FOURTH QUARTER 1995
MONITORING REPORT

UNION PACIFIC MOTOR FREIGHT
FACILITY
OAKLAND, CALIFORNIA

USPCI/LAIDLAW PROJECT NO.
96120-844

PREPARED FOR:

UNION PACIFIC RAILROAD
ENVIRONMENTAL MANAGEMENT
1416 DODGE STREET, ROOM 930
OMAHA, NEBRASKA 68179

LAIDLAW ENVIRONMENTAL SERVICES

Prepared by:

USPCI/Laidlaw Consulting Services
5665 Flatiron Parkway
Boulder, Colorado 80301

January 22, 1996

LAIDLAW ENVIRONMENTAL SERVICES

January 22, 1996

Mr. Harry Patterson
Union Pacific Railroad
1416 Dodge Street, Room 930
Omaha, Nebraska 68179

RE: **"Fourth Quarter 1995 Monitoring Report"** Oakland Motor Freight Facility, 1750 Ferro Street, Oakland, California, USPCI/Laidlaw Project No. 96120-844

Dear Mr. Patterson:

Enclosed is the final copy of the **"Fourth Quarter 1995 Monitoring Report"**, dated January 22, 1996, for the Union Pacific Motor Freight Facility at 1750 Ferro Street in Oakland, California.

During the third quarter monitoring event, the arsenic results were approximately one order of a magnitude over the results of the previous sampling events. Results of the re-sampling during this monitoring event indicated that the levels were approximately equal to the historical levels. It has been recommended that arsenic continued to be sampled on an annual frequency without the inclusion of a lead analysis.

It was also recommended that the monitoring frequency of fluid levels in groundwater monitoring well OKUS-W4 be switched from monthly to quarterly.

If you have any questions, please call us at (303) 938-5500.

Sincerely,

Denton Mauldin
Project Engineer

Sam Marquis
Project Hydrogeologist

cc: Jennifer Eberle, ACDEH
John Amdur, Port of Oakland
Philip Herden, APL
Mark McCormick, USPCI/Laidlaw

Enclosure
DM/tjh

oakmf\qtrmf495.ltr, 96120-844, January 22, 1996

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FOURTH QUARTER 1995 MONITORING REPORT
UNION PACIFIC RAILROAD
UNION PACIFIC MOTOR FREIGHT FACILITY
OAKLAND, CALIFORNIA
USPCI/Laidlaw Project No. 96120-844

Prepared for:
Union Pacific Railroad
Environmental Management - Room 930
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for submittal to:
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for

Mark McCormick
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Sam Marquis
Project Hydrogeologist
R.G. No. 5110

January 22, 1996

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1. INTRODUCTION

This document was prepared by USPCI, a Laidlaw Company (Laidlaw) on behalf of Union Pacific Railroad (UPRR) as part of the groundwater monitoring and reporting program at the Union Pacific Motor Freight (UPMF) facility at 1750 Ferro Street in Oakland, California. The report was prepared in response to an April 29, 1993, Alameda County Department of Environmental Health, Hazardous Materials Division (ACDEH), request for UPRR to begin a quarterly monitoring program at the UPMF facility in Oakland, California. The facility (Figure 1) was the site of a release of petroleum hydrocarbons from underground storage tanks (USTs).

The fourth quarter monitoring event involved:

- Measuring fluid levels in all of the groundwater monitoring wells;
- Purging and sampling groundwater monitoring wells where non-aqueous phase liquid petroleum hydrocarbon (product) is not present;
- Analyzing groundwater samples for petroleum hydrocarbons;
- Removing product from the recovery well (well RW) and monitoring the performance of the product skimmer;
- Determining the local hydraulic gradient based on the groundwater level measurements; and
- Preparing this fourth quarter report.

Product was detected in groundwater monitoring wells OKUS-W5, OKUS-W6, and in recovery well RW during the fourth quarter. Product has been identified as diesel oil number 7 or "bunker C" in the groundwater monitoring wells and as a diesel and motor oil mixture in the recovery well. Groundwater samples were collected from eight groundwater monitoring wells at the facility on November 29, 1995.

1.1 SITE BACKGROUND

The site is located on the southeastern portion of the UPRR Oakland trailer-on-flat-car (TOFC) Yard, which is adjacent to the Oakland Inner Harbor or Oakland Estuary (Figures 1 and 2). The area surrounding the site is used for heavy to light commerce. Residential areas are located approximately one half mile north of the site and across the Oakland Estuary one half mile south of the site. The refueling portion of the TOFC yard, approximately 700 feet northwest of the truck repair shop, is

currently undergoing groundwater remediation for recovery of non-aqueous phase liquid as diesel. The limits of the diesel plume in that portion of the site were defined during previous investigations (USPCI, 1993); based on the results of these investigations, the plume does not extend to the area of impacted groundwater at the truck repair facility in the Oakland TOFC Yard.

Five USTs were removed from the UPMF site from 1987 to 1990. As a result of the tank removal activities, a site assessment was performed in two phases to define the extent of petroleum hydrocarbons in the soil and groundwater (USPCI, 1993).

1.2 Investigative Procedures

All Laidlaw and subcontractor field activities, including data recording procedures, decontamination methods, groundwater sample collection, and purge water disposal, were completed following Laidlaw's standard operating procedures previously supplied to the ACDEH (USPCI, 1994). The quarterly monitoring event was conducted by Laidlaw personnel on November 29, 1995. Groundwater level measurements and samples were collected on the same day. Fluid level measurements were collected from groundwater monitoring wells OKUS-W4, OKUS-W5, and OKUS-W6 on a monthly basis during the fourth quarter of 1995. Also, fluid level measurements have been collected from the recovery well RW on a monthly basis. These measurements are collected to assess the presence of product. Samples were analyzed for total petroleum hydrocarbons as diesel (TPH-D) by EPA Method 8015 Modified; TPH as gasoline (TPH-G) by EPA Method 8015 Modified; benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8020; and Arsenic by EPA method 7060.

2. FIELD INVESTIGATION RESULTS

The continued monitoring of wells and the compilation of the field and analytical data is directed towards the characterization of groundwater and petroleum hydrocarbon migration beneath the site. The field investigation presented in this report was completed on November 29, 1995. The following subsections present the findings and activities completed during the fourth quarter monitoring event.

2.1 Groundwater Gradient

Static water levels measured on November 29, 1995 (Table 1) were used to produce the groundwater elevation map presented as Figure 3. A decrease in groundwater elevations relative to the previous (third quarter 1995 monitoring event) was again noted in most of the monitoring wells at the site. Groundwater elevations have been decreasing since the first quarter 1995 sampling event. The groundwater gradient at the site ranged from approximately 0.0078 to 0.013 and the observed groundwater flow direction was to the east. The gradient was consistent with gradients observed during previous monitoring events. Sample collection logs and reports are presented in Appendix A.

2.2 Analytical Results

Analytical results of the samples collected from the groundwater monitoring wells reveal dissolved concentrations of TPH-D, TPH-G and BTEX in samples from monitoring wells OKUS-W2, OKUS-W3, OKUS-W4, OKUS-W7, OKUS-W8, APL/UP-W1, and APL/UP-W2. Monitoring well OKUS-W1 did not contain dissolved BTEX concentrations above the method detection limits (MDLs) of 0.50 micrograms per liter (μg/l). Total BTEX concentrations ranged from below the MDLs of 0.50 μg/l in the sample collected from monitoring well OKUS-W1 to approximately 330 μg/l in the sample collected from monitoring well OKUS-W2 (Table 2). TPH-G concentrations ranged from below the MDL of 50 μg/l in the sample collected from OKUS-W1 to 7,100 μg/l in the sample from OKUS-W2. TPH-D concentrations ranged from below the MDL of 50 μg/l in sample OKUS-W1 to 5,600 μg/l in the sample from OKUS-W2.

The dissolved BTEX plume in the groundwater is presented in Figure 4. During the last two monitoring events, total BTEX concentrations have been below 530 μg/l in the three groundwater monitoring wells near the source area (OKUS-W2, OKUS-W3, and OKUS-W4). The average concentrations of total BTEX from the eight sampling events in 1993 and 1994 decreased in 1995 from 7,200 to 740 μg/l in OKUS-W2 (nearly one order of magnitude), from 5,300 to 1,500 μg/l in OKUS-W3 (more than a three-fold decrease), and from 4,400 to 2,500 μg/l in OKUS-W4 (nearly a two-fold decrease). These results suggest that the combined effects of product removal and natural attenuation, resulting from aerobic and anaerobic degradation, dispersion, sorption, and volatilization, are decreasing BTEX concentrations with time. Groundwater analytical results for the wells at the site are presented in Table 2. Analytical reports and chain of custody forms are included in Appendix B.

Arsenic concentrations ranged from below the MDL of 0.0050 milligrams per liter (mg/L) in APL/UP-W1 to 0.18 mg/L in OKUS-W3. Arsenic concentrations were approximately one order of magnitude lower than the concentrations observed during the third quarter sampling event. The fourth quarter arsenic results were consistent with historical concentrations observed during previous sampling events. The anomalous nature of the third quarter arsenic concentrations were possibly due to the lack of filtration prior to analysis. Lead has not been detected in the groundwater monitoring wells at the site since August 27, 1993.

2.3 Monitoring and Recovery of Non-Aqueous Phase Liquid

Product was not detected in groundwater monitoring well OKUS-W4 during the monitoring event and has not been detected since May 12, 1993. Fluid level measurement data indicated that monitoring wells OKUS-W5, OKUS-W6, and recovery well RW contained product. Groundwater monitoring well OKUS-W6 continues to contain "bunker C" type product. Since October 18, 1995, groundwater monitoring well OKUS-W5 also contained "bunker C" type hydrocarbon as evidenced by the highly viscous nature of the product. An accurate determination of product thicknesses was not possible due to the high viscosity of the product in OKUS-W5 and OKUS-W6.

Approximately 0.5 gallons of product was retrieved from the recovery well on October 18, 1995, and approximately 0.25 gallons was retrieved on November 10, 1995, by Smith/Riedel personnel. Laidlaw personnel retrieved approximately 0.5 gallons of product on November 29, 1995. During the monitoring event, 1.25 gallons of product was recovered from the recovery well RW.

Fluid level measurements in groundwater monitoring wells do not indicate that product has migrated down gradient.

3. CONCLUSIONS AND RECOMMENDATIONS

The following subsections present conclusions and recommendations based on the fourth quarter 1995 monitoring results.

3.1 Conclusions

Based on the above information, the following conclusions are made:

- The groundwater monitoring well water level information for November 1995 indicates a groundwater flow is to the east with a gradient that ranges from 0.0078 to 0.013, which is consistent with previous monitoring events.

- During the last two monitoring events, total BTEX concentrations have been below 530 μg/l in the three groundwater monitoring wells near the source area (OKUS-W2, OKUS-W3, and OKUS-W4).

- The average concentrations of total BTEX from the eight sampling events in 1993 and 1994 decreased in 1995 from 7,200 to 740 μg/l in OKUS-W2 (nearly one order of magnitude), from 5,300 to 1,500 μg/l in OKUS-W3 (more than a three-fold decrease), and from 4,400 to 2,500 μg/l in OKUS-W4 (nearly a two-fold decrease). These results suggest that the combined effects of product removal and natural attenuation, resulting from aerobic and

anaerobic degradation, dispersion, sorption, and volatilization, are decreasing BTEX concentrations with time.

- Groundwater arsenic levels from the fourth quarter analytical results were equal to the levels that have been observed historically.
- Lead has not been detected in the site's groundwater monitoring wells since August 27, 1993.
- Product was not detected in groundwater monitoring well OKUS-W4 during the monitoring event and has not been detected since May 12, 1993.
- Wells OKUS-W5 and OKUS-W6 indicated the presence of "bunker C" during the monitoring event.
- During the monitoring event, 1.25 gallons of product was recovered from the recovery well.
- Fluid level measurements in groundwater monitoring wells do not indicate that product has migrated down gradient.

3.2 Recommendations

Based on the above conclusions, the following recommendations are made:

- To monitor the migration and attenuation of the dissolved petroleum hydrocarbon plume in the groundwater at the site, the quarterly monitoring program should be continued.
- The monitoring of bunker C and product near the UPMF facility should be continued.
- The monitoring frequency of fluid levels in well OKUS-W4 should be switched from monthly to quarterly.
- The product in recovery well RW should continue to be removed.
- Samples should continue to be analyzed for arsenic on an annual basis.

4. REFERENCES

USPCI, 1993. "Phase II Site Assessment Report," Union Pacific Railroad, October, 1993.

USPCI, 1994. "Fourth Quarter 1993, Monitoring Event," Union Pacific Railroad, May 1994.

TABLE 1
FLUID LEVEL MEASUREMENT DATA
UNION PACIFIC RAILROAD
OAKLAND MOTOR FREIGHT FACILITY

WELL NO.	ELEV.* TOC	DATE	DEPTH TO PRODUCT	PRODUCT THICKNESS	DEPTH TO WATER	WATER ELEV.	CORR'D ELEV.
OKUS-W1	9.17	01/14/93	N/A	NP	8.42	0.75	0.75
	9.17	01/15/93	N/A	NP	8.45	0.72	0.72
	9.17	02/18/93	N/A	NP	7.79	1.38	1.38
	9.17	05/12/93	N/A	NP	8.04	1.13	1.13
	9.17	08/25/93	N/A	NP	8.61	0.56	0.56
	9.17	11/11/93	N/A	NP	9.24	-0.07	-0.07
	9.17	02/08/94	N/A	NP	8.47	0.70	0.70
	9.17	05/03/94	N/A	NP	8.49	0.68	0.68
	9.17	08/24/94	N/A	NP	8.89	0.28	0.28
	9.17	11/16/94	N/A	NP	8.56	0.61	0.61
	9.17	02/22/95	N/A	NP	7.61	1.56	1.56
	9.17	06/22/95	N/A	NP	8.00	1.17	1.17
	9.17	08/09/95	N/A	NP	8.18	0.99	0.99
	9.17	11/29/95	N/A	NP	8.78	0.39	0.39
OKUS-W2	9.71	01/14/93	N/A	NP	9.08	0.63	0.63
	9.71	01/15/93	N/A	NP	9.12	0.59	0.59
	9.71	02/18/93	N/A	NP	8.70	1.01	1.01
	9.71	05/12/93	N/A	NP	9.04	0.67	0.67
	9.71	08/25/93	N/A	NP	9.61	0.10	0.10
	9.71	11/11/93	N/A	NP	10.20	-0.49	-0.49
	9.71	02/08/94	N/A	NP	9.46	0.25	0.25
	9.71	05/03/94	N/A	NP	9.50	0.21	0.21
	9.71	08/24/94	N/A	NP	9.74	-0.03	-0.03
	9.71	11/16/94	N/A	NP	9.74	-0.03	-0.03
	9.71	02/22/95	N/A	NP	8.49	1.22	1.22
	9.71	06/22/95	N/A	NP	8.90	0.81	0.81
	9.71	08/09/95	N/A	NP	9.09	0.62	0.62
	9.71	11/29/95	N/A	NP	9.69	0.02	0.02
OKUS-W3	9.80	01/14/93	N/A	NP	9.39	0.41	0.41
	9.80	01/15/93	N/A	NP	9.33	0.47	0.47
	9.80	02/18/93	N/A	NP	8.85	0.95	0.95
	9.80	05/12/93	N/A	NP	9.23	0.57	0.57
	9.80	08/25/93	N/A	NP	9.82	-0.02	-0.02
	9.80	11/11/93	N/A	NP	10.30	-0.50	-0.50
	9.80	02/08/94	N/A	NP	9.73	0.07	0.07
	9.80	05/03/94	N/A	NP	9.75	0.05	0.05
	9.80	08/24/94	N/A	NP	9.98	-0.18	-0.18
	9.80	11/16/94	N/A	NP	9.61	0.19	0.19
	9.80	02/22/95	N/A	NP	8.76	1.04	1.04
	9.80	06/22/95	N/A	NP	9.15	0.65	0.65
	9.80	08/09/95	N/A	NP	9.41	0.39	0.39
	9.80	11/29/95	N/A	NP	9.97	-0.17	-0.17
OKUS-W4	7.35	01/14/93	N/A	NP	6.43	0.92	0.92
	7.35	01/15/93	N/A	NP	6.44	0.91	0.91
	7.35	02/18/93	N/A	NP	5.77	1.58	1.58
	7.35	05/12/93	6.39	0.01	6.40	0.95	0.95
	7.35	08/25/93	N/A	NP	6.63	0.72	0.72
	7.35	11/11/93	N/A	NP	7.10	0.25	0.25
	7.35	02/07/94	N/A	NP	6.64	0.71	0.71
	7.35	03/07/94	N/A	NP	6.45	0.90	0.90
	7.35	04/18/94	N/A	NP	6.58	0.77	0.77
	7.35	05/03/94	N/A	NP	6.55	0.80	0.80
	7.35	06/07/94	N/A	NP	6.62	0.73	0.73
	7.35	07/29/94	N/A	NP	6.65	0.70	0.70
	7.35	08/24/94	N/A	NP	6.80	0.55	0.55
	7.35	09/01/94	N/A	NP	6.93	0.42	0.42
	7.35	09/26/94	N/A	NP	6.95	0.40	0.40
	7.35	10/27/94	N/A	NP	7.05	0.30	0.30
	7.35	11/16/94	N/A	NP	6.71	0.64	0.64
	7.35	01/25/95	N/A	NP	5.63	1.72	1.72
	7.35	02/22/95	N/A	NP	5.71	1.64	1.64
	7.35	06/22/95	N/A	NP	6.01	1.34	1.34
	7.35	07/31/95	N/A	NP	5.96	1.39	1.39
	7.35	08/09/95	N/A	NP	6.10	1.25	1.25
	7.35	09/07/95	N/A	NP	6.36	0.99	0.99
	7.35	10/18/95	N/A	NP	6.49	0.86	0.86
	7.35	11/10/95	N/A	NP	6.67	0.68	0.68
	7.35	11/29/95	N/A	NP	6.70	0.65	0.65
	7.35	12/15/95	N/A	NP	6.56	0.79	0.79

TABLE 1 (CONT.)
FLUID LEVEL MEASUREMENT DATA
UNION PACIFIC RAILROAD
OAKLAND MOTOR FREIGHT FACILITY

WELL NO.	ELEV.* TOC	DATE	DEPTH TO PRODUCT	PRODUCT THICKNESS	DEPTH TO WATER	WATER ELEV.	CORR'D ELEV.
OKUS-W5	9.25	01/14/93	N/A	NP	9.13	0.12	0.12
	9.25	01/15/93	N/A	NP	9.15	0.10	0.10
	9.25	02/18/93	N/A	NP	8.85	0.40	0.40
	9.25	05/12/93	9.18	0.02	9.20	0.05	0.05
	9.25	08/25/93	8.82	0.02	8.84	0.41	0.41
	9.25	11/11/93	N/A	NP	10.15	-0.90	-0.90
	9.25	02/07/94	N/A	NP	9.61	-0.36	-0.36
	9.25	03/07/94	N/A	NP	9.51	-0.26	-0.26
	9.25	04/18/94	N/A	NP	9.78	-0.53	-0.53
	9.25	05/03/94	N/A	NP	9.77	-0.52	-0.52
	9.25	06/07/94	N/A	NP	9.71	-0.46	-0.46
	9.25	07/29/94	N/A	NP	9.83	-0.58	-0.58
	9.25	08/24/94	N/A	NP	9.93	-0.68	-0.68
	9.25	09/01/94	9.91	0.01	9.92	-0.67	-0.67
	9.25	09/26/94	N/A	NP	9.92	-0.67	-0.67
	9.25	10/27/94	10.08	0.06	10.14	-0.89	-0.89
	9.25	11/16/94	9.59	0.22	9.81	-0.56	-0.56
	9.25	01/25/95	N/A	Trace	8.59	0.66	0.66
	9.25	02/22/95	8.75	0.16	8.91	0.34	0.34
	9.25	05/09/95	N/A	Trace	9.00	0.25	0.25
	9.25	06/22/95	N/A	Trace	9.29	-0.04	-0.04
	9.25	07/31/95	N/A	Trace	9.34	-0.09	-0.09
	9.25	08/09/95	N/A	Trace	9.75	-0.50	-0.50
	9.25	09/07/95	N/A	Trace	9.56	-0.31	-0.31
	9.25	10/18/95	9.82	P	--	--	--
	9.25	11/10/95	9.97	P	--	--	--
	9.25	11/29/95	10.19	P	--	--	--
	9.25	12/15/95	9.60	P	--	--	--
OKUS-W6	7.02	07/16/93	N/A	NP	6.20	0.82	0.82
	7.02	08/25/93	N/A	NP	6.52	0.50	0.50
	7.02	11/12/93	N/A	NP	7.22	-0.20	-0.20
	7.02	02/07/94	5.89	P	--	--	--
	7.02	05/03/94	5.90	P	--	--	--
	7.02	08/24/94	6.27	P	--	--	--
	7.02	09/26/94	6.50	P	--	--	--
	7.02	10/27/94	6.68	P	--	--	--
	7.02	11/16/94	5.13	P	--	--	--
	7.02	01/25/95	3.89	P	--	--	--
	7.02	02/22/95	4.96	P	--	--	--
	7.02	05/09/95	5.39	P	--	--	--
	7.02	06/22/95	5.30	P	--	--	--
	7.02	07/31/95	5.60	P	--	--	--
	7.02	08/09/95	5.65	P	--	--	--
	7.02	09/07/95	5.98	P	--	--	--
	7.02	10/18/95	6.38	P	--	--	--
	7.02	11/10/95	6.52	P	--	--	--
	7.02	11/29/95	5.75	P	--	--	--
	7.02	12/15/95	5.47	P	--	--	--
OKUS-W7	6.91	07/16/93	N/A	NP	5.72	1.19	1.19
	6.91	08/25/93	N/A	NP	5.94	0.97	0.97
	6.91	11/12/93	N/A	NP	6.50	0.41	0.41
	6.91	02/07/94	N/A	NP	5.81	1.10	1.10
	6.91	05/03/94	N/A	NP	5.69	1.22	1.22
	6.91	08/24/94	N/A	NP	6.11	0.80	0.80
	6.91	11/16/94	N/A	NP	5.90	1.01	1.01
	6.91	02/22/95	N/A	NP	4.89	2.02	2.02
	6.91	06/22/95	N/A	NP	5.26	1.65	1.65
	6.91	08/09/95	N/A	NP	5.53	1.38	1.38
	6.91	11/29/95	N/A	NP	6.09	0.82	0.82
OKUS-W8	6.75	07/16/93	N/A	NP	5.56	1.19	1.19
	6.75	08/27/93	N/A	NP	5.88	0.87	0.87
	6.75	11/11/93	N/A	NP	6.43	0.32	0.32
	6.75	02/07/94	N/A	NP	5.59	1.16	1.16
	6.75	05/03/94	N/A	NP	5.55	1.20	1.20
	6.75	08/24/94	N/A	NP	5.98	0.77	0.77
	6.75	11/16/94	N/A	NP	5.75	1.00	1.00
	6.75	02/22/95	N/A	NP	4.79	1.96	1.96
	6.75	06/22/95	N/A	NP	5.18	1.57	1.57
	6.75	08/09/95	N/A	NP	5.32	1.43	1.43
	6.75	11/29/95	N/A	NP	5.95	0.80	0.80

TABLE 1 (CONT.)
FLUID LEVEL MEASUREMENT DATA
UNION PACIFIC RAILROAD
OAKLAND MOTOR FREIGHT FACILITY

WELL NO.	ELEV.* TOC	DATE	DEPTH TO PRODUCT	PRODUCT THICKNESS	DEPTH TO WATER	WATER ELEV.	CORR'D ELEV.
APL/UP–W1	8.12	07/16/93	N/A	NP	10.02	–1.90	–1.90
	8.12	08/26/93	N/A	NP	9.93	–1.81	–1.81
	8.12	11/11/93	N/A	NP	10.25	–2.13	–2.13
	8.12	02/07/94	N/A	NP	9.71	–1.59	–1.59
	8.12	05/03/94	N/A	NP	10.10	–1.98	–1.98
	8.12	08/24/94	N/A	NP	10.25	–2.13	–2.13
	8.12	11/15/94	N/A	NP	10.08	–1.96	–1.96
	8.12	02/22/95	N/A	NP	9.76	–1.64	–1.64
	8.12	06/22/95	N/A	NP	10.25	–2.13	–2.13
	8.12	08/09/95	N/A	NP	10.01	–1.89	–1.89
	8.12	11/29/95	N/A	NP	10.29	–2.17	–2.17
APL/UP–W2	7.31	07/16/93	N/A	NP	9.38	–2.07	–2.07
	7.31	08/26/93	N/A	NP	9.20	–1.89	–1.89
	7.31	11/11/93	N/A	NP	9.65	–2.34	–2.34
	7.31	02/07/94	N/A	NP	8.85	–1.54	–1.54
	7.31	05/03/94	N/A	NP	10.02	–2.71	–2.71
	7.31	08/24/94	N/A	NP	9.13	–1.82	–1.82
	7.31	11/15/94	N/A	NP	9.40	–2.09	–2.09
	7.31	02/22/95	N/A	NP	8.85	–1.54	–1.54
	7.31	06/22/95	N/A	NP	9.42	–2.11	–2.11
	7.31	08/09/95	N/A	NP	9.42	–2.11	–2.11
	7.31	11/29/95	N/A	NP	9.41	–2.10	–2.10
RW	––	01/31/94	10.31	0.10	10.41	––	––
	––	02/07/94	10.26	0.10	10.36	––	––
	––	02/17/94	10.11	0.07	10.18	––	––
	––	02/23/94	10.01	0.09	10.10	––	––
	––	03/01/94	9.96	0.03	9.99	––	––
	––	03/07/94	9.92	0.04	9.96	––	––
	––	03/16/94	9.92	0.07	9.99	––	––
	––	03/23/94	9.93	0.06	9.99	––	––
	––	03/30/94	10.00	0.05	10.05	––	––
	––	04/05/94	10.02	0.01	10.03	––	––
	––	04/11/94	10.02	0.01	10.03	––	––
	––	04/18/94	10.07	0.02	10.09	––	––
	––	04/26/94	10.07	0.07	10.14	––	––
	––	06/07/94	9.94	0.03	9.97	––	––
	––	07/29/94	10.19	0.01	10.20	––	––
	––	09/01/94	9.71	0.09	9.80	––	––
	––	09/26/94	9.78	0.06	9.84	––	––
	––	10/27/94	9.81	0.05	9.86	––	––
	––	11/22/94	––	––	––	––	––
	––	12/20/94	––	––	––	––	––
	––	01/25/95	8.35	0.12	8.47	––	––
	––	02/22/95	8.35	0.14	8.49	––	––
	––	05/09/95	8.41	0.11	8.52	––	––
	––	06/22/95	8.72	0.10	8.82	––	––
	––	07/31/95	8.94	0.04	8.98	––	––
	––	08/09/95	9.07	0.03	9.10	––	––
	––	09/07/95	9.18	0.01	9.19	––	––
	––	10/18/95	9.41	0.02	9.43	––	––
	––	11/10/95	9.58	––	N/A	––	––
	––	11/29/95	9.63	0.09	9.72	––	––
	––	12/15/95	9.46	0.12	9.58	––	––

* All well casings measured to mean sea level (MSL).
–– Information not available or inaccurate.
P – Product (bunker C) was encountered but the oil/water interface could not be found.
N/A Non Applicable
NP – No Product

TABLE 2
ANALYTICAL RESULTS -- GROUNDWATER MONITORING WELLS
UNION PACIFIC RAILROAD
OAKLAND MOTOR FREIGHT FACILITY

SAMPLE LOCATION	SAMPLE ID	DATE SAMPLED	TPH/IR (mg/l)	TPH/D (ug/l)	TPH/G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	BTEX (ug/l)	As (mg/l)	Pb (mg/l)
OKUS-W1	OKUS-W1	01/14/93	ND	ND	410	20	4	220	ND	240	ND	ND
"	"	05/12/93	80	120	ND	ND	ND	ND	ND	ND	ND	ND
		08/25/83	ND	100	ND	ND	ND	ND	ND	ND	ND	ND
		11/11/93	ND	160	91	1.1	0.88	21	1.6	24	ND	ND
		02/08/94	NA	92	<50	<0.50	<0.50	<0.50	<0.50	ND	<0.10	<0.02
		05/03/94	NA	61	<50	<0.50	<0.50	<0.50	<0.50	ND	<0.10	<0.02
		08/24/94	NA	86	<50	<0.50	<0.50	<0.50	<0.50	ND	<0.10	NA
		11/16/94	NA	51	<50	<0.50	<0.50	<0.50	<0.50	ND	NA	NA
		02/22/95	NA	120	<50	<0.50	<0.50	<0.50	<0.50	ND	NA	NA
		06/22/95	NA	<50	<50	<0.50	<0.50	<0.50	<0.50	ND	NA	NA
		08/09/95	NA	<50	<50	<0.50	<0.50	<0.50	<0.50	ND	0.040	<0.050
		11/29/95	NA	480	<50	<0.50	<0.50	<0.50	<0.50	ND	<0.0050	NA
OKUS-W2	OKUS-W2	01/14/93	2.5	5400	14000	480	92	8500	ND	9100	0.036	ND
"	"	05/12/93	ND	2800	8800	220	47	4600	100	5000	0.093	ND
		08/25/93	5.8	6500	22000	420	92	10000	210	11000	0.089	ND
		11/11/93	3.5	7700	24000	540	150	13000	280	14000	ND	ND
		02/08/94	NA	2300	4900	150	29	3000	78	3300	<0.10	<0.02
		05/03/94	NA	2600	17000	300	<0.50	5800	220	6300	<0.10	<0.02
		08/24/94	NA	8200	11000	320	67	7500	250	8100	<0.10	NA
		11/16/94	NA	5500	10000	290	79	130	160	660	NA	NA
		02/22/95	NA	2000	3500	100	18	1600	66	1800	NA	NA
		06/22/95	NA	3200	13000	260	62	<0.50	110	430	NA	NA
		08/09/95	NA	2900	4800	160	28	<0.50	200	390	0.920	<0.050
		11/29/95	NA	9600	7100	240	34	<0.50	58	330	0.049	NA
OKUS-W3	OKUS-W3	01/14/93	4.5	4200	4900	230	42	2600	44	2900	NA	ND
"	"	05/12/93	1.7	4400	4600	290	60	3500	72	3900	0.14	ND
		08/25/93	1.5	2700	9400	280	55	4300	41	4700	0.08	ND
		11/11/93	2.3	5000	9500	390	110	5100	130	5700	0.14	ND
		02/08/94	NA	4400	17000	420	78	9800	160	10000	0.12	<0.02
		05/03/94	NA	3000	14000	310	61	6400	210	7000	0.14	<0.02
		08/24/94	NA	4500	10000	350	78	7300	170	7900	<0.10	NA
		11/16/94	NA	4700	9100	260	64	95	<0.50	420	NA	NA
		02/22/95	NA	2400	7400	250	51	4400	150	4900	NA	NA
		06/22/95	NA	3300	8100	250	53	<0.50	76	380	NA	NA
		08/09/95	NA	3100	5200	200	39	<0.50	140	380	1.60	<0.050
		11/29/95	NA	4500	5300	220	42	<0.50	44	310	0.18	NA
OKUS-W4	OKUS-W4	01/15/93	2.5	5400	8900	300	ND	4500	ND	4800	NA	ND
"	"	05/12/93	1.3	2900	6000	320	110	4600	230	5300	0.16	ND
		08/26/93	ND	2200	6700	350	72	4800	130	5400	0.098	ND
		11/11/93	ND	2400	5500	250	53	4600	140	5000	0.13	ND
		02/07/94	NA	2700	9100	250	<0.50	4900	150	5300	<0.10	<0.02
		05/03/94	NA	2300	6500	240	34	4200	140	4600	0.12	<0.02
		08/24/94	NA	2900	5200	200	41	3600	190	4000	0.11	NA
		11/16/94	NA	2800	5500	320	52	<0.50	120	490	NA	NA
		02/22/95	NA	2000	4300	250	47	2900	160	3400	NA	NA
		06/22/95	NA	2700	4900	280	38	5200	140	5700	NA	NA
		08/09/95	NA	2900	5300	270	54	<0.50	210	530	1.30	<0.050
		11/29/95	NA	3100	4500	260	41	<0.50	46	290	0.14	NA
OKUS-W5	OKUS-W5	01/15/93	ND	2900	550	53	11	180	20	260	NA	ND
"	"	05/12/93	130	2100	550	81	14	250	37	380	0.56	ND
		08/25/93	PRODUCT IN WELL -- NOT SAMPLED									
		11/11/93	2.7	1600	590	14	3.1	54	6.2	77	0.53	ND
		02/07/94	NA	1900	760	54	9.4	220	24	310	0.55	<0.02
		05/03/94	NA	2000	820	57	9.5	240	27	330	0.38	<0.02
		08/24/94	NA	1700	910	55	14	8.5	18	96	0.45	NA
		11/16/94	PRODUCT IN WELL -- NOT SAMPLED									
		02/22/95	PRODUCT IN WELL -- NOT SAMPLED									
		06/22/95	PRODUCT IN WELL -- NOT SAMPLED									
		08/09/95	PRODUCT IN WELL -- NOT SAMPLED									
		11/29/95	PRODUCT IN WELL -- NOT SAMPLED									

TABLE 2 (CONT.)
ANALYTICAL RESULTS – GROUNDWATER MONITORING WELLS
UNION PACIFIC RAILROAD
OAKLAND MOTOR FREIGHT FACILITY

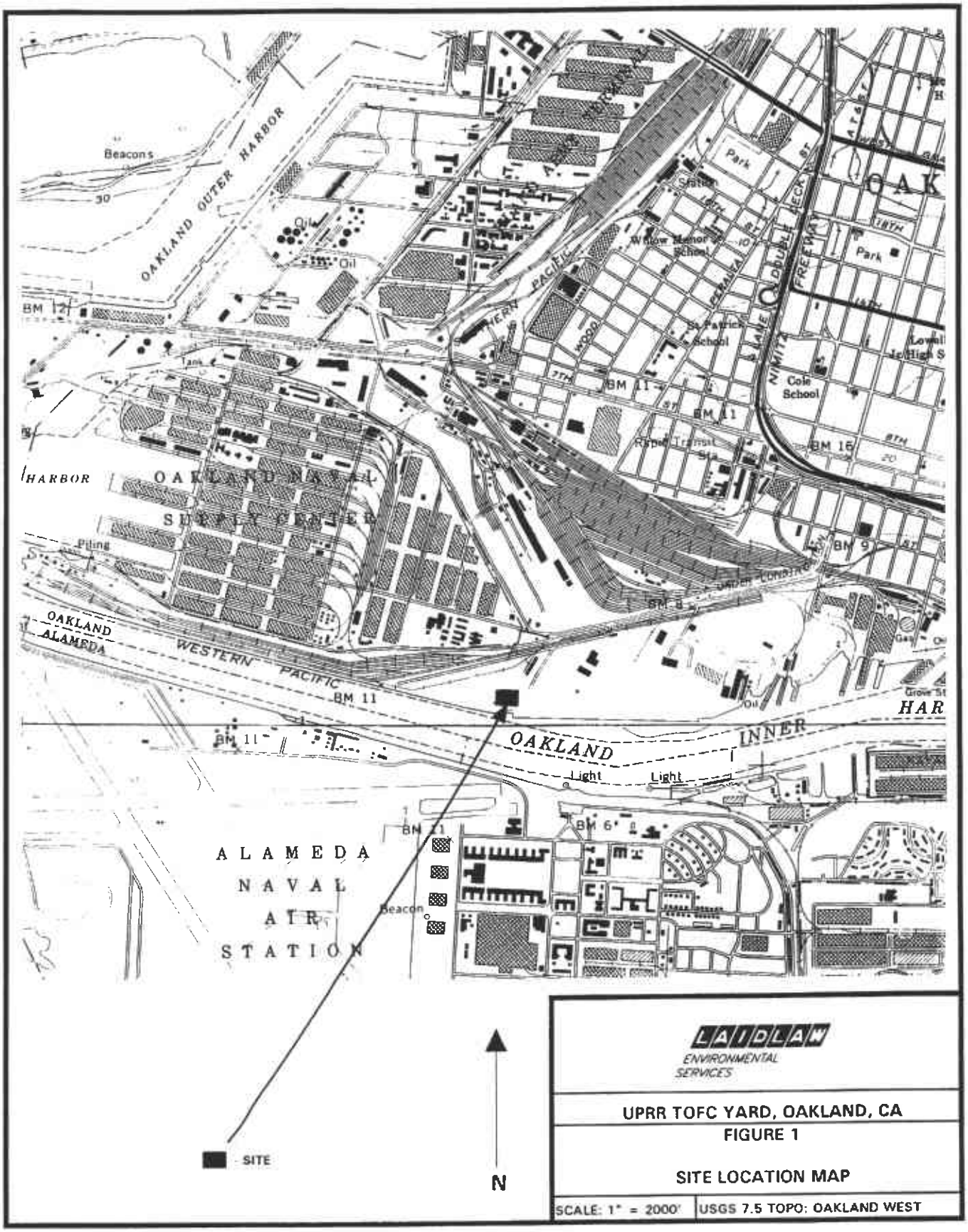
SAMPLE LOCATION	SAMPLE ID	DATE SAMPLED	TPH/IR (mg/l)	TPH/D (ug/l)	TPH/G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	BTEX (ug/l)	As (mg/l)	Pb (mg/l)
OKUS–W6	OKUS–W6	07/16/93	BRK	BRK	ND	2.5	ND	ND	ND	2.5	0.004	ND
"	"	08/25/93	ND	590	ND	2.6	ND	4.9	1.3	8.8	0.013	ND
		11/12/93	ND	610	ND	3.6	ND	3.7	1.3	8.6	ND	ND
		02/07/94	PRODUCT IN WELL – NOT SAMPLED									
		05/03/94	PRODUCT IN WELL – NOT SAMPLED									
		08/24/94	PRODUCT IN WELL – NOT SAMPLED									
		11/16/94	PRODUCT IN WELL – NOT SAMPLED									
		02/22/95	PRODUCT IN WELL – NOT SAMPLED									
		06/22/95	PRODUCT IN WELL – NOT SAMPLED									
		08/09/95	PRODUCT IN WELL – NOT SAMPLED									
		11/29/95	PRODUCT IN WELL – NOT SAMPLED									
OKUS–W7	OKUS–W7	07/16/93	16	ND	ND	2.1	ND	ND	ND	2.1	0.009	ND
"	"	08/25/93	ND	930	56	2.9	ND	1.2	ND	4.1	ND	ND
		11/12/93	ND	1100	ND	ND	ND	ND	ND	ND	ND	ND
		02/07/94	NA	1100	ND	0.7	<0.50	<0.50	<0.50	0.7	<0.10	<0.02
		05/03/94	NA	1300	<50	<0.50	<0.50	<0.50	<0.50	ND	<0.10	<0.02
		08/24/94	NA	910	<50	2.5	0.54	<0.50	<0.50	3.0	<0.10	NA
		11/16/94	NA	820	<50	0.62	<0.50	<0.50	<0.50	0.6	NA	NA
		02/22/95	NA	830	<50	0.54	<0.50	<0.50	<0.50	0.5	NA	NA
		06/22/95	NA	850	<50	2.4	<0.50	0.52	<0.50	2.9	NA	NA
		08/09/95	NA	640	71	4.2	<0.50	1.2	1.2	6.6	0.074	<0.050
		11/29/95	NA	1300	64	4.3	<0.50	1.3	0.51	6.1	0.0095	NA
OKUS–W8	OKUS–W8	07/16/93	15	ND	ND	ND	ND	ND	ND	ND	0.012	0.003
"	"	08/27/93	ND	1100	120	1.3	ND	ND	0.85	2.2	ND	0.005
		11/11/93	ND	1300	190	3.5	1.3	46	4.9	55.7	ND	ND
		02/07/94	NA	1000	120	0.9	<0.50	<0.50	<0.50	0.9	<0.10	<0.02
		05/03/94	NA	780	79	0.99	<0.50	<0.50	<0.50	1.0	<0.10	<0.02
		08/24/94	NA	700	100	1.4	<0.50	<0.50	<0.50	1.4	<0.10	NA
		11/16/94	NA	830	110	0.77	<0.50	<0.50	<0.50	0.8	NA	NA
		02/22/95	NA	370	150	0.96	<0.50	<0.50	1.2	2.2	NA	NA
		06/22/95	NA	870	76	0.92	<0.50	<0.50	<0.50	0.9	NA	NA
		08/09/95	NA	1100	90	1.1	<0.50	<0.50	1.3	2.4	0.078	<0.050
		11/29/95	NA	2400	100	0.73	<0.50	<0.50	0.91	1.6	<0.0050	NA
APL/UP–W1	APL/UP–W1	07/16/93	11	700	300	25.4	1.7	ND	3.0	30	0.011	ND
"	"	08/26/93	ND	810	720	47	1.3	360	14.0	420	0.013	ND
		11/11/93	ND	530	560	26	ND	220	11.0	260	ND	ND
		02/07/94	NA	660	620	25	<0.50	180	10	220	<0.10	<0.02
		05/03/94	NA	590	680	48	2.9	260	9.8	320	<0.10	<0.02
		08/24/94	NA	420	830	48	4.8	12	3.2	68	<0.10	NA
		11/15/94	NA	480	470	36	3.6	9.6	12	61	NA	NA
		02/22/95	NA	510	470	33	2.8	170	9	210	NA	NA
		06/22/95	NA	320	160	12	0.82	3.5	2.4	19	NA	NA
		08/09/95	NA	160	69	4.2	<0.50	<0.50	2.3	6.5	<0.0050	<0.050
		11/29/95	NA	920	170	7.4	0.58	66	3.5	78	0.018	NA
APL/UP–W2	APL/UP–W2	07/16/93	19	ND	ND	8.0	ND	ND	ND	8	0.016	ND
"	"	08/26/93	ND	240	94	ND	ND	35	2.4	37	0.023	ND
		11/11/93	ND	190	110	5.0	ND	38	2.6	46	ND	ND
		02/07/94	NA	270	120	6.6	<0.50	38	1.8	46	<0.10	<0.02
		05/03/94	NA	100	<50	<0.50	<0.50	<0.50	<0.50	ND	<0.10	<0.02
		08/24/94	NA	330	220	13.0	0.77	3.5	3.1	20	<0.10	NA
		11/15/94	NA	320	190	11.0	<0.50	63.0	5.4	79	NA	NA
		02/22/95	NA	550	320	19.0	<0.50	100	9.5	130	NA	NA
		06/22/95	NA	300	170	10.0	62	2.2	2.3	76	NA	NA
		08/09/95	NA	180	62	3.5	<0.50	<0.50	2.3	5.8	0.220	<0.050
		11/29/95	NA	690	110	7.2	<0.50	49	2.3	59	0.019	NA

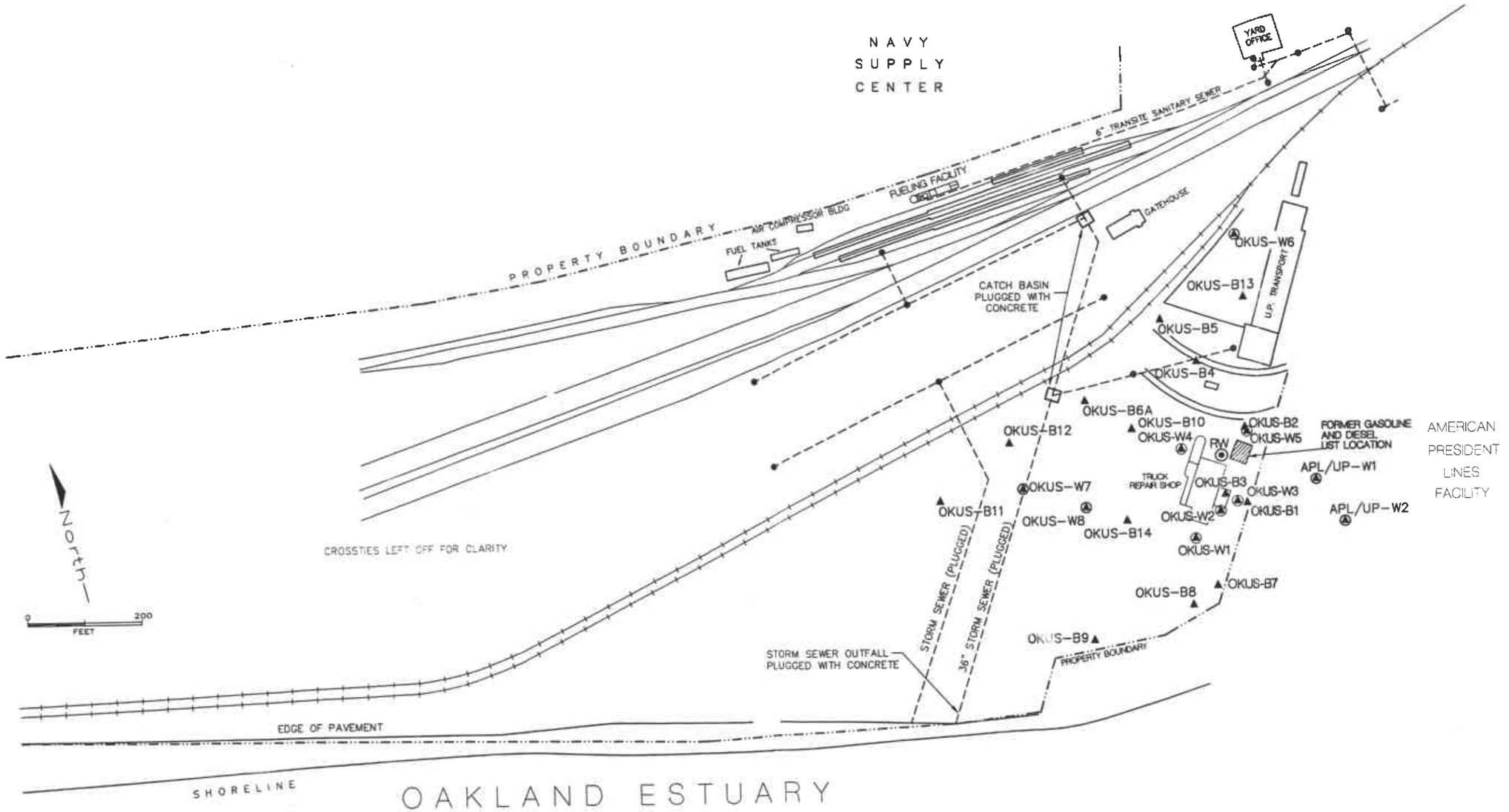
TABLE 2 (CONT.)
ANALYTICAL RESULTS – GROUNDWATER MONITORING WELLS
UNION PACIFIC RAILROAD
OAKLAND MOTOR FREIGHT FACILITY

SAMPLE LOCATION	SAMPLE ID	DATE SAMPLED	TPH/IR (mg/l)	TPH/D (ug/l)	TPH/G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	BTEX (ug/l)	As (mg/l)	Pb (mg/l)
	DUPLICATES											
OKUS–W5	OKUS–W6	01/15/93	ND	2800	510	50	10	170	19	250	NA	NA
OKUS–W1	OKUS–W6	05/12/93	ND	140	ND	ND	ND	ND	ND	ND	ND	ND
APL/UP–W1	QA/QC–1	07/16/93	12	ND	0.21	22.4	ND	ND	2.4	25	0.012	ND
OKUS–W4	OKUS–W9	08/26/93	ND	2700	6200	340	78	4500	100	5000	0.100	ND
OKUS–W8	OKUS–W9	11/11/93	ND	1300	120	1.3	ND	4	1.4	7	2.400	ND
OKUS–W3	QA/QC–1	02/08/94	NA	2900	15000	280	64	5800	<0.50	6100	0.120	0.12
OKUS–W4	OKUS–QC1	05/03/94	NA	2500	5400	300	41	5200	130	5700	0.120	<0.02
OKUS–W8	OKUS–QC1	08/24/94	NA	950	92	1.6	<0.50	<0.50	<0.50	2	<0.10	NA
APL/UP–W2	OKUS–QC1	11/16/94	NA	310	190	10	<0.50	62	4.7	77	NA	NA
APL/UP–W2	APL–W12	02/22/95	NA	490	360	20	<0.50	110	6.7	140	NA	NA
APL/UP–W2	APL–W12	08/09/95	NA	160	71	3.4	<0.50	<0.50	2.2	5.6	0.200	<0.050
APL/UP–W1	APL–W11	11/29/95	NA	1100	170	7.5	0.57	66	4.4	79	0.021	NA
	TRIP BLANKS											
UPMF	OAK–FB 1	07/16/93	NA	NA	NA	ND	ND	ND	ND	ND	NA	NA
UPMF	OAK–TB 2	07/16/93	NA	NA	NA	ND	ND	ND	ND	ND	NA	NA
UPMF	TB–1	08/27/93	NA	NA	NA	ND	ND	ND	ND	ND	NA	NA
UPMF	TB–2	08/27/93	NA	NA	NA	ND	ND	ND	ND	ND	NA	NA
UPMF	TB–1	11/12/93	NA	NA	NA	ND	ND	ND	ND	ND	NA	NA
UPMF	TB–1	08/24/94	NA	NA	NA	ND	ND	ND	ND	ND	NA	NA
UPMF	TB–1	11/16/94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UPMF	TB–1	02/22/95	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA
UPMF	TB–1	06/22/95	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA
UPMF	TB–1	08/09/95	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA
UPMF	TRIP BLANK	11/29/95	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA

ND – Not Detected
NA – Not Analyzed
BRK – Bottle broken during shipment
TPH – Total Petroleum Hydrocarbons
mg/L – milligram per liter
ug/L – microgram per liter

TPH/IR – analyzed using EPA Method 418.1
TPH/D – anaylzed using EPA Method 8015 Mod.
TPH/G – anaylzed using EPA Method 8015 Mod.
BTEX – analyzed using EPA Method 8020
As – analyzed using EPA Method 7060
Pb – analyzed using EPA Method 7421


Beacons
OAKLAND OUTER HARBOR
Oil
BM 12
HARBOR
OAKLAND NAVAL SUPPLY CENTER
Piling
OAKLAND ALAMEDA
WESTERN PACIFIC
BM 11
OAKLAND INNER
Light
Light
BM 6
ALAMEDA NAVAL AIR STATION
Beacon
Park
Shafter
Window Manor School
DOUBLE DECK FREEWAY
NIMITZ
St. Patrick School
Cole School
Lowell Jr High S
BM 16
BM 9
SITE
N
LAIDLAW ENVIRONMENTAL SERVICES
UPRR TOFC YARD, OAKLAND, CA
FIGURE 1
SITE LOCATION MAP
SCALE: 1" = 2000'
USGS 7.5 TOPO: OAKLAND WEST



LEGEND

⏃ OKUS-W1	MONITORING WELL LOCATION AND NUMBER
▲ OKUS-B1	BORING LOCATION AND NUMBER
●	CATCH BASIN FOR STORM SEWER
◉ RW	RECOVERY WELL

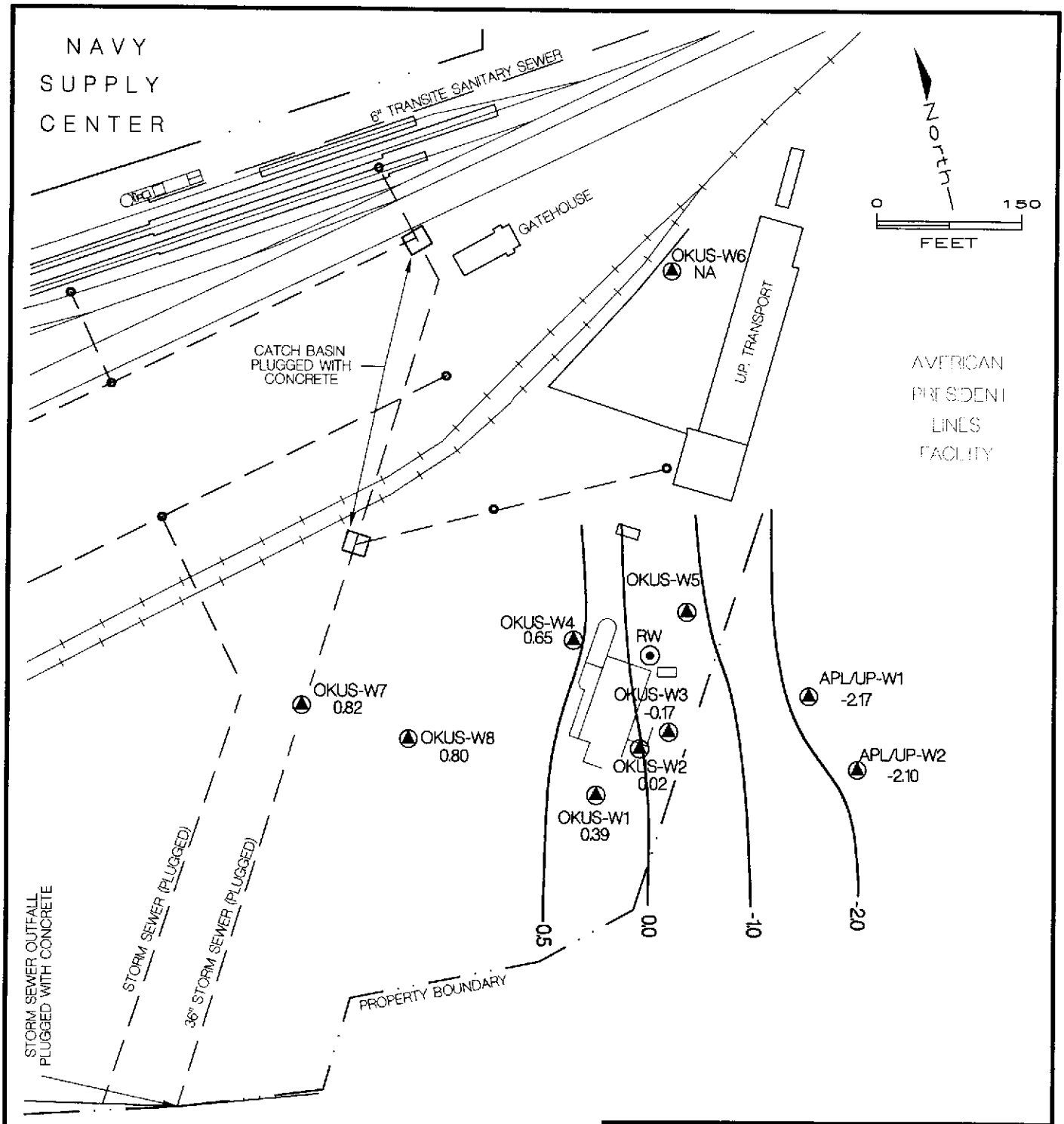
BY	DATE
DRAWN WRB	7/18/95
CHECKED	
APPROVED	
APPROVED	
APPROVED	

USPCI
A LAIDLAW COMPANY

UPRR TOFC RAILYARD
UPMF REPAIR SHOP, OAKLAND, CALIFORNIA

FIGURE 2
SITE VICINITY MAP

SCALE	DATE	DWG. NO.
1"=200'	9/93	96120-556



LEGEND

OKUS-W1 0.39	MONITOR WELL LOCATION AND NUMBER WITH GROUNDWATER ELEVATION
RW	RECOVERY WELL
	CATCH BASIN FOR STORM SEWER
0	GROUNDWATER ELEVATION CONTOUR (FEET RELATIVE TO MEAN SEA LEVEL)

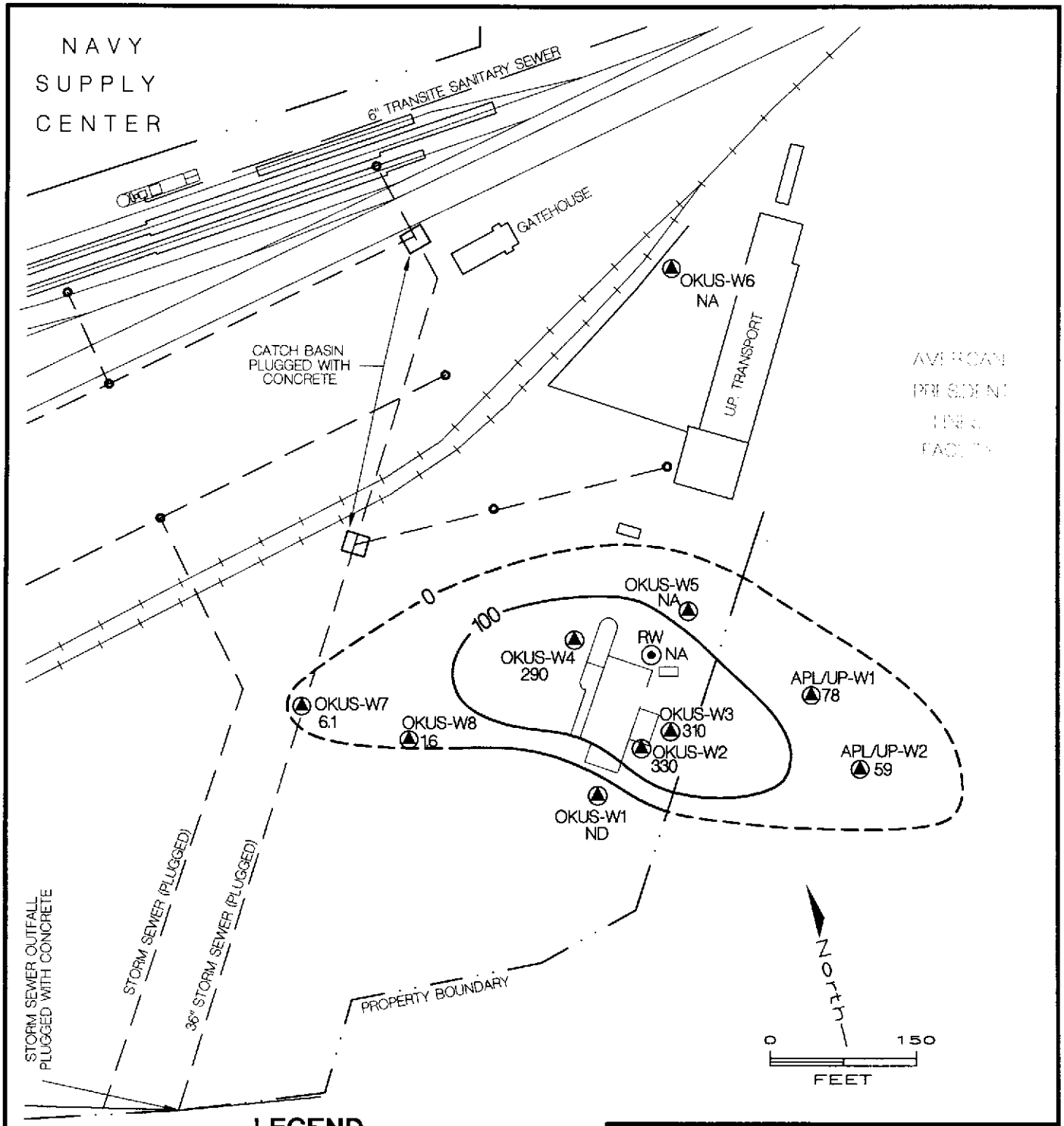
96120-771

USPCI
A LAIDLAW COMPANY

UPMF REPAIR SHOP-OAKLAND, CALIFORNIA

FIGURE 3
GROUNDWATER ELEVATION MAP (11/95)

SCALE:	APPROVED/DATE
1" = 150'	1-10-96



LEGEND

OKUS-W8 ▲ 4.0	MONITOR WELL LOCATION AND NUMBER WITH TOTAL DISSOLVED BTEX CONCENTRATION ug/L
RW ⊙	RECOVERY WELL
●	CATCH BASIN FOR STORM SEWER
100	TOTAL BTEX DISTRIBUTION CONTOUR; DASHED WHERE INFERRED
ND	NOT DETECTED
NA	NOT ANALYZED

NOTE: ALL ANALYTICAL RESULTS IN µg/L

96120-772

USPCI

A LAIDLAW COMPANY

UPMF REPAIR SHOP-OAKLAND, CALIFORNIA

FIGURE 4
DISSOLVED PHASE BTEX DISTRIBUTION (11/95)

SCALE:	APPROVED/DATE
1" = 150'	1-3-96

APPENDIX A

FLUID LEVEL MEASUREMENTS AND SAMPLE COLLECTION LOGS

HYDRODATA

Date: 10/18/95

PROJECT: UPRR-TOFC EVENT: _____ SAMPLER: CM/RP

No.	Well or Location	Date	Time Hr.	Time Min.	Measurement DTP / DTW	Comments
1	OP-4	10/18	10	18	5.43' / 5.68	.25' PROD
2	MW-9	10/18	10	22	5.75 / 7.99	2.24' PROD BAILED 1 GAL
3	ORW-1	10/18	10	28	/ 11.10'	NO DETECTED THICKNESS
4	OP-3	10/18	10	30	6.43 / 7.70	1.27' PRODUCT
5	~~E~~ MW-7	10/18	10	33	6.54 / 8.59	2.05
6	MW-8	10/18	10	41	6.60 / 7.42	.82
7	RW-1	10/18	12	00	9.41 - 9.43	APPROXIMAT DTP-DTW DUE TO THICKNESS OF OIL BAILED .5 GAL
8	~~OMW-4~~ OKW4	10/18	11	15	/ 6.49	NO PROD
9	~~OMW-5~~ OKW5	10/18	11	25	9.82'	DEPTH TO THICK VISCOUS PRODUCT - 2"?
10	~~OMW-6~~ OKW6	10/18	11	43	6.38'	" "
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

[1] All levels are depth from inner casing - describe any other reference points in comments column; when in doubt, describe reference point.
Note in comments column if well is not: properly labeled, locked, or able to be locked. Describe corrective action.
Note flooding of vault box, odor, access problems.

HYDRODATA

Date: 11/10/95

PROJECT: 4117 EVENT: NOVEMBER H_2O LEVELS SAMPLER: CM/RA

No.	Well or Location	Date	Time Hr.	Time Min.	Measurement DTP	Measurement DTW	Comments FP
1	OMW-1	11-10-95	8	49	7.57'	7.57'	0.0' FP
2	OMW-2		11	05	5.01'	5.01'	TRACE FP
3	OMW-3		10	50	6.20	6.20	0.0 FP
4	OMW-4		9	09	6.73'	7.65	.92 FP PURGED .5 GAL OIL ≈ 8 GAL H_2O
5	OMW-5		11	17	6.54'	6.54'	0.0 FP
6	OMW-6				6.45'	6.45	
7	OMW-7		9	33	6.79'	8.03'	1.24' FP .25 GAL BAILED
8	OMW-8		9	04	6.67'	6.67'	0.0' FP
9	OMW-9		10	18	5.92	8.19	2.27 BAILED 1 GAL
10	OMW-10		10	10	6.70'	6.70'	TRACE OF FP
11	OP-1		9	20	5.99	8.84	2.85 FP 1 GALLON BAILED
12	OP-2		11	11	6.68	8.68	2.00' FP BAILED .5 GAL + H_2O
13	OP-3		9	45	6.57	7.82	1.25 FP BAILED ≈ .5 GAL
14	OP-4		9	50	5.62'	5.90	.28' FP
15	ORW-1		9	47	11.39'	11.39'	0.0' FT
16	ORW-2		9	24	9.48'	9.49'	.01' FP
17	ORW-3		9	14	9.40'	9.40'	0.0 FP
18	RW-1		11	37	9.58'		ASSUME ≈.025" PROBE COATED & NOT RESPONDING TO WATER. BAILED ≈ 1 GT
19	OKVS-4		12	09	6.67	6.67	0.0' FP
20	OKVS-5		12	03	9.97		≈.025" PROBE NOT RESPONSIVE TO WATER

[1] All levels are depth from inner casing - describe any other reference points in comments column; when in doubt, describe reference point.
Note in comments column if well is not: properly labeled, locked, or able to be locked. Describe corrective action.
Note flooding of vault box, odor, access problems.

HYDRODATA

Date: 11/10/95

PROJECT: 417 EVENT: NOVEMBER H,O LEVELS SAMPLER: CM/RA

No.	Well or Location	Date	Time		Measurement		Comments
			Hr.	Min.	DTP	DTW	
1	OKUS-6	11/10/95	12	16	6.52	——	PROBE UNRESPONSIVE TO WATER ≈.5" DSL
2	DSMW-1		13	27		6.16'	NO PRODUCT - NO ODOR
3	DSMW-2		13	23		7.77'	NO PRODUCT - NO ODOR
4	DSMW-3		13	17		7.96'	NO PRODUCT - NO ODOR
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

[1] All levels are depth from inner casing - describe any other reference points in comments column; when in doubt, describe reference point.
Note in comments column if well is not: properly labeled, locked, or able to be locked. Describe corrective action.
Note flooding of vault box, odor, access problems.

HYDRODATA

Date: 12-15-95

PROJECT: 4117 EVENT: DECEMBER LEVELS SAMPLER: CM / RP

No.	Well or Location	Date	Time		Measurement	Comments
			Hr.	Min.		
1	OKUS 4	12.15.95	9	42	6.56 WATER	ASPHALT BROKEN WELL COVER BROKEN
2	OKUS 5	15-12-95	9	50	Oil 9.60 —	COULDN'T GET WATER RD
3	OKUS 6	15-DEC-95	10	08	Oil 5.47 H2O —	COULDN'T GET WATER DEEP
4	RW-1	15-DEC-95	10	27	Oil 9.46 Wat. 9.58	
5	OP 4	15-DEC-95	11	16	Oil N/A H2O 3.93	
6	OSMW1	" "	12	02	4.44'	NO ODOR, NO PRODUCT
7	OSMW2	" "	12	15	9.58'	NO ODORS, NO PRODUCT
8	OSMW3	" "	12	21	8.82'	NO DISCERNABLE PRODUCT OR ODORS
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

All levels are depth from inner casing - describe any other reference points in comments column; when in doubt, describe reference point.
Note in comments column if well is not: properly labeled, locked, or able to be locked. Describe corrective action.
Note flooding of vault box, odor, access problems.

USPCI SAMPLING AND WELL STABLIZATION FORM

USPCI Project Name: **UPMF Oakland** | USPCI Project Number: **96120-844**

Measuring Point (MP) Location **Top of casing**

Well No. OKUS-W1

Well Depth: (Below MP): **18.70 Feet**

Casing diameter: **2 Inches** | Sampling Date: **11/29/95**

Depth To Ground Water (Below MP): **8.78 Feet** | Sample ID No. **OKUS-W1**

Method Of Well Development: | Time: **16:55**

☐ Tap ☐ Submersible Pump ☐ Bladder Pump | Riser Elevation (MP): 9.17 Feet

■ Bailer ☐ Centrifugal Pump ☐ Other | Top of Screen Elevation: 6.85 Feet

Sampling Collection Method: | Sample Appearance: **Very slightly turbid**

☐ Tap ☐ Submersible Pump ☐ Bladder Pump Sample | Odor: **Slight**

■ Bailer Type: ○ Teflon ○ Stainless Steel | Sampling Problems (if any):

○ ABS Plastic ○ PVC ● HDPE plastic disposable

Pump Intake Or Bailer Set At _____ Feet Below MP | Decontamination Performed: Probe and filter

Tubing Type (if Used):

Tubing Used for: ☐ Sample Collection ☐ Well Development/Field Tests | Samples Collected: **TPH-Gasoline, , TPH-Diesel 8020 BTEX, As**

Time	pH (Units)	Temperature Corrected Conductance (umho/cm)	Temperature (Centigrade)	Water Level (Nearest 0.01 Ft.)	Cumulative Volume of Water Removed From well (Gallons)	Pumping Rate in Gallons/Minute (GPM)
12:00	Begin well					
12:11	7.8	900	24.0		1.75	
12:17	7.7	1000	23.5		3.50	
12:22	7.7	1000	23.5		5.25	
12:30	Sample well					

At Least 3 Well Bore Volumes Were Evacuated Before Sampling | Discharge Rate = | GPM x 0.00223 = | cfs

Comments: **Metals filtered with .45 micron filter**

(18.70 - 8.78) * 0.16 = 1.58 or 1.75 gallons per volume

[Comments may continue on back]

Form Completed By: **Mark McCormick** | Witnessed By:

USPCI SAMPLING AND WELL STABLIZATION FORM

USPCI Project Name: **UPMF Oakland**

USPCI Project Number: **96120-844**

Measuring Point (MP) Location **Top of casing**

Well No. OKUS-W2

Well Depth: (Below MP): **22.00 Feet**

Casing diameter: **2 Inches**

Sampling Date: **11/29/95**

Depth To Ground Water (Below MP): **9.69 Feet**

Sample ID No. **OKUS-W2**

Method Of Well Development:

Time: **12:50**

☐ Tap ☐ Submersible Pump ☐ Bladder Pump

Riser Elevation (MP): **9.71 Feet**

■ Bailer ☐ Centrifugal Pump ☐ Other

Top of Screen Elevation: **7.05 Feet**

Sampling Collection Method:

Sample Appearance: **Slightly turbid**

☐ Tap ☐ Submersible Pump ☐ Bladder Pump Sample

Odor: **Light - moderate**

■ Bailer Type: ○ Teflon ○ Stainless Steel

Sampling Problems (if any):

○ ABS Plastic ○ PVC ● HDPE plastic disposable

Pump Intake Or Bailer Set At _____ Feet Below MP

Decontamination Performed: **Probe and filter**

Tubing Type (if Used):

Tubing Used for: ☐ Sample Collection ☐ Well Development/Field Tests

Samples Collected: **TPH-Gasoline, TPH-Diesel, 8020 BTEX, As**

Time	pH (Units)	Temperature Corrected Conductance (umho/cm)	Temperature (Centigrade)	Water Level (Nearest 0.01 Ft.)	Cumulative Volume of Water Removed From well (Gallons)	Pumping Rate in Gallons/Minute (GPM)
12:50	Begin well					
13:00	7.8	2400	23.5		2.0	
13:05	7.8	2400	23.5		4.0	
13:09	7.9	2500	23.0		6.0	
13:15	Sample well					

At Least 3 Well Bore Volumes Were Evacuated Before Sampling Discharge Rate = GPM x 0.00223 = cfs

Comments: **Metals filtered with .45 micron filter**

(22.00 - 9.69) * 0.16 = 1.97 or 2.0 gallons per volume

[Comments may continue on back]

Form Completed By: **Mark McCormick**

Witnessed By:

USPCI SAMPLING AND WELL STABLIZATION FORM

USPCI Project Name: **UPMF Oakland** | USPCI Project Number: **96120-844**

Measuring Point (MP) Location **Top of casing**

Well Depth: (Below MP): **21.5 Feet**

Well No. OKUS-W3

Casing diameter: **2 Inches** | Sampling Date: **11/29/95**

Depth To Ground Water (Below MP): **9.97 Feet** | Sample ID No. **OKUS-W3**

Method Of Well Development: | Time: **14:10**

☐ Tap ☐ Submersible Pump ☐ Bladder Pump | Riser Elevation (MP): **9.80 Feet**

■ Bailer ☐ Centrifugal Pump ☐ Other | Top of Screen Elevation: **6.55 Feet**

Sampling Collection Method: | Sample Appearance: **Slightly turbid**

☐ Tap ☐ Submersible Pump ☐ Bladder Pump Sample | Odor: **Moderate**

■ Bailer Type: ○ Teflon ○ Stainless Steel | Sampling Problems (if any): **Water is reactive**

○ ABS Plastic ○ PVC ● HDPE plastic disposable

Pump Intake Or Bailer Set At _____ Feet Below MP | Decontamination Performed: **Probe and filter**

Tubing Type (if Used):

Tubing Used for: ☐ Sample Collection ☐ Well Development/Field Tests | Samples Collected: **TPH-Gasoline, TPH-Diesel, 8020 BTEX, As**

Time	pH (Units)	Temperature Corrected Conductance (umho/cm)	Temperature (Centigrade)	Water Level (Nearest 0.01 Ft.)	Cumulative Volume of Water Removed From well (Gallons)	Pumping Rate in Gallons/Minute (GPM)
13:40	Begin well					
13:49	7.8	2800	24.0		2.0	
13:54	7.9	2900	23.5		4.0	
13:59	7.9	2900	23.5		6.0	
14:10	Sample well					

At Least 3 Well Bore Volumes Were Evacuated Before Sampling Discharge Rate = GPM x 0.00223 = cfs

Comments:

Metals sample filtered with .45 micron filter

(21.50 - 9.97) * 0.16 = 1.85 or 2.0 gallons per volume

[Comments may continue on back]

Form Completed By: **Mark McCormick** Witnessed By:

USPCI SAMPLING AND WELL STABLIZATION FORM

USPCI Project Name: **UPMF Oakland** | USPCI Project Number: **96120-844**

Measuring Point (MP) Location **Top of casing**

Well No. OKUS-W4

Well Depth: (Below MP): **20.69 Feet**

Casing diameter: **2 Inches** | Sampling Date: **11/29/95**

Depth To Ground Water (Below MP): **6.70 Feet** | Sample ID No. **OKUS-W4**

Method Of Well Development: | Time: **15:00**

☐ Tap ☐ Submersible Pump ☐ Bladder Pump | Riser Elevation (MP): **7.35 Feet**

■ Bailer ☐ Centrifugal Pump ☐ Other | Top of Screen Elevation: **6.08 Feet**

Sampling Collection Method: | Sample Appearance: **Slighly turbid**

☐ Tap ☐ Submersible Pump ☐ Bladder Pump Sample | Odor: **Light - moderate**

■ Bailer Type: ○ Teflon ○ Stainless Steel | Sampling Problems (if any):

○ ABS Plastic ○ PVC ● HDPE plastic disposable

Pump Intake Or Bailer Set At _____ Feet Below MP | Decontamination Performed: Probe and filter

Tubing Type (if Used):

Tubing Used for: ☐ Sample Collection ☐ Well Development/Field Tests | Samples Collected: **TPH-Gasoline, TPH-Diesel 8020 BTEX, As**

Time	pH (Units)	Temperature Corrected Conductance (umho/cm)	Temperature (Centigrade)	Water Level (Nearest 0.01 Ft.)	Cumulative Volume of Water Removed From well (Gallons)	Pumping Rate in Gallons/Minute (GPM)
14:25	Begin well					
14:36	7.6	2500	22.5		2.25	
14:43	7.6	2400	22.5		4.50	
14:50	7.7	2400	23.0		6.75	
15:00	Sample well					

At Least 3 Well Bore Volumes Were Evacuated Before Sampling Discharge Rate = GPM x 0.00223 = cfs

Comments: **Metals sample filtered with .45 micron filter**

(20.69 - 6.70) * 0.16 = 2.24 or 2.25 gallons per volume

[Comments may continue on back]

Form Completed By: **Mark McCormick** Witnessed By:

USPCI SAMPLING AND WELL STABLIZATION FORM

USPCI Project Name: **UPMF Oakland** | USPCI Project Number: **96120-844**

Measuring Point (MP) Location **Top of casing**

Well No. OKUS-W5

Well Depth: (Below MP): **21.00 Feet**

Casing diameter: **2 Inches** | Sampling Date: **11/29/95**

Depth To Ground Water (Below MP): **10.19 Feet *** | Sample ID No. **N/A**

Method Of Well Development: | Time: **11:45**

☐ Tap ☐ Submersible Pump ☐ Bladder Pump | Riser Elevation (MP): 9.25 Feet

☐ Bailer ☐ Centrifugal Pump ☐ Other | Top of Screen Elevation: 5.95 Feet

Sampling Collection Method: | Sample Appearance:

☐ Tap ☐ Submersible Pump ☐ Bladder Pump Sample | Odor: **Strong**

☐ Bailer Type: ○ Teflon ○ Stainless Steel | Sampling Problems (if any):

○ ABS Plastic ○ PVC

Pump Intake Or Bailer Set At _____ Feet Below MP | Decontamination Performed: Probe

Tubing Type (if Used):

Tubing Used for: ☐ Sample Collection ☐ Well Development/Field Tests | Samples Collected: **None**

Time	pH (Units)	Temperature Corrected Conductance (umho/cm)	Temperature (Centigrade)	Water Level (Nearest 0.01 Ft.)	Cumulative Volume of Water Removed From well (Gallons)	Pumping Rate in Gallons/Minute (GPM)
WELL NOT	SAMPLED					

At Least Well Bore Volumes Were Evacuated Before Sampling Discharge Rate = GPM x 0.00223 = cfs

Comments: *** No Oil/Water interface detected, but product noted coating probe and in bailer, noted as "bunker C" type hydrocarbon.**

Well not sampled because of phase separated hydrocarbons.

[Comments may continue on back]

Form Completed By: **Mark McCormick** Witnessed By:

USPCI SAMPLING AND WELL STABLIZATION FORM

USPCI Project Name: **UPMF Oakland** | USPCI Project Number: **96120-844**

Measuring Point (MP) Location **Top of casing**

Well No. OKUS-W6

Well Depth: (Below MP): **16.30 Feet**

Casing diameter: **2** Inches | Sampling Date: **11/29/95**

Depth To Ground Water (Below MP): **6.24 Feet**
Depth to Product (Below MP): **5.75 Feet** | Sample ID No. **N/A**

Method Of Well Development: | Time: **12:12**

☐ Tap ☐ Submersible Pump ☐ Bladder Pump | Riser Elevation (MP): **7.29 Feet**

☐ Bailer ☐ Centrifugal Pump ☐ Other | Top of Screen Elevation: **2.29 Feet**

Sampling Collection Method: | Sample Appearance:

☐ Tap ☐ Submersible Pump ☐ Bladder Pump Sample | Odor: **Strong**

☐ Bailer Type: ○ Teflon ○ Stainless Steel | Sampling Problems (if any):

○ ABS Plastic ○ PVC

Pump Intake Or Bailer Set At _____ Feet Below MP | Decontamination Performed: Probe

Tubing Type (if Used):

Tubing Used for: ☐ Sample Collection ☐ Well Development/Field Tests | Samples Collected: **None**

Time	pH (Units)	Temperature Corrected Conductance (umho/cm)	Temperature (Centigrade)	Water Level (Nearest 0.01 Ft.)	Cumulative Volume of Water Removed From well (Gallons)	Pumping Rate in Gallons/Minute (GPM)
WELL NOT	SAMPLED					

At Least Well Bore Volumes Were Evacuated Before Sampling Discharge Rate = GPM x 0.00223 = cfs

Comments: **Measurement only to product/air interface, viscosity of "bunker C" type hydrocarbon completely obsures the product/water interface. A bailer was inserted downhole and product thickness was measured by appearance on bailer.**

[Comments may continue on back]

Form Completed By: **Mark McCormick** Witnessed By:

USPCI SAMPLING AND WELL STABLIZATION FORM

USPCI Project Name: **UPMF Oakland** | USPCI Project Number: **96120-844**

Measuring Point (MP) Location **Top of casing** | **Well No. OKUS-W7**

Well Depth: (Below MP): **19.78 Feet**

Casing diameter: **2 Inches** | Sampling Date: **11/29/95**

Depth To Ground Water (Below MP): **6.09 Feet** | Sample ID No. **OKUS-W7**

Method Of Well Development: | Time: **16:40**

☐ Tap ☐ Submersible Pump ☐ Bladder Pump | Riser Elevation (MP): 7.4 Feet

■ Bailer ☐ Centrifugal Pump ☐ Other | Top of Screen Elevation: 2.4 Feet

Sampling Collection Method: | Sample Appearance: **Clear/Slightly turbid, yellow**

☐ Tap ☐ Submersible Pump ☐ Bladder Pump Sample | Odor: **Light - moderate**

■ Bailer Type: ○ Teflon ○ Stainless Steel | Sampling Problems (if any):

○ ABS Plastic ○ PVC ● HDPE plastic disposable

Pump Intake Or Bailer Set At _____ Feet Below MP | Decontamination Performed: Probe and filter

Tubing Type (if Used):

Tubing Used for: ☐ Sample Collection ☐ Well Development/Field Tests | Samples Collected: **TPH-Gasoline, TPH-Diesel, 8020 BTEX, As**

Time	pH (Units)	Temperature Corrected Conductance (umho/cm)	Temperature (Centigrade)	Water Level (Nearest 0.01 Ft.)	Cumulative Volume of Water Removed From well (Gallons)	Pumping Rate in Gallons/Minute (GPM)
16:12	Begin well					
16:19	7.7	2000	21.0		2.25	
16:23	7.7	2100	21.0		4.50	
16:28	7.7	2100	21.0		6.75	
16:40	Sample well					

At Least 3 Well Bore Volumes Were Evacuated Before Sampling | Discharge Rate = GPM x 0.00223 = cfs

Comments: **Metals sample filtered with .45 micron filter**

(19.78 - 6.09) * 0.16 = 2.19 or 2.25 gallons per volume

Samples doubled for MS/MSD for TPH and BTEX

[Comments may continue on back]

Form Completed By: **Mark McCormick** | Witnessed By:

USPCI SAMPLING AND WELL STABLIZATION FORM

USPCI Project Name: **UPMF Oakland** | USPCI Project Number: **96120-844**

Measuring Point (MP) Location **Top of casing**

Well Depth: (Below MP): **14.87 Feet**

Well No. OKUS-W8

Casing diameter: **2 Inches** | Sampling Date: **11/29/95**

Depth To Ground Water (Below MP): **5.95 Feet** | Sample ID No. **OKUS-W8**

Method Of Well Development: | Time: **15:55**

☐ Tap ☐ Submersible Pump ☐ Bladder Pump | Riser Elevation (MP): 7.11 Feet

■ Bailer ☐ Centrifugal Pump ☐ Other | Top of Screen Elevation: 2.11 Feet

Sampling Collection Method: | Sample Appearance: **Slightly turbid, yellow**

☐ Tap ☐ Submersible Pump ☐ Bladder Pump Sample | Odor: **Slight**

■ Bailer Type: ○ Teflon ○ Stainless Steel | Sampling Problems (if any):

○ ABS Plastic ○ PVC ● HDPE plastic disposable

Pump Intake Or Bailer Set At _____ Feet Below MP | Decontamination Performed: Probe and filter

Tubing Type (if Used):

Tubing Used for: ☐ Sample Collection ☐ Well Development/Field Tests | Samples Collected: **TPH-Gasoline, TPH-Diesel, 8020 BTEX, As**

Time	pH (Units)	Temperature Corrected Conductance (umho/cm)	Temperature (Centigrade)	Water Level (Nearest 0.01 Ft.)	Cumulative Volume of Water Removed From well (Gallons)	Pumping Rate in Gallons/Minute (GPM)
15:28	Begin well					
15:34	7.5	3300	22.5		1.5	
15:38	7.6	3200	22.5		3.0	
15:42	7.6	3300	22.5		4.5	
15:55	Sample well					

At Least 3 Well Bore Volumes Were Evacuated Before Sampling Discharge Rate = GPM x 0.00223 = cfs

Comments: **Metals sample filtered with .45 micron filter.**

(14.87 - 5.95) * 0.16 = 1.45 or 1.5 gallons per volume

[Comments may continue on back]

Form Completed By: **Mark McCormick** Witnessed By:

USPCI SAMPLING AND WELL STABLIZATION FORM

USPCI Project Name: **UPMF Oakland** | USPCI Project Number: **96120-844**

Measuring Point (MP) Location **Top of casing**

Well Depth: (Below MP): **21.87 Feet**

Well No. APL-W1

Casing diameter: **2 Inches** | Sampling Date: **11/29/95**

Depth To Ground Water (Below MP): **10.29 Feet** | Sample ID No. **APL-W1**

Method Of Well Development: | Time: **10:00**

☐ Tap ☐ Submersible Pump ☐ Bladder Pump | Riser Elevation (MP): **7.11 Feet**

■ Bailer ☐ Centrifugal Pump ☐ Other | Top of Screen Elevation: **2.11 Feet**

Sampling Collection Method: | Sample Appearance: **Clear**

☐ Tap ☐ Submersible Pump ☐ Bladder Pump Sample | Odor: **Light**

■ Bailer Type: ○ Teflon ○ Stainless Steel | Sampling Problems (if any):

○ ABS Plastic ○ PVC ● HDPE disposable

Pump Intake Or Bailer Set At _____ Feet Below MP | Decontamination Performed: Probe and filter

Tubing Type (if Used):

Tubing Used for: ☐ Sample Collection ☐ Well Development/Field Tests | Samples Collected: **TPH-Gasoline, TPH-Diesel, 8020 BTEX, As**

Time	pH (Units)	Temperature Corrected Conductance (umho/cm)	Temperature (Centigrade)	Water Level (Nearest 0.01 Ft.)	Cumulative Volume of Water Removed From well (Gallons)	Pumping Rate in Gallons/Minute (GPM)
09:35	Begin well	purging				
09:40	7.7	2000	22.0		2.00	
09:44	7.8	2100	21.5		4.00	
09:50	7.8	2100	21.5		6.00	
10:00	Sample well					

At Least **3** Well Bore Volumes Were Evacuated Before Sampling Discharge Rate = GPM x 0.00223 = cfs

Comments: **Metals sample filtered with .45 micron filter**

(21.87 - 10.29) * 0.16 = 1.85 or 2.0 gallons per volume

Duplicate sample = MW-11 at 10:15

[Comments may continue on back]

Form Completed By: **Mark McCormick** Witnessed By:

USPCI SAMPLING AND WELL STABLIZATION FORM

USPCI Project Name: **UPMF Oakland** | USPCI Project Number: **96120-844**

Measuring Point (MP) Location **Top of casing** | **Well No. APL-W2**

Well Depth: (Below MP): **11.17 Feet**

Casing diameter: **2 Inches** | Sampling Date: **11/29/95**

Depth To Ground Water (Below MP): **9.41 Feet** | Sample ID No. **APL-W2**

Method Of Well Development: | Time: **09:05**

☐ Tap ☐ Submersible Pump ☐ Bladder Pump | Riser Elevation (MP): 7.62 Feet

■ Bailer ☐ Centrifugal Pump ☐ Other | Top of Screen Elevation: 2.62 Feet

Sampling Collection Method: | Sample Appearance: **Clear**

☐ Tap ☐ Submersible Pump ☐ Bladder Pump Sample | Odor: **None**

■ Bailer Type: ○ Teflon ○ Stainless Steel | Sampling Problems (if any):

○ ABS Plastic ○ PVC ● HDPE disposable

Pump Intake Or Bailer Set At _____ Feet Below MP | Decontamination Performed: Probe and filter

Tubing Type (if Used):

Tubing Used for: ☐ Sample Collection ☐ Well Development/Field Tests | Samples Collected: **TPH-Gasoline, TPH-Diesel, 8020 BTEX, As**

Time	pH (Units)	Temperature Corrected Conductance (umho/cm)	Temperature (Centigrade)	Water Level (Nearest 0.01 Ft.)	Cumulative Volume of Water Removed From well (Gallons)	Pumping Rate in Gallons/Minute (GPM)
08:52	Begin well	purging				
08:55	7.8	2100	20.5		0.33	
08:57	7.8	2100	20.5		0.66	
08:59	7.8	2100	20.5		1.00	
09:05	Sample well					

At Least 3 Well Bore Volumes Were Evacuated Before Sampling Discharge Rate = GPM x 0.00223 = cfs

Comments:

Metals sample filtered with .45 micron filter

(11.17 - 9.41) * 0.16 = 0.28 or .33 gallons per volume

[Comments may continue on back]

Form Completed By: **Mark McCormick** Witnessed By:

APPENDIX B

ANALYTICAL REPORTS

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

USPCI / Laidlaw
5665 Flatiron Pkwy.
Boulder, CO 80301
Attention: Denton Mauldin

Client Project ID: U.P. Motor Freight (#96120-844)
Sample Matrix: Water
Analysis Method: EPA 5030/8015 Mod./8020
First Sample #: 512-0078

Sampled: Nov 29, 1995
Received: Nov 30, 1995
Reported: Dec 20, 1995

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 512-0078 APL-W2	Sample I.D. 512-0079 APL-W1	Sample I.D. 512-0080 APL-W11	Sample I.D. 512-0081 OKUS-W1	Sample I.D. 512-0082 OKUS-W2	Sample I.D. 512-0083 OKUS-W3
QC Batch Number:		GC121395 802002A	GC121395 802002A	GC121395 802002A	GC121395 802002A	GC121395 802005A	GC121395 802005A
Purgeable Hydrocarbons	50	110	170	170	N.D.	7,100	5,300
Benzene	0.50	7.2	7.4	7.5	N.D.	240	220
Toluene	0.50	N.D.	0.58	0.57	N.D.	34	42
Ethyl Benzene	0.50	49	66	66	N.D.	N.D.	N.D.
Total Xylenes	0.50	2.3	3.5	4.4	N.D.	58	44
Chromatogram Pattern:		Gasoline	Gasoline	Gasoline	--	Gasoline	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	50	50
Date Analyzed:	12/13/95	12/13/95	12/13/95	12/13/95	12/13/95	12/13/95
Instrument Identification:	HP-2	HP-2	HP-2	HP-2	HP-5	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	104	97	99	97	86	90

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

SEQUOIA ANALYTICAL, #1271

Kevin Van Slambrook
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

USPCI / Laidlaw	Client Project ID:	U.P. Motor Freight (#96120-844)	Sampled: Nov 29, 1995
5665 Flatiron Pkwy.	Sample Matrix:	Water	Received: Nov 30, 1995
Boulder, CO 80301	Analysis Method:	EPA 5030/8015 Mod./8020	Reported: Dec 20, 1995
Attention: Denton Mauldin	First Sample #:	512-0084	

QC Batch Number: GC121395 802005A | GC121395 802002A | GC121395 802002A | GC121395 802004A

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 512-0084 OKUS-W4	Sample I.D. 512-0085 OKUS-W8	Sample I.D. 512-0086 OKUS-W7	Sample I.D. 512-0087 Trip Blank
Purgeable Hydrocarbons	50	4,500	100	64	N.D.
Benzene	0.50	200	0.73	4.3	N.D.
Toluene	0.50	41	N.D.	N.D.	N.D.
Ethyl Benzene	0.50	N.D.	N.D.	1.3	N.D.
Total Xylenes	0.50	46	0.91	0.51	N.D.
Chromatogram Pattern:		Gasoline	Unidentified Hydrocarbons >C9	Gasoline	--

Quality Control Data

Report Limit Multiplication Factor:	50	1.0	1.0	1.0
Date Analyzed:	12/13/95	12/13/95	12/13/95	12/13/95
Instrument Identification:	HP-5	HP-2	HP-2	HP-4
Surrogate Recovery, %: (QC Limits = 70-130%)	86	103	95	90

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

SEQUOIA ANALYTICAL, #1271

Kevin Van Slambrook
Project Manager

5120078.UUU <2>

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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USPCI / Laidlaw	Client Project ID:	U.P. Motor Freight (#96120-844)	Sampled: Nov 29, 1995
5665 Flatiron Pkwy.	Sample Matrix:	Water	Received: Nov 30, 1995
Boulder, CO 80301	Analysis Method:	EPA 3510/8015 Mod.	Reported: Dec 20, 1995
Attention: Denton Mauldin	First Sample #:	512-0078	

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 512-0078 APL-W2	Sample I.D. 512-0079 APL-W1	Sample I.D. 512-0080 APL-W11	Sample I.D. 512-0081 OKUS-W1	Sample I.D. 512-0082 OKUS-W2	Sample I.D. 512-0083 OKUS-W3
QC Batch Number:		SP120495 8015EXC	SP120495 8015EXC	SP120495 8015EXC	SP120495 8015EXC	SP120495 8015EXC	SP120495 8015EXC
Extractable Hydrocarbons	50	690	920	1100	480	5600	4500
Chromatogram Pattern:		Diesel & Unidentified Hydrocarbons >C16	Diesel & Unidentified Hydrocarbons >C16	Diesel & Unidentified Hydrocarbons >C16	Diesel & Unidentified Hydrocarbons >C16	Diesel & Unidentified Hydrocarbons <C15 and >C16	Diesel & Unidentified Hydrocarbons <C15 and >C16

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Extracted:	12/4/95	12/4/95	12/4/95	12/4/95	12/4/95	12/4/95
Date Analyzed:	12/6/95	12/6/95	12/6/95	12/6/95	12/6/95	12/6/95
Instrument Identification:	HP-3A	HP-3A	HP-3A	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, #1271

Kevin Van Slambrook
Project Manager

Sequoia Analytical

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USPCI / Laidlaw	Client Project ID:	U.P. Motor Freight (#96120-844)	Sampled: Nov 29, 1995
5665 Flatiron Pkwy.	Sample Matrix:	Water	Received: Nov 30, 1995
Boulder, CO 80301	Analysis Method:	EPA 3510/8015 Mod.	Reported: Dec 20, 1995
Attention: Denton Mauldin	First Sample #:	512-0084	

QC Batch Number: SP120495 8015EXC | SP120495 8015EXC | SP120495 8015EXC

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 512-0084 OKUS-W4	Sample I.D. 512-0085 OKUS-W8	Sample I.D. 512-0086 OKUS-W7
Extractable Hydrocarbons	50	3100	2400	1300
Chromatogram Pattern:		Diesel & Unidentified Hydrocarbons <C15 and >C16	Diesel & Unidentified Hydrocarbons >C16	Diesel & Unidentified Hydrocarbons >C16

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0
Date Extracted:	12/4/95	12/4/95	12/4/95
Date Analyzed:	12/6/95	12/6/95	12/6/95
Instrument Identification:	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, #1271

Kevin Van Slambrook
Project Manager

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Sequoia Analytical

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USPCI / Laidlaw	Client Project ID:	U.P. Motor Freight (#96120-844)	Sampled: Nov 29, 1995
5665 Flatiron Pkwy.	Sample Descript:	Water	Received: Nov 30, 1995
Boulder, CO 80301	Analysis for:	Arsenic	Digested: Dec 11, 1995
Attention: Denton Mauldin	First Sample #:	512-0078	Analyzed: Dec 13, 1995
			Reported: Dec 20, 1995

LABORATORY ANALYSIS FOR: Arsenic

Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L	QC Batch Number	Instrument ID
512-0078	APL-W2	0.0050	0.019	ME1211952000MDA	MV-2
512-0079	APL-W1	0.0050	0.018	ME1211952000MDA	MV-2
512-0080	APL-W11	0.0050	0.021	ME1211952000MDA	MV-2
512-0081	OKUS-W1	0.0050	N.D.	ME1211952000MDA	MV-2
512-0082	OKUS-W2	0.0050	0.049	ME1211952000MDA	MV-2
512-0083	OKUS-W3	0.0050	0.18	ME1211952000MDA	MV-2
512-0084	OKUS-W4	0.0050	0.14	ME1211952000MDA	MV-2
512-0085	OKUS-W8	0.0050	N.D.	ME1211952000MDA	MV-2
512-0086	OKUS-W7	0.0050	0.0095	ME1211952000MDA	MV-2

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Kevin Van Slambrook
Project Manager

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Sequoia Analytical

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USPCI / Laidlaw
5665 Flatiron Pkwy.
Boulder, CO 80301
Attention: Denton Mauldin

Client Project ID: U.P. Motor Freight (#96120-844)
Matrix: Liquid
QC Sample Group: 5120078-087

Reported: Dec 20, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel	Arsenic
QC Batch#:	GC121395	GC121395	GC121395	GC121395	SP120495	ME121195
	802002A	802002A	802002A	802002A	8015EXC	2000MDA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015	EPA 206.2
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 3510	EPA 200.0
Analyst:	N. Beaman	N. Beaman	N. Beaman	N. Beaman	J. Dinsay	T. Le
MS/MSD #:	5120039	5120039	5120039	5120039	BLK120495	5120078
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.	0.019 mg/L
Prepared Date:	12/13/95	12/13/95	12/13/95	12/13/95	12/4/95	12/11/95
Analyzed Date:	12/13/95	12/13/95	12/13/95	12/13/95	12/8/95	12/13/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	GCHP-3A	MV-2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L	0.10 mg/L
Result:	23	22	22	70	340	0.11
MS % Recovery:	115	110	110	117	113	91
Dup. Result:	22	22	24	70	320	0.11
MSD % Recov.:	110	110	120	117	107	91
RPD:	4.4	0.0	8.7	0.0	6.1	0.0
RPD Limit:	0-20	0-20	0-20	0-20	0-20	0-20

LCS #:	1LCS121395	1LCS121395	1LCS121395	1LCS121395	LCS120495	BLK121195
Prepared Date:	12/13/95	12/13/95	12/13/95	12/13/95	12/4/95	12/11/95
Analyzed Date:	12/13/95	12/13/95	12/13/95	12/13/95	12/8/95	12/13/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	GCHP-3A	MV-2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L	0.10 mg/L
LCS Result:	22	22	22	66	330	0.099
LCS % Recov.:	110	110	110	110	110	99

MS/MSD LCS Control Limits	71-133	72-128	72-130	71-120	38-122	75-125

SEQUOIA ANALYTICAL, #1271

Kevin Van Slambrook
Project Manager

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.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

Sequoia Analytical

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USPCI / Laidlaw
5665 Flatiron Pkwy.
Boulder, CO 80301
Attention: Denton Mauldin

Client Project ID: U.P. Motor Freight (#96120-844)
Matrix: Liquid
QC Sample Group: 5120078-087
Reported: Dec 20, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC121395 802005A	GC121395 802005A	GC121395 802005A	GC121395 802005A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	N. Beaman	N. Beaman	N. Beaman	N. Beaman
MS/MSD #:	5120179	5120179	5120179	5120179
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/13/95	12/13/95	12/13/95	12/13/95
Analyzed Date:	12/13/95	12/13/95	12/13/95	12/13/95
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Result:	18	18	18	56
MS % Recovery:	90	90	90	93
Dup. Result:	20	19	19	60
MSD % Recov.:	100	95	95	100
RPD:	11	5.4	5.4	6.9
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	3LCS121395	3LCS121395	3LCS121395	3LCS121395
Prepared Date:	12/13/95	12/13/95	12/13/95	12/13/95
Analyzed Date:	12/13/95	12/13/95	12/13/95	12/13/95
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
LCS Result:	16	17	17	52
LCS % Recov.:	80	85	85	87

MS/MSD LCS Control Limits	71-133	72-128	72-130	71-120

SEQUOIA ANALYTICAL, #1271

Kevin Van Slambrook
Project Manager

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.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

Sequoia Analytical

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USPCI / Laidlaw
5665 Flatiron Pkwy.
Boulder, CO 80301
Attention: Denton Mauldin

Client Project ID: U.P. Motor Freight (#96120-844)
Matrix: Liquid
QC Sample Group: 5120078-087
Reported: Dec 20, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC121395 802004A	GC121395 802004A	GC121395 802004A	GC121395 802004A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	N. Beaman	N. Beaman	N. Beaman	N. Beaman
MS/MSD #:	5120087	5120087	5120087	5120087
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/13/95	12/13/95	12/13/95	12/13/95
Analyzed Date:	12/13/95	12/13/95	12/13/95	12/13/95
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Result:	19	21	21	64
MS % Recovery:	95	105	105	107
Dup. Result:	20	20	21	62
MSD % Recov.:	100	100	105	103
RPD:	5.1	4.9	0.0	3.2
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	2LCS121395	2LCS121395	2LCS121395	2LCS121395
Prepared Date:	12/13/95	12/13/95	12/13/95	12/13/95
Analyzed Date:	12/13/95	12/13/95	12/13/95	12/13/95
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
LCS Result:	18	20	20	59
LCS % Recov.:	90	100	100	98

MS/MSD LCS Control Limits	71-133	72-128	72-130	71-120

SEQUOIA ANALYTICAL, #1271

Kevin Van Slambrook
Project Manager

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.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

SEQUOIA ANALYTICAL
CHAIN OF CUSTODY

☐ 680 Chesapeake Drive • Redwood City, CA 94063 • (415) 364-9600 FAX (415) 364-9233
☐ 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 FAX (916) 921-0100
☒ 404 N. Wiget Lane • Walnut Creek, CA 94598 • (510) 988-9600 FAX (510) 988-9673

Company Name: USPCI / Laidlaw	Project Name: U.P. Motor Freight Proj #96120-844
Address: 5665 Flatiron Pkwy	Billing Address (if different): —
City: Boulder State: CO Zip Code: 80301	
Telephone: (303) 938-5500 FAX #: 938-5590	P.O. #: 96120-844 (Will Call)
Report To: Denton Mauldin Sampler: Mark McCormick	QC Data: ☐ Level D (Standard) ☒ Level C ☐ Level B ☐ Level A

Turnaround Time: ☒ 10 Working Days ☐ 3 Working Days ☐ 2 - 8 Hours ☐ 7 Working Days ☐ 2 Working Days ☐ 5 Working Days ☐ 24 Hours

☐ Drinking Water ☐ Waste Water ☒ Other GW

Analyses Requested

#	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	8020 BTEX	MOD 8015 TPH-Diesel	MOD 8015 TPH-Gasoline	Arsenic EPA 7060	Comments
1	APL-W2	11/29/95 09:05	GW	3	VOA	5120078	X		X		Please bill as proj # 96120-844
2				1	1L Amber	A-E		X			
3				1	1L Plastic				X		Filtered in Field
4	APL-W1	11/29/95 10:00	GW	3	VOA	5120079	X		X		
5				1	1L Amber	A-E		X			
6				1	1L Plastic				X		Filtered in Field
7	APL-W11	11/29/95 10:15	GW	3	VOA	5120080	X		X		
8				1	1L Amber	A-E		X			
9				1	1L Plastic				X		Filtered in Field
10											

Relinquished By: Tim McCourt	Date: 11/30/95	Time:	Received By: Ralf Bandi	Date: 11/30/95	Time: 2:20
Relinquished By: Ralf Bandi	Date: 11/30/95	Time: 6:15	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab:	Date: 11/30/95	Time: 1815

Were Samples Received in Good Condition? ☐ Yes ☐ No Samples on Ice? ☐ Yes ☐ No Method of Shipment _____

Pink - Client
Yellow - Sequoia
White - Sequoia

SEQUOIA ANALYTICAL
CHAIN OF CUSTODY

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☒ 404 N. Wiget Lane • Walnut Creek, CA 94598 • (510) 988-9600 FAX (510) 988-9673

Company Name: USPCI / Laidaw	Project Name: U.P. Motor Freight; Proj #96120-844
Address: 5665 Flatiron Pkwy	Billing Address (if different): —
City: Boulder State: CO Zip Code: 80301	
Telephone: (303) 938-5500 FAX #: 938-5590	P.O. #: 96120-844 (Will Call)
Report To: Denton Mauldin Sampler: Mark McCormick	QC Data: ❑ Level D (Standard) ☒ Level C ❑ Level B ❑ Level A

Turnaround Time: ☒ 10 Working Days ❑ 3 Working Days ❑ 2 - 8 Hours ❑ 7 Working Days ❑ 2 Working Days ❑ 5 Working Days ❑ 24 Hours

❑ Drinking Water ❑ Waste Water ☒ Other GW

Analyses Requested: 8020 BTEX; MOD 8015 TPH-Gasoline; MOD 8015 TPH-Diesel; Arsenic

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	8020 BTEX	MOD 8015 TPH-Gasoline	MOD 8015 TPH-Diesel	Arsenic	Comments
1.	OKUS-W1	11/29/95 12:30	GW	3	VOA	5120081	X	X			Please bill as proj #
2.				1	1L Amber	A-E			X		96120-844
3.				1	1L Plastic	↓				X	Filtered in Field
4.	OKUS-W2	13:15		3	VOA	5120082	X	X			
5.				1	1L Amber	A-E			X		
6.				1	1L Plastic	↓				X	Filtered in Field
7.	OKUS-W3	14:10		3	VOA	5120083	X	X			
8.				1	1L Amber	A-E			X		
9.				1	1L Plastic	↓				X	Filtered in Field
10.											

Relinquished By: [signature]	Date: 11/30/95	Time:	Received By: [signature] Date: 11/30/95 Time: 2:20 pm
Relinquished By: Kaff Bonelli	Date: 11/30/95	Time: 6:15	Received By: Date: Time:
Relinquished By:	Date:	Time:	Received By Lab: [signature] Date: 11/30/95 Time: 1815

Were Samples Received in Good Condition? ❑ Yes ❑ No Samples on Ice? ❑ Yes ❑ No Method of Shipment _____

Pink - Client
Yellow - Sequoia
White - Sequoia

SEQUOIA ANALYTICAL
CHAIN OF CUSTODY

☐ 680 Chesapeake Drive • Redwood City, CA 94063 • (415) 364-9600 FAX (415) 364-9233
☐ 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 FAX (916) 921-0100
☒ 404 N. Wiget Lane • Walnut Creek, CA 94598 • (510) 988-9600 FAX (510) 988-9673

Company Name: USPCI/Laidlaw	Project Name: U.P. Motor Freight; Proj # 96120-844
Address: 5665 Flatiron Pkwy	Billing Address (if different): —
City: Boulder State: CO Zip Code: 80301	
Telephone: (303) 938-5500 FAX #: 938-5590	P.O. #: 96120-844 (Will Call)
Report To: Denton Mauldin Sampler: Mark McCormick	QC Data: ☐ Level D (Standard) ☒ Level C ☐ Level B ☐ Level A

Turnaround Time: ☒ 10 Working Days ☐ 3 Working Days ☐ 2 - 8 Hours ☐ 7 Working Days ☐ 2 Working Days ☐ 5 Working Days ☐ 24 Hours

☐ Drinking Water ☐ Waste Water ☒ Other GW

Analyses Requested: BOZO BTEX; MOD 8015 TPH-Gasoline; MOD 8015 TPH-Diesel; Arsenic EPA 7060

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	BOZO BTEX	MOD 8015 TPH-Gasoline	MOD 8015 TPH-Diesel	Arsenic EPA 7060	Comments
1. OKUS-W4	11/29/95 15:00	GW	3	VOA	5120084	X	X			Please bill as proj # 96120-844
2.			1	1L Amber	A-E			X		
3.			1	1L Plastic					X	Filtered in Field
4. OKUS-W8	15:55		3	VOA	5120085	X	X			
5.			1	1L Amber	A-E			X		
6.			1	1L Plastic					X	Filtered in Field
7. OKUS-W7	16:40		6	VOA	5120086	X	X			Run MS/MSD
8.			2	1L Amber	A-I			X		
9.			1	1L Plastic					X	Filtered in Field
10. Trip Blank	—	—	1	VOA	5120087	X				

Relinquished By:	Date: 11/30/95	Time:	Received By:	Date: 11/30/95	Time: 2:20 pm
Relinquished By:	Date: 11/30/95	Time: 6:15	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab:	Date: 11/30/95	Time: 1815

Were Samples Received in Good Condition? ☐ Yes ☐ No Samples on Ice? ☐ Yes ☐ No Method of Shipment_____

Pink - Client
Yellow - Sequoia
White - Sequoia