√ R0402

Alameda-Contra Costa Transit District

February 8, 2005

Alameda County
FEB 10 2005
Environmental Health

Ms. eva chu
Alameda County Health Division
Division of Environmental Protection
Department of Environmental Health
1131 Harbor Bay Parkway, Second Floor
Alameda, CA 94502

Dear Ms. chu:

Subject: Quarterly Groundwater Monitoring Report – November 2004 Sampling
AC Transit, 1177 47th Street, Emeryville

AC Transit hereby submits the enclosed Quarterly Groundwater Monitoring and Technology Screening Reports for the AC Transit facility located at 1177 47th Street in Emeryville. These reports were prepared by our consultant, Cameron-Cole, LLC, and contain the results of the November 2004 sampling event.

The quarterly groundwater monitoring included collecting groundwater samples from monitoring wells MW-11and MW-12 and measuring depth to water in all monitoring wells. A groundwater sample was not collected from MW-13 due to the presence of a free phase hydrocarbon layer. These samples were analyzed for total petroleum hydrocarbons (TPH) using modified EPA Method 8015 and benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tert-butyl ether (MTBE) using EPA Method 8021B. No analytes were detected in samples collected from MW-11. TPH as degraded diesel was detected in MW-12 at a concentration of 320 ppb. TPH as degraded gasoline was detected MW-12 at 186pp.

If you have any questions or comments regarding the enclosed report, please call me at (510) 577-8869.

Sincerely,

Suzanne Patton

Suzanne Patton, P.E.
Environmental Engineer
enclosure

R0402

GROUNDWATER MONITORING REPORT FOR THE AC TRANSIT FACILITY LOCATED AT 1177 47th STREET, EMERYVILLE, CALIFORNIA

December 2004

Prepared For:
Ms. Suzanne Patton
AC Transit
10626 E. 14th Street
Oakland, California 94603

Prepared By:
Cameron-Cole
101 W. Atlantic Avenue
Building 90
Alameda, California 94501

Project No: 2016

CAMERON-COLE

GROUNDWATER MONITORING REPORT FOR THE AC TRANSIT FACILITY LOCATED AT 1177 47th STREET, EMERYVILLE, CALIFORNIA

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Reviewed By
Brad Wright, RG, CHG
Principle Hydrogeologist

STATE OF CALIFORNIA REGISTERED GEOLOGIST 5276 BRAD D. WRIGHT REGISTERED GEOLOGIST

Written By
Matt Eckhardt
Environmental Scientist

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

This report presents the results from the November 2004 sampling event for the AC Transit Facility located at 1177 47th Street, Emeryville, California (Site). Groundwater sampling of monitor wells MW-11 and MW-12 was conducted in accordance with directives from Alameda County Health Care Services (ACHCS). In a letter dated November 7, 2001, ACHCS requested quarterly groundwater sampling for monitor wells MW-11, MW-12 and MW-13 and semi-annual groundwater sampling of other Site monitor wells. AC Transit retained Cameron-Cole to perform this work.

GROUNDWATER MONITORING

Work performed during this sampling event included measuring depth to water in all monitor wells and collecting groundwater samples from monitor wells MW-11 and MW-12. Groundwater samples were analyzed for total extractable petroleum hydrocarbons (TEPH) using Environmental Protection Agency (EPA) Method 8015 Modified and benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl tertiary-butyl ether (MTBE) by EPA Method 8021B. A groundwater sample was not collected from MW-13 due to the presence of a free phase hydrocarbon layer. However, the free phase hydrocarbon layer was purged from MW-13.

A site map displaying the monitor well locations is presented as Figure 1. Chain-of-custody documents, field data sheets and certified analytical reports are included in Appendix A.

Groundwater Elevations and Flow Direction

On November 17, 2004, all 16 Site monitor wells were inspected and measured for the presence of free phase hydrocarbons and depth to groundwater. Measurements of depths to groundwater are presented on Table 1 and were used to construct the groundwater elevation contours shown in Figure 2. As shown, groundwater flow is to the west at a gradient of 0.025 feet/foot. A free phase hydrocarbon layer measuring 0.25 feet was detected in MW-13.

Groundwater Sampling Activities

The monitor wells were purged a minimum of three casing volumes using a centrifugal pump and samples were collected using disposable polyethylene bailers. During well purging, field parameters for pH, electrical conductivity, dissolved oxygen, oxidation-reduction potential, ferrous iron and temperature were monitored using calibrated field meters.

Groundwater samples were collected in 40-milliliter glass vials preserved with hydrochloric acid and one-liter non-preserved amber glass containers and placed in an ice-filled cooler for shipment under chain-of-custody to a State of California certified laboratory. A trip blank was submitted for analysis by EPA Method 8021B.

Groundwater Analytical Results

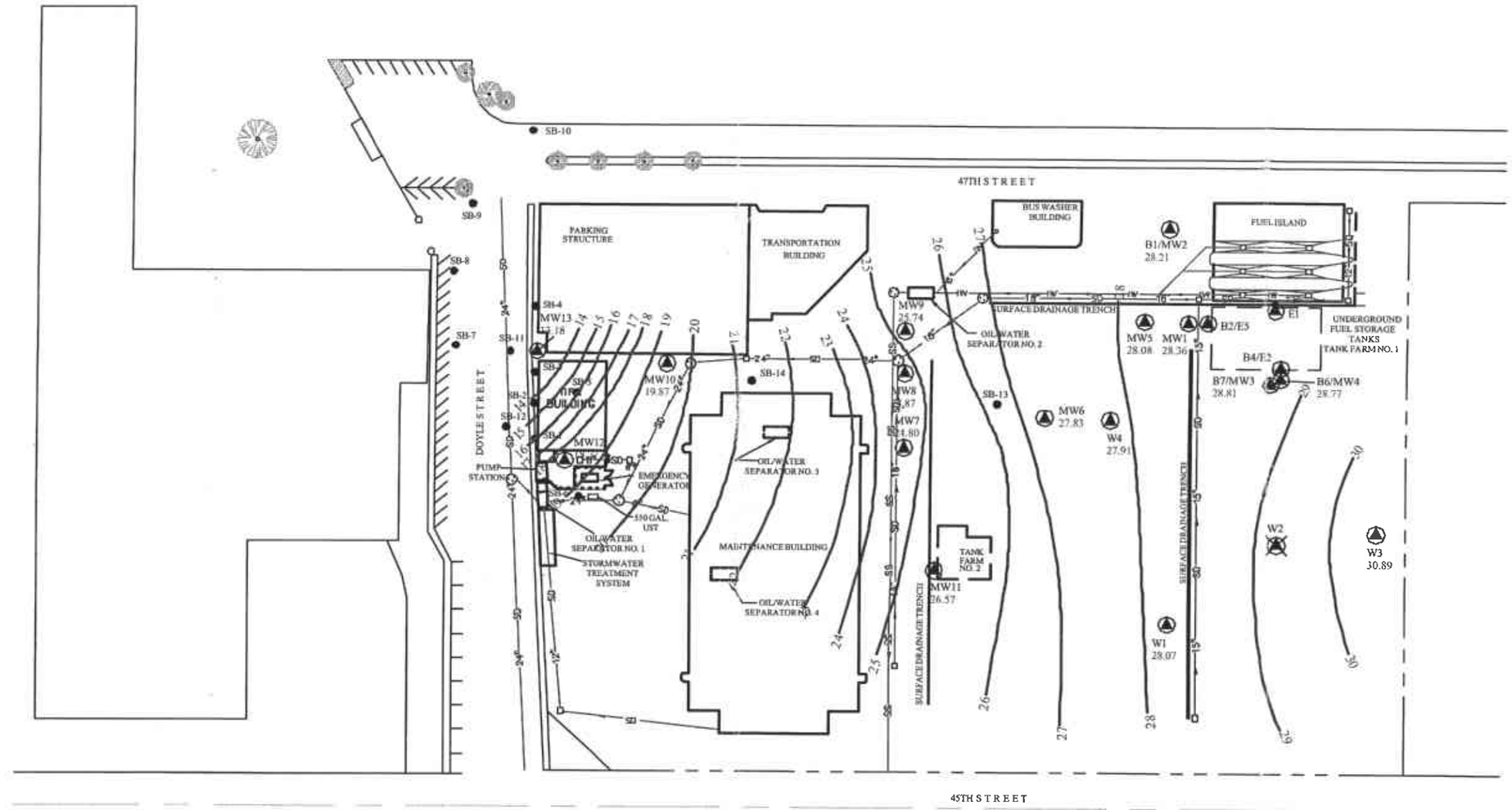
Table 2 presents groundwater analytical results for the November 2004 sampling event. TPH as degraded diesel was detected in monitor well MW-12 at 320 parts per billion (ppb). TPH as degraded gasoline was detected in monitor well MW-12 concentrations of 186 pbb. MTBE was detected in MW-12 at a concentration of 10.8 ppb. Both ethylbenzene and toluene were detected in MW-12 at concentrations of 0.5 ppb. No analytes were detected in the trip blank or method blank. A lab control spike and lab control spike duplicate passed the EPA's criteria for acceptance.

