



ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
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May 28, 1997
STID 4609
page 1 of 2

Harry Patterson
Union Pacific Railroad
1416 Dodge St.
Omaha NE 68179

REMEDIAL ACTION COMPLETION CERTIFICATION

RE: Hadley Auto Transport, aka Chrysler Auto Unloading Site, 1407 Middle Harbor Rd.,
Oakland CA 94607

Dear Mr. Patterson,

This letter confirms the completion of site investigation and remedial action for the six underground storage tanks (including one clarifier) formerly located in the vicinity of the current maintenance shop at the above referenced site. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tanks is greatly appreciated.

Based on information in the above-referenced file, and with the provision that the information provided to this agency was accurate and representative of site conditions, **no further action related to the underground tank release is required.**

This notice is issued pursuant to a regulation contained in Title 23, Division 3, Chapter 16, Section 2721(e) of the California Code of Regulations.

Please contact our office if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung, Director

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Harry Patterson

cc: Gordon Coleman, Chief, Environmental Protection Division
Kevin Graves, RWQCB
Lori Casias, SWRCB
Dave Deaner, SWRCB, UST Cleanup Fund Program
Attn: Leroy Griffin, Supervisor, Hazardous Materials Program, City of Oakland, Fire
Services Agency, 505-14th St., suite 702, Oakland CA 94612
Ken Rose, USPCI/Laidlaw, 5665 Flatiron Pky, Boulder CO 80301
Diane Heinze, Port of Oakland, 530 Water St., Oakland CA 94607
Jennifer Eberle (3 copies of letter only)

LOP/Completion
je.4609clos.let

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



RO # 736

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Harry Patterson
Union Pacific Railroad
1416 Dodge St.
Omaha NE 68179

RE: **CASE CLOSURE**, Hadley Auto Transport, aka Chrysler Auto Unloading Site,
Maintenance Shop, ¹⁴⁰¹1407 Middle Harbor Rd., Oakland CA 94607

Dear Mr. Patterson,

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]). The State Water Resources Control Board (SWRCB) adopted this letter on 2/20/97. As of 3/1/97, Alameda County Health Care Services Agency, Environmental Health Services, Local Oversight Program is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. **The subject fuel leak case is closed.**

SITE INVESTIGATION AND CLEANUP SUMMARY:

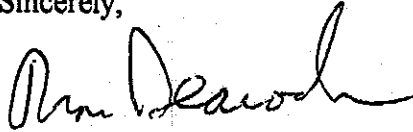
Please be advised that the following conditions exist at the site:

- * Four hundred fifty-five (455) parts per million (ppm) Total Petroleum Hydrocarbons as Oil and Grease (TPH-O&G), 0.055 ppm toluene, and 0.035 ppm xylene remain *in the native soil* in the vicinity of the former waste oil UST.
- * Twenty-two (22) ppm of hydrocarbons in the range of C10 to C50 remain *in the native soil* in the vicinity of the former fuel UST.
- * Four thousand and eight hundred (4,800) parts per billion (ppb) TPH as diesel, and 1,800 ppb motor oil (method 8015m) remain *in the groundwater*.

If you have any questions, please call Ms. Jennifer Eberle at 510-567-6761. Thank you.

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Harry Patterson

Sincerely,



Tom Peacock
Supervisor, Local Oversight Program

Enclosures:

1. Case Closure Letter
2. Case Closure Summary

cc: Ken Rose, USPCI/Laidlaw, 5665 Flatiron Pky, Boulder CO 80301
Diane Heinze, Port of Oakland, 530 Water St., Oakland CA 94607
Attn: Leroy Griffin, Supervisor, Hazardous Materials Program, City of Oakland, Fire
Services Agency, 505-14th St., suite 702, Oakland CA 94612
Jennifer Eberle (3 copies of letter only)

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: 1/27/97

Agency name: **Alameda County-HazMat** Address: **1131 Harbor Bay Pky**
City/State/Zip: **Alameda CA 94502** Phone: **(510) 567-6700**
Responsible staff person: **Jennifer Eberle** Title: **Hazardous Materials Spec.**

II. CASE INFORMATION

Site facility name: **Chrysler Auto Unloading Facility**
Site facility address: **1401-07 Middle Harbor Rd., Oakland CA 94607**
RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **4609**
ULR filing date: **8/28/92** SWEEPS No: **N/A**

Responsible Parties: **Addresses:** **Phone Numbers:**
Harry Patterson, Union Pacific Railroad Co., 1416 Dodge St., Omaha Nebraska 68179

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	1,000	motor oil	Removed	2/20/91
2	10,000	diesel	Removed	2/20/91
3	10,000	diesel	Removed	2/20/91
4	10,000	gasoline	Removed	2/20/91
5	108	clarifier	Removed	12/6/91
6	2,000	waste oil	Removed	12/10/91

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: apparently leaking clarifier vessels (not the clarifier UST), and the motor oil UST
Site characterization complete? **YES**
Monitoring Wells installed? **YES** Number: **3** Proper screened interval? **YES**
Highest GW depth below ground surface (DTW): **3.90'bgs** Lowest GW depth: **5.22'bgs**
Flow direction: **southeast**
Most sensitive current use at present: **automobile storage lot**
Are drinking water wells affected? **NO** Aquifer name: **n/a**
Is surface water affected? **Probably not** Nearest SW name: **Oakland Inner Harbor (approximately 1000 ft south of site)**
Off-site beneficial use impacts (addresses/locations): **n/a**
Report(s) on file? **YES at Alameda County, 1131 Harbor Bay Pky, Alameda CA 94502**

Leaking Underground Fuel Storage Tank Program

Treatment and Disposal of Affected Material:

<u>Material</u>	<u>Amount (include units)</u>	<u>Action (Treatment of Disposal w/destination)</u>	<u>Date</u>
Tank	500 lb (2,000-gal waste oil UST)	disposed to Erickson in Richmond	12/10/91
	500 lb (108-gallon clarifier UST)	disposed to Erickson in Richmond	12/6/91
Soil	84 yd ³	disposed to USPCI's Grassy Mountain site in Clive, Utah (This included three 10,000-gal fiberglass USTs broken during removal, and presumably the 1,000-gal motor oil UST which was presumed to be fiberglass)	2/22/91
	1,815 tons	disposed to USPCI's Grassy Mountain site in Clive, Utah (haz) And to Glens Excavating in Tooele, Utah (non-haz)	2/13/92 2/13/92
Groundwater	14,500 gal	disposed at Solvent Services, Inc. in San Jose	12/91
	30,000 gal	disposed into storm drain under RWQCB approval	10/92

Maximum Documented Contaminant Concentrations for UST Sites - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	<u>Before</u>	<u>After</u>	<u>Before</u>	<u>After</u>
TPH (Gas)	ND*	ND***	ND#	ND^
TPH (Diesel)	ND*	ND***	5,600#	4,800^^
Benzene	0.001*	ND***	ND#	ND^ or ^^
Toluene	0.325**	0.055****	ND#	ND^ or ^^
Ethylbenzene	0.360**	ND***	ND#	ND^ or ^^
Xylene	1.170**	0.035****	6#	ND^ or ^^
C17-C40 Hcs	359*	NA	NA	NA
C14-C40 Hcs	231*	NA	NA	NA
C10-C50 Hcs	NA	22***	NA	NA
TPH (418.1)	15,200**	455****	NA	NA
other VOCs	**	****	NA	ND^^
SVOCs	**	ND****	NA	ND^^
metals	**	****	NA	^^
motor oil (8015m)	NA	NA	NA	1,800^^
TPH (413.1)	NA	NA	11,000##	NA
MTBE	NA	NA	NA	ND^^

See footnotes on next page

Leaking Underground Fuel Storage Tank Program

- * fuel UST samples collected on 2/20/91 (see Table 1)
- ** waste oil UST samples collected on 12/10/91 (see Table 4).
- *** fuel UST verification samples collected on 3/1/91 (see Table 3)
- **** waste oil UST verification samples collected on 12/17/91 (see Table 5)
- # grab sample from Baker tank/UST pits collected on 2/20/91 (see Table 2)
- ## grab sample from motor oil UST pit collected on 2/20/91 (see Table 2)
- ^ 2/27/96 MW sampling event (see Table 8)
- ^^ 9/26/96 MW sampling event (see Table 9)

Maximum Documented Contaminant Concentrations for Oily Seepage Site - - Before and After Cleanup

Contaminant	Soil (ppm) (SEE TABLE 6)	
	<u>Before *</u>	<u>After**</u>
TPH (Gas)	ND	10
TPH (Diesel)	23,500	6,450
Benzene	ND	ND
Toluene	ND	ND
Ethylbenzene	ND	0.014
Xylene	ND	0.045

* 9/8/92 to 9/14/92 initial sampling; see table 6

** 9/15/92 to 9/17/92 sampling; see table 6

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the
Regional Board Basin Plan? Undetermined

Does completed corrective action protect potential beneficial uses per the
Regional Board Basin Plan? Undetermined

Does corrective action protect public health for current land use (commercial/industrial)? YES

Site management requirements: If the areas with residual soil concentrations are to be excavated in the future, a site management plan should be prepared. The management plan should include an evaluation of the risks to human health from exposure to contaminants left in soil and/or groundwater.

