

6/2/03  
R0414  
30 May 2003

Ms. Betty Graham  
California Regional Water Quality Control Board  
San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, CA 94612



Mr. Barney Chan  
Alameda County Health Care Services  
Environmental Health Services  
Environmental Protection  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

Subject: Soil and Ground Water Investigation Results  
United Airlines Oakland Maintenance Center  
Oakland International Airport, Oakland, California

Dear Ms. Graham and Mr. Chan:

The purpose of this letter is to notify the San Francisco Bay Regional Water Quality Control Board (RWQCB) and Alameda County Health Care Services (ACHCS) of the results of soil and ground water sampling recently completed at United Airlines' (UAL) Oakland Maintenance Center (OMC), located at 1100 Airport Drive in Oakland, California (Figure 1). On UAL's behalf, Environmental Resources Management (ERM) performed the investigation in connection with UAL's exit of the OMC on 31 May 2003. A formal site investigation report will be submitted to the RWQCB and ACHCS in July 2003. This forthcoming report will provide detailed descriptions of the investigation methods and results. The following sections of this letter provide site background information, a summary of the investigation, the analytical results, and closing remarks. The information contained in this letter has also been submitted to the Port of Oakland, which owns the property.

Weiss Associates, consultant to the Port of Oakland, conducted a concurrent soil and ground water investigation that was coordinated with ERM's work on behalf of UAL. It is our understanding that the Port of Oakland will submit an



investigation report to the RWQCB and ACHCS in the near future to provide their data.

## **SITE BACKGROUND**

The OMC is an approximately 39.09-acre facility that UAL has leased from the Port of Oakland since 1988 for maintenance on wide-body aircraft. The OMC property is located within the Oakland International Airport in a predominantly commercial/industrial area. Figure 2 presents a recent aerial photograph of the OMC and areas immediately surrounding the property. As shown, the surrounding area includes storm water drainage channels/ponds and an aircraft taxiway connecting the North Field and South Field of the airport to the north; Sally Ride Way to the east beyond which is additional parking for the airport and the runway and taxiways for the North Field; Airport Drive to the south beyond which is the long-term parking area, rental car facilities, and unoccupied wetlands; and an access road and the economy parking lot to the west.

An approximately 309,910 square foot structure containing four adjoining hangars is the primary building on the OMC property. The area surrounding the hangar building is paved with either asphalt or concrete, and is primarily used for aircraft movement. As seen on Figure 3, the hangar and surrounding areas contain a number of structures and facilities related to aircraft maintenance.

The current area of the OMC property was within San Francisco Bay until the late 1950s or early 1960s, when filling began to construct the South Field of the airport, which opened in 1962. The filled area now occupied by the OMC remained undeveloped until 1973, when the hangar building and surrounding paved taxiways and aircraft parking areas were constructed. World Airways was the property tenant from its initial construction in 1973 until UAL's occupancy began in 1988. World Airways conducted aircraft maintenance and associated activities during its period of occupation at the OMC.

## **SUMMARY OF WORK**

The initial task of the investigation was to identify potential areas of concern where soil and/or ground water sampling might be warranted. Based on this initial phase of work, 19 areas of potential concern (AOCs) were identified, as shown on Figure 3.

As also seen on Figure 3, ERM subsequently collected soil and/or ground water samples from 47 locations in April 2003. In addition, ground water samples were collected from five existing on-site wells (UAL-MW-1 through UAL-MW-3, P-1, and P-2). Soil samples were collected by a hand auger/slide hammer or a Geoprobe rig, depending upon location and depth. Ground water samples were collected from temporary PVC wells installed with the Geoprobe rig. Based on the analytical results, 10 permanent monitoring wells were subsequently installed in three of the AOCs (AOC 1, AOC 2, and AOC 3) during May 2003 to confirm the results of grab samples collected during the initial investigation. Sequoia Analytical, a State-certified laboratory in Walnut Creek, California, analyzed the soil and ground water samples for a variety of potential contaminants.

## ANALYTICAL RESULTS

This data submittal is not intended to document the methods and results of the investigation in detail. The goal is to notify the RWQCB and ACHCS of the types and concentrations of chemicals detected at the site. Detailed information will be presented in the forthcoming site investigation report.

Table 1 lists the samples collected during the investigation and the analyses performed on each sample. The results for volatile organic compounds (VOCs), total purgeable petroleum hydrocarbons (TPPH), total extractable petroleum hydrocarbons (TEPH), and semivolatile organic compounds (SVOCs) detected in soil samples are presented in Table 2. Metals detected in soil samples are presented in Table 3. Polychlorinated biphenyls were analyzed for in a number of samples but were not detected. For comparison purposes, the tables present United States Environmental Protection Agency (USEPA) Region IX Preliminary Remedial Goals (PRGs) for VOCs, SVOCs, and metals. RWQCB Risk-Based Screening Levels (RBSLs) are presented for comparison with the TPPH and TEPH results.

Table 4 presents the results for VOCs, TPPH, TEPH, and SVOCs detected in ground water. Table 5 presents the results of ground water metals analyses. California Maximum Contaminant Levels are presented for comparison purposes for VOCs, SVOCs, and metals. RWQCB RBSLs for TPPH and TEPH in ground water are provided as well.

The analytical data are summarized in maps (Figures 4 through 18) to present the results of the evaluation for individual and grouped AOCs. These figures indicate whether compounds of a given class of chemical (VOCs, BTEX, TEPH,

TPPH, metals, PCBs, and SVOCs) were detected within soil (brown) and/or ground water (blue) samples collected at each location and whether the concentrations detected were above or below screening criteria (RBSLs, MCLs, PRGs). In addition, compounds detected at concentrations in excess of the appropriate screening criteria are identified on the figures along with the concentration detected and the appropriate screening level highlighted in yellow.

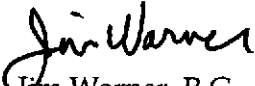
Based on the detected concentrations and site hydrogeologic conditions, we do not believe that the soil and ground water impacts in the investigated areas are likely to be areally extensive or that any constituents of concern are migrating to human or ecological receptors. This issue will be further evaluated and discussed in the forthcoming investigation report.

#### CLOSING

This letter has been submitted to inform the RWQCB and ACHCS that various chemical compounds have been detected in soil and ground water samples collected at the OMC. UAL intends to submit a formal site investigation report to the RWQCB and ACHCS in July 2003. In addition, it is our understanding that the Port of Oakland will submit the results of Weiss Associates' concurrent investigation of the OMC in the near future. We have provided the Port of Oakland with the information presented herein, and will also provide the Port with a copy of the July 2003 report.

Following your review of this letter, we would be happy to meet with you and representatives of the Port to discuss the site. If you have any questions or comments, please contact me at (925) 946-0455.

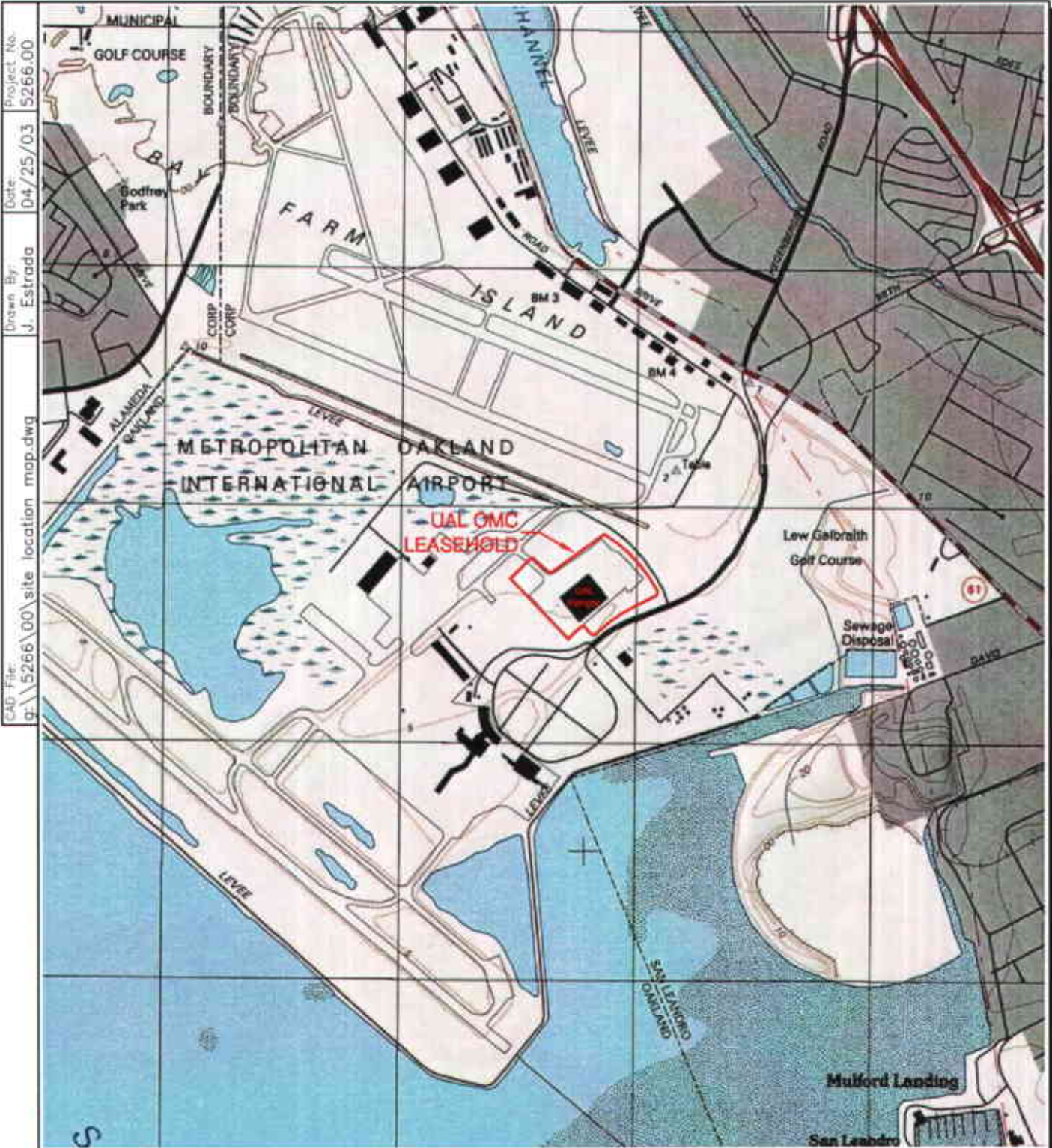
Sincerely,

  
Jim Warner, R.G.  
Principal

JBW/jal/5310.10

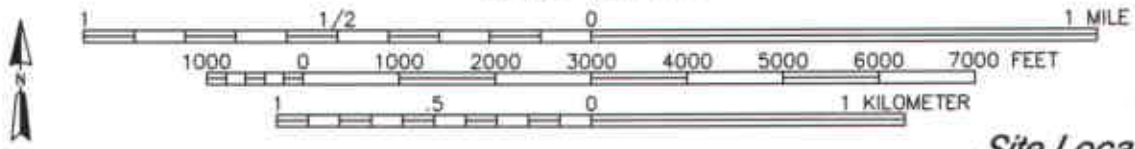
Attachments Figures 1 through 18  
Tables 1 through 5

cc: Mr. Dan Tisoncik, United Airlines  
Mr. Dale Klettke, Port of Oakland



CAD File: g:\5266\00\site location map.dwg  
 Drawn By: J. Estrada  
 Date: 04/25/03  
 Project No: 5266.00

SCALE 1:24,000



**Figure 1**  
*Site Location Map*  
*United Airlines Oakland Maintenance Center*  
*Oakland International Airport*  
*Oakland, California*

References:  
 TOPO!® Version 2.6.8 (2001)

CAO File: g:\5266\00\52660020.dwg  
Drawn By: J. Estrada  
Date: 04/26/03  
Project No: 5266.00

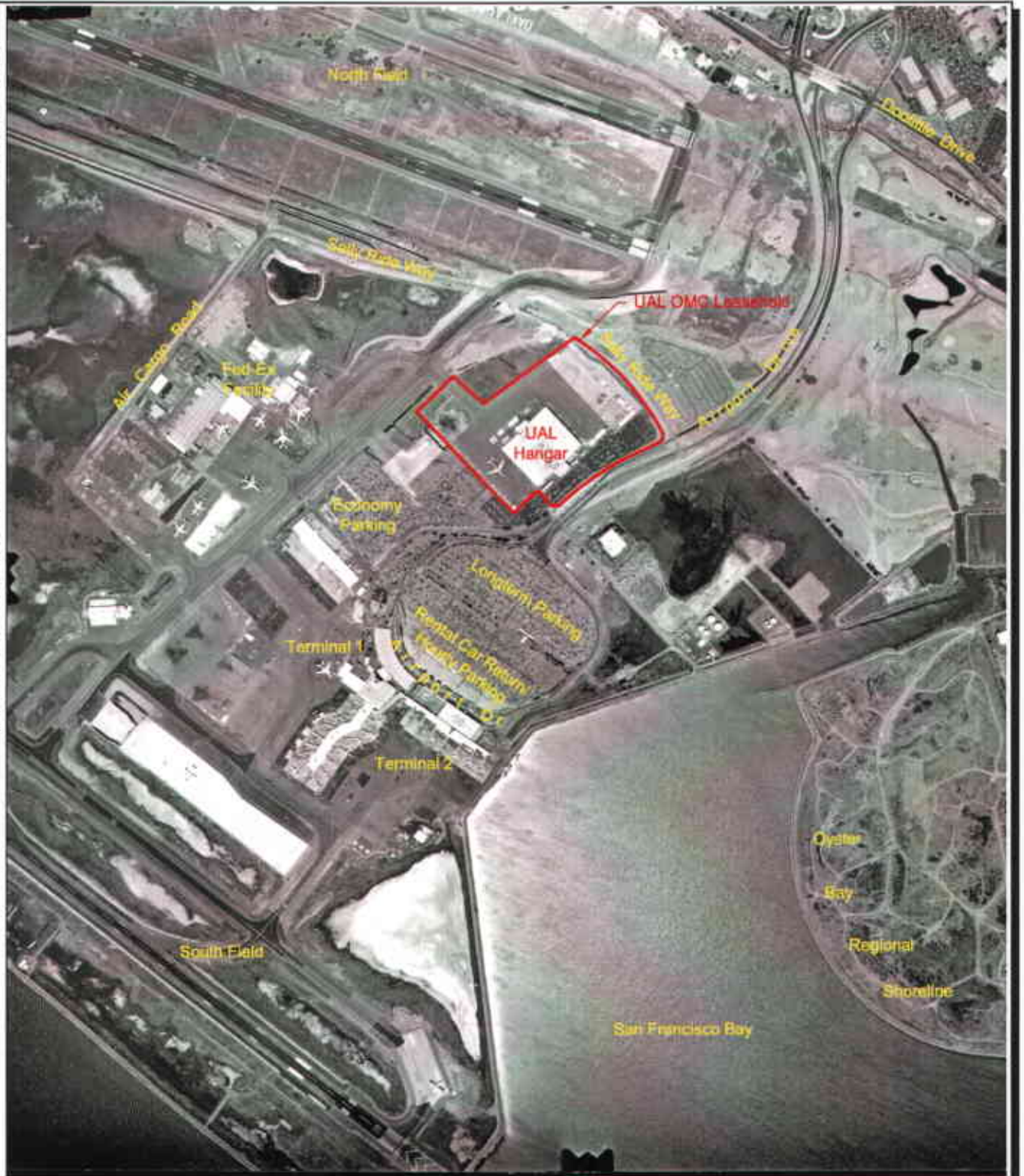
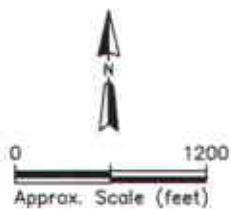
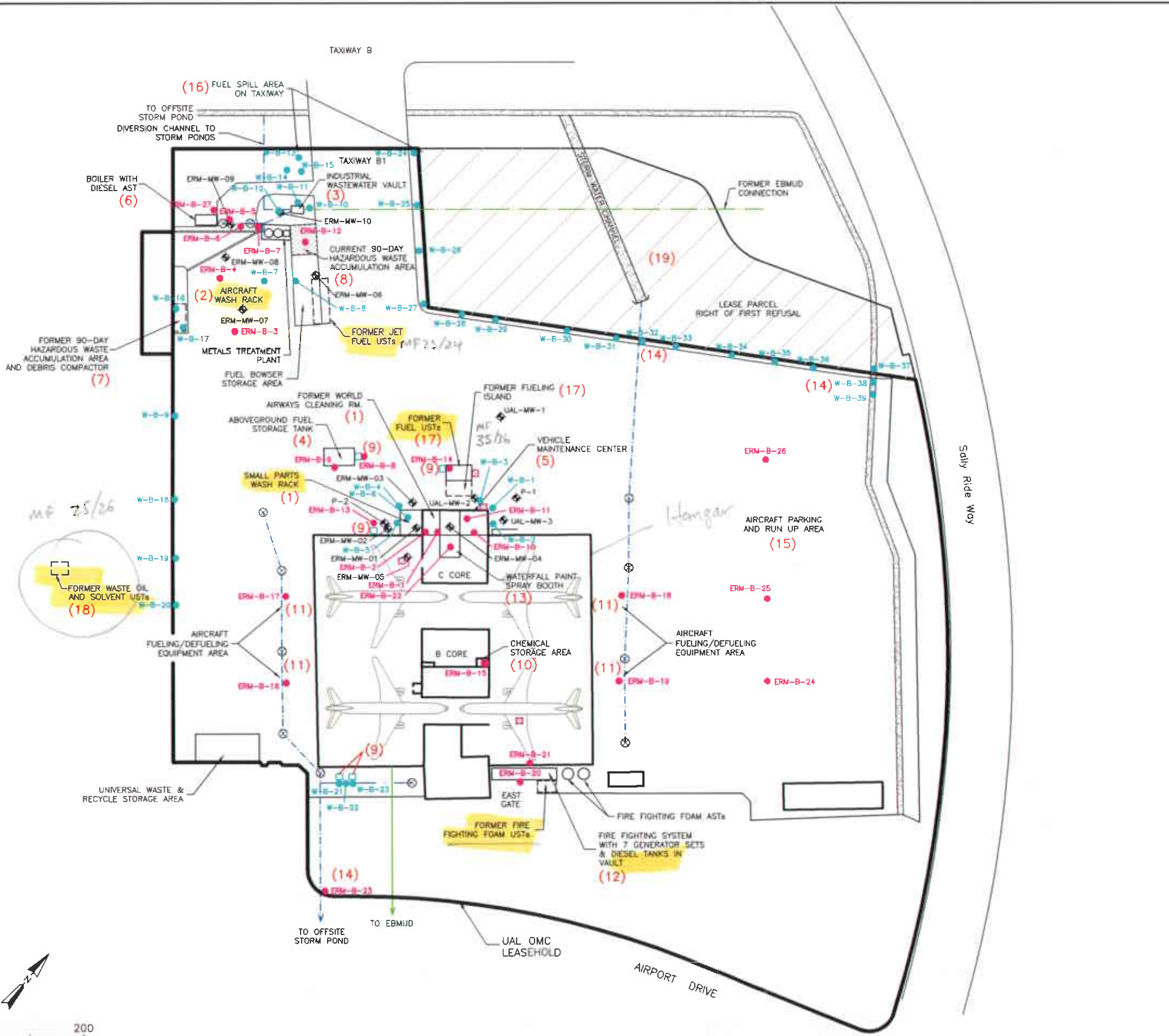


Figure 2  
July 2002 Aerial Photograph  
of the OMC Surrounding Area  
United Airlines Oakland Maintenance Center  
Oakland International Airport  
Oakland, California

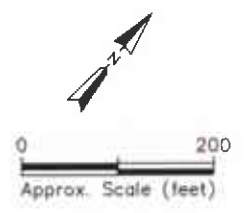


Project No. 5266.00  
 Date: 05/23/03  
 Drawn By: J. Estrada  
 CAD File: g:\5266\00\52660032.dwg

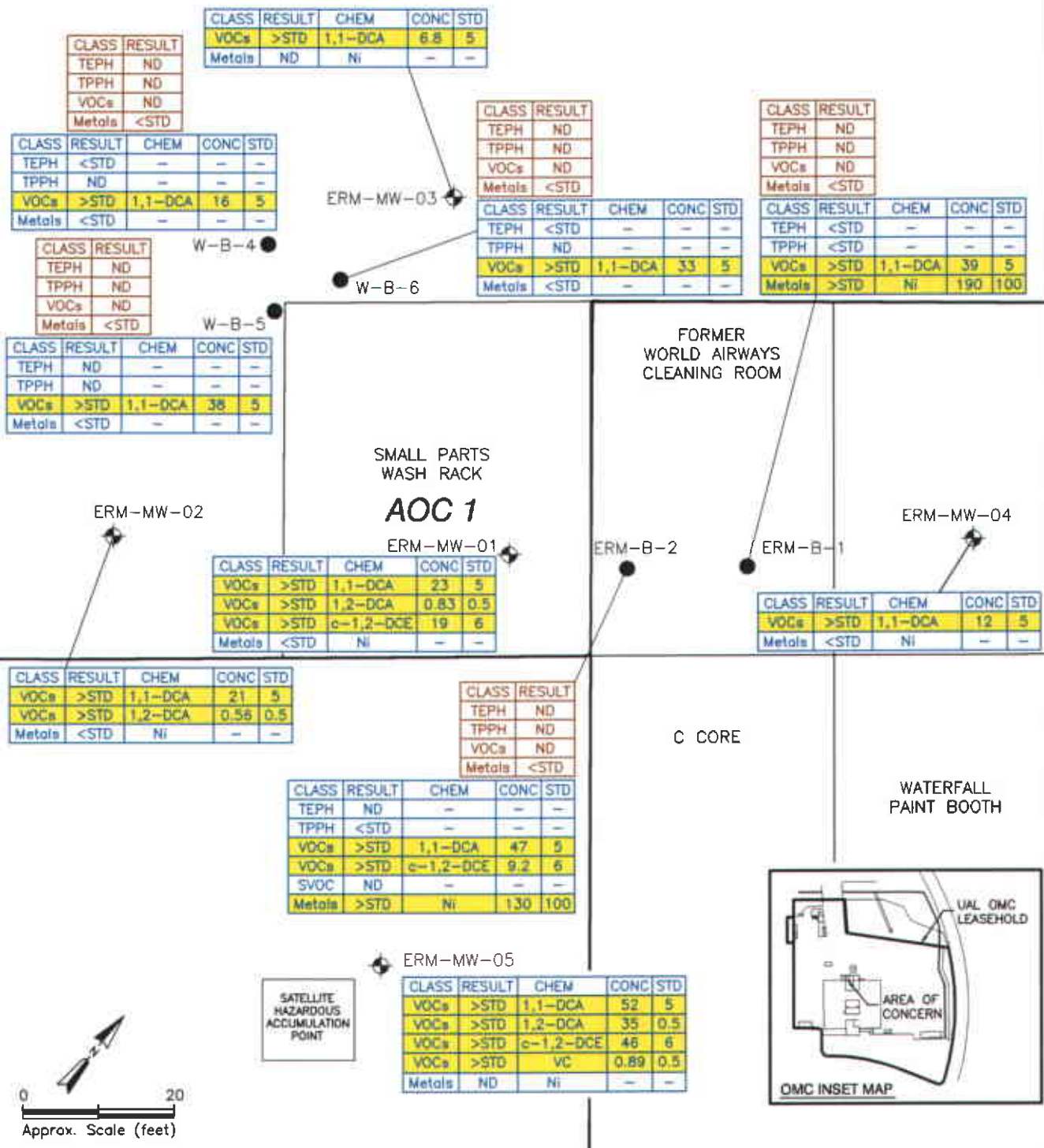


**LEGEND**

- ◆ MONITORING WELL
- ERM BORING
- WEISS BORING
- ▣ SATELLITE HAZARDOUS ACCUMULATION POINTS
- HAZARDOUS MATERIAL STORAGE AREA (9)
- ⊗ STORM DRAIN CATCH BASIN (14)
- STORM SEWER LINE (14)
- ▤ TRENCH DRAIN (14)
- ▭ STORM WATER CHANNEL (14)
- WASTEWATER LINE
- (5) AREA of CONCERN



**Figure 3**  
*Areas of Concern/Site Features Map*  
 United Airlines Oakland Maintenance Center  
 Oakland International Airport  
 Oakland, California



**ABBREVIATIONS:**

CLASS	Chemical Class	TEPH	Total Extractable Petroleum Hydrocarbon	VC	Vinyl Chloride
CHEM	Chemical Constituent	TPPH	Total Purgeable Petroleum Hydrocarbon	c-1,2-DCE	cis-1,2-Dichloroethene
CONC	Concentration	VOCs	Volatile Organic Compounds	Ni	Nickel
STD	Standard	SVOC	Semi Volatile Organic Compounds		
ND	Not Detected	1,1-DCA	1,1-Dichloroethane		

**Notes:**  
 Standards included USEPA Region IX PRG for Industrial Soil, RWQCB RBSL for Commercial Soil and Ground Water, and USEPA MCLs for Ground Water.  
 Highlighted data indicates concentration greater than STD.  
 Soil data table on top.  
 Ground water concentration results are in µg/L (ground water data table on bottom).

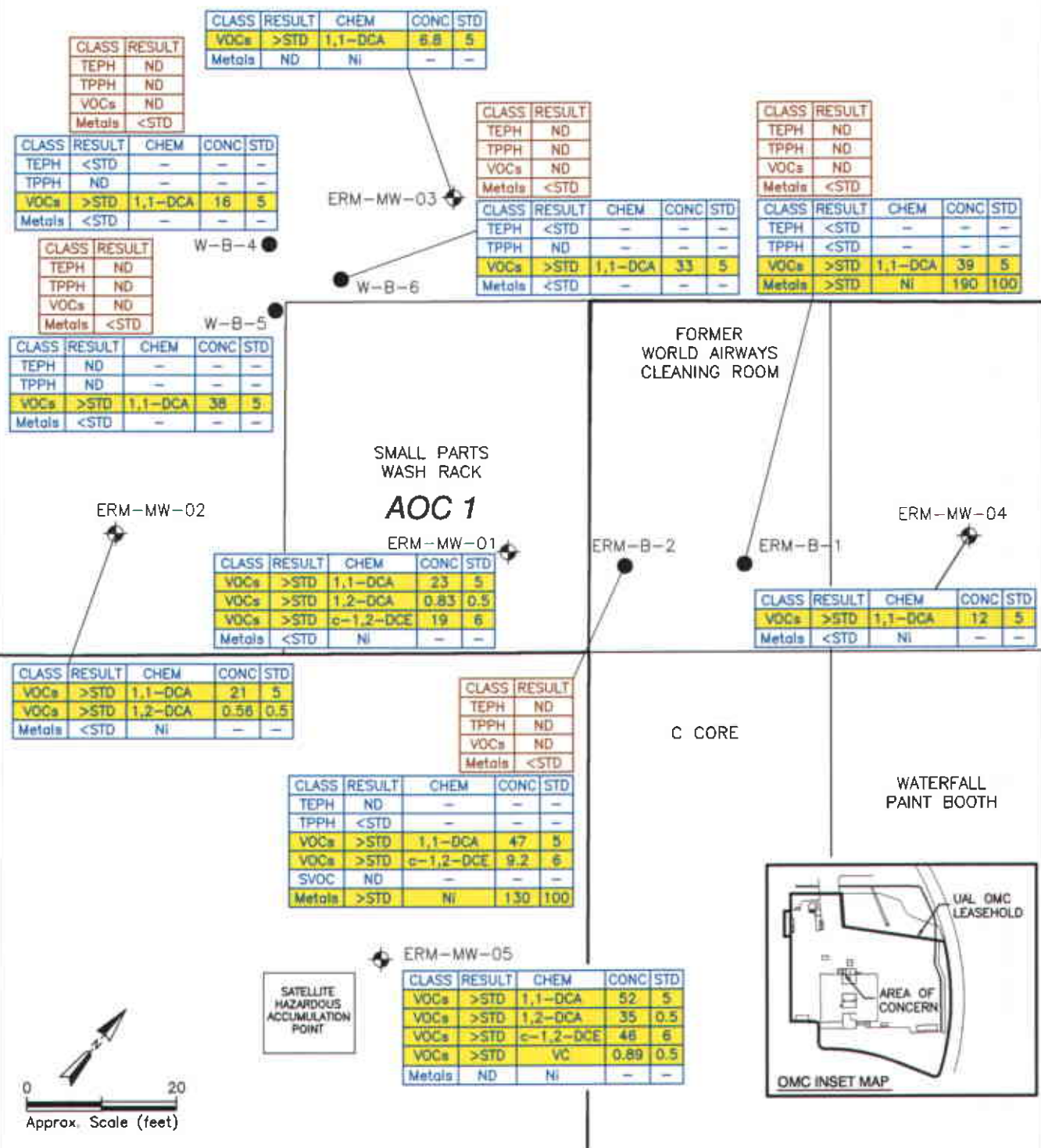
**LEGEND**

- SAMPLE LOCATION
- ⊕ MONITORING WELL LOCATION
- AOC 1 AREA OF CONCERN

**Figure 4**  
*Soil and Ground Water Sample Results*  
*Area of Concern 1*  
*United Airlines Oakland Maintenance Center*  
*Oakland International Airport*  
*Oakland, California*



Project No: 5266.00  
 Date: 05/23/03  
 Drawn By: J. Estrada  
 CAD File: G:\5266\00\52660007.dwg



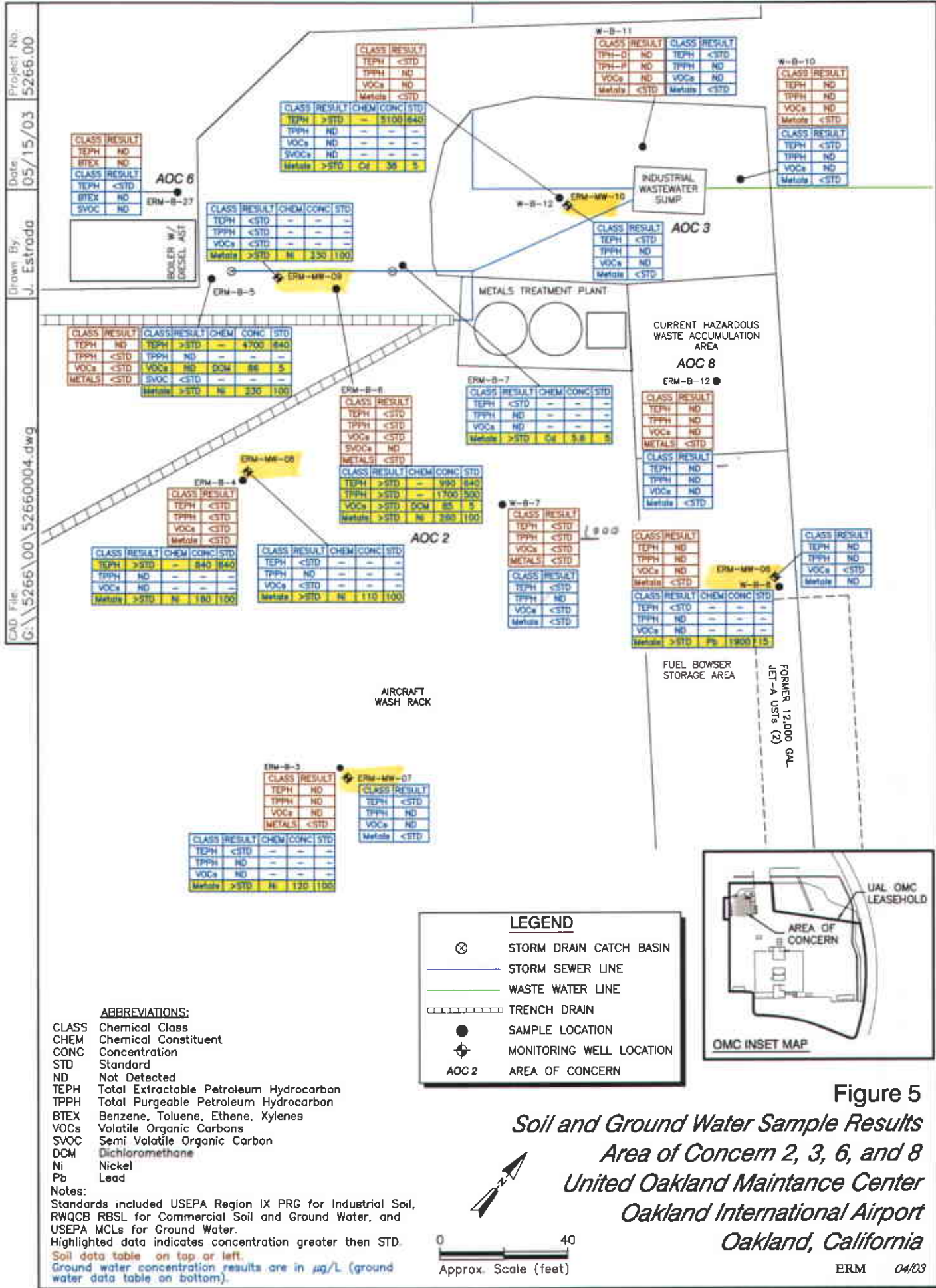
0 20  
 Approx. Scale (feet)

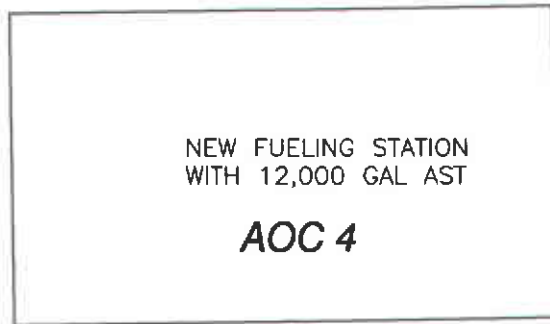
**LEGEND**

- SAMPLE LOCATION
- ⊕ MONITORING WELL LOCATION
- AOC 1 AREA OF CONCERN

*Duplicate*

**Figure 4**  
**Soil and Ground Water Sample Results**  
**Area of Concern 1**  
**United Airlines Oakland Maintenance Center**  
**Oakland International Airport**  
**Oakland, California**





ERM-B-9

CLASS	RESULT
TEPH	ND
TPPH	ND
BTEX	ND
SVOCs	ND
CLASS	RESULT
TEPH	<STD
TPPH	ND
BTEX	ND

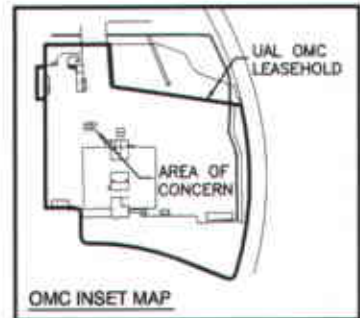


ERM-B-8

CLASS	RESULT
TEPH	ND
TPPH	ND
BTEX	ND
CLASS	RESULT
TEPH	<STD
TPPH	ND
BTEX	ND

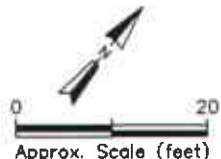
**ABBREVIATIONS:**  
 CLASS Chemical Class  
 STD Standard  
 ND Not Detected  
 TEPH Total Extractable Petroleum Hydrocarbon  
 TPPH Total Purgeable Petroleum Hydrocarbon  
 BTEX Benzene, Toluene, Ethene, Xylenes

**Notes:**  
 Standards included USEPA Region IX PRG for Industrial Soil, RWQCB RBSL for Commercial Soil and Ground Water, and USEPA MCLs for Ground Water.  
 Soil data table on top.  
 Ground water data table on bottom.

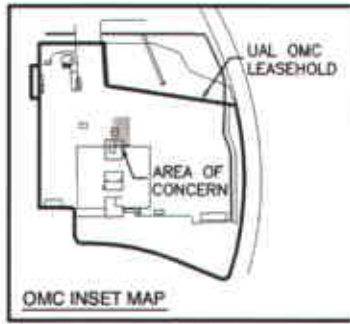


**LEGEND**

- SAMPLE LOCATION
- AOC 4 AREA OF CONCERN

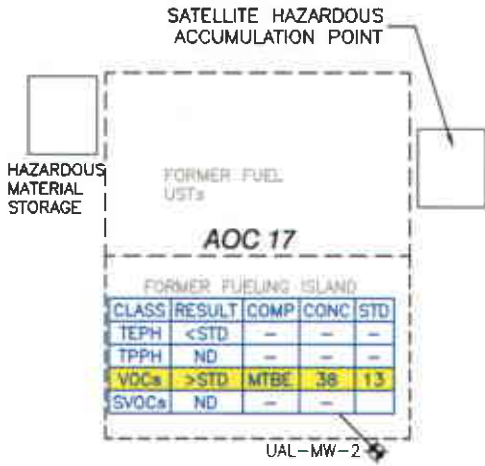


**Figure 6**  
*Soil and Ground Water Sample Results*  
*Area of Concern 4*  
*United Airlines Oakland Maintenance Center*  
*Oakland International Airport*  
*Oakland, California*



UAL-MW-1

CLASS	RESULT
TEPH	ND
TPPH	ND
VOCs	<STD

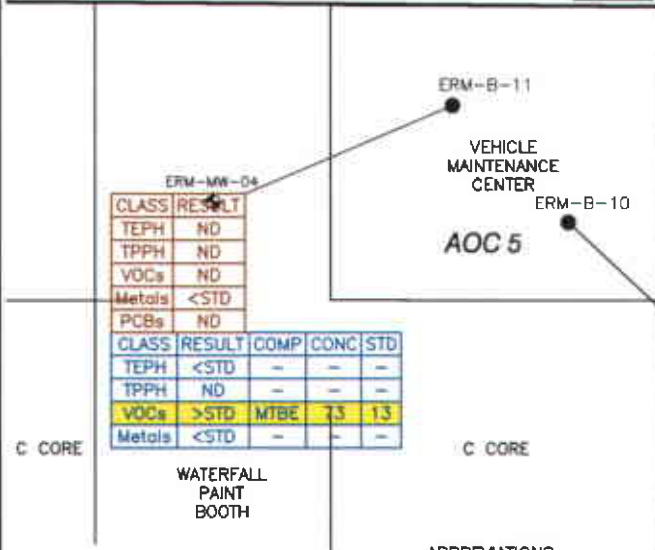


CLASS	RESULT	COMP	CONC	STD
TEPH	ND	-	-	-
TPPH	ND	-	-	-
VOCs	ND	-	-	-
Metals	<STD	-	-	-
CLASS	RESULT	COMP	CONC	STD
TEPH	<STD	-	-	-
TPPH	<STD	-	-	-
VOCs	>STD	MTBE	210	13
Metals	>STD	Sb	55	6

P-1

CLASS	RESULT	COMP	CONC	STD
TEPH	<STD	-	-	-
TPPH	ND	-	-	-
VOCs	>STD	MTBE	84	13

CLASS	RESULT	COMP	CONC	STD
TEPH	ND	-	-	-
TPPH	ND	-	-	-
VOCs	ND	-	-	-
Metals	<STD	-	-	-
CLASS	RESULT	COMP	CONC	STD
TEPH	<STD	-	-	-
TPPH	<STD	-	-	-
VOCs	>STD	MTBE	200	13
SVOCs	ND	-	-	-
Metals	<STD	-	-	-



CLASS	RESULT	COMP	CONC	STD
TEPH	ND	-	-	-
TPPH	ND	-	-	-
VOCs	ND	-	-	-
Metals	<STD	-	-	-
PCBs	ND	-	-	-
CLASS	RESULT	COMP	CONC	STD
TEPH	<STD	-	-	-
TPPH	ND	-	-	-
VOCs	>STD	MTBE	73	13
Metals	<STD	-	-	-

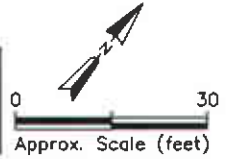
CLASS	RESULT	COMP	CONC	STD
TEPH	ND	-	-	-
TPPH	ND	-	-	-
VOCs	ND	-	-	-
Metals	<STD	-	-	-
CLASS	RESULT	COMP	CONC	STD
TEPH	<STD	-	-	-
TPPH	<STD	-	-	-
VOCs	>STD	MTBE	110	13
Metals	>STD	Sb	74	6
Metals	>STD	Be	8.6	4

CLASS	RESULT	COMP	CONC	STD
TEPH	<STD	-	-	-
TPPH	ND	-	-	-
VOCs	>STD	MTBE	69	13

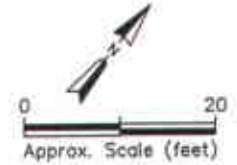
**ABBREVIATIONS:**

CLASS	Chemical Class	ND	Not Detected	SVOCs	Semi Volatile Organic Compounds
CHEM	Chemical Constituent	TEPH	Total Extractable Petroleum Hydrocarbon	MTBE	Methyl Tert-Butyl Ether
CONC	Concentration	TPPH	Total Purgeable Petroleum Hydrocarbon	Sb	Antimony
STD	Standard	VOCs	Volatile Organic Compounds	Be	Beryllium

**Notes:**  
 Standards included USEPA Region IX PRG for Industrial Soil, RWQCB RBSL for Commercial Soil and Ground Water, and USEPA MCLs for Ground Water.  
 Highlighted data indicates concentration greater than STD.  
 Soil data table on top.  
 Ground water concentration results are in µg/L (ground water data table on bottom).



**Figure 7**  
*Soil and Ground Water Sample Results*  
*Area of Concern 5 and 17*  
*United Airlines Oakland Maintenance Center*  
*Oakland International Airport*  
*Oakland, California*



FORMER 90-DAY HAZARDOUS  
WASTE ACCUMULATION  
AREA AND DEBRIS COMPACTOR

W-B-16

CLASS	RESULT
TEPH	ND
TPPH	ND
VOCs	ND
Metals	<STD

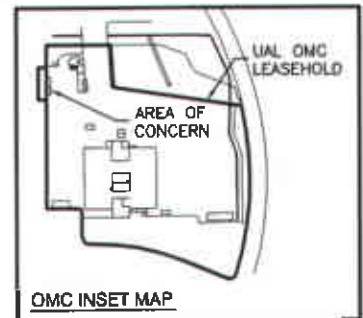
CLASS	RESULT
TEPH	<STD
TPPH	ND
VOCs	<STD
Metals	<STD

AOC 7

W-B-17

CLASS	RESULT
TEPH	ND
TPPH	ND
VOCs	ND
Metals	<STD

CLASS	RESULT	CHEM	CONC	STD
TEPH	<STD	-	-	-
TPPH	ND	-	-	-
VOCs	>STD	1,1-DCA	54	5
VOCs	>STD	1,1-DCE	59	6
SVOCs	ND	-	-	-
Metals	ND	-	-	-



**ABBREVIATIONS:**

CLASS	Chemical Class	TEPH	Total Extractable Petroleum Hydrocarbon
CHEM	Chemical Constituent	TPPH	Total Purgeable Petroleum Hydrocarbon
CONC	Concentration	VOCs	Volatile Organic Compounds
STD	Standard	SVOCs	Semi Volatile Organic Compounds
ND	Not Detected		

1,1-DCA	1,1-Dichloroethane
1,1-DCE	1,1-Dichloroethene

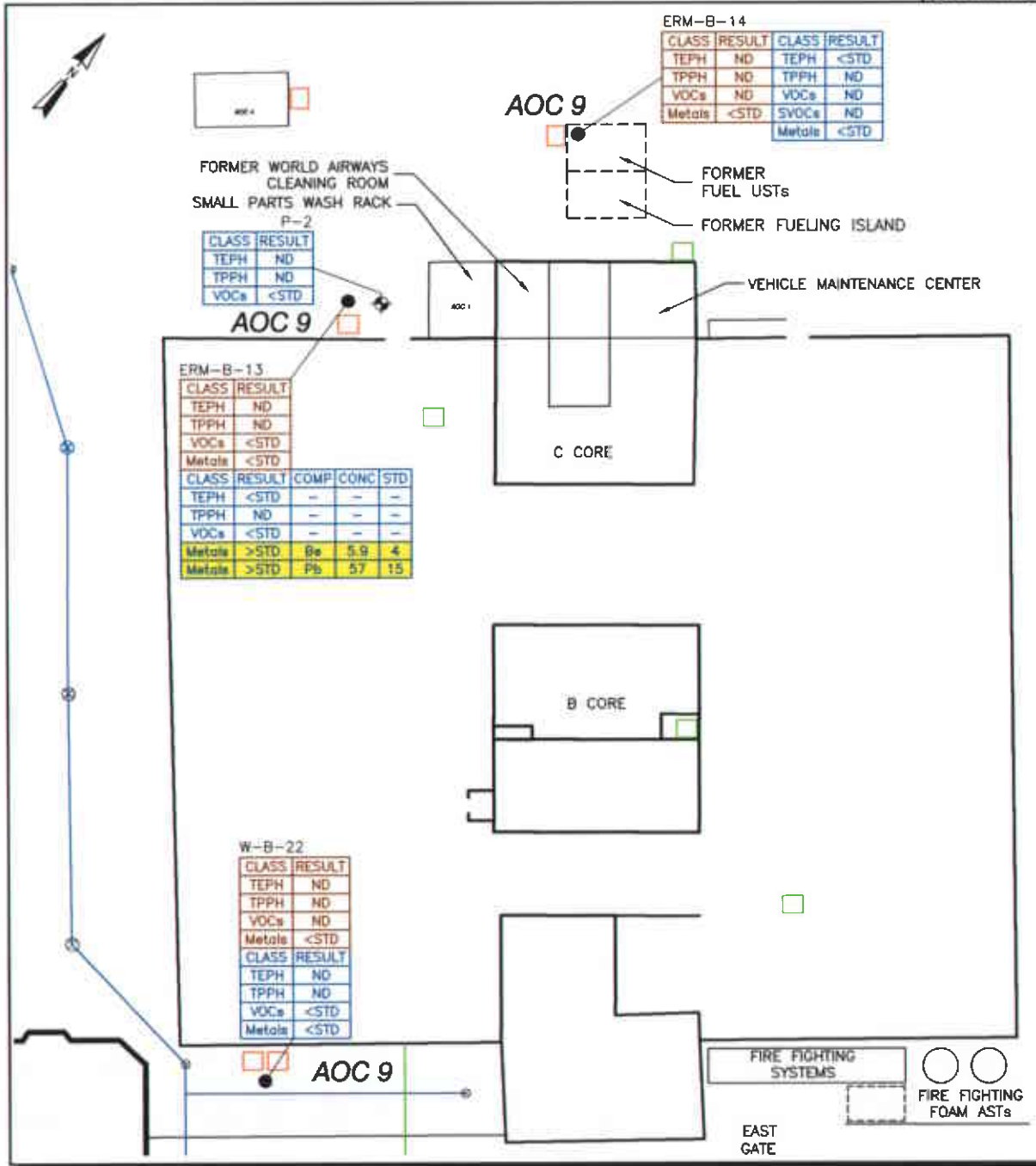
Notes:  
Standards included USEPA Region IX PRG for Industrial Soil, RWQCB RBSL for Commercial Soil and Ground Water, and USEPA MCLs for Ground Water.  
Highlighted data indicates concentration greater than STD.

Soil data table on top.  
Ground water concentration results are in  $\mu\text{g/L}$  (ground water data table on bottom).

**LEGEND**

- SAMPLE LOCATION
- AOC 7 AREA OF CONCERN

**Figure 8**  
*Soil and Ground Water Sample Results  
Area of Concern 7  
United Airlines Oakland Maintenance Center  
Oakland International Airport  
Oakland, California*



ERM-B-14

CLASS	RESULT	CLASS	RESULT
TEPH	ND	TEPH	<STD
TPPH	ND	TPPH	ND
VOCs	ND	VOCs	ND
Metals	<STD	SVOCs	ND
		Metals	<STD

P-2

CLASS	RESULT
TEPH	ND
TPPH	ND
VOCs	<STD

ERM-B-13

CLASS	RESULT
TEPH	ND
TPPH	ND
VOCs	<STD
Metals	<STD

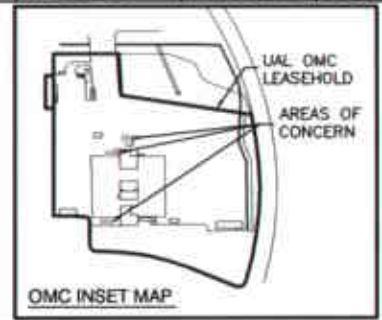
CLASS	RESULT	COMP	CONC	STD
TEPH	<STD	-	-	-
TPPH	ND	-	-	-
VOCs	<STD	-	-	-
Metals	>STD	Be	5.9	4
Metals	>STD	Pb	57	15

W-B-22

CLASS	RESULT
TEPH	ND
TPPH	ND
VOCs	ND
Metals	<STD

CLASS	RESULT
TEPH	ND
TPPH	ND
VOCs	<STD
Metals	<STD



**LEGEND**

- ⊗ STORM DRAIN CATCH BASIN
- STORM SEWER LINE
- SAMPLE LOCATION
- ⊕ MONITORING WELL
- SATELLITE HAZARDOUS ACCUMULATION POINTS
- HAZARDOUS MATERIAL STORAGE AREA
- AOC 9 AREA OF CONCERN

**ABBREVIATIONS:**

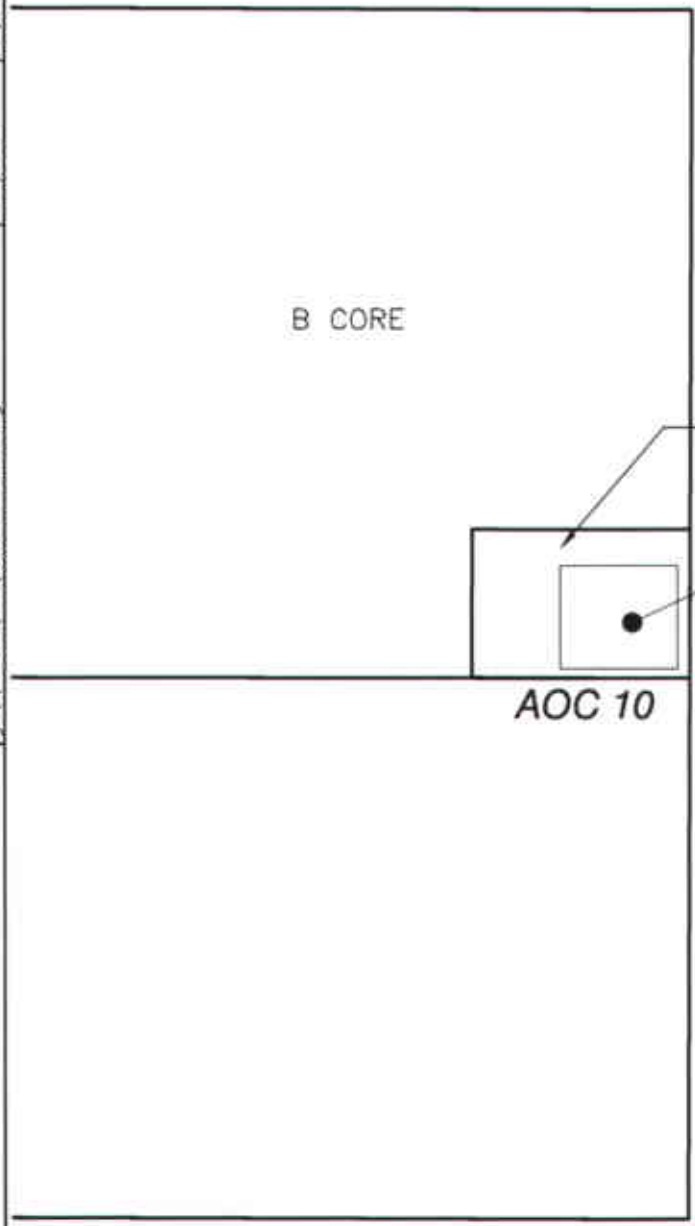
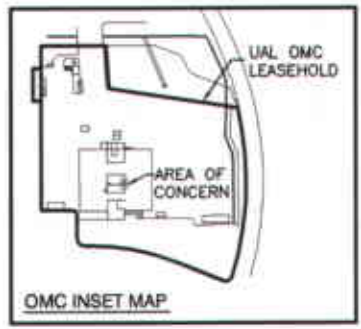
CLASS Chemical Class  
 CHEM Chemical Constituent  
 CONC Concentration  
 STD Standard  
 ND Not Detected  
 TEPH Total Extractable Petroleum Hydrocarbon  
 TPPH Total Purgeable Petroleum Hydrocarbon  
 VOCs Volatile Organic Compounds  
 SVOC Semi Volatile Organic Compounds  
 Be Beryllium  
 Pb Lead

**Notes:**  
 Standards included USEPA Region IX PRG for Industrial Soil, RWQCB RBSL for Commercial Soil and Ground Water, and USEPA MCLs for Ground Water.  
 Highlighted data indicates concentration greater than STD.  
 Soil data table on top.  
 Ground water concentration results are in µg/L (ground water data on bottom or right)

**Figure 9**  
**Soil and Ground Water Sample Results**  
**Area of Concern 9**  
**United Airlines Oakland Maintenance Center**  
**Oakland International Airport**  
**Oakland, California**

ERM 04/03

CAD File: g:\5226\00\522600010.dwg  
 Drawn By: JSE/RLO  
 Date: 05/09/03  
 Project No: 5266.00



ERM-B-15

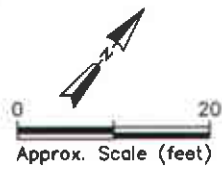
CLASS	RESULT
TEPH	ND
TPPH	ND
VOCs	ND
Metals	<STD

**ABBREVIATIONS:**  
 CLASS Chemical Class  
 STD Standard  
 ND Not Detected  
 TEPH Total Extractable Petroleum Hydrocarbon  
 TPPH Total Purgeable Petroleum Hydrocarbon  
 VOCs Volatile Organic Compounds

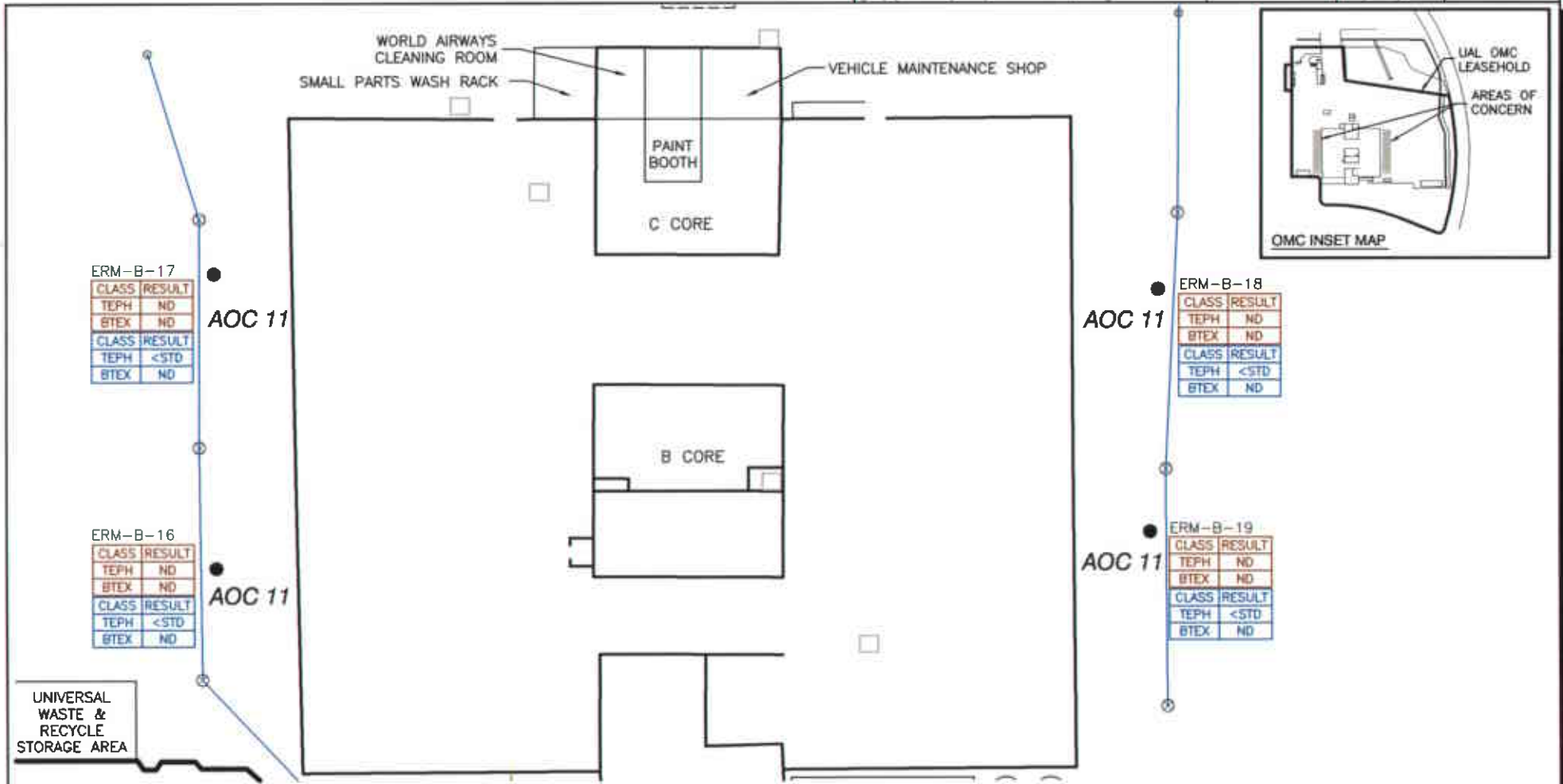
**Notes:**  
 Standards included USEPA Region IX PRG for Industrial Soil, RWQCB RBSL for Commercial Soil and Ground Water, and USEPA MCLs for Ground Water.

**LEGEND**

●	SAMPLE LOCATION
□	AOC 10 AREA OF CONCERN



**Figure 10**  
*Soil Sample Results*  
*Area of Concern 10*  
*United Airlines Oakland Maintenance Center*  
*Oakland International Airport*  
*Oakland, California*

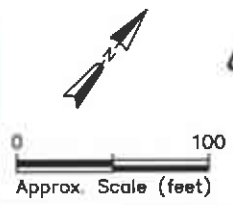


**ABBREVIATIONS:**  
 CLASS Chemical Class  
 STD Standard  
 ND Not Detected  
 TEPH Total Extractable Petroleum Hydrocarbon  
 BTEX Benzene, Toluene, Ethene, Xylenes

**Notes:**  
 Standards included USEPA Region IX PRG for Industrial Soil, RWQCB RBSL for Commercial Soil and Ground Water, and USEPA MCLs for Ground Water.  
 Soil data table on top.  
 Ground water data table on bottom

**LEGEND**

- STORM DRAIN CATCH BASIN
- STORM SEWER LINE
- SAMPLE LOCATION
- AREA OF CONCERN



**Figure 11**  
*Soil and Ground Water Sample Results*  
*Area of Concern 11*  
*United Airlines Oakland Maintenance Center*  
*Oakland International Airport*  
*Oakland, California*



Project No.  
5266.00

Date:  
05/09/03

Drawn By:  
J. Estrada

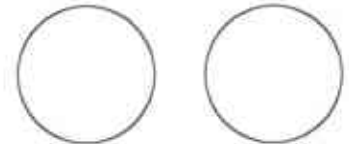
CAD File:  
g:\5226\00\522600012.dwg

CLASS	RESULT
TEPH	ND
BTEX	ND
CLASS	RESULT
TEPH	<STD
BTEX	ND
SVOCs	ND

ERM-B-21

FIRE FIGHTING SYSTEM W/  
7 GENERATORS SET &  
DIESEL TANKS IN VAULT

AOC 12



FIRE FIGHTING  
FOAM ASTs

ERM-B-20

CLASS	RESULT
TEPH	ND
BTEX	ND
CLASS	RESULT
TEPH	<STD
BTEX	ND

FORMER FIRE  
FIGHTING FOAM  
USTs

EAST  
GATE

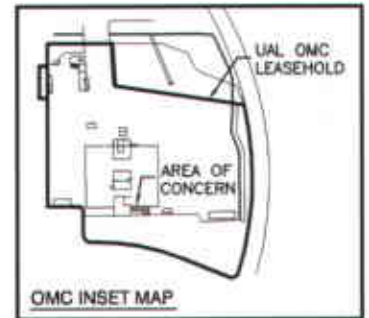
**ABBREVIATIONS:**

CLASS Chemical Class  
 STD Standard  
 ND Not Detected  
 TEPH Total Extractable Petroleum Hydrocarbon  
 SVOCs Semi Volatile Organic Compounds  
 BTEX Benzene, Toluene, Ethene, Xylenes

**Notes:**

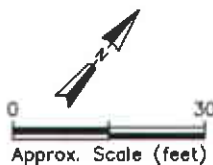
Standards included USEPA Region IX PRG for Industrial Soil,  
 RWQCB RBSL for Commercial Soil and Ground Water, and  
 USEPA MCLs for Ground Water.

Soil data table on top.  
 Ground water data table on bottom.



**LEGEND**

- SAMPLE LOCATION
- AOC 12 AREA OF CONCERN



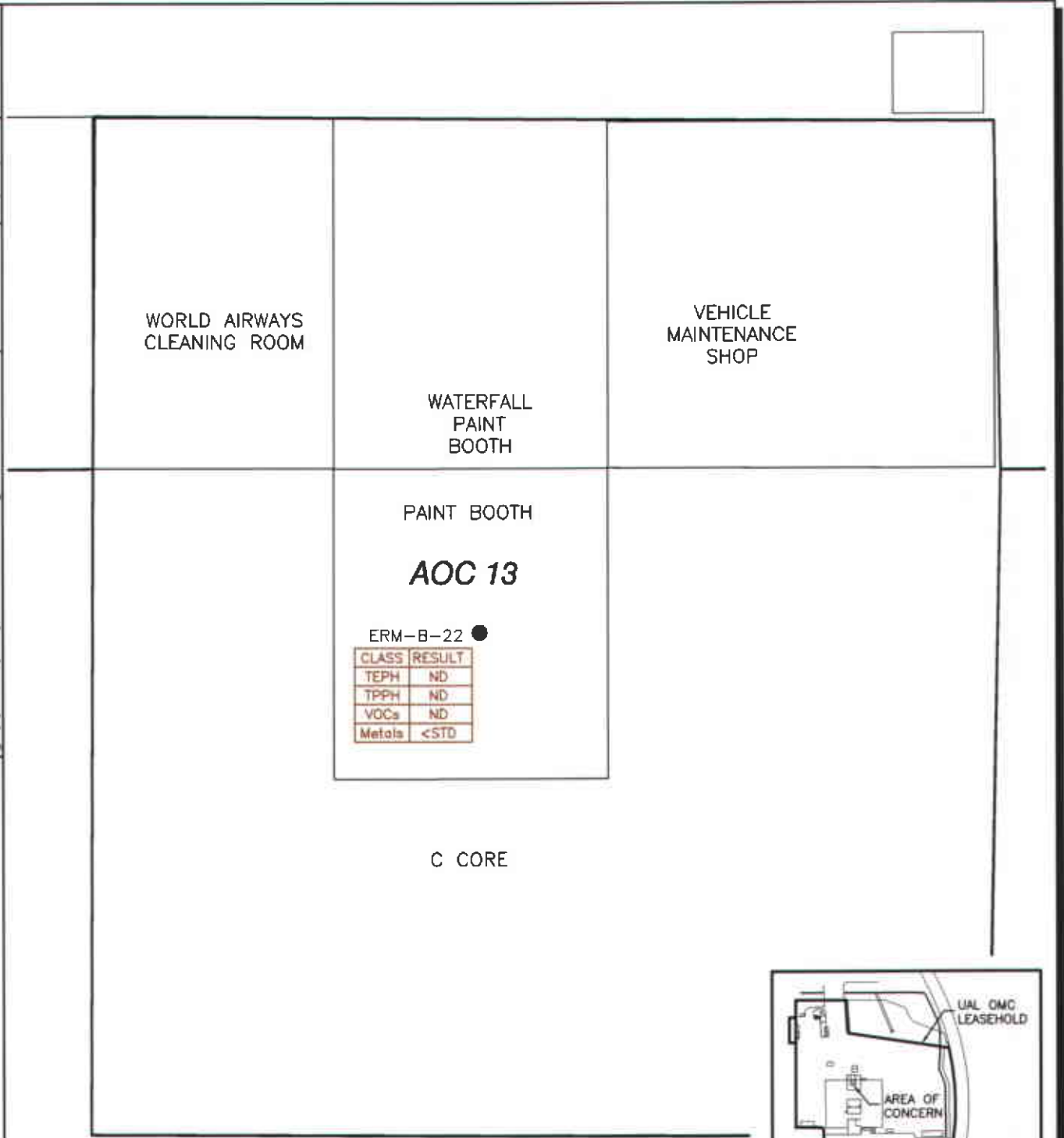
**Figure 12**  
*Soil and Ground Water Sample Results*  
*Area of Concern 12*  
*United Airlines Oakland Maintenance Center*  
*Oakland International Airport*  
*Oakland, California*

Project No.  
52666.00

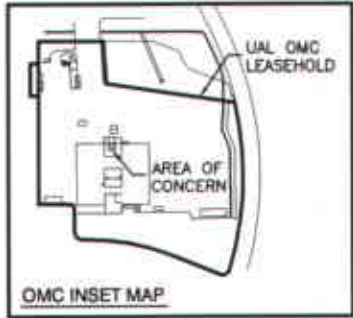
Date:  
05/09/03

Drawn By:  
J. Estrada

CAD File:  
c:\5226\00\522600013.dwg



CLASS	RESULT
TEPH	ND
TPPH	ND
VOCs	ND
Metals	<STD

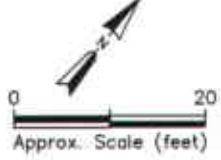


**ABBREVIATIONS:**  
 CLASS Chemical Class  
 STD Standard  
 ND Not Detected  
 TEPH Total Extractable Petroleum Hydrocarbon  
 TPPH Total Purgeable Petroleum Hydrocarbon  
 VOCs Volatile Organic Compounds

**Notes:**  
 Standards included USEPA Region IX PRG for Industrial Soil, RWQCB RBSL for Commercial Soil and Ground Water, and USEPA MCLs for Ground Water.

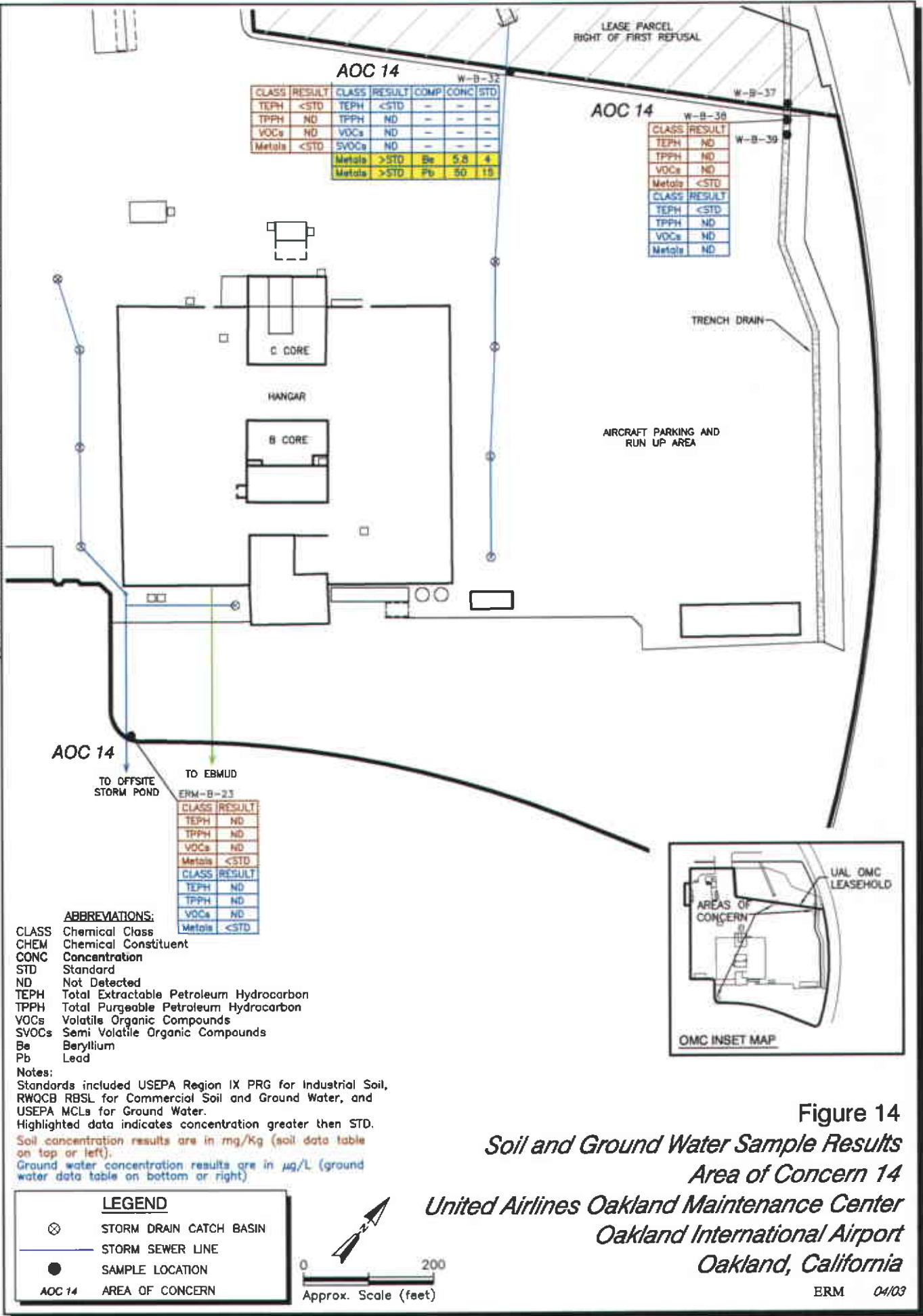
**LEGEND**

- SAMPLE LOCATION
- AOC 13 AREA OF CONCERN



**Figure 13**  
*Soil Sample Results*  
*Area of Concern 13*  
*United Airlines Oakland Maintenance Center*  
*Oakland International Airport*  
*Oakland, California*

Project No. 5266.00  
 Date: 05/09/03  
 Drawn By: J. Estrada  
 CAD File: g:\5226\00\522600014.dwg



**Figure 14**  
*Soil and Ground Water Sample Results*  
*Area of Concern 14*  
*United Airlines Oakland Maintenance Center*  
*Oakland International Airport*  
*Oakland, California*

Project No.  
5266.00

Date:  
05/09/03

Drawn By:  
J. Estrada

CAD File:  
g:\5226\00\522600015.dwg

ERM-B-26

CLASS	RESULT
TEPH	ND
BTEX	ND
CLASS	RESULT
TEPH	<STD
BTEX	ND

AIRCRAFT PARKING AND RUN UP AREA

AOC 15

ERM-B-25

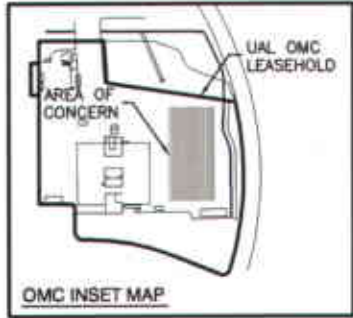
CLASS	RESULT
TEPH	ND
BTEX	ND
CLASS	RESULT
TEPH	<STD
BTEX	<STD

ERM-B-24

CLASS	RESULT
TEPH	ND
BTEX	ND
CLASS	RESULT
TEPH	<STD
BTEX	ND
SVOCs	ND

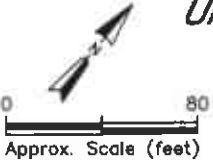
**ABBREVIATIONS:**  
 CLASS Chemical Class  
 STD Standard  
 ND Not Detected  
 TEPH Total Extractable Petroleum Hydrocarbon  
 BTEX Benzene, Toluene, Ethene, Xylenes  
 SVOCs Semi Volatile Organic Compounds

**Notes:**  
 Standards included USEPA Region IX PRG for Industrial Soil, RWQCB RBSL for Commercial Soil and Ground Water, and USEPA MCLs for Ground Water.  
 Soil data table on top.  
 Ground water data table on bottom.



**LEGEND**

⊗	STORM DRAIN CATCH BASIN
—	STORM SEWER LINE
●	SAMPLE LOCATION
AOC 15	AREA OF CONCERN



**Figure 15**  
*Soil and Ground Water Sample Results*  
*Area of Concern 15*  
*United Airlines Oakland Maintenance Center*  
*Oakland International Airport*  
*Oakland, California*

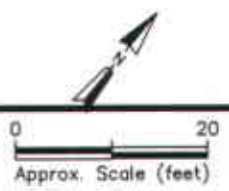
Project No.  
5266.00

Date:  
05/23/03

Drawn By:  
J. Estrada

CAD File:  
C:\5266\00\52660031.dwg

DIVERSION CHANNEL TO STORM  
PONDS



### AOC 16

W-B-13 ● W-B-15 ●  
W-B-14 ●

CLASS	RESULT
TEPH	ND
BTEX	ND

CLASS	RESULT
TEPH	<STD
BTEX	ND

TAXIWAY B1



**ABBREVIATIONS:**

CLASS	Chemical Class	TEPH	Total Extractable Petroleum Hydrocarbon	Cd	Cadium
CHEM	Chemical Constituent	TPPH	Total Purgeable Petroleum Hydrocarbon		
CONC	Concentration	VOCs	Volatile Organic Compounds		
STD	Standard	SVOCs	Semi Volatile Organic Compounds		
ND	Not Detected				

**Notes:**  
Standards included USEPA Region IX PRG for Industrial Soil, RWQCB RBSL for Commercial Soil and Ground Water, and USEPA MCLs for Ground Water.  
Highlighted data indicates concentration greater than STD.  
Soil data table on top or left.  
Ground water concentration results are in µg/L (ground water data table on bottom or right)

**LEGEND**

- STORM SEWER LINE
- WASTE WATER LINE
- SAMPLE LOCATION
- AOC 16 AREA OF CONCERN

**Figure 16**  
*Soil and Ground Water Sample Results*  
**Area of Concern 16**  
*United Airlines Oakland Maintenance Center*  
*Oakland International Airport*  
*Oakland, California*

● W-B-9

CLASS	RESULT
VOCs	ND
CLASS	RESULT
VOCs	<STD

● W-B-18

AOC 18

● W-B-19

CLASS	RESULT			
VOCs	ND			
CLASS	RESULT	COMP	CONC	STD
VOCs	>STD	c-1,2-DCE	6.4	6
VOCs	>STD	TCE	56	5

● W-B-20

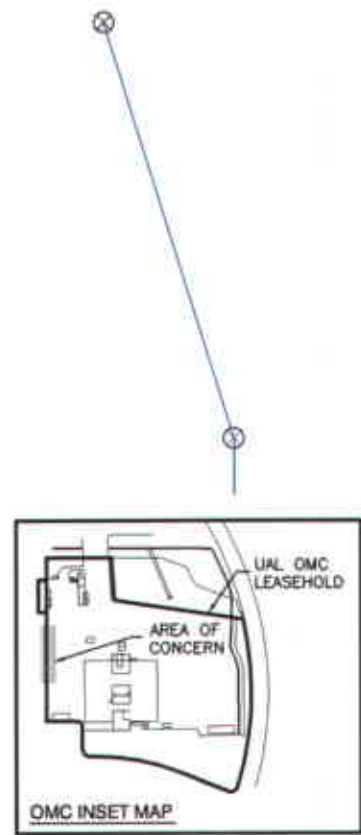
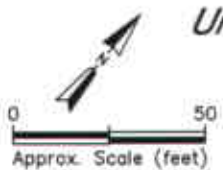
**ABBREVIATIONS:**  
 CLASS Chemical Class  
 CHEM Chemical Constituent  
 CONC Concentration  
 STD Standard  
 ND Not Detected  
 VOCs Volatile Organic Compounds  
 c-1,2-DCE cis-1,2-Dichloroethane  
 TCE Trichloroethene

**Notes:**  
 Standards included USEPA Region IX PRG for Industrial Soil, RWQCB RBSL for Commercial Soil and Ground Water, and USEPA MCLs for Ground Water.  
 Highlighted data indicates concentration greater than STD.

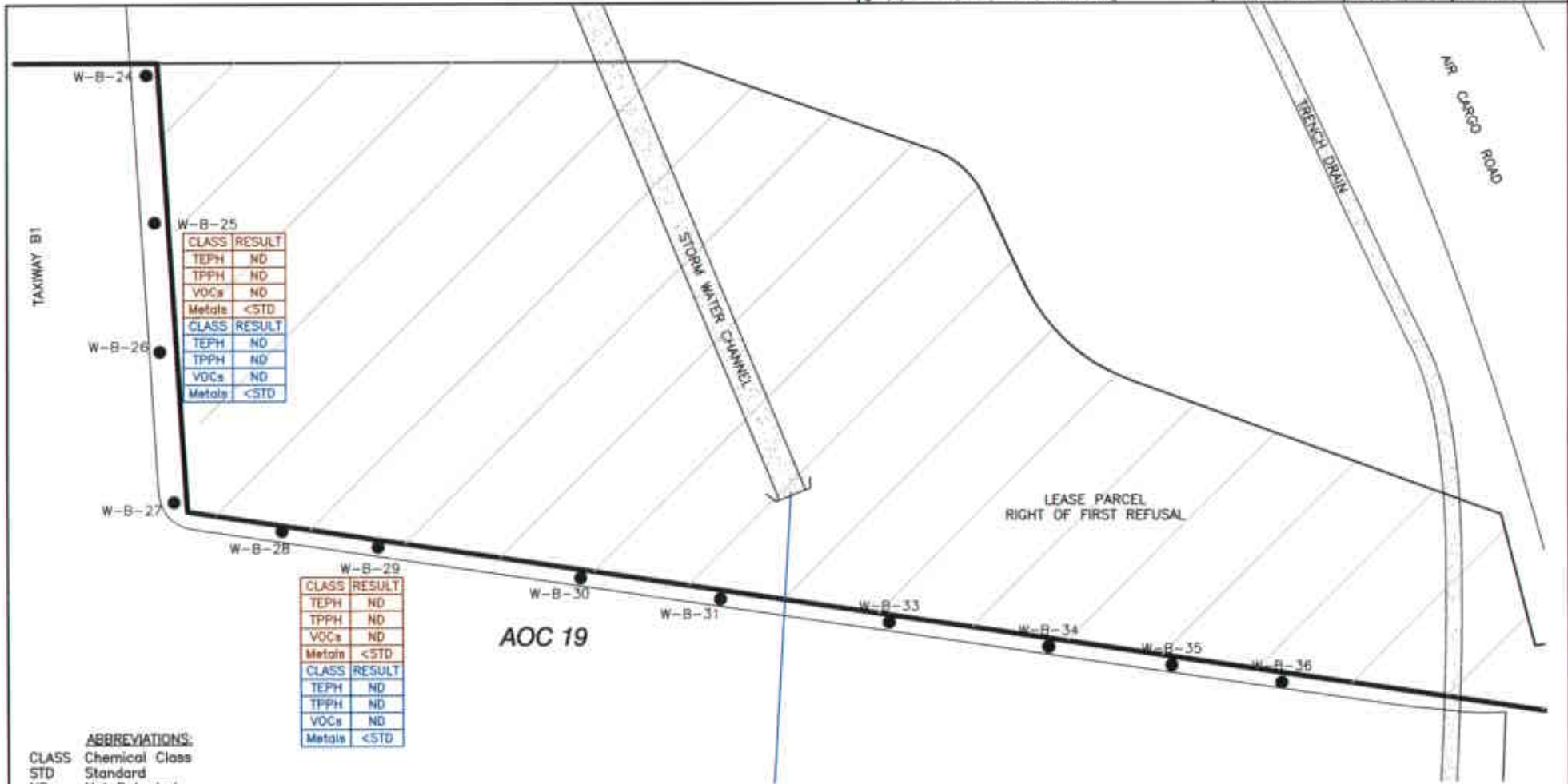
Soil data table on top.  
 Ground water concentration results are in µg/L (ground water data table on bottom).

**LEGEND**

- ⊗ STORM DRAIN CATCH BASIN
- STORM SEWER LINE
- SAMPLE LOCATION
- AOC 18 AREA OF CONCERN



**Figure 17**  
*Soil and Ground Water Sample Results*  
*Area of Concern 18*  
*United Airlines Oakland Maintenance Center*  
*Oakland International Airport*  
*Oakland, California*



W-B-25

CLASS	RESULT
TEPH	ND
TPPH	ND
VOCs	ND
Metals	<STD

CLASS	RESULT
TEPH	ND
TPPH	ND
VOCs	ND
Metals	<STD

W-B-29

CLASS	RESULT
TEPH	ND
TPPH	ND
VOCs	ND
Metals	<STD

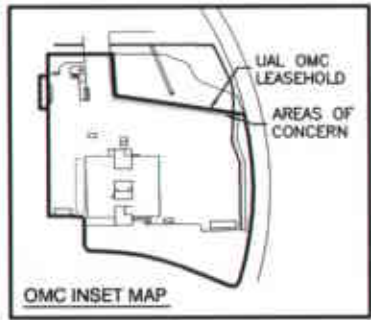
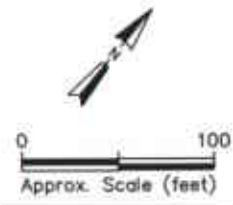
CLASS	RESULT
TEPH	ND
TPPH	ND
VOCs	ND
Metals	<STD

**ABBREVIATIONS:**  
 CLASS Chemical Class  
 STD Standard  
 ND Not Detected  
 TEPH Total Extractable Petroleum Hydrocarbon  
 TPPH Total Purgeable Petroleum Hydrocarbon  
 VOCs Volatile Organic Compounds

**Notes:**  
 Standards included USEPA Region IX PRG for Industrial Soil, RWOCB RBSL for Commercial Soil and Ground Water, and USEPA MCLs for Ground Water.  
 Soil data table on top.  
 Ground water data table on bottom.

**LEGEND**

- STORM SEWER LINE
- SAMPLE LOCATION
- AOC 19 AREA OF CONCERN



**Figure 18**  
*Soil and Ground Water Sample Results*  
*Area of Concern 19*  
*United Airlines Oakland Maintenance Center*  
*Oakland International Airport*  
*Oakland, California*

**Table 1**  
**Sampling and Analytical Matrix**  
**UAL Oakland Maintenance Center**  
**Oakland International Airport**

Sample Location	Sample Depth (feet bgs)	Sample Type	Date Sampled	VOCs	BTEX Only	MTBE Only	TPPH	TEPH	SVOCs	PCBs	Title 22 Metals	TDS
<b>Area 1 - Small Parts Wash Rack/Former World Airways Cleaning Room</b>												
ERM-B-1	3.5	Soil	15 Apr 03	X			X	X	X		X	
ERM-B-1	-	Water	15 Apr 03	X			X	X			X	
ERM-B-2	3.5	Soil	15 Apr 03	X			X	X			X	
ERM-B-2	-	Water	15 Apr 03	X			X	X	X		X	
W-B-4	3-4	Soil	14 Apr 03	X			X	X			X	
W-B-4	-	Water	15 Apr 03	X			X	X			X	
W-B-5	3-4	Soil	14 Apr 03	X			X	X			X	
W-B-5	-	Water	15 Apr 03	X			X	X			X	
W-B-6	3-4	Soil	14 Apr 03	X			X	X			X	
W-B-6	-	Water	15 Apr 03	X			X	X			X	
ERM-MW-01	-	Water	9 May 03	X							Ni	
ERM-MW-02	-	Water	9 May 03	X							Ni	
ERM-MW-03	-	Water	9 May 03	X							Ni	
ERM-MW-04	-	Water	9 May 03	X							Ni	
ERM-MW-05	-	Water	9 May 03	X							Ni	
<b>Area 2 - Aircraft Wash Rack</b>												
ERM-B-3	2.5	Soil	15 Apr 03	X			X	X			X	
ERM-B-3	-	Water	15 Apr 03	X			X	X			X	
ERM-B-4	2.5	Soil	15 Apr 03	X			X	X			X	
ERM-B-4	-	Water	15 Apr 03	X			X	X			X	
ERM-B-5	2.5	Soil	15 Apr 03	X			X	X			X	
ERM-B-5	-	Water	15 Apr 03	X			X	X	X		X	
ERM-B-6	2.5	Soil	15 Apr 03	X			X	X	X		X	
ERM-B-6	-	Water	15 Apr 03	X			X	X			X	
ERM-B-7	-	Water	15 Apr 03	X			X	X			X	
W-B-7	1-2	Soil	17 Apr 03	X			X	X			X	
W-B-7	-	Water	17 Apr 03	X			X	X			X	
W-B-8	1.5-2.5	Soil	14 Apr 03	X			X	X			X	
W-B-8	-	Water	15 Apr 03	X			X	X			X	
ERM-MW-06	-	Water	9 May 03	X			X	X			Ni, Cd, Pb	
ERM-MW-07	-	Water	9 May 03	X			X	X			Ni, Cd, Pb	
ERM-MW-08	-	Water	9 May 03	X			X	X			Ni, Cd, Pb	
ERM-MW-09	-	Water	9 May 03	X			X	X			Ni, Cd, Pb	
<b>Area 3 - Industrial Wastewater Sump</b>												
W-B-10	3-4	Soil	15 Apr 03	X			X	X			X	
W-B-10	-	Water	15 Apr 03	X			X	X			X	
W-B-11	1-2	Soil	15 Apr 03	X			X	X			X	
W-B-11	-	Water	15 Apr 03	X			X	X			X	
W-B-12	0.5	Soil	15 Apr 03	X			X	X			X	
W-B-12	-	Water	15 Apr 03	X			X	X	X		X	
ERM-MW-10	-	Water	9 May 03	X			X	X			Ni, Cd, Pb	
<b>Area 4 - New Fueling Station with 12,000 Gallon AST</b>												
ERM-B-8	4	Soil	16 Apr 03		X	X	X	X				
ERM-B-8	-	Water	16 Apr 03		X	X	X	X				
ERM-B-9	4.5	Soil	16 Apr 03		X	X	X	X	X			
ERM-B-9	-	Water	16 Apr 03		X	X	X	X				
<b>Area 5 - Vehicle Maintenance Center</b>												
ERM-B-10	2.5	Soil	17 Apr 03	X			X	X			X	
ERM-B-10	-	Water	17 Apr 03	X			X	X			X	
ERM-B-11	2.5	Soil	17 Apr 03	X			X	X		X	X	
ERM-B-11	6.5	Soil	17 Apr 03	X			X	X		X	X	
ERM-B-11	-	Water	17 Apr 03	X			X	X			X	
W-B-2	3.5-4.5	Soil	14 Apr 03	X			X	X			X	
W-B-2	-	Water	15 Apr 03	X			X	X	X		X	
W-B-3	3-4	Soil	14 Apr 03	X			X	X			X	



**Table 1**  
**Sampling and Analytical Matrix**  
**UAL Oakland Maintenance Center**  
**Oakland International Airport**

Sample Location	Sample Depth (feet bgs)	Sample Type	Date Sampled	VOCs	BTEX Only	MTBE Only	TPPH	TEPH	SVOCs	PCBs	Title 22 Metals	TDS
W-B-3	-	Water	15 Apr 03	X			X	X			X	
P-1	-	Water	18 Apr 03	X			X	X				
<b>Area 6 - Boiler with Diesel AST</b>												
ERM-B-27	2	Soil	17 Apr 03		X			X				
ERM-B-27	-	Water	17 Apr 03		X			X	X			
<b>Area 7 - Former Hazardous Waste Accumulation Area</b>												
W-B-16	1-2	Soil	17 Apr 03	X			X	X			X	
W-B-16	-	Water	17 Apr 03	X			X	X			X	
W-B-17	1-2	Soil	17 Apr 03	X			X	X			X	
W-B-17	-	Water	17 Apr 03	X			X	X	X		X	X
<b>Area 8 - Current Hazardous Waste Accumulation Area</b>												
ERM-B-12	2	Soil	17 Apr 03	X			X	X			X	
ERM-B-12	-	Water	17 Apr 03	X			X	X			X	
<b>Area 9 - Hazardous Materials Storage</b>												
ERM-B-13	3.5	Soil	16 Apr 03	X			X	X			X	
ERM-B-13	-	Water	16 Apr 03	X			X	X			X	
ERM-B-14	4.5	Soil	17 Apr 03	X			X	X			X	
ERM-B-14	-	Water	17 Apr 03	X			X	X	X		X	X
W-B-22	2-3	Soil	18 Apr 03	X			X	X			X	
W-B-22	-	Water	18 Apr 03	X			X	X			X	
P-2	-	Water	18 Apr 03	X			X	X				
<b>Area 10 - Chemical Storage (Chem Crib)</b>												
ERM-B-15	1	Soil	17 Apr 03	X			X	X			X	
<b>Area 11 - Fueling and Defueling Aircraft</b>												
ERM-B-16	4.5	Soil	16 Apr 03		X			X				
ERM-B-16	-	Water	16 Apr 03		X			X				X
ERM-B-17	3.5	Soil	16 Apr 03		X			X				
ERM-B-17	-	Water	16 Apr 03		X			X				
ERM-B-18	4	Soil	16 Apr 03		X			X				
ERM-B-18	-	Water	16 Apr 03		X			X				
ERM-B-19	4.5	Soil	16 Apr 03		X			X				
ERM-B-19	-	Water	16 Apr 03		X			X				
<b>Area 12 - Fire Systems</b>												
ERM-B-20	3	Soil	16 Apr 03		X			X				
ERM-B-20	-	Water	17 Apr 03		X			X				X
ERM-B-21	2	Soil	17 Apr 03		X			X				
ERM-B-21	-	Water	17 Apr 03		X			X	X			
<b>Area 13 - Paint Booth</b>												
ERM-B-22	1.5	Soil	17 Apr 03	X			X	X				
<b>Area 14 - Storm Drains</b>												
ERM-B-23	4.5	Soil	17 Apr 03	X			X	X			X	
ERM-B-23	-	Water	17 Apr 03	X			X	X			X	
W-B-32	1-2	Soil	16 Apr 03	X			X	X			X	
W-B-32	-	Water	16 Apr 03	X			X	X	X		X	X
W-B-37	-	Water	17 Apr 03					X				
W-B-38	2-3	Soil	15 Apr 03	X			X	X			X	
W-B-38	-	Water	15 Apr 03	X			X	X			X	
<b>Area 15 - Run-Up Area and Aircraft Parking</b>												
ERM-B-24	2.5	Soil	15 Apr 03		X			X				
ERM-B-24	-	Water	15 Apr 03		X			X	X			X
ERM-B-25	3.5	Soil	15 Apr 03		X			X				
ERM-B-25	-	Water	15 Apr 03		X			X				
ERM-B-26	2	Soil	16 Apr 03		X			X				
ERM-B-26	-	Water	16 Apr 03		X			X				

*Table 1  
Sampling and Analytical Matrix  
UAL Oakland Maintenance Center  
Oakland International Airport*

Sample Location	Sample Depth (feet bgs)	Sample Type	Date Sampled	VOCs	BTEX Only	MTBE Only	TPPH	TEPH	SVOCs	PCBs	Title 22 Metals	TDS
<b>Area 16 - Fueling Spill</b>												
W-B-14	2-3	Soil	15 Apr 03		X			X				
W-B-14	-	Water	15 Apr 03		X			X				
<b>Area 17 - Former Vehicle Fueling Area</b>												
UAL-MW-1	-	Water	18 Apr 03	X			X	X				
UAL-MW-2	-	Water	18 Apr 03	X			X	X	X			
UAL-MW-3	-	Water	18 Apr 03	X			X	X				
<b>Area 18 - Offsite Solvent USTs</b>												
W-B-9	3-3.5	Soil	18 Apr 03	X								
W-B-9	-	Water	18 Apr 03	X								
W-B-19	3-3.5	Soil	18 Apr 03	X								
W-B-19	-	Water	18 Apr 03	X								
<b>Area 19 - Pavement Perimeter</b>												
W-B-25	1-2	Soil	15 Apr 03	X			X	X			X	
W-B-25	-	Water	16 Apr 03	X			X	X			X	
W-B-29	1-2	Soil	16 Apr 03	X			X	X			X	
W-B-29	-	Water	16 Apr 03	X			X	X			X	

**Notes:**

ERM prefix indicates a boring completed by ERM

W prefix indicates a boring completed by Weiss Associates

bgs = Below ground surface

VOCs = Volatile Organic Compounds

BTEX = Benzene, toluene, ethylbenzene, and xylenes

MTBE = Methyl tert-butyl ether

TPPH = Total purgeable petroleum hydrocarbons

TEPH = Total extractable petroleum hydrocarbons

SVOCs = Semivolatile organic compounds

PCBs = Polychlorinated biphenyls

TDS = Total dissolved solids

Ni = Nickel

Cd = Cadmium

Pb = Lead



Table 2  
VOC, TPH, SVOC, and PCB Detections in Soil  
Oakland Maintenance Center  
United Airlines

Sample Location	Sample Depth (feet bgs)	Date Sampled	Methods	VOCs													TPPH	TEPH	TEPH SGCU	SVOCs	PCBs	
				N-BB	SEC-BB	DCM	IPB	P-IPT	MTBE	NAP	1,2,4-TMB	1,3,5-TMB	BZ	EB	TOL	XYL						
Residential RBSL (Non-Potable Water) (mg/kg)																		400	500	500		
Commercial RBSL (Non-Potable Water) (mg/kg)																		400	500	500		
Residential PRG (mg/kg)				240	220	9.1	NS	52	17	56	21	8.9	0.60	8.9	520	270	NS	NS				0.22
Industrial PRG (mg/kg)				240	220	21	NS	170	36	190	70	20	1.3	20	520	420	NS	NS				0.74
ERM-B-21 <sup>1</sup>	2	4/17/03	DHS LUFT	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.0050	<0.0050	<0.0050	<0.0050	NA	<5.0	NA	NA	NA	
Area of Concern 13 - Paint Spray Booth																						
ERM-B-22	1.5	4/17/03	8260	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<1.0	<5.0	NA	NA	NA	
Area of Concern 14 - Storm Drains																						
ERM-B-23	4.5	4/17/03	8260	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<1.0	<20	NA	NA	NA	
W-B-32	1-2	4/16/03	8260	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<1.0	23	NJ	22	NJ	NA
W-B-38	2-3	4/15/03	8260	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<1.0	<5.0	NA	NA	NA	
Area of Concern 15 - Aircraft Parking and Run Up Area																						
ERM-B-24	2.5	4/15/03	DHS LUFT	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.0050	<0.0050	<0.0050	<0.0050	NA	<5.0	NA	NA	NA	
ERM-B-25	3.5	4/15/03	DHS LUFT	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.0050	<0.0050	<0.0050	<0.0050	NA	<5.0	NA	NA	NA	
ERM-B-26	2	4/16/03	DHS LUFT	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.0050	<0.0050	<0.0050	<0.0050	NA	<5.0	NA	NA	NA	
Area of Concern 16 - Reported Fuel Spill Area on Taxiway																						
W-B-14	2-3	4/15/03	DHS LUFT	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.0050	<0.0050	<0.0050	<0.0050	NA	<5.0	NA	NA	NA	
Area of Concern 18 - Migration of Offsite Solvent Plume Onto OMC Property																						
W-B-9	3-3.5	4/18/03	8260	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	NA	NA	NA	NA	NA	
W-B-19	3-3.5	4/18/03	8260	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	NA	NA	NA	NA	NA	
Area of Concern 19 - Runoff from Pavement to Unpaved Area North of OMC																						
W-B-25	1-2	4/15/03	8260	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<1.0	<5.0	NA	NA	NA	
W-B-29	1-2	4/16/03	8260	<0.0050	<0.0050	<0.025	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<1.0	<5.0	NA	NA	NA	
Number of Samples				33	33	33	33	33	35	33	33	33	46	46	46	46	33	46	9	2	3	
Number of Detections				2	2	0	2	3	0	5	4	4	0	1	1	1	4	8	5	0	0	
Number of Detections above the PRG/RBSL				0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
Minimum Detection				0.0098	0.0073	NA	0.0085	0.012	NA	0.0063	0.014	0.0078	NA	0.027	0.005	0.35	1.4	5.1	9.2	NA	NA	
Maximum Detection				0.092	0.094	NA	0.048	0.19	NA	0.047	1.2	1.1	NA	0.027	0.005	0.35	170	1300	410	NA	NA	
Median				0.051	0.051	NA	0.028	0.017	NA	0.015	0.070	0.035	NA	0.027	0.005	0.35	6.3	25	15.0	NA	NA	
Mean				0.051	0.051	NA	0.028	0.073	NA	0.026	0.34	0.294	NA	0.027	0.005	0.35	46	204.3	93.8	NA	NA	

Notes:

Sample concentrations reported in milligrams per kilogram (mg/kg)

\* Location ERM-B-11 was analyzed for PCB-1016, -1221, -1232, -1242, -1248, -1254, and -1260; no PCB concentrations were detected.

Residential RBSL (Non-Potable Water) = Residential Risk Based Screening Level for shallow soil where potentially impacted ground water is not a current or potential drinking water resource. (Table B-1 of Application of Risk-Based Screening Levels and Decision Making to Site with Impacted Soil and Ground Water, RWQCB, December 2001)

Commercial RBSL (Non-Potable Water) = Commercial Risk Based Screening Level for shallow soil where potentially impacted ground water is not a current or potential drinking water resource. (Table B-2 of Application of Risk-Based Screening Levels and Decision Making to Site with Impacted Soil and Ground Water, RWQCB, December 2001)

PRG = Preliminary Remedial Goal (EPA Region 9 PRG Table, 1 October 2002)

Bold values indicate concentrations detected above the laboratory method detection limit

< 0.5 Compound not detected at or above the laboratory method detection limit

Indicates a concentration detected above the respective RBSL

NS PRG not established

NA Not Analyzed

Abbreviations:

VOC = Volatile Organic Compounds	NAP = Naphthalene
TPH = Total Petroleum Hydrocarbons	1,2,4-TMB = 1,2,4-Trimethylbenzene
SVOC = Semi-Volatile Organic Compounds	1,3,5-TMB = 1,3,5-Trimethylbenzene
PCB = Polychlorinated Biphenyls	BZ = Benzene
N-BB = n-Butylbenzene	EB = Ethylbenzene
SEC-BB = sec-Butylbenzene	TOL = Toluene
DCM = Dichloromethane	XYL = Xylenes
IPB = Isopropylbenzene	TEPH = Total Extractable Petroleum Hydrocarbons
P-IPT = p-Isopropyltoluene	TEPH SGCU = Total Extractable Petroleum Hydrocarbons - with Silica Gel Cleanup
MTBE = Methyl tert-butyl ether	TPPH = Total Purgeable Petroleum Hydrocarbons

ERM Qualifiers:

J = Estimated Value

UJb = Estimated Non-Detected Value Due to Common Laboratory Contaminant

NJ = Tentative Identification Estimated

Table 3  
Metals Detected in Soil  
Oakland Maintenance Center  
United Airlines

Sample Location	Sample Depth (feet bgs)	Date Sampled	Hg	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	Ag	Tl	V	Zn		
		Residential PRG (mg/kg)	23	31	22	5400	150	37	210	900	3100	150	390	1600	390	390	5.2	550	23000		
		Industrial PRG (mg/kg)	310	410	260	67000	1900	450	450	1900	41000	750	5100	20000	5100	5100	67	7200	100000		
<b>Area of Concern 1 - Small Parts Wash Rack/Former World Airways Cleaning Room</b>																					
ERM-B-1	3.5	4/15/03	<0.020	<10	18	22	<1.0	<1.0	18	12	38	<10	<4.0	21	<10	<1.0	70	J	12	40	J
ERM-B-2	3.5	4/15/03	<0.020	<10	20	22	<1.0	<1.0	15	<4.0	4.9	<10	<4.0	18	<10	<1.0	63	J	11	19	J
W-B-4	3-4	4/14/03	<0.020	<10	16	14	<1.0	<1.0	17	<4.0	3.2	<10	<4.0	17	<10	<1.0	63	J	12	14	
W-B-5	3-4	4/14/03	<0.020	<10	17	13	<1.0	<1.0	15	<4.0	3.0	<10	<4.0	18	<10	<1.0	59	J	11	13	
W-B-6	3-4	4/14/03	0.032	<10	30	65	<1.0	<1.0	20	5.9	14	<10	<4.0	35	<10	<1.0	140	J	13	26	
<b>Area of Concern 2 - Aircraft Wash Rack</b>																					
ERM-B-3	2.5	4/15/03	<0.020	<10	19	21	<1.0	<1.0	17	<4.0	6.0	<10	<4.0	19	<10	<1.0	72	J	12	<14	UJ
ERM-B-4	2.5	4/15/03	<0.020	<10	19	27	<1.0	<1.0	13	<4.0	6.4	<10	<4.0	17	<10	<1.0	55	J	10	<14	UJ
ERM-B-5	2.5	4/15/03	<0.020	<10	21	26	<1.0	<1.0	22	<4.0	7.0	<10	<4.0	21	<10	<1.0	67	J	12	<21	UJ
ERM-B-6	2.5	4/15/03	<0.020	<10	19	23	<1.0	<1.0	16	<4.0	9.0	<10	<4.0	17	<10	<1.0	62	J	11	<14	UJ
W-B-7	1-2	4/17/03	<0.017	<10	21	31	<1.0	<1.0	18	<4.0	5.5	<10	<4.0	22	<10	<1.0	75	J	13	15	J
W-B-8	1.5-2.5	4/14/03	0.16	<10	46	110	<1.0	<1.0	19	6.5	25	79	<4.0	32	<10	<1.0	200	J	23	94	
<b>Area of Concern 3 - Industrial Wastewater Vault</b>																					
W-B-10	3-4	4/15/03	<0.020	<10	19	20	<1.0	<1.0	18	<4.0	3.6	<10	<4.0	19	<10	<1.0	60	J	12	15	
W-B-11	1-2	4/15/03	0.022	<10	29	50	<1.0	<1.0	20	4.3	6.6	<10	<4.0	26	<10	<1.0	93	J	15	20	
W-B-12	0.5	4/16/03	<0.020	25	33	150	<1.0	44	90	6.2	4,200	35	260	340	<10	2.7	160	J	19	190	
<b>Area of Concern 5 - Vehicle Maintenance Center</b>																					
ERM-B-10	2.5	4/17/03	<0.018	<10	23	28	<1.0	<1.0	19	4.0	4.7	<10	<4.0	21	<10	<1.0	77	J	13	15	J
ERM-B-11	2.5	4/17/03	<0.018	<10	24	39	<1.0	<1.0	18	<4.0	4.1	<10	<4.0	20	<10	<1.0	75	J	13	16	J
W-B-2	3.5-4.5	4/14/03	<0.020	<10	15	66	<1.0	<1.0	12	<4.0	2.6	<10	<4.0	15	<10	<1.0	50	J	8.9	11	
W-B-3	3-4	4/14/03	<0.020	<10	15	20	<1.0	<1.0	19	<4.0	4.6	<10	<4.0	21	<10	<1.0	74	J	12	18	
<b>Area of Concern 7 - Former 90-Day Hazardous Waste Accumulation Area</b>																					
W-B-16	1-2	4/17/03	<0.019	<10	24	32	<1.0	<1.0	19	<4.0	4.9	<10	<4.0	22	<10	<1.0	80	J	14	18	J
W-B-17	1-2	4/17/03	<0.017	<10	28	31	<1.0	<1.0	22	6.7	6.6	<10	<4.0	25	<10	<1.0	93	J	15	18	J
<b>Area of Concern 8 - Current 90-Day Hazardous Waste Accumulation Area</b>																					
ERM-B-12	2	4/17/03	<0.018	<10	27	32	<1.0	<1.0	21	4.2	5.5	<10	<4.0	24	<10	<1.0	91	J	15	19	J
<b>Area of Concern 9 - Hazardous Material Storage Areas</b>																					
ERM-B-13	3.5	4/16/03	<0.020	<10	14	19	<1.0	<1.0	11	<4.0	4.0	<10	<4.0	15	<10	<1.0	59	J	7.6	13	
ERM-B-14	4.5	4/17/03	0.028	<10	36	37	<1.0	<1.0	23	6.0	8.0	<10	<4.0	30	<10	<1.0	150	J	16	28	
W-B-22	2-3	4/18/03	<0.017	<10	22	29	<1.0	<1.0	16	<4.0	3.8	<10	<4.0	18	<10	<1.0	76	J	12	20	J
<b>Area of Concern 10 - Chemical Storage Area</b>																					
ERM-B-15	1	4/17/03	<0.019	<10	22	21	<1.0	<1.0	17	<4.0	3.9	<10	<4.0	21	<10	<1.0	83	J	13	18	J
<b>Area of Concern 13 - Paint Spray Booth</b>																					
ERM-B-22	1.5	4/17/03	<0.019	<10	25	21	<1.0	<1.0	18	<4.0	4	<10	<4.0	20	<10	<1.0	85	J	13	15	J
<b>Area of Concern 14 - Storm Drains</b>																					
ERM-B-23	4.5	4/17/03	0.024	<10	26	35	<1.0	<1.0	17	4.2	7.9	<10	<4.0	21	<10	<1.0	96	J	15	31	
W-B-32	1-2	4/16/03	0.029	<10	22	23	<1.0	4.2	26	<4.0	23	20	<4.0	17	<10	<1.0	78	J	11	140	
W-B-38	2-3	4/15/03	<0.020	<10	21	11	<1.0	<1.0	16	<4.0	3.4	<10	<4.0	20	<10	<1.0	67	J	12	14	
<b>Area of Concern 19 - Runoff from Pavement to Unpaved Area North of OMC</b>																					
W-B-25	1-2	4/15/03	<0.020	<10	82	120	<1.0	<1.0	55	11	29	<10	<4.0	22	<10	<1.0	380/<0.42*	J	54	61	
W-B-29	1-2	4/16/03	0.039	<10	77	61	<1.0	<1.0	56	11	20	<10	<4.0	72	<10	<1.0	280	J	33	52	

Table 3  
Metals Detected in Soil  
Oakland Maintenance Center  
United Airlines

Sample Location	Sample Depth (feet bgs)	Date Sampled	Hg	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	Ag	Tl	V	Zn
	Residential PRG (mg/kg)		23	31	22	5400	150	37	210	900	3100	150	390	1600	390	390	5.2	550	23000
	Industrial PRG (mg/kg)		310	410	260	67000	1900	450	450	1900	41000	750	5100	20000	5100	5100	67	7200	100000
	Number of Samples		31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
	Number of Detections		7	1	31	31	0	2	31	12	31	3	1	31	0	1	-	31	27
	Number of Detections above the PRG/RBSL		0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0
	Minimum Detection		0.022	25	14	11	NA	4.2	11	4	2.6	20	260	15	NA	2.7	-	7.6	11
	Maximum Detection		0.16	25	82	150	NA	44	90	12	4200	79	260	340	NA	2.7	-	54	190
	Median		0.029	25	22	28	NA	24.1	18	6.1	5.5	35	260	21	NA	2.7	-	13	18
	Mean		0.048	25	26.8	39.3	NA	24.1	22.7	6.8	144.3	44.7	260	33.1	NA	2.7	-	15.0	35.3

Notes:

Sample concentrations reported in milligrams per kilogram (mg/kg)  
PRG = Preliminary Remedial Goal (EPA Region 9 PRG Table; 1 October 2002)

Bold values indicate concentrations detected above the laboratory method detection limit.

< 0.5	Compound not detected at or above the laboratory method detection limit
#	Shaded results exceed applicable regulatory standard
NS	PRG not established
NA	Not Analyzed
feet bgs	feet below ground surface
380/<0.42*	Bold indicates the initial result by inductively coupled plasma/ <i>Italicized</i> indicates the result after reanalysis by graphite furnace

The initial thallium results were obtained using an inductively coupled plasma method. Concentrations of iron and aluminum within the samples can cause interferences for certain elements including thallium. The reanalysis using the graphite furnace method indicates that this interference is occurring with the samples collected during this investigation and the samples most likely contain concentrations similar to that detected by the graphite furnace analysis.

Abbreviations:

Hg = Mercury	Pb = Lead
Sb = Antimony	Mo = Molybdenum
As = Arsenic	Ni = Nickel
Ba = Barium	Se = Selenium
Be = Beryllium	Ag = Silver
Cd = Cadmium	Tl = Thallium
Cr = Chromium	V = Vanadium
Co = Cobalt	Zn = Zinc
Cu = Copper	

ERM Qualifiers:

J = Estimated Value
UJ = Estimated Non-detected Value



Sample Location	Date Sampled	Methods	VOCs																																TPPH	TPH	TPH SGCU	Distal SGCU	Metax CB SGCU	4-Methylch. met
			N-BB	T-BB	CB	CF	CM	1,3-DCB	1,4-DCB	1,1-DCA	1,2-DCA	1,1-DCE	o-1,2-DCE	1,1,2-DCE	DCM	IPB	p-IPB	MIBP	NAP	N-PB	STY	1,1,1-TCA	TCE	1,2,4-TMB	1,2,4-TMB	BZ	B	TOL	VC	XYL										
Fire-Police Water BBL (ug/L)			NS	NS	NS	NS	NS	0.06	5	2	0.5	2	4	10	5	NS	NS	23	NS	NS	100	200	5	NS	NS	1	70	150	45	170	80	40	40	40	40	40	40			
MCL (ug/L)			NS	NS	NS	NS	NS	0.06	5	2	0.5	2	4	10	5	NS	NS	23	NS	NS	100	200	5	NS	NS	1	70	150	45	170	80	40	40	40	40	40	40			

NS indicates a concentration detected above the respective MCL.  
 MCL not established  
 NI  
 NA Not Analyzed

**Abbreviations:**

VOC = Volatile Organic Compounds  
 TPH = Total Petroleum Hydrocarbons  
 SVOC = Semi-Volatile Organic Compounds  
 DCM = Dichloromethane  
 MTBE = Methyl tert-butyl ether  
 1,1-DCA = 1,1-Dichloroethane  
 1,1-DCE = 1,1-Dichloroethane  
 1,1,1-TCA = 1,1,1-Trichloroethane  
 o-1,2-DCE = o-1,2-Dichloroethane  
 TCE = Trichloroethene  
 NAP = Naphthalene  
 1,2,4-TMB = 1,2,4-Trimethylbenzene  
 1,3,5-TMB = 1,3,5-Trimethylbenzene

p-IPB = p-Isopropylbenzene  
 IPB = Isopropylbenzene  
 CM = Chloroform  
 CE = Chloroethane  
 STY = Styrene  
 BZ = Benzene  
 TOL = Toluene  
 BB = Ethylbenzene  
 XYL = Xylenes  
 TEPH = Total Extractable Petroleum Hydrocarbons  
 TEPH SGCU = Total Extractable Petroleum Hydrocarbons - with Silica Gel Cleanup  
 TPPH = Total Purgable Petroleum Hydrocarbons  
 N-BB = n-Butylbenzene

t-BB = tert-Butylbenzene  
 n-PB = n-Propylbenzene  
 VC = Vinyl Chloride  
 1,2-DCA = 1,2-Dichloroethane  
 trans-1,2-DCE = trans-1,2-Dichloroethane  
 1,2-DCB = 1,2-Dichlorobenzene  
 1,4-DCB = 1,4-Dichlorobenzene  
 CP = Chloroform

**ERM Qualifiers:**  
 J = Estimated Value  
 UJ = Estimated Non-Detected Value  
 UJb = Estimated Non-Detected Value Due to Common Laboratory Constraints  
 NI = Tentative Identification Parameter



Table 5  
Dissolved Metals Detected in Ground Water  
Oakland Maintenance Center  
United Airlines

Sample Location	Date Sampled	Hg	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	Ag	Tl	V	Zn	TDS
MCL (mg/L)		0.002	0.006	0.05	1.0	0.004	0.005	0.05	NS	1.3	0.015	NS	0.1	0.05	0.1**	0.002	NS	5.0**	
<b>Area of Concern 1 - Small Parts Wash Rack/Former World Airways Cleaning Room</b>																			
ERM-B-1	4/15/03	<0.0002	<0.050	<0.050	0.18	<0.0050	<0.0050	<0.0050	0.02	<0.0050	<0.050	<0.020	0.13	<0.050	<0.0050	<0.050	<0.020	0.0065	NA
ERM-B-2	4/15/03	<0.0002	<0.050	<0.050	0.6	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.050	<0.020	0.28	<0.050	<0.0050	0.21/<0.005*	<0.020	<0.0050	NA
W-B-4	4/15/03	<0.0002	<0.050	<0.050	0.064	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.050	<0.020	<0.020	<0.050	<0.0050	0.082	<0.020	<0.020	NA
W-B-5	4/15/03	<0.0002	<0.050	<0.050	0.21	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.050	<0.020	0.064	<0.050	<0.0050	<0.050	<0.020	<0.020	NA
W-B-6	4/15/03	<0.0002	<0.050	<0.050	0.19	<0.0055	UJ	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	0.031	<0.050	<0.0050	<0.050	<0.020	<0.020	NA
ERM-MW-01	5/9/03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.09	NA	NA	NA	NA	NA	NA
ERM-MW-02	5/9/03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.036	NA	NA	NA	NA	NA	NA
ERM-MW-03	5/9/03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.030	NA	NA	NA	NA	NA	NA
ERM-MW-04	5/9/03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.062	NA	NA	NA	NA	NA	NA
ERM-MW-05	5/9/03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.030	NA	NA	NA	NA	NA	NA
<b>Area of Concern 2 - Aircraft Wash Rack</b>																			
ERM-B-3	4/15/03	<0.0002	<0.050	<0.050	0.29	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.050	<0.020	0.12	<0.050	<0.0050	<0.050	<0.020	<0.0050	NA
ERM-B-4	4/15/03	<0.0002	<0.050	<0.050	0.3	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.050	<0.020	0.16	<0.050	<0.0050	<0.050	<0.020	<0.0050	NA
ERM-B-5	4/15/03	<0.0002	<0.050	<0.050	0.16	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.050	0.051	0.23	<0.050	<0.0050	0.074	<0.020	0.0066	NA
ERM-B-6	4/15/03	<0.0002	<0.050	<0.050	0.33	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.050	0.028	0.26	<0.050	<0.0050	0.081	<0.020	<0.0050	NA
ERM-B-7	4/15/03	<0.0002	UJ	<0.050	<0.050	0.13	<0.0050	0.0056	0.0075	<0.020	0.0054	<0.050	0.12	0.092	<0.050	<0.0050	<0.050	<0.020	NA
W-B-7	4/17/03	<0.0002	<0.050	<0.050	0.28	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.050	<0.020	<0.020	<0.050	<0.0050	<0.050	<0.020	<0.020	NA
W-B-8	4/14/03	<0.0002	<0.050	<0.050	0.37	<0.0050	<0.0050	0.047	<0.020	0.048	0.15	<0.020	0.052	<0.050	<0.0050	0.15	<0.020	0.79	NA
ERM-MW-06	5/9/03	NA	NA	NA	NA	NA	<0.0050	NA	NA	NA	<0.050	NA	<0.030	NA	NA	NA	NA	NA	NA
ERM-MW-07	5/9/03	NA	NA	NA	NA	NA	<0.0050	NA	NA	NA	<0.050	NA	0.084	NA	NA	NA	NA	NA	NA
ERM-MW-08	5/9/03	NA	NA	NA	NA	NA	<0.0050	NA	NA	NA	<0.050	NA	0.12	NA	NA	NA	NA	NA	NA
ERM-MW-09	5/9/03	NA	NA	NA	NA	NA	<0.0050	NA	NA	NA	<0.050	NA	0.25	NA	NA	NA	NA	NA	NA
<b>Area of Concern 3 - Industrial Wastewater Vault</b>																			
W-B-10	4/15/03	<0.0002	<0.050	<0.050	0.068	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.050	<0.020	<0.020	<0.050	<0.0050	<0.050	<0.020	<0.020	NA
W-B-11	4/15/03	<0.0002	<0.050	<0.050	0.086	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.050	<0.020	<0.020	<0.050	<0.0050	<0.050	<0.020	<0.020	NA
W-B-12	4/15/03	<0.0002	<0.050	<0.050	<0.050	<0.0050	0.0056	<0.0050	<0.020	0.22	<0.050	0.085	0.063	<0.050	<0.0050	<0.050	<0.020	0.036	NA
ERM-MW-10	5/9/03	NA	NA	NA	NA	NA	<0.0050	NA	NA	NA	<0.050	NA	0.082	NA	NA	NA	NA	NA	NA
<b>Area of Concern 5 - Vehicle Maintenance Center</b>																			
ERM-B-10	4/17/03	<0.0002	UJ	0.074	0.1	0.0056	<0.0050	<0.0050	<0.020	<0.0050	<0.050	<0.020	<0.020	<0.050	<0.0050	<0.050	<0.020	<0.020	NA
ERM-B-11	4/17/03	<0.0002	UJ	<0.050	0.076	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.050	<0.020	<0.020	<0.050	<0.0050	0.064	<0.020	<0.020	NA
W-B-2	4/15/03	<0.0002	<0.050	<0.050	0.054	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.050	<0.020	<0.020	<0.050	<0.0050	<0.050	<0.020	<0.020	NA
W-B-3	4/15/03	<0.0002	0.055	<0.050	0.12	<0.0061	UJ	<0.0050	<0.0050	<0.0050	<0.050	<0.020	<0.020	<0.050	<0.0050	<0.050	<0.020	0.0063	NA
<b>Area of Concern 7 - Former 90-Day Hazardous Waste Accumulation Area</b>																			
W-B-16	4/17/03	<0.0002	UJ	<0.050	<0.050	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.050	0.022	0.054	<0.050	<0.0050	<0.050	<0.020	<0.020	NA
W-B-17	4/17/03	<0.0002	UJ	<0.050	<0.050	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.050	<0.020	<0.020	<0.050	<0.0050	<0.050	<0.020	<0.020	1,300
<b>Area of Concern 8 - Current 90-Day Hazardous Waste Accumulation Area</b>																			
ERM-B-12	4/17/03	<0.0002	<0.050	<0.050	0.24	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.050	0.031	0.063	<0.050	<0.0050	<0.050	<0.020	<0.020	NA
<b>Area of Concern 9 - Hazardous Material Storage Areas</b>																			
ERM-B-13	4/16/03	<0.0002	<0.050	<0.050	0.058	0.0059	<0.0050	<0.0050	<0.020	<0.0050	0.057	0.028	<0.020	<0.050	0.0058	<0.050	<0.020	0.017	NA
ERM-B-14	4/17/03	<0.0002	<0.050	<0.050	0.058	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.050	<0.020	<0.020	<0.050	<0.0050	0.065	<0.020	<0.020	3,300
W-B-22	4/18/03	<0.0002	<0.050	<0.050	<0.050	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.050	<0.020	<0.020	<0.050	<0.0050	<0.050	<0.020	0.0099	NA
<b>Area of Concern 11 - Aircraft Fueling/Defueling Equipment Areas</b>																			
ERM-B-16	4/16/03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15,000
<b>Area of Concern 12 - Fire System Motors and Associated Fuel Tanks</b>																			
ERM-B-20	4/17/03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,200
<b>Area of Concern 14 - Storm Drains</b>																			
ERM-B-23	4/17/03	<0.0002	UJ	<0.050	0.077	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.050	<0.020	<0.020	<0.050	<0.0050	<0.050	<0.020	<0.020	NA
W-B-32	4/16/03	<0.0002	<0.050	<0.050	0.12	0.0055	<0.0050	<0.0050	<0.020	0.0056	0.05	<0.020	<0.020	<0.050	<0.0050	<0.050	<0.020	0.021	1,900

Table 5  
Dissolved Metals Detected in Ground Water  
Oakland Maintenance Center  
United Airlines

Sample Location	Date Sampled	Hg	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	Ag	Tl	V	Zn	TDS
MCL (mg/L)		0.002	0.006	0.05	1.0	0.004	0.005	0.05	NS	1.3	0.015	NS	0.1	0.05	0.1**	0.002	NS	5.0**	
W-B-38	4/15/03	<0.0002	<0.050	<0.050	<0.050	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.050	<0.020	<0.020	<0.050	<0.0050	<0.050	<0.020	<0.020	NA
Area of Concern 15 - Aircraft Parking and Run Up Area																			
ERM-B-24	4/15/03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,300
Area of Concern 19 - Runoff from Pavement to Unpaved Area North of OMC																			
W-B-25	4/16/03	<0.0002	<0.050	<0.050	<0.050	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.050	<0.020	<0.020	<0.050	<0.0050	<0.050	<0.020	0.0081	NA
W-B-29	4/16/03	<0.0002	<0.050	<0.050	<b>0.12</b>	<0.0050	<0.0050	<0.0050	<0.020	<0.0050	<0.050	<0.020	<0.020	<0.050	<0.0050	<0.050	<0.020	<b>0.005</b>	NA
Number of Samples		30	30	30	30	30	35	30	30	30	35	30	40	30	30	30	30	30	6
Number of Detections		0	2	0	24	3	2	2	1	4	3	7	21	0	1	-	0	11	6
Number of Detections above the MCL/RBSL		0	2	0	0	3	2	0	0	0	3	0	8	0	0	-	0	0	NA
Minimum Detection		NA	0.055	NA	0.054	0.0058	0.0056	0.0075	0.02	0.0054	0.05	0.022	0.031	NA	0.0058	-	NA	0.005	1300
Maximum Detection		NA	0.074	NA	0.6	0.0086	0.038	0.047	0.02	0.22	1.9	0.12	0.26	NA	0.0058	-	NA	0.79	15000
Median		NA	0.065	NA	0.125	0.006	0.022	0.027	0.020	0.027	0.057	0.031	0.087	NA	0.006	-	NA	0.010	2050
Mean		NA	0.065	NA	0.178	0.007	0.022	0.027	0.020	0.070	0.669	0.052	0.110	NA	0.006	-	NA	0.084	4167

Notes:

Sample concentrations reported in milligrams per liter (mg/L)

MCL = California Maximum Contaminant Level (A Compilation of Water Quality Goals, RWQCB, August 2000)

Bold values indicate concentrations detected above the laboratory method detection limit.

\*\* Secondary MCL used when a Primary MCL was not available.

< 0.5 Compound not detected at or above the laboratory method detection limit

≠ Indicates a concentration detected above the respective MCL.

NS MCL not established

NA Not Analyzed

0.21/<0.005\* Bold indicates the initial result by inductively coupled plasma/*Italicized* indicates the result after reanalysis by graphite furnace

The initial thallium results were obtained using an inductively coupled plasma method. Concentrations of iron and aluminum within the samples can cause interferences for certain elements including thallium. The reanalysis using the graphite furnace method indicates that this interference is occurring with the samples collected during this investigation and the samples most likely contain concentrations similar to that detected by the graphite furnace analysis.

Abbreviations:

Hg = Mercury	Pb = Lead
Sb = Antimony	Mo = Molybdenum
As = Arsenic	Ni = Nickel
Ba = Barium	Se = Selenium
Be = Beryllium	Ag = Silver
Cd = Cadmium	Tl = Thallium
Cr = Chromium	V = Vanadium
Co = Cobalt	Zn = Zinc
Cu = Copper	TDS = Total Dissolved Solids

ERM Qualifiers:

J = Estimated Value

UJ = Estimated Non-Detected Value