RO 2461

FUGRO WEST, INC.

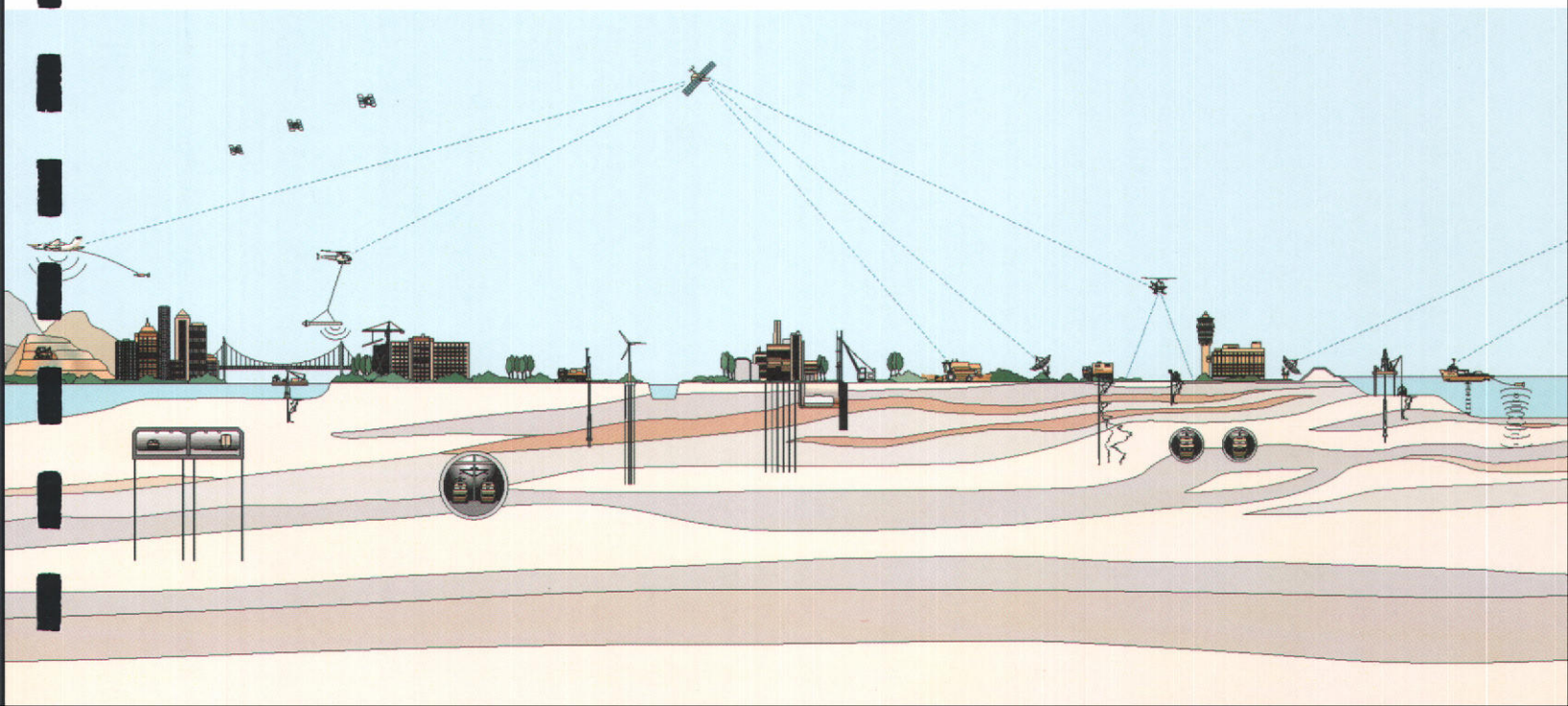
GROUNDWATER MONITORING REPORT
2005 ANNUAL EVENT
FORMER SEABREEZE YACHT CENTER
OAKLAND, CALIFORNIA

280 6th Ave, 94606

Prepared for:
PORT OF OAKLAND

JUNE 2005

Project No. 133.024



RO 2461

FUGRO

TRANSMITTAL

Date: June 22, 2005
Project No. 133.024

Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Attention: Mr. Barney Chan

Subject: Former Seabreeze Yacht Center – Annual Groundwater Monitoring Report

We are sending one (1) copy of the above-referenced material for your use. Other copies are being sent to:

Mr. Steven Hill ..... 1 copy
Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Ms. Lydia Huang ..... 1 copy
BASELINE
5900 Hollis Street, Suite D
Emeryville, CA 94608

Mr. Earl James ..... 1 copy
EKI
1870 Ogden Drive
Burlingame, CA 94010-5306

Thank you for the opportunity to be of service.

Sincerely,

FUGRO WEST, INC.

Melissa L. Pleva
Staff Engineer & Geologist

- ☐ Overnight a.m.
- ☐ Overnight p.m.
- ☒ Regular Mail
- ☐ Hand Delivery

DOCUMENT2

PORT OF OAKLAND

June 17, 2005

Mr. Barney Chan
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: **Former Seabreeze Yacht Center**
Annual Groundwater Monitoring report

Dear Mr. Chan:

Enclosed please find the Port of Oakland's annual groundwater monitoring report for the former Seabreeze Yacht Center prepared by Fugro West, Inc. This report documents recent groundwater monitoring results for TPH diesel in the three existing monitoring wells.

If you have any questions, contact me at 510-627-1467.

Sincerely,

Diane Heinze

Diane Heinze, P.E.
Associate Port Environmental Scientist

Encl: Annual Groundwater Monitoring Report

Cc: w/encl:
Steven Hill, RWQCB
Lydia Huang, BASELINE Environmental
Earl James, EKI

530 Water Street ■ Jack London Square ■ P.O. Box 2064 ■ Oakland, California 94604–2064
Telephone: (510) 627-1100 ■ Facsimile: (510) 627-1826 ■ Web Page: *www.portofoakland.com*

FUGRO WEST, INC.

1000 Broadway, Suite 200
Oakland, California 94607
Tel: (510) 268-0461
Fax: (510) 268-0137

June 21, 2005
Project No. 133.024

Environmental Health & Safety Compliance Department
Port of Oakland
530 Water Street, 7th Floor
Oakland, California 94607-2064

Attention: Ms. Diane Heinze

Subject: 2005 Annual Groundwater Monitoring Report
Former Seabreeze Yacht Center, Oakland, California

Dear Ms. Heinze:

With this report Fugro West, Inc., presents the results of the 2005 annual groundwater monitoring event conducted at the former Seabreeze Yacht Center (Site). The location of the Site is shown on Plate 1. Previous investigations indicate that petroleum hydrocarbons have impacted groundwater at the Site. Groundwater monitoring has been performed at the Site since 1995.