Should corrective action be reviewed if land use changes? YES

Monitoring wells Decommissioned: Not yet; waiting for RWQCB signoff

Leaking Underground Fuel Storage Tank Program

Number Decommissioned: ~~0~~ 2

Number Retained: ~~3~~ 1

List enforcement actions taken: none

List enforcement actions rescinded: none

V. ADDITIONAL COMMENTS, DATA, ETC.

On 2/20/91, four USTs were removed from the vicinity of the maintenance shop. See Figure 1. They included a 1,000-gallon (presumably fiberglass) new motor oil UST, two 10,000-gallon fiberglass diesel USTs, and one 10,000-gallon fiberglass gasoline UST. The removal was witnessed by Dennis Byrne of Alameda County. His inspection report makes the following comments: One soil sample was collected from the steel UST at 3.5' below ground surface (bgs) (sample 7). Two soil samples were collected from either end of the fiberglass USTs at 3.5' bgs, due to shallow groundwater depth (samples 1-6).

One water sample was also collected (sample 8W). Two samples were collected from the soil stockpiles (samples 9S, 10S). The new oil UST was located in a pit separate from the other USTs.

Results from the UST removal were summarized in USPCI's "Final Closure Report," dated 11/21/91. This report listed the USTs differently from Mr. Byrne's inspection report, in as much as USPCI reported a) the new oil UST as being 2,000 gallons in size (pg 1), and b) soil samples were collected at approximately 12'bgs in the gas and diesel UST excavation (pg 4), and c) soil samples were collected at approximately 8'bgs in the new oil UST excavation (pg 4).

Results from the diesel and gasoline USTs' soil samples indicated ND (or at the detection limit) BTEX, ND TPHg, ND TPHd, and ND to 177 mg/kg of "C17-C40 hydrocarbons" (motor oil range). See Table 1. Note that this table does not include results from sample #1; the lab report indicates 231 mg/kg of "C14-C40 hydrocarbons." Results from the new oil UST soil sample indicated ND BTEX, ND TPHg, ND TPHd, 359 mg/kg of "C17-C40 hydrocarbons" (motor oil range), and 0.29% Oil and Grease. Stockpile samples were also ND (or at the detection limit) of BTEX, ND TPHg, ND TPHd, and 0.8 and 231 mg/kg "C17-C40 hydrocarbons." Results from the water sample (collected in the new oil UST pit) were 11,000 ug/L Oil and Grease. See Table 2.

During tank removal, groundwater infiltrated into the excavation. Approximately 20,000 gallons of water was pumped out and stored in Baker tanks onsite. A water sample was reportedly collected from the Baker tank on 2/20/91. Results indicated ND BTE, 6 ppb xylenes, ND TPHg, ND TPHd, and 5,600 ppb "C10-C22 hydrocarbons" (diesel). See Table 2. The water was reportedly transported to the Union Pacific water treatment plant in Oakland to be treated prior to discharge.

Leaking Underground Fuel Storage Tank Program

USPCI reportedly overexcavated both UST pits and collected verification samples on 3/1/91. The soil at sampling locations #1, #4, and #7 were reportedly overexcavated. Verification samples #1B, #4B, and #7B were collected approximately 3' in from the original samples. See **Figure 1**. Results indicated concentrations ND (or at the detection limit) BTEX, ND TPHg, ND TPHd, and ND of "C10-C50 hydrocarbons" except 22 mg/kg "C10-C50 hydrocarbons" in sample #7B. See **Table 3**.

Approximately 84 yd³ of contaminated soil was transported to USPCI's Grassy Mountain Facility in Clive, Utah on 2/22/91. The three 10,000-gallon fiberglass USTs were broken during removal, and reportedly transported along with the soil to the facility in Clive, Utah. There is no disposal documentation for the 1,000 UST, although it was presumably disposed of along with the three 10,000-gallon fiberglass USTs.

On 12/6/91, Dennis Byrne witnessed the removal of one 2,000-gallon waste oil UST and a 108-gallon below ground clarifier "UST." See **Figure 2**. There were no obvious holes in the 108-gallon "UST," but there was "considerable evidence of contamination in the soil," reportedly caused by seepage from clarifier vessels associated with this tank. Water appeared in the excavation at 5'bgs. One soil sample was collected at approximately 5'bgs. USPCI's 5/3/94 "Underground Storage Tank Closure Report" presented the findings related to the 12/91 removal of a below-ground clarifier and associated 108-gallon UST, and the removal of a 2,000-gallon waste oil UST, as well as the ensuing soil excavation and site remediation. Results from the clarifier soil sample (UP-C-1-2ft) was analyzed for TPH (method 418.1), VOCs, SVOCs, and TTLC metals. See **Table 4**. Results included SVOCs, VOCs, 5,450 mg/kg TPH, and metals. Approximately 25 tons of discolored soil was overexcavated from this area.

The 2,000-gallon (fiberglass) waste oil UST was removed on 12/10/91. Stained soil was observed in the immediate vicinity of this UST. A large crack was observed along the top of this UST. Two soil samples were collected from the base of the bank excavation (samples NBS-W6 and NBS-E6). The samples were analyzed for TPH (method 418.1), VOCs, SVOCs, PCBs, TCLP, RCRA metals and TTLC metals. See **Table 4**. Results included ND PCBs, SVOCs, VOCs, some metals, and up to 15,200 mg/kg TPH.

The waste oil UST excavation was overexcavated, and 19 verification soil samples were collected on 12/17/91. See **Table 5 and Figure 3**. The samples were analyzed for TPH (method 418.1), Cd, Cr, Pb, Ni, Zn, SVOCs (method 8270), and VOCs (method 8240). Maximum concentrations detected were 455 mg/kg TPH, 1.04 mg/kg Cd, 16.70 mg/kg Cr, 7.00 mg/kg Pb, 21.00 mg/kg Ni, 22.00 mg/kg Zn, ND SVOCs, and the following VOCs: 0.120 mg/kg acetone, 0.055 mg/kg toluene, and 0.035 mg/kg total xylenes.

Approximately 1,815 tons of soil was removed from the former 2,000-gallon waste oil UST excavation in 19 rail gondolas on 2/13/92. Thirteen of the rail gondolas were transported to Glens Excavating in Tooele, Utah as non-hazardous material. Six rail gondolas were transported to USPCI's Grassy Mountain facility in Clive, Utah as hazardous waste. In addition, approximately 14,500 gallons of groundwater was pumped from the two excavations, and disposed under hazardous waste manifest to Solvent Services Inc in San Jose, between December 6 and December 18, 1991.

Leaking Underground Fuel Storage Tank Program

On 9/1/92, USPCI began excavating soil due to the discovery of an oily seepage from the asphalt pavement near an abandoned building located east of the former UST locations. ESE collected soil samples on 9/2/92. It was determined that the source of the seep was fill material in the upper 3 to 5 feet of soil. The fill contained gravel, oily sludge and old debris (i.e., a tongue and groove wood box, old Pepsi bottles). The excavation was continued to groundwater (approximately 7' bgs). **Approximately 1,800 yd³ of soil was excavated and stored on plastic for future disposal.** A grab groundwater sample was collected on 9/8/92. Results indicated ND TPHg, TPHd, and BTEX. Although some metals were detected, the concentrations reportedly did not exceed the MCLs. Approximately 30,000 gallons of groundwater were removed from the excavation and discharged into the storm drain system, with the approval of the RWQCB (10/1/92 letter from ESE).

These activities were compiled by ESE in their report titled "Report of Excavation," dated 11/3/92. They concluded that no further action was needed. Most of the contamination was removed. A few "hotspots" were left in place in the sidewalls, due to site constraints. **See Figures 4, 5, and 6.** They include 6,450 mg/kg TPHd below the active storm drain (sample 9-15-E at 8' bgs), 1,900 mg/kg TPHd (sample 9-17-C at 7' bgs), and 690 mg/kg TPHd (sample 9-17-D at 7' bgs). BTEX and TPHg were ND or at low concentrations. **See Table 6.** Although diesel range hydrocarbons were detected in the asphalt fill, it was believed to be in an immobile state.

Five borings were drilled on 3/16/95; three were converted into monitoring wells in the locations of the former USTs and the oily seepage. **See Figure 7.** Soil samples were collected from each boring. They were analyzed for BTEX, TPHg, and TPHd. Results indicated ND BTEX (except trace concentrations in MW-1), ND TPHg, ND TPHd, and up to 206 mg/kg "C10-C50 hydrocarbons." **See Table 7.**

Groundwater flow direction was southeast on 3/21/95, 4/25/95, 8/10/95, 11/28/95, and 2/27/96. Groundwater has been ND for BTEX and TPHg for four quarters. TPHd concentrations have ranged from ND to 2,100 ug/L. These are fairly low concentrations. **See Table 8.** Groundwater was sampled by another consultant on 9/26/96; samples were analyzed for metals, MTBE, VOCs (8240), SVOCs (8270), and TPH-extractables (diesel and motor oil). Results indicated ND VOCs, ND SVOCs, ND MTBE, up to 4,800 ug/L diesel, up to 1,800 ug/L motor oil, and some metals. **See Table 9.** The metals concentrations were all below MCLs.

