

BUTTNER PROPERTIES, INC.

PROPERTY DEVELOPMENT • REAL ESTATE INVESTMENT • PROPERTY MANAGEMENT

600 West Grand Avenue, Oakland, California 94612

Telephone (510) 832-3456 • Facsimile (510) 465-4670

Email: Buttner@value.net

October 28, 2010

Alameda County Environmental Health Services
Local Oversight Program
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

RECEIVED

4:55 pm, Oct 29, 2010

Alameda County
Environmental Health

Attention: Ms. Barbara Jakub, Hazardous Materials Specialist

RE: Dave's Station
2250 Telegraph Avenue
Oakland, California

Dear Ms. Jakub:

The Fall 2010 Groundwater Monitoring Report ("Report") was prepared by our consultant, Fugro West, Inc. ("Fugro"), who we believe to be experienced and qualified to advise us in a technical area that requires a high degree of professional expertise. Therefore we have relied upon Fugro's assistance, knowledge and expertise in their preparation of the Report. I am unaware of any material inaccuracy in the information in the Report or of any violation of government guidelines that are applicable to the Report. Accordingly, I am not aware of any reason to question the conclusions and recommendations contained in the Report.

This letter is submitted pursuant to the requirements of California Water Code Section 13267(b)(1).

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Sincerely,

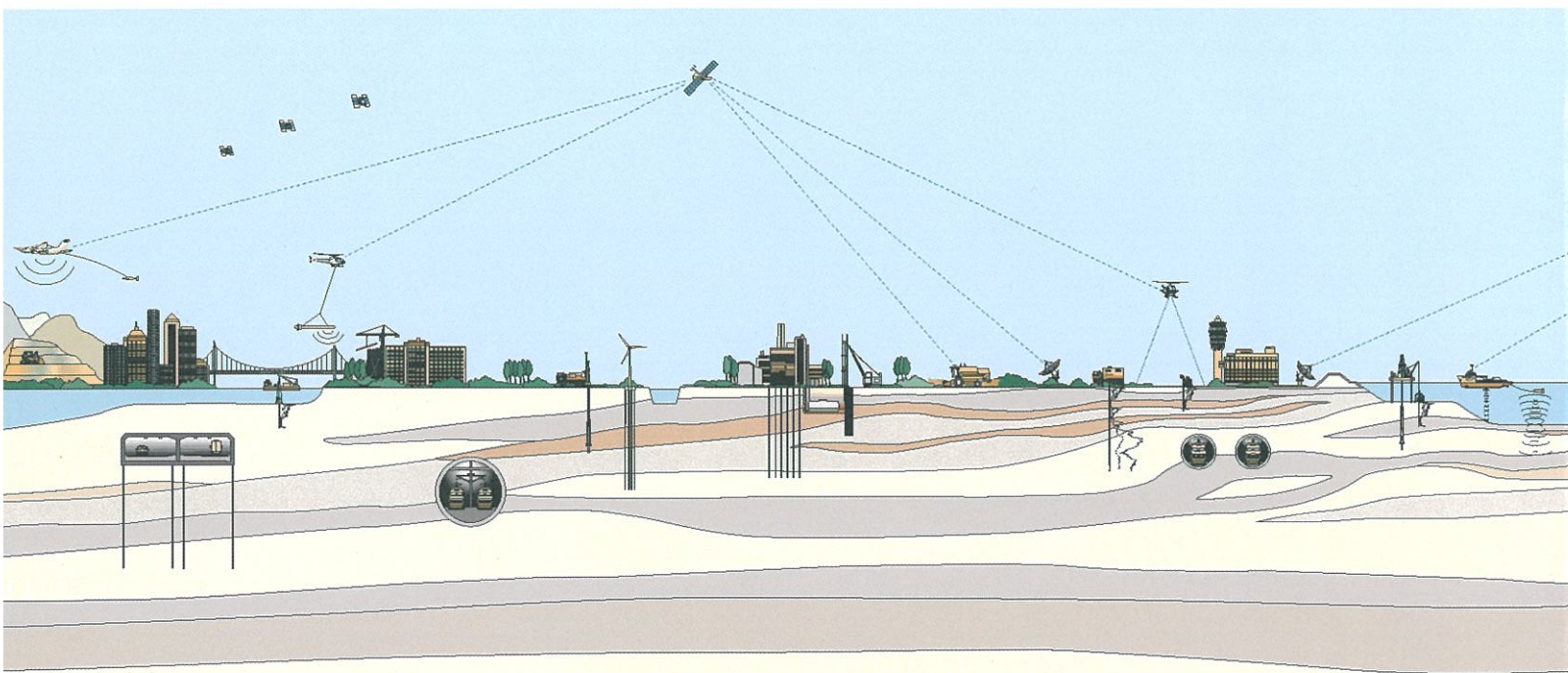


Marianne B. Robison
President

**FALL 2010 GROUNDWATER
MONITORING REPORT
2250 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA**

Prepared for:
BUTTNER PROPERTIES

October 2010
Fugro Project No. 609.004



October 29, 2010
Project No. 609.004

Buttner Properties
600 West Grand Avenue
Oakland, California 94612

Attention: Ms. Marianne Robison

Subject: Fall 2010 Groundwater Monitoring Report,
Fuel Leak Case No. RO0000359, GeoTracker Global ID T0600100431,
Dave's Station, 2250 Telegraph Avenue, Oakland, California

Dear Ms. Robison:

Fugro West, Inc., (Fugro) is pleased to present this report, which records the results of the Fall 2010 groundwater monitoring event for the 2250 Telegraph Avenue property (Site). The groundwater monitoring program has been implemented in general accordance with Fugro's Technical Comments and Work Plan for Monitoring Well Installation, dated October 12, 2010. During this monitoring event, Fugro conducted annual groundwater monitoring and sampled Wells MW-1 and MW-3 through MW-6. Alameda County Environmental Health Department (ACEH) has approved cessation of semi-annual groundwater monitoring on Well MW-2. The Site location is shown on the Vicinity Map - Plate 1, and the Site Plan is presented on Plate 2.

BACKGROUND

A review of soil and groundwater data collected during source removal activities, site characterization and monitoring well installation studies, and groundwater monitoring events conducted onsite since March 1994, indicates that the Site is impacted by releases that occurred onsite and possibly those which have occurred from offsite sources. The plumes become commingled on site. Data further suggests that the characteristics of the plumes have not changed significantly during the last sixteen years. Previous risk assessment activities have also confirmed that no significant risks are posed to the ongoing commercial use of the property.

Fugro submitted a Work Plan to ACEH in October 2010 which proposed the installation of two new groundwater monitoring wells; no written response has been received from ACEH as of the date of this report.

GROUNDWATER MONITORING – FALL 2010

Fugro conducted this monitoring event on October 5 and 6, 2010. City permits were obtained and a traffic control plan was submitted and approved to allow work within the street right-of-way, as necessary. Prior to sampling, the presence of free product was checked and the depth to groundwater was measured in all five wells. On October 5, 2010, each well was





purged of approximately three casing volumes of water while monitoring for changes in pH, conductivity, and temperature. Wells MW-5 and MW-6 were then sampled with clean disposable bailers once the water levels stabilized. Due to slow recharge of Wells MW-1, MW-3, and MW-4, Fugro's field personnel returned to the Site on October 6, 2010 and sampled these wells with clean disposable bailers.

During this groundwater monitoring event, Fugro's field personnel noticed hydrocarbon odor during purging and sampling of Monitoring Wells MW-1, MW-3, MW-4, and MW-6; however, no free product was observed. All groundwater samples were retained in glass containers pre-cleaned by the laboratory in accordance with Environmental Protection Agency (EPA) protocols. The containers were placed in an ice-filled cooler and kept chilled, pending delivery to the laboratory.

The samples for this event were submitted under chain-of-custody documentation to Curtis & Tompkins, Ltd., a laboratory certified by the State of California Department of Health Services for hazardous waste and water testing in accordance with the approved monitoring program. A sample from each well was analyzed for the following constituents:

- Total volatile hydrocarbons as gasoline (TVHg) by EPA Methods 5030/8260;
- Total extractable petroleum hydrocarbons as diesel and motor oil (TEHd and TEHmo) by EPA Methods 8015m, using silica gel cleanup;
- Lead scavengers (dichloroethane and dibromoethane); Five fuel oxygenates (MTBE, TBA, DIPE, ETBE, and TAME); and Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8260.

Well gauging and sampling forms and the laboratory analytical report (including chain-of-custody documentation) is presented in Appendices A and B, respectively. Groundwater elevation data is summarized in Table 1. Analytical test results are summarized in Table 2.

The historic groundwater flow directions for this Site are presented in the Rose Diagram on Plate 2. The gradient for this event was 0.01 feet/feet¹ directed towards the south-southeast. Based on the groundwater elevation data presented in Table 1, the groundwater gradient remains generally consistent with previous measurements. Groundwater was generally encountered at lower elevations compared to the April 2010 monitoring event, which is expected given that this monitoring event was conducted following a dry summer season.

¹ Data based on current measurements in wells MW-1 and MW-3 through MW-6. Well MW-2 is not used in gradient determination as its conditions are not representative of onsite conditions.



DISCUSSION OF RESULTS

Analyses detected TVHg and TEHd during this event in groundwater samples obtained from Wells MW-1, MW-3, MW-4, and MW-6 at concentrations ranging from 68 micrograms per liter ($\mu\text{g/L}$) to 910 $\mu\text{g/L}$, and 64 $\mu\text{g/L}$ to 420 $\mu\text{g/L}$, respectively. Concentrations of the analytes detected during this sampling event are generally within the historic range of data for each well. TEHmo was not detected in any of the samples analyzed.

Analysis detected benzene, toluene, ethylbenzene, and total xylenes in Well MW-3 at concentrations of 89 $\mu\text{g/L}$, 3.7 $\mu\text{g/L}$, 4.6 $\mu\text{g/L}$, and 5.2 $\mu\text{g/L}$, respectively. Concentrations of the analytes detected during this sampling event are generally within the historic range of data for this well. No concentrations of BTEX were detected in groundwater samples obtained from MW-1 and MW-4 through MW-6.

No MTBE concentrations were detected in any of the samples tested during this event. TBA was detected in the sample obtained from MW-6 at a concentration of 14 $\mu\text{g/L}$. No other lead scavengers or fuel oxygenates were detected in any of the samples analyzed. This is the first detection of TBA in Well MW-6. TBA has sporadically been detected in perimeter Wells MW-1 and MW-3 at similar concentrations, and may represent an offsite plume contribution.

REPORTING REQUIREMENTS

In accordance with reporting requirements, Fugro has uploaded a PDF copy of this Fall 2010 Groundwater Monitoring Report to the ACEH ftp website. We have also sent electronic copies of all attached tables in a Microsoft excel format to ACEH. Copies of required reports, tables, and site plans have also been uploaded to the Regional Water Quality Control Board's (RWQCB) GeoTracker database.

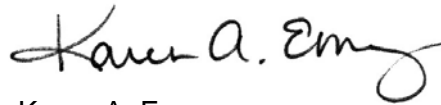
FUTURE SITE WORK

Fugro has prepared and submitted to ACEH a Work Plan for the installation of two new monitoring wells. This Work Plan is currently being reviewed by ACEH. Well installation will need to be conducted at a time conducive to the existing property tenants and as such may take some time to coordinate. Therefore, completion of the well installation will be slated for sometime in the beginning of 2011 time frame to ensure that all approvals are received from ACEH, and to provide sufficient time for the coordination of field activities.

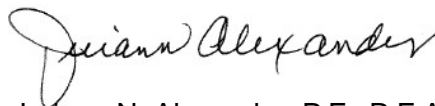
CLOSING STATEMENT

The next scheduled monitoring event will be conducted during April of 2011. If you have any questions, please call either of the undersigned at (510) 268-0461.

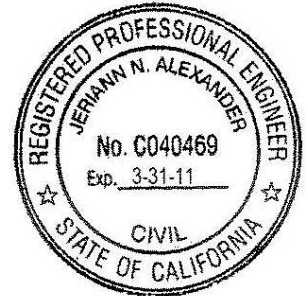
Sincerely,
FUGRO WEST, INC.



