

AC Transit

Alameda-Contra Costa Transit District

Ro. 402

10626 East 14th Street, Oakland, California

94603 ☐ (510) 577-8804

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February 12, 2002



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

FEB 14 2002

Dear Ms. chu:

Subject: Quarterly Groundwater Monitoring Report,
AC Transit, 1177 47th Street, Emeryville

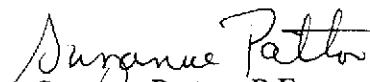
AC Transit hereby submits the enclosed quarterly groundwater monitoring report for the AC Transit facility located at 1177 47th Street in Emeryville. The report was prepared by our consultant, Cameron-Cole, LLC, and contains the results of the December 2001 sampling event.

Ground water samples were collected from three on-site monitoring wells and analyzed for total extractable petroleum hydrocarbons (TPH) using modified EPA Method 8015 and benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tert-butyl ether (MTBE) using EPA Method 8021B. This sampling was performed pursuant to your August 7, 2001, request of quarterly groundwater sampling of monitoring wells MW-11, MW-12, and MW-13 and semi-annual groundwater sampling of other site monitoring wells. Depth to ground water was measured in all 16 monitoring wells and ground water contour maps were developed for the report.

Analytical results indicate that TPH was detected as degraded diesel in MW-11, MW-12, and MW-13 at concentrations of 320, 170 and 160 ppb, respectively. BTEX compounds were not detected in any of the samples. TPH as degraded gasoline was detected only in MW-12 at a concentration of 670 ppb. MTBE was measured at 9.4 ppb in the sample from MW-12.

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, P.E.
Environmental Engineer

enclosure

Ro-402

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

January 25, 2002

FEB 14 2002

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

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

Project No: 2015-1



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

January 25, 2001


Prepared For:


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

Prepared By:

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

Project No: 2015-1


Reviewed By
Brad Wright, R.O.
Senior Geologist



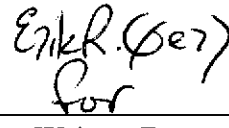

Written By
Brady Hanson
Geologist I

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INTRODUCTION

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

GROUNDWATER MONITORING

Work performed during this sampling event included measuring depth to water in all monitor wells and groundwater sampling of monitor wells MW-11, MW-12 and MW-13. Groundwater samples were analyzed for total extractable petroleum hydrocarbons (TEPH) using Environmental Protection Agency (EPA) Method 8015 Modified and benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl tertiary-butyl ether (MTBE) by EPA Method 8021B.

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

Groundwater Elevations and Flow Direction

On December 14, 2001, all 16 Site monitor wells were inspected and measured for the presence of free phase hydrocarbons and depth to groundwater. Measurements of depths to groundwater are presented on Table 1 and were used to construct the groundwater elevation contours shown in Figure 2. As shown on Figure 2, groundwater flow is to the west at a gradient of 0.02 feet/foot.

Groundwater Sampling Activities

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

Groundwater samples were collected in 40-milliliter glass vials preserved with hydrochloric acid and one-liter non-preserved amber glass containers and placed in an ice-filled cooler for shipment under chain-of-custody to a State of California certified laboratory. A trip blank was submitted on December 14, 2001 for analysis by EPA Method 8021B.

Groundwater Analytical Results

Table 2 presents groundwater analytical results for the December 2001 sampling event. TPH was detected in all three wells at concentrations ranging from 160 to 670 parts per billion (ppb). MTBE was detected in wells MW-12 and MW-13 below the California maximum contaminant level for drinking water of 13 ppb. No analytes were detected in the trip blank or method blank. A lab control spike and lab control spike duplicate passed the EPA's criteria for acceptance.

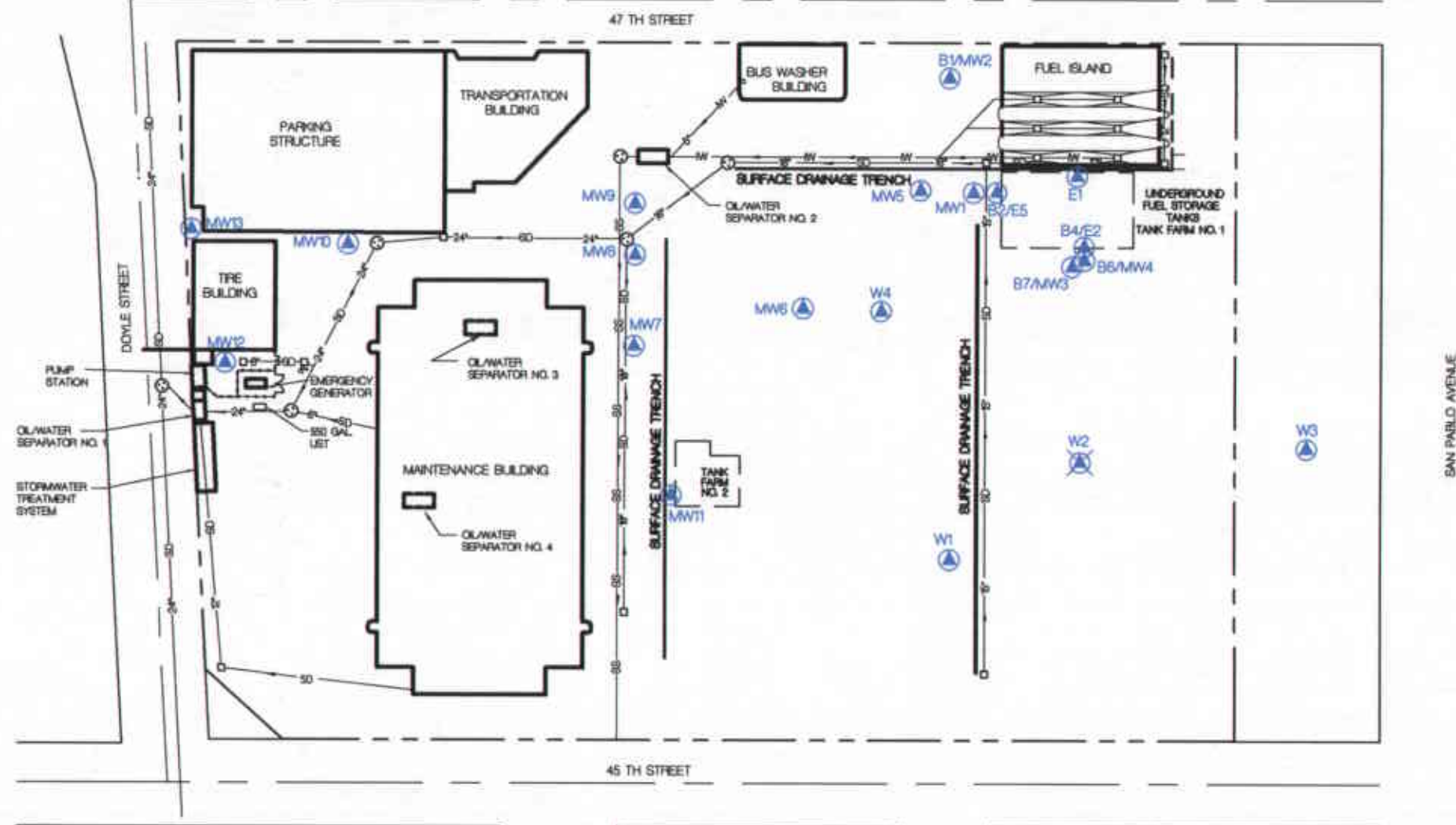
SUMMARY OF RESULTS

- Groundwater flow is to the west at a gradient of 0.02 feet/foot.
- TPH as degraded diesel was detected in MW-11, MW-12 and MW-13 at 320, 170 and 160 ppb, respectively.
- TPH as degraded gasoline was detected in MW-12 at 670 ppb, respectively.
- MTBE was detected in MW-12 at 9.4 ppb.

- MTBE was detected in MW-13 at 11.0 ppb.
- Benzene, ethylbenzene, toluene and xylenes were below reporting limits in all wells sampled.