BACKGROUND

Four groundwater monitoring wells (MWSB-2 through MW-SB-5) were installed in November 1994. Monitoring well MWSB-2 was destroyed in December 2002. Quarterly groundwater monitoring of the wells was conducted from 1995 until 1998. Beginning in 1998 the wells were sampled on an annual basis and analyzed for total petroleum hydrocarbons as diesel (TPHd) with silica gel cleanup. From 2000 to 2002 the groundwater samples were also analyzed for Methyl Tert-Butyl Ether (MTBE). MTBE was not detected in any of the wells sampled. In January 1993 the Port of Oakland (Port) requested approval from Alameda County Environmental Health (ACEH) for no longer requiring the analysis of groundwater samples for MTBE. ACEH verbally agreed to remove MTBE from the required analyte testing list.

MONITORING ACTIVITIES

Initially, the wells MW-SB3, MW-SB4, and MW-SB5 were all sounded with a dual phase water level indicator to check for the presence of separate phase product. No free product was observed in any of the wells sampled during this event. Water level readings were then taken within the shortest amount of allowable time. The dual phase probe was decontaminated prior to its initial use and also following each use in order to reduce the risk of cross contamination. Groundwater level readings were recorded on the groundwater level survey forms (Appendix A). Groundwater elevation data including the time measured are presented in Table 1. The Site is acceptable to tidal fluctuation. The times of the high and low tides are also presented at the end of Table 1.

The wells were purged following low flow purging requirements, taking care not to cause a significant drawdown while attempting to remove no more than three well volumes of water. Measurements of water quality parameters were recorded on groundwater purge sampling forms (Appendix B) prepared for each well. Purge water was placed into a DOT-approved 55-gallon labeled drum temporarily stored onsite pending receipt of the analytical data.

Samples were collected after the well parameters stabilized. A peristaltic pump and dedicated down-hole tubing was used for well sampling. The tubing within the peristaltic pump rotor housing was decontaminated prior to use in each well.

The samples were delivered to the laboratory at the end of the sampling day in a secured cooler sealed with custody seals. Samples were submitted for Total petroleum hydrocarbons (TPH) as diesel EPA 8015m, using silica gel cleanup. A trip blank was stored in an ice-filled cooler, ready to accompany the samples collected. The samples collected were listed, along with a laboratory prepared trip blank, on the chain of custody form (Appendix C).

DISCUSSION OF RESULTS

The current and historical chemical results are presented in Table 2. The analytical test reports, chromatographs and chain of custody forms are included in Appendix C. TPHd was not detected in wells MW-SB3 and MW-SB4. TPHd was detected in the groundwater sample from well MW-SB5 at a concentration of 0.099 mg/L. C&T reported that the sample exhibited a chromatographic pattern that does not resemble the laboratory standard for diesel.

QUALITY ASSURANCE

Analytical results were subjected to quality assurance evaluation, which included the review of holding times, method blanks, laboratory control spikes, and surrogates. All quality control elements were within control limits, and the analytical results are acceptable for project use.

GROUNDWATER FLOW DIRECTION

The groundwater elevation data collected on April 14, 2005, was used to develop groundwater elevation contours (Plate 2). Groundwater flow direction at the time measurements were taken was toward the southeast at a gradient of 0.01 ft/ft.

WASTE DISPOSAL ACTIVITIES

On May 19, 2005, one drum containing purge water from groundwater monitoring activities was removed from the Site. The drum was transported under a Uniform Hazardous Waste Manifest to an appropriate disposal facility. A copy of the manifest is presented in Appendix D.

ONGOING MONITORING

In accordance with the approved program, the next sampling event will be an annual event conducted in April 2006. If you have any questions, please call either of the undersigned at (510) 268-0461.

Sincerely,
FUGRO WEST, INC.

Melissa L. Pleva
Staff Engineer & Geologist

REGISTERED PROFESSIONAL ENGINEER
JERIANN N. ALEXANDER
No. C040469
Exp. 3/31/07
CIVIL
STATE OF CALIFORNIA

Jeriann N. Alexander, P.E., R.E.
R.E.A No. 03130 (exp. 7/05)
Civil Engineer 40469 (exp. 3/07)

REGISTERED ENVIRONMENTAL ASSESSOR
JERIANN N. ALEXANDER
NO REA-03130
Expires 7/05
STATE OF CALIFORNIA

MLP/JNA:rp

Attachments:

Tables: Table 1. Groundwater Elevation
Table 2. Analytical Data

Plates: Plate 1. Vicinity Map
Plate 2. Site Plan with Groundwater Elevations, April 2005

Appendices: Appendix A. Groundwater Level Survey Forms
Appendix B. Well Sampling Forms
Appendix C. Analytical Test Reports, Chromatographs and Chain of Custody Reports
Appendix D. Waste Manifest

Table 1
Groundwater Elevation Data
Former Seabreeze Yacht Center
Oakland, California

Well Number	Date	Time	TOC Elevation Feet (MSL)	Groundwater Depth Feet	Groundwater Elevation Feet (MSL)
MW-SB2	4/19/91	11:09	7.18[1]	5.38	1.80
	7/9/91	11:04		3.70	3.48
	1/10/94	12:31		3.08	4.10
	1/26/94	13:40		1.63	5.55
	11/14/94	7:30		4.80	2.38
	11/14/94	11:05		4.76	2.42
	11/14/94	14:14		4.73	2.45
	11/28/94	9:00		2.85	4.33
	3/3/95	8:50		2.84	4.34
	6/28/96	7:40		3.76	3.42
	9/16/96	9:01		4.30	2.88
	12/11/96	11:15		2.00	5.18
	3/12/97	9:02		3.48	3.70
	6/18/97	9:10		3.94	3.24
	1/26/98	10:02		1.65	5.53
	1/4/99	8:11		3.3[3]	3.88
	2/1/00	10:20		--	--
	1/17/01	9:20	8.93[4]	3.91	5.02
	1/22/02	9:30		4.67	4.26
	Well Destroyed (January 2003)				
MW-SB3	11/14/94	7:25	8.10[1]	8.23	-0.13
	11/14/94	11:00		8.14	-0.04
	11/14/94	14:12		8.07	0.03
	11/28/94	8:53		6.32	1.78
	12/6/94	8:37		6.15	1.95
	3/3/95	8:40		6.78	1.32
	6/28/96	7:35		5.46	2.64
	9/16/96	8:55		5.78	2.32
	12/11/96	10:32		5.31	2.79
	3/12/97	9:05		6.03	2.07
	6/18/97	9:12		5.50	2.60
	1/26/98	9:20		5.12	2.98
	1/4/99	8:20		5.97	2.13
	2/1/00	9:50		5.81	2.29
	1/17/01	9:15		6.04	2.06
	1/22/02	9:00		5.33	2.77
	2/3/03	13:12		5.30	2.80
	3/5/04	9:57		4.64	3.46
	4/14/05	10:34		6.26	1.84