Karen A. Emery
Project Geologist



Jeriann N. Alexander, P.E., R.E.A.
Project Manager
Civil Engineer 40469 (exp. 3/31/11)
REA 03130 (exp. 7/11)



KAE/JNA:ke

Attachments: Table 1 - Groundwater Elevation Data
Table 2 – Summary of Chemical Concentrations – Groundwater Monitoring Wells

Plate 1 - Vicinity Map
Plate 2 - Site Plan

Appendix A – Well Sampling Forms
Appendix B – Analytical Report and Chain-of-Custody Form

Copies Submitted: (1) Addressee
(PDF) Mr. Tim Robison, Ph.D.
(PDF) Ms. Helen Robison
(PDF) Alameda County Environmental Health FTP website
(PDF) Regional Water Quality Control Board GeoTracker database

TABLES



Table 1
Groundwater Elevation Data
2250 Telegraph Avenue, Oakland, California

Monitoring Well	Date	TOC Elevation (Feet MSL)	DTW (feet)	Elevation (Feet MSL)
MW-1	3/3/1994	20.55	10.39	10.16
	3/10/1994		10.54	10.01
	6/6/1994		11.36	9.19
	9/7/1994		11.92	8.63
	12/22/1994		10.83	9.72
	3/17/1995		9.73	10.82
	6/27/1995		10.51	10.04
	9/18/1995		11.12	9.43
	5/30/1996		10.49	10.06
	7/9/1997		11.79	8.76
	8/21/1998		11.00	9.55
	10/6/1998		11.84	8.71
	2/24/1999		9.74	10.81
	6/30/2000		11.28	9.27
	4/27/2001		10.56	9.99
	4/14/2005		10.12	10.43
	8/1/2005		10.56	9.99
	11/9/2005		12.53	8.02
	3/21/2006		9.71	10.84
	8/7/2006		11.40	9.15
	10/27/2006		11.39	9.16
	3/20/2007		10.94	9.61
	8/8/2007		11.21	9.34
	2/5/2008		9.52	11.03
	8/14/2008		11.00	9.55
	3/3/2009		9.69	10.86
7/30/2009	11.10	9.45		
9/8/2009	11.77	8.78		
3/23/2010	10.15	10.40		
	10/5/2010		10.98	9.57
MW-2	3/3/1994	20.03	10.37	9.66
	3/10/1994		10.53	9.50
	6/6/1994		11.15	8.88
	9/7/1994		11.72	8.31
	12/22/1994		11.27	8.76
	3/17/1995		9.85	10.18
	6/27/1995		10.70	9.33
	9/18/1995		11.67	8.36
	5/30/1996		11.56	8.47
	7/9/1997		11.52	8.51
	8/21/1998		11.91	8.12
	10/6/1998		11.57	8.46
	2/24/1999		9.91	10.12
	6/30/2000		11.16	8.87
	4/27/2001		11.32	8.71
	4/14/2005		11.00	9.03
	8/1/2005		11.67	8.36
	11/9/2005		11.54	8.49
	3/21/2006		11.02	9.01
	8/7/2006		11.84	8.19
	10/27/2006		11.92	8.11
	3/20/2007		12.52	7.51
	8/8/2007		12.82	7.21
	2/5/2008		10.39	9.64
	8/14/2008		9.10	10.93
	3/3/2009		12.31	7.72
7/30/2009	11.41	8.62		
	3/23/2010		Not Sampled	
	10/5/2010		12.32	7.71



Table 1
Groundwater Elevation Data
2250 Telegraph Avenue, Oakland, California

Monitoring Well	Date	TOC Elevation (Feet MSL)	DTW (feet)	Elevation (Feet MSL)
MW-3	3/3/1994	18.97	9.50	9.47
	3/10/1994		9.51	9.46
	6/6/1994		10.28	8.69
	9/7/1994		10.75	8.22
	12/22/1994		9.74	9.23
	3/17/1995		8.85	10.12
	6/27/1995		9.94	9.03
	9/18/1995		10.54	8.43
	5/30/1996		9.69	9.28
	7/9/1997		10.60	8.37
	8/21/1998		10.36	8.61
	10/6/1998		10.64	8.33
	2/24/1999		8.58	10.39
	6/30/2000		10.21	8.76
	4/27/2001		9.85	9.12
	4/14/2005		9.58	9.39
	8/1/2005		10.24	8.73
	11/9/2005		10.45	8.52
	3/21/2006		8.77	10.20
	8/7/2006		10.30	8.67
	10/27/2006		10.63	8.34
	3/20/2007		9.72	9.25
	8/8/2007		10.48	8.49
	2/5/2008		8.61	10.36
	8/14/2008		10.53	8.44
	3/2/2009		8.11	10.86
7/30/2009	10.41	8.56		
9/8/2009	10.60	8.37		
3/23/2010	8.87	10.10		
	10/5/2010		10.51	8.46
MW-4	3/3/1994	19.88	10.89	8.99
	3/10/1994		11.19	8.69
	6/6/1994		11.85	8.03
	9/7/1994		12.86	7.02
	12/22/1994		12.26	7.62
	3/17/1995		10.10	9.78
	6/27/1995		11.05	8.83
	9/18/1995		11.84	8.04
	5/30/1996		10.97	8.91
	7/9/1997		12.08	7.80
	8/21/1998		11.86	8.02
	10/6/1998		12.84	7.04
	2/24/1999		10.79	9.09
	6/30/2000		12.39	7.49
	4/27/2001		11.26	8.62
	4/14/2005		12.01	7.87
	8/1/2005		11.78	8.10
	11/9/2005		12.42	7.46
	3/21/2006		10.00	9.88
	8/7/2006		11.90	7.98
	10/27/2006		12.75	7.13
	3/20/2007		11.20	8.68
	8/8/2007		12.00	7.88
	2/5/2008		10.40	9.48
	8/14/2008		11.47	8.41
	3/2/2009		11.13	8.75
7/30/2009	11.81	8.07		
9/8/2009	12.11	7.77		
3/23/2010	9.95	9.93		
	10/5/2010		11.38	8.50



Table 1
Groundwater Elevation Data
2250 Telegraph Avenue, Oakland, California

Monitoring Well	Date	TOC Elevation (Feet MSL)	DTW (feet)	Elevation (Feet MSL)	
MW-5	6/26/1997	16.02	8.44	7.58	
	7/9/1997		8.48	7.54	
	8/21/1998		8.32	7.70	
	10/6/1998		8.51	7.51	
	2/24/1999		6.86	9.16	
	6/30/2000		7.63	8.39	
	4/27/2001		7.60	8.42	
	4/15/2005		7.20	8.82	
	8/1/2005		8.16	7.86	
	11/9/2005		7.92	8.10	
	3/21/2006		6.58	9.44	
	8/7/2006		8.27	7.75	
	10/27/2006		8.48	7.54	
	3/20/2007		7.67	8.35	
	8/8/2007		8.43	7.59	
	2/5/2008		6.76	9.26	
	8/14/2008		8.31	7.71	
	3/2/2009		6.20	9.82	
	7/30/2009		8.13	7.89	
	3/23/2010		Not Sampled		
	10/5/2010		8.18	7.84	
MW-6	6/26/1997	18.36	10.89	7.47	
	7/9/1997		10.98	7.38	
	8/21/1998		11.00	7.36	
	10/6/1998		10.79	7.57	
	2/24/1999		9.32	9.04	
	6/30/2000		10.37	7.99	
	4/27/2001		10.10	8.26	
	4/15/2005		9.55	8.81	
	8/1/2005		10.54	7.82	
	11/9/2005		No Access		
	3/21/2006		9.11	9.25	
	8/7/2006		10.59	7.77	
	10/27/2006		No Access		
	3/20/2007		10.10	8.26	
	8/8/2007		10.85	7.51	
	2/5/2008		9.27	9.09	
	8/14/2008		10.71	7.65	
	3/3/2009		8.60	9.76	
	7/30/2009		No Access		
	3/23/2010		Not Sampled		
	10/5/2010		10.62	7.74	
TOC = Top of Casing DTW = Depth to Water Elevation Reference: USGS benchmark W1197, 1969 with a reported elevation of +21.06 feet MSL datum.					

Table 2
Summary of Chemical Concentrations - Groundwater Monitoring Wells
2250 Telegraph Avenue, Oakland, California



Well	Date	Groundwater Elevation (Feet MSL)	Petroleum Hydrocarbons				Volatile Organics														
			TVH as Gasoline µg/L	TEH as Kerosene µg/L	TEH as Diesel µg/L	TEH as Motor Oil µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Total Xylenes µg/L	MTBE -8020 µg/L	MTBE -8260 µg/L	TBA µg/L	DIPE µg/L	ETBE µg/L	TAME µg/L	1,1,1-TCA µg/L	1,2-DCA µg/L	1,2-DBA µg/L	PCE µg/L	Chlorobenzene µg/L
Soil Gas ESL*			NV	NV	NV	NE	540	380,000	170,000	160,000	24,000	24,000	NV	NE	NE	NE	130,000	200	150	120	13,000
Groundwater ESL**			210	210	210	210	46.0	130	43	100	1,800	1,800	18,000	NE	NE	NE	62	200	150	120	25
MW-3	03/03/94	9.47	85	<50	<50	<500	<0.5	0.77	<0.5	3.7	--	--	--	--	--	--	<0.5	<0.5	--	<0.5	<0.5
	06/06/94	8.69	100	110+	<50	<500	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	2.5	0.8	--	2.1	<0.5
	09/07/94	8.22	220	<50	<50	<500	11	1.8	2.6	3.5	--	--	--	--	--	--	<0.5	<0.5	--	0.6	<0.5
	12/22/94	9.23	130	95+	<50	<500	3.8	0.5	0.6	1.2	--	--	--	--	--	--	<0.5	<0.5	--	<0.5	<0.5
	03/17/95	10.12	1,500	270	<50	<500	83	6.0	10	15	--	--	--	--	--	--	<0.5	<0.5	--	<0.5	<0.5
	06/27/95	9.03	2,500	<50	<50	<500	330	8.9	8.1	20	--	--	--	--	--	--	<0.5	<0.5	--	<0.5	<0.5
	09/18/95	8.43	1,500	--	770+	--	400	11	2.2	3.3	--	--	--	--	--	--	<0.5	<0.5	--	<0.5	<0.5
	08/21/98	8.61	2,300	--	600+	--	410	9.3	36	25	<10	--	--	--	--	--	--	--	--	--	--
	02/24/99	10.39	55	--	110+	--	<0.5	<0.5	<0.5	<0.5	--	<2.0	--	--	--	--	--	--	--	--	--
	06/30/00	10.83	110	--	83+	--	<0.5	<0.5	0.51	<0.5	<2.0	--	--	--	--	--	--	--	--	--	--
	04/27/01	8.67	<50	--	690+	--	<0.5	<0.5	<0.5	<0.5	<2.0	--	--	--	--	--	--	--	--	--	--
	04/14/05	9.12	<50	--	<50	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	08/01/05	9.39	410	--	150 ^{HL}	750	17	<0.5	0.87 ^c	1.4	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	11/09/05	8.73	1,100 ^Y	--	110 ^{LY}	<300	150	3.4	6.1	3.8	--	<0.5	13	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	03/21/06	10.20	100	--	61 ^Y	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	12	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	08/07/06	8.67	4,000 ^Y	--	280 ^{LY}	<300	630	9	31	12	--	<0.5	18	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	10/27/06	8.34	5,300	--	240 ^{LY}	<300	950	13	17	11	--	<10	<200	<10	<10	<10	--	<10	<10	--	--
	03/20/07	9.25	1,000 ^{LY}	--	180 ^{LY}	<300	100	1.5	2.1	3.3	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	08/08/07	8.49	2,100 ^{LY}	--	130 ^{LY}	<300	260	5.1	5.8	3.6	--	<2.0	<40	<2.0	<2.0	<2.0	--	<2.0	<2.0	--	--
	02/05/08	10.36	100	--	50 ^Y	<300	7.6	<0.5	<0.5	0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	08/14/08	8.44	1,400	--	200 ^Y	<300	510	8.2	22	7.2	--	<3.6	<71	<3.6	<3.6	<3.6	--	<3.6	<3.6	--	--
03/02/09	10.86	170 ^Y	--	<50	<300	16	<0.5	<0.5	2.4	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
07/30/09	8.56	360	--	71 ^Y	<300	14	<0.5	1.2	<1.0	--	<0.5	13	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
09/08/09	8.37	1200 ^Y	--	--	--	280	2.4	9.2 ^c	3.08 ^c	--	<2.0	--	--	--	--	--	--	--	--	--	
03/24/10	10.10	300	--	130 ^Y	<300	64	2.5	0.78	3.3	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
10/06/10	8.46	450	--	76 ^Y	<300	89	3.7	4.6	5.2	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
MW-4	03/03/94	8.99	4,300	<50	240	<500	220	20	7.5	17	--	--	--	--	--	--	<0.5	5.9	--	<0.5	4.4
	06/06/94	8.03	4,400	<50	800+	<500	140	<0.5	<0.5	<0.5	--	--	--	--	--	--	<0.5	<0.5	--	<0.5	<0.5
	09/07/94	7.02	10,000	490+	280+	<500	84	<0.5	42	69	--	--	--	--	--	--	<0.5	4.4	--	0.5	4.3
	12/22/94	7.62	2,400	450+	54+	<500	11	<0.5	7.1	11	--	--	--	--	--	--	<0.5	3.6	--	3.6	<0.5
	03/17/95	9.78	2,200	380	160+	<500	<0.5	<0.5	7.9	10	--	--	--	--	--	--	<0.5	1.7	--	<0.5	4.5
	06/27/95	8.83	3,100	<50	82	<500	<0.5	<0.5	13	19	--	--	--	--	--	--	<0.5	2.3	--	<0.5	4.8
	09/18/95	8.04	3,000	--	1,231+	--	12	<0.7	6.9	8.3	--	--	--	--	--	--	<0.5	1.9	--	<0.5	4.0
	08/21/98	8.02	1,700	--	600+	--	8.2	12	13	5.2	<2.0	--	--	--	--	--	--	--	--	--	--
	02/24/99	9.09	2,700	--	2,100+	--	4.3	0.64	<0.5	0.54	--	<2.0	--	--	--	--	--	--	--	--	--
	06/30/00	11.74	6,700	--	3,200+	--	3.1	1.7	11	16.7	27	--	--	--	--	--	--	--	--	--	--
	04/27/01	8.62	1,900	--	710	--	<0.5	<0.5	<0.5	<0.5	14	--	--	--	--	--	--	--	--	--	--
	04/14/05	7.87	2,900	--	2,200 ^{HL}	2,500	<0.5	<0.5	<0.5	5.1	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	08/01/05	8.10	2,000	--	2,100 ^{HL}	3,400 ^L	<0.5	<0.5	<0.5	5.8 ^c	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	11/09/05	7.46	2,000 ^Y	--	1,900 ^{HL}	2,300 ^L	1.2	<0.5	<0.5	0.8	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	03/21/06	9.88	2,200	--	2,800 ^{HL}	4,000 ^L	1.2	<0.5	<0.5	0.7	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	08/07/06	7.98	2,500 ^Y	--	4,700 ^{HL}	7,200 ^L	0.6	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	10/27/06	7.13	2,200 ^Y	--	2,500 ^{HL}	3,200 ^L	0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	03/20/07	8.68	2,700	--	2,900 ^{HL}	3,500 ^L	0.77	<0.5	<0.5	0.67	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	08/08/07	7.88	6,100 ^{LY}	--	9,200 ^{HL}	12,000 ^{HL}	0.7	<0.5	<0.5	0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	02/05/08	9.48	2,100	--	2,100 ^Y	2,200	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	08/14/08	8.41	1,900 ^Y	--	370 ^Y	<300	1.4	0.59	<0.5	0.85	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
03/02/09	8.75	1,300 ^Y	--	880 ^Y	850	<0.5	<0.5	<0.5	<1.0	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
07/30/09	8.07	1,400 ^Y	--	1,100 ^Y	1,300	<0.5	<0.5	<0.5	<1.0	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
09/08/09	7.77	580 ^Y	--	--	--	<0.5	<0.5	<0.5	7.5 ^c	--	2.4 ^c	--	--	--	--	--	--	--	--	--	
03/24/10	9.93	510 ^Y	--	670	980	<0.5	<0.5	<0.5	<1.0	--	<0.5	<0.5	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
10/06/10	8.50	560 ^Y	--	130 ^Y	<300	<0.5	<0.5	<0.5	<1.0	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	



