



Alameda-Contra Costa Transit District

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Alameda County
Environmental Health

August 21, 2009

Mr. Stephen Plunkett
Alameda County Health Division
Division of Environmental Protection
Department of Environmental Health
1131 Harbor Bay Parkway, Second Floor
Alameda, CA 94502

Dear Mr. Plunkett:

Subject: Groundwater Monitoring Report – June 2009
AC Transit, 1100 Seminary Ave., Oakland

AC Transit hereby submits the enclosed groundwater monitoring report for the AC Transit facility located at 1100 Seminary Avenue in Oakland. The report was prepared by our consultant, Cameron-Cole, and contains the results of groundwater monitoring performed on June 12, 2009, from six on-site monitoring wells.

Sampling results indicate that diesel was present in samples collected from three of the six wells sampled at concentrations of 170 ppb (MW-1), 15,300 ppb (MW-2) and 2,160 ppb (MW-3). Gasoline was detected in the same three wells at concentrations of 1,640 ppb (MW-1), 40,200 ppb (MW-2) and 694 ppb (MW-3). Chemical concentrations in excess of Maximum Contaminant Levels (MCLs) were limited to benzene in wells MW-1, MW-2 and MW-3 and toluene, ethylbenzene and xylenes in well MW-2.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

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

Sincerely,

Suzanne Chaewsky, P.E.
Environmental Engineer

enclosure

**GROUNDWATER MONITORING REPORT
FOR THE AC TRANSIT FACILITY
LOCATED AT 1100 SEMINARY AVENUE,
OAKLAND, CALIFORNIA**

August 2009

Prepared For:

Ms. Sue Chaewsky
AC Transit
10626 E. 14th Street
Oakland, California 94603



Prepared By:

Cameron-Cole
101 W. Atlantic, Building 90
Alameda, California 94501



Project No: 2036

GROUNDWATER MONITORING REPORT
FOR THE AC TRANSIT FACILITY
LOCATED AT 1100 SEMINARY AVENUE,
OAKLAND, CALIFORNIA

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Prepared For:

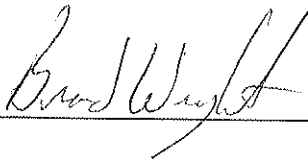
Ms. Sue Chaewsky
AC Transit
10626 E. 14th Street
Oakland, California 94603



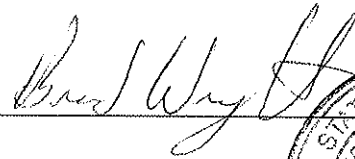
Prepared By:

Cameron-Cole
101 W. Atlantic, Building 90
Alameda, California 94501





For: Written By
Dennis Baker
Environmental Scientist



Approved By
Brad Wright, PG, CHG
Principle Hydrogeologist

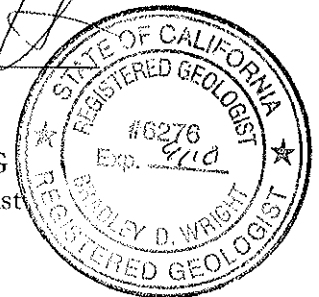


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INTRODUCTION

This report presents the results of the June 2009 sampling event for the AC Transit facility located at 1100 Seminary Avenue, Oakland, California (Figure 1). Cameron-Cole performed groundwater sampling of monitor wells MW-1 through MW-3 and MW-9 through MW-11, in accordance with directives from the Alameda County Health Care Services Agency (ACHCS).

OBJECTIVES AND SCOPE OF WORK

Work performed during quarterly monitoring included measuring depth to water and presence of free phase hydrocarbons in the monitor wells and collecting groundwater samples. Field parameters collected during sampling included pH, temperature, and electric conductivity. Groundwater samples were collected for laboratory analysis using United States Environmental Protection Agency (USEPA) Method 8015 Modified with silica gel cleanup for total petroleum hydrocarbons (TPH) as diesel, and USEPA Method 8260B for gasoline and benzene, toluene, ethylbenzene, and xylene (BTEX) and methyl tertiary butyl ether (MTBE).

Chain-of-custody documents and certified analytical reports are presented in Appendix A. Field data sheets are included in Appendix B.

Groundwater Elevations and Flow Direction

Prior to purging and sample collection, all six site monitor wells were measured for free phase hydrocarbon layers and depth to groundwater. Depth to groundwater measurements shown in Table 1 were used to construct the groundwater elevation contours shown in Figure 2. As shown, groundwater flow is to the west at a gradient of 0.003 feet/foot.

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, and temperature were monitored using calibrated field meters.

Groundwater samples were transferred to appropriate laboratory supplied and preserved 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 8260B.

Groundwater Analytical Results

Table 2 presents second quarter 2009 and historic analytical results of groundwater testing. Concentrations of benzene above the State of California maximum contaminant level (MCL) of 1.0 micrograms per liter (ug/l) were detected in monitor wells MW-1, MW-2, and MW-3. Ethylbenzene was detected above the MCL of 300 ug/l in monitor well MW-2. TPH-gasoline and diesel was detected above the reporting limit in monitor wells MW-1, MW-2, and MW-3. No analytes were detected in the trip blanks or method blanks. A lab control spike and lab control spike duplicate passed the USEPA's criteria for acceptance.

SUMMARY OF RESULTS

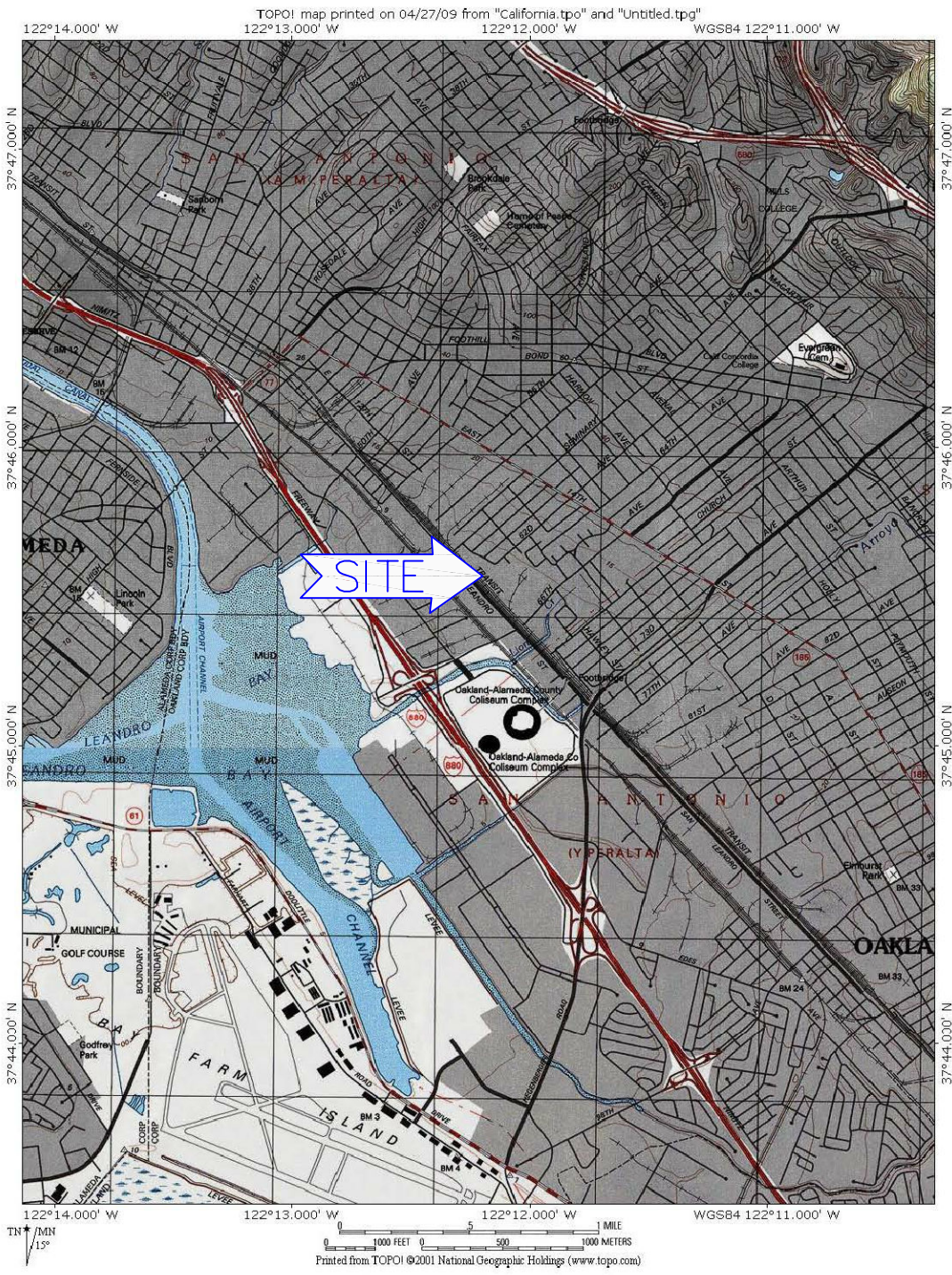
- Groundwater flow direction is towards the west at a gradient of 0.003 feet/foot.
- Chemical concentrations in excess of MCLs were limited to benzene in wells MW-1, MW-2, and MW-3, and ethylbenzene in well MW-2.
- Gasoline was found to be present in groundwater samples taken from wells MW-1 (1,640 ug/l), MW-2 (40,200 ug/l), and MW-3 (694 ug/l).
- Diesel was found to be present in groundwater samples taken from MW-1, MW-2 and MW-3 at concentrations of 170 ug/l, 15,300 ug/l, and 2,610 ug/l, respectively.

PROJECTED WORK AND RECOMMENDATIONS

On May 19, 2009 the State of California Water Resources Control Board adopted Resolution 2009-0042, which required Regional Water Boards and Local Oversight Program agencies (LOPs) to review their fuel leak cases and reduce quarterly monitoring requirements to semiannual or less

frequent monitoring at all sites unless site-specific needs warrant otherwise and notify all responsible parties of the new requirements no later than August 1, 2009. The ACHCS notified AC Transit of the requirement in a July 24, 2009 letter which requested that a review of the monitoring program be completed to determine if site-specific needs warranted quarterly groundwater monitoring. Based on the requested review, quarterly groundwater monitoring is not required at the Site and future groundwater monitoring will be performed on a semi-annual schedule. The next groundwater monitoring event will be conducted during the fourth quarter of 2009.

Figures

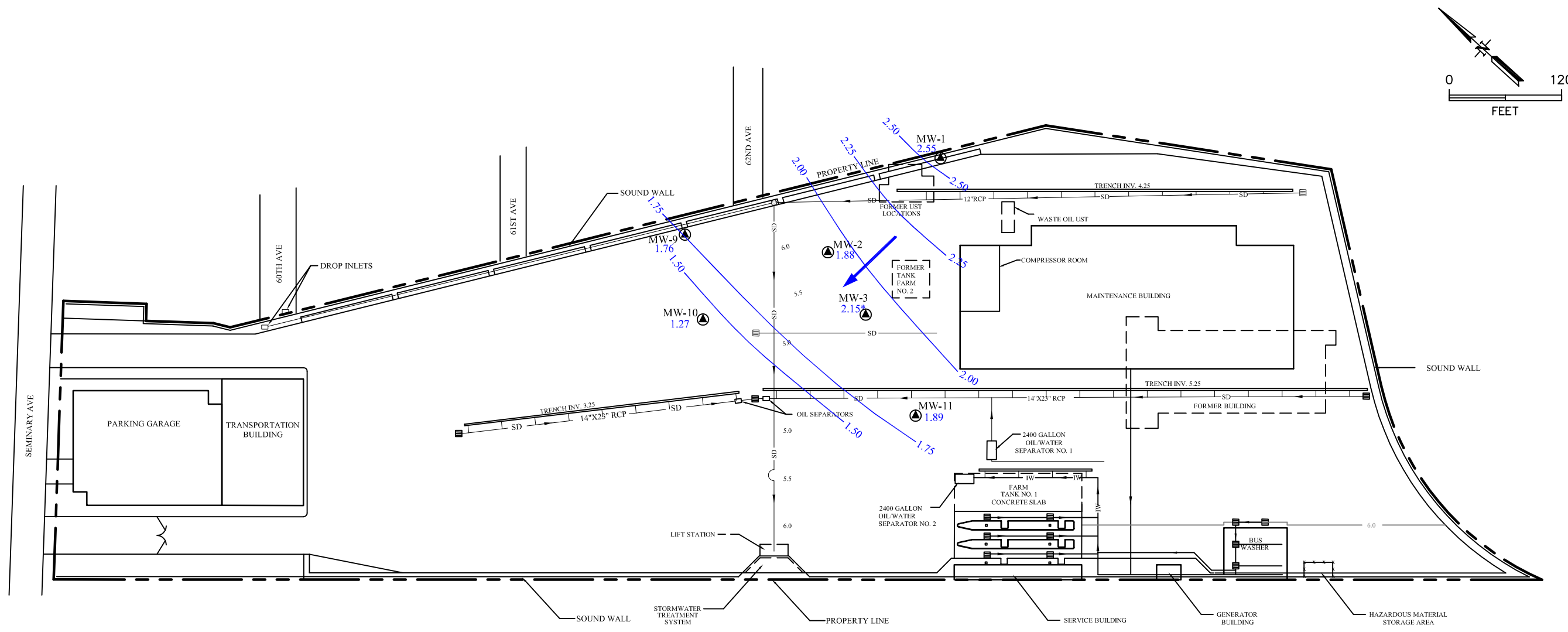


2036-001A



Cameron-Cole
 101 WEST ATLANTIC AVENUE, BUILDING 90
 ALAMEDA, CALIFORNIA 94501
 PHONE: 510-337-8660
 FAX: 510-337-3994
<http://www.cameron-cole.com>

FIGURE 1	
SITE LOCATION MAP AC TRANSIT – SEMINARY OAKLAND, CALIFORNIA	
SCALE:	DATE:
AS NOTED	4-28-09



LEGEND

- 1.75 — GROUNDWATER ELEVATION CONTOUR
- 1.27 GROUNDWATER ELEVATION (FT. MSL)
- * VALUE NOT USED IN CONTOURING
- ← REPORTED GROUNDWATER FLOW
- ▲ EXISTING MONITORING WELL
- ⊙ MANHOLE
- ▤ CATCH BASIN
- SD — SURFACE DRAINAGE TRENCH
- IW — STORM DRAIN PIPELINE
- IW — INDUSTRIAL WASTE PIPELINE

BY	DATE
DRAWN SPS	7/28/09
CHECKED	
APPROVED	
APPROVED	
APPROVED	



FIGURE 2

AC TRANSIT - OAKLAND, CALIFORNIA

1100 SEMINARY ROAD-POTENTIOMETRIC SURFACE MAP

JUNE 12, 2009

SCALE: 1" = 120'	DWG. NO.: 2036-005A
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Tables

TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
AC Transit Facility
1100 Seminary Avenue, Oakland, California

Well	Date	Top of Casing Elevation (ft- msl)*	Product Thickness (feet)	DTW (feet)	Measured Groundwater Elevation (ft-msl)	Groundwater Elevation Corrected for Product Thickness** (ft-msl)
MW-1	1/7/1999	6.25	None	5.13	1.12	
	2/7/2000		None	3.75	2.5	
	5/25/2000		None	3.69	2.56	
	8/22/2000		None	4.79	1.46	
	11/20/2000		None	4.92	1.33	
	3/1/2001		None	2.75	3.50	
	5/14/2001		None	3.67	2.58	
	7/26/2001		None	4.73	1.52	
	10/16/2001		None	5.35	0.90	
	2/21/2002		None	3.30	2.95	
	5/29/2002		None	3.70	2.55	
	9/17/2002		None	4.85	1.40	
	11/14/2002		None	4.59	1.66	
	2/5/2003		None	3.37	2.88	
	5/14/2003		None	3.17	3.08	
	8/22/2003		None	4.52	1.73	
	11/20/2003		None	4.61	1.64	
	2/9/2004		None	3.05	3.20	
	5/25/2004		None	3.22	3.03	
	8/16/2004		None	4.65	1.60	
	11/18/2004		None	3.81	2.44	
	2/22/2005		None	2.62	3.63	
	5/5/2005		None	3.44	2.81	
	10/9/2005***		None	4.75	1.50	
	5/28/2006***		None	3.50	2.75	
	11/13/2006***		None	4.00	2.25	
	5/27/2007***		None	3.61	2.64	
	11/10/2007***		None	3.30	2.95	
	5/24/2008***		None	3.76	2.49	
	3/26/2009		None	3.08	3.17	
	6/12/2009		None	3.70	2.55	
MW-2	1/7/1999	5.53	2.27	6.91	-1.38	0.44
	6/8/1999		2.23	5.83	-0.3	1.48
	6/9/1999		0	3.9	1.63	1.63
	6/10/1999		0	3.9	1.63	1.63
	6/15/1999		0.42	3.92	1.61	1.95
	7/8/1999		0.2	4.3	1.23	1.39
	2/7/2000		Sheen	3.8	1.73	
	5/25/2000		0.12	3.23	2.3	2.40
	8/22/2000		0.23	4.45	1.08	1.10
	11/20/2000		0.23	4.70	0.83	0.85
	3/1/2001		0.13	2.75	2.78	2.79
	5/14/2001		Sheen	3.30	2.23	
	7/26/2001		None	3.27	2.26	
	10/16/2001		0.02	5.25	0.28	0.28
	2/21/2002		0.01	3.32	2.21	2.21
	5/29/2002		0.02	2.98	2.55	2.55
	9/17/2002		None	4.83	0.70	
	11/14/2002		None	5.43	0.10	
	2/5/2003		None	3.85	1.68	
	5/14/2003		None	2.94	2.59	
	8/22/2003		None	4.20	1.33	
	11/20/2003		None	4.68	0.85	
	2/9/2004		None	2.94	2.59	
	5/25/2004		None	2.90	2.63	
	8/16/2004		None	4.30	1.23	
	11/18/2004		None	4.67	0.86	
	2/22/2005		None	5.48	0.05	
	5/5/2005		None	3.02	2.51	
	10/9/2005***		0.083	6.91	-1.38	-1.37
	5/28/2006***		0.1	3.45	2.08	2.09
11/13/2006***	None	2.60	2.93			
5/27/2007***	None	3.30	2.23			
11/10/2007***	None	3.10	2.43			
5/24/2008***	None	3.36	2.17			
3/26/2009	None	2.82	2.71			
	6/12/2009		None	3.65	1.88	

TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
AC Transit Facility
1100 Seminary Avenue, Oakland, California

