Alameda-Contra Costa Transit District

July 14, 2005

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

Dear Mr. Chan:

Subject: Quarterly Groundwater Monitoring Report – May 2005 Sampling
AC Transit, 1100 Seminary Avenue, Oakland, CA

AC Transit hereby submits the enclosed quarterly groundwater monitoring report for the May 2005 sampling event at the 1100 Seminary Avenue, Oakland, facility. The report was prepared by our consultants, Cameron-Cole.

On May 5, 2005, groundwater sampling of six monitoring wells (MW-1 through MW-3 and MW-9 through MW-11) was performed by Cameron-Cole in accordance with directives from your office. Groundwater samples were collected and analyzed for total petroleum hydrocarbons (TPH) as gasoline and diesel using EPA Method 8015, benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl-tert butyl ether (MTBE) using EPA Method 8260B and nitrate and sulfate using Standard Methods 300.0A. Field parameters collected during sampling included pH, temperature, electrical conductivity, dissolved oxygen, ferrous iron and oxidation reduction potential. In addition, monitoring well MW-2 is being purged dry monthly and during each quarterly sampling event.

Sample results continue to show that TPH and related compounds are primarily restricted to monitoring wells MW-1, MW-2 and MW-3, installed near the former underground tank farm. Concentrations of benzene above the State of California maximum contaminant level (MCL) of 1.0 parts per billion (ppb) were detected in monitoring wells MW-1, MW-2, MW-3 and MW-9. Free phase product has not been measured in well MW-2 since the second quarter of 2002.

We have not received a response to our previous requests for your approval to allow us to change the monitoring frequency from quarterly to semi-annual. Unless we hear otherwise from your agency, we will begin the semi-annual monitoring schedule starting in August of this year. If you have any questions regarding this report or other matters pertaining to this site, please call me at (510) 577-8869.

Sincerely,

Suzanne Chaewsky

Suzanne Chaewsky, P.E.
Environmental Engineer
enclosure

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

July 2005

Prepared For:

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

Prepared By:

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

CAMERON-COLE

Project No: 2016

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Written By
Adam Weinberg
Environmental Scientist

Approved By
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Principle Hydrogeologist

STATE OF CALIFORNIA REGISTERED GEOLOGIST #6276 Exp. 9/06 BRADLEY D. WRIGHT REGISTERED GEOLOGIST

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INTRODUCTION

This report presents the results of the May 2005 sampling event for the AC Transit facility located at 1100 Seminary Avenue, Oakland, California (Site) (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 sampling included measuring depth to water and presence of free phase hydrocarbons in the monitor wells and collecting water samples. Field parameters collected during sampling included pH, temperature, electric conductivity, dissolved oxygen (DO), ferrous iron (Fe^{2+}) and oxygen reduction potential (ORP). Groundwater samples were collected for laboratory analysis using United States Environmental Protection Agency (USEPA) Method 8015 for total petroleum hydrocarbons (TPH) gasoline/diesel, USEPA Method 8021B for benzene, toluene, ethylbenzene, and xylene (BTEX) and methyl-tert butyl ether (MTBE) and methods of chemical analysis for water and waste (MCAWW) 300.0A for nitrate and sulfate.

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 inspected and measured for 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 0.007 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, DO, ORP, Fe^{2+} and temperature were monitored using calibrated field meters.

In addition, MW-2 is now being purged of ten casing volumes monthly and during all quarterly sampling events to expedite the removal of free phase hydrocarbons from the vicinity of the well. Field data sheets of the over-purge events are included in Appendix B.

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.

Groundwater Analytical Results

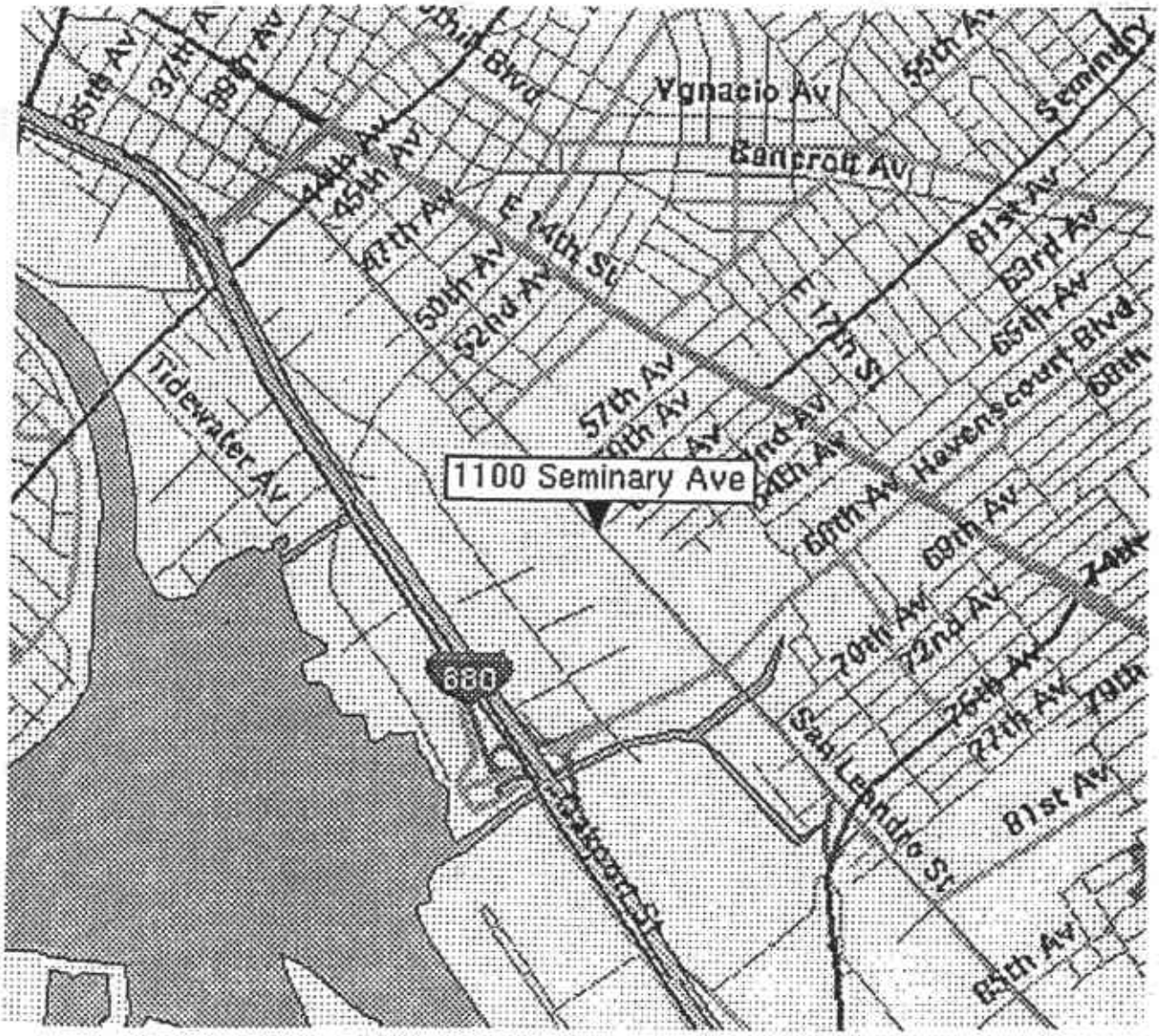
Table 2 presents groundwater historic and second quarter 2005 analytical results. Concentrations of benzene above the State of California maximum contaminant level (MCL) of 1.0 part per billion (ppb) were detected in monitor wells MW-1, MW-2, MW-3, and MW-9. Toluene was detected above the MCL of 150 ppb in monitor well MW-2. Ethylbenzene was detected above the MCL of 300 ppb in monitor well MW-2. Total xylenes were detected above the MCL of 1,750 ppb in MW-2. TPH-gasoline was detected above the reporting limit in monitor wells MW-1, MW-2, and MW-3. TPH-diesel was detected above the reporting limit in wells MW-1, MW-2, MW-3, and MW-9.

SUMMARY OF RESULTS

- Groundwater flow direction is towards the west at a gradient of 0.007 feet/foot.
- Chemical concentrations in excess of MCLs were limited to benzene in wells MW-1, MW-2, MW-3, and MW-9, and toluene, ethylbenzene and xylenes in well MW-2.
- Gasoline was found to be present in groundwater samples taken from wells MW-1 (512 ppb), MW-2 (38,600 ppb), and MW-3 (2,920 ppb).
- Diesel was found to be present in groundwater samples taken from MW-1 (670 ppb), MW-2 (18,300 ppb), MW-3 (670 ppb), and MW-9 (190 ppb).
- The free phase product level previously measured in well MW-2 has not been detected since the second quarter 2002.

PROJECTED WORK AND RECOMMENDATIONS

Because of the consistency of quarterly groundwater monitoring data collected since February 2000, it was recommended that the groundwater monitoring program be modified to a semi-annual schedule. To date ACHCS has not commented on this recommendation.