Table 1
Groundwater Elevation Data
Former Seabreeze Yacht Center
Oakland, California

Well Number	Date	Time	TOC Elevation Feet (MSL)	Groundwater Depth Feet	Groundwater Elevation Feet (MSL)
MW-SB4	11/28/94	9:02	6.39[2]	1.05	5.34
	3/3/95	8:35		0.90	5.49
	6/28/96	8:28		3.16	3.23
	9/16/96	8:52		2.85	3.54
	12/11/96	9:28		0.65	5.74
	3/12/97	9:07		2.53	3.86
	6/18/97	9:25		3.10	3.29
	1/26/98	10:30		0.88	5.51
	1/4/99	8:26		2.55	3.84
	2/1/00	10:43		0.61	5.78
	1/17/01	9:01		1.70	4.69
	1/22/02	10:00		3.17	3.22
	2/3/03	11:30		3.40	2.99
	3/5/04	9:55		3.90	2.49
	4/14/05	10:35		4.08	2.31
MW-SB5	11/28/94	8:40	6.30[2]	6.32	-0.02
	3/3/95	9:00		2.54	3.76
	6/28/96	8:45		2.43	3.87
	9/16/96	10:15		2.52	3.78
	12/11/96	14:12		3.09	3.21
	3/12/97	9:11		2.42	3.88
	6/18/97	8:56		2.32	3.98
	1/26/98	14:10		1.42	4.88
	1/5/99	12:20		3.50	2.80
	2/1/00	12:27		3.91	2.39
	1/17/01	7:54		4.21	2.09
	1/22/02	11:05		4.10	2.20
	2/3/03	15:40		4.95	1.35
	3/5/04	15:40		3.68	2.62
	4/14/05	10:40		2.51	3.79

Table 1
Groundwater Elevation Data
Former Seabreeze Yacht Center
Oakland, California

Notes:
-- = not measured
msl = mean sea level
TOC = top of casing
[1] = Well survey conducted by Bates & Bailey 11/18/94.
[2] = Well survey conducted by Bates & Bailey 11/28/94.
[3] = The steel well head protection and PVC appears damaged; groundwater elevations may be inaccurate.
[4] = New TOC elevation after well repair in April 2000.

11/14/94: High tide 9:21; Low tide 15:50.
11/28/94: High tide 7:46
2/15/95: High tide 5:14 & 18:03; Low tide 23:34
3/3/95: High tide 13:14; Low tide 8:23 & 21:07
6/28/96: High tide 11:41 & 22:32; Low tide
9/16/96: High tide 2:57 & 14:57; Low tide 8:23 & 21:07
12/11/96: High tide 1:02 & 11:47; Low tide 5:35 & 18:30
3/12/97: High tide 2:17 & 15:02; Low tide 8:23
6/18/97: High tide 12:18 & 23:07; Low tide 5:15 & 16:49
1/26/98: High tide 10:10; Low tide 4:00 & 16:57
1/4/99: High tide 2:21 & 13:06; Low tide 7:13
1/5/99: High tide 3:07 & 13:54; Low tide 8:09 & 20:37
2/1/00: High tide 9:01 & 23:19; Low tide 3:03 & 16:08
1/17/01: High tide 6:38 & 19:47; Low tide 13:25
1/22/02: High tide 6:16 & 19:58; Low tide13:25
2/3/03: High tide 2:05 & 12:59; Low tide 7:07 & 19:35
4/14/05: High tide 3:48 & 19:16; Low Tide 11:10 & 23:19

Table 2
Groundwater Analytical Results
Former Seabreeze Yacht Center
Oakland, California

Sample ID	Date	Metals		Hydrocarbons			
		Lead (mg/L)	Copper (mg/L)	TPHd (mg/L)	Bunker C (mg/L)	TPHmo (mg/L)	MTBE (mg/L)
MW-SB2	4/19/1991	<0.07	**0.0481**	--	--	--	--
	7/9/1991	<0.06[8]	<0.02[9]	--	--	--	--
	1/10/1994	<0.10[8]	<0.02[9]	--	--	--	--
	1/26/1994	**0.00489**	<0.014[9]	--	--	--	--
	3/6/1995	--	--	**16.0** [4,5]	**28.0** [4,5]	**4.9** [4,5]	--
	7/1/1996	<0.003	**0.055**	<0.05	<0.3	--	--
	9/16/1996	<0.003[11]	<0.005[12]	<0.05	<0.5	<0.25	--
	12/11/1996	**0.00855**[11]	**0.00354**[12]	**0.16**[14]	<0.5	<0.25	--
	3/14/1997	**0.00314**[11]	<0.003[12]	**0.061**	<0.5	<0.25	--
	6/20/1997	--	--	**0.15**	--	--	--
	1/28/1998	--	--	<0.05[16]	--	--	--
	1/6/1999	--	--	<0.048	--	--	--
	2/4/2000	--	--	--	--	--	--
	1/19/2001	--	--	<0.05	--	--	<0.005
	1/24/2002	--	--	<0.05	--	--	<0.005
	2/4/2003	**Well Destroyed - December 2002**					
MW-SB2A (MW-SB2 duplicate)	3/6/1995	--	--	**18.0** [4,5,6]	**33.0** [4,5,6]	<25.0 [4,5,6]	--
	7/1/1996	<0.003	**0.065**	**0.17**[7]	<0.3[5]	--	--
	9/16/1996	<0.003[11]	<0.005[12]	**0.17**	<0.3[5]	<0.25	--
MW-SB3	3/6/1995	--	--	**2.3** [4,5]	**5.8** [4,5]	**1.5** [4,5]	--
	7/1/1996	**0.0036**	<0.01	<0.049	<0.3	--	--
	9/16/1996	<0.003[11]	<0.005[12]	<0.05[4]	<0.5	**0.28**[4]	--
	12/11/1996	<0.003[11]	<0.003[12]	**0.19**[14]	<0.5	<0.25	--
	3/14/1997	<0.003[11]	**0.00529**[12]	**0.085**[15]	<0.5	<0.25	--
	6/20/1997	--	--	**0.015**	--	--	--
	1/28/1998	--	--	<0.05[16]	--	--	--
	1/6/1999	--	--	<0.049[17]	--	--	--
	2/4/2000	--	--	<0.05	--	--	<0.002
	1/19/2001	--	--	<0.05	--	--	<0.005
	1/24/2002	--	--	<0.05	--	--	<0.005
	2/4/2003	--	--	**0.077**[b]	--	--	--
	3/5/2004	--	--	<0.05	--	--	--
	4/14/2005	--	--	<0.05	--	--	--
MW-SB3A (MW-SB3 duplicate)	6/20/1997	--	--	**0.11**	--	--	--
	1/28/1998	--	--	<0.05[16]	--	--	--
	1/6/1999	--	--	**0.13**[7,18]	--	--	--
	2/4/2000	--	--	<0.05	--	--	<0.002

Table 2
Groundwater Analytical Results
Former Seabreeze Yacht Center
Oakland, California

Sample ID	Date	Metals		Hydrocarbons			
		Lead (mg/L)	Copper (mg/L)	TPHd (mg/L)	Bunker C (mg/L)	TPHmo (mg/L)	MTBE (mg/L)
MW-SB4	3/3/1995	--	--	**1.4**[4,5]	**3.0**[4]	**0.66**[4]	--
	7/1/1996	**0.014**	**0.013**	<0.049	<0.3	--	--
	9/16/1996	<0.003[11]	<0.005[12]	<0.05	<0.5	<0.25	--
	12/11/1996	**0.00465**[11]	**0.00674**[12]	**0.12**[14]	<0.5	<0.25	--
	3/14/1997	**0.00519**[11]	<0.003[12]	<0.05	<0.5	<0.25	--
	6/20/1997	--	--	**0.11**	--	--	--
	1/28/1998	--	--	<0.05[16]	--	--	--
	1/6/1999	--	--	<0.049	--	--	--
	2/4/2000	--	--	<0.05	--	--	<0.002
	1/19/2001	--	--	<0.05	--	--	<0.005
	1/24/2002	--	--	<0.05	--	--	<0.005
	2/4/2003	--	--	<0.05	--	--	--
	3/5/2004	--	--	<0.05	--	--	--
	4/14/2005	--	--	<0.05	--	--	--
MW-SB4A (MW-SB4 duplicate)	3/5/2004	--	--	<0.05	--	--	--
MW-SB5	3/6/1995	--	--	**15.0**[4,5]	**34.0**[4,5]	**8.1**[4,5]	--
	7/1/1996	**0.0031**	**0.012**	<0.049	<0.3	--	--
	9/16/1996	<0.003[11]	<0.005[12]	**0.14**[4,13]	<0.5	<0.25	--
	12/11/1996	<0.00344[11]	<0.003[12]	**0.16**[14]	<0.5	<0.25	--
	3/14/1997	<0.003[11]	**0.00318**[12]	**0.29**	<0.5	<0.25	--
	6/20/1997	--	--	**0.27**	--	--	--
	1/28/1998	--	--	<0.05[16]	--	--	--
	1/6/1999	--	--	<0.05	--	--	--
	2/4/2000	--	--	<0.05	--	--	--
	1/19/2001	--	--	<0.05	--	--	<0.002
	1/24/2002	--	--	<0.05	--	--	<0.005
	2/4/2003	--	--	<0.05	--	--	<0.005
	3/23/2004	--	--	**0.13**	--	--	--
	4/14/2005	--	--	**0.099**[4]	--	--	--
MW-SB5A (MW-SB5 duplicate)	3/6/1995	--	--	**15.0**[4,5,6]	**31.0**[4,5,6]	**6.9**[4,5,6]	--
	12/11/1996	<0.003[11]	<0.003[12]	**0.081**[14]	<0.5	<0.25	--
	3/14/1997	<0.003[11]	<0.003[12]	**0.22**	<0.5	<0.25	--
	1/24/2002	--	--	<0.05	--	--	<0.005

Table 2
Groundwater Analytical Results
Former Seabreeze Yacht Center
Oakland, California

Notes:

<0.05 = analyte not identified above the given laboratory reporting limit

detected concentrations in **bold**

-- = not analyzed

TPH d = Total petroleum hydrocarbons as diesel

TPH mo = Total petroleum hydrocarbons as motor oil

mg/L = milligrams per liter

b = diesel range compounds are significant

1 = Analytical Method EPA 6010A, unless otherwise noted

2 = Analytical Method California DOHS, LUFT Manual (EPA 8015M) with silica gel cleanup (EPA 3630)

3 = Analytical Method EPA 8020 or 8021B.

4 = Sample chromatogram does not resemble hydrocarbon standard

5 = Samples were not subject to silica gel cleanup prior to analysis

6 = Duplicate sample centrifuged prior to TEPH analysis.

7 = Sample exhibited fuel pattern that does not resemble standard

8 = Analyzed using EPA method 7420

9 = Analyzed using EPA method 7210

10 = Sample was also analyzed for Hg, Ar, Cd, Cr, Fe, Ni, Ag, and Zn. All metals were below reporting limits except for 0.13 mg/L of iron.

11 = Analyzed using EPA method 7421. Sample filtered by laboratory prior to analysis.

12 = Analyzed using EPA method 7411. Sample filtered by laboratory prior to analysis.

13 = Laboratory indicated that miscellaneous peaks were present in the diesel range

14 = Laboratory indicated that the analyte was also detected in the corresponding method blank at a similar concentration, verifying lab contamination

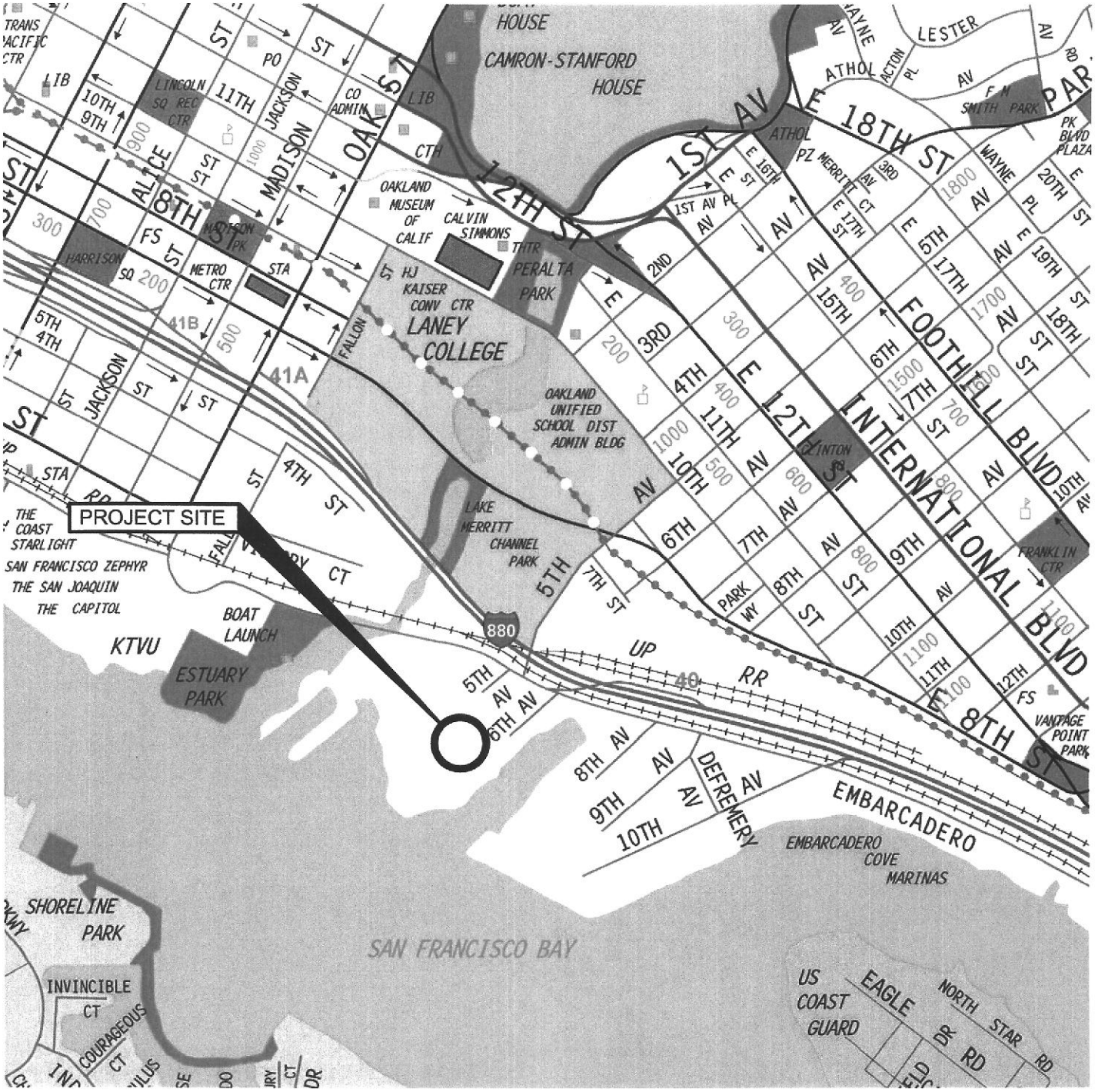
15 = The laboratory indicated that the chromatograph pattern of the sample matches a known laboratory contaminant

16 = The corresponding method blank contained 0.067 mg/L of hydrocarbon reported as heavier than diesel.

17 = The corresponding duplicate sample (MW-SB3A) contain diesel concentrations above the laboratory reporting limit

18 = Laboratory indicated that the sample chromatogram contained heavier hydrocarbons than the diesel standard.

June 2005
Project No. 133.024



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.

NORTH
0 1000 2000
FEET

SITE VICINITY MAP
Former Seabreeze Yacht Center
Oakland, California

PLATE 1

G:\jobdocs\133\133.024\drawings\A133-024-01.dwg 6-21-05 09:01:14 AM mfillingim

Depth to Groundwater

Project Name: Former Seabreeze Yacht Center Date: 4/14/05

Personnel: M. Pleva Project No.: 133.024

Well ID	Date	Time	Depth to Water from TOC (feet) *	Total Depth of Casing (feet)	Comments
MWSB3	4/14/05	1034	6.26'	11.06'	no odors
MWSB4	4/14/05	1035	9.08'	11.64'	no odors
MWSB5	4/14/05	1040	2.51'	14.76'	no odors

TOC = Top of Casing

* measured w/ Interface Meter (Solinst Model 122)

Groundwater Purge Sampling Form

Project Name:	Former Seabreeze Yacht Center	Date:	4/13/05
Personnel:	M. Pleva	Project No.:	133.024
Well ID:	MWSB-3		

Purge Method:	peristaltic pump
Purge Depth (feet):	~ 7.5' below TOC
Start Time:	1297 End Time: 1309
Total Gallons purged:	2.0

INSTRUMENT CALIBRATION

Instrument	Field measure	Standard measure
Conductivity	Supplier	
pH	Calibrated	
Turbidity		
Temperature		

SAMPLES	Field ID	Time Collected	Containers & Preservative
	MWSB-3	N/A	2 Ambers

COMMENTS: problems w/ generator

DTW @ 1143: 4.96 3 well volumes 2.98gal
total depth = 11.06

Time	1300	1303	1306	1309				
Volumes purged (gallons)	1.	~1.0		2.0				
Temperature (°C)	16.19	16.10	16.46	16.30				
pH	4.43	4.59	4.63	4.72				
Specific Conductivity (uS/cm)	2360	1965	2046	1846				
Turbidity (NTU) / color								
Dissolved oxygen (mg/L)	1.34	1.80	1.66	2.74				
Odor	none	none	none	none				
Depth to Water during purge (feet)	6.70	6.90	7.21	7.23				
Purge Rate (Liters/minute)	0.6	0.6	0.6	0.6				

Groundwater Purge Sampling Form

Project Name:	Former Seabreeze Yacht Center		Date:	4/14/05	
Personnel:	M. Pleva	Project No.:	133.023	Well ID:	MWSB3

Total Depth of Casing (BTOC):	11.06	feet	Calculated Purge Volume:	2.4 = 3 vol	
Depth to Groundwater (BTOC):	6.21	feet	(feet of water * casing dia2 * .0408 * # of Volumes)		
Feet of Water in Well:	4.85	feet	Free Product:	none	

Purge Method:	peristaltic pump		Instrument	Field measure	Standard measure
Purge Depth (feet):	~7.0'		Conductivity	Supplier Calibrated	
Start Time:	1323	End Time: 1333	pH		
Total Gallons purged:	~1.5		Turbidity		
			Temperature		

SAMPLES	Field ID	Time Collected	Containers & Preservative
	MWSB3	1345	2 Amber (none)

COMMENTS:

purged 4/13/05. purged additionaly today to record some turbidity values not recorded on 4/13/05.

Time	1326	1329	1331	1333				
Volumes purged (gallons)	0.40	0.80	1.2	1.6				
Temperature (°C)	17.15	16.32	17.04	16.63				
pH	4.81	4.83	4.95	4.78				
Specific Conductivity (uS/cm)	4,050	2,746	3,128	3,623				
Turbidity (NTU) / color	20.40	3.7	2.2	4.0				
Dissolved oxygen (mg/L)	3.29	2.48	3.64	2.97				
Odor								
Depth to Water during purge (feet)	6.86	7.28	7.69	8.05				
Purge Rate (Liters/minute)	0.5	0.5	0.5	0.5				

Groundwater Purge Sampling Form

Project Name:	Former Seabreeze Yacht Center			Date:	4-14-05
Personnel:	M. Pleva	Project No.:	133.024	Well ID:	MWSB4

Total Depth of Casing (BTOC):	11.64 feet	Calculated Purge Volume: ~~(3 gallons)~~	3.76 = 3 volumes
Depth to Groundwater (BTOC):	3.95 feet (1103)	(feet of water * casing dia2 * .0408 * # of Volumes)	
Feet of Water in Well:	7.69 feet	Free Product:	N/A

Purge Method:	peristaltic pump
Purge Depth (feet):	~7ft
Start Time:	1105 End Time: 1128
Total Gallons purged:	2.6

Instrument	Field measure	Standard measure
Conductivity	Supplier lab calibrated YSI 600XLM DRT-15CE	
pH		
Turbidity		
Temperature		

SAMPLES	Field ID	Time Collected	Containers & Preservative
	MWSB4	1135	2 Ambers (none)

COMMENTS:

Time	1108	1111	1114	1117	1120	1123	1126	1128
Volumes purged (gallons)	0.4	0.8	1.1	1.4	1.7	2.0	2.3	2.6
Temperature (°C)	16.95	16.94	17.54	16.78	16.44	16.85	16.38	16.81
pH	4.95	5.09	5.11	5.06	5.04	5.04	5.05	4.98
Specific Conductivity (uS/cm)	13,330	10,190	6,594	3,892	3,778	4,502	4,847	4,938
Turbidity (NTU) / color	7.21	7.05	4.81	6.85	9.86	5.77	8.36	8.81
Dissolved oxygen (mg/L)	2.75	7.21	4.69	3.58	3.51	6.25	5.81	~~8.81~~ mm 4/14 7.64
Odor								
Depth to Water during purge (feet)	5.30	5.40	4.80	4.98	5.30	5.65	5.89	6.38
Purge Rate (Liters/minute)	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4

Groundwater Purge Sampling Form

Project Name:	Former Seabreeze Yacht Center			Date:	4/14/05
Personnel:	M. Pleva	Project No.:	133-024	Well ID:	MWSB5

Total Depth of Casing (BTOC):	14.76 feet	Calculated Purge Volume: (3 volumes)	6.0
Depth to Groundwater (BTOC):	2.49' feet (125)	(feet of water * casing dia2 * .0408 * # of Volumes)	
Feet of Water in Well:	12.27 feet	Free Product:	none

			Field measure	Standard measure
Purge Method:	peristaltic pump	Instrument		
Purge Depth (feet):	~7'	Conductivity	Ld calibrated by supplier	
Start Time:	1220 End Time: 1244	pH		
Total Gallons purged:	~2.5 gal	Turbidity		
		Temperature		

SAMPLES	Field ID	Time Collected	Containers & Preservative
	MWSB5	1250	2 Ambers (none)

COMMENTS:

Time	1223	1226	1229	1232	1235	1238	1241	1244
Volumes purged (gallons)	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4
Temperature (°C)	18.04	18.02	18.42	18.41	17.91	17.91	17.98	17.62
pH	4.66	4.69	4.72	4.76	4.73	4.71	4.72	4.72
Specific Conductivity (uS/cm)	24,140	22,240	20,750	20,640	21,540	21,580	22,460	22,870
Turbidity (NTU) / color	14.52 slight yellow	29.30 slight yellow	28.6	8.8 →	3.36 →	4.67 →	3.03 →	2.39 →
Dissolved oxygen (mg/L)	3.91	2.41	5.89	6.30	3.53	3.46	3.99	1.19
Odor	none	none	none	slight Sulphur	slight Sulphur	→	→	→
Depth to Water during purge (feet)	4.25	4.55	5.08	5.63	6.35	7.01	7.56	8.01
Purge Rate (Liters/minute)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4

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

ANALYTICAL REPORT

Prepared for:

Fugro West, Inc.
1000 Broadway
Suite 200
Oakland, CA 94607

Date: 28-APR-05
Lab Job Number: 178904
Project ID: 133.024
Location: Seabreeze Yacht Center

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 signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by: _____
Project Manager

Reviewed by: _____
Operations Manager

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	178904
Client:	Fugro West, Inc.
Project:	133.024
Location:	Seabreeze Yacht Center
Request Date:	04/14/05
Samples Received:	04/14/05

This hardcopy data package contains sample and QC results for three water samples, requested for the above referenced project on 04/14/05. The samples were received cold and intact.

TPH-Extractables by GC (EPA 8015B):

No analytical problems were encountered.

CHAIN OF CUSTODY

10907

PROJECT NAME: **Seabreeze Yacht Center**

POJECT NO.: **133.024**

LAB: **C&T**

PROJECT CONTACT: **Melissa L. Pleva**

TURNAROUND: 5 day

SAMPLED BY: **Melissa L. Pleva**

REQUESTED BY: **Melissa L. Pleva**

LABORATORY I.D. NUMBER	FIELD SAMPLE I.D.	MATRIX				CONTAINERS						PRESERVATIVE						SAMPLING DATE				NOTES	ANALYSIS REQUESTED
		WATER	SOIL	AIR		VOA	LITER	PINT	TUBE			HCL	H_2SO_4	HNO_3	ICE	OTHER	NONE	MONTH	DAY	YEAR	TIME		TEH Diesel with silica gel (8015m)
-1	MWSB-3	X					2								X			04	14	05	1345		X
-2	MWSB-4	X					2								X			04	14	05	1135		X
-3	MWSB-5	X					2								X			04	14	05	1250		X
-4	Trip Blank	X					1								X			04	14	05			

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
Melissa L. Pleva	4/14/05 1428	Jodi Ingram	4/14/05 14:28
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:

Intact | on ice

FUGRO WEST, INC.