Well	Date	Top of Casing Elevation (ft- msl)*	Product Thickness (feet)	DTW (feet)	Measured Groundwater Elevation (ft-msl)	Groundwater Elevation Corrected for Product Thickness** (ft-msl)		
MW-3	1/7/1999	4.76	None	4.11	0.65			
	2/7/2000		None	3.1	1.66			
	5/25/2000		None	2.41	2.35			
	8/22/2000		None	3.45	1.31			
	11/20/2000		None	3.42	1.34			
	3/1/2001		None	2.00	2.76			
	5/14/2001		None	2.64	2.12			
	7/26/2001		None	3.17	1.59			
	10/16/2001		None	3.97	0.79			
	2/21/2002		None	2.20	2.56			
	5/29/2002		None	2.52	2.24			
	9/17/2002		None	3.65	1.11			
	11/14/2002		None	3.47	1.29			
	2/5/2003		None	2.19	2.57			
	5/14/2003		None	2.12	2.64			
	8/22/2003		None	3.25	1.51			
	11/20/2003		None	3.40	1.36			
	2/9/2004		None	2.06	2.70			
	5/25/2004		None	2.10	2.66			
	8/16/2004		None	3.36	1.40			
	11/18/2004		None	2.68	2.08			
	2/22/2005		None	1.90	2.86			
	5/5/2005		None	2.38	2.38			
	10/9/2005***		None	3.36	1.40			
	5/28/2006***		None	2.32	2.44			
	11/13/2006***		None	3.00	1.76			
	5/27/2007***		None	2.45	2.31			
	11/10/2007***		None	2.70	2.06			
	5/24/2008***		None	2.65	2.11			
	3/26/2009		None	2.18	2.58			
			6/12/2009		None	2.61	2.15	
	MW-9		2/7/2000	5.8	None	4.37	1.43	
			5/25/2000		None	4.95	0.85	
8/22/2000		None	5.18		0.62			
11/20/2000		None	4.70		1.10			
3/1/2001		None	3.03		2.77			
5/14/2001		None	4.56		1.24			
7/26/2001		None	5.17		0.63			
10/16/2001		None	5.19		0.61			
2/21/2002		None	4.79		1.01			
5/29/2002		None	4.07		1.73			
9/17/2002		None	4.94		0.86			
11/14/2002		None	4.87		0.93			
2/5/2003		None	3.88		1.92			
5/14/2003		None	3.77		2.03			
8/22/2003		None	4.73		1.07			
11/20/2003		None	4.46		1.34			
2/9/2004		None	3.23		2.57			
5/25/2004		None	3.53		2.27			
8/16/2004		None	4.20		1.60			
11/18/2004		None	3.91		1.89			
2/22/2005		None	2.75		3.05			
5/5/2005		None	3.21		2.59			
10/9/2005***		None	4.45		1.35			
5/28/2006***		None	3.33		2.47			
11/13/2006***		None	4.35		1.45			
5/27/2007***		None	3.75		2.05			
11/10/2007***		None	4.25		1.55			
5/24/2008***		None	4.05		1.75			
3/26/2009		None	3.31		2.49			
		6/12/2009			None	4.04	1.76	

TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
AC Transit Facility
1100 Seminary Avenue, Oakland, California

Well	Date	Top of Casing Elevation (ft- msl)*	Product Thickness (feet)	DTW (feet)	Measured Groundwater Elevation (ft-msl)	Groundwater Elevation Corrected for Product Thickness** (ft-msl)
MW-10	2/7/2000	4.65	None	3.19	1.46	
	5/25/2000		None	3.11	1.54	
	8/22/2000		None	4.35	0.30	
	11/20/2000		None	4.18	0.47	
	3/1/2001		None	3.14	1.51	
	5/14/2001		None	3.27	1.38	
	7/26/2001		None	3.95	0.70	
	10/16/2001		None	4.57	0.08	
	2/21/2002		None	3.29	1.36	
	5/29/2002		None	3.30	1.35	
	9/17/2002		None	4.11	0.54	
	11/14/2002		None	3.86	0.79	
	2/5/2003		None	3.36	1.29	
	5/14/2003		None	3.23	1.42	
	8/22/2003		None	4.52	0.13	
	11/20/2003		None	3.56	1.09	
	2/9/2004		None	2.51	2.14	
	5/25/2004		None	2.90	1.75	
	8/16/2004		None	3.90	0.75	
	11/18/2004		None	2.52	2.13	
	2/22/2005		None	2.66	1.99	
	5/5/2005		None	3.18	1.47	
	10/9/2005***		None	3.88	0.77	
	5/28/2006***		None	2.78	1.87	
	11/13/2006***		None	3.70	0.95	
	5/27/2007***		None	3.15	1.50	
	11/10/2007***		None	3.20	1.45	
	5/24/2008***		None	3.20	1.45	
	3/26/2009		None	2.51	2.14	
			6/12/2009		None	3.38
MW-11	2/7/2000	4.19	None	4.97	-0.78	
	5/25/2000		None	7.58	-3.39	
	8/22/2000		None	3.01	1.18	
	11/20/2000		None	2.88	1.31	
	3/1/2001		None	1.91	2.28	
	5/14/2001		None	4.49	-0.3	
	7/26/2001		None	2.95	1.24	
	10/16/2001		None	3.35	0.84	
	2/21/2002		None	1.85	2.34	
	5/29/2002		None	2.36	1.83	
	9/17/2002		None	3.11	1.08	
	11/14/2002		None	2.55	1.64	
	2/5/2003		None	2.75	1.44	
	5/14/2003		None	1.98	2.21	
	8/22/2003		None	2.86	1.33	
	11/20/2003		None	2.73	1.46	
	2/9/2004		None	2.60	1.59	
	5/25/2004		None	2.06	2.13	
	8/16/2004		None	2.91	1.28	
	11/18/2004		None	2.75	1.44	
	2/22/2005		None	3.06	1.13	
	5/5/2005		None	2.89	1.3	
	10/9/2005***		None	3.04	1.15	
	5/28/2006***		None	1.30	2.89	
	11/13/2006***		None	2.30	1.89	
	5/27/2007***		None	2.20	1.99	
	11/10/2007***		None	1.60	2.59	
	5/24/2008***		None	2.31	1.88	
	3/26/2009		None	2.01	2.18	
			6/12/2009		None	2.30

Notes:

* ft-msl: feet-mean sea level

** used 0.8 specific gravity of product

DTW: Depth to Water

*** Essel Technology Services, Inc. data.

TABLE 2
ANALYTICAL RESULTS OF GROUNDWATER SAMPLES (ug/l)
AC Transit Facility
1100 Seminary Avenue, Oakland, California

Well	Date	TPH-G	TPH-D	TPH	Benzene	Toluene	Ethyl	Xylenes	MTBE
							Benzene		
		MCL (ug/l)			1.0	150	300	1,750	13
MW-1	1/7/1999	<100	470	NA	17.0	2	31.0	18	<50
	2/7/2000	390	<60	1,300	13.0	<10	<10	<10	<20
	5/25/2000	<50	<50	1,000	12.0	<1.0	<1.0	<1.0	<2.0
	8/22/2000	<50	<50	600	6.3	<1.0	2.3	<1.0	<2.0
	11/20/2000	<50	<50	630	2.8	<1.0	1.1	<1.0	<2.0
	3/1/2001	<50	<50	900	29.0	1.2	16.0	6	<2.0
	5/14/2001	<50	<50	540	4.1	<1.0	3.1	<1.0	<2.0
	7/26/2001	190	<50	500	<1.0	<1.0	<1.0	<1.0	<2.0
	10/16/2001	<50	<50	650	16.0	1.1	4.6	1.6	<2.0
	2/21/2002	560	<50	550	21	1.0	19	15	<2.0
	5/29/2002	130	<50	510	<1.0	<1.0	<1.0	<1.0	<2.0
	9/17/2002	140	<50	330	<1.0	<1.0	<1.0	<1.0	<2.0
	11/14/2002	150	570	NA	4.8	0.57	2.7	1.1	<1.0
	2/5/2003	250	210	NA	16.0	<0.5	0.93	<1.0	<1.0
	5/14/2003	220	<50	NA	9.9	<0.5	1.6	<1.0	<1.0
	8/22/2003	150	770	NA	<0.5	<1.0	<1.0	<1.0	<1.0
	11/20/2003	300	320	NA	3.0	<0.5	0.56	<1.0	<1.0
	2/9/2004	210	370	NA	<0.5	0.50	0.52	<1.0	<1.0
	5/26/2004	470	<50	NA	5.0	<0.5	7.2	1.9	<1.0
	8/16/2004	75	<50	NA	<0.5	<0.5	<0.5	<1.0	<1.0
	11/18/2004	207	200	NA	6.8	<0.5	2.80	1.0	<0.5
	2/22/2005	325	170	NA	17.3	<0.5	3.80	5.0	<0.5
	5/5/2005	512	670	NA	47.2	1.2	42.4	18.9	<0.5
	10/9/2005*	2,800	840	NA	200.0	5.0	85.0	26.0	<5.0
	5/29/2006*	1,900	580	NA	33.0	4.3	23.0	16.0	<5.0
	11/13/2006*	<50	230	NA	<0.5	<0.5	<0.5	<0.5	<5.0
	5/27/2007*	1,400	4,700	NA	46.0	5.5	7.4	8.8	<15
11/10/2007*	<50	1,900	NA	<0.5	<0.5	<0.5	<0.5	<5.0	
5/25/2008*	1,200	550	NA	3.9	5.4	2.2	1.5	<5.0	
3/26/2009	1,510	167	NA	32.4	<5.0	40.4	<10	<5.0	
6/12/2009	1,640	170	NA	20.9	<5.0	35.6	<10	<5.0	

TABLE 2
ANALYTICAL RESULTS OF GROUNDWATER SAMPLES (ug/l)
AC Transit Facility
1100 Seminary Avenue, Oakland, California

Well	Date	TPH-G	TPH-D	TPH	Benzene	Toluene	Ethyl	Xylenes	MTBE
							Benzene		
		MCL (ug/l)			1.0	150	300	1,750	13
MW-2	6/8/1999	11,000	434,000	117,000	1,000,000	<100,000	260,000	<300,000	<5,000,000
	2/7/2000	51,000	160,000	<5000	19,000	<500	920	<500	<1000
	5/25/2000	<1200	<50000	65,000	11,000	<500	670	530	<1000
	8/22/2000	<2500	<2500	150,000	23,000	<500	1,100	1,100	<1000
	11/20/2000	<1200	<25000	430,000	18,000	<500	840	610	<1000
	3/3/2001	<500	<25000	610,000	14,000	<830	<830	<830	<1700
	5/14/2001	<1000	280,000	51,000	19,000	240	1,100	1,200	<330
	7/26/2001	54,000	590,000	<25000	19,000	<500	1,300	1,500	<1000
	10/16/2001	43,000	560,000	<25000	18,000	280	1,100	1,300	<100
	2/21/2002	46,000	180,000	<12000	18,000	<500	950	1,500	<1000
	5/29/2002	49,000	130,000	<5000	17,000	350	970	1,700	<500
	9/17/2002	60,000	<25000	470,000	21,000	<500	1,600	2,700	<1000
	11/14/2002	36,000	490,000	NA	14,000	280	970	2,200	<400
	2/5/2003	47,000	28,000	NA	15,000	360	1,200	2,100	<100
	5/14/2003	39,000	200,000	NA	13,000	370	1,000	2,000	<100
	8/22/2003	43,000	480,000	NA	22,000	490	1,500	2,100	<400
	11/20/2003	59,000	320,000	NA	22,000	<100	1,700	3,200	<200
	2/9/2004	19,000	55,000	NA	5,400	160	800	1,800	<100
	5/26/2004	60,000	520,000	NA	22,000	410	1,700	2,800	<250
	8/16/2004	63,000	42,000	NA	20,000	520	1,600	2,400	<250
	11/18/2004	38,200	126,000	NA	21,900	430	1,400	3,700	<2.5
	2/22/2005	55,200	42,000	NA	26,400	389	2,020	3,430	<50
	5/5/2005	38,600	18,300	NA	8,060	177	1,200	2,310	<50
	10/9/2005*	42,000	12,000	NA	19,000	<250	1,300	1,800	<250
	5/29/2006*	20,000	170,000	NA	5,900	88	190	660	<170
	11/13/2006*	3,000	7,200	NA	560	13	46	140	<80
	5/27/2007*	6,900	45,000	NA	1,800	28	110	270	<130
	11/10/2007*	19,000	14,000	NA	5,800	79	360	660	<500
	5/25/2008*	33,000	5,900	NA	9,100	170	700	880	<250
	3/26/2009	36,900	169,000	NA	15,000	229	841	854	<200
	6/12/2009	40,200	15,300	NA	16,800	<200	1,340	1,340	<200