Although a sheen was reported in MW3 on 9/26/96, additional monitoring by Shawnee Co. on 11/22/96 indicated no sheen or product in any of these wells. Note that MW3 is located next to an active storm drain.

The residual concentrations were compared to the Tier 1 look up table in the American Society of Testing and Materials' (ASTM) "Risk Based Corrective Action Applied at Petroleum Release Sites," document E1739-95. As noted in Section III above, there is no residual benzene or ethylbenzene in soil. However, there was 0.055 ppm toluene, 0.035 ppm xylenes, and 455 ppm TPH (418.1). The toluene and xylene concentrations are lower than the RBSLs for the outdoor and indoor air pathways. There is no published literature for comparing TPH (418.1) concentrations.

There was no residual BTEX in groundwater. However, there was 4,800 ppb TPHd in groundwater on 9/26/96. This concentration is extrapolated for naphthalene by multiplying by a factor of 0.0013, since naphthalene

Leaking Underground Fuel Storage Tank Program

comprises 0.13% of diesel. The result is 6.24 ug/L naphthalene, which is <the RBSL (hazard quotient) of 4,740 ug/L, using the groundwater to building pathway, residential scenario. The extrapolation for benzo(a)pyrene is a moot issue, since the RBSL is "S," meaning that the "selected risk level is not exceeded for all possible dissolved levels."

In 1996, the Port of Oakland contracted Shawnee Co. Inc. to do additional investigation, since the Port was considering purchasing the property. Shawnee Co. completed 8 borings in July 1996, and 41 soil gas survey points in August 1996. These borings/points were emplaced throughout the site, and this investigation is to be considered separate from the UST/oily seepage investigation. Mr. Sum Arigala of the RWQCB will be overseeing this work.

To summarize, the reasons that no further investigations are recommended with respect to the former USTs at this site are as follows:

- * The sources have been removed (six USTs, 45,500 gallons of water from the excavations, and 84 yd³ plus 1840 tons of contaminated soil);
- * The site has been adequately characterized;
- * The wells were located downgradient from the areas of release, and they have been ND for BTEX and TPHg for 5 and 4 quarters, respectively;
- * The closest environmental receptor in the site vicinity is the estuary (Inner Harbor), which lies approximately 1,000 feet from the site (a significant and unlikely distance for a hydrocarbon plume to travel); and
- * There appears to be no significant risk to human health.

VI. LOCAL AGENCY REPRESENTATIVE DATA

Name: Jennifer Eberle Title: Hazardous Materials Specialist

Signature: *J Eberle* Date: 2-6-97

Reviewed by

Name: Amy Leech Title: Hazardous Materials Specialist

Signature: *A Leech* Date: 2/24/97

Name: Tom Peacock Title: Manager of LOP

Signature: *Tom Peacock* Date: 2-28-97

VII. RWQCB NOTIFICATION

Date Submitted to RWQCB: 2-28-97 RWQCB Response: *Approved*

RWQCB Staff Name: Kevin Graves Date:

Associate Water Resources Control Engineer

3-18-97
[Signature]

**TABLE 1
UPRR-OAKLAND
ANALYTICAL RESULTS
SOIL SAMPLING 2/20/91**

PARAMETER	SAMPLE NUMBER: (UNITS = MG/KG)									
	#1	#2	#3	#4	#5	#6	#7	#9	#10	
Benzene	BDL	BDL	BDL	0.001 ✓	BDL	BDL	BDL ✓	BDL	BDL	
Ethylbenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL ✓	BDL	BDL	
Toluene	BDL	BDL	BDL	0.001 ✓	BDL	BDL	BDL ✓	BDL	0.001	
Xylenes	0.001	BDL	BDL	BDL	BDL	BDL	BDL ✓	BDL	BDL	
Gasoline	BDL ✓	BDL	BDL	BDL	BDL	BDL	BDL ✓	BDL	BDL	
Diesel	BDL ✓	BDL	BDL	BDL	BDL	BDL	BDL ✓	BDL	BDL	
C17-C40 Hydrocarbons	BDL	18.8	0.5	177 ✓	3.2	1.2 ✓	358.8 ✓	0.8	231 ✓	
Oil and Grease	NA	NA	NA	NA	NA	NA	0.29% ✓	NA	NA	

UST
new oil

NOTE: BDL = Below Detection Limit
NA = Not Analyzed For

C17 40

931

samples 1-6: diesel + gas UST

TABLE 2
UPRR-OAKLAND
ANALYTICAL RESULTS
WATER SAMPLING 2/20/91

PARAMETER	SAMPLE NUMBER:	
	<i>new oil</i> #8	#11 <i>Baker tank</i>
Benzene	NA	BDL
Ethylbenzene	NA	BDL
Toluene	NA	BDL
Xylenes	NA	0.006 mg/l
Gasoline	NA	BDL
Diesel	NA	BDL
C10-C22 Hydrocarbons	NA	5.6 mg/kg
Oil and Grease	11.0 mg/l <i>X</i>	NA

gw fm pits + USTs

*also diesel
SW 90%0*

NOTE: BDL = Below Detection Limit
 NA = Not Analyzed For

**TABLE 3
UPRR-OAKLAND
ANALYTICAL RESULTS
VERIFICATION SOIL SAMPLING 3/1/91**

PARAMETER	SAMPLE NUMBER: (UNITS = MG/KG)			
	#1B	#4B	#7B	#12A
Benzene	BDL	BDL	BDL	BDL
Ethylbenzene	BDL	BDL	BDL	BDL
Toluene	BDL	BDL	BDL	0.001
Xylenes	0.001	BDL	BDL	NA
Gasoline	BDL	BDL	BDL	BDL
Diesel	BDL	BDL	BDL	BDL
C10-C50 Hydrocarbons	BDL	BDL	22	NA
Oil and Grease	NA	NA	NA	NA

backfill material

NOTE: BDL = Below Detection Limit
NA = Not Analyzed For

*diesel + gas VETs
operational samples*

Table #4
PCBs IN SOIL

made oil test

EPA METHOD 8080

12-10-91

SAMPLE No.	--ANALYTES--						
	AROCLORS CONCENTRATION (mg/Kg)						
	1016	1221	1232	1242	1248	1254	1260
NBS-E-6	ND	ND	ND	ND	ND	ND	ND
NBS-W-6	ND	ND	ND	ND	ND	ND	ND

ND--not detected
*Laboratory detection limits of 2.0 mg/Kg

Table #4
TCLP RCRA METALS

12-10-91

SAMPLE No.	--ANALYTES--							
	CONCENTRATION (mg/L)							
	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
NBS-W-6	ND	0.68	ND	ND	ND	ND	ND	ND
NBS-E-6	ND	0.47	ND	ND	ND	ND	ND	ND

ND--not detected
*See laboratory data sheets for specific detection limitations

initial . . . samples
w.o. + clarifier
UST

TABLE 4
VOLATILE ORGANICS IN SOIL

EPA METHOD 8240

SOIL SAMPLE NUMBER	ANALYTE*	CONCENTRATION (ug/Kg)
NBS-W-6 <i>north base center</i> 12-10-91	Ethylbenzene	220.0
	1,1,1-Trichloroethane	95.0
	Toluene	300.0
	Total Xylenes	676.0
NBS-E-6 12-10-91	Ethylbenzene	360.0
	1,1,1-Trichloroethane	840.0
	Trichloroethene	610.0
	Toluene	325.0
	Total Xylenes	1170.0
UP-C-1-2FT <i>clarifier</i> 12-6-91	Ethylbenzene	13.0
	Tetrachloroethene	13.0
	Toluene	65.0
	Total Xylenes	100.0

ND -- not detected

*Analytes not listed are recorded below laboratory detection limitations

**See laboratory data sheets for specific detection limitations

TABLE # 4

SEMIVOLATILE ORGANICS IN SOIL

EPA METHOD 8270

SOIL SAMPLE NO.	ANALYTE*	CONCENTRATION (mg/Kg)
NBS-E-6 12-10-91	Acenaphthylene	1.99
	Anthracene	0.63
	Fluorene	1.93
	Naphthalene	3.73
	Phenanthrene	5.84
	Pyrene	1.05
	Bis(2-ethylhexyl)phthalate	4.89
	Di-n-butyl phthalate	3.82
NBS-W-6 12-10-91	Acenaphthene	0.68
	Fluorene	1.43
	Naphthalene	0.85
	Phenanthrene	2.57
	Pyrene	0.46
	Bis(2-ethylhexyl)phthalate	2.91
	Di-n-butyl phthalate	1.11
UP-C-1-2FT 12-6-91	2-Methylnaphthalene	1.54
	Naphthalene	0.42
	Phenanthrene	1.15
	Pyrene	0.46

W.O.
NST

clarifier

ND -- not detected

*Analytes not listed are recorded below laboratory detection limitations

**See laboratory data sheets for specific detection limitations

clarifier +
2000 gal
waste oil UST

Table 4

TTLIC METALS FROM EXTRACTION

SAMPLE No.	-- ANALYTES --				
	CONCENTRATION (mg/Kg)				
	Cadmium	Chromium	Lead	Nickel	Zinc
NBS-W-6	ND	14.00	ND	18.30	12.30
NBS-E-6	0.49	13.70	ND	17.60	17.70
UP-C-1-2F	1.33	13.70	47.30	17.20	36.50