Well	Date	Groundwater Elevation (Feet MSL)	Petroleum Hydrocarbons				Volatile Organics															
			TVH as Gasoline µg/L	TEH as Kerosene µg/L	TEH as Diesel µg/L	TEH as Motor Oil µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Total Xylenes µg/L	MTBE -8020 µg/L	MTBE -8260 µg/L	TBA µg/L	DIPE µg/L	ETBE µg/L	TAME µg/L	1,1,1-TCA µg/L	1,2-DCA µg/L	1,2-DBA µg/L	PCE µg/L	Chlorobenzene µg/L	
Soil Gas ESL*			NV	NV	NV	NE	540	380,000	170,000	160,000	24,000	24,000	NV	NE	NE	NE	130,000	200	150	120	13,000	
Groundwater ESL**			210	210	210	210	46.0	130	43	100	1,800	1,800	18,000	NE	NE	NE	62	200	150	120	25	
MW-5	06/26/97	7.58	120	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	<0.5	<0.5	--	1.6	<0.5	
	08/21/98	7.70	<50	--	<50	--	<0.5	<0.5	<0.5	<0.5	<2.0	--	--	--	--	--	--	--	--	--	--	
	02/24/99	9.16	<50	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	<2.0	--	--	--	--	--	--	--	--	--	
	06/30/00	8.39	<50	--	<50	--	<0.5	<0.5	<0.5	<0.5	5.1	--	--	--	--	--	--	--	--	--	--	
	04/27/01	8.42	<50	--	<50	--	<0.5	<0.5	<0.5	<0.5	<2.0	--	--	--	--	--	--	--	--	--	--	
	04/14/05	8.82	<50	--	<50	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	08/01/05	7.86	<50	--	<50	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	11/09/05	8.10	<50	--	<50	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	03/21/06	9.44	<50	--	<50	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	08/07/06	7.75	<50	--	<50	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	10/27/06	7.54	<50	--	<50	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	03/20/07	8.35	<50	--	<50	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	08/08/07	7.59	<50	--	<50	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	02/05/08	9.26	<50	--	<50	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	08/14/08	7.71	<50	--	<50	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	03/02/09	9.82	<50	--	<50	<300	<0.5	<0.5	<0.5	<1.0	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	07/30/09	7.89	<50	--	<50	<300	<0.5	<0.5	<0.5	<1.0	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
03/24/10	NOT SAMPLED	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	10/05/10	7.84	<50	--	<50	<300	<0.5	<0.5	<0.5	<1.0	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
MW-6	06/26/97	7.47	1,500+	--	450+	--	<0.5	<0.5	11	<0.5	--	--	--	--	--	--	<0.5	<0.5	--	<0.5	1.7	
	08/21/98	7.36	1,400	--	540+	--	<0.5	3.6	5.6	0.4	5.7	3.2	--	--	--	--	--	--	--	--	--	
	02/24/99	9.04	1,600	--	600+	--	<0.5	<0.5	0.56	<0.5	--	2.3	--	--	--	--	--	--	--	--	--	
	06/30/00	8.04	1,900	--	360+	--	0.56	3.0	5.4	3.5	30	--	--	--	--	--	--	--	--	--	--	
	04/27/01	8.26	1,600	--	440	--	<0.5	<0.5	<0.5	<0.5	3.3	--	--	--	--	--	--	--	--	--	--	
	04/14/05	8.81	2,100	--	890 ^{LY}	<300	<0.5	<0.5	<0.5	5.9	--	0.7	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	08/01/05	7.82	2,100	--	670 ^{LY}	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	11/09/05	NO ACCESS	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/21/06	9.25	1,900	--	850 ^{LY}	<300	<0.5	<0.5	<0.5	<0.5	--	0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	08/07/06	7.77	2,200 ^Y	--	940 ^{LY}	<300	<0.5	<0.5	<0.5	<0.5	--	0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	10/27/06	NO ACCESS	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/20/07	8.26	2,000 ^Y	--	670 ^{LY}	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	08/08/07	7.51	2,100 ^{HLY}	--	680 ^{LY}	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	02/05/08	9.09	1,400	--	560 ^Y	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	08/14/08	7.65	1,100 ^Y	--	390 ^Y	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	03/03/09	9.76	990 ^Y	--	230 ^Y	<300	<0.5	<0.5	<0.5	<1.0	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	07/30/09	NO ACCESS	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
03/24/10	NOT SAMPLED	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	10/05/10	7.74	910 ^Y	--	420	<300	<0.5	<0.5	<0.5	<1.0	--	<0.5	14	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	

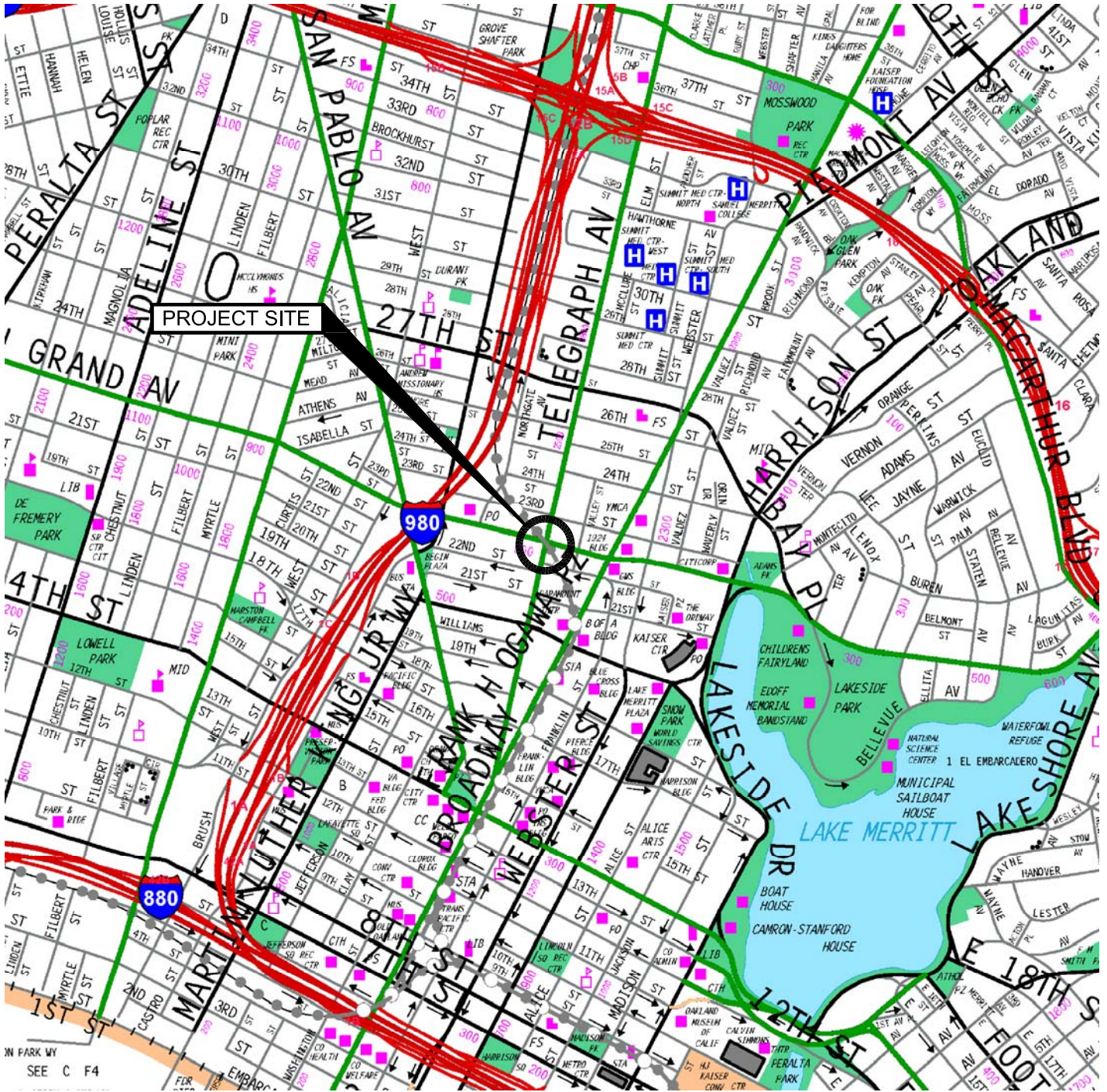
Notes:

TVH = Total Volatile Hydrocarbons
 TEH = Total Extractable Hydrocarbons
 DCA = Dichloroethane
 DBA = Dibromoethane
 TCA = Trichloroethane
 PCE = Tetrachloroethene
 MTBE = tert-Butyl methyl ether
 TBA = Tert butyl alcohol
 DIPE = Diisopropyl Ether
 ETBE = Ethyl tert butyl ether
 TAME = Methyl tert amyl ether
 -- = Chemical not tested for
 NR = Hydrocarbon range not reported by laboratory
 + = Uncategorized hydrocarbons quantified in ranges specified

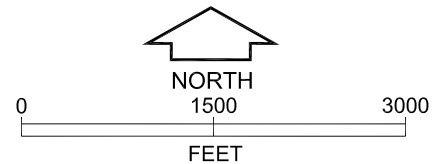
µg/L = micrograms per liter = parts per billion
 <1 = Chemical not present at a concentration greater than the laboratory detection limit shown or stated on test reports
 C = Presence Confirmed, but RPD between columns exceeds 40%
 Y = Sample exhibits chromatographic pattern which does not resemble standard
 H = Heavier hydrocarbon contributed to the quantitation
 L = Lighter hydrocarbon contributed to the quantitation
 ESLs = San Francisco Bay Regional Water Quality Control Board, Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Interim Final November 2007, Revised May 2008
 * = Table E-1 Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion Concerns
 ** = Table F-1a Groundwater Screening Levels (groundwater is a current potential drinking water resource)
 NA = Not Accessible During This Sampling Event
 NE = Not Evaluated
 NV = No Value