TABLE 2
ANALYTICAL RESULTS OF GROUNDWATER SAMPLES (ug/l)
AC Transit Facility
1100 Seminary Avenue, Oakland, California

Well	Date	TPH-G	TPH-D	TPH	Benzene	Toluene	Ethyl	Xylenes	MTBE
							Benzene		
		MCL (ug/l)			1.0	150	300	1,750	13
MW-3	1/7/1999	199	2,680	NA	450	<10	250	190	<500
	2/7/2000	2,000	<150	3,100	26	<2	5	2	<4
	5/25/2000	<50	<50	1,000	35	<1.0	6	4	<2.0
	8/22/2000	<50	<50	2,400	240	<10	<10	<10	<20
	11/20/2000	<50	<50	2,400	<25	<25	<25	<25	<50
	3/1/2001	<50	<50	1,200	100	<5.0	8.3	<5.0	<10
	5/14/2001	<50	<50	860	8.4	<1.0	1.2	<1.0	<2.0
	7/26/2001	1,200	<50	790	140	<5.0	12	<5.0	<10
	10/16/2001	1,000	<50	1,600	5.1	<1.0	4.3	<1.0	<2.0
	2/21/2002	1,700	<50	990	200	<10	29.0	12	<20
	5/29/2002	630	<50	840	68	<1.0	4.2	3.3	<2.0
	9/17/2002	<50	<50	1,100	4.1	<1.0	1.8	1.0	<2.0
	11/14/2002	2,800	460	NA	200	1.1	28	9.0	<2.0
	2/5/2003	720	270	NA	55	<0.5	20	7.1	<1.0
	5/14/2003	540	130	NA	18	<0.5	3.6	1.0	<1.0
	8/22/2003	400	540	NA	2.7	<1.0	1.6	<1.0	<1.0
	11/20/2003	240	520	NA	8.8	<0.5	2.2	<1.0	<1.0
	2/9/2004	700	700	NA	5.6	<0.5	3.8	1.3	<1.0
	5/26/2004	700	<100	NA	83.0	<0.5	11.0	1.7	<1.0
	8/16/2004	440	<500	NA	6.0	<0.5	1.6	<1.0	<1.0
	11/18/2004	728	230	NA	44.8	1.1	14.9	8.4	<0.5
	2/22/2005	3,480	390	NA	1130	1.9	174	89.4	<0.5
	5/5/2005	2,920	670	NA	1,360	2.8	199	100	<0.5
	10/9/2005*	8,400	1,400	NA	4,500	<100	330	<100	<100
	5/29/2006*	340	330	NA	6.2	1.3	<0.5	1.1	<5.0
	11/13/2006*	410	170	NA	2.7	2.1	1.2	1.0	<5.0
	5/27/2007*	600	620	NA	15	<0.5	15	4.7	<10
11/10/2007*	330	600	NA	16	0.8	7.6	1.4	<5.0	
5/25/2008*	810	1,300	NA	84	1.1	21	5.4	<5.0	
3/26/2009	1,160	380	NA	19.0	<1.0	19.2	3.7	<1.0	
6/12/2009	694	2,610	NA	168.0	<2.0	17.4	4.4	<2.0	

TABLE 2
ANALYTICAL RESULTS OF GROUNDWATER SAMPLES (ug/l)
AC Transit Facility
1100 Seminary Avenue, Oakland, California

Well	Date	TPH-G	TPH-D	TPH	Benzene	Toluene	Ethyl	Xylenes	MTBE
							Benzene		
		MCL (ug/l)					300	1,750	13
MW-9	2/7/2000	<50	<50	240	<1	<1	<1	<1	<2
	5/25/2000	<50	<50	130	<1.0	<1.0	<1.0	<1.0	<2.0
	8/22/2000	<50	<50	120	<1.0	<1.0	<1.0	<1.0	<2.0
	20-Nov-00	<50	<50	130	<1.0	<1.0	<1.0	<1.0	<2.0
	3/1/2001	<50	<50	150	<1.0	<1.0	<1.0	<1.0	<2.0
	5/14/2001	<50	<50	110	<1.0	<1.0	<1.0	<1.0	<2.0
	7/26/2001	<50	<50	71	<1.0	<1.0	<1.0	<1.0	<2.0
	10/16/2001	<50	<50	120	<1.0	<1.0	<1.0	<1.0	<2.0
	2/21/2002	<50	<50	89	<1.0	<1.0	<1.0	<1.0	<2.0
	5/29/2002	<50	<50	95	<1.0	<1.0	<1.0	<1.0	<2.0
	9/17/2002	<50	<50	96	<1.0	<1.0	<1.0	<1.0	<2.0
	11/14/2002	<50	82	NA	<0.5	<0.5	<0.5	<1.0	<1.0
	2/5/2003	<50	82	NA	<0.5	<0.5	<0.5	<1.0	<1.0
	5/14/2003	<50	140	NA	<0.5	<0.5	<0.5	<1.0	1.3
	8/22/2003	<50	220	NA	<0.5	<1.0	<1.0	<1.0	<1.0
	11/20/2003	<50	80	NA	<0.5	<0.5	<0.5	<1.0	1.8
	2/9/2004	<50	65	NA	<0.5	<0.5	<0.5	<1.0	<1.0
	5/26/2004	<50	<250	NA	<0.5	<0.5	<0.5	<1.5	<1.0
	8/16/2004	<50	<50	NA	<0.5	<0.5	<0.5	<1.0	1.3
	11/18/2004	<50	<50	NA	<0.5	<0.5	<0.5	<1.0	2.8
	2/22/2005	<50	<0.5	NA	<0.5	<0.5	<0.5	<1.0	1.5
	5/5/2005	<50	190	NA	1.1	<0.5	<0.5	<1.0	1.6
	10/9/2005*	<50	87	NA	2.8	<0.5	<0.5	<0.5	1.2
	5/29/2006*	<50	1,100	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	11/13/2006*	<50	56	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	5/27/2007*	<50	170	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	11/10/2007*	<50	1,300	NA	<0.5	<0.5	<0.5	<0.5	<0.5
5/25/2008*	<50	250	NA	<0.5	<0.5	<0.5	<0.5	<0.5	
3/26/2009	<50	<990	NA	<1.0	<1.0	<1.0	<2.0	1.2	
6/12/2009	<50	<94	NA	<1.0	<1.0	<1.0	<2.0	2.1	

TABLE 2
ANALYTICAL RESULTS OF GROUNDWATER SAMPLES (ug/l)
AC Transit Facility
1100 Seminary Avenue, Oakland, California

Well	Date	TPH-G	TPH-D	TPH	Benzene	Toluene	Ethyl	Xylenes	MTBE
							Benzene		
		MCL (ug/l)			1.0	150	300	1,750	13
MW-10	2/7/2000	<50	<50	470	<1	<1	<1	<1	<2
	5/25/2000	<50	<50	220	<1.0	<1.0	<1.0	<1.0	<2.0
	8/22/2000	<50	<50	140	<1.0	<1.0	<1.0	<1.0	<2.0
	11/20/2000	<50	<50	300	<1.0	<1.0	<1.0	<1.0	<2.0
	3/1/2001	<50	<50	250	<1.0	<1.0	<1.0	<1.0	<2.0
	5/14/2001	<50	<50	74	<1.0	<1.0	<1.0	<1.0	<2.0
	7/26/2001	<50	<50	120	<1.0	<1.0	<1.0	<1.0	<2.0
	10/16/2001	<50	<50	190	<1.0	<1.0	<1.0	<1.0	<2.0
	2/21/2002	<50	<50	190	<1.0	<1.0	<1.0	<1.0	<2.0
	5/29/2002	<50	<50	110	<1.0	<1.0	<1.0	<1.0	<2.0
	9/17/2002	<50	<50	170	<1.0	<1.0	<1.0	<1.0	<2.0
	11/14/2002	<50	270	NA	<0.5	<0.5	<0.5	<1.0	1.5
	2/5/2003	<50	160	NA	<0.5	<0.5	<0.5	<1.0	<1.0
	5/14/2003	<50	<50	NA	<0.5	<0.5	<0.5	<1.0	<1.0
	8/22/2003	<50	320	NA	<0.5	<1.0	<1.0	<1.0	<1.0
	11/20/2003	<50	300	NA	<0.5	<0.5	<0.5	<1.0	1.7
	2/9/2004	<50	250	NA	<0.5	<0.5	<0.5	<1.0	1.1
	5/26/2004	<500	<50	NA	<0.5	<0.5	<0.5	<1.5	<1.0
	8/16/2004	<50	<50	NA	<0.5	<0.5	<0.5	<1.0	<1.0
	11/18/2004	<50	<50	NA	<0.5	<0.5	<0.5	<1.0	0.9
	2/22/2005	<50	<50	NA	1.0	<0.5	<0.5	<1.0	0.9
	5/5/2005	<50	<50	NA	<0.5	<0.5	<0.5	<1.0	<0.5
	10/9/2005*	<50	<50	NA	0.92	<0.5	<0.5	<0.5	0.66
	5/29/2006*	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	11/13/2006*	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	5/27/2007*	<50	550	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	11/10/2007*	<50	130	NA	<0.5	<0.5	<0.5	<0.5	<0.5
5/25/2008*	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5	
3/26/2009	<50	<100	NA	<1.0	<1.0	<1.0	<2.0	<1.0	
6/12/2009	<50	<94	NA	<1.0	<1.0	<1.0	<2.0	<1.0	

