AC Transit
Alameda-Contra Costa Transit District

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

August 6, 2001

R0296

AUG 09 2001

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

Dear Mr. Chan:

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

AC Transit hereby submits the enclosed quarterly groundwater monitoring report for the second quarter of 2001 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 (formerly Safety-Kleen Consulting) in accordance with directives from your office.

Groundwater samples were collected from the six on-site monitoring wells on May 14, 2001. 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.

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 and nondetectable concentrations in wells MW-9, MW-10 and MW-11. Chemical concentrations above laboratory reporting limits in the three newly installed wells MW-9, MW-10, and MW-11, were limited to unspecified hydrocarbons, except for 14 ppb MTBE detected in MW-11.

These results continue to be consistent with past sampling results and the affected groundwater is localized near monitoring well MW-2. In response to your June 26, 2001, request that AC Transit perform a more aggressive remediation of free product removal than every quarter, we propose to purge well MW-2 every month. This work will be conducted by Cameron-Cole. Prior to purging (using a centrifugal pump), the product and water level in the well would be measured and recorded. Product and water level measurements and volume of water purged would be reported in quarterly monitoring reports.

If you agree with our proposed action, product removal will start with the next scheduled sampling event. 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

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

July 20, 2001

R0296

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

Prepared By:
Cameron-Cole
101 West Atlantic Avenue, Bldg. 90
Alameda, California 94501

Project No: 792675

CAMERON-COLE, LLC

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

July 20, 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: 792675

Brad Wright
for:

Written By
Brady Hanson
Geologist I

Approved By:
Brad Wright, RG, CHG
Senior Geologist

STATE OF CALIFORNIA
REGISTERED GEOLOGIST
EXP. 9/02
BRAD WRIGHT
CERTIFIED GEOLOGIST

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INTRODUCTION

This report presents the results from the May 2001 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 sample collection. 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. A free phase hydrocarbon sheen was detected in MW-2. As

shown on Figure 2, groundwater flow is to the west at a gradient of 0.0072 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 and temperature were monitored using calibrated field meters. Due to the very low yield encountered while purging monitoring well MW-11, only two casing volumes were evacuated before it became dry.

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 second quarter 2001 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. MTBE was detected above the MCL of 13 ppb in monitor well MW-11. Ethylbenzene was detected above the MCL of 700 and toluene was detected above the MCL of 150 ppb in monitor well MW-2. TPH-Diesel was detected above the reporting limit in monitor well MW-2. The laboratory qualified the diesel detected in MW-2 as "degraded". Concentrations of unspecified hydrocarbons detected previously in MW-2 and other site monitor wells are thought to be degraded diesel. Additionally, chemical concentrations above laboratory reporting limits detected in all monitoring wells included unspecified hydrocarbons. The carbon chain range of the unspecified hydrocarbon suggests that these concentrations represent degraded diesel. No analytes were detected in the trip blanks or method blanks. A lab control spike and lab control

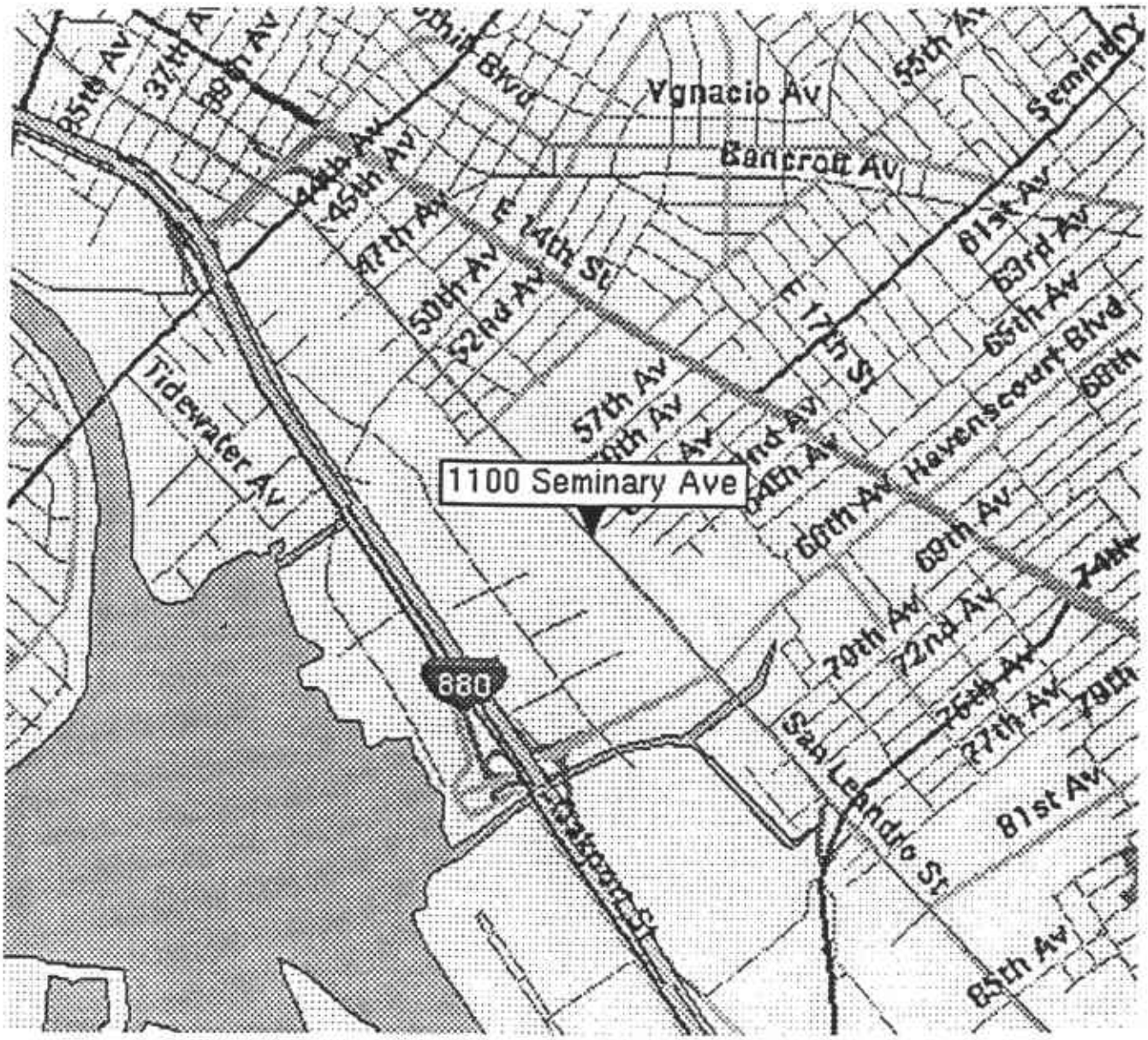
spike duplicate passed the USEPA's criteria for acceptance.

SUMMARY OF RESULTS

- A sheen of free phase hydrocarbon was observed in monitor well MW-2.
- Groundwater flow direction is towards the west at a gradient of 0.0072 feet/foot;
- Chemical concentrations in excess of MCLs were limited to benzene in wells MW-1, MW-2 and MW-3, MTBE in MW-11, and ethylbenzene and toluene in MW-2.

PROJECTED WORK AND RECOMMENDATIONS

- Quarterly groundwater monitoring is scheduled for August 2001.



