
4/1/09	---	NM[(2)]	---	---	---	---	---	---	---	---	---	---	---	---
10/29/09	---	NM[(2)]	---	---	SPH: None	---	---	---	---	---	---	---	---	---
4/8/10	---	6.92	---	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	---	6.34	---	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	---	5.79	---	---	SPH: None; odor;	---	---	---	---	---	---	---	---	---
9/14/11	---	---	---	8260B	SGC	70 Y	<300	72	450	85	3.5	3.9	31	<0.50
12/21/11	---	6.75	---	---	SPH: None	---	---	---	---	---	---	---	---	---
12/22/11	---	---	---	8260B	SGC	730 Y	400	830	1,300	25	1.5	4.1	34	<0.50
3/28/12	---	6.26	---	---	SPH: None	---	---	---	---	---	---	---	---	---
3/29/12	---	---	---	8260B	SGC	180	320	180	940	60	2.7	4	38	<0.50
6/26/12	---	5.15	---	---	SPH: None	---	---	---	---	---	---	---	---	---
6/27/12	---	---	---	8260B	SGC	800	630	860	1,400	28	1.1	2.7	14.8	<0.50
7/18/13	---	5.94	---	8260B	Odor; SCG	93 Y	<290	94	590	120	4.0	5.4	58	<0.50
RW-D10														
11/18/08	---	8.84	---	8260B	SGC	1,000 Y	650	760	640 Y	2.7	0.69	5.6	17.71	<0.50
4/1/09	---	NM[(2)]	---	---	---	---	---	---	---	---	---	---	---	---
10/29/09	---	NM[(2)]	---	---	SPH: None	---	---	---	---	---	---	---	---	---
4/8/10	---	4.87	---	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	---	6.22	---	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	---	5.82	---	---	SPH: None, odor	---	---	---	---	---	---	---	---	---
12/21/11	---	5.99	---	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	---	4.48	---	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	---	5.35	---	---	SPH: None	---	---	---	---	---	---	---	---	---
7/17/13	---	6	---	---		---	---	---	---	---	---	---	---	---
RW-D11														
11/18/08	---	8.66	---	---	---	---	---	---	---	---	---	---	---	---
4/1/09	---	NM[(2)]	---	---	---	---	---	---	---	---	---	---	---	---
10/29/09	---	NM[(2)]	---	---	SPH: None	---	---	---	---	---	---	---	---	---
4/8/10	---	4.71	---	---	SPH: Sheen	---	---	---	---	---	---	---	---	---
10/19/10	---	6.04	---	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	---	5.68	---	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	---	5.84	---	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	---	4.32	---	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	---	NM[(7)]	---	---	SPH: None	---	---	---	---	---	---	---	---	---
7/17/13	---	5.85	---	---	SPH: None	---	---	---	---	---	---	---	---	---

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Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
OB-D1														
4/22/03	---	5.41	---	---	Strong Odor	---	---	---	---	---	---	---	---	---
4/28/04	9.46	5.31	4.15	---	Strong Odor	---	---	---	---	---	---	---	---	---
10/27/04	9.46	5.89	3.57	---	---	---	---	---	---	---	---	---	---	---
8/31/05	9.46	5.42	---	---	SPH: None	---	---	---	---	---	---	---	---	---
3/27/06	9.46	3.09	6.37	---	SPH: None	---	---	---	---	---	---	---	---	---
9/6/06	9.46	8.31	1.15	---	SPH: 0.01 ft.	---	---	---	---	---	---	---	---	---
4/4/07	9.46	7.77	1.69	---	---	---	---	---	---	---	---	---	---	---
10/2/07	9.46	8.66	0.80	---	SPH: None	---	---	---	---	---	---	---	---	---
3/19/08	9.46	8.90	0.56	---	SPH: None	---	---	---	---	---	---	---	---	---
11/18/08	9.46	8.41	1.05	---	---	---	---	---	---	---	---	---	---	---
4/1/09	9.46	8.50	0.96	---	SPH: sheen	---	---	---	---	---	---	---	---	---
10/29/09	9.46	7.65	1.81	---	SPH: None	---	---	---	---	---	---	---	---	---
4/8/10	9.46	4.71	4.75	---	Strong Odor	---	---	---	---	---	---	---	---	---
10/19/10	9.46	6.10	3.36	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	9.46	5.69	3.77	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	9.46	5.9	3.56	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	9.46	4.33	5.13	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	9.46	5.2	4.26	---	SPH: None	---	---	---	---	---	---	---	---	---
7/13/13	9.46	5.94	3.52	---	SPH: None	---	---	---	---	---	---	---	---	---
OB-D2														
4/22/03	---	5.14	---	---		---	---	---	---	---	---	---	---	---
4/28/04	9.95	5.25	4.70	---		---	---	---	---	---	---	---	---	---
10/27/04	9.95	6.42	3.53	---	SPH: None	---	---	---	---	---	---	---	---	---
8/31/05	9.95	5.71	---	---	SPH: 0.01 ft.	---	---	---	---	---	---	---	---	---
3/27/06	9.95	2.32	7.63	---	SPH: None	---	---	---	---	---	---	---	---	---
9/6/06	9.95	8.39	1.56	---	SPH: 0.01 ft.	---	---	---	---	---	---	---	---	---
4/4/07	9.95	7.94	2.01	---	---	---	---	---	---	---	---	---	---	---
10/2/07	9.95	9.07	0.88	---	SPH: None	---	---	---	---	---	---	---	---	---
3/19/08	9.95	8.64	1.31	---	SPH: None	---	---	---	---	---	---	---	---	---
11/18/08	9.95	8.94	1.01	---	---	---	---	---	---	---	---	---	---	---
4/1/09	9.95	7.00	2.95	---	SPH: None	---	---	---	---	---	---	---	---	---
10/29/09	9.95	8.24	1.71	---	SPH: None	---	---	---	---	---	---	---	---	---
4/8/10	9.95	5.38	4.57	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	9.95	6.55	3.40	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	9.95	5.59	4.36	---	SPH: None	---	---	---	---	---	---	---	---	---
12/21/11	9.95	6.21	3.74	---	SPH: None	---	---	---	---	---	---	---	---	---
3/28/12	9.95	4.9	5.05	---	SPH: None	---	---	---	---	---	---	---	---	---
6/26/12	9.95	5.41	4.54	---	SPH: None	---	---	---	---	---	---	---	---	---
7/13/13	9.95	6.36	3.59	---	SPH: None	---	---	---	---	---	---	---	---	---

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Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
RW-1														
4/22/03	---	6.43	---	---		---	---	---	---	---	---	---	---	---
4/28/04	---	5.73	---	---		---	---	---	---	---	---	---	---	---
10/27/04	---	6.34	---	---	SPH: None	---	---	---	---	---	---	---	---	---
8/31/05	---	5.83	---	---	SPH: None	---	---	---	---	---	---	---	---	---
3/27/06	---	NM[(2)]	---	---	---	---	---	---	---	---	---	---	---	---
9/6/06	---	NM[(2)]	---	---	No Access	---	---	---	---	---	---	---	---	---
4/4/07	---	NM[(2)]	---	---	---	---	---	---	---	---	---	---	---	---
10/2/07	---	NM[(2)]	---	---	---	---	---	---	---	---	---	---	---	---
3/19/08	---	NM[(2)]	---	---	---	---	---	---	---	---	---	---	---	---
11/18/08	---	8.81	---	---	---	---	---	---	---	---	---	---	---	---
4/1/09	---	NM[(2)]	---	---	---	---	---	---	---	---	---	---	---	---
10/29/09	---	8.17	---	---	---	---	---	---	---	---	---	---	---	---
4/8/10	---	5.21	---	---	SPH: None	---	---	---	---	---	---	---	---	---
10/19/10	---	6.60	---	---	SPH: None	---	---	---	---	---	---	---	---	---
9/12/11	---	6.21	---	---	SPH: None	---	---	---	---	---	---	---	---	---
9/13/11	---	---	---	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
12/21/11	---	6.41	---	---	SPH: None	---	---	---	---	---	---	---	---	---
12/22/11	---	---	---	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
3/28/12	---	4.74	---	---	SPH: None	---	---	---	---	---	---	---	---	---
3/29/12	---	---	---	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
6/26/12	---	5.71	---	---	SPH: None	---	---	---	---	---	---	---	---	---
6/27/12	---	---	---	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
7/19/13	---	6.36	---	8260B	SGC	<49	<290	<49	<50	<0.50	<0.50	<0.50	<0.50	<0.50
Field Blank														
10/28/04	---	---	---	8260B		---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<0.5
9/1/05	---	---	---	8260B		<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
9/2/05	---	---	---	8260B		---	---	---	<50	---	---	---	---	---
4/4/06	---	---	---	8260B		<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
9/7/06	---	---	---	8260B		<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
4/3/07	---	---	---	8260B		<50	<300	<50	<50	<0.5	0.54	<0.5	<0.5	<0.5
10/2/07	---	---	---	8260B		<50	<300	<50	<50	<0.5	0.5	<0.5	<0.5	<0.5
3/20/08	---	---	---	8260B	SGC	<50	<300	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/19/08	---	---	---	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
11/20/08	---	---	---	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
11/21/08	---	---	---	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
4/1/09	---	---	---	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
10/30/09	---	---	---	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
4/8/10	---	---	---	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
10/19/10	---	---	---	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	0.51	<0.50

Table 1
Summary of Groundwater Analytical Data, Petroleum Hydrocarbons
Municipal Service Center
7101 Edgewater Drive, Oakland, California

Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
9/14/11	---	---	---	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
12/22/11	---	---	---	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
3/29/12	---	---	---	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
6/27/12	---	---	---	8260B	SGC	<50	<300	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50
Trip Blank														
8/19/98	---	---	---	8020		---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5.0
11/22/99	---	---	---	8020		---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5.0
11/28/00	---	---	---	8020		---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5.0
2/27/01	---	---	---	8020	Filtered+SGC	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5.0
5/17/01	---	---	---	8020	SGC	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5.0
12/16/01	---	---	---	8021		---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5.0
4/5/02	---	---	---	8021	Trip Blank 1	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5
4/5/02	---	---	---	8021	Trip Blank 2	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5
6/21/02	---	---	---	8021	Trip Blank 1	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5
9/12/02	---	---	---	8021	Trip Blank 1	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<2
9/13/02	---	---	---	8021	Trip Blank 2	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<2
4/23/03	---	---	---	8021B	Trip Blank 1	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<2
4/28/04	---	---	---	8260B	Trip Blank 1	---	---	---	<100	<0.5	<1.0	<1.0	<1.0	<1.0
10/29/04	---	---	---	8260B	Trip Blank 2	---	---	---	<50	---	---	---	---	---
4/3/07	---	---	---	8260B	Trip Blank 1	---	---	---	---	<0.5	<0.5	<0.5	<0.5	<0.5
10/2/07	---	---	---	8260B	Trip Blank 1	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:

Groundwater elevations corrected for the presence of free product according to the calculation: GW Elevation = TOC - DTW + (0.8 x SPH thickness)

(1) = Depth to groundwater measured on August 31, 2005.
(2) = Converted to an extraction well, and access port is too small for the oil/water probe.
(3) = Depth to groundwater measured on March 27, 2006.
(4) = Could not locate well.
(5) = Well dewatered, field staff unable to collect all samples.
(6) = Well has active remediation unit/recovery.
(7) = Well was covered by car or heavy equipment.
(8) = Depth to groundwater measured on March 19, 2008.
(9) = Well dewatered, field staff unable to collect samples.
(10) = Depth to groundwater measured on November 18, 2008.
(11) = Low surrogate recovery was observed for hexacosane. The sample was re-extracted, but was outside the EPA recommended hold time.
(12) = Depth to groundwater measured on April 1, 2009.
(13) = Well checked for SPH by OTG EniroEngineering Solutions on September 30, 2011
* = Product was thick; difficult to measure thickness.

Table 1
Summary of Groundwater Analytical Data, Petroleum Hydrocarbons
Municipal Service Center
7101 Edgewater Drive, Oakland, California

Well ID/ Date	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	BTEX Method	Notes	TPH-d (µg/l)	TPH-mo (µg/l)	TPH-k (µg/l)	TPH-g (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)

--- = Not measured/analyzed
BTEX = Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8020 or 8240/8260
DTW = Depth to water
Dup = Duplicate sample
EPA = Environmental Protection Agency
Filtered = Groundwater samples were filtered through a 0.45-micron glass membrane filter.
ID = Identification
MTBE = Methyl tertiary-butyl ether by EPA Method 8020 or 8260. Confirmation 8260 results shown in parentheses.
NM = Not measured. Well obstructed or could not be located.
RPD = Relative percent difference
SPH = Separate-phase hydrocarbons; measured thickness
SGC = Silica gel cleanup based on Method 3630B prior to TPH-d, TPH-k, or TPH-mo analysis, following California Regional Water Quality Control Board February 16, 1999 memorandum
TBW = Tank backfill well
TOC = Top of casing
TPH-d = Total petroleum hydrocarbons quantitated as diesel - analyzed by EPA Method 8015B
TPH-g = Total petroleum hydrocarbons quantitated as gasoline - analyzed by EPA Method 8015B
TPH-k = Total petroleum hydrocarbons quantitated as kerosene - analyzed by EPA Method 8015B
TPH-mo = Total petroleum hydrocarbons quantitated as motor oil - analyzed by EPA Method 8015B

a = The analytical laboratory reviewed the data and noted that petroleum hydrocarbons quantified in the diesel range actually resemble heavier fuels at the front end of the motor oil pattern.
b= The analytical laboratory reviewed the data and noted that petroleum hydrocarbons quantified in the diesel range actually resemble lighter fuels; the response looks like lower carbon chain compounds close to the gasoline range.
b1= Analyte detected above the reporting limit in the laboratory method blank.
c= The analytical laboratory reviewed the data and noted that the sample exhibits a fuel pattern that does not resemble the standard.
e= Results are estimated due to concentrations exceeding the calibration range.
f= Filtration with 0.45-micron glass membrane filter and silica gel treatment.
h= The analytical laboratory reviewed the data and noted that petroleum hydrocarbons quantified in the motor oil range are actually from the front end of the kerosene oil pattern.
i= The analytical laboratory reviewed the data and noted that petroleum hydrocarbons quantified in the motor oil range are actually from the back end of the kerosene oil pattern.
j= The analytical laboratory reviewed the data and noted that the sample exhibited an unknown peak or peaks.
B= Results flagged with "B" indicate motor oil was detected in the method blank.
B1=Analyte detected in associated equipment blank.
C= Footnote assigned by Ninyo and Moore, not defined in their historical tables.
E= Footnote assigned by Ninyo and Moore, not defined in their historical tables.
F = Original and duplicate sample results RPD was greater than 30 percent.
H= Heavier hydrocarbons contributed to the quantitation.
J= Value qualified as "estimated."
L= Lighter hydrocarbons contributed to the quantitation.
Y= Sample exhibits chromatographic pattern that does not resemble standard.
Z= Sample exhibits unknown single peak or peaks.

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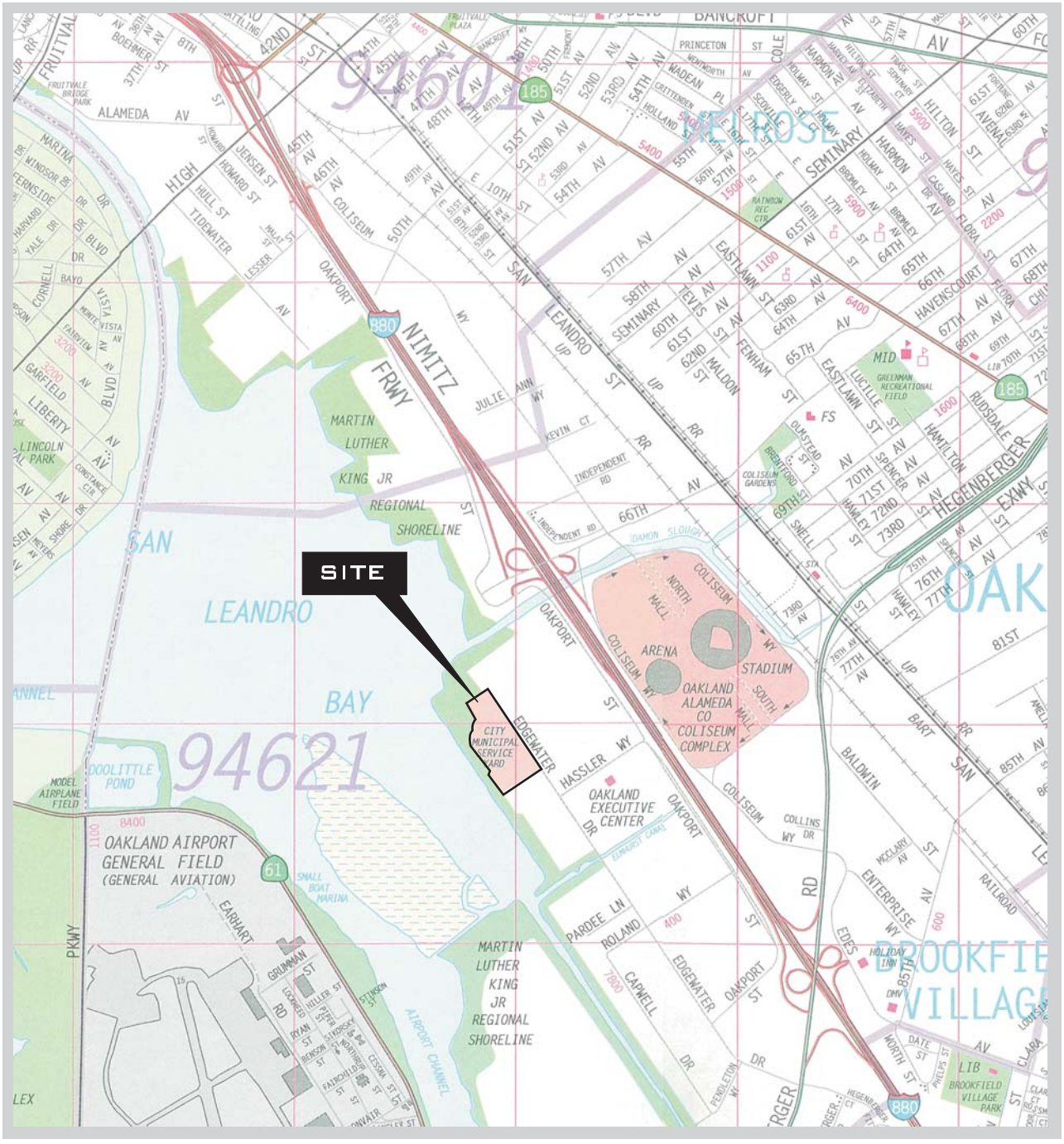
Figures



0 2400 4800

APPROXIMATE SCALE IN FEET

SOURCE: 2002 THOMAS GUIDE FOR ALAMEDA AND CONTRA COSTA COUNTIES

MUNICIPAL SERVICE CENTER
7101 EDGEWATER DRIVE, OAKLAND, CALIFORNIA

SITE VICINITY MAP

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FIGURE
1

DESIGN\092251\11\000\09225 MSC SiteVicinity.CDR

LEGEND:

MW-1	MONITORING WELL LOCATION
RW-D1	REMEDIATION WELL LOCATION
TBW-1	ABANDONED WELL LOCATION
	FENCE
(5.34)	GROUNDWATER ELEVATION, FEET ABOVE MEAN SEA LEVEL (MSL)
3.0	GROUNDWATER ELEVATION CONTOUR (MSL); DASHED WHERE INFERRED
*	GROUNDWATER ELEVATION NOT USED FOR CONTOURING
UST	UNDERGROUND STORAGE TANK
NM	NOT MEASURED

DAMON SLOUGH

EDGEWATER DRIVE

EDGEWATER DRIVE

Planter

Public Works Building

911 Center

Admin.

Crafts and Storage

Storage

Building No. 5

Active USTs

Former USTs

Former USTs

Former UST

Aboveground Storage Tanks
NGV Fueling Station

MW-1 (5.14)
MW-2 (3.60)
MW-3
MW-4
MW-5 (5.22)
MW-6 (5.31)
MW-7 (4.75)
MW-8 (2.60)
MW-9 (2.58)
MW-10 (3.36)
MW-11 (5.34)
MW-12 (NM)
MW-13 (0.98)
MW-14 (2.79)
MW-15 (2.26)
MW-16 (DRY)
MW-17 (0.48)
MW-18

RW-D1 (3.54)
RW-D2 (3.40)
RW-D3 (3.40)
RW-D4 (4.15*)
RW-D5 (3.91)
RW-D6
RW-D7
RW-D8
RW-D9
RW-D10
RW-D11
OB-D1 (3.52)
OB-D2 (3.59)
RW-1
TBW-5 (3.54)
TBW-6 (3.33)
RW-C1 (4.65)
RW-C2 (4.41)
RW-C3 (4.31)
RW-C4 (4.97)
RW-C5 (4.63)
RW-C6 (4.41)
RW-C7 (3.83*)
TBW-1
TBW-2
OB-C1
TBW-3
TBW-4
RW-A1 (6.74)
RW-A2 (6.49)
OB-A1
RW-B1 (3.73)
RW-B2 (3.76)
RW-B3 (1.34)
RW-B4 (1.38)

5.0
4.0
3.0
2.0
1.0
6.0

SAN LEANDRO BAY

N

0 75 150 300
Scale (ft)

Source: CAMBRIA

MUNICIPAL SERVICE CENTER
7101 EDGEWATER DRIVE, OAKLAND, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP SHALLOW GROUNDWATER - JULY 2013

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FIGURE 2

LEGEND:

MW-1	MONITORING WELL LOCATION
RW-D1	REMEDIATION WELL LOCATION
TBW-1	ABANDONED WELL LOCATION
MW-1 / TPHg / TPHk / TPHd / TPHmo / B	MONITORING WELL ID TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (µg/L) TOTAL PETROLEUM HYDROCARBONS AS KEROSENE (µg/L) TOTAL PETROLEUM HYDROCARBONS AS DIESEL (µg/L) TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL (µg/L) BENZENE (µg/L)
SAMPLE	
µg/L	MICROGRAMS PER LITER
UST	UNDERGROUND STORAGE TANK
BOLD	CONCENTRATION EXCEEDS THE RWQCB ENVIRONMENTAL SCREENING LEVEL FOR SITES WHERE GROUNDWATER IS NOT A CURRENT OR POTENTIAL DRINKING WATER RESOURCE

DAMON SLOUGH

EDGEWATER DRIVE

EDGEWATER DRIVE

Planter

911 Center

Admin.

Public Works Building

Crafts and Storage

Storage

Active USTs

Former USTs

Former UST

Building No. 5

Aboveground Storage Tanks
NGV Fueling Station

SAN LEANDRO BAY

MW-2

MW-3

MW-4

MW-5
2,000
530
470 Y
<290
0.65

MW-6
380
1,700
2,100 Y
360
160

MW-7

MW-8

MW-9

MW-10
<50
<49
55 Y
<290
8.9

MW-11

MW-12

MW-13
<50
<49
64 Y
330
<0.50

MW-14
<50
<49
80 Y
<290
<0.50

MW-15

MW-16

MW-17
<50
<49
<49
<290
<0.050

MW-18

MW-1
200
76.0
75 Y
<300
<0.50

RW-A1

RW-A2
<50
110 Y
420 Y
<290
<0.50

RW-B1
<500 / <500
76 / 66
150 Y / 150 Y
380 / <290
380 / < 290

RW-B2
9,700
260
240 Y
<290
2,100

RW-B3
2,900
2,000
1,900 Y
600
1,900

RW-B4
7,600
3,900
3,600 Y
500
2,200

RW-C1

RW-C2

RW-C3

RW-C4

RW-C5
990
320
450 Y
<290
71

RW-C6
2,600
920
940 Y
<290
400

RW-C7
120
110
340 Y
340
21

RW-D1

RW-D2

RW-D3

RW-D4

RW-D5
710
280
360 Y
<290
1,500

RW-D6
5,300 / 4,900
1,300 / 1,400
1,200 Y / 1,400 Y
360 / 340
860 / 800

RW-D7

RW-D8
4,200
1,700
1,800 Y
790
14

RW-D9
590
94
360 Y
<290
120

RW-D10

RW-D11

OB-A1

OB-D1

OB-D2

OB-C1

TBW-1

TBW-2

TBW-3

TBW-4

TBW-5

TBW-6

0 75 150 300

Scale (ft)

Source: CAMBRIA

MUNICIPAL SERVICE CENTER
7101 EDGEWATER DRIVE, OAKLAND, CALIFORNIA

HYDROCARBON CONCENTRATIONS IN SHALLOW GROUNDWATER JULY 2013

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FIGURE 3

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Appendix A

Groundwater Sampling Field Data Sheets

ARCADIS WATER-LEVEL MEASUREMENTS LOG

Project No. LC010060.0016.00003 Date July 17, 2013 Page 1 of 2

Project Name Oakland MSC Day: ☐ Sun ☐ Mon ☐ Tues ☒ Weds ☐ Thurs ☐ Fri ☐ Sat

Field Personnel Miljan Draganic and Gary Clift

General Observations Overcast; Site secured; heavy vehicular traffic on property.

WELL NO.	Time Opened	DEPTH TO WATER 1	DEPTH TO WATER 2	Time Measured	WELL SECURE? Y	WELL SECURE? N	REMARKS (UNITS = FEET)
MW-10	0820	7.23	7.23	1143	X		
MW-13	0825	10.38	10.38	1147	X		
MW-14	0828	7.26	7.26	1149	X		
MW-9	0831	8.19	8.19	1152		X	No bolts
MW-15	0833	10.10	10.10	1155	X		
MW-16	0837	DRY	DRY	1200	X		TD = 12.60'
MW-17	0838	9.38	9.38	1203		X	No bolts; Well box rim comes off
MW-8	0842	9.62	9.62	1206	X		
MW-2	0855	6.87	6.87	1220	X		
RW-D1	0926	6.64	6.64	1235	X		
RW-D2	0920	6.15	6.15	1237	X		
RW-D3	0923	6.67	6.67	1240	X		
RW-D4	0936	6.12	6.12	1300	X		Odor present (petroleum)
RW-D5	0902	6.08	6.08	1250	X		
RW-D6	0928	6.23	6.23	1233	X		Strong petroleum odor
RW-D7	0931	6.22	6.22	1230	X		Petroleum odor present
RW-D8	0900	4.99	4.99	1228	X		Slight petroleum odor
RW-D9	0933	5.94	5.94	1242	X		Slight petroleum odor
RW-D10	0917	6.00	6.00	1244	X		
RW-D11	0914	5.85	5.85	1246	X		
RW-1	0907	6.36	6.36	1255	X		
OB-D1	0909	5.94	5.94	1248	X		
OB-D2	0911	6.36	6.36	1258	X		
TBW-5	0905	6.68	6.68	1252	X		Petroleum odor present
RW-C1	1020	5.79	5.79	1451	X		
RW-C2	1026	6.17	6.17	1447	X		
RW-C3	1023	6.40	6.40	1449	X		
RW-C4	1430	6.35	6.35	1452	X		
RW-C5	1433	6.16	6.16	1500	X		Petroleum odor present; Pressurized
RW-C6	1439	6.00	6.00	1457	X		Petroleum odor present; Pressurized
RW-C7	1443	6.29	6.29	1458	X		
OB-C1	1436	DRY	DRY	1454	X		TD = 5.33'

rw-lift added

on all pages

WELL NO.	Time Opened	DEPTH TO WATER 1	DEPTH TO WATER 2	Time Measured	WELL SECURE? Y	WELL SECURE? N	REMARKS (UNITS = FEET)
TBW-6	0938	4.16	4.16	1317	X		
MW-1	0941	4.91	4.91	1320	X		
MW-12	Well buried under large cargo container and metal pipes stored on site.						
MW-6	1035	5.67	5.67	1332		X	No bolts; Petroleum odor present
RW-B1	1042	7.46	7.46	1330	X		
RW-B2	1041	7.47	7.47	1328	X		
RW-B3	1040	9.80	9.80	1326	X		Petroleum odor present
RW-B4	1038	9.91	9.91	1324	X		Petroleum odor present
OB-A1	1043	4.48	4.48	1333	X		
RW-A1	1046	3.45	3.45	1334	X		
RW-A2	1048	3.18	3.18	1335	X		
MW-7	1052	6.76	6.76	1339		X	No bolts
MW-5	1091	5.93	5.93	1342	X		Petroleum odor present; Pressurize
MW-11	1056	6.26	6.26	1344	X		
MW-18	—	—	—	—	—	—	As before, well not found.

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WATER-QUALITY SAMPLING LOG

Project No. LC010060.0016.00003 Date: July 18, 2013 Page 1 of 1

Project Name: MSC Oakland Edgewater Sampling Location: 7101 Edgewater Drive, Oakland, Ca

Sampler's Name: Miljan Draganic Sample No.: MW-1 ☒ FB

Sampling Plan By: Ron Goloubow C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Poly Tank Storage Location: On-site

Analyses Requested	No. and Type of Bottles Used
TPHg / BTEX / MTBE by 8260	3 VOAs with HCl preservative
TPHd / TPHmo / TPHk by 8010 with silica gel clean-up	2 500-ml Ambers (Unpreserved)
~~PAHs by 8270~~	~~1 Liter Amber (Unpreserved)~~

Lab Name: Curtis and Tompkins

Delivery By ☐ Courier ☒ Hand

Well No. MW-1 Depth of Water 4.91'

Well Diameter: 2" Well Depth 15.75'

☒ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 10.84'

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 1.7 gal

* After purging, used a different and new bailer to collect Field Blank (FB) sample, and ultimately the well sample.

80% DTW

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
1425		4.91	ϕ						Start purge
1430		6.17	1.5	0.52	23.56	6.85	17261	-157.4	
1434		8.94	3.0	0.61	22.15	6.82	17840	-149.3	
1439		10.06	4.5	0.47	21.32	6.74	17611	-152.4	
1446		12.6	6.0	0.58	21.03	6.73	17508	-146.7	
1450	Waiting for 80% recharge								
1512		8.27	6.2	0.49	21.07	6.79	17317	-154.6	
1515									Sampling FB
1537		5.19	6.5	0.55	21.19	6.76	17769	-152.9	
1540									Sampling

Continue remarks on reverse, if needed...

ARCADIS

WATER-QUALITY SAMPLING LOG

Project No. LC010060.0016.00003 Date: July 18, 2013 Page 1 of _____

Project Name: MSC Oakland Edgewater Sampling Location: 7101 Edgewater Drive, Oakland, Ca

Sampler's Name: GARY CWFT Sample No.: MW-5 ☐ FB

Sampling Plan By: Ron Goloubow C.O.C. No.: _____ ☐ DUP _____

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other _____

Purge Water Storage Container Type: Poly Tank Storage Location: On-site

Analyses Requested	No. and Type of Bottles Used
TPHg / BTEX / MTBE by 8260	3 VOAs with HCl preservative
TPHd / TPHmo / TPHk by 8010 with silica gel clean-up	2 500-ml Ambers (Unpreserved)
PAHs by 8270	1 Liter Amber (Unpreserved)

Lab Name: Curtis and Tompkins

Delivery By ☐ Courier _____ ☒ Hand _____

Well No. MW-5 Depth of Water 5.91

Well Diameter: 2 Well Depth 14.30

☒ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 8.39 x .16

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 1.34 x 3 = 4.02

80% DTW 5.94

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
15:20			1.5	.79	23.88	6.58	2337	-19.0	
15:23			3.0	2.81	23.09	6.77	6024	-89.1	
15:26			4.0	.83	22.65	6.05	1797	-38.2	
15:28			4.5	.79	22.71	6.08	1795	-31.7	
15:30			5.0	.74	22.83	6.11	1784	-32.4	

SAMPLE 15:35

Continue remarks on reverse, if needed...

ARCADIS

WATER-QUALITY SAMPLING LOG

Project No. LC010060.0016.00003 Date: July 19, 2013 Page 1 of 1

Project Name: MSC Oakland Edgewater Sampling Location: 7101 Edgewater Drive, Oakland, Ca

Sampler's Name: GARY CLIFT Sample No.: MW-6 ☐ FB

Sampling Plan By: Ron Goloubow C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Poly Tank Storage Location: On-site

Analyses Requested	No. and Type of Bottles Used
TPHg / BTEX / MTBE by 8260	3 VOAs with HCl preservative
TPHd / TPHmo / TPHk by 8010 with silica gel clean-up	2 500-ml Ambers (Unpreserved)
PAHs by 8270	1 Liter Amber (Unpreserved)

Lab Name: Curtis and Tompkins

Delivery By ☐ Courier ☒ Hand

Well No. MW-6 Depth of Water 5.56

Well Diameter: 2" Well Depth 14.20

☒ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 8.64 x .16 =

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 1.38 x 3 = 4.14

80% DTW 5.74

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
8:40			1.50	1.03	21.67	7.25	4029	-147.6	Strong GAS Smell
8:43			2.0	1.46	22.01	6.69	3291	-126.5	
8:45			3.0	.75	22.18	6.73	3294	-131.6	
8:46			4.0	.72	22.31	6.80	3295	-134.8	
8:48			4.5	.70	22.26	6.82	3304	-131.6	
8:55									SAMPLE

Continue remarks on reverse, if needed...

