AC Transit
Alameda-Contra Costa Transit District

10626 East 14th Street, Oakland, California 94603 ☐ (510) 577-8804
FAX ☐ (510) 577-8859

April 9, 2002

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

APR 11 2002

Dear Mr. Chan:

Subject: Quarterly Groundwater Monitoring Report
AC Transit, 1100 Seminary Avenue, Oakland, CA

AC Transit hereby submits the enclosed quarterly groundwater monitoring report for the first quarter of 2002 for the AC Transit facility located at 1100 Seminary Avenue in Oakland. Groundwater sampling of 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 from the six on-site monitoring wells on February 21, 2002. Samples were 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

Analytical results of grab water samples showed benzene concentrations above the California maximum contaminant level of 1 ppb in wells MW-1, MW-2, and MW-3. Ethylbenzene was detected above the MCL of 700 ppb in well MW-2 at a concentration of 950 ppb. Unspecified hydrocarbons, thought to be degraded diesel, were detected at concentrations above laboratory reporting limits in all wells except MW-2.

These results continue to be consistent with past sampling results with slight decreases in concentrations of several analytes. Monthly purging of well MW-2 began in July 2001. The next quarterly sampling event is scheduled to occur in May 2002. If you have any questions regarding this report or other matters pertaining to this site, please call me at (510) 577-8869.

Sincerely,

Suzanne Patton

Suzanne Patton, P.E.
Environmental Engineer

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

March 15, 2002

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

APR 11 2002

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

Project No: 2014

CAMERON-COLE, LLC

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

March 15, 2002

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

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

Project No: 2014

Written By
Brady Hanson
Geologist I

Approved By
Brad Wright, RG, CHG
Sr. Hydrogeologist

STATE OF CALIFORNIA
REGISTERED GEOLOGIST
#6276
Exp. 12/03
BRADLEY D. WRIGHT
REGISTERED GEOLOGIST

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INTRODUCTION

This report presents the results of the February 2002 sampling event for the AC Transit facility located at 1100 Seminary Avenue, Oakland, California (Site) (Figure 1). Groundwater sampling of monitor wells MW-1 through MW-3 and MW-9 through MW-11 was performed by Cameron-Cole, 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 8260B 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 on Figure 2, groundwater flow is to the northwest 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 completely purged dry monthly and during all quarterly sampling events in an attempt to cleanse the formation around the immediate vicinity of the well. Field data sheets for this new over-purge event 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. A trip blank was submitted for analysis by USEPA Method 8260B.

Groundwater Analytical Results

Table 2 presents groundwater historic and first quarter 2002 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 and MW-3. Ethylbenzene was detected above the MCL of 700 ppb in monitor well MW-2. TPH-Diesel, qualified as "degraded" by the laboratory, was detected above the reporting limit in monitor well MW-2. TPH-Gas was detected above the reporting limit in monitor wells MW-1, MW-2 and MW-3. Unspecified hydrocarbons, which are likely degraded diesel, were detected in all monitoring wells except MW-2. 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

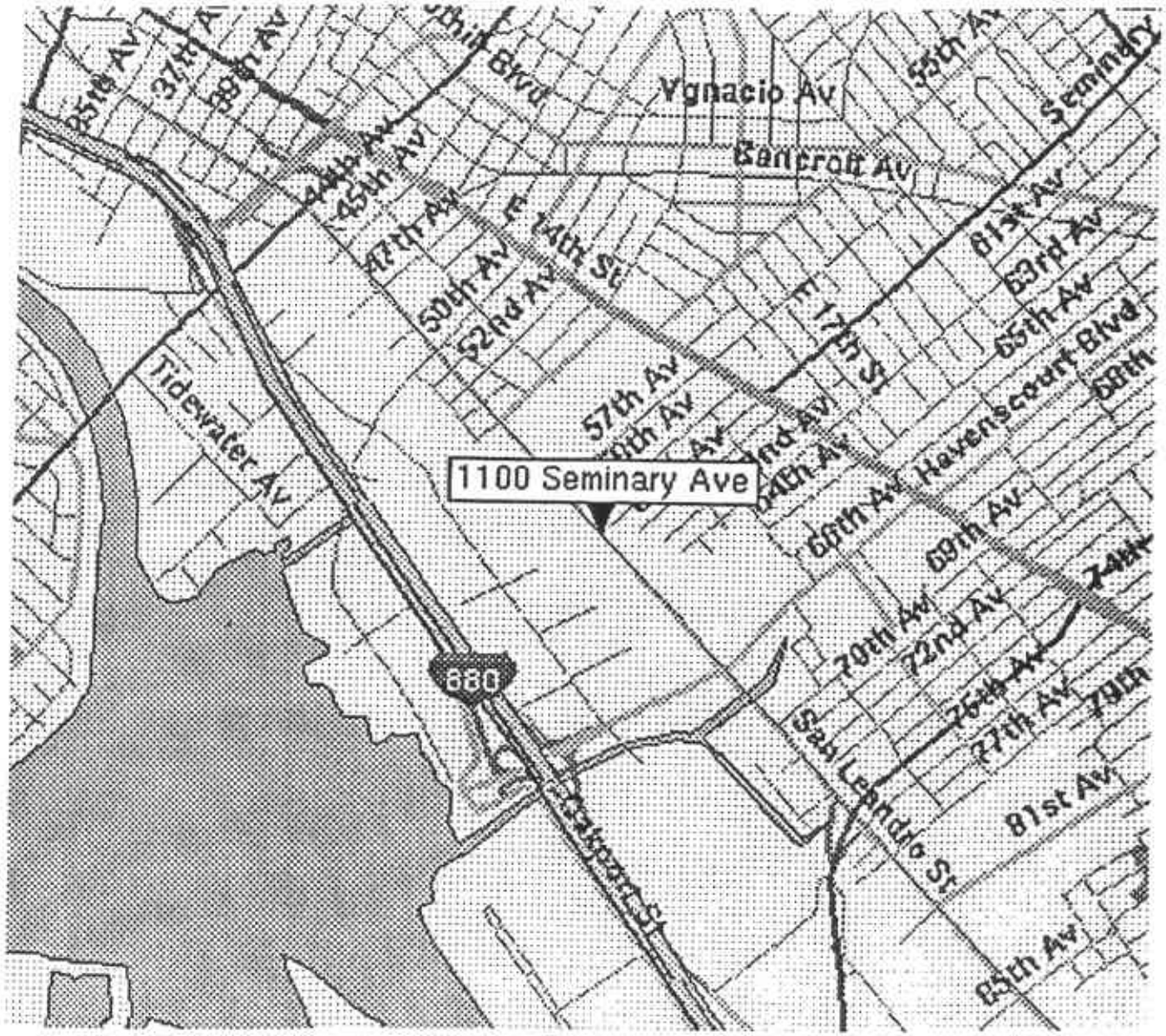
- Groundwater flow direction is towards the northwest at a gradient of 0.007 feet/foot.

- Chemical concentrations in excess of MCLs were limited to benzene in wells MW-1, MW-2 and MW-3 and ethylbenzene in MW-2.

PROJECTED WORK AND RECOMMENDATIONS

- Quarterly groundwater monitoring is scheduled for May 2002.

- Continued monthly over purges of MW-2.



