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PROTECTION
98 NOV -6 PM 3:13

November 3, 1998

Mr. Larry Seto
Senior Hazardous Materials Specialist
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, #250
Alameda, California 94502-6577

Re: Groundwater Monitoring Report – Second Quarter
Alameda Federal Center, 620 Central Avenue, Alameda, California
STID 4655
CAPE Project No. 2403C.024.001

Dear Mr. Seto:

Please find enclosed the second quarterly groundwater monitoring report for the above referenced project. This report has been prepared by Cape Environmental Management Inc (CAPE) on behalf of the General Services Administration (GSA) to monitor observed groundwater impacts due to former leaking underground diesel fuel storage tank.

CAPE and the GSA will continue quarterly monitoring until 4 quarters have been completed.

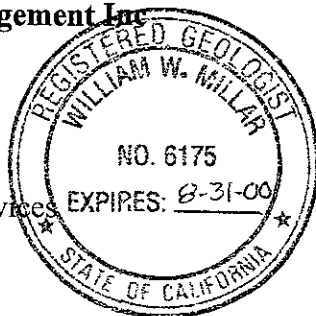
If you have further questions or require additional information, please contact the undersigned at 714/427-6160.

Sincerely,

Cape Environmental Management Inc



William W. Millar, R.G.
Manager, Environmental Services



Attachment

cc Denise Hawkins GSA (9PEC), 450 Golden Gate Ave., San Francisco CA 94102
Ando Merendi GSA (9PMS), 450 Golden Gate Ave., San Francisco CA 94102
Project File

**GROUNDWATER MONITORING REPORT
SECOND QUARTER**

November 3, 1998

Prepared for:

Cape Environmental Management Inc.
Harbor Corporate Park
3631 South Harbor Blvd. Suite 130
Santa Ana, CA 92704

Prepared by:

JBR Environmental Consultants, Inc.
8160 South Highland Drive
Sandy, Utah 84093
(801) 943-4144

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Quarterly Groundwater Monitoring Report - Second Quarter

Alameda Federal Center
620 Central Avenue
Alameda, California

STID # 4655
CAPE Project No.: 2403C.024.001

prepared for:

General Service Administration, Region 9
450 Golden Gate Avenue
San Francisco, California 94025

prepared by:

Cape Environmental Management Inc
Harbor Corporate Park
3631 South Harbor Boulevard, Suite 130
Santa Ana, California 92704

November 1998

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1.0 INTRODUCTION

On behalf of the General Services Administration (GSA), Cape Environmental Management Inc (CAPE) has performed this Quarterly Groundwater Monitoring – Second Quarter at the Alameda Federal Center, located at 620 Central Avenue, Alameda, California. The purpose of the monitoring is to assess the extent of possible groundwater contamination due to underground storage tank (UST) releases. The USTs have been removed from the site. Figure 1 is a Site Vicinity Map depicting relative location of the project site.

1.1 SITE DESCRIPTION

The site is located in the northwest portion of the City of Alameda, California. The site is approximately 500 feet east of the San Francisco Bay shoreline, and is situated in a relatively flat tidal plain area, which slopes gently towards the bay. The site spans approximately 10 acres with several buildings used for administrative office space and storage functions. Figure 2, 3, and 4 depict the location and orientation of the subject site and monitoring well locations.

2.0 PROJECT DESCRIPTION

This section describes details of the field and laboratory activities conducted during the groundwater monitoring to include groundwater sampling, sample handling, and laboratory analyses. Fieldwork was conducted on August 31, 1998.

2.1 GROUNDWATER MONITORING METHODOLOGY

CAPE measured the depth to ground water in 7 of the 8 wells. Groundwater monitoring well MW-2R could not be accessed because a car was parked over it. The 4 wells in the monitoring program were purged of approximately 3 well volumes, and groundwater samples were collected. The depth to groundwater and other development and sampling details for all the wells are provided in Appendix A - Groundwater Purging and Sampling Logs. Water samples were collected from MW-1, AMW-1, AMW-2 and AMW-3 with dedicated disposal 2-inch diameter plastic hand bailers. Sample containers filled from each well included 6 VOA vials, 40 milliliter (ml) glass and 2 amber glass 1-liter container. The containers were labeled, preserved at 4° Celsius, and transferred to the laboratory under chain-of-custody documentation.

2.2 LABORATORY TESTING

Chemical analysis of the groundwater samples from MW-1, AMW-1, AMW-2 and AMW-3 included the following suite of parameters

- hydrocarbon Oil and Grease (O&G) using Test Method SMWW 5520.

- total petroleum hydrocarbons as diesel (TPHd)(referred to by the laboratory as total extractable hydrocarbons (THE)) using DHS/LUFT procedure EPA Test Method 8015-Modified (diesel);
- total petroleum hydrocarbons as gasoline (TPHg)(referred to by the laboratory as total volatile hydrocarbons (TVH)) using DHS/LUFT procedure EPA Test Method 8015-Modified (gasoline);
- benzene, toluene, ethyl benzene, and total xylenes (BTEX) using EPA Test Method 8020; and
- halogenated volatile organics (HVO) for EPA Test Method 8010.

3.0 GROUNDWATER MONITORING RESULTS

A summary of laboratory chemical test results for groundwater samples obtained from monitoring wells MW-1, AMW-1, AMW-2 and AMW-3 is provided on Table 3.0.1, and 3.0.2. TPHd levels for samples collected from wells MW-1, AMW-1 and AMW-3 were reported to be 88 micrograms per liter ($\mu\text{g/l}$), 63 $\mu\text{g/l}$ and 420 $\mu\text{g/l}$ respectively. No TPHd concentration was reported above the detection limit for the test method (ND) in the water sample collected from well AMW-2. The laboratory also notes that chromatographs of hydrocarbons in the diesel range for the samples from MW-1 and AMW-1 did not resemble the pattern of a diesel standard. Further, the chromatographs for the diesel range hydrocarbons detected in the sample from AMW-3 were heavier hydrocarbons than a diesel standard. Concentrations of TPHg and BTEX compounds were ND for the 4 water samples. Results for all samples for O&G were ND.

The analytical results for the water samples collected from wells AMW-1, AMW-2 and AMW-3 were reported as ND for HVO compounds. In the water sample collected from well MW-1 trans-1,2-dichloroethene and cis-1,2-dichloroethene were reported with concentrations of 2.0 $\mu\text{g/l}$ and 15 $\mu\text{g/l}$, respectively. Appendix B presents a copy of the analytical report submitted by the laboratory for the groundwater samples.

4.0 GROUNDWATER GRADIENT MEASUREMENT

An illustration of the estimated groundwater gradient is provided on Figure 5 - Groundwater Gradient Map and monitoring well reference points are tabulated on Table 4.0.1 - Static Water Level (SWL) Measurements. All elevations used are reduced to mean sea level datum.

Groundwater gradient was estimated by concurrent sounding of all 7 monitoring points, after the elevations for each well was determined. Depth to static groundwater from each reference point was then reduced to mean sea level elevations and a graphic method was used to establish groundwater gradient and direction. The result of this determination indicated that the

groundwater gradient is approximately 0.0028 ft/ft (14.78 ft/mile) with a flow direction to the south.

These calculations represent the configuration of the shallow groundwater surface at the time of the sounding. It is expected that seasonal fluctuation in water level and corresponding alterations of the current groundwater regime (gradient and direction) may occur in response to local precipitation, landscape irrigation, urban runoff, and other influences.

5.0 SUMMARY


Depths to groundwater were recorded for each of the groundwater monitoring wells on the site. The wells in the sampling program were purged and sampled. Groundwater monitoring well MW-2R could not be accessed because a car was parked over it.

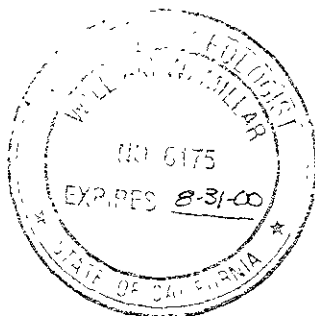
The water samples were analyzed for TPHd, TPHg, O&G, BTEX, and HVO Compounds. TPHd concentrations were reported in the samples collected from wells MW-1, AMW-1, and AMW-3. TPHd was ND in the sample taken from AMW-2. The chromatograph patterns for the diesel range hydrocarbons detected in the samples from wells MW-1, and AMW-1 did not resemble a diesel standard. Also, the patterns for the diesel range hydrocarbons detected in the sample from well AMW-3 indicated heavier hydrocarbons than a diesel standard. TPHg and BTEX concentrations for all of the samples collected from the 4 wells were ND. HVO compounds only detected in the sample derived from MW-1. HVO compounds trans-1,2-dichloroethene and cis-1,2-dichloroethene were detected at concentrations of 2.0 µg/l and 15 µg/l. O&G concentrations for the samples collected were ND.

The groundwater gradient for this monitoring event was found to be towards the south. The projected groundwater gradient for the February 1998 monitoring event was roughly to the west.

6.0 CAPE TEAM MEMBERS AND SIGNATURE PAGE

For this project, CAPE Team Members included Mr. William W. Millar, California Professional Registered Geologist and Manager of Environmental Services, Mr. Ulysses O. Figueroa Field Technician and Mr. George R. Fagin CAD Operator. Field activities and report review for this Quarterly Groundwater Monitoring was performed under the direct supervision of William Millar, whose signature, professional registration number, and stamp appear below.


William W. Millar, R.G.
Registration No. 6175




Date

TABLE 3.0.1
SUMMARY OF FUEL HYDORCARBONS ANALYTICAL RESULTS

Sample ID	Date Sampled	TPHd ($\mu\text{g/L}$)	TPHg ($\mu\text{g/L}$)	B ($\mu\text{g/L}$)	T ($\mu\text{g/L}$)	E ($\mu\text{g/L}$)	X ($\mu\text{g/L}$)	O&G (mg/L)
MW-1	8/31/98	88	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(5)
AMW-1	8/31/98	63	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(5)
AMW-2	8/31/98	ND(50)	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(5)
AMW-3	8/31/98	420	ND(50)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND(5)

NOTES:

- $\mu\text{g/L}$ - micrograms per liter.
- ND- not detected at or above Method Detection Limit (MDL).
- ()- number in parenthesis following reported ND result represents MDL.
- TPHd- total petroleum hydrocarbons as diesel, using EPA 8015 modified.
- TPHg- total petroleum hydrocarbons as gasoline, using EPA 8015 modified.
- BTEX- benzene, toluene, ethyl benzene and total xylenes (m-, p-, and o- isomers) using EPA Test Method 8020.
- O&G oil and grease using EPA SM 5520.

TABLE 3.0.2
SUMMARY OF HALOGENATED VOLATILE ORGANIC ANALYTICAL RESULTS

SAMPLE	DATE	VOH	µg/L
MW-1	8-31-98	Trans-1,2-dichloroethene	2.0
		Cis-1,2-dichloroethene	15
AMW-1	8-31-98	ND	
AMW-2	8-31-98	ND	
AMW-3	8-31-98	ND	

Abbreviations:

µg/L = Micrograms per liter

ND = not detected at or above the method detection limit (MDL)

TABLE 4.0.1
 STATIC WATER LEVEL (SWL) MEASUREMENTS
 AUGUST 31, 1998

Location	Date	Time	SWL(ft)	Casing Elevation(ft)	Water Elevation(ft)
MW-1	8-31-98	0933	4.93	8.19	3.26
MW-2R	NA				
MW-4	8-31-98	0935	5.26	8.53	3.27
MW-5	8-31-98	0940	5.22	8.37	3.15
MW-6	8-31-98	0947	5.05	8.61	3.56
AMW-1	8-31-98	0917	4.35	8.73	4.38
AMW-2	8-31-98	0920	4.51	8.84	4.33
AMW-3	8-31-98	0921	4.09	8.53	4.44

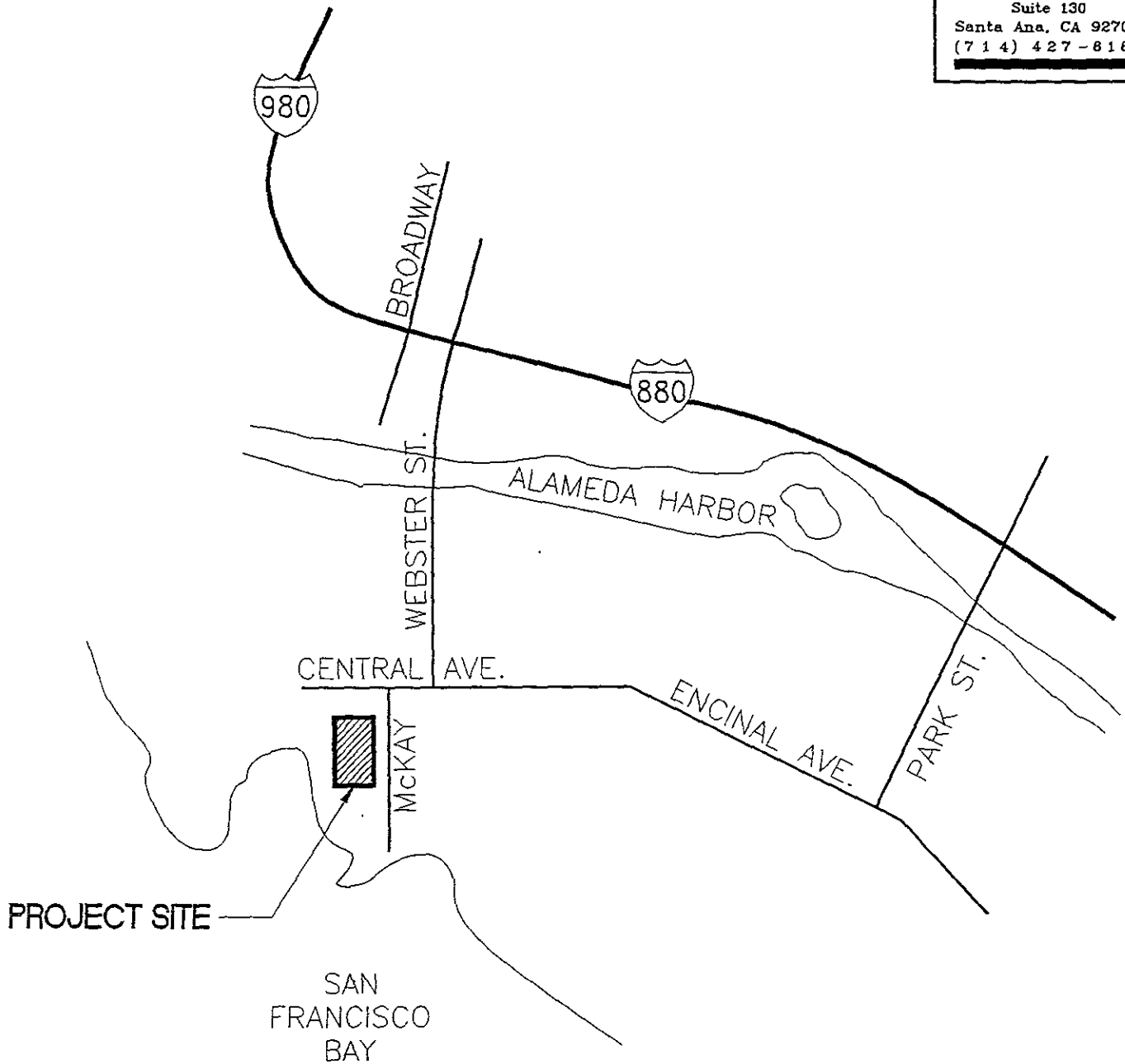
NOTES:

SWL in feet below top of well casing.
 Elevations in feet above mean sea level.
 NA = not available.

FIGURES

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 Santa Ana, CA 92704
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PROJECT SITE

SAN FRANCISCO BAY

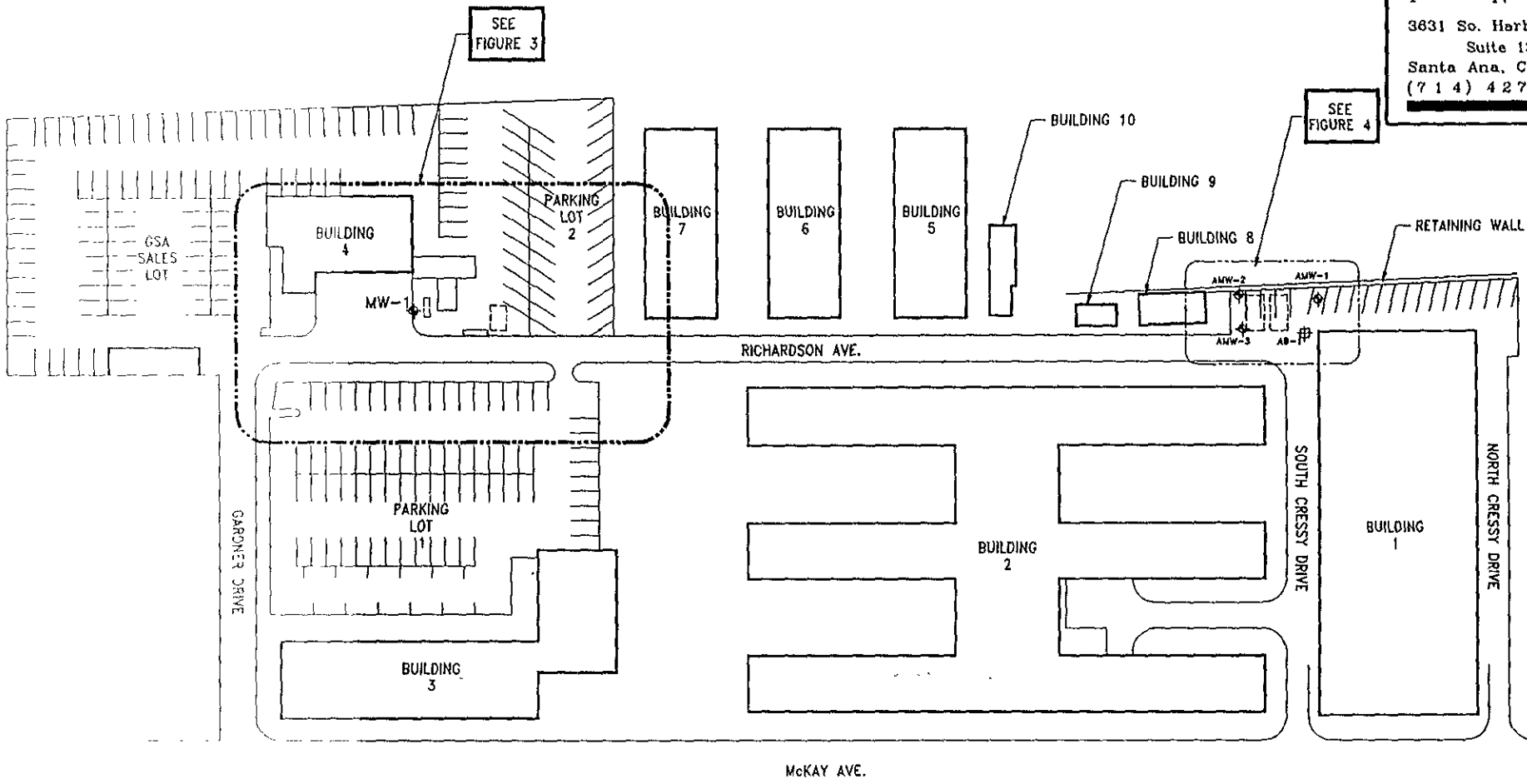
VICINITY MAP

NOT TO SCALE



SHEET TITLE FIGURE 1 - SITE VICINITY MAP	DRAWN BY W.A.M.	PROJECT NUMBER 24030 24
PROJECT TITLE ALAMEDA FEDERAL CENTER, ALAMEDA CA	DRAWN BY G.P.F.	DATE SEP 1998 SHEET 1 OF 5

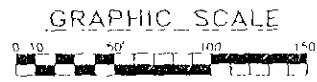
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LEGEND

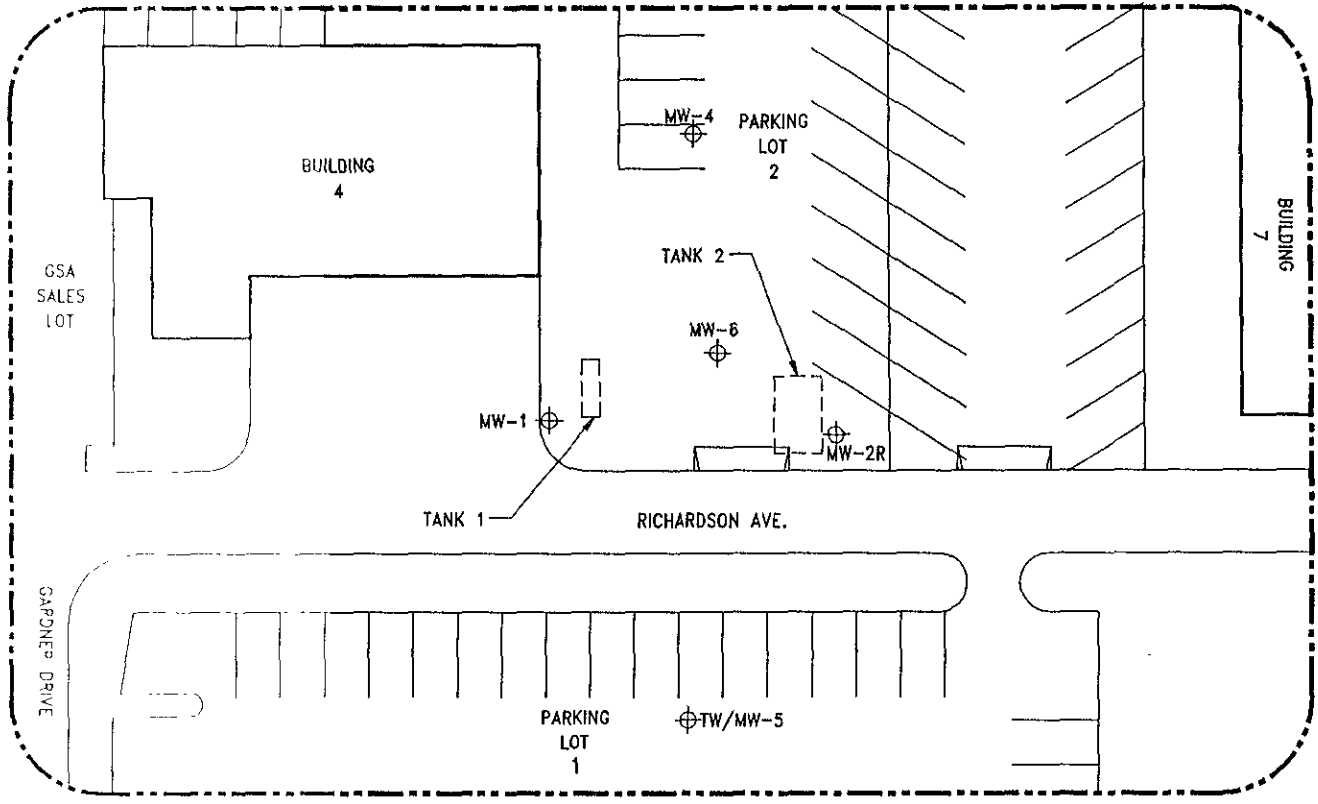
MW-1 MONITORING WELL

AB-1 SOIL BORING



SHEET TITLE: FIGURE 2 - SITE MAP		CHECKED BY: W.W.M.	PROJECT NUMBER: 2403C.24
PROJECT TITLE: ALAMEDA FEDERAL CENTER, ALAMEDA, CA		DRAWN BY: G.R.F.	DATE: SEPT. 1998
			SHEET: 2 OF 5

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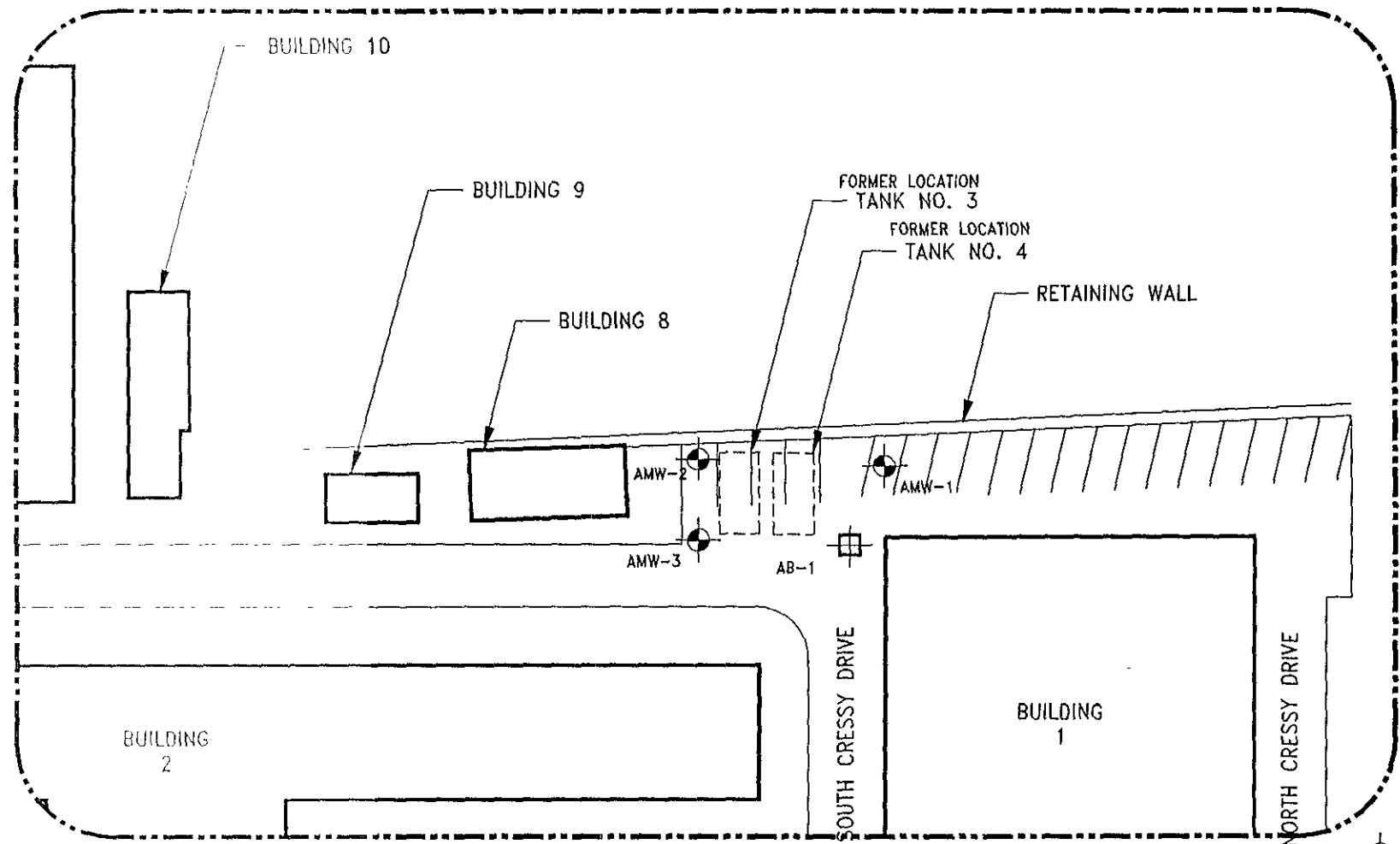
LEGEND
 ⊕ MW EXISTING MONITORING WELL
 - - - - - APPROX. LOCATION OF REMOVED UST's




GRAPHIC SCALE
 0 10 20 30
 SCALE 1" = 40'

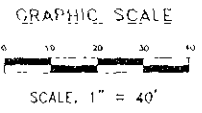


SHEET TITLE: FIGURE 3 - TANK 1 & 2 AREA / BORING LOCATIONS		CHECKED BY: W.W.M.	PROJECT NUMBER: 2403C.24
PROJECT TITLE: ALAMEDA FEDERAL CENTER, ALAMEDA, CA		DRAWN BY: G.R.F.	DATE: SEPT. 1998
			SHEET: 3 OF 5

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- LEGEND**
-  MONITORING WELLS
 -  SOIL BORING
 -  APPROX. LOCATION OF REMOVED UST'S



SHEET TITLE:
FIGURE 4 - TANK 3 & 4 AREA / MONITORING WELL LOCATIONS

PROJECT TITLE:
 ALAMEDA FEDERAL CENTER, ALAMEDA, CA

CHECKED BY:
 W.W.M.

PROJECT NUMBER:
 2403C.24

DRAWN BY:
 G.R.F.

DATE:
 SEPT. 1998

SHEET:
 4 OF 5

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REVISIONS:

NO.	DATE	REMARKS

PROJECT NAME:

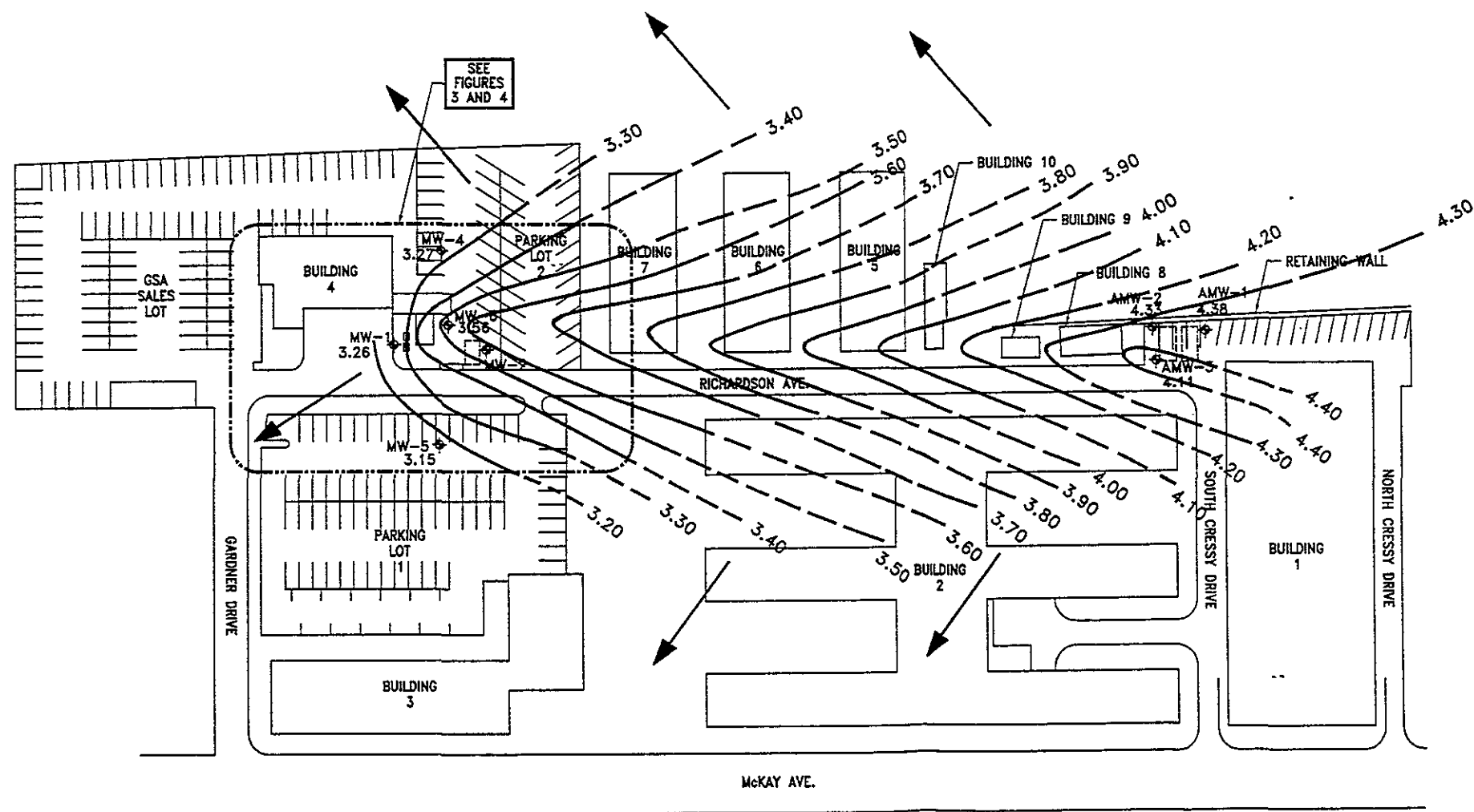
ALAMEDA FEDERAL CENTER,
 ALAMEDA, CA

SHEET TITLE:

GROUNDWATER GRADIENT
 MAP
 RETRIEVED ON 8-31-98

CAPE JOB NO. 2403C.24

SHEET: 5	DRAWN BY: G. Fagin
OF: 5	CHECKED BY: B. Miller
CAD FILE: GRADIENTB.DWG	DATE: SEPT. 98



LEGEND

MW-1 3.26 ◆ EXISTING MONITORING WELL WITH GROUNDWATER LEVEL

3.20 - - - GROUNDWATER CONTOUR GRADIENT
 ← GROUNDWATER DIRECTION



APPENDIX A
GROUNDWATER PURGING AND SAMPLING LOGS

WELL NUMBER: MW-1
 SITE: ALAMEDA FED. CENTER JOB NUMBER: 2403C 024.001
 COLLECTOR: Bin MULLAL DATE SAMPLED: 8-31-98
 pH / SPECIFIC CONDUCTIVITY METER USED, SERIAL NUMBER: 9511
 pH / METER CALIBRATION: CALIBRATED pH 8-31-98
 DEPTH TO WATER PRIOR TO PURGING: 4.93 ft. TIME: 0933
 DEPTH TO BOTTOM OF WELL: 15' ft. CASING DIAMETER
 STANDING WELL VOLUME: 1.71 x 3 = 5.14 gallons (inches): 2"

TIME	TEMP (°C)	pH	CONDUCTIVITY (Umhos)	COLOR	TURBIDITY	OTHERS	VOLUME PURGED
9:58	74.7	6.89	10.17 x 100	clear	LOW	Nothing	2.5 gal
10:00	75.0	6.915	10.22 x 100	yellow	LOW	-	1 gal
10:03	75.3	7.15	9.43 x 100	yellow	LOW	-	2 gal
10:05	75.4	7.24	9.57 x 100	yellow	LOW	-	3 gal
10:06	75.9	7.410	9.80 x 100	yellow	LOW	-	4 gal
10:08	75.8	7.48	9.410 x 100	yellow	LOW	-	5 gal

DEPTH TO WATER AFTER PURGING: 5.49 START PURGE: 9:58 o'clock
 END PURGE: 10:10 o'clock
 PURGE DURATION 12 minutes
 WELL VOLUMES PURGED: 3

SAMPLE NUMBER	CONTAINER(S)	TYPE	FILTERED (Y/N)	TIME	PRESERVATIVES	REMARKS
NW1	2 100ml bottles	H ₂ O	N	12:00	2 mL / HCl	
NW1	2 100ml bottles	H ₂ O	N	1:25 PM	2 mL / HCl	

DECON PROCEDURE: (internal) _____
 DECON PROCEDURE: (external) _____

WELL NUMBER: AMW-1
 SITE: AMANDA FEDERAL CENTER JOB NUMBER: 2403C.024.001
 COLLECTOR: BRN MILLAR DATE SAMPLED: 8-31-98
 pH / SPECIFIC CONDUCTIVITY METER USED, SERIAL NUMBER: 9511
 pH / METER CALIBRATION: CALIBRATED pH METER BURBULED STANDARDS 8-31-
 DEPTH TO WATER PRIOR TO PURGING: 4.35' ft. TIME: 0917
 DEPTH TO BOTTOM OF WELL: 15' ft. CASING DIAMETER
 STANDING WELL VOLUME: (.81 x 3 = 5.43 gallons (inches): 2"

0.17 GALLONS / FE.

TIME	TEMP (C)	pH	CONDUCTIVITY (Umhos)	COLOR	TURBIDITY	OTHERS	VOLUME PURGED
1035	74.5	8.29	15.77 x 100	CLEAR	LOW		15' BAIL OUT
1037	73.5	8.25	15.66 x 100	"	"		1 GAL
1038	72.3	8.21	15.60	TAN	"		1.5 GAL
1039	71.6	8.14	15.15	"	"		2 GAL
1040	71.2	8.08	15.71	"	"		3 GAL
1042	71.7	8.09	15.74	"	MED		4 GAL
1043	71.2	7.99	15.84	"	"		4.5 GAL
1044	71.2	7.97	15.82	"	"		5 GAL

DEPTH TO WATER AFTER PURGING: 5.35 START PURGE: 1035 o'clock
 END PURGE: 1045 o'clock
 PURGE DURATION 10 minutes
 WELL VOLUMES PURGED: 3

SAMPLE NUMBER	CONTAINER(S)	TYPE	FILTERED (Y/N)	TIME	PRESERVATIVES	REMARKS
AMW-1	8	ZAMBOLITE 2.50H	N	1344	HCL & ICE	

DECON PROCEDURE: (internal) _____
 DECON PROCEDURE: (external) _____

WELL NUMBER: AMW-2
 SITE: ARMED & DETERMINED CENTER JOB NUMBER: 2403C.024-001
 COLLECTOR: Bill Mullan DATE SAMPLED: 8-31-98
 pH / SPECIFIC CONDUCTIVITY METER USED, SERIAL NUMBER: 9511
 pH / METER CALIBRATION: CALIBRATED pH 8-31-98
 DEPTH TO WATER PRIOR TO PURGING: 4.51' ft. TIME: 0920
 DEPTH TO BOTTOM OF WELL: 15' ft. CASING DIAMETER
 STANDING WELL VOLUME: 1.78 x 3 = 5.35 gallons (inches): 2"

TIME	TEMP (°C)	pH	CONDUCTIVITY (Umhos)	COLOR	TURBIDITY	OTHERS	VOLUME PURGED
1136	75.0	8.44	13.39x100	CLEAR	LOW	---	1ST BALCK
1137	74.3	8.45	13.37x100	"	"	---	1 GAL
1139	73.7	8.50	13.72x100	"	"	---	2 GAL
1140	72.6	8.46	14.25x100	"	"	---	2.5 GAL
1141	71.9	8.39	14.48	"	"	---	3 GAL
1143	72.3	8.28	15.32	"	"	---	3.5 GAL
1144	71.9	8.22	14.56	"	"	---	4 GAL
1146	72.1	8.18	15.76	"	"	---	4.5 GAL
1147	71.6	8.14	15.36	"	"	---	5 GAL

DEPTH TO WATER AFTER PURGING: 5.46 START PURGE: 1136 o'clock
4.49 END PURGE: 1150 o'clock
 PURGE DURATION 14 minutes
 WELL VOLUMES PURGED: 3

SAMPLE NUMBER	CONTAINER(S)	TYPE	FILTERED (Y/N)	TIME	PRESERVATIVES	REMARKS
AMW-2	2	2 AMBELLTR 2.5 GAL	N	1403	ICE/HCL	

DECON PROCEDURE. (internal) _____
 DECON PROCEDURE: (external) _____

WELL NUMBER: AMW-3
 SITE: ALAMOSA FSD CENTRAL JOB NUMBER: 2403C.024,001
 COLLECTOR: BILL MILLER DATE SAMPLED: 8-31-98
 pH / SPECIFIC CONDUCTIVITY METER USED, SERIAL NUMBER: 9511
 pH / METER CALIBRATION: CALIBRATED pH 8-31-98
 DEPTH TO WATER PRIOR TO PURGING: 4.09' ft. TIME: 0921
 DEPTH TO BOTTOM OF WELL: 15' ft. CASING DIAMETER
 STANDING WELL VOLUME: 1.85 x 3 = 5.56 gallons (inches): 2"

TIME	TEMP (C)	pH	CONDUCTIVITY (Units)	COLOR	TURBIDITY	OTHERS	VOLUME PURGED
11:58	74.9	8.47	11.61 x 100	yellow	mod	sheen	1 1/2 gal
12:00	72.6	8.45	11.38 x 100	brown	mod hi	sheen	1 gal
12:02	71.8	8.36	12.51 x 100	brown	hi	sheen	2 gal
12:03	71.2	8.17	12.12 x 100	-	hi	-	3 gal
12:05	71.3	8.15	12.90 x 100	-	hi	-	4 gal
12:06	71.2	8.14	12.92 x 100	brown	hi	sheen	5 gal
12:08	71.0	8.16	13.33 x 100	brown	hi	sheen	5 gal

DEPTH TO WATER AFTER PURGING: 0.58' START PURGE: 11:58 o'clock
4.15' END PURGE: 12:08 o'clock
 PURGE DURATION 10 minutes
 WELL VOLUMES PURGED: 3

SAMPLE NUMBER	CONTAINER(S)	TYPE	FILTERED (Y/N)	TIME	PRESERVATIVES	REMARKS
AMW-3	3	3 AMW-3	N	12:12	11E/HCL	

DECON PROCEDURE: (internal) _____
 DECON PROCEDURE: (external) _____

APPENDIX B
ANALYTICAL REPORT



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900, Fax (510) 486-0532

A N A L Y T I C A L R E P O R T

Prepared for:

Cape Environmental, Inc.
3631 South Harbor Blvd.
Suite 130
Santa Anna, CA 92704

Date: 18-SEP-98
Lab Job Number: 135343
Project ID: 2403C.024.001
Location: Alameda Fed.

Reviewed by:

Reviewed by:

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Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 135343
CLIENT: CAPE ENVIRONMENTAL, INC.
PROJECT#: 2403C.024.001
LOCATION: ALAMEDA FED.

DATE SAMPLED: 08/31/98
DATE RECEIVED: 08/31/98
DATE ANALYZED: 09/16/98
QC BATCH#: 43420

=====
ANALYSIS: Petroleum Oil & Grease
METHOD REFERENCE: SM 5520BF
=====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
135343-001	MW-1	ND	mg/L	5.0
135343-002	AMW-1	ND	mg/L	5.0
135343-003	AMW-2	ND	mg/L	5.0
135343-004	AMW-3	ND	mg/L	5.0
METHOD BLANK	N/A	ND	mg/L	5.0

ND = Not detected at or above the reporting limit.

QA/QC SUMMARY: BS/BSD

=====
RPD, % 3
RECOVERY, % 110
=====

TEH-Tot Ext Hydrocarbons

Client: Cape Environmental, Inc.
 Project#: 2403C.024.001
 Location: Alameda Fed.

Analysis Method: EPA 8015M
 Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
135343-001	MW-1	43085	08/31/98	09/01/98	09/03/98	
135343-002	AMW-1	43085	08/31/98	09/01/98	09/03/98	
135343-003	AMW-2	43085	08/31/98	09/01/98	09/03/98	
135343-004	AMW-3	43085	08/31/98	09/01/98	09/03/98	

Matrix: Water

Analyte	Units	135343-001	135343-002	135343-003	135343-004
Diln Fac:		1	1	1	1
Diesel C12-C22	ug/L	88 Y	63 Y	<50	420 H
Surrogate					
Hexacosane	%REC	82	74	76	73

Y: Sample exhibits fuel pattern which does not resemble standard

H: Heavier hydrocarbons than indicated standard

Lab #: 135343

BATCH QC REPORT



Curtis & Jenkins, Inc.
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TEH-Tot Ext Hydrocarbons

Client: Cape Environmental, Inc.
Project#: 2403C.024.001
Location: Alameda Fed.

Analysis Method: EPA 8015M
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 43085
Units: ug/L
Diln Fac: 1

Prep Date: 09/01/98
Analysis Date: 09/02/98

MB Lab ID: QC78829

Analyte	Result	
Diesel C12-C22	<50	
Surrogate	%Rec	Recovery Limits
Hexacosane	81	53-136

Lab #: 135343

BATCH QC REPORT



Curtis & Tompkins, Inc. Page 1 of 1

TEH-Tot Ext Hydrocarbons

Client: Cape Environmental, Inc.	Analysis Method: EPA 8015M
Project#: 2403C.024.001	Prep Method: EPA 3520
Location: Alameda Fed.	

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water	Prep Date: 09/01/98
Batch#: 43085	Analysis Date: 09/05/98
Units: ug/L	
Diln Fac: 1	

BS Lab ID: QC78830

Analyte	Spike Added	BS	%Rec #	Limits
Diesel C12-C22	2475	1818	73	58-110
Surrogate	%Rec	Limits		
Hexacosane	91	53-136		

BSD Lab ID: QC78831

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Diesel C12-C22	2475	1913	77	58-110	5	21
Surrogate	%Rec	Limits				
Hexacosane	92	53-136				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits

TVH-Total Volatile Hydrocarbons

Client: Cape Environmental, Inc.	Analysis Method: EPA 8015M
Project#: 2403C.024.001	Prep Method: EPA 5030
Location: Alameda Fed.	

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
135343-001	MW-1	43090	08/31/98	09/02/98	09/02/98	
135343-002	AMW-1	43090	08/31/98	09/02/98	09/02/98	
135343-003	AMW-2	43090	08/31/98	09/02/98	09/02/98	
135343-004	AMW-3	43090	08/31/98	09/02/98	09/02/98	

Matrix: Water

Analyte	Units	135343-001	135343-002	135343-003	135343-004
Diln Fac:		1	1	1	1
Gasoline C7-C12	ug/L	<50	<50	<50	<50
Surrogate					
Trifluorotoluene	%REC	116	115	117	119
Bromofluorobenzene	%REC	120	122	119	123

BTXE

Client: Cape Environmental, Inc.
Project#: 2403C.024.001
Location: Alameda Fed.

Analysis Method: EPA 8020A
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
135343-001	MW-1	43090	08/31/98	09/02/98	09/02/98	
135343-002	AMW-1	43090	08/31/98	09/02/98	09/02/98	
135343-003	AMW-2	43090	08/31/98	09/02/98	09/02/98	
135343-004	AMW-3	43090	08/31/98	09/02/98	09/02/98	

Matrix: Water

Analyte	Units	135343-001	135343-002	135343-003	135343-004
Diln Fac:		1	1	1	1
Benzene	ug/L	<0.5	<0.5	<0.5	<0.5
Toluene	ug/L	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	ug/L	<0.5	<0.5	<0.5	<0.5
m,p-Xylenes	ug/L	<0.5	<0.5	<0.5	<0.5
o-Xylene	ug/L	<0.5	<0.5	<0.5	<0.5
Surrogate					
Trifluorotoluene	%REC	119	117	118	122
Bromofluorobenzene	%REC	128	131	129	133

Lab #: 135343

BATCH QC REPORT



Curtis & Tompkins, Inc.
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TVH-Total Volatile Hydrocarbons

Client: Cape Environmental, Inc.
Project#: 2403C.024.001
Location: Alameda Fed.

Analysis Method: EPA 8015M
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 43090
Units: ug/L
Diln Fac: 1

Prep Date: 09/02/98
Analysis Date: 09/02/98

MB Lab ID: QC78848

Analyte	Result	
Gasoline C7-C12	<50	
Surrogate	%Rec	Recovery Limits
Trifluorotoluene	101	59-162
Bromofluorobenzene	100	59-162

Lab #: 135343

BATCH QC REPORT



Curtis & Tompkins, Ltd.
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BTXE

Client: Cape Environmental, Inc.
Project#: 2403C.024.001
Location: Alameda Fed.

Analysis Method: EPA 8020A
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 43090
Units: ug/L
Diln Fac: 1

Prep Date: 09/02/98
Analysis Date: 09/02/98

MB Lab ID: QC78848

Analyte	Result		
Benzene	<0.5		
Toluene	<0.5		
Ethylbenzene	<0.5		
m,p-Xylenes	<0.5		
o-Xylene	<0.5		
Surrogate	%Rec		Recovery Limits
Trifluorotoluene	102		53-124
Bromofluorobenzene	104		41-142

Lab #: 135343

BATCH QC REPORT



Curtis & Tompkins, Ltd. Page 1 of 1

TVH-Total Volatile Hydrocarbons

Client: Cape Environmental, Inc. Analysis Method: EPA 8015M
Project#: 2403C.024.001 Prep Method: EPA 5030
Location: Alameda Fed.

LABORATORY CONTROL SAMPLE

Matrix: Water Prep Date: 09/02/98
Batch#: 43090 Analysis Date: 09/02/98
Units: ug/L
Diln Fac: 1

LCS Lab ID: QC78846

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline C7-C12	1823	2000	91	80-119
Surrogate	%Rec	Limits		
Trifluorotoluene	126	59-162		
Bromofluorobenzene	114	59-162		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits

Lab #: 135343

BATCH QC REPORT



Curtis & Tompkins, Ltd.
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BTXE

Client: Cape Environmental, Inc.
Project#: 2403C.024.001
Location: Alameda Fed.

Analysis Method: EPA 8020A
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 43090
Units: ug/Kg
Diln Fac: 1

Prep Date: 09/02/98
Analysis Date: 09/02/98

LCS Lab ID: QC78847

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	17.58	20	88	69-109
Toluene	19.96	20	100	72-116
Ethylbenzene	21.14	20	106	67-120
m,p-Xylenes	43.08	40	108	69-117
o-Xylene	21.54	20	108	75-122
Surrogate	%Rec	Limits		
Trifluorotoluene	113	53-124		
Bromofluorobenzene	130	41-142		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

Lab #: 135343

BATCH QC REPORT



Curtis & Tompkins, Ltd. Page 1 of 1

TVH-Total Volatile Hydrocarbons

Client: Cape Environmental, Inc.	Analysis Method: EPA 8015M
Project#: 2403C.024.001	Prep Method: EPA 5030
Location: Alameda Fed.	

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ	Sample Date: 08/31/98
Lab ID: 135346-003	Received Date: 08/31/98
Matrix: Water	Prep Date: 09/02/98
Batch#: 43090	Analysis Date: 09/02/98
Units: ug/L	
Diln Fac: 1	

MS Lab ID: QC78849

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline C7-C12	2000	<50	1952	98	71-131
Surrogate	%Rec	Limits			
Trifluorotoluene	149	59-162			
Bromofluorobenzene	142	59-162			

MSD Lab ID: QC78850

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline C7-C12	2000	2042	102	71-131	4	26
Surrogate	%Rec	Limits				
Trifluorotoluene	151	59-162				
Bromofluorobenzene	144	59-162				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits

Halogenated Volatile Organics
 EPA 8010 Analyte List

Client: Cape Environmental, Inc.	Analysis Method: EPA 8260
Project#: 2403C.024.001	Prep Method: EPA 5030
Location: Alameda Fed.	

Field ID: MW-1	Sampled: 08/31/98
Lab ID: 135343-001	Received: 08/31/98
Matrix: Water	Extracted: 09/08/98
Batch#: 43201	Analyzed: 09/08/98
Units: ug/L	
Diln Fac: 1	

Analyte	Result	Reporting Limit
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Chloromethane	ND	1.0
Vinyl Chloride	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	0.5
Freon 113	ND	1.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	2.0	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	15	0.5
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%Recovery	Recovery Limits
-----------	-----------	-----------------

1,2-Dichloroethane-d4	110	85-121
Toluene-d8	101	92-110
Bromofluorobenzene	105	84-115

Halogenated Volatile Organics
 EPA 8010 Analyte List

Client: Cape Environmental, Inc.	Analysis Method: EPA 8260
Project#: 2403C.024.001	Prep Method: EPA 5030
Location: Alameda Fed.	

Field ID: AMW-1	Sampled: 08/31/98
Lab ID: 135343-002	Received: 08/31/98
Matrix: Water	Extracted: 09/05/98
Batch#: 43174	Analyzed: 09/05/98
Units: ug/L	
Diln Fac: 1	

Analyte	Result	Reporting Limit
Chloromethane	ND	1.0
Vinyl Chloride	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	0.5
Freon 113	ND	1.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	127*	85-121
Toluene-d8	98	92-110
Bromofluorobenzene	97	84-115

* Values outside of QC limits

Halogenated Volatile Organics
 EPA 8010 Analyte List

Client: Cape Environmental, Inc.	Analysis Method: EPA 8260
Project#: 2403C.024.001	Prep Method: EPA 5030
Location: Alameda Fed.	

Field ID: AMW-2	Sampled: 08/31/98
Lab ID: 135343-003	Received: 08/31/98
Matrix: Water	Extracted: 09/05/98
Batch#: 43174	Analyzed: 09/05/98
Units: ug/L	
Diln Fac: 1	

Analyte	Result	Reporting Limit
Chloromethane	ND	1.0
Vinyl Chloride	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	0.5
Freon 113	ND	1.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	127*	85-121
Toluene-d8	98	92-110
Bromofluorobenzene	100	84-115

* Values outside of QC limits

Halogenated Volatile Organics
 EPA 8010 Analyte List

Client: Cape Environmental, Inc.	Analysis Method: EPA 8260
Project#: 2403C.024.001	Prep Method: EPA 5030
Location: Alameda Fed.	

Field ID: AMW-3	Sampled: 08/31/98
Lab ID: 135343-004	Received: 08/31/98
Matrix: Water	Extracted: 09/05/98
Batch#: 43174	Analyzed: 09/05/98
Units: ug/L	
Diln Fac: 1	

Analyte	Result	Reporting Limit
Chloromethane	ND	1.0
Vinyl Chloride	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	0.5
Freon 113	ND	1.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	105*	85-121
Toluene-d8	99	92-110
Bromofluorobenzene	99	84-115

* Values outside of QC limits

Lab #: 135343

BATCH QC REPORT



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Halogenated Volatile Organics
EPA 8010 Analyte List

Client: Cape Environmental, Inc.
Project#: 2403C.024.001
Location: Alameda Fed.

Analysis Method: EPA 8260
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 43174
Units: ug/L
Diln Fac: 1

Prep Date: 09/04/98
Analysis Date: 09/04/98

MB Lab ID: QC79161

Analyte	Result	Reporting Limit
Chloromethane	ND	1.0
Vinyl Chloride	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	0.5
Freon 113	ND	1.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	120	85-121
Toluene-d8	100	92-110
Bromofluorobenzene	95	84-115

Lab #: 135343

BATCH QC REPORT

Curtis & Jenkins, Inc.
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 Halogenated Volatile Organics
 EPA 8010 Analyte List

 Client: Cape Environmental, Inc.
 Project#: 2403C.024.001
 Location: Alameda Fed.

 Analysis Method: EPA 8260
 Prep Method: EPA 5030

METHOD BLANK

 Matrix: Water
 Batch#: 43201
 Units: ug/L
 Diln Fac: 1

 Prep Date: 09/08/98
 Analysis Date: 09/08/98

MB Lab ID: QC79286

Analyte	Result	Reporting Limit
Chloromethane	ND	1.0
Vinyl Chloride	ND	1.0
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	0.5
Freon 113	ND	1.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	106	85-121
Toluene-d8	100	92-110
Bromofluorobenzene	104	84-115

Lab #: 135343

BATCH QC REPORT



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Halogenated Volatile Organics

Client: Cape Environmental, Inc.	Analysis Method: EPA 8260
Project#: 2403C.024.001	Prep Method: EPA 5030
Location: Alameda Fed.	

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water	Prep Date: 09/04/98
Batch#: 43174	Analysis Date: 09/04/98
Units: ug/L	
Diln Fac: 1	

BS Lab ID: QC79159

Analyte	Spike Added	BS	%Rec #	Limits
1,1-Dichloroethene	50	46.61	93	69-137
Trichloroethene	50	47.84	96	83-116
Chlorobenzene	50	49.12	98	87-117
Surrogate	%Rec	Limits		
1,2-Dichloroethane-d4	107	85-121		
Toluene-d8	100	92-110		
Bromofluorobenzene	101	84-115		

BSD Lab ID: QC79160

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	45.84	92	69-137	2	14
Trichloroethene	50	46.1	92	83-116	4	10
Chlorobenzene	50	47.76	96	87-117	3	10
Surrogate	%Rec	Limits				
1,2-Dichloroethane-d4	102	85-121				
Toluene-d8	99	92-110				
Bromofluorobenzene	100	84-115				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 3 outside limits

Spike Recovery: 0 out of 6 outside limits

Lab #: 135343

BATCH QC REPORT



Curtis & Page Inc.

Halogenated Volatile Organics

Client: Cape Environmental, Inc.
Project#: 2403C.024.001
Location: Alameda Fed.

Analysis Method: EPA 8260
Prep Method: EPA 5030

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
Batch#: 43201
Units: ug/L
Diln Fac: 1

Prep Date: 09/08/98
Analysis Date: 09/08/98

BS Lab ID: QC79284

Analyte	Spike Added	BS	%Rec #	Limits
1,1-Dichloroethene	50	51.68	103	69-137
Trichloroethene	50	53.38	107	83-116
Chlorobenzene	50	51.95	104	87-117
Surrogate	%Rec	Limits		
1,2-Dichloroethane-d4	106	85-121		
Toluene-d8	100	92-110		
Bromofluorobenzene	103	84-115		

BSD Lab ID: QC79285

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	50.21	100	69-137	3	14
Trichloroethene	50	52.6	105	83-116	1	10
Chlorobenzene	50	51.43	103	87-117	1	10
Surrogate	%Rec	Limits				
1,2-Dichloroethane-d4	109	85-121				
Toluene-d8	100	92-110				
Bromofluorobenzene	105	84-115				

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 3 outside limits
Spike Recovery: 0 out of 6 outside limits

CHAIN OF CUSTODY FORM

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Curtis & Tompkins, Ltd.
 Analytical Laboratories, Since 1878

db 2323 Fifth Street
 Berkeley, CA 94710
 (510) 486-0900 Phone
 (510) 486-0532 Fax

C&T LOGIN # 155243

Analyses

Sampler: BILL WILLIAM

Project No: 2403C.024001 Report To: BILL WILLIAM

Project Name: ALAMEDA FED. Company: CAPE ENV. MAN. INC.

Project P.O.: 2403C.024 Telephone: 714/427-6160

Turnaround Time: NORM Fax: 714/427-6161

Lab Number	Sample ID.	Sampling Date Time	Matrix			# of Containers	Preservative				Field Notes
			Soil	Water	Waste		HCl	H ₂ SO ₄	HNO ₃	ICE	
	MW-1	1325		X		8	X			X	OIL & GREASE EPEZO BO15 DIESEL BO15/BO20 GAS/BTEX VOLATILE ORGANIC. HALOCARBONS
	AMW-1	1344		X		8	X			X	
	AMW-2	1403		X		8	X			X	
	AMW-3	1412		X		8	X			X	

Notes:

	RELINQUISHED BY: 8-31-98 1506 DATE/TIME	RECEIVED BY: J. GUERRERO DATE/TIME
	DATE/TIME	DATE/TIME
	DATE/TIME	DATE/TIME

Signature on this form constitutes a firm Purchase Order for the services requested above.