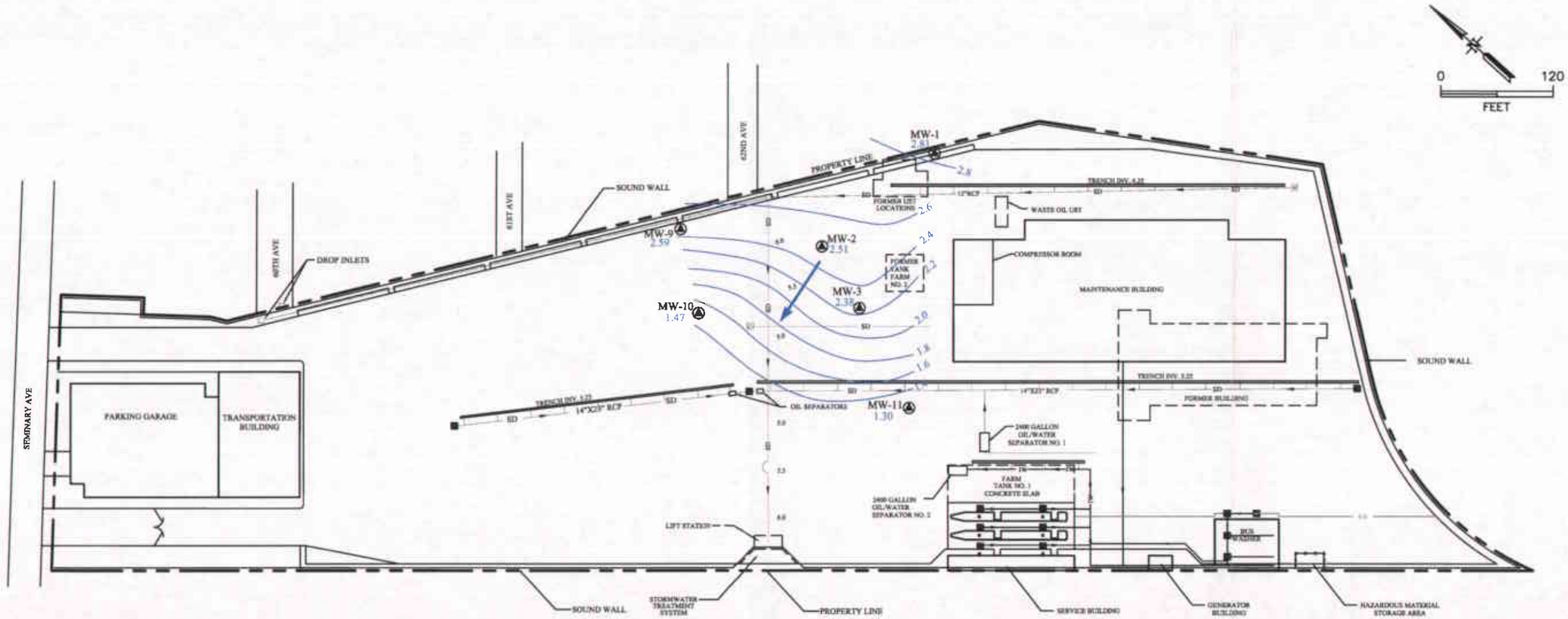
CAMERON-COLE

AC TRANSIT - OAKLAND, CALIFORNIA

FIGURE 1
SITE LOCATION MAP
1100 SEMINARY ROAD

SCALE	DATE
NO SCALE	3/22/00

LOCMAP



LEGEND

1.0 — GROUNDWATER ELEVATION CONTOUR	EXISTING MONITORING WELL
1.99 GROUNDWATER ELEVATION (FT. MSL)	MANHOLE
REPORTED GROUNDWATER FLOW	CATCH BASIN
SD — STORM DRAIN PIPELINE	0.05* MW-2 NOT INCLUDED
6.0 — CONTOUR	
IW — INDUSTRIAL WASTE PIPELINE	
SURFACE DRAINAGE TRENCH	

	BY	DATE
DRAWN	SPS	5/31/05
CHECKED		
APPROVED		
APPROVED		
APPROVED		

CAMERON-COLE

FIGURE 2

AC TRANSIT - OAKLAND, CALIFORNIA

1100 SEMINARY ROAD-POTENTIOMETRIC SURFACE MAP
MAY 2005

SCALE: 1" = 120'

DWG. NO.: 2011-20

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**
MW-1	7-Jan-99	6.25	None	5.13	1.12	
	7-Feb-00		None	3.75	2.5	
	25-May-00		None	3.69	2.56	
	22-Aug-00		None	4.79	1.46	
	20-Nov-00		None	4.92	1.33	
	1-Mar-01		None	2.75	3.50	
	14-May-01		None	3.67	2.58	
	26-Jul-01		None	4.73	1.52	
	16-Oct-01		None	5.35	0.90	
	21-Feb-02		None	3.30	2.95	
	29-May-02		None	3.70	2.55	
	17-Sep-02		None	4.85	1.40	
	14-Nov-02		None	4.59	1.66	
	5-Feb-03		None	3.37	2.88	
	14-May-03		None	3.17	3.08	
	22-Aug-03		None	4.52	1.73	
	20-Nov-03		None	4.61	1.64	
	9-Feb-04		None	3.05	3.20	
	25-May-04		None	3.22	3.03	
	16-Aug-04		None	4.65	1.60	
	18-Nov-04		None	3.81	2.44	
	22-Feb-05		None	2.62	3.63	
	5-May-05		**None**	**3.44**	**2.81**	
MW-2	7-Jan-99	5.53	2.27	6.91	-1.38	0.44
	8-Jun-99		2.23	5.83	-0.3	1.48
	9-Jun-99		0	3.9	1.63	1.63
	10-Jun-99		0	3.9	1.63	1.63
	15-Jun-99		0.42	3.92	1.61	1.95
	8-Jul-99		0.2	4.3	1.23	1.39
	7-Feb-00		Sheen	3.8	1.73	
	25-May-00		0.12	3.23	2.3	2.40
	22-Aug-00		0.23	4.45	1.08	1.10
	20-Nov-00		0.23	4.70	0.83	0.85
	1-Mar-01		0.13	2.75	2.78	2.79
	14-May-01		Sheen	3.30	2.23	
	26-Jul-01		None	3.27	2.26	
	16-Oct-01		0.02	5.25	0.28	0.28
	21-Feb-02		0.01	3.32	2.21	2.21
	29-May-02		0.02	2.98	2.55	2.55
	17-Sep-02		None	4.83	0.70	
	14-Nov-02		None	5.43	0.10	
	5-Feb-03		None	3.85	1.68	
	14-May-03		None	2.94	2.59	
	22-Aug-03		None	4.20	1.33	
	20-Nov-03		None	4.68	0.85	
	9-Feb-04		None	2.94	2.59	
	25-May-04		None	2.90	2.63	
	16-Aug-04		None	4.30	1.23	
	18-Nov-04		None	4.67	0.86	
	22-Feb-05		None	5.48	0.05	
	5-May-05		**None**	**3.02**	**2.51**	

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**
MW-3	7-Jan-99	4.76	None	4.11	0.65	
	7-Feb-00		None	3.1	1.66	
	25-May-00		None	2.41	2.35	
	22-Aug-00		None	3.45	1.31	
	20-Nov-00		None	3.42	1.34	
	1-Mar-01		None	2.00	2.76	
	14-May-01		None	2.64	2.12	
	26-Jul-01		None	3.17	1.59	
	16-Oct-01		None	3.97	0.79	
	21-Feb-02		None	2.20	2.56	
	29-May-02		None	2.52	2.24	
	17-Sep-02		None	3.65	1.11	
	14-Nov-02		None	3.47	1.29	
	5-Feb-03		None	2.19	2.57	
	14-May-03		None	2.12	2.64	
	22-Aug-03		None	3.25	1.51	
	20-Nov-03		None	3.40	1.36	
	9-Feb-04		None	2.06	2.70	
	25-May-04		None	2.10	2.66	
	16-Aug-04		None	3.36	1.40	
	18-Nov-04		None	2.68	2.08	
	22-Feb-05		None	1.90	2.86	
	5-May-05		**None**	**2.38**	**2.38**	
MW-9	7-Feb-00	5.8	None	4.37	1.43	
	25-May-00		None	4.95	0.85	
	22-Aug-00		None	5.18	0.62	
	20-Nov-00		None	4.70	1.10	
	1-Mar-01		None	3.03	2.77	
	14-May-01		None	4.56	1.24	
	26-Jul-01		None	5.17	0.63	
	16-Oct-01		None	5.19	0.61	
	21-Feb-02		None	4.79	1.01	
	29-May-02		None	4.07	1.73	
	17-Sep-02		None	4.94	0.86	
	14-Nov-02		None	4.87	0.93	
	5-Feb-03		None	3.88	1.92	
	14-May-03		None	3.77	2.03	
	22-Aug-03		None	4.73	1.07	
	20-Nov-03		None	4.46	1.34	
	9-Feb-04		None	3.23	2.57	
	25-May-04		None	3.53	2.27	
	16-Aug-04		None	4.20	1.60	
	18-Nov-04		None	3.91	1.89	
	22-Feb-05		None	2.75	3.05	
	5-May-05		**None**	**3.21**	**2.59**	