ND -- not detected

*See laboratory data sheets for specific detection limitations

Table 4

TOTAL PETROLEUM HYDROCARBONS IN SOIL

EPA METHOD 418.1

SAMPLE NUMBER	SAMPLE DEPTH (ft.)	TPH (mg/kg)
NBS-W-6	6'	13,200
NBS-E-6	6'	15,200
UP-C-1-2FT	2'	5,450

ND -- not detected

Laboratory detection limits of 10 mg/kg

12-10-91 }
W.O.
12-6-91
clarifier

waste oil UST

Table # 5 12-17-91

TOTAL PETROLEUM HYDROCARBONS IN SOIL VERIFICATION SOIL SAMPLES

EPA METHOD 418.1

SAMPLE NUMBER	SAMPLE DEPTH (ft.)	TPH (mg/kg)
W-6FT-1	6'	40
W-12FT-2	12'	ND
W-6FT-3	6'	250
W-12FT-4	12'	20
W-6FT-5	6'	ND
W-12FT-6	12'	250
S-6FT-1	6'	ND
S-12FT-2	12'	ND
N-6FT-1	6'	20
N-12FT-2	12'	20
E-6FT-1	6'	20
E-12FT-2	12'	ND
E-6FT-3	6'	120
E-12FT-4	12'	ND
E-6FT-5	6'	<u>455</u>
E-12FT-6	12'	ND
NB-14FT	14'	ND
MB-17FT	17'	ND
SB-17FT	17'	ND

north base (bottom)
middle base
south base

LABORATORY DETECTION LIMITATIONS OF 10 MG/KG

ND -- not detected

Laboratory detection limits of 10 mg/kg

they dewatered during overex process.

Table 2 5

12-17-91

**TTLIC METALS FROM EXTRACTION
VERIFICATION SOIL SAMPLES**

STLC 1.0 5 5 20 250

SAMPLE No.	--ANALYTES--					
	CONCENTRATION (mg/Kg)					
	Cadmium	Chromium	Lead	Nickel	Zinc	
W-6FT-1	0.60	13.20	ND	21.00	20.60	
W-12FT-2	0.70	16.70	ND	21.00	21.90	
W-6FT-3	1.04	7.42	ND	11.80	7.86	
W-12FT-4	0.66	14.5	ND	17.1	19.7	
W-6FT-5	0.48	11.9	ND	14.9	10.3	
W-12FT-6	0.44	12.2	ND	14.8	37.7	
S-6FT-1	ND	9.05	ND	13.9	10.2	
S-12FT-2	1.04	14.7	ND	19.1	34	
N-6FT-1	ND	8.18	ND	9.53	10.6	
N-12FT-2	ND	12.8	ND	7.78	16.4	
E-6FT-1	ND	8.12	ND	12.00	12.60	
E-12FT-2	ND	9.51	ND	15.40	15.70	
E-6FT-3	ND	10.20	7.00	19.20	17.30	
E-12FT-4	ND	15.10	ND	20.70	22.00	
E-6FT-5	ND	6.72	ND	11.30	10.00	
E-12FT-6	0.85	14.00	ND	10.00	12.60	
NB-14FT	ND	9.82	ND	18.70	6.44	
MB-17FT	ND	13.10	ND	10.40	9.37	
SB-17FT	ND	10.00	ND	10.40	8.27	

ND--not detected

*See laboratory data sheets for specific detection limitations

TABLE 2

12-17-91

SEMIVOLATILE ORGANICS IN SOIL
VERIFICATION SOIL SAMPLES

EPA METHOD 8270

SOIL SAMPLE NO.	ANALYTE*	CONCENTRATION (mg/Kg)
W-6FT-1	ALL	ND
W-12FT-2	ALL	ND
W-6FT-3	ALL	ND
W-12FT-4	ALL	ND
W-6FT-5	ALL	ND
W-12FT-6	ALL	ND
S-6FT-1	ALL	ND
S-12FT-2	ALL	ND
N-6FT-1	ALL	ND
N-12FT-2	ALL	ND
E-6FT-1	ALL	ND
E-12FT-2	ALL	ND
E-6FT-3	ALL	ND
E-12FT-4	ALL	ND
E-6FT-5	ALL	ND
E-12FT-6	ALL	ND
NB-14FT	ALL	ND
MB-17FT	ALL	ND
SB-17FT	ALL	ND

ND -- not detected

*Analytes not listed are recorded below laboratory detection limitations

**See laboratory data sheets for specific detection limitations

TABLE ~~4~~ 5
**VOLATILE ORGANICS IN SOIL
 VERIFICATION SOIL SAMPLES**

12-17-91

EPA METHOD 8240

SOIL SAMPLE NUMBER	ANALYTE*	CONCENTRATION (ug/Kg)
W-6FT-1	ALL	ND
W-12FT-2	ALL	ND
W-6FT-3	ALL	ND
W-12FT-4	ALL	ND
W-6FT-5	ALL	ND
W-12FT-6	ALL	ND
S-6FT-1	Acetone Total Xylenes	120.0 15.0
S-12FT-2	Acetone	50.0
N-6FT-1	Acetone	35.0
N-12FT-2	ALL	ND
E-6FT-1	ALL	ND
E-12FT-2	Total Xylenes	35.0
E-6FT-3	ALL	ND
E-12FT-4	Total Xylenes	10.0
E-6FT-5	ALL	ND
E-12FT-4	ALL	ND
NB-14FT	Toluene	55.0
MB-17FT	Toluene	25.0
SB-17FT	Toluene	25.0

SEE LABORATORY DATA SHEETS FOR SPECIFIC DETECTION LIMITATIONS

ALL - ALL ANALYTES

ND - NOT DETECTED

TABLE 6

Oily Seepage
Sept 92SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES
USPCI, 1407 MIDDLE HARBOR ROAD, OAKLAND, CALIFORNIA

Sample Number	Location	Depth (feet)	Date	TPH-d (mg/Kg)	TPH-g (mg/Kg)	B	T	E	X
F-S-1 ¹	Floor	12	9/8	ND<10	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.010
F-S-2 ¹	Floor	12	9/8	ND<10	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.010
F-S-3 ¹	Floor	12	9/8	ND<10	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.010
F-S-4 ¹	Floor	14	9/8	ND<10	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.010
9-11-A ¹	Floor	14	9/11	ND<10	--	ND<0.005	ND<0.005	ND<0.005	ND<0.010
9-11-B ¹	Floor	14	9/11	ND<10	--	ND<0.005	ND<0.005	ND<0.005	ND<0.010
91492-A ¹	Floor	14	9/14	ND<10	--	ND<0.005	ND<0.005	ND<0.005	ND<0.010
91492-B ¹	Floor	14	9/14	ND<10	--	ND<0.005	ND<0.005	ND<0.005	ND<0.010
91492-P ¹	Sidewall	4	9/14	23,500	--	ND<0.005	ND<0.005	0.436	2.60
9-15-A ¹	Sidewall	7	9/15	ND<10	--	ND<0.005	ND<0.005	ND<0.005	ND<0.010
9-15-B ¹	Sidewall	7	9/15	ND<10	--	ND<0.005	ND<0.005	ND<0.005	ND<0.010
9-15-C ¹	Sidewall	7	9/15	ND<10	--	ND<0.005	ND<0.005	ND<0.005	ND<0.010
9-15-D ¹	Sidewall	7	9/15	ND<10	--	ND<0.005	ND<0.005	ND<0.005	ND<0.010
9-15-E ¹ <i>east</i>	Sidewall	8	9/15	6,450	--	ND<0.005	ND<0.005	ND<0.005	ND<0.010
9-15-F ²	Sidewall	7	9/15	ND<1	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005
9-15-G ²	Sidewall	6	9/15	3.4	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005
9-15-H ²	Sidewall	7	9/15	ND<1	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005