SUMMARY OF RESULTS

- Groundwater flow is to the west at a gradient of 0.025 feet/foot.
- TPH as degraded diesel was detected in MW-12 at 320 ppb.
- TPH as degraded gasoline was detected in MW-12 at 186 ppb.
- MTBE was detected in MW-12 at 10.8 ppb.
- Ethylbenzene was detected in MW-12 at 0.5 ppb.
- Toluene was detected in MW-12 at 0.5 ppb.

PROJECTED WORK AND RECOMMENDATIONS

- Semi-annual groundwater monitoring of all monitor wells including removal of the free product layer in MW-13 is scheduled for February 2005. This event will include site-wide depth to groundwater level measurements, and sample collection and analysis of ten site monitor wells



LEGEND

- MANHOLE
- CATCH BASIN
- MONITORING WELL
- ABANDONED MONITORING WELL
- SOIL BORING
- SD — STORM DRAIN PIPELINE
- SS — SANITARY SEWER PIPELINE
- IW — INDUSTRIAL WASTE PIPELINE
- CHAIN LINK FENCE
- 19.87 — GROUNDWATER ELEVATION (FT. M.S.L.)
- POTENTIOMETRIC SURFACE CONTOUR (FT. M.S.L.)

0 100
FEET

	BY	DATE
DRAWN	WRB	12/15/04
CHECKED		
APPROVED		
APPROVED		
APPROVED		

CAMERON-COLE

FIGURE 3
SOIL BORING AND
MONITORING WELL LOCATIONS
AC TRANSIT, EMERYVILLE FACILITY - OAKLAND, CA

SCALE: 1" = 100'
DWG. NO.: 2017-19

TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
AC TRANSIT
1177 47TH STREET, EMERYVILLE, CALIFORNIA

Well	Date	Top of Casing Elevation (ft-msl)	Product Thickness (feet)	DTW (feet)	Groundwater Elevation (ft-msl)	Groundwater Elevation Corrected from Product Thickness* (ft-msl)
MW-1	8/31/1999	32.56	None	3.24	29.32	NA
	11/23/1999		None	4.55	28.01	NA
	3/1/2000		None	3.65	28.91	NA
	5/17/2000		None	4.08	28.48	NA
	8/30/2000		None	5.18	27.38	NA
	12/18/2000		None	4.86	27.7	NA
	3/20/2001		None	4.22	28.34	NA
	6/7/2001		None	4.88	27.68	NA
	9/20/2001		None	4.97	27.59	NA
	12/14/2001		None	3.59	28.97	NA
	2/27/2002		None	4.03	28.53	NA
	5/16/2002		None	4.32	28.24	NA
	9/18/2002		None	4.61	27.95	NA
	10/30/2002		None	4.74	27.82	NA
	2/6/2003		None	4.08	28.48	NA
	5/1/2003		None	3.68	28.88	NA
	8/26/2003		None	4.64	27.92	NA
	11/20/2003		None	4.57	27.99	NA
	2/10/2004		None	3.95	28.61	NA
	5/18/2004		None	4.45	28.11	NA
	8/30/2004		None	5.14	27.42	NA
	11/17/2004		**None**	**4.2**	**28.36**	**NA**
MW-2	8/31/1999	32.12	None	5.24	26.88	NA
	11/23/1999		None	4.03	28.09	NA
	3/1/2000		None	3.11	29.01	NA
	5/17/2000		None	3.66	28.46	NA
	8/30/2000		None	4.65	27.47	NA
	12/18/2000		None	4.06	28.06	NA
	3/20/2001		None	3.91	28.21	NA
	6/7/2001		None	4.40	27.72	NA
	9/20/2001		None	4.45	27.67	NA
	12/14/2001		None	3.19	28.93	NA
	2/27/2002		None	3.45	28.67	NA
	5/16/2002		None	3.74	28.38	NA
	9/18/2002		None	4.20	27.92	NA
	10/30/2002		None	4.23	27.89	NA
	2/6/2003		None	3.70	28.42	NA
	5/1/2003		None	3.59	28.53	NA
	8/26/2003		None	4.24	27.88	NA
	11/20/2003		None	4.35	27.77	NA
	2/10/2004		None	3.61	28.51	NA
	5/18/2004		None	3.91	28.21	NA
	8/30/2004		None	4.62	27.50	NA
	11/17/2004		**None**	**3.91**	**28.21**	**NA**

TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
AC TRANSIT
1177 47TH STREET, EMERYVILLE, CALIFORNIA

Well	Date	Top of Casing Elevation (ft-msl)	Product Thickness (feet)	DTW (feet)	Groundwater Elevation (ft-msl)	Groundwater Elevation Corrected from Product Thickness* (ft-msl)
MW-3	8/31/1999	34.06	None	6.15	27.91	NA
	11/23/1999		None	5.78	28.28	NA
	3/1/2000		None	4.82	29.24	NA
	5/17/2000		None	5.29	28.77	NA
	8/30/2000		None	6.20	27.86	NA
	12/18/2000		None	5.65	28.41	NA
	3/20/2001		None	5.18	28.88	NA
	6/7/2001		None	6.01	28.05	NA
	9/20/2001		None	5.9	28.16	NA
	12/14/2001		None	4.66	29.40	NA
	2/27/2002		None	5.00	29.06	NA
	5/16/2002		None	5.21	28.85	NA
	9/18/2002		None	5.61	28.45	NA
	10/30/2002		None	5.72	28.34	NA
	2/6/2003		None	4.97	29.09	NA
	5/1/2003		None	4.89	29.17	NA
	8/26/2003		None	5.82	28.24	NA
	11/20/2003		None	5.92	28.14	NA
	2/10/2004		None	4.99	29.07	NA
	5/18/2004		None	5.52	28.54	NA
	8/30/2004		None	6.25	27.81	NA
	11/17/2004		**None**	**5.25**	**28.81**	**NA**
MW-4	8/31/1999	34.11	None	6.22	27.89	NA
	11/23/1999		None	6.01	28.10	NA
	3/1/2000		None	4.74	29.37	NA
	5/17/2000		None	5.33	28.78	NA
	8/30/2000		None	6.26	27.85	NA
	12/18/2000		None	5.66	28.45	NA
	3/20/2001		None	5.46	28.65	NA
	6/7/2001		None	6.02	28.09	NA
	9/20/2001		None	6.06	28.05	NA
	12/14/2001		None	5.39	28.72	NA
	2/27/2002		None	5.28	28.83	NA
	5/16/2002		None	5.39	28.72	NA
	9/18/2002		None	5.61	28.50	NA
	10/30/2002		None	5.70	28.41	NA
	2/6/2003		None	5.39	28.72	NA
	5/1/2003		None	5.25	28.86	NA
	8/26/2003		None	5.88	28.23	NA
	11/20/2003		None	5.84	28.27	NA
	2/10/2004		None	5.10	29.01	NA
	5/18/2004		None	5.58	28.53	NA
	8/30/2004		None	6.30	27.81	NA
	11/17/2004		**None**	**5.34**	**28.77**	**NA**

TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
AC TRANSIT
1177 47TH STREET, EMERYVILLE, CALIFORNIA

Well	Date	Top of Casing Elevation (ft-msl)	Product Thickness (feet)	DTW (feet)	Groundwater Elevation (ft-msl)	Groundwater Elevation Corrected from Product Thickness* (ft-msl)
MW-5	8/31/1999	31.70	None	4.51	27.19	NA
	11/23/1999		None	4.00	27.70	NA
	3/1/2000		None	3.31	28.39	NA
	5/17/2000		None	3.59	28.11	NA
	8/30/2000		None	4.53	27.17	NA
	12/18/2000		None	3.97	27.73	NA
	3/20/2001		None	3.68	28.02	NA
	6/7/2001		None	4.37	27.33	NA
	9/20/2001		None	4.46	27.24	NA
	12/14/2001		None	3.23	28.47	NA
	2/27/2002		None	3.44	28.26	NA
	5/16/2002		None	3.68	28.02	NA
	9/18/2002		None	4.04	27.66	NA
	10/30/2002		None	4.21	27.49	NA
	2/6/2003		None	3.61	28.09	NA
	5/1/2003		None	3.15	28.55	NA
	8/26/2003		None	4.00	27.70	NA
	11/20/2003		None	4.20	27.50	NA
	2/10/2004		None	3.38	28.32	NA
	5/18/2004		None	3.75	27.95	NA
	8/30/2004		None	4.55	27.15	NA
	11/17/2004		**None**	**3.62**	**28.08**	**NA**
MW-6	8/31/1999	31.02	None	4.40	26.62	NA
	11/23/1999		None	3.81	27.21	NA
	3/1/2000		None	2.88	28.14	NA
	5/17/2000		None	3.44	27.58	NA
	8/30/2000		None	4.40	26.62	NA
	12/18/2000		None	3.61	27.41	NA
	3/20/2001		None	3.16	27.86	NA
	6/7/2001		None	4.18	26.84	NA
	9/20/2001		Sheen	4.22	26.80	NA
	12/14/2001		None	3.62	27.40	NA
	2/27/2002		None	2.94	28.08	NA
	5/16/2002		None	3.53	27.49	NA
	9/18/2002		None	3.97	27.05	NA
	10/30/2002		None	3.96	27.06	NA
	2/6/2003		None	2.97	28.05	NA
	5/1/2003		None	3.98	27.04	NA
	8/26/2003		None	3.82	27.20	NA
	11/20/2003		None	3.78	27.24	NA
	2/10/2004		None	2.94	28.08	NA
	5/18/2004		None	3.47	27.55	NA
	8/30/2004		None	4.22	26.80	NA
	11/17/2004		**None**	**3.19**	**27.83**	**NA**
MW-7	8/31/1999	29.62	None	5.47	24.15	NA
	11/23/1999		None	4.93	24.69	NA
	3/1/2000		None	4.06	25.56	NA
	5/17/2000		None	4.69	24.93	NA
	8/30/2000		None	5.50	24.12	NA
	12/18/2000		None	5.78	23.84	NA
	3/20/2001		None	4.83	24.79	NA
	6/7/2001		None	4.80	24.82	NA
	9/20/2001		None	5.19	24.43	NA
	12/14/2001		None	4.68	24.94	NA
	2/27/2002		None	4.53	25.09	NA
	5/16/2002		None	4.34	25.28	NA
	9/18/2002		None	5.28	24.34	NA
	10/30/2002		None	5.51	24.11	NA
	2/6/2003		None	4.36	25.26	NA
	5/1/2003		None	4.76	24.86	NA
	8/26/2003		None	5.25	24.37	NA
	11/20/2003		None	5.26	24.36	NA
	2/10/2004		None	4.31	25.31	NA
	5/18/2004		None	4.46	25.16	NA
	8/30/2004		None	5.61	24.01	NA
	11/17/2004		**None**	**4.82**	**24.80**	**NA**

TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
AC TRANSIT
1177 47TH STREET, EMERYVILLE, CALIFORNIA

Well	Date	Top of Casing Elevation (ft-msl)	Product Thickness (feet)	DTW (feet)	Groundwater Elevation (ft-msl)	Groundwater Elevation Corrected from Product Thickness* (ft-msl)
MW-8	8/31/1999	29.43	None	5.35	24.08	NA
	11/23/1999		None	4.75	24.68	NA
	3/1/2000		None	4.48	24.95	NA
	5/17/2000		None	4.78	24.65	NA
	8/30/2000		None	5.02	24.41	NA
	12/18/2000		None	5.23	24.20	NA
	3/20/2001		None	4.70	24.73	NA
	6/7/2001		None	5.13	24.30	NA
	9/20/2001		None	5.68	23.75	NA
	12/14/2001		None	4.26	25.17	NA
	2/27/2002		None	4.18	25.25	NA
	5/16/2002		None	4.58	24.85	NA
	9/18/2002		None	4.96	24.47	NA
	10/30/2002		None	4.99	24.44	NA
	2/6/2003		None	4.41	25.02	NA
	5/1/2003		None	4.29	25.14	NA
	8/26/2003		None	4.58	24.85	NA
	11/20/2003		None	4.69	24.74	NA
	2/10/2004		None	4.22	25.21	NA
	5/18/2004		None	4.52	24.91	NA
	8/30/2004		None	4.79	24.64	NA
	11/17/2004		**None**	**4.56**	**24.87**	**NA**
MW-9	8/31/1999	29.18	None	4.15	25.03	NA
	11/23/1999		None	3.93	25.25	NA
	3/1/2000		None	3.69	25.49	NA
	5/17/2000		None	3.56	25.62	NA
	8/30/2000		None	4.64	24.54	NA
	12/18/2000		None	4.02	25.16	NA
	3/20/2001		None	3.92	25.26	NA
	6/7/2001		None	4.28	24.90	NA
	9/20/2001		None	5.12	24.06	NA
	12/14/2001		None	3.87	25.31	NA
	2/27/2002		None	4.48	24.70	NA
	5/16/2002		None	5.13	24.05	NA
	9/18/2002		None	4.48	24.70	NA
	10/30/2002		None	3.90	25.28	NA
	2/6/2003		None	3.65	25.53	NA
	5/1/2003		None	4.50	24.68	NA
	8/26/2003		None	4.33	24.85	NA
	11/20/2003		None	3.83	25.35	NA
	2/10/2004		None	3.17	26.01	NA
	5/18/2004		None	3.42	25.76	NA
	8/30/2004		None	3.45	25.73	NA
	11/17/2004		**None**	**3.44**	**25.74**	**NA**
MW-10	8/31/1999	29.13	None	9.59	19.54	NA
	11/23/1999		None	9.44	19.69	NA
	3/1/2000		None	9.06	20.07	NA
	5/17/2000		None	9.31	19.82	NA
	8/30/2000		None	9.68	19.45	NA
	12/18/2000		None	9.41	19.72	NA
	3/20/2001		None	9.23	19.90	NA
	6/7/2001		None	9.60	19.53	NA
	9/20/2001		None	9.70	19.43	NA
	12/14/2001		None	8.83	20.30	NA
	2/27/2002		None	9.15	19.98	NA
	5/16/2002		None	9.45	19.68	NA
	9/18/2002		None	9.65	19.48	NA
	10/30/2002		None	9.73	19.40	NA
	2/6/2003		None	9.34	19.79	NA
	5/1/2003		None	9.14	19.99	NA
	8/26/2003		None	9.69	19.44	NA
	11/20/2003		None	9.62	19.51	NA
	2/10/2004		None	9.20	19.93	NA
	5/18/2004		None	9.58	19.55	NA
	8/30/2004		None	9.85	19.28	NA
	11/17/2004		**None**	**9.26**	**19.87**	**NA**

TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
AC TRANSIT
1177 47TH STREET, EMERYVILLE, CALIFORNIA

Well	Date	Top of Casing Elevation (ft-msl)	Product Thickness (feet)	DTW (feet)	Groundwater Elevation (ft-msl)	Groundwater Elevation Corrected from Product Thickness* (ft-msl)
MW-11	9/20/2001	28.93	None	4.41	24.52	NA
	12/14/2001		None	1.82	27.11	NA
	2/27/2002		None	2.39	26.54	NA
	5/16/2002		None	2.98	25.95	NA
	9/18/2002		None	4.00	24.93	NA
	10/30/2002		None	4.14	24.79	NA
	2/6/2003		None	2.59	26.34	NA
	5/1/2003		None	2.26	26.67	NA
	8/26/2003		None	3.79	25.14	NA
	11/20/2003		None	3.66	25.27	NA
	2/10/2004		None	2.40	26.53	NA
	5/18/2004		None	3.20	25.73	NA
	8/30/2004		None	4.43	24.50	NA
	11/17/2004		**None**	**2.36**	**26.57**	**NA**
MW-12	9/20/2001	28.68	None	10.41	18.27	NA
	12/14/2001		None	9.62	19.06	NA
	2/27/2002		None	10.09	18.59	NA
	5/16/2002		None	10.04	18.64	NA
	9/18/2002		None	10.66	18.02	NA
	10/30/2002		None	10.62	18.06	NA
	2/6/2003		None	9.97	18.71	NA
	5/1/2003		None	9.78	18.90	NA
	8/26/2003		None	10.70	17.98	NA
	11/20/2003		None	10.53	18.15	NA
	2/10/2004		None	9.80	18.88	NA
	5/18/2004		None	10.13	18.55	NA
	8/30/2004		None	10.32	18.36	NA
	11/17/2004		**None**	**9.91**	**18.77**	**NA**
MW-13	9/20/2001	22.715	None	8.83	13.89	NA
	12/14/2001		None	7.95	14.77	NA
	2/27/2002		None	7.64	15.08	NA
	5/16/2002		None	8.43	14.29	NA
	9/18/2002		6.86	15.09	7.63	13.11
	10/30/2002		6.04	14.29	8.43	13.26
	2/6/2003		0.09	8.25	14.47	14.54
	5/1/2003		0.24	7.29	15.43	15.62
	8/26/2003		0.39	9.70	13.02	13.33
	11/20/2003		0.85	9.85	12.87	13.55
	2/10/2004		0.88	10.59	12.13	12.83
	5/18/2004		0.92	10.70	12.02	12.75
	8/30/2004		1.06	9.36	13.36	14.20
	11/17/2004		**0.25**	**9.74**	**12.98**	**13.18**
W-1	3/2/2000	33.43	None	4.08	29.35	NA
	5/17/2000		None	5.41	28.02	NA
	8/30/2000		None	6.71	26.72	NA
	12/18/2000		None	5.73	27.70	NA
	3/20/2001		None	5.16	28.27	NA
	6/7/2001		None	6.10	27.33	NA
	9/20/2001		None	6.58	26.85	NA
	12/14/2001		None	4.69	28.74	NA
	2/27/2002		None	4.94	28.49	NA
	5/16/2002		None	5.54	27.89	NA
	9/18/2002		None	6.08	27.35	NA
	10/30/2002		None	6.24	27.19	NA
	2/6/2003		None	5.17	28.26	NA
	5/1/2003		None	4.71	28.72	NA
	8/26/2003		None	6.14	27.29	NA
	11/20/2003		None	6.19	27.24	NA
	2/10/2004		None	4.95	28.48	NA
	5/18/2004		None	5.70	27.73	NA
	8/30/2004		None	6.64	26.79	NA
	11/17/2004		**None**	**5.36**	**28.07**	**NA**

TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
AC TRANSIT
1177 47TH STREET, EMERYVILLE, CALIFORNIA

Well	Date	Top of Casing Elevation (ft-msl)	Product Thickness (feet)	DTW (feet)	Groundwater Elevation (ft-msl)	Groundwater Elevation Corrected from Product Thickness* (ft-msl)
W-2	5/17/2000	34.21	None	5.60	28.61	NA
	8/30/2000		None	7.37	26.84	NA
	12/18/2000		None	6.44	27.77	NA
	1/23/2001					abandoned
W-3	5/17/2000	37.46	None	6.38	31.08	NA
	8/30/2000		None	8.16	29.30	NA
	12/18/2000		None	7.19	30.27	NA
	3/20/2001		None	5.70	31.76	NA
	6/7/2001		None	7.51	29.95	NA
	9/20/2001		None	7.83	29.63	NA
	12/14/2001		None	4.76	32.70	NA
	2/27/2002		None	5.32	32.14	NA
	5/16/2002		None	6.45	31.01	NA
	9/18/2002		None	7.10	30.36	NA
	10/30/2002		None	7.30	30.16	NA
	2/6/2003		None	5.69	31.77	NA
	5/1/2003		None	4.97	32.49	NA
	8/26/2003		None	7.52	29.94	NA
	11/20/2003		None	7.58	29.88	NA
	2/10/2004		None	5.63	31.83	NA
	5/18/2004		None	6.20	31.26	NA
	8/30/2004		None	8.39	29.07	NA
	11/17/2004		**None**	**6.57**	**30.89**	**NA**
W-4	3/2/2000	31.72	None	3.34	28.38	NA
	5/17/2000		None	3.86	27.86	NA
	8/30/2000		None	4.99	26.73	NA
	12/18/2000		None	4.20	27.52	NA
	3/20/2001		None	3.75	27.97	NA
	6/7/2001		None	4.67	27.05	NA
	9/20/2001		None	4.80	26.92	NA
	12/14/2001		None	3.22	28.50	NA
	2/27/2002		None	3.58	28.14	NA
	5/16/2002		None	3.89	27.83	NA
	9/18/2002		None	4.24	27.48	NA
	10/30/2002		None	4.56	27.16	NA
	2/6/2003		None	3.67	28.05	NA
	5/1/2003		None	2.61	29.11	NA
	8/26/2003		None	4.47	27.25	NA
	11/20/2003		None	4.42	27.30	NA
	2/10/2004		None	3.54	28.18	NA
	5/18/2004		None	4.11	27.61	NA
	8/30/2004		None	4.85	26.87	NA
	11/17/2004		**None**	**3.81**	**27.91**	**NA**

Notes:
* used 0.8 specific gravity of product
ft-msl:feet mean sea level
DTW: Depth to water
NA: not applicable

