PORT OF OAKLAND

September 23, 1992

Mr. Barney Chan
Hazardous Materials Specialist
Alameda Co. Environmental Health, Hazardous Materials Div.
Alameda County Health Care Services Agency
80 Swan Way
Oakland, CA 94621

#1049

SUBJECT: Report of Quarterly Groundwater Monitoring at United Airlines Maintencance Hangar, 1100 Airport Drive, Oakland.

Dear Mr. ~~Smith~~:

This letter reports the results of quarterly groundwater monitoring at the United Airlines hangar, Oakland Airport located at 1100 Airport Dirve, Oakland, California (Figure 1). There are two wells at the site, next to the locations of a former underground storage tanks (Figure 2). Uribe & Associates (U&A) collected quarterly groundwater samples, as outlined in the site work plans, on August 6 and 7, 1992.

Water levels were measured at 3.67 (well MW-1-2) and 3.26 (well MW-1-3) feet below ground surface. The corresponding surface and groundwater elevations are summerized in Table 1. The presumed groundwater gradient is to the south.

After the wells were purged, water samples were collected ~~form~~ from each well. No free product or sheen was observed in any of the samples. The temperature of the purged water ranged between 74 and 78 degrees F; pH ranged between 7.1 and 8.7. The completed field report form used during sampling is attached.

The water samples were analyzed by Clayton Environmental Laboratory. The samples from MW-1-3 were analyzed for TPH-jet fuel (EPA Method 3510, Modified), TPH-gasoline (EPA Mehtod 5030, Modified), BTEX (EPA Method 8020), Oil and Grease (SM 5520) and Volatile Organic Compounds (EPA Method 8240). The sample form MW-1-2 was analyzed for TPH-jet fuel, TPH-gasoline, BTEX, and Oil and Grease. The results are summarized in Table 2. The laboratory reported that the samples analyzed for jet fuel did not match the jet fuel standard.

Please call if you have any questions.

Sincerely,

Jon Anderson (for)

Neil Werner
Environmental Compliance Supervisor
Port of Oakland

Check to see what CHC were found in MW-1-3 ~~the~~ tank area initially. Is MW situated correctly?

cc: Alan E. White, Uribe & Associates

Attachments

530 Water Street ■ Jack London's Waterfront ■ P.O. Box 2064 ■ Oakland, California 94604-2064
Telephone (510) 272-1100 ■ Fax (510) 272-1172 ■ Cable address, PORTOFOAK, Oakland

Table 1: Elevation of Groundwater Surface (Feet)

Date	Surface Elevation[1]	Time	GW Depth[2]	GW Elevation[3]
MW-1-2				
May 15, 1992	7.43	2:45	3.16	4.27
August 6, 1992	7.43	11:47	3.67	3.76
(Well installed May 13, 1992)				
MW-1-3				
May 15, 1992	6.97	11:40	3.16	3.81
August 6, 1992	6.97	2:48	3.26	3.71
(Well installed May 13, 1992)				

[1] *Elevation of ground surface relative to mean lower low water (3.2 feet below mean sea level) surveyed by Bissel & Karn.*

[2] *Depth below surface.*

[3] *Elevation of groundwater above mean lower low water.*

Table 2: Summary of Laboratory Results

Concentrations in mg/L

Date	TPH-Gasoline	TPH-Jet Fuel	Oil & Grease	VOCs 8240	Benzene	Toluene	Ethylbenzene	m,p-Xylenes	o-Xylene
MW-1-2									
May 15, 1992	na	4.9	na	na	0.001	0.001	0.002	0.001	0.007
August 7, 1992	0.220	6.4*	<5	na	0.0004	<0.0003	0.0014	<0.0004	0.0037
MW-1-3									
May 15, 1992	<0.050	na	<5	na	<0.0004	<0.0003	<0.0003	<0.0004	<0.0004
August 7, 1992	<0.050	0.8*	<5	nd	<0.0004	<0.0003	<0.0003	<0.0004	<0.0004

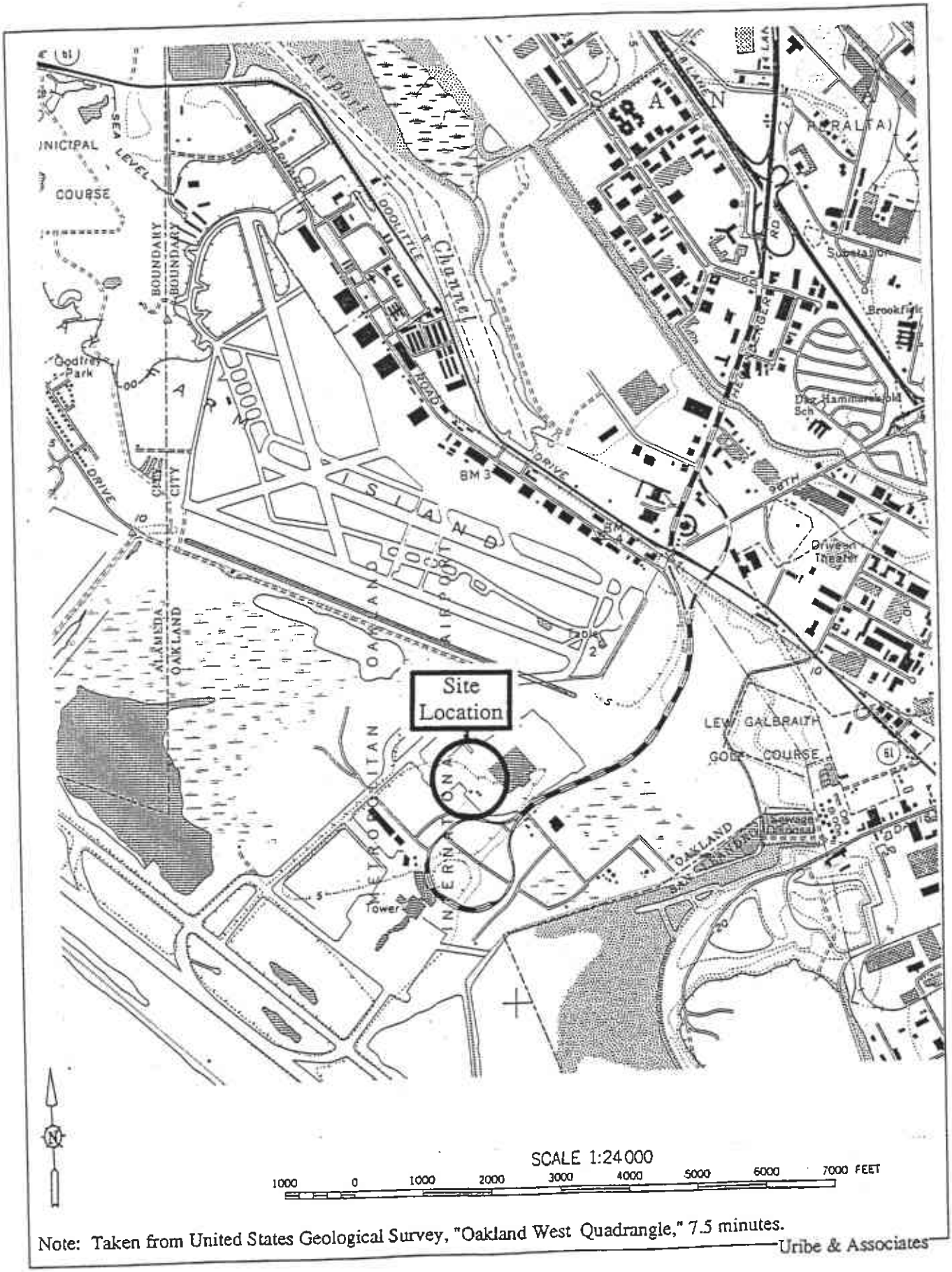
TPHd

Notes:

* *Laboratory reported as not matching standard.*

nd = not detected for all compounds analyzed.

na = not analyzed.



Note: Taken from United States Geological Survey, "Oakland West Quadrangle," 7.5 minutes.

Figure 1: Site Location Map

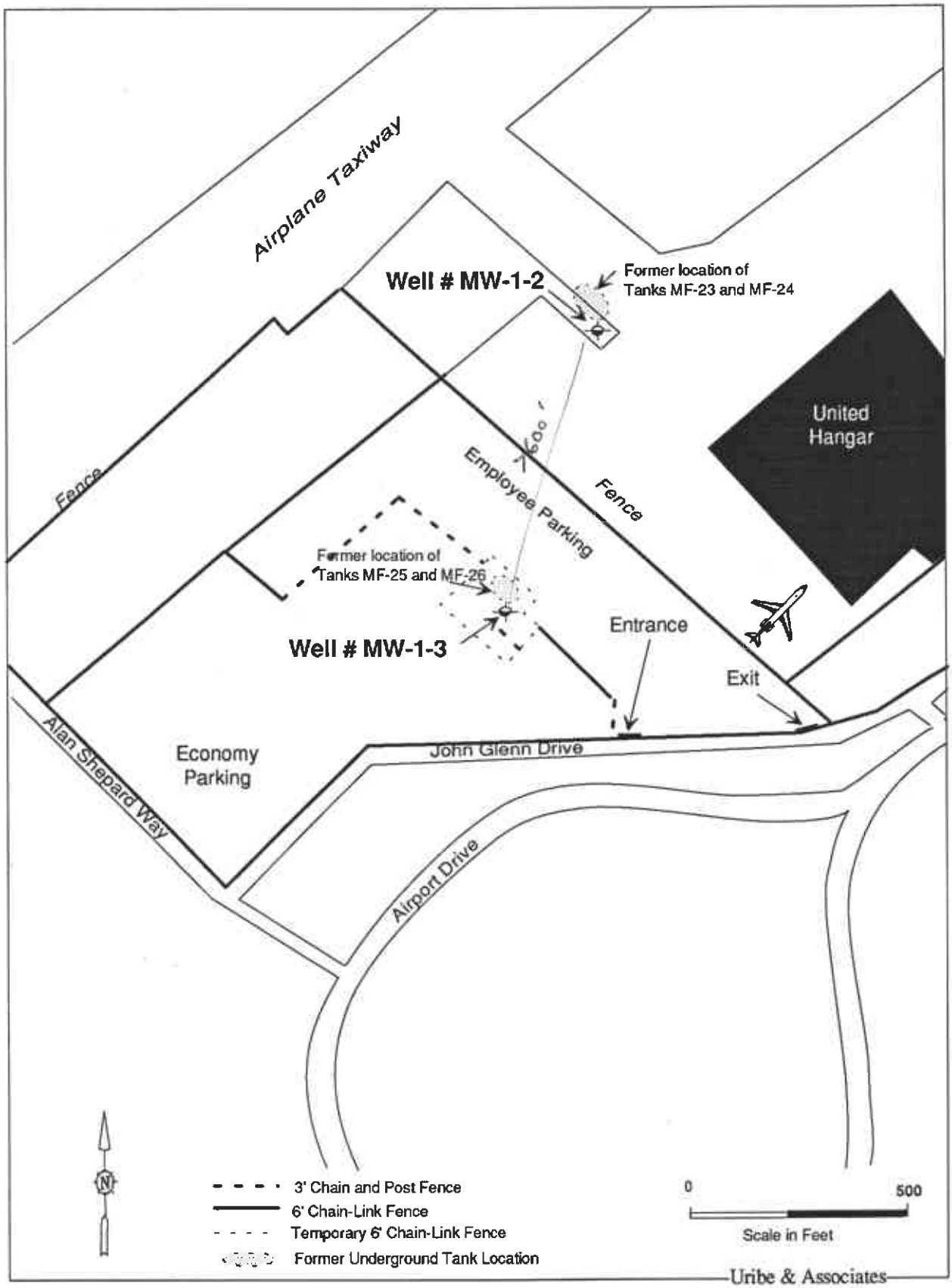


Figure 2: Site Plan Map of Monitoring Wells MW-1-2 and MW-1-3 at United Hangar

Monitoring Well Sampling Form

Site Location: Port of Oakland - MF-25 & MF-26 Date: 8/6-7/92

Well Location: 1100 Airport Drive, Economy Parking lot Project Reference #: 96-401 & 96-403

Well #	Time of Sampling	Water Level	Free Product Thickness	Total Depth	Bailed Water Volume	Temperature degrees F	pH	Electric Conductivity
MW-1-3	2:48	3.26 feet	- -	13.3 feet	2.7 gal 5 gal - dry	74 75.1	7.5 7.1	15440 umhos/cm 17580 umhos/cm
Sample Collected	4:00							
MW-1-2	11:47	3.67 feet	- -	9.2 feet	1.5 gal 3 gal 8 gal	78.2 76.9 75.7	8.1 8.7 8.1	3740 umhos/cm 4200 umhos/cm 3100 umhos/cm

Water Level Measurement Method: Flat tape water level meter

Free Product Thickness Measurement Method: NA

Well Purging Procedures: Hand bail

Well-Purge Water Characterization and Disposal Methods:
Purged water placed in drum on site. If lab results not detect, dump water in storm drain. Otherwise check other disposal options.

Comments:

Sampling Performed by: John Borrego

U&A Form: H2Omonit.xls

Western Operations

1252 Quarry Lane
P.O. Box 9019
Pleasanton, CA 94566
(510) 426-2600
Fax (510) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS

August 17, 1992

Mr. John Borrego
URIBE & ASSOCIATES
2930 Lakeshore Ave, Ste. 200
Oakland, CA 94610

Client Ref. 96.4
Clayton Project No. 92080.69

Dear Mr. Borrego:

Attached is our analytical laboratory report for the samples received on August 7, 1992. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Maryann Gambino, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Michael Lynch for

Ronald H. Peters, CIH
Director, Laboratory Services
Western Operations

RHP/tb
Attachments

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96.4
Clayton Project No. 92080.69

Sample Identification:	MW-1-3	Date Sampled:	08/06/92
Lab Number:	9208069-01A	Date Received:	08/07/92
Sample Matrix/Media:	WATER	Date Prepared:	08/10/92
Preparation Method:	EPA 5030	Date Analyzed:	08/10/92
Analytical Method:	EPA 8015/8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	ND	0.4
Toluene	108-88-3	ND	0.3
Ethylbenzene	100-41-4	ND	0.3
p,m-Xylenes	---	ND	0.4
o-Xylene	95-47-6	ND	0.4
Gasoline	---	ND	50
SURROGATE		RECOVERY (%)	LIMITS (%)
a,a,a-Trifluorotoluene	98-08-8	97	50 - 150

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96.4
Clayton Project No. 92080.69

Sample Identification:	MW-1-2	Date Sampled:	08/07/92
Lab Number:	9208069-02A	Date Received:	08/07/92
Sample Matrix/Media:	WATER	Date Prepared:	08/10/92
Preparation Method:	EPA 5030	Date Analyzed:	08/10/92
Analytical Method:	EPA 8015/8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	0.4	0.4
Toluene	108-88-3	ND	0.3
Ethylbenzene	100-41-4	1.4	0.3
p,m-Xylenes	---	ND	0.4
o-Xylene	95-47-6	3.7	0.4
Gasoline	---	220	50
SURROGATE		RECOVERY (%)	LIMITS (%)
a,a,a-Trifluorotoluene	98-08-8	96	50 - 150

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96.4
Clayton Project No. 92080.69

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9208069-03A	Date Received:	--
Sample Matrix/Media:	WATER	Date Prepared:	08/10/92
Preparation Method:	EPA 5030	Date Analyzed:	08/10/92
Analytical Method:	EPA 8015/8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	ND	0.4
Toluene	108-88-3	ND	0.3
Ethylbenzene	100-41-4	ND	0.3
p,m-Xylenes	---	ND	0.4
o-Xylene	95-47-6	ND	0.4
Gasoline	---	ND	50
SURROGATE		RECOVERY (%)	LIMITS (%)
a,a,a-Trifluorotoluene	98-08-8	97	50 - 150

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96.4
Clayton Project No. 92080.69

Sample Identification:	MW-1-3	Date Sampled:	08/06/92
Lab Number:	9208069-01E	Date Received:	08/07/92
Sample Matrix/Media:	WATER	Date Prepared:	08/10/92
Preparation Method:	EPA 5030	Date Analyzed:	08/10/92
Analytical Method:	EPA 8240		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
Purgeable Organics			
Chloromethane	74-87-3	ND	5
Bromomethane	74-83-9	ND	5
Vinyl chloride	75-01-4	ND	5
Chloroethane	75-00-3	ND	5
Methylene chloride	75-09-2	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,1-Dichloroethane	75-35-3	ND	5
Trans-1,2-Dichloroethene	156-60-5	ND	5
Cis-1,2-Dichloroethene	156-59-2	ND	5
Chloroform	67-66-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
Carbon tetrachloride	56-23-5	ND	5
Bromodichloromethane	75-27-4	ND	5
1,2-Dichloropropane	78-87-5	ND	5
Cis-1,3-Dichloropropene	10061-01-5	ND	5
Trichloroethene	79-01-6	ND	5
Benzene	71-43-2	ND	5
Dibromochloromethane	124-48-1	ND	5

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96.4
Clayton Project No. 92080.69

Sample Identification: MW-1-3
Lab Number: 9208069-01E
Sample Matrix/Media: WATER
Preparation Method: EPA 5030
Analytical Method: EPA 8240

Date Sampled: 08/06/92
Date Received: 08/07/92
Date Prepared: 08/10/92
Date Analyzed: 08/10/92

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	5
Trans-1,3-Dichloropropene	10061-02-6	ND	5
2-Chloroethylvinylether	110-75-8	ND	5
Bromoform	75-25-2	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	ND	5
Chlorobenzene	108-90-7	ND	5
Ethylbenzene	100-41-4	ND	5
1,3-Dichlorobenzene	541-73-7	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Freon 113	76-13-1	ND	5
p,m-Xylenes	--	ND	5
o-Xylene	95-47-6	ND	5
Acetone	67-64-1	ND	20
2-Butanone	78-93-3	ND	20
4-Methyl-2-pentanone	108-10-1	ND	20
2-Hexanone	591-78-6	ND	20
Vinyl acetate	108-05-4	ND	10

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96.4
Clayton Project No. 92080.69

Sample Identification: MW-1-3
Lab Number: 9208069-01E
Sample Matrix/Media: WATER
Preparation Method: EPA 5030
Analytical Method: EPA 8240

Date Sampled: 08/06/92
Date Received: 08/07/92
Date Prepared: 08/10/92
Date Analyzed: 08/10/92

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	5
Styrene	100-42-5	ND	5
Surrogates		Recovery (%)	QC Limits (%) LCL UCL
1,2-Dichloroethane-d4	17060-07-0	114	76 - 114
Toluene-d8	2037-26-5	98	88 - 110
Bromofluorobenzene	460-00-4	98	86 - 115

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96.4
Clayton Project No. 92080.69

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9208069-03A	Date Received:	--
Sample Matrix/Media:	WATER	Date Prepared:	08/10/92
Preparation Method:	EPA 5030	Date Analyzed:	08/10/92
Analytical Method:	EPA 8240		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
Purgeable Organics			
Chloromethane	74-87-3	ND	5
Bromomethane	74-83-9	ND	5
Vinyl chloride	75-01-4	ND	5
Chloroethane	75-00-3	ND	5
Methylene chloride	75-09-2	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,1-Dichloroethane	75-35-3	ND	5
Trans-1,2-Dichloroethene	156-60-5	ND	5
Cis-1,2-Dichloroethene	156-59-2	ND	5
Chloroform	67-66-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
Carbon tetrachloride	56-23-5	ND	5
Bromodichloromethane	75-27-4	ND	5
1,2-Dichloropropane	78-87-5	ND	5
Cis-1,3-Dichloropropene	10061-01-5	ND	5
Trichloroethene	79-01-6	ND	5
Benzene	71-43-2	ND	5
Dibromochloromethane	124-48-1	ND	5

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96.4
Clayton Project No. 92080.69

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9208069-03A	Date Received:	--
Sample Matrix/Media:	WATER	Date Prepared:	08/10/92
Preparation Method:	EPA 5030	Date Analyzed:	08/10/92
Analytical Method:	EPA 8240		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
Purgeable Organics (continued)			
1,1,2-Trichloroethane	79-00-5	ND	5
Trans-1,3-Dichloropropene	10061-02-6	ND	5
2-Chloroethylvinylether	110-75-8	ND	5
Bromoform	75-25-2	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	ND	5
Chlorobenzene	108-90-7	ND	5
Ethylbenzene	100-41-4	ND	5
1,3-Dichlorobenzene	541-73-7	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Freon 113	76-13-1	ND	5
p,m-Xylenes	--	ND	5
o-Xylene	95-47-6	ND	5
Acetone	67-64-1	ND	20
2-Butanone	78-93-3	ND	20
4-Methyl-2-pentanone	108-10-1	ND	20
2-Hexanone	591-78-6	ND	20
Vinyl acetate	108-05-4	ND	10

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96.4
Clayton Project No. 92080.69

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9208069-03A	Date Received:	--
Sample Matrix/Media:	WATER	Date Prepared:	08/10/92
Preparation Method:	EPA 5030	Date Analyzed:	08/10/92
Analytical Method:	EPA 8240		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
Purgeable Organics (continued)			
Carbon disulfide	75-15-0	ND	5
Styrene	100-42-5	ND	5
Surrogates		Recovery (%)	QC Limits (%) LCL UCL
1,2-Dichloroethane-d4	17060-07-0	98	76 - 114
Toluene-d8	2037-26-5	98	88 - 110
Bromofluorobenzene	460-00-4	90	86 - 115

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96.4
Clayton Project No. 92080.69

Sample Matrix/Media: WATER
Analysis Method: SM 5520B

Date Received: 08/07/92
Date Analyzed: 08/17/92

Lab Number	Sample Identification	Date Sampled	Total Oil and Grease (mg/L)	Detection Limit (mg/L)
01G	MW-1-3	08/06/92	ND	5
02E	MW-1-2	08/07/92	ND	5
03A	METHOD BLANK	--	ND	5

ND Not detected at or above limit of detection
< Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96.4
Clayton Project No. 92080.69

Sample Matrix/Media: WATER
Preparation Method: EPA 3510
Analysis Method: EPA 8015

Date Received: 08/07/92
Date Prepared: 08/12/92
Date Analyzed: 08/12/92

Lab Number	Sample Identification	Date Sampled	Jet Fuel (ug/L)	Detection Limit (ug/L)
01C	MW-1-3	08/06/92	800a	50
02C	MW-1-2	08/07/92	6,400a	50
03A	METHOD BLANK	--	ND	50

ND Not detected at or above limit of detection
< Not detected at or above limit of detection
-- Information not available or not applicable

a Extractable hydrocarbons quantitated as jet fuel do not match typical jet fuel pattern

URIBE & ASSOCIATES
2930 LAKESHORE AVENUE
SUITE TWO HUNDRED
OAKLAND, CALIFORNIA 94610
415 - 832 - 2233
FAX 415 - 832 - 2237

9208069

CHAIN OF CUSTODY RECORD

PROJ. NO. 96.4

PROJECT NAME: Port of Oakland 1100 Airport Dr.

SAMPLERS: (Signature) John C Borrego

NO.	DATE	TIME	COMP	GRAB	SAMPLE I.D.	NO. OF CONTAINERS	TPH-G W/BTEX	TPH-Telfuel	8240	Oil & Grease 5520 B
1	8/6				MW-1-3	4 VOA 4L	X	X	X	X
2	8/7				MW-1-2	2 VOA 4L	X	X		X

Normal T.A.T
Bill Port of Oakland
Work order # ____

CHECK IF RUSH

REMARKS

8/10/92
by J. Borrego WORK ORDER # 028691 OK
028692

Relinquished by: (Signature) John C Borrego — Date/Time 8/7/92 4pm
Received by: (Signature) Jim Mitchell
Relinquished by: (Signature) Jim Mitchell — Date/Time 8/7/92 1715
Received by: (Signature)

Relinquished by: (Signature) — Date/Time
Received by: (Signature)
Relinquished by: (Signature) — Date/Time
Received for Laboratory by: (Signature) Rebecca L Chavelle — Date/Time 8/7/92 5:15

NAME
ADDRESS
PHONE NO.