

February 22, 1994
Project No. RC0027.009

94 FEB 28 PM 12:32

Mr. Paul Ahlin
United Parcel Service, Inc.
8400 Pardee Drive
Oakland, California 94621

583

SUBJECT: Results of Groundwater Monitoring, January 4, 1994, United Parcel Service, Inc. Facility, 8400 Pardee Drive, Oakland, California.

Dear Mr. Ahlin:

This letter report presents the results of the monitoring and sampling performed on January 4, 1994, for the United Parcel Service, Inc. (UPS) facility referenced above (Figure 1). The scope of work for this project was contained in a previous Geraghty & Miller, Inc. (Geraghty & Miller) document to UPS dated December 23, 1993.

GROUNDWATER SAMPLING PROCEDURES

Groundwater samples were collected from Monitoring Wells MW-1 through MW-7 on January 4, 1994 (Figure 2). Prior to sampling, depth to water was measured, and each well was checked for the presence of liquid-phase hydrocarbons. Liquid-phase hydrocarbons (LPH) were not observed in any of the monitor wells.

Prior to sampling, each well was purged using a 1-inch diaphragm pump with a new length of polyethylene tubing for each well. Approximately three casing volumes of groundwater were purged from each of the wells or the well was purged dry due to slow recovery. A summary of the field sampling parameters is presented in Table 1. The purged water was placed in 55-gallon drums and stored onsite for proper handling and disposal by UPS.

Following purging, groundwater samples were collected from the wells using a new disposable polyethylene bailer for each well. The groundwater samples were placed into the appropriate U.S. Environmental Protection Agency (USEPA) approved containers, placed on ice, and transported to Sequoia Laboratories, Inc. of Concord, California, along



with appropriate chain-of-custody documentation. The groundwater samples were analyzed for total petroleum hydrocarbons as diesel (TPH-D) by modified USEPA Method 8015 and benzene, toluene, ethylbenzene, and total xylenes (BTEX) by USEPA Method 8020. In addition, the samples collected from Monitor Wells MW-4 through MW-7 were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) by modified USEPA Method 8015. Copies of the chain-of-custody forms and laboratory reports are attached. A trip blank was also submitted to the laboratory for analysis for quality control purposes. The trip blank was analyzed for TPH-G (modified USEPA Method 8015) and BTEX (USEPA Method 8020).

RESULTS

Depth-to-water measurements and groundwater elevations for the wells are presented in Table 2. Based on the groundwater elevations, the direction of shallow groundwater flow in the vicinity of the southern fueling facilities is generally toward the south-southwest. In the vicinity of the northern fueling facilities, the direction of shallow groundwater flow is generally toward the north (Figure 2).

The results of groundwater analyses for the January 4, 1994, sampling event are summarized in Table 3. In the vicinity of the underground storage tanks beneath the southeastern portion of the site, TPH-D was detected at concentrations ranging from 3,700 micrograms per liter ($\mu\text{g/L}$) (Well MW-2) to 12,000 $\mu\text{g/L}$ (Well MW-1). BTEX concentrations are summarized in Table 3.

In the vicinity of the underground storage tanks beneath the northeastern portion of the site, TPH-D was detected in samples collected from Monitor Wells MW-4 (110 $\mu\text{g/L}$), MW-5 (100 $\mu\text{g/L}$), and MW-7 (250 $\mu\text{g/L}$). TPH-D was not detected in the sample collected from Well MW-6. TPH-G and BTEX were not detected in the samples collected from these four wells. TPH-G and BTEX were not detected in the trip blank.



Geraghty & Miller appreciates the opportunity to be of service to UPS. If you have any questions regarding this letter report, please do not hesitate to call.

Sincerely,
GERAGHTY & MILLER, INC.

Michael M. Bessette

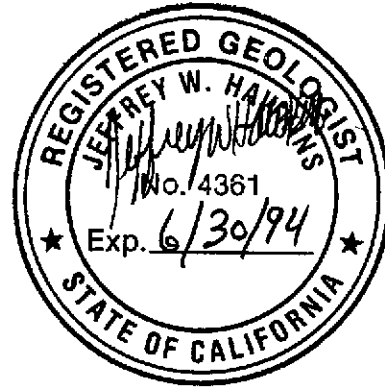
Michael M. Bessette
Geologist/Project Manager

Jeffrey W. Hawkins

Jeffrey W. Hawkins, R.G.
Senior Geologist

Jeffrey W. Hawkins

for Gary W. Keyes, P.E.
Principal Engineer/Associate
Richmond, California Officer Manager



Attachments:	Table 1	Summary of Field Sampling Data
	Table 2	Depth-to-Water and Groundwater Elevations
	Table 3	Groundwater Analytical Results
	Figure 1	Site Location Map
	Figure 2	Groundwater Elevation Map (January 1994)
	Attachment 1	Copies of Certified Laboratory Analytical Results and Chain-of-Custody Documentation

cc: Mr. Barney Chan
Alameda County Health Department, Hazardous Materials Division
80 Swan Way, Room 200
Oakland, California 94621

Project No. RC0027.009

GERAGHTY & MILLER, INC.

Table 1: Summary of Field Sampling Data
 United Parcel Service, Inc.
 8400 Pardee Drive, Oakland, California.

Well	Date	Calculated Purge Volume (a) (Gallons)	Actual Purge Volume (Gallons)	FIELD PARAMETERS			Depth to Water (b) (Feet)	Well Depth (b) (Feet)	Casing Diameter (inches)
				pH	SC (µS/cm)	Temperature (°F)			
MW-1	4-Jan-94	20.98	21.0	9.14	2,330	61.3	3.34	14.10	4
MW-2	4-Jan-94	18.70	12.0	7.90	5,490	61.9	4.56	14.15	4
MW-3	4-Jan-94	21.31	17.0	8.36	2,860	63.7	3.40	14.33	4
MW-4	4-Jan-94	21.21	22.0	6.91	11,230	59.5	3.49	14.37	4
MW-5	4-Jan-94	20.42	14.0	6.45	6,200	62.8	3.72	14.19	4
MW-6	4-Jan-94	51.81	25.0	6.74	14,490	59.3	7.27	19.10	6
MW-7	4-Jan-94	4.03	4.0	7.56	10,460	60.9	7.75	16.16	2

(a) Based on three casing volumes.
 (b) Measured from top of PVC casing.

NM Not Measured.
 SC Specific Conductance.
 MSL Mean Sea Level.



Table 2: Depth-to-Water and Groundwater Elevations
 United Parcel Service, Inc.
 8400 Pardee Drive, Oakland, California.

Well	Date	Depth to Water (a) (feet)	Top of Casing Elevation (feet MSL)	Top of Water Elevation (feet MSL)	Measured Depth of Well (a) (feet)	
MW-1	28-Aug-90	3.80	7.43	3.63	14.05	
	20-Sep-90	3.99		3.44		
	19-Jun-91	3.47		3.96		
	23-Jul-91	3.70		3.73		
	26-Aug-91	3.92		3.51		
	18-Nov-91	4.21		3.22		
	3-Feb-92	3.99		3.44		
	29-Jun-92	3.38		4.05		
	23-Jun-93	2.72		4.71		14.20
	11-Oct-93	3.87		3.56		14.27
	4-Jan-94	3.34		4.09		14.10
MW-2	28-Aug-90	4.98	7.15	2.17	15.35	
	20-Sep-90	4.94		2.21		
	19-Jun-91	4.66		2.49		
	23-Jul-91	4.81		2.34		
	26-Aug-91	4.89		2.26		
	18-Nov-91	4.93		2.22		
	3-Feb-92	4.44		2.71		
	29-Jun-92	4.80		2.35		
	23-Jun-93	4.38		2.77		14.35
	11-Oct-93	5.20		1.95		14.35
	4-Jan-94	4.56		2.59		14.15
MW-3	28-Aug-90	3.88	7.42	3.54	14.60	
	20-Sep-90	3.99		3.43		
	19-Jun-91	3.49		3.93		
	23-Jul-91	3.71		3.71		
	26-Aug-91	3.94		3.48		
	18-Nov-91	4.23		3.19		
	3-Feb-92	4.01		3.41		
	29-Jun-92	3.40		4.02		
	23-Jun-93	2.75		4.67		14.50
	11-Oct-93	3.84		3.58		14.45
	4-Jan-94	3.40		4.02		14.33



Table 2: Depth-to-Water and Groundwater Elevations
 United Parcel Service, Inc.
 8400 Pardee Drive, Oakland, California.

Well	Date	Depth to Water (a) (feet)	Top of Casing Elevation (feet MSL)	Top of Water Elevation (feet MSL)	Measured Depth of Well (a) (feet)	
MW-4	28-Aug-90	3.15	5.71	2.56	14.66	
	20-Sep-90	3.19		2.52		
	19-Jun-91	2.73		2.98		
	23-Jul-91	3.07		2.64		
	26-Aug-91	4.32		1.39		
	18-Nov-91	4.03		1.68		
	3-Feb-92	3.86		1.85		
	29-Jun-92	2.94		2.77		
	23-Jun-93	2.49		3.22		14.54
	11-Oct-93	4.08		1.63		14.45
	4-Jan-94	3.49		2.22		14.37
MW-5	28-Aug-90	7.46	4.93	-2.53	14.77	
	20-Sep-90	3.99		0.94		
	19-Jun-91	3.63		1.30		
	23-Jul-91	4.37		0.56		
	26-Aug-91	4.19		0.74		
	18-Nov-91	4.25		0.68		
	3-Feb-92	3.53		1.40		
	29-Jun-92	3.48		1.45		
	23-Jun-93	3.40		1.53		14.29
	11-Oct-93	3.66		1.27		14.40
	4-Jan-94	3.72		1.21		14.19
MW-6	28-Aug-90	7.76	6.27	-1.49	18.10	
	20-Sep-90	7.18		-0.91		
	19-Jun-91	7.71		-1.44		
	23-Jul-91	7.90		-1.63		
	26-Aug-91	7.71		-1.44		
	18-Nov-91	6.99		-0.72		
	3-Feb-92	7.19		-0.92		
	29-Jun-92	7.92		-1.65		
	23-Jun-93	7.53		-1.26		19.11
	11-Oct-93	7.60		-1.33		19.20
	4-Jan-94	7.27		-1.00		19.10



Table 2: Depth-to-Water and Groundwater Elevations
 United Parcel Service, Inc.
 8400 Pardee Drive, Oakland, California.

Well	Date	Depth to Water (a) (feet)	Top of Casing Elevation (feet MSL)	Top of Water Elevation (feet MSL)	Measured Depth of Well (a) (feet)
MW-7	4-Jan-94	7.75	(b)	(b)	16.16
OW-1	23-Jun-93	4.14	(b)	(b)	18.60
	11-Oct-93	NM			NM
	4-Jan-94	NM			NM

(a) Measured from top of PVC casing.

(b) Well casing elevation unknown.

MSL Mean Sea Level.

NM Not Measured.



Table 3: Groundwater Analytical Results
 United Parcel Service, Inc.
 8400 Pardee Drive, Oakland, California.

Well	Date	TPH		Benzene (b) (µg/L)	Toluene (b) (µg/L)	Ethyl- benzene (b) (µg/L)	Total Xylenes (b) (µg/L)
		Gasoline (a) (µg/L)	Diesel (a) (µg/L)				
MW-1	28-Aug-90	NA	21,000	3.0	1.4	4.0	2.4
	19-Jun-91	NA	7,100	1.7	0.7	0.5	0.9
	23-Jul-91	220	8,700	1.6	1.1	0.5	1.5
	26-Aug-91	NA	2,800	180.0	120.0	31.0	160.0
	18-Nov-91	NA	6,600	1.1	0.4	0.5	ND(<0.3)
	3-Feb-92	NA	2,200	0.9	ND(<0.3)	0.8	0.7
	29-Jun-92	NA	2,100	0.8	0.4	0.4	0.9
	23-Jun-93	NA	3,200	0.66	ND(<0.5)	0.5	ND(<0.5)
	11-Oct-93	NA	9,600	1.3	ND(<0.5)	ND(<0.5)	ND(<0.5)
	4-Jan-94	NA	12,000	2.1	0.65	1.3	2.1
MW-2	28-Aug-90	NA	3,500	0.6	0.4	0.6	0.7
	19-Jun-91	NA	ND(<50)	0.5	ND(<0.3)	ND(<0.3)	ND(<0.3)
	23-Jul-91	ND(<50)	660	0.7	ND(<0.3)	ND(<0.3)	ND(<0.3)
	26-Aug-91	NA	ND(<50)	0.7	ND(<0.3)	ND(<0.3)	ND(<0.3)
	18-Nov-91	NA	3,200	0.8	ND(<0.3)	ND(<0.3)	ND(<0.3)
	3-Feb-92	NA	400	0.7	ND(<0.3)	ND(<0.3)	0.5
	29-Jun-92	NA	250	0.6	ND(<0.3)	ND(<0.3)	ND(<0.3)
	23-Jun-93	NA	11,000	0.55	ND(<0.5)	ND(<0.5)	ND(<0.5)
	11-Oct-93	NA	1,400	1.2	ND(<0.5)	ND(<0.5)	1.3
	4-Jan-94	NA	3,700	0.72	ND(<0.5)	ND(<0.5)	1.1
MW-3	28-Aug-90	NA	18,000	0.5	0.8	4.3	2.3
	19-Jun-91	NA	1,300	0.4	0.4	1.7	1.4
	23-Jul-91	330	6,800	0.3	ND(<0.3)	1.5	0.5
	26-Aug-91	NA	ND(<50)	13.0	13.0	5.8	26.0
	18-Nov-91	NA	2,500	0.6	ND(<0.3)	ND(<0.3)	ND(<0.3)
	3-Feb-92	NA	1,100	0.4	ND(<0.3)	1.3	0.6
	29-Jun-92	NA	3,200	ND(<0.3)	ND(<0.3)	1.3	0.3
	23-Jun-93	NA	8,100	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	11-Oct-93	NA	7,100	1.0	ND(<0.5)	1.5	2.4
	4-Jan-94	NA	7,400	ND(<0.5)	ND(<0.5)	1.6	ND(<0.5)
MW-4	28-Aug-90	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	19-Jun-91	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	23-Jul-91	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	26-Aug-91	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	18-Nov-91	ND(<50)	60	0.3	ND(<0.3)	ND(<0.3)	ND(<0.3)
	3-Feb-92	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	29-Jun-92	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	23-Jun-93	ND(<50)	59	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	11-Oct-93	ND(<50)	90	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	4-Jan-94	ND(<50)	110 (c)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)



Table 3: Groundwater Analytical Results
 United Parcel Service, Inc.
 8400 Pardee Drive, Oakland, California.

Well	Date	TPH		Benzene (b)	Toluene (b)	Ethyl- benzene (b)	Total Xylenes (b)
		Gasoline (a)	Diesel (a)				
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-5	28-Aug-90	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	19-Jun-91	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	23-Jul-91	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	26-Aug-91	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	18-Nov-91	ND(<50)	100	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	3-Feb-92	53	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	0.5
	29-Jun-92	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	23-Jun-93	ND(<50)	61	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	11-Oct-93	ND(<50)	96	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
4-Jan-94	ND(<50)	100 (c)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	
MW-6	7-Sep-90	ND(<50)	ND(<100)	ND(<0.3)	0.5	ND(<0.3)	1.0
	19-Jun-91	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	23-Jul-91	ND(<50)	110	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	26-Aug-91	NA	NA	NA	NA	NA	NA
	18-Nov-91	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	3-Feb-92	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	29-Jun-92	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	23-Jun-93	ND(<50)	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	11-Oct-93	ND(<50)	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
4-Jan-94	ND(<50)	ND(<50)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)	
MW-7	4-Jan-94	ND(<50)	250 (c)	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
OW-1	23-Jun-93	NA	3,400,000	ND(<0.5)	ND(<0.5)	ND(<0.5)	31.0
	4-Jan-94	NS	NS	NS	NS	NS	NS
Trip Blank	26-Aug-91	ND(<50)	NA	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	18-Nov-91	ND(<50)	NA	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	3-Feb-92	ND(<50)	NA	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	29-Jun-92	ND(<50)	NA	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	23-Jun-93	ND(<50)	NA	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	11-Oct-93	ND(<50)	NA	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)
	4-Jan-94	ND(<50)	NA	ND(<0.5)	ND(<0.5)	ND(<0.5)	ND(<0.5)

(a) Total Petroleum Hydrocarbons analyzed by modified USEPA Method 8015.

(b) Analyzed by USEPA Method 8020.

(c) Reported by the laboratory as a diesel and nondiesel mixture.

ND Not Detected.

NA Not Analyzed.

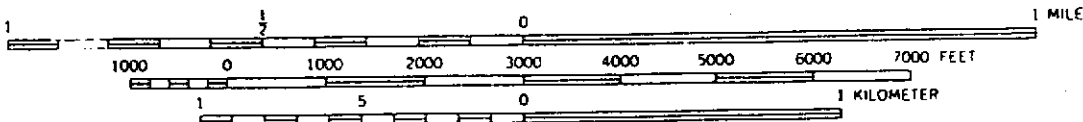
NS Not Sampled.

µg/L micrograms per liter.

August 26, 1991 through June 29, 1992 analyses by Superior Precision Analytical Laboratories, Inc., Martinez, California;
 June 23, 1993 through January 4, 1994 analyses by Sequoia Analytical, Inc. Concord, California.

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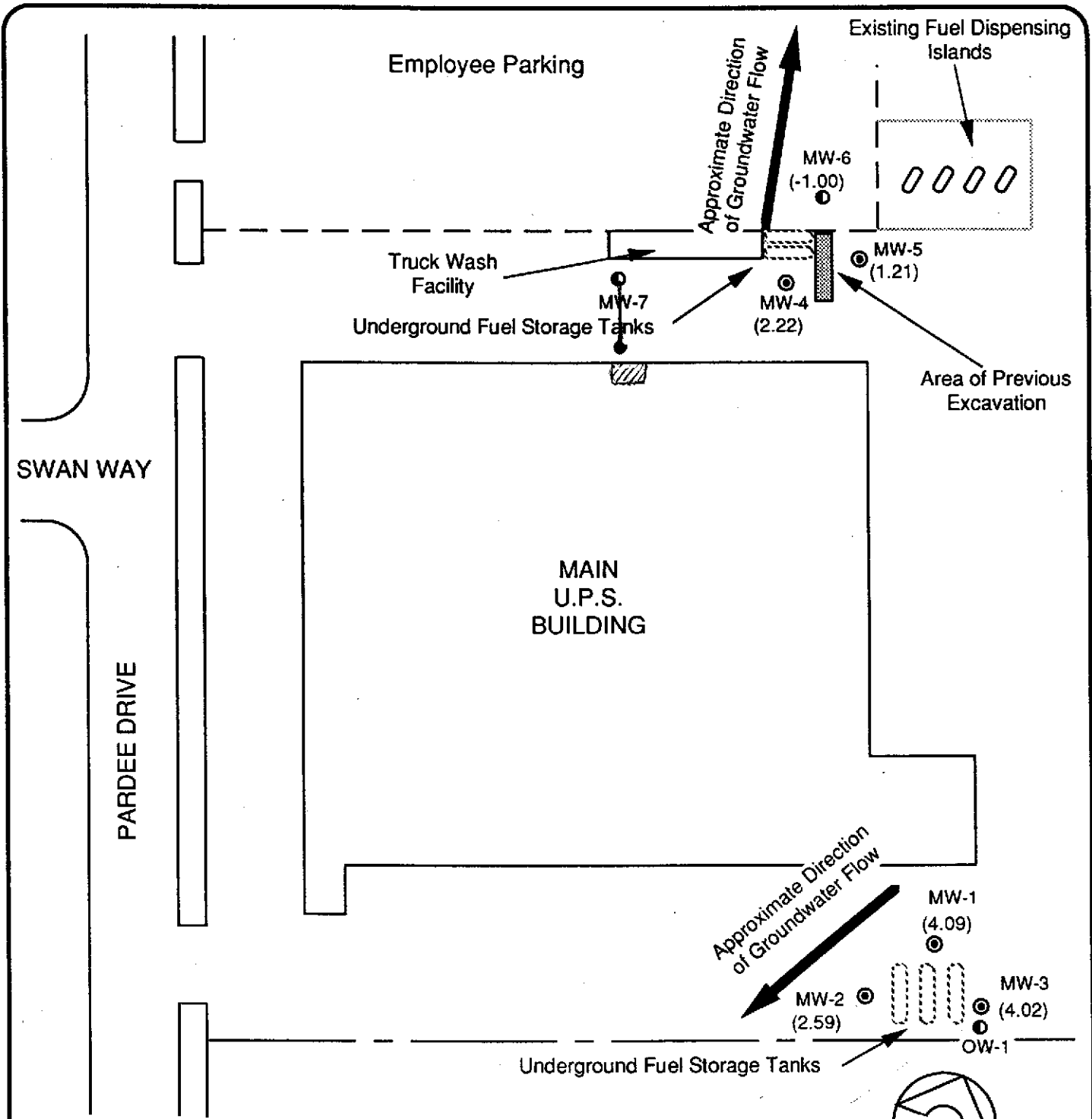


CONTOUR INTERVAL 20 FEET
 DOTTED LINES REPRESENT 3-FOOT CONTOURS



SITE LOCATION MAP
 United Parcel Service
 Package Distribution Facility
 Oakland, California

FIGURE
 1



EXPLANATION

- ⊙ Approximate locations of monitoring wells installed by Geraghty & Miller
- Approximate location of monitoring well installed by others
- (4.09) Groundwater elevation in feet (1/4/94)



Project No. RC0027.009

GROUNDWATER ELEVATION MAP
JANUARY 1994
 UNITED PARCEL SERVICE, INC.
 8400 Pardee Drive
 Oakland, California

FIGURE
2

ATTACHMENT 1

**COPIES OF CERTIFIED ANALYTICAL LABORATORY REPORTS
AND CHAIN-OF-CUSTODY DOCUMENTATION**



SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Geraghty & Miller, Inc.
1050 Marina Way South
Richmond, CA 94804
Attention: Michael Bessette

Client Project ID: RC0027.009/UPS-Oakland
Sample Matrix: Water
Analysis Method: EPA 5030/8020
First Sample #: 401-0136

Sampled: Jan 4, 1994
Received: Jan 5, 1994
Reported: Jan 20, 1994

BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 401-0136 MW-1	Sample I.D. 401-0137 MW-2	Sample I.D. 401-0138 MW-3
Benzene	0.5	2.1	0.72	N.D.
Toluene	0.5	0.65	N.D.	N.D.
Ethyl Benzene	0.5	1.3	N.D.	1.6
Total Xylenes	0.5	2.1	1.1	N.D.

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	2.0
Date Analyzed:	1/14/94	1/18/94	1/14/94
Instrument Identification:	HP-5	HP-2	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	93	106	91

Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL


Karen L. Enstrom
Project Manager



SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Geraghty & Miller, Inc.
1050 Marina Way South
Richmond, CA 94804
Attention: Michael Bessette

Client Project ID: RC0027.009/UPS-Oakland
Sample Matrix: Water
Analysis Method: EPA 5030/8015/8020
First Sample #: 401-0139

Sampled: Jan 4, 1994
Received: Jan 5, 1994
Reported: Jan 20, 1994

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 401-0139 MW-4	Sample I.D. 401-0140 MW-5	Sample I.D. 401-0141 MW-6	Sample I.D. 401-0142 MW-7	Sample I.D. 401-0143 Trip Blank
Purgeable Hydrocarbons	50	N.D.	N.D.	N.D.	N.D.	N.D.
Benzene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.
Toluene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.5	N.D.	N.D.	N.D.	N.D.	N.D.
Chromatogram Pattern:		--	--	--	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	1/10/94	1/12/94	1/10/94	1/10/94	1/10/94
Instrument Identification:	HP-5	HP-2	HP-5	HP-5	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	99	102	100	101	105

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Karen L. Enstrom
Project Manager



SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Geraghty & Miller, Inc.
1050 Marina Way South
Richmond, CA 94804
Attention: Michael Bessette

Client Project ID: RC0027.009/UPS-Oakland
Sample Matrix: Water
Analysis Method: EPA 3510/3520/8015
First Sample #: 401-0136

Sampled: Jan 4, 1994
Received: Jan 5, 1994
Reported: Jan 20, 1994

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 401-0136 MW-1	Sample I.D. 401-0137 MW-2	Sample I.D. 401-0138 MW-3	Sample I.D. 401-0139 MW-4	Sample I.D. 401-0140 MW-5	Sample I.D. 401-0141 MW-6
Extractable Hydrocarbons	50	12,000	3,700	7,400	110	100	N.D.
Chromatogram Pattern:		Diesel	Diesel	Diesel	Diesel & Non-Diesel Mixture (> C20)	Diesel & Non-Diesel Mixture (> C20)	..

Quality Control Data

Report Limit Multiplication Factor:	10	10	1.0	1.0	1.0	1.0
Date Extracted:	1/7/94	1/7/94	1/7/94	1/7/94	1/7/94	1/7/94
Date Analyzed:	1/11/94	1/11/94	1/11/94	1/10/94	1/10/94	1/10/94
Instrument Identification:	HP-3B	HP-3B	HP-3B	HP-3A	HP-3A	HP-3A

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL


Karen L. Enstrom
Project Manager



SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Geraghty & Miller, Inc.
1050 Marina Way South
Richmond, CA 94804
Attention: Michael Bessette

Client Project ID: RC0027.009/UPS-Oakland
Sample Matrix: Water
Analysis Method: EPA 3510/3520/8015
First Sample #: 401-0142

Sampled: Jan 4, 1994
Received: Jan 5, 1994
Reported: Jan 20, 1994

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 401-0142 MW-7
Extractable Hydrocarbons	50	250
Chromatogram Pattern:		Diesel & Non-Diesel Mixture (> C20)

Quality Control Data

Report Limit Multiplication Factor:	1.0
Date Extracted:	1/7/94
Date Analyzed:	1/10/94
Instrument Identification:	HP-3A

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL


Karen L. Enstrom
Project Manager



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Geraghty & Miller, Inc.
1050 Marina Way South
Richmond, CA 94804
Attention: Michael Bessette

Client Project ID: RC0027.009/UPS-Oakland
Matrix: Liquid

QC Sample Group: 4010136-143

Reported: Jan 20, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015
Analyst:	A.T.	A.T.	A.T.	A.T.	K.W.

MS/MSD	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Batch#:	4010446	4010446	4010446	4010446	BLK010794
Date Prepared:	1/14/94	1/14/94	1/14/94	1/14/94	1/7/94
Date Analyzed:	1/14/94	1/14/94	1/14/94	1/14/94	1/11/94
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	HP-3A
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L
Matrix Spike % Recovery:	109	107	102	100	80
Matrix Spike Duplicate % Recovery:	114	107	107	103	81
Relative % Difference:	4.5	0.0	4.8	3.0	1.7

LCS Batch#:	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Batch#:	3LCS011494	3LCS011494	3LCS011494	3LCS011494	BLK010794
Date Prepared:	1/14/94	1/14/94	1/14/94	1/14/94	1/7/94
Date Analyzed:	1/14/94	1/14/94	1/14/94	1/14/94	1/11/94
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	HP-3A
LCS % Recovery:	116	111	114	106	80

% Recovery Control Limits:	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Control Limits:	71-133	72-128	72-130	71-120	28-122

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

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Karen L. Enstrom
Project Manager

