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REPORT OF MONITORING WELL INSTALLATION  
1100 AIRPORT DRIVE,  
METROPOLITAN OAKLAND INTERNATIONAL AIRPORT

JUNE 22, 1992

*Reviewed 9/8/92*

Prepared For:  
Port of Oakland  
Oakland, California

Prepared By:  
Uribe & Associates  
Oakland, California

**REPORT OF MONITORING WELL INSTALLATION**  
**1100 AIRPORT DRIVE,**  
**METROPOLITAN OAKLAND INTERNATIONAL AIRPORT**

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June 22, 1992

**REPORT OF MONITORING WELL INSTALLATION**  
**1100 AIRPORT DRIVE,**  
**METROPOLITAN OAKLAND INTERNATIONAL AIRPORT**

**Summary**

This report documents the installation on May 13, 1992, of two monitoring wells (MW-1-2 and MW-1-3) at 1100 Airport Drive (George P. Miller Aviation Hangar at the Metropolitan Oakland International Airport), Oakland, California. Monitoring well MW-1-2 was installed within ten feet down-gradient of the excavated underground storage tanks MF-23 and MF-24. Monitoring well MW-1-3 was installed within ten feet down-gradient of the excavated underground storage tanks MF-25 and MF-26. Advance Drilling Company performed all drilling activities. Uribe & Associates (U&A) supervised the drilling activities and completed all borehole logs.

A report of tank removal (for tanks MF-23 and MF-24 near monitoring well MW-1-2) was prepared by Baseline Environmental Consulting and submitted to the Alameda County Health Care Services Agency (ACHCSA) in July, 1991. An additional report of tank removal (for tanks MF-25 and MF-26 near monitoring well MW-1-3) was prepared by U&A and submitted to ACHCSA in May, 1992. Based on these reports, the groundwater gradient was estimated to flow toward the southwest for both locations. Soil samples collected during the well drilling activities at MW-1-3 contained 100 mg/kg oil and grease. Water samples collected during completion activities for MW-1-2 contained a maximum of 7 ug/l benzene, toluene, ethylbenzene, and xylenes (BTEX). All other soil and water samples were below the detection limit for total petroleum hydrocarbons-gasoline (TPH-G) and BTEX (see Tables 1 and 2).

Site location maps (Figures 1 and 2), well bore profiles (Figures 3 and 4), borehole logs, and approved permit applications are included in this report.

## **Permits and Licenses**

A permit application for the installation of one monitoring well was sent to the Alameda County Flood Control and Water Conservation District (ACFCWCD) on April 29, 1992. The project was approved by Wyman Hong and assigned drilling permit number 92212. A second application was submitted on May 8, 1992, for an additional well installation at the same address. Per conversation with Craig Mayfield of the ACFCWCD, the additional well was incorporated into the existing permit. Although West HazMat Drilling (license number C57-554979) was listed on the application as the driller, Advance Drilling (license number C57-607458) replaced them as the drilling contractor.

## **Construction Details**

The groundwater monitoring wells were completed at a depth of 12 feet using a CME-45B hollow stem auger drill rig equipped with an eight-inch auger. Two-inch ~~screens~~ <sup>Casings</sup>, five feet in length with a 0.020-inch slot size, were placed in the boreholes. Two-inch PVC casing was installed to surface in both wells, and a sand pack of Number 3 gravel was placed from Total Depth to one foot above the top of the screens. Next, one-foot bentonite seals were placed in the annuli. Cement with 4% bentonite was placed in the annuli above the bentonite seal to the surface. The individual well profiles are attached along with the borehole logs.

## **Elevation Survey**

Bissel and Karn, Inc. surveyed the well elevations on May 18, 1992. The elevation for well MW-1-3 was 6.97 feet. The elevation for well MW-1-2 was 7.43 feet. A Port of Oakland benchmark (SAM D) located on Airport Drive was used as the control point for both wells. The Port of Oakland Datum references Mean Low Low Sea Level.

## **Development Procedures**

The monitoring wells were developed by West HazMat Drilling Corporation on May 15, 1992; U&A supervised the procedures. Approximately 23 gallons were bailed from MW-1-3; the well recharged at a rate of approximately one foot per minute. A surge block was run down the well after 12 gallons had been bailed. Temperature, pH, and conductivity readings were taken periodically. Water samples were taken when the water began to clear and the pH, conductivity, and temperature readings stabilized.

Approximately 27 gallons of water were bailed from MW-1-2. The well contained sand from 12 feet (Total Depth) to 9 feet. Sand continued to enter the well during bailing activities, and remained in the well at the 9-foot level, indicating that the screen may be damaged at or below 9 feet in this well. Water samples were taken, as well as conductivity, pH, and temperature readings, when the water above the sand began to clear.

The Monitoring Well Sampling Forms used by U&A to record well development and sampling activities are attached.

### ***Soil and Groundwater Sampling***

Core soil samples were collected during drilling activities. The samples were sent to Clayton Environmental Laboratories to be analyzed for total petroleum hydrocarbons as gasoline (TPH-G), and benzene, toluene, ethylbenzene, and xylenes (BTEX). In addition, MW-1-3-1 was analyzed for Oil and Grease. This sample contained 100 mg/kg Oil and Grease. The remaining results were below the detection limit for all analyzed constituents (see Table 2).

U&A collected water samples from the wells after completing the development procedures. The samples were also sent to Clayton Environmental Laboratories to be analyzed for BTEX, chlorides, and total dissolved solids. In addition, sample MW-1-2 was analyzed for TPH-Jet Fuel, and sample MW-1-3 was analyzed for oil and grease and TPH-G. Laboratory data sheets and chain of custody forms for both soil and water samples are included in this report. Analysis result summaries for soil and water samples are included in Tables 1 and 2.

*Should run OHC  
or VOA  
plus 8270  
Semi-volatiles*

**Table 1  
Summary of Water Sample Analysis**

Sample ID	MW-1-2	MW-1-3
TPH-G (ug/l)	--	<50
Benzene (ug/l)	1	<0.4
Toluene (ug/l)	1	<0.3
Ethylbenzene (ug/l)	2	<0.3
p,m-Xylenes (ug/l)	1	<0.4
o-Xylene (ug/l)	7	<0.4
TDS (mg/l)	2,200	5,900
Chlorides (mg/l)	730	3,100
Total Oil and Grease (mg/l)	--	<5
Total Jet Fuel (ug/l)	<b>4,900</b>	--

-- indicates not analyzed

**Table 2  
Summary of Soil Sample Analysis**

*Should run TPHd  
+ OHC*

Sample ID	MW-1-2-1	MW-1-3-1
TPH-G (mg/kg)	--	<0.3
Benzene (mg/kg)	<0.005	<0.005
Toluene (mg/kg)	<0.005	<0.005
Ethylbenzene (mg/kg)	<0.005	<0.005
p,m-Xylenes (mg/kg)	<0.005	<0.005
o-Xylene (mg/kg)	<0.005	<0.005
Total Oil and Grease (mg/kg)	--	<b>100</b>
Total Jet Fuel (mg/kg)	<1	--

-- indicates not analyzed



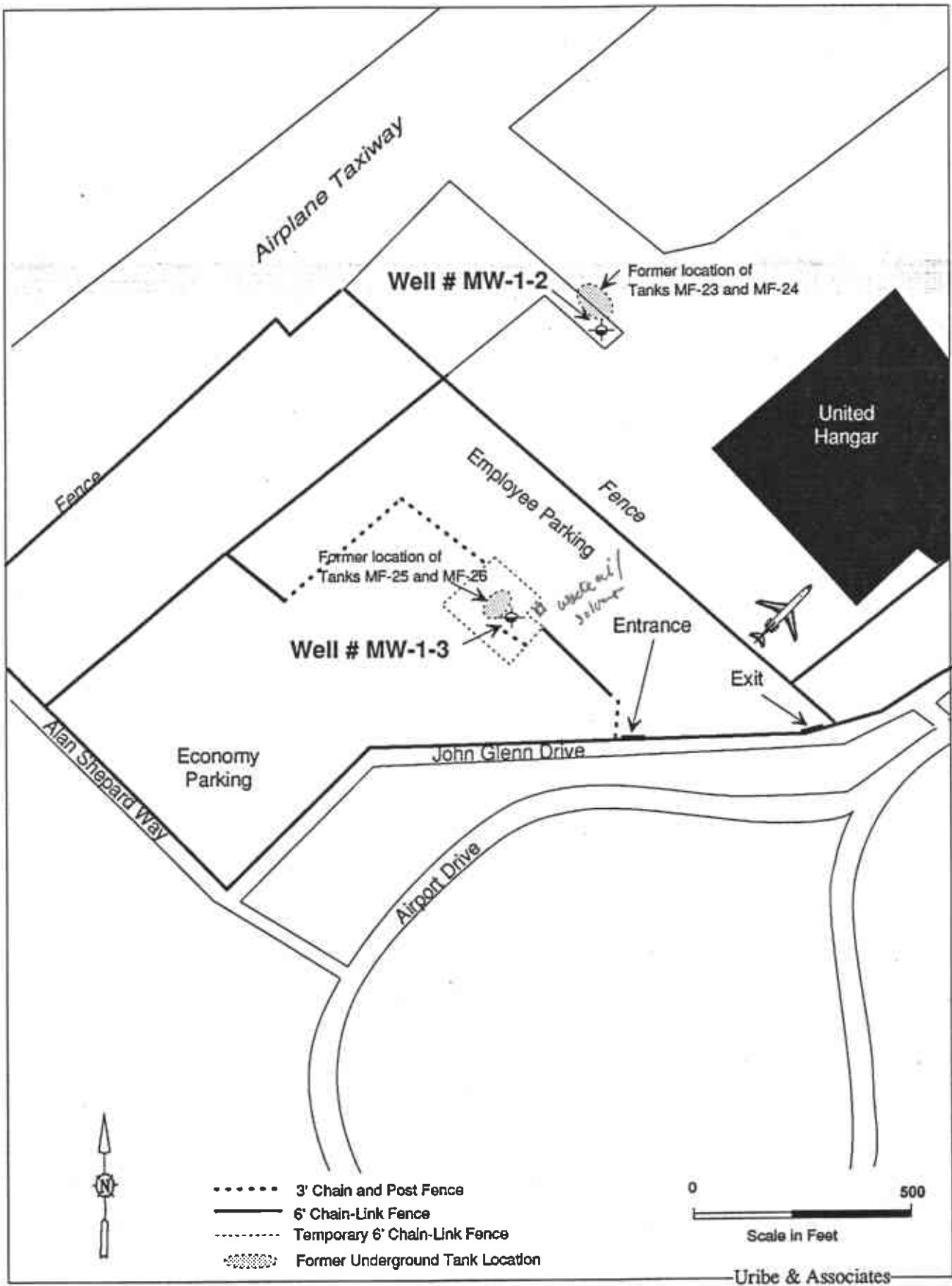


Figure 2: Site Plan Map of Monitoring Wells MW-1-2 and MW-1-3 at United Hangar



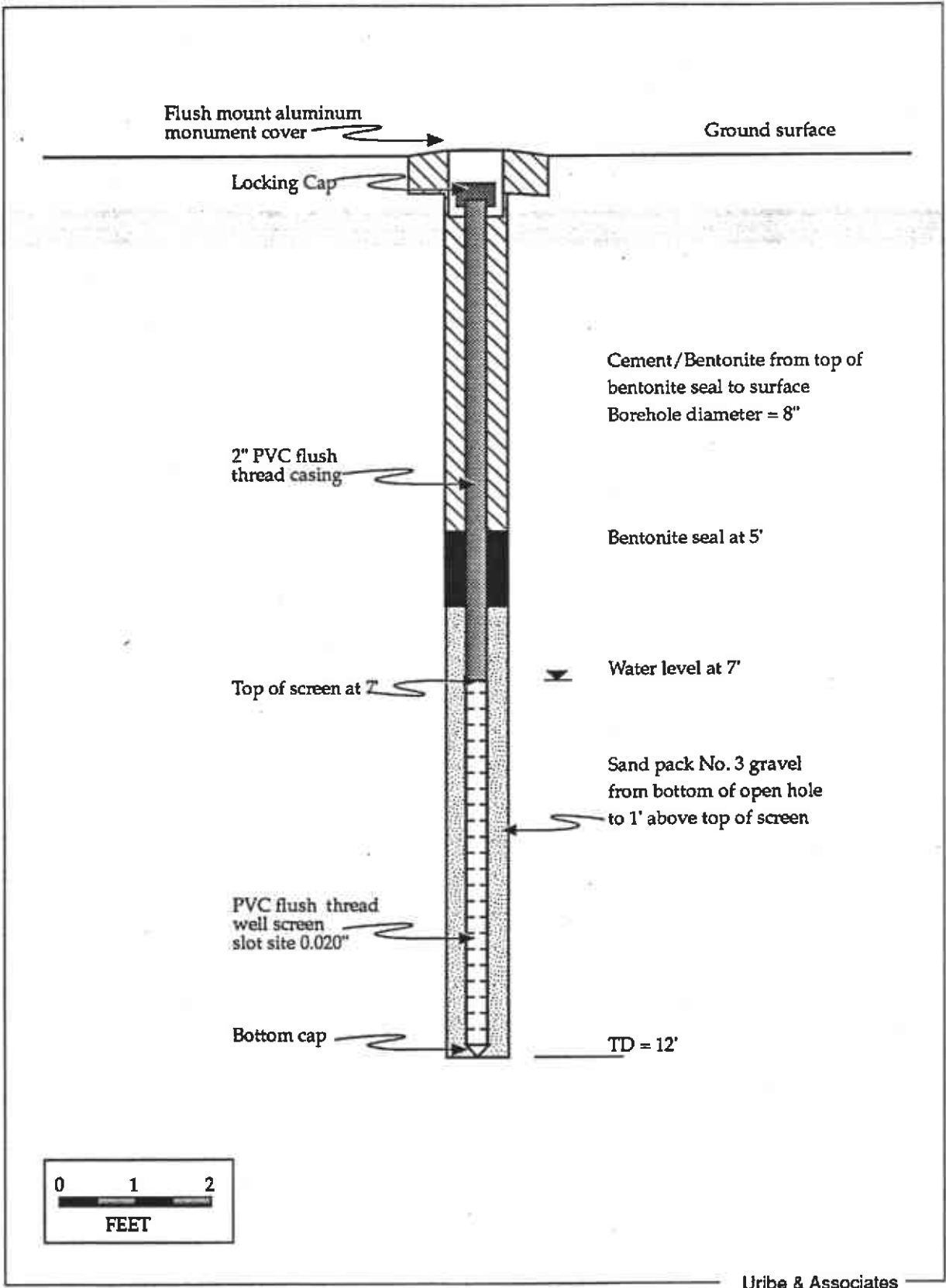


Figure 3: Monitoring Well MW-1-2 Construction Details

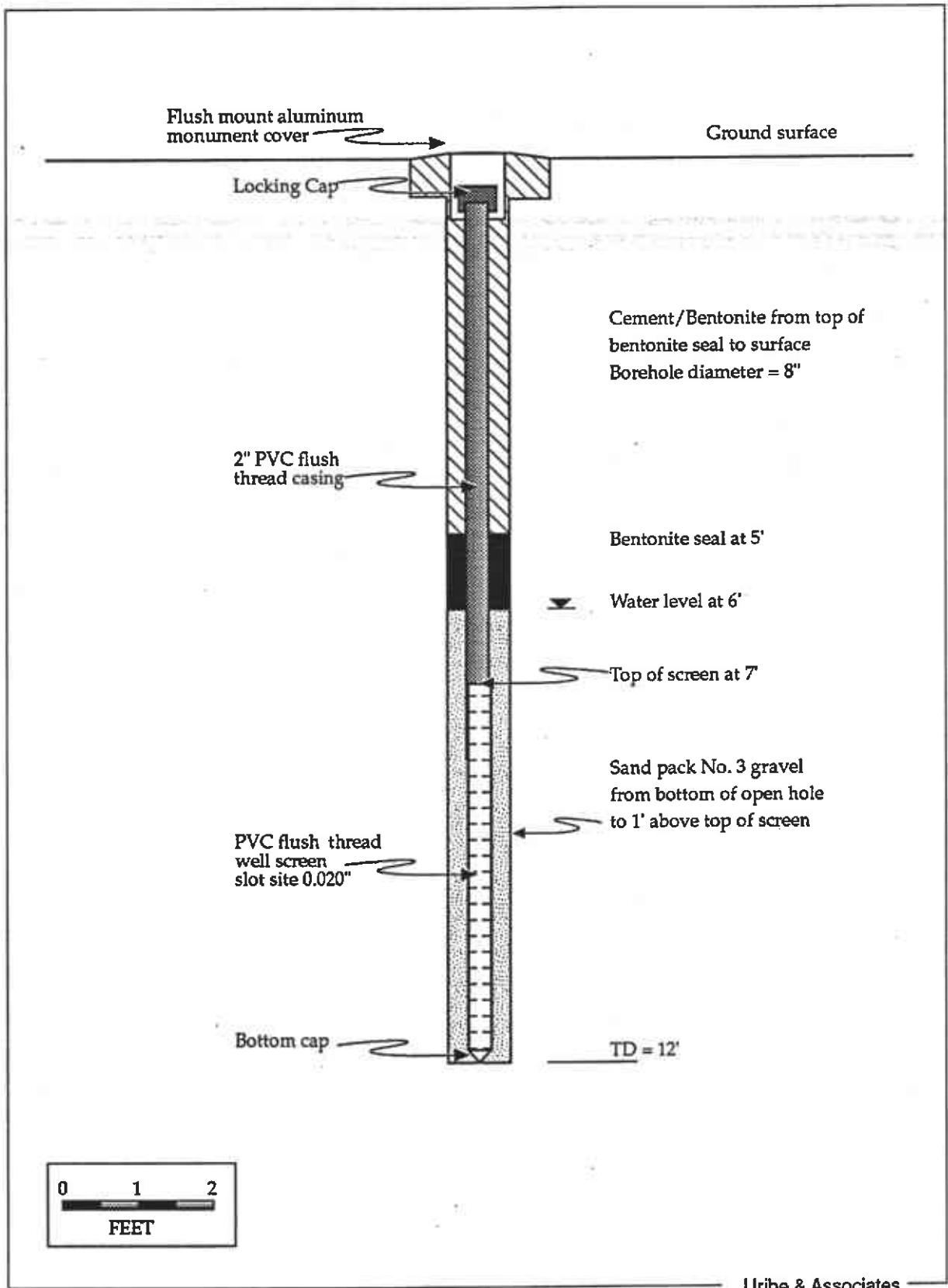


Figure 4: Monitoring Well MW-1-3 Construction Details

CLIENT: Port of Oakland				JOB NO: 96	BOREHOLE NUMBER: MW-1-2		
PROJECT:				LOCATION: 1100 Airport Drive, Tanks MF 23 and MF 24			
DRILLING CO: Advance Drilling Company				HOLE DIAMETER: 8"		ELEVATION: 7.43'	
DRILLING METHOD: Hollow-stem Auger				DATE: 5/13/92			
SAMPLING METHOD: Split-spoon				RECORDED BY: S. Baehr		PROJECT R.G.: K. Koford	
DEPTH (Feet)	BLOWS/ 6 INCH	CORE RECOV.	MOISTURE CONTENT	LITHOLOGIC DESCRIPTIONS / REMARKS	SAMPLE I.D. #	SAMPLE TIME	
1	17	100%	D	Fill, sand, rocks, pebbles			
	12		↓	↓			
2	14		M	Fine grained sand, slightly moist, greenish gray, no odor			
	10						
3	13			As above, increasing moisture			
	13			↓			
4	9			↓			
	10			Fine grained sand, this tube has wet sand, no odor			
5	12			Fine grained sand, blackish green, very moist, no odor			
	7		↓	As above			
6	12		W				
	13						
7	8		↓				
	18		▼	Encountered water	MW-1-2-1	12:35	
8	12		W				
	6			As above			
9	4						
	5			As above			
10	2						
	1			As above			
11	1						
	push						
12	push			As above			
	push	↓	↓	Clay streaks - greenish gray in middle and bottom tube	MW-1-2-2	1:00	
13				<i>why not verify clay aquitard of &gt; 0.5'</i>			
14							
15							
16							
17							
18							
19							
20							

CLIENT: Port of Oakland			JOB NO: 96	BOREHOLE NUMBER: MW-1-3		
PROJECT:			LOCATION: 1100 Airport Drive, Tanks MF 25 and MF 26			
DRILLING CO: Advance Drilling Company			HOLE DIAMETER: 8"		ELEVATION: 6.97'	
DRILLING METHOD: Hollow-stem Auger			DATE: 5/13/92			
SAMPLING METHOD: Split-spoon			RECORDED BY: S. Baehr		PROJECT R.G.: K. Koford	
DEPTH (Feet)	BLOWS/ 6 INCH	CORE RECOV.	MOISTURE CONTENT	LITHOLOGIC DESCRIPTIONS / REMARKS	SAMPLE I.D. #	SAMPLE TIME
1	7	100%	D	4" asphalt cover		
	10		↓	Fine grained sand, moist, no odor, brown, very well sorted		
2	14		M	unconsolidated		
	10					
3	13			Increasing moisture, grayish green		
	14			As above, increased moisture content		
4	8			As above, increased moisture content		
	10			As above, increased moisture content		
5	12			As above	MW-1-3-1	15:30
	10			Sand as above		
6	16		↓	Sand as above		
	20		▼	saturated with water (last brass tube only)		
7	13		W			
	15					
8	17			As above, saturated with water		
	8					
9	4			Greenish brown, pebbly		
	push					
10	1					
	1			Bay mud, gray black with abundant shell fragments		
11	1					
	1					
12	2					
	3	↓	↓	TD = 12'	MW-1-3-2	16:15
13						
14						
15						
16						
17						
18						
19						
20						







ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT  
 5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588 (510) 484-2600

**DRILLING PERMIT APPLICATION**

FOR OFFICE USE

FOR APPLICANT TO COMPLETE

George P. Miller  
 LOCATION OF PROJECT Aviation Hangar  
 00 Airport Dr., Oakland Intern'l Airport  
 Oakland, Ca.

PERMIT NUMBER 92212  
 LOCATION NUMBER \_\_\_\_\_

AGENT Port of Oakland  
 Address 530 Water St. Phone (510) 272-1178  
Oakland, Ca. Zip 94610

APPLICANT Uribe & Associates  
 Address 2930 Lakeshore Phone (510) 832-2233  
Oakland Zip 94610

TYPE OF PROJECT  
 Construction \_\_\_\_\_ Geotechnical Investigation \_\_\_\_\_  
 Cathodic Protection \_\_\_\_\_ General \_\_\_\_\_  
 Water Supply \_\_\_\_\_ Contamination \_\_\_\_\_  
 Monitoring X Well Destruction \_\_\_\_\_

PROPOSED WATER SUPPLY WELL USE  
 Domestic \_\_\_\_\_ Industrial \_\_\_\_\_ Other N/A  
 Municipal \_\_\_\_\_ Irrigation \_\_\_\_\_

DRILLING METHOD:  
 Conventional Rotary \_\_\_\_\_ Air Rotary \_\_\_\_\_ Auger X  
 Other \_\_\_\_\_

DRILLER'S LICENSE NO. 657-554979

WELL PROJECTS  
 Drill Hole Diameter 8 In. Maximum Depth 20 ft.  
 Casing Diameter 2 In. Number 1  
 Surface Seal Depth \_\_\_\_\_ ft.

GEOTECHNICAL PROJECTS  
 Number of Borings \_\_\_\_\_ Maximum Depth \_\_\_\_\_ ft.  
 Hole Diameter \_\_\_\_\_ In.

ESTIMATED STARTING DATE May 14, 1992  
 ESTIMATED COMPLETION DATE May 14, 1992

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE [Signature] Date 4/29/92

PERMIT CONDITIONS

Circled Permit Requirements Apply

- (A) GENERAL
  1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
  2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
  3. Permit is void if project not begun within 90 days of approval date.
- (B) WATER WELLS, INCLUDING PIEZOMETERS
  1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
  2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
- (C) GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.
- (D) CATHODIC. Fill hole above anode zone with concrete placed by tremie.
- (E) WELL DESTRUCTION. See attached.

Approved [Signature] Date 4 May 92  
 Wyman Hong



ZONE 7 WATER RESOURCES MANAGEMENT

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588

VOICE (510) 484-2600 FAX (510) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 1100 Airport Rd Oakland, CA

PERMIT NUMBER LOCATION NUMBER

PORT OF OAKLAND 530 Water St Oakland Phone (510) 272-1178 Zip 94607

PERMIT CONDITIONS

Circled Permit Requirements Apply

URIBE + ASSOCIATES 2130 Lakeshore Oakland Phone (510) 832-2133 Zip 94610

A. GENERAL

- 1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

PROJECT TYPE: Well Construction, Geotechnical Investigation, Contamination, Well Destruction

B. WATER WELLS, INCLUDING PIEZOMETERS

- 1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

PROPOSED WATER SUPPLY WELL USE: Domestic, Industrial, Municipal, Irrigation, Other N/A

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

DRILLING METHOD: Air Rotary, Auger X

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

DRILLER'S LICENSE NO. 657: 607458

E. WELL DESTRUCTION. See attached.

WELL PROJECTS: Drill Hole Diameter 8 in., Casing Diameter 2 in., Surface Seal Depth 20 ft.

GEOTECHNICAL PROJECTS: Number of Borings, Maximum Depth

ESTIMATED STARTING DATE May 14, 1992 ESTIMATED COMPLETION DATE May 14, 1992

Approved Date

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Date 3/8/92



Results of Analysis  
for  
Uribe & Associates/ Port of Oakland

Client Reference: 96  
Clayton Project No. 92052.26

Sample Identification:	MW-1-3	Date Sampled:	05/15/92
Lab Number:	9205226-02A	Date Received:	05/18/92
Sample Matrix/Media:	WATER	Date Prepared:	05/22/92
Preparation Method:	EPA 5030	Date Analyzed:	05/22/92
Analytical Method:	EPA 8015/8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
<u>BTEX/Gasoline</u>			
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
<u>SURROGATE</u>		<u>RECOVERY (%)</u>	<u>LIMITS (%)</u>
a,a,a-Trifluorotoluene	98-08-8	106	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  
Clayton Project No. 92052.26

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9205226-04A	Date Received:	--
Sample Matrix/Media:	WATER	Date Prepared:	05/22/92
Preparation Method:	EPA 5030	Date Analyzed:	05/22/92
Analytical Method:	EPA 8015/8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
<u>BTEX/Gasoline</u>			
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
<u>SURROGATE</u>		<u>RECOVERY (%)</u>	<u>LIMITS (%)</u>
a,a,a-Trifluorotoluene	98-08-8	105	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  
Clayton Project No. 92052.26

Sample Identification:	MW-1-2	Date Sampled:	05/15/92
Lab Number:	9205226-03A	Date Received:	05/18/92
Sample Matrix/Media:	WATER	Date Analyzed:	05/29/92
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)	
			LCL	UCL
<u>BTEX</u>				
Benzene	71-43-2	0.7	0.4	
Toluene	108-88-3	0.6	0.3	
Ethylbenzene	100-41-4	2.1	0.3	
p,m-Xylenes	---	0.7	0.4	
o-Xylene	95-47-6	6.9	0.4	
<u>Surrogates</u>		<u>Recovery (%)</u>	<u>QC Limits (%)</u>	
			LCL	UCL
a,a,a-Trifluorotoluene	98-08-8	107	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  
Clayton Project No. 92052.26

Sample Identification: MW-1-3  
Lab Number: 9205226-02  
Sample Matrix/Media: WATER

Date Sampled: 05/15/92  
Date Received: 05/18/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Chloride	3,100	1	mg/L	--	05/20/92	--	EPA 325.2
Total Dissolved Solids	5,900	10	mg/L	--	05/20/92	--	EPA 160.1
Total Oil and Grease	<5	5	mg/L	--	05/26/92	--	SM 5520B

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  
Clayton Project No. 92052.26

Sample Identification: MW-1-2  
Lab Number: 9205226-03  
Sample Matrix/Media: WATER

Date Sampled: 05/15/92  
Date Received: 05/18/92

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Chloride	730	1	mg/L	—	05/20/92	—	EPA 325.2
Oil Fuel	4,900	50	ug/L	05/22/92	05/27/92	EPA 3510	EPA 8015
Total Dissolved Solids	2,200	10	mg/L	—	05/20/92	—	EPA 160.1

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  
Clayton Project No. 92052.26

Sample Identification: METHOD BLANK  
Lab Number: 9205226-04  
Sample Matrix/Media: WATER

Date Sampled: --  
Date Received: --

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Chloride	<1	1	mg/L	--	05/20/92	--	EPA 325.2
Lat Fuel	ND	50	ug/L	05/22/92	05/27/92	EPA 3510	EPA 8015
Total Dissolved Solids	<10	10	mg/L	--	05/20/92	--	EPA 160.1
Total Oil and Grease	<5	5	mg/L	--	05/26/92	--	SM 5520B

ND Not detected at or above limit of detection  
K 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  
Clayton Project No. 92051.89

Sample Identification:	MW-1-3-1	Date Sampled:	05/13/92
Lab Number:	9205189-05A	Date Received:	05/14/92
Sample Matrix/Media:	SOIL	Date Prepared:	05/20/92
Preparation Method:	EPA 5030	Date Analyzed:	05/20/92
Analytical Method:	EPA 8015/8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
<u>BTEX/Gasoline</u>			
Benzene	71-43-2	ND	0.005
Toluene	108-88-3	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
p,m-Xylenes	---	ND	0.005
o-Xylene	95-47-6	ND	0.005
Gasoline	---	ND	0.3
<u>Surrogates</u>		<u>Recovery (%)</u>	<u>QC Limits (%)</u> LCL UCL
a,a,a-Trifluorotoluene	98-08-8	92	50 - 150

ND Not detected at or above limit of detection  
 -- Information not available or not applicable  
 Results are reported on a wet weight basis, as received





Results of Analysis  
for  
Uribe & Associates/ Port of Oakland

Client Reference: 96  
Clayton Project No. 92051.89

Sample Identification:	MW-1-2-1	Date Sampled:	05/13/92
Lab Number:	9205189-03A	Date Received:	05/14/92
Sample Matrix/Media:	SOIL	Date Extracted:	05/20/92
Extraction Method:	EPA 5030	Date Analyzed:	05/20/92
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
<u>BTEX</u>			
Benzene	71-43-2	ND	0.005
Toluene	108-88-3	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
p,m-Xylenes	---	ND	0.005
o-Xylene	95-47-6	ND	0.005

Surrogates	Recovery (%)	QC Limits (%)	
		LCL	UCL
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 are reported on a wet weight basis, as received

Results of Analysis  
 for  
 Uribe & Associates/ Port of Oakland

Client Reference: 96  
 Clayton Project No. 92051.89

Sample Matrix/Media: SOIL  
 Preparation Method: EPA 3550  
 Analysis Method: EPA 8015  
 Date Received: 05/14/92  
 Date Prepared: 05/15/92  
 Date Analyzed: 05/16/92

Lab No.	Sample ID	Date Sampled	TPH as Jet Fuel (mg/kg)	Detection Limit (mg/kg)
03A	MW-1-2-1	05/13/92	ND	1
07A	METHOD BLANK	--	ND	1

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

Results are reported on a wet weight basis, as received

Results of Analysis  
 for  
 Uribe & Associates/ Port of Oakland

Client Reference: 96  
 Clayton Project No. 92051.89

Sample Matrix/Media: SOIL  
 Analysis Method: SM 5520E  
 Date Received: 05/14/92  
 Date Analyzed: 05/19/92

Lab No.	Sample ID	Date Sampled	Total Oil & Grease (mg/kg)	Detection Limit (mg/kg)
05A	MW-1-3-1	05/13/92	100	50
07A	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

Results are reported on a wet weight basis, as received



RI A CIA  
 2930 LAKESHORE AVENUE  
 SUITE TWO HUNDRED  
 OAKLAND, CALIFORNIA 94610  
 415-832-2233  
 FAX 415-832-2237

92015222

CHAIN OF CUSTODY RECORD

PROJECT NO.		PROJECT NAME				NO. OF CONTAINERS	ANALYSIS						REMARKS	CHECK IF TUSH	
96		Port of Oakland					BTXE	TPH-G	Chlorides	TDS	D/1 Grease	TPH			TPH-Tot. Fuel
NO.	DATE	TIME	COMP	DRAB	SAMPLE ID.										
SAMPLERS: (Signature) CB															
1	5/15	10:30		-	MW-1-1	3	X	X	X	X			2x40-2 (HCL) 1xpl 1/16	OK	
2	5/15	2:15		-	MW-1-3	4	X	X	X	X			↓ 1x (HCL) 1x 1/16	↓	
3	5/15	5:00		-	MW-1-2	4	X	X	X	X			↓ ↓	↓	
Relinquished by: (Signature) CB						Date/Time	Received by: (Signature) Ed Kellogg						Date/Time	Received by: (Signature) Nicole Perice	
Relinquished by: (Signature) Jim Mitchell						Date/Time	Received by: (Signature) Jim Mitchell						Date/Time	Received by: (Signature)	
Relinquished by: (Signature)						Date/Time	Received for Laboratory by: (Signature) Tux Lab						Date/Time	NAME Clayton ADDRESS 1252 Quarry Lane	



URIBE & ASSOCIATES  
 2830 LAKESHORE AVENUE  
 SUITE 100 HUNTERED  
 OAKLAND, CALIFORNIA 94610  
 415-832-2233  
 FAX 415-832-2237

CHAIN OF CUSTODY RECORD

PROJ. NO.		PROJECT NAME				NO. OF CONTAINERS	ANALYSIS				REMARKS	CHECK IF PUSH		
96		Port of Oakland					BTX (EM 8020) TPH AS GASOLINE (EM 8020) TPH AS JET FUEL (EM 8020) OIL & GREASE (SM WKS 503)							
SAMPLERS: (Signature)														
Stacy Baeh														
NO.	DATE	TIME	COMP	GRAB	SAMPLE I.D.									
<del>1</del>	5-13-92	9:15		X	MW-1-1-1	1	X	X				Analysis as Indicated		
<del>2</del>		9:25		X	MW-1-1-2	1	X	X				HOLD		
3		12:35		X	MW-1-2-1	1	X		X			Analysis as Indicated		
4		13:00		X	MW-1-2-2	1	X		X			HOLD		
5		15:30		X	MW-1-3-1	1	X	X		X		Analysis as Indicated		
6	V	16:15		X	MW-1-3-2	1	X	X		X		HOLD		
<del>7</del>														
<del>8</del>														
Relinquished by: (Signature)			Date/Time			Received by: (Signature)			Date/Time			Received by: (Signature)		
Stacy Baeh			5-13-92 6:20											
Relinquished by: (Signature)			Date/Time			Received by: (Signature)			Date/Time			Received by: (Signature)		
Relinquished by: (Signature)			Date/Time			Received for Laboratory by: (Signature)			Date/Time			NAME		
												ADDRESS		
												PHONE NO.		

V  
Z