1000 Broadway, Suite 200

Oakland, California 94607

Tel: 510.268.0461 Fax: 510.268.0137

g:/server migration/data/template/chain of custody

Excel

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	178904	Location:	Seabreeze Yacht Center
Client:	Fugro West, Inc.	Prep:	EPA 3520C
Project#:	133.024	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	04/14/05
Units:	ug/L	Received:	04/14/05
Diln Fac:	1.000	Prepared:	04/15/05
Batch#:	101227		

Field ID: MWSB-3
Type: SAMPLE
Lab ID: 178904-001
Analyzed: 04/19/05
Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
Hexacosane	135	55-143

Field ID: MWSB-4
Type: SAMPLE
Lab ID: 178904-002
Analyzed: 04/20/05
Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
Hexacosane	126	55-143

Field ID: MWSB-5
Type: SAMPLE
Lab ID: 178904-003
Analyzed: 04/19/05
Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	99 Y	50

Surrogate	%REC	Limits
Hexacosane	129	55-143

Type: BLANK
Lab ID: QC290713
Analyzed: 04/19/05
Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
Hexacosane	123	55-143

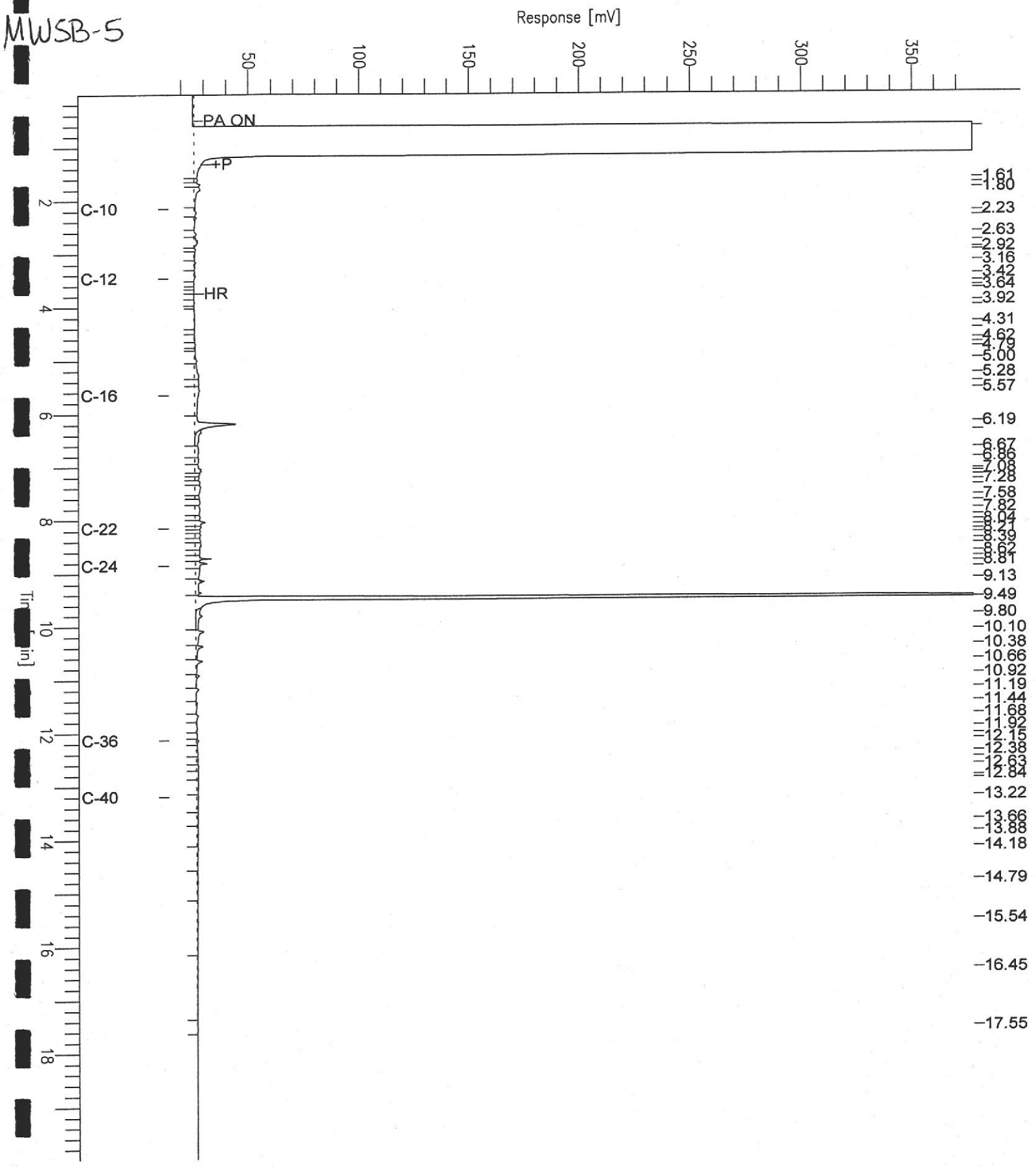
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Chromatogram

mple Name : 178904-003sg,101227
leName : G:\GC17\CHA\108A058.RAW
Method : ATEH103.MTH
Start Time : 0.01 min End Time : 19.99 min
Scale Factor: 0.0 Plot Offset: 14 mV

Sample #: 101227 Page 1 of 1
Date : 4/20/05 10:43 AM
Time of Injection: 4/19/05 11:30 PM
Low Point : 14.43 mV High Point : 377.35 mV
Plot Scale: 362.9 mV

MWSB-5

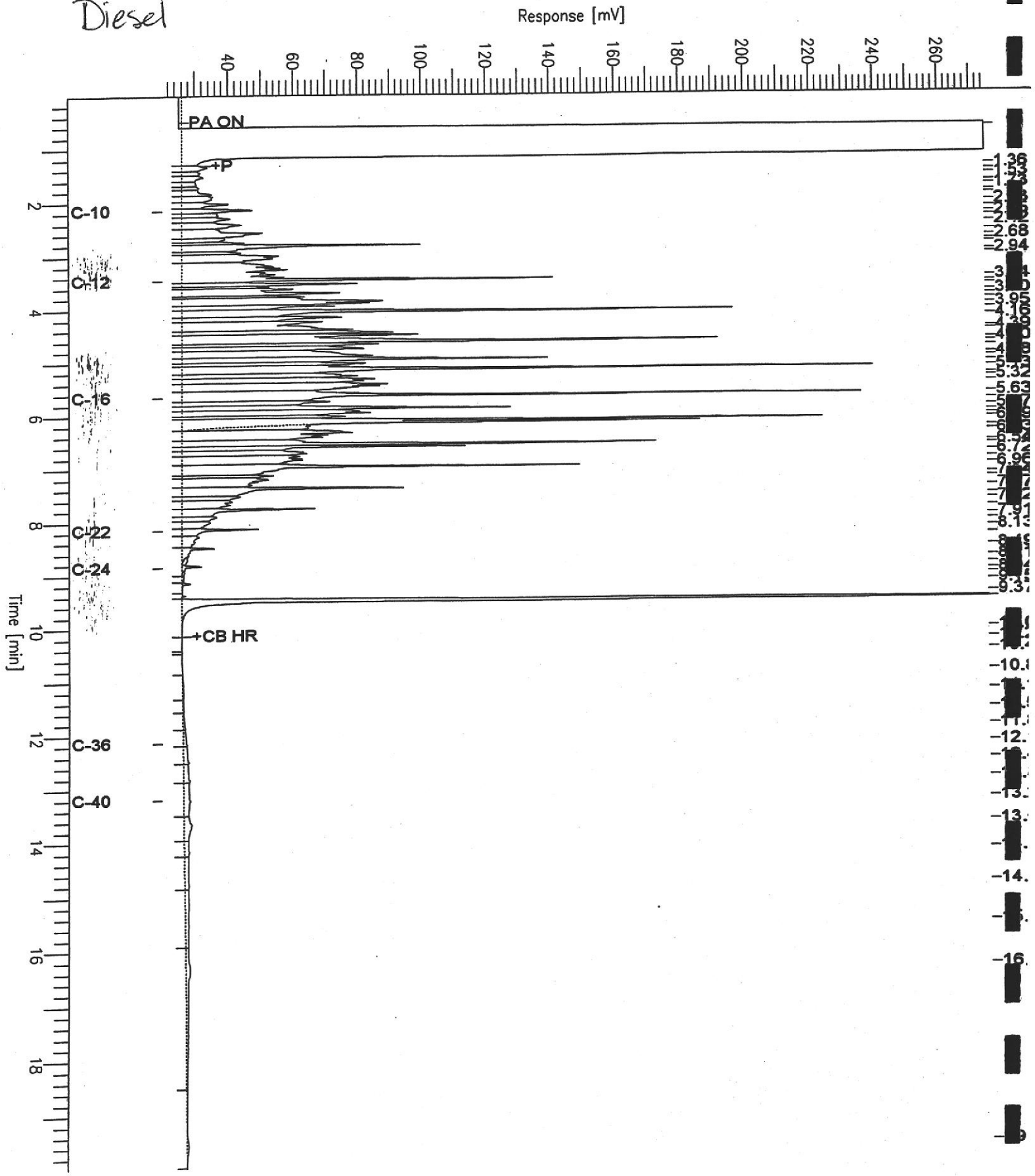


Chromatogram

Sample Name : ccv,S167,dsl
FileName : G:\GC17\CHA\108A007.RAW
Method : ATEH103.MTH
Start Time : 0.01 min End Time : 19.99 min
Scale Factor: 0.0 Plot Offset: 20 mV

Sample #: 500mg/L
Date : 4/18/05 05:59 PM
Time of Injection: 4/18/05 05:15 PM
Low Point : 20.22 mV High Point : 274.71 mV
Plot Scale: 254.5 mV

Diesel



Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	178904	Location:	Seabreeze Yacht Center
Client:	Fugro West, Inc.	Prep:	EPA 3520C
Project#:	133.024	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	101227
Units:	ug/L	Prepared:	04/15/05
Diln Fac:	1.000	Analyzed:	04/19/05

Type: BS
Lab ID: QC290714
Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,305	92	50-133

Surrogate	%REC	Limits
Hexacosane	114	55-143

Type: BSD
Lab ID: QC290715
Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	3,203	128	50-133	33	40

Surrogate	%REC	Limits
Hexacosane	140	55-143

RPD= Relative Percent Difference

State of California—Environmental Protection Agency
Form Approved OMB No. 2050-0039 (Expires 9-30-99)
Please print or type. *Form designed for use on elite (12-pitch) typewriter.*

See Instructions on back of page 6.

Department of Toxic Substances Control
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAL000213428 Manifest Document No. 24524926
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address
PORT OF OAKLAND
530 WATER STREET
OAKLAND, CA 94607
SITE: PORT OF OAKLAND
SEABREEZE MARINA
OAKLAND, CA 94607
ATTN: JEFF RUBIN

4. Generator's Phone (510) 627-1134

A. State Manifest Document Number 24524926

B. State Generator's ID

5. Transporter 1 Company Name: DILLARD ENVIRONMENTAL SVCS.
6. US EPA ID Number: CAD982523433

C. State Transporter's ID [Reserved.]

D. Transporter's Phone (925) 634-6850

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Transporter's ID [Reserved.]

F. Transporter's Phone

9. Designated Facility Name and Site Address
ROMIC ENVIRONMENTAL TECHNOLOGIES
2081 BAY ROAD
EAST PALO ALTO, CA 94303
10. US EPA ID Number: CAD009452657

G. State Facility's ID

H. Facility's Phone (650) 324-1638

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. NON RCRA HAZARDOUS WASTE LIQUID (WATER/DIESEL) (PF348710)	002	DM	00080	G	State 133 EPA/Other N/R
b. NON RCRA HAZARDOUS WASTE SOLID (SOIL CUTTINGS) (PF348701)	001	DM	00400	P	State 352 EPA/Other N/R
c.					State EPA/Other
d.					State EPA/Other

J. Additional Descriptions for Materials Listed Above
11A X 11B X 11C X 11D X
HA 348710
HB 348701

K. Handling Codes for Wastes Listed Above
a. 01 b. 01
c. d.

15. Special Handling Instructions and Additional Information
JOB# 480-107 05CRE02

Emergency Contact: DILLARD (925) 634-6850 WEAR PROPER PROTECTIVE EQUIPMENT (PPE)

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: COLLEEN LIMNG
Signature:
Month 05 Day 18 Year 05

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: SKEEVES
Signature:
Month 05 Day 18 Year 05

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: MAY LANEY
Signature:
Month 05 Day 19 Year 05

DO NOT WRITE BELOW THIS LINE.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.
(Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)

DTSC 8022A (1/99)
EPA 8700—22

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

24524926