TABLE 2
ANALYTICAL RESULTS GROUNDWATER SAMPLES
AC TRANSIT
1177 47TH STREET, EMERYVILLE, CALIFORNIA

Well	Date	TPH-8015 (diesel)	TPH-8015 (gas)	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
MCL (ppb)		None	None	1.0	150	700	1750	13
MW-1	8/31/1999	310	NA	<1.0	2.4	1	1.6	NA
	11/23/1999	250	NA	<1.0	<1.0	<1.0	<1.0	NA
	3/1/2000	310	62	<1.0	<1.0	<1.0	<2.0	687
	5/17/2000	390	63	<1.0	<1.0	<1.0	<2.0	74
	8/31/2000	180	<50	<1.0	<1.0	<1.0	<2.0	49
	12/18/2000	310	<50	<1.0	<1.0	<1.0	<2.0	44
	3/21/2001	240	<50	<1.0	<1.0	<1.0	<2.0	17
	6/7/2001	540	<50	<1.0	<1.0	<1.0	<2.0	32
	9/20/2001	290	<50	<1.0	<1.0	<1.0	<2.0	29
	2/27/2002	<250	<50	<1.0	<1.0	<1.0	<2.0	14
	9/18/2002	230	<50	<1.0	<1.0	<1.0	<2.0	30
	2/6/2003	82	<50	<0.5	<0.5	<0.5	<1.0	17
	8/26/2003	200	<50	<0.5	<0.5	<0.5	<1.0	9.8
	2/10/2004	4,800	<50	<0.5	<0.5	<0.5	<1.0	6.6
	8/30/2004	<56	<50	<0.5	<0.5	<0.5	<1.5	4.2
MW-2	8/31/1999	180	NA	<1.0	<1.0	<1.0	1.2	NA
	11/23/1999	120	NA	<1.0	<1.0	<1.0	<5.0	NA
	3/1/2000	510	<50	<1.0	<1.0	<1.0	<2.0	81
	5/17/2000	1,100	<50	<1.0	<1.0	<1.0	<2.0	87
	8/31/2000	620	<50	<1.0	<1.0	<1.0	<2.0	65
	12/19/2000	830	<50	<1.0	<1.0	<1.0	<2.0	70
	3/21/2001	900	<50	<2.0	<2.0	<2.0	<4.0	33
	6/7/2001	810	<50	<1.0	<1.0	<1.0	<2.0	43
	9/20/2001	1,200	<50	<1.0	<1.0	<1.0	<2.0	35
	2/27/2002	<250	<50	<1.0	<1.0	<1.0	<2.0	19
	9/18/2002	180	<50	<1.0	<1.0	<1.0	<2.0	17
	2/6/2003	58	<50	<0.5	<0.5	<0.5	<1.0	18
	8/26/2003	150	<50	<0.5	<0.5	<0.5	<1.0	15
	2/11/2004	<50	<50	<0.5	<0.5	<0.5	<1.0	5.2
	8/30/2004	<56	<50	<0.5	<0.5	<0.5	<1.5	6.3
MW-3	8/31/1999	2,700	NA	<1.0	<1.0	<1.0	<1.0	NA
	11/23/1999	640	NA	<1.0	<1.0	<1.0	<1.0	NA
	3/1/2000	<250	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	5/17/2000	620	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	8/31/2000	1,800	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	12/18/2000	NA	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	3/21/2001	1,700	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	6/7/2001	770	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	9/21/2001	260	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	2/27/2002	560	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	9/18/2002	340	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	2/6/2003	<50	<50	<0.5	<0.5	<0.5	<1.0	3.9
	8/26/2003	5,800	<50	<0.5	<0.5	<0.5	<1.0	4.9
	2/11/2004	<50	<50	<0.5	<0.5	<0.5	<1.0	3.4
	8/30/2004	<56	<50	<0.5	<0.5	<0.5	1.5	4

TABLE 2
ANALYTICAL RESULTS GROUNDWATER SAMPLES
AC TRANSIT
1177 47TH STREET, EMERYVILLE, CALIFORNIA

Well	Date	TPH-8015 (diesel)	TPH-8015 (gas)	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
MCL (ppb)		None	None	1.0	150	700	1750	13
MW-4	8/31/1999	<50	NA	<1.0	<1.0	<1.0	1.6	NA
	11/23/1999	<50	NA	<1.0	<1.0	<1.0	<1.0	NA
	3/1/2000	<250	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	5/17/2000	80	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	8/31/2000	<250	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	12/18/2000	<250	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	3/20/2001	<250	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	6/7/2001	<250	<50	<1.0	<1.0	<1.0	<2.0	<5.0
MW-5	8/31/1999	250	NA	<1.0	<1.0	<1.0	1	NA
	11/23/1999	300	NA	<1.0	<1.0	<1.0	<5.0	NA
	3/1/2000	340	<50	<1.0	<1.0	<1.0	<2.0	100
	5/17/2000	230	<50	<1.0	<1.0	<1.0	<2.0	86
	8/31/2000	220	<50	<1.0	<1.0	<1.0	<2.0	59
	12/18/2000	360	<50	<1.0	<1.0	<1.0	<2.0	57
	3/20/2001	250	<50	<5.0	<5.0	<5.0	<10	87
	6/7/2001	600	<50	<1.0	<1.0	<1.0	<2.0	74
MW-6	8/31/1999	140,000	NA	77	18	31	49	NA
	11/23/1999	6,100	NA	45	14	6.9	48	NA
	3/1/2000	22,000	2800	6.8	<2.0	<2.0	<10	<5.0
	5/17/2000	1,800	6200	77	16	39	37	<5.0
	8/31/2000	76,000	5300	60	13	43	45.7	<5.0
	12/19/2000	6,300	1300	26.0	4.9	8.4	11.5	<5.0
	3/21/2001	5,100	1900	49.0	9.5	13	12	<10
	6/7/2001	14,000	2600	47.0	10	13	19	<10
	9/21/2001	15,000	4000	180	14	24	40	<50
	2/27/2002	43,000	5000	68	16	52	41.8	<25
	9/18/2002	320,000	2000	74	7.3	22	25	<5.0
	2/6/2003	4,300	2600	63	8.2	18	15	<1.0
	8/26/2003	68,000	6500	110	16	44	42	<10
	2/10/2004	19,000	3500	37	4.9	24	15	<5
	8/30/2004	<56	<50	86	7.8	15	27	<5
MW-7	8/31/1999	1,400	NA	<1.0	2.9	2.3	2.7	NA
	11/23/1999	530	NA	<1.0	<1.0	<1.0	<1.0	NA
	3/1/2000	640	860	<1.0	<1.0	<1.0	<2.0	<20
	5/17/2000	430	410	<1.0	<1.0	<1.0	<2.0	9.5
	8/31/2000	950	1100	<1.0	<1.0	<1.0	<2.0	<5.0
	12/18/2000	1,100	820	<1.0	<1.0	<1.0	<2.0	<5.0
	3/20/2001	770	1000	<1.0	1.4	<1.0	<2.0	<5.0
	6/7/2001	1,400	870	<1.0	<1.0	<1.0	<2.0	<5.0
	9/21/2001	940	1000	<1.0	<1.0	<2.0	<5.0	<5.0
	2/27/2002	430	930	<1.0	<1.0	<1.0	<2.0	<5.0
	9/18/2002	440	870	<1.0	<1.0	<1.0	<2.0	<5.0
	2/6/2003	230	890	<0.5	<0.5	<0.5	<1.0	1.6
	8/26/2003	470	590	<0.5	<0.5	<0.5	<1.0	1.5
	2/11/2004	140	690	<0.5	1.9	0.57	1.0	1.1
	8/30/2004	<56	200	<0.5	<0.5	<0.5	<1.5	1.5