6
TABLE 4 (Continued...)

**SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES
USPCI, 1407 MIDDLE HARBOR ROAD, OAKLAND, CALIFORNIA**

Sample Number	Location	Depth (feet)	Date	TPH-d (mg/Kg)	TPH-g (mg/Kg)	B	T	E	X
9-15-I ²	Sidewall	6	9/15	12	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005
9-15-J ¹	Sidewall	6	9/15	ND<10	--	ND<0.005	ND<0.005	ND<0.005	ND<0.010
9-15-K ¹	Sidewall	6	9/15	ND<10	--	ND<0.005	ND<0.005	ND<0.005	ND<0.010
9-15-L ¹	Sidewall	6	9/15	ND<10	--	ND<0.005	ND<0.005	ND<0.005	ND<0.010
9-15-M ¹	Sidewall	6	9/15	ND<10	--	ND<0.005	ND<0.005	ND<0.005	ND<0.010
9-15-N ¹	Sidewall	7	9/15	ND<10	--	ND<0.005	ND<0.005	ND<0.005	ND<0.010
9-15-O ²	Sidewall	7	9/15	3.0	--	ND<0.005	ND<0.005	ND<0.005	ND<0.005
9-15-P ²	Sidewall	7	9/15	ND<1	--	ND<0.005	ND<0.005	ND<0.005	ND<0.005
9-15-Q ²	Sidewall	7	9/15	15	--	ND<0.005	ND<0.005	ND<0.005	ND<0.005
9-15-R ²	Sidewall	7	9/15	5.1	--	ND<0.005	ND<0.005	ND<0.005	ND<0.005
9-15-S ²	Sidewall	7	9/15	7.4	--	ND<0.005	ND<0.005	ND<0.005	ND<0.005
9-15-T ²	Sidewall	7	9/15	3.3	--	ND<0.005	ND<0.005	ND<0.005	ND<0.005
9-15-U ²	Sidewall	6	9/15	6.3	--	ND<0.005	ND<0.005	ND<0.005	ND<0.005
9-15-W ²	Sidewall	7	9/15	14	--	ND<0.005	ND<0.005	ND<0.005	ND<0.005
9-15-Y ²	Sidewall	7	9/15	ND<1	--	ND<0.005	ND<0.005	ND<0.005	ND<0.005
9-15-Base ²	Floor	12	9/15	24	--	ND<0.005	ND<0.005	ND<0.005	ND<0.005
9-17-PH1 ²	Pothole	6	9/17	1.1	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005

6
TABLE 4 (Continued...)

**SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES
USPCI, 1407 MIDDLE HARBOR ROAD, OAKLAND, CALIFORNIA**

Sample Number	Location	Depth (feet)	Date	TPH-d (mg/Kg)	TPH-g (mg/Kg)	B	T	E	X
9-17-A ²	Sidewall	6.5	9/17	ND<1	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005
9-17-B ²	Sidewall	6.5	9/17	73	2.2	ND<0.005	ND<0.005	ND<0.005	0.017
9-17-C ²	Sidewall <i>N</i>	7	9/17	1,900	10	ND<0.005	ND<0.005	0.0067	0.025
9-17-D ²	Sidewall <i>N</i>	7	9/17	690	5.6	ND<0.005	ND<0.005	0.014	0.045
9-17-E ²	Sidewall	6	9/17	4.7	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005

NOTES:

Samples collected by Environmental Science & Engineering, Inc. (ESE)

1 = Samples analyzed by Precision Laboratories

2 = Samples analyzed by Sequoia Analytical

TPH-g = Total Petroleum Hydrocarbons as gasoline

TPH-d = Total Petroleum Hydrocarbons as diesel

B = Benzene

T = Toluene

E = Ethylbenzene

X = Total Xylenes

ND = Nondetectable at method reporting limits

mg/Kg = milligrams per kilogram

TABLE 7

3-17-95

SOIL ANALYSIS FOR HADLEY AUTO TRANSPORT
1407 MIDDLE HARBOR ROAD - OAKLAND, CA.

SAMPLE	DEPTH	AROMATIC VOLATILE HYDROCARBON ANALYSIS (BTEX) ($\mu\text{g}/\text{kg}$)				TPH VOLATILES (mg/kg)		TPH EXTRACTABLES (mg/kg)	
		BENZENE	TOLUENE	ETHYLBENZENE	XYLENES	TPH-G (gasoline)	C5-C12 HYDROCARBONS	TPH-D (diesel)	C10-C50 HYDROCARBONS
HMW-1	6 ft.	ND	ND	ND	ND	ND	ND	ND	216
HMW-1	12 ft.	5	8	ND	9	ND	ND	ND	7.7
HMW-2	6 ft.	ND	ND	ND	ND	ND	ND	ND	8.6
HMW-3	6 ft.	ND	ND	ND	ND	ND	ND	ND	194
HMW-3	9.5 ft.	ND	ND	ND	ND	ND	ND	ND	3.4
HB-1	4 ft.	ND	ND	ND	ND	ND	ND	ND	24.8
HB-1	7 ft.	ND	ND	ND	ND	ND	ND	ND	19
HB-2	3.5 ft.	ND	ND	ND	ND	ND	ND	ND	206
HB-2	6 ft.	ND	ND	ND	ND	ND	ND	ND	3.8

ND = NON-DETECT
 EPA METHOD 602 FOR BTEX ANALYSIS, DETECTION LIMIT = $0.3 \mu\text{g}/\text{L}$
 EPA METHOD 8015/5030 FOR TPH-G, DETECTION LIMIT = $50 \mu\text{g}/\text{L}$
 DHS EXTRACTION METHOD (LUFT) FOR TPH-D, DETECTION LIMIT = $0.05 \text{mg}/\text{L}$

TABLE # 8

GROUNDWATER ANALYTICAL DATA
 UNION PACIFIC RAILROAD PROPERTY
 1407 MIDDLE HARBOR ROAD
 OAKLAND, CALIFORNIA

MONITORING WELL No.	DATE SAMPLED	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYLBENZENE (mg/L)	XYLENES (mg/L)	TPH-DIESEL (mg/L)	TPH-GAS (mg/L)
HMW-1	03/20/95	ND	ND	ND	ND	ND	ND
	08/10/95	ND	ND	ND	ND	0.25	ND
	11/28/95	ND/ND	ND/ND	ND/ND	ND/ND	1.30/1.40	ND
	02/27/96	ND	ND	ND	ND	0.08	ND
HMW-2	03/20/95	ND	ND	ND	ND	0.20	ND
	08/10/95	ND	ND	ND	ND	0.55	ND
	11/28/95	ND	ND	ND	ND	2.10	ND
	02/27/96	ND	ND	ND	ND	1.10	ND
HMW-3	03/20/95	ND/ND	ND/ND	ND/ND	ND/ND	1.70/1.90	ND/ND
	08/10/95	ND/ND	ND/ND	ND/ND	ND/ND	0.22/0.30	ND/ND
	11/28/95	ND	ND	ND	ND	1.10	ND
	02/27/96	ND/ND	ND/ND	ND/ND	ND/ND	0.60/0.62	ND/ND

ND = Not Detected above Laboratory Detection Limits

#/# = Duplicate Analyses

Laboratory Detection Limits for BTEX is 0.0005 mg/L (0.0005 ppm), see lab data sheets

Laboratory Detection Limits for TPH is 0.050 mg/L (0.050 ppm), see lab data sheets

BTEX by EPA Method 8020

TPH-Diesel by EPA Method 3510/8015 Mod.

TPH-Gasoline by EPA Method 5030

Table 9

ENVIRONMENTAL
PROTECTION

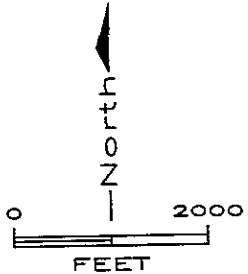
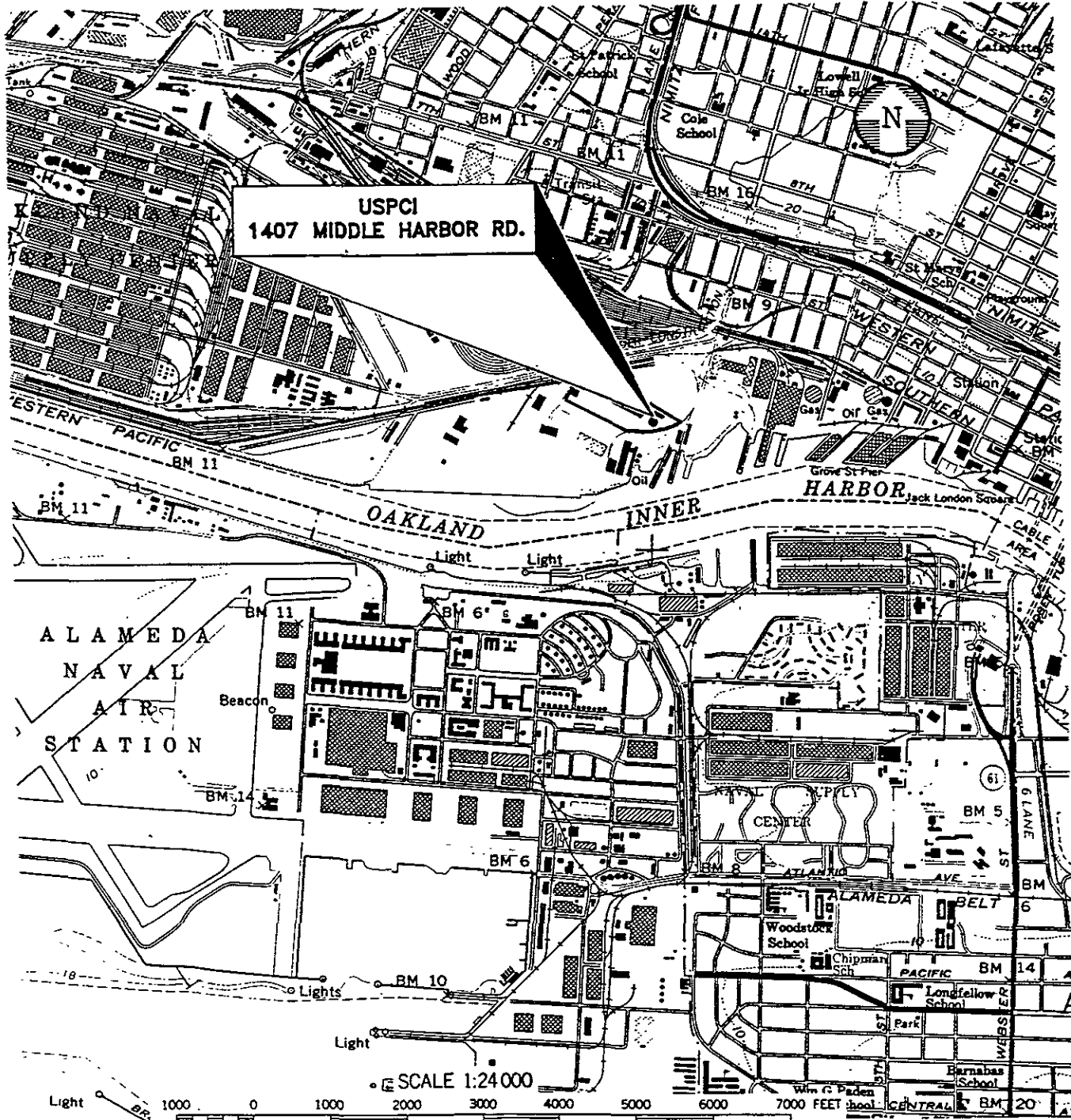
UP Roundhouse

September 26, 1996 Groundwater Sampling Results 97 JAN 10 AM 11:23
 Sampling conducted by Burns & McDonnell Waste Consultants, Inc. for UP
 [wells installed March 1995 screened from 2-12' b.g.s.]

Analysis	MW-1 (ug/l)	MW-2 (ug/l)	MW-3 (ug/l)
17 CAM metals:			
copper	< 10(u)/ < 10	< 10	31
lead	6.6(u)/6.3	8.4	8.2
mercury	< 0.2(u)/ < 0.2	< 0.2	0.67
nickel	< 20(u)/ < 20	20	22
zinc	41(u)/ < 20	41	30
MTBE	< 2	< 2	< 2
EPA 8240	ND	ND	ND
EPA 8270	ND	ND	ND
TPH ext: 8015 m			
diesel	3,800	4,800	2,200
motor oil	1,800	1,800	1,400

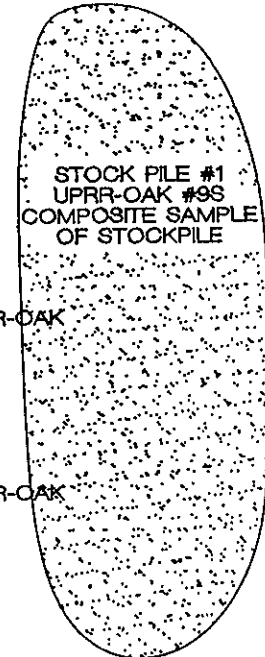
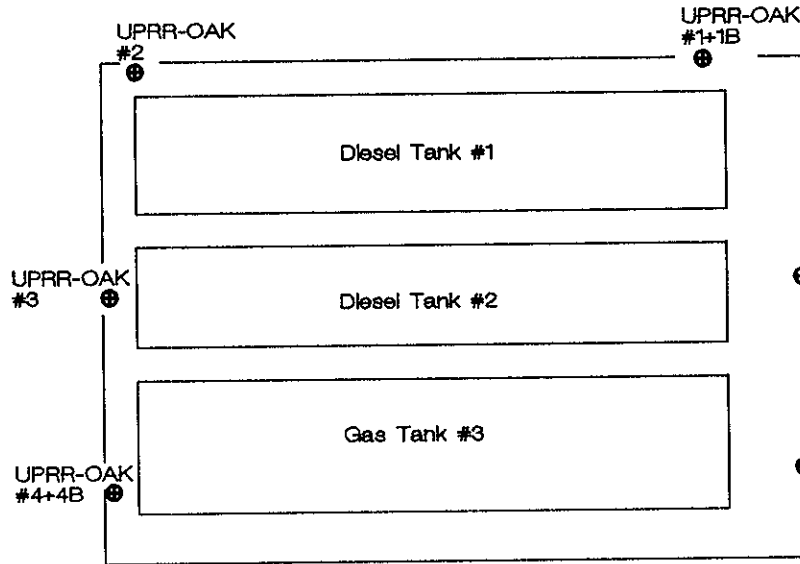
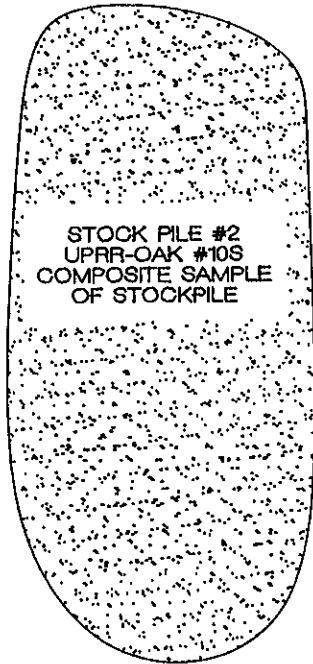
u = unfiltered, all other samples for metals analysis filtered

Samples analyzed by Curtis & Tompkins Analytical Laboratory Berkeley

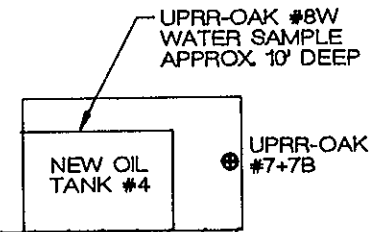


<p>USPCI A Subsidiary of Union Pacific Corporation</p>	
<p>OAKLAND, CALIFORNIA</p>	
<p>FIGURE 1 A SITE VICINITY MAP</p>	
<p>SCALE 1" = 2000'</p>	<p>APPROVED/DATE 3/94</p>

21,000 GAL BAKER TANK #1710
COMPOSITE SAMPLE #11W

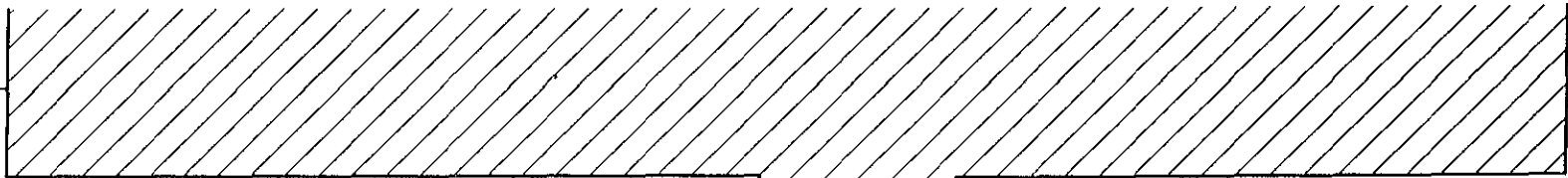


21,000 GAL BAKER TANK #732N

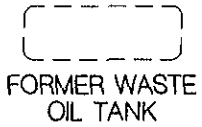


—North

USPCI A Subsidiary of Union Pacific Corporation	
OAKLAND, CALIFORNIA	
FIGURE 1 UPRR SOIL SAMPLE LOCATIONS	
SCALE: NOT TO SCALE	APPROVED/DATE NOV, 1991

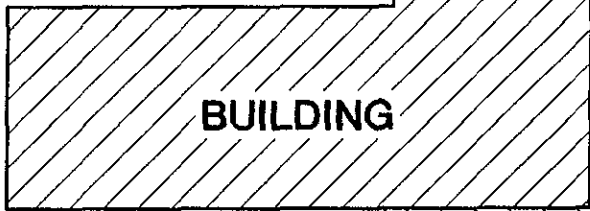


2000-gal.

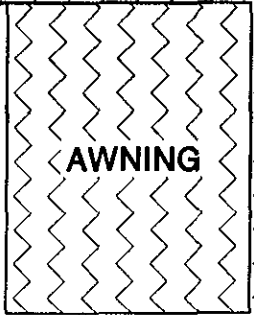


FORMER WASTE OIL TANK

NBS
NBS



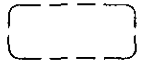
BUILDING



AWNING

108-gal.
steel tank

FORMER CLARIFIER TANK LOCATION



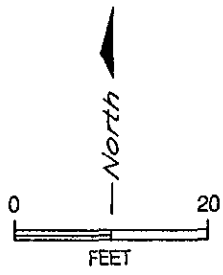
UP-C-1-2



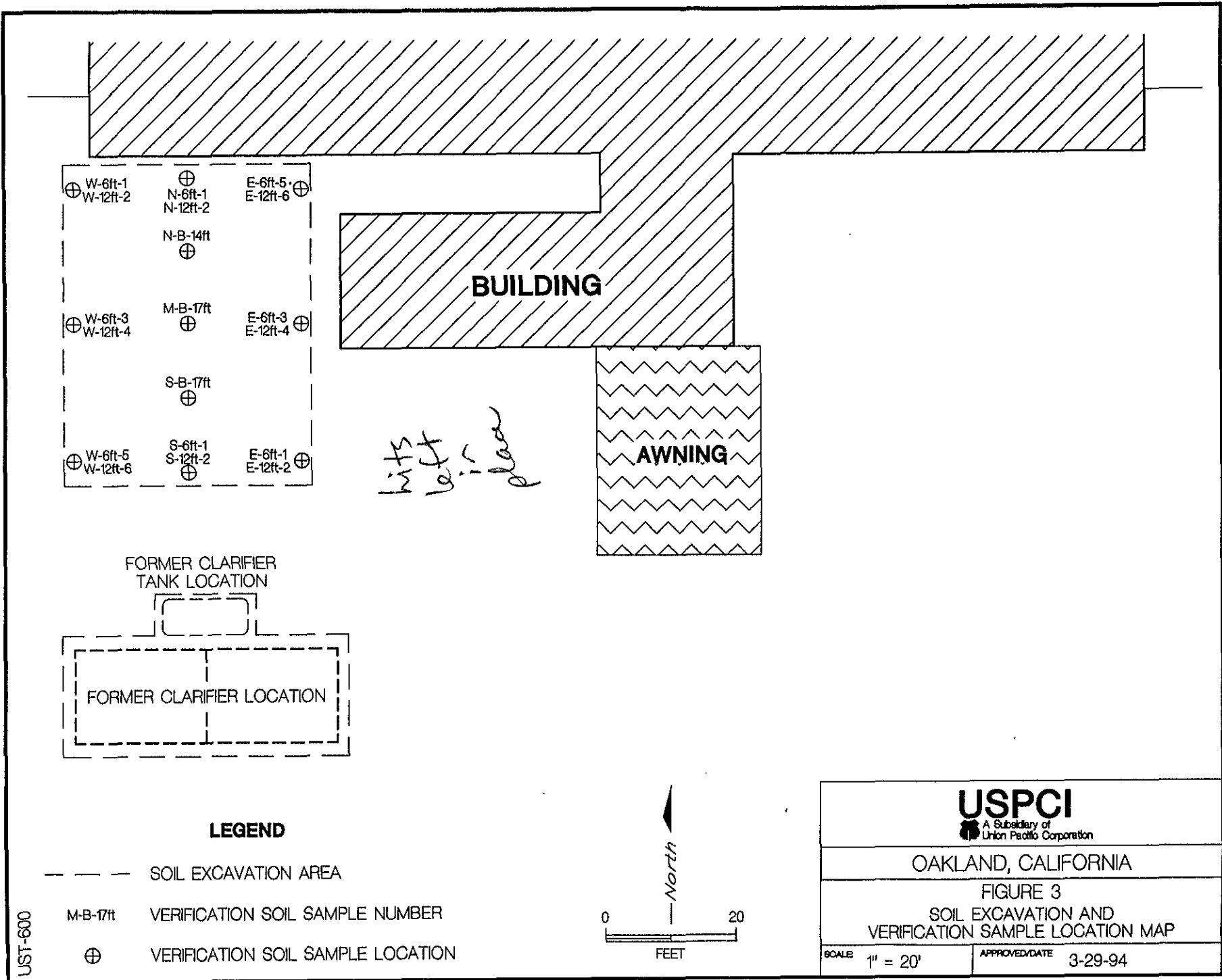
FORMER CLARIFIER LOCATION

(concrete)
actual
clarifier

UST-599

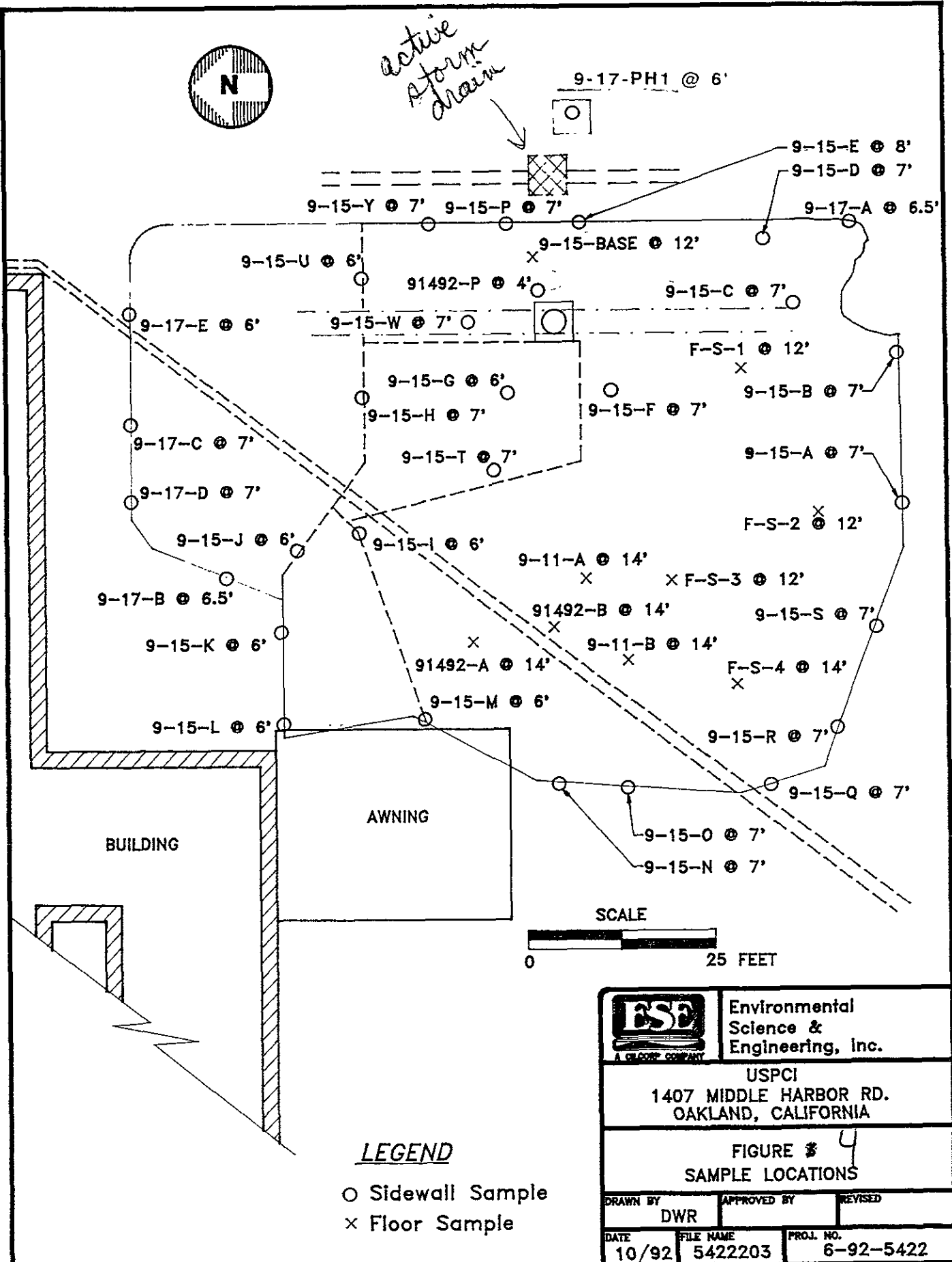


USPCI A Subsidiary of Union Pacific Corporation	
OAKLAND, CALIFORNIA	
FIGURE 2 SITE LOCATION MAP 1407 MIDDLE HARBOR RD.	
SCALE: 1" = 20'	APPROVED/DATE 3-94



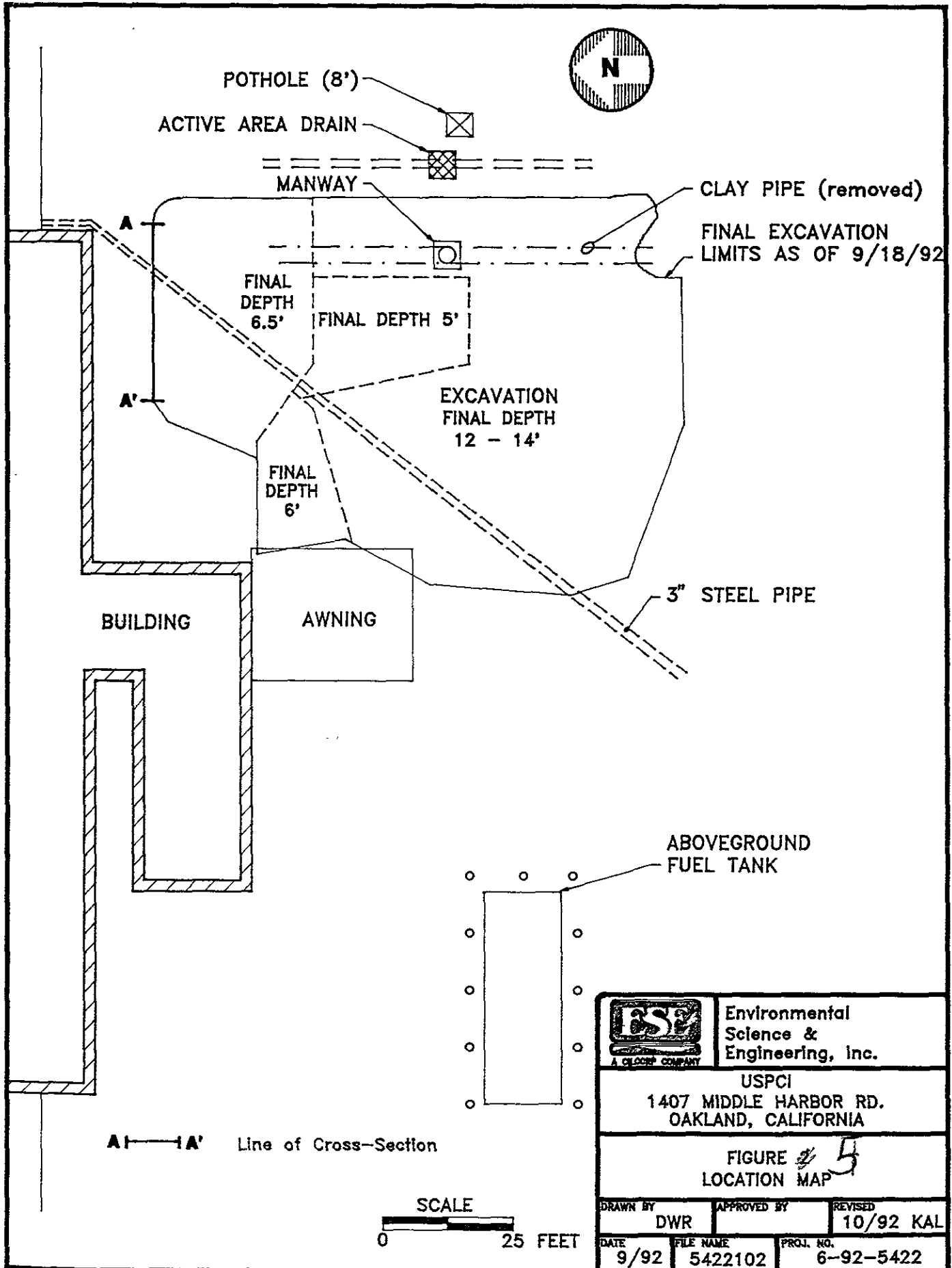


active storm drain



LEGEND

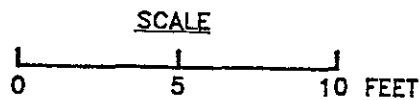
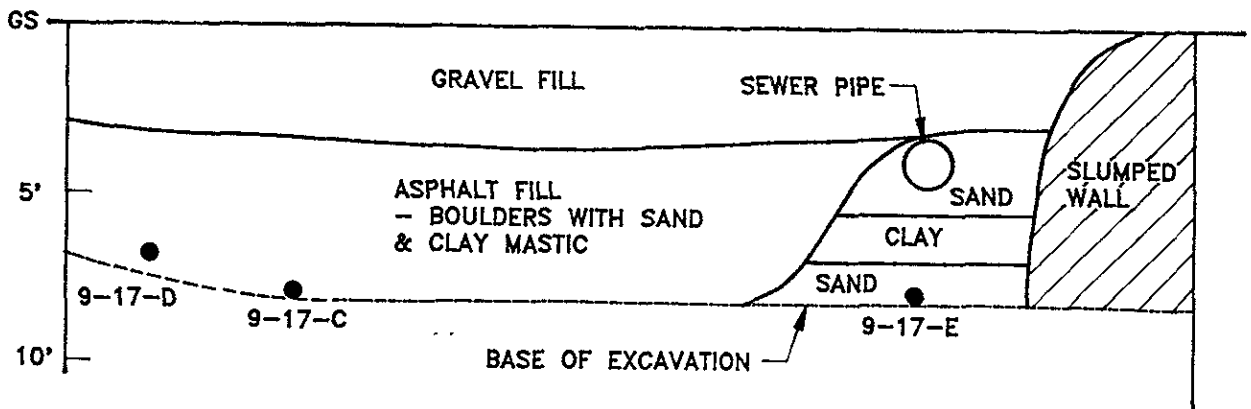
- Sidewall Sample
- × Floor Sample




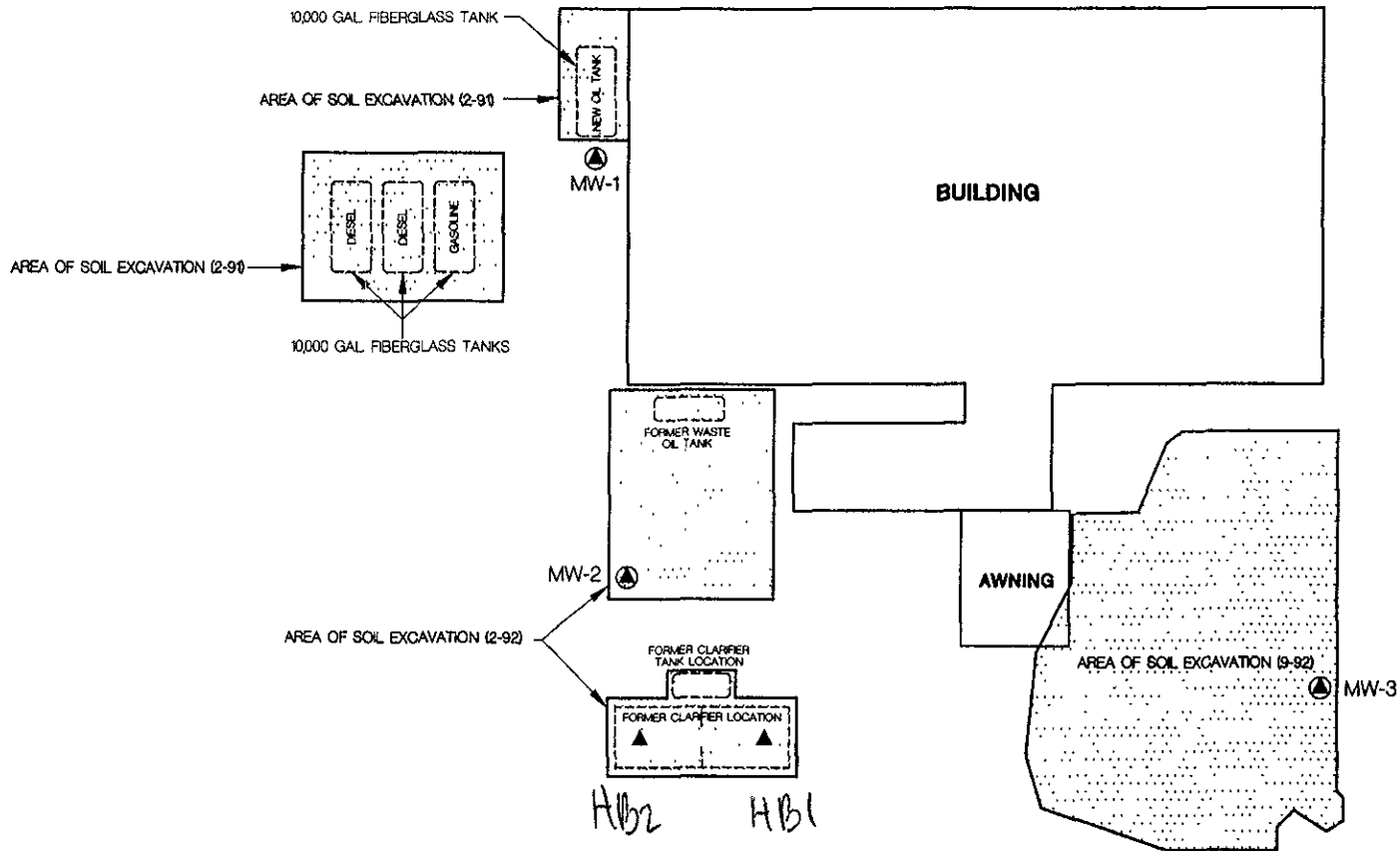
WEST
A

NORTH WALL OF EXCAVATION

EAST
A'

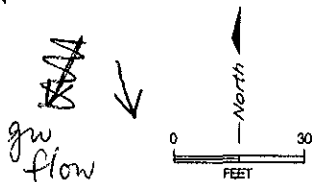


 A GEORGE COMPANY	Environmental Science & Engineering, Inc.	
USPCI 1407 MIDDLE HARBOR RD. OAKLAND, CALIFORNIA		
FIGURE 6 CROSS-SECTION A-A' NORTH WALL		
DRAWN BY DWR	APPROVED BY REVISD	
DATE 10/92	FILE NAME 5422804	PROJ. NO. 6-92-5422



LEGEND

- FORMER UNDERGROUND TANK LOCATION
- SOIL EXCAVATION AREA
- ⊙ MONITOR WELL LOCATION
- ▲ SOIL BORING LOCATION



BY	DATE
DESIGNED	5-10-95
DRAWN	CJJ
APPROVED	
APPROVED	
APPROVED	

Laidlaw
ENVIRONMENTAL
SERVICES

HADLEY (CHRYSLER) AUTO TRANSPORT FACILITY
1407 MIDDLE HARBOR ROAD
OAKLAND, CALIFORNIA

SOIL BORING AND MONITOR WELL LOCATIONS

SCALE 1" = 30'

DWG. NO. LST638

FIGURE 7