LOCMAP

—North

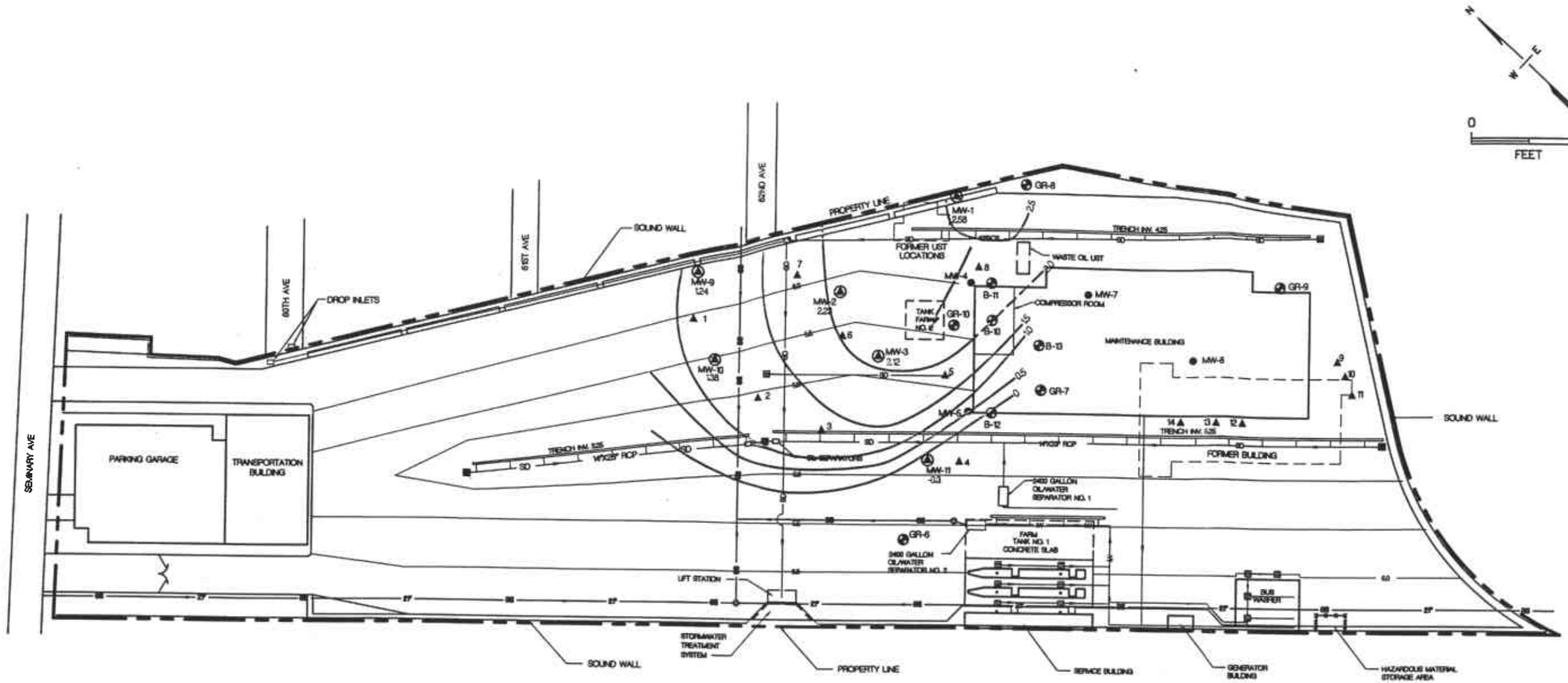
safety-kleen consulting

AC TRANSIT - OAKLAND, CALIFORNIA

FIGURE 1
SITE LOCATION MAP
1100 SEMINARY ROAD

SCALE: NO SCALE

DATE: 3/22/00



LEGEND:

	GROUNDWATER ELEVATION CONTOUR	-1.0	GROUNDWATER ELEVATION (FT. MSL)
	REPORTED GROUNDWATER FLOW		EXISTING MONITORING WELL
6.0	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

FIGURE 2

BY	DATE
DRAWN WRB	6/28/01
CHECKED	
APPROVED	
APPROVED	
APPROVED	

safety-kleen consulting

AC TRANSIT - OAKLAND, CALIFORNIA

1100 SEMINARY ROAD-POTENTIOMETRIC SURFACE MAP MAY 14, 2001

SCALE: 1" = 120'

DWG. NO: 792675-0003

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**	
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**	
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**	
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**	
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**	
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**	

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**
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**
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**
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**
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**

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-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**

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

May 31, 2001

STL SACRAMENTO PROJECT NUMBER: **G1E150164**
PO/CONTRACT:

Brad Wright
Safety Kleen Consulting
2233 Santa Clara Ave
Suite 7
Alameda, CA 94501

Dear Mr. Wright,

This report contains the analytical results for the samples received under chain of custody by STL Sacramento on May 14, 2001. These samples are associated with your AC Transit Seminary project.

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

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STL SACRAMENTO PROJECT NUMBER G1E150164

CASE NARRATIVE

STL SACRAMENTO PROJECT NUMBER G1E150164

General Comments

Samples were received at 16 degrees Centigrade.

WATER, 8015M, TPH Gas

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

WATER, 8260B, BTEX + MTBE

For sample MW-2, the first voa vial was used to screen the sample and the second voa vial was injected at a dilution based on the screening data. The third voa vial was used for a second dilution, but the benzene result was still outside of the linear calibration range. There was insufficient sample available to run the sample at a stronger dilution. Results from both dilutions are included in the report. Results that are above the linear calibration range and should be considered estimated concentrations are flagged with 'E' qualifiers.

WATER, 8015 MOD, Diesel

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

Sample MW-2 required a 500X dilution to bring the analyte response within the calibration range. Subsequently, the surrogate spikes were diluted out and recoveries could not be evaluated. However, the surrogate recoveries in the method blank and LCS were within the QC limits, demonstrating acceptable method performance.

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: Quanterra® Quality Control Program, Policy QA-003

STL Sacramento Certifications:
Alaska (UST-055), Arizona (#AZ00616), Arkansas, California (#2166), 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).

G1E150164

[redacted]

Chain of Custody Record

STL Quanterra

QUA-4124 0797

Client	Project Manager	Date	Chain of Custody Number
SAFETY-KLEEN CONSULTING	BRAD WRIGHT	5-1-01	41601
Address 2233 SANTA CLARA	**Telephone Number (Area Code)/Fax Number** 510-337-8660	**Lab Number**	**Page** 1 of 1
City ALAMEDA **State** CA **Zip Code** 94501	**Site Contact**	**Lab Contact** BONNIE MANIEL	
Project Name 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: Aqueous	Matrix: Sed.	Matrix: Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: NITRATE/SULFATE	Analysis: 8260 BTEX/MTBE	Analysis: GRO 8015	Analysis: DRO 8015
MW-1	5-14-01	1030	X									X	X	X	X
MW-9		1120													
MW-10		1200													
MW-3		1300													
MW-2		1400													
MW-11		1445													
TRIP BLANK															

Special Instructions/ Conditions of Receipt

RECEIVED IN GOOD CONDITION UNDER COC
MAY 14 2001
INI: LB

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

	Relinquished By	Date	Time	Received By	Date	Time
1.	Brad X Hanna	5-14-01	1540	Brat Brackett	5-14	1540
2.	Brat Brackett	5-14	1800	Morgan Burnett	5-14-01	1800
3.						

Comments

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

STL - Sacramento (916) 373-5600

3 of 70

SEVERN TRENT SERVICES

LOT RECEIPT CHECKLIST

STL Sacramento

CLIENT Safety Kleen PM BL LOG # 9234

LOT# (QUANTIMS ID) G1E150164 QUOTE# 34472 LOCATION WAE, VB

	Initials	Date
DATE RECEIVED 5-14-01 TIME RECEIVED 1800	NB	5-14-01

DELIVERED BY
- ☐ FEDEX ☐ CA OVERNIGHT ☐ CLIENT
- ☐ AIRBORNE ☐ GOLDENSTATE ☐ DHL
- ☐ UPS ☐ BAX GLOBAL ☐ GO-GETTERS
- ☐ QES COURIER ☒ B & B ☐ OTHER

CUSTODY SEAL STATUS ☐ INTACT ☐ BROKEN ☒ N/A

CUSTODY SEAL #(S)

SHIPPPING CONTAINER(S) ☒ STL ☐ CLIENT ☐ N/A

TEMPERTURE RECORD (IN °C) IR 1☐ 2☒ ☐ OTHER

COC #(S) 41601

TEMPERATURE BLANK

AMBIENT TEMPERATURE 16°

COLLECTOR'S NAME: ☐ Verified from COC ☒ Not on COC

pH MEASURED ☐ YES ☐ ANOMALY ☒ N/A

LABELED BY.....

LABELS CHECKED BY.....

SHORT HOLD TEST NOTIFICATION

SAMPLE RECEIVING

WETCHEM ☐ N/A KH

☐ METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL ☒ N/A

☐ COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES ☒ N/A

☒ Clouseau ☒ TEMPERATURE EXCEEDED (2 °-6 °C) ☐ N/A

☒ WET ICE ☐ BLUE ICE ☐ GEL PACK

☒ PM NOTIFIED ☐ NO COOLING AGENTS USED

Notes: 2 Bags of wet ice on top of samples, not touching all samples. 2 layers of bubble wrap.

LEAVE NO SPACES BLANK. USE "N/A" IF NOT APPLICABLE. INITIAL AND DATE ALL "N/A" ENTRIES. QA185 8/00 NEK

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VOA *																				
VOAh *	6	6	6	6	6	3														
___AGB	2	2	2	2	2															
AGBs																				
250AGB																				
250AGBs																				
250AGBn																				
250AGBna																				
___AGJ																				
500AGJ																				
250AGJ																				
125AGJ																				
___CGJ																				
500CGJ																				
250CGJ																				
125CGJ																				
___PB/PJ																				
___PBn/PJn																				
500PB/PJ	1	1	1	1	1															
500PBn/PJn																				
500PBna																				
500PBzn/na																				
250PB																				
250PBn																				
250PBna																				
250PBzn/na																				
___*CT																				
Encore																				
Folder/Filter																				
PUF																				
Petri/Filter																				
XAD Trap																				
Ziploc																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

h = hydrochloric acid s = sulfuric acid na = sodium hydroxide n = nitric acid zn = zinc acetate

* Number of VOA's with air bubbles present / total number of VOA's

WATER, 8015M, TPH Gas

SAFETY KLEEN CONSULTING

Client Sample ID: MW-1

GC Volatiles

Lot-Sample #...: G1E150164-001	Work Order #...: EDDNP1AE	Matrix.....: WATER	
Date Sampled...: 05/14/01	Date Received..: 05/14/01		
Prep Date.....: 05/22/01	Analysis Date..: 05/22/01		
Prep Batch #...: 1145461			
Dilution Factor: 1	Method.....: DHS CA LUFT		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (as Gasoline)	ND	50	ug/L
Unknown Hydrocarbon	210	50	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	114	(70 - 130)

SAFETY KLEEN CONSULTING

Client Sample ID: MW-9

GC Volatiles

Lot-Sample #...: G1E150164-002 Work Order #...: EDDNW1AE Matrix.....: WATER
Date Sampled...: 05/14/01 Date Received..: 05/14/01
Prep Date.....: 05/22/01 Analysis Date..: 05/22/01
Prep Batch #...: 1145461
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	101	(70 - 130)

SAFETY KLEEN CONSULTING

Client Sample ID: MW-10

GC Volatiles

Lot-Sample #...: G1E150164-003 Work Order #...: EDDNX1AE Matrix.....: WATER
Date Sampled...: 05/14/01 Date Received..: 05/14/01
Prep Date.....: 05/22/01 Analysis Date..: 05/22/01
Prep Batch #...: 1145461
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	98	(70 - 130)

SAFETY KLEEN CONSULTING

Client Sample ID: MW-3

GC Volatiles

Lot-Sample #...: G1E150164-004	**Work Order #...:** EDDN11AE	**Matrix.....:** WATER	
Date Sampled...: 05/14/01	**Date Received..:** 05/14/01		
Prep Date.....: 05/22/01	**Analysis Date..:** 05/22/01		
Prep Batch #...: 1145461			
Dilution Factor: 1	**Method.....:** DHS CA LUFT		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (as Gasoline)	ND	50	ug/L
Unknown Hydrocarbon	**680**	**50**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	111	(70 - 130)

SAFETY KLEEN CONSULTING

Client Sample ID: MW-2

GC Volatiles

Lot-Sample #...: G1E150164-005 Work Order #...: EDDN31AE Matrix.....: WATER
Date Sampled...: 05/14/01 Date Received..: 05/14/01
Prep Date.....: 05/23/01 Analysis Date..: 05/24/01
Prep Batch #...: 1149255
Dilution Factor: 20 Method.....: DHS CA LUFT

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (as Gasoline)	ND	1000	ug/L
Unknown Hydrocarbon	51000	1000	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	105	(70 - 130)

SAFETY KLEEN CONSULTING

Client Sample ID: MW-11

GC Volatiles

Lot-Sample #...: G1E150164-006	**Work Order #...:** EDDN71AE		**Matrix.....:** WATER
Date Sampled...: 05/14/01	**Date Received..:** 05/14/01		
Prep Date.....: 05/22/01	**Analysis Date..:** 05/23/01		
Prep Batch #...: 1145461			
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	94	(70 - 130)

QC DATA ASSOCIATION SUMMARY

G1E150164

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	DHS CA LUFT		1145461	
002	WATER	DHS CA LUFT		1145461	
003	WATER	DHS CA LUFT		1145461	
004	WATER	DHS CA LUFT		1145461	
005	WATER	DHS CA LUFT		1149255	1149127
006	WATER	DHS CA LUFT		1145461	

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: G1E150164 **Work Order #...:** ED1081AA **Matrix.....:** WATER
MB Lot-Sample #: G1E250000-461

Prep Date.....: 05/22/01
Analysis Date..: 05/22/01 **Prep Batch #...:** 1145461
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	107	(70 - 130)

NOTE(S):

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

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: G1E150164 **Work Order #...:** ED3TE1AA **Matrix.....:** WATER
MB Lot-Sample #: G1E290000-255

Prep Date.....: 05/23/01
Analysis Date..: 05/24/01 **Prep Batch #...:** 1149255
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	95	(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 #...: G1E150164 **Work Order #...:** ED1081AD-LCS **Matrix.....:** WATER
LCS Lot-Sample#: G1E250000-461 ED1081AE-LCSD
Prep Date.....: 05/22/01 **Analysis Date..:** 05/22/01
Prep Batch #...: 1145461
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
TPH (as Gasoline)	**1000**	**1010**	**ug/L**	**101**		**DHS CA LUFT**
	1000	**1030**	**ug/L**	**103**	**1.9**	**DHS CA LUFT**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	110	(70 - 130)
	113	(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 #...: G1E150164 **Work Order #...:** ED1081AD-LCS **Matrix.....:** WATER
LCS Lot-Sample#: G1E250000-461 ED1081AE-LCSD
Prep Date.....: 05/22/01 **Analysis Date..:** 05/22/01
Prep Batch #...: 1145461
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
TPH (as Gasoline)	**101**	**(70 - 130)**			**DHS CA LUFT**
	103	**(70 - 130)**	**1.9**	**(0-35)**	**DHS CA LUFT**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	110	(70 - 130)
	113	(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 #...: G1E150164 **Work Order #...:** ED3TE1AC **Matrix.....:** WATER
LCS Lot-Sample#: G1E290000-255
Prep Date.....: 05/23/01 **Analysis Date..:** 05/24/01
Prep Batch #...: 1149255
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
TPH (as Gasoline)	**1000**	**1010**	**ug/L**	**101**	**DHS CA LUFT**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	111	(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 #...: G1E150164 **Work Order #...:** ED3TE1AC **Matrix.....:** WATER
LCS Lot-Sample#: G1E290000-255
Prep Date.....: 05/23/01 **Analysis Date..:** 05/24/01
Prep Batch #...: 1149255
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
TPH (as Gasoline)	**101**	**(70 - 130)**	**DHS CA LUFT**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	111	(70 - 130)

NOTE(S):

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

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: G1E150164 Work Order #...: EDJL41AJ-MS Matrix.....: WATER
MS Lot-Sample #: G1E170221-001 EDJL41AK-MSD
Date Sampled...: 05/16/01 Date Received..: 05/16/01
Prep Date.....: 05/23/01 Analysis Date..: 05/25/01
Prep Batch #...: 1149255
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
TPH (as Gasoline)	ND	1000	935	ug/L	93		DHS CA LUFT
	ND	1000	964	ug/L	96	3.1	DHS CA LUFT

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	109	(70 - 130)
	114	(70 - 130)

NOTE(S):

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

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...:	G1E150164	**Work Order #...:**	EDJL41AJ-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	G1E170221-001		EDJL41AK-MSD		
Date Sampled...:	05/16/01	**Date Received..:**	05/16/01		
Prep Date.....:	05/23/01	**Analysis Date..:**	05/25/01		
Prep Batch #...:	1149255				
Dilution Factor:	1				

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
TPH (as Gasoline)	**93**	**(70 - 130)**			**DHS CA LUFT**
	96	**(70 - 130)**	**3.1**	**(0-35)**	**DHS CA LUFT**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	109	(70 - 130)
	114	(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

SAFETY KLEEN CONSULTING

Client Sample ID: MW-1

GC/MS Volatiles

Lot-Sample #...: G1E150164-001	**Work Order #...:** EDDNP1AF	**Matrix.....:** WATER	
Date Sampled...: 05/14/01	**Date Received..:** 05/14/01		
Prep Date.....: 05/22/01	**Analysis Date..:** 05/22/01		
Prep Batch #...: 1143466			
Dilution Factor: 1	**Method.....:** SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	**4.1**	**1.0**	**ug/L**
Toluene	ND	1.0	ug/L
Ethylbenzene	**3.1**	**1.0**	**ug/L**
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L
Xylenes (total)	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	101	(76 - 112)
1,2-Dichloroethane-d4	108	(76 - 118)
Toluene-d8	102	(79 - 115)

SAFETY KLEEN CONSULTING

Client Sample ID: MW-9

GC/MS Volatiles

Lot-Sample #...: G1E150164-002	**Work Order #...:** EDDNW1AF	**Matrix.....:** WATER
Date Sampled...: 05/14/01	**Date Received..:** 05/14/01	
Prep Date.....: 05/22/01	**Analysis Date..:** 05/22/01	
Prep Batch #...: 1143466		
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
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L
Xylenes (total)	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	99	(76 - 112)
1,2-Dichloroethane-d4	113	(76 - 118)
Toluene-d8	103	(79 - 115)

SAFETY KLEEN CONSULTING

Client Sample ID: MW-10

GC/MS Volatiles

Lot-Sample #...: G1E150164-003	**Work Order #...:** EDDNX1AF	**Matrix.....:** WATER
Date Sampled...: 05/14/01	**Date Received..:** 05/14/01	
Prep Date.....: 05/22/01	**Analysis Date..:** 05/22/01	
Prep Batch #...: 1143466		
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
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L
Xylenes (total)	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	94	(76 - 112)
1,2-Dichloroethane-d4	107	(76 - 118)
Toluene-d8	100	(79 - 115)

SAFETY KLEEN CONSULTING

Client Sample ID: MW-3

GC/MS Volatiles

Lot-Sample #...: G1E150164-004 Work Order #...: EDDN11AF Matrix.....: WATER
Date Sampled...: 05/14/01 Date Received..: 05/14/01
Prep Date.....: 05/22/01 Analysis Date..: 05/22/01
Prep Batch #...: 1143466
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	**8.4**	**1.0**	**ug/L**
Toluene	ND	1.0	ug/L
Ethylbenzene	**1.2**	**1.0**	**ug/L**
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L
Xylenes (total)	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	102	(76 - 112)
1,2-Dichloroethane-d4	99	(76 - 118)
Toluene-d8	101	(79 - 115)

SAFETY KLEEN CONSULTING

Client Sample ID: MW-2

GC/MS Volatiles

Lot-Sample #...: G1E150164-005	Work Order #...: EDDN31AF	Matrix.....: WATER	
Date Sampled...: 05/14/01	Date Received..: 05/14/01		
Prep Date.....: 05/22/01	Analysis Date..: 05/22/01		
Prep Batch #...: 1143466			
Dilution Factor: 8.33	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	**3700 E,Q**	**8.3**	**ug/L**
Toluene	**230 E**	**8.3**	**ug/L**
Ethylbenzene	**1300 E**	**8.3**	**ug/L**
Methyl tert-butyl ether (MTBE)	ND	17	ug/L
Xylenes (total)	ND	8.3	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(76 - 112)
1,2-Dichloroethane-d4	95	(76 - 118)
Toluene-d8	97	(79 - 115)

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

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

SAFETY KLEEN CONSULTING

Client Sample ID: MW-2

GC/MS Volatiles

Lot-Sample #...: G1E150164-005	Work Order #...: EDDN32AF	Matrix.....: WATER	
Date Sampled...: 05/14/01	Date Received..: 05/14/01		
Prep Date.....: 05/23/01	Analysis Date..: 05/24/01		
Prep Batch #...: 1144314			
Dilution Factor: 166.7	Method.....: SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	19000 E,Q	170	ug/L
Toluene	240	170	ug/L
Ethylbenzene	1100	170	ug/L
Methyl tert-butyl ether (MTBE)	ND	330	ug/L
Xylenes (total)	1200	170	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(76 - 112)
1,2-Dichloroethane-d4	104	(76 - 118)
Toluene-d8	99	(79 - 115)

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

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

SAFETY KLEEN CONSULTING

Client Sample ID: MW-11

GC/MS Volatiles

Lot-Sample #...: G1E150164-006 **Work Order #...:** EDDN71AF **Matrix.....:** WATER
Date Sampled...: 05/14/01 **Date Received..:** 05/14/01
Prep Date.....: 05/23/01 **Analysis Date..:** 05/23/01
Prep Batch #...: 1144310
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
Methyl tert-butyl ether (MTBE)	**14**	**2.0**	**ug/L**
Xylenes (total)	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(76 - 112)
1,2-Dichloroethane-d4	98	(76 - 118)
Toluene-d8	101	(79 - 115)

SAFETY KLEEN CONSULTING

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: G1E150164-007 Work Order #...: EDDN91AA Matrix.....: WATER
Date Sampled...: 05/14/01 Date Received..: 05/14/01
Prep Date.....: 05/22/01 Analysis Date..: 05/22/01
Prep Batch #...: 1143466
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
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L
Xylenes (total)	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	94	(76 - 112)
1,2-Dichloroethane-d4	98	(76 - 118)
Toluene-d8	99	(79 - 115)

QC DATA ASSOCIATION SUMMARY

G1E150164

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	SW846 8260B		1143466	1143245
002	WATER	SW846 8260B		1143466	1143245
003	WATER	SW846 8260B		1143466	1143245
004	WATER	SW846 8260B		1143466	1143245
005	WATER	SW846 8260B		1143466	1143245
	WATER	SW846 8260B		1144314	1144156
006	WATER	SW846 8260B		1144310	1144153
007	WATER	SW846 8260B		1143466	1143245

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: G1E150164 **Work Order #...:** EDT081AA **Matrix.....:** WATER
MB Lot-Sample #: G1E230000-466

Prep Date.....: 05/22/01
Analysis Date..: 05/22/01 **Prep Batch #...:** 1143466
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	96	(76 - 112)
1,2-Dichloroethane-d4	104	(76 - 118)
Toluene-d8	99	(79 - 115)

NOTE(S):

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

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: G1E150164 **Work Order #...:** EDWRA1AA **Matrix.....:** WATER
MB Lot-Sample #: G1E240000-310

Prep Date.....: 05/23/01
Analysis Date..: 05/23/01 **Prep Batch #...:** 1144310
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	100	(76 - 112)
1,2-Dichloroethane-d4	107	(76 - 118)
Toluene-d8	103	(79 - 115)

NOTE(S):

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

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: G1E150164 **Work Order #...:** EDWTE1AA **Matrix.....:** WATER
MB Lot-Sample #: G1E240000-314

Prep Date.....: 05/23/01
Analysis Date..: 05/23/01 **Prep Batch #...:** 1144314
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
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	SW846 8260B
Xylenes (total)	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	92	(76 - 112)
1,2-Dichloroethane-d4	91	(76 - 118)
Toluene-d8	96	(79 - 115)

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 #...: G1E150164 **Work Order #...:** EDT081AC **Matrix.....:** WATER
LCS Lot-Sample#: G1E230000-466
Prep Date.....: 05/22/01 **Analysis Date..:** 05/22/01
Prep Batch #...: 1143466
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Benzene	**10.0**	**10.0**	**ug/L**	**100**	**SW846 8260B**
Toluene	**10.0**	**10.2**	**ug/L**	**102**	**SW846 8260B**
Chlorobenzene	**10.0**	**9.93**	**ug/L**	**99**	**SW846 8260B**
1,1-Dichloroethene	**10.0**	**9.95**	**ug/L**	**99**	**SW846 8260B**
Trichloroethene	**10.0**	**9.90**	**ug/L**	**99**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	102	(76 - 112)
1,2-Dichloroethane-d4	108	(76 - 118)
Toluene-d8	100	(79 - 115)

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 #...: G1E150164 Work Order #...: EDT081AC Matrix.....: WATER
LCS Lot-Sample#: G1E230000-466
Prep Date.....: 05/22/01 Analysis Date..: 05/22/01
Prep Batch #...: 1143466
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Benzene	**100**	**(85 - 120)**	**SW846 8260B**
Toluene	**102**	**(82 - 121)**	**SW846 8260B**
Chlorobenzene	**99**	**(86 - 117)**	**SW846 8260B**
1,1-Dichloroethene	**99**	**(79 - 115)**	**SW846 8260B**
Trichloroethene	**99**	**(78 - 118)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	102	(76 - 112)
1,2-Dichloroethane-d4	108	(76 - 118)
Toluene-d8	100	(79 - 115)

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 #...: G1E150164 **Work Order #...:** EDWRA1AC **Matrix.....:** WATER
LCS Lot-Sample#: G1E240000-310
Prep Date.....: 05/23/01 **Analysis Date..:** 05/23/01
Prep Batch #...: 1144310
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Benzene	**10.0**	**10.2**	**ug/L**	**102**	**SW846 8260B**
Toluene	**10.0**	**10.5**	**ug/L**	**105**	**SW846 8260B**
Chlorobenzene	**10.0**	**10.2**	**ug/L**	**102**	**SW846 8260B**
1,1-Dichloroethene	**10.0**	**9.34**	**ug/L**	**93**	**SW846 8260B**
Trichloroethene	**10.0**	**10.4**	**ug/L**	**104**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	101	(76 - 112)
1,2-Dichloroethane-d4	103	(76 - 118)
Toluene-d8	98	(79 - 115)

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 #...: G1E150164 Work Order #...: EDWRA1AC Matrix.....: WATER
LCS Lot-Sample#: G1E240000-310
Prep Date.....: 05/23/01 Analysis Date..: 05/23/01
Prep Batch #...: 1144310
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Benzene	**102**	**(85 - 120)**	**SW846 8260B**
Toluene	**105**	**(82 - 121)**	**SW846 8260B**
Chlorobenzene	**102**	**(86 - 117)**	**SW846 8260B**
1,1-Dichloroethene	**93**	**(79 - 115)**	**SW846 8260B**
Trichloroethene	**104**	**(78 - 118)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	101	(76 - 112)
1,2-Dichloroethane-d4	103	(76 - 118)
Toluene-d8	98	(79 - 115)

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 #...: G1E150164 **Work Order #...:** EDWTE1AC **Matrix.....:** WATER
LCS Lot-Sample#: G1E240000-314
Prep Date.....: 05/23/01 **Analysis Date..:** 05/23/01
Prep Batch #...: 1144314
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Benzene	**10.0**	**8.85**	**ug/L**	**89**	**SW846 8260B**
Toluene	**10.0**	**8.97**	**ug/L**	**90**	**SW846 8260B**
Chlorobenzene	**10.0**	**8.88**	**ug/L**	**89**	**SW846 8260B**
1,1-Dichloroethene	**10.0**	**7.89**	**ug/L**	**79**	**SW846 8260B**
Trichloroethene	**10.0**	**8.69**	**ug/L**	**87**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(76 - 112)
1,2-Dichloroethane-d4	93	(76 - 118)
Toluene-d8	92	(79 - 115)

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 #...: G1E150164 Work Order #...: EDWTB1AC Matrix.....: WATER
LCS Lot-Sample#: G1E240000-314
Prep Date.....: 05/23/01 Analysis Date..: 05/23/01
Prep Batch #...: 1144314
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Benzene	**89**	**(85 - 120)**	**SW846 8260B**
Toluene	**90**	**(82 - 121)**	**SW846 8260B**
Chlorobenzene	**89**	**(86 - 117)**	**SW846 8260B**
1,1-Dichloroethene	**79**	**(79 - 115)**	**SW846 8260B**
Trichloroethene	**87**	**(78 - 118)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(76 - 112)
1,2-Dichloroethane-d4	93	(76 - 118)
Toluene-d8	92	(79 - 115)

NOTE(S):

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

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: G1E150164 **Work Order #...:** EDE5E1AG-MS **Matrix.....:** WATER
MS Lot-Sample #: G1E150297-002 EDE5E1AH-MSD
Date Sampled...: 05/14/01 **Date Received..:** 05/15/01
Prep Date.....: 05/22/01 **Analysis Date..:** 05/22/01
Prep Batch #...: 1143466
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**ND**	**10.0**	**9.91**	ug/L	**99**		**SW846 8260B**
	ND	**10.0**	**9.83**	ug/L	**98**	**0.80**	**SW846 8260B**
Toluene	**ND**	**10.0**	**9.94**	ug/L	**99**		**SW846 8260B**
	ND	**10.0**	**9.89**	ug/L	**99**	**0.55**	**SW846 8260B**
Chlorobenzene	**ND**	**10.0**	**9.63**	ug/L	**96**		**SW846 8260B**
	ND	**10.0**	**9.56**	ug/L	**96**	**0.70**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10.0**	**7.97**	ug/L	**80**		**SW846 8260B**
	ND	**10.0**	**8.21**	ug/L	**82**	**2.9**	**SW846 8260B**
Trichloroethene	**7.2**	**10.0**	**15.7**	ug/L	**85**		**SW846 8260B**
	7.2	**10.0**	**16.5**	ug/L	**94**	**5.5**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	105	(76 - 112)
	104	(76 - 112)
1,2-Dichloroethane-d4	118	(76 - 118)
	116	(76 - 118)
Toluene-d8	99	(79 - 115)
	100	(79 - 115)

NOTE(S):

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

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: G1E150164 **Work Order #...:** EDE5E1AG-MS **Matrix.....:** WATER
MS Lot-Sample #: G1E150297-002 EDE5E1AH-MSD
Date Sampled...: 05/14/01 **Date Received..:** 05/15/01
Prep Date.....: 05/22/01 **Analysis Date..:** 05/22/01
Prep Batch #...: 1143466
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**99**	**(85 - 120)**			**SW846 8260B**
	98	**(85 - 120)**	**0.80**	**(0-14)**	**SW846 8260B**
Toluene	**99**	**(82 - 121)**			**SW846 8260B**
	99	**(82 - 121)**	**0.55**	**(0-30)**	**SW846 8260B**
Chlorobenzene	**96**	**(86 - 117)**			**SW846 8260B**
	96	**(86 - 117)**	**0.70**	**(0-15)**	**SW846 8260B**
1,1-Dichloroethene	**80**	**(79 - 115)**			**SW846 8260B**
	82	**(79 - 115)**	**2.9**	**(0-26)**	**SW846 8260B**
Trichloroethene	**85**	**(78 - 118)**			**SW846 8260B**
	94	**(78 - 118)**	**5.5**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	105	(76 - 112)
	104	(76 - 112)
1,2-Dichloroethane-d4	118	(76 - 118)
	116	(76 - 118)
Toluene-d8	99	(79 - 115)
	100	(79 - 115)

NOTE(S):

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

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: G1E150164 **Work Order #...:** EDKVA1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: G1E180144-006 EDKVA1AD-MSD
Date Sampled...: 05/15/01 **Date Received..:** 05/17/01
Prep Date.....: 05/23/01 **Analysis Date..:** 05/23/01
Prep Batch #...: 1144310
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**ND**	**10.0**	**9.26**	**ug/L**	**93**		**SW846 8260B**
	ND	**10.0**	**9.74**	**ug/L**	**97**	**5.0**	**SW846 8260B**
Toluene	**ND**	**10.0**	**9.19**	**ug/L**	**92**		**SW846 8260B**
	ND	**10.0**	**9.74**	**ug/L**	**97**	**5.7**	**SW846 8260B**
Chlorobenzene	**ND**	**10.0**	**9.14**	**ug/L**	**91**		**SW846 8260B**
	ND	**10.0**	**9.54**	**ug/L**	**95**	**4.3**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10.0**	**7.78**	**ug/L**	**78 a**		**SW846 8260B**
	ND	**10.0**	**8.21**	**ug/L**	**82**	**5.4**	**SW846 8260B**
Trichloroethene	**ND**	**10.0**	**8.90**	**ug/L**	**89**		**SW846 8260B**
	ND	**10.0**	**9.16**	**ug/L**	**92**	**2.9**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	101	(76 - 112)
	103	(76 - 112)
1,2-Dichloroethane-d4	106	(76 - 118)
	110	(76 - 118)
Toluene-d8	97	(79 - 115)
	99	(79 - 115)

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: G1E150164 **Work Order #...:** EDKVA1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: G1E180144-006 EDKVA1AD-MSD
Date Sampled...: 05/15/01 **Date Received..:** 05/17/01
Prep Date.....: 05/23/01 **Analysis Date..:** 05/23/01
Prep Batch #...: 1144310
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**93**	**(85 - 120)**			**SW846 8260B**
	97	**(85 - 120)**	**5.0**	**(0-14)**	**SW846 8260B**
Toluene	**92**	**(82 - 121)**			**SW846 8260B**
	97	**(82 - 121)**	**5.7**	**(0-30)**	**SW846 8260B**
Chlorobenzene	**91**	**(86 - 117)**			**SW846 8260B**
	95	**(86 - 117)**	**4.3**	**(0-15)**	**SW846 8260B**
1,1-Dichloroethene	**78 a**	**(79 - 115)**			**SW846 8260B**
	82	**(79 - 115)**	**5.4**	**(0-26)**	**SW846 8260B**
Trichloroethene	**89**	**(78 - 118)**			**SW846 8260B**
	92	**(78 - 118)**	**2.9**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	101	(76 - 112)
	103	(76 - 112)
1,2-Dichloroethane-d4	106	(76 - 118)
	110	(76 - 118)
Toluene-d8	97	(79 - 115)
	99	(79 - 115)

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: G1E150164 **Work Order #...:** EDKVD1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: G1E180144-007 EDKVD1AD-MSD
Date Sampled...: 05/15/01 **Date Received..:** 05/17/01
Prep Date.....: 05/23/01 **Analysis Date..:** 05/24/01
Prep Batch #...: 1144314
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	**ND**	**10.0**	**9.54**	**ug/L**	**95**		**SW846 8260B**
	ND	**10.0**	**9.60**	**ug/L**	**96**	**0.55**	**SW846 8260B**
Toluene	**ND**	**10.0**	**9.49**	**ug/L**	**95**		**SW846 8260B**
	ND	**10.0**	**9.62**	**ug/L**	**96**	**1.3**	**SW846 8260B**
Chlorobenzene	**ND**	**10.0**	**9.23**	**ug/L**	**92**		**SW846 8260B**
	ND	**10.0**	**9.44**	**ug/L**	**94**	**2.3**	**SW846 8260B**
1,1-Dichloroethene	**ND**	**10.0**	**8.05**	**ug/L**	**81**		**SW846 8260B**
	ND	**10.0**	**8.19**	**ug/L**	**82**	**1.7**	**SW846 8260B**
Trichloroethene	**ND**	**10.0**	**9.07**	**ug/L**	**91**		**SW846 8260B**
	ND	**10.0**	**9.27**	**ug/L**	**93**	**2.2**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	99	(76 - 112)
	97	(76 - 112)
1,2-Dichloroethane-d4	105	(76 - 118)
	100	(76 - 118)
Toluene-d8	97	(79 - 115)
	95	(79 - 115)

NOTE(S):

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

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: G1E150164 **Work Order #...:** EDKVD1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: G1E180144-007 EDKVD1AD-MSD
Date Sampled...: 05/15/01 **Date Received..:** 05/17/01
Prep Date.....: 05/23/01 **Analysis Date..:** 05/24/01
Prep Batch #...: 1144314
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	**95**	**(85 - 120)**			**SW846 8260B**
	96	**(85 - 120)**	**0.55**	**(0-14)**	**SW846 8260B**
Toluene	**95**	**(82 - 121)**			**SW846 8260B**
	96	**(82 - 121)**	**1.3**	**(0-30)**	**SW846 8260B**
Chlorobenzene	**92**	**(86 - 117)**			**SW846 8260B**
	94	**(86 - 117)**	**2.3**	**(0-15)**	**SW846 8260B**
1,1-Dichloroethene	**81**	**(79 - 115)**			**SW846 8260B**
	82	**(79 - 115)**	**1.7**	**(0-26)**	**SW846 8260B**
Trichloroethene	**91**	**(78 - 118)**			**SW846 8260B**
	93	**(78 - 118)**	**2.2**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	99	(76 - 112)
	97	(76 - 112)
1,2-Dichloroethane-d4	105	(76 - 118)
	100	(76 - 118)
Toluene-d8	97	(79 - 115)
	95	(79 - 115)

NOTE(S):

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

Bold print denotes control parameters

WATER, 8015 MOD, Diesel

SAFETY KLEEN CONSULTING

Client Sample ID: MW-1

GC Semivolatiles

Lot-Sample #...: G1E150164-001	Work Order #...: EDDNP1AD		Matrix.....: WATER
Date Sampled...: 05/14/01	Date Received..: 05/14/01		
Prep Date.....: 05/18/01	Analysis Date..: 05/29/01		
Prep Batch #...: 1138351			
Dilution Factor: 1	Method.....: SW846 8015 MOD		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (as Diesel)	ND	50	ug/L
Unknown Hydrocarbon	**540**	**50**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	120	(57 - 147)

NOTE(S):

The unknown from n-C8 to n-C28 is quantitated based on a diesel reference from n-C10 to n-C24.

SAFETY KLEEN CONSULTING

Client Sample ID: MW-9

GC Semivolatiles

Lot-Sample #...: G1E150164-002 Work Order #...: EDDNW1AD Matrix.....: WATER
Date Sampled...: 05/14/01 Date Received..: 05/14/01
Prep Date.....: 05/18/01 Analysis Date..: 05/25/01
Prep Batch #...: 1138351
Dilution Factor: 1 Method.....: SW846 8015 MOD

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (as Diesel)	ND	50	ug/L
Unknown Hydrocarbon	110	50	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	112	(57 - 147)

NOTE(S):

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

SAFETY KLEEN CONSULTING

Client Sample ID: MW-10

GC Semivolatiles

Lot-Sample #...: G1E150164-003	Work Order #...: EDDNX1AD		Matrix.....: WATER
Date Sampled...: 05/14/01	Date Received..: 05/14/01		
Prep Date.....: 05/18/01	Analysis Date..: 05/25/01		
Prep Batch #...: 1138351			
Dilution Factor: 1	Method.....: SW846 8015 MOD		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (as Diesel)	ND	50	ug/L
Unknown Hydrocarbon	74	50	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	106	(57 - 147)

NOTE(S):

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

SAFETY KLEEN CONSULTING

Client Sample ID: MW-3

GC Semivolatiles

Lot-Sample #...: G1E150164-004 Work Order #...: EDDN11AD Matrix.....: WATER
Date Sampled...: 05/14/01 Date Received..: 05/14/01
Prep Date.....: 05/18/01 Analysis Date..: 05/25/01
Prep Batch #...: 1138351
Dilution Factor: 1 Method.....: SW846 8015 MOD

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (as Diesel)	ND	50	ug/L
Unknown Hydrocarbon	860	50	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	116	(57 - 147)

NOTE(S):

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

SAFETY KLEEN CONSULTING

Client Sample ID: MW-2

GC Semivolatiles

Lot-Sample #...: G1E150164-005	**Work Order #...:** EDDN31AD		**Matrix.....:** WATER
Date Sampled...: 05/14/01	**Date Received..:** 05/14/01		
Prep Date.....: 05/18/01	**Analysis Date..:** 05/29/01		
Prep Batch #...: 1138351			
Dilution Factor: 500	**Method.....:** SW846 8015 MOD		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (as Diesel)	**280000**	**25000**	**ug/L**
Unknown Hydrocarbon	ND	25000	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.

The diesel pattern appears to be degraded.

SAFETY KLEEN CONSULTING

Client Sample ID: MW-11

GC Semivolatiles

Lot-Sample #...: G1E150164-006 Work Order #...: EDDN71AD Matrix.....: WATER
Date Sampled...: 05/14/01 Date Received..: 05/14/01
Prep Date.....: 05/18/01 Analysis Date..: 05/29/01
Prep Batch #...: 1138351
Dilution Factor: 1 Method.....: SW846 8015 MOD

PARAMETER	RESULT	REPORTING LIMIT	UNITS
TPH (as Diesel)	ND	50	ug/L
Unknown Hydrocarbon	160	50	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	101	(57 - 147)

NOTE(S):

The unknown from n-C14 to n-C32 is qunatitated based on a diesel reference from n-C10 to n-C24.

QC DATA ASSOCIATION SUMMARY

G1E150164

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	MCAWW 300.0A		1141271	1141148
	WATER	MCAWW 300.0A		1141290	1141129
	WATER	SW846 8015 MOD		1138351	
	WATER	DHS CA LUFT		1145461	
	WATER	SW846 8260B		1143466	1143245
002	WATER	MCAWW 300.0A		1141271	1141148
	WATER	MCAWW 300.0A		1141290	1141129
	WATER	SW846 8015 MOD		1138351	
	WATER	DHS CA LUFT		1145461	
	WATER	SW846 8260B		1143466	1143245
003	WATER	MCAWW 300.0A		1141271	1141148
	WATER	MCAWW 300.0A		1141290	1141129
	WATER	SW846 8015 MOD		1138351	
	WATER	DHS CA LUFT		1145461	
	WATER	SW846 8260B		1143466	1143245
004	WATER	MCAWW 300.0A		1141271	1141148
	WATER	MCAWW 300.0A		1141290	1141129
	WATER	SW846 8015 MOD		1138351	
	WATER	DHS CA LUFT		1145461	
	WATER	SW846 8260B		1143466	1143245
005	WATER	MCAWW 300.0A		1141271	1141148
	WATER	MCAWW 300.0A		1141290	1141129
	WATER	SW846 8015 MOD		1138351	
	WATER	DHS CA LUFT		1149255	1149127
	WATER	SW846 8260B		1143466	1143245
	WATER	SW846 8260B		1144314	1144156
006	WATER	MCAWW 300.0A		1141271	1141148
	WATER	MCAWW 300.0A		1141290	1141129
	WATER	SW846 8015 MOD		1138351	
	WATER	DHS CA LUFT		1145461	
	WATER	SW846 8260B		1144310	1144153
007	WATER	SW846 8260B		1143466	1143245

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: G1E150164 **Work Order #...:** EDLP11AA **Matrix.....:** WATER
MB Lot-Sample #: G1E180000-351

Prep Date.....: 05/18/01
Analysis Date..: 05/25/01 **Prep Batch #...:** 1138351
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	124	(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 #...: G1E150164 **Work Order #...:** EDLP11AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: G1E180000-351 EDLP11AD-LCSD
Prep Date.....: 05/18/01 **Analysis Date..:** 05/25/01
Prep Batch #...: 1138351
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
TPH (as Diesel)	**300**	**218**	**ug/L**	**73**		**SW846 8015 MOD**
	300	**236**	**ug/L**	**79**	**8.1**	**SW846 8015 MOD**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	112	(57 - 147)
	120	(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 #...: G1E150164 **Work Order #...:** EDLP11AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: G1E180000-351 EDLP11AD-LCSD
Prep Date.....: 05/18/01 **Analysis Date..:** 05/25/01
Prep Batch #...: 1138351
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
TPH (as Diesel)	**73**	**(39 - 125)**			**SW846 8015 MOD**
	79	**(39 - 125)**	**8.1**	**(0-44)**	**SW846 8015 MOD**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	112	(57 - 147)
	120	(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

SAFETY KLEEN CONSULTING

Client Sample ID: MW-1

General Chemistry

Lot-Sample #...: G1E150164-001 Work Order #...: EDDNP Matrix.....: WATER
Date Sampled...: 05/14/01 10:30 Date Received..: 05/14/01 18:00

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N	ND	0.050	mg/L	MCAWW 300.0A	05/15/01	1141290
		Dilution Factor: 1		Analysis Time..: 19:47		
Sulfate	2.5	1.0	mg/L	MCAWW 300.0A	05/15/01	1141271
		Dilution Factor: 1		Analysis Time..: 19:47		

SAFETY KLEEN CONSULTING

Client Sample ID: MW-9

General Chemistry

Lot-Sample #...: G1E150164-002 Work Order #...: EDDNW Matrix.....: WATER
Date Sampled...: 05/14/01 11:20 Date Received..: 05/14/01 18:00

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N	0.10	0.050	mg/L	MCAWW 300.0A	05/15/01	1141290
		Dilution Factor: 1		Analysis Time..: 20:02		
Sulfate	140 Q	10.0	mg/L	MCAWW 300.0A	05/15/01	1141271
		Dilution Factor: 10		Analysis Time..: 21:26		

NOTE(S):

RL Reporting Limit

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

SAFETY KLEEN CONSULTING

Client Sample ID: MW-10

General Chemistry

Lot-Sample #...: G1E150164-003 Work Order #...: EDDNX Matrix.....: WATER
Date Sampled...: 05/14/01 12:00 Date Received..: 05/14/01 18:00

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N	ND	0.050	mg/L	MCAWW 300.0A	05/15/01	1141290
		Dilution Factor: 1		Analysis Time..: 20:16		
Sulfate	135 Q	10.0	mg/L	MCAWW 300.0A	05/15/01	1141271
		Dilution Factor: 10		Analysis Time..: 21:40		

NOTE(S):

RL Reporting Limit

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

SAFETY KLEEN CONSULTING

Client Sample ID: MW-3

General Chemistry

Lot-Sample #...: G1E150164-004 Work Order #...: EDDN1 Matrix.....: WATER
Date Sampled...: 05/14/01 13:00 Date Received..: 05/14/01 18:00

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N	ND	0.050	mg/L	MCAWW 300.0A	05/15/01	1141290
		Dilution Factor: 1		Analysis Time..: 19:05		
Sulfate	21.1	1.0	mg/L	MCAWW 300.0A	05/15/01	1141271
		Dilution Factor: 1		Analysis Time..: 19:05		

SAFETY KLEEN CONSULTING

Client Sample ID: MW-2

General Chemistry

Lot-Sample #...: G1E150164-005 **Work Order #...:** EDDN3 **Matrix.....:** WATER
Date Sampled...: 05/14/01 14:00 **Date Received..:** 05/14/01 18:00

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N	ND	0.050	mg/L	MCAWW 300.0A	05/15/01	1141290
		Dilution Factor: 1		Analysis Time..: 20:30		
Sulfate	ND	1.0	mg/L	MCAWW 300.0A	05/15/01	1141271
		Dilution Factor: 1		Analysis Time..: 20:30		

SAFETY KLEEN CONSULTING

Client Sample ID: MW-11

General Chemistry

Lot-Sample #...: G1E150164-006 Work Order #...: EDDN7 Matrix.....: WATER
Date Sampled...: 05/14/01 14:45 Date Received..: 05/14/01 18:00

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N	0.23	0.050	mg/L	MCAWW 300.0A	05/15/01	1141290
		Dilution Factor: 1		Analysis Time..: 20:44		
Sulfate	103 Q	10.0	mg/L	MCAWW 300.0A	05/15/01	1141271
		Dilution Factor: 10		Analysis Time..: 21:54		

NOTE(S):

RL Reporting Limit

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

QC DATA ASSOCIATION SUMMARY

G1E150164

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	MCAWW 300.0A		1141271	1141148
	WATER	MCAWW 300.0A		1141290	1141129
002	WATER	MCAWW 300.0A		1141271	1141148
	WATER	MCAWW 300.0A		1141290	1141129
003	WATER	MCAWW 300.0A		1141271	1141148
	WATER	MCAWW 300.0A		1141290	1141129
004	WATER	MCAWW 300.0A		1141271	1141148
	WATER	MCAWW 300.0A		1141290	1141129
005	WATER	MCAWW 300.0A		1141271	1141148
	WATER	MCAWW 300.0A		1141290	1141129
006	WATER	MCAWW 300.0A		1141271	1141148
	WATER	MCAWW 300.0A		1141290	1141129

METHOD BLANK REPORT

General Chemistry

Client Lot #...: G1E150164 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N		Work Order #: EDNE21AA		MB Lot-Sample #:	G1E210000-290	
	ND	0.050	mg/L	MCAWW 300.0A	05/15/01	1141290
		Dilution Factor: 1				
		Analysis Time..: 18:37				
Sulfate		Work Order #: EDNDP1AD		MB Lot-Sample #:	G1E210000-271	
	ND	1.0	mg/L	MCAWW 300.0A	05/15/01	1141271
		Dilution Factor: 1				
		Analysis Time..: 18:37				

NOTE(S):

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

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: G1E150164 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N			Work Order #: EDNE21AC	LCS Lot-Sample#:		G1E210000-290	
	1.00	0.940	mg/L	94	MCAWW 300.0A	05/15/01	1141290
			Dilution Factor: 1				
			Analysis Time..: 18:23				
Sulfate			Work Order #: EDNDP1AE	LCS Lot-Sample#:		G1E210000-271	
	10.0	9.41	mg/L	94	MCAWW 300.0A	05/15/01	1141271
			Dilution Factor: 1				
			Analysis Time..: 18:23				

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: G1E150164 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N		Work Order #: EDNE21AC LCS Lot-Sample#: G1E210000-290			
	94	(90 - 110)	MCAWW 300.0A	05/15/01	1141290
		Dilution Factor: 1			
		Analysis Time..: 18:23			
Sulfate		Work Order #: EDNDP1AE LCS Lot-Sample#: G1E210000-271			
	94	(90 - 110)	MCAWW 300.0A	05/15/01	1141271
		Dilution Factor: 1			
		Analysis Time..: 18:23			

NOTE(S):

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

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: G1E150164 **Matrix.....:** WATER
Date Sampled...: 05/14/01 13:00 **Date Received..:** 05/14/01 18:00

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N			WO#: EDDN11AJ-MS/EDDN11AK-MSD				MS Lot-Sample #: G1E150164-004		
	ND	2.00	1.95	mg/L	98		MCAWW 300.0A	05/15/01	1141290
	ND	2.00	1.92	mg/L	96	1.6	MCAWW 300.0A	05/15/01	1141290
			Dilution Factor: 1						
			Analysis Time..: 19:19						
Sulfate			WO#: EDDN11AL-MS/EDDN11AM-MSD				MS Lot-Sample #: G1E150164-004		
	21.1	20.0	41.4	mg/L	101		MCAWW 300.0A	05/15/01	1141271
	21.1	20.0	41.2	mg/L	101	0.41	MCAWW 300.0A	05/15/01	1141271
			Dilution Factor: 1						
			Analysis Time..: 19:19						

NOTE(S):

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: G1E150164 **Matrix.....:** WATER
Date Sampled...: 05/14/01 13:00 **Date Received..:** 05/14/01 18:00

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate as N		WO#: EDDN11AJ-MS/EDDN11AK-MSD				MS Lot-Sample #: G1E150164-004	
	98	(90 - 110)			MCAWW 300.0A	05/15/01	1141290
	96	(90 - 110)	1.6	(0-10)	MCAWW 300.0A	05/15/01	1141290
		Dilution Factor: 1					
		Analysis Time..: 19:19					
Sulfate		WO#: EDDN11AL-MS/EDDN11AM-MSD				MS Lot-Sample #: G1E150164-004	
	101	(90 - 110)			MCAWW 300.0A	05/15/01	1141271
	101	(90 - 110)	0.41	(0-10)	MCAWW 300.0A	05/15/01	1141271
		Dilution Factor: 1					
		Analysis Time..: 19:19					

NOTE(S):

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

APPENDIX B

SAMPLING EVENT DATA

DEPTH TO WATER

DATE: 5-14-01

PROJECT AC Transit Seminary EVENT Quarterly TECHNICIAN BH

NO.	WELL OR LOCATION	DATE	TIME	MEASUREMENT	CODE	COMMENTS
1	MW-1	5-14-01	0855	4.66 - .99 =	3.67	
2	MW-2		0902	4.29 - .99	3.30	oil sheen (no layer)
3	MW-3		0853	3.64 - .99 =	2.64	
4	MW-9		0857	5.55 - .99 =	4.56	
5	MW-10		0900	4.26 - .99 =	3.27	
6	MW-11		0851	5.48 - .99 =	4.49	
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

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

STL

Quanterra

Chain of Custody Record

QUA-4124 0797

Client: SAFETY-KLEEN CONSULTING	Project Manager: BRAD WRIGHT	Date: 3-1-01	Chain of Custody Number: 41601
Address: 2233 SANTA CLARA	Telephone Number (Area Code)/Fax Number: 510-337-8660	Lab Number:	Page 1 of 1
City: ALAMEDA · State: CA · Zip Code: 94501	Site Contact: · Lab Contact: BONNIE MCNIEL		
Project Name: 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: 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
MW-1	5-14-01	1030	X											X	X	X	X	
MW-9	↓	1120	↓											↓	↓	↓	↓	
MW-10	↓	1200	↓											↓	↓	↓	↓	
MW-3	↓	1300	↓											↓	↓	↓	↓	
MW-2	↓	1400	↓											↓	↓	↓	↓	
MW-11	↓	1415	↓											↓	↓	↓	↓	
TRIP BLANK	↓	0800	↓												↓			

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: Brady N. Hanson	5-14-01	1540	1. Received By: Rhett Brackett	5-14	1540
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-1

Project Name: AC TRANSIT SEMINARY
Casing Diameter (in): 2"
Total Well Depth (ft): 15.50'
Depth to Water (ft), before purging: 3.67'

Project Number: 792588
Sample Date: 5-14-01
Sample ID: MW-1

Development Method:

X Bailer: ___ Teflon ___ Stainless Steel ___ PVC ___ ABS Plastic

X Pump: ___ Dedicated Submersible Pump ___ Bladder Pump
X Non-Dedicated Submersible Pump

Time	pH	Conduct. (umho/cm)	Temp. (Celsius)	Water Level (to 0.01 ft)	Cum. Vol. (gal)	Pump Rate (GPM)
1017	6.94	1173	28.8	4.66	2	0.67
1020	6.92	1127	29.5	4.98	4	"
1023	6.83	1162	30.1	5.01	6	"
				TOTAL = 6	Gallons	

Water Volume to be Purged (gal) = (15.50 - 3.67) = 11.83 x .165 = 1.95 x 3 = 5.85
(Casing Length in Ft - Depth to Water in Ft) x X x 3
Where X = 1 Well Volume in gal/ft, X = 0.165 for 2 in. wells, X = 0.37 for 3 in. wells, X = 0.65 for 4 in. we
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

X Pump: ___ Dedicated Submersible Pump ___ Bladder Pump
X Non-Dedicated Submersible Pump

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

NITRATE/SULFATE
8260
8015

Trip Blank @ 0800 hrs

Parameter Collected:
Sample Appearance
___ OVA Reading (ppm)
___ Suspended Solids (describe):

Cent pump to purge

Fe : 1.87
DO BH : 13.97
ORP ~~7.92~~ BH 40 mV

Decontamination Performed: R/W S/M

Comments / Calculations:

START 1014
STOP 1023
SAMPLE 1030

5-14-01

BIAH

Project Name: AC TRANSIT SEMINARY
Project Number: 792588
Casing Diameter (in): 2"
Sample Date: 5-14-01
Total Well Depth (ft): 23.50
Sample ID: MW-2
Depth to Water (ft), before purging: 3.30

Development Method:

X Bailer: ___ Teflon ___ Stainless Steel ___ PVC ___ ABS Plastic

X Pump: ___ Dedicated Submersible Pump ___ Bladder Pump
X Non-Dedicated Submersible Pump

Time	pH	Conduct. (umho/cm)	Temp. (Celsius)	Water Level (to 0.01 ft)	Cum. Vol. (gal)	Pump Rate (GPM)
1350	6.64	1880	31.5	8.65	3	0.71
1354	6.70	1963	20.3	10.09	6	1
1358	6.65	1971	31.0	10.15	9	1
				Total V =	10	

Water Volume to be Purged (gal) = (23.50 - 3.30) = 20.2 x .165 = 3.3 x 3 = 10.0
(Casing Length in Ft - Depth to Water in Ft) x X x 3
Where X = 1 Well Volume in gal/ft, X = 0.165 for 2 in. wells, X = 0.37 for 3 in. wells, X = 0.65 for 4 in. wel
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

X Pump: ___ Dedicated Submersible Pump ___ Bladder Pump
X Non-Dedicated Submersible Pump

QA/QC Samples if any (Duplicate, Field Blank, Rinse Blank, etc.):
8015 GRO/DRO
NITRATE/SULFATE
8260

CENT PUMP TO PURGE

Fe = 3.30
ORP = 44.83
DO = 3.33

Parameter Collected:
Sample Appearance
___ OVA Reading (ppm)
___ Suspended Solids (describe):

Decontamination Performed: (P/W/S/M)

Comments / Calculations:

START - 1345
STOP - 1359
SAMPLE - 1400

B I A H

5-14-01

Well ID: MW-3

Project Name: AC TRANSIT SEMINARY
Casing Diameter (in): 2"
Total Well Depth (ft): 16.80'
Depth to Water (ft), before purging: 2.64'

Project Number: 792588
Sample Date: 5-14-01
Sample ID: MW-3

Development Method:

X Bailer: ___ Teflon ___ Stainless Steel ___ PVC ___ ABS Plastic

X Pump: ___ Dedicated Submersible Pump ___ Bladder Pump
X Non-Dedicated Submersible Pump

Time	pH	Conduct. (umho/cm)	Temp. (Celsius)	Water Level (to 0.01 ft)	Cum. Vol. (gal)	Pump Rate (GPM)
1243	7.29	1025	34.6	7.30	2.5	0.32
1250	7.19	656	34.9	7.15	5.0	"
1258	7.16	689	35.5	7.29	7.0	"
				total V =	7.0 gal	

Water Volume to be Purged (gal) = (16.80 - 2.64') = 14.16 x .165 = 2.34 x 3 = 7
(Casing Length in Ft - Depth to Water in Ft) x X x 3
Where X = 1 Well Volume in gal/ft, X = 0.165 for 2 in. wells, X = 0.37 for 3 in. wells, X = 0.65 for 4 in. we
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

X Pump: ___ Dedicated Submersible Pump ___ Bladder Pump
X Non-Dedicated Submersible Pump

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

NITRATE/SULFATE
8260
8015 GRO/DRO

Parameter Collected:
Sample Appearance
___ OVA Reading (ppm)
___ Suspended Solids (describe): CENT PUMP TO PURGE

ORP : 29.69
Fe : 0.00 mg/L
DO : 9.80 mg/L

Decontamination Performed:

R/W S/M

Comments / Calculations:

START : 1235
STOP : 1258
SAMPLE : 1300

B. I. A. H.

5-14-01

Well ID: MW-9

Project Name: AC TRANSIT SEMINARY
Project Number: 792588
Casing Diameter (in): 2"
Sample Date: 5-14-01
Total Well Depth (ft): 19.50
Sample ID: MW-9
Depth to Water (ft), before purging: 4.56

Development Method:

X Bailer: ___ Teflon ___ Stainless Steel ___ PVC ___ ABS Plastic

✓ Pump: ___ Dedicated Submersible Pump ___ Bladder Pump
X Non-Dedicated Submersible Pump

Time	pH	Conduct. (umho/cm)	Temp. (Celsius)	Water Level (to 0.01 ft)	Cum. Vol. (gal)	Pump Rate (GPM)
1106	7.42	1277	30.0	7.09	2.5	0.63
1109	7.33	1365	30.2	9.73	5.0	↓
1112	7.31	1370	29.4	10.11	7.5	⊥
				TOTAL V -	7.5 gallons	

Water Volume to be Purged (gal) = (19.50 - 4.56) = 14.94 × .165 = 2.46 × 3 = 7.39
(Casing Length in Ft - Depth to Water in Ft) x X x 3
Where X = 1 Well Volume in gal/ft, X = 0.165 for 2 in. wells, X = 0.37 for 3 in. wells, X = 0.65 for 4 in. we
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

X Pump: ___ Dedicated Submersible Pump ___ Bladder Pump
X Non-Dedicated Submersible Pump

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

NITRATE/SULFATE
8260
Parameter Collected: 8015 GPO/DRO

Cent pump to purge

Fe = 0.00 mg/L
DO ~~ORP~~ pH = 8.29
ORP = 55 mV

Sample Appearance
___ OVA Reading (ppm)
___ Suspended Solids (describe):

Decontamination Performed:

R/W S/m

Comments / Calculations:

START: 1103
STOP: 1115
SAMPLE: 1120

B. A. H.

5-14-01

Project Name: AC TRANSIT SEMINARY
Project Number: 792588
Casing Diameter (in): 2"
Sample Date: 5-14-01
Total Well Depth (ft): 11.40
Sample ID: MW-10
Depth to Water (ft), before purging: 3.27

Development Method:

X Bailer: ___ Teflon ___ Stainless Steel ___ PVC ___ ABS Plastic

X Pump: ___ Dedicated Submersible Pump ___ Bladder Pump
X Non-Dedicated Submersible Pump

Time	pH	Conduct. (umho/cm)	Temp. (Celsius)	Water Level (to 0.01 ft)	Cum. Vol. (gal)	Pump Rate (GPM)
1148	7.04	3060	30.2	4.65	1.25	0.31
1150	6.94	3220	30.5	4.80	2.50	1
1155	6.88	3190	30.3	5.50	3.75	1
				TOTAL V=	4.0 gal.	

Water Volume to be Purged (gal) = (11.40 - 3.27) = 8.13 x .165 = 1.34 x 3 = 4.0
(Casing Length in Ft - Depth to Water in Ft) x X x 3
Where X = 1 Well Volume in gal/ft, X = 0.165 for 2 in. wells, X = 0.37 for 3 in. wells, X = 0.65 for 4 in. wel
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

X Pump: ___ Dedicated Submersible Pump ___ Bladder Pump
X Non-Dedicated Submersible Pump

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

NITRATE/SULFATE
8260
8015 GRO/DRO

Parameter Collected:

CENT PUMP TO PURGE

Fe: 0.00
ORP: 26.64
DO = 6.79 mg/L

Sample Appearance
___ OVA Reading (ppm)
___ Suspended Solids (describe):

Decontamination Performed: MW S/M

Comments / Calculations:

START: 1145
STOP: 1158
SAMPLE: 1200

B. J. A H...

5-14-01

Well ID: MW-11

Project Name: AC TRANSIT SEMINARY
Project Number: 792588
Casing Diameter (in): 2"
Sample Date: 5-14-01
Total Well Depth (ft): 13.5'
Sample ID: MW-11
Depth to Water (ft), before purging: 4.49'

Development Method:

X Bailer: ____ Teflon ____ Stainless Steel ____ PVC ____ ABS Plastic

X Pump: ____ Dedicated Submersible Pump ____ Bladder Pump
X Non-Dedicated Submersible Pump

Time	pH	Conduct. (umho/cm)	Temp. (Celsius)	Water Level (to 0.01 ft)	Cum. Vol. (gal)	Pump Rate (GPM)
0943	7.00	3090 us	26.2	9.76	1.5	0.21
0950	7.09	2930 us	27.0	13.28	3.0	1
dry (0953)					4.5	1
SAMPLED @ 1445				TOTAL PURGED 3.4 gallons		

Water Volume to be Purged (gal) = (13.5 - 4.49) x .901 x .165 = 1.49 x 3 = 4.46
(Casing Length in Ft - Depth to Water in Ft) x X x 3
Where X = 1 Well Volume in gal/ft, X = 0.165 for 2 in. wells, X = 0.37 for 3 in. wells, X = 0.65 for 4 in. wells
NOTE: 3 to 5 Well Casing Volumes required prior to sample collection.

At least 2 well casing volumes were removed prior to sampling.

Sample Collection Method:

X Bailer: ____ Teflon ____ Stainless Steel ____ PVC ____ ABS Plastic

X Pump: ____ Dedicated Submersible Pump ____ Bladder Pump
X Non-Dedicated Submersible Pump

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

NITRATE/SULFATE
8260
8015 GRO/DRO

Parameter Collected:

Sample Appearance

____ OVA Reading (ppm)

____ Suspended Solids (describe):

CENT PUMP TO PURGE

Fe = 2.91 mg/L
ORP = 109
DO = 6.06 mg/L

Decontamination Performed: R/W/SM

Comments / Calculations:

2 casing volumes purged well allowed to recover to 80%

START: 0936
STOP: 0953
SAMPLE: 1445

Brandon A Harris

5-14-01