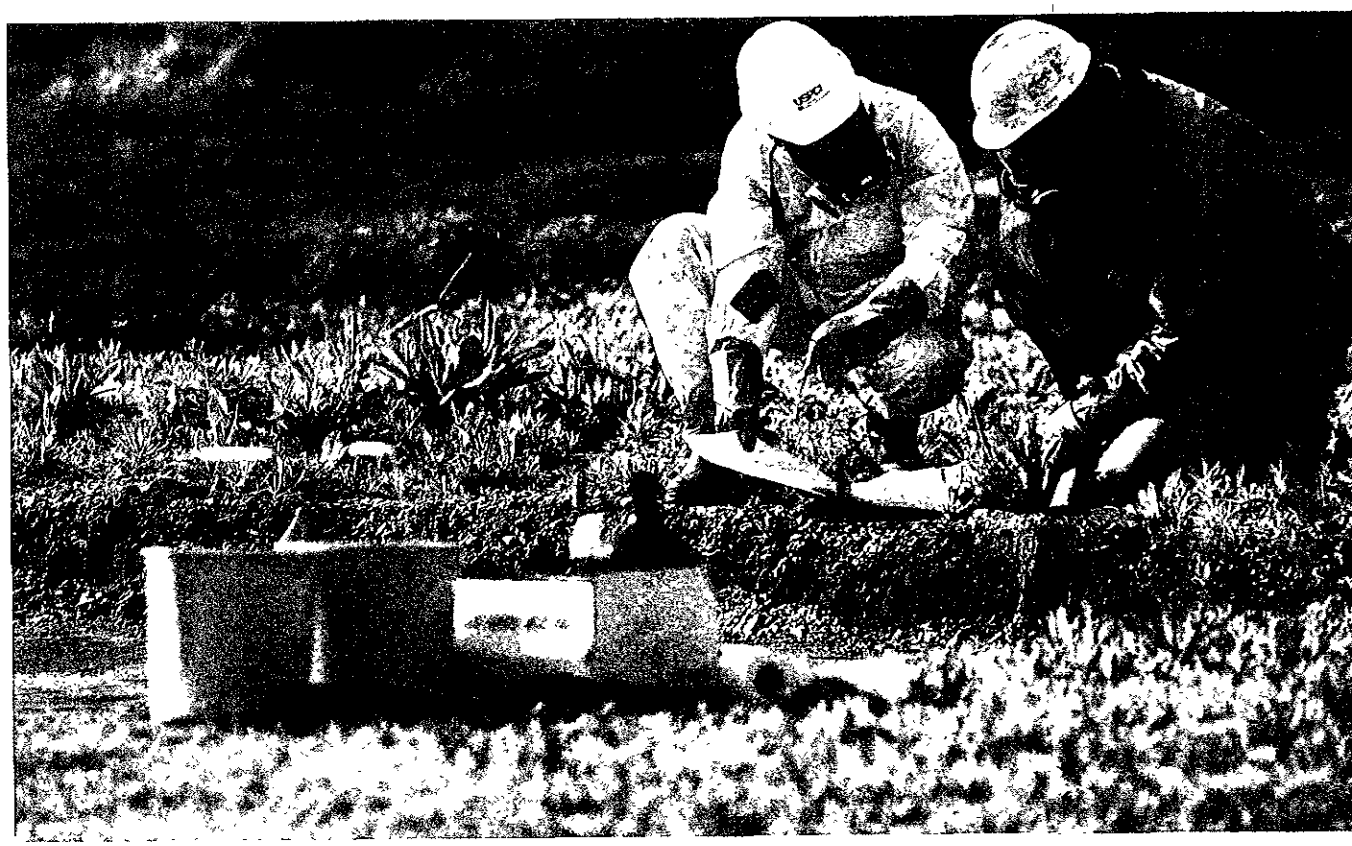

Underground Storage Tank Closure Report Union Pacific Railroad Yard Oakland, California

February 25, 1994

UNDERGROUND STORAGE TANK CLOSURE REPORT UNION PACIFIC RAILROAD COMPANY OAKLAND, CALIFORNIA

UNION PACIFIC TOFC YARD 1717 MIDDLE HARBOR ROAD OAKLAND, CALIFORNIA 94607

PREPARED FOR:
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UNDERGROUND STORAGE TANK CLOSURE REPORT FOR THE UNION PACIFIC RAILROAD PROPERTY LOCATED AT 1717 MIDDLE HARBOR ROAD IN OAKLAND, CALIFORNIA

1. INTRODUCTION

This report presents the results of the Underground Storage Tank (UST) Closure Investigation that was performed by USPCI from May 10, 1993 through May 21, 1993 at the Union Pacific Railyard located at 1717 Middle Harbor Road in Oakland, California.

1.1 SITE DESCRIPTION

The subject site is a Union Pacific Railyard located in an industrial area in Oakland, California. UPRR operations at this facility consist of loading and unloading over-the-road trailers on flat cars for rail transport. The facility also includes a former re-fueling area for diesel locomotives. The site is bound on the south and the west by the Oakland Estuary and on the north by the Navy Supply Center (See Figure 1).

Prior to the tank removal described in this report, UPRR maintained one 12,000 gallon, single-walled, fiberglass, waste oil underground storage tank at the site. The waste oil tank was located immediately adjacent to an oil/water separator, near the former locomotive fueling facility in the central portion of the railyard (Figure 2).

1.2 SITE HISTORY

In March, 1991, USPCI conducted a subsurface investigation in the Oakland, TOFC Yard, to investigate the presence of free-product (diesel) on the surface of the shallow groundwater at the site. The investigation concentrated on the area of the former fueling facility, including the location of the waste oil UST. The results of the USPCI investigation and a conceptual design of a hydrocarbon recovery and treatment system are presented in the report, **"Hydrocarbon Investigation and Remedial Design"**, dated June 10, 1991.

In October, 1991, USPCI began construction of the groundwater recovery and treatment system designed to capture diesel product and control the groundwater gradient to reduce contaminant migration. The active system is currently in operation at the site and includes three recovery well locations. The recovery wells are located in the center of the diesel plume, and each well is equipped with a total fluids pump. The pumps discharge to an oil/water separator that includes activated carbon canisters. The recovered water is treated and discharged to the East Bay Municipal Utility District (EBMUD) sanitary sewer under permit # 502-51231.

During the operating period of March 3 to June 10, 1993, the groundwater recovery and treatment system had recovered approximately 400 gallons of diesel product and treated 197,000 gallons of groundwater. Since start-up on May 12, 1992 until June 10, 1993, the system had recovered approximately 1,900 gallons of diesel product. The above information is presented in greater detail in the **"Quarterly Monitoring Report, Hydrocarbon Recovery System, Union Pacific Railroad Yard, Oakland, California, Second Quarter, 1993"** dated June 28, 1993. The recovery system design was presented in the, **"Preliminary Design Report"** dated September 5, 1991. As-built information for the groundwater recovery system is presented in the **"Hydrocarbon Recovery System, As-Built Construction Report"** dated July 20, 1992.

1.3 Site Geology

The stratigraphy underlying the site consists of a surface fill cap of variable thickness and composition, overlying a sequence of naturally deposited bay sediments. The cap generally consists of concrete or asphalt with a sandy sub-grade fill (1 to 3.5 ft. thick), or railroad ballast with a clastic sub-grade fill (2.5 to 4.5 ft. thick). In some areas an additional fill layer can be distinguished between the surfacial fill and the natural sediments by the presence of brick fragments and metal debris (2.5 to 5 ft.).
The natural bay sediments underlying the surface fill are laterally continuous and fairly homogeneous. Layers of different lithology are distinguished on the basis of silt content and degree of sorting. Lithologies range from silty sand of variable grain size to fairly clean sand of a uniform grain size. These sands extend from the fill contact (4 to 5 ft. BGS) to a depth of greater than 15 feet BGS. This uppermost unit of the natural bay sediments is completely saturated with groundwater.

1.4 Site Hydrogeology

Groundwater is typically encountered at the site at depths ranging from 3 to 7 feet below ground surface (BGS). Groundwater appears to be unconfined, with little difference in the depths at which water was encountered during the tank excavation and the static water levels recorded in the surrounding monitor wells. Groundwater was observed at or below the contact between the poorly sorted sandy bay material and the fill or asphalt sub-grade. The local groundwater gradient dips gently south towards the estuary. Groundwater depths and elevations measured in the site monitor wells is presented in Table 1. A groundwater potentiometric surface map that is based on the measured elevations is presented in Figure 3.

The UPRR Oakland Railyard is immediately adjacent to the Oakland Estuary, which is located in the northern portion of the San Francisco Bay. The close proximity of the Estuary to the site suggests a direct hydraulic connection between the Estuary and the groundwater underlying the site. Groundwater records maintained at the site since 1991 indicate that direct tidal influences are only detectable in monitor wells with close proximity to the Bay (< 100 feet).

2. UNDERGROUND STORAGE TANK CLOSURE PROGRAM

Diesel fuel from the above ground storage tanks, and waste oil from the UST was removed from the site on May 11, 1993 (Manifest number 90835048). Groundwater with some waste oil (diesel) collected from the tank excavation pit was removed from the site on May 13, 1993 (Manifest number 90834547). The 12,000 gallon waste oil UST was removed from the site on May 13, 1993 (Manifest number 84117796). Hydrocarbon contaminated soil generated during the UST excavation was removed from site on June 21, 1993 (Manifest number 90835025). The following field and laboratory activities were performed as a part of the tank closure.

2.1 Tank Removal Procedures

Prior to initiating tank removal activities, USPCI collected a sample of the waste oil tank contents and submitted the sample to Sequoia Analytical Laboratory on April 1, 1993. Observations made by USPCI personnel during sample collection indicated that the tank contents consisted of waste oil and water. The laboratory results indicated that the tank contents was RCRA Non-Hazardous, as no RCRA regulated substances were detected above Hazardous Characteristic Levels (HCLs). The results of the initial tank samples are presented in Table 2 and the laboratory data sheets are presented in Appendix A.

On May 6, 1993, USPCI submitted by FAX the "Tank Removal/ Contaminated Soil Excavation Notification Form" to the Bay Area Air Quality Management District. On May 11, 1993, USPCI began the excavation and removal of the 12,000 gallon, single-walled, fiberglass, waste oil tank. The tank appeared to be in good condition with no visible holes or cracks. The tank was inspected by USPCI and Alameda County, Department of Environmental Health personnel and transported to Erickson, Inc. in Richland, Ca. The Uniform Hazardous Waste Manifest for the tank contents, the tank disposal, and the groundwater removed from the tank excavation are presented in Appendix B. The Notification Form for tank removal that was presented by USPCI to the Bay Area Air Quality Management District is presented in Appendix C.

2.2 Soil Excavation and Storage

USPCI personnel completed the tank removal and soil excavation on May 13, 1993. At this time approximately 40 tons of soil was removed from the tank excavation and temporarily stockpiled on top of visqueen near the tank location. Further over excavation at the site was not performed due to the proximity of above and below ground structures and utilities, and the occurrence of free diesel fuel on the shallow groundwater surface (currently an active groundwater remediation system is operating in the immediate vicinity of the tank excavation). The tank removal and soil excavation was witnessed by Ms. Jennifer Eberle of the Alameda County Environmental Health Department.

USPCI transferred the stockpiled soil to a UPRR 100 ton gondola (rail car) on May 17, 1993. The stockpiled soils remained in the railcar prior to proper removal and off-site disposal.

Approximately 175 tons of clean fill material (sand and crushed rock) was imported from off-site and used to backfill the tank excavation.

2.3 Soil Disposal

Soil removed from the tank excavation was transported by rail car to the East Carbon Development Company, (USPCI disposal facility) in Columbia Junction, Utah. Laboratory analyses of the soil confirmed that the TPH contaminated soil was Non-RCRA hazardous waste. The soil was transported from site on June 21, 1993, under Uniformed Hazardous Waste Manifest, Document Number 90835025. A copy of the Manifest is presented in Appendix B.

2.4 Soil Sampling

Two soil samples were collected from the tank excavation sidewalls on May 13, 1993. The sample locations and sampling procedures were specified and witnessed by Ms. Jennifer Eberle of the Alameda County Environmental Health Department. During sample collection visible soil discoloration and a strong hydrocarbon was reported from both sample locations.

The soil samples were collected from the tank excavation by a geologist with Environmental Science and Engineering (ES&E). The soil sampling procedure notes and the chain of custody records are presented in Appendix D. The samples were delivered to the laboratory on May 13, 1993.

2.5 Chemical Analyses of Waste Oil and Excavation Soils

The waste oil sample collected by USPCI on April 1, 1993, and the tank excavation soil samples collected by Environmental Science and Engineering (ES&E) on May 5, 1993, were analyzed by Sequoia Analytical Laboratory in Concord, Ca.

The waste oil sample collected by USPCI was analyzed for: Volatile Organics (EPA 8240); Semi-Volatile Organics (8270); RCRA Metals;

The analytical results of the waste oil tank sample are displayed on Table 2, and the laboratory data sheets are presented in Appendix A.

The soil samples collected by ES&E were analyzed for: Total Purgeable Petroleum Hydrocarbons with BTEX Distinction (EPA 5030/8015/8020); Total Extractable Petroleum Hydrocarbons (EPA 3550/8015); Total Recoverable Petroleum Hydrocarbons (SM5520 E&F, gravimetric); Halogenated Volatile Organics

(EPA 8010), Semi-Volatile Organics (EPA 8270); and 5 selected Metals (by Atomic Absorption). The analytical results of the tank excavation soil samples are displayed on Table 3, and the laboratory data sheets are presented in Appendix A.

2.6 On-site Hydrocarbon Contamination

Laboratory analyses of the soil samples collected by ES&E from the tank excavation pit confirmed the presence of diesel fuel in the underlying shallow soil. Total Purgeable Petroleum Hydrocarbons (TPH) with BTEX Distinction (EPA 5030/8015/8020) analyses indicated a high TPH concentration (1,300 mg/kg) with no reportable levels of benzene or toluene and low levels of ethylbenzene and xylenes (See Table 3). This occurrence of high TPH in soil with low reported BTEX is commonly associated with diesel fuel contamination. Further analyses of the soil for RCRA analytes confirmed that the TPH contaminated soil was Non-RCRA hazardous. However, all soil excavated during the tank removal was disposed of under Uniformed Hazardous Waste Manifest (Document Number 90835025, Appendix B).

Free-phase hydrocarbon (diesel fuel) was encountered in the shallow subsurface soils during the tank excavation. Contamination in the area of the tank is the result of previous locomotive fueling operations, as described in the June 10, 1991 USPCI "Hydrocarbon Investigation and Remedial Design" Report. An active free-product recovery system is currently in operation in the immediate vicinity of the former tank location. The productivity of the active recovery system is documented quarterly in the "Quarterly Monitoring Report, Hydrocarbon Recovery System, Union Pacific Railroad Yard, Oakland, California" reports. Since system start-up, quarterly reports have been prepared by USPCI and submitted to the Union Pacific Railroad with a recommendation to be forwarded to the East Bay Municipal Utility District (EBMUD, Attn: Mr. Safa Toma) and to the California Regional Water Quality Control Board, San Francisco Bay Region (Attn: Mr. Ray Balcom), and the County of Alameda Department of Health Services. The recovery system operates under EBMUD permit number 502-51231, and has maintained continuous operation since the start-up on May 12, 1992. There is no evidence to indicate that an unauthorized leak occurred during the operation of the underground waste oil tank. Upon removal, the waste oil tank was found to be intact and there was no underground piping associated with this tank. Photographs that display the waste oil tank and site conditions during removal activities are displayed in Appendix E.

who?

3. CONCLUSIONS

On May 13, 1993 USPCI removed a 12,000 gallon fiberglass waste oil tank from an area immediately adjacent to the former locomotive fueling area. The conclusions of the previous USPCI site activities and the underground storage tank closure and removal are presented below.

- Upon removal, the waste oil tank was found to be intact and there was no underground piping associated with this tank.

- Four items were removed from site under Hazardous Waste Manifest as part of the tank closure. The four items include: diesel fuel from the above ground storage tanks, and waste oil from the UST; groundwater with some diesel fuel collected from the tank excavation pit; the 12,000 gallon waste oil UST; and, hydrocarbon stained soil excavated during tank removal.

- Contamination in the area of the tank is the result of previous locomotive fueling operations.

- An active groundwater remediation system is currently operating in the immediate vicinity of the former UST site. As of 5/93 the remediation system has processed 755,900 gallons of groundwater and recovered over 1,900 gallons of free phase hydrocarbon (diesel fuel).

- The site continues to be controlled by the effects of the active groundwater remediation system and does not pose a threat to human health or the surrounding environment. how was this ascertained?

- The medium to coarse grained soils at the site may allow substantial reductions in TPH concentrations as the groundwater remediation system removes a number of pore volumes.

4. RECOMMENDATIONS

The Union Pacific Railroad, with the current assistance of USPCI, will continue to operate the active groundwater remediation system in the vicinity of the former UST location. A continuing program is in place to evaluate the impact of the remediation system on groundwater quality and hydrocarbon concentration in soils. Modifications to the groundwater remediation system will be made if necessary to enhance performance. After the remediation system has reduced the free product (diesel) plume, the groundwater restoration trends will be evaluated to determine if bio-stimulation or other in-situ enhancement technologies are appropriate for implementation.

Based on the enclosed site information and history, USPCI recommends that the tank site receive closure and no further remedial action be required.

TABLES

TABLE 1

Well Gauging Data
Union Pacific Railyard
Oakland TOFC

Well No.	Date	Well Head Elevation Above M.S.L. (ft)	Depth to Product (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Product Thickness (ft)	Corrected Water Level Elevation* (ft)
OMW-1	04/09/91	8.79		5.54	3.25		3.25
	06/19/91			6.89	1.90		1.90
	05/11/92			6.34	2.45		2.45
	06/09/92			6.91	1.88		1.88
	07/07/92			7.21	1.58		1.58
	08/11/92			7.55	1.24		1.24
	09/04/92			7.82	0.97		0.97
	10/13/92			7.96	0.83		0.83
	11/12/92			7.64	1.15		1.15
	12/17/92			6.64	2.15		2.15
	03/18/93			5.98	2.81		2.81
	05/14/93			6.39	2.40		2.40
OMW-2	04/09/91	5.88		2.10	3.78		3.78
	06/19/91			3.59	2.29		2.29
	05/11/92			3.22	2.66		2.66
	06/09/92			3.97	1.91		1.91
	07/07/92			4.21	1.67		1.67
	08/11/92			4.46	1.42		1.42
	09/04/92			4.77	1.11		1.11
	10/13/92			4.96	0.92		0.92
	11/12/92			4.08	1.80		1.80
	12/17/92			1.70	4.18		4.18
	03/18/93			1.94	3.94		3.94
	05/14/93			3.29	2.59		2.59
OMW-3	04/09/91	7.16		3.93	3.23		3.23
	06/19/91			5.33	1.83		1.83
	05/11/92			5.92	1.24		1.24
	06/09/92			5.48	1.68		1.68
	07/07/92			5.78	1.38		1.38
	08/11/92			6.09	1.07		1.07
	09/04/92			6.33	0.83		0.83
	10/13/92			6.55	0.61		0.61
	11/12/92			6.16	1.00		1.00
	12/17/92			5.15	2.01		2.01
	03/18/93			2.58	4.58		4.58
	05/14/93			4.91	2.25		2.25
OMW-4	04/09/91	7.41	3.79	6.23	1.18	2.44	3.23
	06/19/91		4.44	8.68	-1.27	4.24	2.29
	05/11/92						not available
	06/09/92		5.88	9.81	-2.40	3.93	0.90
	07/07/92		6.00	9.88	-2.47	3.88	0.79
	08/11/92		6.13	8.23	-0.82	2.10	0.94
	09/04/92		6.78	8.37	-0.96	1.59	0.38
	10/13/92**			6.58	0.83		0.83
	11/12/92		5.74	7.33	0.08	1.59	1.42
	12/17/92		5.77	7.28	0.13	1.51	1.40
	03/18/93		3.82	5.73	1.68	1.91	3.28
	05/14/93		5.76	8.45	-1.04	2.69	1.22
OMW-5	04/09/91	7.62		4.64	2.98		2.98
	06/19/91			5.35	2.27		2.27
	05/11/92			5.18	2.44		2.44
	06/09/92			5.85	1.77		1.77
	07/07/92			6.02	1.60		1.60
	08/11/92			6.18	1.44		1.44

TABLE 1

Well Gauging Data
Union Pacific Railyard
Oakland TOFC

Well No.	Date	Well Head Elevation Above M.S.L. (ft)	Depth to Product (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Product Thickness (ft)	Corrected Water Level Elevation* (ft)
OMW-5	09/04/92			6.59	1.03		1.03
	10/13/92			6.54	1.08		1.08
	11/12/92			6.23	1.39		1.39
	12/17/92			5.23	2.39		2.39
	03/18/93			3.33	4.29		4.29
	05/14/93			5.06	2.56		2.56
OMW-6	04/09/91	5.78		7.60	-1.82		-1.82
	06/19/91			6.98	-1.20		-1.20
	05/11/92			7.41	-1.63		-1.63
	06/09/92			7.18	-1.40		-1.40
	07/07/92			6.61	-0.83		-0.83
	08/11/92			7.14	-1.36		-1.36
	09/04/92			6.58	-0.80		-0.80
	10/13/92**			6.16	-0.38		-0.38
	11/12/92			6.91	-1.13		-1.13
	12/17/92			6.16	-0.38		-0.38
	03/18/93			7.31	-1.53		-1.53
	05/14/93			6.59	-0.81		-0.81
OMW-7	04/09/91	7.03	3.26	7.48	-0.45	4.22	3.09
	06/19/91		4.13	7.66	-0.63	3.53	2.34
	05/11/92		3.70	7.32	-0.29	3.62	2.75
	06/09/92		5.79	7.78	-0.75	1.99	0.92
	07/07/92		5.98	7.88	-0.85	1.90	0.75
	08/11/92		6.01	9.22	-2.19	3.21	0.51
	09/04/92		6.53	8.92	-1.89	2.39	0.12
	10/13/92		5.97	8.00	-0.97	2.03	0.74
	11/12/92		5.29	8.69	-1.66	3.40	1.20
	12/17/92		5.60	8.66	-1.63	3.06	0.94
	03/18/93		3.93	7.97	-0.94	4.04	2.45
	05/14/93		5.34	8.21	-1.18	2.87	1.23
OMW-8	04/09/91	7.52		4.25	3.27		3.27
	06/19/91			5.27	2.25		2.25
	05/11/92			5.05	2.47		2.47
	06/09/92			6.25	1.27		1.27
	07/07/92			6.33	1.19		1.19
	08/11/92			6.48	1.04		1.04
	09/04/92			7.00	0.52		0.52
	10/13/92			6.23	1.29		1.29
	11/12/92			6.34	1.18		1.18
	12/17/92			6.10	1.42		1.42
	03/18/93			4.51	3.01		3.01
	05/14/93			5.78	1.74		1.74
OMW-9	05/11/92	6.64	3.41	7.65	-1.01	4.24	2.55
	06/09/92		5.09	8.17	-1.53	3.08	1.06
	07/07/92		5.28	8.42	-1.78	3.14	0.86
	08/11/92		5.29	9.45	-2.81	4.16	0.68
	09/04/92		5.70	9.56	-2.92	3.86	0.32
	10/13/92		5.70	6.88	-0.24	1.18	0.75
	11/12/92		5.23	6.44	0.20	1.21	1.22
	12/17/92		5.08	6.40	0.24	1.32	1.35
	03/18/93		3.01	6.69	-0.05	3.68	3.04
	05/14/93		4.38	10.37	-3.73	5.99	1.30

TABLE 1

Well Gauging Data
Union Pacific Railyard
Oakland TOFC

Well No.	Date	Well Head Elevation Above M.S.L. (ft)	Depth to Product (ft)	Depth to Water (ft)	Water Level Elevation (ft)	Product Thickness (ft)	Corrected Water Level Elevation* (ft)
OMW-10	05/11/92	7.56		4.76	2.80		2.80
	06/09/92			5.42	2.14		2.14
	07/07/92			5.58	1.98		1.98
	08/11/92			5.83	1.73		1.73
	09/04/92			6.18	1.38		1.38
	10/13/92**			5.30	2.26		2.26
	11/12/92			5.41	2.15		2.15
	12/17/92			4.20	3.36		3.36
	03/18/93		3.93	4.00	3.56	0.07	3.62
	05/14/93		4.83	4.92	2.64	0.09	2.72
ORW-1	06/19/91	6.59	3.91	9.36	-2.77	5.45	1.81
	05/11/92		NOT GAUGED				
	06/09/92		NOT GAUGED				
	07/07/92		NOT GAUGED				
	08/11/92			8.39	-1.80		-1.80
	09/04/92			8.35	-1.76		-1.76
	10/13/92		6.95	8.15	-1.56	1.20	-0.55
	11/12/92		NOT GAUGED				
	12/17/92		8.30	8.35	-1.76	0.05	-1.72
	03/18/93		3.60	7.39	-0.80	3.79	2.38
	05/14/93			8.63	-2.04		-2.04
ORW-2	06/19/91	6.79	4.36	4.38	2.41	0.02	2.43
	05/11/92		3.55	6.34	0.45	2.79	2.79
	06/09/92		NOT GAUGED				
	07/07/92		NOT GAUGED				
	08/11/92			9.30	-2.51		-2.51
	09/04/92			9.31	-2.52		-2.52
	10/13/92		8.20	9.20	-2.41	1.00	-1.57
	11/12/92		NOT GAUGED				
	12/17/92			9.45	-2.66		-2.66
	03/18/93		2.94	7.48	-0.69	4.54	3.12
	05/14/93			8.21	-1.42		-1.42
ORW-3	06/19/91	6.30	4.07	4.10	2.20	0.03	2.23
	05/11/92		3.24	5.31	0.99	2.07	2.73
	06/09/92		NOT GAUGED				
	07/07/92		NOT GAUGED				
	08/11/92			8.90	-2.60		-2.60
	09/04/92			8.75	-2.45		-2.45
	10/13/92			8.59	-2.29		-2.29
	11/12/92		NOT GAUGED				
	12/17/92			8.35	-2.05		-2.05
	03/18/93		2.90	5.71	0.59	2.81	2.95
	05/14/93			8.16	-1.86		-1.86

* Corrected water level elevation assumes product density of 0.84 g/cm3
M.S.L. = Mean Sea Level
** Guaging data for these may have been switched.

TABLE 2

WASTE OIL TANK SAMPLE
VOLATILE ORGANICS IN WASTE OIL

EPA METHOD 8240

WASTE OIL SAMPLE	ANALYTE	CONCENTRATION (µg/kg) L
4-1-93	benzene?	was ND
WASTE OIL	Ethylbenzene	25,000 ppb
	Toluene	8,400
	Total Xylenes	170,000

See laboratory data sheets for specific detection limits and total list of analytes
Note: analytes not listed were reported below laboratory detection limitations

TABLE 2

WASTE OIL TANK SAMPLE
INORGANIC PERSISTANT AND BIOACCUMULATIVE TOXIC SUBSTANCES

4-1-93

ANALYTE	SOLUBLE THRESHOLD LIMIT CONC. mg/L	TOTAL THRESHOLD LIMIT CONC. mg/kg
Copper	25	2,500
Vanadium	24	2,400
Zink	250	5,000

TTLCs result? mg/kg
2.6
2.5
6.3

See laboratory data sheets for specific detection limits and total list of analytes
Note: analytes not listed were reported below laboratory detection limitations

TABLE 2

WASTE OIL TANK SAMPLE
POLYCHLORINATED BIPHENYLS
EPA METHOD 8080

WASTE OIL SAMPLE	ANALYTE	CONCENTRATION mg/kg
WASTE OIL 4-1-93	PCB PCB 1016 PCB 1221 PCB 1232 PCB 1242 PCB 1248 PCB 1254 PCB 1260	 ND ND ND ND ND ND ND

Laboratory detection limitation of 1.0 mg/kg

TABLE 3

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

SOIL SAMPLE NO.	EXTRACTABLE HYDROCARBONS mg/kg
WEST	120
EAST	21,000

see laboratory data sheets for specific detection limitations

TABLE 3

SEMIVOLATILE ORGANICS IN SOIL

EPA METHOD 8270

SOIL SAMPLE NO.	ANALYTE	CONCENTRATION (µg/kg)
WEST	Benzo(g,h,i)perylene	100
	Fluorene	120
	2-Methylnapthalene	310
	Phenanthrene	280
	Pyrene	190
EAST	Dibenzofuran	6,500
	Fluorene	15,000
	2-Methylnapthalene	92,000
	Naphthalene	20,000
	Phenanthrene	30,000

5-13-93

See laboratory data sheets for specific detection limits

8010 was ND for East + West

TABLE 3

TOTAL METALS IN SOIL

5-13-93

SOIL SAMPLE NO.	ANALYTE	SAMPLE RESULTS (mg/kg)
WEST	Cadmium	1.1
	Chromium	39
	Lead	7.2
	Nickel	48
	Zinc	34
EAST	Cadmium	0.75
	Chromium	28
	Lead	9.5
	Nickel	25
	Zinc	26

See laboratory data sheets for specific detection limits

TABLE 3

TOTAL RECOVERABLE PETROLEUM OIL IN SOIL

5-13-93

SOIL SAMPLE NO.	OIL AND GREASE (mg/kg)
WEST	500
EAST	25,000

see laboratory data sheets for specific detection limits

TABLE 3

TOTAL PURGEABLE PETROLEUM HYDROCARBONS WITH BTEX DISTINCTION

SOIL SAMPLE NO.	ANALYTE	SAMPLE RESULTS (mg/kg)
WEST	Purgeable Hydrocarbons	8.8
	Benzene	ND
	Toluene	ND
	Ethyl Benzene	0.011
	Total Xylenes	0.066
EAST	Purgeable Hydrocarbons	1,300
	Benzene	ND
	Toluene	ND
	Ethyl Benzene	2.0
	Total Xylenes	11

see laboratory data sheets for specific detection limits

FIGURES

Figure 1 - Site Location Map

Figure 2 - Tank Location Map

Figure 3 - Groundwater Potentiometric Surface

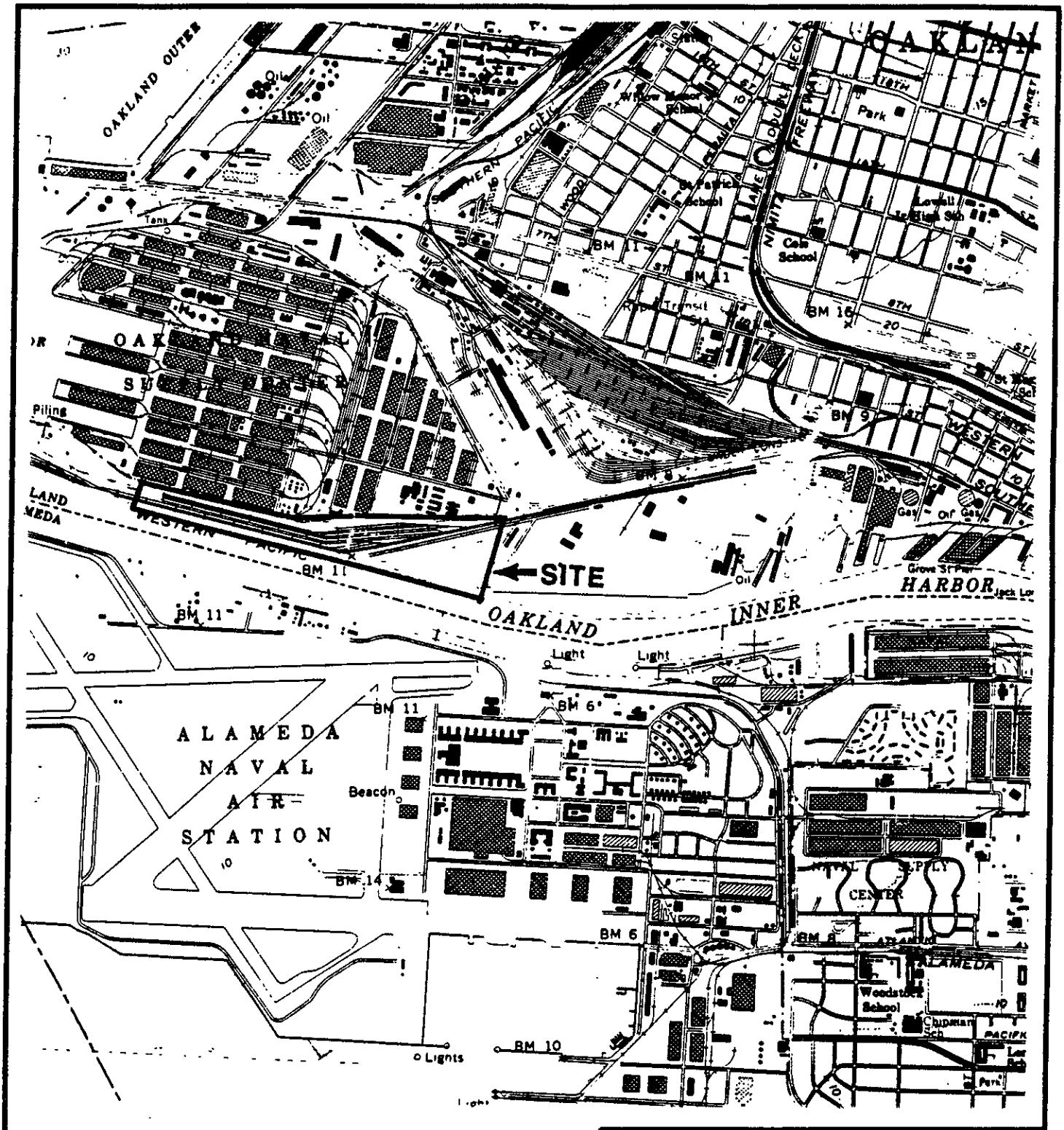


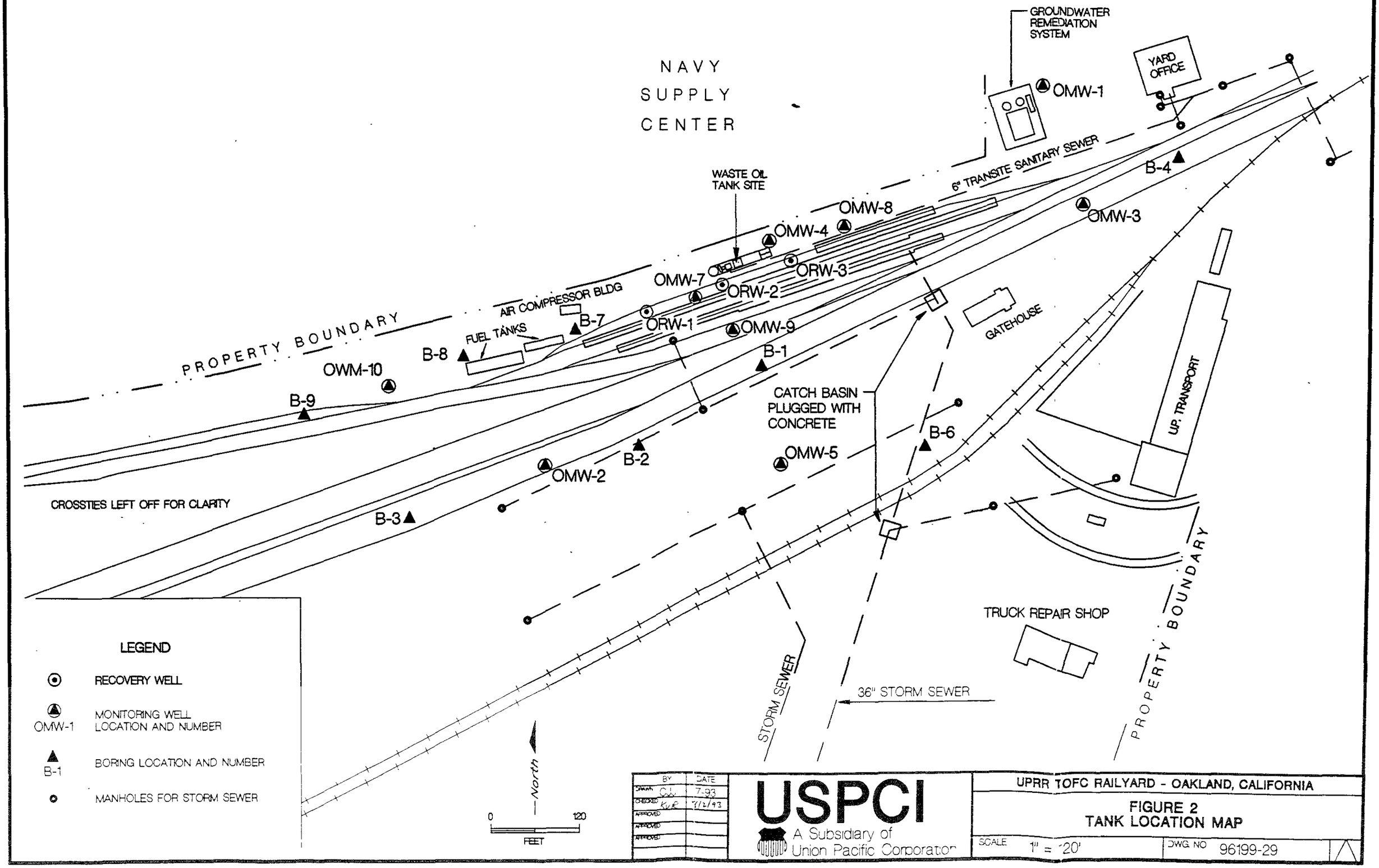
FIGURE 1

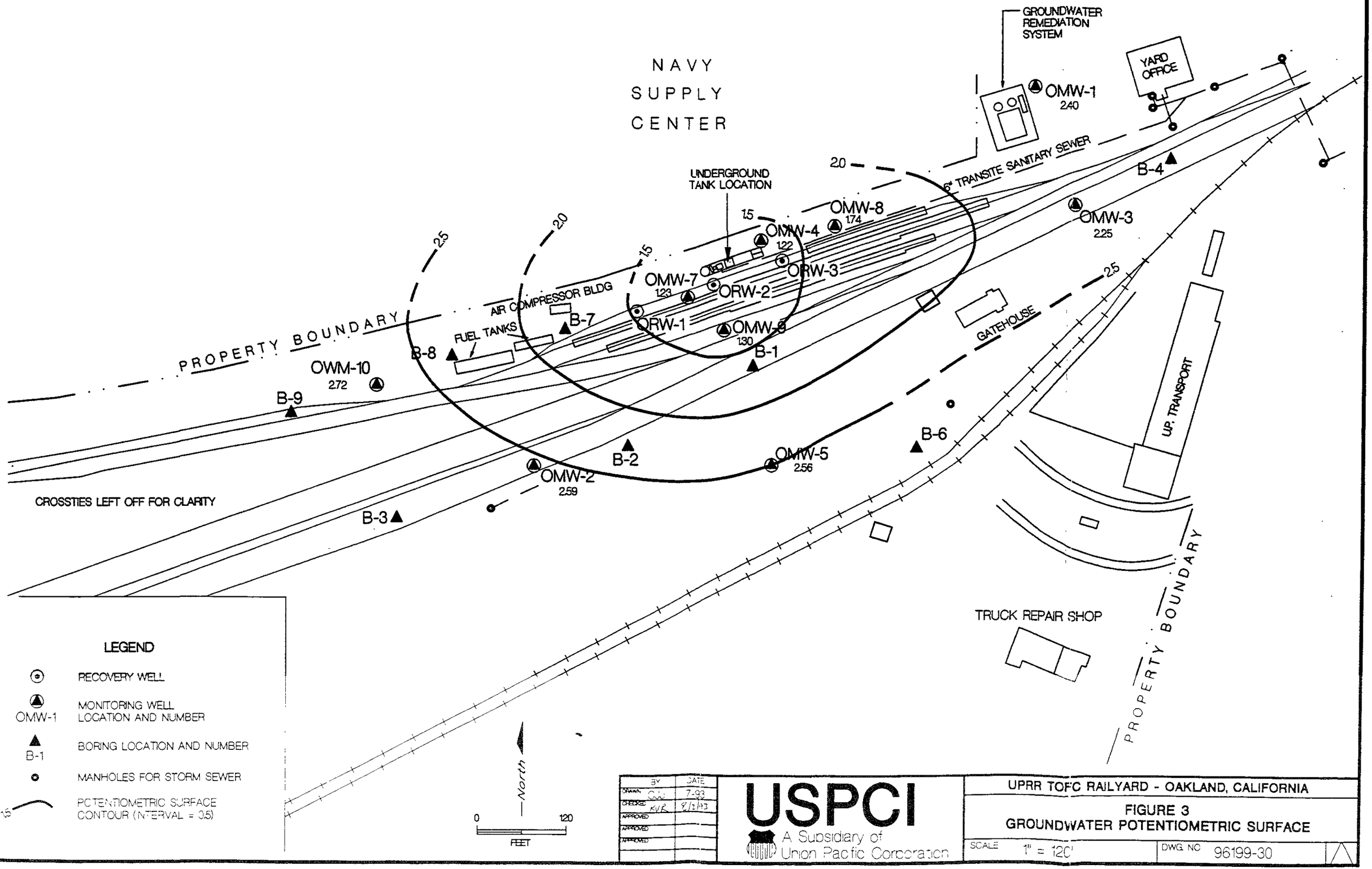
USPCI
A Subsidiary of Union Pacific Corporation

OAKLAND WEST, CA

USGS 7 1/2 MINUTE QUAD
1959 PHOTOREVISED 1980

SCALE: 1"=24000' | APPROVED/DATE


NAVY
SUPPLY
CENTER
GROUNDWATER REMEDIATION SYSTEM
YARD OFFICE
OMW-1
6" TRANSITE SANITARY SEWER
WASTE OIL TANK SITE
OMW-8
OMW-4
OMW-3
B-4
ORW-3
OMW-7
ORW-2
AIR COMPRESSOR BLDG
B-7
ORW-1
OMW-9
FUEL TANKS
B-8
B-1
PROPERTY BOUNDARY
OWM-10
B-9
CATCH BASIN PLUGGED WITH CONCRETE
GATEHOUSE
UP. TRANSPORT
B-6
OMW-5
B-2
OMW-2
CROSSTIES LEFT OFF FOR CLARITY
B-3
TRUCK REPAIR SHOP
STORM SEWER
36" STORM SEWER
PROPERTY BOUNDARY
LEGEND
RECOVERY WELL
OMW-1 MONITORING WELL LOCATION AND NUMBER
B-1 BORING LOCATION AND NUMBER
MANHOLES FOR STORM SEWER
North
0
120
FEET
BY
DATE
CL 7-93
KLR 7/12/93
USPCI
A Subsidiary of Union Pacific Corporation
UPRR TOFC RAILYARD - OAKLAND, CALIFORNIA
FIGURE 2
TANK LOCATION MAP
SCALE 1" = 120'
DWG NO 96199-29



	BY	DATE
DRAWN	CJL	7-93
CHECKED	KVR	8/12/93
APPROVED		
APPROVED		
APPROVED		

USPCI
A Subsidiary of Union Pacific Corporation

UPRR TOFC RAILYARD - OAKLAND, CALIFORNIA

FIGURE 3
GROUNDWATER POTENTIOMETRIC SURFACE

SCALE 1" = 120'

DWG NO 96199-30

APPENDIX A

LABORATORY DATA SHEETS

WASTE OIL SAMPLE
LABORATORY DATA SHEETS

SEQUOIA ANALYTICAL

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

U.S.P.C.I.	Client Project ID:	#93.409	Sampled:	Apr 1, 1993
4385 E. Lowell St., Ste. C	Sample Descript:	Oil, Waste Oil	Received:	Apr 1, 1993
Ontario, CA 91761	Analysis Method:	EPA 8240	Analyzed:	Apr 13, 1993
Attention: Tim Albright	Lab Number:	304-0043	Reported:	Apr 15, 1993

VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acetone	10,000	N.D.
Benzene	2,000	N.D.
Bromodichloromethane	2,000	N.D.
Bromoform	2,000	N.D.
Bromomethane	2,000	N.D.
2-Butanone	10,000	N.D.
Carbon disulfide	2,000	N.D.
Carbon tetrachloride	2,000	N.D.
Chlorobenzene	2,000	N.D.
Chloroethane	2,000	N.D.
2-Chloroethyl vinyl ether	10,000	N.D.
Chloroform	2,000	N.D.
Chloromethane	2,000	N.D.
Dibromochloromethane	2,000	N.D.
1,1-Dichloroethane	2,000	N.D.
1,2-Dichloroethane	2,000	N.D.
1,1-Dichloroethene	2,000	N.D.
cis-1,2-Dichloroethene	2,000	N.D.
trans-1,2-Dichloroethene	2,000	N.D.
1,2-Dichloropropane	2,000	N.D.
cis-1,3-Dichloropropene	2,000	N.D.
trans-1,3-Dichloropropene	2,000	N.D.
Ethylbenzene	**2,000**	**25,000**
2-Hexanone	10,000	N.D.
Methylene chloride	5,000	N.D.
4-Methyl-2-pentanone	10,000	N.D.
Styrene	2,000	N.D.
1,1,2,2-Tetrachloroethane	2,000	N.D.
Tetrachloroethene	2,000	N.D.
Toluene	**2,000**	**8,400**
1,1,1-Trichloroethane	2,000	N.D.
1,1,2-Trichloroethane	2,000	N.D.
Trichloroethene	2,000	N.D.
Trichlorofluoromethane	2,000	N.D.
Vinyl acetate	2,000	N.D.
Vinyl chloride	2,000	N.D.
Total Xylenes	**2,000**	**170,000**

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL

Karen L. Enstrom
Project Manager

SEQUOIA ANALYTICAL

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

U.S.P.C.I.	Client Project ID:	#93.409	Sampled:	Apr 1, 1993
4385 E. Lowell St., Ste. C	Sample Descript:	Oil, Waste Oil	Received:	Apr 1, 1993
Ontario, CA 91761	Analysis Method:	EPA 8080	Extracted:	Apr 12, 1993
Attention: Tim Albright	Lab Number:	304-0043	Analyzed:	Apr 13, 1993
			Reported:	Apr 15, 1993

POLYCHLORINATED BIPHENYLS (EPA 8080)

Analyte	Detection Limit mg/kg	Sample Results mg/kg
PCB 1016	1.0	N.D.
PCB 1221	1.0	N.D.
PCB 1232	1.0	N.D.
PCB 1242	1.0	N.D.
PCB 1248	1.0	N.D.
PCB 1254	1.0	N.D.
PCB 1260	1.0	N.D.

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

SEQUOIA ANALYTICAL

Karen L. Enstrom
Project Manager

SEQUOIA ANALYTICAL

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

U.S.P.C.I.	Client Project ID:	#93.409	Sampled:	Apr 1, 1993
4385 E. Lowell St., Ste. C	Sample Descript:	Oil, Waste Oil	Received:	Apr 1, 1993
Ontario, CA 91761			Extracted:	Apr 14, 1993
Attention: Tim Albright	Lab Number:	304-0043	Reported:	Apr 15, 1993

INORGANIC PERSISTENT AND BIOACCUMULATIVE TOXIC SUBSTANCES

	Soluble Threshold Limit Concentration (Waste Extraction Test)			Total Threshold Limit Concentration		
Analyte	**STLC Max. Limit** (mg/L)	**Detection Limit** (mg/L)	**Analysis Result** (mg/L)	**TTLC Max. Limit** (mg/kg)	**Detection Limit** (mg/kg)	**Analysis Result** (mg/kg)
Antimony	15	0.10	-	500	5.0	N.D.
Arsenic	5.0	0.10	-	500	5.0	N.D.
Barium	100	0.10	-	10,000	2.5	N.D.
Beryllium	0.75	0.010	-	75	0.50	N.D.
Cadmium	1.0	0.010	-	100	0.50	N.D.
Chromium (VI)	5.0	0.0050	-	500	0.050	-
Chromium (III)	560	0.010	-	2,500	0.50	N.D.
Cobalt	80	0.050	-	8,000	1.5	N.D.
Copper	**25**	**0.010**	**-**	**2,500**	**0.50**	**2.6**
Lead	5.0	0.10	-	1,000	2.5	N.D.
Mercury	0.20	0.00020	-	20	0.010	N.D.
Molybdenum	350	0.050	-	3,500	1.5	N.D.
Nickel	20	0.050	-	2,000	1.5	N.D.
Selenium	1.0	0.10	-	100	5.0	N.D.
Silver	5.0	0.010	-	500	0.50	N.D.
Thallium	7.0	0.10	-	700	5.0	N.D.
Vanadium	**24**	**0.050**	**-**	**2,400**	**1.5**	**2.5**
Zinc	**250**	**0.010**	**-**	**5,000**	**0.50**	**6.3**
Asbestos	-	10	-	10,000	100	-
Fluoride	180	0.10	-	18,000	1.0	-

TTLC results are reported as mg/kg of wet weight. Asbestos results are reported as fibers/g.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Karen E. Enstrom
Project Manager

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
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U.S.P.C.I.
4385 E. Lowell St., Ste. C
Ontario, CA 91761
Attention: Tim Albright

Client Project ID: #93.409
Matrix: Oil

QC Sample Group: 304-0043

Reported: Apr 15, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Zinc	Lead	Cadmium	Nickel	Chromium	Mercury	PCB-1260
Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 7471	EPA 8080
Analyst:	S.Foster	S.Foster	S.Foster	S.Foster	S.Foster	V.Owens	C. Chapman
Conc. Spiked:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	25
Units:	25	25	25	25	25	0.25	mg/kg
LCS Batch#:	MS041493	MS041493	MS041493	MS041493	MS041493	ICV040893	IS101692A
Date Prepared:	4/14/93	4/14/93	4/14/93	4/14/93	4/14/93	4/8/93	4/10/93
Date Analyzed:	4/14/93	4/14/93	4/14/93	4/14/93	4/14/93	4/8/93	4/13/93
Instrument I.D.#:	PE-40	PE-40	PE-40	PE-40	PE-40	SH1000	HP-5
LCS % Recovery:	102	96	97	102	101	92	128
Control Limits:	80-120	80-120	80-120	80-120	80-120	90-110	60-140
MS/MSD Batch #:	3040198	3040198	3040198	3040198	3040198	3040090	BLK041293
Date Prepared:	4/14/93	4/14/93	4/14/93	4/14/93	4/14/93	4/8/93	4/12/93
Date Analyzed:	4/14/93	4/14/93	4/14/93	4/14/93	4/14/93	4/8/93	4/13/93
Instrument I.D.#:	PE-40	PE-40	PE-40	PE-40	PE-40	SH1000	HP-5
Matrix Spike % Recovery:	98	100	95	98	92	120	128
Matrix Spike Duplicate % Recovery:	102	100	99	98	92	116	124
Relative % Difference:	2.2	0.0	3.8	0.0	0.0	3.2	3.2

SEQUOIA ANALYTICAL

Karen L. Enstrom
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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

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U.S.P.C.I.
4385 E. Lowell St., Ste. C
Ontario, CA 91761
Attention: Tim Albright

Client Project ID: #93.409
Matrix: Oil
QC Sample Goup: 304-0043

Reported: Apr 15, 1993

QUALITY CONTROL DATA REPORT

ANALYTE:	1,1-Dichloro-ethene	Trichloroethene	Benzene	Toluene	Chlorobenzene
Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Analyst:	M.Nguyen	M.Nguyen	M.Nguyen	M.Nguyen	M.Nguyen
Conc. Spiked:	Feb 19, 1900	Feb 19, 1900	Feb 19, 1900	Feb 19, 1900	Feb 19, 1900
Units:	µg/L	µg/L	µg/L	µg/L	µg/L
LCS Batch#:	LCS041393	LCS041393	LCS041393	LCS041393	LCS041393
Date Prepared:	4/13/93	4/13/93	4/13/93	4/13/93	4/13/93
Date Analyzed:	4/13/93	4/13/93	4/13/93	4/13/93	4/13/93
Instrument I.D.#:	GC/MS2	GC/MS2	GC/MS2	GC/MS2	GC/MS2
LCS % Recovery:	113	102	98	101	103
Control Limits:	61-145	71-120	76-127	76-125	75-130
MS/MSD Batch #:	3040282	3040282	3040282	3040282	3040282
Date Prepared:	4/13/93	4/13/93	4/13/93	4/13/93	4/13/93
Date Analyzed:	4/13/93	4/13/93	4/13/93	4/13/93	4/13/93
Instrument I.D.#:	GC/MS2	GC/MS2	GC/MS2	GC/MS2	GC/MS2
Matrix Spike % Recovery:	105	106	101	106	106
Matrix Spike Duplicate % Recovery:	106	105	102	102	105
Relative % Difference:	1.1	1.1	0.39	3.1	0.76

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

SEQUOIA ANALYTICAL

Karen L. Enstrom
Project Manager

USPCI
A Subsidiary of Union Pacific Corporation

ANALYTICAL SERVICES

SAMPLE ANALYSIS REQUEST FORM

4322 South 49th West Avenue
Tulsa, Oklahoma 74107
Telephone 918-446-1162
Fax 918-445-0945

REPORT WILL BE SENT TO:

NAME OF COMPANY	REQUEST DATE
USPCI	4/1/93

ADDRESS - NUMBER, STREET	CITY	STATE	ZIP CODE
4385 E. LOWELL ST, SUITE-C	ONTARIO	CA	91761

PHONE NO.	FAX NO.	CONTACT
714-467-3733	714-467-3735	Tim ALBRIGHT

BILLING WILL BE SENT TO:

NAME OF COMPANY: USPCI

ADDRESS - NUMBER, STREET	CITY	STATE	ZIP CODE
SAME			

PHONE NO.	CONTACT	P.O. NO.
		93-409

☒ Same as above

SAMPLING DATA

COLLECTOR'S NAME: Tim ALBRIGHT — PHONE NO.:

NAME OF COMPANY, DISPOSAL SITE, ETC.:

ADDRESS - NUMBER, STREET	CITY	STATE	ZIP CODE

☒ Same as above

COLLECTOR'S SAMPLE NO.	LAB SAMPLE NO.	TYPE OF SAMPLE	DATE AND TIME OF SAMPLING	ANALYSIS REQUESTED: BE SPECIFIC
~~Void~~ ~~waste~~ oil		Liquid/oil	4/1/93	~~8240, PCB, TTLC CAL METALS.~~
waste oil		Liquid/oil	4-1-93	8240, PCB, TTLC Cal metals

ADDITIONAL INFORMATION

2-VOC + 1-500 mL

RESULTS

STANDARD	RUSH	DATE EXPECTED
✓		

RECEIVED BY

SIGNATURE	TITLE	DATE	TIME

WHITE – LABORATORY COPY

CANARY – CUSTOMER COPY

EXCAVATION SOILS SAMPLES
LABORATORY DATA SHEETS

SEQUOIA ANALYTICAL

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

Environmental Science & Engineering, Inc.	Client Project ID:	U.S.P.C.I.-Oakland/#6-93-5079	Sampled:	May 13, 1993
4090 Nelson Avenue, Ste. J	Sample Descript:	Soil, West	Received:	May 13, 1993
Concord, CA 94520	Analysis Method:	EPA 8270	Extracted:	May 17, 1993
Attention: Tim Albright	Lab Number:	305-0701	Analyzed:	May 18, 1993
			Reported:	May 20, 1993

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acenaphthene	100	N.D.
Acenaphthylene	100	N.D.
Aniline	100	N.D.
Anthracene	100	N.D.
Benzidine	2,500	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	100	N.D.
Benzo(b)fluoranthene	100	N.D.
Benzo(k)fluoranthene	100	N.D.
Benzo(g,h,i)perylene	100	100
Benzo(a)pyrene	100	N.D.
Benzyl alcohol	100	N.D.
Bis(2-chloroethoxy)methane	100	N.D.
Bis(2-chloroethyl)ether	100	N.D.
Bis(2-chloroisopropyl)ether	100	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	100	N.D.
Butyl benzyl phthalate	100	N.D.
4-Chloroaniline	100	N.D.
2-Chloronaphthalene	100	N.D.
4-Chloro-3-methylphenol	100	N.D.
2-Chlorophenol	100	N.D.
4-Chlorophenyl phenyl ether	100	N.D.
Chrysene	100	N.D.
Dibenz(a,h)anthracene	100	N.D.
Dibenzofuran	100	N.D.
Di-N-butyl phthalate	500	N.D.
1,3-Dichlorobenzene	100	N.D.
1,4-Dichlorobenzene	100	N.D.
1,2-Dichlorobenzene	100	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	100	N.D.
Diethyl phthalate	100	N.D.
2,4-Dimethylphenol	100	N.D.
Dimethyl phthalate	100	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.

SEQUOIA ANALYTICAL

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

Environmental Science & Engineering, Inc.	Client Project ID:	U.S.P.C.I.-Oakland/#6-93-5079	Sampled:	May 13, 1993
4090 Nelson Avenue, Ste. J	Sample Descript:	Soil, West	Received:	May 13, 1993
Concord, CA 94520	Analysis Method:	EPA 8270	Extracted:	May 17, 1993
Attention: Tim Albright	Lab Number:	305-0701	Analyzed:	May 18, 1993
			Reported:	May 20, 1993

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
2,4-Dinitrotoluene	100	N.D.
2,6-Dinitrotoluene	100	N.D.
Di-N-octyl phthalate	100	N.D.
Fluoranthene	100	N.D.
Fluorene	**100**	**120**
Hexachlorobenzene	100	N.D.
Hexachlorobutadiene	100	N.D.
Hexachlorocyclopentadiene	100	N.D.
Hexachloroethane	100	N.D.
Indeno(1,2,3-cd)pyrene	100	N.D.
Isophorone	100	N.D.
2-Methylnaphthalene	**100**	**310**
2-Methylphenol	100	N.D.
4-Methylphenol	100	N.D.
Naphthalene	100	N.D.
2-Nitroaniline	500	N.D.
3-Nitroaniline	500	N.D.
4-Nitroaniline	500	N.D.
Nitrobenzene	100	N.D.
2-Nitrophenol	100	N.D.
4-Nitrophenol	500	N.D.
N-Nitrosodiphenylamine	100	N.D.
N-Nitroso-di-N-propylamine	100	N.D.
Pentachlorophenol	500	N.D.
Phenanthrene	**100**	**280**
Phenol	100	N.D.
Pyrene	**100**	**190**
1,2,4-Trichlorobenzene	100	N.D.
2,4,5-Trichlorophenol	500	N.D.
2,4,6-Trichlorophenol	100	N.D.

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

SEQUOIA ANALYTICAL

Karen L. Enstrom
Project Manager

SEQUOIA ANALYTICAL

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

Environmental Science & Engineering, Inc.	Client Project ID:	U.S.P.C.I. Oakland/#6-93-5079	Sampled:	May 13, 1993
4090 Nelson Avenue, Ste. J	Sample Descript:	Soil, East	Received:	May 13, 1993
Concord, CA 94520	Analysis Method:	EPA 8270	Extracted:	May 14, 1993
Attention: Tim Albright	Lab Number:	305-0702	Analyzed:	May 15, 1993
			Reported:	May 20, 1993

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acenaphthene	5,000	N.D.
Acenaphthylene	5,000	N.D.
Aniline	5,000	N.D.
Anthracene	5,000	N.D.
Benzidine	130,000	N.D.
Benzoic Acid	25,000	N.D.
Benzo(a)anthracene	5,000	N.D.
Benzo(b)fluoranthene	5,000	N.D.
Benzo(k)fluoranthene	5,000	N.D.
Benzo(g,h,i)perylene	5,000	N.D.
Benzo(a)pyrene	5,000	N.D.
Benzyl alcohol	5,000	N.D.
Bis(2-chloroethoxy)methane	5,000	N.D.
Bis(2-chloroethyl)ether	5,000	N.D.
Bis(2-chloroisopropyl)ether	5,000	N.D.
Bis(2-ethylhexyl)phthalate	25,000	N.D.
4-Bromophenyl phenyl ether	5,000	N.D.
Butyl benzyl phthalate	5,000	N.D.
4-Chloroaniline	5,000	N.D.
2-Chloronaphthalene	5,000	N.D.
4-Chloro-3-methylphenol	5,000	N.D.
2-Chlorophenol	5,000	N.D.
4-Chlorophenyl phenyl ether	5,000	N.D.
Chrysene	5,000	N.D.
Dibenz(a,h)anthracene	5,000	N.D.
Dibenzofuran	**5,000**	**6,500**
Di-N-butyl phthalate	25,000	N.D.
1,3-Dichlorobenzene	5,000	N.D.
1,4-Dichlorobenzene	5,000	N.D.
1,2-Dichlorobenzene	5,000	N.D.
3,3-Dichlorobenzidine	25,000	N.D.
2,4-Dichlorophenol	5,000	N.D.
Diethyl phthalate	5,000	N.D.
2,4-Dimethylphenol	5,000	N.D.
Dimethyl phthalate	5,000	N.D.
4,6-Dinitro-2-methylphenol	25,000	N.D.
2,4-Dinitrophenol	25,000	N.D.

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Environmental Science & Engineering, Inc.	Client Project ID:	U.S.P.C.I.-Oakland/#6-93-5079	Sampled:	May 13, 1993
4090 Nelson Avenue, Ste. J	Sample Descript:	Soil, East	Received:	May 13, 1993
Concord, CA 94520	Analysis Method:	EPA 8270	Extracted:	May 14, 1993
Attention: Tim Albright	Lab Number:	305-0702	Analyzed:	May 15, 1993
			Reported:	May 20, 1993

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit ug/kg	Sample Results ug/kg
2,4-Dinitrotoluene	5,000	N.D.
2,6-Dinitrotoluene	5,000	N.D.
Di-N-octyl phthalate	5,000	N.D.
Fluoranthene	5,000	N.D.
Fluorene	**5,000**	**15,000**
Hexachlorobenzene	5,000	N.D.
Hexachlorobutadiene	5,000	N.D.
Hexachlorocyclopentadiene	5,000	N.D.
Hexachloroethane	5,000	N.D.
Indeno(1,2,3-cd)pyrene	5,000	N.D.
Isophorone	5,000	N.D.
2-Methylnaphthalene	**5,000**	**92,000**
2-Methylphenol	5,000	N.D.
4-Methylphenol	5,000	N.D.
Naphthalene	**5,000**	**20,000**
2-Nitroaniline	25,000	N.D.
3-Nitroaniline	25,000	N.D.
4-Nitroaniline	25,000	N.D.
Nitrobenzene	5,000	N.D.
2-Nitrophenol	5,000	N.D.
4-Nitrophenol	25,000	N.D.
N-Nitrosodiphenylamine	5,000	N.D.
N-Nitroso-di-N-propylamine	5,000	N.D.
Pentachlorophenol	25,000	N.D.
Phenanthrene	**5,000**	**30,000**
Phenol	5,000	N.D.
Pyrene	5,000	N.D.
1,2,4-Trichlorobenzene	5,000	N.D.
2,4,5-Trichlorophenol	25,000	N.D.
2,4,6-Trichlorophenol	5,000	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

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Environmental Science & Engineering, Inc.	Client Project ID:	U.S.P.C.I.-Oakland/#6-93-5079	Sampled:	May 13, 1993
4090 Nelson Avenue, Ste. J	Sample Descript:	Soil, West	Received:	May 13, 1993
Concord, CA 94520			Extracted:	May 17, 1993
Attention: Tim Albright	Lab Number:	305-0701	Analyzed:	5/17-5/20/93
			Reported:	May 20, 1993

LABORATORY ANALYSIS

Analyte	Detection Limit mg/kg	Sample Results mg/kg
Cadmium	0.50	1.1
Chromium	0.25	39
Lead	0.25	7.2
Nickel	2.5	48
Zinc	0.50	34

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

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Environmental Science & Engineering, Inc.	Client Project ID:	U.S.P.C.I.-Oakland/#6-93-5079	Sampled:	May 13, 1993
4090 Nelson Avenue, Ste. J	Sample Descript:	Soil, East	Received:	May 13, 1993
Concord, CA 94520			Extracted:	May 17, 1993
Attention: Tim Albright	Lab Number:	305-0702	Analyzed:	5/17-5/20/93
			Reported:	May 20, 1993

LABORATORY ANALYSIS

Analyte	Detection Limit mg/kg	Sample Results mg/kg
Cadmium	0.50	0.75
Chromium	0.25	28
Lead	0.25	9.5
Nickel	2.5	26
Zinc	0.50	26

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

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Environmental Science & Engineering, Inc.
4090 Nelson Avenue, Ste. J
Concord, CA 94520
Attention: Tim Albright

Client Project ID: U.S.P.C.I.-Oakland/#6-93-5079
Matrix: Soil
QC Sample Group 3060701-702

Reported: May 20, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes	Diesel	Oil & Grease
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015	SM 5520
Analyst:	J.F.	J.F.	J.F.	J.F.	K.Wimer	D.Newcomb
Conc. Spiked:	0.40	0.40	0.40	1.2	10	5000
Units:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
LCS Batch#:	2LCS051893	2LCS051893	2LCS051893	2LCS051893	BLK051893	BLK051593
Date Prepared:	5/18/93	5/18/93	5/18/93	5/18/93	5/18/93	5/14/93
Date Analyzed:	5/18/93	5/18/93	5/18/93	5/18/93	5/21/93	5/15/93
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4	HP-3A	N/A
LCS % Recovery:	96	96	100	108	96	108
Control Limits:	70-130	70-130	70-130	70-130	80-120	80-120
MS/MSD Batch #:	3050686	3050686	3050686	3050686	3050870	3050697
Date Prepared:	5/18/93	5/18/93	5/18/93	5/18/93	5/18/93	5/15/93
Date Analyzed:	5/18/93	5/18/93	5/18/93	5/18/93	5/21/93	5/15/93
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4	HP-3A	N/A
Matrix Spike % Recovery:	80	78	75	82	76	120
Matrix Spike Duplicate % Recovery:	85	80	88	88	74	116
Relative % Difference:	6.0	2.5	16	7.0	2.8	4.0

SEQUOIA ANALYTICAL

Karen L. Enstrom
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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

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Environmental Science & Engineering, Inc.
4090 Nelson Avenue, Ste. J
Concord, CA 94520
Attention: Tim Albright

Client Project ID: U.S.P.C.I.-Oakland/#6-93-5079
Matrix: Soil

QC Sample Group: 3050701-702

Reported: May 20, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Chromium	Lead	Cadmium	Nickel	Zinc
Method:	EPA 7191	EPA 7421	EPA 7191	EPA 7520	EPA 7950
Analyst:	K.V.S.	K.M.A.	K.V.S.	K.V.S.	K.V.S.
Conc. Spiked:	50	50	50	50	50
Units:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
LCS Batch#:	BLK051793	BLK051793	BLK051793	BLK051793	BLK051793
Date Prepared:	5/17/93	5/17/93	5/17/93	5/17/93	5/17/93
Date Analyzed:	5/18/93	5/17/93	5/19/93	5/20/93	5/20/93
Instrument I.D.#:	SpectrAA-400	SpectrAA-400	SpectrAA-20	SpectrAA-20	SpectrAA-20
LCS % Recovery:	94	98	88	90	84
Control Limits:	75-125	75-125	75-125	75-125	75-125
MS/MSD Batch #:	3050702	3050702	3050702	3050702	3050702
Date Prepared:	5/17/93	5/17/93	5/17/93	5/17/93	5/17/93
Date Analyzed:	5/18/93	5/17/93	5/19/93	5/20/93	5/20/93
Instrument I.D.#:	SpectrAA-400	SpectrAA-400	SpectrAA-20	SpectrAA-20	SpectrAA-20
Matrix Spike % Recovery:	98	91	97	96	98
Matrix Spike Duplicate % Recovery:	98	93	95	96	96
Relative % Difference:	0.0	2.2	2.1	0.0	2.1

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Environmental Science & Engineering, Inc.
4090 Nelson Avenue, Ste. J
Concord, CA 94520
Attention: Tim Albright

Client Project ID: U.S.P.C.I.-Oakland/#6-93-5079
Matrix: Soil
QC Sample Goup: 3050701-702

Reported: May 20, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Phenol	2-Chlorophenol	1,4-Dichloro-benzene	N-Nitroso-Di-N-propylamine	1,2,4-Trichloro-benzene	4-Chloro-3-Methylphenyl
Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Analyst:	Son Le	Son Le	Son Le	Son Le	Son Le	Son Le
Conc. Spiked:	5000	5000	2500	2500	2500	5,000
Units:	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg
LCS Batch#:	LCS051493	LCS051493	LCS051493	LCS051493	LCS051493	LCS051493
Date Prepared:	5/14/93	5/14/93	5/14/93	5/14/93	5/14/93	5/14/93
Date Analyzed:	5/17/93	5/17/93	5/17/93	5/17/93	5/17/93	5/17/93
Instrument I.D.#:	GC/MS1	GC/MS1	GC/MS1	GC/MS1	GC/MS1	GC/MS1
LCS % Recovery:	71	69	66	90	68	77
Control Limits:	26-90	25-102	28-104	41-126	38-107	26-103
MS/MSD Batch #:	3050585	3050585	3050585	3050585	3050585	3050585
Date Prepared:	5/14/93	5/14/93	5/14/93	5/14/93	5/14/93	5/14/93
Date Analyzed:	5/17/93	5/17/93	5/17/93	5/17/93	5/17/93	5/17/93
Instrument I.D.#:	GC/MS1	GC/MS1	GC/MS1	GC/MS1	GC/MS1	GC/MS1
Matrix Spike % Recovery:	125	167	156	22	194	197
Matrix Spike Duplicate % Recovery:	124	165	156	42	180	191
Relative % Difference:	0.80	1.2	0.0	63	7.5	3.1

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Environmental Science & Engineeri
4090 Nelson Avenue, Ste. J
Concord, CA 94520
Attention: Tim Albright

Client Project ID: U.S.P.C.I.-Oakland/#6-93-5079
Matrix: Soil
QC Sample Group: 3050701-702

Reported: May 20, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Acenaphthene	4-Nitrophenol	2,4-Dinitro-toluene	Pentachloro-phenol	Pyrene
Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Analyst:	Son Le	Son Le	Son Le	Son Le	Son Le
Conc. Spiked:	2500	5,000	2500	5,000	2500
Units:	µg/Kg	µg/Kg	µg/Kg	µg/Kg	µg/Kg
LCS Batch#:	LCS051493	LCS051493	LCS051493	LCS051493	LCS051493
Date Prepared:	5/14/93	5/14/93	5/14/93	5/14/93	5/14/93
Date Analyzed:	5/17/93	5/17/93	5/17/93	5/17/93	5/17/93
Instrument I.D.#:	GC/MS1	GC/MS1	GC/MS1	GC/MS1	GC/MS1
LCS % Recovery:	76	68	60	81	116
Control Limits:	31-137	11-114	28-89	17-109	35-142
MS/MSD Batch #:	3050585	3050585	3050585	3050585	3050585
Date Prepared:	5/14/93	5/14/93	5/14/93	5/14/93	5/14/93
Date Analyzed	5/17/93	5/17/93	5/17/93	5/17/93	5/17/93
Instrument I.D.#:	GC/MS1	GC/MS1	GC/MS1	GC/MS1	GC/MS1
Matrix Spike % Recovery:	214	8.0	38	30	280
Matrix Spike Duplicate % Recovery:	202	19	60	54	290
Relative % Difference:	5.8	81	45	57	3.51

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Karen L. Enstrom
Project Manager

Please Note:
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Environmental Science & Engineering, Inc.	Client Project ID:	U.S.P.C.I.-Oakland/#6-93-5079	Sampled:	May 13, 1993
4090 Nelson Avenue, Ste. J	Matrix Descript:	Soil	Received:	May 13, 1993
Concord, CA 94520	Analysis Method:	SM 5520 E&F (Gravimetric)	Extracted:	May 15, 1993
Attention: Tim Albright	First Sample #:	305-0701	Analyzed:	May 17, 1993
			Reported:	May 20, 1993

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg
305-0701	West	500
305-0702	East	25,000

Detection Limits:	**50**

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

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Environmental Science & Engineering, Inc.	Client Project ID:	U.S.P.C.I.-Oakland/#6-93-5079	Sampled:	May 13, 1993
4090 Nelson Avenue, Ste. J	Sample Matrix:	Soil	Received:	May 13, 1993
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	May 20, 1993
Attention: Tim Albright	First Sample #:	305-0701		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 305-0701 West	Sample I.D. 305-0702 East
Purgeable Hydrocarbons	1.0	8.8	1,300
Benzene	0.005	N.D.	N.D.
Toluene	0.005	N.D.	N.D.
Ethyl Benzene	0.005	0.011	2.0
Total Xylenes	0.005	0.066	11
Chromatogram Pattern:		Non Gasoline Mixture (>C10)	Non Gasoline Mixture (>C9)

Quality Control Data

Report Limit Multiplication Factor:	1.0	100
Date Analyzed:	5/19/93	5/18/93
Instrument Identification:	HP-2	HP-4
Surrogate Recovery, %: (QC Limits = 70-130%)	100	89

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

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Environmental Science & Engineering, Inc.	Client Project ID:	U.S.P.C.I.-Oakland/#6-93-5079	Sampled: May 13, 1993
4090 Nelson Avenue, Ste. J	Sample Matrix:	Soil	Received: May 13, 1993
Concord, CA 94520	Analysis Method:	EPA 3550/8015	Reported: May 20, 1993
Attention: Tim Albright	First Sample #:	305-0701	

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 305-0701 West	Sample I.D. 305-0702 East
Extractable Hydrocarbons	1.0	120	21,000
Chromatogram Pattern:		Diesel	Diesel

Quality Control Data

Report Limit Multiplication Factor:	20	250
Date Extracted:	5/18/93	5/18/93
Date Analyzed:	5/20/93	5/20/93
Instrument Identification:	HP-3B	HP-3B

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

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Environmental Science & Engineering, Inc.	Client Project ID:	U.S.P.C.I.-Oakland/#6-93-5079	Sampled:	May 13, 1993
4090 Nelson Avenue, Ste. J	Sample Descript:	Soil, West	Received:	May 13, 1993
Concord, CA 94520	Analysis Method:	EPA 5030/8010	Analyzed:	May 18, 1993
Attention: Tim Albright	Lab Number:	305-0701	Reported:	May 20, 1993

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.

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

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Environmental Science & Engineering, Inc.	Client Project ID:	U.S.P.C.I.-Oakland/#6-93-5079	Sampled:	May 13, 1993
4090 Nelson Avenue, Ste. J	Sample Descript:	Soil, East	Received:	May 13, 1993
Concord, CA 94520	Analysis Method:	EPA 5030/8010	Analyzed:	May 17, 1993
Attention: Tim Albright	Lab Number:	305-0702	Reported:	May 20, 1993

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	200	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	200	N.D.
2-Chloroethylvinyl ether	200	N.D.
Chloroform	100	N.D.
Chloromethane	200	N.D.
Dibromochloromethane	100	N.D.
1,3-Dichlorobenzene	100	N.D.
1,4-Dichlorobenzene	100	N.D.
1,2-Dichlorobenzene	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Methylene chloride	1,000	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl chloride	200	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

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Karen L. Enstrom
Project Manager

APPENDIX B

HAZARDOUS WASTE MANIFESTS

WASTE OIL AND WATER FROM STORAGE TANK
5/11/93

(Manifest number 90835048)

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. *Form designed for use on elite (12-pitch typewriter).*

See Instructions on Back of Page 6 and Front of Page 7

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: C A D 9 8 1 3 8 5 4 9 5 | Manifest Document No.: 0 0 0 0 1

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
1416 DODGE ST.. ATTN: HARRY PATTERSON
OMAHA, NE 68179
4. Generator's Phone (402 271-4078

A. State Manifest Document Number: 90835048

B. State Generator's ID: H A H 9 3 6 0 1 5 8 9 3

5. Transporter 1 Company Name: EVERGREEN
6. US EPA ID Number: C A D 9 8 0 6 9 5 7 6 1

C. State Transporter's ID: 30229-00

D. Transporter's Phone: 800-972-5284

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
EVERGREEN
6880 SMITH AVE
NEWARK, CA. 94560
10. US EPA ID Number: C A D 9 8 0 8 8 7 4 1 8

G. State Facility's ID: C A D 9 8 0 8 8 7 4 1 8

H. Facility's Phone: 510-795-4400

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE PETROLEUM OIL, HAZARD CLASS 3, PG-3, UN-1270, (NONE)	0 0 1	T T	04000	G	State 221 / EPA/Other NONE
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
A, ER-31, WASTE OIL AND WATER FROM STORAGE TANK

K. Handling Codes for Wastes Listed Above
a. b. c. d.

15. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING THIS MATERIAL JOB-SITE:
1717 MIDDLE HARBOR ROAD. OAKLAND, CA. EMERGENCY PHONE 402-271-4078

16.
GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: FOR HARRY PATTERSON WILLIE J. SWEATT
Signature: Willie J. Sweatt
Month Day Year: 05 11 93

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: JOSEPH BRASHER
Signature: Joe Brasher
Month Day Year: 05 11 93

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
Printed/Typed Name
Signature
Month Day Year

GENERATOR
TRANSPORTER
FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

90835048

DHS 6022 A
EPA 8700—22
(Rev. 6-89) Previous editions are obsolete.

Do Not Write Below This Line

MAIL THIS COPY TO DOHS WITHIN 30 DAYS
P.O. Box 942732, Sacramento, CA 95812-0400

WASTE OIL AND WATER FROM TANK EXCAVATION
5/13/93

(Manifest number 90834547)
TANK DISPOSAL MANIFEST

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. Form designed for use on elite (12-pitch) typewriter).

93-409

See Instructions on Back of Page 6 and Front of Page 7

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: C A D 9 8 1 3 8 5 4 9 5 — Manifest Document No.: 0 0 0 0 1

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
1416 DODGE ST.. ATTN: HARRY PATTERSON
OMAHA, NE 68179

4. Generator's Phone (402) 271-4078

A. State Manifest Document Number: 90834547

B. State Generator's ID: N A N 0 3 6 0 1 5 8 0 3

5. Transporter 1 Company Name: ~~H.S. [illegible] CONTROL~~ JIM ERICKSON

6. US EPA ID Number: CAD 0094 68392

C. State Transporter's ID: 30? 63

D. Transporter's Phone: [illegible]

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
SOLVENT SERVICE INC.
1021 BERRYESSA RD.
SAN JOSE, CA 95133

10. US EPA ID Number: C A D 0 5 9 4 9 4 3 1 0

G. State Facility's ID: C A D 0 5 9 4 9 4 3 1 0

H. Facility's Phone: 408-453-6046

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. NON-RCRA HAZARDOUS WASTE LIQUID (WASTE OIL / WATER)	0 0 1	T T	~~27000~~ 2700	G	State 342; EPA/Other NON-RCRA
b.					State; EPA/Other
c.					State; EPA/Other
d.					State; EPA/Other

J. Additional Descriptions for Materials Listed Above
A, ER-31. HWL-2862. OIL AND WATER

K. Handling Codes for Wastes Listed Above
a. b. c. d.

15. Special Handling Instructions and Additional Information
OAKLAND TANK
WEAR PROPER PPE WHEN HANDLING THIS MATERIAL.------------ER-31-----------
EMERGENCY PHONE 713-350-7228

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month Day Year
DEAN C. COOPER	Dean C Cooper	05 13 93

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
JOHN DOUGLASS	John Douglass	05 13 93

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year

GENERATOR / TRANSPORTER / FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

90834547

DHS 8022 A
EPA 8700—22
(Rev. 6-89) Previous editions are obsolete.

Do Not Write Below This Line

GENERATOR SENDS THIS COPY TO DOHS WITHIN 30 DAYS

TANK DISPOSAL MANIFEST
5/13/93

(Manifest number 84117796)

State of California—Health and Welfare Agency

93-409

Department of Health Services
Toxic Substances Control Division
Sacramento, California

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD981385495 Manifest Document No. 00076

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
1416 DODGE ST
OMAHA, NE 68179
ATTN: HARRY PATTERSON

4. Generator's Phone (402) 271-4078

5. Transporter 1 Company Name
ERICKSON

6. US EPA ID Number
CAD009466392

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address
ERICKSON INC
255 PARR BLVD
RICHMOND, CA 94801

10. US EPA ID Number
CAD009466392

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. WASTE EMPTY STORAGE TANK, NON-RCRA HAZARDOUS WASTE SOLID.	001		10,000	P
b.				
c.				
d.				

15. Special Handling Instructions and Additional Information
WEAR PROPER PPE WHEN HANDLING THIS MATERIAL
JOB SITE. 1717 MIDDLE HARBOR Rd. OAKLAND, CA.
OAKLAND TANK
24 HR CONTACT: DEAN CROCKER (510) 703-2165

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

Printed/Typed Name	Signature	Date (Month Day Year)
DEAN C. COOPER	Dean C. Cooper	05 17 89

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
RICH PALLASTRINI		05 17 89

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date (Month Day Year)

GENERATOR

TRANSPORTER

FACILITY

Blue: GENERATOR SENDS THIS COPY TO DOHS WITHIN 30 DAYS.
To: P.O. Box 400, Sacramento, CA 95802

:2 A (7/84)
10-22)

84 80641

SOIL DISPOSAL MANIFEST
6/21/93

(Manifest number 90835025)

State of California—Health and Welfare Agency
Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. *Form designed for use on elite (12-pitch typewriter).*

See Instructions on Back of Page 6 and Front of Page 7

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD981385495 — Manifest Document No. 000002
2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
1416 DODGE ST., ATTN: HARRY PATTERSON
OMAHA, NE 68179
4. Generator's Phone (402) 271-4078

A. State Manifest Document Number: 90835025
B. State Generator's ID: HAHQ36021583

5. Transporter 1 Company Name: UNION PACIFIC RAILROAD
6. US EPA ID Number: NED001792910
C. State Transporter's ID:
D. Transporter's Phone: 402-271-4400

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
EAST CARBON DEVELOPMENT CO.
COLUMBIA JUNCTION, UTAH
10. US EPA ID Number
G. State Facility's ID: 900001
H. Facility's Phone: 801-888-4451

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Nos.
a. NON-RCRA HAZARDOUS WASTE SOLID---------- WASTE TPH CONTAMINATED SOIL, (NONE)	001	CM	00040	T	State: 352 EPA/Other: NONE
b.					State: EPA/Other:
c.					State: EPA/Other:
d.					State: EPA/Other:

J. Additional Descriptions for Materials Listed Above
A. ER#31 CONTAMINATED SOIL FROM TANK EXCAVATION
GONDOLA NUMBER UTLX 643527 BLOCK 3 (ESTIMATED)

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
JOB SITE; 1717 MIDDLE HARBOR RD., OAKLAND, CA.
EMERGENCY PHONE 1-800-877-2416 WEAT PROPER PPE WHEN HANDLING THIS MATERIAL.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month	Day	Year
HARRY PATTERSON	H P Patterson	10	6	93

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Harry Patterson	H P Patterson	10	6	93

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name	Signature	Month	Day	Year

DHS 8022 A
EPA 8700—22
(Rev. 6-89) Previous editions are obsolete.

Do Not Write Below This Line

White—TSDF SENDS THIS COPY TO DOHS WITHIN 30 DAYS
To: P.O. Box 3000, Sacramento, CA 95812

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

90835025

APPENDIX C

TANK REMOVAL/CONTAMINATED SOIL EXCAVATION NOTIFICATION FORM (FAXED 5/6/93)

BAAQMD
Bay Area Air Quality Management District

Acknowledgment

REGULATION 8, RULE 40 Lenschan
Aeration of Contaminated Soil and Removal of Underground Storage Tanks

NOTIFICATION FORM
X (Removal) or Replacement of Tanks
X Excavation of Contaminated Soil — JUST AROUND TANK.

INFORMATION

Bay Area Air Quality Management District acknowledges receipt of your Tank Removal/Contaminated Soil Excavation Notification Form received on

5/6/93 Blg

...r Rd.

ZIP 94607

...90

...e HARBOR Rd.

CONTAMINATED SOIL EXCAVATION

SCHEDULED STARTUP DATE 5/10/93

STOCKPILES WILL BE COVERED? YES X NO ____

ALTERNATIVE METHOD OF AERATION (DESCRIBE BELOW):

(MAY REQUIRE PERMIT)

...CTOR INFORMATION

NAME U.S. Pollution Control CONTACT Tim AlBRIGHT
ADDRESS 4385 E. Lowell ST. SUITE-C PHONE (909) 467-3733
CITY, STATE, ZIP ONTARIO, CA 91761

CONSULTANT INFORMATION
(IF APPLICABLE)

NAME U.S. Pollution Control CONTACT KEN ROSE
ADDRESS 5665 FLATIRON PARKWAY PHONE (303) 938-5500
CITY, STATE, ZIP Boulder, CO

FOR OFFICE USE ONLY

DATE RECEIVED FAX 5/6/93 BY Blg (init.)

DATE POSTMARKED ____ BY ____ (init.)

CC: INSPECTOR NO. 52 DATE 5/7/93 BY Blg (init.)

UPDATE: CONTACT NAME ____ DATE ____ BY ____ (init.)

BAAQMD N # ____ DATA ENTRY ____

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

REGULATION 8, RULE 40 (Enclosure)
Aeration of Contaminated Soil and Removal of Underground Storage Tanks

NOTIFICATION FORM
X (Removal) or Replacement of Tanks
X Excavation of Contaminated Soil — JUST AROUND TANK.

SITE INFORMATION

SITE ADDRESS 1717 MIDDLE HARBOR Rd.
CITY, STATE OAKLAND, CA ZIP 94607
OWNER NAME UNION PACIFIC RAILROAD
SPECIFIC LOCATION OF PROJECT 1717 MIDDLE HARBOR Rd.

TANK REMOVAL
SCHEDULED STARTUP DATE 5/13/93
VAPORS REMOVED BY: DRY ICE
[X] WATER WASH
[ ] VAPOR FREEING (CO^2)
[ ] VENTILATION

CONTAMINATED SOIL EXCAVATION
SCHEDULED STARTUP DATE 5/10/93
STOCKPILES WILL BE COVERED? YES X NO ___
ALTERNATIVE METHOD OF AERATION (DESCRIBE BELOW):
___
(MAY REQUIRE PERMIT)

CONTRACTOR INFORMATION

NAME U.S. POLLUTION CONTROL. CONTACT TIM AIBRIGHT
ADDRESS 4385 E. LOWELL ST. SUITE-C PHONE (909) 467-3733
CITY, STATE, ZIP ONTARIO, CA 91761

CONSULTANT INFORMATION
(IF APPLICABLE)

NAME U.S. POLLUTION CONTROL. CONTACT KEN ROSE
ADDRESS 5665 FLATIRON PARKWAY PHONE (303) 938-5500
CITY, STATE, ZIP Boulder, CO

FOR OFFICE USE ONLY

DATE RECEIVED FAX 5/6/93 BY Bly (init.)
DATE POSTMARKED ___ BY ___ (init.)
CC: INSPECTOR NO. 524 DATE 5/7/93 BY Bly (init.)
UPDATE: CONTACT NAME ___ DATE ___ BY ___ (init.)
BAAQMD N # ___ DATA ENTRY ___

APPENDIX D

ES&E SOIL SAMPLING PROCEDURE NOTES AND SAMPLE CHAIN OF CUSTODY

Environmental Science & Engineering, Inc.

DATE 5/13/93 TIME

JOB NAME/NUMBER 6-93-5079
CLIENT USPCI (Tim Albright)
OBSERVER KL
TOT HRS
LOCATION 1717 M. Harbor Rd.

12,000 gal = 95.5 inches X 384 inches — from Don, USPCI

800 Depart
855 Arrive. 12,000 gal waste oil tank. SVS pended tank w/ cords to crane (Solvent Services, Inc.)
- fiberglass, double-walled? ~~Steel~~ SSI, skimming oil from surface of gw. Concrete pad, 16" thick w/ dimensions of 40' (E-W) x 9' removed, pea gravel below concrete to ~3' removed from above the tank. Top of tank reported at ~3 ft. After removal of overburden, tank reportedly popped-up. Sludge submerged settled to east end — pumped out. Then west end reportedly dropped at hut concrete pad — hole at west end.

Waste oil from drip pans between rails to sump (10 ft diam grate) to two-chamber oil/water separator. Oil/water separator removed from west end of UST.

905 KL signed USPCI H&S Plan. Jennifer Eberly, Alameda County present
925 Tim Albright says there are 5 gw monitoring wells, all with floating product in immediate site vicinity. GW in excavation above top of tank -> < than 3 ft below concrete pad. T. Albright ~~does~~ wants to forgone sampling since 12,000 gal UST in w/in defined plume. Product in wells is reportedly diesel. There is one recovery well ~ ft SW of west end of tank w/ operating pump. There are 10 gw wells ET 3 recovery wells at site.
1005 Lt. Calvin Chayce Fire Dept arrives — to observe pulling tank & placing on flatbed truck (Erikson) Richmond, CA).
Will hoist tank, place on ground, rotate straps & lift in area, then back up flatbed truck. Don, USPCI has LEL Meter - 9:1
1025 Pull tank. No holes except for new hole (~1 ft diam) @ west end.
1035 Lt. Chayce departs.
Ericksen pumped out ~250 gallons of liquid from excavation — most is water.

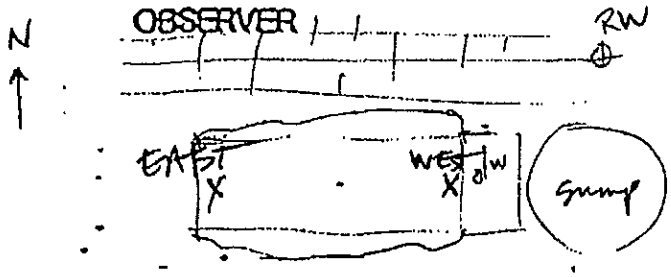
Environmental Science & Engineering, Inc.

DATE 5/13/93 TIME

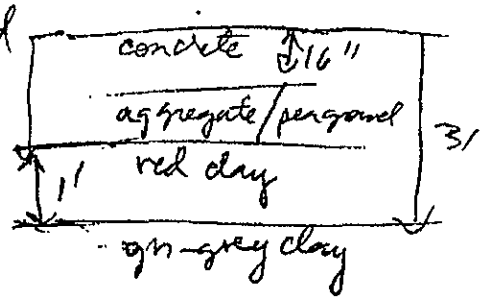
JOB NAME/NUMBER 6-93-5079 TOT HRS

CLIENT US PCI

OBSERVER



LOCATION WEST end



1100 Continue pumping oil/water from excavation.

1115 Sample west end of tank in sidewall @ ~ 4.5 ft. Groundwater @ about 6 feet bgs.

~~1130~~ ~~WEST @ 4.5'~~ 1115, Sidewall sample - gn-grey, mod plast. cl. ~~Sidewall sample~~ strong HC odor

1130 Water pipe leaking, located on S side of tank exc. Remove soil from above piping.

1150 Prepare to sample from east end. Cannot sample at end because telephone pole located ~3 ft from limit of excavation

1155 Backhoe approach on S side (backhoe tracks) & collect sample

1205 Sample EAST from SE sidewall (corner) @ 5.5 ft - gn-gray f.g. sand strong HC odor

1225 J. Eberle departs

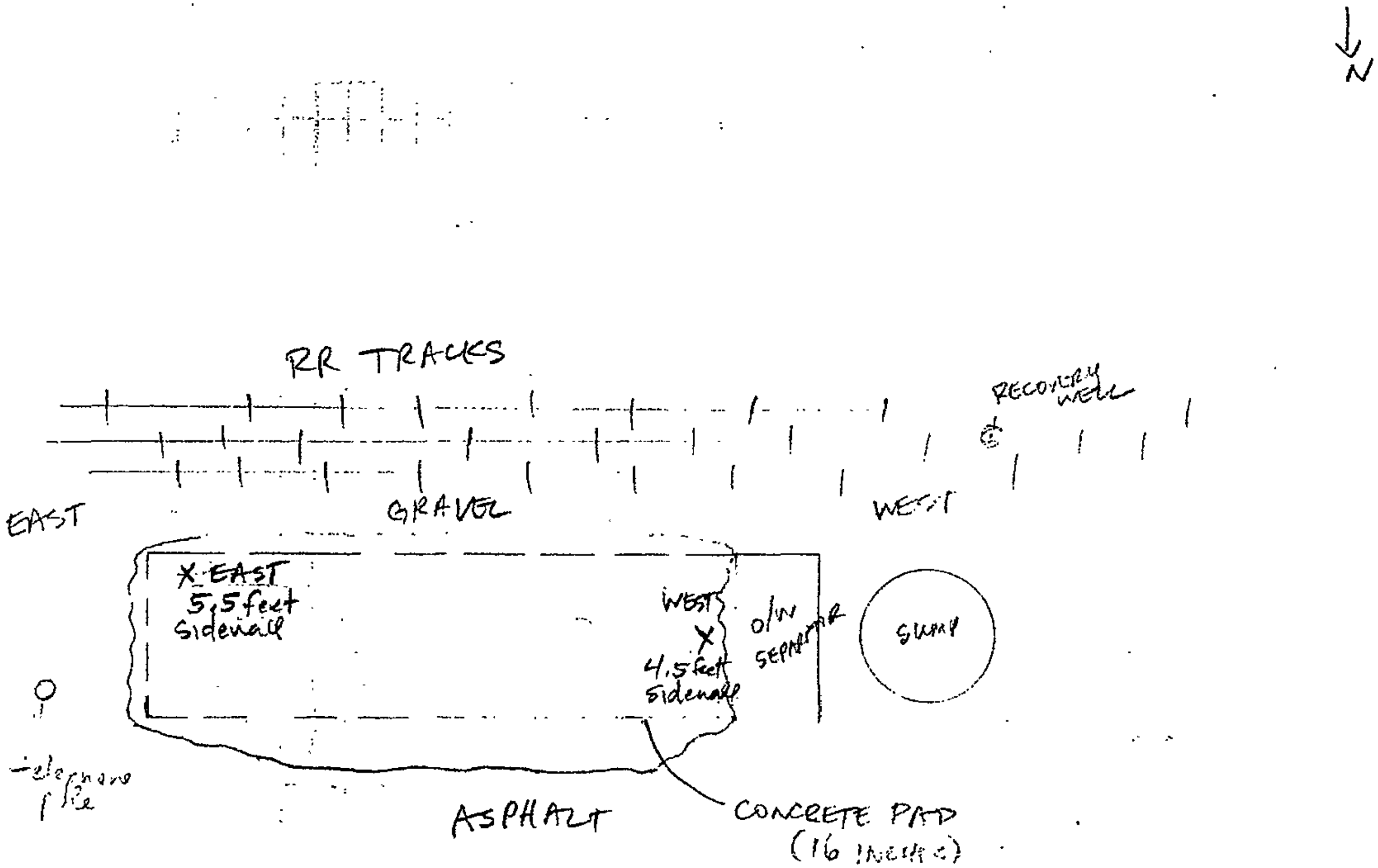
1235 KL departs to Sequoia Analytical

1300 LUNCH

1430 Arrive ESE. Unload. Deliver two soil samples to Sequoia.

Environmental Science & Engineering, Inc.
A CILCORP Company

CLIENT USPS
PROJECT NAME 1717 Middle Harbor Road
PROJECT # 6-93-5070 Specified(?)
PAGE NO. 1 OF 1
DATE 5/13/93
PREPARED BY KAL
CHECKED BY



Jennifer Eberle, Alameda County Health specified sampling locations

SOIL SAMPLES:

SAMPLE NO.	DEPTH (feet)	LOCATION	DATE	TIME
WEST	4.5	W. SIDEWALL	5/13/93	11:15
EAST	5.5	SE SIDEWALL	5/13/93	12:05

CP:1W

USPCI # 93409

CHAIN OF CUSTODY RECORD

DATE 5/13/93 PAGE 1 OF 1

PROJECT NAME USPCI - Oakland

ADDRESS 1717 M. Harbor Rd. Oakland, CA

PROJECT NO. 6-93-5079

SAMPLED BY KERRY LEFEVER

LAB NAME SEQUOIA ANALYTICAL

ESE Environmental Science & Engineering, Inc.

4090 Nelson Avenue Suite J Concord, CA 94520

(415) 685-4053

Fax (415) 685-5323

SAMPLE #	DATE	TIME	LOCATION	ANALYSES TO BE PERFORMED: TPH-G/BTEX	TPH-D	O&G SM5520F	chlorinated hydrocarbons 8010	Cd/Cr/Pb/Zn/Ni AA	Semi volatiles 8270					MATRIX	NUMBER OF CONTAINERS	REMARKS (CONTAINER, SIZE, ETC.)
WEST	5/13/93	1115	west sidewall @4.5 feet	X	X	X	X	X	X					SOIL	1	BRASS RING
EAST	5/13/93	1205	SE sidewall @6.5 feet	X	X	X	X	X	X					SOIL	1	BRASS RING

RELINQUISHED BY: (signature)	RECEIVED BY: (signature)	date	time
1. Kerry Lefever		5/13/93	3:55pm
2.			
3.			
4.			
5.			

2 TOTAL NUMBER OF CONTAINERS

REPORT RESULTS TO: Tim Albright 93409

SPECIAL SHIPMENT REQUIREMENTS

INSTRUCTIONS TO LABORATORY (handling, analyses, storage, etc.):

5 DAY TA

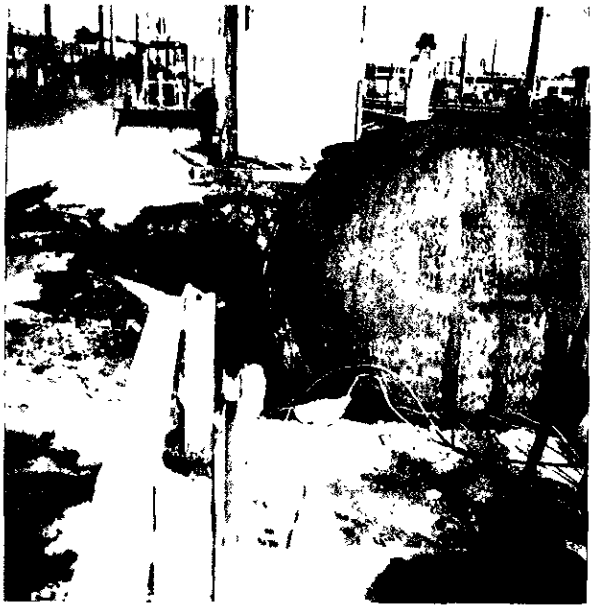
SAMPLE RECEIPT

CHAIN OF CUSTODY SEALS	
REC'D GOOD CONDTN/COLD	
CONFORMS TO RECORD	

APPENDIX E

PHOTOGRAPHS OF TANK REMOVAL

Oil/Water Separator on top of concrete tank pad prior to tank removal



12,000 gallon fiberglass
Waste Oil Tank

Waste Oil Tank

Note: hole in tank
occurred during tank
removal activities

Water and diesel fuel
in tank pit

West end of pit

East end of pit