PLATES

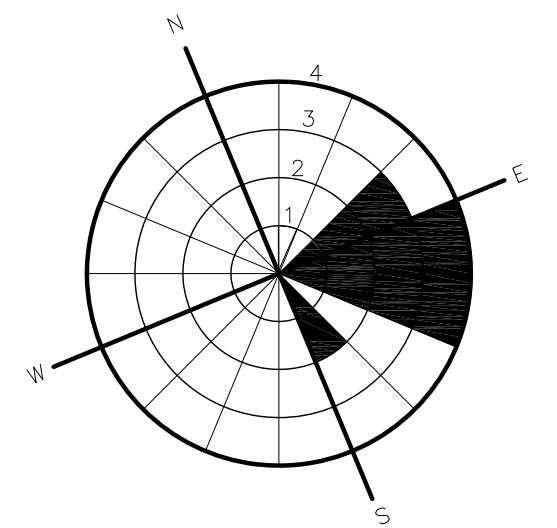
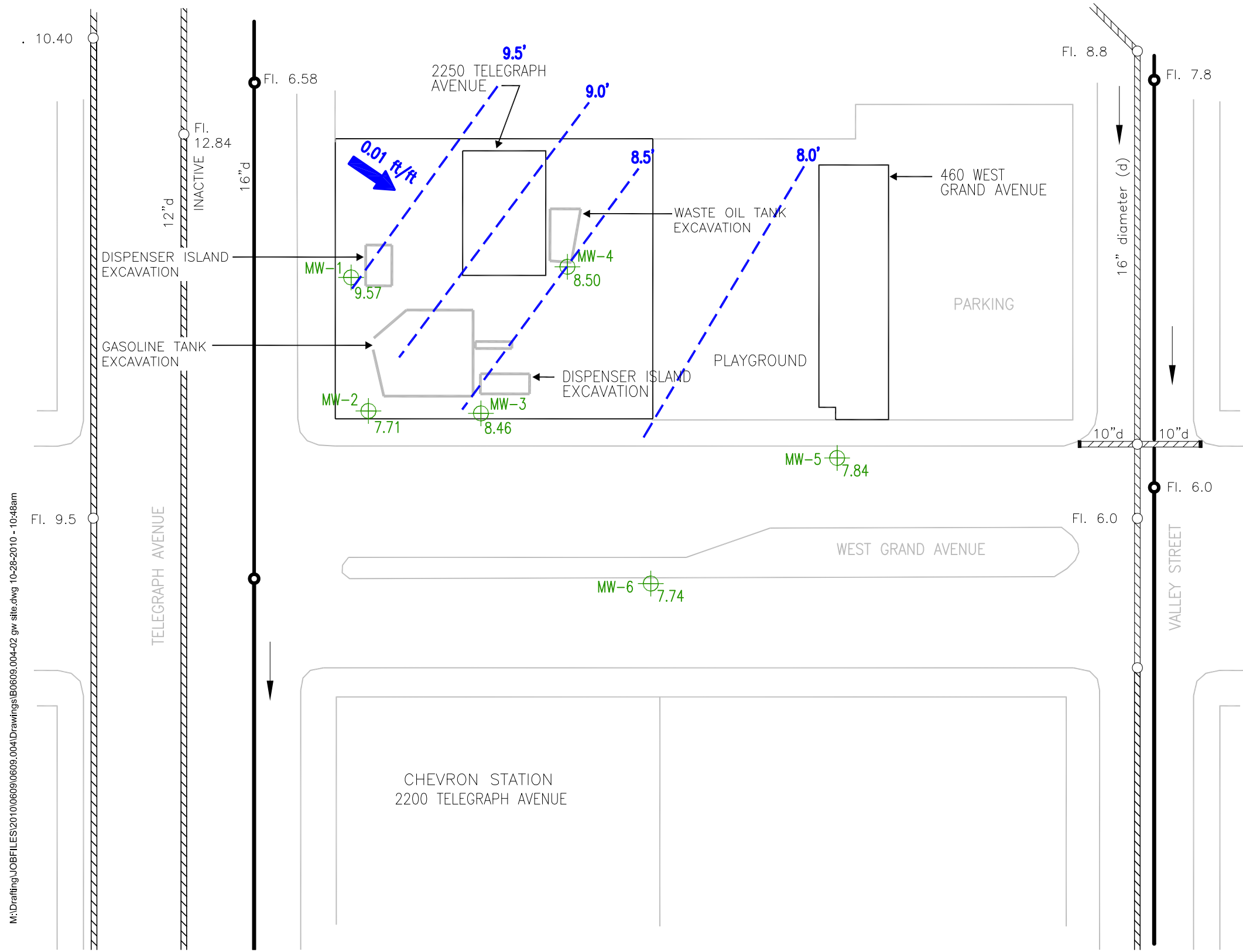
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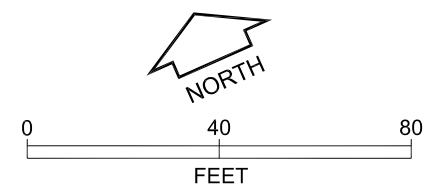
SOURCE: This Site Vicinity Map is based on The Thomas Guide Digital Edition 2003, Bay Area Metro, Alameda, Contra Costa, Marin, San Francisco, San Mateo, and Santa Clara Counties.



VICINITY MAP
 2250 Telegraph Avenue
 Oakland, California



- LEGEND**
- STRUCTURE
 - LIMITS OF EXCAVATION
 - MONITORING WELL LOCATION
GROUNDWATER ELEVATION
 - APPROXIMATE GROUNDWATER FLOW DIRECTION
 - GROUNDWATER ELEVATION CONTOUR



SITE PLAN
2250 Telegraph Avenue
Oakland, California

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APPENDIX A
WELL SAMPLING FORMS



ES-F50 WELL SAMPLING FORM

PROJECT NAME: Buttner
PROJECT NO.: 609.604
SAMPLED BY: M. D'Anna
DATE: 10-5-10
WEATHER: Sunny

WELL NO.: MW-1
WELL CASING DIAMETER: 3"
TOC ELEVATION: 20-55

TOTAL DEPTH OF CASING (BTOC): 14.31 FEET
DEPTH TO GROUNDWATER (BTOC): 10.98 FEET
FEET OF WATER IN WELL: 2.37 FEET

CALCULATED PURGE VOLUME: 3.5 gallons
(feet of water * casing dia² * .0408 * # of Volumes)
1.33 * 4 * .3
FREE PRODUCT: none
PURGE METHOD: Peristaltic Pump

MEASUREMENT METHOD: ELECTRONIC SOUNDER or OTHER

FIELD MEASUREMENTS

GALLONS REMOVED	TIME	Temp	pH	CONDUCTIVITY (µMHOS/CM)	TDS (g/L)	ORP (mV)	DO (mg/l)	COMMENTS (odor, color, ...)
Downhole (Pre-Purge)	<u>12:21</u>	<u>21.63</u>	<u>6.61</u>	<u>966</u>		<u>-52.7</u>	<u>1.12</u>	
	<u>12:24</u>	<u>21.78</u>	<u>6.85</u>	<u>957</u>		<u>-46.4</u>	<u>4.22</u>	<u>Clarity is clear</u> <u>Hydrocarbon odor</u> <u>Purge oil dry</u>
	<u>12:29</u>	<u>21.76</u>	<u>6.82</u>	<u>962</u>		<u>-42.7</u>	<u>3.25</u>	

CALCULATED DEPTH TO WATER @ 80% RECHARGE 12.446
(Total depth of casing - (feet of water in well * 0.80) 5.964)

DEPTH TO GROUNDWATER BEFORE SAMPLING (BTOC): 11.7
DTW GREATER THAN 80%? (circle) YES NO OKAY TO SAMPLE? (circle) YES NO
SAMPLING METHOD: Disposable Bailor TIME SAMPLED: 9:10

CONTAINERS / PRESERVATIVE: 3 / HCL 40 ML LITER
Poly OTHER
2x 500ml / HCL

- ANALYSES: (Note if any samples are field filtered)
- TPHd, TPHmo (8015 w/ Silica gel)
 - TPHg, BTEX, MTBE (8015/8020)
 - VOCs (8260)
 - HVOCs (8260)
 - Title 22/CAM 17 Metals (6010/7000)
 - Pesticides (8080)
 - PCBs (8080)
 - Sulfate (300.0)
 - Nitrate (300.0)
 - Fe²⁺ - Field Filtered

MISC FIELD OBSERVATION:

Equipment	Serial No.	Calibration
Conductivity		
pH		
Turbidity		
Temperature		

generator
450 600
tested & calibrated
from Equipco.



ES-F50 WELL SAMPLING FORM

PROJECT NAME: Butner
PROJECT NO.: 609004
SAMPLED BY: M. D'Anna
DATE: 10-5-10
WEATHER: Sunny

WELL NO.: MW-2
WELL CASING DIAMETER: 2"
TOC ELEVATION: 20.03

TOTAL DEPTH OF CASING (BTOC): 16.85 FEET
DEPTH TO GROUNDWATER (BTOC): 12.32 FEET
FEET OF WATER IN WELL: 4.53 FEET

CALCULATED PURGE VOLUME: Not Purged or Sampled gallons
(feast of water * casing dia^2 * .0408 * # of Volumes)

FREE PRODUCT:
PURGE METHOD:

MEASUREMENT METHOD: ELECTRONIC SOUNDER or OTHER

FIELD MEASUREMENTS

Table with 9 columns: GALLONS REMOVED, TIME, Temp, pH, CONDUCTIVITY (µMHOS/CM), TDS (g/L), ORP (mV), DO (mg/l), COMMENTS (odor, color, ...). Includes a 'Downhole (Pre-Purge)' row.

CALCULATED DEPTH TO WATER @ 80% RECHARGE
(Total depth of casing - (feet of water in well * 0.80))

DEPTH TO GROUNDWATER BEFORE SAMPLING (BTOC):
DTW GREATER THAN 80%? (circle) YES NO OKAY TO SAMPLE? (circle) YES NO

SAMPLING METHOD: TIME SAMPLED:

CONTAINERS / PRESERVATIVE: 40 ML LITER
Poly OTHER

ANALYSES: (Note if any samples are field filtered)
TPHd, TPHmo (8015 w/ Silica gel)
TPHg, BTEX, MTBE (8015/8020)
VOCs (8260)
HVOCs (8260)
Title 22/CAM 17 Metals (6010/7000)
Pesticides (8080)
PCBs (8080)
Sulfate (300.0)
Nitrate (300.0)
Fe 2+ - Field Filtered

MISC FIELD OBSERVATION: Well Not purged or sampled during this event.

Table with 3 columns: Equipment, Serial No., Calibration. Rows include Conductivity, pH, Turbidity, Temperature.



ES-F50 WELL SAMPLING FORM

PROJECT NAME: Burthen
 PROJECT NO.: 60904
 SAMPLED BY: M. D. Hunter
 DATE: 10-5-10
 WEATHER: Sunny

WELL NO.: MLW-3
 WELL CASING DIAMETER: 2"
 TOC ELEVATION: 18.97

TOTAL DEPTH OF CASING (BTOC): 16.30 FEET
 DEPTH TO GROUNDWATER (BTOC): 10.51 FEET
 FEET OF WATER IN WELL: 5.79 FEET

CALCULATED PURGE VOLUME: 2.8 gallons
 (feet of water * casing dia² * .0408 * # of Volumes)
5.79 * 4 * 3
 FREE PRODUCT: NO
 PURGE METHOD: Peristaltic Pump

MEASUREMENT METHOD: ELECTRONIC SOUNDER or OTHER

FIELD MEASUREMENTS

GALLONS REMOVED	TIME	Temp	pH	CONDUCTIVITY (µMHOS/CM)	TDS (g/L)	ORP (mV)	DO (mg/l)	COMMENTS (odor, color, ...)
Downhole (Pre-Purge)	11:59	21.16	6.56	898	---	-62.7	1.63	
	12:03	21.05	6.78	913	---	-61.2	4.02	strong Hydrocarbon odor
	12:04	21.26	6.76	869	---	-55.4	4.82	
	12:07	21.28	6.76	887	---	-50.1	3.53	floating blk particles some require one at bottom Purged Dry

CALCULATED DEPTH TO WATER @ 80% RECHARGE 11.66%
 (Total depth of casing - (feet of water in well * 0.80) 4.632)

DEPTH TO GROUNDWATER BEFORE SAMPLING (BTOC): 10.61
 DTW GREATER THAN 80%? (circle) YES NO OKAY TO SAMPLE? (circle) YES NO

SAMPLING METHOD: Disposable Bailor TIME SAMPLED: 9:31

CONTAINERS / PRESERVATIVE: 3 / HCL LITER
2x 500ml / HCL OTHER

- ANALYSES: (Note if any samples are field filtered)
- _____ TPHd, TPHmo (8015 w/ Silica gel)
 - _____ Pesticides (8080)
 - _____ TPHg, BTEX, MTBE (8015/8020)
 - _____ PCBs (8080)
 - _____ VOCs (8260)
 - _____ Sulfate (300.0)
 - _____ HVOCs (8260)
 - _____ Nitrate (300.0)
 - _____ Title 22/CAM 17 Metals (6010/7000)
 - _____ Fe²⁺ - Field Filtered

MISC FIELD OBSERVATION: _____

Equipment	Serial No.	Calibration
Conductivity		
pH		
Turbidity		
Temperature		

generator
PSI 600
Rentel & Calibrated
from Equipco.



ES-F50 WELL SAMPLING FORM

PROJECT NAME: Buttner
 PROJECT NO.: 6099-004
 SAMPLED BY: M. D'Anna
 DATE: 10-5-10
 WEATHER: Sunny

WELL NO.: MW-4
 WELL CASING DIAMETER: 2"
 TOC ELEVATION: 19.88

TOTAL DEPTH OF CASING (BTOC): 19.30 FEET
 DEPTH TO GROUNDWATER (BTOC): 11.38 FEET
 FEET OF WATER IN WELL: 4.92 FEET

CALCULATED PURGE VOLUME: 7.9 gallons
 (feet of water * casing dia² * .0408 * # of Volumes)
4.92 * 4 * 3

FREE PRODUCT: none
 PURGE METHOD: Peristaltic Pump

MEASUREMENT METHOD: ELECTRONIC SOUNDER or OTHER

FIELD MEASUREMENTS

GALLONS REMOVED	TIME	Temp	pH	CONDUCTIVITY (µMHOS/CM)	TDS (g/L)	ORP (mV)	DO (mg/l)	COMMENTS (odor, color, ...)
Downhole (Pre-Purge)	11:39	21.41	6.61	1149	—	-92.3	1.52	
	11:42	21.39	6.78	1263	—	-84.2	2.86	clear
	11:43	21.37	6.82	1235	—	-87.2	2.02	slur
	11:45	21.29	6.87	1248	—	-89.9	2.80	Purged Dry

CALCULATED DEPTH TO WATER @ 80% RECHARGE 12.76
 (Total depth of casing - (feet of water in well * 0.80) 5.536)

DEPTH TO GROUNDWATER BEFORE SAMPLING (BTOC): 11.98
 DTW GREATER THAN 80%? (circle) YES NO OKAY TO SAMPLE? (circle) YES NO

SAMPLING METHOD: Disposable Bailer TIME SAMPLED: 9:44

CONTAINERS / PRESERVATIVE: 3 / HCL LITER
40 ML
2 + 500ml / HCL
Amber OTHER

ANALYSES: (Note if any samples are field filtered)

- TPHd, TPHmo (8015 w/ Silica gel)
- TPHg, BTEX, MTBE (8015/8020)
- VOCs (8260)
- HVOCs (8260)
- Title 22/CAM 17 Metals (6010/7000)
- Pesticides (8080)
- PCBs (8080)
- Sulfate (300.0)
- Nitrate (300.0)
- Fe²⁺ - Field Filtered

MISC FIELD OBSERVATION: _____

Equipment	Serial No.	Calibration
Conductivity		
pH		
Turbidity		
Temperature		

*generator
 VSI 600
 Rented & Calibrated
 from EquipCO*



ES-F50 WELL SAMPLING FORM

PROJECT NAME: Burthen
 PROJECT NO.: 6004.004
 SAMPLED BY: M. D. Ammer
 DATE: 10-5-10
 WEATHER: Sunny