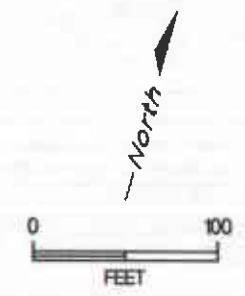
PROJECTED WORK AND RECOMMENDATIONS

- Semi-annual groundwater monitoring of all Site monitoring wells is scheduled for February 2002. This event will include Site-wide depth to groundwater level measurements, including inspection of each monitor well for free-phase hydrocarbon.



LEGEND

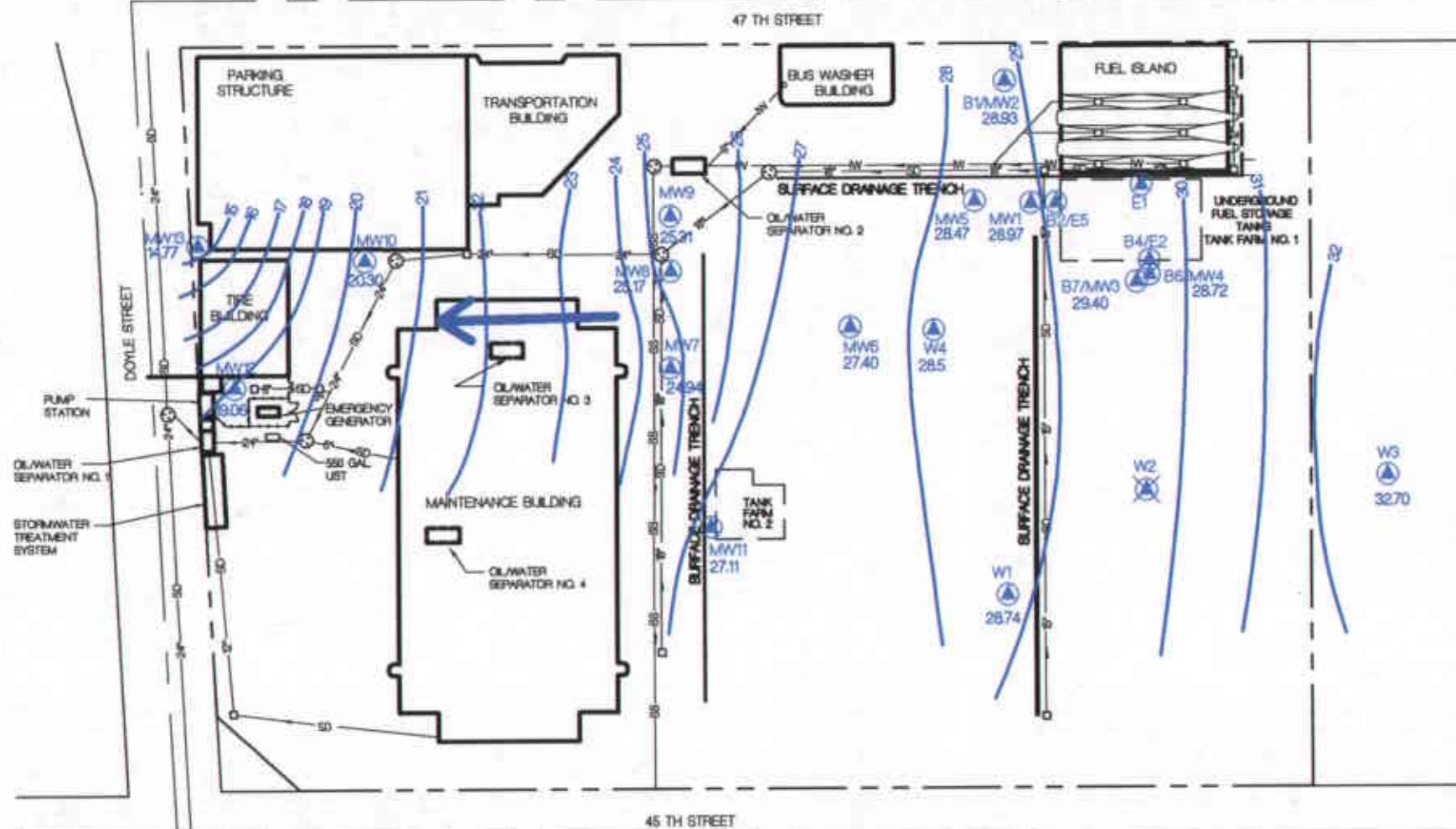
	MANHOLE
	CATCH BASIN
	MONITORING WELL
	ABANDONED MONITORING WELL
	STORM DRAIN PIPELINE
	SANITARY SEWER PIPELINE
	INDUSTRIAL WASTE PIPELINE
	CHAIN LINK FENCE



BY	DATE
DRAWN CJJ	10-03-01
DESIGNED	
APPROVED	
APPROVED	



EMERYVILLE FACILITY - OAKLAND, CALIFORNIA	
FIGURE 1	
AC TRANSIT - MONITORING WELL LOCATION MAP	
SCALE	DWG NO:
1" = 100'	2015-01

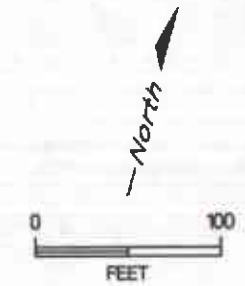


LEGEND

- MANHOLE
- CATCH BASIN
- MONITORING WELL
- ABANDONED MONITORING WELL
- 19.43 POTENTIOMETRIC SURFACE ELEVATION
- POTENTIOMETRIC SURFACE CONTOUR
- SD STORM DRAIN PIPELINE
- SS SANITARY SEWER PIPELINE
- IW INDUSTRIAL WASTE PIPELINE
- CHAIN LINK FENCE

NOTE: DATA FOR MW-4 WAS NOT USED IN CONTOURING

SAN PABLO AVENUE



BY	DATE
WRB	1/25/02
APPROVED	
APPROVED	
APPROVED	



EMERYVILLE FACILITY - OAKLAND, CALIFORNIA

FIGURE 2

AC TRANSIT - POTENTIOMETRIC SURFACE MAP

SCALE: 1" = 100'

DWG NO: 2015-03

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

Well	Date	Top of Casing Elevation (ft-msl)	Product Thickness (feet)	DTW (feet)	Groundwater Elevation (ft-msl)	Groundwater
						Elevation Corrected from Product Thickness*
MW-1	8/31/1999	32.56	None	3.24	29.32	NA
	11/23/1999		None	4.55	28.01	NA
	3/1/2000		None	3.65	28.91	NA
	5/17/2000		None	4.08	28.48	NA
	8/30/2000		None	5.18	27.38	NA
	12/18/2000		None	4.86	27.7	NA
	3/20/2001		None	4.22	28.34	NA
	6/7/2001		None	4.88	27.68	NA
	9/20/2001		None	4.97	27.59	NA
	12/14/2001		None	4.59	28.97	NA
MW-2	8/31/1999	32.12	None	5.24	26.88	NA
	11/23/1999		None	4.03	28.09	NA
	3/1/2000		None	3.11	29.01	NA
	5/17/2000		None	3.66	28.46	NA
	8/30/2000		None	4.65	27.47	NA
	12/18/2000		None	4.06	28.06	NA
	3/20/2001		None	3.91	28.21	NA
	6/7/2001		None	4.40	27.72	NA
	9/20/2001		None	4.45	27.67	NA
	12/14/2001		None	5.19	28.93	NA
MW-3	8/31/1999	34.06	None	6.15	27.91	NA
	11/23/1999		None	5.78	28.28	NA
	3/1/2000		None	4.82	29.24	NA
	5/17/2000		None	5.29	28.77	NA
	8/30/2000		None	6.20	27.86	NA
	12/18/2000		None	5.65	28.41	NA
	3/20/2001		None	5.18	28.88	NA
	6/7/2001		None	6.01	28.05	NA
	9/20/2001		None	5.9	28.16	NA
	12/14/2001		None	4.66	29.40	NA
MW-4	8/31/1999	34.11	None	6.22	27.89	NA
	11/23/1999		None	6.01	28.10	NA
	3/1/2000		None	4.74	29.37	NA
	5/17/2000		None	5.33	28.78	NA
	8/30/2000		None	6.26	27.85	NA
	12/18/2000		None	5.66	28.45	NA
	3/20/2001		None	5.46	28.65	NA
	6/7/2001		None	6.02	28.09	NA
	9/20/2001		None	6.06	28.05	NA
	12/14/2001		None	5.59	28.72	NA
MW-5	8/31/1999	31.70	None	4.51	27.19	NA
	11/23/1999		None	4.00	27.70	NA
	3/1/2000		None	3.31	28.39	NA
	5/17/2000		None	3.59	28.11	NA
	8/30/2000		None	4.53	27.17	NA
	12/18/2000		None	3.97	27.73	NA
	3/20/2001		None	3.68	28.02	NA
	6/7/2001		None	4.37	27.33	NA
	9/20/2001		None	4.46	27.24	NA
	12/14/2001		None	3.73	28.47	NA

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

Well	Date	Top of Casing Elevation (ft-msl)	Product Thickness (feet)	DTW (feet)	Groundwater Elevation (ft-msl)	Groundwater
						Elevation Corrected from Product Thickness*
MW-6	8/31/1999	31.02	None	4.40	26.62	NA
	11/23/1999		None	3.81	27.21	NA
	3/1/2000		None	2.88	28.14	NA
	5/17/2000		None	3.44	27.58	NA
	8/30/2000		None	4.40	26.62	NA
	12/18/2000		None	3.61	27.41	NA
	3/20/2001		None	3.16	27.86	NA
	6/7/2001		None	4.18	26.84	NA
	9/20/2001		Sheen	4.22	26.80	NA
	12/14/2001		None	3.62	27.40	NA
	MW-7		8/31/1999	29.62	None	5.47
11/23/1999		None	4.93		24.69	NA
3/1/2000		None	4.06		25.56	NA
5/17/2000		None	4.69		24.93	NA
8/30/2000		None	5.50		24.12	NA
12/18/2000		None	5.78		23.84	NA
3/20/2001		None	4.83		24.79	NA
6/7/2001		None	4.80		24.82	NA
9/20/2001		None	5.19		24.43	NA
12/14/2001		None	4.68		24.94	NA
MW-8		8/31/1999	29.43		None	5.35
	11/23/1999	None		4.75	24.68	NA
	3/1/2000	None		4.48	24.95	NA
	5/17/2000	None		4.78	24.65	NA
	8/30/2000	None		5.02	24.41	NA
	12/18/2000	None		5.23	24.20	NA
	3/20/2001	None		4.70	24.73	NA
	6/7/2001	None		5.13	24.30	NA
	9/20/2001	None		5.68	23.75	NA
	12/14/2001	None		4.26	25.17	NA
	MW-9	8/31/1999		29.18	None	4.15
11/23/1999		None	3.93		25.25	NA
3/1/2000		None	3.69		25.49	NA
5/17/2000		None	3.56		25.62	NA
8/30/2000		None	4.64		24.54	NA
12/18/2000		None	4.02		25.16	NA
3/20/2001		None	3.92		25.26	NA
6/7/2001		None	4.28		24.90	NA
9/20/2001		None	5.12		24.06	NA
12/14/2001		None	3.87		25.31	NA
MW-10		8/31/1999	29.13		None	9.59
	11/23/1999	None		9.44	19.69	NA
	3/1/2000	None		9.06	20.07	NA
	5/17/2000	None		9.31	19.82	NA
	8/30/2000	None		9.68	19.45	NA
	12/18/2000	None		9.41	19.72	NA
	3/20/2001	None		9.23	19.90	NA
	6/7/2001	None		9.60	19.53	NA
	9/20/2001	None		9.70	19.43	NA
	12/14/2001	None		8.83	20.30	NA
	MW-11	9/20/2001		28.93	None	4.41
12/14/2001		None	1.82		27.11	NA

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

Well	Date	Top of Casing Elevation (ft-msl)	Product Thickness (feet)	DTW (feet)	Groundwater Elevation (ft-msl)	Groundwater Elevation Corrected from Product Thickness* (ft-msl)
MW-12	9/20/2001	28.68	None	10.41	18.27	NA
	12/14/2001		None	9.62	19.06	NA
MW-13	9/20/2001	22.715	None	8.83	13.89	NA
	12/14/2001		None	7.95	14.77	NA
W-1	3/2/2000	33.43	None	4.08	29.35	NA
	5/17/2000		None	5.41	28.02	NA
	8/30/2000		None	6.71	26.72	NA
	12/18/2000		None	5.73	27.70	NA
	3/20/2001		None	5.16	28.27	NA
	6/7/2001		None	6.10	27.33	NA
	9/20/2001		None	6.58	26.85	NA
	12/14/2001		None	4.69	28.74	NA
W-2	5/17/2000	34.21	None	5.60	28.61	NA
	8/30/2000		None	7.37	26.84	NA
	12/18/2000		None	6.44	27.77	NA
	1/23/2001					abandoned
W-3	5/17/2000	37.46	None	6.38	31.08	NA
	8/30/2000		None	8.16	29.30	NA
	12/18/2000		None	7.19	30.27	NA
	3/20/2001		None	5.70	31.76	NA
	6/7/2001		None	7.51	29.95	NA
	9/20/2001		None	7.83	29.63	NA
	12/14/2001		None	4.76	32.70	NA
W-4	3/2/2000	31.72	None	3.34	28.38	NA
	5/17/2000		None	3.86	27.86	NA
	8/30/2000		None	4.99	26.73	NA
	12/18/2000		None	4.20	27.52	NA
	3/20/2001		None	3.75	27.97	NA
	6/7/2001		None	4.67	27.05	NA
	9/20/2001		None	4.80	26.92	NA
	12/14/2001		None	3.22	28.50	NA

Notes:

* used 0.8 specific gravity of product

ft-msl: feet mean sea level

DTW: Depth to water

NA: not applicable

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

Well	Date	TPH-8015 (diesel)	TPH-8015 (gas)	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
MCL (ppb)		None	None	1.0	150	700	1750	13
MW-1	8/31/1999	310	NA	<1.0	2.4	1	1.6	NA
	11/23/1999	250	NA	<1.0	<1.0	<1.0	<1.0	NA
	3/1/2000	310	62	<1.0	<1.0	<1.0	<2.0	687
	5/17/2000	390	63	<1.0	<1.0	<1.0	<2.0	74
	8/31/2000	180	<50	<1.0	<1.0	<1.0	<2.0	49
	12/18/2000	310	<50	<1.0	<1.0	<1.0	<2.0	44
	3/21/2001	240	<50	<1.0	<1.0	<1.0	<2.0	17
	6/7/2001	540	<50	<1.0	<1.0	<1.0	<2.0	32
	9/20/2001	290	<50	<1.0	<1.0	<1.0	<2.0	29
MW-2	8/31/1999	180	NA	<1.0	<1.0	<1.0	1.2	NA
	11/23/1999	120	NA	<1.0	<1.0	<1.0	<5.0	NA
	3/1/2000	510	<50	<1.0	<1.0	<1.0	<2.0	81
	5/17/2000	1,100	<50	<1.0	<1.0	<1.0	<2.0	87
	8/31/2000	620	<50	<1.0	<1.0	<1.0	<2.0	65
	12/19/2000	830	<50	<1.0	<1.0	<1.0	<2.0	70
	3/21/2001	900	<50	<2.0	<2.0	<2.0	<4.0	33
	6/7/2001	810	<50	<1.0	<1.0	<1.0	<2.0	43
	9/20/2001	1,200	<50	<1.0	<1.0	<1.0	<2.0	35
MW-3	8/31/1999	2,700	NA	<1.0	<1.0	<1.0	<1.0	NA
	11/23/1999	640	NA	<1.0	<1.0	<1.0	<1.0	NA
	3/1/2000	<250	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	5/17/2000	620	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	8/31/2000	1,800	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	12/18/2000	NA	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	3/21/2001	1,700	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	6/7/2001	770	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	9/21/2001	260	<50	<1.0	<1.0	<1.0	<2.0	<5.0
MW-4	8/31/1999	<50	NA	<1.0	<1.0	<1.0	1.6	NA
	11/23/1999	<50	NA	<1.0	<1.0	<1.0	<1.0	NA
	3/1/2000	<250	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	5/17/2000	80	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	8/31/2000	<250	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	12/18/2000	<250	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	3/20/2001	<250	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	6/7/2001	<250	<50	<1.0	<1.0	<1.0	<2.0	<5.0
MW-5	8/31/1999	250	NA	<1.0	<1.0	<1.0	1	NA
	11/23/1999	300	NA	<1.0	<1.0	<1.0	<5.0	NA
	3/1/2000	340	<50	<1.0	<1.0	<1.0	<2.0	100
	5/17/2000	230	<50	<1.0	<1.0	<1.0	<2.0	86
	8/31/2000	220	<50	<1.0	<1.0	<1.0	<2.0	59
	12/18/2000	360	<50	<1.0	<1.0	<1.0	<2.0	57
	3/20/2001	250	<50	<5.0	<5.0	<5.0	<10	87
	6/7/2001	600	<50	<1.0	<1.0	<1.0	<2.0	74

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

Well	Date	TPH-8015 (diesel)	TPH-8015 (gas)	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
MCL (ppb)		None	None	1.0	150	700	1750	13
MW-6	8/31/1999	140,000	NA	77	18	31	49	NA
	11/23/1999	6,100	NA	45	14	6.9	48	NA
	3/1/2000	22,000	2800	6.8	<2.0	<2.0	<10	<5.0
	5/17/2000	1,800	6200	77	16	39	37	<5.0
	8/31/2000	76,000	5300	60	13	43	45.7	<5.0
	12/19/2000	6,300	1300	26.0	4.9	8.4	11.5	<5.0
	3/21/2001	5,100	1900	49.0	9.5	13	12	<10
	6/7/2001	14,000	2600	47.0	10	13	19	<10
9/21/2001	15,000	4000	180	14	24	40	<5.0	
MW-7	8/31/1999	1,400	NA	<1.0	2.9	2.3	2.7	NA
	11/23/1999	530	NA	<1.0	<1.0	<1.0	<1.0	NA
	3/1/2000	640	860	<1.0	<1.0	<1.0	<2.0	<20
	5/17/2000	430	410	<1.0	<1.0	<1.0	<2.0	9.5
	8/31/2000	950	1100	<1.0	<1.0	<1.0	<2.0	<5.0
	12/18/2000	1,100	820	<1.0	<1.0	<1.0	<2.0	<5.0
	3/20/2001	770	1000	<1.0	1.4	<1.0	<2.0	<5.0
	6/7/2001	1,400	870	<1.0	<1.0	<1.0	<2.0	<5.0
9/21/2001	940	1000	<1.0	<1.0	<2.0	<5.0	<5.0	
MW-8	8/31/1999	230	NA	<1.0	<1.0	1.2	<1.0	NA
	11/23/1999	220	NA	<1.0	<1.0	<1.0	<1.0	NA
	3/1/2000	260	150	<1.0	<1.0	<1.0	<2.0	<5.0
	5/17/2000	660	310	<1.0	<1.0	<1.0	<2.0	<5.0
	8/31/2000	460	300	<1.0	<1.0	<1.0	1.4	<5.0
	12/18/2000	370	230	<1.0	<1.0	<1.0	<2.0	<5.0
	3/20/2001	1,700	64	<1.0	<1.0	<1.0	<2.0	<5.0
	6/7/2001	1,300	180	<1.0	<1.0	<1.0	<2.0	<5.0
MW-9	8/31/1999	2,800	NA	<1.0	<1.0	<1.0	1.1	NA
	11/23/1999	1,300	NA	<1.0	<1.0	<1.0	<1.0	NA
	3/1/2000	510	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	5/17/2000	990	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	8/31/2000	1,100	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	12/18/2000	1,900	<50	<1.0	<1.0	<1.0	<2.0	5.9
	3/20/2001	1,500	<50	<1.0	<1.0	<1.0	<2.0	5.5
	6/7/2001	590	<50	<1.0	<1.0	<1.0	<2.0	8.1
9/20/2001	790	<50	<1.0	<1.0	<1.0	<2.0	8.5	
MW-10	8/31/1999	1,100	NA	<1.0	1.2	2.0	<1.0	NA
	11/23/1999	1,200	NA	<1.0	<1.0	<1.0	<1.0	NA
	3/1/2000	1,300	540	<1.0	<1.0	<1.0	<2.0	NA
	5/17/2000	990	460	<1.0	<1.0	<1.0	<2.0	6.9
	8/31/2000	840	320	<1.0	<1.0	<1.0	<2.0	25
	12/18/2000	900	290	<1.0	<1.0	<1.0	<2.0	<9.0
	3/21/2001	620	220	<1.0	<1.0	<1.0	<2.0	<5.0
	6/7/2001	1,300	360	<1.0	<1.0	<1.0	<2.0	15
9/20/2001	1,000	350	<1.0	<1.0	<1.0	<2.0	44	

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

Well	Date	TPH-8015 (diesel)	TPH-8015 (gas)	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
MCL (ppb)		None	None	1.0	150	700	1750	13
MW-11	9/20/2001	460	88	<1.0	<1.0	<1.0	<2.0	<5.0
	12/14/2002	320	<50	<1.0	<1.0	<1.0	<2.0	<5.0
MW-12	9/20/2001	540	960	<1.0	<1.0	<2.0	<5.0	11
	12/14/2002	170	670	<1.0	<1.0	<1.0	<2.0	9.4
MW-13	9/21/2001	<250	<50	<1.0	<1.0	<1.0	<2.0	7.4
	12/14/2002	160	<50	<1.0	<1.0	<1.0	<2.0	11
W-1	3/2/2000	1,800	3400	20.0	5.3	30	23.8	<5.0
	5/17/2000	1,100	7300	35.0	11	59	45	<1.0
	8/31/2000	2,200	6200	20.0	7.9	36	38.2	<10
	12/19/2000	1,700	5600	20.0	8.4	30	35.6	<5.0
	3/20/2001	2,100	7200	32.0	13	56	40	<10
	6/7/2001	2,100	7300	26.0	18	42	38.3	<10
	9/21/2001	1,800	7100	27	<10	48	40	<10
W-2	5/17/2000	19,000	870	<2.0	<1.0	<2.0	<4.0	<5.0
	8/31/2000	7,400	2200	4.6	2.5	3.8	11	<5.0
	12/19/2000	10,000	290	8.8	3.4	8.6	17.4	<5.0
W-3	5/17/2000	<50	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	8/31/2000	<50	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	12/18/2000	<250	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	3/20/2001	630	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	6/7/2001	1,200	<50	<1.0	<1.0	<1.0	<2.0	<5.0
W-4	3/2/2000	190	<50	1.1	<1.0	<1.0	<2.0	<5.0
	5/17/2000	230	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	8/31/2000	240	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	12/19/2000	320	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	3/21/2001	220	<50	<1.0	<1.0	<1.0	<2.0	<5.0
	6/7/2001	430	<50	<1.0	<1.0	<1.0	<2.0	<5.0

Notes:

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

APPENDIX A

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

CAMERON-COLE
SAMPLING EVENT DATA SHEET

WELL OR LOCATION MW-11

PROJECT ACTIAB Energy EVENT quarterly SAMPLER BH/EW DATE 12/14/01

<p>Intake depth <u>10'</u></p> <p>SWL <u>1.82</u> (if above screen)</p> <p>SWL _____ (if in screen)</p> <p>Measured TD <u>17.40</u></p> <p>Diameter <u>2"</u></p> <p><u>0.165</u> gal/ft. casing</p> <p><u>6'</u> =TOP</p> <p><u>16'</u> =BOP</p> <p><u>16'</u> =TD (as built)</p>	Well type <u>MW</u> (MW, EW, etc.)	ACTION	TIME	PUMP RATE (gpm)	IWL
	Start Pump / Begin	1035	1.2		
	Stop	1042			
	Sampled	1045			
	Final IWL				2.09

PURGE CALCULATION

0.165 gal/ft. * 15.58 ft. = 2.6 gals. X 3 = 7.7 gals.

SWL to BOP or TD one volume purge volume - 3 casings
 2" = 0.165 gal/ft. 4" = 0.65 gal/ft. 6" = 1.47 gal/ft.

Equipment Used / Sampling Method / Description of Event:

centrifugal pump used to purge
disposable bailer used to sample

Actual gallons purged 8.5

Actual volumes purged 3+

Well Yield ⊕ HY

COC # 071040

Additional Comments:

trip blank collected at 0800
measured total depth used for
purge calculation

Sample I.D.	Analysis	Lab
<u>MW-11</u>	<u>8015</u>	<u>STL</u>
<u>MW-11</u>	<u>8021</u>	<u>STL</u>

Gallons Purged *	Time	Temp (°C) °F (circle one)	EC (us / cm)	pH	Turbidity (NTU)
<u>2.5</u>	<u>1037</u>	<u>18.9</u>	<u>817</u>	<u>7.69</u>	
<u>5</u>	<u>1039</u>	<u>19.3</u>	<u>740</u>	<u>7.60</u>	
<u>7.5</u>	<u>1040</u>	<u>19.1</u>	<u>745</u>	<u>7.60</u>	

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

CAMERON-COLE
SAMPLING EVENT DATA SHEET

WELL OR LOCATION

MW-12

PROJECT AC trans energy EVENT quarterly SAMPLER BH/EW DATE 12/14/01

	Well type <u>MW</u> (MW, EW, etc.)	ACTION	TIME	PUMP RATE (gpm)	IWL
	Diameter <u>2"</u>	Start Pump / Begin	11:19	0.38	
	0.165 gal/ft. casing				
	15' = TOP	Stop	11:48		
	30' = BOP	Sampled	11:50		
	30' = TD (as built)	Final IWL			12.72

PURGE CALCULATION

0.165 gal/ft. * 20.38 ft. = 3.36 gals. X 3 = 10.0 gals.

2" = 0.165 gal/ft. 4" = 0.65 gal/ft. one volume 6" = 1.47 gal/ft. purge volume - 3 casings

Equipment Used / Sampling Method / Description of Event:
centrifugal pump used to purge
disposable boiler used to sample

Actual gallons purged 11
Actual volumes purged 3+
Well Yield \oplus HY

COC # 071040

Additional Comments:
total depth as built used in purge calculation

Sample I.D.	Analysis	Lab
<u>MW-12</u>	<u>8015</u>	<u>STL</u>
<u>MW-12</u>	<u>8021</u>	<u>STL</u>

Gallons Purged *	Time	Temp \odot °F (circle one)	EC (us / cm)	pH	Turbidity (NTU)
<u>3</u>	<u>11:25</u>	<u>27.6</u>	<u>901</u>	<u>7.00</u>	
<u>6</u>	<u>11:31</u>	<u>30.7</u>	<u>905</u>	<u>6.92</u>	
<u>9</u>	<u>11:44</u>	<u>37.0</u>	<u>919</u>	<u>6.92</u>	

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

CAMERON-COLE
SAMPLING EVENT DATA SHEET

WELL OR LOCATION MW-13

PROJECT AC TRANS ENERGY EVENT quarterly SAMPLER BH/EW DATE 12/14/01

<p>Well type <u>MW</u> (MW, EW, etc.)</p> <p>Diameter <u>2"</u></p> <p><u>0.165</u> gal/ft. casing</p> <p>Intake depth <u>17ft</u></p> <p>SWL (if above screen)</p> <p>SWL <u>7.95</u> (if in screen)</p> <p>Measured TD <u>21.96</u></p> <p><u>7'</u> =TOP</p> <p><u>22'</u> =BOP</p> <p><u>22'</u> =TD (as built)</p>	ACTION	TIME	PUMP RATE (gpm)	IWL
	Start Pump / Begin	12:10	0.18	
	Stop	12:58		
	Sampled	13:00		
	Final IWL			14.92
	PURGE CALCULATION			
$0.165 \text{ gal/ft.} \cdot 14.05 \text{ ft.} = 2.32 \text{ gals.} \times 3 = 7 \text{ gals.}$				
<small>SWL to BOP or TD one volume SWL to BOP or TD one volume SWL to BOP or TD one volume</small> <small>2" = 0.165 gal/ft. 4" = 0.65 gal/ft. 6" = 1.47 gal/ft.</small>				

Equipment Used / Sampling Method / Description of Event:
centrifugal pump used to purge
disposable bailer used to sample

Actual gallons purged 7.5

Actual volumes purged 3+

Well Yield \oplus MY

COC # 071040

Additional Comments:
Total depth as built used in purge calculation

Sample I.D.	Analysis	Lab
<u>MW-13</u>	<u>8015</u>	<u>STL</u>
<u>MW-13</u>	<u>8021</u>	<u>STL</u>

Gallons Purged *	Time	Temp (°C) °F (circle one)	EC (us / cm)	pH	Turbidity (NTU)
<u>2</u>	<u>11:25</u>	<u>35.2</u>	<u>1259</u>	<u>7.19</u>	
<u>4</u>	<u>11:40</u>	<u>33.3</u>	<u>1166</u>	<u>7.13</u>	
<u>6</u>	<u>12:55</u>	<u>39.3</u>	<u>1237</u>	<u>7.06</u>	

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

AC TRANSIT - EMERYVILLE
FOURTH QUARTER 2001

FIELD PERSONNEL: EW/BH

WELL OR LOCATION	DATE	TIME	MEASUREMENT	CODE	COMMENTS
MW-1	12/14/01	0853	3.59	SWL	
MW-2	↓	0859	3.19	↓	
MW-3		0848	4.66		
MW-4		0843	5.39		
MW-5		0855	3.23		
MW-6		—	—		—
MW-6	12/14/01	0958	3.62	OWI	
MW-7	↓	0917	4.68	SWL	
MW-8		0922	4.26	↓	
MW-9		0930	3.87		
MW-10		0935	8.83		
MW-11		0911	1.82		
MW-12		0941	9.62		
MW-13		0945	7.95		
W-1		0905	4.69		
W-3		0831	4.76		
W-4		0935	3.22		

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

Chain of Custody Record

**SEVERN
TRENT
SERVICES**

Severn Trent Laboratories, Inc.

STL-4124 (1200)

Client: California - Cole Project Manager: Paul Wright Date: 12/14/01 Chain of Custody Number: 071040
 Address: 101 W. Atlantic Ave Bldg 90 Telephone Number (Area Code)/Fax Number: (510) 337-8660 Lab Number: _____
 City: Alameda State: CA Zip Code: 94501 Site Contact: _____ Lab Contact: Bonnie M
 Project Name and Location (State): 101 W. Atlantic Ave Bldg 90 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				Containers & Preservatives						Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt					
			Air	Aqueous	Sed	Soil	Unpres	H ₂ SO ₄	HNO ₃	HCl	NaOH	ZnAc			MsOH				
<u>Lead Blank</u>	<u>12/14/01</u>	<u>0800</u>		<u>X</u>															
<u>MW-11</u>	<u>12/14/01</u>	<u>1045</u>		<u>↓</u>				<u>2</u>											<u>GAS/BTEX/MTBE</u>
<u>MW-12</u>	<u>12/14/01</u>	<u>1150</u>		<u>↓</u>				<u>↓</u>											<u>diesel/MGDI OIL</u>
<u>MW-13</u>	<u>12/14/01</u>	<u>1300</u>		<u>↓</u>				<u>↓</u>											<u>Lead Blank Fuel</u> <u>Fuel BTEX/MTBE</u>

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

1. Relinquished By: <u>[Signature]</u>	Date: <u>12/14/01</u>	Time: <u>1145</u>	1. Received By: <u>Brick Brundlett</u>	Date: <u>12-14-01</u>	Time: <u>1445</u>
2. Relinquished By: _____	Date: _____	Time: _____	2. Received By: _____	Date: _____	Time: _____
3. Relinquished By: _____	Date: _____	Time: _____	3. Received By: _____	Date: _____	Time: _____

Comments: _____

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

**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

January 30, 2002

STL SACRAMENTO PROJECT NUMBER: G1L140394

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 December 14, 2001. These samples are associated with your AC Transit Emeryville 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 J. McNeill
Project Manager

TABLE OF CONTENTS

STL SACRAMENTO PROJECT NUMBER G1L140394

Case Narrative

STL Sacramento Quality Assurance Program

Sample Description Information

Chain of Custody Documentation

WATER, 8015M, TPH Gas/ 8021B BTEX + MTBE

Samples: 1, 2, 3, 4

Sample Data Sheets

Method Blank Reports

Laboratory QC Reports

WATER, 8015 MOD, Diesel/Motor Oil

Samples: 2, 3, 4

Sample Data Sheets

Method Blank Reports

Laboratory QC Reports

CASE NARRATIVE

STL SACRAMENTO PROJECT NUMBER G1L140394

General Comments

Samples were received at 3 degrees Centigrade.

