CAPE
ENVIRONMENTAL MANAGEMENT
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TRANSMITTAL LETTER

Juliet Shin
Attn:

Alameda County, Dept. of Env. Health
Co. name

1131 Harbor Bay Parkway, #250
Address

Alameda CA 94502-6577

ph.# 510 567 6763

Date Oct. 2, 1995

RE: STID 4655

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COPIES	DESCRIPTION
1	Second Quarter Groundwater Monitoring Report, Aug. 1995

REMARKS

20280 South Vermont Ave.
Suite 250
Torrance, CA 90502

Phone 310/532-4500
Fax 310/532-6022

From Larry Harlan

Cape Job. # _____

October 2. 1995

Ms. Juliet Shin
Senior Hazardous Materials Specialist
Alameda County Department of Environmental Health
Environmental Protection Division
1131 Harbor Bay Parkway, #250
Alameda, California 94502-6577

SUBJECT: Second Quarter Groundwater Monitoring Report, August 1995
Alameda Federal Center
620 Central Avenue, Alameda, California
STID 4655

Dear Ms. Shin:

Please find enclosed the second quarter, August 1995, 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 assess groundwater contamination conditions due to underground storage tank releases.

If you have further questions or require additional information, please contact the undersigned at (310) 532-4500.

Respectfully Submitted,
CAPE ENVIRONMENTAL MANAGEMENT, INC.

William W. Millar, RG
Senior Geologist

Larry M. Harlan
Project Geologist

Attachment

cc: James Lew/GSA Region 9
Project File

20280 South Vermont Avenue
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CAPE
ENVIRONMENTAL
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Second Quarter Groundwater Monitoring Report

Alameda Federal Center
620 Central Avenue
Alameda, California

GSA Project No. RCA21602
Cape Project No. 2403C.24

prepared for:

General Services Administration, Pacific Rim Region
525 Market Street
San Francisco, California 94105-2799

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prepared by:

Cape Environmental Management Inc
20280 South Vermont Avenue
Suite 250
Torrance, California 90502

October 1995

TABLE OF CONTENTS

Section 1
Introduction

On behalf of General Services Administration (GSA), Cape Environmental Management Inc (Cape) is performing quarterly groundwater monitoring and testing at the Alameda Federal Center, located at 620 Central Avenue, Alameda, California. The purpose of the groundwater monitoring program is to investigate the extent and severity of impacted groundwater due to underground storage tank (UST) releases. *Figure 1 is a Site Vicinity Map depicting the area around the subject site.*

This report describes field work and analytical results of the second quarter, August 1995, of groundwater monitoring at the site. Cape submitted to the Alameda County Department of Environmental Health (DEH) a Preliminary Site Assessment (PSA) Report, dated July 1995, which constituted the first quarter of the monitoring program. The PSA report contained information regarding soil and groundwater conditions observed during the installation of three (3) groundwater monitoring wells (MW-4, MW-6, and TW/MW-5) and the replacement of one (1) damaged groundwater monitoring well (MW-2R) in Tank 1 and 2 Area, and the installation of three (3) soil test borings (TB-1, TB-2, and TB-3) in Tank 3 and 4 Area. The PSA report also included groundwater sampling results of existing monitoring well MW-1 located in the Tank 1 and 2 Area and MW-3 located in the Tank 3 and 4 Area. Figure 2 is a Site Map depicting location and orientation of the subject site. Figure 3 illustrates tank areas 1 and 2, the location and orientation of the former USTs, and the location of monitoring wells used in the quarterly groundwater monitoring program, MW-1, MW-2R, MW-4, TW/MW-5, and MW-6.

Monitoring well MW-3 is located adjacent to two (2) existing 10,000-gallon USTs (Tanks 3 and 4). These USTs are scheduled for removal in the immediate future and MW-3 will be destroyed during the excavation and removal activities. Sampling of MW-3 has been omitted from the monitoring program; however, water level measurements will be used to estimate the local groundwater gradient. Why?

Section 2
Project Description

On August 30 and 31, 1995, Cape performed the second quarter of groundwater monitoring at the site. Activities included the development of well TW/MW-5, and performing water level sounding, purging and sampling of monitoring wells MW-1, MW-2R, MW-4, TW/MW-5, and MW-6.

2.1 Well Development, Purging and Sampling

During the PSA, well TW/MW-5 was designated "TW" (test well) due to initial temporary installation for water level measurements and, at the time, it was determined prudent to convert this well into a permanent installation for future ground water gradient measurements, however proper development was not completed.

Cape re-developed TW/MW-5 on August 30, 1995 by initially purging the well with a submersible pump of approximately 15-20 gallons of water. The well was then surged with a weighted dedicated PVC bailer and immediately purged with the pump. The surging and pumping continued for approximately four (4) hours resulting in recovery of approximately 80 gallons of development water. Appendix A is a Well Development Log of TW/MW-5.

Cape measured the depth to groundwater from each of the monitoring wells and collected ground water samples from MW-1, MW-2R, MW-4, TW/MW-5, and MW-6. The depths to ground water and other purging and sampling details for each well are provided in Appendix B. Water samples were collected with dedicated disposable 2-inch diameter Teflon hand bailers and placed in 40 milliliter (ml) glass and 1 liter amber glass containers, labelled, preserved at 4° Celsius, and transferred under Chain-of- Custody documentation to a state-certified laboratory.

2.2 Sample Preparations and Handling

All groundwater samples, following collection, were secured in laboratory supplied containers fitted with threaded Teflon-lined caps. Sample containers were immediately placed in a pre-cooled ice chest and delivered to the analytical laboratory within approximately 24 hours after collection. Samples were submitted for a 5-day turn-around analytical testing schedule.

2.3 Laboratory Testing

Chemical analysis of the five (5) groundwater samples were identical, i.e. the following suite of parameters:

- hydrocarbon oil and grease (O&G) using method SMWW 5520,
- total extractable petroleum hydrocarbons (TEPH) using DHS/LUFT procedure EPA Method 8015-modified (diesel fuel);
- total volatile hydrocarbons (TVH) using DHS/LUFT procedure EPA Method 8015-modified

(gasoline);

- benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 8020;
- volatile halocarbons (VH) using EPA Test Method 8010;
- semivolatile organics/ polynuclear aromatic hydrocarbons (PNA) using EPA Method 8270; and
- total dissolved solids (TDS) using EPA Method 160.1.

In the first quarter, analysis for PNA compounds was performed using EPA Method 8270 for the EPA Method 8100/8310 suite of analytes. In this quarter analysis for PNA compounds was performed using EPA Method 8270 for semivolatile organics (i.e., PNAs and semivolatile organics).

Section 3
Analytical and Monitoring Results

This section describes the analytical and monitoring results for the second quarter with respect to identified groundwater contamination and groundwater flow direction.

3.1 Analytical Results

Groundwater samples were obtained from pre-existing well MW1, replacement well MW-2R, new monitoring wells MW-4 and MW-6, and new test well TW/MW-5. Well locations are shown on Figure 3 - Tank 1 and 2 Area/Boring Locations. Because of an oversight in the field the groundwater sample collected from well MW-1 was not analyzed for TVH, BTEX, or VH. The holding time on the sample had expired by the time the problem was discovered. In early October 1995, as part of a scheduled groundwater monitoring well gauging event another sample will be collected from MW-1 and submitted for analysis for, TVH, BTEX, and VH. Results from these analyses will be submitted as an addendum to this report.

Concentrations of O&G were reported to be below respective method detection limits (not detected) for all groundwater samples collected (MW-1, MW-2R, MW-4, TW/MW-5, and MW-6). Concentrations of TVH, BTEX, HV, and PNAs were not detected from wells MW-2R, MW-4, and MW-6. Concentrations of TEPH were reported in all submitted samples with concentrations ranging from 140 µg/l to 2,240 µg/l. TDS was below the recommended state maximum contaminant level (MCL) of 500 mg/l for drinking water in all samples. Concentrations of PNAs were not detected in samples submitted from wells MW-1, MW-2R, MW-4, and MW-6. The groundwater sample collected from TW/WM-5 was reported to contain 14 µg/l bis(2-ethylhexyl)phthalate. Second quarter groundwater sample analytical results are tabulated in Tables 1 and 2. Table 4 presents a summary of groundwater sample analytical data for the project to date.

The principal change since the last quarter of groundwater monitoring is that water samples collected from wells MW-2R, MW-4, and MW-6 are now reported to contain concentrations of TEPH, whereas TEPH was not detected in samples from these wells in the previous quarter. TEPH concentrations detected in the samples from the current quarter are still very low. In the previous quarter, the water sample from monitoring well MW-1 was reported to contain 5,500 µg/l TEPH quantified as diesel and this quarter TEPH was reported at 840 µg/l motor oil and 1,400 µg/l diesel. The PNA compounds detected in the previous quarter for TW/MW-5 were not detected in this sampling quarter.

3.2 Groundwater Gradient Determination

Static water level (SWL) gauging was performed in the groundwater monitoring wells on August 31, 1995 The SWL data for this quarter is presented in Table 3 A summary of SWL data for the groundwater monitoring wells to date is presented in Table 5. Survey graphics used in determining groundwater gradient are provided on Figure 3 - Groundwater Gradient Map All elevations determined for this study are reduced to mean sea level datum.

Groundwater gradient at Tank 1 and 2 Area was detected by concurrent sounding of all five monitoring points. Depth to static groundwater from each reference point was then reduced to mean sea level elevations and a graphic 3-point solution method used to establish groundwater gradient and direction. The result of the determination is the approximate groundwater gradient = 0.0038 ft/ft (approximately 20.1 ft/mile) with a flow direction compass bearing of approximately 186° (SSW).

Table 1
Second Quarter Analytical Results August 1995
Petroleum Compounds and Total Dissolved Solids (TDS)

Sample ID	Date Sampled	O&G (mg/L)	TEPH (µg/L)	TVH (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	TDS (mg/L)
MW-1	8/31/95	ND	840 (D) 1,400 (MO)	XX	XX	XX	XX	XX	410
MW-2R	8/31/95	ND	140 (D)	ND	ND	ND	ND	ND	390
MW-4	8/31/95	ND	190 (D)	ND	ND	ND	ND	ND	410
TW/MW-5	8/31/95	ND	230 (D)	ND	ND	ND	ND	ND	380
MW-6	8/31/95	ND	370 (D)	ND	ND	ND	ND	ND	450

NOTES:

mg/L- Milligrams per liter.
µg/L- Micrograms per liter.
ND- Not detected at or above Reporting Limit (RL).
O&G- Hydrocarbon oil and grease using Test Method SMWW 5520 with RL of 5 mg/L.
TEPH-Total extractable petroleum hydrocarbon using California Department of Health Services (DOHS) Method with RL of 50 µg/L. Quantified ranges for diesel and motor oil are labeled D and MO, respectively.
TVH- Total volatile hydrocarbons as gasoline using California DOHS Method with RL of 50 µg/L.
BTEX-Benzene, toluene, ethyl benzene and total xylenes using EPA Test Method 8020 with RL of 0.5 µg/L.
TDS- Total dissolved solids using EPA Test Method 160.1 with RL of 10 µg/L.
XX- Analytical results pending.

Table 2
Second Quarter Analytical Results August 1995
Volatile Halocarbons and Polynuclear Aromatic Hydrocarbons (Water)

Sample ID	Date Sampled	VH (μg/L)	PNA (μg/L)
MW-1	8/31/95	XX	ND
MW-2R	8/31/95	ND	ND
MW-4	8/31/95	ND	ND
TW/MW-5	8/31/95	ND	14 bis(2-Ethylhexyl)phthalate (9.4)
MW-6	8/31/95	ND	ND

NOTES: Results indicate concentration of compound detected and corresponding reporting limit (RL) in parenthesis following respective compound.

μg/L- Micrograms per liter.
ND- Compounds not detected at or above RL.
VH- Volatile halocarbons for EPA Test Method 8010 compounds using EPA Test Method 8240 with compound RL's ranging from 1.0 μg/L to 20 μg/L.
PNA- Polynuclear aromatic hydrocarbons using EPA Test Method 8270 with RL's ranging from 9.4 to 47 μg/L.
XX- Analytical results pending.

Table 3
Second Quarter, August 1995
Static Water Level (SWL) Measurements

Location	Date	Time	SWL	Casing Elevation	Water Elevation
MW-1	8/31/95	1125	4.93	8.19	3.26
MW-2R	8/31/95	1110	4.78	8.27	3.49
MW-3	8/31/95	1119	5.12	9.00	3.88
MW-4	8/31/95	1114	5.18	8.53	3.35
TW/MW-5	8/31/95	1107	4.98	8.37	3.39
MW-6	8/31/95	1112	5.22	8.61	3.39

NOTES:

SWL in feet below top of well casing.
Elevations in feet above mean sea level.

Table 4
Summary Table Water Sample Analytical Results
Alameda Federal Center, Groundwater Monitoring Well MW-1

Collection Date	5/18/95	8/31/95		
Compound				
O&G (mg/l)(SMWW 5520)	ND	ND		
TEPH (µg/l)(DOHS 8015 mod.)	5,500	840 diesel 1,400 motor oil		
TVH (µg/l)(DOHS 8015 mod.)	ND	xx		
Benzene (µg/l)(EPA 8020)	1.1	xx		
Toluene (µg/l)(EPA 8020)	ND	xx		
Ethyl Benzene (µg/l)(EPA8020)	0.9	xx		
Total Xylenes (µg/l)(EPA 8020)	1.6	xx		
Tot. dis. solids (mg/l)(EPA 160.1)	NA	410		
Volatile Halocarbons (EPA 8010)				
cis-1,2-dichloroethene (µg/l)	3	xx		
trans-1,2-dichloroethene (µg/l)	3	xx		
trichloroethene (µg/l)	7	xx		
tetra-chloroethene (µg/l)	1	xx		
chloroform (µg/l)	1	xx		
Polynuclear Aromatic Hydrocarbons (EPA 8270)				
bis(2-ethylhexyl)phthalate (µg/l)	ND	ND		
napthalene (µg/l)	ND	ND		
fluoranthene (µg/l)	ND	ND		
pyrene (µg/l)	ND	ND		
chrysene (µg/l)	ND	ND		
benzo(a)pyrene (µg/l)	ND	ND		

Notes:

mg/l	milligrams per liter
µ/l	micorgrams per liter
ND	not detected at or above the method detection limit (MDL)
O&G	hydrocarbon oil and grease using test method SMWW5520
TEPH	total extractable petroleum hydrocarbons using California Department of Health Services (DOHS) Method EPA 8015 modified
TVH	total Volatile hydrocarbons as gasoline using California DOHS Method EPA 8015 modified
Volatile Halocarbons	EPA Method 8010
Polynuclear Aromatic Hydrocarbons	EPA Method 8270
NA	Not Analyzed
TDS	Total dissolved solids using EPA Method 160.1
xx	Analytical results pending

Table 4 (Continued)

Summary Table Water Sample Analytical Results
Alameda Federal Center, Groundwater Monitoring Well MW-2R

Collection Date	5/18/95	8/31/95		
Compound				
O&G (mg/l)(SMWW 5520)	ND	ND		
TEPH (µg/l)(DOHS 8015 mod.)	ND	140 diesel		
TVH (µg/l)(DOHS 8015 mod.)	ND	ND		
Benzene (µg/l)(EPA 8020)	ND	ND		
Toluene (µg/l)(EPA 8020)	ND	ND		
Ethyl Benzene (µg/l)(EPA8020)	ND	ND		
Total Xylenes (µg/l)(EPA 8020)	ND	ND		
Total dis. solids (mg/l)(EPA 160.1)	NA	390		
Volatile Halocarbons (EPA 8010)				
cis-1,2-dichloroethene (µg/l)	ND	ND		
trans-1,2-dichloroethene (µg/l)	ND	ND		
trichloroethene (µg/l)	ND	ND		
tetra-chloroethene (µg/l)	ND	ND		
chloroform (µg/l)	ND	ND		
Polynuclear Aromatic Hydrocarbons (EPA 8270)				
bis(2-ethylhexyl)phthalate (µg/l)	ND	ND		
napthalene (µg/l)	ND	ND		
fluoranthene (µg/l)	ND	ND		
pyrene (µg/l)	ND	ND		
chrysene (µg/l)	ND	ND		
benzo(a)pyrene (µg/l)	ND	ND		

Notes:

mg/l	milligrams per liter
µ/l	micorgrams per liter
ND	not detected at or above the method detection limit (MDL)
O&G	hydrocarbon oil and grease using test method SMWW5520
TEPH	total extractable petroleum hydrocarbons using California Department of Health Services (DOHS) Method EPA 8015 modified
TVH	total Volatile hydrocarbons as gasoline using California DOHS Method EPA 8015 modified
Volatile Halocarbons	EPA Method 8010
Polynuclear Aromatic Hydrocarbons	EPA Method 8270
NA	Not Analyzed
TDS	Total dissolved solids using EPA Method 160.1

Table 4 (Continued)

Summary Table Water Sample Analytical Results
Alameda Federal Center, Groundwater Monitoring Well MW-3

Collection Date	5/18/95	not sampled		
Compound				
O&G (mg/l)(SMWW 5520)	ND	NA		
TEPH (µg/l)(DOHS 8015 mod.)	92	NA		
TVH (µg/l)(DOHS 8015 mod.)	ND	NA		
Benzene (µg/l)(EPA 8020)	ND	NA		
Toluene (µg/l)(EPA 8020)	ND	NA		
Ethyl Benzene (µg/l)(EPA8020)	ND	NA		
Total Xylenes (µg/l)(EPA 8020)	ND	NA		
Total dis. solids (mg/l)(EPA 160.1)	NA	NA		
Volatile Halocarbons (EPA 8010)				
cis-1,2-dichloroethene (µg/l)	ND	NA		
trans-1,2-dichloroethene (µg/l)	ND	NA		
trichloroethene (µg/l)	ND	NA		
tetra-chloroethene (µg/l)	ND	NA		
chloroform (µg/l)	ND	NA		
Polynuclear Aromatic Hydrocarbons (EPA 8270)				
bis(2-ethylhexyl)phthalate (µg/l)	ND	NA		
napthalene (µg/l)	ND	NA		
fluoranthene (µg/l)	ND	NA		
pyrene (µg/l)	ND	NA		
chrysene (µg/l)	ND	NA		
benzo(a)pyrene (µg/l)	ND	NA		

Notes:

mg/l	**milligrams per liter**
µ/l	micorgrams per liter
ND	not detected at or above the method detection limit (MDL)
O&G	hydrocarbon oil and grease using test method SMWW5520
TEPH	total extractable petroleum hydrocarbons using California Department of Health Services (DOHS) Method EPA 8015 modified
TVH	total Volatile hydrocarbons as gasoline using California DOHS Method EPA 8015 modified
Volatile Halocarbons	EPA Method 8010
Polynuclear Aromatic Hydrocarbons	EPA Method 8270
NA	Not Analyzed
TDS	Total dissolved solids using EPA Method 160 1

Table 4 (Continued)

Summary Table Water Sample Analytical Results
Alameda Federal Center, Groundwater Monitoring Well MW-4

Collection Date	5/18/95	8/31/95		
Compound				
O&G (mg/l)(SMWW 5520)	ND	ND		
TEPH (µg/l)(DOHS 8015 mod.)	ND	190 diesel		
TVH (µg/l)(DOHS 8015 mod.)	ND	ND		
Benzene (µg/l)(EPA 8020)	ND	ND		
Toluene (µg/l)(EPA 8020)	ND	ND		
Ethyl Benzene (µg/l)(EPA8020)	ND	ND		
Total Xylenes (µg/l)(EPA 8020)	ND	ND		
Total dis. solids (mg/l)(EPA 160.1)	NA	410		
Volatile Halocarbons (EPA 8010)				
cis-1,2-dichloroethene (µg/l)	ND	ND		
trans-1,2-dichloroethene (µg/l)	ND	ND		
trichloroethene (µg/l)	ND	ND		
tetra-chloroethene (µg/l)	ND	ND		
chloroform (µg/l)	ND	ND		
Polynuclear Aromatic Hydrocarbons (EPA 8270)				
bis(2-ethylhexyl)phthalate (µg/l)	ND	ND		
napthalene (µg/l)	ND	ND		
fluoranthene (µg/l)	ND	ND		
pyrene (µg/l)	ND	ND		
chrysene (µg/l)	ND	ND		
benzo(a)pyrene (µg/l)	ND	ND		

Notes:

mg/l	milligrams per liter
µ/l	micorgrams per liter
ND	not detected at or above the method detection limit (MDL)
O&G	hydrocarbon oil and grease using test method SMWW5520
TEPH	total extractable petroleum hydrocarbons using California Department of Health Services (DOHS) Method EPA 8015 modified
TVH	total Volatile hydrocarbons as gasoline using California DOHS Method EPA 8015 modified
Volatile Halocarbons	EPA Method 8010
Polynuclear Aromatic Hydrocarbons	EPA Method 8270
NA	Not Analyzed
TDS	Total dissolved solids using EPA Method 160.1

Table 4 (Continued)

Summary Table Water Sample Analytical Results
Alameda Federal Center, Groundwater Monitoring Well TW/MW-5

Collection Date	5/17/95	8/31/95		
Compound				
O&G (mg/l)(SMWW 5520)	ND	ND		
TEPH (µg/l)(DOHS 8015 mod.)	680	230 diesel		
TVH (µg/l)(DOHS 8015 mod.)	ND	ND		
Benzene (µg/l)(EPA 8020)	ND	ND		
Toluene (µg/l)(EPA 8020)	ND	ND		
Ethyl Benzene (µg/l)(EPA8020)	ND	ND		
Total Xylenes (µg/l)(EPA 8020)	ND	ND		
Total dis. solids (mg/l)(EPA 160.1)	NA	380		
Volatile Halocarbons (EPA 8010)				
cis-1,2-dichloroethene (µg/l)	ND	ND		
trans-1,2-dichloroethene (µg/l)	ND	ND		
trichloroethene (µg/l)	ND	ND		
tetra-chloroethene (µg/l)	ND	ND		
chloroform (µg/l)	1.0	ND		
Polynuclear Aromatic Hydrocarbons (EPA 8270)				
bis(2-ethylhexyl)phthalate (µg/l)	ND	14		
napthalene (µg/l)	7.5	ND		
fluoranthene (µg/l)	8.5	ND		
pyrene (µg/l)	14	ND		
chrysene (µg/l)	5.5	ND		
benzo(a)pyrene (µg/l)	6.2	ND		

Notes:

mg/l	milligrams per liter
µl	micorgrams per liter
ND	not detected at or above the method detection limit (MDL)
O&G	hydrocarbon oil and grease using test method SMWW5520
TEPH	total extractable petroleum hydrocarbons using California Department of Health Services (DOHS) Method EPA 8015 modified
TVH	total Volatile hydrocarbons as gasoline using California DOHS Method EPA 8015 modified
Volatile Halocarbons	EPA Method 8010
Polynuclear Aromatic Hydrocarbons	EPA Method 8270
NA	Not Analyzed
TDS	Total dissolved solids using EPA Method 160.1

Table 4 (Continued)

Summary Table Water Sample Analytical Results
Alameda Federal Center, Groundwater Monitoring Well MW-6

Collection Date	5/18/95	8/31/95		
Compound				
O&G (mg/l)(SMWW 5520)	ND	ND		
TEPH (µg/l)(DOHS 8015 mod.)	ND	370 diesel		
TVH (µg/l)(DOHS 8015 mod.)	ND	ND		
Benzene (µg/l)(EPA 8020)	ND	ND		
Toluene (µg/l)(EPA 8020)	ND	ND		
Ethyl Benzene (µg/l)(EPA8020)	ND	ND		
Total Xylenes (µg/l)(EPA 8020)	ND	ND		
Total dis. solids (mg/l)(EPA 160.1)	NA	450		
Volatile Halocarbons (EPA 8010)				
cis-1,2-dichloroethene (µg/l)	ND	ND		
trans-1,2-dichloroethene (µg/l)	ND	ND		
trichloroethene (µg/l)	ND	ND		
tetra-chloroethene (µg/l)	ND	ND		
chloroform (µg/l)	ND	ND		
Polynuclear Aromatic Hydrocarbons (EPA 8270)				
bis(2-ethylhexyl)phthalate (µg/l)	ND	ND		
napthalene (µg/l)	ND	ND		
fluoranthene (µg/l)	ND	ND		
pyrene (µg/l)	ND	ND		
chrysene (µg/l)	ND	ND		
benzo(a)pyrene (µg/l)	ND	ND		

Notes:

mg/l	milligrams per liter
µ/l	micorgrams per liter
ND	not detected at or above the method detection limit (MDL)
O&G	hydrocarbon oil and grease using test method SMWW5520
TEPH	total extractable petroleum hydrocarbons using California Department of Health Services (DOHS) Method EPA 8015 modified
TVH	total Volatile hydrocarbons as gasoline using California DOHS Method EPA 8015 modified
Volatile Halocarbons	EPA Method 8010
Polynuclear Aromatic Hydrocarbons	EPA Method 8270
NA	Not Analyzed
TDS	Total dissolved solids using EPA Method 160.1

Table 5
Summary Quarterly Static Water Level (SWL) Measurements
Groundwater Monitoring Wells, Alameda Federal Center
620 Central Avenue, Alameda, California

Location	Date	Time	SWL	Casing Elevation	Water Elevation
MW-1	5/18/95	1813	4.20	8.19	3.99
	8/31/95	1125	4.93	8.19	3.26
MW-2R	5/18/95	1822	4.14	8.27	4.13
	8/31/95	1110	4.78	8.27	3.49
MW-3	5/16/95	1415	4.72	9.00	4.28
	8/31/95	1119	5.12	9.00	3.88
MW-4	5/18/95	1810	4.52	8.53	4.01
	8/31/95	1114	5.18	8.53	3.35
TW/MW-5	5/18/95	1819	4.27	8.37	4.10
	8/31/95	1107	4.98	8.37	3.39
MW-6	5/18/95	1819	4.27	8.61	4.10
	8/31/95	1112	5.22	8.61	3.39

NOTES:

SWL in feet below top of well casing.
Elevations in feet above mean sea level.

FIGURES

C A P E
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MANAGEMENT
I N C
20280 S Vermont Ave.
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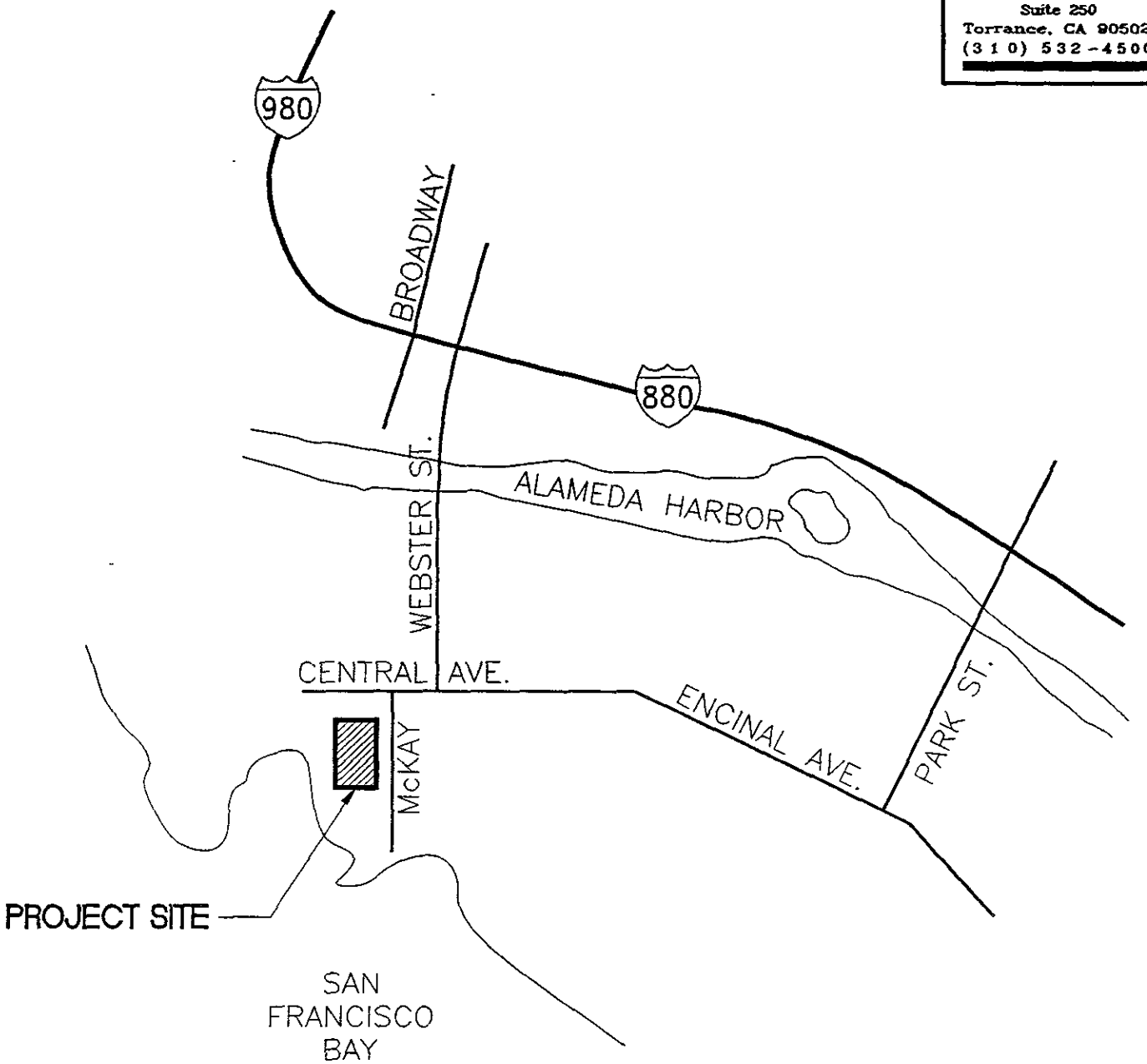

VICINITY MAP

NOT TO SCALE

PROJECT NORTH

SHEET TITLE: FIGURE 1 – SITE VICINITY MAP	CHECKED BY: L HARLAN	PROJECT NUMBER: 2403C.24	
PROJECT TITLE: ALAMEDA FEDERAL CENTER, ALAMEDA, CA	DRAWN BY: J GONZALES	DATE: SEP. 25, '95	SHEET: 1 OF 1

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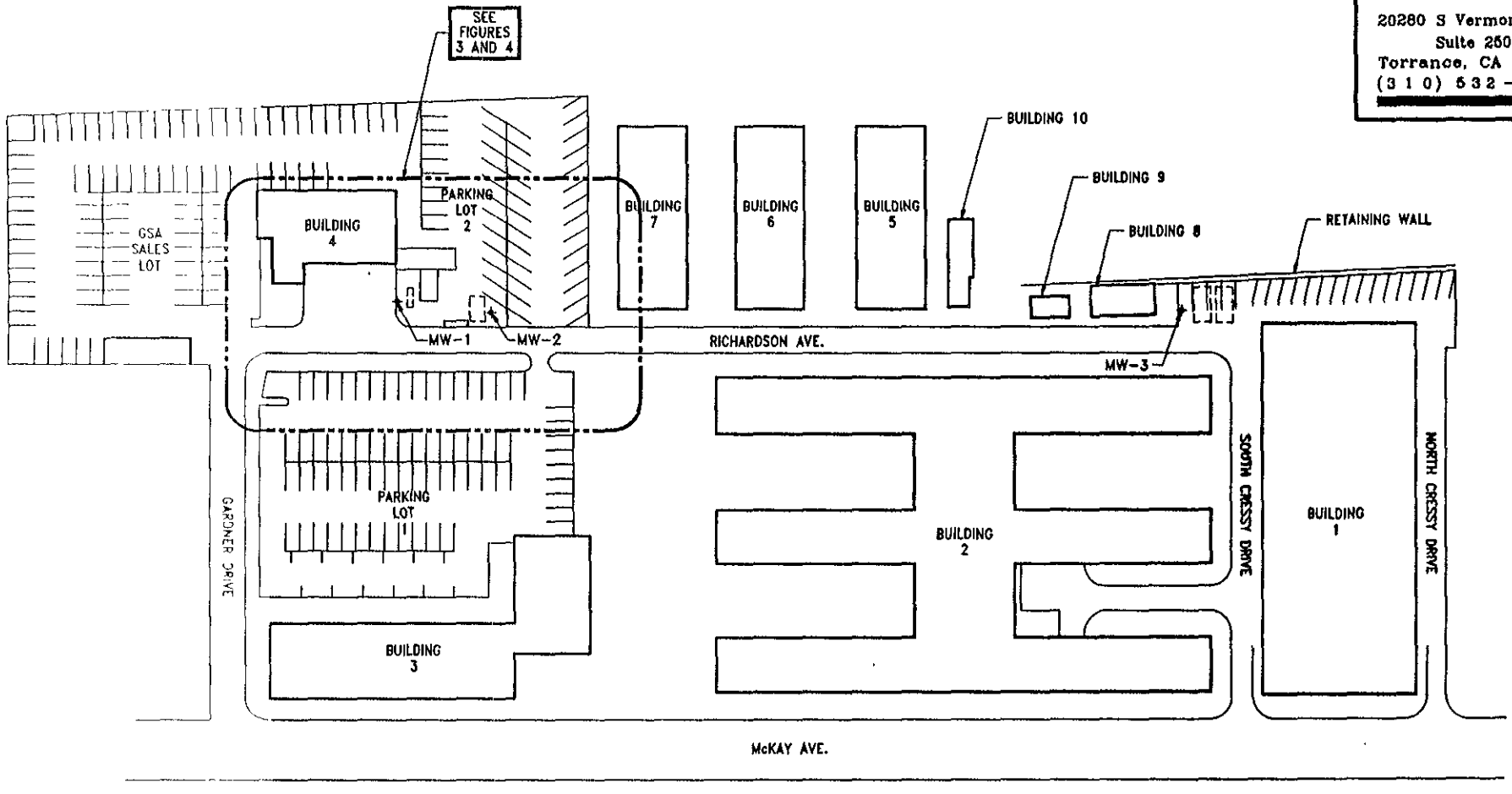
Torrance, CA 90502
(3 1 0) 5 3 2 - 4 5 0 0



LEGEND

MW EXISTING MONITORING WELL

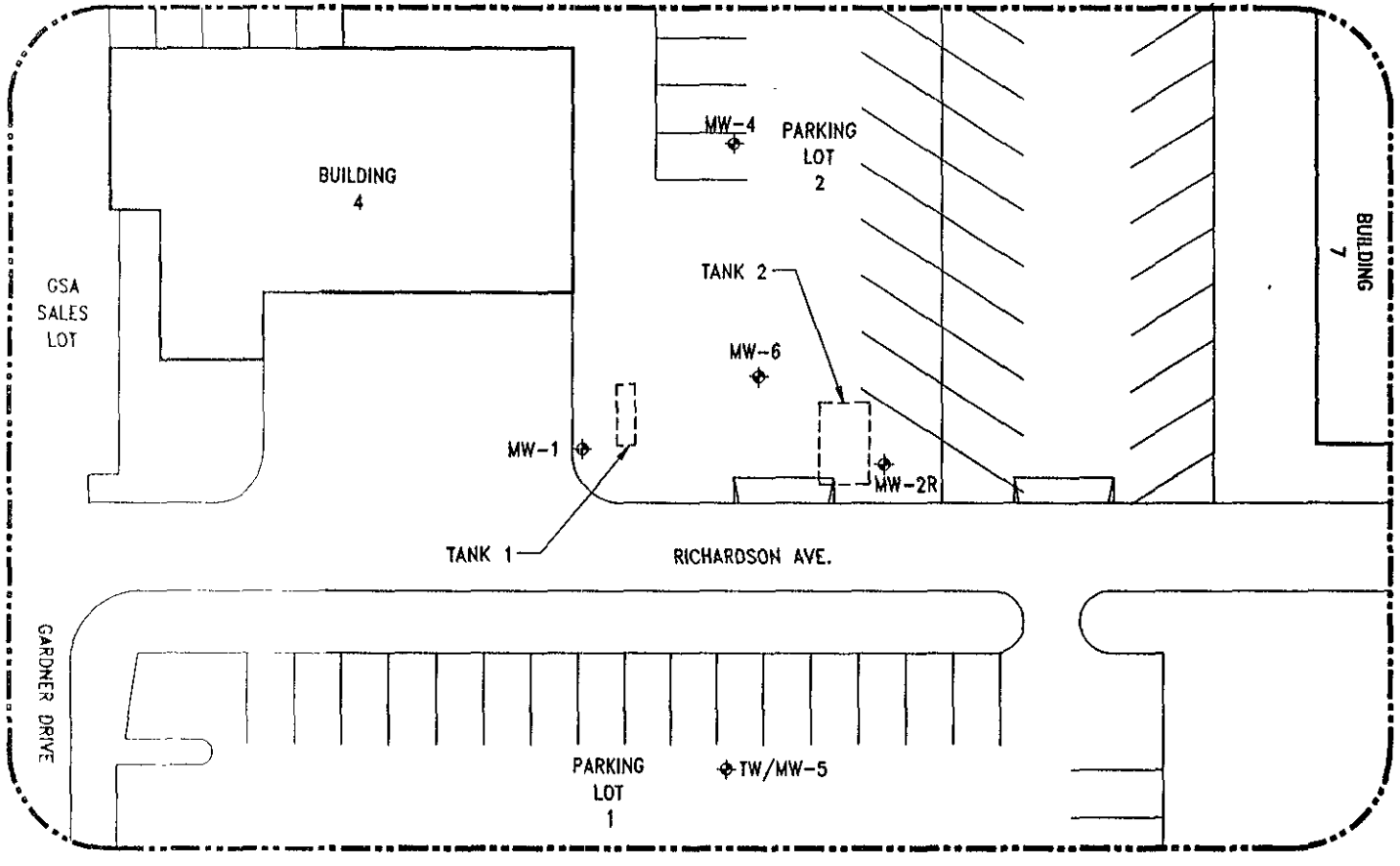
GRAPHIC SCALE

0 10' 50' 100' 150'

PROJECT NORTH

SHEET TITLE: FIGURE 2 - SITE PLAN	CHECKED BY: L. HARLAN	PROJECT NUMBER: 2403C.24	
PROJECT TITLE: ALAMEDA FEDERAL CENTER, ALAMEDA, CA	DRAWN BY: J. GONZALES	DATE: SEP. 25, '95	SHEET: 1 OF 1

C A P E
ENVIRONMENTAL
MANAGEMENT
I N C
20280 S Vermont Ave.
Suite 250
Torrance, CA 90502
(310) 532-4500



LEGEND

MW EXISTING MONITORING WELL

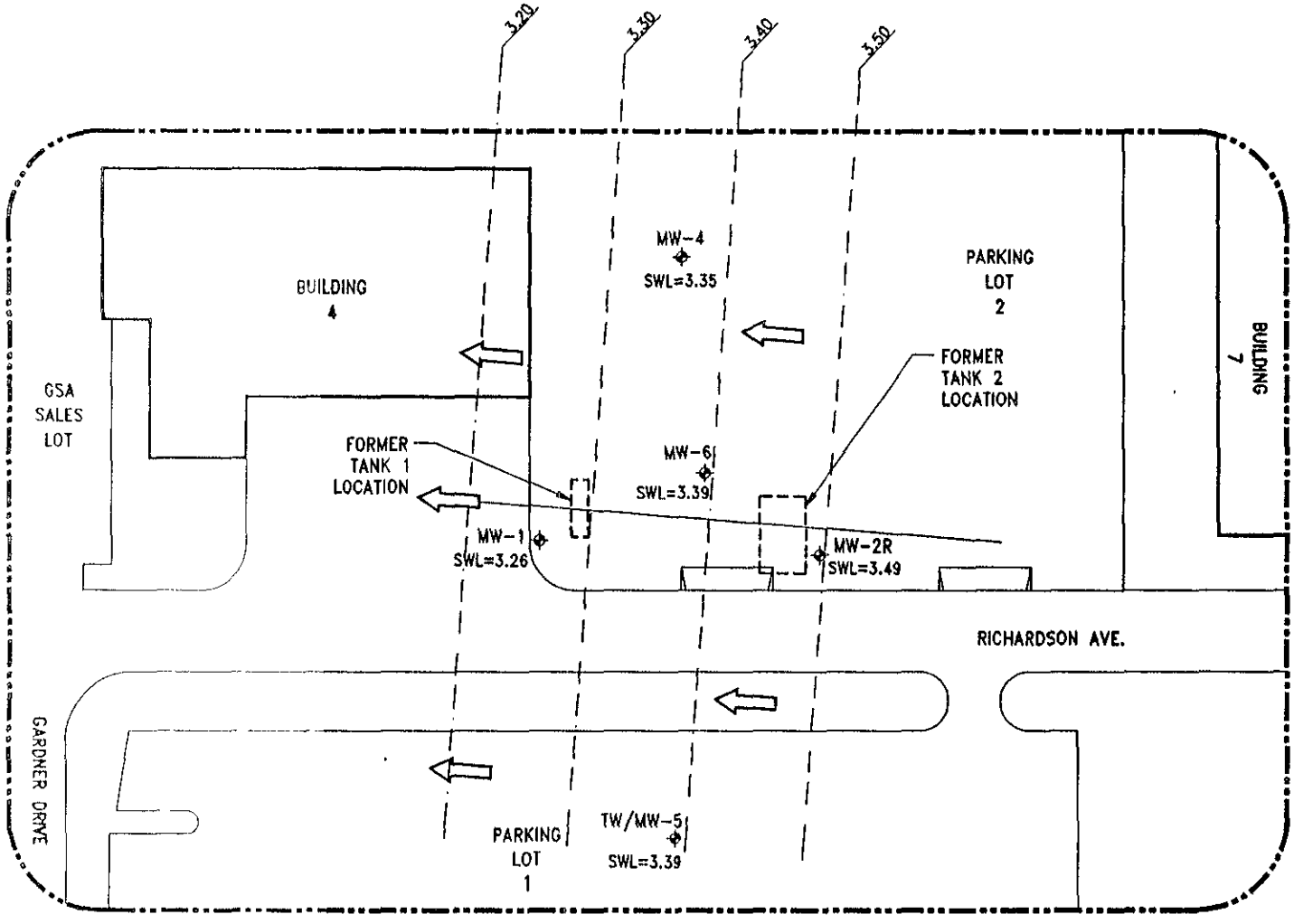
APPROX. LOCATION OF REMOVED UST's

GRAPHIC SCALE

PROJECT NORTH

SHEET TITLE: FIGURE 3 - TANK 1 & 2 AREA / BORING LOCATIONS	CHECKED BY: L. HARLAN	PROJECT NUMBER: 2403C.24	
PROJECT TITLE: ALAMEDA FEDERAL CENTER, ALAMEDA, CA	DRAWN BY: J. GONZALES	DATE: SEP. 25, '95	SHEET: 1 OF 1

C A P E
ENVIRONMENTAL
MANAGEMENT
I N C
20280 S Vermont Ave.
Suite 250
Torrance, CA 90502
(310) 532-4500



LEGEND

- MW — EXISTING MONITORING WELL
- APPROX. LOCATION OF REMOVED UST's
- GROUNDWATER GRADIENT
- SWL — STATIC WATER LEVEL ELEVATIONS IN FEET ABOVE MEAN LEVEL
- EQUIPOTENTIAL ELEVATION CONTOUR

GRAPHIC SCALE

PROJECT NORTH

SHEET TITLE: FIGURE 4 - GROUNDWATER GRADIENT MAP TANK 1 & 2 AREA		CHECKED BY: L. HARLAN	PROJECT NUMBER: 2403C.24
PROJECT TITLE: ALAMEDA FEDERAL CENTER, ALAMEDA, CA	DRAWN BY: J. GONZALES	DATE: SEP. 25, '95	SHEET: 1 OF 1

APPENDIX A

WELL DEVELOPMENT LOGS

CAPE ENVIRONMENTAL MANAGEMENT INC

Well Development Log

Date 8-30-95 Sample Location TW/MW-5

Project Name GSA Alameda Project No. 2403C.24

Weather Conditions Sunny, slight breeze, ≈ 74°F

Observations/Comments

Development Completed By Larry Harlan CEM1

QUALITY CONTROL

Development Method Surging w/ full bailer, pumping w/ submersible pump

Method to Measure Water Level Solinst - Electric contact sounder

Development Lines: new cleaned Dedicated Nylon bailer rope & 3/8" poly pump tubing

Method of Cleaning

Comments Silty-sand within casing to 7.9' below MP. Following sediment removal ~~depth~~ length of casing = 12.1' below MP.

DEVELOPMENT DATA

Water Level (below MP) Start 4.96' @ 1539 End 5.02 @ 1855

Casing volume: 1.2 gal. 7.14' H_2O in 2"Ø casing, 8" borehole

Measuring Point (MP) North side of well casing - marked

Time	Pump Rate (gpm)	Cummulative Discharge (gallons)	Color	Odor	Turbidity
1700		25 gal	Med. Gray	None	Cloudy
1800		55	"	"	Cloudy
1900		80	"	"	"

~~Sediment~~ & Fine sand prevalent throughout development. Slight decrease in sediment ~~content~~ volume after 50 gallons removed, however sand component remained.

Total Discharge ≈ 80 gal. Casing Volumes 66 @ 80 gals.

Method of Disposal of Development Water Temporary on-site storage / labelled DOT Drums

Sheet 1 of 1

APPENDIX B

GROUNDWATER MONITOR WELL SAMPLING AND FIELD DATA SHEET

Groundwater Monitor Well Sampling & Field Data Sheet

CAPE ENVIRONMENTAL MANAGEMENT INC

Location No. MW 1
Sample No. MW 1
Project/Client: GSA
Location: Alameda
Job No. 2403C.24

Date: 8-31-95 Time: 1125
Weather:
Conditions Sunny
Air Temperature 94°F
Personnel Larry Harlan

WELL INFORMATION

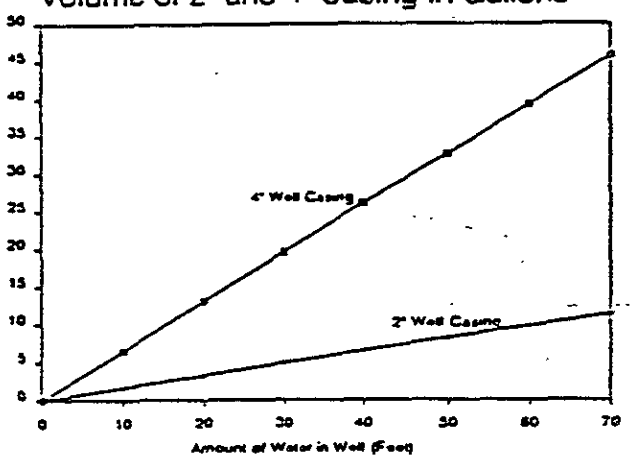
Casing, Dia.: 2"
( ) Stainless Steel
( ) Steel
(X) PVC
( ) Teflon
( ) Other

1125 Water Level: 4.93
Total Depth: 15
Measuring Device
( ) M-Scope
(X) Other Solinst
Volume of Water in Casing 1.71 gal
Datum:
( ) Top of Surf. Casing
(X) Top of Well Casing
( ) Other

Intake, Diameter: 2"
( ) Stainless Steel
( ) Steel
(X) PVC
( ) Teflon
( ) Other

Well Conditions:
Well Clean to Bottom
( ) yes, (X) no
Well in Good Condition
( ) yes, ( ) no (X) FAIR
Surface Protection:
Clean (X) yes, ( ) no
Condition FAIR
Cover seal broken (snapped cover bolt)
Lock (X) yes, ( ) no

Volume of 2" and 4" Casing in Gallons



Purging Data:

Method:
( ) Bladder Pump
(X) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials:
Pump/Bailer
( ) Teflon
( ) Stainless Steel
(X) PVC
( ) Other

Tubing/rope
( ) Teflon
( ) Polypropylene
(X) Nylon
( ) Other
Pumping Rate
Elapsed Time
Volume Pumped 5gal
Well Evacuated ( ) yes, (X) no
Number of Well Volumes Purged 3

Purging Equipment
(X) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned

Time Series Data

Measurement	1	2	3	4
GALLONS ~~Well Volumes~~	1.5	2.5	3.5	5.0
Water Temp.	77.6	74.6	74.5	74.2
pH	7.63	6.81	7.63	7.60
x1000 Other Cond.	1.19	1.48	.49	.49

Sampling Data:

Method:
( ) Bladder Pump
(X) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials: Pump/Bailer
( ) Teflon
( ) Stainless Steel
(X) PVC
( ) Other
Materials: Tubing/rope
( ) Teflon
( ) Polypropylene
(X) Nylon
( ) Other

Sampling Equipment
(X) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned
Metals Sample Field Filtered
( ) Yes
(X) No
Method

Physical & Chemical Data:

Appearance:
( ) Clear
(X) Turbid
(X) Color Lt. Brown
(X) Immiscible Product in droplets
( ) Other
Filed Condition of Sample
Temp
pH
Other

Certification:
This sample was collected and handled in accordance with standard regulatory and corporate procedures

Groundwater Monitor Well Sampling & Field Data Sheet

CAPE ENVIRONMENTAL MANAGEMENT INC

Location No. MW2-R
Sample No. _____
Project/Client: GSA
Location: Alameda
Job No. 2403C.24

Date: 8-31-95 Time: 1110
Weather:
Conditions Sunny
Air Temperature 74F
Personnel Larry Harlan

WELL INFORMATION

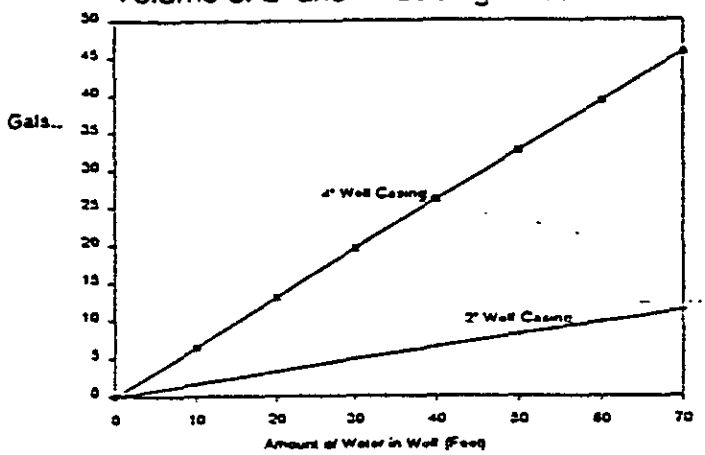
Casing, Dia.: 4"
( ) Stainless Steel
( ) Steel
(X) PVC
( ) Teflon
( ) Other

1110 Water Level: 4.78
Total Depth: 183
Measuring Device
( ) M-Scope
(X) Other Solinst
Volume of Water in Casing 5gals.
Datum:
( ) Top of Surf. Casing
(X) Top of Well Casing
( ) Other _____

Intake, Diameter: 4"
( ) Stainless Steel
( ) Steel
(X) PVC
( ) Teflon
( ) Other

Well Conditions:
Well Clean to Bottom
(X) yes, ( ) no
Well in Good Condition
(X) yes, ( ) no
Surface Protection:
Clean (X) yes, ( ) no
Condition Good
Lock (X) yes, ( ) no

Volume of 2" and 4" Casing in Gallons



Purging Data:

Method:
( ) Bladder Pump
(X) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other _____
Materials:
Pump/Bailer
( ) Teflon
( ) Stainless Steel
(X) PVC
( ) Other _____

Tubing/rope
( ) Teflon
( ) Polypropylene
(X) Nylon
( ) Other _____
Pumping Rate _____
Elapsed Time _____
Volume Pumped 5gal
Well Evacuated ( ) yes, (X) no
Number of Well Volumes Purged 1

Purging Equipment
(X) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned

Time Series Data

Measurement	1	2	3	4
GALLONS Well Volumes	1.5	2.5	3.5	5
Water Temp.	77.5	77.3	76.9	76.6
pH	7.72	7.45	7.43	6.01
Other Cond. x1000	.58	.59	.59	.59

Sampling Data:

Method:
( ) Bladder Pump
(X) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other _____
Materials: Pump/Bailer
( ) Teflon
( ) Stainless Steel
(X) PVC
( ) Other _____
Materials: Tubing/rope
( ) Teflon
( ) Polypropylene
(X) Nylon
( ) Other _____
Sampling Equipment
(X) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned
Metals Sample Field Filtered
( ) Yes
(X) No
Method _____

Physical & Chemical Data:

Appearance:
( ) Clear
(X) Turbid
(X) Color Lt. Brown
( ) Immiscible Product
( ) Other _____
Filed Condition of Sample
Temp _____
pH _____
Other _____ _____

Certification:
This sample was collected and handled in accordance with standard regulatory and corporate procedures

Groundwater Monitor Well Sampling & Field Data Sheet

CAPE ENVIRONMENTAL MANAGEMENT INC

Location No. MW3
Sample No. N/A
Project/Client: GSA
Location: Alameda
Job No. 2403C.24

Date: 8-31-95 Time: 1119
Weather:
Conditions Sunny
Air Temperature 74°F
Personnel Larry Harlan

Well sounded only - not sampled.

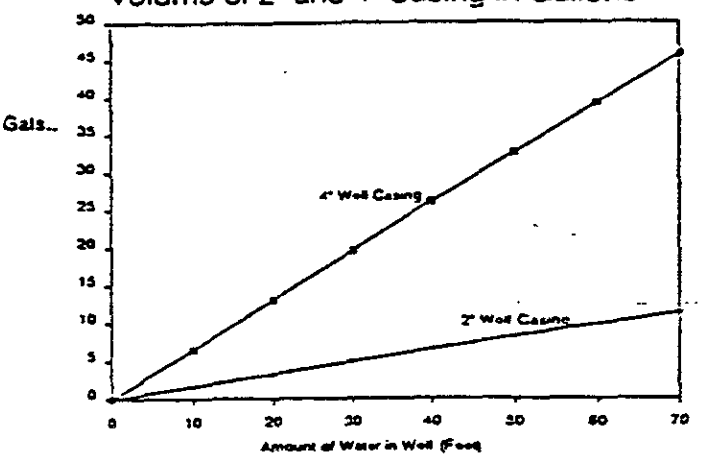
WELL INFORMATION

Casing, Dia.: 2"
( ) Stainless Steel
( ) Steel
(X) PVC
( ) Teflon
( ) Other

1119 Water Level: 5.12
Total Depth: 15
Measuring Device
( ) M-Scope
(X) Other Solinst
Volume of Water in Casing
Datum:
( ) Top of Surf. Casing
(X) Top of Well Casing
( ) Other

Intake, Diameter: 2"
( ) Stainless Steel
( ) Steel
(X) PVC
( ) Teflon
( ) Other
Well Conditions:
Well Clean to Bottom
( ) yes, ( ) no
Well in Good Condition
( ) yes, ( ) no
Surface Protection:
Clean (X) yes, ( ) no
Condition Good
Lock (X) yes, ( ) no

Volume of 2" and 4" Casing in Gallons



Purging Data:

Method:
( ) Bladder Pump
( ) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials:
Pump/Bailer
( ) Teflon
( ) Stainless Steel
( ) PVC
( ) Other

Tubing/rope
( ) Teflon
( ) Polypropylene
( ) Nylon
( ) Other
Pumping Rate
Elapsed Time
Volume Pumped
Well Evacuated ( ) yes, ( ) no
Number of Well Volumes Purged

Purging Equipment
( ) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned

Time Series Data

Measurement	1	2	3	4
Well Volumes				
Water Temp.				
pH				
Other				

Sampling Data:

Method:
( ) Bladder Pump
( ) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials: Pump/Bailer
( ) Teflon
( ) Stainless Steel
( ) PVC
( ) Other
Materials: Tubing/rope
( ) Teflon
( ) Polypropylene
( ) Nylon
( ) Other
Sampling Equipment
( ) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned
Metals Sample Field Filtered
( ) Yes
( ) No
Method

Physical & Chemical Data:

Appearance:
( ) Clear
( ) Turbid
( ) Color
( ) Immiscible Product
( ) Other
Filed Condition of Sample
Temp
pH
Other

Certification:
This sample was collected and handled in accordance with standard regulatory and corporate procedures

Groundwater Monitor Well Sampling & Field Data Sheet

CAPE ENVIRONMENTAL MANAGEMENT INC

Location No. MW 4a
Sample No. MW 4
Project/Client: GSA
Location: Alameda
Job No. 2403c.24

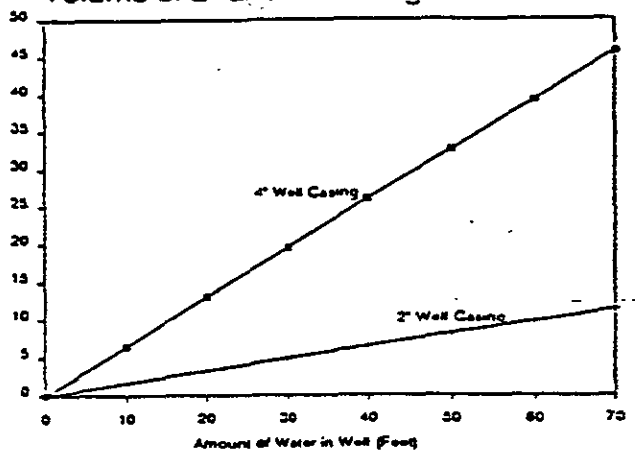
Date: 8-31-95 Time: 1114
Weather:
Conditions Sunny
Air Temperature 74°F
Personnel Larry Harlan

WELL INFORMATION

Casing, Dia.: 4"
( ) Stainless Steel
(X) Steel
( ) PVC
( ) Teflon
( ) Other
1144 Water Level: 5.18
Total Depth: 13
Measuring Device
( ) M-Scope
(X) Other Solinst
Volume of Water in Casing 5 gal
Datum:
( ) Top of Surf. Casing
(X) Top of Well Casing
( ) Other

Intake, Diameter: 4"
( ) Stainless Steel
( ) Steel
(X) PVC
( ) Teflon
( ) Other
Well Conditions:
Well Clean to Bottom
(X) yes, ( ) no
Well in Good Condition
(X) yes, ( ) no
Surface Protection:
Clean (X) yes, ( ) no
Condition Good
Lock (X) yes, ( ) no

Volume of 2" and 4" Casing in Gallons



Purging Data:

Method:
( ) Bladder Pump
(X) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials:
Pump/Bailer
( ) Teflon
( ) Stainless Steel
(X) PVC
( ) Other

Tubing/rope
( ) Teflon
( ) Polypropylene
(X) Nylon
( ) Other
Pumping Rate
Elapsed Time
Volume Pumped 5 gal
Well Evacuated ( ) yes, (X) no
Number of Well Volumes Purged 1

Purging Equipment
(X) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned

Time Series Data

Measurement	1	2	3	4
GALLONS Well Volumes	1 gal.	2.5	3.5	5
Water Temp.	78.1	77.6	76.8	77.5
pH	7.06	7.12	7.15	6.81
x1000 Other Cond.	0.58	0.60	0.61	0.63

Sampling Data:

Method:
( ) Bladder Pump
(X) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials: Pump/Bailer
( ) Teflon
( ) Stainless Steel
(X) PVC
( ) Other
Materials: Tubing/rope
( ) Teflon
( ) Polypropylene
(X) Nylon
( ) Other
Sampling Equipment
(X) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned
Metals Sample Field Filtered
( ) Yes
(X) No
Method

Physical & Chemical Data:

Appearance:
(X) Clear
( ) Turbid
( ) Color
( ) Immiscible Product
( ) Other
Filed Condition of Sample
Temp
pH
Other

Certification:
This sample was collected and handled in accordance with standard regulatory and corporate procedures

Groundwater Monitor Well Sampling & Field Data Sheet

CAPE ENVIRONMENTAL MANAGEMENT INC

Location No. TW/MW5
Sample No. TW/MW5
Project/Client: GSA
Location: Alameda
Job No. 2403C.24

Date: 8.31.95 Time: 1107
Weather:
Conditions Sunny
Air Temperature 74°F
Personnel Larry Harlan

WELL INFORMATION

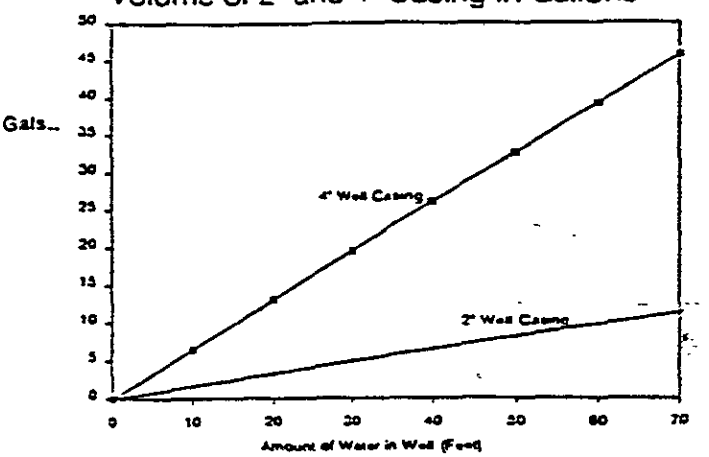
Casing, Dia.: 2"
( ) Stainless Steel
( ) Steel
(X) PVC
( ) Teflon
( ) Other

T 1107 – Water Level: 4.98
Total Depth: 17
Measuring Device
( ) M-Scope
(X) Other Solinst
Volume of Water in Casing 1.2
Datum:
( ) Top of Surf. Casing
(X) Top of Well Casing
( ) Other

Intake, Diameter: 2"
( ) Stainless Steel
( ) Steel
(X) PVC
( ) Teflon
( ) Other

Well Conditions:
Well Clean to Bottom
(X) yes, ( ) no
Well in Good Condition
( ) yes, ( ) no, (X) FAIR
Surface Protection:
Clean (X) yes, ( ) no
Condition GOOD
Lock (X) yes, ( ) no

Volume of 2" and 4" Casing in Gallons



Purging Data:

Method:
( ) Bladder Pump
(X) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials:
Pump/Bailer
( ) Teflon
( ) Stainless Steel
(X) PVC
( ) Other

Tubing/rope
( ) Teflon
( ) Polypropylene
(X) Nylon
( ) Other
Pumping Rate
Elapsed Time
Volume Pumped 5
Well Evacuated ( ) yes, ( ) no
Number of Well Volumes Purged 4 x 1000

Purging Equipment
(X) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned

Time Series Data

Measurement	1	2	3	4
Well Volumes	1.5	2.5	3.5	5.0
Water Temp.	79.2	79.5	77.7	77.4
pH	8.33	7.63	~~7.79~~	7.84
Other Cond.	.59	.64	.62	.61
			7.79	

Sampling Data:

Method:
( ) Bladder Pump
(X) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials: Pump/Bailer
( ) Teflon
( ) Stainless Steel
(X) PVC
( ) Other
Materials: Tubing/rope
( ) Teflon
( ) Polypropylene
(X) Nylon
( ) Other
Sampling Equipment
(X) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned
Metals Sample Field Filtered
( ) Yes
(X) No
Method

Physical & Chemical Data:

Appearance:
( ) Clear
(X) Turbid
(X) Color Lt. Brown
( ) Immiscible Product
( ) Other
Filed Condition of Sample
Temp
pH
Other

Abundance of fine sand.

Certification:
This sample was collected and handled in accordance with standard regulatory and corporate procedures

Groundwater Monitor Well Sampling & Field Data Sheet

CAPE ENVIRONMENTAL MANAGEMENT INC

Location No. MW 6
Sample No. MW 6
Project/Client: GSA
Location: Alameda
Job No. 2403C.24

Date: 8.31.95 Time: 1112
Weather:
Conditions Sunny
Air Temperature 74°
Personnel Carey Harlan

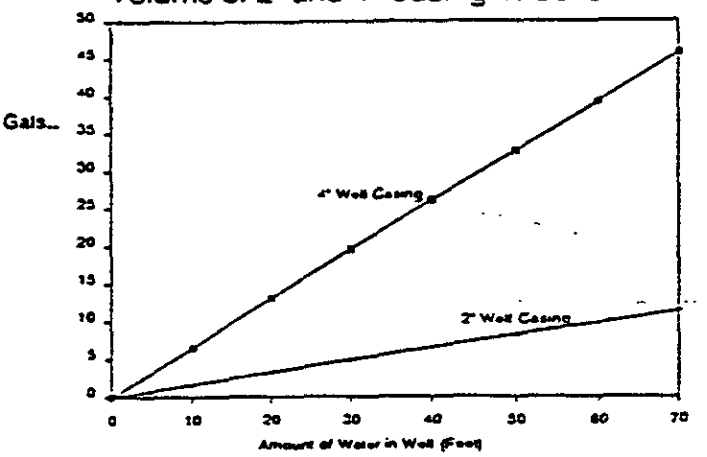
WELL INFORMATION

Casing, Dia.: 4"
( ) Stainless Steel
( ) Steel
(X) PVC
( ) Teflon
( ) Other

1112 Water Level: 5.22
Total Depth: 13
Measuring Device
( ) M-Scope
(X) Other Solinst
Volume of Water in Casing 5 gal
Datum:
( ) Top of Surf. Casing
(X) Top of Well Casing
( ) Other

Intake, Diameter: 4"
( ) Stainless Steel
( ) Steel
(X) PVC
( ) Teflon
( ) Other
Well Conditions:
Well Clean to Bottom
(X) yes, ( ) no
Well in Good Condition
(X) yes, ( ) no
Surface Protection:
Clean (X) yes, ( ) no
Condition Good
Lock (X) yes, ( ) no

Volume of 2" and 4" Casing in Gallons



Purging Data:

Method:
( ) Bladder Pump
(X) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials:
Pump/Bailer
( ) Teflon
( ) Stainless Steel
(X) PVC
( ) Other

Tubing/rope
(X) Teflon
( ) Polypropylene
( ) Nylon
( ) Other
Pumping Rate
Elapsed Time
Volume Pumped 5 gal.
Well Evacuated ( ) yes, ( ) no
Number of Well Volumes Purged 1

Purging Equipment
(X) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned

Time Series Data

Measurement	1	2	3	4
Well Volumes	1.5	2.5	3.5	5
Water Temp.	80.1	77.6	77.6	77.4
pH	6.81	7.69	6.82	7.61
K1000 Other Cond	.72	.65 (.72)	.70	.69

Sampling Data:

Method:
( ) Bladder Pump
(X) Bailer
( ) Submersible Pump
( ) Peristaltic Pump
( ) Other
Materials: Pump/Bailer
( ) Teflon
( ) Stainless Steel
(X) PVC
( ) Other
Materials: Tubing/rope
(X) Teflon
( ) Polypropylene
(X) Nylon
( ) Other
Sampling Equipment
(X) Dedicated
( ) Prepared Off-Site
( ) Field Cleaned
Metals Sample Field Filtered
( ) Yes
(X) No
Method

Physical & Chemical Data:

Appearance:
( ) Clear
( ) Turbid
( ) Color
( ) Immiscible Product
( ) Other
Filed Condition of Sample
Temp
pH
Other

Certification:
This sample was collected and handled in accordance with standard regulatory and corporate procedures

APPENDIX C

CERTIFIED LABORATORY REPORTS AND SAMPLE CHAIN OF CUSTODY DOCUMENTATION

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710. Phone (510) 486-0900

ANALYTICAL REPORT

Prepared for:

Cape Environmental INC.
20280 South Vermont Ave
Suite 250
Torrance, CA 90502

Date: 18-SEP-95
Lab Job Number: 122455
Project ID: 2403C.24
Location: Alameda

Reviewed by:

Reviewed by:

TEH-Tot Ext Hydrocarbons

Client: Cape Environmental INC.
Project#: 2403C.24
Location: Alameda

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: LUFT

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
122455-001	MW4	23088	08/31/95	09/05/95	09/13/95	
122455-002	MW2-R	23088	08/31/95	09/05/95	09/13/95	
122455-003	MW6	23088	08/31/95	09/05/95	09/13/95	
122455-004	TW/MW5	23088	08/31/95	09/05/95	09/13/95	

Analyte	Units	122455-001	122455-002	122455-003	122455-004
Diln Fac:		1	1	1	1
Diesel Range	ug/L	190 Y	140 Y	370 Y	230 Y
Motor Oil Range	ug/L	<1300	<1300	<1300	<1300
Surrogate					
Hexacosane	%REC	111	93	111	110

Y: Sample exhibits fuel pattern which does not resemble standard

TEH-Tot Ext Hydrocarbons

Client: Cape Environmental INC.
Project#: 2403C.24
Location: Alameda

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: LUFT

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
122455-005	MW1	23088	08/31/95	09/05/95	09/13/95	

Analyte	Units	122455-005	
Diln Fac:		1	
Diesel Range	ug/L	840	YH
Motor Oil Range	ug/L	1400	Y
Surrogate			
Hexacosane	%REC	100	

Y: Sample exhibits fuel pattern which does not resemble standard
H: Heavier hydrocarbons than indicated standard

Lab #: 122455 BATCH QC REPORT Curtis & Tompkins, Ltd. Page 1 of 1

TEH-Tot Ext Hydrocarbons			
Client:	Cape Environmental INC.	Analysis Method:	CA LUFT (EPA 8015M)
Project#:	2403C.24	Prep Method:	3520
Location:	Alameda		

METHOD BLANK			
Matrix:	Water	Prep Date:	09/05/95
Batch#:	23088	Analysis Date:	09/13/95
Units:	ug/L		
Diln Fac:	1		

MB Lab ID: QC03343

Analyte	Result	
Diesel Range	<50	
Motor Oil Range	<1300	
Surrogate	**%Rec**	**Recovery Limits**
Hexacosane	115	60-140

Curtis & Tompkins, Ltd.

Lab #: 122455 BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Cape Environmental INC.
Project#: 2403C.24
Location: Alameda

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: 3520

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
Batch#: 23088
Units: ug/L
Diln Fac: 1

Prep Date: 09/05/95
Analysis Date: 09/13/95

BS Lab ID: QC03344

Analyte	Spike Added	BS	%Rec #	Limits
Diesel Range	2565	2721	106	60-140
Surrogate	%Rec	Limits		
Hexacosane	118	60-140		

BSD Lab ID: QC03345

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Diesel Range	2565	2716	106	60-140	0	<35
Surrogate	%Rec	Limits				
Hexacosane	122	60-140				

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

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 122455
CLIENT: CAPE ENVIRONMENTAL INC.
PROJECT ID: 2403C.24
LOCATION: ALAMEDA

DATE SAMPLED: 08/31/95
DATE RECEIVED: 08/31/95
DATE ANALYZED: 09/05/95
DATE REPORTED: 09/10/95

ANALYSIS: TOTAL DISOLVED SOLIDS
ANALYSIS METHOD: EPA 160.1

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
122455-001	MW4	410	mg/L	10
122455-002	MW2-R	390	mg/L	10
122455-003	MW6	450	mg/L	10
122455-004	TW/MW5	380	mg/L	10
METHOD BLANK	N/A	ND	mg/L	10

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: SAMPLE DUPLICATE OF 12455-001

RPD, %	<1

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 122455-001
CLIENT: CAPE ENVIRONMENTAL INC.
PROJECT ID: 2403C.24
LOCATION: ALAMEDA
SAMPLE ID: MW4

DATE SAMPLED: 08/31/95
DATE RECEIVED: 08/31/95
DATE ANALYZED: 09/01/95
DATE REPORTED: 09/10/95
BATCH NO: 23025

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2.0
Bromomethane	ND	2.0
Vinyl chloride	ND	2.0
Chloroethane	ND	2.0
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1.0
1,1-Dichloroethene	ND	1.0
1,1-Dichloroethane	ND	1.0
cis-1,2-Dichloroethene	ND	1.0
trans-1,2-Dichloroethene	ND	1.0
Chloroform	ND	1.0
Freon 113	ND	1.0
1,2-Dichloroethane	ND	1.0
1,1,1-Trichloroethane	ND	1.0
Carbon tetrachloride	ND	1.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
Trichloroethene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
Dibromochloromethane	ND	1.0
Bromoform	ND	2.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Chlorobenzene	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

ND = Not detected at or above reporting limit.

Surrogate Recovery	
Bromobenzene	105 %

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 122455-002
CLIENT: CAPE ENVIRONMENTAL INC.
PROJECT ID: 2403C.24
LOCATION: ALAMEDA
SAMPLE ID: MW2-R

DATE SAMPLED: 08/31/95
DATE RECEIVED: 08/31/95
DATE ANALYZED: 09/01/95
DATE REPORTED: 09/10/95
BATCH NO: 23025

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2.0
Bromomethane	ND	2.0
Vinyl chloride	ND	2.0
Chloroethane	ND	2.0
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1.0
1,1-Dichloroethene	ND	1.0
1,1-Dichloroethane	ND	1.0
cis-1,2-Dichloroethene	ND	1.0
trans-1,2-Dichloroethene	ND	1.0
Chloroform	ND	1.0
Freon 113	ND	1.0
1,2-Dichloroethane	ND	1.0
1,1,1-Trichloroethane	ND	1.0
Carbon tetrachloride	ND	1.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
Trichloroethene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
Dibromochloromethane	ND	1.0
Bromoform	ND	2.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Chlorobenzene	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

ND = Not detected at or above reporting limit.

Surrogate Recovery	
Bromobenzene	105 %

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 122455-003
CLIENT: CAPE ENVIRONMENTAL INC.
PROJECT ID: 2403C.24
LOCATION: ALAMEDA
SAMPLE ID: MW6

DATE SAMPLED: 08/31/95
DATE RECEIVED: 08/31/95
DATE ANALYZED: 09/01/95
DATE REPORTED: 09/10/95
BATCH NO: 23025

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2.0
Bromomethane	ND	2.0
Vinyl chloride	ND	2.0
Chloroethane	ND	2.0
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1.0
1,1-Dichloroethene	ND	1.0
1,1-Dichloroethane	ND	1.0
cis-1,2-Dichloroethene	ND	1.0
trans-1,2-Dichloroethene	ND	1.0
Chloroform	ND	1.0
Freon 113	ND	1.0
1,2-Dichloroethane	ND	1.0
1,1,1-Trichloroethane	ND	1.0
Carbon tetrachloride	ND	1.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
Trichloroethene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
Dibromochloromethane	ND	1.0
Bromoform	ND	2.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Chlorobenzene	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

ND = Not detected at or above reporting limit.

Surrogate Recovery	
Bromobenzene	105 %

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 122455-004
CLIENT: CAPE ENVIRONMENTAL INC.
PROJECT ID: 2403C.24
LOCATION: ALAMEDA
SAMPLE ID: TW/MW5

DATE SAMPLED: 08/31/95
DATE RECEIVED: 08/31/95
DATE ANALYZED: 09/01/95
DATE REPORTED: 09/10/95
BATCH NO: 23025

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2.0
Bromomethane	ND	2.0
Vinyl chloride	ND	2.0
Chloroethane	ND	2.0
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1.0
1,1-Dichloroethene	ND	1.0
1,1-Dichloroethane	ND	1.0
cis-1,2-Dichloroethene	ND	1.0
trans-1,2-Dichloroethene	ND	1.0
Chloroform	ND	1.0
Freon 113	ND	1.0
1,2-Dichloroethane	ND	1.0
1,1,1-Trichloroethane	ND	1.0
Carbon tetrachloride	ND	1.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
Trichloroethene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
Dibromochloromethane	ND	1.0
Bromoform	ND	2.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Chlorobenzene	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

ND = Not detected at or above reporting limit.

Surrogate Recovery	
Bromobenzene	105 %

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 122455-METHOD BLANK
CLIENT: CAPE ENVIRONMENTAL INC.
PROJECT ID: 2403C.24
LOCATION: ALAMEDA
SAMPLE ID: MB

DATE ANALYZED: 09/01/95
DATE REPORTED: 09/10/95
BATCH NO: 23025

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2.0
Bromomethane	ND	2.0
Vinyl chloride	ND	2.0
Chloroethane	ND	2.0
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1.0
1,1-Dichloroethene	ND	1.0
1,1-Dichloroethane	ND	1.0
cis-1,2-Dichloroethene	ND	1.0
trans-1,2-Dichloroethene	ND	1.0
Chloroform	ND	1.0
Freon 113	ND	1.0
1,2-Dichloroethane	ND	1.0
1,1,1-Trichloroethane	ND	1.0
Carbon tetrachloride	ND	1.0
Bromodichloromethane	ND	1.0
1,2-Dichloropropane	ND	1.0
cis-1,3-Dichloropropene	ND	1.0
Trichloroethene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
Dibromochloromethane	ND	1.0
Bromoform	ND	2.0
Tetrachloroethene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
Chlorobenzene	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0

ND = Not detected at or above reporting limit.

Surrogate Recovery	
Bromobenzene	106 %

Curtis & Tompkins, Ltd.

Curtis & Tompkins, Ltd

8010/8020 Laboratory Control Sample Report [Quant Column]

Date Analyzed: 01-SEP-95
Matrix: WATER
Batch No: 23025 325244092003

LCS Datafile: 244W003
Operator: LW
GC ID: GC12

EPA METHOD 8010: HALOGENATED VOLATILE ORGANICS

	Instrdg	SpikeAmt	% Rec	Limits
1,1-Dichloroethene	23.3	20	116 %	68-134%
Trichloroethene	23.9	20	120 %	85-141%
Chlorobenzene	21.2	20	106 %	69-135%
Surrogate Recovery				
Bromobenzene	104.	100	104 %	85-119%

EPA METHOD 8020: AROMATIC VOLATILE ORGANICS

Benzene	20.9	20	104 %	88-118%
Toluene	20.9	20	105 %	85-119%
Chlorobenzene	21.0	20	105 %	90-115%
Surrogate Recovery				
Bromobenzene	104.	100	104 %	81-124%

Column: Rtx 502.2
Water Limits based on LCS Data Generated 5/5/95
Soil Limits based on 3/90 SOW

Results within Specifications - PASS

Curtis & Tompkins, Ltd

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8010 MS/MSD Report

Matrix Sample Number: 122314-001
Matrix Sample File: 244W004
Matrix: WATER
Batch No: 23025 325244110005 325244119006 325244101004

Date Analyzed: 01-SEP-95
Spike File: 244W005
Spike Dup File: 244W006
Analyst: LW

	Instrdg	SpikeAmt	% Rec	Limits
MS RESULTS				
1,1-Dichloroethene	24.2	20	121 %	68-134%
Trichloroethene	25.1	20	125 %	85-141%
Chlorobenzene	21.1	20	106 %	69-135%
Surrogate Recovery				
Bromobenzene	103.8	100	104 %	85-119%
MSD RESULTS				
1,1-Dichloroethene	25.1	20	125 %	68-134%
Trichloroethene	25.3	20	127 %	85-141%
Chlorobenzene	21.0	20	105 %	69-135%
Surrogate Recovery				
Bromobenzene	103.9	100	104 %	85-119%
MATRIX RESULTS				
1,1-Dichloroethene	0.0			
Trichloroethene	0.0			
Chlorobenzene	0.0			
RPD DATA				
1,1-Dichloroethene	4 %			< 14%
Trichloroethene	1 %			< 14%
Chlorobenzene	1 %			< 13%

Column: Rtx 502.2
WATER Limits based on LCS data generated 5/95
Soil Limits based on 3/90 SOW CLP

Results within Specifications - PASS

Semivolatile Organics by GC/MS

Client: Cape Environmental INC.
Project#: 2403C.24
Location: Alameda

Analysis Method: EPA 8270
Prep Method: EPA 3520

Field ID: MW4
Lab ID: 122455-001
Matrix: Water
Batch#: 23089
Units: ug/L
Diln Fac: 1

Sampled: 08/31/95
Received: 08/31/95
Extracted: 09/05/95
Analyzed: 09/10/95

Analyte	Result	Reporting Limit
Phenol	ND	9.4
2-Chlorophenol	ND	9.4
Benzyl alcohol	ND	9.4
2-Methylphenol	ND	9.4
4-Methylphenol	ND	9.4
2-Nitrophenol	ND	47
2,4-Dimethylphenol	ND	9.4
Benzoic acid	ND	47
2,4-Dichlorophenol	ND	9.4
4-Chloro-3-methylphenol	ND	9.4
2,4,6-Trichlorophenol	ND	9.4
2,4,5-Trichlorophenol	ND	47
2,4-Dinitrophenol	ND	47
4-Nitrophenol	ND	47
4,6-Dinitro-2-methylphenol	ND	47
Pentachlorophenol	ND	47
N-Nitrosodimethylamine	ND	9.4
Aniline	ND	9.4
bis(2-Chloroethyl)ether	ND	9.4
1,3-Dichlorobenzene	ND	9.4
1,4-Dichlorobenzene	ND	9.4
1,2-Dichlorobenzene	ND	9.4
bis(2-Chloroisopropyl) ether	ND	9.4
N-Nitroso-di-n-propylamine	ND	9.4
Hexachloroethane	ND	9.4
Nitrobenzene	ND	9.4
Isophorone	ND	9.4
bis(2-Chloroethoxy)methane	ND	9.4
1,2,4-Trichlorobenzene	ND	9.4
Naphthalene	ND	9.4
4-Chloroaniline	ND	9.4
Hexachlorobutadiene	ND	9.4
2-Methylnaphthalene	ND	9.4
Hexachlorocyclopentadiene	ND	9.4
2-Chloronaphthalene	ND	9.4
2-Nitroaniline	ND	47
Dimethylphthalate	ND	9.4
Acenaphthylene	ND	9.4

Semivolatile Organics by GC/MS

Field ID:	MW4	Sampled:	08/31/95
Lab ID:	122455-001	Received:	08/31/95
Matrix:	Water	Extracted:	09/05/95
Batch#:	23089	Analyzed:	09/10/95
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	9.4
3-Nitroaniline	ND	47
Acenaphthene	ND	9.4
Dibenzofuran	ND	9.4
2,4-Dinitrotoluene	ND	9.4
Diethylphthalate	ND	9.4
4-Chlorophenyl-phenylether	ND	9.4
Fluorene	ND	9.4
4-Nitroaniline	ND	47
N-Nitrosodiphenylamine	ND	9.4
Azobenzene	ND	9.4
4-Bromophenyl-phenylether	ND	9.4
Hexachlorobenzene	ND	9.4
Phenanthrene	ND	9.4
Anthracene	ND	9.4
Di-n-butylphthalate	ND	9.4
Fluoranthene	ND	9.4
Pyrene	ND	9.4
Butylbenzylphthalate	ND	9.4
3,3'-Dichlorobenzidine	ND	47
Benzo(a)anthracene	ND	9.4
Chrysene	ND	9.4
bis(2-Ethylhexyl)phthalate	ND	9.4
Di-n-octylphthalate	ND	9.4
Benzo(b)fluoranthene	ND	9.4
Benzo(k)fluoranthene	ND	9.4
Benzo(a)pyrene	ND	9.4
Indeno(1,2,3-cd)pyrene	ND	9.4
Dibenz(a,h)anthracene	ND	9.4
Benzo(g,h,i)perylene	ND	9.4

Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	43	21-110
Phenol-d5	47	10-110
2,4,6-Tribromophenol	73	10-123
Nitrobenzene-d5	46	35-114
2-Fluorobiphenyl	50	43-116
Terphenyl-d14	30	33-141

Semivolatile Organics by GC/MS

Client: Cape Environmental INC.
Project#: 2403C.24
Location: Alameda

Analysis Method: EPA 8270
Prep Method: EPA 3520

Field ID: MW2-R
Lab ID: 122455-002
Matrix: Water
Batch#: 23089
Units: ug/L
Diln Fac: 1

Sampled: 08/31/95
Received: 08/31/95
Extracted: 09/05/95
Analyzed: 09/10/95

Analyte	Result	Reporting Limit
Phenol	ND	9.4
2-Chlorophenol	ND	9.4
Benzyl alcohol	ND	9.4
2-Methylphenol	ND	9.4
4-Methylphenol	ND	9.4
2-Nitrophenol	ND	47
2,4-Dimethylphenol	ND	9.4
Benzoic acid	ND	47
2,4-Dichlorophenol	ND	9.4
4-Chloro-3-methylphenol	ND	9.4
2,4,6-Trichlorophenol	ND	9.4
2,4,5-Trichlorophenol	ND	47
2,4-Dinitrophenol	ND	47
4-Nitrophenol	ND	47
4,6-Dinitro-2-methylphenol	ND	47
Pentachlorophenol	ND	47
N-Nitrosodimethylamine	ND	9.4
Aniline	ND	9.4
bis(2-Chloroethyl)ether	ND	9.4
1,3-Dichlorobenzene	ND	9.4
1,4-Dichlorobenzene	ND	9.4
1,2-Dichlorobenzene	ND	9.4
bis(2-Chloroisopropyl) ether	ND	9.4
N-Nitroso-di-n-propylamine	ND	9.4
Hexachloroethane	ND	9.4
Nitrobenzene	ND	9.4
Isophorone	ND	9.4
bis(2-Chloroethoxy)methane	ND	9.4
1,2,4-Trichlorobenzene	ND	9.4
Naphthalene	ND	9.4
4-Chloroaniline	ND	9.4
Hexachlorobutadiene	ND	9.4
2-Methylnaphthalene	ND	9.4
Hexachlorocyclopentadiene	ND	9.4
2-Chloronaphthalene	ND	9.4
2-Nitroaniline	ND	47
Dimethylphthalate	ND	9.4
Acenaphthylene	ND	9.4

Semivolatile Organics by GC/MS

Field ID:	MW2-R	Sampled:	08/31/95
Lab ID:	122455-002	Received:	08/31/95
Matrix:	Water	Extracted:	09/05/95
Batch#:	23089	Analyzed:	09/10/95
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	9.4
3-Nitroaniline	ND	47
Acenaphthene	ND	9.4
Dibenzofuran	ND	9.4
2,4-Dinitrotoluene	ND	9.4
Diethylphthalate	ND	9.4
4-Chlorophenyl-phenylether	ND	9.4
Fluorene	ND	9.4
4-Nitroaniline	ND	47
N-Nitrosodiphenylamine	ND	9.4
Azobenzene	ND	9.4
4-Bromophenyl-phenylether	ND	9.4
Hexachlorobenzene	ND	9.4
Phenanthrene	ND	9.4
Anthracene	ND	9.4
Di-n-butylphthalate	ND	9.4
Fluoranthene	ND	9.4
Pyrene	ND	9.4
Butylbenzylphthalate	ND	9.4
3,3'-Dichlorobenzidine	ND	47
Benzo(a)anthracene	ND	9.4
Chrysene	ND	9.4
bis(2-Ethylhexyl)phthalate	ND	9.4
Di-n-octylphthalate	ND	9.4
Benzo(b)fluoranthene	ND	9.4
Benzo(k)fluoranthene	ND	9.4
Benzo(a)pyrene	ND	9.4
Indeno(1,2,3-cd)pyrene	ND	9.4
Dibenz(a,h)anthracene	ND	9.4
Benzo(g,h,i)perylene	ND	9.4

Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	45	21-110
Phenol-d5	48	10-110
2,4,6-Tribromophenol	70	10-123
Nitrobenzene-d5	48	35-114
2-Fluorobiphenyl	49	43-116
Terphenyl-d14	36	33-141

Semivolatile Organics by GC/MS

Client:	Cape Environmental INC.	Analysis Method:	EPA 8270
Project#:	2403C.24	Prep Method:	EPA 3520
Location:	Alameda		

Field ID:	MW6	Sampled:	08/31/95
Lab ID:	122455-003	Received:	08/31/95
Matrix:	Water	Extracted:	09/05/95
Batch#:	23089	Analyzed:	09/10/95
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
Phenol	ND	9.4
2-Chlorophenol	ND	9.4
Benzyl alcohol	ND	9.4
2-Methylphenol	ND	9.4
4-Methylphenol	ND	9.4
2-Nitrophenol	ND	47
2,4-Dimethylphenol	ND	9.4
Benzoic acid	ND	47
2,4-Dichlorophenol	ND	9.4
4-Chloro-3-methylphenol	ND	9.4
2,4,6-Trichlorophenol	ND	9.4
2,4,5-Trichlorophenol	ND	47
2,4-Dinitrophenol	ND	47
4-Nitrophenol	ND	47
4,6-Dinitro-2-methylphenol	ND	47
Pentachlorophenol	ND	47
N-Nitrosodimethylamine	ND	9.4
Aniline	ND	9.4
bis(2-Chloroethyl)ether	ND	9.4
1,3-Dichlorobenzene	ND	9.4
1,4-Dichlorobenzene	ND	9.4
1,2-Dichlorobenzene	ND	9.4
bis(2-Chloroisopropyl) ether	ND	9.4
N-Nitroso-di-n-propylamine	ND	9.4
Hexachloroethane	ND	9.4
Nitrobenzene	ND	9.4
Isophorone	ND	9.4
bis(2-Chloroethoxy)methane	ND	9.4
1,2,4-Trichlorobenzene	ND	9.4
Naphthalene	ND	9.4
4-Chloroaniline	ND	9.4
Hexachlorobutadiene	ND	9.4
2-Methylnaphthalene	ND	9.4
Hexachlorocyclopentadiene	ND	9.4
2-Chloronaphthalene	ND	9.4
2-Nitroaniline	ND	47
Dimethylphthalate	ND	9.4
Acenaphthylene	ND	9.4

Semivolatile Organics by GC/MS

Field ID:	MW6	Sampled:	08/31/95
Lab ID:	122455-003	Received:	08/31/95
Matrix:	Water	Extracted:	09/05/95
Batch#:	23089	Analyzed:	09/10/95
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	9.4
3-Nitroaniline	ND	47
Acenaphthene	ND	9.4
Dibenzofuran	ND	9.4
2,4-Dinitrotoluene	ND	9.4
Diethylphthalate	ND	9.4
4-Chlorophenyl-phenylether	ND	9.4
Fluorene	ND	9.4
4-Nitroaniline	ND	47
N-Nitrosodiphenylamine	ND	9.4
Azobenzene	ND	9.4
4-Bromophenyl-phenylether	ND	9.4
Hexachlorobenzene	ND	9.4
Phenanthrene	ND	9.4
Anthracene	ND	9.4
Di-n-butylphthalate	ND	9.4
Fluoranthene	ND	9.4
Pyrene	ND	9.4
Butylbenzylphthalate	ND	9.4
3,3'-Dichlorobenzidine	ND	47
Benzo(a)anthracene	ND	9.4
Chrysene	ND	9.4
bis(2-Ethylhexyl)phthalate	ND	9.4
Di-n-octylphthalate	ND	9.4
Benzo(b)fluoranthene	ND	9.4
Benzo(k)fluoranthene	ND	9.4
Benzo(a)pyrene	ND	9.4
Indeno(1,2,3-cd)pyrene	ND	9.4
Dibenz(a,h)anthracene	ND	9.4
Benzo(g,h,i)perylene	ND	9.4

Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	49	21-110
Phenol-d5	54	10-110
2,4,6-Tribromophenol	69	10-123
Nitrobenzene-d5	52	35-114
2-Fluorobiphenyl	49	43-116
Terphenyl-d14	23	33-141

Semivolatile Organics by GC/MS

Client:	Cape Environmental INC.	Analysis Method:	EPA 8270
Project#:	2403C.24	Prep Method:	EPA 3520
Location:	Alameda		
Field ID:	TW/MW5	Sampled:	08/31/95
Lab ID:	122455-004	Received:	08/31/95
Matrix:	Water	Extracted:	09/05/95
Batch#:	23089	Analyzed:	09/10/95
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
Phenol	ND	9.4
2-Chlorophenol	ND	9.4
Benzyl alcohol	ND	9.4
2-Methylphenol	ND	9.4
4-Methylphenol	ND	9.4
2-Nitrophenol	ND	47
2,4-Dimethylphenol	ND	9.4
Benzoic acid	ND	47
2,4-Dichlorophenol	ND	9.4
4-Chloro-3-methylphenol	ND	9.4
2,4,6-Trichlorophenol	ND	9.4
2,4,5-Trichlorophenol	ND	47
2,4-Dinitrophenol	ND	47
4-Nitrophenol	ND	47
4,6-Dinitro-2-methylphenol	ND	47
Pentachlorophenol	ND	47
N-Nitrosodimethylamine	ND	9.4
Aniline	ND	9.4
bis(2-Chloroethyl)ether	ND	9.4
1,3-Dichlorobenzene	ND	9.4
1,4-Dichlorobenzene	ND	9.4
1,2-Dichlorobenzene	ND	9.4
bis(2-Chloroisopropyl) ether	ND	9.4
N-Nitroso-di-n-propylamine	ND	9.4
Hexachloroethane	ND	9.4
Nitrobenzene	ND	9.4
Isophorone	ND	9.4
bis(2-Chloroethoxy)methane	ND	9.4
1,2,4-Trichlorobenzene	ND	9.4
Naphthalene	ND	9.4
4-Chloroaniline	ND	9.4
Hexachlorobutadiene	ND	9.4
2-Methylnaphthalene	ND	9.4
Hexachlorocyclopentadiene	ND	9.4
2-Chloronaphthalene	ND	9.4
2-Nitroaniline	ND	47
Dimethylphthalate	ND	9.4
Acenaphthylene	ND	9.4

Semivolatile Organics by GC/MS

Field ID:	TW/MW5	Sampled:	08/31/95
Lab ID:	122455-004	Received:	08/31/95
Matrix:	Water	Extracted:	09/05/95
Batch#:	23089	Analyzed:	09/10/95
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	9.4
3-Nitroaniline	ND	47
Acenaphthene	ND	9.4
Dibenzofuran	ND	9.4
2,4-Dinitrotoluene	ND	9.4
Diethylphthalate	ND	9.4
4-Chlorophenyl-phenylether	ND	9.4
Fluorene	ND	9.4
4-Nitroaniline	ND	47
N-Nitrosodiphenylamine	ND	9.4
Azobenzene	ND	9.4
4-Bromophenyl-phenylether	ND	9.4
Hexachlorobenzene	ND	9.4
Phenanthrene	ND	9.4
Anthracene	ND	9.4
Di-n-butylphthalate	ND	9.4
Fluoranthene	ND	9.4
Pyrene	ND	9.4
Butylbenzylphthalate	ND	9.4
3,3'-Dichlorobenzidine	ND	47
Benzo(a)anthracene	ND	9.4
Chrysene	ND	9.4
bis(2-Ethylhexyl)phthalate	14	9.4
Di-n-octylphthalate	ND	9.4
Benzo(b)fluoranthene	ND	9.4
Benzo(k)fluoranthene	ND	9.4
Benzo(a)pyrene	ND	9.4
Indeno(1,2,3-cd)pyrene	ND	9.4
Dibenz(a,h)anthracene	ND	9.4
Benzo(g,h,i)perylene	ND	9.4

Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	47	21-110
Phenol-d5	50	10-110
2,4,6-Tribromophenol	70	10-123
Nitrobenzene-d5	51	35-114
2-Fluorobiphenyl	45	43-116
Terphenyl-d14	19	33-141

Semivolatile Organics by GC/MS

Client: Cape Environmental INC.
Project#: 2403C.24
Location: Alameda

Analysis Method: EPA 8270
Prep Method: EPA 3520

Field ID: MW1
Lab ID: 122455-005
Matrix: Water
Batch#: 23089
Units: ug/L
Diln Fac: 1

Sampled: 08/31/95
Received: 08/31/95
Extracted: 09/05/95
Analyzed: 09/10/95

Analyte	Result	Reporting Limit
Phenol	ND	9.4
2-Chlorophenol	ND	9.4
Benzyl alcohol	ND	9.4
2-Methylphenol	ND	9.4
4-Methylphenol	ND	9.4
2-Nitrophenol	ND	47
2,4-Dimethylphenol	ND	9.4
Benzoic acid	ND	47
2,4-Dichlorophenol	ND	9.4
4-Chloro-3-methylphenol	ND	9.4
2,4,6-Trichlorophenol	ND	9.4
2,4,5-Trichlorophenol	ND	47
2,4-Dinitrophenol	ND	47
4-Nitrophenol	ND	47
4,6-Dinitro-2-methylphenol	ND	47
Pentachlorophenol	ND	47
N-Nitrosodimethylamine	ND	9.4
Aniline	ND	9.4
bis(2-Chloroethyl)ether	ND	9.4
1,3-Dichlorobenzene	ND	9.4
1,4-Dichlorobenzene	ND	9.4
1,2-Dichlorobenzene	ND	9.4
bis(2-Chloroisopropyl) ether	ND	9.4
N-Nitroso-di-n-propylamine	ND	9.4
Hexachloroethane	ND	9.4
Nitrobenzene	ND	9.4
Isophorone	ND	9.4
bis(2-Chloroethoxy)methane	ND	9.4
1,2,4-Trichlorobenzene	ND	9.4
Naphthalene	ND	9.4
4-Chloroaniline	ND	9.4
Hexachlorobutadiene	ND	9.4
2-Methylnaphthalene	ND	9.4
Hexachlorocyclopentadiene	ND	9.4
2-Chloronaphthalene	ND	9.4
2-Nitroaniline	ND	47
Dimethylphthalate	ND	9.4
Acenaphthylene	ND	9.4

Semivolatile Organics by GC/MS

Field ID:	MW1	Sampled:	08/31/95
Lab ID:	122455-005	Received:	08/31/95
Matrix:	Water	Extracted:	09/05/95
Batch#:	23089	Analyzed:	09/10/95
Units:	ug/L		
Diln Fac:	1		

Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	9.4
3-Nitroaniline	ND	47
Acenaphthene	ND	9.4
Dibenzofuran	ND	9.4
2,4-Dinitrotoluene	ND	9.4
Diethylphthalate	ND	9.4
4-Chlorophenyl-phenylether	ND	9.4
Fluorene	ND	9.4
4-Nitroaniline	ND	47
N-Nitrosodiphenylamine	ND	9.4
Azobenzene	ND	9.4
4-Bromophenyl-phenylether	ND	9.4
Hexachlorobenzene	ND	9.4
Phenanthrene	ND	9.4
Anthracene	ND	9.4
Di-n-butylphthalate	ND	9.4
Fluoranthene	ND	9.4
Pyrene	ND	9.4
Butylbenzylphthalate	ND	9.4
3,3'-Dichlorobenzidine	ND	47
Benzo(a)anthracene	ND	9.4
Chrysene	ND	9.4
bis(2-Ethylhexyl)phthalate	ND	9.4
Di-n-octylphthalate	ND	9.4
Benzo(b)fluoranthene	ND	9.4
Benzo(k)fluoranthene	ND	9.4
Benzo(a)pyrene	ND	9.4
Indeno(1,2,3-cd)pyrene	ND	9.4
Dibenz(a,h)anthracene	ND	9.4
Benzo(g,h,i)perylene	ND	9.4

Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	45	21-110
Phenol-d5	54	10-110
2,4,6-Tribromophenol	73	10-123
Nitrobenzene-d5	53	35-114
2-Fluorobiphenyl	52	43-116
Terphenyl-d14	30	33-141

EPA 8270 Semi-Volatile Organics

Client: Cape Environmental INC.
Project#: 2403C.24
Location: Alameda

Analysis Method: EPA 8270
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 23089
Units: ug/L
Diln Fac: 1

Prep Date: 09/05/95
Analysis Date: 09/07/95

MB Lab ID: QC03346

Analyte	Result	Reporting Limit
Phenol	ND	10
2-Chlorophenol	ND	10
Benzyl alcohol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	50
2,4-Dimethylphenol	ND	10
Benzoic acid	ND	50
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	50
2,4-Dinitrophenol	ND	50
4-Nitrophenol	ND	50
4,6-Dinitro-2-methylphenol	ND	50
Pentachlorophenol	ND	50
N-Nitrosodimethylamine	ND	10
Aniline	ND	10
bis(2-Chloroethyl)ether	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
1,2-Dichlorobenzene	ND	10
bis(2-Chloroisopropyl) ether	ND	10
N-Nitroso-di-n-propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
1,2,4-Trichlorobenzene	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	10
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	50
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	10
3-Nitroaniline	ND	50

EPA 8270 Semi-Volatile Organics

Client: Cape Environmental INC.
Project#: 2403C.24
Location: Alameda

Analysis Method: EPA 8270
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 23089
Units: ug/L
Diln Fac: 1

Prep Date: 09/05/95
Analysis Date: 09/07/95

MB Lab ID: QC03346

Analyte	Result	Reporting Limit
Acenaphthene	ND	10
Dibenzofuran	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	50
N-Nitrosodiphenylamine	ND	10
Azobenzene	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	50
Benzo(a)anthracene	ND	10
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Dibenz(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	10

Surrogate	%Rec	Recovery Limits
2-Fluorophenol	18	21-110
Phenol-d5	41	10-110
2,4,6-Tribromophenol	63	10-123
Nitrobenzene-d5	49	35-114
2-Fluorobiphenyl	53	43-116
Terphenyl-d14	66	33-141

Curtis & Tompkins, Ltd.

Lab #: 122455 BATCH QC REPORT

EPA 8270 Semi-Volatile Organics

Client: Cape Environmental INC.
Project#: 2403C.24
Location: Alameda

Analysis Method: EPA 8270
Prep Method: EPA 3520

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
Batch#: 23089
Units: ug/L
Diln Fac: 1

Prep Date: 09/05/95
Analysis Date: 09/07/95

BS Lab ID: QC03347

Analyte	Spike Added	BS	%Rec #	Limits
Phenol	100	34.16	34	12-110
2-Chlorophenol	100	40.43	40	27-123
4-Chloro-3-methylphenol	100	46.77	47	23-97
4-Nitrophenol	100	59.02	59	10-80
Pentachlorophenol	100	45.9	46	9-103
1,4-Dichlorobenzene	50	20.8	42	36-97
N-Nitroso-di-n-propylamine	50	32.25	64	41-116
1,2,4-Trichlorobenzene	50	21.38	42	39-98
Acenaphthene	50	25.49	50	46-118
2,4-Dinitrotoluene	50	28.7	58	24-96
Pyrene	50	23.99	48	26-127

Surrogate	%Rec	Limits
2-Fluorophenol	15	21-110
Phenol-d5	38	10-110
2,4,6-Tribromophenol	61	10-123
Nitrobenzene-d5	49	35-114
2-Fluorobiphenyl	52	43-116
Terphenyl-d14	60	33-141

? Not within limit

BSD Lab ID: QC03348

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Phenol	100	31.99	32	12-110	6	<42
2-Chlorophenol	100	38.94	39	27-123	3	<40
4-Chloro-3-methylphenol	100	45.69	46	23-97	2	<42
4-Nitrophenol	100	63.03	63	10-80	7	<50
Pentachlorophenol	100	48.89	49	9-103	6	<50
1,4-Dichlorobenzene	50	20.53	42	36-97	0	<28
N-Nitroso-di-n-propylamine	50	33.32	66	41-116	3	<38
1,2,4-Trichlorobenzene	50	20.67	42	39-98	0	<28
Acenaphthene	50	25.53	52	46-118	4	<31
2,4-Dinitrotoluene	50	29.6	60	24-96	3	<38
Pyrene	50	25	50	26-127	4	<31

Surrogate	%Rec	Limits
2-Fluorophenol	13	21-110
Phenol-d5	35	10-110
2,4,6-Tribromophenol	63	10-123
Nitrobenzene-d5	48	35-114
2-Fluorobiphenyl	51	43-116
Terphenyl-d14	64	33-141

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 11 outside limits
Spike Recovery: 0 out of 22 outside limits

Curtis & Tompkins, Ltd.

Client: Cape Environmental INC.

Laboratory Login Number: 122455

Project Name: Alameda
Project Number: 2403C.24

Report Date: 13 September 95

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **METHOD: SMWW 17:5520BF**

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
122455-001	MW4	Water	31-AUG-95	31-AUG-95	05-SEP-95	ND	mg/L	5	TR	23087
122455-002	MW2-R	Water	31-AUG-95	31-AUG-95	05-SEP-95	ND	mg/L	5	TR	23087
122455-003	MW6	Water	31-AUG-95	31-AUG-95	05-SEP-95	ND	mg/L	5	TR	23087
122455-004	TW/MW5	Water	31-AUG-95	31-AUG-95	05-SEP-95	ND	mg/L	5	TR	23087

ND = Not Detected at or above Reporting Limit (RL).

Curtis & Tompkins, Ltd.

QC Batch Report

Client: Cape Environmental INC.
Project Name: Alameda
Project Number: 2403C.24

Laboratory Login Number: 122455
Report Date: 13 September 95

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **QC Batch Number: 23087**

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	85%	SMWW 17:5520BF	05-SEP-95
BSD	83%	SMWW 17:5520BF	05-SEP-95

		Control Limits
Average Spike Recovery	84%	80% - 120%
Relative Percent Difference	2.6%	< 20%

TVH-Total Volatile Hydrocarbons

Client: Cape Environmental INC.
Project#: 2403C.24
Location: Alameda

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
122455-001	MW4	23090	08/31/95	09/05/95	09/05/95	
122455-002	MW2-R	23090	08/31/95	09/05/95	09/05/95	
122455-003	MW6	23090	08/31/95	09/05/95	09/05/95	
122455-004	TW/MW5	23090	08/31/95	09/05/95	09/05/95	

Analyte Diln Fac:	Units	122455-001 1	122455-002 1	122455-003 1	122455-004 1
Gasoline C4-C12	ug/L	<50	<50	<50	<50
Surrogate					
Trifluorotoluene	%REC	93	93	97	95
Bromobenzene	%REC	93	91	101	99

BTXE

Client: Cape Environmental INC.
Project#: 2403C.24
Location: Alameda

Analysis Method: BTXE
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
122455-001	MW4	23090	08/31/95	09/05/95	09/05/95	
122455-002	MW2-R	23090	08/31/95	09/05/95	09/05/95	
122455-003	MW6	23090	08/31/95	09/05/95	09/05/95	
122455-004	TW/MW5	23090	08/31/95	09/05/95	09/05/95	

Analyte Diln Fac:	Units	122455-001 1	122455-002 1	122455-003 1	122455-004 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	95	94	96	94
Bromobenzene	%REC	100	98	105	102

Curtis & Tompkins, Ltd.

Lab #: 122455 BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client:	Cape Environmental INC.	Analysis Method:	CA LUFT (EPA 8015M)
Project#:	2403C.24	Prep Method:	EPA 5030
Location:	Alameda		

METHOD BLANK

Matrix:	Water	Prep Date:	09/05/95
Batch#:	23090	Analysis Date:	09/05/95
Units:	ug/L		
Diln Fac:	1		

MB Lab ID: QC03350

Analyte	Result	
Gasoline C4-C12	<50	
Surrogate	**%Rec**	**Recovery Limits**
Trifluorotoluene	96	65-135
Bromobenzene	95	65-135

Curtis & Tompkins, Ltd.

Lab #: 122455 BATCH QC REPORT

BTXE

Client: Cape Environmental INC.
Project#: 2403C.24
Location: Alameda

Analysis Method: BTXE
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 23090
Units: ug/L
Diln Fac: 1

Prep Date: 09/05/95
Analysis Date: 09/05/95

MB Lab ID: QC03350

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	95	75-125
Bromobenzene	99	75-125

Curtis & Tompkins, Ltd.

Lab #: 122455 BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Cape Environmental INC.
Project#: 2403C.24
Location: Alameda

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 122462-002
Matrix: Water
Batch#: 23090
Units: ug/L
Diln Fac: 1

Sample Date: 09/01/95
Received Date: 09/01/95
Prep Date: 09/05/95
Analysis Date: 09/05/95

MS Lab ID: QC03351

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline C4-C12	2006	<50.00	1902	95	75-125
Surrogate	**%Rec**	**Limits**			
Trifluorotoluene	105	65-135			
Bromobenzene	102	65-135			

MSD Lab ID: QC03352

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline C4-C12	2006	1916	96	75-125	1	<35
Surrogate	**%Rec**	**Limits**				
Trifluorotoluene	104	65-135				
Bromobenzene	103	65-135				

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

Curtis & Tompkins, Ltd

Lab #: 122455 BATCH QC REPORT

BTXE

Client: Cape Environmental INC.
Project#: 2403C.24
Location: Alameda

Analysis Method: BTXE
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 23090
Units: ug/L
Diln Fac: 1

Prep Date: 09/05/95
Analysis Date: 09/05/95

LCS Lab ID: QC03349

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	20.9	20	105	85-115
Toluene	20.3	20	102	85-115
Ethylbenzene	20.5	20	103	85-115
m,p-Xylenes	21.2	20	106	85-115
o-Xylene	19.7	20	99	85-115

Surrogate	%Rec	Limits
Trifluorotoluene	98	75-125
Bromobenzene	102	75-125

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

CHAIN OF CUSTODY FORM

Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710
(510) 486-0900 Phone
(510) 486-0532 Fax

Sampler: Larry Harlan

Report to: Same

Project No: Alameda

Company: Cape Env. Management

Project Name: 24036.24

Telephone: 310 533 4500

Turnaround Time: 5 day

Fax: 532 6022

Laboratory Number	Sample ID.	Sampling Date	Sampling Time	Matrix: Soil	Matrix: Water	Matrix: Waste	# of Containers	Preservative: HCl	Preservative: HNO3	Preservative: ICE	Field Notes	Analyses: Oil & Grease	Analyses: TEH	Analyses: TVH / BTEX	Analyses: 8010	Analyses: 8270	Analyses: TDS
	MW4	8-31-95	1220		X		2	X			VOA			X			
	MW4	"	1220				2	X			VOA				X		
	MW4	"	1220				1	X			1 L Amber	X					
	MW4	"	1220				1				1 L Amber		X				
	MW4	"	1303				1				1 L Amber					X	
	MW4	"	1220				1				250ml Poly						X
	MW2-R	"	1335				2	X			VOA			X			
	MW2-R	"	1335				2	X			VOA				X		
	MW2-R	"	1335				1	X			1 L Amber	X					
	MW2-R	"	1335				1				1 L Amber		X				
	MW2-R	"	1335				1				1 L Amber					X	
	MW2-R	"	1335		X		1				250ml Poly						X
					X												

NOTES:

RELINQUISHED BY:

Larry Harlan 8-31-95 1801 DATE/TIME

DATE/TIME

DATE/TIME

RECEIVED BY:

Damara Moore 8/31/95 6pm DATE/TIME

DATE/TIME

DATE/TIME

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CHAIN OF CUSTODY FORM

Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710
(510) 486-0900 Phone
(510) 486-0532 Fax

Sampler: Larry Harlan

Report to: same

Project No: Alameda

Company: Cape Env. Management

Project Name: 2403C.24

Telephone: 310 532 4500

Turnaround Time: 5 day

Fax: 532 6022

Laboratory Number	Sample ID.	Sampling Date	Sampling Time	Matrix: Soil	Matrix: Water	Matrix: Waste	# of Containers	Preservative: HCl	Preservative: HNO3	Preservative: Other	Preservative: Ice	Field Notes	Analyses: Oil & Grease	Analyses: TEH	Analyses: TVH/BTEX	Analyses: 8010	Analyses: 8270	Analyses: TDS
	MW6	8-31-95	1415		X		2	X				VOA			X			
	MW6	"	1415				2	X				VOA				X		
	MW6	"	1415				1	X				1 L Amber	X					
	MW6	"	1415				1					1 L Amber		X				
	MW6	"	1415				1					1 L Amber					X	
	MW6	"	1415				1					250ml Poly						X
	TW MW5	"	1540				2	X				VOA			X			
	TW/MW5	"	1540				2	X				VOA				X		
	TW/MW5	"	1540				1	X				1L Amber	X					
	TW/MW5	"	1540				1					1L Amber					X	
	TW/MW5	"	1540				1					1L Amber		X				
	TW/MW5	8-31-95	1540			X	1					250ml Poly						X

NOTES:

RELINQUISHED BY:

Larry Harlan 8-31-95 1801
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Damara Moore 8/31/95 6pm
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Berkeley, CA 94710
(510) 486-0900 Phone
(510) 486-0532 Fax

Sampler: Larry Harlan

Report to: SAME

Project No: 24036.24

Company: Cape Env. Management Inc

Project Name: Alameda

Telephone: 310 532 4500

Turnaround Time: 5 day

Fax: 310 532 6022

Laboratory Number	Sample ID.	Sampling Date	Sampling Time	Matrix: Soil	Matrix: Water	Matrix: Sediment	# of Containers	Preservative: HCl	Preservative: HNO3	Preservative: Other	Preservative: Ice	Field Notes	Analyses: O&G	Analyses: TEH	Analyses: TVH/BTEX	Analyses: 8010	Analyses: 8240	Analyses: TDS
	MW 1	8/31/95	1634		X		2	X				VOA						
	MW 1	"	1634				2	X				VOA						
	MW 1	"	1634				1	X				1 L Amber						
	MW 1	"	1634				1					1 L Amber					X	
	MW 1	"	1634				1					1 L Amber		X				
	MW 1	"	1634		X		1					250ml Poly						
	~~MW 1~~																	

NOTES:

RELINQUISHED BY:

Larry M Harlan 8-31-95 1801 DATE/TIME

DATE/TIME

DATE/TIME

RECEIVED BY:

Damara Moore 8/31/95 6pm DATE/TIME

DATE/TIME

DATE/TIME

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Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

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

Prepared for:

Cape Environmental INC.
20280 South Vermont Ave
Suite 250
Torrance, CA 90502

Date: 27-SEP-95
Lab Job Number: 122702
Project ID: 2403C.24
Location: Alameda

Reviewed by: _____

Reviewed by: _____

Curtis & Tompkins, Ltd.

Client: Cape Environmental INC.

Laboratory Login Number: 122702

Project Name: Alameda
Project Number: 2403C.24

Report Date: 27 September 95

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **METHOD:** SMWW 17:5520BF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
122702-001	MW1	Water	31-AUG-95	31-AUG-95	26-SEP-95	ND	mg/L	5	TR	23520

ND = Not Detected at or above Reporting Limit (RL).

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 122702
CLIENT: CAPE ENVIRONMENTAL INC.
PROJECT ID: 2403C.24
LOCATION: ALAMEDA

DATE SAMPLED: 08/31/95
DATE RECEIVED: 08/31/95
DATE ANALYZED: 09/05/95
DATE REPORTED: 09/27/95

ANALYSIS: EPA 160.1
ANALYSIS METHOD: TOTAL DISOLVED SOLIDS

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
122702-001	MW-1	410	mg/L	10
METHOD BLANK	N/A	ND	mg/L	10

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: SAMPLE DUPLICATE OF 122455-001

RPD, %	<1

Curtis & Tompkins, Ltd.

QC Batch Report

Client: Cape Environmental INC.
Project Name: Alameda
Project Number: 2403C.24

Laboratory Login Number: 122702
Report Date: 27 September 95

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **QC Batch Number: 23520**

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	86%	SMWW 17:5520BF	26-SEP-95
BSD	84%	SMWW 17:5520BF	26-SEP-95

		Control Limits
Average Spike Recovery	85%	80% - 120%
Relative Percent Difference	2.2%	< 20%

Curtis & Tompkins, Ltd.

VERBAL ADDITIONS/CANCELLATIONS TO ANALYSIS REQUEST SHEET

Client: Capó Date: 9/20/95

Requested By: Tony Hale Time: _____ AM _____ PM

Recorded By: TB

Current Lab ID (Previous Lab ID)	Client ID	Circle Matrix	Specify add or cancel	Analysis	Due Date
(12295)	MW 1	water soil waste oil other	dd	TDS SSOBF	9/26
( )		water soil waste oil other			
( )		water soil waste oil other			
( )		water soil waste oil other			
( )		water soil waste oil other			
( )		water soil waste oil other			

CHAIN OF CUSTODY FORM 12702

Page 3 of 3

Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710
(510) 486-0900 Phone
(510) 486-0532 Fax

Sampler: Larry Harlan

Report to: SAMG

Project No: 24036.24

Company: Cape Env. Management Inc

Project Name: Alameda

Telephone: 310 532 4500

Turnaround Time: 5 day

Fax: 310 532 6022

Laboratory Number	Sample ID.	Sampling Date	Sampling Time	Matrix: Soil	Matrix: Water	Matrix: Sludge	# of Containers	Preservative: HCl	Preservative: HNO3	Preservative: Other	Preservative: Ice	Field Notes	Analyses: O&G & Grease	Analyses: TEH	Analyses: TVH/BTEX	Analyses: 8010	Analyses: 8240	Analyses: TDS
	MW1	8.31.95	1634		X		2	X				VOA	X		X	X		
	MW1	"	1634				2	X				VOA						
	MW1	"	1634				1	X				1 L Amber						
	MW1	"	1634				1					1 L Amber					X	
	MW1	"	1634				1					1 L Amber		X				
	MW1	"	1634		X		1					250ml Poly						X
	MW1																	

NOTES:

RELINQUISHED BY:

Larry M Harlan 8.31.95 1801 DATE/TIME

DATE/TIME

DATE/TIME

RECEIVED BY:

Damara Moore 8/31/95 DATE/TIME

Lam DATE/TIME

DATE/TIME

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SEP 27 '95 13:02 C&T