TABLE 2
ANALYTICAL RESULTS GROUNDWATER SAMPLES
AC TRANSIT
1177 47TH STREET, EMERYVILLE, CALIFORNIA

Well	Date	TPH-8015 (diesel)	TPH-8015 (gas)	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
MCL (ppb)		**None**	**None**	**1.0**	**150**	**700**	**1750**	**13**
MW-8	8/31/1999	230	NA	<1.0	<1.0	1.2	<1.0	NA
	11/23/1999	220	NA	<1.0	<1.0	<1.0	<1.0	NA
	3/1/2000	260	150	<1.0	<1.0	<1.0	<2.0	<5.0
	5/17/2000	660	310	<1.0	<1.0	<1.0	<2.0	<5.0
	8/31/2000	460	300	<1.0	<1.0	<1.0	1.4	<5.0
	12/18/2000	370	230	<1.0	<1.0	<1.0	<2.0	<5.0
	3/20/2001	1,700	64	<1.0	<1.0	<1.0	<2.0	<5.0
	6/7/2001	1,300	180	<1.0	<1.0	<1.0	<2.0	<5.0
MW-9	8/31/1999	2,800	NA	<1.0	<1.0	<1.0	1.1	NA
	11/23/1999	1,300	NA	<1.0	<1.0	<1.0	<1.0	NA
	3/1/2000	510	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	5/17/2000	990	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	8/31/2000	1,100	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	12/18/2000	1,900	<50	<1.0	<1.0	<1.0	<2.0	5.9
	3/20/2001	1,500	<50	<1.0	<1.0	<1.0	<2.0	5.5
	6/7/2001	590	<50	<1.0	<1.0	<1.0	<2.0	8.1
	9/20/2001	790	<50	<1.0	<1.0	<1.0	<2.0	8.5
	2/27/2002	650	<50	<1.0	<1.0	<1.0	<2.0	9.5
	9/18/2002	480	<50	<1.0	<1.0	<1.0	<2.0	6.2
	2/6/2003	54	<50	<0.5	<0.5	<0.5	<1.0	5.5
	8/26/2003	1,300	<50	<0.5	<0.5	<0.5	<1.0	6.6
	2/10/2004	6,200	250	<0.5	<0.5	<0.5	<1.0	4.4
	8/30/2004	<50	<50	<0.5	<0.5	<0.5	<1.5	3.6
MW-10	8/31/1999	1,100	NA	<1.0	1.2	2.0	<1.0	NA
	11/23/1999	1,200	NA	<1.0	<1.0	<1.0	<1.0	NA
	3/1/2000	1,300	540	<1.0	<1.0	<1.0	<2.0	NA
	5/17/2000	990	460	<1.0	<1.0	<1.0	<2.0	6.9
	8/31/2000	840	320	<1.0	<1.0	<1.0	<2.0	25
	12/18/2000	900	290	<1.0	<1.0	<1.0	<2.0	<9.0
	3/21/2001	620	220	<1.0	<1.0	<1.0	<2.0	<5.0
	6/7/2001	1,300	360	<1.0	<1.0	<1.0	<2.0	15
	9/20/2001	1,000	350	<1.0	<1.0	<1.0	<2.0	44
	2/27/2002	610	150	<1.0	<1.0	<1.0	<2.0	<5.0
	9/18/2002	850	240	<1.0	1.2	<1.0	<2.0	20
	2/6/2003	510	200	<0.5	<0.5	<0.5	<1.0	2.8
	8/26/2003	1,100	250	<0.5	<0.5	<0.5	<1.0	14
	2/10/2004	260	190	<0.5	<0.5	<0.5	<1.0	1.6
	8/30/2004	310	240	<0.5	<0.5	<0.5	<1.5	6.7
MW-11	9/20/2001	460	88	<1.0	<1.0	<1.0	<2.0	<5.0
	12/14/2002	320	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	2/27/2002	<50	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	5/16/2002	380	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	9/18/2002	250	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	10/30/2002	260	<50	<0.5	<0.5	<0.5	<1.5	<2.5
	2/6/2003	250	<50	<0.5	<0.5	<0.5	<1.0	<1.0
	5/1/2003	220	<50	<0.5	<0.5	<0.5	<1.0	<1.0
	8/26/2003	300	<50	<0.5	<0.5	<0.5	<1.0	<1.0
	11/20/2003	77	<50	<0.5	<0.5	<0.5	<1.0	<1.0
	5/18/2004	<50	<50	<0.5	<0.5	<0.5	<1.0	<1.0
	8/30/2004	<56	<50	<0.5	<0.5	<0.5	<1.5	<1.0
	11/17/2004	**<50**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<1.0**	**<0.5**

TABLE 2
ANALYTICAL RESULTS GROUNDWATER SAMPLES
AC TRANSIT
1177 47TH STREET, EMERYVILLE, CALIFORNIA

Well	Date	TPH-8015 (diesel)	TPH-8015 (gas)	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
MCL (ppb)		**None**	**None**	**1.0**	**150**	**700**	**1750**	**13**
MW-12	9/20/2001	540	960	<1.0	<1.0	<2.0	<5.0	11
	12/14/2002	170	670	<1.0	<1.0	<1.0	<2.0	9.4
	2/27/2002	350	950	<1.0	<1.0	<1.0	<2.0	11
	5/16/2002	500	1100	<1.0	<1.0	<1.0	<2.0	6.7
	9/18/2002	1,600	570	<1.0	<1.0	<1.0	<3.0	7.1
	10/30/2002	440	420	<0.5	<0.5	<0.5	<1.5	<2.5
	2/6/2003	190	340	<0.5	<0.5	<0.5	<1.0	6.8
	5/1/2003	580	950	<2.5	<2.5	3.7	9.0	8.8
	8/26/2003	110	260	<0.5	<0.5	<0.5	<1.0	11
	11/20/2003	100	160	<0.5	<0.5	<0.5	<1.0	8.9
	2/10/2004	210	490	<0.5	0.6	<0.5	<1.0	6.7
	5/18/2004	190	620	<0.5	<0.5	0.8	<1.0	5.6
	8/30/2004	<56	430	<0.5	<0.5	<0.5	<1.5	5.6
	11/17/2004	**320**	**186**	**<0.5**	**0.5**	**0.5**	**<1.0**	**10.8**
MW-13	9/21/2001	<250	<50	<1.0	<1.0	<1.0	<2.0	7.4
	12/14/2002	160	<50	<1.0	<1.0	<1.0	<2.0	11
	2/27/2002	1,100	450	<1.0	<5.0	<1.0	<2.0	9.9
W-1	5/16/2002	520	150	<1.0	<1.0	<1.0	<2.0	8.7
	3/2/2000	1,800	3400	20.0	5.3	30	23.8	<5.0
	5/17/2000	1,100	7300	35.0	11	59	45	<1.0
	8/31/2000	2,200	6200	20.0	7.9	36	38.2	<10
	12/19/2000	1,700	5600	20.0	8.4	30	35.6	<5.0
	3/20/2001	2,100	7200	32.0	13	56	40	<10
	6/7/2001	2,100	7300	26.0	18	42	38.3	<10
	9/21/2001	1,800	7100	27	<10	48	40	<10
	2/27/2002	1,800	7100	24	9	52	34	<25
	2/6/2003	990	5300	11	4.7	27	24	<1.0
	8/26/2003	1,700	5800	7.5	5.4	24	25	<10
	2/10/2004	940	6000	16.0	4.9	20	21	<1.0
	8/30/2004	<56	2500	8.6	3.6	11	18	<1.30
W-2	9/18/2002	1,000	5900	11	<22	23	22	<5.0
	5/17/2000	19,000	870	<2.0	<1.0	<2.0	<4.0	<5.0
	8/31/2000	7,400	2200	4.6	2.5	3.8	11	<5.0
W-3	12/19/2000	10,000	290	8.8	3.4	8.6	17.4	<5.0
	5/17/2000	<50	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	8/31/2000	<50	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	12/18/2000	<250	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	3/20/2001	630	<50	<1.0	<1.0	<1.0	<2.0	<5.0
W-4	6/7/2001	1,200	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	3/2/2000	190	<50	1.1	<1.0	<1.0	<2.0	<5.0
	5/17/2000	230	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	8/31/2000	240	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	12/19/2000	320	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	3/21/2001	220	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	6/7/2001	430	<50	<1.0	<1.0	<1.0	<2.0	<5.0

Notes:
ppb: parts per billion
TPH: Total Petroleum Hydrocarbons
MTBE: methyl tert butylether
MCL: Maximum Contaminant Level
NA: not analyzed

APPENDIX A

CHAIN-OF-CUSTODY DOCUMENTATION
FIELD DATA SHEETS
CERTIFIED ANALYTICAL REPORTS

North State Labs

90 South Spruce Avenue, Suite W, South San Francisco, CA 94080
Phone: (650) 266-4563 Fax: (650) 266-4560

Chain of Custody / Request for Analysis
Lab Job No.:_____Page___of___

Client: [illegible] CAMPBELL-COLE	Report to: CARLY WATERS	Phone: 510-769-3570	Turnaround Time
Mailing Address: [illegible] AVE, ALAMEDA, CA 94501	Billing to: -	Fax: 510-337-3996	STANDARD 5-10 DAYS
		email: CWATERS@CAMPBELL-COLE.COM	Date: 11/17/04
		PO# 2016	Sampler: MP SG

Project / Site Address / Global ID:

Analysis Requested

Sample ID	Sample Type	Container No. / Type	Pres.	Sampling Date / Time	8021 BTEX/MTBE	8015 TPH GAS	8015 TPH - DIESEL	NITRATE/ SULFATE				EDF ☐ PDF ☒ Field Point ID
TB - [illegible]		3/VOA	HCL	11/17/04 / 1210	X							
[illegible]		3/VOA	HCL	11/17/04 / 12.15	X							
"		3/VOA	HCL	"		X						
"		2/AMBER	N/A	"			X					
"		1/POLY	N/A	"				X				
[illegible]		3/VOA	HCL	11/17/04 / 1305	X							
"		3/VOA	HCL	"		X						
"		2/AMBER	N/A	"			X					
"		1/POLY	N/A	"				X				
[illegible]												

Relinquished by: [signature]	Date: 11/17/04	Time: 1420	Received by: [signature]	Lab Comments/ Hazards
Relinquished by:	Date:	Time:	Received by:	
Relinquished by:	Date:	Time:	Received by:	

TERMS: NET 30 OAC

AC TRANSIT - EMERYVILLE
SECOND QUARTER 2003

FIELD PERSONNEL:

WELL OR LOCATION	DATE	TIME	MEASUREMENT	CODE	COMMENTS
MW-1	11/17/04	1035	4.20	SWL	
MW-2		1045	3.91		
MW-3		1033	5.25		
MW-4		1030	5.34		
MW-5		1040	~~3.19~~ (ME) 3.62		
MW-6				OIL	NO SHEEN
MW-6		1050	3.19	OWI	
MW-7		1100	4.82	SWL	
MW-8		1103	4.56		
MW-9		1119	3.44		
MW-10		1114	9.26		
MW-11		1058	2.36		BBL ~
MW-12		1117	9.91		
MW-13		1020	9.49	OIL	USED OIL WATER +
MW-13		1020	9.74	OWI	INTERPHASE (OFF BY 1 FT)
W-1		1055	5.36	SWL	
W-3		1025	6.57		
W-4	↓	1053	3.81		

SWL - Static Water Level
OIL - Oil Level
OWI - Oil/Water Interface
MTD - Measured Total Depth

CAMERON-COLE

SAMPLING EVENT DATA SHEET

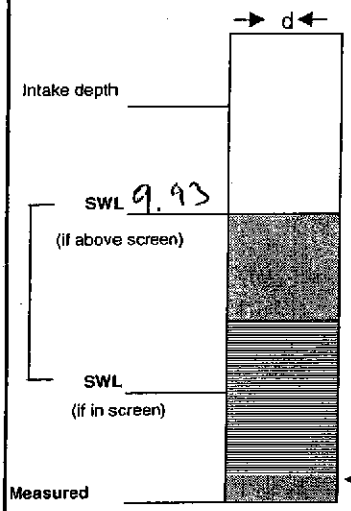
WELL OR LOCATION MW-12

PROJECT Emeryville EVENT Quarterly SAMPLER ME, SS DATE 11/17/04

Well type MW (MW, EW, PZ, etc.)

Diameter 2"

0.165 gal/ft. casing



ACTION	TIME	PUMP RATE (gpm)	DTW
Start Pump / Begin	12 40	0.6	~~12.95~~
	12 45		12.91
	1252		13.22
Stop	1300		13.35
Sampled	1305		
Final IWL			

PURGE CALCULATION

0.165 gal/ft. * 19.94 ft. (SWL to TD) = 3.29 gals. (one volume) X 3 = 9.87 gals. (purge volume - 3 casings)

2" = 0.165 gal/ft. 4" = 0.65 gal/ft. 6" = 1.47 gal/ft.

Equipment Used / Sampling Method / Decription of Event:

Cent Pump used to Purge
Disp Bailer used to Sample
wash/rinsed sounder & Meters

Actual gallons purged 10

Actual volumes purged 3+

Well Yield ⊕ HY

COC # NA

Sample I.D.	Analysis	Lab
MW-12	8021 BTEX/MTBE	NSC
	8015 TPH Gas	
	8015 TPH Diesel	
	Nitrate/Sulfate	

Additional Comments:

Gallons Purged *	Temp °C	EC (us / cm)	pH	Turbidity (NTU)	Other	
1. 1.5	31.8	742	6.75	—	FE	0.47 mg/L
2. 4	31.0	762	6.69	—	DO	0.60 mg/L
3. 8	30.6	763	6.67	—	ORP	-049 mV
4.						
5.						

*Take measurement at approximately each casing volume purged. ⊕

HY-Minimal W.L. drop MY - WL drop - able to purge 3 volumes during one sitting by reducing pump rate or cycling pump LY - Able to purge 3 volumes by returing later or next day. VLY - Minimal recharge - unable to purge 3 volumes.

CAMERON-COLE

SAMPLING EVENT DATA SHEET

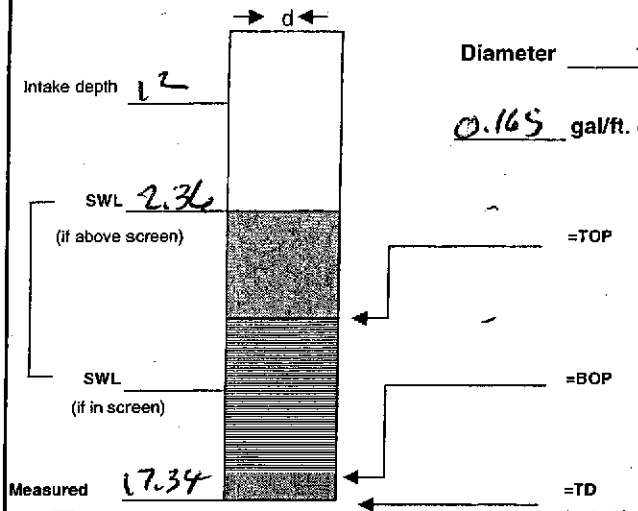
WELL OR LOCATION MW-11

PROJECT AC EMERYVILLE EVENT QUARTERLY SAMPLER MESS DATE 11/17/04

Well type MW
(MW, EW, PZ, etc.)

Diameter 2"

0.165 gal/ft. casing



ACTION	TIME	PUMP RATE (gpm)	DTW
Start Pump / Begin	1155	0.6	
	1158		2.36
Stop	1210		
Sampled	1215		
Final IWL			

PURGE CALCULATION

0.165 gal/ft. * 14.98 ft. = 2.47 gals. X 3 = 7.41 gals.
(SWL to TD) (one volume) (purge volume - 3 casings)

2" = 0.165 gal/ft. 4" = 0.65 gal/ft. 6" = 1.47 gal/ft.

Equipment Used / Sampling Method / Decription of Event:

- GRUNDFOS PUMP USED TO PURGE
- DISP BAILER USED TO SAMPLE
WASH / RINSE SOUNDER

Actual gallons purged 8

Actual volumes purged 3 4

Well Yield ⊕ Hy

COC # NA

Sample I.D.	Analysis	Lab
MW-11	8021 BTEX/MTBE	NSL
	8015 TPH-GAS	
	8015 TPH DIESEL	
	NITRATE / SULFATE	

Additional Comments:

Gallons Purged *	Temp °C	EC (us / cm)	pH	Turbidity (NTU)	Other	
1. 2	27.7	576	7.05	-	Fe	0.0 mg/L
2. 4	28.9	549	7.15	-	DO	0.03 mg/L
3. 6	28.9	531	7.19	-	ORP	34 mV
4.						
5.						

*Take measurement at ⊕ approximately each casing volume purged.

HY-Minimal W.L. drop

MY - WL drop - able to purge 3 volumes during one sitting by reducing pump rate or cycling pump

LY - Able to purge 3 volumes by returing later or next day.

VLY - Minimal recharge - unable to purge 3 volumes.

North State Labs
90 South Spruce Avenue, Suite V • South San Francisco, CA 94080 • (650) 266-4563 • FAX (650) 266-4560
CA ELAP # 1753

Case Narrative

Client: Cameron-Cole, LLC
Project: AC TRANSIT EMERYVILLE
Lab No: 04-1810
Date Received: 11/17/2004 Date reported: 11/21/2004

Three water samples were received for the analysis of diesel and gasoline by method 8015M, BTEX and MTBE by method 8021B. No errors occurred during analysis. Results for QC/QA samples met all required criteria. No MS/MSD were analyzed for diesel analysis due to insufficient sample volume submitted; the LCS/LCSD results were reported instead. The nitrate and sulfate analyses were subcontracted to state certified laboratories.

John A. Murphy
Laboratory Director

North State Labs
CA ELAP # 1753
90 South Spruce Avenue, Suite V • South San Francisco, CA 94080 • (650) 266-4563 • FAX (650) 266-4560

CERTIFICATE OF ANALYSIS

Lab Number: 04-1810
Client: Cameron-Cole, LLC
Project: AC TRANSIT EMERYVILLE

Date Reported: 11/21/2004

Gasoline,BTEX and MTBE by Methods 8015M/8021B
Diesel Range Hydrocarbons by Method 8015M

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 04-1810-01 Client ID: TRIP BLANK				11/17/2004	W
Benzene	SW8020F	ND<0.5	UG/L		11/18/2004
Ethylbenzene	SW8020F	ND<0.5	UG/L		11/18/2004
Methyl-tert-butyl ether	SW8020F	ND<0.5	UG/L		11/18/2004
Toluene	SW8020F	ND<0.5	UG/L		11/18/2004
Xylenes	SW8020F	ND<1.0	UG/L		11/18/2004
Sample: 04-1810-02 Client ID: MW-11				11/17/2004	W
Benzene	SW8020F	ND<0.5	UG/L		11/18/2004
Ethylbenzene	SW8020F	ND<0.5	UG/L		11/18/2004
Gasoline Range Organics	SW8020F	ND<50	UG/L		11/18/2004
Methyl-tert-butyl ether	SW8020F	ND<0.5	UG/L		11/18/2004
Toluene	SW8020F	ND<0.5	UG/L		11/18/2004
Xylenes	SW8020F	ND<1.0	UG/L		11/18/2004
Diesel Fuel #2	CATFH	ND<0.05	MG/L		11/18/2004
Sample: 04-1810-03 Client ID: MW-12				11/17/2004	W
Benzene	SW8020F	ND<0.5	UG/L		11/18/2004
Ethylbenzene	SW8020F	0.5	UG/L		11/18/2004
Gasoline Range Organics	SW8020F	186	UG/L		11/18/2004
Methyl-tert-butyl ether	SW8020F	*10.8	UG/L		11/18/2004
Toluene	SW8020F	0.5	UG/L		11/18/2004
Xylenes	SW8020F	ND<1.0	UG/L		11/18/2004
Diesel Fuel #2	CATFH	**0.32	MG/L		11/18/2004

*Conf. by GC/MS method 8260B.**Does not match diesel pattern

North State Labs
CA ELAP # 1753
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C E R T I F I C A T E O F A N A L Y S I S

Quality Control/Quality Assurance

Lab Number: 04-1810
Client: Cameron-Cole, LLC
Project: AC TRANSIT EMERYVILLE

Date Reported: 11/21/2004

Gasoline,BTEX and MTBE by Methods 8015M/8021B
Diesel Range Hydrocarbons by Method 8015M

Analyte	Method	Reporting Limit	Unit	Blank	Avg MS/MSD Recovery	RPD
Gasoline Range Organics	SW8020F	50	UG/L	ND	109/111	2
Benzene	SW8020F	0.5	UG/L	ND	98/111	12
Toluene	SW8020F	0.5	UG/L	ND	103/104	1
Ethylbenzene	SW8020F	0.5	UG/L	ND	103/104	1
Xylenes	SW8020F	1.0	UG/L	ND	109/109	0
Methyl-tert-butyl ether	SW8020F	0.5	UG/L	ND	92/89	3
Diesel Fuel #2	CATFH	0.05	MG/L	ND	89/80	11

ELAP Certificate NO:1753
Reviewed and Approved

John A.Murphy, Laboratory Director

North State Labs

90 South Spruce Avenue, Suite W, South San Francisco, CA 94080
Phone: (650) 266-4563 Fax: (650) 266-4560

04-1810

Chain of Custody / Request for Analysis
Lab Job No.:_____ Page___of___

Client: (ME) Emily Waters Cambrian-Cole	Report to: Emily Waters	Phone: 510-769-3570	Turnaround Time
Mailing Address: 101 W. Atlantic Ave Bldg #90 Alameda, CA 94501	Billing to:	Fax: 510-337-3994	STANDARD 5-10 DAYS
		email: ewaters@cambrian-cole.com	Date: 11/17/04
Project / Site Address / Global ID: AC Transit - Emeryville		PO# 2016	Sampler: MB, SS

					Analysis Requested									
Sample ID	Sample Type	Container No. / Type	Pres.	Sampling Date / Time	8021 BTEX/MTBE	8015 TPH - GAS	8015 TPH - DIESEL	NITRATE/ SULFATE					EDF ☐ PDF ☒ Field Point ID	
TRIP BLANK		3/VOA	HCL	11/17/04/1210	X									
MW-11		3/VOA	HCL	11/17/04/1215	X									
		3/VOA	HCL	↓		X								
		2/AMBER	N/A				X							
↓		1/POLY	N/A	↓				X						
MW-12		3/VOA	HCL	11/17/04/1305	X									
		3/VOA	HCL	↓		X								
		2/AMBER	N/A				X							
↓		1/POLY	N/A	↓				X						
(ME)														

Relinquished by:	Date: 11/17/04	Time: 1420	Received by: Angi Adams	Lab Comments/ Hazards
Relinquished by: Angi Adams	Date: 11/17/04	Time: 15:15	Received by:	
Relinquished by:	Date:	Time:	Received by:	

TERMS: NET 30 OAC