SAMPLE 8:55

ARCADIS

WATER-QUALITY SAMPLING LOG

Project No. LC010060.0016.00003 Date: July 18, 2013 Page 1 of _____

Project Name: MSC Oakland Edgewater Sampling Location: 7101 Edgewater Drive, Oakland, Ca

Sampler's Name: M.D. & G.C. Sample No.: MW-10 ☐ FB

Sampling Plan By: Ron Goloubow C.O.C. No.: _____ ☐ DUP _____

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other _____

Purge Water Storage Container Type: Poly Tank Storage Location: On-site

Analyses Requested	No. and Type of Bottles Used
TPHg / BTEX / MTBE by 8260	3 VOAs with HCl preservative
TPHd / TPHmo / TPHk by 8010 with silica gel clean-up	2 500-ml Ambers (Unpreserved)
PAHs by 8270	1 Liter Amber (Unpreserved)

Lab Name: Curtis and Tompkins

Delivery By ☐ Courier _____ ☒ Hand _____

Well No. MW-10 Depth of Water 7.20

Well Diameter: 2" Well Depth 15.14

☒ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 7.94 x .17

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 1.34 x 3 = 4.04

80% DTW _____

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
1107	—	7.20	ϕ	—	—	—	—	→	Start purge.
1110			1.5	0.90	20.93	7.22	7120	-117.8	
1113			3.0	1.14	20.50	7.11	6594	-105.1	
1117			4.5	0.69	19.96	7.13	6038	-125.1	
1119			5.0	0.56	19.76	6.65	5904	-104.9	
1120			5.5	0.61	19.71	7.25	5606	-135.1	
1121			6.0	0.67	19.84	7.18	5355	-127.4	
1123			6.5	0.62	19.95	7.24	5268	-136.0	
1130	—	—	—	—	—	—	—	→	Sampling
		7.40							

Continue remarks on reverse, if needed...

ARCADIS

WATER-QUALITY SAMPLING LOG

Project No. LC010060.0016.00003 Date: July 18, 2013 Page 1 of 1

Project Name: MSC Oakland Edgewater Sampling Location: 7101 Edgewater Drive, Oakland, Ca

Sampler's Name: Miljan Draganic Sample No.: MW-13 ☐ FB

Sampling Plan By: Ron Goloubow C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Poly Tank Storage Location: On-site

Analyses Requested	No. and Type of Bottles Used
TPHg / BTEX / MTBE by 8260	3 VOAs with HCl preservative
TPHd / TPHmo / TPHk by 8010 with silica gel clean-up	2 500-ml Ambers (Unpreserved)
PAHs by 8270	1 Liter Amber (Unpreserved)

Lab Name: Curtis and Tompkins

Delivery By ☐ Courier ☒ Hand

Well No. MW-13 Depth of Water 10.00'

Well Diameter: 2" Well Depth 19.47'

☒ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 9.47'

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 1.51 gal

80% DTW

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
1023	—	10.00	—	—	—	—	—	→	Start purge
1027			1.5	0.59	19.89	6.86	13127	-177.0	
1032			3.0	0.74	19.06	6.78	12871	-161.4	
1036			4.5	0.80	18.92	6.79	13049	-151.0	
1039			5.0	0.76	18.84	6.80	13231	-143.5	
1042			5.5	0.84	18.87	6.81	13174	-147.6	
1045	—	—	—	—	—	—	—	→	Sampling

Continue remarks on reverse, if needed...

ARCADIS

WATER-QUALITY SAMPLING LOG

Project No. LC010060.0016.00003 Date: July 18, 2013 Page 1 of 1

Project Name: MSC Oakland Edgewater Sampling Location: 7101 Edgewater Drive, Oakland, Ca

Sampler's Name: GARY CLIFT Sample No.: MW-14 ☐ FB

Sampling Plan By: Ron Goloubow C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Poly Tank Storage Location: On-site

Analyses Requested	No. and Type of Bottles Used
TPHg / BTEX / MTBE by 8260	3 VOAs with HCl preservative
TPHd / TPHmo / TPHk by 8010 with silica gel clean-up	2 500-ml Ambers (Unpreserved)
PAHs by 8270	1 Liter Amber (Unpreserved)

Lab Name: Curtis and Tompkins

Delivery By ☐ Courier ☒ Hand

Well No. MW-14 Depth of Water 7.17

Well Diameter: 2" Well Depth 14.65

☒ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 7.48 X .17

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 1.27 X 3 = 3.81

80% DTW 7.18

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
10:22			1.0	.91	21.09	7.54	11532	-154.2	
10:24			2.5	.87	20.92	7.51	11493	-150.8	
10:26			3.0	.81	20.90	7.49	11507	-149.7	
10:27			4.0	.78	20.87	7.52	11502	-145.3	

Continue remarks on reverse, if needed...

Sample Time 10:37

ARCADIS

WATER-QUALITY SAMPLING LOG

Project No. LC010060.0016.00003 Date: July 18, 2013 Page 1 of _____

Project Name: MSC Oakland Edgewater Sampling Location: 7101 Edgewater Drive, Oakland, Ca

Sampler's Name: _____ Sample No.: _____ ☐ FB

Sampling Plan By: Ron Goloubow C.O.C. No.: _____ ☐ DUP _____

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other _____

Purge Water Storage Container Type: Poly Tank Storage Location: On-site

Analyses Requested	No. and Type of Bottles Used
TPHg / BTEX / MTBE by 8260	3 VOAs with HCl preservative
TPHd / TPHmo / TPHk by 8010 with silica gel clean-up	2 500-ml Ambers (Unpreserved)
PAHs by 8270	1 Liter Amber (Unpreserved)

Lab Name: Curtis and Tompkins

Delivery By ☐ Courier _____ ☒ Hand _____

* Well is dry, therefore Not sampled.

Well No. MW-16 Depth of Water _____

Well Diameter: _____ Well Depth _____

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height _____

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume _____

80% DTW _____

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks

Continue remarks on reverse, if needed...

ARCADIS WATER-QUALITY SAMPLING LOG

Project No. LC010060.0016.00003 Date: July 18, 2013 Page 1 of 1

Project Name: MSC Oakland Edgewater Sampling Location: 7101 Edgewater Drive, Oakland, Ca

Sampler's Name: GARY CLIFT Sample No.: MW-17 ☐ FB

Sampling Plan By: Ron Goloubow C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Poly Tank Storage Location: On-site

Analyses Requested	No. and Type of Bottles Used
TPHg / BTEX / MTBE by 8260	3 VOAs with HCl preservative
TPHd / TPHmo / TPHk by 8010 with silica gel clean-up	2 500-ml Ambers (Unpreserved)
PAHs by 8270	1 Liter Amber (Unpreserved)

Lab Name: Curtis and Tompkins

Delivery By ☐ Courier ☒ Hand

Well No. MW-17 Depth of Water 8.47

Well Diameter: 2" Well Depth 17.21

☒ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 8.74 x .17

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 1.48 x 3 = 4.45

80% DTW

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
0933		8.47	ϕ						Start purge
0936			1.5	0.70	20.00	7.19	31454	-241.7	
0939			3.0	0.57	19.66	7.34	31908	-258.1	
0942			4.5	0.63	19.67	7.27	32442	-260.4	
0944		8.37	5.0	0.66	19.64	7.29	32439	-264.1	End
0950									Sampling

Continue remarks on reverse, if needed...

ARCADIS

WATER-QUALITY SAMPLING LOG

Project No. LC010060.0016.00003 Date: July 19, 2013 Page 1 of 1

Project Name: MSC Oakland Edgewater Sampling Location: 7101 Edgewater Drive, Oakland, Ca

Sampler's Name: GARY CLIFT Sample No.: RW-A2 ☐ FB

Sampling Plan By: Ron Goloubow C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Poly Tank Storage Location: On-site

Analyses Requested	No. and Type of Bottles Used
TPHg / BTEX / MTBE by 8260	3 VOAs with HCl preservative
TPHd / TPHmo / TPHk by 8010 with silica gel clean-up	2 500-ml Ambers (Unpreserved)
PAHs by 8270	1 Liter Amber (Unpreserved)

Lab Name: Curtis and Tompkins

Delivery By ☐ Courier ☒ Hand

Well No. RW-A2 Depth of Water 3.20

Well Diameter: 4" Well Depth 13.56

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 10.36 x .65

☒ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 6.73 X3 = 20.20

80% DTW 3.20

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
9:10			7.00	1.23	23.98	6.18	679	46.1	Strong odor
9:20			14.00	1.41	23.71	6.31	658	40.1	
9:25			17.00	1.44	23.68	6.34	644	38.7	
9:30			21.00	1.38	23.59	6.36	652	38.4	
9:40									SAMPLE

Continue remarks on reverse, if needed...

Sample 9:40

ARCADIS

WATER-QUALITY SAMPLING LOG

Project No. LC010060.0016.00003 Date: July 19, 2013 Page 1 of 1

Project Name: MSC Oakland Edgewater Sampling Location: 7101 Edgewater Drive, Oakland, Ca

Sampler's Name: Miljan Draganic Sample No.: RW-B1 ☐ FB

Sampling Plan By: Ron Goloubow C.O.C. No.: ☒ DUP RW-B1-D

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Poly Tank Storage Location: On-site

Analyses Requested	No. and Type of Bottles Used
TPHg / BTEX / MTBE by 8260	3 VOAs with HCl preservative
TPHd / TPHmo / TPHk by 8010 with silica gel clean-up	2 500-ml Ambers (Unpreserved)
PAHs by 8270	1 Liter Amber (Unpreserved)

Lab Name: Curtis and Tompkins

Delivery By ☐ Courier ☒ Hand

Well No. RW-B1 Depth of Water 7.45'

Well Diameter: 4" Well Depth 15.52'

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 8.07'

☒ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 5.25 gal.

80% DTW

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
1055		7.49	5	1.84	23.78	6.92	5051	-27.4	
1058			10	2.24	22.88	6.51	6531	-33.0	
1102			15	1.71	22.60	7.09	6089	-59.1	
1105			20	1.68	22.45	6.79	5886	-54.7	
1108			21.5	1.74	22.50	6.74	5792	-60.4	
1110		7.60	23	1.72	22.56	6.70	5602	-62.8	
1115	→	→	→	→	→	→	→	→	Sampling
1120	→	→	→	→	→	→	→	→	DUP Sampling

Continue remarks on reverse, if needed...

ARCADIS WATER-QUALITY SAMPLING LOG

Project No. LC010060.0016.00003 Date: July 19, 2013 Page 1 of 1

Project Name: MSC Oakland Edgewater Sampling Location: 7101 Edgewater Drive, Oakland, Ca

Sampler's Name: GARY CURT Sample No.: RW-B2 ☐ FB

Sampling Plan By: Ron Goloubow C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Poly Tank Storage Location: On-site

Analyses Requested	No. and Type of Bottles Used
TPHg / BTEX / MTBE by 8260	3 VOAs with HCl preservative
TPHd / TPHmo / TPHk by 8010 with silica gel clean-up	2 500-ml Ambers (Unpreserved)
PAHs by 8270	1 Liter Amber (Unpreserved)

Lab Name: Curtis and Tompkins

Delivery By ☐ Courier ☒ Hand

Well No. RW-B2 Depth of Water 7.37

Well Diameter: 4" Well Depth 13.86

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 6.49 x .65

☒ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 4.21 x 3 = 12.65

80% DTW 7.39

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
10:08			4.5	13.42	23.52	5.99	8378	84.1	Strong odor
10:12			6.5	4.26	23.47	7.78	2335	-87.4	DARK color
10:14			8.5	4.14	2346	7.82	2339	-89.7	
10:15			10.0	4.22	23.52	7.91	2342	-90.4	
10:18			13.0	4.31	23.48	7.82	2355	-96.7	
10:30									SAMPLE

Continue remarks on reverse, if needed...

SAMPLE 10:30

ARCADIS

WATER-QUALITY SAMPLING LOG

Project No. LC010060.0016.00003 Date: July 19, 2013 Page 1 of 1

Project Name: MSC Oakland Edgewater Sampling Location: 7101 Edgewater Drive, Oakland, Ca

Sampler's Name: Miljan Draganic Sample No.: RW-B3 ☐ FB

Sampling Plan By: Ron Goloubow C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Poly Tank Storage Location: On-site

Analyses Requested	No. and Type of Bottles Used
TPHg / BTEX / MTBE by 8260	3 VOAs with HCl preservative
TPHd / TPHmo / TPHk by 8010 with silica gel clean-up	2 500-ml Ambers (Unpreserved)
PAHs by 8270	1 Liter Amber (Unpreserved)

Lab Name: Curtis and Tompkins

Delivery By ☐ Courier ☒ Hand

Well No. RW-B3 Depth of Water 9.77'

Well Diameter: 4" Well Depth 14.81'

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 5.04'

☒ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 3.27 gal.

80% DTW

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
1000	—	9.77	ϕ					→	Start purge
1004			3.0	0.69	19.34	6.82	8647	-102.4	
1007			6.0	0.75	19.18	6.79	9036	-104.8	
1010			9.0	0.72	19.17	6.81	9465	-101.6	
1015		9.80	12.0	0.73	19.22	6.86	9591	-103.3	
1020								→	Sampling

Continue remarks on reverse, if needed...

ARCADIS

WATER-QUALITY SAMPLING LOG

Project No. LC010060.0016.00003 Date: July 19, 2013 Page 1 of 1

Project Name: MSC Oakland Edgewater Sampling Location: 7101 Edgewater Drive, Oakland, Ca

Sampler's Name: Miljan Draganic Sample No.: RW-B4 ☐ FB

Sampling Plan By: Ron Goloubow C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Poly Tank Storage Location: On-site

Analyses Requested	No. and Type of Bottles Used
TPHg / BTEX / MTBE by 8260	3 VOAs with HCl preservative
TPHd / TPHmo / TPHk by 8010 with silica gel clean-up	2 500-ml Ambers (Unpreserved)
PAHs by 8270	1 Liter Amber (Unpreserved)

Lab Name: Curtis and Tompkins

Delivery By ☐ Courier ☒ Hand

Well No. RW-B4 Depth of Water 9.85'

Well Diameter: 4" Well Depth 13.80'

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 3.95'

☒ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 2.55 gal

⊗ Groundwater has a slight petroleum odor.

80% DTW

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
0903	—	9.85	ϕ					→	Start purge
0907			2.5	0.77	19.86	6.62	10314	-74.6	
0911			5.0	0.84	19.66	6.66	10351	-70.6	
0914			7.5	0.81	19.53	6.65	10320	-69.5	
0917		9.90	9.0	0.75	19.58	6.64	10333	-66.8	
0925								→	Sampling

Continue remarks on reverse, if needed...

ARCADIS

WATER-QUALITY SAMPLING LOG

Project No. LC010060.0016.00003 Date: July 17, 2013 Page 1 of 1

Project Name: MSC Oakland Edgewater Sampling Location: 7101 Edgewater Drive, Oakland, Ca

Sampler's Name: GARY CURT Sample No.: RW-C5 ☐ FB

Sampling Plan By: Ron Goloubow C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Poly Tank Storage Location: On-site

Analyses Requested	No. and Type of Bottles Used
TPHg / BTEX / MTBE by 8260	3 VOAs with HCl preservative
TPHd / TPHmo / TPHk by 8010 with silica gel clean-up	2 500-ml Ambers (Unpreserved)
PAHs by 8270	1 Liter Amber (Unpreserved)

Lab Name: Curtis and Tompkins

Delivery By ☐ Courier ☒ Hand

Well No. RW-C5 Depth of Water 6.16

Well Diameter: 4 Well Depth 13.30

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 7.14

☒ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 4.641 x 3 = 13.9

80% DTW 6.18

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
15:12			1.5	2.11	23.90	6.61	2387	-94.7	
15:14			5.0	1.13	23.81	6.48	1138	-81.4	
15:16			7.5	1.14	23.55	6.31	1132	-73.6	
15:20			10.5	1.18	23.61	6.39	1121	-81.7	
15:24		6.18	14.5	1.17	23.74	6.42	1116	-80.4	

Continue remarks on reverse, if needed...

Sample Time 15:35

ARCADIS

WATER-QUALITY SAMPLING LOG

Project No. LC010060.0016.00003 Date: July 17, 2013 Page 1 of 1

Project Name: MSC Oakland Edgewater Sampling Location: 7101 Edgewater Drive, Oakland, Ca

Sampler's Name: Miljan Draganic Sample No.: RW-C6 ☐ FB

Sampling Plan By: Ron Goloubow C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Poly Tank Storage Location: On-site

Analyses Requested	No. and Type of Bottles Used
TPHg / BTEX / MTBE by 8260	3 VOAs with HCl preservative
TPHd / TPHmo / TPHk by 8010 with silica gel clean-up	2 500-ml Ambers (Unpreserved)
PAHs by 8270	1 Liter Amber (Unpreserved)

Lab Name: Curtis and Tompkins

Delivery By ☐ Courier ☒ Hand

Well No. RW-C6 Depth of Water 6.00'

Well Diameter: 4" Well Depth 13.31'

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 7.31'

☒ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 4.75 gal

80% DTW

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
1516	13.31	6.00	ϕ						Start purge
1520			5	0.88	22.85	6.62	9214	-93.9	
1525			10	0.74	23.08	6.62	7631	-107.9	
1532			15	0.77	22.93	6.64	8041	-104.7	
1537		6.00	20	0.80	22.96	6.63	7798	-109.7	
1545									Sampling.

Continue remarks on reverse, if needed...

ARCADIS WATER-QUALITY SAMPLING LOG

Project No. LC010060.0016.00003 Date: July 17, 2013 Page 1 of 1

Project Name: MSC Oakland Edgewater Sampling Location: 7101 Edgewater Drive, Oakland, Ca

Sampler's Name: Gary Clift Sample No.: RW-C7 ☐ FB

Sampling Plan By: Ron Goloubow C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Poly Tank Storage Location: On-site

Analyses Requested	No. and Type of Bottles Used
TPHg / BTEX / MTBE by 8260	3 VOAs with HCl preservative
TPHd / TPHmo / TPHk by 8010 with silica gel clean-up	2 500-ml Ambers (Unpreserved)
PAHs by 8270	1 Liter Amber (Unpreserved)

Lab Name: Curtis and Tompkins

Delivery By ☐ Courier ☒ Hand

Well No. RW-C7 Depth of Water 6.29

Well Diameter: 4" Well Depth 14.05

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 7.76

☒ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 5.04 x 3 = 15.13

80% DTW

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
1614	14.05	6.29	0						Start purge
1617			5	1.38	22.44	6.72	8609	-70.4	
1620			10	1.27	21.68	6.58	8264	-62.4	
1624			15	1.25	21.38	6.61	8993	-57.1	
1627			18	1.29	21.30	6.57	9045	-54.3	
1635									

Continue remarks on reverse, if needed...

ARCADIS WATER-QUALITY SAMPLING LOG

Project No. LC010060.0016.00003 Date: July 19, 2013 Page 1 of 1

Project Name: MSC Oakland Edgewater Sampling Location: 7101 Edgewater Drive, Oakland, Ca

Sampler's Name: GARY CLIFT Sample No.: RW-1 ☐ FB

Sampling Plan By: Ron Goloubow C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Poly Tank Storage Location: On-site

Analyses Requested	No. and Type of Bottles Used
TPHg / BTEX / MTBE by 8260	3 VOAs with HCl preservative
TPHd / TPHmo / TPHk by 8010 with silica gel clean-up	2 500-ml Ambers (Unpreserved)
PAHs by 8270	1 Liter Amber (Unpreserved)

Lab Name: Curtis and Tompkins

Delivery By ☐ Courier ☒ Hand

Well No. RW-1 Depth of Water 6.19

Well Diameter: 4" Well Depth 16.61

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 10.42 X .65

☒ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 6.77 x 3 = 20.31

80% DTW 6.63

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
11:54			7.0	.40	22.98	6.49	9077	-130.9	
11:58			15.0	.30	21.46	6.45	11531	-142.5	
12:04			16.0	.58	21.35	6.51	11572	-143.7	
12:06			18.0	.43	21.38	6.56	11591	-143.3	
12:08			21.0	.47	21.41	6.59	11620	-142.4	
12:25									SAMPLE

Continue remarks on reverse, if needed...

SAMPLE 12:25

ARCADIS — WATER-QUALITY SAMPLING LOG

Project No. LC010060.0016.00003 Date: July 18, 2013 Page 1 of 1

Project Name: MSC Oakland Edgewater Sampling Location: 7101 Edgewater Drive, Oakland, Ca

Sampler's Name: Miljan Draganic Sample No.: RW-D5 ☐ FB

Sampling Plan By: Ron Goloubow C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Poly Tank Storage Location: On-site

Analyses Requested	No. and Type of Bottles Used
TPHg / BTEX / MTBE by 8260	3 VOAs with HCl preservative
TPHd / TPHmo / TPHk by 8010 with silica gel clean-up	2 500-ml Ambers (Unpreserved)
PAHs by 8270	1 Liter Amber (Unpreserved)

Lab Name: Curtis and Tompkins

Delivery By ☐ Courier ☒ Hand

Well No. RW-D5 Depth of Water 6.05'

Well Diameter: 4" Well Depth 11.91'

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 5.86'

☒ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 3.81 gal

⊛ Groundwater has some petroleum odor to it.

80% DTW

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
1316	—	6.05	ϕ	—	—	—	—	→	Start Purge
1320			4.0	0.76	25.04	6.66	7045	-120.0	
1325			8.0	0.82	24.22	6.48	6773	-97.1	
1330			12.0	0.88	24.05	6.44	6698	-92.7	
1333			14.0	0.86	23.97	6.44	6671	-90.6	
1336		6.19	16.0	0.88	24.00	6.43	6618	-88.4	
1340	—	—	—	—	—	—	—	→	Sampling.

Continue remarks on reverse, if needed...

ARCADIS

WATER-QUALITY SAMPLING LOG

Project No. LC010060.0016.00003 Date: July 18, 2013 Page 1 of 1

Project Name: MSC Oakland Edgewater Sampling Location: 7101 Edgewater Drive, Oakland, Ca

Sampler's Name: GARY CLIFT Sample No.: RW-D6 ☐ FB

Sampling Plan By: Ron Goloubow C.O.C. No.: ☒ DUP RW-D6-D

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Poly Tank Storage Location: On-site

Analyses Requested	No. and Type of Bottles Used
TPHg / BTEX / MTBE by 8260	3 VOAs with HCl preservative
TPHd / TPHmo / TPHk by 8010 with silica gel clean-up	2 500-ml Ambers (Unpreserved)
PAHs by 8270	1 Liter Amber (Unpreserved)

Lab Name: Curtis and Tompkins

Delivery By ☐ Courier ☒ Hand

Well No. RW-D6 Depth of Water 6.52

Well Diameter: 4" Well Depth 14.50

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 7.98 X .65 =

☒ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume 5.18 X 3 = 15.56

80% DTW 6.61

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
13:55			5.50	1.70	24.20	7.48	9679	-64.1	
14:00			11.0	1.59	24.07	7.37	10131	-64.7	
14:08			16.0	1.44	23.94	7.30	10154	-65.2	
14:15		6.61							SAMPLE DUP
14:20									SAMPLE well

<SAMPLE — 14:20> <14:15 - DUP>

Continue remarks on reverse, if needed...

ARCADIS WATER-QUALITY SAMPLING LOG

Project No. LC010060.0016.00003 Date: July 19, 2013 Page 1 of 1

Project Name: MSC Oakland Edgewater Sampling Location: 7101 Edgewater Drive, Oakland, Ca

Sampler's Name: Miljan Draganic Sample No.: RW-D8 ☐ FB

Sampling Plan By: Ron Goloubow C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☒ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Poly Tank Storage Location: On-site

Analyses Requested	No. and Type of Bottles Used
TPHg / BTEX / MTBE by 8260	3 VOAs with HCl preservative
TPHd / TPHmo / TPHk by 8010 with silica gel clean-up	2 500-ml Ambers (Unpreserved)
PAHs by 8270	1 Liter Amber (Unpreserved)

Lab Name: Curtis and Tompkins

Delivery By ☐ Courier ☒ Hand

Well purged Dry.
- Sampled after waiting for 2 hours, came before 80% recharge.

80% DTW

Well No. RW-D8 Depth of Water 4.96'

Well Diameter: 6" Well Depth 19.72'

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 14.76'

☐ 4" (0.65 gal/feet) ☒ 6" (1.47 gal/feet) Well Volume 21.55 gal

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
1150	—	4.96	0	—				→	Start purge
1202		10.96	15	1.20	22.91	6.39	20165	-93.2	
1215		15.76	30	0.77	21.04	6.43	23841	-89.1	Water black & turbid
1229		19.43	40	0.14	20.46	6.38	25960	-105.6	Purged DRY
									Waiting for recharge
1310		18.45							
1440		17.82							
1441		17.93	41	0.63	20.87	6.55	25941	-82.4	Water black & turbid
1445	—							→	Sampling

Continue remarks on reverse, if needed...

ARCADIS WATER-QUALITY SAMPLING LOG

Project No. LC010060.0016.00003 Date: July 18, 2013 Page 1 of 1

Project Name: MSC Oakland Edgewater Sampling Location: 7101 Edgewater Drive, Oakland, Ca

Sampler's Name: GARY CLIFT Sample No.: RW-D9 ☐ FB

Sampling Plan By: Ron Goloubow C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Poly Tank Storage Location: On-site

Analyses Requested	No. and Type of Bottles Used
TPHg / BTEX / MTBE by 8260	3 VOAs with HCl preservative
TPHd / TPHmo / TPHk by 8010 with silica gel clean-up	2 500-ml Ambers (Unpreserved)
PAHs by 8270	1 Liter Amber (Unpreserved)

Lab Name: Curtis and Tompkins

Delivery By ☐ Courier ☒ Hand

Well No. RW-D9 Depth of Water 5.93

Well Diameter: 6" Well Depth 19.85

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height 13.92 X 1.47

☐ 4" (0.65 gal/feet) ☒ 6" (1.47 gal/feet) Well Volume 20.46 X 3 = 61.38

80% DTW

Time	Inlet Depth	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temperature (C°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
13:15			21.0	1.15	23.96	6.45	22385	-121.5	
13:36			35.0	1.20	21.53	6.64	26016	-122.3	Well Going Dry @ 35 G
15:53			40.0	1.23	21.19	6.66	21326	-126.4	
15:55			41.0	1.21	21.30	6.64	21471	-127.8	
15:56			42.0	1.30	21.48	6.61	21431	-124.6	

Continue remarks on reverse, if needed...

Sample 15:59

CHAIN OF CUSTODY

Curtis & Tompkins Laboratories
ENVIRONMENTAL ANALYTICAL TESTING LABORATORY
In Business Since 1878

2323 Fifth Street
Berkeley, CA 94710

Phone (510) 486-0900
Fax (510) 486-0532

C&T LOGIN # ____

Page 1 of 2

Chain of Custody # ____

Project No: LC010060.0016.00003

Project Name: MSC Oakland

Project P. O. No:

EDD Format: Report Level ☐ II ☐ III ☐ IV

Turnaround Time: ☐ RUSH ____ ☒ Standard

Sampler: Miljan D. & Gary C.

Report To: Ron Goloubow

Company: ARCADIS

Telephone: on file

Email:

Lab No.	Sample ID.	SAMPLING: Date Collected	SAMPLING: Time Collected	MATRIX: Water	MATRIX: Solid			# of Containers	CHEMICAL PRESERVATIVE: HCl	H2SO4	HNO3	NaOH	None	ANALYTICAL REQUEST: TPHg/BTEX/MTBE (8260B)	TPH d/mo/k (8010) ⊛	PAHs (8270)	Hold
	RW-C5	7-17-13	1535	X				5	X				X	X	X		
	RW-C6	↓	1545	X				6	X				X	X	X	X	
	RW-C7	↓	1635	X				6	X				X	X	X	X	
	MW-17	7-18-13	0950	X				5	X				X	X	X		
	MW-14	↓	1037	X				5	X				X	X	X		
	MW-13	↓	1045	X				6	X				X	X	X	X	
	MW-10	↓	1130	X				5	X				X	X	X		
	RW-D5	↓	1340	X				5	X				X	X	X		
	RW-D6	↓	1420	X				6	X				X	X	X	X	
	RW-D6-D	↓	1415	X				6	X				X	X	X	X	
	MW-5	↓	1535	X				5	X				X	X	X		
	MW-1-FB	↓	1515	X				5	X				X				X
	MW-1	↓	1540	X				5	X				X	X	X		

Notes:
⊛ Use Silica Gel clean up prior to analyzing for TPH d/mo/k

SAMPLE RECEIPT
☒ Intact
☒ Cold
☒ On Ice
☐ Ambient

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
[signature]	7/19/13	1555	[signature]	7/19/13	1555

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ENVIRONMENTAL ANALYTICAL TESTING LABORATORY
In Business Since 1878

2323 Fifth Street
Berkeley, CA 94710

Phone (510) 486-0900
Fax (510) 486-0532

Chain of Custody # _____

C&T LOGIN # _____

Project No: LC010060.0016.00003
Project Name: MSC Oakland
Project P. O. No:
EDD Format: Report Level ☐ II ☐ III ☐ IV
Turnaround Time: ☐ RUSH _____ ☒ Standard

Sampler: Miljan D. & Gary C.
Report To: Ron Goloubow
Company: ARCADIS
Telephone: on file
Email:

Lab No.	Sample ID.	SAMPLING		MATRIX				# of Containers	CHEMICAL PRESERVATIVE					ANALYTICAL REQUEST				
		Date Collected	Time Collected	Water	Solid				HCl	H2SO4	HNO3	NaOH	None	TPHg/BTEX/MTBE (8260B)	TPH d/mo/k (8010) ⊛	PAHs (8270)	Hold	
	RW-D9	7-18-13	1559	X				6	X				X	X	X	X		
	MW-6	7-19-13	0855	X				6	X				X	X	X	X		
	RW-B4		0925	X				6	X				X	X	X	X		
	RW-A2		0940	X				5	X				X	X	X			
	RW-B3		1020	X				5	X				X	X	X			
	RW-B2		1030	X				5	X				X	X	X			
	RW-B1		1115	X				5	X				X	X	X			
	RW-B1-D		1120	X				5	X				X	X	X			
	RW-1		1225	X				5	X				X	X	X			
	RW-D8		1445	X				6	X				X	X	X	X		
	TB071913	7-19-13	—	X				3	X								X	

Notes:
⊛ Use Silica Gel clean up prior to analyzing for TPH d/mo/k.

SAMPLE RECEIPT
☒ Intact
☒ Cold
☒ On Ice
☐ Ambient

RELINQUISHED BY:
Dra[illegible] Miz — DATE: 7/19/13 TIME: 1555
DATE: TIME:
DATE: TIME:

RECEIVED BY:
Pat [illegible] — DATE: 7/19/13 TIME: 1555
DATE: TIME:
DATE: TIME:

ARCADIS

Appendix B

Laboratory Results and Chain-of-Custody Documentation


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Analytical Laboratories, Since 1878

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

Laboratory Job Number 247135
ANALYTICAL REPORT

Arcadis	Project : LC010060.0016
2000 Powell St.	Location : MSC Oakland
Emeryville, CA 94608	Level : II

Sample ID	Lab ID
RW-C5	247135-001
RW-C6	247135-002
RW-C7	247135-003
MW-17	247135-004
MW-14	247135-005
MW-13	247135-006
MW-10	247135-007
RW-D5	247135-008
RW-D6	247135-009
RW-D6-D	247135-010
MW-5	247135-011
MW-1-FB	247135-012
MW-1	247135-013
RW-D9	247135-014
MW-6	247135-015
RW-B4	247135-016
RW-A2	247135-017
RW-B3	247135-018
RW-B2	247135-019
RW-B1	247135-020
RW-B1-D	247135-021
RW-1	247135-022
RW-D8	247135-023
TB071913	247135-024

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: Tracy Babjar Date: 07/26/2013

Tracy Babjar
Project Manager
(510) 204-2226

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**247135**
Client:	**Arcadis**
Project:	**LC010060.0016**
Location:	**MSC Oakland**
Request Date:	**07/19/13**
Samples Received:	**07/19/13**

This data package contains sample and QC results for twenty two water samples, requested for the above referenced project on 07/19/13. The samples were received cold and intact. All data were e-mailed to Miljan Draganic on 07/26/13.

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

Volatile Organics by GC/MS (EPA 8260B):
RW-D8 (lab # 247135-023) had pH greater than 2. No other analytical problems were encountered.

Semivolatile Organics by GC/MS SIM (EPA 8270C-SIM):
High surrogate recovery was observed for nitrobenzene-d5 in RW-C6 (lab # 247135-002). Low surrogate recovery was observed for terphenyl-d14 in MW-6 (lab # 247135-015). A number of samples were diluted due to high non-target analytes. RW-D8 (lab # 247135-023) was diluted due to the dark and viscous nature of the sample extract. No other analytical problems were encountered.

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Page 1 of 2

Chain of Custody # ____

C&T LOGIN # 247135

Project No: LC010060.0016.00003
Sampler: Miljan D. & Gary C.
Project Name: MSC Oakland
Report To: Ron Goloubow
Project P. O. No:
Company: ARCADIS
EDD Format: Report Level ☐ II ☐ III ☐ IV
Telephone: on file
Turnaround Time: ☐ RUSH ____ ☒ Standard
Email: on file

Lab No.	Sample ID.	SAMPLING: Date Collected	SAMPLING: Time Collected	MATRIX: Water	MATRIX: Solid			# of Containers	CHEMICAL PRESERVATIVE: HCl	H2SO4	HNO3	NaOH	None	ANALYTICAL REQUEST: TPHg / BTEX / MTBE (8260B)	TPH d/mo/k (8010) ⊛	PAHs (8270)	Hold
1	RW-C5	7-17-13	1535	X				5	X				X	X	X		
2	RW-C6	↓	1545	X				6	X				X	X	X	X	
3	RW-C7	↓	1635	X				6	X				X	X	X	X	
4	MW-17	7-18-13	0950	X				5	X				X	X	X		
5	MW-14	↓	1037	X				5	X				X	X	X		
6	MW-13	↓	1045	X				6	X				X	X	X	X	
7	MW-10	↓	1130	X				5	X				X	X	X		
8	RW-D5	↓	1340	X				5	X				X	X	X		
9	RW-D6	↓	1420	X				6	X				X	X	X	X	
10	RW-D6-D	↓	1415	X				6	X				X	X	X	X	
11	MW-5	↓	1535	X				5	X				X	X	X		
12	MW-1-FB	↓	1515	X				5	X				X				X
13	MW-1	↓	1540	X				5	X				X	X	X		

Notes:
⊛ Use Silica Gel clean up prior to analyzing for TPH d/mo/k

SAMPLE RECEIPT
☒ Intact
☒ Cold
☒ On Ice
☐ Ambient

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
[signature]	7/19/13	1555	[signature]	7/19/13	1555

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Phone (510) 486-0900
Fax (510) 486-0532

Chain of Custody # _____

C&T LOGIN # 247135

Project No: LC010060.0016.00003
Project Name: MSC Oakland
Project P. O. No:
EDD Format: Report Level ☐ II ☐ III ☐ IV
Turnaround Time: ☐ RUSH ☒ Standard

Sampler: Miljan D. & Gary C.
Report To: Ron Goloubow
Company: ARCADIS
Telephone:
Email: on file

Lab No.	Sample ID.	SAMPLING		MATRIX				# of Containers	CHEMICAL PRESERVATIVE					ANALYTICAL REQUEST					
		Date Collected	Time Collected	Water	Solid				HCl	H2SO4	HNO3	NaOH	None	TPHg/BTEX/MTBE (8260B)	TPH d/mo/k (8010) ⊛	PAHs (8270)	Hold		
14	RW-D9	7-18-13	1559	X				6	X				X	X	X	X			
15	MW-6	7-19-13	0855	X				6	X				X	X	X	X			
16	RW-B4		0925	X				6	X				X	X	X	X			
17	RW-A2		0940	X				5	X				X	X	X				
18	RW-B3		1020	X				5	X				X	X	X				
19	RW-B2		1030	X				5	X				X	X	X				
20	RW-B1		1115	X				5	X				X	X	X				
21	RW-B1-D		1120	X				5	X				X	X	X				
22	RW-1		1225	X				5	X				X	X	X				
23	RW-D8		1445	X				6	X				X	X	X	X			
24	TB071913	7-19-13	—	X				3	X								X		

Notes:
⊛ Use Silica Gel clean up prior to analyzing for TPH d/mo/k.

SAMPLE RECEIPT
☒ Intact
☒ Cold
☒ On Ice
☐ Ambient

RELINQUISHED BY: DATE: 7/19/13 TIME: 1555
DATE: TIME:
DATE: TIME:

RECEIVED BY: DATE: 7/19/13 TIME: 1555
DATE: TIME:
DATE: TIME:

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 247135 Date Received 2/19/13 Number of coolers 5
Client Arcadis Project LC0100 66.0016.00003

Date Opened 2/19/13 By (print) MG (sign) MG
Date Logged in 2 By (print) 2 (sign) 2

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

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

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

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☑ Wet ☐ Blue/Gel ☐ None Temp(°C) 1 2, 0.6, 1.3, 1.2, 1.2

☐ Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

☐ 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 there any missing / extra samples? _____ YES (NO)
11. Are samples in the appropriate containers for indicated tests? _____ (YES) NO
12. Are sample labels present, in good condition and complete? _____ (YES) NO
13. Do the sample labels agree with custody papers? _____ (YES) NO
14. Was sufficient amount of sample sent for tests requested? _____ (YES) NO
15. Are the samples appropriately preserved? _____ (YES) NO (N/A) MG
16. Did you check preservatives for all bottles for each sample? _____ YES NO (N/A)
17. Did you document your preservative check? _____ YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? _____ (YES) NO N/A
21. Was the client contacted concerning this sample delivery? _____ YES NO
If YES, Who was called? _____ By _____ Date: _____

COMMENTS

_____
_____
_____
_____
_____
_____

Rev 10, 11/11

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 3520C
Project#:	LC010060.0016	Analysis:	EPA 8015B
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Received:	07/19/13

Field ID:	RW-C5	Sampled:	07/17/13
Type:	SAMPLE	Prepared:	07/19/13
Lab ID:	247135-001	Analyzed:	07/21/13
Batch#:	200843	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	320	49
Diesel C10-C24	450 Y	49
Motor Oil C24-C36	ND	290

Surrogate	%REC	Limits
o-Terphenyl	91	62-133

Field ID:	RW-C6	Sampled:	07/17/13
Type:	SAMPLE	Prepared:	07/19/13
Lab ID:	247135-002	Analyzed:	07/21/13
Batch#:	200843	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	920	49
Diesel C10-C24	940 Y	49
Motor Oil C24-C36	ND	290

Surrogate	%REC	Limits
o-Terphenyl	100	62-133

Field ID:	RW-C7	Sampled:	07/17/13
Type:	SAMPLE	Prepared:	07/19/13
Lab ID:	247135-003	Analyzed:	07/21/13
Batch#:	200843	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	110	49
Diesel C10-C24	340 Y	49
Motor Oil C24-C36	340	290

Surrogate	%REC	Limits
o-Terphenyl	95	62-133

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

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 3520C
Project#:	LC010060.0016	Analysis:	EPA 8015B
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Received:	07/19/13

Field ID:	MW-17	Sampled:	07/18/13
Type:	SAMPLE	Prepared:	07/19/13
Lab ID:	247135-004	Analyzed:	07/21/13
Batch#:	200843	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	ND	49
Diesel C10-C24	ND	49
Motor Oil C24-C36	ND	290

Surrogate	%REC	Limits
o-Terphenyl	92	62-133

Field ID:	MW-14	Sampled:	07/18/13
Type:	SAMPLE	Prepared:	07/19/13
Lab ID:	247135-005	Analyzed:	07/21/13
Batch#:	200843	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	ND	49
Diesel C10-C24	80 Y	49
Motor Oil C24-C36	ND	290

Surrogate	%REC	Limits
o-Terphenyl	91	62-133

Field ID:	MW-13	Sampled:	07/18/13
Type:	SAMPLE	Prepared:	07/19/13
Lab ID:	247135-006	Analyzed:	07/21/13
Batch#:	200843	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	ND	49
Diesel C10-C24	64 Y	49
Motor Oil C24-C36	330	290

Surrogate	%REC	Limits
o-Terphenyl	114	62-133

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

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 3520C
Project#:	LC010060.0016	Analysis:	EPA 8015B
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Received:	07/19/13

Field ID:	MW-10	Sampled:	07/18/13
Type:	SAMPLE	Prepared:	07/19/13
Lab ID:	247135-007	Analyzed:	07/21/13
Batch#:	200843	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	ND	49
Diesel C10-C24	55 Y	49
Motor Oil C24-C36	ND	290

Surrogate	%REC	Limits
o-Terphenyl	76	62-133

Field ID:	RW-D5	Sampled:	07/18/13
Type:	SAMPLE	Prepared:	07/19/13
Lab ID:	247135-008	Analyzed:	07/21/13
Batch#:	200843	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	280	49
Diesel C10-C24	360 Y	49
Motor Oil C24-C36	ND	290

Surrogate	%REC	Limits
o-Terphenyl	92	62-133

Field ID:	RW-D6	Sampled:	07/18/13
Type:	SAMPLE	Prepared:	07/19/13
Lab ID:	247135-009	Analyzed:	07/21/13
Batch#:	200843	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	1,300	49
Diesel C10-C24	1,200 Y	49
Motor Oil C24-C36	360	290

Surrogate	%REC	Limits
o-Terphenyl	86	62-133

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

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 3520C
Project#:	LC010060.0016	Analysis:	EPA 8015B
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Received:	07/19/13

Field ID:	RW-D6-D	Sampled:	07/18/13
Type:	SAMPLE	Prepared:	07/19/13
Lab ID:	247135-010	Analyzed:	07/21/13
Batch#:	200843	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	1,400	49
Diesel C10-C24	1,400 Y	49
Motor Oil C24-C36	340	290

Surrogate	%REC	Limits
o-Terphenyl	83	62-133

Field ID:	MW-5	Sampled:	07/18/13
Type:	SAMPLE	Prepared:	07/19/13
Lab ID:	247135-011	Analyzed:	07/21/13
Batch#:	200843	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	530	49
Diesel C10-C24	470 Y	49
Motor Oil C24-C36	ND	290

Surrogate	%REC	Limits
o-Terphenyl	80	62-133

Field ID:	MW-1	Sampled:	07/18/13
Type:	SAMPLE	Prepared:	07/19/13
Lab ID:	247135-013	Analyzed:	07/21/13
Batch#:	200843	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	76	50
Diesel C10-C24	75 Y	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	119	62-133

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

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 3520C
Project#:	LC010060.0016	Analysis:	EPA 8015B
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Received:	07/19/13

Field ID:	RW-D9	Sampled:	07/18/13
Type:	SAMPLE	Prepared:	07/22/13
Lab ID:	247135-014	Analyzed:	07/23/13
Batch#:	200897	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	94	49
Diesel C10-C24	93 Y	49
Motor Oil C24-C36	ND	290

Surrogate	%REC	Limits
o-Terphenyl	103	62-133

Field ID:	MW-6	Sampled:	07/19/13
Type:	SAMPLE	Prepared:	07/22/13
Lab ID:	247135-015	Analyzed:	07/23/13
Batch#:	200897	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	1,700	49
Diesel C10-C24	2,100 Y	49
Motor Oil C24-C36	360	290

Surrogate	%REC	Limits
o-Terphenyl	62	62-133

Field ID:	RW-B4	Sampled:	07/19/13
Type:	SAMPLE	Prepared:	07/22/13
Lab ID:	247135-016	Analyzed:	07/23/13
Batch#:	200897	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	3,900	49
Diesel C10-C24	3,600 Y	49
Motor Oil C24-C36	500	290

Surrogate	%REC	Limits
o-Terphenyl	98	62-133

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

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 3520C
Project#:	LC010060.0016	Analysis:	EPA 8015B
Matrix:	Water	Dil'n Fac:	1.000
Units:	ug/L	Received:	07/19/13

Field ID:	RW-A2	Sampled:	07/19/13
Type:	SAMPLE	Prepared:	07/22/13
Lab ID:	247135-017	Analyzed:	07/23/13
Batch#:	200897	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	110 Y	49
Diesel C10-C24	420 Y	49
Motor Oil C24-C36	ND	290

Surrogate	%REC	Limits
o-Terphenyl	79	62-133

Field ID:	RW-B3	Sampled:	07/19/13
Type:	SAMPLE	Prepared:	07/22/13
Lab ID:	247135-018	Analyzed:	07/23/13
Batch#:	200897	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	2,000	49
Diesel C10-C24	1,900 Y	49
Motor Oil C24-C36	600	290

Surrogate	%REC	Limits
o-Terphenyl	76	62-133

Field ID:	RW-B2	Sampled:	07/19/13
Type:	SAMPLE	Prepared:	07/22/13
Lab ID:	247135-019	Analyzed:	07/24/13
Batch#:	200897	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	260	49
Diesel C10-C24	240 Y	49
Motor Oil C24-C36	ND	290

Surrogate	%REC	Limits
o-Terphenyl	64	62-133

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

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 3520C
Project#:	LC010060.0016	Analysis:	EPA 8015B
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Received:	07/19/13

Field ID:	RW-B1	Sampled:	07/19/13
Type:	SAMPLE	Prepared:	07/22/13
Lab ID:	247135-020	Analyzed:	07/24/13
Batch#:	200897	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	76	49
Diesel C10-C24	150 Y	49
Motor Oil C24-C36	380	290

Surrogate	%REC	Limits
o-Terphenyl	83	62-133

Field ID:	RW-B1-D	Sampled:	07/19/13
Type:	SAMPLE	Prepared:	07/22/13
Lab ID:	247135-021	Analyzed:	07/24/13
Batch#:	200897	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	66	49
Diesel C10-C24	110 Y	49
Motor Oil C24-C36	ND	290

Surrogate	%REC	Limits
o-Terphenyl	82	62-133

Field ID:	RW-1	Sampled:	07/19/13
Type:	SAMPLE	Prepared:	07/22/13
Lab ID:	247135-022	Analyzed:	07/24/13
Batch#:	200897	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	ND	49
Diesel C10-C24	ND	49
Motor Oil C24-C36	ND	290

Surrogate	%REC	Limits
o-Terphenyl	81	62-133

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

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 3520C
Project#:	LC010060.0016	Analysis:	EPA 8015B
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Received:	07/19/13

Field ID:	RW-D8	Sampled:	07/19/13
Type:	SAMPLE	Prepared:	07/22/13
Lab ID:	247135-023	Analyzed:	07/24/13
Batch#:	200897	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	1,700	50
Diesel C10-C24	1,800 Y	50
Motor Oil C24-C36	790	300

Surrogate	%REC	Limits
o-Terphenyl	66	62-133

Type:	BLANK	Prepared:	07/19/13
Lab ID:	QC698381	Analyzed:	07/21/13
Batch#:	200843	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	ND	50
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	92	62-133

Type:	BLANK	Prepared:	07/22/13
Lab ID:	QC698593	Analyzed:	07/23/13
Batch#:	200897	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Kerosene C10-C16	ND	50
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	99	62-133

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

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 3520C
Project#:	LC010060.0016	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	200843
Units:	ug/L	Prepared:	07/19/13
Diln Fac:	1.000	Analyzed:	07/21/13

Type: BS
Lab ID: QC698382
Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,101	84	59-120

Surrogate	%REC	Limits
o-Terphenyl	112	62-133

Type: BSD
Lab ID: QC698383
Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,522	101	59-120	18	46

Surrogate	%REC	Limits
o-Terphenyl	122	62-133

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 3520C
Project#:	LC010060.0016	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC698594	Batch#:	200897
Matrix:	Water	Prepared:	07/22/13
Units:	ug/L	Analyzed:	07/23/13

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,205	88	59-120

Surrogate	%REC	Limits
o-Terphenyl	97	62-133

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 3520C
Project#:	LC010060.0016	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	200897
MSS Lab ID:	247164-001	Sampled:	07/22/13
Matrix:	Water	Received:	07/22/13
Units:	ug/L	Prepared:	07/22/13
Diln Fac:	1.000	Analyzed:	07/24/13

Type: MS Lab ID: QC698595

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	53.08	2,451	2,295	91	61-120

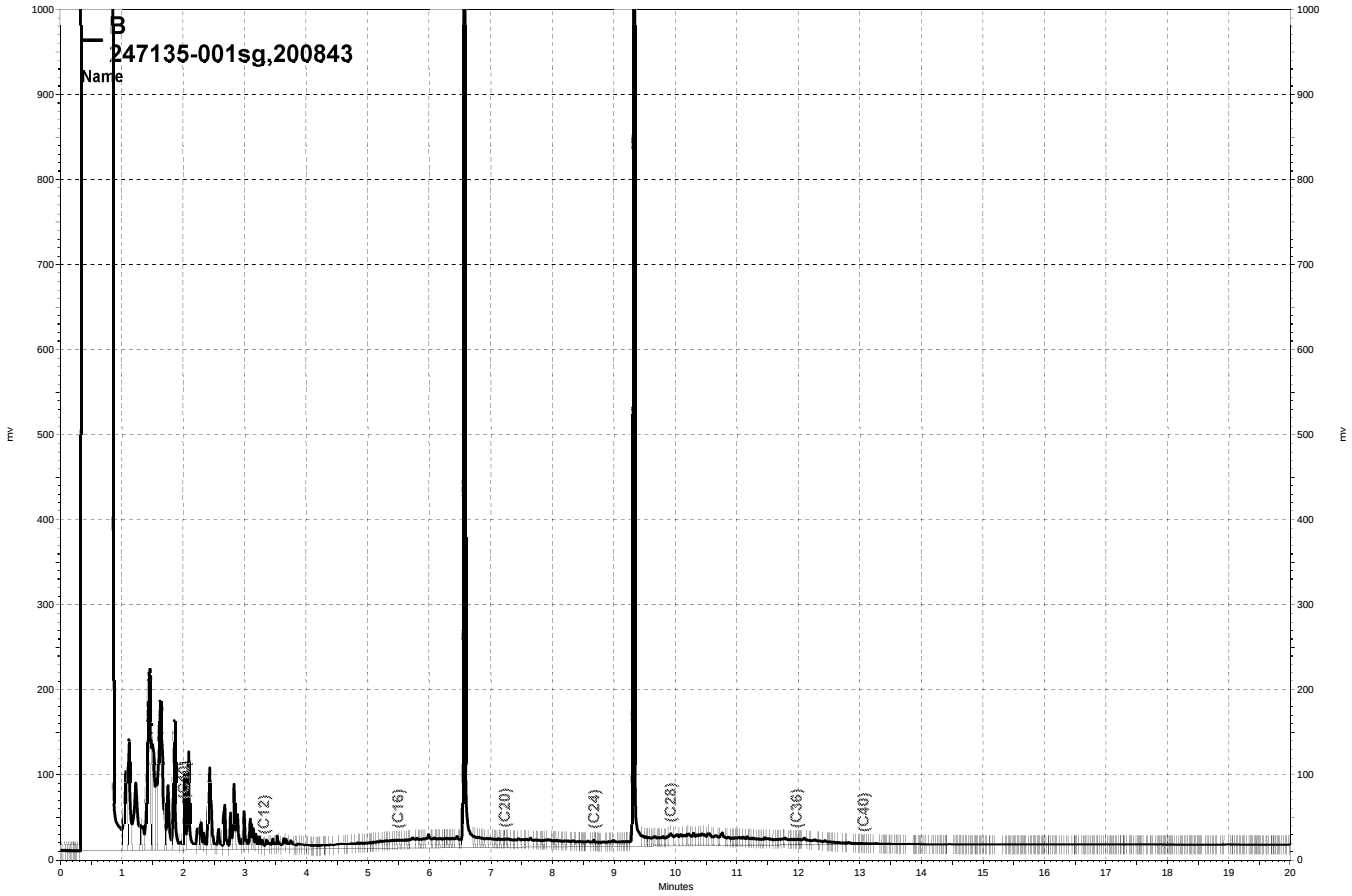
Surrogate	%REC	Limits
o-Terphenyl	93	62-133

Type: MSD Lab ID: QC698596

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,451	2,423	97	61-120	5	43

Surrogate	%REC	Limits
o-Terphenyl	95	62-133

RPD= Relative Percent Difference



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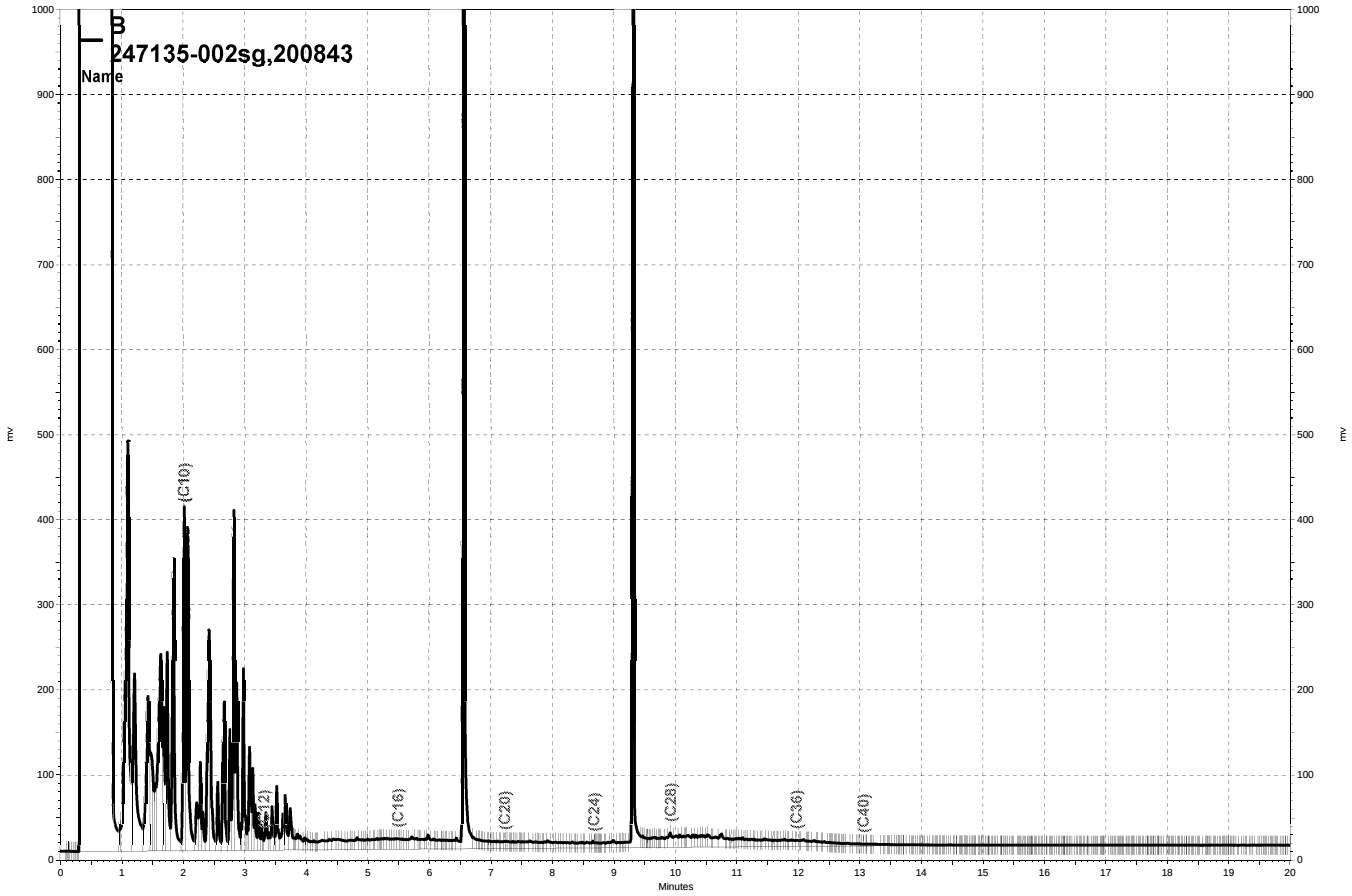

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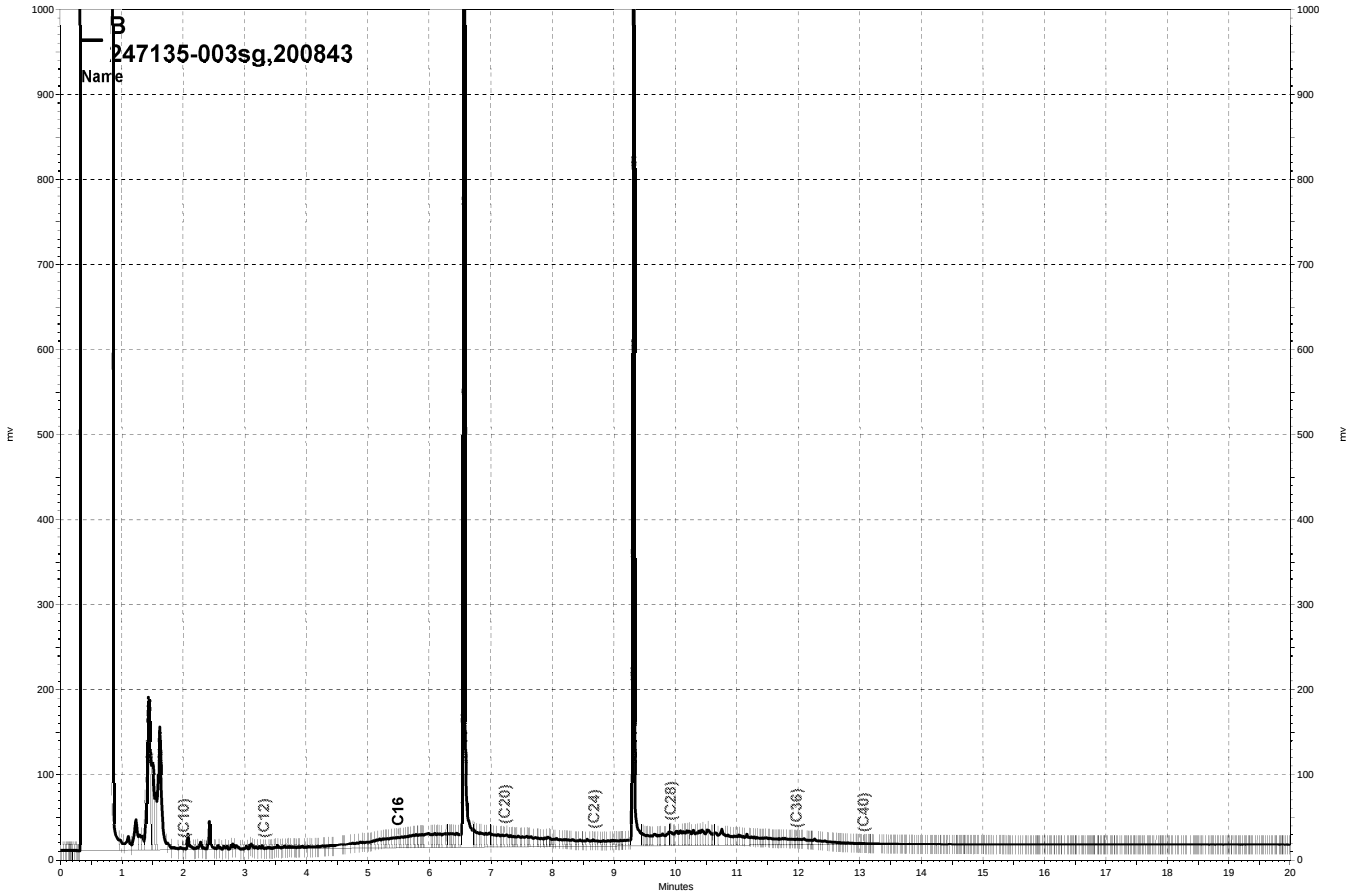

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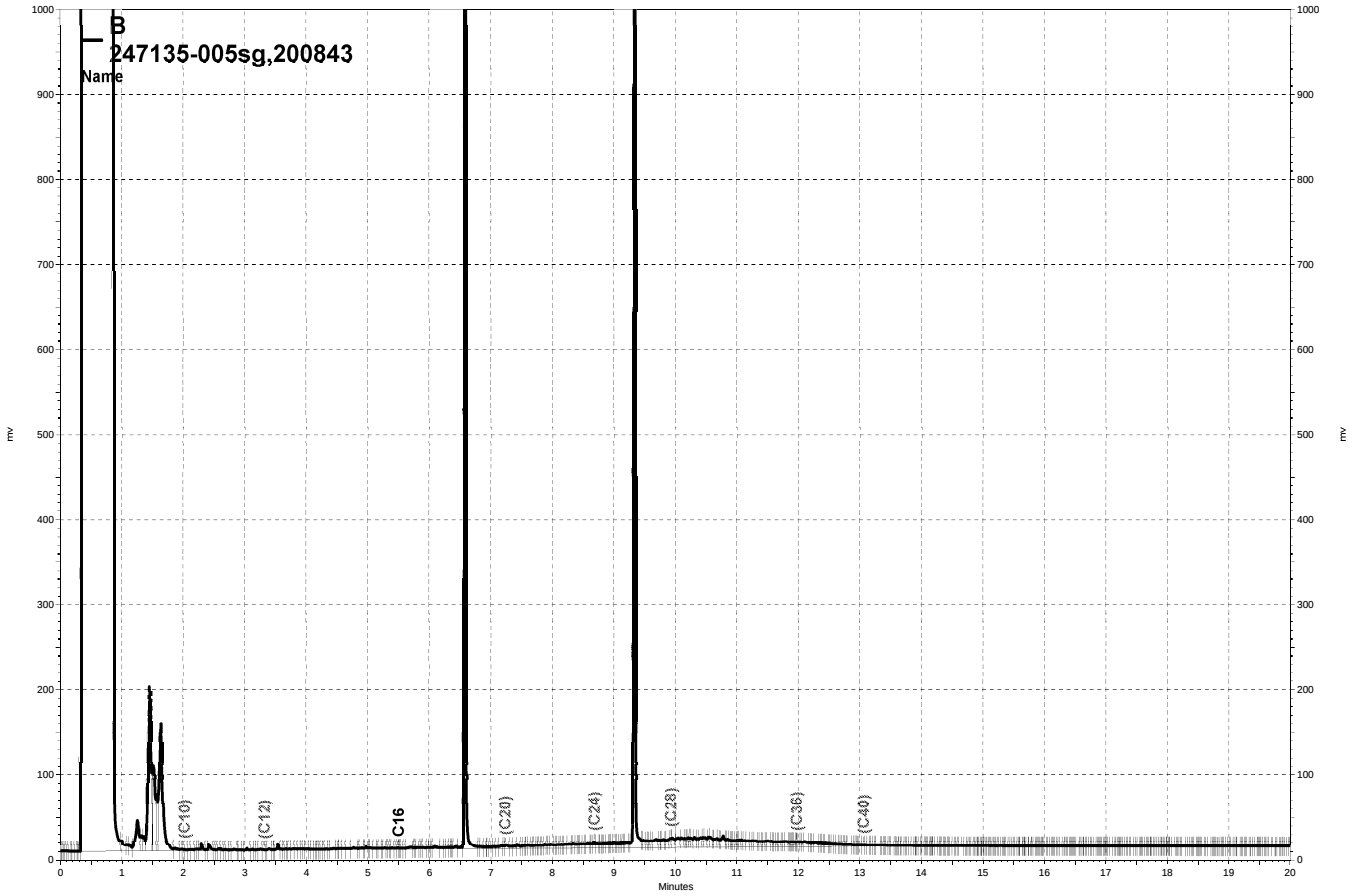

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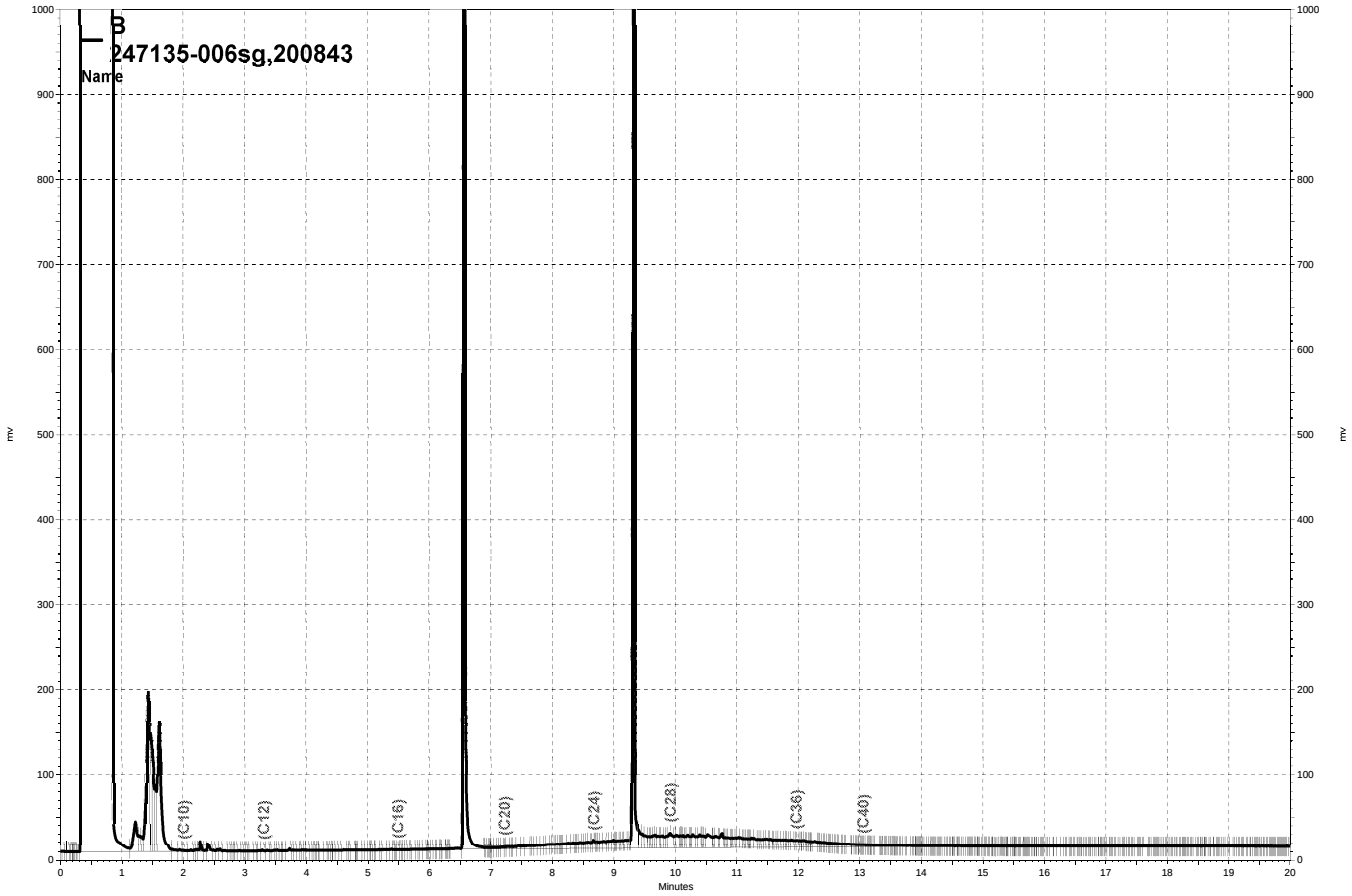

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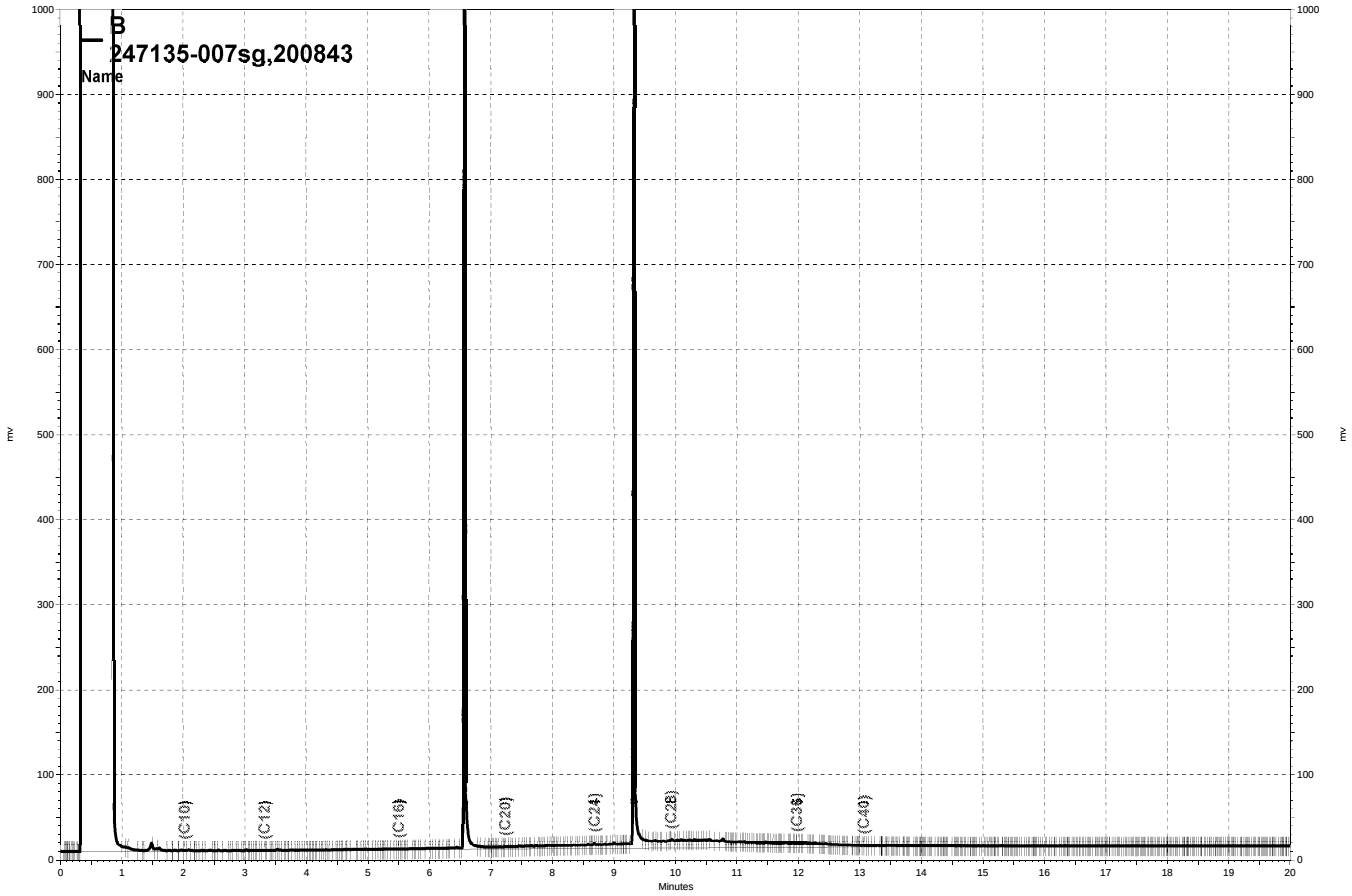

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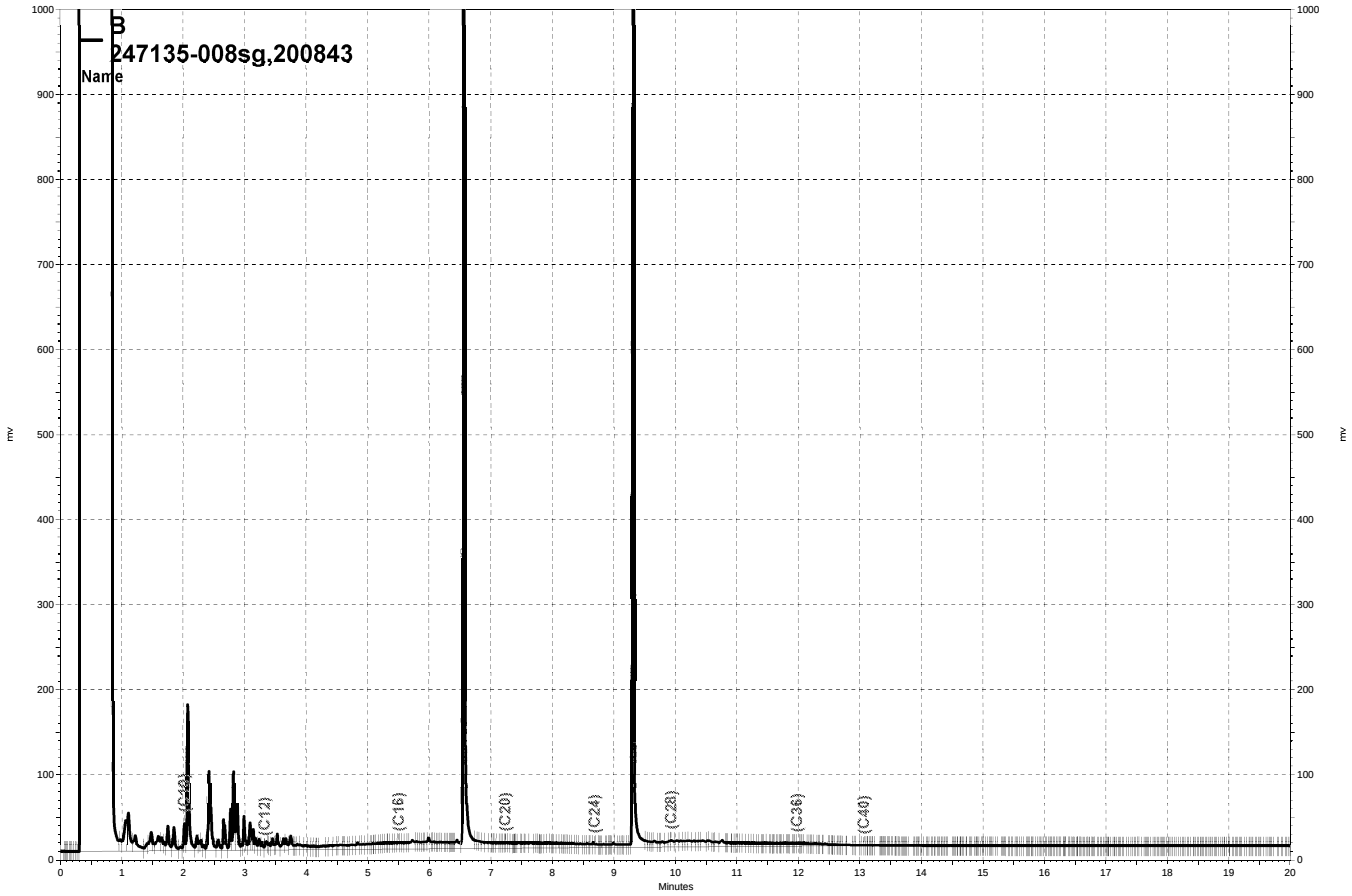

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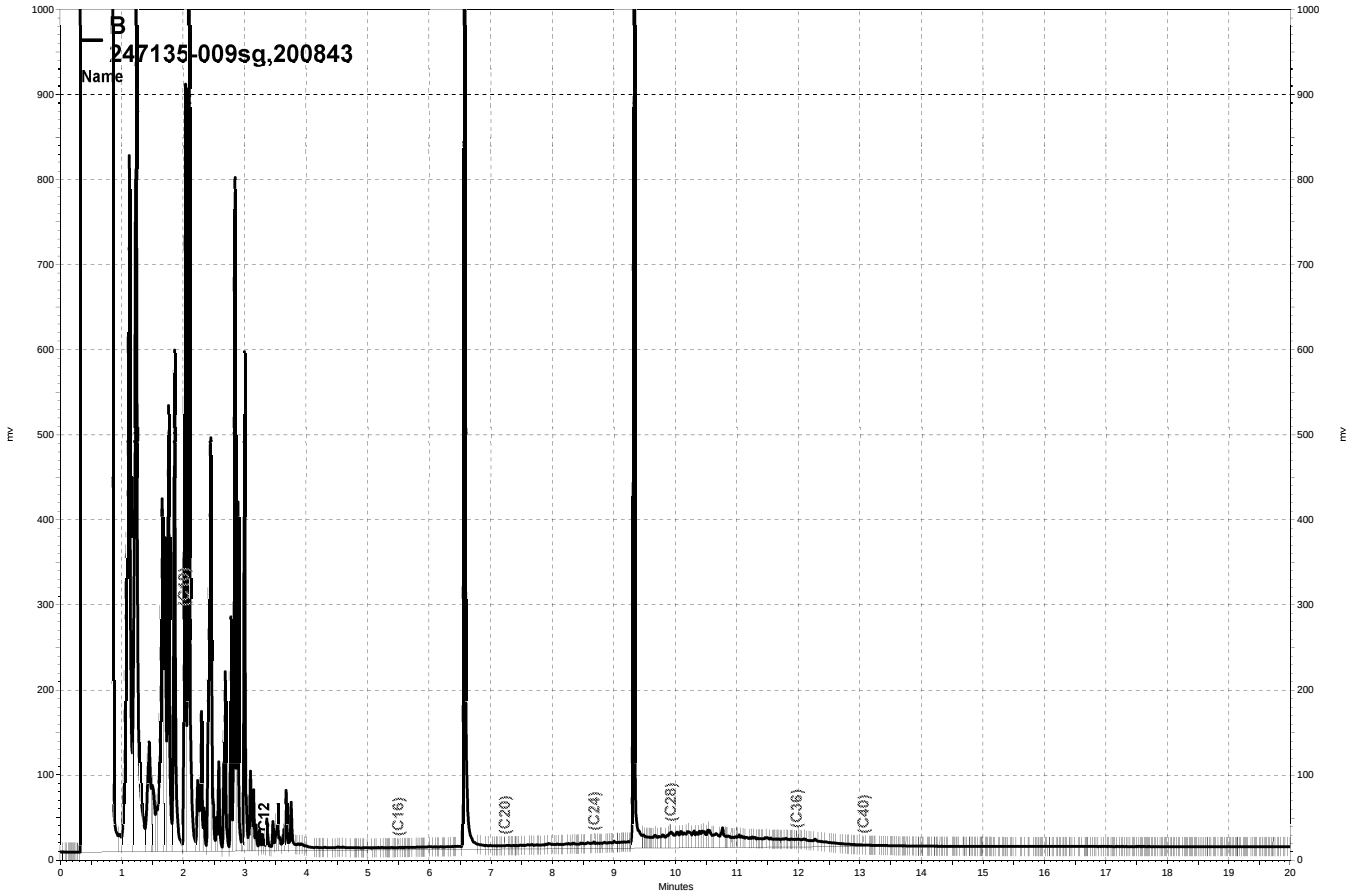

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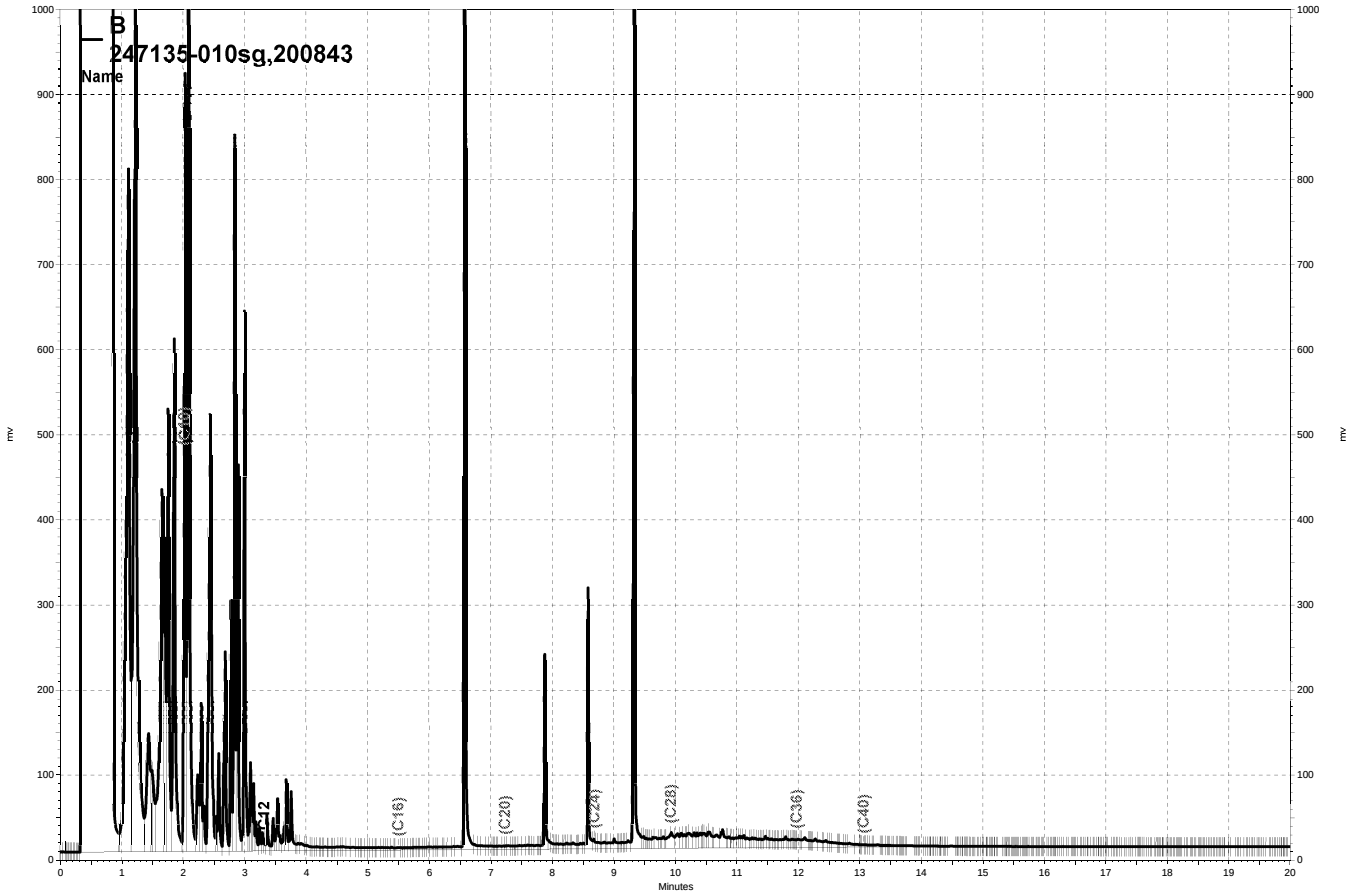

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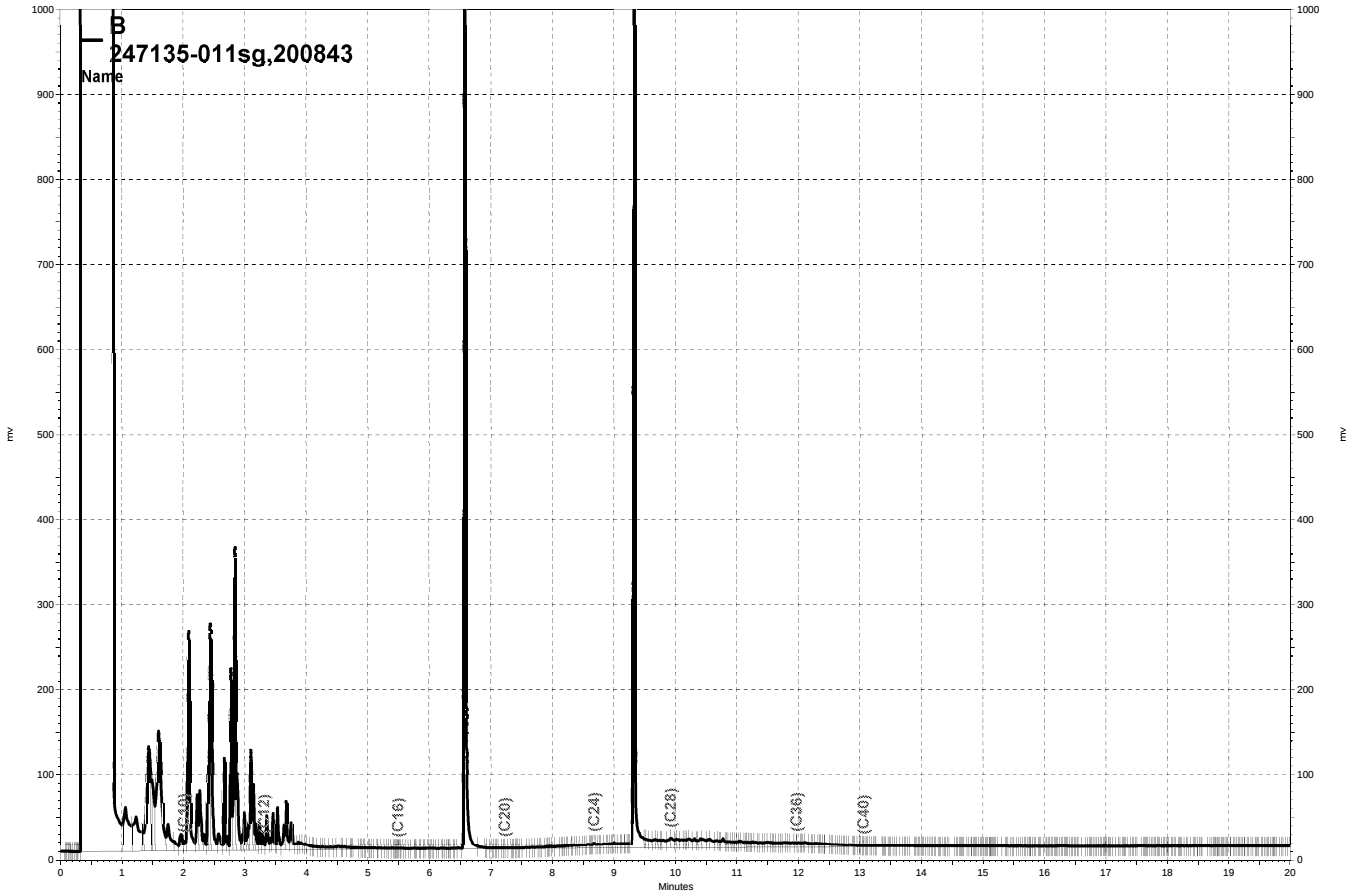

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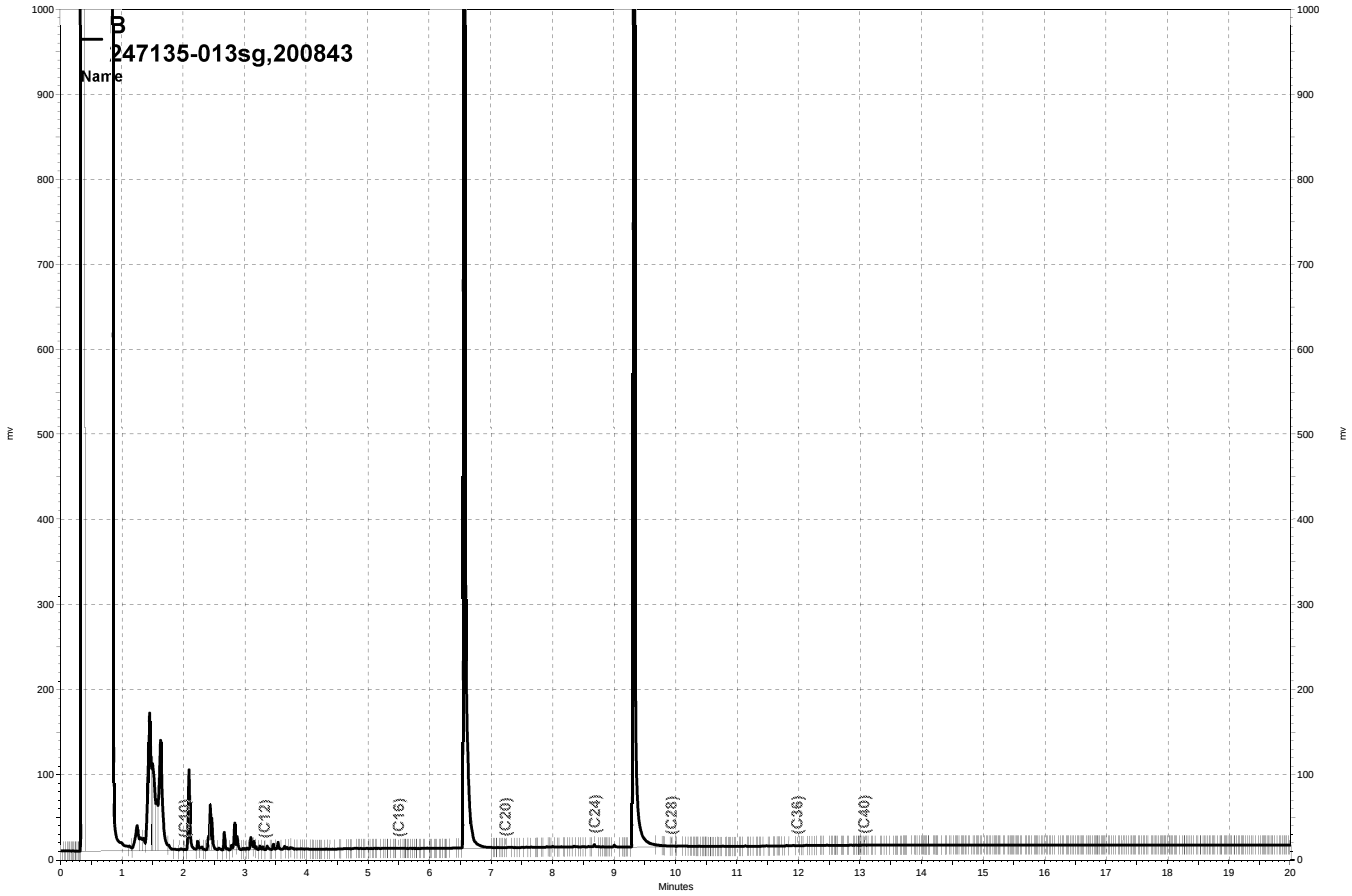

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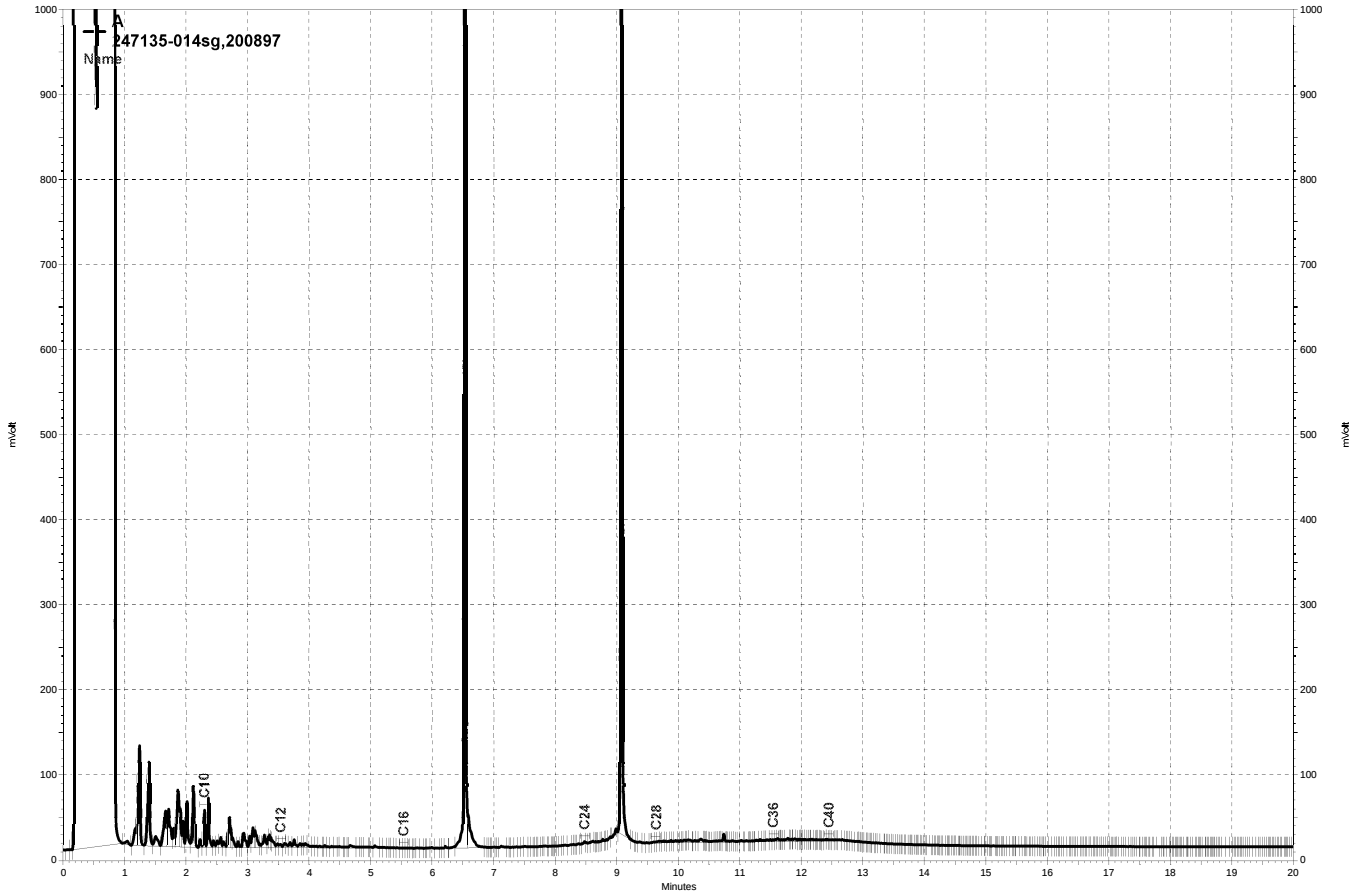

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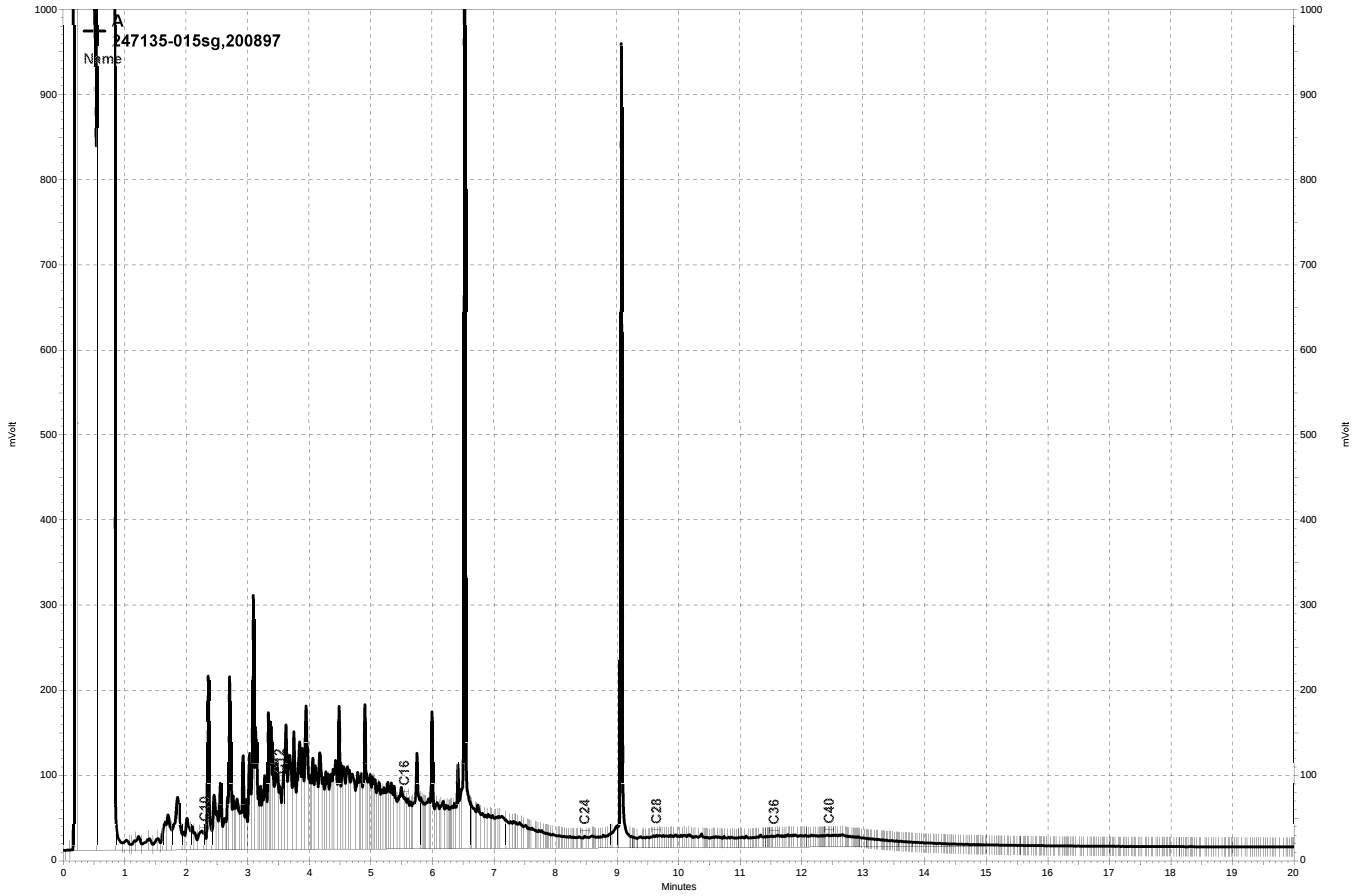

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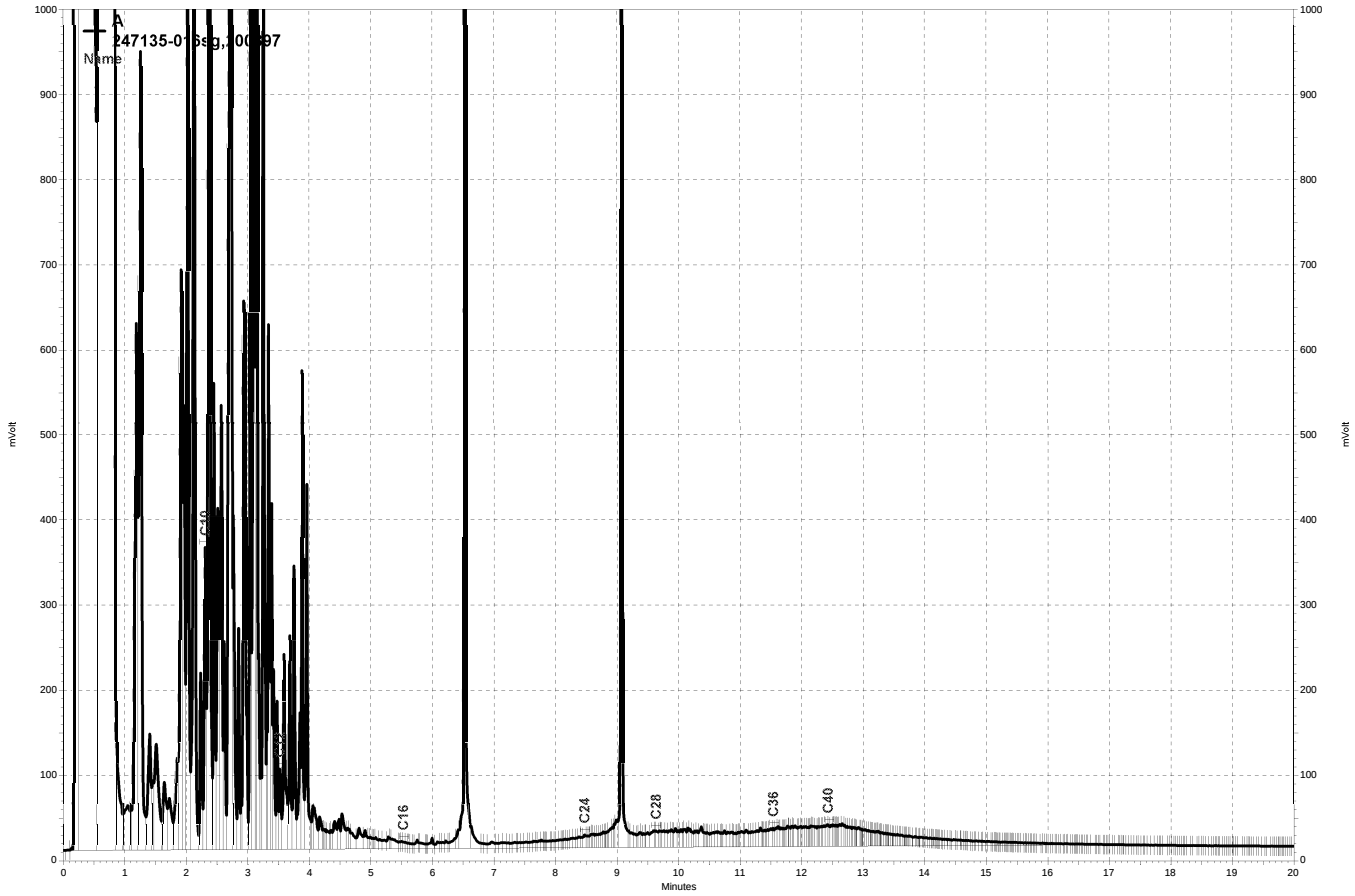

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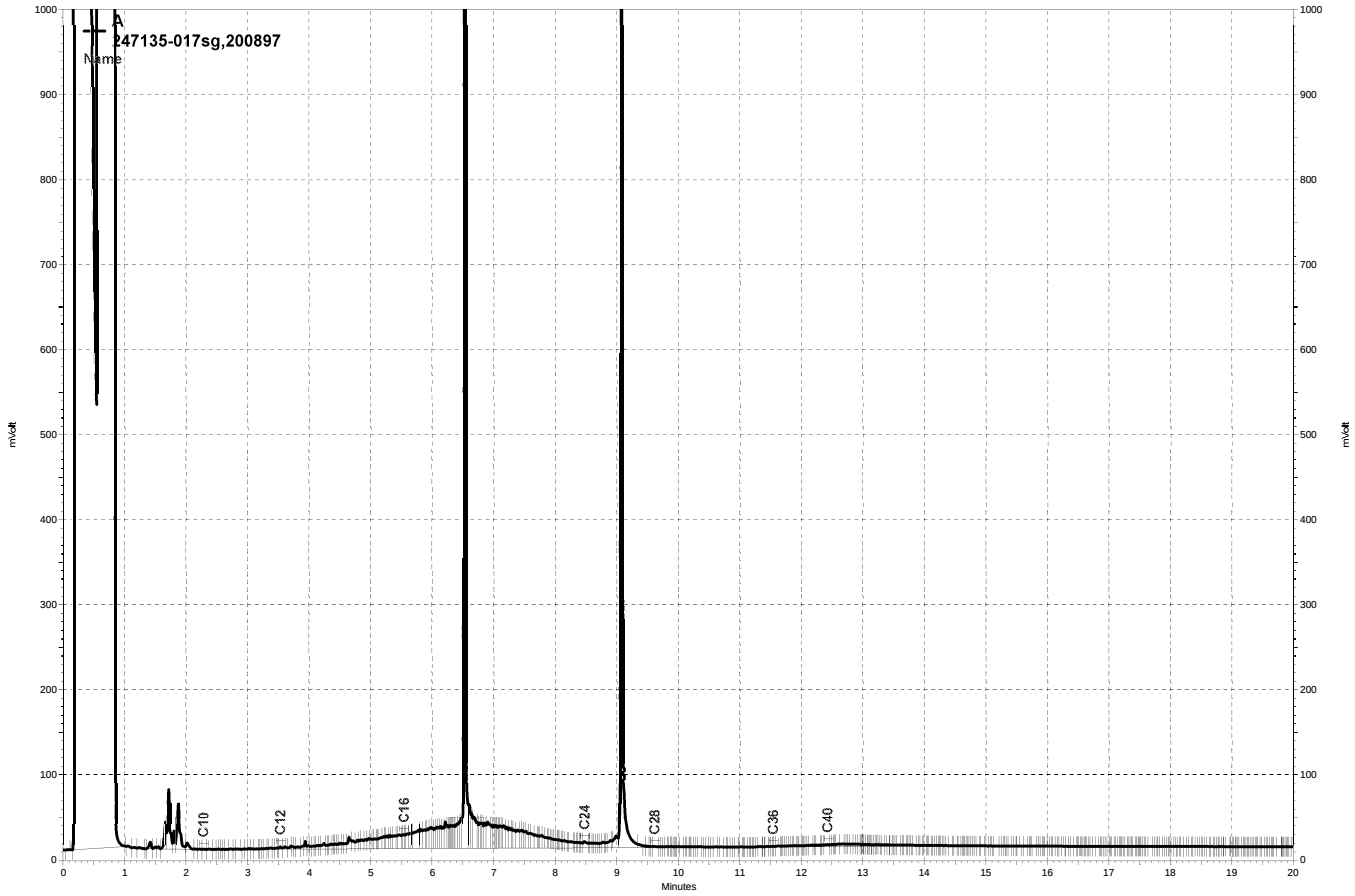

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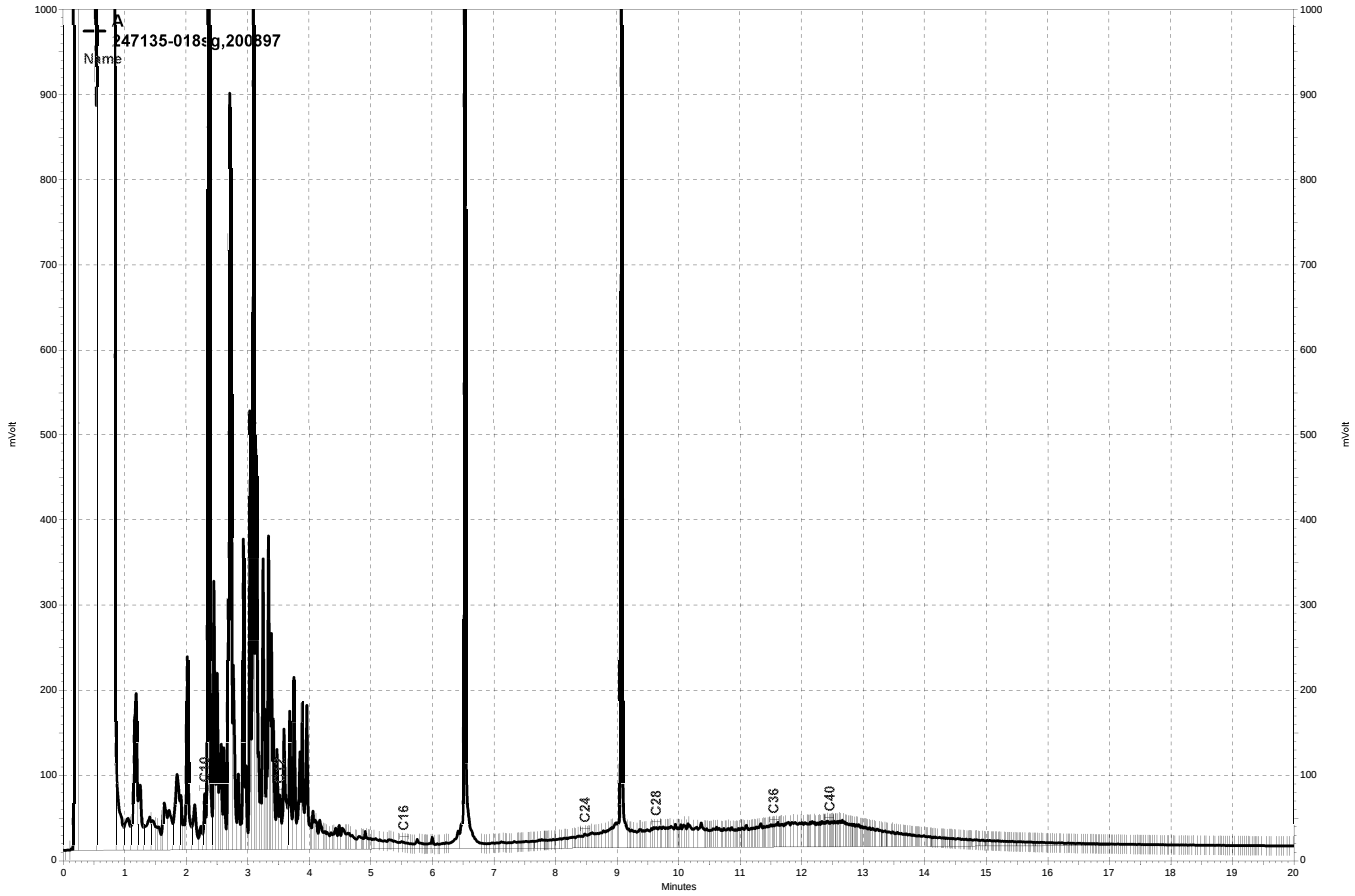

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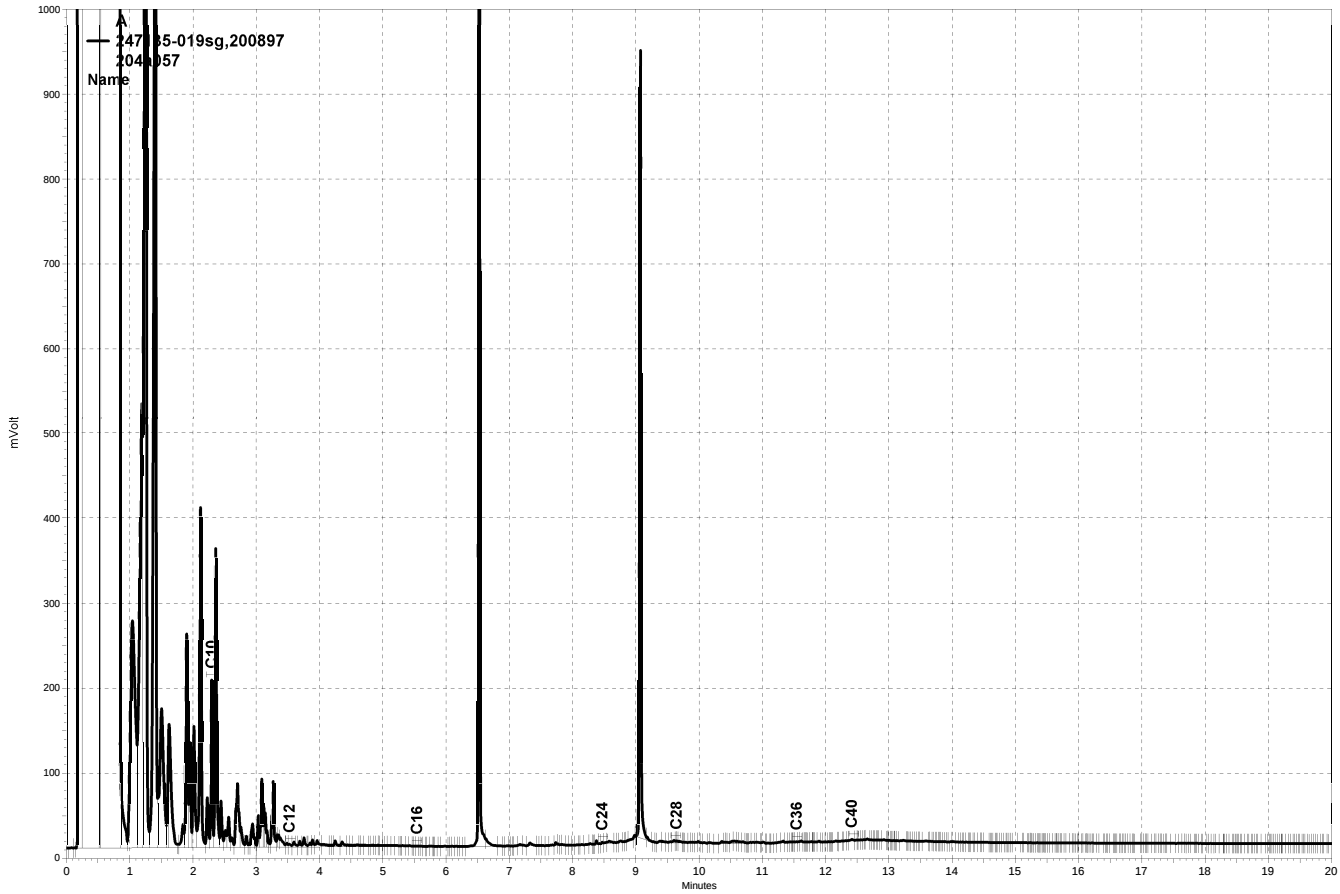

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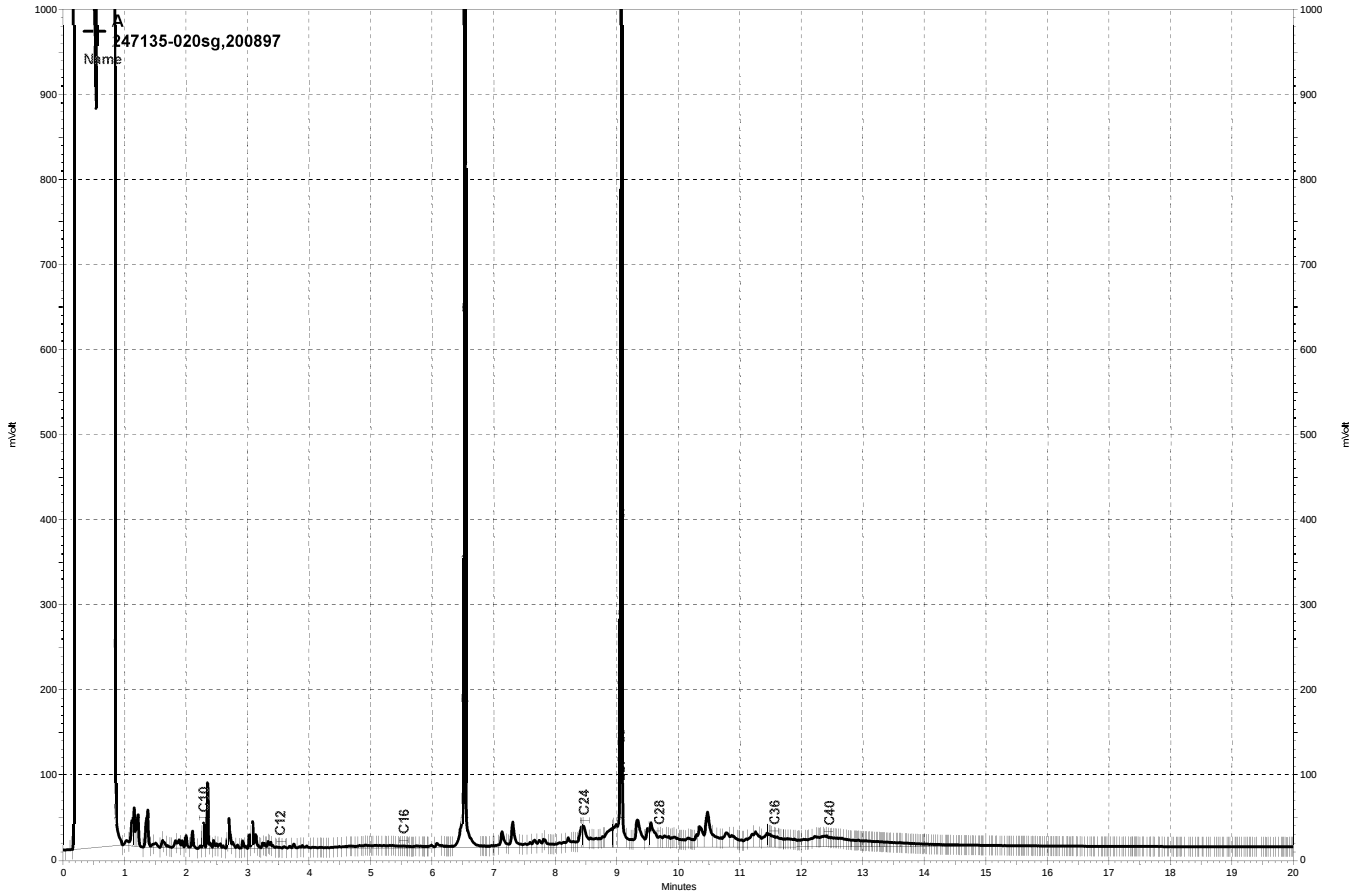

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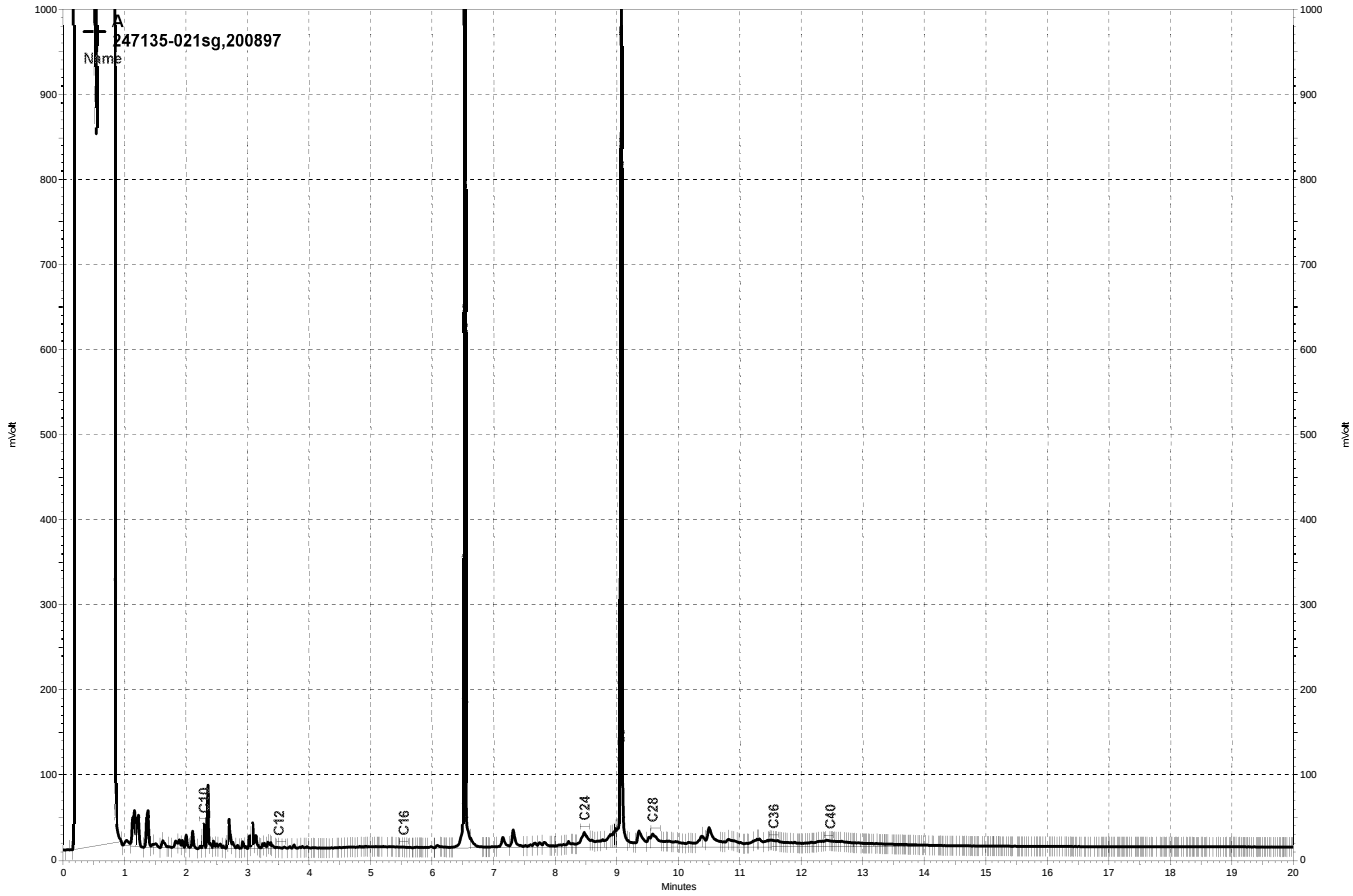

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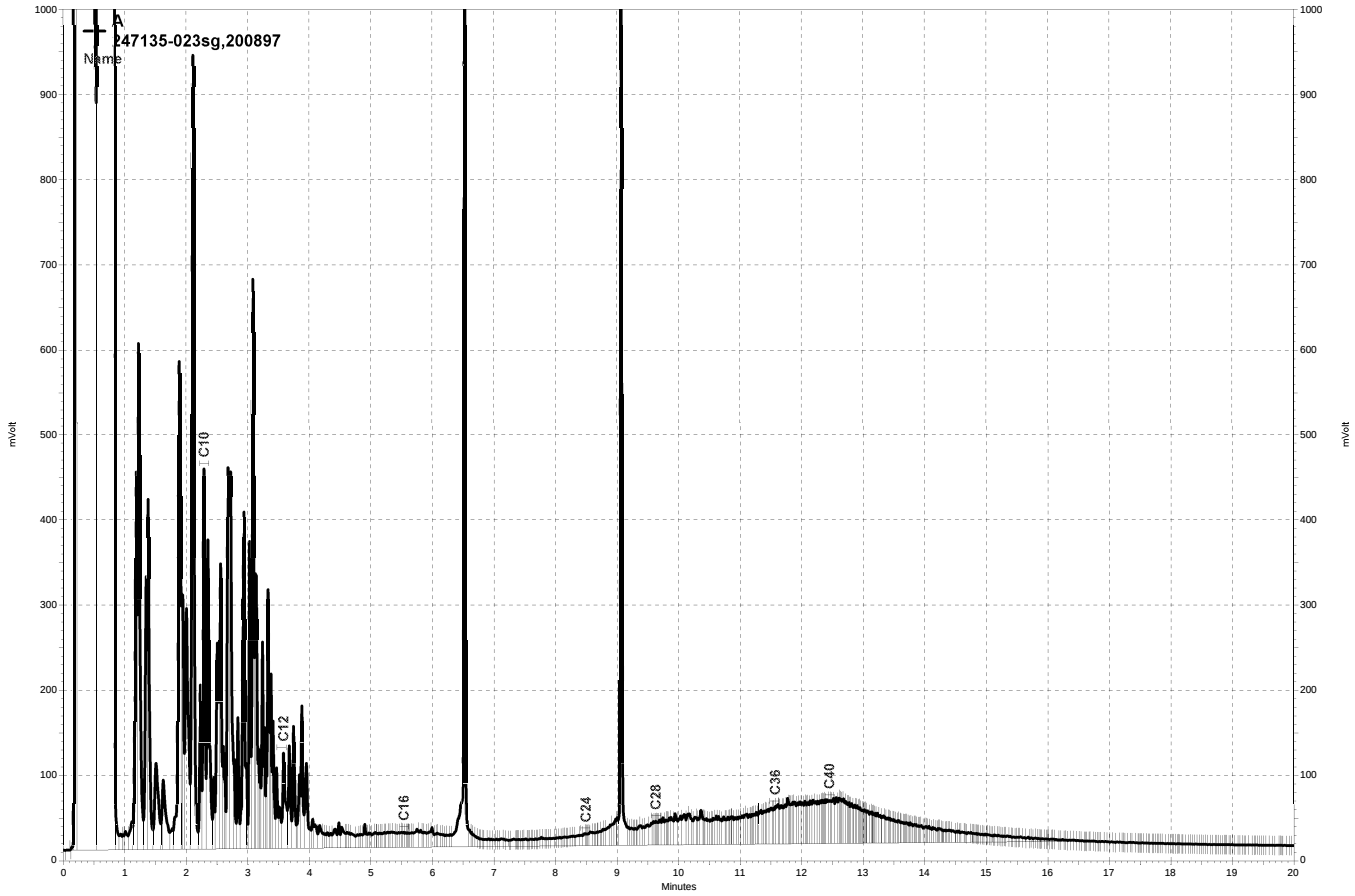

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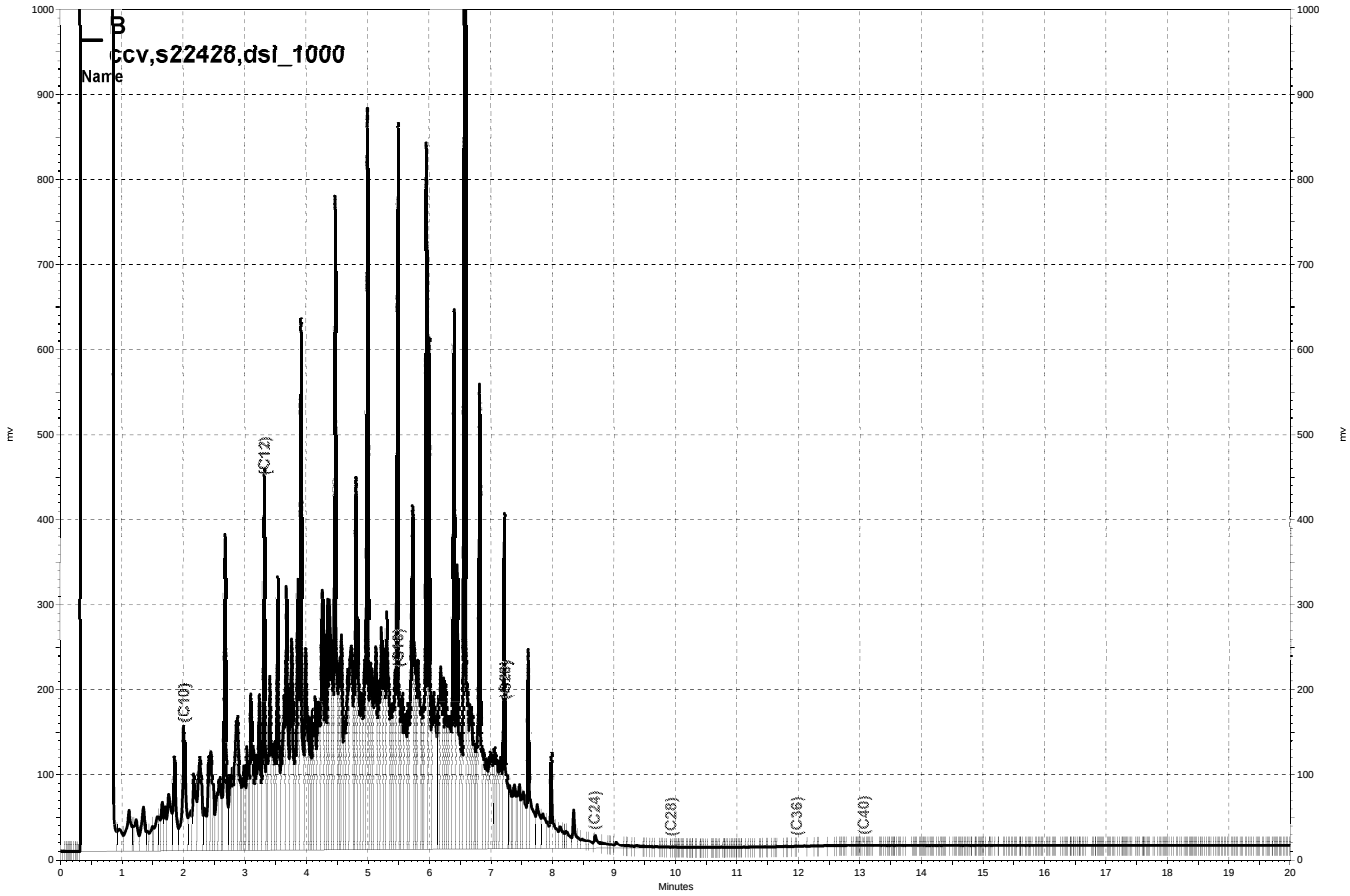

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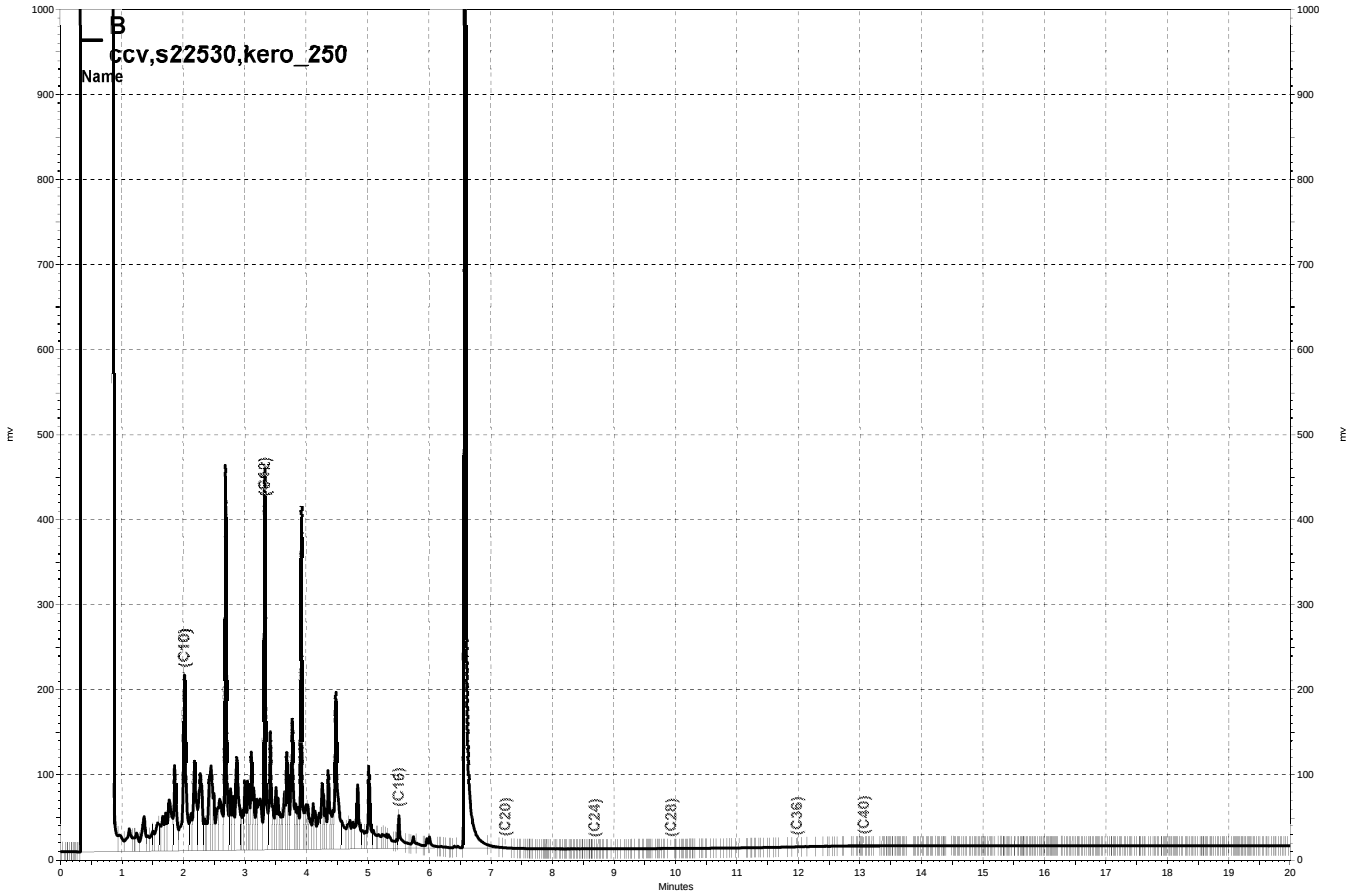

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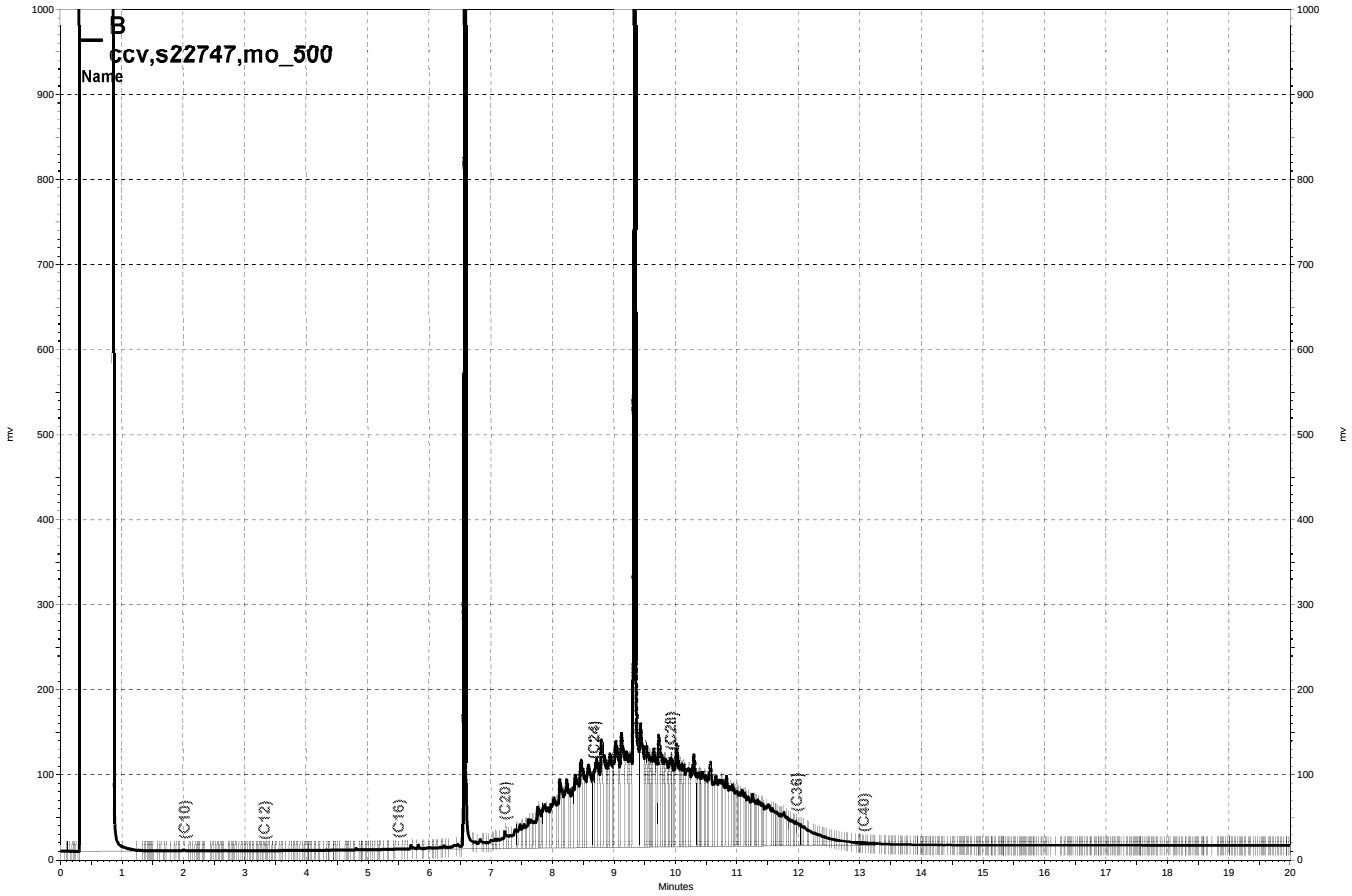

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Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Received:	07/19/13
Units:	ug/L		

Field ID:	RW-C5	Batch#:	200905
Type:	SAMPLE	Sampled:	07/17/13
Lab ID:	247135-001	Analyzed:	07/23/13
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	990	50
MTBE	ND	0.50
Benzene	71	0.50
Toluene	8.6	0.50
Ethylbenzene	22	0.50
m,p-Xylenes	38	0.50
o-Xylene	10	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	83	77-134
1,2-Dichloroethane-d4	96	72-140
Toluene-d8	95	80-120
Bromofluorobenzene	89	80-120

Field ID:	RW-C6	Lab ID:	247135-002
Type:	SAMPLE	Sampled:	07/17/13

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Gasoline C7-C12	2,600	100	2.000	200865	07/22/13
MTBE	1.2	1.0	2.000	200865	07/22/13
Benzene	400	4.2	8.333	200907	07/23/13
Toluene	17	1.0	2.000	200865	07/22/13
Ethylbenzene	47	1.0	2.000	200865	07/22/13
m,p-Xylenes	200	1.0	2.000	200865	07/22/13
o-Xylene	63	1.0	2.000	200865	07/22/13

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	84	77-134	2.000	200865	07/22/13
1,2-Dichloroethane-d4	86	72-140	2.000	200865	07/22/13
Toluene-d8	99	80-120	2.000	200865	07/22/13
Bromofluorobenzene	92	80-120	2.000	200865	07/22/13

NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Received:	07/19/13
Units:	ug/L		

Field ID:	RW-C7	Batch#:	200865
Type:	SAMPLE	Sampled:	07/17/13
Lab ID:	247135-003	Analyzed:	07/22/13
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	120	50
MTBE	ND	0.50
Benzene	21	0.50
Toluene	0.68	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	3.3	0.50
o-Xylene	0.52	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	84	77-134
1,2-Dichloroethane-d4	97	72-140
Toluene-d8	94	80-120
Bromofluorobenzene	91	80-120

Field ID:	MW-17	Batch#:	200865
Type:	SAMPLE	Sampled:	07/18/13
Lab ID:	247135-004	Analyzed:	07/22/13
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
MTBE	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	87	77-134
1,2-Dichloroethane-d4	99	72-140
Toluene-d8	95	80-120
Bromofluorobenzene	91	80-120

NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Received:	07/19/13
Units:	ug/L		

Field ID:	MW-14	Batch#:	200865
Type:	SAMPLE	Sampled:	07/18/13
Lab ID:	247135-005	Analyzed:	07/22/13
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
MTBE	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	83	77-134
1,2-Dichloroethane-d4	98	72-140
Toluene-d8	96	80-120
Bromofluorobenzene	91	80-120

Field ID:	MW-13	Batch#:	200865
Type:	SAMPLE	Sampled:	07/18/13
Lab ID:	247135-006	Analyzed:	07/22/13
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
MTBE	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	84	77-134
1,2-Dichloroethane-d4	97	72-140
Toluene-d8	93	80-120
Bromofluorobenzene	92	80-120

NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Received:	07/19/13
Units:	ug/L		

Field ID:	MW-10	Batch#:	200865
Type:	SAMPLE	Sampled:	07/18/13
Lab ID:	247135-007	Analyzed:	07/22/13
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
MTBE	ND	0.50
Benzene	8.9	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	85	77-134
1,2-Dichloroethane-d4	98	72-140
Toluene-d8	96	80-120
Bromofluorobenzene	90	80-120

Field ID:	RW-D5	Lab ID:	247135-008
Type:	SAMPLE	Sampled:	07/18/13

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Gasoline C7-C12	710	500	10.00	200865	07/22/13
MTBE	ND	5.0	10.00	200865	07/22/13
Benzene	1,500	13	25.00	200907	07/23/13
Toluene	17	5.0	10.00	200865	07/22/13
Ethylbenzene	11	5.0	10.00	200865	07/22/13
m,p-Xylenes	18	5.0	10.00	200865	07/22/13
o-Xylene	5.4	5.0	10.00	200865	07/22/13

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	85	77-134	10.00	200865	07/22/13
1,2-Dichloroethane-d4	85	72-140	10.00	200865	07/22/13
Toluene-d8	96	80-120	10.00	200865	07/22/13
Bromofluorobenzene	89	80-120	10.00	200865	07/22/13

NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Received:	07/19/13
Units:	ug/L		

Field ID:	RW-D6	Batch#:	200905
Type:	SAMPLE	Sampled:	07/18/13
Lab ID:	247135-009	Analyzed:	07/23/13
Diln Fac:	14.29		

Analyte	Result	RL
Gasoline C7-C12	5,300	710
MTBE	ND	7.1
Benzene	860	7.1
Toluene	120	7.1
Ethylbenzene	94	7.1
m,p-Xylenes	340	7.1
o-Xylene	380	7.1

Surrogate	%REC	Limits
Dibromofluoromethane	83	77-134
1,2-Dichloroethane-d4	91	72-140
Toluene-d8	97	80-120
Bromofluorobenzene	92	80-120

Field ID:	RW-D6-D	Batch#:	200905
Type:	SAMPLE	Sampled:	07/18/13
Lab ID:	247135-010	Analyzed:	07/23/13
Diln Fac:	14.29		

Analyte	Result	RL
Gasoline C7-C12	4,900	710
MTBE	ND	7.1
Benzene	800	7.1
Toluene	120	7.1
Ethylbenzene	83	7.1
m,p-Xylenes	310	7.1
o-Xylene	340	7.1

Surrogate	%REC	Limits
Dibromofluoromethane	82	77-134
1,2-Dichloroethane-d4	90	72-140
Toluene-d8	96	80-120
Bromofluorobenzene	91	80-120

NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Received:	07/19/13
Units:	ug/L		

Field ID:	MW-5	Batch#:	200905
Type:	SAMPLE	Sampled:	07/18/13
Lab ID:	247135-011	Analyzed:	07/23/13
Diln Fac:	1.250		

Analyte	Result	RL
Gasoline C7-C12	2,000	63
MTBE	42	0.63
Benzene	0.65	0.63
Toluene	ND	0.63
Ethylbenzene	20	0.63
m,p-Xylenes	3.0	0.63
o-Xylene	0.63	0.63

Surrogate	%REC	Limits
Dibromofluoromethane	83	77-134
1,2-Dichloroethane-d4	96	72-140
Toluene-d8	96	80-120
Bromofluorobenzene	88	80-120

Field ID:	MW-1	Batch#:	200865
Type:	SAMPLE	Sampled:	07/18/13
Lab ID:	247135-013	Analyzed:	07/22/13
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	200	50
MTBE	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	0.66	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	86	77-134
1,2-Dichloroethane-d4	96	72-140
Toluene-d8	96	80-120
Bromofluorobenzene	90	80-120

NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Received:	07/19/13
Units:	ug/L		

Field ID:	RW-D9	Lab ID:	247135-014
Type:	SAMPLE	Sampled:	07/18/13

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Gasoline C7-C12	590	50	1.000	200865	07/22/13
MTBE	ND	0.50	1.000	200865	07/22/13
Benzene	120	1.3	2.500	200907	07/23/13
Toluene	4.0	0.50	1.000	200865	07/22/13
Ethylbenzene	5.4	0.50	1.000	200865	07/22/13
m,p-Xylenes	35	0.50	1.000	200865	07/22/13
o-Xylene	23	0.50	1.000	200865	07/22/13

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	85	77-134	1.000	200865	07/22/13
1,2-Dichloroethane-d4	94	72-140	1.000	200865	07/22/13
Toluene-d8	98	80-120	1.000	200865	07/22/13
Bromofluorobenzene	89	80-120	1.000	200865	07/22/13

Field ID:	MW-6	Batch#:	200865
Type:	SAMPLE	Sampled:	07/19/13
Lab ID:	247135-015	Analyzed:	07/22/13
Diln Fac:	3.333		

Analyte	Result	RL
Gasoline C7-C12	380	170
MTBE	2.7	1.7
Benzene	160	1.7
Toluene	4.7	1.7
Ethylbenzene	ND	1.7
m,p-Xylenes	4.6	1.7
o-Xylene	ND	1.7

Surrogate	%REC	Limits
Dibromofluoromethane	82	77-134
1,2-Dichloroethane-d4	87	72-140
Toluene-d8	96	80-120
Bromofluorobenzene	88	80-120

NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Received:	07/19/13
Units:	ug/L		

Field ID:	RW-B4	Batch#:	200865
Type:	SAMPLE	Sampled:	07/19/13
Lab ID:	247135-016	Analyzed:	07/22/13
Diln Fac:	25.00		

Analyte	Result	RL
Gasoline C7-C12	7,600	1,300
MTBE	ND	13
Benzene	2,200	13
Toluene	54	13
Ethylbenzene	210	13
m,p-Xylenes	280	13
o-Xylene	31	13

Surrogate	%REC	Limits
Dibromofluoromethane	83	77-134
1,2-Dichloroethane-d4	88	72-140
Toluene-d8	99	80-120
Bromofluorobenzene	89	80-120

Field ID:	RW-A2	Batch#:	200865
Type:	SAMPLE	Sampled:	07/19/13
Lab ID:	247135-017	Analyzed:	07/22/13
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
MTBE	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	85	77-134
1,2-Dichloroethane-d4	94	72-140
Toluene-d8	96	80-120
Bromofluorobenzene	92	80-120

NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Received:	07/19/13
Units:	ug/L		

Field ID:	RW-B3	Batch#:	200905
Type:	SAMPLE	Sampled:	07/19/13
Lab ID:	247135-018	Analyzed:	07/23/13
Diln Fac:	33.33		

Analyte	Result	RL
Gasoline C7-C12	2,900	1,700
MTBE	ND	17
Benzene	1,900	17
Toluene	28	17
Ethylbenzene	67	17
m,p-Xylenes	20	17
o-Xylene	ND	17

Surrogate	%REC	Limits
Dibromofluoromethane	82	77-134
1,2-Dichloroethane-d4	90	72-140
Toluene-d8	98	80-120
Bromofluorobenzene	90	80-120

Field ID:	RW-B2	Batch#:	200905
Type:	SAMPLE	Sampled:	07/19/13
Lab ID:	247135-019	Analyzed:	07/23/13
Diln Fac:	40.00		

Analyte	Result	RL
Gasoline C7-C12	9,700	2,000
MTBE	ND	20
Benzene	2,100	20
Toluene	2,000	20
Ethylbenzene	170	20
m,p-Xylenes	610	20
o-Xylene	470	20

Surrogate	%REC	Limits
Dibromofluoromethane	82	77-134
1,2-Dichloroethane-d4	89	72-140
Toluene-d8	98	80-120
Bromofluorobenzene	89	80-120

NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Received:	07/19/13
Units:	ug/L		

Field ID:	RW-B1	Batch#:	200905
Type:	SAMPLE	Sampled:	07/19/13
Lab ID:	247135-020	Analyzed:	07/23/13
Diln Fac:	10.00		

Analyte	Result	RL
Gasoline C7-C12	ND	500
MTBE	ND	5.0
Benzene	610	5.0
Toluene	42	5.0
Ethylbenzene	13	5.0
m,p-Xylenes	12	5.0
o-Xylene	14	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	83	77-134
1,2-Dichloroethane-d4	89	72-140
Toluene-d8	96	80-120
Bromofluorobenzene	88	80-120

Field ID:	RW-B1-D	Batch#:	200905
Type:	SAMPLE	Sampled:	07/19/13
Lab ID:	247135-021	Analyzed:	07/23/13
Diln Fac:	10.00		

Analyte	Result	RL
Gasoline C7-C12	ND	500
MTBE	ND	5.0
Benzene	630	5.0
Toluene	44	5.0
Ethylbenzene	14	5.0
m,p-Xylenes	13	5.0
o-Xylene	13	5.0

Surrogate	%REC	Limits
Dibromofluoromethane	82	77-134
1,2-Dichloroethane-d4	88	72-140
Toluene-d8	99	80-120
Bromofluorobenzene	91	80-120

NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Received:	07/19/13
Units:	ug/L		

Field ID:	RW-1	Batch#:	200864
Type:	SAMPLE	Sampled:	07/19/13
Lab ID:	247135-022	Analyzed:	07/22/13
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
MTBE	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	98	77-134
1,2-Dichloroethane-d4	126	72-140
Toluene-d8	104	80-120
Bromofluorobenzene	114	80-120

Field ID:	RW-D8	Lab ID:	247135-023
Type:	SAMPLE	Sampled:	07/19/13

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Gasoline C7-C12	4,200	170	3.333	200944	07/24/13
MTBE	ND	0.50	1.000	200905	07/23/13
Benzene	14	0.50	1.000	200905	07/23/13
Toluene	15	0.50	1.000	200905	07/23/13
Ethylbenzene	14	0.50	1.000	200905	07/23/13
m,p-Xylenes	280	1.7	3.333	200944	07/24/13
o-Xylene	170	1.7	3.333	200944	07/24/13

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	85	77-134	1.000	200905	07/23/13
1,2-Dichloroethane-d4	99	72-140	1.000	200905	07/23/13
Toluene-d8	97	80-120	1.000	200905	07/23/13
Bromofluorobenzene	97	80-120	1.000	200905	07/23/13

NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Received:	07/19/13
Units:	ug/L		

Type: BLANK
Lab ID: QC698474
Diln Fac: 1.000

Batch#: 200864
Analyzed: 07/22/13

Analyte	Result	RL
Gasoline C7-C12	ND	50
MTBE	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	100	77-134
1,2-Dichloroethane-d4	125	72-140
Toluene-d8	107	80-120
Bromofluorobenzene	114	80-120

Type: BLANK
Lab ID: QC698477
Diln Fac: 1.000

Batch#: 200865
Analyzed: 07/22/13

Analyte	Result	RL
Gasoline C7-C12	ND	50
MTBE	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	83	77-134
1,2-Dichloroethane-d4	95	72-140
Toluene-d8	98	80-120
Bromofluorobenzene	93	80-120

NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Received:	07/19/13
Units:	ug/L		

Type: BLANK
Lab ID: QC698631
Diln Fac: 1.000

Batch#: 200905
Analyzed: 07/23/13

Analyte	Result	RL
Gasoline C7-C12	ND	50
MTBE	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	83	77-134
1,2-Dichloroethane-d4	94	72-140
Toluene-d8	98	80-120
Bromofluorobenzene	89	80-120

Type: BLANK
Lab ID: QC698638
Diln Fac: 1.000

Batch#: 200907
Analyzed: 07/23/13

Analyte	Result	RL
Gasoline C7-C12	NA	
MTBE	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	115	77-134
1,2-Dichloroethane-d4	100	72-140
Toluene-d8	102	80-120
Bromofluorobenzene	89	80-120

NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Received:	07/19/13
Units:	ug/L		

Type:	BLANK	Batch#:	200944
Lab ID:	QC698801	Analyzed:	07/24/13
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
MTBE	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	83	77-134
1,2-Dichloroethane-d4	95	72-140
Toluene-d8	97	80-120
Bromofluorobenzene	91	80-120

NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	200864
Units:	ug/L	Analyzed:	07/22/13
Diln Fac:	1.000		

Type: BS Lab ID: QC698472

Analyte	Spiked	Result	%REC	Limits
MTBE	25.00	25.42	102	58-120
Benzene	25.00	24.80	99	78-125
Toluene	25.00	25.84	103	79-123
Ethylbenzene	25.00	27.94	112	80-126
m,p-Xylenes	50.00	51.40	103	80-123
o-Xylene	25.00	23.96	96	75-120

Surrogate	%REC	Limits
Dibromofluoromethane	100	77-134
1,2-Dichloroethane-d4	129	72-140
Toluene-d8	105	80-120
Bromofluorobenzene	113	80-120

Type: BSD Lab ID: QC698473

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	25.00	25.75	103	58-120	1	23
Benzene	25.00	24.15	97	78-125	3	20
Toluene	25.00	25.13	101	79-123	3	20
Ethylbenzene	25.00	26.97	108	80-126	4	20
m,p-Xylenes	50.00	50.24	100	80-123	2	20
o-Xylene	25.00	23.79	95	75-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	99	77-134
1,2-Dichloroethane-d4	129	72-140
Toluene-d8	104	80-120
Bromofluorobenzene	113	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	200865
Units:	ug/L	Analyzed:	07/22/13
Diln Fac:	1.000		

Type: BS Lab ID: QC698475

Analyte	Spiked	Result	%REC	Limits
MTBE	25.00	21.03	84	58-120
Benzene	25.00	25.14	101	78-125
Toluene	25.00	27.12	108	79-123
Ethylbenzene	25.00	27.37	109	80-126
m,p-Xylenes	50.00	54.76	110	80-123
o-Xylene	25.00	27.50	110	75-120

Surrogate	%REC	Limits
Dibromofluoromethane	85	77-134
1,2-Dichloroethane-d4	98	72-140
Toluene-d8	97	80-120
Bromofluorobenzene	91	80-120

Type: BSD Lab ID: QC698476

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	25.00	20.78	83	58-120	1	23
Benzene	25.00	25.66	103	78-125	2	20
Toluene	25.00	26.81	107	79-123	1	20
Ethylbenzene	25.00	27.24	109	80-126	0	20
m,p-Xylenes	50.00	55.08	110	80-123	1	20
o-Xylene	25.00	26.32	105	75-120	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	85	77-134
1,2-Dichloroethane-d4	94	72-140
Toluene-d8	98	80-120
Bromofluorobenzene	89	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	200864
Units:	ug/L	Analyzed:	07/22/13
Diln Fac:	1.000		

Type: BS Lab ID: QC698487

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	967.6	97	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	103	77-134
1,2-Dichloroethane-d4	135	72-140
Toluene-d8	105	80-120
Bromofluorobenzene	111	80-120

Type: BSD Lab ID: QC698488

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	923.4	92	80-120	5	20

Surrogate	%REC	Limits
Dibromofluoromethane	100	77-134
1,2-Dichloroethane-d4	131	72-140
Toluene-d8	104	80-120
Bromofluorobenzene	114	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	200865
Units:	ug/L	Analyzed:	07/22/13
Diln Fac:	1.000		

Type: BS Lab ID: QC698493

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	955.9	96	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	84	77-134
1,2-Dichloroethane-d4	95	72-140
Toluene-d8	98	80-120
Bromofluorobenzene	90	80-120

Type: BSD Lab ID: QC698494

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	963.5	96	80-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	83	77-134
1,2-Dichloroethane-d4	92	72-140
Toluene-d8	96	80-120
Bromofluorobenzene	90	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	200905
Units:	ug/L	Analyzed:	07/23/13
Diln Fac:	1.000		

Type: BS Lab ID: QC698629

Analyte	Spiked	Result	%REC	Limits
MTBE	25.00	20.44	82	58-120
Benzene	25.00	25.42	102	78-125
Toluene	25.00	26.36	105	79-123
Ethylbenzene	25.00	26.97	108	80-126
m,p-Xylenes	50.00	55.51	111	80-123
o-Xylene	25.00	26.19	105	75-120

Surrogate	%REC	Limits
Dibromofluoromethane	83	77-134
1,2-Dichloroethane-d4	93	72-140
Toluene-d8	95	80-120
Bromofluorobenzene	91	80-120

Type: BSD Lab ID: QC698630

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	25.00	20.97	84	58-120	3	23
Benzene	25.00	25.22	101	78-125	1	20
Toluene	25.00	26.19	105	79-123	1	20
Ethylbenzene	25.00	27.38	110	80-126	2	20
m,p-Xylenes	50.00	54.64	109	80-123	2	20
o-Xylene	25.00	26.54	106	75-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	83	77-134
1,2-Dichloroethane-d4	93	72-140
Toluene-d8	96	80-120
Bromofluorobenzene	89	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	200905
Units:	ug/L	Analyzed:	07/23/13
Diln Fac:	1.000		

Type: BS Lab ID: QC698632

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	958.6	96	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	83	77-134
1,2-Dichloroethane-d4	98	72-140
Toluene-d8	97	80-120
Bromofluorobenzene	90	80-120

Type: BSD Lab ID: QC698633

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	932.8	93	80-120	3	20

Surrogate	%REC	Limits
Dibromofluoromethane	83	77-134
1,2-Dichloroethane-d4	94	72-140
Toluene-d8	98	80-120
Bromofluorobenzene	91	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	200907
Units:	ug/L	Analyzed:	07/23/13
Diln Fac:	1.000		

Type: BS Lab ID: QC698636

Analyte	Spiked	Result	%REC	Limits
MTBE	12.50	9.516	76	58-120
Benzene	12.50	12.61	101	78-125
Toluene	12.50	12.44	100	79-123
Ethylbenzene	12.50	11.44	92	80-126
m,p-Xylenes	25.00	23.34	93	80-123
o-Xylene	12.50	9.970	80	75-120

Surrogate	%REC	Limits
Dibromofluoromethane	108	77-134
1,2-Dichloroethane-d4	100	72-140
Toluene-d8	101	80-120
Bromofluorobenzene	86	80-120

Type: BSD Lab ID: QC698637

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	12.50	10.19	82	58-120	7	23
Benzene	12.50	12.57	101	78-125	0	20
Toluene	12.50	12.24	98	79-123	2	20
Ethylbenzene	12.50	11.65	93	80-126	2	20
m,p-Xylenes	25.00	23.54	94	80-123	1	20
o-Xylene	12.50	9.781	78	75-120	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	109	77-134
1,2-Dichloroethane-d4	102	72-140
Toluene-d8	101	80-120
Bromofluorobenzene	87	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	200907
MSS Lab ID:	247164-001	Sampled:	07/22/13
Matrix:	Water	Received:	07/22/13
Units:	ug/L	Analyzed:	07/23/13
Diln Fac:	1.000		

Type: MS Lab ID: QC698642

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<0.1000	12.50	11.70	94	63-120
Benzene	<0.1000	12.50	12.86	103	80-125
Toluene	<0.1000	12.50	12.58	101	80-122
Ethylbenzene	<0.1321	12.50	11.81	94	80-124
m,p-Xylenes	<0.1123	25.00	23.73	95	80-121
o-Xylene	<0.1000	12.50	10.31	82	77-120

Surrogate	%REC	Limits
Dibromofluoromethane	106	77-134
1,2-Dichloroethane-d4	100	72-140
Toluene-d8	100	80-120
Bromofluorobenzene	86	80-120

Type: MSD Lab ID: QC698643

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	12.50	11.22	90	63-120	4	27
Benzene	12.50	12.88	103	80-125	0	21
Toluene	12.50	12.42	99	80-122	1	21
Ethylbenzene	12.50	11.73	94	80-124	1	21
m,p-Xylenes	25.00	23.61	94	80-121	0	21
o-Xylene	12.50	10.28	82	77-120	0	22

Surrogate	%REC	Limits
Dibromofluoromethane	106	77-134
1,2-Dichloroethane-d4	99	72-140
Toluene-d8	100	80-120
Bromofluorobenzene	86	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	200944
Units:	ug/L	Analyzed:	07/24/13
Diln Fac:	1.000		

Type: BS Lab ID: QC698799

Analyte	Spiked	Result	%REC	Limits
MTBE	25.00	20.35	81	58-120
Benzene	25.00	25.12	100	78-125
Toluene	25.00	26.87	107	79-123
Ethylbenzene	25.00	26.56	106	80-126
m,p-Xylenes	50.00	55.26	111	80-123
o-Xylene	25.00	26.21	105	75-120

Surrogate	%REC	Limits
Dibromofluoromethane	84	77-134
1,2-Dichloroethane-d4	94	72-140
Toluene-d8	97	80-120
Bromofluorobenzene	89	80-120

Type: BSD Lab ID: QC698800

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	25.00	21.69	87	58-120	6	23
Benzene	25.00	26.58	106	78-125	6	20
Toluene	25.00	28.31	113	79-123	5	20
Ethylbenzene	25.00	28.82	115	80-126	8	20
m,p-Xylenes	50.00	58.38	117	80-123	5	20
o-Xylene	25.00	28.04	112	75-120	7	20

Surrogate	%REC	Limits
Dibromofluoromethane	84	77-134
1,2-Dichloroethane-d4	91	72-140
Toluene-d8	98	80-120
Bromofluorobenzene	91	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Organics by GC/MS

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 5030B
Project#:	LC010060.0016	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	200944
Units:	ug/L	Analyzed:	07/24/13
Diln Fac:	1.000		

Type: BS Lab ID: QC698802

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	947.5	95	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	84	77-134
1,2-Dichloroethane-d4	93	72-140
Toluene-d8	97	80-120
Bromofluorobenzene	92	80-120

Type: BSD Lab ID: QC698803

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	976.8	98	80-120	3	20

Surrogate	%REC	Limits
Dibromofluoromethane	83	77-134
1,2-Dichloroethane-d4	95	72-140
Toluene-d8	97	80-120
Bromofluorobenzene	94	80-120

RPD= Relative Percent Difference

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Instrument: MSVOA09.i

Sample Info: S,247135-001

Operator: VOC

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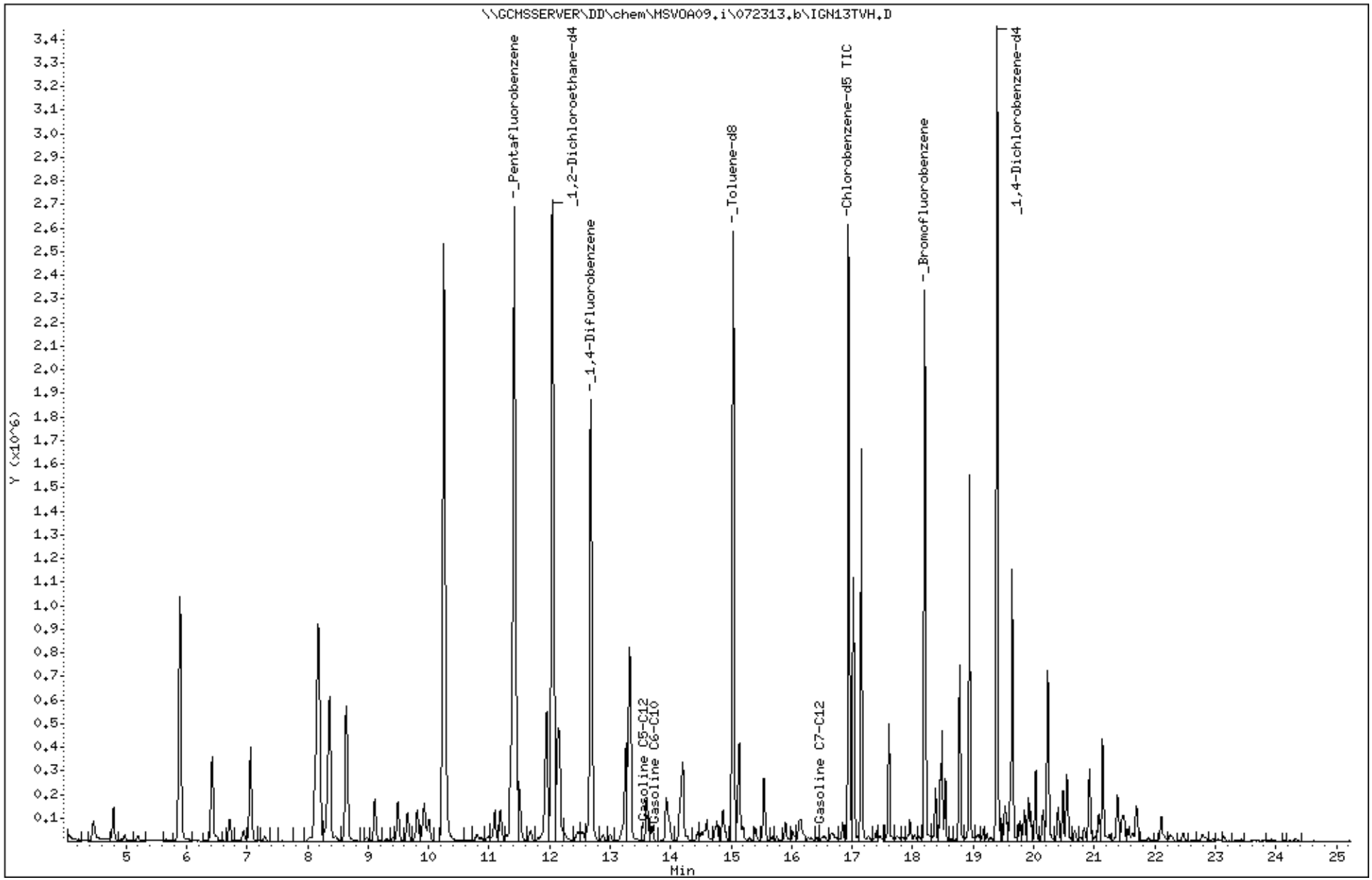

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Instrument: MSVOA09.i

Sample Info: S,247135-002

Operator: VOC

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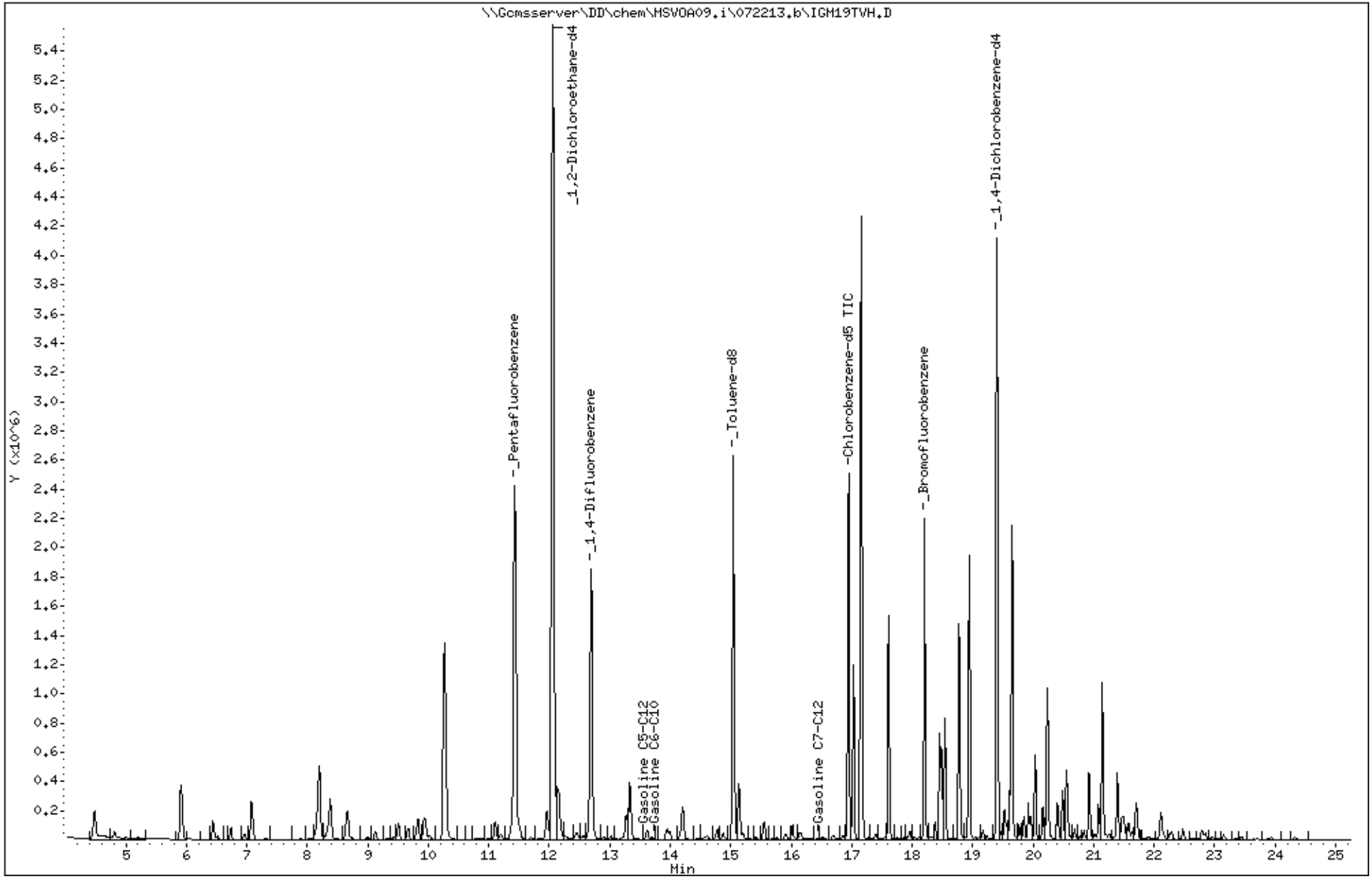

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Date : 22-JUL-2013 14:02

Client ID: DYNA P&T

Instrument: MSVOA09.i

Sample Info: S,247135-003

Operator: VOC

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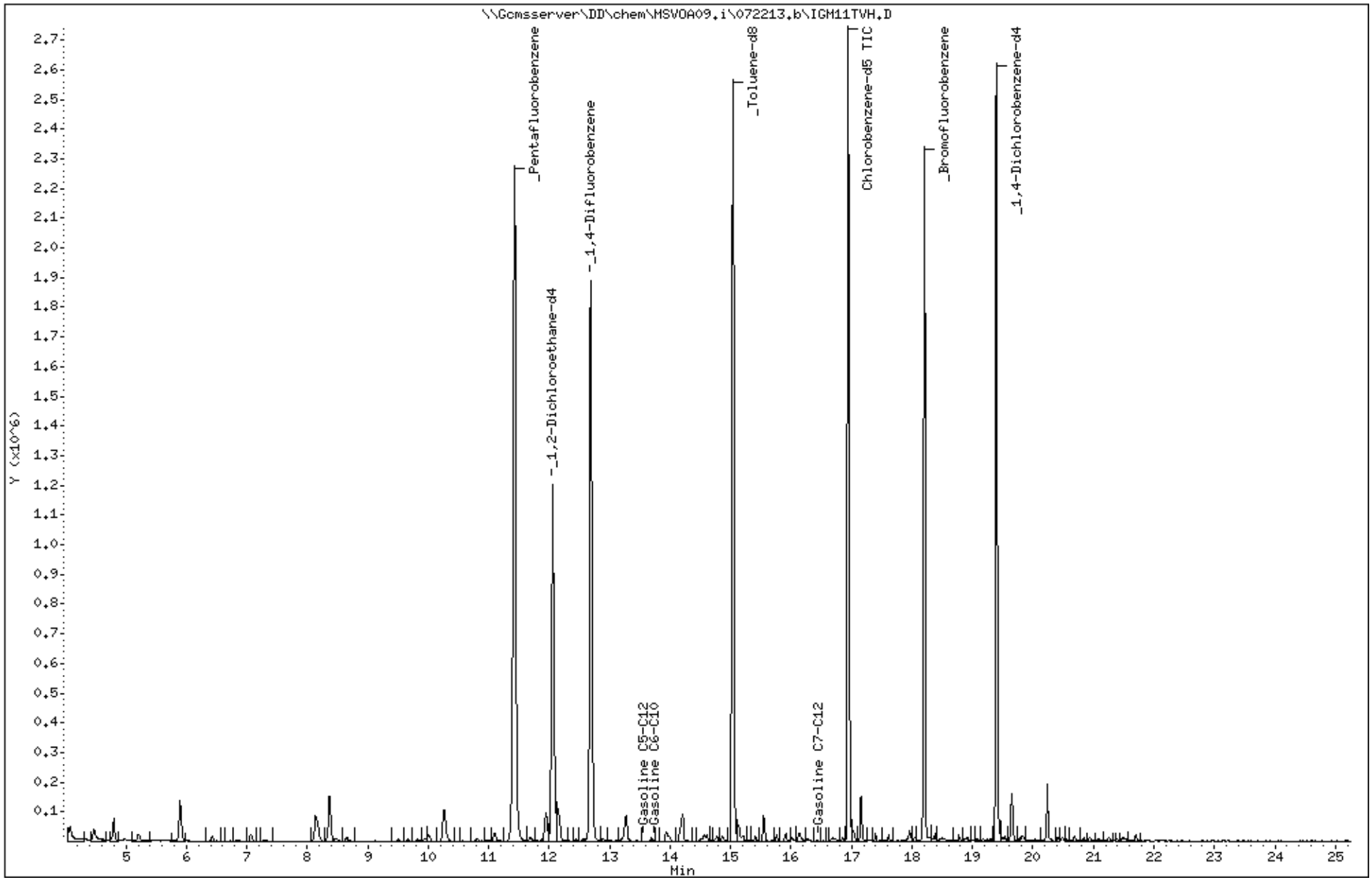

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Date : 22-JUL-2013 20:16

Client ID: DYNA P&T

Instrument: MSVOA09.i

Sample Info: S,247135-008

Operator: VOC

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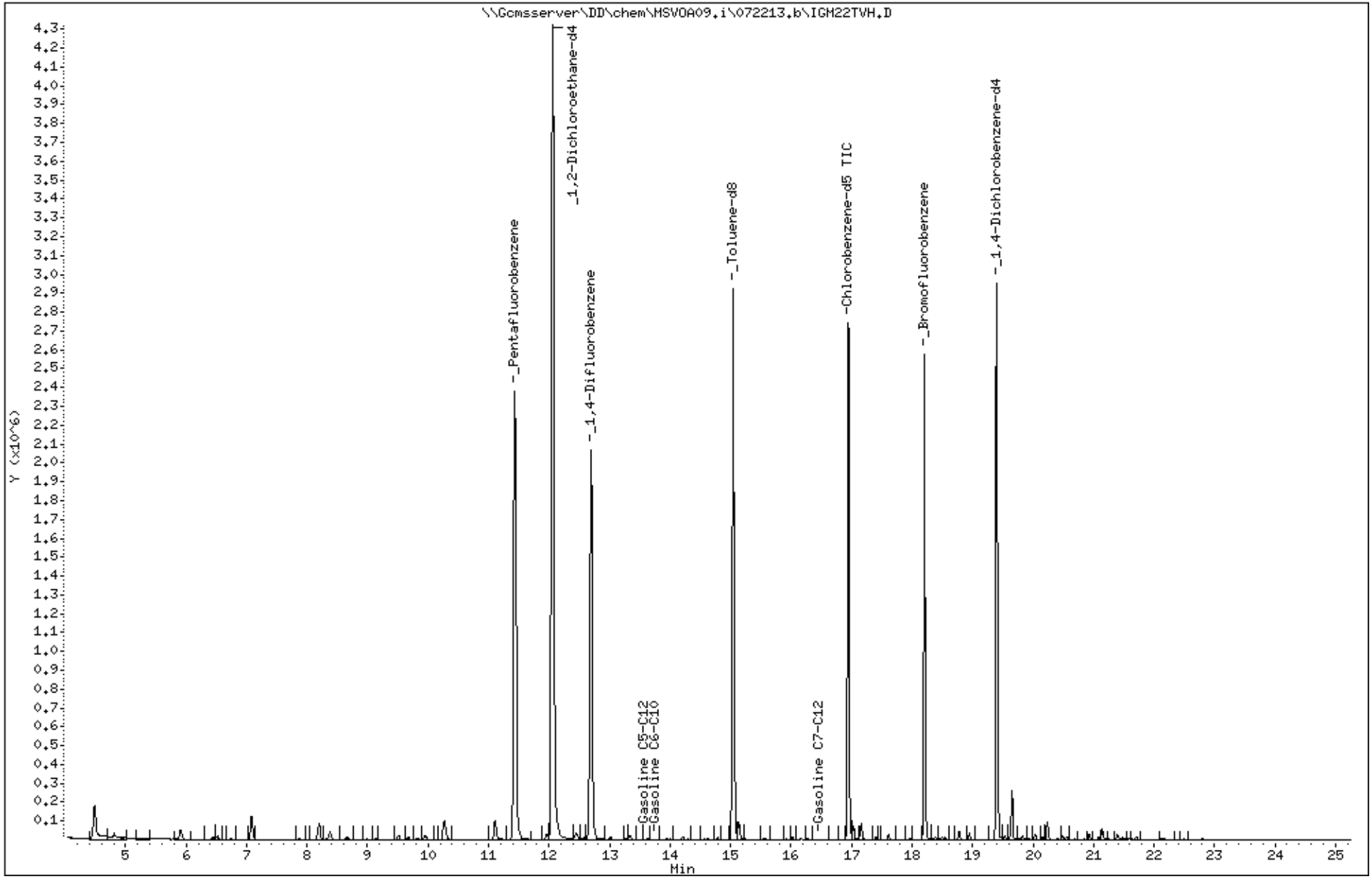

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Date : 23-JUL-2013 17:05

Client ID: DYNA P&T

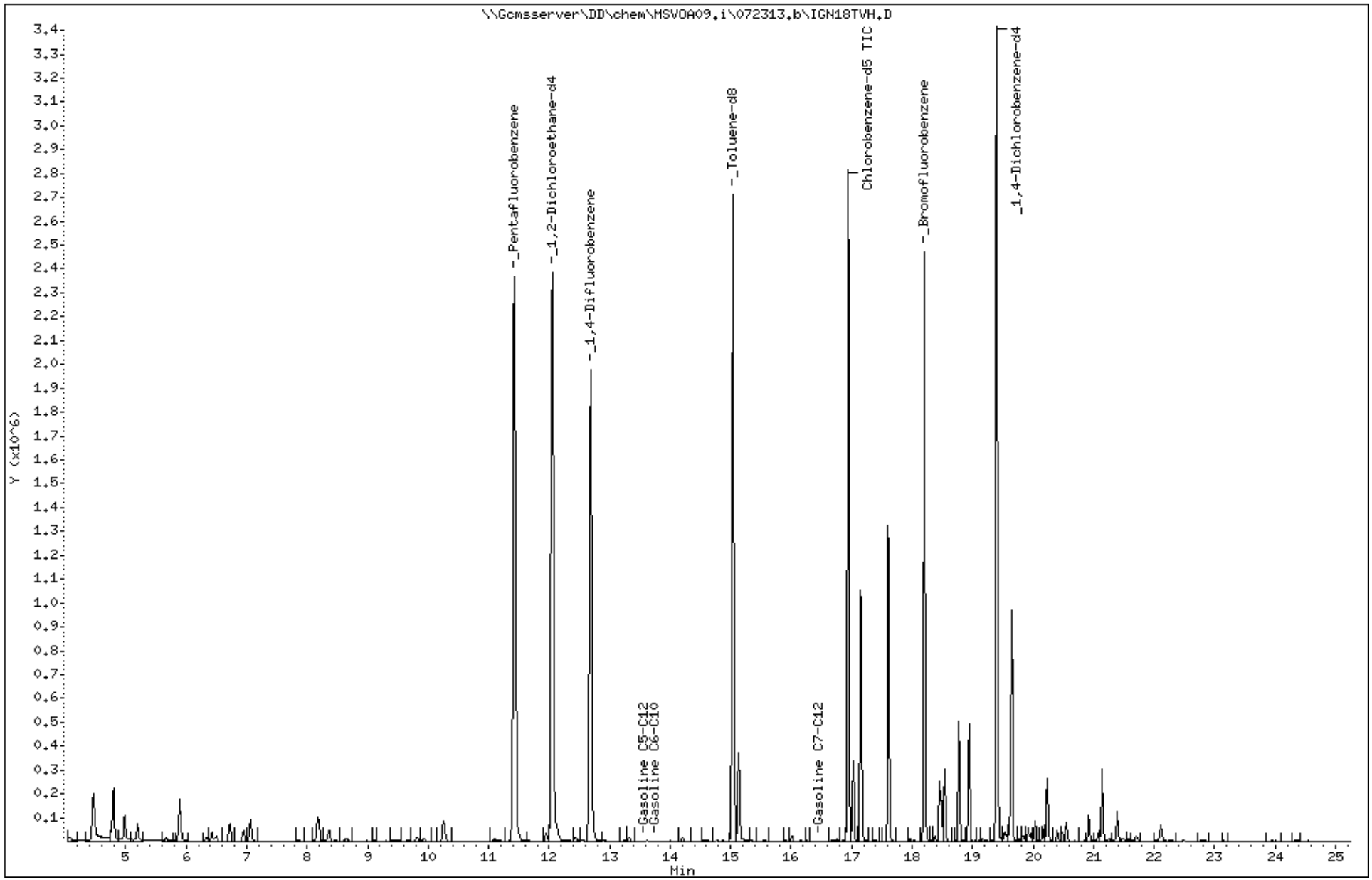
Instrument: MSVOA09.i

Sample Info: S,247135-009

Operator: VOC

Column phase:

Column diameter: 2.00



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Date : 23-JUL-2013 17:39

Client ID: DYNA P&T

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Sample Info: S,247135-010

Operator: VOC

Column phase:

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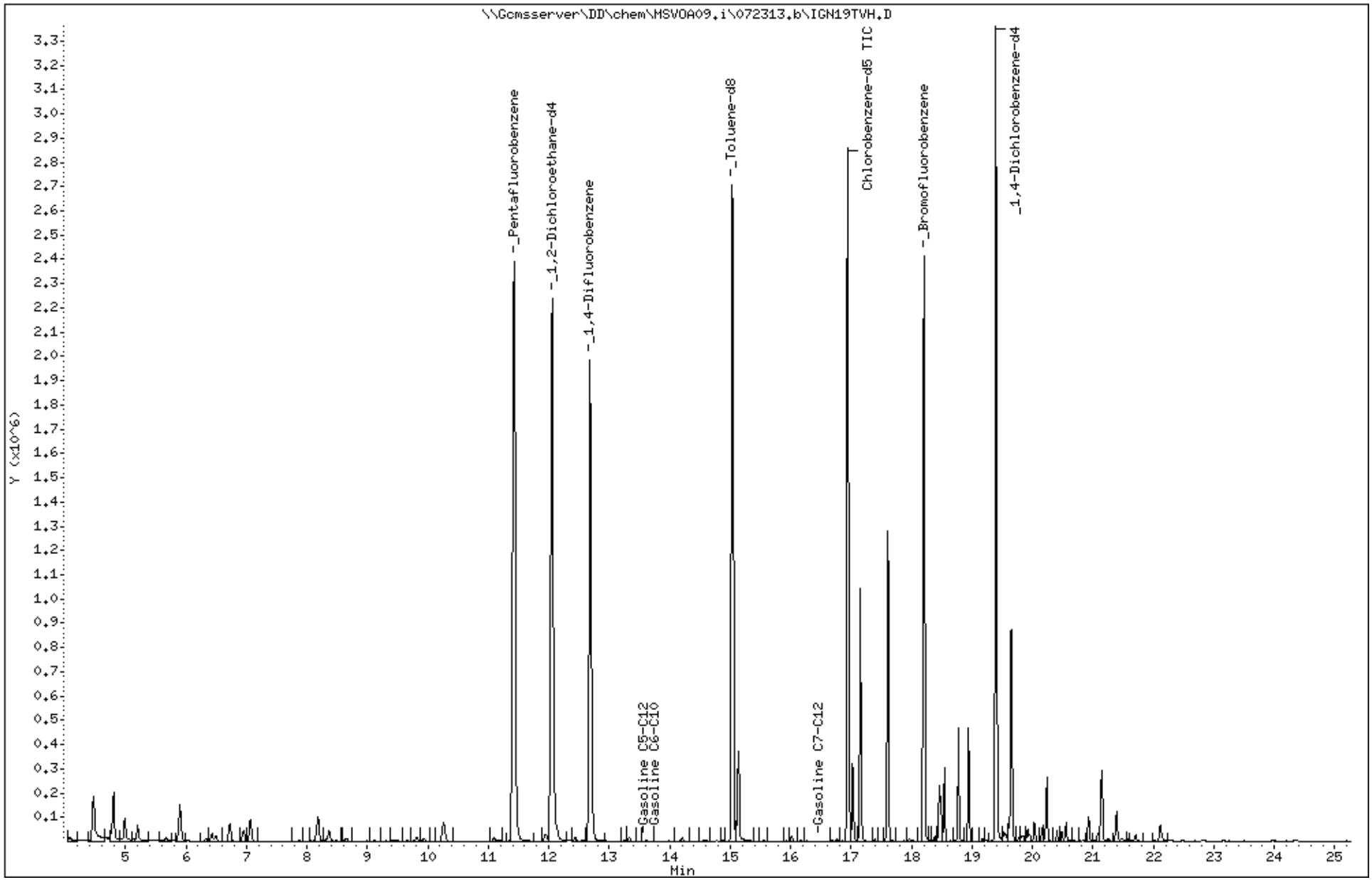

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Date : 23-JUL-2013 15:22

Client ID: DYNA P&T

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Sample Info: S,247135-011

Operator: VOC

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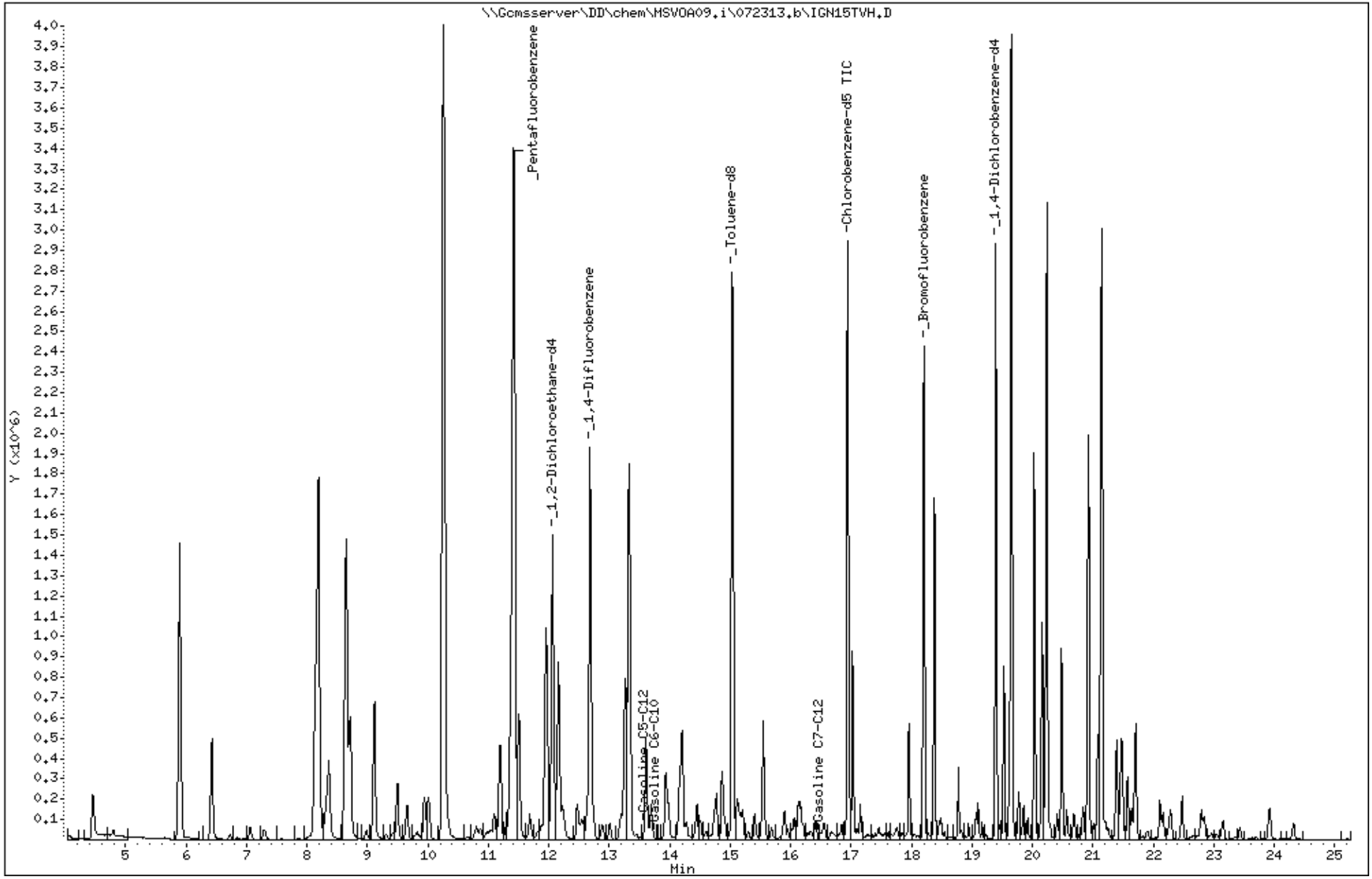

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Date : 22-JUL-2013 16:52

Client ID: DYNA P&T

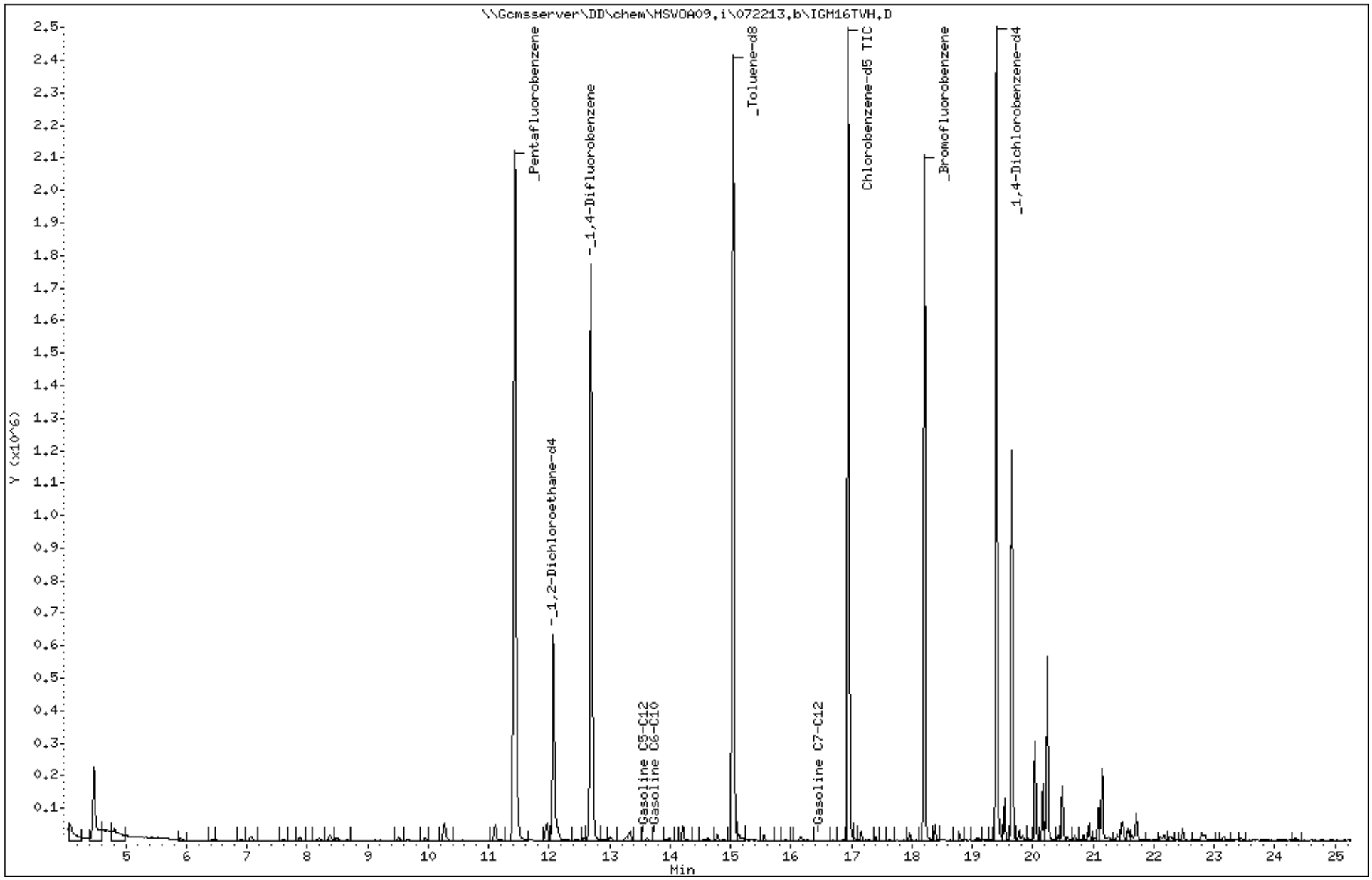
Instrument: MSVOA09.i

Sample Info: S,247135-013

Operator: VOC

Column phase:

Column diameter: 2.00



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Date : 22-JUL-2013 17:26

Client ID: DYNA P&T

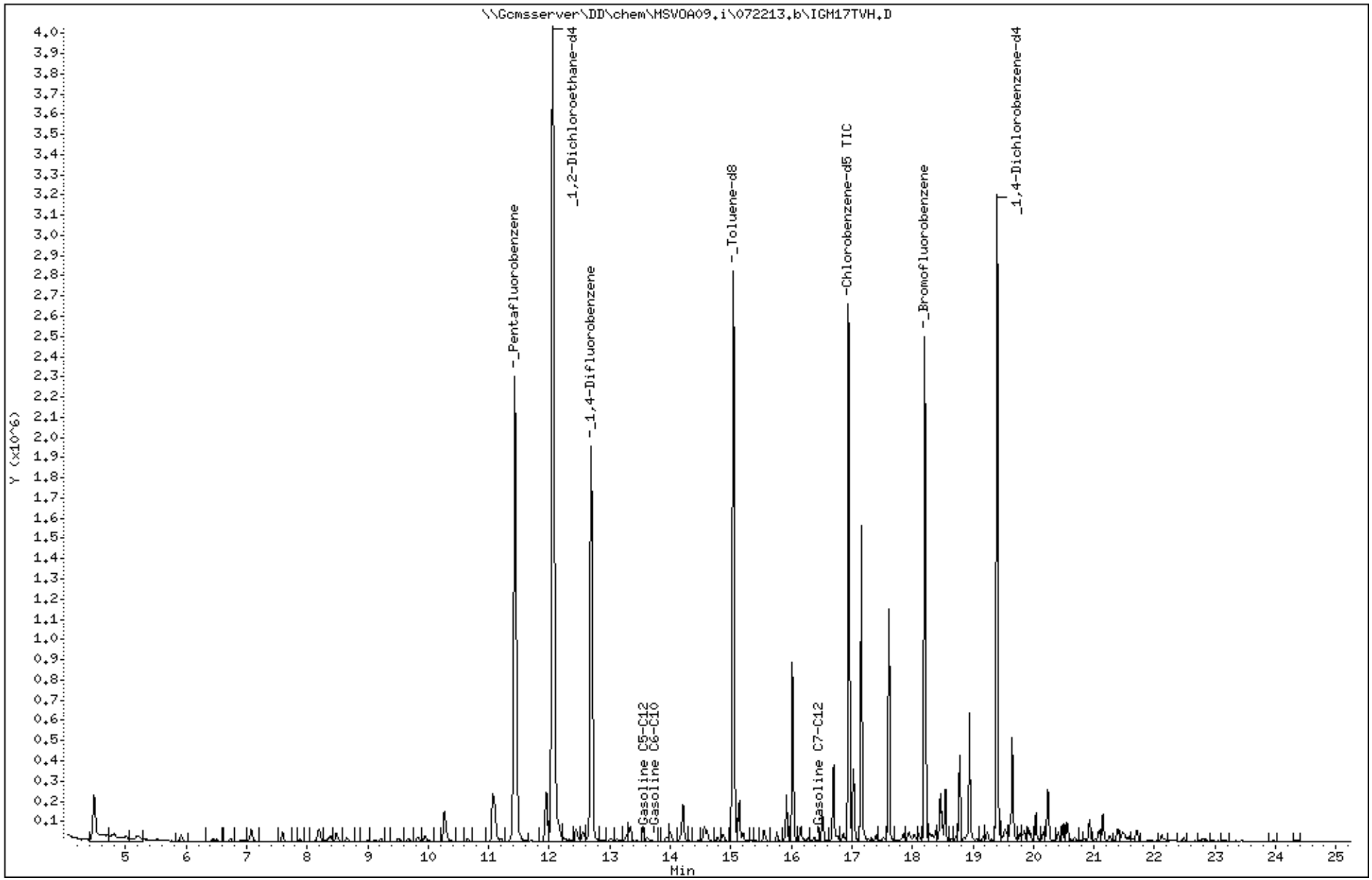
Instrument: MSVOA09.i

Sample Info: S,247135-014

Operator: VOC

Column phase:

Column diameter: 2.00



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Date : 22-JUL-2013 19:42

Client ID: DYNA P&T

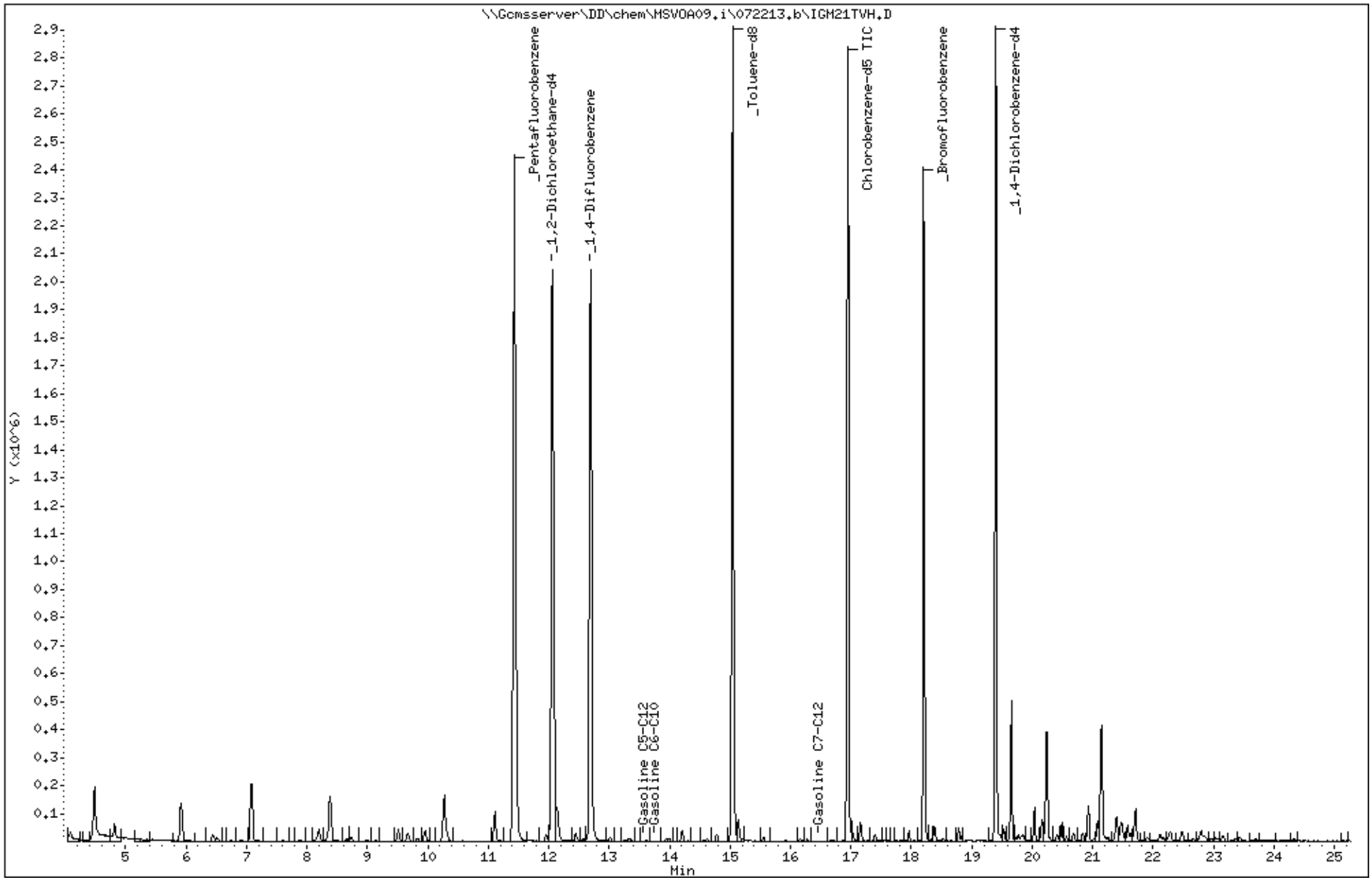
Instrument: MSVOA09.i

Sample Info: S,247135-015

Operator: VOC

Column phase:

Column diameter: 2.00



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Date : 22-JUL-2013 20:50

Client ID: DYNA P&T

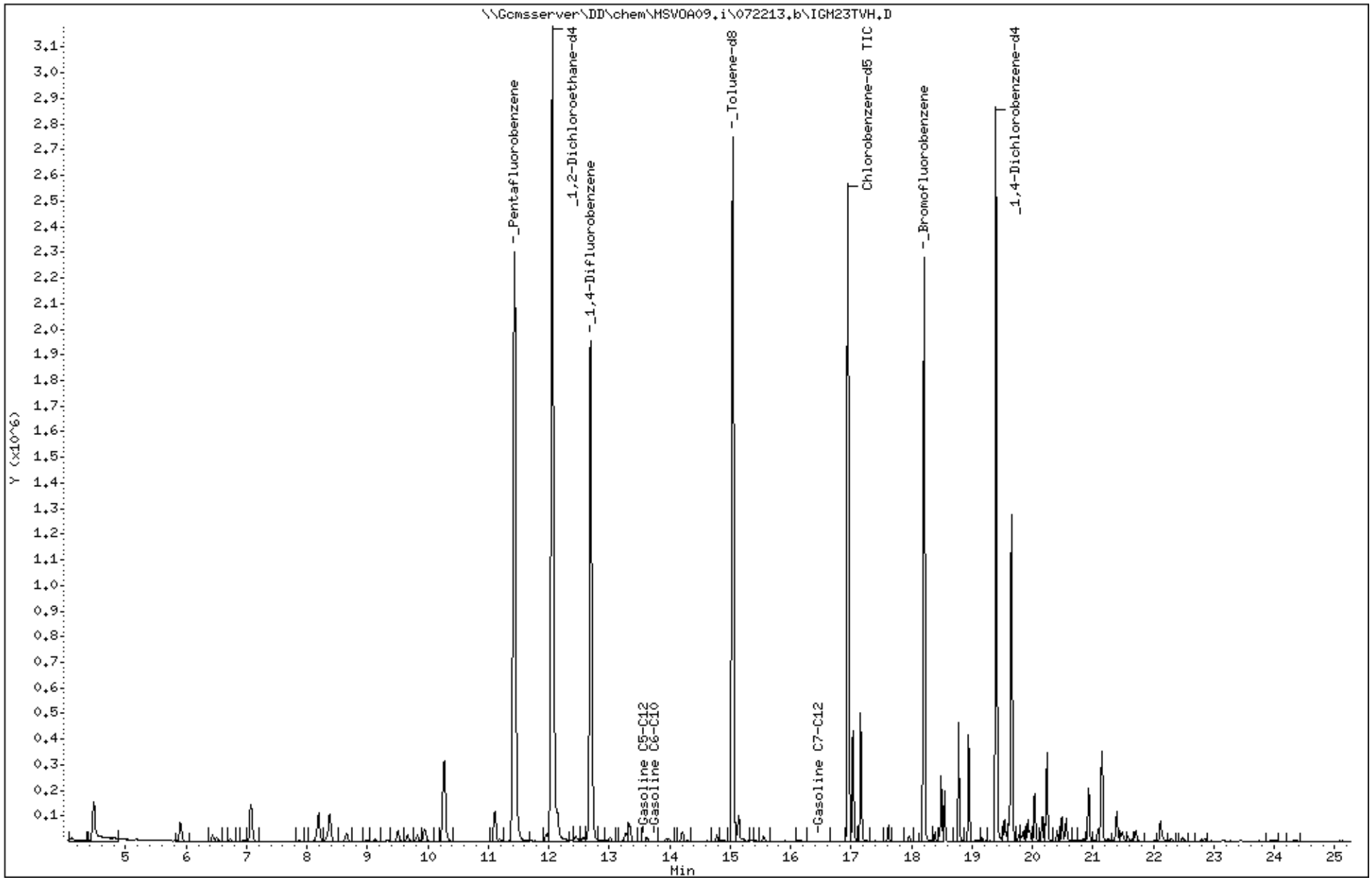
Instrument: MSVOA09.i

Sample Info: S,247135-016

Operator: VOC

Column phase:

Column diameter: 2.00



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Date : 23-JUL-2013 18:13

Client ID: DYNA P&T

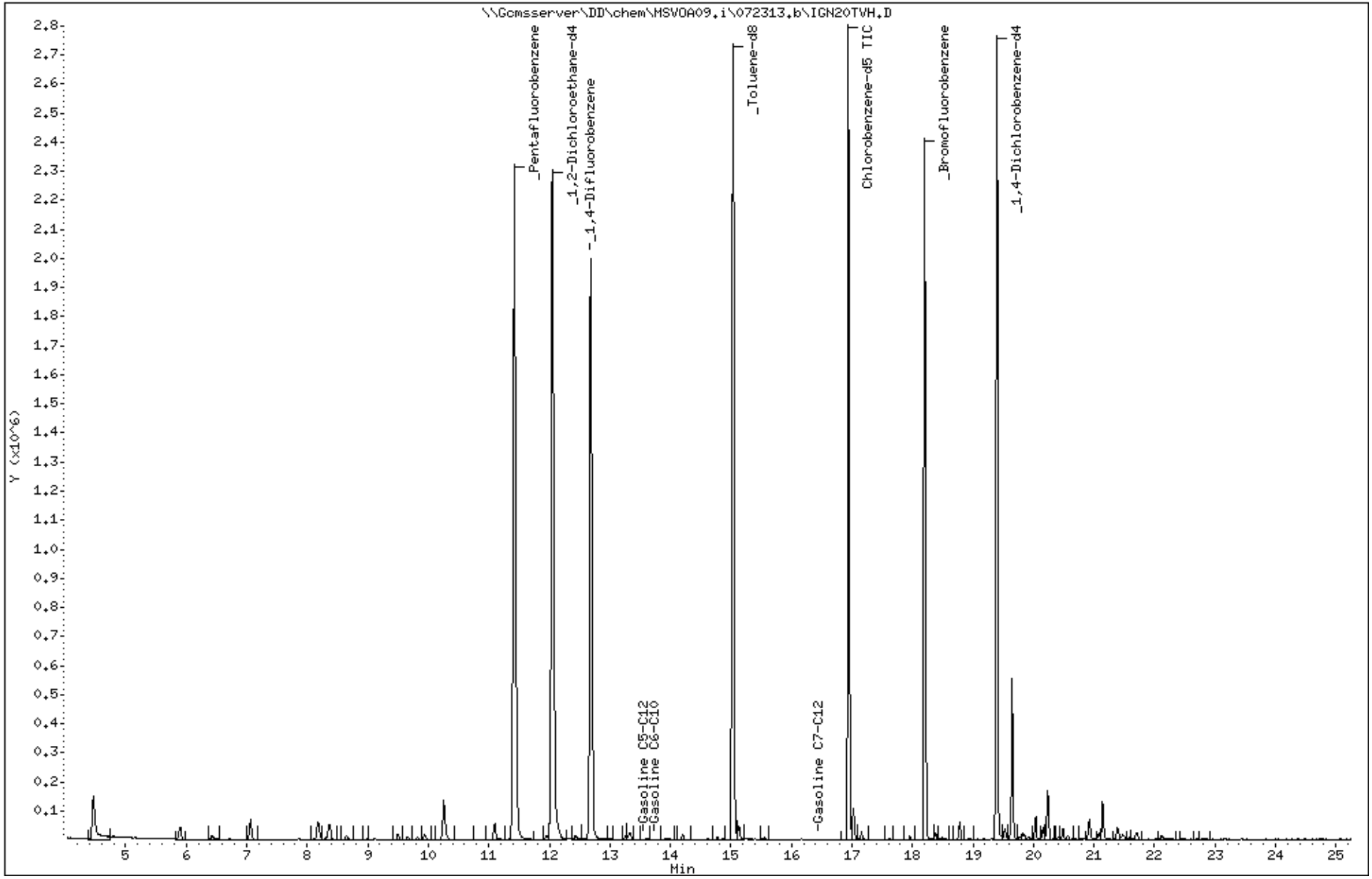
Instrument: MSVOA09.i

Sample Info: S,247135-018

Operator: VOC

Column phase:

Column diameter: 2.00



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Date : 23-JUL-2013 18:47

Client ID: DYNA P&T

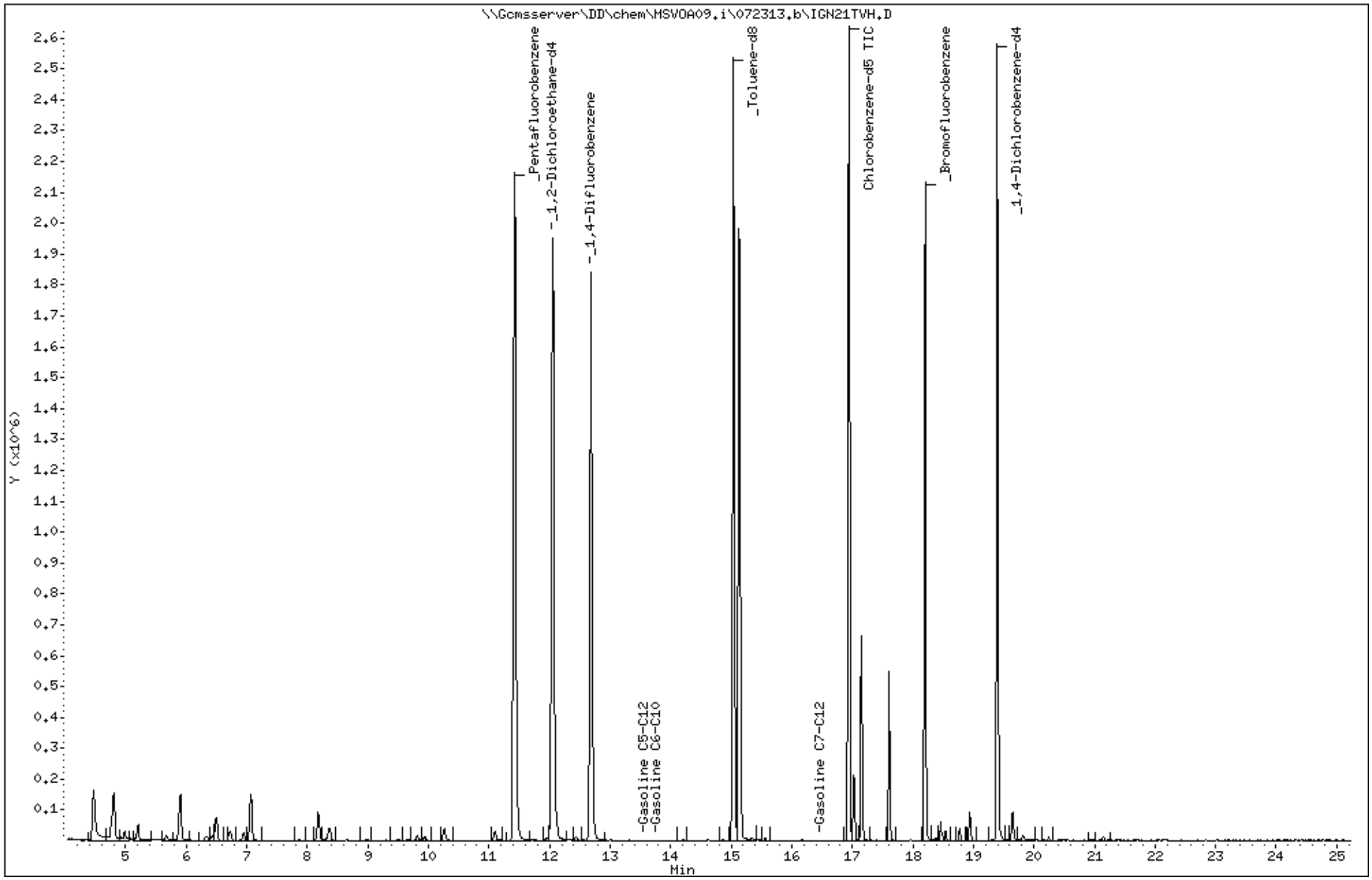
Instrument: MSVOA09.i

Sample Info: S,247135-019

Operator: VOC

Column phase:

Column diameter: 2.00



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Date : 24-JUL-2013 13:17

Client ID: DYNA P&T

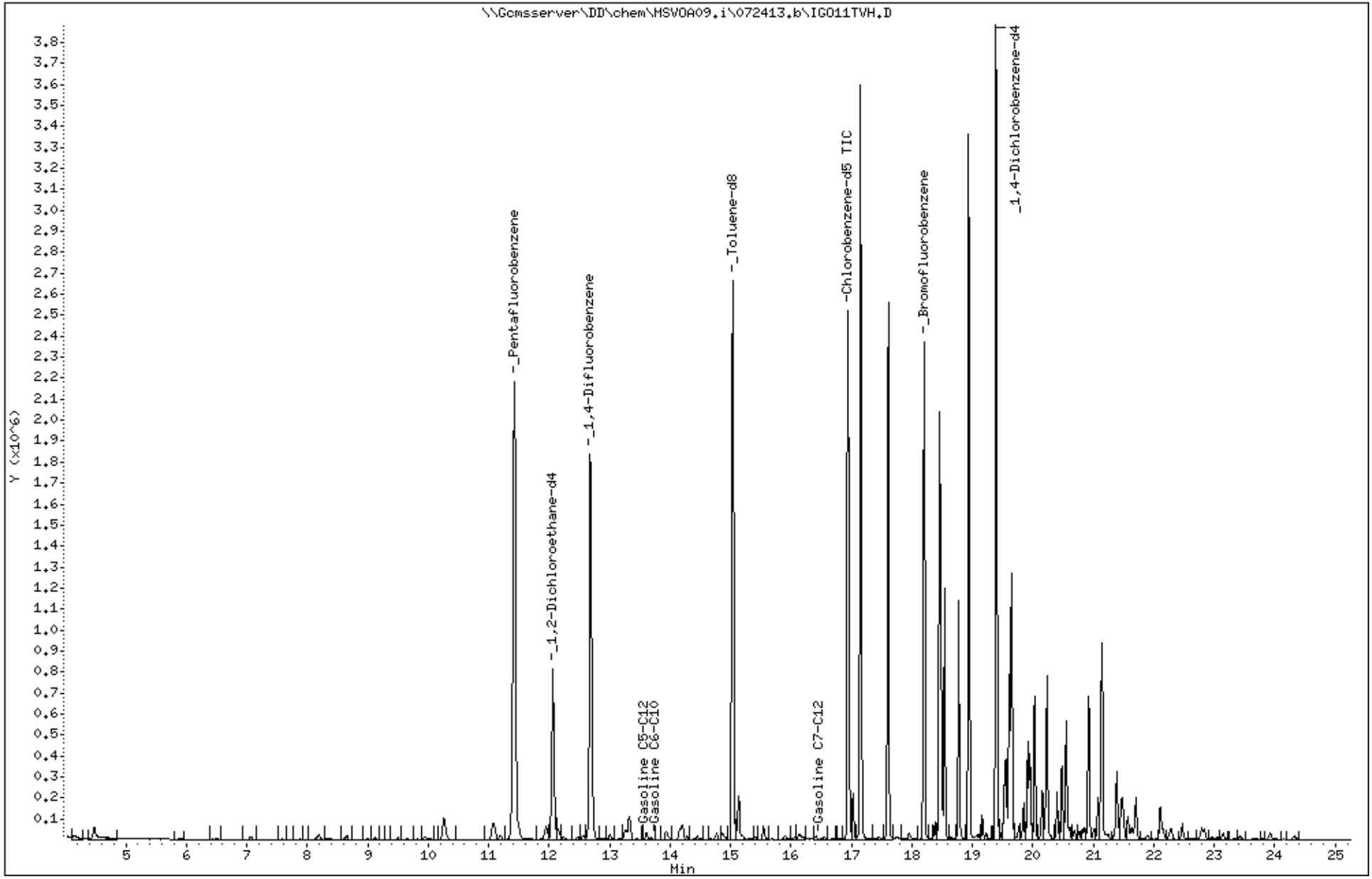
Instrument: MSVOA09.i

Sample Info: S,247135-023

Operator: VOC

Column phase:

Column diameter: 2.00



Data File: \\GCMSSERVER\DD\chem\MSVOA08.i\072213.b\HGM14TVH.D

Date : 22-JUL-2013 14:02

Client ID: DYNA P&T

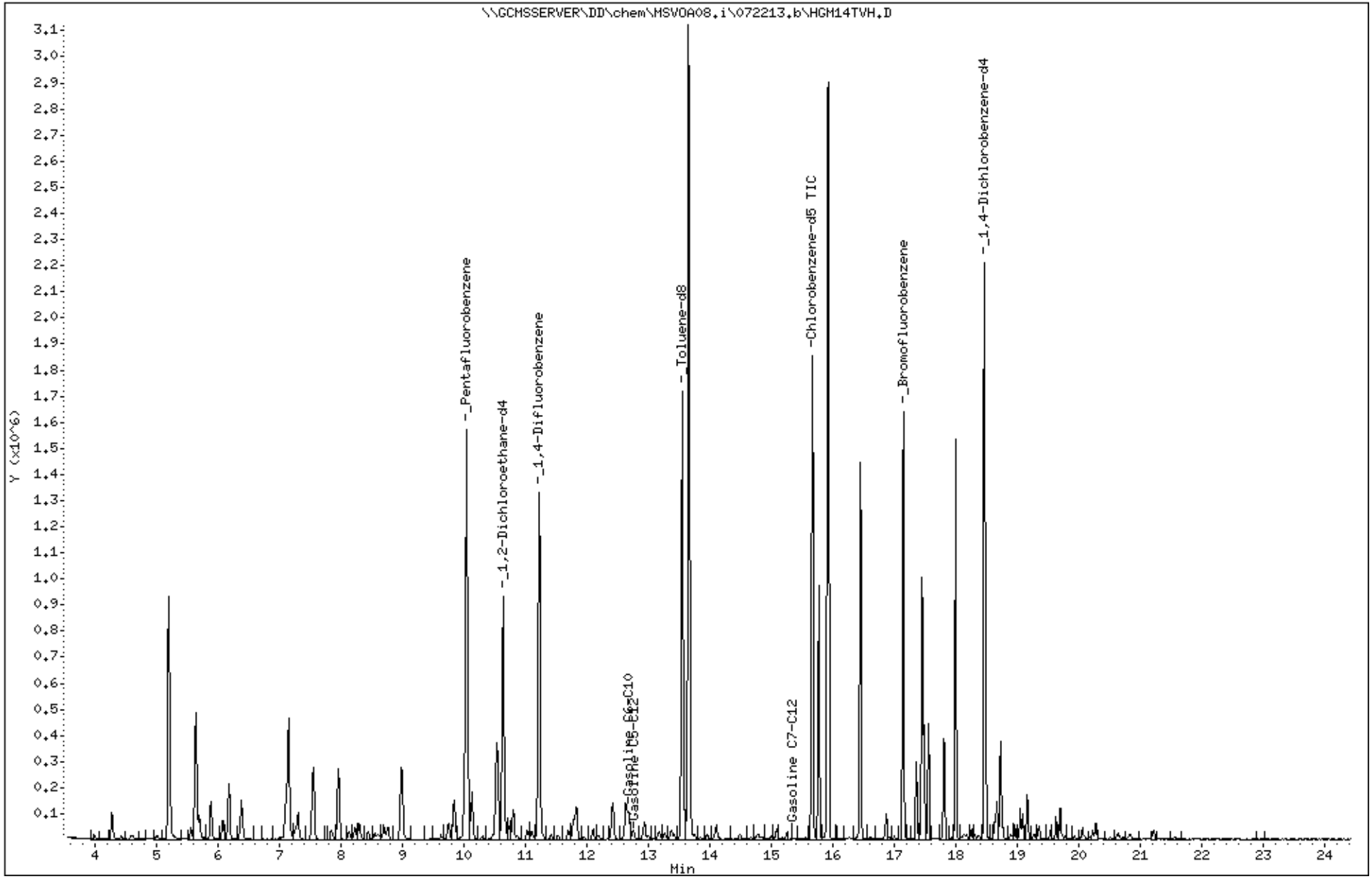
Instrument: MSVOA08.i

Sample Info: CCV/BS,QC698487,200864,S22314,.01/100

Operator: VOC

Column phase:

Column diameter: 2.00



Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS SIM

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 3520C
Project#:	LC010060.0016	Analysis:	EPA 8270C-SIM
Field ID:	RW-C6	Batch#:	200888
Lab ID:	247135-002	Sampled:	07/17/13
Matrix:	Water	Received:	07/19/13
Units:	ug/L	Prepared:	07/22/13
Diln Fac:	5.000	Analyzed:	07/23/13

Analyte	Result	RL
Naphthalene	22	0.5
Acenaphthylene	ND	0.5
Acenaphthene	ND	0.5
Fluorene	ND	0.5
Phenanthrene	ND	0.5
Anthracene	ND	0.5
Fluoranthene	ND	0.5
Pyrene	ND	0.5
Benzo(a)anthracene	ND	0.5
Chrysene	ND	0.5
Benzo(b)fluoranthene	ND	0.5
Benzo(k)fluoranthene	ND	0.5
Benzo(a)pyrene	ND	0.5
Indeno(1,2,3-cd)pyrene	ND	0.5
Dibenz(a,h)anthracene	ND	0.5
Benzo(g,h,i)perylene	ND	0.5

Surrogate	%REC	Limits
Nitrobenzene-d5	357 *	48-130
2-Fluorobiphenyl	80	47-120
Terphenyl-d14	85	33-120

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS SIM

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 3520C
Project#:	LC010060.0016	Analysis:	EPA 8270C-SIM
Field ID:	RW-C7	Batch#:	200888
Lab ID:	247135-003	Sampled:	07/17/13
Matrix:	Water	Received:	07/19/13
Units:	ug/L	Prepared:	07/22/13
Diln Fac:	2.000	Analyzed:	07/24/13

Analyte	Result	RL
Naphthalene	ND	0.2
Acenaphthylene	ND	0.2
Acenaphthene	ND	0.2
Fluorene	ND	0.2
Phenanthrene	ND	0.2
Anthracene	ND	0.2
Fluoranthene	ND	0.2
Pyrene	ND	0.2
Benzo(a)anthracene	ND	0.2
Chrysene	ND	0.2
Benzo(b)fluoranthene	ND	0.2
Benzo(k)fluoranthene	ND	0.2
Benzo(a)pyrene	ND	0.2
Indeno(1,2,3-cd)pyrene	ND	0.2
Dibenz(a,h)anthracene	ND	0.2
Benzo(g,h,i)perylene	ND	0.2

Surrogate	%REC	Limits
Nitrobenzene-d5	127	48-130
2-Fluorobiphenyl	73	47-120
Terphenyl-d14	55	33-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS SIM

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 3520C
Project#:	LC010060.0016	Analysis:	EPA 8270C-SIM
Field ID:	MW-13	Batch#:	200888
Lab ID:	247135-006	Sampled:	07/18/13
Matrix:	Water	Received:	07/19/13
Units:	ug/L	Prepared:	07/22/13
Diln Fac:	1.000	Analyzed:	07/24/13

Analyte	Result	RL
Naphthalene	ND	0.09
Acenaphthylene	ND	0.09
Acenaphthene	ND	0.09
Fluorene	ND	0.09
Phenanthrene	ND	0.09
Anthracene	ND	0.09
Fluoranthene	0.2	0.09
Pyrene	0.7	0.09
Benzo(a)anthracene	0.1	0.09
Chrysene	0.2	0.09
Benzo(b)fluoranthene	0.2	0.09
Benzo(k)fluoranthene	ND	0.09
Benzo(a)pyrene	0.2	0.09
Indeno(1,2,3-cd)pyrene	ND	0.09
Dibenz(a,h)anthracene	ND	0.09
Benzo(g,h,i)perylene	ND	0.09

Surrogate	%REC	Limits
Nitrobenzene-d5	119	48-130
2-Fluorobiphenyl	97	47-120
Terphenyl-d14	74	33-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS SIM

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 3520C
Project#:	LC010060.0016	Analysis:	EPA 8270C-SIM
Field ID:	RW-D6	Batch#:	200888
Lab ID:	247135-009	Sampled:	07/18/13
Matrix:	Water	Received:	07/19/13
Units:	ug/L	Prepared:	07/22/13
Diln Fac:	12.50	Analyzed:	07/24/13

Analyte	Result	RL
Naphthalene	75	1.2
Acenaphthylene	ND	1.2
Acenaphthene	ND	1.2
Fluorene	ND	1.2
Phenanthrene	ND	1.2
Anthracene	ND	1.2
Fluoranthene	ND	1.2
Pyrene	ND	1.2
Benzo(a)anthracene	ND	1.2
Chrysene	ND	1.2
Benzo(b)fluoranthene	ND	1.2
Benzo(k)fluoranthene	ND	1.2
Benzo(a)pyrene	ND	1.2
Indeno(1,2,3-cd)pyrene	ND	1.2
Dibenz(a,h)anthracene	ND	1.2
Benzo(g,h,i)perylene	ND	1.2

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	48-130
2-Fluorobiphenyl	DO	47-120
Terphenyl-d14	DO	33-120

DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS SIM

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 3520C
Project#:	LC010060.0016	Analysis:	EPA 8270C-SIM
Field ID:	RW-D6-D	Batch#:	200888
Lab ID:	247135-010	Sampled:	07/18/13
Matrix:	Water	Received:	07/19/13
Units:	ug/L	Prepared:	07/22/13
Diln Fac:	10.00	Analyzed:	07/23/13

Analyte	Result	RL
Naphthalene	62	0.9
Acenaphthylene	ND	0.9
Acenaphthene	ND	0.9
Fluorene	ND	0.9
Phenanthrene	ND	0.9
Anthracene	ND	0.9
Fluoranthene	ND	0.9
Pyrene	ND	0.9
Benzo(a)anthracene	ND	0.9
Chrysene	ND	0.9
Benzo(b)fluoranthene	ND	0.9
Benzo(k)fluoranthene	ND	0.9
Benzo(a)pyrene	ND	0.9
Indeno(1,2,3-cd)pyrene	ND	0.9
Dibenz(a,h)anthracene	ND	0.9
Benzo(g,h,i)perylene	ND	0.9

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	48-130
2-Fluorobiphenyl	DO	47-120
Terphenyl-d14	DO	33-120

DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS SIM

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 3520C
Project#:	LC010060.0016	Analysis:	EPA 8270C-SIM
Field ID:	RW-D9	Batch#:	200888
Lab ID:	247135-014	Sampled:	07/18/13
Matrix:	Water	Received:	07/19/13
Units:	ug/L	Prepared:	07/22/13
Diln Fac:	10.00	Analyzed:	07/24/13

Analyte	Result	RL
Naphthalene	1.8	0.9
Acenaphthylene	ND	0.9
Acenaphthene	ND	0.9
Fluorene	ND	0.9
Phenanthrene	ND	0.9
Anthracene	ND	0.9
Fluoranthene	ND	0.9
Pyrene	ND	0.9
Benzo(a)anthracene	ND	0.9
Chrysene	ND	0.9
Benzo(b)fluoranthene	ND	0.9
Benzo(k)fluoranthene	ND	0.9
Benzo(a)pyrene	ND	0.9
Indeno(1,2,3-cd)pyrene	ND	0.9
Dibenz(a,h)anthracene	ND	0.9
Benzo(g,h,i)perylene	ND	0.9

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	48-130
2-Fluorobiphenyl	DO	47-120
Terphenyl-d14	DO	33-120

DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS SIM

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 3520C
Project#:	LC010060.0016	Analysis:	EPA 8270C-SIM
Field ID:	MW-6	Batch#:	200888
Lab ID:	247135-015	Sampled:	07/19/13
Matrix:	Water	Received:	07/19/13
Units:	ug/L	Prepared:	07/22/13
Diln Fac:	3.000	Analyzed:	07/23/13

Analyte	Result	RL
Naphthalene	1.8	0.3
Acenaphthylene	ND	0.3
Acenaphthene	ND	0.3
Fluorene	ND	0.3
Phenanthrene	ND	0.3
Anthracene	ND	0.3
Fluoranthene	0.3	0.3
Pyrene	0.5	0.3
Benzo(a)anthracene	ND	0.3
Chrysene	0.4	0.3
Benzo(b)fluoranthene	0.5	0.3
Benzo(k)fluoranthene	ND	0.3
Benzo(a)pyrene	0.4	0.3
Indeno(1,2,3-cd)pyrene	ND	0.3
Dibenz(a,h)anthracene	ND	0.3
Benzo(g,h,i)perylene	ND	0.3

Surrogate	%REC	Limits
Nitrobenzene-d5	105	48-130
2-Fluorobiphenyl	51	47-120
Terphenyl-d14	13 *	33-120

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS SIM

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 3520C
Project#:	LC010060.0016	Analysis:	EPA 8270C-SIM
Field ID:	RW-B4	Batch#:	200888
Lab ID:	247135-016	Sampled:	07/19/13
Matrix:	Water	Received:	07/19/13
Units:	ug/L	Prepared:	07/22/13
Diln Fac:	20.00	Analyzed:	07/23/13

Analyte	Result	RL
Naphthalene	130	1.9
Acenaphthylene	ND	1.9
Acenaphthene	2.4	1.9
Fluorene	ND	1.9
Phenanthrene	ND	1.9
Anthracene	ND	1.9
Fluoranthene	ND	1.9
Pyrene	ND	1.9
Benzo(a)anthracene	ND	1.9
Chrysene	ND	1.9
Benzo(b)fluoranthene	ND	1.9
Benzo(k)fluoranthene	ND	1.9
Benzo(a)pyrene	ND	1.9
Indeno(1,2,3-cd)pyrene	ND	1.9
Dibenz(a,h)anthracene	ND	1.9
Benzo(g,h,i)perylene	ND	1.9

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	48-130
2-Fluorobiphenyl	DO	47-120
Terphenyl-d14	DO	33-120

DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS SIM

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 3520C
Project#:	LC010060.0016	Analysis:	EPA 8270C-SIM
Field ID:	RW-D8	Batch#:	200888
Lab ID:	247135-023	Sampled:	07/19/13
Matrix:	Water	Received:	07/19/13
Units:	ug/L	Prepared:	07/22/13
Diln Fac:	150.0	Analyzed:	07/23/13

Analyte	Result	RL
Naphthalene	150	30
Acenaphthylene	ND	30
Acenaphthene	ND	30
Fluorene	ND	30
Phenanthrene	ND	30
Anthracene	ND	30
Fluoranthene	ND	30
Pyrene	60	30
Benzo(a)anthracene	ND	30
Chrysene	44	30
Benzo(b)fluoranthene	56	30
Benzo(k)fluoranthene	ND	30
Benzo(a)pyrene	37	30
Indeno(1,2,3-cd)pyrene	ND	30
Dibenz(a,h)anthracene	ND	30
Benzo(g,h,i)perylene	ND	30

Surrogate	%REC	Limits
Nitrobenzene-d5	DO	48-130
2-Fluorobiphenyl	DO	47-120
Terphenyl-d14	DO	33-120

DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Semivolatile Organics by GC/MS SIM

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 3520C
Project#:	LC010060.0016	Analysis:	EPA 8270C-SIM
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC698563	Batch#:	200888
Matrix:	Water	Prepared:	07/22/13
Units:	ug/L	Analyzed:	07/23/13

Analyte	Result	RL
Naphthalene	ND	0.1
Acenaphthylene	ND	0.1
Acenaphthene	ND	0.1
Fluorene	ND	0.1
Phenanthrene	ND	0.1
Anthracene	ND	0.1
Fluoranthene	ND	0.1
Pyrene	ND	0.1
Benzo(a)anthracene	ND	0.1
Chrysene	ND	0.1
Benzo(b)fluoranthene	ND	0.1
Benzo(k)fluoranthene	ND	0.1
Benzo(a)pyrene	ND	0.1
Indeno(1,2,3-cd)pyrene	ND	0.1
Dibenz(a,h)anthracene	ND	0.1
Benzo(g,h,i)perylene	ND	0.1

Surrogate	%REC	Limits
Nitrobenzene-d5	87	48-130
2-Fluorobiphenyl	90	47-120
Terphenyl-d14	113	33-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Semivolatile Organics by GC/MS SIM

Lab #:	247135	Location:	MSC Oakland
Client:	Arcadis	Prep:	EPA 3520C
Project#:	LC010060.0016	Analysis:	EPA 8270C-SIM
Matrix:	Water	Batch#:	200888
Units:	ug/L	Prepared:	07/22/13
Diln Fac:	1.000	Analyzed:	07/23/13

Type: BS Lab ID: QC698564

Analyte	Spiked	Result	%REC	Limits
Acenaphthene	1.000	0.8045	80	52-120
Pyrene	1.000	0.8871	89	45-120

Surrogate	%REC	Limits
Nitrobenzene-d5	90	48-130
2-Fluorobiphenyl	88	47-120
Terphenyl-d14	106	33-120

Type: BSD Lab ID: QC698565

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Acenaphthene	1.000	0.8181	82	52-120	2	72
Pyrene	1.000	0.8939	89	45-120	1	53

Surrogate	%REC	Limits
Nitrobenzene-d5	92	48-130
2-Fluorobiphenyl	91	47-120
Terphenyl-d14	107	33-120

RPD= Relative Percent Difference

ARCADIS

Appendix C

Historical Tables

Table D-1
Summary of Groundwater Analytical Data, VOCs
Municipal Service Center, 7101 Edgewater Drive, Oakland, California

Concentrations expressed in micrograms per liter (µg/l)

Well ID/ Date	Benzene (µg/l)	n-Butyl-benzene (µg/l)	sec-Butyl-benzene (µg/l)	tert-Butyl-benzene (µg/l)	Chloro-ethane (µg/l)	Chloro-form (µg/l)	Methyl Chloride (µg/l)	1,2-DCA (µg/l)	cis-1,2-DCE (µg/l)	1,2-DCP (µg/l)	Ethyl-benzene (µg/l)	Isopropyl-benzene (µg/l)	p-Isopropyl-toluene (µg/l)	MTBE (µg/l)	Napthalene (µg/l)	n-Propyl-benzene (µg/l)	Toluene (µg/l)	1,2,4-TMB (µg/l)	1,3,5-TMB (µg/l)	Xylenes (µg/l)
MW-5																				
2/27/01	180	9	4	ND	3	ND	ND	7	ND	3	260	23	6	1,100	43	68	7	1	11	53
MW-6																				
2/27/01	270	11	3	ND	< 1	ND	ND	7	ND	< 1	9	6.0	1.0	19.0	62	21	3	1	< 1	3
8/20/01	E280	14	< 1	< 1	< 1	3	2	< 1	< 1	< 1	11	4.0	< 1	14.0	E82	14	4	< 1	< 1	9
TBW-1																				
8/20/01	E530	30	< 1	54	< 1	4	10	< 1	2	< 1	E540	36	54	< 1	E300	E120	79	E430	< 1	E790
TBW-3																				
8/20/01	10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	6	< 1	< 1	< 1	5	< 1	< 1	< 1	< 1	3
TBW-5																				
8/20/01	E620	< 1	< 1	E160	< 1	3	< 1	< 1	< 1	< 1	E730	40	E160	< 1	E450	E140	E110	< 1	< 1	E3100

Notes:

cis-1,2-DCE = cis-1,2-dichloroethene
E = Estimated concentration.
MTBE = methyl tertiary-butyl ether
ND = Not detected.
VOCs = Volatile organic compounds by EPA Method 8260. Sample not subject to silica gel cleanup or filtration prior to analysis.
1,2-DCA = 1,2-dichloroethane
1,2-DCP = 1,2-dichloropropane
1,2,4-TMB = 1,2,4-trimethylbenzene
1,3,5-TMB = 1,3,5-trimethylbenzene

Table D-2
Summary of Groundwater Analytical Data, SVOCs
Municipal Service Center, 7101 Edgewater Drive, Oakland, California

Concentrations expressed in micrograms per liter (µg/l)

Well ID/ Date	Napthalene (µg/l)	Pyrene (µg/l)	Other SVOCs (µg/l)
MW-6			
2/27/01	19	ND	ND
8/20/01	52	< 5	39
MW-9			
11/28/00	ND	ND	ND
MW-13			
11/28/00	ND	10	ND
MW-17			
11/28/00	ND	ND	ND
TBW-1			
8/20/01	140	8	387
TBW-3			
8/20/01	< 5	< 5	5
TBW-5			
8/20/01	220	< 5	73

Notes:

SVOCs = Semivolatile organic compounds by EPA Method 8270.
ND = Not detected

Samples not subject to silica gel cleanup or filtration before analysis.

Table D-3
Summary of Groundwater Analytical Data, LUFT Metals
Municipal Service Center, 7101 Edgewater Drive, Oakland, California

Concentrations expressed in milligrams per liter (mg/l)

Well ID/ Date	Cadmium (mg/l)	Chromium (mg/l)	Lead (mg/l)	Nickel (mg/l)	Zinc (mg/l)	Notes
MW-2						
8/19/98	---	---	< 100	---	---	a
MW-6						
2/28/01	< 0.001	0.035	0.23	0.046	0.19	non-filtered
8/16/01	< 0.001	0.020	0.12	0.032	0.11	
TBW-1						
8/16/01	< 0.001	0.017	0.042	0.034	0.10	0.1*
TBW-3						
8/16/01	< 0.001	0.008	0.01	0.019	< 0.02	
TBW-5						
8/16/01	< 0.001	< 0.005	0.01	0.008	0.03	

Notes:

--- = Not measured/analyzed.
* = Note was indicated but not defined in historical data tables.
a = Analyzed for organic lead.
LUFT = Leaking Underground Fuel Tank

LUFT metals by EPA Method 6010. Samples filtered in lab before analysis, unless noted otherwise.

Table D-4
Summary of Groundwater Analytical Data, Additional Metals
Municipal Service Center, 7101 Edgewater Drive, Oakland, California
Concentrations expressed in milligrams per liter (mg/l)

Sample ID/ Date	Antimony (mg/l)	Arsenic (mg/l)	Beryllium (mg/l)	Copper (mg/l)	Selenium (mg/l)	Silver (mg/l)	Thallium (mg/l)
MW-6							
8/16/01	<0.01	0.033	<0.001	0.025	<0.01	<0.003	<0.01
TBW-1							
8/16/01	<0.01	0.015	<0.001	0.017	<0.01	<0.003	<0.01
TBW-3							
8/16/01	<0.01	0.009	<0.001	0.008	<0.01	<0.003	<0.01
TBW-5							
8/16/01	<0.01	0.020	<0.001	<0.005	<0.01	<0.003	<0.01

Notes:

Metals by EPA Method 6010. Samples filtered in lab before analysis, unless noted otherwise.