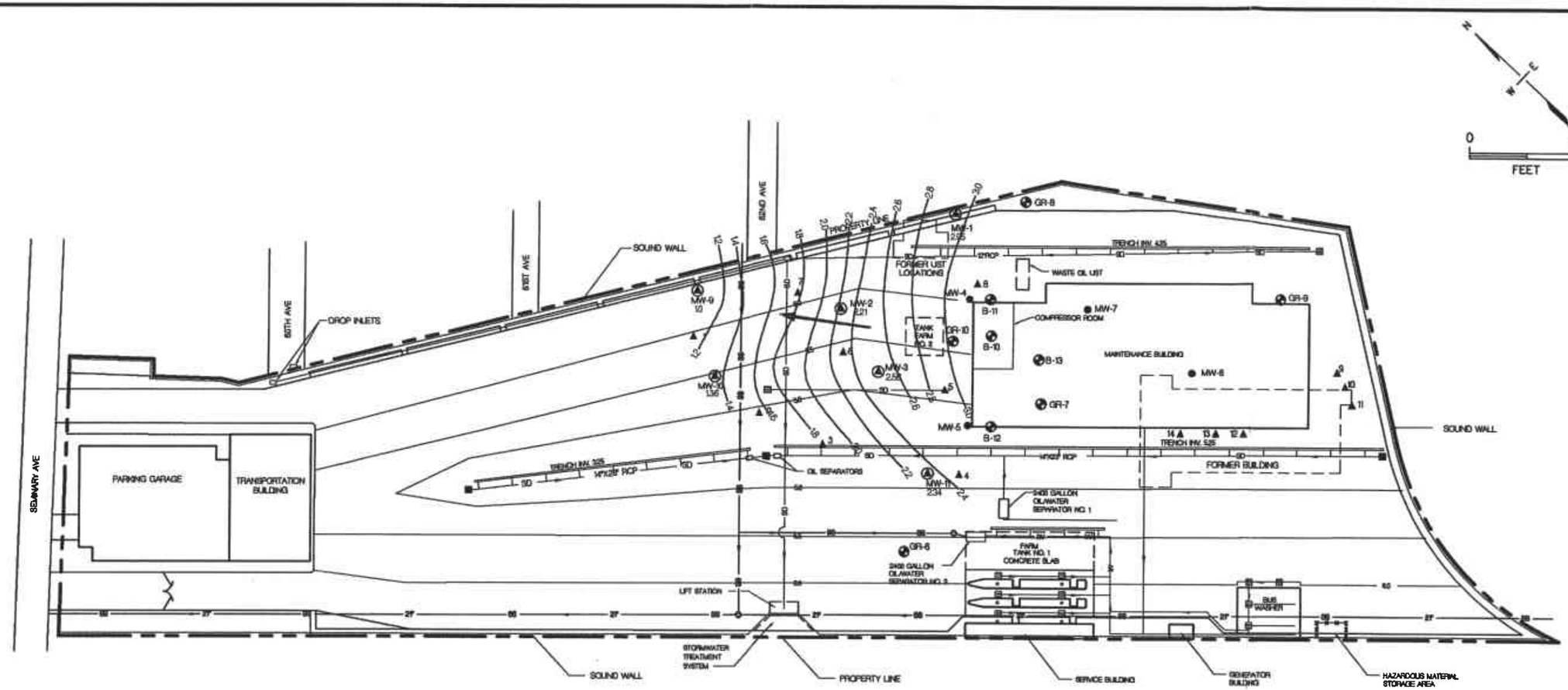
CAMERON-COLE

AC TRANSIT - OAKLAND, CALIFORNIA

FIGURE 1
SITE LOCATION MAP
1100 SEMINARY ROAD

SCALE	DATE
NO SCALE	3/22/00

LOCMAP



LEGEND:

150	GROUNDWATER ELEVATION CONTOUR	159	GROUNDWATER ELEVATION (FT. MSL)
	REPORTED GROUNDWATER FLOW		EXISTING MONITORING WELL
60	CONTOUR		ABANDONED MONITORING WELL
SD	STORM DRAIN PIPELINE		PREVIOUSLY INSTALLED SOIL BORING
SS	SANITARY SEWER PIPELINE		NEWLY INSTALLED SOIL BORING
IW	INDUSTRIAL WASTE PIPELINE		MANHOLE
	SURFACE DRAINAGE TRENCH		CATCH BASIN

BY	DATE
DRAWN WRB	3/18/02
CHECKED	
APPROVED	
APPROVED	
APPROVED	

CAMERON-COLE

FIGURE 2

AC TRANSIT - OAKLAND, CALIFORNIA

1100 SEMINARY ROAD-POTENTIOMETRIC SURFACE MAP FEBRUARY 21, 2002

SCALE: 1" = 120'

DWG. NO: 2011-03

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**	
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**
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**	

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-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**	
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**	
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**	

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	700	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**
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
(Product)	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**

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	700	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**	**200.0**	**<10**	**29.0**	12	**<20**	**<50**	**20,500**	**5,730**	**0**
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**

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	700	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**
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**

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

APPENDIX A

CERTIFIED ANALYTICAL REPORTS

CHAIN-OF-CUSTODY DOCUMENTS

SEVERN TRENT SERVICES

STL Sacramento
880 Riverside Parkway
West Sacramento, CA 95605-1500

Tel: 916 373 5600
Fax: 916 371 8420
www.stl-inc.com

March 13, 2002

STL SACRAMENTO PROJECT NUMBER: G2B210311

Brad Wright
Cameron-Cole LLC
101 West Atlantic Avenue
Building #90
Alameda, CA 94501

Dear Mr. Wright,

This report contains the analytical results for the samples received under chain of custody by STL Sacramento on February 21, 2002. These samples are associated with your AC Transit Seminary project.

The test results in this report meet all NELAC requirements for parameters that accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The case narrative is an integral part of this report.

If you have any questions, please feel free to call me at (916) 374-4414.

Sincerely,

Bonnie McNeill

Bonnie J. McNeill
Project Manager

TABLE OF CONTENTS

STL SACRAMENTO PROJECT NUMBER G2B210311

CASE NARRATIVE

STL SACRAMENTO PROJECT NUMBER G2B210311

General Comments

Samples were received at 2 degrees Centigrade.

WATER, 8015 MOD, Diesel
Sample(s): 2, 3, 4, 5, 6, 7

There was insufficient sample volume to prepare an MS/MSD pair with this batch. A second LCS was prepared instead.

There were no other anomalies associated with this project.

STL Sacramento

Quality Control Definitions

QC Parameter	Definition
QC Batch	A set of up to 20 field samples plus associated laboratory QC samples that are similar in composition (matrix) and that are processed within the same time period with the same reagent and standard lots.
Duplicate Control Sample (DCS)	Consist of a pair of LCSs analyzed within the same QC batch to monitor precision and accuracy independent of sample matrix effects. This QC is performed only if required by client or when insufficient sample is available to perform MS/MSD.
Duplicate Sample (DU)	A second aliquot of an environmental sample, taken from the same sample container when possible, that is processed independently with the first sample aliquot. The results are used to assess the effect of the sample matrix on the precision of the analytical process. The precision estimated using this sample is not necessarily representative of the precision for other samples in the batch.
Laboratory Control Sample (LCS)	A volume of reagent water for aqueous samples or a contaminant-free solid matrix (Ottawa sand) for soil and sediment samples which is spiked with known amounts of representative target analytes and required surrogates. An LCS is carried through the entire analytical process and is used to monitor the accuracy of the analytical process independent of potential matrix effects.
Matrix Spike and Matrix Spike Duplicate (MS/MSD)	A field sample fortified with known quantities of target analytes that are also added to the LCS. Matrix spike duplicate is a second matrix spike sample. MSs/MSDs are carried through the entire analytical process and are used to determine sample matrix effect on accuracy of the measurement system. The accuracy and precision estimated using MS/MSD is only representative of the precision of the sample that was spiked.
Method Blank (MB)	A sample composed of all the reagents (in the same quantities) in reagent water carried through the entire analytical process. The method blank is used to monitor the level of contamination introduced during sample preparation steps.
Surrogate Spike	Organic constituents not expected to be detected in environmental media and are added to every sample and QC at a known concentration. Surrogates are used to determine the efficiency of the sample preparation and the analytical process.

Source: STL Sacramento Laboratory Quality Manual

STL Sacramento Certifications:
Alaska (UST-055), Arizona (#AZ00616), Arkansas, California (NELAP # 01119CA) (ELAP #I-2439), Connecticut (#PH-0691), Florida (E87570), Hawaii, Louisiana (AI # 30612), New Jersey (Lab ID 44005), Nevada (#CA 044), New York (LAB ID 11666 serial # 107407), Oregon (LAB ID CA 044), South Carolina (LAB ID 87014, Cert. # 870140), Utah (E-168), Virginia (#00178), Washington (# C087), West Virginia (# 9930C), Wisconsin (Lab 998204680), USNAVY, USACE, USDA Foreign Plant (Permit # 37-82605), USDA Foreign Soil (Permit # S-46613)..

Sample Summary
G2B210311

WO#	Sample #	Client Sample ID	Sampling Date	Received Date
EVF0K	1	TRIP BLANK	2/21/02 11:30 AM	2/21/02 06:35 PM
EVF0L	2	MW-1	2/21/02 12:00 PM	2/21/02 06:35 PM
EVF0R	3	MW-9	2/21/02 12:10 PM	2/21/02 06:35 PM
EVF0T	4	MW-10	2/21/02 12:55 PM	2/21/02 06:35 PM
EVF0V	5	MW-11	2/21/02 01:15 PM	2/21/02 06:35 PM
EVF0W	6	MW-3	2/21/02 01:45 PM	2/21/02 06:35 PM
EVF0X	7	MW-2	2/21/02 02:05 PM	2/21/02 06:35 PM

Notes(s):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity, pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weigh

G2B210311

[redacted]

Chain of Custody Record

SEVERN TRENT SERVICES — Severn Trent Laboratories, Inc.

STL-4124 (1200)

Client: Cameron - Cole	Project Manager: Brad Wright	Date: 2/21/02	Chain of Custody Number: 101904
Address: 101 W. Atlantic Ave Bldg 90	Telephone Number (Area Code)/Fax Number: (510) 337-8660 / (510) 337-3994	Lab Number:	Page 1 of 1
City: Alameda; State: CA; Zip Code: 94501	Site Contact:	Lab Contact: B. McNeill	
Project Name and Location (State): AC Transit (Seminary)	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.:			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: Nitrate/Sulfate	8260 BTEX/MTBE	GRO 8015	DRO 8015	Special Instructions/ Conditions of Receipt
Trip Blank	2/21/02	1130		X										X			good
MW-1		1200											X		X	X	
MW-9		1210															
MW-10		1255															
MW-11		1315															
MW-3		1345															
MW-2		1405															

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☒ 21 Days ☐ Other _____

QC Requirements (Specify): Standard

	Date	Time		Date	Time
1. Relinquished By	2/21/02	1645	1. Received By	2-21-02	1645
2. Relinquished By	2-21-02	1835	2. Received By	2-21-02	1835
3. Relinquished By			3. Received By		

Comments:

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

STL Sacramento (916) 373 - 5600

WATER, 8015M, TPH Gas

CAMERON-COLE LLC

Client Sample ID: MW-1

GC Volatiles

Lot-Sample #...: G2B210311-002	Work Order #...: EVF0L1AE	Matrix.....: WATER	
Date Sampled...: 02/21/02	Date Received..: 02/21/02		
Prep Date.....: 02/25/02	Analysis Date..: 02/25/02		
Prep Batch #...: 2056245	Analysis Time..: 13:13		
Dilution Factor: 1			
	Method.....: DHS CA LUFT		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (as Gasoline)	**560**	**50**	**ug/L**
Unknown Hydrocarbon	ND	50	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	120	(70 - 130)

CAMERON-COLE LLC

Client Sample ID: MW-9

GC Volatiles

Lot-Sample #...: G2B210311-003	Work Order #...: EVF0R1AE	Matrix.....: WATER
Date Sampled...: 02/21/02	Date Received..: 02/21/02	
Prep Date.....: 02/25/02	Analysis Date..: 02/25/02	
Prep Batch #...: 2056245	Analysis Time..: 13:54	
Dilution Factor: 1		
	Method.....: DHS CA LUFT	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (as Gasoline)	ND	50	ug/L
Unknown Hydrocarbon	ND	50	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	107	(70 - 130)

CAMERON-COLE LLC

Client Sample ID: MW-10

GC Volatiles

Lot-Sample #...: G2B210311-004 Work Order #...: EVF0T1AE Matrix.....: WATER
Date Sampled...: 02/21/02 Date Received..: 02/21/02
Prep Date.....: 02/25/02 Analysis Date..: 02/25/02
Prep Batch #...: 2056245 Analysis Time..: 14:35
Dilution Factor: 1
Method.....: DHS CA LUFT

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (as Gasoline)	ND	50	ug/L
Unknown Hydrocarbon	ND	50	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	107	(70 - 130)

CAMERON-COLE LLC

Client Sample ID: MW-11

GC Volatiles

Lot-Sample #...: G2B210311-005	Work Order #...: EVF0V1AE	Matrix.....: WATER	
Date Sampled...: 02/21/02	Date Received..: 02/21/02		
Prep Date.....: 02/25/02	Analysis Date..: 02/25/02		
Prep Batch #...: 2056245	Analysis Time..: 15:16		
Dilution Factor: 1			
	Method.....: DHS CA LUFT		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (as Gasoline)	ND	50	ug/L
Unknown Hydrocarbon	ND	50	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	106	(70 - 130)

CAMERON-COLE LLC

Client Sample ID: MW-3

GC Volatiles

Lot-Sample #...: G2B210311-006	Work Order #...: EVF0W1AE	Matrix.....: WATER
Date Sampled...: 02/21/02	Date Received..: 02/21/02	
Prep Date.....: 02/25/02	Analysis Date..: 02/25/02	
Prep Batch #...: 2056245	Analysis Time..: 15:58	
Dilution Factor: 1		
	Method.....: DHS CA LUFT	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (as Gasoline)	**1700**	**50**	**ug/L**
Unknown Hydrocarbon	ND	50	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	120	(70 - 130)

CAMERON-COLE LLC

Client Sample ID: MW-2

GC Volatiles

Lot-Sample #...: G2B210311-007	**Work Order #...:** EVF0X1AE		**Matrix.....:** WATER
Date Sampled...: 02/21/02	**Date Received..:** 02/21/02		
Prep Date.....: 02/25/02	**Analysis Date..:** 02/25/02		
Prep Batch #...: 2056245	**Analysis Time..:** 23:52		
Dilution Factor: 50			
	Method.....: DHS CA LUFT		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (as Gasoline)	**46000**	**2500**	**ug/L**
Unknown Hydrocarbon	ND	2500	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	107	(70 - 130)

QC DATA ASSOCIATION SUMMARY

G2B210311

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
002	WATER	DHS CA LUFT		2056245	
003	WATER	DHS CA LUFT		2056245	
004	WATER	DHS CA LUFT		2056245	
005	WATER	DHS CA LUFT		2056245	
006	WATER	DHS CA LUFT		2056245	
007	WATER	DHS CA LUFT		2056245	

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: G2B210311 Work Order #...: EVJ4A1AA Matrix.....: WATER
MB Lot-Sample #: G2B250000-245

Prep Date.....: 02/25/02 Analysis Time..: 11:09
Analysis Date..: 02/25/02 Prep Batch #...: 2056245
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
TPH (as Gasoline)	ND	50	ug/L	DHS CA LUFT
Unknown Hydrocarbon	ND	50	ug/L	DHS CA LUFT

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	104	(70 - 130)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: G2B210311 Work Order #...: EVJ4A1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: G2B250000-245 EVJ4A1AD-LCSD
Prep Date.....: 02/25/02 Analysis Date..: 02/25/02
Prep Batch #...: 2056245 Analysis Time..: 11:51
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
TPH (as Gasoline)	**1000**	**987**	**ug/L**	**99**		**DHS CA LUFT**
	1000	**991**	**ug/L**	**99**	**0.38**	**DHS CA LUFT**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	116	(70 - 130)
	108	(70 - 130)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: G2B210311 Work Order #...: EVJ4A1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: G2B250000-245 EVJ4A1AD-LCSD
Prep Date.....: 02/25/02 Analysis Date..: 02/25/02
Prep Batch #...: 2056245 Analysis Time..: 11:51
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
TPH (as Gasoline)	**99**	**(70 - 130)**			**DHS CA LUFT**
	99	**(70 - 130)**	**0.38**	**(0-35)**	**DHS CA LUFT**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	116	(70 - 130)
	108	(70 - 130)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

WATER, 8260B, BTEX + MTBE

CAMERON-COLE LLC

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: G2B210311-001 Work Order #...: EVF0K1AA Matrix.....: WATER
Date Sampled...: 02/21/02 Date Received..: 02/21/02
Prep Date.....: 03/06/02 Analysis Date..: 03/06/02
Prep Batch #...: 2066440
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	1.0	ug/L
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	98	(80 - 125)
1,2-Dichloroethane-d4	107	(75 - 137)
Toluene-d8	101	(85 - 123)

CAMERON-COLE LLC

Client Sample ID: MW-1

GC/MS Volatiles

Lot-Sample #...: G2B210311-002 Work Order #...: EVF0L1AF Matrix.....: WATER
Date Sampled...: 02/21/02 Date Received..: 02/21/02
Prep Date.....: 03/02/02 Analysis Date..: 03/02/02
Prep Batch #...: 2066434
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	21	1.0	ug/L
Toluene	1.0	1.0	ug/L
Ethylbenzene	19	1.0	ug/L
Xylenes (total)	15	1.0	ug/L
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	106	(80 - 125)
1,2-Dichloroethane-d4	98	(75 - 137)
Toluene-d8	109	(85 - 123)

CAMERON-COLE LLC

Client Sample ID: MW-9

GC/MS Volatiles

Lot-Sample #...: G2B210311-003 Work Order #...: EVF0R1AF Matrix.....: WATER
Date Sampled...: 02/21/02 Date Received..: 02/21/02
Prep Date.....: 03/02/02 Analysis Date..: 03/02/02
Prep Batch #...: 2066434
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	1.0	ug/L
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	104	(80 - 125)
1,2-Dichloroethane-d4	108	(75 - 137)
Toluene-d8	111	(85 - 123)

CAMERON-COLE LLC

Client Sample ID: MW-10

GC/MS Volatiles

Lot-Sample #...: G2B210311-004 Work Order #...: EVF0T1AF Matrix.....: WATER
Date Sampled...: 02/21/02 Date Received..: 02/21/02
Prep Date.....: 03/02/02 Analysis Date..: 03/02/02
Prep Batch #...: 2066434
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	1.0	ug/L
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	100	(80 - 125)
1,2-Dichloroethane-d4	108	(75 - 137)
Toluene-d8	108	(85 - 123)

CAMERON-COLE LLC

Client Sample ID: MW-11

GC/MS Volatiles

Lot-Sample #...: G2B210311-005	Work Order #...: EVF0V1AF	Matrix.....: WATER	
Date Sampled...: 02/21/02	Date Received..: 02/21/02		
Prep Date.....: 03/02/02	Analysis Date..: 03/02/02		
Prep Batch #...: 2066434			
Dilution Factor: 1	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Xylenes (total)	ND	1.0	ug/L
Methyl tert-butyl ether (MTBE)	**2.2**	**2.0**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	107	(80 - 125)
1,2-Dichloroethane-d4	107	(75 - 137)
Toluene-d8	111	(85 - 123)

CAMERON-COLE LLC

Client Sample ID: MW-3

GC/MS Volatiles

Lot-Sample #...: G2B210311-006	Work Order #...: EVF0W2AF		Matrix.....: WATER
Date Sampled...: 02/21/02	Date Received..: 02/21/02		
Prep Date.....: 03/04/02	Analysis Date..: 03/04/02		
Prep Batch #...: 2066438			
Dilution Factor: 10	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	200 Q	10	ug/L
Toluene	ND	10	ug/L
Ethylbenzene	29	10	ug/L
Xylenes (total)	12	10	ug/L
Methyl tert-butyl ether (MTBE)	ND	20	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	90	(80 - 125)
1,2-Dichloroethane-d4	93	(75 - 137)
Toluene-d8	98	(85 - 123)

NOTE(S):

Q Elevated reporting limit. The reporting limit is elevated due to high analyte levels.

CAMERON-COLE LLC

Client Sample ID: MW-2

GC/MS Volatiles

Lot-Sample #...: G2B210311-007 Work Order #...: EVF0X1AF Matrix.....: WATER
Date Sampled...: 02/21/02 Date Received..: 02/21/02
Prep Date.....: 03/02/02 Analysis Date..: 03/02/02
Prep Batch #...: 2066434
Dilution Factor: 500 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	**18000 Q**	**500**	**ug/L**
Toluene	ND	500	ug/L
Ethylbenzene	**950**	**500**	**ug/L**
Xylenes (total)	**1500**	**500**	**ug/L**
Methyl tert-butyl ether (MTBE)	ND	1000	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(80 - 125)
1,2-Dichloroethane-d4	96	(75 - 137)
Toluene-d8	106	(85 - 123)

NOTE(S):

Q Elevated reporting limit. The reporting limit is elevated due to high analyte levels.

QC DATA ASSOCIATION SUMMARY

G2B210311

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	SW846 8260B		2066440	
002	WATER	SW846 8260B		2066434	
003	WATER	SW846 8260B		2066434	
004	WATER	SW846 8260B		2066434	
005	WATER	SW846 8260B		2066434	
006	WATER	SW846 8260B		2066438	
007	WATER	SW846 8260B		2066434	

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: G2B210311 Work Order #...: EV4JR1AA Matrix.....: WATER
MB Lot-Sample #: G2C070000-434

Prep Date.....: 03/02/02
Analysis Date..: 03/02/02 Prep Batch #...: 2066434
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(80 - 125)
1,2-Dichloroethane-d4	95	(75 - 137)
Toluene-d8	104	(85 - 123)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: G2B210311 Work Order #...: EV4JW1AA Matrix.....: WATER
MB Lot-Sample #: G2C070000-438

Prep Date.....: 03/04/02
Analysis Date..: 03/04/02 Prep Batch #...: 2066438
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	113	(80 - 125)
1,2-Dichloroethane-d4	114	(75 - 137)
Toluene-d8	122	(85 - 123)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: G2B210311 Work Order #...: EV4J71AA Matrix.....: WATER
MB Lot-Sample #: G2C070000-440

Prep Date.....: 03/06/02
Analysis Date..: 03/06/02 Prep Batch #...: 2066440
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(80 - 125)
1,2-Dichloroethane-d4	103	(75 - 137)
Toluene-d8	99	(85 - 123)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: G2B210311 Work Order #...: EV4JR1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: G2C070000-434 EV4JR1AD-LCSD
Prep Date.....: 03/02/02 Analysis Date..: 03/02/02
Prep Batch #...: 2066434
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10.0**	**9.64**	**ug/L**	**96**		**SW846 8260B**
	10.0	**9.51**	**ug/L**	**95**	**1.4**	**SW846 8260B**
Toluene	**10.0**	**9.42**	**ug/L**	**94**		**SW846 8260B**
	10.0	**9.12**	**ug/L**	**91**	**3.2**	**SW846 8260B**
Chlorobenzene	**10.0**	**9.34**	**ug/L**	**93**		**SW846 8260B**
	10.0	**9.49**	**ug/L**	**95**	**1.5**	**SW846 8260B**
1,1-Dichloroethene	**10.0**	**8.91**	**ug/L**	**89**		**SW846 8260B**
	10.0	**7.99**	**ug/L**	**80**	**11**	**SW846 8260B**
Trichloroethene	**10.0**	**9.05**	**ug/L**	**90**		**SW846 8260B**
	10.0	**9.35**	**ug/L**	**93**	**3.2**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	99	(80 - 125)
	101	(80 - 125)
1,2-Dichloroethane-d4	97	(75 - 137)
	100	(75 - 137)
Toluene-d8	102	(85 - 123)
	100	(85 - 123)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: G2B210311 **Work Order #...:** EV4JW1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: G2C070000-438 EV4JW1AD-LCSD
Prep Date.....: 03/04/02 **Analysis Date..:** 03/04/02
Prep Batch #...: 2066438
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**10.0**	**10.4**	**ug/L**	**104**		**SW846 8260B**
	10.0	**10.8**	**ug/L**	**108**	**4.2**	**SW846 8260B**
Toluene	**10.0**	**9.99**	**ug/L**	**100**		**SW846 8260B**
	10.0	**10.1**	**ug/L**	**101**	**1.5**	**SW846 8260B**
Chlorobenzene	**10.0**	**10.1**	**ug/L**	**101**		**SW846 8260B**
	10.0	**9.98**	**ug/L**	**100**	**1.2**	**SW846 8260B**
1,1-Dichloroethene	**10.0**	**9.18**	**ug/L**	**92**		**SW846 8260B**
	10.0	**8.65**	**ug/L**	**86**	**5.9**	**SW846 8260B**
Trichloroethene	**10.0**	**9.57**	**ug/L**	**96**		**SW846 8260B**
	10.0	**9.83**	**ug/L**	**98**	**2.7**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	106	(80 - 125)
	107	(80 - 125)
1,2-Dichloroethane-d4	111	(75 - 137)
	111	(75 - 137)
Toluene-d8	105	(85 - 123)
	108	(85 - 123)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: G2B210311 Work Order #...: EV4J71AC-LCS Matrix.....: WATER
LCS Lot-Sample#: G2C070000-440 EV4J71AD-LCSD
Prep Date.....: 03/06/02 Analysis Date..: 03/06/02
Prep Batch #...: 2066440
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	10.0	8.57	ug/L	86		SW846 8260B
	10.0	8.62	ug/L	86	0.56	SW846 8260B
Toluene	10.0	9.50	ug/L	95		SW846 8260B
	10.0	9.63	ug/L	96	1.4	SW846 8260B
Chlorobenzene	10.0	9.67	ug/L	97		SW846 8260B
	10.0	9.65	ug/L	96	0.24	SW846 8260B
1,1-Dichloroethene	10.0	9.13	ug/L	91		SW846 8260B
	10.0	9.05	ug/L	90	0.89	SW846 8260B
Trichloroethene	10.0	9.18	ug/L	92		SW846 8260B
	10.0	11.1	ug/L	111	18	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	93	(80 - 125)
	97	(80 - 125)
1,2-Dichloroethane-d4	94	(75 - 137)
	100	(75 - 137)
Toluene-d8	94	(85 - 123)
	98	(85 - 123)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: G2B210311 Work Order #...: EV4JR1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: G2C070000-434 EV4JR1AD-LCSD
Prep Date.....: 03/02/02 Analysis Date..: 03/02/02
Prep Batch #...: 2066434
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**96**	**(84 - 125)**			**SW846 8260B**
	95	**(84 - 125)**	**1.4**	**(0-27)**	**SW846 8260B**
Toluene	**94**	**(85 - 122)**			**SW846 8260B**
	91	**(85 - 122)**	**3.2**	**(0-27)**	**SW846 8260B**
Chlorobenzene	**93**	**(80 - 123)**			**SW846 8260B**
	95	**(80 - 123)**	**1.5**	**(0-27)**	**SW846 8260B**
1,1-Dichloroethene	**89**	**(77 - 125)**			**SW846 8260B**
	80	**(77 - 125)**	**11**	**(0-31)**	**SW846 8260B**
Trichloroethene	**90**	**(79 - 127)**			**SW846 8260B**
	93	**(79 - 127)**	**3.2**	**(0-28)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	99	(80 - 125)
	101	(80 - 125)
1,2-Dichloroethane-d4	97	(75 - 137)
	100	(75 - 137)
Toluene-d8	102	(85 - 123)
	100	(85 - 123)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: G2B210311 Work Order #...: EV4JW1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: G2C070000-438 EV4JW1AD-LCSD
Prep Date.....: 03/04/02 Analysis Date..: 03/04/02
Prep Batch #...: 2066438
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**104**	**(84 - 125)**			**SW846 8260B**
	108	**(84 - 125)**	**4.2**	**(0-27)**	**SW846 8260B**
Toluene	**100**	**(85 - 122)**			**SW846 8260B**
	101	**(85 - 122)**	**1.5**	**(0-27)**	**SW846 8260B**
Chlorobenzene	**101**	**(80 - 123)**			**SW846 8260B**
	100	**(80 - 123)**	**1.2**	**(0-27)**	**SW846 8260B**
1,1-Dichloroethene	**92**	**(77 - 125)**			**SW846 8260B**
	86	**(77 - 125)**	**5.9**	**(0-31)**	**SW846 8260B**
Trichloroethene	**96**	**(79 - 127)**			**SW846 8260B**
	98	**(79 - 127)**	**2.7**	**(0-28)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	106	(80 - 125)
	107	(80 - 125)
1,2-Dichloroethane-d4	111	(75 - 137)
	111	(75 - 137)
Toluene-d8	105	(85 - 123)
	108	(85 - 123)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: G2B210311 Work Order #...: EV4J71AC-LCS Matrix.....: WATER
LCS Lot-Sample#: G2C070000-440 EV4J71AD-LCSD
Prep Date.....: 03/06/02 Analysis Date..: 03/06/02
Prep Batch #...: 2066440
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**86**	**(84 - 125)**			**SW846 8260B**
	86	**(84 - 125)**	**0.56**	**(0-27)**	**SW846 8260B**
Toluene	**95**	**(85 - 122)**			**SW846 8260B**
	96	**(85 - 122)**	**1.4**	**(0-27)**	**SW846 8260B**
Chlorobenzene	**97**	**(80 - 123)**			**SW846 8260B**
	96	**(80 - 123)**	**0.24**	**(0-27)**	**SW846 8260B**
1,1-Dichloroethene	**91**	**(77 - 125)**			**SW846 8260B**
	90	**(77 - 125)**	**0.89**	**(0-31)**	**SW846 8260B**
Trichloroethene	**92**	**(79 - 127)**			**SW846 8260B**
	111	**(79 - 127)**	**18**	**(0-28)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	93	(80 - 125)
	97	(80 - 125)
1,2-Dichloroethane-d4	94	(75 - 137)
	100	(75 - 137)
Toluene-d8	94	(85 - 123)
	98	(85 - 123)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

WATER, 8015 MOD, Diesel

CAMERON-COLE LLC

Client Sample ID: MW-1

GC Semivolatiles

Lot-Sample #...: G2B210311-002	Work Order #...: EVF0L1AD	Matrix.....: WATER	
Date Sampled...: 02/21/02	Date Received..: 02/21/02		
Prep Date.....: 02/22/02	Analysis Date..: 02/27/02		
Prep Batch #...: 2053190			
Dilution Factor: 1	Method.....: SW846 8015 MOD		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (as Diesel)	ND	50	ug/L
Unknown Hydrocarbon	550	50	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	103	(57 - 147)

NOTE(S):

The unknown hydrocarbon from n-C8 to n-C40 is quantitated based on a diesel reference from n-C10 to n-C24 only.

CAMERON-COLE LLC

Client Sample ID: MW-9

GC Semivolatiles

Lot-Sample #...: G2B210311-003	Work Order #...: EVF0R1AD		Matrix.....: WATER
Date Sampled...: 02/21/02	Date Received..: 02/21/02		
Prep Date.....: 02/22/02	Analysis Date..: 02/27/02		
Prep Batch #...: 2053190			
Dilution Factor: 1	Method.....: SW846 8015 MOD		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (as Diesel)	ND	50	ug/L
Unknown Hydrocarbon	**89**	**50**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	85	(57 - 147)

NOTE(S):

The unknown hydrocarbon from n-C14 to n-C40 is quantitated based on a diesel reference from n-C10 to n-C24 only.

CAMERON-COLE LLC

Client Sample ID: MW-10

GC Semivolatiles

Lot-Sample #...: G2B210311-004	Work Order #...: EVF0T1AD		Matrix.....: WATER
Date Sampled...: 02/21/02	Date Received..: 02/21/02		
Prep Date.....: 02/22/02	Analysis Date..: 02/27/02		
Prep Batch #...: 2053190			
Dilution Factor: 1	Method.....: SW846 8015 MOD		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (as Diesel)	ND	50	ug/L
Unknown Hydrocarbon	**190**	**50**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	86	(57 - 147)

NOTE(S):

The unknown hydrocarbon from n-C12 to n-C40 is quantitated based on a diesel reference from n-C10 to n-C24 only.

CAMERON-COLE LLC

Client Sample ID: MW-11

GC Semivolatiles

Lot-Sample #...:	G2B210311-005	Work Order #...:	EVF0V1AD	Matrix.....:	WATER
Date Sampled...:	02/21/02	Date Received..:	02/21/02		
Prep Date.....:	02/22/02	Analysis Date..:	02/27/02		
Prep Batch #...:	2053190				
Dilution Factor:	1	Method.....:	SW846 8015 MOD		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (as Diesel)	ND	50	ug/L
Unknown Hydrocarbon	170	50	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	91	(57 - 147)

NOTE(S):

The unknown hydrocarbon from n-C14 to n-C40 is quantitated based on a diesel reference from n-C10 to n-C24 only.

CAMERON-COLE LLC

Client Sample ID: MW-3

GC Semivolatiles

Lot-Sample #...:	G2B210311-006	Work Order #...:	EVF0W1AD	Matrix.....:	WATER
Date Sampled...:	02/21/02	Date Received..:	02/21/02		
Prep Date.....:	02/22/02	Analysis Date..:	02/27/02		
Prep Batch #...:	2053190				
Dilution Factor:	1	Method.....:	SW846 8015 MOD		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (as Diesel)	ND	50	ug/L
Unknown Hydrocarbon	**990**	**50**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	94	(57 - 147)

NOTE(S):

The unknown hydrocarbon from n-C8 to n-C40 is quantitated based on a diesel reference from n-C10 to n-C24 only.

CAMERON-COLE LLC

Client Sample ID: MW-2

GC Semivolatiles

Lot-Sample #...:	G2B210311-007	Work Order #...:	EVF0X1AD	Matrix.....:	WATER
Date Sampled...:	02/21/02	Date Received..:	02/21/02		
Prep Date.....:	02/22/02	Analysis Date..:	03/05/02		
Prep Batch #...:	2053190				
Dilution Factor:	250	Method.....:	SW846 8015 MOD		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (as Diesel)	**180000**	**12000**	**ug/L**
Unknown Hydrocarbon	ND	12000	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	0.0 SRD	(57 - 147)

NOTE(S):

SRD The surrogate recovery was not calculated because the extract was diluted beyond the ability to quantitate a recovery.

QC DATA ASSOCIATION SUMMARY

G2B210311

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
002	WATER	MCAWW 300.0A		2058541	2063182
	WATER	MCAWW 300.0A		2058539	2063180
	WATER	SW846 8015 MOD		2053190	
	WATER	DHS CA LUFT		2056245	
003	WATER	MCAWW 300.0A		2058541	2063182
	WATER	MCAWW 300.0A		2058539	2063180
	WATER	SW846 8015 MOD		2053190	
	WATER	DHS CA LUFT		2056245	
004	WATER	MCAWW 300.0A		2058541	2063182
	WATER	MCAWW 300.0A		2058539	2063180
	WATER	SW846 8015 MOD		2053190	
	WATER	DHS CA LUFT		2056245	
005	WATER	MCAWW 300.0A		2058541	2063182
	WATER	MCAWW 300.0A		2058539	2063180
	WATER	SW846 8015 MOD		2053190	
	WATER	DHS CA LUFT		2056245	
006	WATER	MCAWW 300.0A		2058541	2063182
	WATER	MCAWW 300.0A		2058539	2063180
	WATER	SW846 8015 MOD		2053190	
	WATER	DHS CA LUFT		2056245	
007	WATER	MCAWW 300.0A		2058541	2063182
	WATER	MCAWW 300.0A		2058539	2063180
	WATER	SW846 8015 MOD		2053190	
	WATER	DHS CA LUFT		2056245	

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: G2B210311 Work Order #...: EVGD81AA Matrix.....: WATER
MB Lot-Sample #: G2B220000-190

Prep Date.....: 02/22/02
Analysis Date..: 02/27/02 Prep Batch #...: 2053190
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
TPH (as Diesel)	ND	50	ug/L	SW846 8015 MOD
Unknown Hydrocarbon	ND	50	ug/L	SW846 8015 MOD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	86	(57 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: G2B210311 Work Order #...: EVGD81AC-LCS Matrix.....: WATER
LCS Lot-Sample#: G2B220000-190 EVGD81AD-LCSD
Prep Date.....: 02/22/02 Analysis Date..: 02/27/02
Prep Batch #...: 2053190
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
TPH (as Diesel)	**300**	**254**	**ug/L**	**85**		**SW846 8015 MOD**
	300	**249**	**ug/L**	**83**	**2.2**	**SW846 8015 MOD**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	88	(57 - 147)
	87	(57 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: G2B210311 Work Order #...: EVGD81AC-LCS Matrix.....: WATER
LCS Lot-Sample#: G2B220000-190 EVGD81AD-LCSD
Prep Date.....: 02/22/02 Analysis Date..: 02/27/02
Prep Batch #...: 2053190
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
TPH (as Diesel)	**85**	**(39 - 125)**			**SW846 8015 MOD**
	83	**(39 - 125)**	**2.2**	**(0-44)**	**SW846 8015 MOD**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	88	(57 - 147)
	87	(57 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

General Chemistry - Various Methods

CAMERON-COLE LLC

Client Sample ID: MW-1

General Chemistry

Lot-Sample #...: G2B210311-002 Work Order #...: EVF0L Matrix.....: WATER
Date Sampled...: 02/21/02 12:00 Date Received..: 02/21/02 18:35

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N	ND	0.050	mg/L	MCAWW 300.0A	02/22/02	2058539
	Analysis Time..: 18:41					
Sulfate	**3.0**	**1.0**	**mg/L**	**MCAWW 300.0A**	**02/22/02**	**2058541**
	Analysis Time..: 18:41					

CAMERON-COLE LLC

Client Sample ID: MW-9

General Chemistry

Lot-Sample #...: G2B210311-003 Work Order #...: EVF0R Matrix.....: WATER
Date Sampled...: 02/21/02 12:10 Date Received..: 02/21/02 18:35

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N	0.094	0.050	mg/L	MCAWW 300.0A	02/22/02	2058539
		Analysis Time..: 18:55				
Sulfate	137 Q	10.0	mg/L	MCAWW 300.0A	02/22/02	2058541
		Analysis Time..: 18:41				

NOTE(S):

RL Reporting Limit

Q Elevated reporting limit. The reporting limit is elevated due to high analyte levels.

CAMERON-COLE LLC

Client Sample ID: MW-10

General Chemistry

Lot-Sample #...: G2B210311-004 Work Order #...: EVF0T Matrix.....: WATER
Date Sampled...: 02/21/02 12:55 Date Received..: 02/21/02 18:35

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N	ND	0.050	mg/L	MCAWW 300.0A	02/22/02	2058539
		Analysis Time..: 19:08				
Sulfate	77.7 Q	10.0	mg/L	MCAWW 300.0A	02/22/02	2058541
		Analysis Time..: 17:20				

NOTE(S):

RL Reporting Limit

Q Elevated reporting limit. The reporting limit is elevated due to high analyte levels.

CAMERON-COLE LLC

Client Sample ID: MW-11

General Chemistry

Lot-Sample #...: G2B210311-005 Work Order #...: EVF0V Matrix.....: WATER
Date Sampled...: 02/21/02 13:15 Date Received..: 02/21/02 18:35

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N	0.11	0.050	mg/L	MCAWW 300.0A	02/22/02	2058539
		Analysis Time..: 19:22				
Sulfate	75.6 Q	10.0	mg/L	MCAWW 300.0A	02/22/02	2058541
		Analysis Time..: 18:01				

NOTE(S):

RL Reporting Limit

Q Elevated reporting limit. The reporting limit is elevated due to high analyte levels.

CAMERON-COLE LLC

Client Sample ID: MW-3

General Chemistry

Lot-Sample #...: G2B210311-006 Work Order #...: EVF0W Matrix.....: WATER
Date Sampled...: 02/21/02 13:45 Date Received..: 02/21/02 18:35

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N	ND	0.050	mg/L	MCAWW 300.0A	02/22/02	2058539
		Analysis Time..: 20:03				
Sulfate	20.5	1.0	mg/L	MCAWW 300.0A	02/22/02	2058541
		Analysis Time..: 20:03				

CAMERON-COLE LLC

Client Sample ID: MW-2

General Chemistry

Lot-Sample #...: G2B210311-007 Work Order #...: EVF0X Matrix.....: WATER
Date Sampled...: 02/21/02 14:05 Date Received..: 02/21/02 18:35

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N	ND G	0.10	mg/L	MCAWW 300.0A	02/22/02	2058539
		Analysis Time..: 15:45				
Sulfate	ND G	2.0	mg/L	MCAWW 300.0A	02/22/02	2058541
		Analysis Time..: 15:45				

NOTE(S):

RL Reporting Limit

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

QC DATA ASSOCIATION SUMMARY

G2B210311

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
002	WATER	MCAWW 300.0A		2058541	2063182
	WATER	MCAWW 300.0A		2058539	2063180
003	WATER	MCAWW 300.0A		2058541	2063182
	WATER	MCAWW 300.0A		2058539	2063180
004	WATER	MCAWW 300.0A		2058541	2063182
	WATER	MCAWW 300.0A		2058539	2063180
005	WATER	MCAWW 300.0A		2058541	2063182
	WATER	MCAWW 300.0A		2058539	2063180
006	WATER	MCAWW 300.0A		2058541	2063182
	WATER	MCAWW 300.0A		2058539	2063180
007	WATER	MCAWW 300.0A		2058541	2063182
	WATER	MCAWW 300.0A		2058539	2063180

METHOD BLANK REPORT

General Chemistry

Client Lot #...: G2B210311 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N		Work Order #: EVWCD1AA		MB Lot-Sample #:	G2B270000-539	
	ND	0.050	mg/L	MCAWW 300.0A	02/22/02	2058539
		Analysis Time..: 14:24				
Sulfate		Work Order #: EVWCL1AA		MB Lot-Sample #:	G2B270000-541	
	ND	1.0	mg/L	MCAWW 300.0A	02/22/02	2058541
		Analysis Time..: 14:24				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: G2B210311 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N			Work Order #: EVWCD1AC LCS Lot-Sample#: G2B270000-539				
	1.50	1.43	mg/L	95	MCAWW 300.0A	02/22/02	2058539
			Analysis Time..: 14:10				
Sulfate			Work Order #: EVWCL1AC LCS Lot-Sample#: G2B270000-541				
	15.0	14.1	mg/L	94	MCAWW 300.0A	02/22/02	2058541
			Analysis Time..: 14:10				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: G2B210311 Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N		Work Order #: EVWCD1AC LCS Lot-Sample#: G2B270000-539			
	95	(90 - 110)	MCAWW 300.0A	02/22/02	2058539
		Analysis Time..: 14:10			
Sulfate		Work Order #: EVWCL1AC LCS Lot-Sample#: G2B270000-541			
	94	(90 - 110)	MCAWW 300.0A	02/22/02	2058541
		Analysis Time..: 14:10			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: G2B210311 **Matrix.....:** WATER
Date Sampled...: 02/21/02 12:55 **Date Received..:** 02/21/02 18:35

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N			WO#: EVF0T1AG-MS/EVF0T1AH-MSD		MS Lot-Sample #: G2B210311-004				
	ND	2.00	1.91	mg/L	96		MCAWW 300.0A	02/22/02	2058539
	ND	2.00	1.90	mg/L	95	0.63	MCAWW 300.0A	02/22/02	2058539
			Analysis Time..: 20:16						
Sulfate			WO#: EVF0T1AJ-MS/EVF0T1AK-MSD		MS Lot-Sample #: G2B210311-004				
	77.7	200	276	mg/L	99		MCAWW 300.0A	02/22/02	2058541
	77.7	200	272	mg/L	97	1.4	MCAWW 300.0A	02/22/02	2058541
			Analysis Time..: 17:34						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: G2B210311 **Matrix.....:** WATER
Date Sampled...: 02/21/02 12:55 **Date Received..:** 02/21/02 18:35

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N		WO#: EVF0T1AG-MS/EVF0T1AH-MSD				MS Lot-Sample #: G2B210311-004	
	96	(90 - 110)			MCAWW 300.0A	02/22/02	2058539
	95	(90 - 110)	0.63	(0-10)	MCAWW 300.0A	02/22/02	2058539
		Analysis Time..: 20:16					
Sulfate		WO#: EVF0T1AJ-MS/EVF0T1AK-MSD				MS Lot-Sample #: G2B210311-004	
	99	(90 - 110)			MCAWW 300.0A	02/22/02	2058541
	97	(90 - 110)	1.4	(0-10)	MCAWW 300.0A	02/22/02	2058541
		Analysis Time..: 17:34					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

APPENDIX B

SAMPLING EVENT DATA

FIELD PERSONNEL: EG/ECW

WELL OR LOCATION	DATE	TIME	MEASUREMENT	CODE	COMMENTS
MW-1	2/21/02	1028	3.30	SWL	
MW-2		1101	4.31/4.32	OIL/SWL	
MW-3		1255	2.20	SWL	
MW-9		1034	4.79	SWL	
MW-10		1039	3.29	SWL	
MW-11	↓	1049	1.85	SWL	

SWL - Static Water Level

OIL - Oil Level

OWI - Oil/Water Interface

MTD - Measured Total Depth

Project Name: ACT (Seminary) Project Number: 2014 Well ID: MW-1
Casing Diameter (in): 2" Sample Date: 2/21/02
Total Well Depth (ft): 15.35 Sample ID: MW-1
Depth to Water (ft) before purging: 3.30

Development Method:

_____**Bailer:** _____Teflon _____Stainless Steel _____PVC _____ABS Plastic

NA _____**Pump:** _____Dedicated Submersible Pump _____Bladder Pump
_____Non-Dedicated Submersible Pump

Time	pH	Conductivity (umho/cm)	Temperature (Celsius)	Water Level (to 0.01 ft.)	Cum. Vol. (gal)	Pump Rate (GPM)
2 1140	6.70	1432	23.5	3.46	2	0.4
4 1145	7.03	1620	23.2	3.53	4	↓
6 1152	7.08	1625	23.4	3.59	6	↓
				Total V=	6.0	

Water Volume to be Purged (gal): (15.35 - 3.30) = 12.05 x 0.165 = 1.99 x 3 = 5.97
(Casing Length in Ft – Depth to Water in Ft) (X) (3)
Where X =1 Well Volume in Gal/ft, X=0.165 for 2" wells, X=0.37 for 3" wells, X=0.65 for 4" wells

NOTE: 3 to 5 Well Casing Volumes required prior to sample collection.

At least 3 well casing volumes were removed prior to sampling.

Sample Collection Method:

X **Bailer:** _____Teflon _____Stainless Steel _____PVC _____ABS Plastic

_____**Pump:** _____Dedicated Submersible Pump _____Bladder Pump
_____Non-Dedicated Submersible Pump

QA/QC Samples if any (Duplicate, Field Blank, Rinse Blank, Etc.):
Trip Blank collected @ 1130

Parameter Collected: 8015 GRO/DRO 8260 MTBE/BTEX Nitrate/Sulfate _____

Sample Appearance
_____OVA Reading (ppm)
_____Suspended Solids (describe):

~~ORP~~ Fe = 2.20
DO = 5.89
~~Fe~~ ORP = -45

Decontamination Performed:

W/R S/M

Start : 1136
Stop : 1152
Sample: ~~1130~~ 1200

Comments / Calculations:

Centrifugal pump to purge

Name: Erik R. Gerking Date: 2/21/02

Project Name: Seminary (ACT) Project Number: 2014 Well ID: MW-2
Casing Diameter (in): 2" Sample Date: 2/21/02
Total Well Depth (ft): 23.51 Sample ID: MW-2
Depth to Water (ft) before purging:
4.31 oil Level / 4.32 static water level – subtract 1' for calibration → # SWL = 3.32
Development Method:

_____**Bailer:** _____Teflon _____Stainless Steel _____PVC _____ABS Plastic

_____**Pump:** _____Dedicated Submersible Pump _____Bladder Pump
_____Non-Dedicated Submersible Pump

Time	pH	Conductivity (umho/cm)	Temperature (Celsius)	Water Level (to 0.01 ft.)	Cum. Vol. (gal)	Pump Rate (GPM)
1320	7.51	3730	23.3	5.21	3	0.6
1327	7.43	3840	24.2	6.31	6	↓
1335	7.42	3850	24.1	6.86	9	↓
				Total V =	10 gal	

Water Volume to be Purged (gal): (3.32 – 23.51) = 20.19 × 0.165 = 3.33 × 3 = 9.99
(Casing Length in Ft – Depth to Water in Ft) (X) (3)
Where X =1 Well Volume in Gal/ft, X=0.165 for 2" wells, X=0.37 for 3" wells, X=0.65 for 4" wells

NOTE: 3 to 5 Well Casing Volumes required prior to sample collection.

At least 3 well casing volumes were removed prior to sampling.

Sample Collection Method:

__X__**Bailer:** _____Teflon _____Stainless Steel _____PVC _____ABS Plastic

_____**Pump:** _____Dedicated Submersible Pump _____Bladder Pump
_____Non-Dedicated Submersible Pump

QA/QC Samples if any (Duplicate, Field Blank, Rinse Blank, Etc.):

Parameter Collected: 8260 BTEX/MTBE GRO DRO Nitrate/Sulfate

Sample Appearance
_____OVA Reading (ppm)
_____Suspended Solids (describe):

Fe = 3.30
DO = 3.65
ORP = -27

Decontamination Performed:

Comments / Calculations:

Start: 1315
Stop: 1338
sample: 1345

Name: Erik Berg Date: 2/21/02

Project Name: Seminary (ACT)
Project Number: 2014-1
Well ID: MW-3
Casing Diameter (in): 2"
Sample Date: 2/21/02
Total Well Depth (ft): 16.8'
Sample ID: MW-3
Depth to Water (ft) before purging: 2.20'

Development Method:

_____**Bailer:** _____Teflon _____Stainless Steel _____PVC _____ABS Plastic

NA

_____**Pump:** _____Dedicated Submersible Pump _____Bladder Pump
_____Non-Dedicated Submersible Pump

Time	pH	Conductivity (umho/cm)	Temperature (Celsius)	Water Level (to 0.01 ft.)	Cum. Vol. (gal)	Pump Rate (GPM)
1300	7.08	2135	23.5	2.45	2.5	
1305	6.85	2140	23.2	2.58	5.0	
1310	6.91	2140	23.4	3.16	7.5	
				Total V =	7.5 gal	

Water Volume to be Purged (gal): (16.8 - 2.20) = 14.6 x 0.165 = 2.4143 = 7.2
(Casing Length in Ft – Depth to Water in Ft) (X) (3)
Where X =1 Well Volume in Gal/ft, X=0.165 for 2" wells, X=0.37 for 3" wells, X=0.65 for 4" wells

NOTE: 3 to 5 Well Casing Volumes required prior to sample collection.

At least _____ well casing volumes were removed prior to sampling.

Sample Collection Method:

_X_**Bailer:** _____Teflon _____Stainless Steel _____PVC _____ABS Plastic

_____**Pump:** _____Dedicated Submersible Pump _____Bladder Pump
_____Non-Dedicated Submersible Pump

QA/QC Samples if any (Duplicate, Field Blank, Rinse Blank, Etc.):

Parameter Collected: 8015 GRO/DRO 8260 MTBE/BTEX Nitrate/Sulfate _____

Sample Appearance
_____OVA Reading (ppm)
_____Suspended Solids (describe):

Decontamination Performed:

ORP = ~~0.3~~ (-10)
DO = 5.73
FE = 0.00

Comments / Calculations:

Start = 1255
Stop = 1310
Sample = 1345

Name: Eric R. Cox Date: 2/21/02

Project Name: Seminary
Project Number: 2014-1
Well ID: MW-9
Casing Diameter (in): 2"
Total Well Depth (ft): ~~13.00~~ 19.50
Depth to Water (ft) before purging: 4.79
Sample Date: 2/21/02
Sample ID: MW-9

Development Method:
_____**Bailer:** _____Teflon _____Stainless Steel _____PVC _____ABS Plastic
NA **Pump:** _____Dedicated Submersible Pump _____Bladder Pump
_____Non-Dedicated Submersible Pump

Time	pH	Conductivity (umho/cm)	Temperature (Celsius)	Water Level (to 0.01 ft.)	Cum. Vol. (gal)	Pump Rate (GPM)
1146	7.34	1338	22.5	9.77	2	
1150	7.39	1373	23.0	10.89	4	
1155	7.39	1394	24.0	11.07	6	
			total volume = 8			

Water Volume to be Purged (gal):
(Casing Length in Ft – Depth to Water in Ft) (X) (3)
Where X =1 Well Volume in Gal/ft, X=0.165 for 2" wells, X=0.37 for 3" wells, X=0.65 for 4" wells
19.5 - 4.79 = 14.71 x .165 = 2.42 x 3 = 7.28
NOTE: 3 to 5 Well Casing Volumes required prior to sample collection.

At least 3 well casing volumes were removed prior to sampling.

Sample Collection Method:
X **Bailer:** _____Teflon _____Stainless Steel _____PVC _____ABS Plastic
_____**Pump:** _____Dedicated Submersible Pump _____Bladder Pump
_____Non-Dedicated Submersible Pump

QA/QC Samples if any (Duplicate, Field Blank, Rinse Blank, Etc.):

Parameter Collected: 8015 GRO 8015 DRO 8260 BTEX/MTBE Nitrate/Sulfate

Sample Appearance
_____OVA Reading (ppm)
_____Suspended Solids (describe): centrifugal pump used to purge

Decontamination Performed:
washed/rinsed sounders/meters

Comments / Calculations:
start 11:42
stop 11:58
sample 12:10
DO: 3.50 mg/L
ORP: -22 mV
Fe: 0.07 mg/L

Name: Emily Hlatka Date: 2/21/02

Project Name: ACT (Seminary)
Casing Diameter (in): 2"
Total Well Depth (ft): 11.40
Depth to Water (ft) before purging: 3.29

Project Number: 2014
Sample Date: 2/21/02
Sample ID: MW-10

Well ID: MW-10

Development Method:
_____**Bailer:** _____Teflon _____Stainless Steel _____PVC _____ABS Plastic
NA
_____**Pump:** _____Dedicated Submersible Pump _____Bladder Pump
_____Non-Dedicated Submersible Pump

Time	pH	Conductivity (umho/cm)	Temperature (Celsius)	Water Level (to 0.01 ft.)	Cum. Vol. (gal)	Pump Rate (GPM)
1240	7.22	2750	24.1	3.81	1.5	0.3
1245	7.15	2740	23.4	3.89	3.0	↓
1250	7.21	2750	23.2	3.98	4.5	↓
				Total V=	4.5	

Water Volume to be Purged (gal): (11.40 – 3.29) = 8.11 x 0.165 = 1.34 x 3 = 4.01
(Casing Length in Ft – Depth to Water in Ft) (X) (3)
Where X =1 Well Volume in Gal/ft, X=0.165 for 2" wells, X=0.37 for 3" wells, X=0.65 for 4" wells

NOTE: 3 to 5 Well Casing Volumes required prior to sample collection.

At least _____ well casing volumes were removed prior to sampling.

Sample Collection Method:
__X__**Bailer:** _____Teflon _____Stainless Steel _____PVC _____ABS Plastic

_____**Pump:** _____Dedicated Submersible Pump _____Bladder Pump
_____Non-Dedicated Submersible Pump

QA/QC Samples if any (Duplicate, Field Blank, Rinse Blank, Etc.):

Parameter Collected: 8015 GRO/DRO 8260 MTBE/BTEX Nitrate/Sulfate _____

Sample Appearance
_____OVA Reading (ppm)
_____Suspended Solids (describe):

ORP = -61
DO = 4.28
FE = 0.00

Decontamination Performed:

W/R S/M

Comments / Calculations:

Centrifugal pump to purge

Start: 1235
Stop: 1250
Sample: 1255

Name: Erik R. Gerkin Date: 2/21/02

Project Name: Seminary (ACT)
Casing Diameter (in): 2"
Total Well Depth (ft): 13.5'
Depth to Water (ft) before purging: 1.85'

Project Number: 2014-1
Sample Date: 2/21/02
Sample ID: MW-11

Well ID: MW-11

Development Method:

_____**Bailer:** _____Teflon _____Stainless Steel _____PVC _____ABS Plastic

NA _____**Pump:** _____Dedicated Submersible Pump _____Bladder Pump
_____Non-Dedicated Submersible Pump

Time	pH	Conductivity (umho/cm)	Temperature (Celsius)	Water Level (to 0.01 ft.)	Cum. Vol. (gal)	Pump Rate (GPM)
1150	7.15	1798	22.5	3.03	2	0.05
1230	7.25	1786	21.9	4.06	4	↓
1300	7.24	1780	22.0	4.85	6	↓
				Total V=	6.0	

Water Volume to be Purged (gal): (13.5 - 1.85) = 11.65 x 0.165 = 1.92 x 3 = 5.76
(Casing Length in Ft – Depth to Water in Ft) (X) (3)
Where X =1 Well Volume in Gal/ft, X=0.165 for 2" wells, X=0.37 for 3" wells, X=0.65 for 4" wells

NOTE: 3 to 5 Well Casing Volumes required prior to sample collection.

At least _____ well casing volumes were removed prior to sampling.

Sample Collection Method:

__X__**Bailer:** _____Teflon _____Stainless Steel _____PVC _____ABS Plastic

_____**Pump:** _____Dedicated Submersible Pump _____Bladder Pump
_____Non-Dedicated Submersible Pump

QA/QC Samples if any (Duplicate, Field Blank, Rinse Blank, Etc.):

Parameter Collected: 8015 GRO/DRO 8260 BTEX/MTBE Nitrate/Sulfate _____

Sample Appearance

_____OVA Reading (ppm)
_____Suspended Solids (describe):

ORP = +61
DO = +4.28
FE = 0.00

Decontamination Performed:

W/A S/M

Comments / Calculations:

Peristaltic pump to purge

Start : 1110
Stop : 1300
Sample : 1315

Name: Eric R. Gerz

Date: 2/21/02

[redacted]

Chain of Custody Record

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

STL-4124 (1200)

Client	Cameron-Cole
Address	101 W. Atlantic Ave Bldg 90
City	Alameda
State	CA
Zip Code	94501
Project Name and Location (State)	AC Transit (Seminary)
Contract/Purchase Order/Quote No.	
Project Manager	Brad Wright
Telephone Number (Area Code)/Fax Number	(510) 337-8660 / (510) 337-3994
Site Contact	
Lab Contact	B. McNeill
Carrier/Waybill Number	
Date	2/21/02
Lab Number	
Chain of Custody Number	101904
Page	1 of 1

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Matrix: Aqueous	Matrix: Sed.	Matrix: Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Nitrate/Sulfate	8260 BTEX/MTBE	GRO 8015	DRO 8015	Special Instructions/Conditions of Receipt
Trip Blank	2/21/02	1130		X										X			
MW-1	↓	1200		↓									X	X	X	X	
MW-9	↓	1210		↓									↓	↓	↓	↓	
MW-10	↓	1255		↓									↓	↓	↓	↓	
MW-11	↓	1315		↓									↓	↓	↓	↓	
MW-3	↓	1345		↓									↓	↓	↓	↓	
MW-2	↓	1405		↓									↓	↓	↓	↓	

Possible Hazard Identification: ☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☑ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☑ 21 Days ☐ Other ____

QC Requirements (Specify): Standard

	Date	Time		Date	Time
1. Relinquished By: [signature]	2/21/02	1645	1. Received By: [signature]	2-21-02	1645
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Well ID: MW-2

Project Name: ACT, Seminary (overpurge) Project Number: 2014 -1
Casing Diameter (in): 2" Sample Date: 1/7/02
Total Well Depth (ft): 23.51 Sample ID: NS
Depth to Water (ft) before purging: 2.35 (SWL)

Development Method:
_____**Bailer:** _____Teflon _____Stainless Steel _____PVC _____ABS Plastic

NA _____**Pump:** _____Dedicated Submersible Pump _____Bladder Pump
_____Non-Dedicated Submersible Pump

Time	pH	Conductivity (umho/cm)	Temperature (Celsius)	Water Level (to 0.01 ft.)	Cum. Vol. (gal)	Pump Rate (GPM)
1300	Start	Pump			0	0.2
						↓
1500	Stop	Pump			25	↓
				Total volume	25	
				Total casings	7.2	

Water Volume to be Purged (gal): 23.51 − 2.35 = 21.16 × 0.165 = 3.49 gal = one casing volume
(Casing Length in Ft – Depth to Water in Ft) (X) (3)
Where X =1 Well Volume in Gal/ft, X=0.165 for 2" wells, X=0.37 for 3" wells, X=0.65 for 4" wells

NOTE: 3 to 5 Well Casing Volumes required prior to sample collection.

At least _____ well casing volumes were removed prior to sampling.

Sample Collection Method:
_____**Bailer:** _____Teflon _____Stainless Steel _____PVC _____ABS Plastic

NA _____**Pump:** _____Dedicated Submersible Pump _____Bladder Pump
_____Non-Dedicated Submersible Pump

QA/QC Samples if any (Duplicate, Field Blank, Rinse Blank, Etc.):

Parameter Collected: NA _____ _____ _____

Sample Appearance
_____OVA Reading (ppm)
_____Suspended Solids (describe):

Decontamination Performed:

Washed / Rinsed Sounder

Comments / Calculations:

Start: 1300
Stop - 1500

Name: Erik R. (Kerr) Date: 1/7/02

Well ID: MW-2

Project Name: Seminary Overpurge Project Number: 2014-1
Casing Diameter (in): 2" ~~Sample~~ Date: 2/4/02
Total Well Depth (ft): 23.51 Sample ID:
Depth to Water (ft) before purging:
3.946(@L) 3.95 (SWL) NS

Development Method:
_____**Bailer:** _____Teflon _____Stainless Steel _____PVC _____ABS Plastic

_____**Pump:** _____Dedicated Submersible Pump _____Bladder Pump
_____Non-Dedicated Submersible Pump

Time	pH	Conductivity (umho/cm)	Temperature (Celsius)	Water Level (to 0.01 ft.)	Cum. Vol. (gal)	Pump Rate (GPM)
1130	Start pump		→	→	0	0.2
						↓
1345	Stop pump		→	→	25	↓

Water Volume to be Purged (gal): 23.51 - 3.95 = 19.56 x 0.165 = 3.22 x 3 = 9.7
(Casing Length in Ft – Depth to Water in Ft) (X) (3)
Where X =1 Well Volume in Gal/ft, X=0.165 for 2" wells, X=0.37 for 3" wells, X=0.65 for 4" wells

NOTE: 3 to 5 Well Casing Volumes required prior to sample collection.

At least _____ well casing volumes were removed prior to sampling.

Sample Collection Method:
_____**Bailer:** _____Teflon _____Stainless Steel _____PVC _____ABS Plastic

NA _____**Pump:** _____Dedicated Submersible Pump _____Bladder Pump
_____Non-Dedicated Submersible Pump

QA/QC Samples if any (Duplicate, Field Blank, Rinse Blank, Etc.):

Parameter Collected: NA _____ _____ _____

Sample Appearance
_____OVA Reading (ppm)
_____Suspended Solids (describe):

Decontamination Performed:

Washed/Rinsed Sounder

Comments / Calculations:

Centrifugal pump to purge

Start: 1130
Stop: 1345

Name: Erik R. Berg Date: 2/4/02

Project Name: ACTC Seminary Over)
Project Number: 2074-1
Well ID: MW-2
Casing Diameter (in): 2" Purge
~~Sample Date:~~ ~~3/3~~ 3/4/02
Total Well Depth (ft): 23.51
~~Sample ID~~:
Depth to Water (ft) before purging: OL NS
3.44 (SWL) / 3.42 (~~OWL~~)
Development Method:

NA _____**Bailer:** _____Teflon _____Stainless Steel _____PVC _____ABS Plastic

_____**Pump:** _____Dedicated Submersible Pump _____Bladder Pump
_____Non-Dedicated Submersible Pump

Time	pH	Conductivity (umho/cm)	Temperature (Celsius)	Water Level (to 0.01 ft.)	Cum. Vol. (gal)	Pump Rate (GPM)
Start @ 0900					0	
Stop @ 1100					29	
				Total V =	29	
				Total Comp =	8.76	

Water Volume to be Purged (gal): 23.51 - 3.44 = 20.07 x 0.165 = 3.31 gal = 1 casing vol
(Casing Length in Ft – Depth to Water in Ft) (X) (3)
Where X =1 Well Volume in Gal/ft, X=0.165 for 2" wells, X=0.37 for 3" wells, X=0.65 for 4" wells

NOTE: 3 to 5 Well Casing Volumes required prior to sample collection.

At least _____ well casing volumes were removed prior to sampling.

Sample Collection Method:

_____**Bailer:** _____Teflon _____Stainless Steel _____PVC _____ABS Plastic

NA _____**Pump:** _____Dedicated Submersible Pump _____Bladder Pump
_____Non-Dedicated Submersible Pump

QA/QC Samples if any (Duplicate, Field Blank, Rinse Blank, Etc.):

Parameter Collected: None _____ _____ _____

Sample Appearance
_____OVA Reading (ppm)
_____Suspended Solids (describe):

Decontamination Performed:

Washed and rinsed oil/water interface probe

Comments / Calculations:

Centrifugal pump to purge

Name: Eric R. Gort Date: 3/4/02