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**
MW-10	7-Feb-00	4.65	None	3.19	1.46	
	25-May-00		None	3.11	1.54	
	22-Aug-00		None	4.35	0.30	
	20-Nov-00		None	4.18	0.47	
	1-Mar-01		None	3.14	1.51	
	14-May-01		None	3.27	1.38	
	26-Jul-01		None	3.95	0.70	
	16-Oct-01		None	4.57	0.08	
	21-Feb-02		None	3.29	1.36	
	29-May-02		None	3.30	1.35	
	17-Sep-02		None	4.11	0.54	
	14-Nov-02		None	3.86	0.79	
	5-Feb-03		None	3.36	1.29	
	14-May-03		None	3.23	1.42	
	22-Aug-03		None	4.52	0.13	
	20-Nov-03		None	3.56	1.09	
	9-Feb-04		None	2.51	2.14	
	25-May-04		None	2.90	1.75	
	16-Aug-04		None	3.90	0.75	
	18-Nov-04		None	2.52	2.13	
	22-Feb-05		None	2.66	1.99	
	5-May-05		**None**	**3.18**	**1.47**	
MW-11	7-Feb-00	4.19	None	4.97	-0.78	
	25-May-00		None	7.58	-3.39	
	22-Aug-00		None	3.01	1.18	
	20-Nov-00		None	2.88	1.31	
	1-Mar-01		None	1.91	2.28	
	14-May-01		None	4.49	-0.3	
	26-Jul-01		None	2.95	1.24	
	16-Oct-01		None	3.35	0.84	
	21-Feb-02		None	1.85	2.34	
	29-May-02		None	2.36	1.83	
	17-Sep-02		None	3.11	1.08	
	14-Nov-02		None	2.55	1.64	
	5-Feb-03		None	2.75	1.44	
	14-May-03		None	1.98	2.21	
	22-Aug-03		None	2.86	1.33	
	20-Nov-03		None	2.73	1.46	
	9-Feb-04		None	2.60	1.59	
	25-May-04		None	2.06	2.13	
	16-Aug-04		None	2.91	1.28	
	18-Nov-04		None	2.75	1.44	
	22-Feb-05		None	3.06	1.13	
	5-May-05		**None**	**2.89**	**1.3**	

Notes:

* ft-msl: feet-mean sea level

** used 0.8 specific gravity of product

DTW: Depth to Water

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

Well	Date	TPH-G	TPH-D	TPH	Benzene	Toluene	Ethyl Benzene	Xylenes	MTBE	Nitrate	Sulfate	DO	Fe
	MCL (ppb)				1.0	150	300	1,750	13				
MW-1	7-Jan-99	<100	470	NA	17.0	2	31.0	18	<50	150	3,400	360	53
	7-Feb-00	390	<60	1,300	13.0	<10	<10	<10	<20	<50	1,200	1,220	11,800
	25-May-00	<50	<50	1,000	12.0	<1.0	<1.0	<1.0	<2.0	140	1,500	1,950	1,380
	22-Aug-00	<50	<50	600	6.3	<1.0	2.3	<1.0	<2.0	75	2,100	6,850	2,350
	20-Nov-00	<50	<50	630	2.8	<1.0	1.1	<1.0	<2.0	<50	4,500	11,210	1,170
	1-Mar-01	<50	<50	900	29.0	1.2	16.0	6	<2.0	<50	2,800	6,020	2,920
	14-May-01	<50	<50	540	4.1	<1.0	3.1	<1.0	<2.0	<50	2,500	13,970	1,870
	26-Jul-01	190	<50	500	<1.0	<1.0	<1.0	<1.0	<2.0	75	3,700	8,480	1,950
	16-Oct-01	<50	<50	650	16.0	1.1	4.6	1.6	<2.0	<50	3,600	9,480	2,560
	21-Feb-02	560	<50	550	21	1.0	19	15	<2.0	<50	3,000	5,890	2,200
	29-May-02	130	<50	510	<1.0	<1.0	<1.0	<1.0	<2.0	<50	2,300	6,820	1,300
	17-Sep-02	140	<50	330	<1.0	<1.0	<1.0	<1.0	<2.0	<50	5,200	5,840	>3300
	14-Nov-02	150	570	NA	4.8	0.57	2.7	1.1	<1.0	<200	12,000	4,720	>3300
	5-Feb-03	250	210	NA	16.0	<0.5	0.93	<1.0	<1.0	<200	6,500	5,630	>3300
	14-May-03	220	<50	NA	9.9	<0.5	1.6	<1.0	<1.0	<200	5,200	3,280	2,750
	22-Aug-03	150	770	NA	<0.5	<1.0	<1.0	<1.0	<1.0	<200	6,300	2,980	2,570
	20-Nov-03	300	320	NA	3.0	<0.5	0.56	<1.0	<1.0	<200	7,900	3,030	2,680
	9-Feb-04	210	370	NA	<0.5	0.50	0.52	<1.0	<1.0	<200	7,000	4,190	>3300
	26-May-04	470	<50	NA	5.0	<0.5	7.2	1.9	<1.0	<200	2,400	3,780	>3300
	16-Aug-04	75	<50	NA	<0.5	<0.5	<0.5	<1.0	<1.0	<200	11,000	4,120	2,560
	18-Nov-04	207	200	NA	6.8	<0.5	2.80	1.0	<0.5	<200	14,000	50	2,840
	22-Feb-05	325	170	NA	17.3	<0.5	3.80	5.0	<0.5	<200	7,600	3,040	2,750
	5-May-05	**512**	**670**	**NA**	**47.2**	**1.2**	**42.4**	**18.9**	**<0.5**	**ND**	**32,000**	**5,250**	**3,300**
MW-2	8-Jun-99	11,000	434,000	117,000	1,000,000	<100,000	260,000	<300,000	<5,000,000	NA	NA	NA	NA
	7-Feb-00	51,000	160,000	<5000	19,000	<500	920	<500	<1000	51	<1000	6,660	7,300
	25-May-00	<1200	<50000	65,000	11,000	<500	670	530	<1000	330	<1000	5,670	0
	22-Aug-00	<2500	<2500	150,000	23,000	<500	1,100	1,100	<1000	370	<1000	4,530	3,680
	20-Nov-00	<1200	<25000	430,000	18,000	<500	840	610	<1000	<250	<500	1,700	3,300
	3-Mar-01	<500	<25000	610,000	14,000	<830	<830	<830	<1700	<250	<5000	7,880	3,300
	14-May-01	<1000	280,000	51,000	19,000	240	1,100	1,200	<330	<50	<1000	3,330	>3300
	26-Jul-01	54,000	590,000	<25000	19,000	<500	1,300	1,500	<1000	<50	<1000	9,960	>3300
	16-Oct-01	43,000	560,000	<25000	18,000	280	1,100	1,300	<100	<50	1,500	17,630	>3300
	21-Feb-02	46,000	180,000	<12000	18,000	<500	950	1,500	<1000	<100	<2000	3,650	>3300
	29-May-02	49,000	130,000	<5000	17,000	350	970	1,700	<500	<50	1,000	2,220	>3300
	17-Sep-02	60,000	<25000	470,000	21,000	<500	1,600	2,700	<1000	<50	<1000	4,270	>3300
	14-Nov-02	36,000	490,000	NA	14,000	280	970	2,200	<400	<200	<500	6,050	>3300
	5-Feb-03	47,000	28,000	NA	15,000	360	1,200	2,100	<100	<200	<500	6,940	>3300
	14-May-03	39,000	200,000	NA	13,000	370	1,000	2,000	<100	<200	<500	2,140	>3300
	22-Aug-03	43,000	480,000	NA	22,000	490	1,500	2,100	<400	<200	<500	1,960	>3300
	20-Nov-03	59,000	320,000	NA	22,000	<100	1,700	3,200	<200	<200	<500	2,100	>3300
	9-Feb-04	19,000	55,000	NA	5,400	160	800	1,800	<100	<200	1,200	4,730	>3300
	26-May-04	60,000	520,000	NA	22,000	410	1,700	2,800	<250	<200	<500	4,520	>3300
	16-Aug-04	63,000	42,000	NA	20,000	520	1,600	2,400	<250	<200	<2500	3,560	>3300
	18-Nov-04	38,200	126,000	NA	21,900	430	1,400	3,700	<2.5	<200	<500	330	3,300
	22-Feb-05	55,200	42,000	NA	26,400	389	2,020	3,430	<50	2,000	<500	1,350	>3300
	5-May-05	**38,600**	**18,300**	**NA**	**8,060**	**177**	**1,200**	**2,310**	**<50**	**ND**	**470**	**5,200**	**3,300**

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

Well	Date	TPH-G	TPH-D	TPH	Benzene	Toluene	Ethyl Benzene	Xylenes	MTBE	Nitrate	Sulfate	DO	Fe
	MCL (ppb)				1.0	150	300	1,750	13				
MW-3	7-Jan-99	199	2,680	NA	450	<10	250	190	<500	170	3,300	880	0
	7-Feb-00	2,000	<150	3,100	26	<2	5	2	<4	<50	47,300	6,480	17,800
	25-May-00	<50	<50	1,000	35	<1.0	6	4	<2.0	<50	21,700	4,640	600
	22-Aug-00	<50	<50	2,400	240	<10	<10	<10	<20	<50	19,300	3,970	20
	20-Nov-00	<50	<50	2,400	<25	<25	<25	<25	<50	<50	26,500	4,120	20
	1-Mar-01	<50	<50	1,200	100	<5.0	8.3	<5.0	<10	<50	27,000	1,510	50
	14-May-01	<50	<50	860	8.4	<1.0	1.2	<1.0	<2.0	<50	21,100	9,800	0
	26-Jul-01	1,200	<50	790	140	<5.0	12	<5.0	<10	<50	18,700	8,650	80
	16-Oct-01	1,000	<50	1,600	5.1	<1.0	4.3	<1.0	<2.0	<50	29,800	11,360	640
	21-Feb-02	1,700	<50	990	200	<10	29.0	12	<20	<50	20,500	5,730	0
	29-May-02	630	<50	840	68	<1.0	4.2	3.3	<2.0	<50	14,300	5,870	1,070
	17-Sep-02	<50	<50	1,100	4.1	<1.0	1.8	1.0	<2.0	<50	17,000	6,820	2,820
	14-Nov-02	2,800	460	NA	200	1.1	28	9.0	<2.0	<200	19,000	9,780	1,210
	5-Feb-03	720	270	NA	55	<0.5	20	7.1	<1.0	<200	22,000	8,320	>3300
	14-May-03	540	130	NA	18	<0.5	3.6	1.0	<1.0	<200	19,000	8,460	1,980
	22-Aug-03	400	540	NA	2.7	<1.0	1.6	<1.0	<1.0	<200	18,000	6,620	190
	20-Nov-03	240	520	NA	8.8	<0.5	2.2	<1.0	<1.0	<200	16,000	5,820	100
	9-Feb-04	700	700	NA	5.6	<0.5	3.8	1.3	<1.0	<200	17,000	4,080	0
	26-May-04	700	<100	NA	83.0	<0.5	11.0	1.7	<1.0	<200	18,000	4,210	0
	16-Aug-04	440	<500	NA	6.0	<0.5	1.6	<1.0	<1.0	<200	14,000	3,960	100
	18-Nov-04	728	230	NA	44.8	1.1	14.9	8.4	<0.5	<200	11,000	850	300
	22-Feb-05	3,480	390	NA	1130	1.9	174	89.4	<0.5	<200	5,300	1,910	300
	5-May-05	**2,920**	**670**	**NA**	**1,360**	**2.8**	**199**	**100**	**<0.5**	**ND**	**13,000**	**3,860**	**3,300**
MW-9	7-Feb-00	<50	<50	240	<1	<1	<1	<1	<2	230	183,000	6,940	9,000
	25-May-00	<50	<50	130	<1.0	<1.0	<1.0	<1.0	<2.0	250	172,000	6,020	1,200
	22-Aug-00	<50	<50	120	<1.0	<1.0	<1.0	<1.0	<2.0	280	157,000	7,250	0
	20-Nov-00	<50	<50	130	<1.0	<1.0	<1.0	<1.0	<2.0	340	147,000	9,690	0
	1-Mar-01	<50	<50	150	<1.0	<1.0	<1.0	<1.0	<2.0	230	116,000	4,210	0
	14-May-01	<50	<50	110	<1.0	<1.0	<1.0	<1.0	<2.0	100	140,000	8,290	0
	26-Jul-01	<50	<50	71	<1.0	<1.0	<1.0	<1.0	<2.0	130	143,000	7,560	0
	16-Oct-01	<50	<50	120	<1.0	<1.0	<1.0	<1.0	<2.0	89	141,000	967	50
	21-Feb-02	<50	<50	89	<1.0	<1.0	<1.0	<1.0	<2.0	94	137,000	3,500	70
	29-May-02	<50	<50	95	<1.0	<1.0	<1.0	<1.0	<2.0	94	141,000	4,590	90
	17-Sep-02	<50	<50	96	<1.0	<1.0	<1.0	<1.0	<2.0	100	143,000	3,860	2,130
	14-Nov-02	<50	82	NA	<0.5	<0.5	<0.5	<1.0	<1.0	<200	130,000	10,120	670
	5-Feb-03	<50	82	NA	<0.5	<0.5	<0.5	<1.0	<1.0	<200	140,000	8,630	2,870
	14-May-03	<50	140	NA	<0.5	<0.5	<0.5	<1.0	1.3	<200	130,000	8,760	2,570
	22-Aug-03	<50	220	NA	<0.5	<1.0	<1.0	<1.0	<1.0	<200	140,000	6,140	0
	20-Nov-03	<50	80	NA	<0.5	<0.5	<0.5	<1.0	1.8	<200	140,000	6,030	200
	9-Feb-04	<50	65	NA	<0.5	<0.5	<0.5	<1.0	<1.0	<200	98,000	5,800	0
	26-May-04	<50	<250	NA	<0.5	<0.5	<0.5	<1.5	<1.0	<200	88,000	5,200	0
	16-Aug-04	<50	<50	NA	<0.5	<0.5	<0.5	<1.0	1.3	<200	100,000	4,960	0
	18-Nov-04	<50	<50	NA	<0.5	<0.5	<0.5	<1.0	2.8	<200	110,000	1,040	0
	22-Feb-05	<50	<0.5	NA	<0.5	<0.5	<0.5	<1.0	1.5	<200	101,000	1,220	0
	5-May-05	**<50**	**190**	**NA**	**1.1**	**<0.5**	**<0.5**	**<1.0**	**1.6**	**ND**	**130,000**	**5,000**	**0**

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

Well	Date	TPH-G	TPH-D	TPH	Benzene	Toluene	Ethyl Benzene	Xylenes	MTBE	Nitrate	Sulfate	DO	Fe
	MCL (ppb)				1.0	150	300	1,750	13				
MW-10	7-Feb-00	<50	<50	470	<1	<1	<1	<1	<2	53	114,000	1,200	55,000
	25-May-00	<50	<50	220	<1.0	<1.0	<1.0	<1.0	<2.0	480	136,000	1,940	0
	22-Aug-00	<50	<50	140	<1.0	<1.0	<1.0	<1.0	<2.0	69	126,000	4,350	0
	20-Nov-00	<50	<50	300	<1.0	<1.0	<1.0	<1.0	<2.0	<50	76,200	3,790	0
	1-Mar-01	<50	<50	250	<1.0	<1.0	<1.0	<1.0	<2.0	<250	106,000	7,440	0
	14-May-01	<50	<50	74	<1.0	<1.0	<1.0	<1.0	<2.0	<50	135,000	6,790	0
	26-Jul-01	<50	<50	120	<1.0	<1.0	<1.0	<1.0	<2.0	<50	125,000	9,680	1,970
	16-Oct-01	<50	<50	190	<1.0	<1.0	<1.0	<1.0	<2.0	<50	90,100	28,000	570
	21-Feb-02	<50	<50	190	<1.0	<1.0	<1.0	<1.0	<2.0	<50	77,700	4,280	0
	29-May-02	<50	<50	110	<1.0	<1.0	<1.0	<1.0	<2.0	<50	126,000	7,230	270
	17-Sep-02	<50	<50	170	<1.0	<1.0	<1.0	<1.0	<2.0	<50	107,000	4,230	>3300
	14-Nov-02	<50	270	NA	<0.5	<0.5	<0.5	<1.0	1.5	<200	64,000	1,680	1,400
	5-Feb-03	<50	160	NA	<0.5	<0.5	<0.5	<1.0	<1.0	<200	110,000	5,260	>3300
	14-May-03	<50	<50	NA	<0.5	<0.5	<0.5	<1.0	<1.0	<200	93,000	2,990	1,720
	22-Aug-03	<50	320	NA	<0.5	<1.0	<1.0	<1.0	<1.0	<200	120,000	1,950	0
	20-Nov-03	<50	300	NA	<0.5	<0.5	<0.5	<1.0	1.7	<200	65,000	1,750	0
	9-Feb-04	<50	250	NA	<0.5	<0.5	<0.5	<1.0	1.1	<200	110,000	1,650	0
	26-May-04	<500	<50	NA	<0.5	<0.5	<0.5	<1.5	<1.0	<200	160,000	1,630	0
	16-Aug-04	<50	<50	NA	<0.5	<0.5	<0.5	<1.0	<1.0	<200	120,000	2,840	0
	18-Nov-04	<50	<50	NA	<0.5	<0.5	<0.5	<1.0	0.9	<200	86,000	660	0
	22-Feb-05	<50	<50	NA	1.0	<0.5	<0.5	<1.0	0.9	2,000	106,000	1,570	0
	5-May-05	**<50**	**<50**	**NA**	**<0.5**	**<0.5**	**<0.5**	**<1.0**	**<0.5**	**ND**	**130,000**	**1,620**	**0**

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

Well	Date	TPH-G	TPH-D	TPH	Benzene	Toluene	Ethyl Benzene	Xylenes	MTBE	Nitrate	Sulfate	DO	Fe
	MCL (ppb)				1.0	150	300	1,750	13				
MW-11	7-Feb-00	<50	<50	400	<1	<1	<1	<1	25	800	167,000	7,300	16,200
	25-May-00	<50	<50	200	<1.0	<1.0	<1.0	<1.0	16	480	207,000	6,540	0
	22-Aug-00	<50	<50	170	<1.0	<1.0	<1.0	<1.0	9.3	610	168,000	4,640	20
	20-Nov-00	<50	<50	190	<1.0	<1.0	<1.0	<1.0	7.5	550	143,000	2,380	0
	1-Mar-01	<50	<50	250	<1.0	<1.0	<1.0	<1.0	15.0	170	80,300	5,860	0
	14-May-01	<50	<50	160	<1.0	<1.0	<1.0	<1.0	14.0	230	103,000	6,060	2,910
	26-Jul-01	<50	<50	220	5.9	<1.0	<1.0	2.7	20.0	180	71,300	7,360	>3300
	16-Oct-01	<50	<50	170	<1.0	<1.0	<1.0	<1.0	12.0	190	101,000	8,810	>3300
	21-Feb-02	<50	<50	170	<1.0	<1.0	<1.0	<1.0	2.2	110	75,600	4,280	0
	29-May-02	<50	<50	290	<1.0	<1.0	<1.0	<1.0	2.3	140	98,700	8,350	0
	17-Sep-02	<50	<500	1,900	<1.0	<1.0	<1.0	<1.0	3.8	54	141,000	6,260	90
	14-Nov-02	<50	740	NA	0.88	<0.5	<0.5	1.2	5.3	<200	120,000	8,380	0
	5-Feb-03	<50	410	NA	<0.5	<0.5	<0.5	<1.0	3.4	<200	8,800	9,590	0
	14-May-03	<50	<50	NA	<0.5	<0.5	<0.5	<1.0	2.5	<200	91,000	1,560	1,960
	22-Aug-03	<50	540	NA	<0.5	<1.0	<1.0	<1.0	2.2	<200	130,000	2,210	1,720
	20-Nov-03	<50	290	NA	<0.5	<0.5	<0.5	<1.0	1.8	<200	120,000	2,300	1,910
	9-Feb-04	<50	270	NA	<0.5	<0.5	<0.5	<1.0	<1.0	<200	120,000	10,400	0
	26-May-04	<50	<50	NA	<0.5	<0.5	<0.5	<1.5	<1.0	<200	140,000	10,100	0
	16-Aug-04	<50	100	NA	<0.5	<0.5	<0.5	<1.0	<1.0	<200	130,000	8,610	0
	18-Nov-04	70	<50	NA	3.3	<0.5	0.80	1.7	0.7	<200	120,000	900	300
	22-Feb-05	114	<5.0	NA	<0.5	<0.5	2.20	3.9	<0.5	<200	122,000	3,850	310
	5-May-05	**<50**	**<50**	**NA**	**<0.5**	**0.60**	**<0.5**	**<1.0**	**<0.5**	**ND**	**130,000**	**760**	**0**

Notes:
ppb: parts per billion
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
DO: Dissolved Oxygen
Fe: Ferrous Iron
NA: Not Analyzed

APPENDIX A

CERTIFIED ANALYTICAL REPORTS

CHAIN-OF-CUSTODY DOCUMENTS

North State Labs
CA ELAP # 175
815 Dubuque Avenue • South San Francisco, CA 94080 • (650) 266-4563 • FAX (650) 266-4560

Case Narrative

Client: Cameron-Cole, LLC
Project: AC Transit Seminary/1100 Seminary Rd.
Lab No: 05-0664
Date Received: 05/05/05 Date reported: 05/17/05

Seven water samples were analyzed for gasoline and diesel range organics by method 8015B, and BTEX and MTBE by method 8021B. QC/QA results met acceptance criteria for the diesel range analysis by 8015B. No MS/MSD were analyzed for diesel due to lack of sample volume supplied; the batch was accepted and reported with the LCS/LCSD results. Sample results noted on the report (05-0664-02;-03;-04) did not match the diesel pattern. The result for sample 05-0664-07 was due to a diesel and gas mixture. The MS/MSD results did not meet acceptance criteria for the gasoline, BTEX, and MTBE analyses on 05/11/05 and 05/16/05 due to matrix effects (spiked sample 05-0664-02 (05/11/05) and a non-client sample (05/16/05)); the batches were accepted and reported with the LCS/LCSD results. All other analyses were subcontracted to a state certified laboratory.

Erin Cunniffe
Laboratory Director

North State Labs
CA ELAP # 17
815 Dubuque Avenue • South San Francisco, CA 94080 • (650) 266-4563 • FAX (650) 266-4560

C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 05-0664
Client: Cameron-Cole, LLC
Project: AC TRANSIT SEMINARY/1100 SEMINARY RD

Date Reported: 05/17/2005

Diesel Range Hydrocarbons by Method 8015B
Gasoline,BTEX and MTBE by Methods 8015B/8021B
MTBE,Benzene,Toluene,Ethylbenzene and Xylenes by 8021B

Analyte	Method	Result	Unit	Date Sampled	Date Analyze
Sample: 05-0664-01 Client ID: TB-01				05/05/2005	W
Benzene	SW8020F	ND<0.5	UG/L		05/11/2005
Ethylbenzene	SW8020F	ND<0.5	UG/L		05/11/2005
Methyl-tert-butyl ether	SW8020F	ND<0.5	UG/L		05/11/2005
SUR-a,a,a-Trifluorotoluene	SW8020F	99	PERCENT		05/11/2005
Toluene	SW8020F	ND<0.5	UG/L		05/11/2005
Xylenes	SW8020F	ND<1.0	UG/L		05/11/2005
Sample: 05-0664-02 Client ID: MW-1				05/05/2005	W
Benzene	SW8020F	47.2	UG/L		05/11/2005
Ethylbenzene	SW8020F	42.4	UG/L		05/11/2005
Gasoline Range Organics	SW8020F	512	UG/L		05/11/2005
Methyl-tert-butyl ether	SW8020F	*ND<0.5	UG/L		05/11/2005
SUR-a,a,a-Trifluorotoluene	SW8020F	99	PERCENT		05/11/2005
Toluene	SW8020F	1.2	UG/L		05/11/2005
Xylenes	SW8020F	18.9	UG/L		05/11/2005
Diesel Fuel #2	CATFH	**0.67	MG/L		05/12/2005
Sample: 05-0664-03 Client ID: MW-3				05/05/2005	W
Benzene	SW8020F	1360	UG/L		05/11/2005
Ethylbenzene	SW8020F	199	UG/L		05/11/2005
Gasoline Range Organics	SW8020F	2920	UG/L		05/11/2005
Methyl-tert-butyl ether	SW8020F	*ND<0.5	UG/L		05/11/2005
SUR-a,a,a-Trifluorotoluene	SW8020F	91	PERCENT		05/11/2005

*Confirmed by GC/MS method 8260B;**See narrative

North State Labs
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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

Lab Number: 05-0664
Client: Cameron-Cole, LLC
Project: AC TRANSIT SEMINARY/1100 SEMINARY RD

Date Reported: 05/17/2005

Diesel Range Hydrocarbons by Method 8015B
Gasoline,BTEX and MTBE by Methods 8015B/8021B
MTBE,Benzene,Toluene,Ethylbenzene and Xylenes by 8021B

Analyte	Method	Result	Unit	Date Sampled	Date Analyze
Sample: 05-0664-03 Client ID: MW-3				05/05/2005	W
Toluene	SW8020F	2.8	UG/L		05/11/2005
Xylenes	SW8020F	100	UG/L		05/11/2005
Diesel Fuel #2	CATFH	**0.67	MG/L		05/12/2005
Sample: 05-0664-04 Client ID: MW-9				05/05/2005	W
Benzene	SW8020F	1.1	UG/L		05/11/2005
Ethylbenzene	SW8020F	ND<0.5	UG/L		05/11/2005
Gasoline Range Organics	SW8020F	ND<50	UG/L		05/11/2005
Methyl-tert-butyl ether	SW8020F	*1.6	UG/L		05/11/2005
SUR-a,a,a-Trifluorotoluene	SW8020F	99	PERCENT		05/11/2005
Toluene	SW8020F	ND<0.5	UG/L		05/11/2005
Xylenes	SW8020F	ND<1.0	UG/L		05/11/2005
Diesel Fuel #2	CATFH	**0.19	MG/L		05/13/2005
Sample: 05-0664-05 Client ID: MW-10				05/05/2005	W
Benzene	SW8020F	ND<0.5	UG/L		05/11/2005
Ethylbenzene	SW8020F	ND<0.5	UG/L		05/11/2005
Gasoline Range Organics	SW8020F	ND<50	UG/L		05/11/2005
Methyl-tert-butyl ether	SW8020F	ND<0.5	UG/L		05/11/2005
SUR-a,a,a-Trifluorotoluene	SW8020F	98	PERCENT		05/11/2005
Toluene	SW8020F	ND<0.5	UG/L		05/11/2005
Xylenes	SW8020F	ND<1.0	UG/L		05/11/2005
Diesel Fuel #2	CATFH	ND<0.05	MG/L		05/13/2005

*Confirmed by GC/MS method 8260B;**See narrative

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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

Lab Number: 05-0664
Client: Cameron-Cole, LLC
Project: AC TRANSIT SEMINARY/1100 SEMINARY RD

Date Reported: 05/17/2005

Diesel Range Hydrocarbons by Method 8015B
Gasoline,BTEX and MTBE by Methods 8015B/8021B
MTBE,Benzene,Toluene,Ethylbenzene and Xylenes by 8021B

Analyte	Method	Result	Unit	Date Sampled	Date Analyze
Sample: 05-0664-06 Client ID: MW-11				05/05/2005	W
Benzene	SW8020F	ND<0.5	UG/L		05/12/2005
Ethylbenzene	SW8020F	ND<0.5	UG/L		05/12/2005
Gasoline Range Organics	SW8020F	ND<50	UG/L		05/12/2005
Methyl-tert-butyl ether	SW8020F	*ND<0.5	UG/L		05/12/2005
SUR-a,a,a-Trifluorotoluene	SW8020F	99	PERCENT		05/12/2005
Toluene	SW8020F	0.6	UG/L		05/12/2005
Xylenes	SW8020F	ND<1.0	UG/L		05/12/2005
Diesel Fuel #2	CATFH	ND<0.05	MG/L		05/13/2005
Sample: 05-0664-07 Client ID: MW-2				05/05/2005	W
Benzene	SW8020F	8060	UG/L		05/16/2005
Ethylbenzene	SW8020F	1200	UG/L		05/16/2005
Gasoline Range Organics	SW8020F	38600	UG/L		05/16/2005
Methyl-tert-butyl ether	SW8020F	*ND<50	UG/L		05/16/2005
SUR-a,a,a-Trifluorotoluene	SW8020F	100	PERCENT		05/16/2005
Toluene	SW8020F	177	UG/L		05/16/2005
Xylenes	SW8020F	2310	UG/L		05/16/2005
Diesel Fuel #2	CATFH	**18.3	MG/L		05/13/2005

*Confirmed by GC/MS method 8260B;**See narrative

North State Labs
CA ELAP # 17
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CERTIFICATE OF ANALYSIS

Quality Control/Quality Assurance

Lab Number: 05-0664
Client: Cameron-Cole, LLC
Project: AC TRANSIT SEMINARY/1100 SEMINARY RD

Date Reported: 05/17/2005

Analyte	Method	Reporting Limit	Unit	Blank	MS/MSD Recovery	RPD
05/11/05						
Gasoline Range Organics	SW8020F	50	UG/L	ND	105/105	0
Benzene	SW8020F	0.5	UG/L	ND	121/127	5
Toluene	SW8020F	0.5	UG/L	ND	90/90	0
Ethylbenzene	SW8020F	0.5	UG/L	ND	86/86	0
Xylenes	SW8020F	1.0	UG/L	ND	99/99	0
Methyl-tert-butyl ether	SW8020F	0.5	UG/L	ND	90/90	0
SUR-a,a,a-Trifluorotoluene	SW8020F		PERCENT	98	97/97	0
Diesel Fuel #2	CATFH	0.05	MG/L	ND	107/106	1
05/16/05						
Gasoline Range Organics	SW8020F	50	UG/L	ND	105/106	1
Benzene	SW8020F	0.5	UG/L	ND	81/99	20
Toluene	SW8020F	0.5	UG/L	ND	94/95	1
Ethylbenzene	SW8020F	0.5	UG/L	ND	84/85	1
Xylenes	SW8020F	1.0	UG/L	ND	98/99	1
Methyl-tert-butyl ether	SW8020F	0.5	UG/L	ND	101/96	5
SUR-a,a,a-Trifluorotoluene	SW8020F		PERCENT	95	94/94	0

ELAP Certificate NO:1753
Reviewed and Approved

Erin Cunniffe, Laboratory Director

North State Labs
815 Dubuque Avenue, South San Francisco, CA 94080
Phone: (650) 266-4563 Fax: (650) 266-4560

Chain of Custody / Request for Analysis
Lab Job No.:_____ Page 1 of 1

Client: North State Labs	Report to: Angie Adamo	Phone:	Turnaround Time
Mailing Address:	Billing to:	Fax:	2-DAY ⊛
		email:	Date:
		PO# 05-0664	Sampler:

Project / Site Address / Global ID: 05-0664

Analysis Requested

Sample ID	Sample Type	Container No. / Type	Pres.	Sampling Date / Time	Nitrate	Sulfate		EDF ☐ PDF ☐ Field Point ID
MW-1	Water	1/250ml PL	–	5.05.05/1045	X	X	453-001	⊛ Note:
↓	↓	↓	–	↓/↓		X		48-HR HOLD
MW-3			–	5.05.05/1130	X		-002	TIME for
↓			–	↓/↓		X		Nitrate &
MW-9			–	5.05.05/1205	X		-003	Sulfate
↓			–	↓/↓		X		Analysis
MW-10			–	5.05.05/1240	X		-004	
↓			–	↓/↓		X		
MW-2			–	5.05.05/1435	X		-005	
↓	↓	↓	–	↓/↓		X		
MW-11			–	5.05.05/1405	X		-006	
↓	↓	↓	–	↓/↓		X		

2 DAYS

Relinquished by:	Date: 5/6/05	Time: 0826	Received by:	Lab Comments/ Hazards
Relinquished by:	Date: 5/6/05	Time: 1200	Received by:	
Relinquished by:	Date:	Time:	Received by:	

North State Labs

815 Dubuque Avenue, South San Francisco, CA 94080
Phone: (650) 266-4563 Fax: (650) 266-4560

05-0664

Chain of Custody / Request for Analysis
Lab Job No.: _____ Page 1 of 3

Client: Cameron - Cole	Report to: Emily Waters	Phone: 510-769-3570	Turnaround Time
Mailing Address: 101 West Atlantic Ave Bldg 90 Alameda, CA 94501	Billing to: ← Same	Fax: 510-337-3994	std.
		email:	Date: 5/5/05
		PO# 2016	Sampler:

Project / Site Address / Global ID: AC Transit Seminary / 1100 Seminary Road

Analysis Requested

	Sample ID	Sample Type	Container No. / Type	Pres.	Sampling Date / Time	8021 B	TPH gas 8015M	TPH diesel 8015M	Nitrate	Sulfate			Field Point ID
1	TB-01	Water	3 vows	HCl	5/5/05 1000	X							
2	MW-1				1045	X							
			↓	↓			X						
			2 ambers	N/A				X					
			1 poly						X	[illegible]			
			↓	↓						X			
3	MW-3		3 vows	HCl	1130	X							
			↓	↓			X						
			2 ambers	N/A				X					
			1 poly						X				
			↓	↓						X			
4	MW-9		3 vows	HCl	1205	X							
			↓	↓			X						
			2 ambers	N/A				X					

EDF ☐
PDF ☒

Relinquished by: [signature]	Date: 5/5/05	Time: 4:00	Received by: Angi Adams	Lab Comments/ Hazards
Relinquished by: Angi Adams	Date: 5/5/05	Time: 4:30	Received by: [signature]	
Relinquished by:	Date:	Time:	Received by:	

05-0664

North State Labs
815 Dubuque Avenue, South San Francisco, CA 94080
Phone: (650) 266-4563 Fax: (650) 266-4560

Chain of Custody / Request for Analysis
Lab Job No.:_____ Page 2 of 3

Client: Cameron - Cole	Report to: Emily Waters	Phone: 510-769-3520	Turnaround Time: 5td.
Mailing Address: 101 West Atlantic Ave Bldg #90, Alameda, CA 94501	Billing to: ← Same	Fax: 510-337-3194	
		email:	Date: 5/5/05
		PO# 2016	Sampler:

Project / Site Address / Global ID: AC Transit Seminary / 1100 Seminary Ave

	Sample ID	Sample Type	Container No. / Type	Pres.	Sampling Date / Time	Analysis Requested: 8021B	TPH gas 8015M	TPH diesel 8015M	Nitrate	Sulfate			EDF ☐ PDF ☒ Field Point ID
4	MW-9	Water	1 poly	N/A	5/5/05 1205				X				
	↓		↓	↓	↓					X			
5	MW-10		3 VOAs	HCl	1240	X							
			↓	↓			X						
			2 ambers	N/A				X					
			1 poly						X				
	↓		↓	↓	↓					X			
6	MW-11		3 VOAs	HCl	1405	X							
			↓	↓			X						
			2 ambers	N/A				X					
			1 poly						X				
	↓		↓	↓	↓					X			
7	MW-2		3 VOAs	HCl	1435	X							
	↓	↓	↓	↓	↓		X						

Relinquished by: [signature]	Date: 5/5/05	Time: 4:00	Received by: Angi Adams	Lab Comments/ Hazards
Relinquished by: Angi Adams	Date: 5/5/05	Time: 4:30	Received by: [signature]	
Relinquished by:	Date:	Time:	Received by:	

North State Labs

815 Dubuque Avenue, South San Francisco, CA 94080
Phone: (650) 266-4563 Fax: (650) 266-4560

05-0664

Chain of Custody / Request for Analysis
Lab Job No.:_____ Page 3 of 3

Client: Cameron – Cole	Report to: Emily Waters	Phone: 510-769-3572	Turnaround Time: Std.
Mailing Address: 101 West Atlantic Ave Bldg #90, Alameda, CA 94501	Billing to: ← Same	Fax: 510-337-3794	
		email:	Date: 5/5/05
		PO# 2016	Sampler:

Project / Site Address / Global ID: AC Transit Seminary / 1100 Seminary Road

Analysis Requested

Sample ID	Sample Type	Container No. / Type	Pres.	Sampling Date / Time	TPH diesel 8015 M	Nitrate	Sulfate					Field Point ID
MW-2	Water	2 ambers	N/A	5/5/05 1435	X							
↓	↓	1 poly	↓	↓ ↓		X						
↓	↓	↓	↓	↓ ↓			X					

7

EDF ☐
PDF ☒

Relinquished by:	Date: 5/5/05	Time: 4:00	Received by: Angi Adams
Relinquished by: Angi Adams	Date: 5/5/05	Time: 4:30	Received by:
Relinquished by:	Date:	Time:	Received by:

Lab Comments/ Hazards

North State Labs

CA ELAP # 1753

815 Dubuque Avenue • South San Francisco, CA 94080 • (650) 266-4563 • FAX (650) 266-4560

SAMPLE RECEIPT CHECKLIST

Client Name: Cameron - Cole Ref/Job No: 05-0664 Date: 5-5-05

Checked By: EJC

Matrix: Soil: Water: ✓ Other:

If Received via Shipment (If dropped off in person this section does not apply):

Carrier Name:

Shipping Container/Cooler In Good Condition?	Y	N	
Custody Seals Intact on Shipping Container?	Y	N	N/A
No. of coolers:	Temperature of Cooler:		In Range?: Y N
Custody Seals intact on sample containers?	(Y)	N	N/A
Chain of Custody present?	(Y)	N	
Chain of Custody Signatures & Date/Time correct?	(Y)	N	
Chain of custody agrees with sample labels?	(Y)	N	
Samples in proper containers?	(Y)	N	
Sample containers Intact?	(Y)	N	
Sufficient sample volume for indicated tests?	(Y)	N	
All Samples received within holding times?	(Y)	N	
Temperature Blank present? Record Temp if present.	Y	(N)	Temp:
For water samples- VOAS have zero headspace?	(Y)	N	N/A
Samples received in bottles with proper preservative?	(Y)	N	N/A

pH adjusted - Preservative used: HNO3:__ HCl:__ H2SO4:__ NaOH:__ ZnOAc:__

Supplier: Lot:

For water samples for the analysis of total recoverable metals not digested - pH <2? See attached sheet

Corrective Action Record:

Client Contacted: Date Contacted: Person Contacted:

Contacted by: Regarding:

Comments:

Corrective Action:

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Angie Adams
North State Environmental Labs
815 Dubuque Avenue
South San Francisco, CA 94080

Certificate ID: 43453 - 5/10/2005 2:00:34 PM

Order Number: 43453

Date Received: 5/6/2005 2:31:29 PM
P.O. Number: 05-0664

Project Number: 05-0664

Certificate of Analysis - Final Report

On May 06, 2005, samples were received under chain of custody for analysis. Entech analyzes samples "as received" unless

Matrix	Test	Method	Comments
Liquid	Wet Chemistry	EPA 300.0	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

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

North State Environmental Labs
815 Dubuque Avenue
South San Francisco, CA 94080
Attn: Angie Adams

Project ID: 05-0664
Date Received: 5/6/2005
P.O. Number: 05-0664
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 43453-001 Sample ID: MW-1 Matrix: Liquid Sample Date: 5/5/2005 10:45 AM

EPA 300.0

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Nitrate as N	ND		1	0.2	mg/L	N/A	N/A	5/7/2005	WIC050507
Sulfate	32		1	0.5	mg/L	N/A	N/A	5/7/2005	WIC050507

Analyzed by: DQueja
Reviewed by: equeja

Lab # : 43453-002 Sample ID: MW-3 Matrix: Liquid Sample Date: 5/5/2005 11:30 AM

EPA 300.0

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Nitrate as N	ND		1	0.2	mg/L	N/A	N/A	5/7/2005	WIC050507
Sulfate	13		1	0.5	mg/L	N/A	N/A	5/7/2005	WIC050507

Analyzed by: DQueja
Reviewed by: equeja

Lab # : 43453-003 Sample ID: MW-9 Matrix: Liquid Sample Date: 5/5/2005 12:05 PM

EPA 300.0

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Nitrate as N	ND		1	0.2	mg/L	N/A	N/A	5/7/2005	WIC050507
Sulfate	130		5	2.5	mg/L	N/A	N/A	5/7/2005	WIC050507

Analyzed by: DQueja
Reviewed by: equeja

Lab # : 43453-004 Sample ID: MW-10 Matrix: Liquid Sample Date: 5/5/2005 12:40 PM

EPA 300.0

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Nitrate as N	ND		1	0.2	mg/L	N/A	N/A	5/7/2005	WIC050507
Sulfate	130		5	2.5	mg/L	N/A	N/A	5/7/2005	WIC050507

Analyzed by: DQueja
Reviewed by: equeja

Lab # : 43453-005 Sample ID: MW-2 Matrix: Liquid Sample Date: 5/5/2005 2:35 PM

EPA 300.0

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Nitrate as N	ND		1	0.2	mg/L	N/A	N/A	5/7/2005	WIC050507
Sulfate	0.47		1	0.5	mg/L	N/A	N/A	5/7/2005	WIC050507

Analyzed by: DQueja
Reviewed by: equeja

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
B = Analyte found in associated Method Blank.

Entech Analytical Labs, Inc.

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

North State Environmental Labs
P.O. Box 2148
South San Francisco, CA 94083-2148
Attn: Angie Adams

Project ID: 05-0664
Date Received: 5/6/2005
P.O. Number: 05-0664
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 43453-006 **Sample ID: MW-11** **Matrix:** Liquid **Sample Date:** 5/5/2005 2:05 PM

EPA 300.0

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Nitrate as N	ND		1	0.2	mg/L	N/A	N/A	5/7/2005	WIC050507
Sulfate	130		5	2.5	mg/L	N/A	N/A	5/7/2005	WIC050507

Analyzed by: DQueja
Reviewed by: equeja

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
B = Analyte found in associated Method Blank.

Entech Analytical Labs, Inc.

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

Quality Control - Method Blank

Liquid

QC Batch ID: WIC050507 Validated by: equeja - 05/10/05

QC Batch ID Analysis Date: 5/7/2005

Method Blank **Method: EPA 300.0**

Parameter	Result	DF	PQLR	Units
Nitrate as N	ND	1	0.20	mg/L
Sulfate	ND	1	0.50	mg/L

Quality Control - Laboratory Control Spike / Duplicate Results

Liquid

QC Batch ID: WIC050507 Reviewed by: equeja - 05/10/05

QC Batch ID Analysis Date: 5/7/2005

Method: EPA 300.0 **Conc. Units:** mg/L

LCS

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	% Recovery	RPD	RPD Limits	Recovery Limits
Nitrate as N	<0.01	2.3	2.3	LCS	103			75 - 125
Sulfate	<0.06	15	15	LCS	103			75 - 125

LCSD

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	% Recovery	RPD	RPD Limits	Recovery Limits
Nitrate as N	<0.01	2.3	2.3	LCSD	100	3.1	25.0	75 - 125
Sulfate	<0.06	15	15	LCSD	99.3	3.3	25.0	75 - 125

APPENDIX B

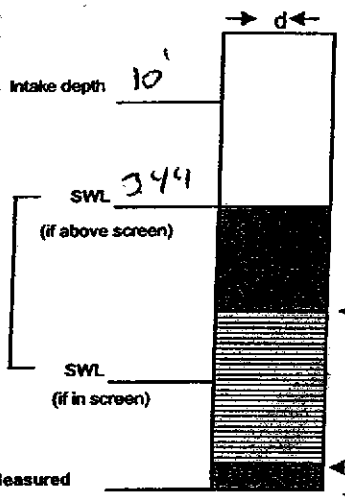
SAMPLING EVENT DATA

CAMERON-COLE

SAMPLING EVENT DATA SHEET

WELL OR LOCATION MW-1

PROJECT ACTransit Seminary EVENT 2nd Quarter SAMPLER (SJ) DATE 5/5/05



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

Diameter 2"

0.165 gal/ft. casing

ACTION	TIME	PUMP RATE (gpm)	DTW
Start Pump / Begin	1019	0.88	
	1020		6.41
	1026		6.82
Stop	1027		
Sampled	1045		
Final IWL	1055		3.82

PURGE CALCULATION

0.165 gal/ft. * 11.86 ft. (SWL to TD) = 1.96 gals. (one volume) X 3 = 5.87 g (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 to Rise
Disp. Bailer to Sample

Actual gallons purged 7.0

Actual volumes purged 3.57

Well Yield ⊕ HY

COC #

Sample I.D.	Analysis	Lab
MW-1	7021 B	Northstar
	TPH Gas	
	TPH Diesel	
	Nitrate	
	Sulfate	

Additional Comments:

Trip Blank TB-01 collected @ 1000

Gallons Purged *	Temp °C	EC (us / cm)	pH	Turbidity (NTU)	Other	
1. 1	22.1	1121	6.89	-	Fe = ~~3.30~~	3.30
2. 3	23.3	1133	6.90	-	DO = 5.25	
3. 5	23.3	1148	6.88	-	ORP = -102	
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 volume

CAMERON-COLE

SAMPLING EVENT DATA SHEET

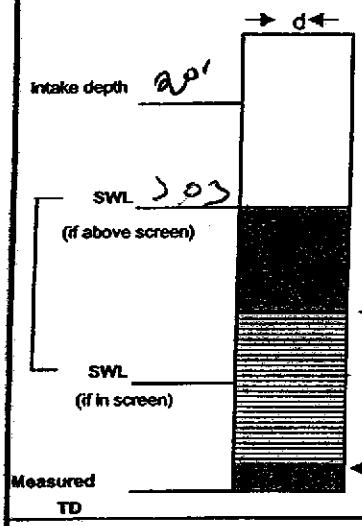
WELL OR LOCATION MW-2

PROJECT Ac Moist Jan-Mar EVENT 2nd Quarter SAMPLER [illegible] DATE 5/5/05

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

Diameter 2"

0.163 gal/ft. casing



ACTION	TIME	PUMP RATE (gpm)	DTW
Start Pump / Begin	1418	0.81	
	1421		9.83
Stop	1431		
Sampled	1435		
Final IWL	1445		3.5

PURGE CALCULATION

0.165 gal/ft. * 20.27 ft. (SWL to TD) = 3.34 gals. (one volume) X 3 = 10.03 g (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 to Purge
Disp. Bailer to Sample

Actual gallons purged 10.5

Actual volumes purged

Well Yield ⊕

COC #

Additional Comments:

Sample I.D.	Analysis	Lab
MW-2	8021 D	North State
	TPH Gas	
	TPH Diesel	
	N. Nitrates	
	Sulfate	

Gallons Purged *	Temp °C	EC (us / cm)	pH	Turbidity (NTU)	Other
1. 2	26.7	1904	6.58	—	Fe = 3.30
2. 5	27.2	1934	6.60	—	DO = 5.2
3. 8	27.4	2110	6.61	—	ORP = -0.65
4.				—	
5.					

*Take measurement at ⊕ approximately each casing volume purged.

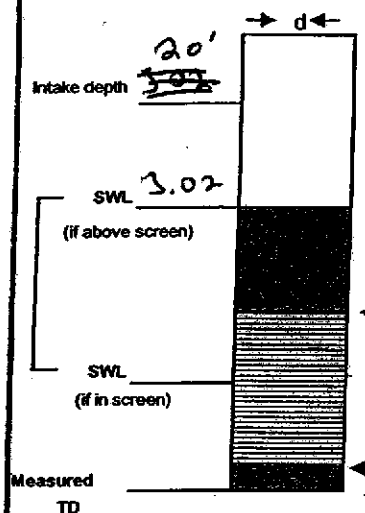
HY-Minimal W.L. drop MY - WL drop - able to purge 3 volumes during one sitting by reducing pump rate or cycling pump LY - Able to purge 3 volumes by returing later or next day. VLY - Minimal recharge unable to purge 3 volum

CAMERON-COLE

SAMPLING EVENT DATA SHEET

WELL OR LOCATION

PROJECT AC Transit Seminary EVENT 2nd Quarter SAMPLER (BJ) / AW DATE



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

Diameter 2"

0.165 gal/ft. casing

ACTION	TIME	PUMP RATE (gpm)	DT
Start Pump / Begin	0939	0.99	
	0943		
	1005		
Stop	1048		
Sampled			
Final IWL			

PURGE CALCULATION

0.165 gal/ft. * 20.33 ft. = 3.35 gals. X 10 = 33.5 g

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:

Cent Pump to Purge

Actual gallons purged 34

Actual volumes purged 10.15

Well Yield ⊕ HY

COC #

Sample I.D.	Analysis	Lab

Additional Comments:

Gallons Purged *	Temp °C	EC (us / cm)	pH	Turbidity (NTU)	Other	
1.						
2.						
3.						
4.						
5.						

*Take measurement at approximately each casing volume purged. ⊕

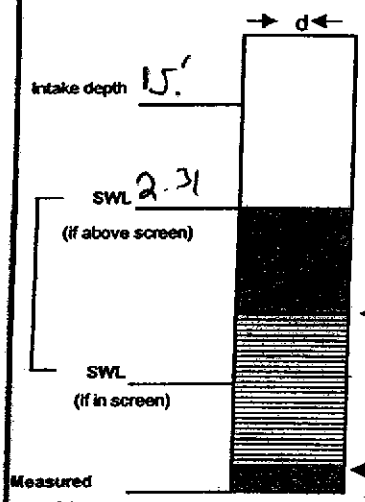
HY-Minimal W.L. drop MY - WL drop - able to purge 3 volumes during one sitting by reducing pump rate or cycling pump LY - Able to purge 3 volumes by returing later or next day. VLY - Minimal recharge unable to purge 3 volume

CAMERON-COLE

SAMPLING EVENT DATA SHEET

WELL OR LOCATION MW-3

PROJECT Ace Transit Seminary EVENT 2nd Quarter SAMPLER (8) DATE 5/5/05



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

Diameter 2"

0.165 gal/ft. casing

ACTION	TIME	PUMP RATE (gpm)	DTW
Start Pump / Begin	1115	0.67	
	1116		6.03
	1118		8.30
	1125		8.26
Stop	1127		
Sampled	1130		
Final IWL	1140		3.02

PURGE CALCULATION

0.165 gal/ft. * 14.69 ft. (SWL to TD) = 2.42 gals. (one volume) X 3 = 7.27 gal (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 to Purge.

Disp. Bailer to Sample

Actual gallons purged 8

Actual volumes purged 3.31

Well Yield ⊕ HY

COC #

Additional Comments:

Sample I.D.	Analysis	Lab
MW-3	8021 B	North State
	TPH Gas	
	TPH Diesel	
	Nitrate	
	Sulfate	

Gallons Purged *	Temp °C	EC (us / cm)	pH	Turbidity (NTU)	Other
1. 1	27.9	1420	6.86	-	Fe = 3.30
2. 4	31.1	851	7.00	-	DO = 3.85
3. 6	29.9	920	6.90	-	ORP = -66
4.					
5.					

*Take measurement at ⊕ approximately each casing volume purged.

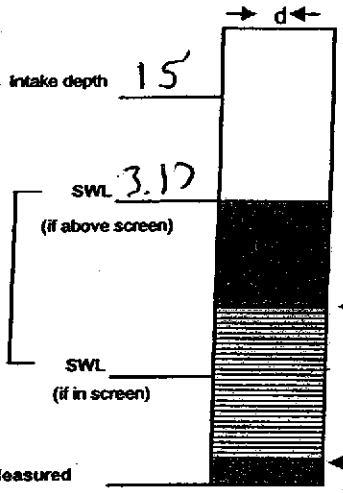
HY-Minimal W.L. drop MY - WL drop - able to purge 3 volumes during one sitting by reducing pump rate or cycling pump LY - Able to purge 3 volumes by returing later or next day. VLY - Minimal recharge - unable to purge 3 volume

CAMERON-COLE

SAMPLING EVENT DATA SHEET

WELL OR LOCATION MW-9

PROJECT Act Transit Survey EVENT 2nd Quarter SAMPLER [illegible] DATE 5/5/05



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

Diameter 2"

0.165 gal/ft. casing

ACTION	TIME	PUMP RATE (gpm)	DTW
Start Pump / Begin	1150	0.69	
	1151		5.9
	1159		12.8
Stop	1203		
Sampled	1205		
Final IWL	1215		8.5

PURGE CALCULATION

0.165 gal/ft. * 16.53 ft. (SWL to TD) = 2.73 gals. (one volume) X 3 = 8.19 g (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 to Purge
Disp. Bailer to Sample

Actual gallons purged 9

Actual volumes purged 3.30

Well Yield ⊕ HY

COC #

Sample I.D.	Analysis	Lab
MW-9	8021 B	North Hrt
	TPH Gas	
	TPH Diesel	
	Nitrate	
	Sulfates	

Additional Comments:

Gallons Purged *	Temp °C	EC (us / cm)	pH	Turbidity (NTU)	Other	
2	25.1	615	7.15	—	Fe = 0.00	
2. 4	23.6	471	7.43	—	DO = 5.05	
3. 7	24.5	638	7.45	—	ORR = 035	
4.						
5.						

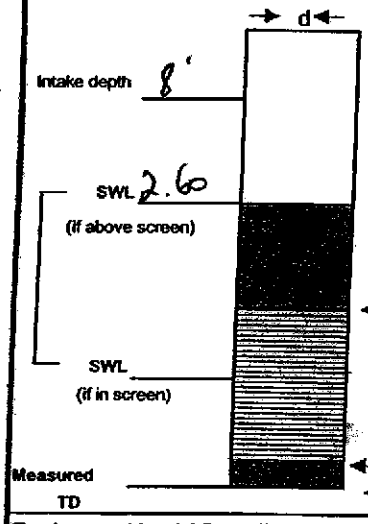
*Take measurement at approximately each casing volume purged. ⊕ HY-Minimal W.L. drop MY - WL drop - able to purge 3 volumes during one sitting by reducing pump rate or cycling pump LY - Able to purge 3 volumes by returing later or next day. VLY - Minimal recharge unable to purge 3 volume

CAMERON-COLE

SAMPLING EVENT DATA SHEET

WELL OR LOCATION MW-10

PROJECT AC Transit Seminary EVENT 2nd Quarter SAMPLER [illegible] DATE 5/5/05



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

Diameter 2"

0.165 gal/ft. casing

ACTION	TIME	PUMP RATE (gpm)	DTW
Start Pump / Begin	1229	0.64	
	1232		622
Stop	1236		
Sampled	1240		
Final fWL	1250		2.63

PURGE CALCULATION

0.165 gal/ft. * 8.8 ft. (SWL to TD) = 1.45 gals. (one volume) X 3 = 4.35 gal (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 to Purge.
Disp. Bailer to Sample

Actual gallons purged 4.5

Actual volumes purged 3.10

Well Yield ⊕ HY

COC # [illegible]

Additional Comments:

Sample I.D.	Analysis	Lab
MW-10	8021 B	North State
	TPH Gas	
	TPH Diesel	
	Nitrate	
	Sulfate	

Gallons Purged *	Temp °C	EC (us / cm)	pH	Turbidity (NTU)	Other
1. 1	29.2	3070	7.02	-	Fe = 0.00
2. 2	29.3	3410	6.95	-	DO = 1.62
3. 4	29.4	3410	6.99	-	ORP = 006
4.					
5.					

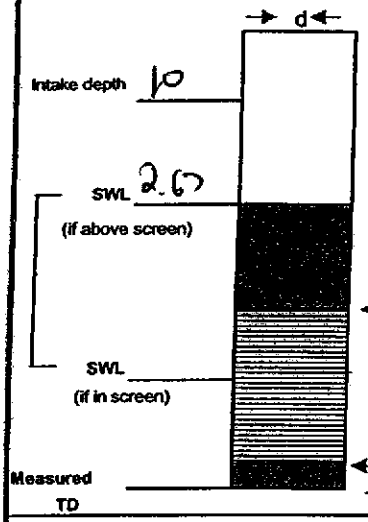
*Take measurement at approximately each casing volume purged. ⊕ HY-Minimal W.L. drop MY - WL drop - able to purge 3 volumes during one sitting by reducing pump rate or cycling pump LY - Able to purge 3 volumes by returing later or next day. VLY - Minimal recharge - unable to purge 3 volumes

CAMERON-COLE

SAMPLING EVENT DATA SHEET

WELL OR LOCATION MW-11

PROJECT AK Transit Sampling EVENT 2nd Quarter SAMPLER (8) DATE 5/5/05



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

Diameter 2"

0.165 gal/ft. casing

ACTION	TIME	PUMP RATE (gpm)	DT
Start Pump / Begin	1303		
	1304		4.51
	1308		7.3
	1315		8.00
Stop	1357		
Sampled	1405		
Final IWL	1415		10.5

PURGE CALCULATION

0.165 gal/ft. * 10.77 ft. (SWL to TD) = 1.78 (one volume) gals. X 3 = 5.33 g (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 to Purge

Disp Bailer to Sample

Actual gallons purged 5.5

Actual volumes purged 3.09

Well Yield ⊕ MY

COC #

Sample I.D.	Analysis	Lab
MW-11	8021 B	North Jet
	TPH Gas	
	TPH Diesel	
	Nitrate	
	Sulfate	

Additional Comments:

Gallons Purged *	Temp °C	EC (us / cm)	pH	Turbidity (NTU)	Other
1. 1	27.8	1165	7.26	—	Fe = 0.00
2. 3	28.1	1154	7.26	—	DO = 0.76
3. 4	29.0	1149	7.30	—	ORP = 0.47
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 volum