TABLE 2
ANALYTICAL RESULTS OF GROUNDWATER SAMPLES (ug/l)
AC Transit Facility
1100 Seminary Avenue, Oakland, California

Well	Date	TPH-G	TPH-D	TPH	Benzene	Toluene	Ethyl	Xylenes	MTBE
							Benzene		
		MCL (ug/l)					300	1,750	13
MW-11	2/7/2000	<50	<50	400	<1	<1	<1	<1	25
	5/25/2000	<50	<50	200	<1.0	<1.0	<1.0	<1.0	16
	8/22/2000	<50	<50	170	<1.0	<1.0	<1.0	<1.0	9.3
	11/20/2000	<50	<50	190	<1.0	<1.0	<1.0	<1.0	7.5
	3/1/2001	<50	<50	250	<1.0	<1.0	<1.0	<1.0	15.0
	5/14/2001	<50	<50	160	<1.0	<1.0	<1.0	<1.0	14.0
	7/26/2001	<50	<50	220	5.9	<1.0	<1.0	2.7	20.0
	10/16/2001	<50	<50	170	<1.0	<1.0	<1.0	<1.0	12.0
	2/21/2002	<50	<50	170	<1.0	<1.0	<1.0	<1.0	2.2
	5/29/2002	<50	<50	290	<1.0	<1.0	<1.0	<1.0	2.3
	9/17/2002	<50	<500	1,900	<1.0	<1.0	<1.0	<1.0	3.8
	11/14/2002	<50	740	NA	0.88	<0.5	<0.5	1.2	5.3
	2/5/2003	<50	410	NA	<0.5	<0.5	<0.5	<1.0	3.4
	5/14/2003	<50	<50	NA	<0.5	<0.5	<0.5	<1.0	2.5
	8/22/2003	<50	540	NA	<0.5	<1.0	<1.0	<1.0	2.2
	11/20/2003	<50	290	NA	<0.5	<0.5	<0.5	<1.0	1.8
	2/9/2004	<50	270	NA	<0.5	<0.5	<0.5	<1.0	<1.0
	5/26/2004	<50	<50	NA	<0.5	<0.5	<0.5	<1.5	<1.0
	8/16/2004	<50	100	NA	<0.5	<0.5	<0.5	<1.0	<1.0
	11/18/2004	70	<50	NA	3.3	<0.5	0.80	1.7	0.7
	2/22/2005	114	<5.0	NA	<0.5	<0.5	2.20	3.9	<0.5
	5/5/2005	<50	<50	NA	<0.5	0.60	<0.5	<1.0	<0.5
	10/9/2005*	<50	82	NA	3.0	<0.5	<0.5	0.57	0.83
	5/29/2006*	<50	150	NA	2.9	<0.5	<0.5	<0.5	<0.5
	11/13/2006*	<50	150	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	5/27/2007*	<50	330	NA	1.8	<0.5	<0.5	<0.5	<0.5
11/10/2007*	110	890	NA	19	<0.5	2.5	4.0	<0.5	
5/25/2008*	300	790	NA	52	1.5	9.5	11	<10	
3/26/2009	<50	<95	NA	<1.0	<1.0	<1.0	<2.0	4.1	
6/12/2009	<50	<95	NA	<1.0	<1.0	<1.0	<2.0	<1.0	

Notes:

ug/l: micrograms per liter

TPH-G: total petroleum hydrocarbons as gasoline

TPH-D: total petroleum hydrocarbons as diesel

TPH: total petroleum hydrocarbons as motor oil or unknown hydrocarbon

MCL: Maximum Contaminant Level

MTBE: Methyl-tert,butylether

NA: Not Analyzed

* Essel Technology Services, Inc. data.

TABLE 3
ANALYTICAL RESULTS OF SOIL SAMPLES (ppm)
AC Transit Facility
1100 Seminary Avenue, Oakland, California

Boring	Date	Depth (feet)	TPH-G	TPH-D	TPH-MO	Benzene	Toluene	Ethyl Benzene	Xylenes	Acetone	Cd	Cr	Pb	Ni	Zn
SB-1	8-Jan-99	8-8.5	<2.5	6.43	NA	<.059	<.059	<.059	<.059	NA	NA	NA	NA	NA	NA
SB-2	8-Jan-99	7.5-8	<2.5	15	NA	<.057	<.057	<.057	<.057	NA	NA	NA	NA	NA	NA
SB-3	8-Jan-99	13.5-14	<2.5	3.73	NA	<.06	<.06	<.06	<.06	NA	NA	NA	NA	NA	NA
SB-4	8-Jan-99	6.5-7	<2.5	2.53	NA	<.06	<.06	<.06	<.06	NA	NA	NA	NA	NA	NA
SB-5	8-Jan-99	7-7.5	<2.5	72.1	NA	<.058	<.058	<.058	<.058	NA	NA	NA	NA	NA	NA
SB-6	8-Jan-99	8-8.5	<2.5	3.29	NA	<.058	<.058	<.058	<.058	NA	NA	NA	NA	NA	NA
SB-7	8-Jan-99	11-11.5	9.36	89.3	NA	<.057	<.057	0.52	3.50	NA	NA	NA	NA	NA	NA
SB-8	8-Jan-99	8-8.5	<2.5	3.44	NA	<.058	<.058	<.058	<.058	NA	NA	NA	NA	NA	NA
SB-9	8-Jun-99	3.5-4	<10	<2.5	14	<10	<10	<10	<10	0.096	<0.25	25	8.1	20	23
SB-11	8-Jun-99	5.5-6	<10	<2.5	<2.5	<10	<10	<10	<10	0.033	<0.25	24	4.1	50	41
SB-12	8-Jun-99	3-3.5	NA	NA	261	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-13	8-Jun-99	4-4.5	NA	NA	412	<10	<10	<10	<10	53	NA	NA	NA	NA	NA
SB-14	8-Jun-99	5-5.5	NA	NA	240	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
ppm: parts per million
TPH-G: total petroleum hydrocarbons as gasoline
TPH-D: total petroleum hydrocarbons as diesel
TPH-MO: total petroleum hydrocarbons as motor oil

APPENDIX A

CERTIFIED ANALYTICAL REPORTS

CHAIN-OF-CUSTODY DOCUMENTS



Technical Report for

Cameron-Cole

T0600102158-AC Transit Seminary, Oakland, CA

2036-002

Accutest Job Number: C6150

Sampling Date: 06/12/09

Report to:

Cameron-Cole

dbaker@cameron-cole.com

ATTN: Dennis Baker

Total number of pages in report: **22**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Laurie Glantz-Murphy
Laboratory Director

Client Service contact: Diane Theesen 408-588-0200

Certifications: CA (08258CA)

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Test results relate only to samples analyzed.



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Sample Summary

Cameron-Cole

Job No: C6150

T0600102158-AC Transit Seminary, Oakland, CA
 Project No: 2036-002

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
C6150-1	06/12/09	08:45 DB	06/12/09	AQ	Ground Water	TB-01
C6150-2	06/12/09	10:10 DB	06/12/09	AQ	Ground Water	MW-2
C6150-3	06/12/09	11:40 DB	06/12/09	AQ	Ground Water	MW-3
C6150-4	06/12/09	12:20 DB	06/12/09	AQ	Ground Water	MW-1
C6150-5	06/12/09	13:00 DB	06/12/09	AQ	Ground Water	MW-9
C6150-6	06/12/09	13:55 DB	06/12/09	AQ	Ground Water	MW-10
C6150-7	06/12/09	14:35 DB	06/12/09	AQ	Ground Water	MW-11

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Cameron-Cole

Job No C6150

Site: T0600102158-AC Transit Seminary, Oakland, CA

Report Date 6/22/2009 4:17:39 PM

7 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 06/12/2009 and were received at Accutest on 06/12/2009 properly preserved, at 3.8 Deg. C and intact. These Samples received an Accutest job number of C6150. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix AQ

Batch ID: VW233

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) C6149-3MS, C6149-3MSD were used as the QC samples indicated.

Extractables by GC By Method SW846 8015B M

Matrix AQ

Batch ID: OP1060

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Accutest Laboratories Northern California (ALNCA) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALNCA and as stated on the COC. ALNCA certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALNCA Quality Manual except as noted above. This report is to be used in its entirety. ALNCA is not responsible for any assumptions of data quality if partial data packages are used



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: TB-01		
Lab Sample ID: C6150-1		Date Sampled: 06/12/09
Matrix: AQ - Ground Water		Date Received: 06/12/09
Method: SW846 8260B		Percent Solids: n/a
Project: T0600102158-AC Transit Seminary, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W6924.D	1	06/19/09	BD	n/a	n/a	VW233
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
	TPH-GRO (C6-C10)	ND	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		60-130%
2037-26-5	Toluene-D8	100%		60-130%
460-00-4	4-Bromofluorobenzene	109%		60-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

32
3

Client Sample ID: MW-2	
Lab Sample ID: C6150-2	Date Sampled: 06/12/09
Matrix: AQ - Ground Water	Date Received: 06/12/09
Method: SW846 8260B	Percent Solids: n/a
Project: T0600102158-AC Transit Seminary, Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W6931.D	200	06/19/09	BD	n/a	n/a	VW233
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	16800	200	ug/l	
108-88-3	Toluene	ND	200	ug/l	
100-41-4	Ethylbenzene	1340	200	ug/l	
1330-20-7	Xylene (total)	1340	400	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	200	ug/l	
	TPH-GRO (C6-C10)	40200	10000	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		60-130%
2037-26-5	Toluene-D8	101%		60-130%
460-00-4	4-Bromofluorobenzene	108%		60-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

32
3

Client Sample ID: MW-2		Date Sampled: 06/12/09
Lab Sample ID: C6150-2		Date Received: 06/12/09
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8015B M SW846 3510C		
Project: T0600102158-AC Transit Seminary, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG6278.D	20	06/17/09	JH	06/15/09	OP1060	GGG228
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	Units	Q
	TPH (C10-C28)	15.3	1.9	mg/l	
	TPH (> C28-C40)	ND	3.8	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	62%		45-140%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-3	Date Sampled: 06/12/09
Lab Sample ID: C6150-3	Date Received: 06/12/09
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: T0600102158-AC Transit Seminary, Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W6932.D	2	06/19/09	BD	n/a	n/a	VW233
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	168	2.0	ug/l	
108-88-3	Toluene	ND	2.0	ug/l	
100-41-4	Ethylbenzene	17.4	2.0	ug/l	
1330-20-7	Xylene (total)	4.4	4.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	ug/l	
	TPH-GRO (C6-C10)	694	100	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		60-130%
2037-26-5	Toluene-D8	102%		60-130%
460-00-4	4-Bromofluorobenzene	110%		60-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-3		
Lab Sample ID: C6150-3		Date Sampled: 06/12/09
Matrix: AQ - Ground Water		Date Received: 06/12/09
Method: SW846 8015B M SW846 3510C		Percent Solids: n/a
Project: T0600102158-AC Transit Seminary, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG6287.D	3	06/17/09	JH	06/15/09	OP1060	GGG229
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	Units	Q
	TPH (C10-C28) ^a	2.61	0.28	mg/l	
	TPH (> C28-C40)	ND	0.57	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
630-01-3	Hexacosane	70%		45-140%	

(a) Higher boiling gasoline compounds in Diesel range (C10-C16).

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

34
3

Client Sample ID: MW-1	
Lab Sample ID: C6150-4	Date Sampled: 06/12/09
Matrix: AQ - Ground Water	Date Received: 06/12/09
Method: SW846 8260B	Percent Solids: n/a
Project: T0600102158-AC Transit Seminary, Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W6933.D	5	06/19/09	BD	n/a	n/a	VW233
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	20.9	5.0	ug/l	
108-88-3	Toluene	ND	5.0	ug/l	
100-41-4	Ethylbenzene	35.6	5.0	ug/l	
1330-20-7	Xylene (total)	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	ug/l	
	TPH-GRO (C6-C10)	1640	250	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		60-130%
2037-26-5	Toluene-D8	101%		60-130%
460-00-4	4-Bromofluorobenzene	110%		60-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-1		
Lab Sample ID: C6150-4		Date Sampled: 06/12/09
Matrix: AQ - Ground Water		Date Received: 06/12/09
Method: SW846 8015B M SW846 3510C		Percent Solids: n/a
Project: T0600102158-AC Transit Seminary, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG6274.D	1	06/17/09	JH	06/15/09	OP1060	GGG228
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	Units	Q
	TPH (C10-C28) ^a	0.170	0.095	mg/l	
	TPH (> C28-C40)	ND	0.19	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
630-01-3	Hexacosane	79%		45-140%	

(a) Higher boiling gasoline compounds in Diesel range (C10-C16).

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

3.5
3

Client Sample ID: MW-9	
Lab Sample ID: C6150-5	Date Sampled: 06/12/09
Matrix: AQ - Ground Water	Date Received: 06/12/09
Method: SW846 8260B	Percent Solids: n/a
Project: T0600102158-AC Transit Seminary, Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W6934.D	1	06/19/09	BD	n/a	n/a	VW233
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.1	1.0	ug/l	
	TPH-GRO (C6-C10)	ND	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		60-130%
2037-26-5	Toluene-D8	101%		60-130%
460-00-4	4-Bromofluorobenzene	108%		60-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

3.5
3

Client Sample ID: MW-9		Date Sampled: 06/12/09
Lab Sample ID: C6150-5		Date Received: 06/12/09
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8015B M SW846 3510C		
Project: T0600102158-AC Transit Seminary, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG6275.D	1	06/17/09	JH	06/15/09	OP1060	GGG228
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	Units	Q
	TPH (C10-C28)	ND	0.094	mg/l	
	TPH (> C28-C40)	0.932	0.19	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	83%		45-140%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-10		
Lab Sample ID: C6150-6		Date Sampled: 06/12/09
Matrix: AQ - Ground Water		Date Received: 06/12/09
Method: SW846 8260B		Percent Solids: n/a
Project: T0600102158-AC Transit Seminary, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W6935.D	1	06/19/09	BD	n/a	n/a	VW233
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
	TPH-GRO (C6-C10)	ND	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		60-130%
2037-26-5	Toluene-D8	102%		60-130%
460-00-4	4-Bromofluorobenzene	109%		60-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-10		Date Sampled: 06/12/09
Lab Sample ID: C6150-6		Date Received: 06/12/09
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8015B M SW846 3510C		
Project: T0600102158-AC Transit Seminary, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG6276.D	1	06/17/09	JH	06/15/09	OP1060	GGG228
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	Units	Q
	TPH (C10-C28)	ND	0.094	mg/l	
	TPH (> C28-C40)	0.360	0.19	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	81%		45-140%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

37
3

Client Sample ID: MW-11		Date Sampled: 06/12/09
Lab Sample ID: C6150-7		Date Received: 06/12/09
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260B		
Project: T0600102158-AC Transit Seminary, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W6936.D	1	06/19/09	BD	n/a	n/a	VW233
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
	TPH-GRO (C6-C10)	ND	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		60-130%
2037-26-5	Toluene-D8	100%		60-130%
460-00-4	4-Bromofluorobenzene	107%		60-130%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

37
3

Client Sample ID: MW-11		Date Sampled: 06/12/09
Lab Sample ID: C6150-7		Date Received: 06/12/09
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8015B M SW846 3510C		
Project: T0600102158-AC Transit Seminary, Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG6277.D	1	06/17/09	JH	06/15/09	OP1060	GGG228
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	Units	Q
	TPH (C10-C28)	ND	0.095	mg/l	
	TPH (> C28-C40)	ND	0.19	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	79%		45-140%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest NC Job #: C6150
<input type="checkbox"/> 8260 Full List <input type="checkbox"/> 824 <input type="checkbox"/> with/TPH as Gasoline <input type="checkbox"/> 8260 Parts (includes BTEX/MTBE/TBA/TEBE/THP/TAHE/1,2,4-DCA/EDB <input type="checkbox"/> TPH as Gas <input type="checkbox"/> 8270 <input type="checkbox"/> PAHs only <input type="checkbox"/> 628 <input type="checkbox"/> + TICs <input type="checkbox"/> <input type="checkbox"/> TPH-Extractable - Diesel - Motor Oil - Other <input type="checkbox"/> <input type="checkbox"/> With Silica Gel Cleanup <input type="checkbox"/> METALS: Cd/Mn/Pb/Li/Fe/Co Ni/Cr/V/Cu Pesticides-0081 <input type="checkbox"/> PCBs-0082 <input type="checkbox"/> 608 <input type="checkbox"/> BTEX-MBE-TPH as Gasoline by GC/MS-FID <input type="checkbox"/> 609 BTEX, MTBE by GC/MS Dissolved Solids for 0.1 by 8895 and Health Solids for 0.1 by 8895	
Requested Analysis	Matrix Codes
WW- Water GW- Ground Water SW- Surface Water SC- Soil OL- Oil WP- Wipe LIQ- Non-aqueous Liquid AIR DW- Drinking Water (Perchlorate Only)	LAB USE ONLY

Client / Reporting Information		Project Information	
Company Name <i>CAMERON-COLET</i>	Project Name <i>ACT - Seminary</i>	Address <i>101 W. ATLANTIC AVE., BLDG. 90</i>	Street <i>1100 Seminary</i>
City <i>ALAMEDA, CA 94501</i>	City <i>Dakland, CA</i>	State <i>CA</i>	State
Project Contact <i>SHAWN SURANI</i>	Project # <i>2036-002</i>	Phone # <i>510-769-9579</i>	EMAIL: <i>SSURANI@CAMERON-COLET.COM</i>
Samplers Name <i>DB</i>	Client Purchase Order #	Collection	
Accutest Sample ID	Sample ID / Field Point / Point of Collection	Date	Time
	<i>MW-10</i>	<i>6/12/09</i>	<i>13:55</i>
	<i>MW-11</i>	<i>6/12/09</i>	<i>14:35</i>
	<i>↓</i>	<i>6/12/09</i>	<i>↓</i>

Turnaround Time (Business days)	Data Deliverable Information	Comments / Remarks
<input type="checkbox"/> Std. 15 Business Days <input checked="" type="checkbox"/> 10 Day (Workload dependent) <input type="checkbox"/> 5 Day (Workload dependent) <input type="checkbox"/> 3 Day (125% markup) <input type="checkbox"/> 2 Day (150% markup) <input type="checkbox"/> 1 Day (200% markup) <input type="checkbox"/> Same Day (300% markup)	<input type="checkbox"/> Commercial "A" <input checked="" type="checkbox"/> Commercial "B" <input type="checkbox"/> EDF for Geotracker <input checked="" type="checkbox"/> EDD Format Provide EDF Global ID <i>FD 60010258</i> Provide EDF Logcode:	

Emergency TIA data available VIA Lablink

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler: <i>Dawn C. Baker</i>	Date Time: <i>6/12/09 1555</i>	Received By: <i>[Signature]</i>	Relinquished By: <i>[Signature]</i>	Date Time: <i>6/12/09 1605</i>	Received By: <i>[Signature]</i>
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3					
Relinquished by:	Date Time:	Received By:	Custody Seal #	Appropriate Bottle / Pres. Y/N	Headspace Y/N
5					

**Accutest Laboratories Northern California
STANDARD OPERATING PROCEDURE**

Sample Receiving Checklist

Job # C6150
Sample Control Initial JM

Review Chain of Custody The Chain of Custody is to be completely and legibly filled out by Client.

- Are these regulatory (NPDES) samples? Yes No circle one
- Is pH requested? Yes No circle one Was Client informed that hold time is 15 min? Yes / No circle one
If yes, did Client consent to continue? _____
- Are sample within hold time? Yes No circle one Are sample in danger of exceeding its hold-time within 6-48 hours?
- Report to info is complete and legible, including:
 - Type of deliverable needed Name Address phone e-mail
- Bill to info is complete and legible, including: PO# Credit card Contact address phone e-mail
- Contact and/or Project Manager identified, including: phone e-mail
- Project name / number Special requirements? Yes / No circle one
- Sample IDs / date & time of collection provided? Yes / No circle one
- Is Matrix listed and correct? Yes No circle one
- Analyses listed are those we do or client has authorized a subcontract? Yes / No circle one
- Chain is signed and dated by both client and sample custodian? Yes No circle one
- TAT requested available? Approved by N/A

Review Coolers:

- Were Coolers temperatures measured at ≤6°C? Cooler # _____ Temp 3.8°C
 - If cooler is outside the ≤6°C: note down below the affected bottles in that cooler
 - Note that ANC does NOT accept evidentiary samples. (We do not lock refrigerators)
- Shipment Method Accutest Courier

Custody Seals: Present : Yes No circle one Unbroken: Yes / No circle one

Review of Sample Bottles: If you answer no, explain below

- Sample ID / bottle number / Date / Time of bottle labels match the COC? Yes No circle one
- Sample bottle intact? Yes No circle one
- Is there enough samples for requested analyses? If so, were samples placed in proper containers? Yes No circle one
- Proper Preservatives? Check pH on preserved samples except 1664, 625, 8270 and VOAs and list below
- Are VOAs received without headspace? Size of bubble (not greater than 6mm in diameter) Yes / No circle one
List sample ID and affected container N/A

Lab #	Client Sample ID	pH Check	Other Comments/Issues

Non-Compliance issues and discrepancies on the COC are forwarded to Project Management

\\Anc-srv-file1\Entech-Data\Laboratory\Sample_Control\Form_Sample Receipt Checklist_Rev0.doc

C6150: Chain of Custody
Page 3 of 3

CHAIN OF CUSTODY

3334 Victor Court, Santa Clara, CA 95054
 (408) 588-0200 FAX: (408) 588-0201

FED-EX Tracking # _____ Bottle Order Control # _____
 Accutest Quote # _____ Accutest NC Job #: C _____

Client / Reporting Information		Project Information	
Company Name <i>CAMERON-COLE</i>	Project Name: <i>ACT - Seminary</i>	Address <i>101 W. ATLANTIC AVE., BLDG. 90</i>	Street <i>1100 Seminary</i>
City <i>ALAMEDA, CA 94501</i>	State <i>CA</i>	City <i>Oakland, CA</i>	State <i>CA</i>
Project Contact: <i>SHAWN SURANI</i>	Project # <i>2036-002</i>	Phone # <i>510-769-3579</i>	EMAIL: <i>SSURANI@CAMERON-COLE.COM</i>
Samplers's Name <i>DB</i>	Client Purchase Order #		

Requested Analysis	Matrix Codes

Accutest Sample ID	Sample ID / Field Point / Point of Collection	Collection			Matrix	# of bottles	Number of preserved Bottles												
		Date	Time	Sampled by			PCI	NiOH	PHO3	H2SO4	NONE	NH4SO4	MEOH	ENCORE					
	<i>MW-10</i>	<i>6/12/09</i>	<i>13:55</i>	<i>DB</i>	<i>GW</i>	<i>2</i>													
	<i>MW-11</i>	<i>6/17/09</i>	<i>14:35</i>	<i>↓</i>	<i>↓</i>	<i>3</i>	<i>X</i>												
	<i>↓</i>	<i>6/18/09</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>2</i>						<i>X</i>							

Turnaround Time (Business days)	Approved By/ Date:	Data Deliverable Information	Comments / Remarks
<input type="checkbox"/> Std. 15 Business Days <input checked="" type="checkbox"/> 10 Day (Workload dependent) <input type="checkbox"/> 5 Day (Workload dependent) <input type="checkbox"/> 3 Day (125% markup) <input type="checkbox"/> 2 Day (150% markup) <input type="checkbox"/> 1 Day (200% markup) <input type="checkbox"/> Same Day (300% markup)	<input type="checkbox"/> Commercial "A" <input checked="" type="checkbox"/> Commercial "B" <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> EDF for Geotracker <input checked="" type="checkbox"/> EDD Format Provide EDF Global ID <i>T060010258</i> Provide EDF Logcode: _____		

Emergency T/A data available VIA Lablink

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler: <i>1</i> <i>Shawn C. Baker</i>	Date Time: <i>6/12/09 1555</i>	Received By: <i>[Signature]</i>	Relinquished By: <i>2</i>	Date Time:	Received By: <i>2</i>
Relinquished by: <i>3</i>	Date Time:	Received By: <i>3</i>	Relinquished By: <i>4</i>	Date Time:	Received By: <i>4</i>
Relinquished by: <i>5</i>	Date Time:	Received By: <i>5</i>	Custody Seal #	Appropriate Bottle / Pres. Y / N	Headspace Y / N
			Labels match Coc? Y / N	Separate Receipt Log Y / N	On Ice Y / N
					Cooler Temp. _____ °C

APPENDIX B

SAMPLING EVENT DATA

HYDRODATA

PROJECT: AC Transit - Seminary EVENT: 2Q2009 Groundwater Monitoring SAMPLER: DB

NO.	WELL OR LOCATION	DATE	TIME	MEASUREMENT	CODE	COMMENTS
1	MW-1	6/12/2009	0915	3.70		
2	MW-2	6/12/2009	0940 0907 (S)	3.65		
3	MW-3	6/12/2009	0903	2.61		
4	MW-9	6/12/2009	0907	4.04		
5	MW-10	6/12/2009	0852	3.38		
6	MW-11	6/12/2009	0859	2.30		
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

CODES:

SWL - Static Water Level

OIL - Oil Level

OWI - Oil/Water Interface

MTD - Measured Total Depth

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SAMPLING EVENT DATA SHEET

WELL OR LOCATION MW-1

PROJECT AC Transit - Seminary EVENT 2Q2009 SAMPLER DB DATE 6/12/2009

	Well type <u>MW</u> (MW, EW, PZ, etc.)	ACTION	TIME	PUMP RATE (gpm)	DTW
	Diameter <u>2"</u>	Start Pump / Begin	<u>12:07</u>	<u>0.60</u>	<u>3.70</u>
	<u>0.165</u> gal/ft. casing				
		Stop	<u>12:17</u>		
		Sampled	<u>12:20</u>		
	Final IWL				<u>8.35</u>
PURGE CALCULATION					
$0.165 \text{ gal/ft.} \times \frac{11.60 \text{ ft.}}{\text{SWL to TD}} = \frac{1.91 \text{ gals.}}{\text{one volume}} \times 3 = \frac{5.74 \text{ gals.}}{\text{purge volume - 3 casings}}$					
2" = 0.165 gal/ft. 4" = 0.65 gal/ft. 6" = 1.47 gal/ft.					

Equipment Used / Sampling Method / Description of Event:
 Cent. Pump used to purge;
 disp. bailer used to sample.

Actual gallons purged	<u>6</u>
Actual volumes purged	<u>3.14</u>
Well Yield ⊕	<u>HY</u>
COC # _____	

Additional Comments:

Sample I.D.	Analysis	Lab
<u>MW-1</u>	<u>599, BTEX, MTBE by 82608</u>	<u>Accutest</u>
<u>↓</u>	<u>diesel/motor oil by 82608</u>	<u>↓</u>

Gallons Purged *	Temp °C	EC <u>45</u> (us/cm)	pH	Turbidity (NTU)	Other
<u>1</u>	<u>19.2</u>	<u>1447</u>	<u>7.02</u>	<u>333.9</u>	
<u>3</u>	<u>18.7</u>	<u>1450</u>	<u>7.01</u>	<u>29.9</u>	
<u>5</u>	<u>18.6</u>	<u>1580</u>	<u>6.91</u>	<u>346.4</u>	

*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 returning later or next day. VLY - Minimal recharge - unable to purge 3 volumes.

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SAMPLING EVENT DATA SHEET

WELL OR LOCATION MW-2

PROJECT AC Transit - Seminary EVENT 2Q2009 SAMPLER DB DATE 6/12/2009

<p>Intake depth <u>20</u></p> <p>SWL <u>3.65</u> (if above screen)</p> <p>SWL _____ (if in screen)</p> <p>Measured TD <u>23.30</u></p> <p>Diameter <u>2"</u></p> <p><u>0.165</u> gal/ft. casing</p> <p>=TOP</p> <p>=BOP</p> <p>=TD (as built)</p>	Well type <u>MW</u> (MW, EW, PZ, etc.)	ACTION	TIME	PUMP RATE (gpm)	DTW
	Start Pump / Begin	<u>0955</u>	<u>0.66</u>	<u>3.65</u>	
		<u>10 07</u>		<u>18.75</u>	
	Stop	<u>10:10</u>		<u>13.89</u>	
	Sampled	<u>10:15</u>			
Final IWL					
PURGE CALCULATION					
$0.165 \text{ gal/ft.} \times \frac{19.65 \text{ ft.}}{\text{SWL to TD}} = \frac{3.24 \text{ gals.}}{\text{one volume}} \times 3 = \frac{9.73 \text{ gals.}}{\text{purge volume - 3 casings}}$					
2" = 0.165 gal/ft. 4" = 0.65 gal/ft. 6" = 1.47 gal/ft.					

Equipment Used / Sampling Method / Description of Event:

Cent. Pump used to purge;
disp. bailer used to sample.

Actual gallons purged	<u>10</u>
Actual volumes purged	<u>3.09</u>
Well Yield ⊕	<u>MY</u>
COC #	_____

Additional Comments:

Sample I.D.	Analysis	Lab
<u>MW-2</u>	<u>993, BTEX, MTBE by 8260B</u>	<u>Accutest</u>
<u>↓</u>	<u>Diesel, MTBE 0.1 by 8015 Mod</u>	<u>↓</u>

Gallons Purged *	Temp °C	EC $\mu\text{S/cm}$	pH	Turbidity (NTU)	Other
<u>3</u>	<u>18.8</u>	<u>2.65</u>	<u>6.79</u>	<u>114.5</u>	
<u>6</u>	<u>18.7</u>	<u>2.62</u>	<u>6.80</u>	<u>186.3</u>	
<u>9</u>	<u>18.8</u>	<u>2.63</u>	<u>6.78</u>	<u>251.5</u>	
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 returning later or next day. VLY - Minimal recharge - unable to purge 3 volumes.

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SAMPLING EVENT DATA SHEET

WELL OR LOCATION MW-3

PROJECT AC Transit - Seminary EVENT 2Q2009 SAMPLER DB DATE 6/12/2009

	Well type <u>MW</u> (MW, EW, PZ, etc.)	ACTION	TIME	PUMP RATE (gpm)	DTW
	Diameter <u>2"</u>	Start Pump / Begin	<u>11:25</u>	<u>0.80</u>	<u>2.63</u>
	<u>0.165</u> gal/ft. casing		<u>11:33</u>		<u>13.02</u>
		Stop	<u>11:35</u>		
		Sampled	<u>11:40</u>		
	Final IWL				<u>10.96</u>
PURGE CALCULATION					
$0.165 \text{ gal/ft.} * \frac{14.4 \text{ ft.}}{\text{SWL to TD}} = \frac{2.38 \text{ gals.}}{\text{one volume}} * 3 * \frac{7.13 \text{ gals.}}{\text{purge volume - 3 casings}}$					
Measured TD <u>17.00</u> =TOP =BOP =TD (as built)					
2" = 0.165 gal/ft. 4" = 0.65 gal/ft. 6" = 1.47 gal/ft.					

Equipment Used / Sampling Method / Description of Event: Cent. Pump used to purge; disp. bailer used to sample.	Actual gallons purged <u>8</u> Actual volumes purged <u>3.36</u> Well Yield \oplus <u>MY</u> COC # _____
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Additional Comments:	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:33%;">Sample I.D.</th> <th style="width:33%;">Analysis</th> <th style="width:33%;">Lab</th> </tr> </thead> <tbody> <tr> <td><u>MW-3</u></td> <td><u>345, BTEX, MTBE by 8/26/09</u></td> <td><u>Accutest</u></td> </tr> <tr> <td><u>↓</u></td> <td><u>2,4-dichloropheno. by 8/21/09</u></td> <td><u>↓</u></td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Sample I.D.	Analysis	Lab	<u>MW-3</u>	<u>345, BTEX, MTBE by 8/26/09</u>	<u>Accutest</u>	<u>↓</u>	<u>2,4-dichloropheno. by 8/21/09</u>	<u>↓</u>									
Sample I.D.	Analysis	Lab																	
<u>MW-3</u>	<u>345, BTEX, MTBE by 8/26/09</u>	<u>Accutest</u>																	
<u>↓</u>	<u>2,4-dichloropheno. by 8/21/09</u>	<u>↓</u>																	

Gallons Purged *	Temp °C	EC μS (us/cm)	pH	Turbidity (NTU)	Other
<u>2</u>	<u>21.0</u>	<u>363</u>	<u>7.34</u>	<u>37.54</u>	
<u>4</u>	<u>20.4</u>	<u>569</u>	<u>7.23</u>	<u>306.1</u>	
<u>6</u>	<u>20.5</u>	<u>802</u>	<u>7.13</u>	<u>265.0</u>	
4.					
5.					

*Take measurement at approximately each casing volume purged. \oplus 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 returning later or next day. VLY - Minimal recharge - unable to purge 3 volumes.

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SAMPLING EVENT DATA SHEET

WELL OR LOCATION MW-9

PROJECT AC Transit - Seminary EVENT 2Q2009 SAMPLER DB DATE 6/12/2009

	Well type <u>MW</u> (MW, EW, PZ, etc.)	ACTION	TIME	PUMP RATE (gpm)	DTW
	Diameter <u>2"</u>	Start Pump / Begin	<u>12:43</u>	<u>0.67</u>	<u>4.06</u>
	<u>0.165</u> gal/ft. casing		<u>12:48</u>		<u>14.04</u>
		Stop	<u>12:56</u>		
		Sampled	<u>13:00</u>		
	Final IWL				<u>14.61</u>

PURGE CALCULATION			
<u>0.165</u> gal/ft. *	<u>15.64</u> ft. =	<u>2.58</u> gals. X 3	<u>7.74</u> 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 / Description of Event:
Cent. Pump used to purge;
disp.bailer used to sample.

Actual gallons purged	<u>8</u>
Actual volumes purged	<u>3.10</u>
Well Yield ⊕	<u>MY</u>
COC #	

Additional Comments:

Sample I.D.	Analysis	Lab
<u>MW-9</u>	<u>gas, BTEX, MTBE by 8260A</u>	<u>Accutest</u>
<u>↓</u>	<u>diethyl/methyl oil by 8015M</u>	<u>↓</u>

Gallons Purged *	Temp °C	EC <u>uS</u> (us/cm)	pH	Turbidity (NTU)	Other
<u>2</u>	<u>20.6</u>	<u>1061</u>	<u>7.45</u>	<u>285.0</u>	
<u>4</u>	<u>20.3</u>	<u>1445</u>	<u>7.38</u>	<u>701.9</u>	
<u>6</u>	<u>20.9</u>	<u>1435</u>	<u>7.44</u>	<u>121.5</u>	

*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 returning later or next day. VLY - Minimal recharge - unable to purge 3 volumes.

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SAMPLING EVENT DATA SHEET

WELL OR LOCATION MW-10

PROJECT AC Transit - Seminary EVENT 2Q2009 SAMPLER DB DATE 6/12/2009

<p>Intake depth <u>10'</u></p> <p>SWL <u>3.24</u> (if above screen)</p> <p>SWL _____ (if in screen)</p> <p>Measured TD <u>11.40</u></p> <p>Diameter <u>2"</u></p> <p><u>0.165</u> gal/ft. casing</p> <p>=TOP</p> <p>=BOP</p> <p>=TD (as built)</p>	Well type <u>MW</u> (MW, EW, PZ, etc.)	ACTION	TIME	PUMP RATE (gpm)	DTW
	Start Pump / Begin	<u>13:36</u>	<u>0.50</u>	<u>3.24</u>	
	Stop	<u>13:46</u>	↓		
	Sampled	<u>13:55</u>			
	Final IWL				
	PURGE CALCULATION				
$0.165 \text{ gal/ft.} \times \frac{8.16 \text{ ft.}}{\text{SWL to TD}} = \frac{1.35 \text{ gals.}}{\text{one volume}} \times 3 = \frac{4.04 \text{ gals.}}{\text{purge volume - 3 casings}}$ <p>2" = 0.165 gal/ft. 4" = 0.65 gal/ft. 6" = 1.47 gal/ft.</p>					

Equipment Used / Sampling Method / Description of Event:

Cent. Pump used to purge;
disp.bailer used to sample.

Actual gallons purged 5

Actual volumes purged 3.70

Well Yield ⊕ MY

COC # _____

Additional Comments:

Sample I.D.	Analysis	Lab
<u>MW-10</u>	<u>745 BTX, MTBE, For 8/10/09</u>	<u>Accutest</u>
↓	<u>diesel/motor oil For 8/15/09</u>	↓

Gallons Purged *	Temp °C	EC ^{mS} (us/cm)	pH	Turbidity (NTU)	Other
<u>1</u>	<u>22.2</u>	<u>4.03</u>	<u>7.09</u>	<u>1100+</u>	
<u>2</u>	<u>22.2</u>	<u>4.05</u>	<u>7.05</u>	<u>1100+</u>	
<u>3</u>	<u>22.2</u>	<u>4.01</u>	<u>7.03</u>	<u>1100+</u>	
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 returning 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 Transit - Seminary EVENT 2Q2009 SAMPLER DB DATE 6/12/2009

	Well type <u>MW</u> (MW, EW, PZ, etc.)	ACTION	TIME	PUMP RATE (gpm)	DTW
	Diameter <u>2"</u>	Start Pump / Begin	<u>14:17</u>	<u>0.60</u>	<u>2.30</u>
	<u>0.165</u> gal/ft. casing				
	Intake depth <u>11"</u>				
	SWL <u>2.30</u> (if above screen)				
	SWL _____ (if in screen)				
Measured TD <u>13.44</u>		Stop	<u>14:27</u>		
		Sampled	<u>14:35</u>		
		Final IWL			<u>10.76</u>
PURGE CALCULATION					
$0.165 \text{ gal/ft.} * 11.14 \text{ ft.} = 1.84 \text{ gals.} \times 3 = 5.51 \text{ gals.}$ <p style="text-align: center; font-size: small;">SWL to TD one volume purge volume - 3 casings</p> <p style="text-align: center; font-size: x-small;">2" = 0.165 gal/ft. 4" = 0.65 gal/ft. 6" = 1.47 gal/ft.</p>					

Equipment Used / Sampling Method / Description of Event:
Cent. Pump used to purge;
disp. bailer used to sample.

Actual gallons purged	<u>6</u>
Actual volumes purged	<u>3.26</u>
Well Yield ⊕	<u>LY</u>
COC # _____	

Additional Comments:
Kept pumping dry; very low flow rate.

Sample I.D.	Analysis	Lab
<u>MW-11</u>	<u>gas, BTEX, MTBE by 8240B</u>	<u>Accutest</u>
<u>↓</u>	<u>diesel/motor oil by 5015 M</u>	<u>↓</u>

Gallons Purged *	Temp °C	EC μS (us/cm)	pH	Turbidity (NTU)	Other
<u>1</u>	<u>22.8</u>	<u>1593</u>	<u>7.48</u>	<u>1100+</u>	
<u>3</u>	<u>22.5</u>	<u>1362</u>	<u>7.45</u>	<u>118.2</u>	
<u>5</u>	<u>22.8</u>	<u>1335</u>	<u>7.45</u>	<u>1100+</u>	

*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 returning later or next day. VLY - Minimal recharge - unable to purge 3 volumes.