WATER, 8015M, TPH Gas

Sample(s): 2, 3, 4

The original analysis within holding time for the samples had continuing calibration verifications outside of acceptance criteria. The samples were re-injected, outside of holding time, for confirmation purposes. Results for samples 002 and 004 confirmed the original results. Sample 003 demonstrated low surrogate recovery and an unknown hydrocarbon at 2 times the original analysis. Sample 003 was re-analyzed a third time and the results confirmed the first re-analysis. Both sets of data are reported for samples 002 and 004 and the first and last are reported for sample 003.

WATER, 8015 MOD, Diesel/Motor Oil

Sample(s): 2, 3, 4

There was insufficient sample volume to prepare an MS/SD 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

G1L140394

<u>WO#</u>	<u>Sample #</u>	<u>Client Sample ID</u>	<u>Sampling Date</u>	<u>Received Date</u>
EQJ6P	1	TRIP BLANK	12/14/01 08:00 AM	12/14/01 05:20 PM
EQJ6R	2	MW-11	12/14/01 10:45 AM	12/14/01 05:20 PM
EQJ6T	3	MW-12	12/14/01 11:50 AM	12/14/01 05:20 PM
EQJ6V	4	MW-13	12/14/01 01:00 PM	12/14/01 05:20 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

Chain of Custody Record

**SEVERN
TRENT
SERVICES**

Severn Trent Laboratories, Inc

STL-4124 (1200)

Client: Cameron-Cole Project Manager: Brad Wright Date: 12/14/01 Chain of Custody Number: 071040
 Address: 101 W. Atlantic Ave Bldg 90 Telephone Number (Area Code)/Fax Number: (510) 337-8660 Lab Number: _____
 City: Alameda State: CA Zip Code: 94501 Site Contact: _____ Lab Contact: Bonnie M Analysis (Attach list if more space is needed): _____
 Project Name and Location (State): AC Transit Emeryville Carrier/Waybill Number: _____ Page 1 of 1
 Contract/Purchase Order/Quote No.:

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix				Containers & Preservatives						Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt	
			Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc2/NiCl2			
Trip Blank	12/14/01	0800	X							3					* Gas/BTEX/MTI diesel/motor oil trip blank run for BTEX/MTBE
MW-11	12/14/01	1045						2		6					
MW-12	12/14/01	1150													
MW-13	12/14/01	1300													

RECEIVED IN GOOD CONDITION
 INDEXED
 DEC 14 2001

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

1. Relinquished By: <u>Emily Walters</u>	Date: <u>12/14/01</u> Time: <u>1445</u>	1. Received By: <u>Brok Brockett</u>	Date: <u>12-14-01</u> Time: <u>1445</u>
2. Relinquished By: <u>Brok Brockett</u>	Date: <u>12-14-01</u> Time: <u>1720</u>	2. Received By: <u>Chy/Agf</u>	Date: <u>12-14-01</u> Time: <u>1720</u>
3. Relinquished By: _____	Date: _____ Time: _____	3. Received By: _____	Date: _____ Time: _____

Comments: _____

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

WATER, 8015M, TPH Gas

8021B BTEX+MTBE

CAMERON-COLE LLC

Client Sample ID: TRIP BLANK

GC Volatiles

Lot-Sample #...: G1L140394-001 Work Order #...: EQJ6P1AA Matrix.....: WATER
Date Sampled...: 12/14/01 Date Received...: 12/14/01
Prep Date.....: 12/28/01 Analysis Date...: 12/28/01
Prep Batch #...: 2009267 Analysis Time...: 18:15
Method.....: DHS CA LUFT

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
o-Xylene	ND	1.0	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Fluorobenzene	95	(70 - 130)

CAMERON-COLE LLC

Client Sample ID: MW-11

GC Volatiles

Lot-Sample #...: G1L140394-002 Work Order #...: EQJ6R2AC Matrix.....: WATER
Date Sampled...: 12/14/01 Date Received...: 12/14/01
Prep Date.....: 12/31/01 Analysis Date...: 01/01/02
Prep Batch #...: 2015381 Analysis Time...: 00:16
Method.....: DHS CA LUFT

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

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
4-Bromofluorobenzene	94	(70 - 130)

CAMERON-COLE LLC

Client Sample ID: MW-11

GC Volatiles

Lot-Sample #....: G1L140394-002 Work Order #....: EQJ6R1AC Matrix.....: WATER
Date Sampled....: 12/14/01 Date Received...: 12/14/01
Prep Date.....: 12/27/01 Analysis Date...: 12/28/01
Prep Batch #....: 2015385 Analysis Time...: 06:09
Method.....: DHS CA LUFT

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

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
4-Bromofluorobenzene	91	(70 - 130)

CAMERON-COLE LLC

Client Sample ID: MW-11

GC Volatiles

Lot-Sample #....: G1L140394-002 Work Order #....: EQJ6R1AD Matrix.....: WATER
Date Sampled....: 12/14/01 Date Received...: 12/14/01
Prep Date.....: 12/28/01 Analysis Date...: 12/28/01
Prep Batch #....: 2009267 Analysis Time...: 19:04
Method.....: DHS CA LUFT

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
o-Xylene	ND	1.0	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Fluorobenzene	81	(70 - 130)

CAMERON-COLE LLC

Client Sample ID: MW-12

GC Volatiles

Lot-Sample #....: G1L140394-003 Work Order #....: EQJ6T1AC Matrix.....: WATER
Date Sampled....: 12/14/01 Date Received...: 12/14/01
Prep Date.....: 12/27/01 Analysis Date...: 12/28/01
Prep Batch #....: 2015385 Analysis Time...: 06:50
Method.....: DHS CA LUFT

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Gasoline)	ND	50	ug/L
Unknown Hydrocarbon	350	50	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
4-Bromofluorobenzene	108	(70 - 130)

CAMERON-COLE LLC

Client Sample ID: MW-12

GC Volatiles

Lot-Sample #...: G1L140394-003 Work Order #...: EQJ6T2AC Matrix.....: WATER
Date Sampled...: 12/14/01 Date Received...: 12/14/01
Prep Date.....: 01/08/02 Analysis Date...: 01/08/02
Prep Batch #...: 2015418 Analysis Time...: 19:48
Method.....: DHS CA LUFT

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Gasoline)	ND	50	ug/L
Unknown Hydrocarbon	670	50	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
4-Bromofluorobenzene	127	(70 - 130)

CAMERON-COLE LLC

Client Sample ID: MW-12

GC Volatiles

Lot-Sample #...: G1L140394-003 Work Order #...: EQJ6T1AD Matrix.....: WATER
 Date Sampled...: 12/14/01 Date Received...: 12/14/01
 Prep Date.....: 12/28/01 Analysis Date...: 12/28/01
 Prep Batch #...: 2009267 Analysis Time...: 19:52
 Method.....: DHS CA LUFT

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
o-Xylene	ND	1.0	ug/L
Methyl tert-butyl ether	9.4	5.0	ug/L
<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>	
	<u>RECOVERY</u>	<u>LIMITS</u>	
Fluorobenzene	110	(70 - 130)	