WELL NO.: MW-5
 WELL CASING DIAMETER: 2"
 TOC ELEVATION: ~~16.02~~ 16.02

TOTAL DEPTH OF CASING (BTOC): 17.40 FEET
 DEPTH TO GROUNDWATER (BTOC): 8.18 FEET
 FEET OF WATER IN WELL: 9.22 FEET
 MEASUREMENT METHOD: (E) ELECTRONIC SOUNDER or OTHER

CALCULATED PURGE VOLUME: 4.5 gallons
 (feet of water * casing dia² * .0408 * # of Volumes)
 $9.22 \cdot 4 \cdot .3$
 FREE PRODUCT: none
 PURGE METHOD: Disposable Bailen

FIELD MEASUREMENTS

GALLONS REMOVED	TIME	Temp	pH	CONDUCTIVITY (µMHOS/CM)	TDS (g/L)	ORP (mV)	DO (mg/l)	COMMENTS (odor, color, ...)
Downhole (Pre-Purge)	9:41	21.28	6.12	405	---	148.0	1.29	
	9:46	21.12	6.27	404	---	129.6	4.94	Brown, Turbid
	9:50	21.21	6.37	403	---	122.1	4.38	
	9:56	21.24	6.39	403	---	118.6	3.61	same

CALCULATED DEPTH TO WATER @ 80% RECHARGE 10.024
 (Total depth of casing - (feet of water in well * 0.80))
 $17.40 - (9.22 \cdot .80) = 7.376$

DEPTH TO GROUNDWATER BEFORE SAMPLING (BTOC): 8.2
 DTW GREATER THAN 80%? (circle) YES NO OKAY TO SAMPLE? (circle) YES NO

SAMPLING METHOD: Disposable Bailen TIME SAMPLED: 11:15

CONTAINERS / PRESERVATIVE: 3 / HCL 40 ML LITER
500ml x 2 / HCL OTHER:

- ANALYSES: (Note if any samples are field filtered)
- _____ TPHd, TPHmo (8015 w/ Silica gel)
 - _____ Pesticides (8080)
 - _____ TPHg, BTEX, MTBE (8015/8020)
 - _____ PCBs (8080)
 - _____ VOCs (8260)
 - _____ Sulfate (300.0)
 - _____ HVOCs (8260)
 - _____ Nitrate (300.0)
 - _____ Title 22/CAM 17 Metals (6010/7000)
 - _____ Fe²⁺ - Field Filtered

MISC FIELD OBSERVATION: _____

Equipment	Serial No.	Calibration
Conductivity		
pH		
Turbidity		
Temperature		

generator
 PSI 600
 Rented & Calibrated
 from Equipco.



ES-F50 WELL SAMPLING FORM

PROJECT NAME: Butner
 PROJECT NO.: 604,004
 SAMPLED BY: M. D'Anne
 DATE: 10-5-10
 WEATHER: SUNNY

WELL NO.: MW-Ce
~~MW-te~~
 WELL CASING DIAMETER: 2"
 TOC ELEVATION: 18.36

TOTAL DEPTH OF CASING (BTOC): 18.95 FEET
 DEPTH TO GROUNDWATER (BTOC): 10.62 FEET
 FEET OF WATER IN WELL: 8.33 FEET

CALCULATED PURGE VOLUME: 4.07 gallons
 (feet of water * casing dia² * .0408 * # of Volumes)
8.33 * 4 * 3

FREE PRODUCT: none

PURGE METHOD: Peristaltic pump Disposable Bailor

MEASUREMENT METHOD: ELECTRONIC SOUNDER or OTHER

FIELD MEASUREMENTS

GALLONS REMOVED	TIME	Temp	pH	CONDUCTIVITY (µMHOS/CM)	TDS (g/L)	ORP (mV)	DO (mg/l)	COMMENTS (odor, color, ...)
Downhole (Pre-Purge)	9:08	23.92	6.90	1254	—	-116.0	2.43	
	9:15	23.01	7.96	1195	—	-98.1	2.86	light turbidity, like
	9:20	23.08	6.95	1217	—	-94.8	2.78	same
	9:23	23.11	6.93	1217	—	-91.9	2.95	

Greg Hydro carbon color

CALCULATED DEPTH TO WATER @ 80% RECHARGE 12.286
 (Total depth of casing - (feet of water in well * 0.80))
18.95 - (8.33 * 0.80) = 6.404

DEPTH TO GROUNDWATER BEFORE SAMPLING (BTOC): 10.56
 DTW GREATER THAN 80%? (circle) YES NO OKAY TO SAMPLE? (circle) YES NO

SAMPLING METHOD: Disposable Bailor TIME SAMPLED: 10:10

CONTAINERS / PRESERVATIVE: 3 / HCL 40 ML LITER
500 mL x 2 / HCL Poly OTHER

ANALYSES: (Note if any samples are field filtered)

- TPHd, TPHmo (8015 w/ Silica gel)
- TPHg, BTEX, MTBE (8015/8020)
- VOCs (8260)
- HVOCs (8260)
- Title 22/CAM 17 Metals (6010/7000)
- Pesticides (8080)
- PCBs (8080)
- Sulfate (300.0)
- Nitrate (300.0)
- Fe²⁺ - Field Filtered

MISC FIELD OBSERVATION:

Equipment	Serial No.	Calibration
Conductivity		
pH		
Turbidity		
Temperature		

generator
 PSI COO
 Rented & Calibrated
 from Equipco

APPENDIX B
ANALYTICAL REPORT AND CHAIN OF CUSTODY FORM



Curtis & Tompkins, Ltd.

Analytical Laboratories, Since 1878



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 223027
ANALYTICAL REPORT

Fugro West Inc.
1000 Broadway
Oakland, CA 94607

Project : 609.004
Location : Buttner
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
MW-1	223027-001
MW-3	223027-002
MW-4	223027-003
MW-5	223027-004
MW-6	223027-005

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: 
Project Manager

Date: 10/14/2010

NELAP # 01107CA

CASE NARRATIVE

Laboratory number: 223027
Client: Fugro West Inc.
Project: 609.004
Location: Buttner
Request Date: 10/07/10
Samples Received: 10/07/10

This data package contains sample and QC results for five water samples, requested for the above referenced project on 10/07/10. The samples were received cold and intact.

TPH-Extractables by GC (EPA 8015B):

No analytical problems were encountered.

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

No analytical problems were encountered.

ES-F10 CHAIN OF CUSTODY

223027


PROJECT NAME: Buher
 PROJECT NO.: 609.004
 PROJECT CONTACT: K. Emery
 SAMPLED BY: M. D. Hunter
 LAB: Curtis & Tompkins
 TURNAROUND: 5 days

ANALYSIS REQUESTED	
TU Ag	
TEPHal & TEPHms	
Lead scavenger 3	
Five fuel organics	
BTEX	

LABORATORY I.D. NUMBER	FIELD SAMPLE I.D.	MATRIX			CONTAINERS					PRESERVATIVE					SAMPLING DATE				NOTES	EDF Reporting	
		WATER	SOIL	AIR	VOA	LITER	PINT	TUBE	500mL Amber	HCL	H ₂ SO ₄	HNO ₃	ICE	OTHER	NONE	MONTH	DAY	YEAR			TIME
1	MW-1	X			X			X				X				10	06	10	0916	X	
2	MW-3	X			X			X				X				10	06	10	0931	X	
3	MW-4	X			X			X				X				10	06	10	0944	X	
4	MW-5	X			X			X				X				10	05	10	1119	X	
5	MW-6	X			X			X				X				10	05	10	1010	X	

CHAIN OF CUSTODY RECORD			
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
<i>[Signature]</i>	10-7-10 12:00	<i>[Signature]</i>	10/2/10 12:00
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME

COMMENTS & NOTES:



FUGRO WEST, INC.
 1000 Broadway, Suite 440
 Oakland, California 94607
 Tel: 510.268.0461 Fax: 510.268.0545

Approved by Glenn Young, AC 62 Manager, Fugro West, Inc. 10/15/07.
 Note: If this is a printed copy, please check the online QMS to ensure that it is the latest version.

COOLER RECEIPT CHECKLIST



Curtis & Tompkins, Ltd.

Login # 223027 Date Received 10-7-10 Number of coolers 1
Client FUGRO Project BUTIMER

Date Opened 10-7-10 By (print) S. EVAZ (sign)
Date Logged in By (print) (sign)

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

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

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

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

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

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

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

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

7. Temperature documentation:

Type of ice used: Wet Blue/Gel None Temp(C) 5.5

Samples Received on ice & cold without a temperature blank

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

8. Were Method 5035 sampling containers present? YES NO
If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? YES NO

10. Are samples in the appropriate containers for indicated tests? YES NO

11. Are sample labels present, in good condition and complete? YES NO

12. Do the sample labels agree with custody papers? YES NO

13. Was sufficient amount of sample sent for tests requested? YES NO

14. Are the samples appropriately preserved? YES NO N/A

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

16. Was the client contacted concerning this sample delivery? YES NO
If YES, Who was called? By Date:

COMMENTS

Blank lines for handwritten comments.

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	223027	Location:	Buttner
Client:	Fugro West Inc.	Prep:	EPA 3520C
Project#:	609.004	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	167767
Units:	ug/L	Prepared:	10/08/10
Diln Fac:	1.000	Analyzed:	10/12/10

Type: BS Cleanup Method: EPA 3630C
 Lab ID: QC563600

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	1,927	77	54-125

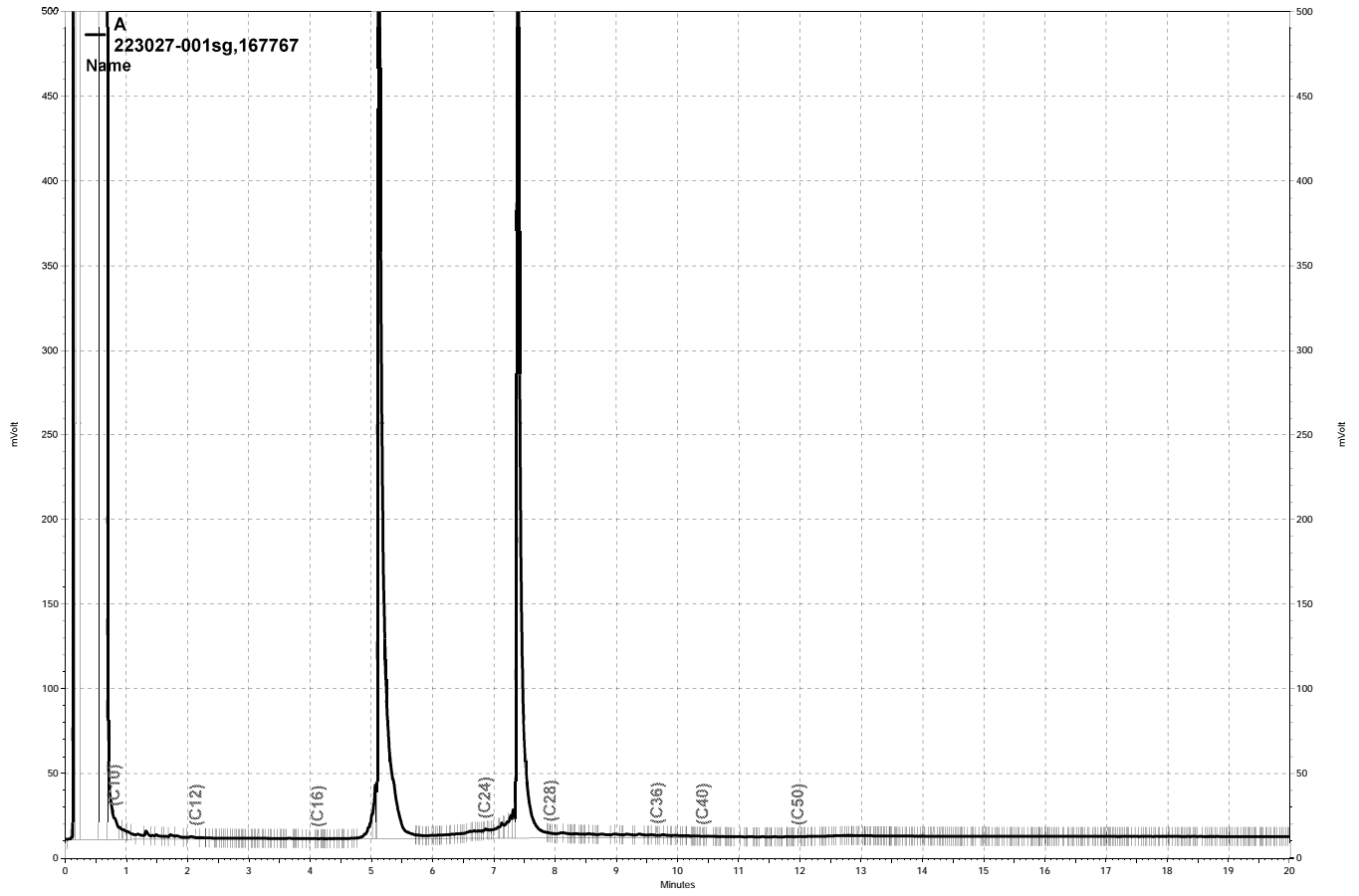
Surrogate	%REC	Limits
o-Terphenyl	95	60-129

Type: BSD Cleanup Method: EPA 3630C
 Lab ID: QC563601

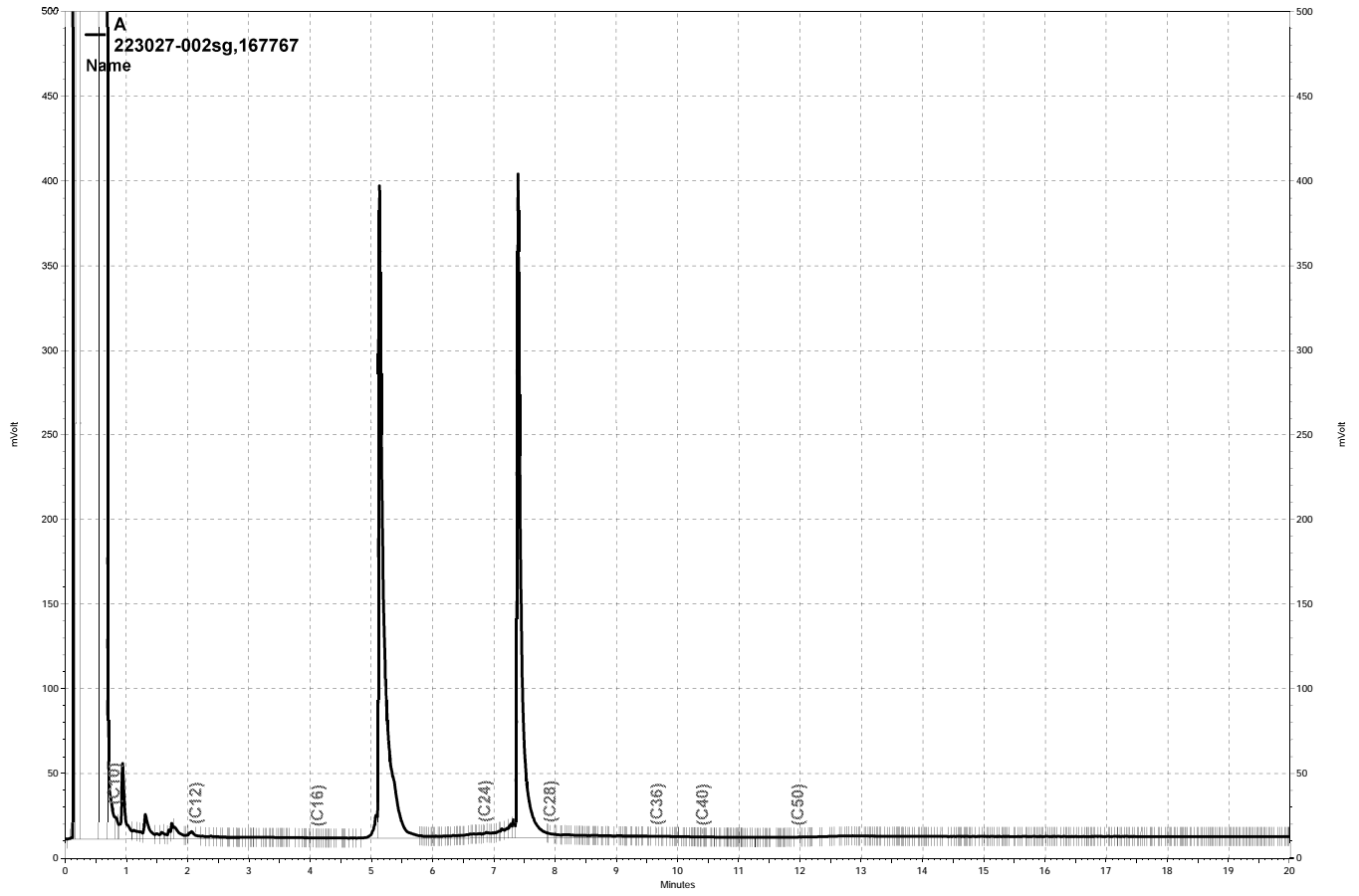
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,018	81	54-125	5	53

Surrogate	%REC	Limits
o-Terphenyl	105	60-129

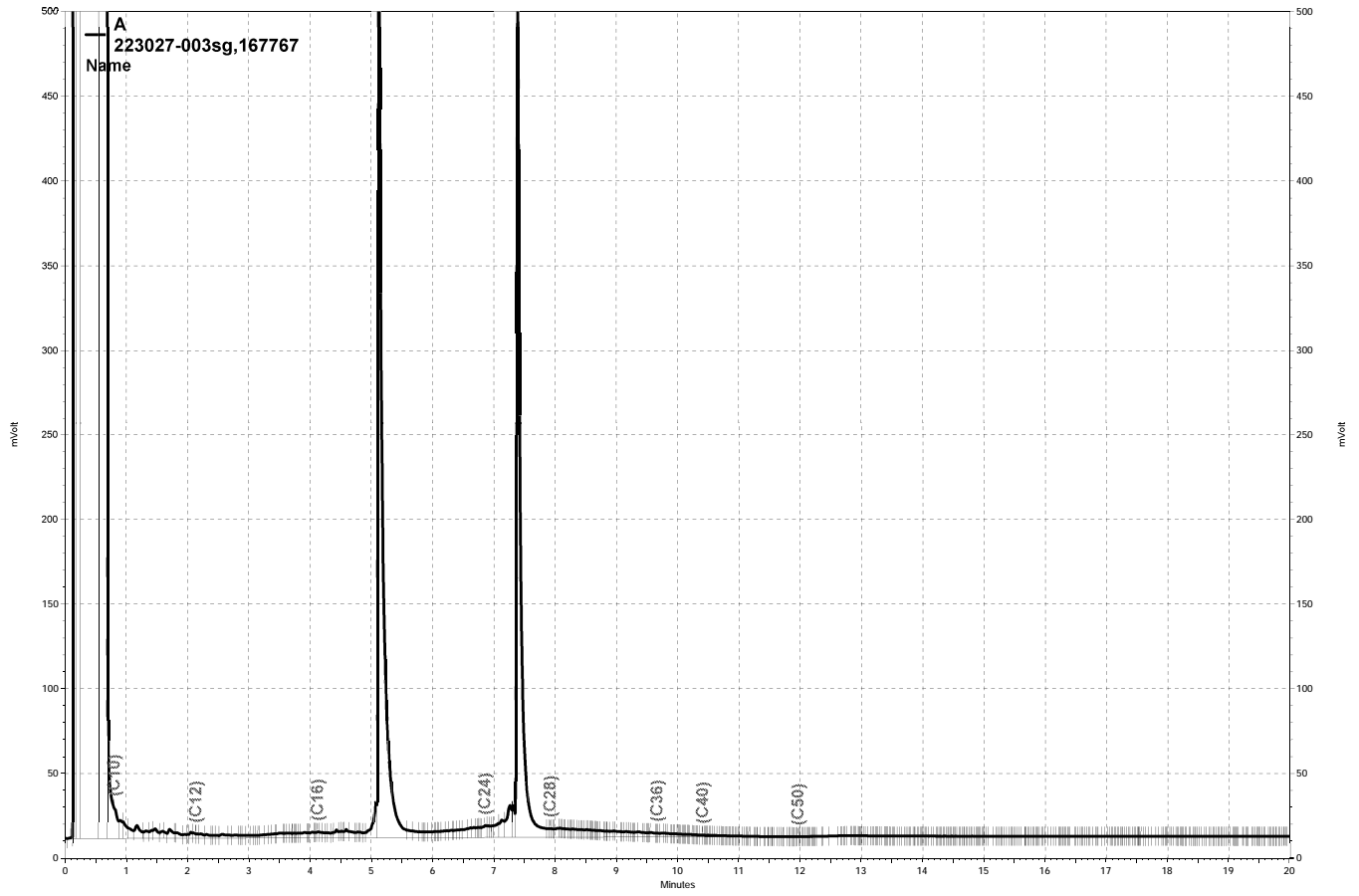
RPD= Relative Percent Difference



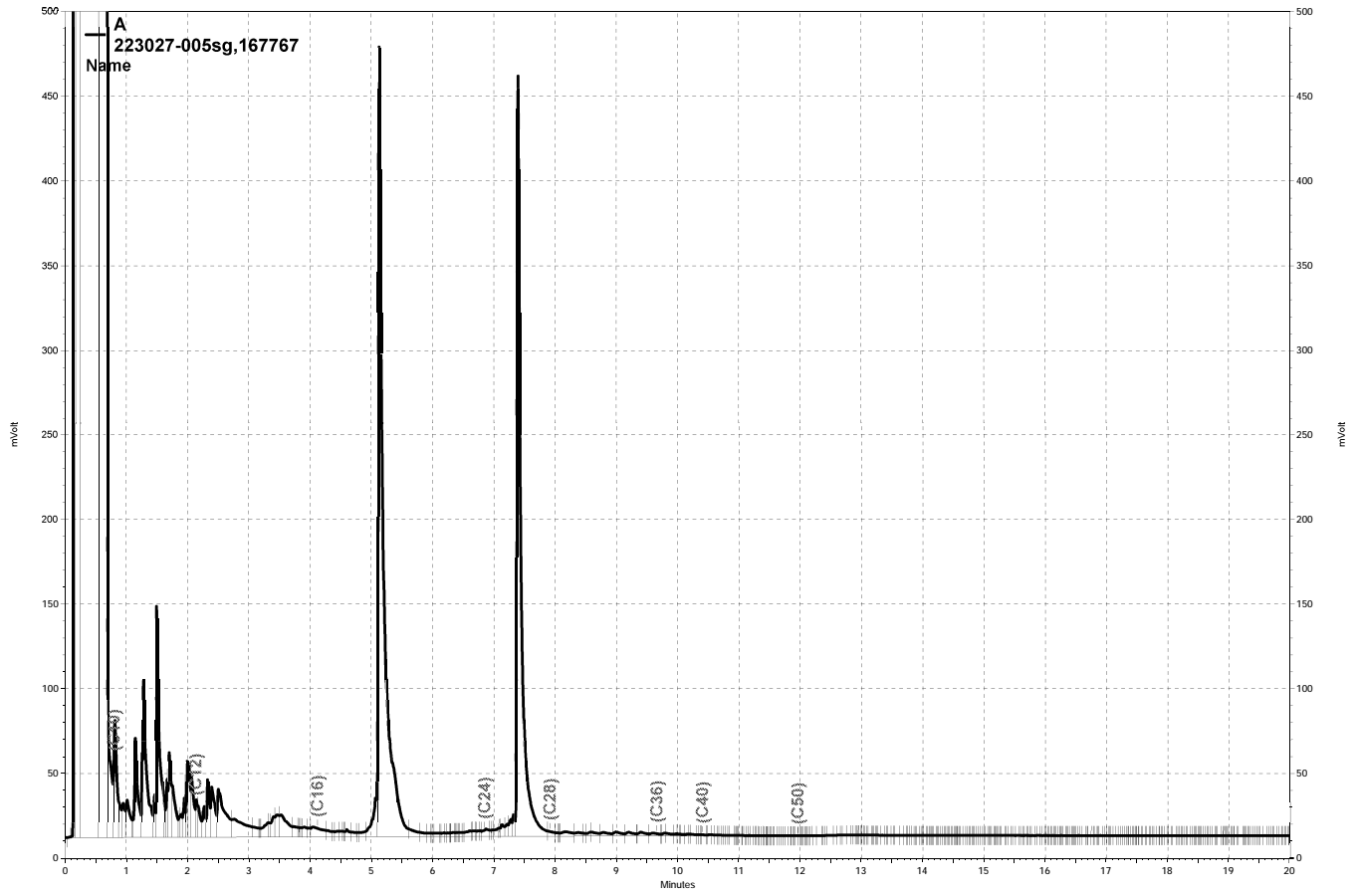
— \\Lims\gdrive\ezchrom\Projects\GC26\Data\284a069, A



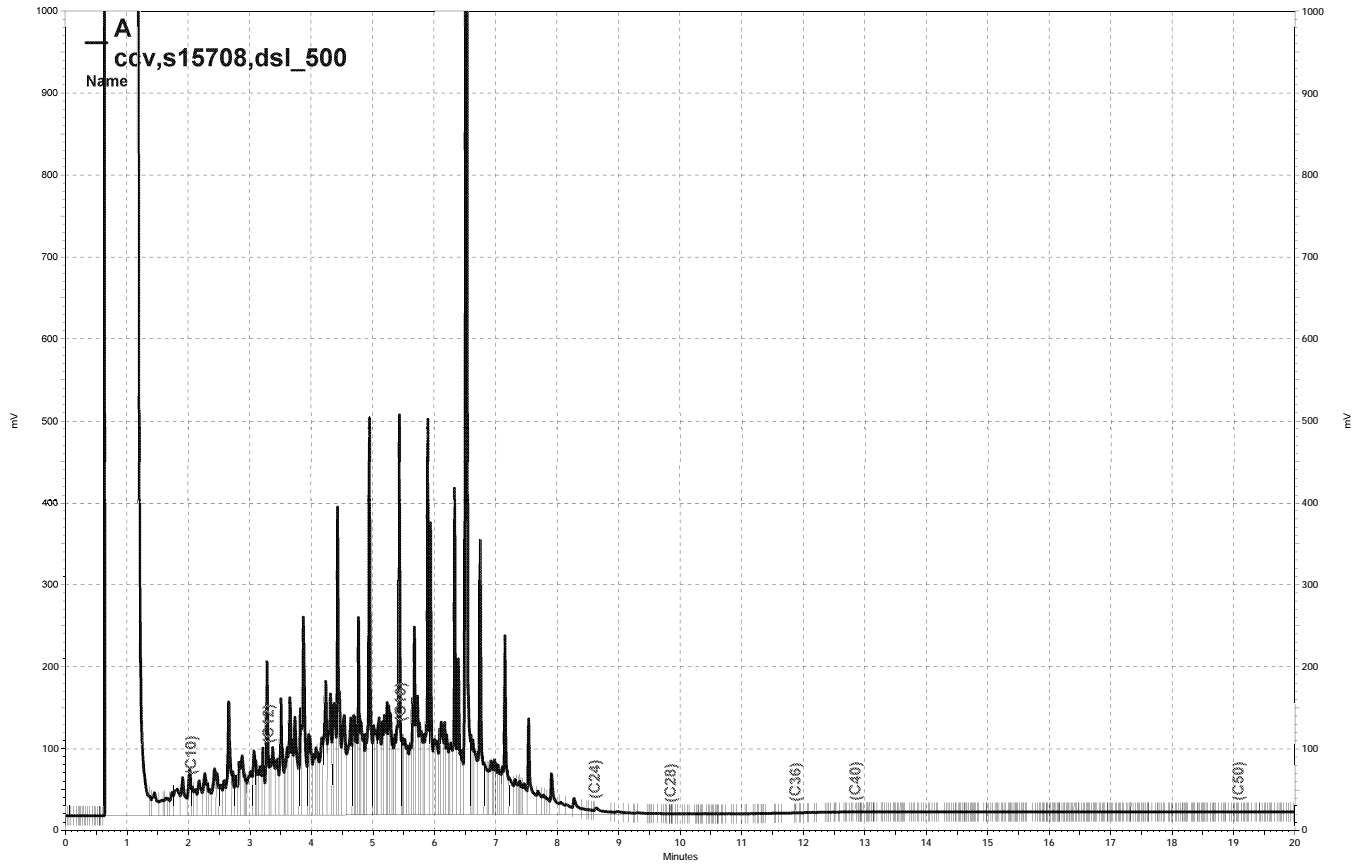
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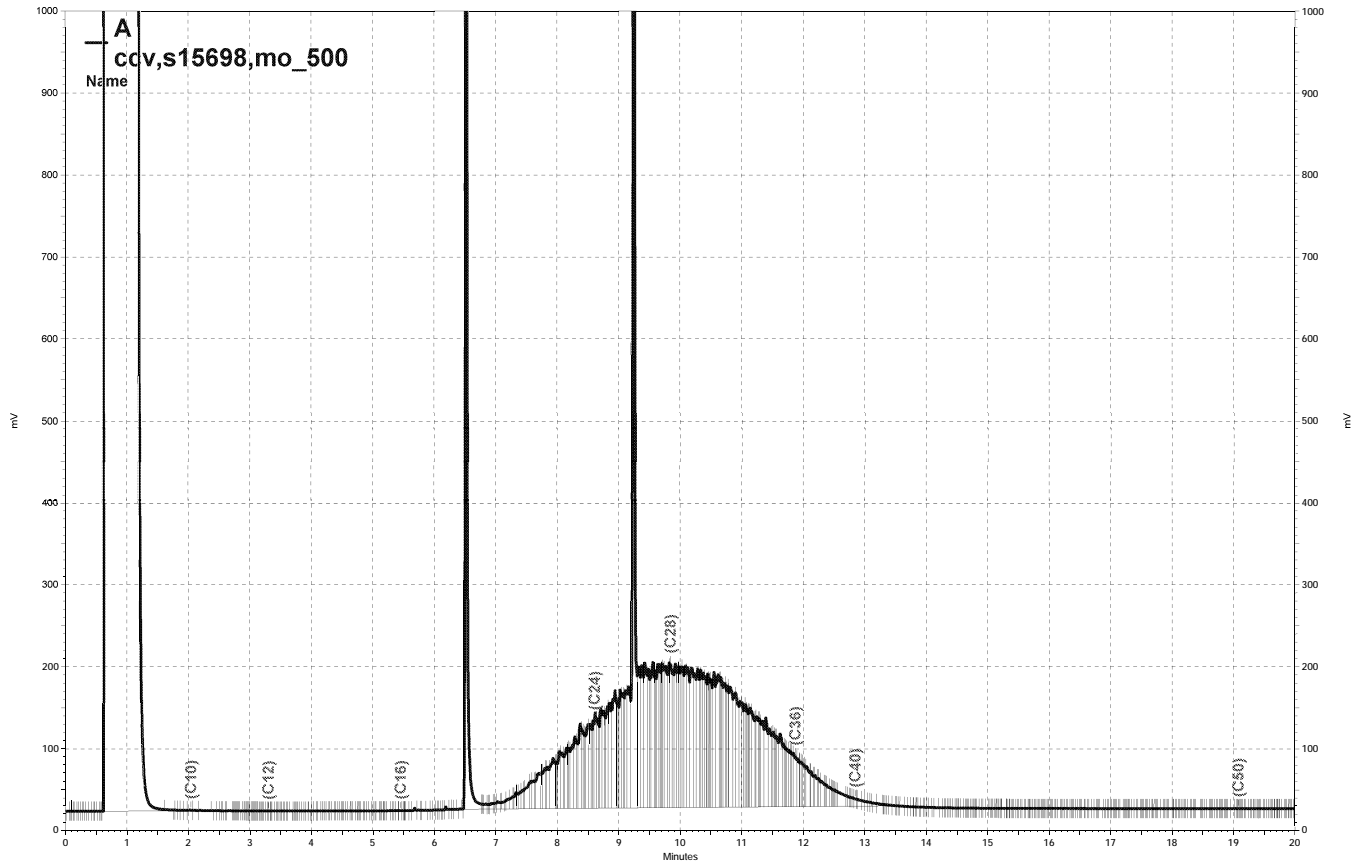
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\\Lims\gdrive\ezchrom\Projects\GC26\Data\284a073, A



— \\Lims\gdrive\ezchrom\Projects\GC17A\Data\284a053, A



— \\Lims\gdrive\ezchrom\Projects\GC17A\Data\284a087, A

Gasoline by GC/MS			
Lab #:	223027	Location:	Buttner
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	609.004	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	167801
Lab ID:	223027-001	Sampled:	10/06/10
Matrix:	Water	Received:	10/07/10
Units:	ug/L	Analyzed:	10/11/10
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	68 Y	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-122
1,2-Dichloroethane-d4	108	71-140
Toluene-d8	99	80-120
Bromofluorobenzene	99	80-121

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

Gasoline by GC/MS			
Lab #:	223027	Location:	Buttner
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	609.004	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	167801
Lab ID:	223027-002	Sampled:	10/06/10
Matrix:	Water	Received:	10/07/10
Units:	ug/L	Analyzed:	10/11/10
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	450	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	89	0.50
Toluene	3.7	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	4.6	0.50
m,p-Xylenes	5.2	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-122
1,2-Dichloroethane-d4	103	71-140
Toluene-d8	95	80-120
Bromofluorobenzene	97	80-121

ND= Not Detected
 RL= Reporting Limit

Gasoline by GC/MS			
Lab #:	223027	Location:	Buttner
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	609.004	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	167801
Lab ID:	223027-003	Sampled:	10/06/10
Matrix:	Water	Received:	10/07/10
Units:	ug/L	Analyzed:	10/11/10
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	560 Y	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-122
1,2-Dichloroethane-d4	102	71-140
Toluene-d8	96	80-120
Bromofluorobenzene	101	80-121

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

Gasoline by GC/MS			
Lab #:	223027	Location:	Buttner
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	609.004	Analysis:	EPA 8260B
Field ID:	MW-5	Batch#:	167801
Lab ID:	223027-004	Sampled:	10/05/10
Matrix:	Water	Received:	10/07/10
Units:	ug/L	Analyzed:	10/11/10
Diln Fac:	1.000		

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

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-122
1,2-Dichloroethane-d4	97	71-140
Toluene-d8	94	80-120
Bromofluorobenzene	100	80-121

ND= Not Detected
 RL= Reporting Limit

Gasoline by GC/MS			
Lab #:	223027	Location:	Buttner
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	609.004	Analysis:	EPA 8260B
Field ID:	MW-6	Batch#:	167801
Lab ID:	223027-005	Sampled:	10/05/10
Matrix:	Water	Received:	10/07/10
Units:	ug/L	Analyzed:	10/11/10
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	910 Y	50
tert-Butyl Alcohol (TBA)	14	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-122
1,2-Dichloroethane-d4	101	71-140
Toluene-d8	97	80-120
Bromofluorobenzene	100	80-121

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

Batch QC Report

Gasoline by GC/MS			
Lab #:	223027	Location:	Buttner
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	609.004	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	167801
Units:	ug/L	Analyzed:	10/11/10
Diln Fac:	1.000		

Type: BS Lab ID: QC563735

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	97.76	78	45-152
Isopropyl Ether (DIPE)	25.00	19.08	76	56-134
Ethyl tert-Butyl Ether (ETBE)	25.00	22.83	91	60-124
Methyl tert-Amyl Ether (TAME)	25.00	21.01	84	66-120
MTBE	25.00	21.20	85	66-120
1,2-Dichloroethane	25.00	25.20	101	70-135
Benzene	25.00	25.42	102	80-122
Toluene	25.00	27.39	110	80-120
1,2-Dibromoethane	25.00	24.04	96	80-120
Ethylbenzene	25.00	27.99	112	80-123
m,p-Xylenes	50.00	56.62	113	80-126
o-Xylene	25.00	27.79	111	80-122

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-122
1,2-Dichloroethane-d4	97	71-140
Toluene-d8	98	80-120
Bromofluorobenzene	100	80-121

Type: BSD Lab ID: QC563736

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	108.5	87	45-152	10	30
Isopropyl Ether (DIPE)	25.00	19.53	78	56-134	2	20
Ethyl tert-Butyl Ether (ETBE)	25.00	23.79	95	60-124	4	20
Methyl tert-Amyl Ether (TAME)	25.00	21.57	86	66-120	3	20
MTBE	25.00	22.39	90	66-120	5	20
1,2-Dichloroethane	25.00	24.30	97	70-135	4	20
Benzene	25.00	24.99	100	80-122	2	20
Toluene	25.00	26.07	104	80-120	5	20
1,2-Dibromoethane	25.00	23.70	95	80-120	1	20
Ethylbenzene	25.00	26.41	106	80-123	6	20
m,p-Xylenes	50.00	53.49	107	80-126	6	20
o-Xylene	25.00	26.85	107	80-122	3	20

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-122
1,2-Dichloroethane-d4	98	71-140
Toluene-d8	96	80-120
Bromofluorobenzene	99	80-121

RPD= Relative Percent Difference

Batch QC Report

Gasoline by GC/MS			
Lab #:	223027	Location:	Buttner
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	609.004	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC563737	Batch#:	167801
Matrix:	Water	Analyzed:	10/11/10
Units:	ug/L		

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

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-122
1,2-Dichloroethane-d4	96	71-140
Toluene-d8	100	80-120
Bromofluorobenzene	103	80-121

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Gasoline by GC/MS			
Lab #:	223027	Location:	Buttner
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	609.004	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	167801
Units:	ug/L	Analyzed:	10/11/10
Diln Fac:	1.000		

Type: BS Lab ID: QC563751

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	965.8	97	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-122
1,2-Dichloroethane-d4	96	71-140
Toluene-d8	99	80-120
Bromofluorobenzene	97	80-121

Type: BSD Lab ID: QC563752

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	972.4	97	80-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-122
1,2-Dichloroethane-d4	94	71-140
Toluene-d8	99	80-120
Bromofluorobenzene	99	80-121

RPD= Relative Percent Difference

Date : 11-OCT-2010 18:14

Client ID: DYNA P&T

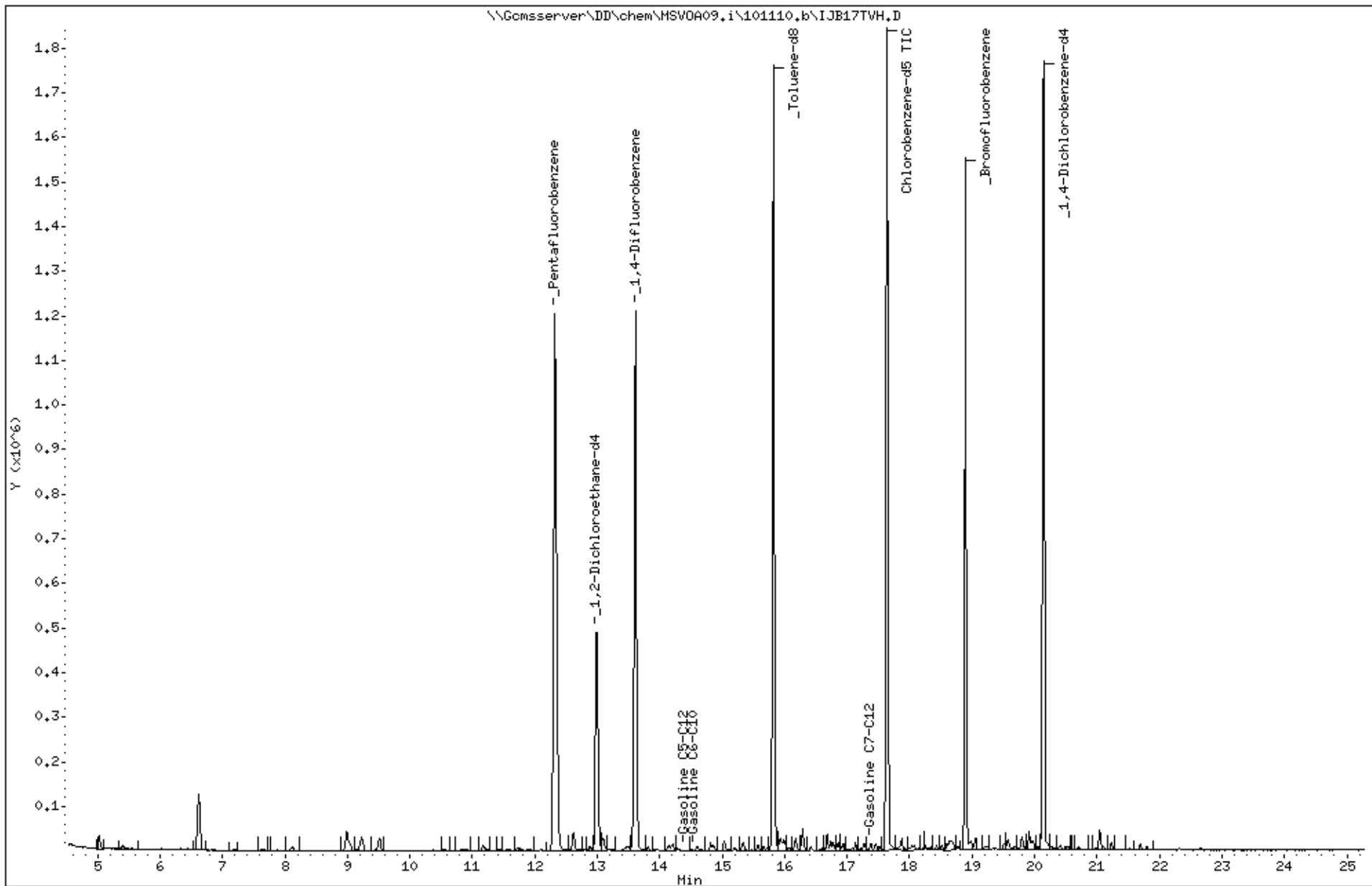
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Operator: VOC

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Column phase:



Date : 11-OCT-2010 18:48

Client ID: DYNA P&T

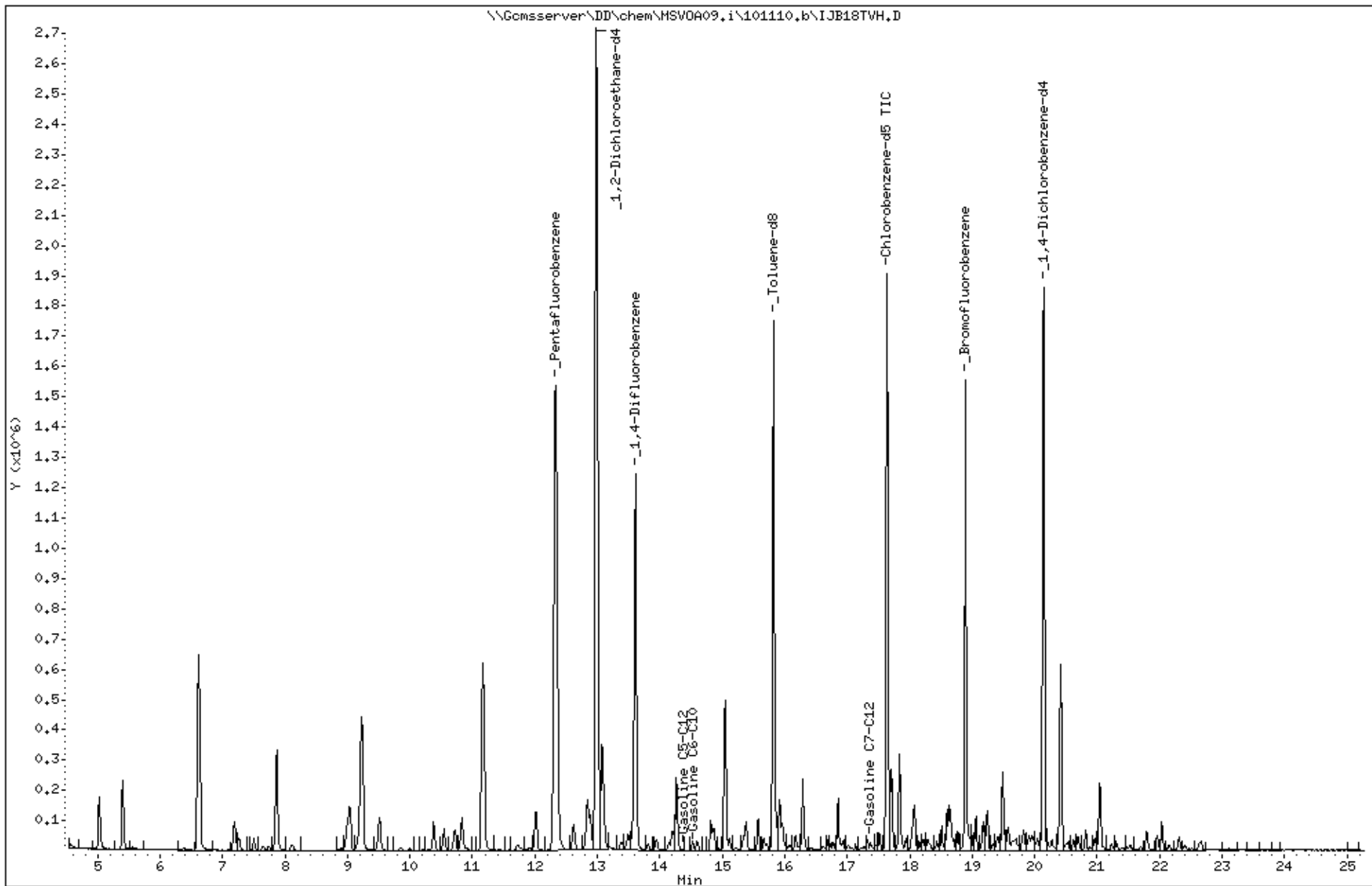
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Instrument: MSV0A09,i

Operator: VOC

Column diameter: 2.00

Column phase:



Date : 11-OCT-2010 19:23

Client ID: DYNA P&T

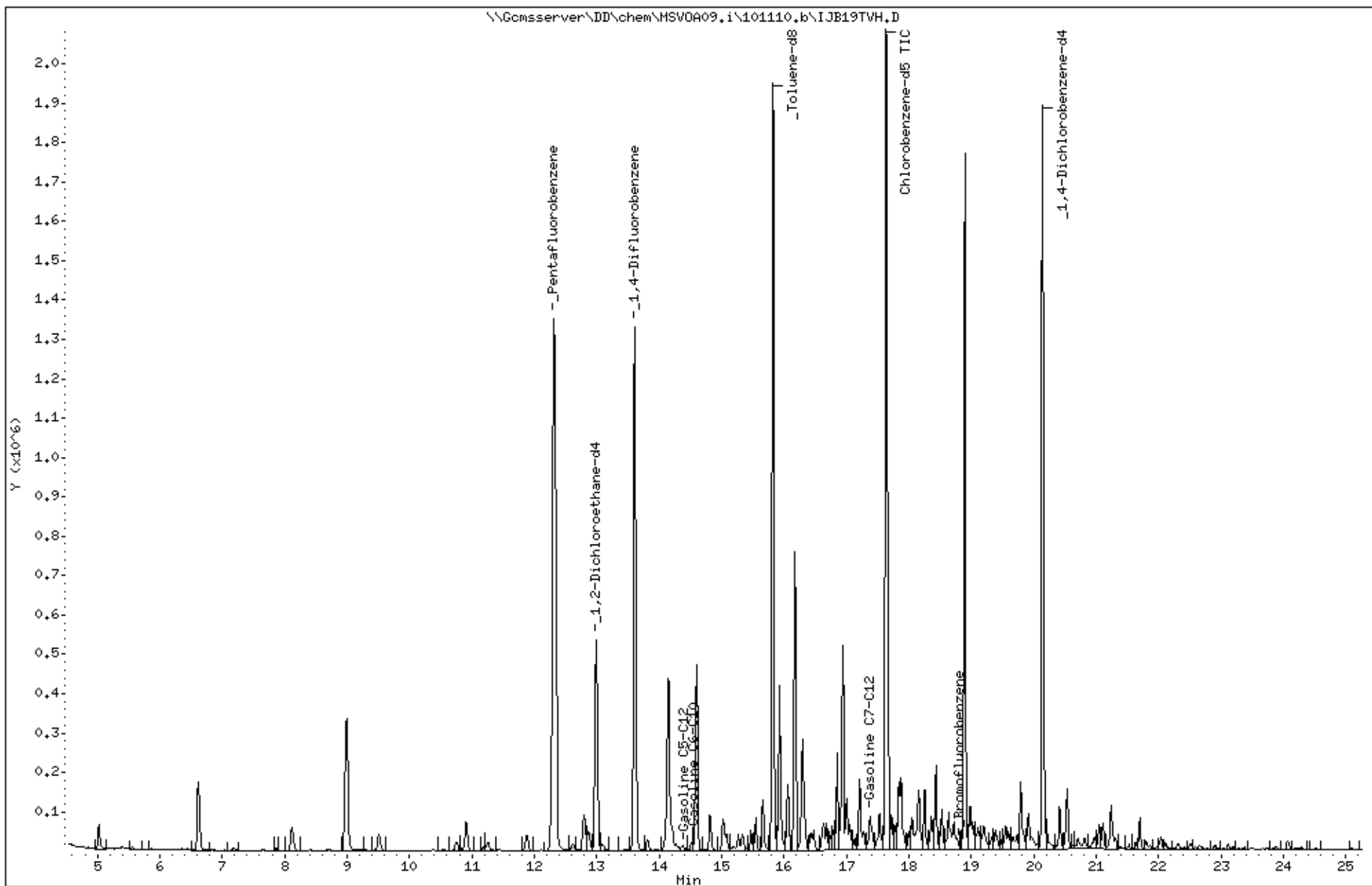
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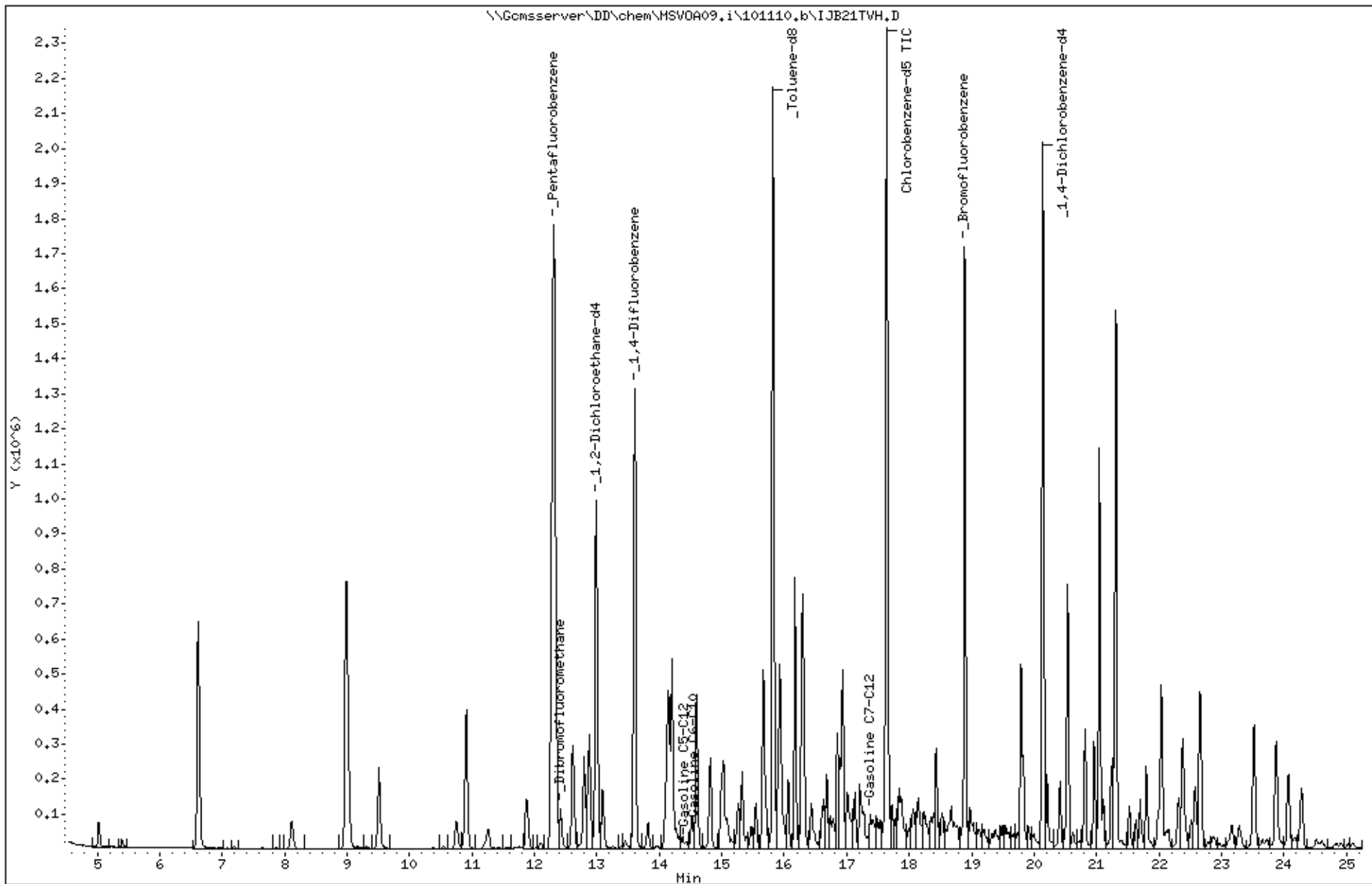
Instrument: MSV0A09.i

Operator: VOC

Column diameter: 2.00

Column phase:





Date : 11-OCT-2010 10:50

Client ID: DYNA P&T

Sample Info: CCV/BS,QC563751,167801,

Instrument: MSV0A09,i

Operator: VOC

Column diameter: 2,00

Column phase:

