

AC Transit

Alameda-Contra Costa Transit District

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



November 16, 1999

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

Dear Ms. chu:

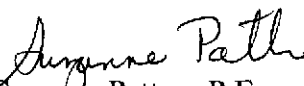
Subject: Quarterly Groundwater Monitoring Report
AC Transit, 1177 47th Street, Emeryville

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, Environmental Decision Group. Quarterly groundwater monitoring was reinstated in response to your request earlier this year.

Monitoring wells MW-1 through MW-10 were redeveloped, inspected and measured for the presence of free product and depth to groundwater. Samples were taken and analyzed for total petroleum hydrocarbons as diesel (TPH-D) and benzene, toluene, ethylbenzene, and xylenes (BTEX). The sample results indicate that TPH-D was detected in all wells except for MW-4. Concentrations of TPH-D ranged from 180 to 140,000 ppb. In addition, benzene was present in well MW-6 at a concentration of 77 ppb. One well, well MW-6 had a detectable free phase floating product layer.

The next quarterly sampling event will be performed the week of November 22, 1999. If you have any questions regarding this information or other matters pertaining to this site, please call me at (510) 577-8869.

Sincerely,


Suzanne Patton, P.E.
Environmental Manager

SP/sp

enclosure

99 NOV 17 PM 4:28
ENVIRONMENTAL
PROTECTION
DIVISION

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

November 10, 1999



2233 SANTA CLARA AVE., SUITE 7

ALAMEDA, CALIFORNIA 94501

510.337.8661

FAX 510.337.3994

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

November 10, 1999

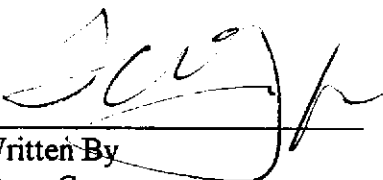
Prepared For:


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

Prepared By:

Safety-Kleen Inc.
2233 Santa Clara Avenue
Alameda, California 94501

Project No: 792551


Written By
Steve Carson


Reviewed By
Brad Wright, R.C.

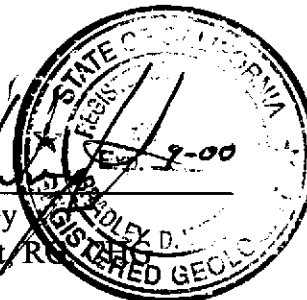


Table of Contents

INTRODUCTION	1
OBJECTIVES AND SCOPE OF WORK	1
Groundwater Elevations and Flow Direction	1
Groundwater Sampling Activities	2
Groundwater Analytical Results	2
SUMMARY OF RESULTS	2
PROJECTED WORK AND RECOMMENDATIONS	3
APPENDIX A	Chain-of-Custody Documentation

List of Figures

Figure 1 Site Map Including Groundwater Elevation Contours

List of Tables

Table 1 Groundwater Level Measurements
Table 2 Analytical Results of Groundwater Samples

INTRODUCTION

This report presents the results from the first sampling event of quarterly groundwater monitoring for the AC Transit Facility located at 1177 47th Street, Emeryville, California (Site). Groundwater sampling of monitor wells MW-1 through MW-10 was reinstated, in accordance with directives from Alameda County Health Care Services. AC Transit retained Environmental Decision Group, Inc., to perform this work..

OBJECTIVES AND SCOPE OF WORK

Work performed during this sampling event included measuring depth to water in the monitor wells, well redevelopment and sample collection. Groundwater samples were analyzed for total petroleum hydrocarbons as diesel (TPH-D) using Environmental Protection Agency (EPA) Method 8015 and benzene, toluene, ethylbenzene and xylenes (BTEX) using EPA Method 8020.

A site map displaying the monitoring well locations is presented as Figure 1. Chain-of-custody documents are included in Appendix A. Field data sheets and certified analytical reports are kept on file and are available upon request.

Groundwater Elevations and Flow Direction

On August 31, 1999, all 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 1. Well MW-6 was the only well which had a detectable free phase hydrocarbon layer. As shown on Figure 1, groundwater flow is to the west at a gradient of 0.002 feet/foot.

Groundwater Sampling Activities

The monitor wells were redeveloped and 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. Purge water was transferred to 55-gallon drums and placed in the Site's drum waste storage area.

Groundwater samples were transferred to 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 for analysis by EPA Method 8020.

Groundwater Analytical Results

Table 2 presents groundwater analytical results for this quarter. TPH-D was detected in all Site monitor wells except for MW-4. Concentrations of TPH-D above laboratory reporting limits ranged from 180 to 140,000 parts per billion (ppb). In addition, benzene was detected in well MW-6, at a concentration of 77 ppb, which is above the maximum contaminant level (MCL) of 1.0 ppb.

No analytes were detected in the trip blanks or method blanks. A lab control spike and lab control spike duplicate passed the EPA's criteria for acceptance.

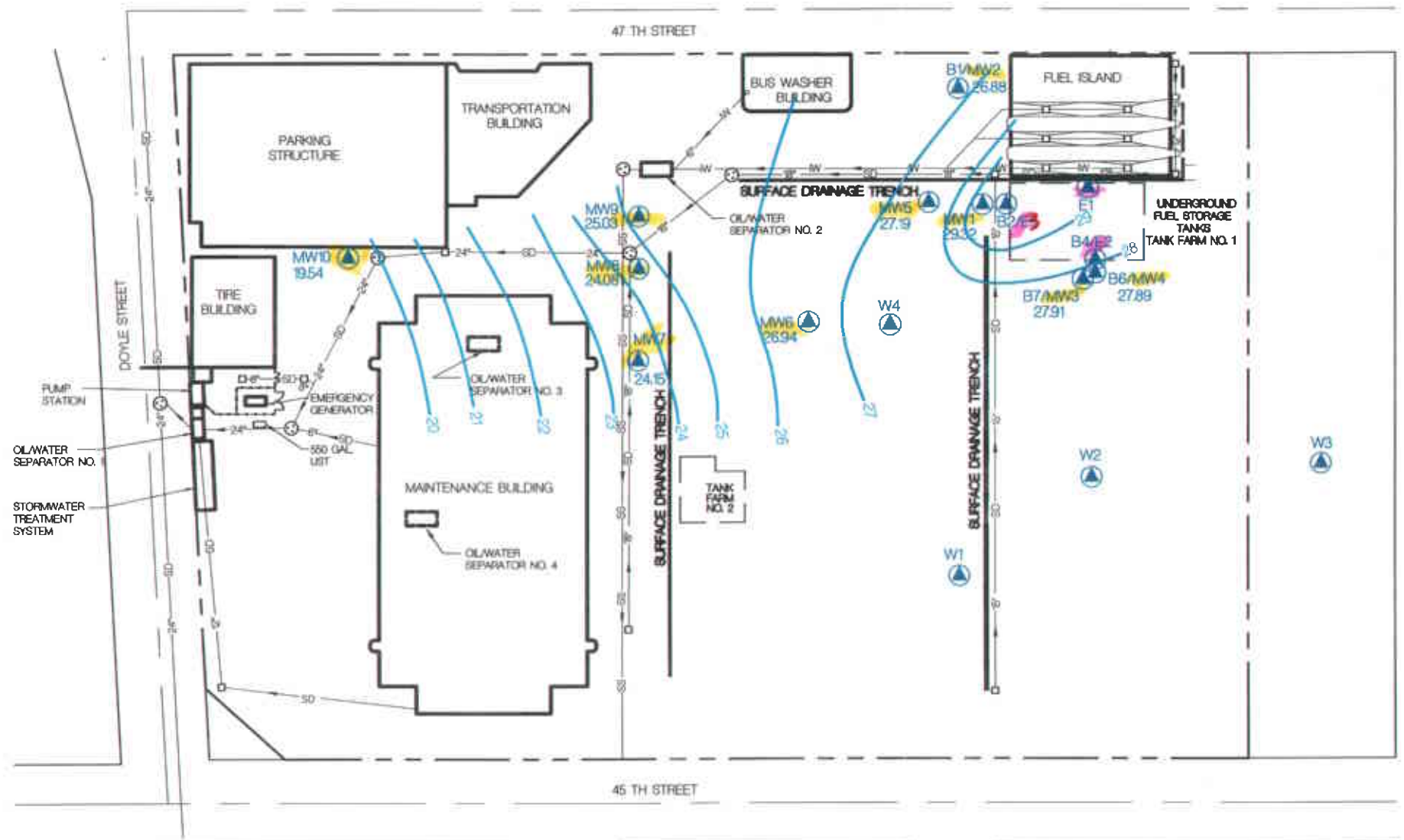
SUMMARY OF RESULTS

- Presence of a free phase hydrocarbon layer was limited to monitor well MW-6.

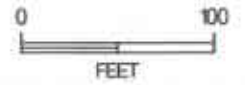
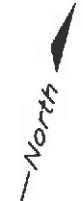
- Groundwater flow direction was interpreted to be toward the west at a gradient of 0.02 feet/foot.
- Benzene was detected at a concentrations of 77 ppb, exceeding the MCL of 1.0, in monitor well MW-6.

PROJECTED WORK AND RECOMMENDATIONS

- Quarterly groundwater monitoring is scheduled for November 1999.



SAN PABLO AVENUE



Elmer E3 are extract wells

LEGEND

	MANHOLE		STORM DRAIN PIPELINE
	CATCH BASIN		SANITARY SEWER PIPELINE
	MONITORING WELL		INDUSTRIAL WASTE PIPELINE
	POTENTIOMETRIC SURFACE ELEVATION		CHAIN LINK FENCE
	POTENTIOMETRIC SURFACE CONTOUR		

BY	DATE
DRWN C.J.J	11/3/98
CHECKED	
APPROVED	
APPROVED	



EMERYVILLE FACILITY - OAKLAND CALIFORNIA

FIGURE 2

AC TRANSIT - POTENTIOMETRIC SURFACE MAP

SCALE: 1" = 100'

DWG. NO: 792551-003

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 for Product Thickness*
MW-1	31-Aug-99	32.56	None	3.24	29.32	NA
MW-2	31-Aug-99	32.12	None	5.24	26.88	NA
MW-3	31-Aug-99	34.06	None	6.15	27.91	NA
MW-4	31-Aug-99	34.11	None	6.22	27.89	NA
MW-5	31-Aug-99	31.70	None	4.51	27.19	NA
MW-6	31-Aug-99	31.02	0.4	4.40	26.62	26.94
MW-7	31-Aug-99	29.62	None	5.47	24.15	NA
MW-8	31-Aug-99	29.43	None	5.35	24.08	NA
MW-9	31-Aug-99	29.18	None	4.15	25.03	NA
MW-10	31-Aug-99	29.13	None	9.59	19.54	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 OF GROUNDWATER SAMPLES
AC TRANSIT
1177 47TH STREET, EMERYVILLE, CALIFORNIA

Well	Date	TPH	Benzene	Toluene	Ethyl Benzene	Xylenes
		MCL (ppb)	1.0	150	700	1,750
MW-1	31-Aug-99	310	<1.0	2.4	1	1.6
MW-2	31-Aug-99	180	<1.0	<1.0	<1.0	1.2
MW-3	31-Aug-99	2,700	<1.0	<1.0	<1.0	<1.0
MW-4	31-Aug-99	<50	<1.0	<1.0	<1.0	1.6
MW-5	31-Aug-99	250	<1.0	<1.0	<1.0	1.0
MW-6	31-Aug-99	140,000	77	18	31	49
MW-7	31-Aug-99	1,400	<1.0	2.9	2.3	2.7
MW-8	31-Aug-99	230	<1.0	<1.0	1.2	<1.0
MW-9	31-Aug-99	2,800	<1.0	<1.0	<1.0	<1.0
MW-10	31-Aug-99	1,100	<1.0	1.2	2.0	1.1

Notes:

ppb: parts per billion

TPH: total petroleum hydrocarbons

MCL: Maximum Contaminant Level

APPENDIX A

CHAIN-OF-CUSTODY

Chain of Custody Record

47 2.9



QUA-4124

Client: **EDG** Project Manager: **Brad Wright** Date: **8-31-99** Chain Of Custody Number: **73205**

Address: **2233 Santa Clara Ave** Telephone Number (Area Code) / Fax Number: **(510) 337-8660 / 337-3994** Lab Number: _____ Page: **1** of **2**

City: **Alameda** State: **Ca** Zip Code: **94646** Site Contact: _____

Project Name: **AC Transit Emeryville** Carrier/Waybill Number: _____

Contract/Purchase Order/Quote No. _____

30903 (AUSTIN)

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers		Preservative	Condition on Receipt	Analysis			
					Type	No.			9020 (BTEX)	9015 (TPH)		
MW-1	8-31-99		H ₂ O	120ml	VOA	3	HCL	X				
↓				2l	Amber	2	ICE	X				
MW-2				120ml	VOA	3	HCL	X				
↓				2l	Amber	2	ICE	X				
MW-3				120ml	VOA	3	HCL	X				
↓				2l	Amber	2	ICE	X				
MW-4				120ml	VOA	3	HCL	X				
↓				2l	Amber	2	ICE	X				
MW-5				120ml	VOA	3	HCL	X				
↓				2l	Amber	2	ICE	X				
MW-6				120ml	VOA	3	HCL	X				
↓				2l	Amber	2	ICE	X				
↓				120ml	VOA	3	HCL	X				
↓				2l	Amber	2	ICE	X				
↓				120ml	VOA	3	HCL	X				
↓				2l	Amber	2	ICE	X				

Special Instructions:

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

Sample Disposal: Return To Client Disposal By Lab Archive For _____ Months

Turn Around Time Required: Normal Rush

OC Level: I. II. III.

Project Specific (Specify): _____

1. Relinquished By: **Brad Wright** Date: **9-1-99** Time: **10:30** 1. Received By: **Michelle Summers** Date: **9/2/99** Time: **0830**

2. Relinquished By: _____ Date: _____ Time: _____ 2. Received By: _____ Date: _____ Time: _____

3. Relinquished By: _____ Date: _____ Time: _____ 3. Received By: _____ Date: _____ Time: _____

Comments

Chain of Custody Record



4.7 2.8

QJA-4124

Client EDG		Project Manager Brad Wright		Date 8-31-99	Chain Of Custody Number 73206
Address 2233 Santa Clara Ave		Telephone Number (Area Code) / Fax Number 670-837-8060		Lab Number	Page <u> </u> of <u> </u>
City Alameda	State Ca	Zip Code 94501	Site Contact		
Project Name AC Transit Emeryville			Carrier/Waybill Number		
Contract/Purchase Order/Quote No.					

Sample I.D. No. and Description	Date	Time	Sample Type	Total Volume	Containers		Preservative	Condition on Receipt	Analysis															
					Type	No.			(M)	(S)	(T)	(N)	(R)	(B)	(I)	(E)	(X)	(O)	(D)					
MW-9 ↳	8-31-99		H ₂ O	120ml	VOA	3	HCL		X															
MW-10 ↳				20ml	Amber	2	HCL		X	X														
Trip Blank ↳				20ml	VOA	3	HCL		X															
				40ml	Amber	2	HCL		X															
					VOA	1			X	X														

Special Instructions

Possible Hazard Identification <input type="checkbox"/> Non-Hazard. <input checked="" type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown				Sample Disposal <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Turn Around Time Required <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush		QC Level <input type="checkbox"/> I. <input type="checkbox"/> II. <input type="checkbox"/> III.		Project Specific (Specify)			
1. Relinquished By <i>Brad Wright</i>		Date 9-1-99 Time 10:20		1. Received By <i>Theresa Summers</i>		Date 9/2/99 Time 0820	
2. Relinquished By		Date Time		2. Received By		Date Time	
3. Relinquished By		Date Time		3. Received By		Date Time	

Comments