CAMERON-COLE LLC

Client Sample ID: MW-13

GC Volatiles

Lot-Sample #...: G1L140394-004 Work Order #...: EQJ6V2AC Matrix.....: WATER
 Date Sampled...: 12/14/01 Date Received...: 12/14/01
 Prep Date.....: 12/31/01 Analysis Date...: 01/01/02
 Prep Batch #...: 2015381 Analysis Time...: 01:39
 Method.....: DHS CA LUFT

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

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
a, a, a-Trifluorotoluene	92	(70 - 130)
4-Bromofluorobenzene	95	(70 - 130)
Fluorobenzene		(70 - 130)

CAMERON-COLE LLC

Client Sample ID: MW-13

GC Volatiles

Lot-Sample #....: G1L140394-004 Work Order #....: EQJ6V1AC Matrix.....: WATER
Date Sampled....: 12/14/01 Date Received...: 12/14/01
Prep Date.....: 12/27/01 Analysis Date...: 12/28/01
Prep Batch #....: 2015385 Analysis Time...: 07:31
Method.....: DHS CA LUFT

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

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
4-Bromofluorobenzene	93	(70 - 130)

CAMERON-COLE LLC

Client Sample ID: MW-13

GC Volatiles

Lot-Sample #...: G1L140394-004 Work Order #...: EQJ6V1AD Matrix.....: WATER
 Date Sampled...: 12/14/01 Date Received...: 12/14/01
 Prep Date.....: 12/28/01 Analysis Date...: 12/28/01
 Prep Batch #...: 2009267 Analysis Time...: 20:40
 Method.....: DHS CA LUFT

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
o-Xylene	ND	1.0	ug/L
Methyl tert-butyl ether	11	5.0	ug/L
	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
<u>SURROGATE</u>			
Fluorobenzene	106	(70 - 130)	

QC DATA ASSOCIATION SUMMARY

G1L140394

Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
001	WATER	DHS CA LUFT		2009267	
002	WATER	DHS CA LUFT		2015381	
	WATER	DHS CA LUFT		2015385	
	WATER	DHS CA LUFT		2009267	
003	WATER	DHS CA LUFT		2015385	
	WATER	DHS CA LUFT		2015418	
	WATER	DHS CA LUFT		2009267	
004	WATER	DHS CA LUFT		2015381	
	WATER	DHS CA LUFT		2015385	
	WATER	DHS CA LUFT		2009267	

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: G1L140394
 MB Lot-Sample #: G2A090000-267
 Analysis Date...: 12/28/01

Work Order #...: EREKR1AA
 Prep Date.....: 12/28/01
 Prep Batch #...: 2009267

Matrix.....: WATER
 Analysis Time...: 17:27

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		<u>METHOD</u>
		<u>LIMIT</u>	<u>UNITS</u>	
Benzene	ND	1.0	ug/L	DHS CA LUFT
Ethylbenzene	ND	1.0	ug/L	DHS CA LUFT
Toluene	ND	1.0	ug/L	DHS CA LUFT
m-Xylene & p-Xylene	ND	2.0	ug/L	DHS CA LUFT
o-Xylene	ND	1.0	ug/L	DHS CA LUFT
Methyl tert-butyl ether	ND	5.0	ug/L	DHS CA LUFT
	<u>PERCENT</u>	<u>RECOVERY</u>		
<u>SURROGATE</u>	<u>RECOVERY</u>	<u>LIMITS</u>		
Fluorobenzene	98	(70 - 130)		

NOTE(S) :

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

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: G1L140394 Work Order #...: ERNT71AA Matrix.....: WATER
MB Lot-Sample #: G2A150000-381 Prep Date.....: 12/31/01 Analysis Time...: 16:00
Analysis Date...: 12/31/01 Prep Batch #...: 2015381

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

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
4-Bromofluorobenzene	92	(70 - 130)

NOTE (S) :

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

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: G1L140394 Work Order #...: ERNV81AA Matrix.....: WATER
MB Lot-Sample #: G2A150000-385 Prep Date.....: 12/27/01 Analysis Time...: 19:59
Analysis Date...: 12/27/01 Prep Batch #...: 2015385

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

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
4-Bromofluorobenzene	59 *	(70 - 130)

NOTE(S) :

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

* Surrogate recovery is outside stated control limits.

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: G1L140394 Work Order #...: ERN1L1AA Matrix.....: WATER
MB Lot-Sample #: G2A150000-418 Prep Date.....: 01/08/02 Analysis Time...: 14:58
Analysis Date...: 01/08/02 Prep Batch #...: 2015418

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

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
4-Bromofluorobenzene	85	(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 #...: G1L140394 Work Order #...: EREKRIAC-LCS Matrix.....: WATER
 LCS Lot-Sample#: G2A090000-267 EREKRIAD-LCSD
 Prep Date.....: 12/28/01 Analysis Date...: 12/28/01
 Prep Batch #...: 2009267 Analysis Time...: 23:53

<u>PARAMETER</u>	<u>SPIKE</u> <u>AMOUNT</u>	<u>MEASURED</u> <u>AMOUNT</u>	<u>UNITS</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RPD</u>	<u>METHOD</u>
Benzene	10.0	9.24	ug/L	92		DHS CA LUFT
	10.0	9.16	ug/L	92	0.94	DHS CA LUFT
Ethylbenzene	10.0	9.07	ug/L	91		DHS CA LUFT
	10.0	9.08	ug/L	91	0.17	DHS CA LUFT
Toluene	10.0	9.20	ug/L	92		DHS CA LUFT
	10.0	9.13	ug/L	91	0.77	DHS CA LUFT
m-Xylene & p-Xylene	20.0	17.9	ug/L	90		DHS CA LUFT
	20.0	18.2	ug/L	91	1.5	DHS CA LUFT
o-Xylene	10.0	9.28	ug/L	93		DHS CA LUFT
	10.0	9.21	ug/L	92	0.68	DHS CA LUFT
Methyl tert-butyl ether	10.0	9.49	ug/L	95		DHS CA LUFT
	10.0	9.39	ug/L	94	1.1	DHS CA LUFT

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Fluorobenzene	93	(70 - 130)
	92	(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 DATA REPORT

GC Volatiles

Client Lot #...: G1L140394 Work Order #...: ERNT71AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: G2A150000-381 ERNT71AD-LCSD
 Prep Date.....: 12/31/01 Analysis Date...: 12/31/01
 Prep Batch #...: 2015381 Analysis Time...: 16:42

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>RPD</u>	<u>METHOD</u>
TPH (as Gasoline)	1000	1110	ug/L	111		DHS CA LUFT
	1000	1080	ug/L	108	2.3	DHS CA LUFT

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
4-Bromofluorobenzene	100	(70 - 130)
	99	(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 DATA REPORT

GC Volatiles

Client Lot #...: G1L140394 Work Order #...: ERNV81AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: G2A150000-385 ERNV81AD-LCSD
 Prep Date.....: 12/27/01 Analysis Date...: 12/28/01
 Prep Batch #...: 2015385 Analysis Time...: 00:44

<u>PARAMETER</u>	<u>SPIKE</u> <u>AMOUNT</u>	<u>MEASURED</u> <u>AMOUNT</u>	<u>UNITS</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RPD</u>	<u>METHOD</u>
TPH (as Gasoline)	1000	785	ug/L	79		DHS CA LUFT
	1000	792	ug/L	79	0.84	DHS CA LUFT

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
4-Bromofluorobenzene	81	(70 - 130)
	81	(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 DATA REPORT

GC Volatiles

Client Lot #...: G1L140394 Work Order #...: ERN111AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: G2A150000-418 ERN111AD-LCSD
 Prep Date.....: 01/08/02 Analysis Date...: 01/08/02
 Prep Batch #...: 2015418 Analysis Time...: 15:39

<u>PARAMETER</u>	<u>SPIKE</u> <u>AMOUNT</u>	<u>MEASURED</u> <u>AMOUNT</u>	<u>UNITS</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RPD</u>	<u>METHOD</u>
TPH (as Gasoline)	1000	1090	ug/L	109		DHS CA LUFT
	1000	1050	ug/L	104	4.2	DHS CA LUFT
<u>SURROGATE</u>				<u>PERCENT</u> <u>RECOVERY</u>		<u>RECOVERY</u> <u>LIMITS</u>
4-Bromofluorobenzene				90		(70 - 130)
				89		(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 #....: G1L140394 Work Order #....: EREKR1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: G2A090000-267 EREKR1AD-LCSD
 Prep Date.....: 12/28/01 Analysis Date...: 12/28/01
 Prep Batch #....: 2009267 Analysis Time...: 23:53

PARAMETER	PERCENT	RECOVERY	RPD		METHOD
	RECOVERY	LIMITS	RPD	LIMITS	
Benzene	92	(70 - 130)			DHS CA LUFT
	92	(70 - 130)	0.94	(0-35)	DHS CA LUFT
Ethylbenzene	91	(70 - 130)			DHS CA LUFT
	91	(70 - 130)	0.17	(0-35)	DHS CA LUFT
Toluene	92	(70 - 130)			DHS CA LUFT
	91	(70 - 130)	0.77	(0-35)	DHS CA LUFT
m-Xylene & p-Xylene	90	(70 - 130)			DHS CA LUFT
	91	(70 - 130)	1.5	(0-35)	DHS CA LUFT
o-Xylene	93	(70 - 130)			DHS CA LUFT
	92	(70 - 130)	0.68	(0-35)	DHS CA LUFT
Methyl tert-butyl ether	95	(70 - 130)			DHS CA LUFT
	94	(70 - 130)	1.1	(0-35)	DHS CA LUFT

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Fluorobenzene	93	(70 - 130)
	92	(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 #...: G1L140394 Work Order #...: ERNT71AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: G2A150000-381 ERNT71AD-LCSD
 Prep Date.....: 12/31/01 Analysis Date...: 12/31/01
 Prep Batch #...: 2015381 Analysis Time...: 16:42

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>
TPH (as Gasoline)	111	(70 - 130)			DHS CA LUFT
	108	(70 - 130)	2.3	(0-35)	DHS CA LUFT

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
4-Bromofluorobenzene	100	(70 - 130)
	99	(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 #...: G1L140394 Work Order #...: ERNV81AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: G2A150000-385 ERNV81AD-LCSD
 Prep Date.....: 12/27/01 Analysis Date...: 12/28/01
 Prep Batch #...: 2015385 Analysis Time...: 00:44

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>
TPH (as Gasoline)	79	(70 - 130)			DHS CA LUFT
	79	(70 - 130)	0.84	(0-35)	DHS CA LUFT

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
4-Bromofluorobenzene	81	(70 - 130)
	81	(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 #...: G1L140394 Work Order #...: ERN1L1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: G2A150000-418 ERN1L1AD-LCSD
 Prep Date.....: 01/08/02 Analysis Date...: 01/08/02
 Prep Batch #...: 2015418 Analysis Time...: 15:39

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>
TPH (as Gasoline)	109	(70 - 130)			DHS CA LUFT
	104	(70 - 130)	4.2	(0-35)	DHS CA LUFT

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
4-Bromofluorobenzene	90	(70 - 130)
	89	(70 - 130)

NOTE(S):

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

Bold print denotes control parameters

WATER, 8015 MOD, Diesel/Motor Oil

CAMERON-COLE LLC

Client Sample ID: MW-11

GC Semivolatiles

Lot-Sample #...: G1L140394-002 Work Order #...: EQJ6R1AA Matrix.....: WATER
Date Sampled...: 12/14/01 Date Received...: 12/14/01
Prep Date.....: 12/17/01 Analysis Date...: 12/27/01
Prep Batch #...: 1351261
Dilution Factor: 1 Method.....: SW846 8015 MOD

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Motor Oil)	ND	250	ug/L
TPH (as Diesel)	ND	50	ug/L
Unknown Hydrocarbon	320	250	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
o-Terphenyl	98	(57 - 147)

NOTE(S):

The unknown from n-C08 to n-C40 was quantitated with all peaks from n-C08 to n-C36 and based on motor oil (n-C19 to n-C36).

CAMERON-COLE LLC

Client Sample ID: MW-12

GC Semivolatiles

Lot-Sample #...: G1L140394-003 Work Order #...: EQJ6T1AA Matrix.....: WATER
Date Sampled...: 12/14/01 Date Received...: 12/14/01
Prep Date.....: 12/17/01 Analysis Date...: 12/27/01
Prep Batch #...: 1351261
Dilution Factor: 1 Method.....: SW846 8015 MOD

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>	
		<u>LIMIT</u>	<u>UNITS</u>
TPH (as Motor Oil)	ND	250	ug/L
TPH (as Diesel)	ND	50	ug/L
Unknown Hydrocarbon	170	50	ug/L

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
o-Terphenyl	93	(57 - 147)

NOTE(S):

The unknown from n-C08 to n-C24 was quantitated with all peaks from n-C08 to n-C36 and based on diesel (n-C10 to n-C24).

CAMERON-COLE LLC

Client Sample ID: MW-13

GC Semivolatiles

Lot-Sample #...: G1L140394-004 Work Order #...: EQJ6V1AA Matrix.....: WATER
Date Sampled...: 12/14/01 Date Received...: 12/14/01
Prep Date.....: 12/17/01 Analysis Date...: 12/27/01
Prep Batch #...: 1351261
Dilution Factor: 1 Method.....: SW846 8015 MOD

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
TPH (as Motor Oil)	ND	250	ug/L
TPH (as Diesel)	ND	50	ug/L
Unknown Hydrocarbon	160	50	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
o-Terphenyl	94	(57 - 147)

NOTE (S) :

The unknown from n-C8 to n-C24 was quantitated with all peaks from n-C08 to n-C36 and based on diesel (n-C10 to n-C24).

QC DATA ASSOCIATION SUMMARY

G1L140394

Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
002	WATER	SW846 8015 MOD		1351261	
003	WATER	SW846 8015 MOD		1351261	
004	WATER	SW846 8015 MOD		1351261	

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: G1L140394
MB Lot-Sample #: G1L170000-261

Work Order #...: EQLVC1AA

Matrix.....: WATER

Analysis Date...: 12/27/01
Dilution Factor: 1

Prep Date.....: 12/17/01
Prep Batch #...: 1351261

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		<u>METHOD</u>
		<u>LIMIT</u>	<u>UNITS</u>	
TPH (as Motor Oil)	ND	250	ug/L	SW846 8015 MOD
TPH (as Diesel)	ND	50	ug/L	SW846 8015 MOD
Unknown Hydrocarbon	ND	50	ug/L	SW846 8015 MOD

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
o-Terphenyl	85	(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 #...: G1L140394 Work Order #...: EQLVC1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: G1L170000-261 EQLVC1AD-LCSD
 Prep Date.....: 12/17/01 Analysis Date...: 12/26/01
 Prep Batch #...: 1351261
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE</u> <u>AMOUNT</u>	<u>MEASURED</u> <u>AMOUNT</u>	<u>UNITS</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RPD</u>	<u>METHOD</u>
TPH (as Diesel)	300	306	ug/L	102		SW846 8015 MOD
	300	303	ug/L	101	1.1	SW846 8015 MOD
<u>SURROGATE</u>				<u>PERCENT</u> <u>RECOVERY</u>		<u>RECOVERY</u> <u>LIMITS</u>
o-Terphenyl				101		(57 - 147)
				96		(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 #....: G1L140394 Work Order #....: EQLVCIAC-LCS Matrix.....: WATER
 LCS Lot-Sample#: G1L170000-261 EQLVCIAD-LCSD
 Prep Date.....: 12/17/01 Analysis Date...: 12/26/01
 Prep Batch #....: 1351261
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>
TPH (as Diesel)	102	(39 - 125)			SW846 8015 MOD
	101	(39 - 125)	1.1	(0-44)	SW846 8015 MOD

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
o-Terphenyl	101	(57 - 147)
	96	(57 - 147)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters