

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



March 9, 1998

STID 5829

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

REMEDIAL ACTION COMPLETION CERTIFICATION

Kaiser Sand & Gravel Company
P.O. Box 580
Pleasanton, CA 94566
Attn: Lawrence Appleton

RE: KAISER SAND & GRAVEL, 3000 BUSCH ROAD, PLEASANTON

Dear Mr. Appleton:

This letter confirms the completion of a site investigation and remedial action for the underground storage tanks formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tanks are 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 Section 2721(e) of Title 23 of the California Code of Regulations.

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

Sincerely,

Mee Ling Tung
Director, Environmental Health Services

c: Dick Pantages, Chief, Env. Protection Division
Stephen Hill, RWQCB
Dave Deaner, SWRCB (w/attachment)
Chris Boykin, Livermore-Pleasanton Fire Dept. (w/attachment)
SOS/files

- SIGNED
COPY -

RB file #
01-0844

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: 12/24/97

Agency name: Alameda County-EPD Address: 1131 Harbor Bay Pkwy #250
City/State/Zip: Alameda, CA 94502 Phone: (510) 567-6700
Responsible staff person: Scott Seery Title: Haz. Materials Spec.

II. CASE INFORMATION

Site facility name: Kaiser Sand and Gravel
Site facility address: 3000 Busch Road, Pleasanton 94566
RB LUSTIS Case No: N/A Local Case No./LOP Case No.: 5829
URF filing date: UNK SWEEPS No: N/A

Responsible Parties: Addresses: Phone Numbers:

Kaiser Sand & Gravel Co. P.O. Box 580
Attn: Lawrence Appleton Pleasanton, CA 94566

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	10K gal	diesel	removed	02/06/95
2	3000 "	"	"	"
3	1000 "	waste oil	"	"
4	5000* "	new oil	"	"
5	12K "	diesel	"	11/02/90
6	12K "	"	"	"
7	10K "	gasoline	"	"

* This UST described in various documents as both of 3000 and 5000 gallon capacity.

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: UNK

Site characterization complete? YES

Date approved by oversight agency:

Monitoring Wells installed? YES Number: 1

Proper screened interval? YES (25 - 33' BG)

Highest GW depth below ground surface: 26.54' Lowest depth: 27.89'

Flow direction: reportedly towards the west

Most sensitive current use: gravel mining

Are drinking water wells affected? NO Aquifer name: Amador Subbasin, Livermore Valley

Leaking Underground Fuel Storage Tank Program

III. RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued)

Is surface water affected? NO Nearest affected SW name: NA

Off-site beneficial use impacts (addresses/locations): NONE

Report(s) on file? YES Where is report filed? Alameda County
1131 Harbor Bay Pkwy
Alameda CA 94502

Treatment and Disposal of Affected Material:

<u>Material</u>	<u>Amount</u> <u>(include units)</u>	<u>Action (Treatment</u> <u>or Disposal w/destination)</u>	<u>Date</u>
Tank	(2x12K; 1x10K gals)	<u>Disposal</u> - H&H Ship Svc San Francisco, CA	11/02/90
	(1x10K; 1x5K; 1x3K; 1x1K)	<u>Disposal</u> - Erickson, Inc. Richmond, CA	02/06/90
Piping	UNK		
Product/sludge	270 gals	<u>Disposal</u> - Erickson, Inc. Richmond, CA	02/90
Soil	~832 tons	<u>Disposal</u> - Forward L.F. Stockton, CA	May 1997

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil ¹ (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	ND	ND	ND	ND
TPH (Diesel)	190	1600	1600	"
TPH (mtr oil)	59	NA	NA	NA
Benzene	ND	ND	ND	ND
Toluene	"	"	"	"
Xylene	"	"	"	"
Ethylbenzene	"	"	"	"
Oil & Grease	60	"	NA	NA
Heavy metals	[geogenic conc.]		"	"
Other SVOC, HVOC	ND	NA	"	"

Note: 1) "Before" soil results from samples collected from UST excavations during 1990 and 1995 closures as follows: TPH-G, TPH-D, BTEX, and O&G result from Area 4 tank cluster; TPH-mo from Area 2 tank; metals, SVOC and HVOC from Area 1 tank. "After" soil results from sample collected after overexcavation of Area 4 tank pit.

Comments (Depth of Remediation, etc.):

During November 1990, one 10,000 gallon gasoline and two 12,000 gallon diesel USTs were removed from a shared excavation located adjacent to the vehicle service shop, identified as "Area 4." During February 1995, one 3,000 gallon diesel, one 10,000 gallon diesel, and one 1,000 gallon waste

Leaking Underground Fuel Storage Tank Program

III. RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued)

oil and one 5,000 gallon new oil USTs were removed from "Area 3," "Area 2," and "Area 1," respectively. Only those samples collected during the 1990 tank closures in "Area 4" revealed noteworthy levels of hydrocarbon compounds consistent with an unauthorized release. Consequently, only the "Area 4" tank closures and subsequent activities will be presented in the remainder of this report.

Historically, the subject UST area was reportedly a former gravel mining pit in the 1940s and 1950s. Mining continued vertically until reaching clay encountered at a reported depth of 30 to 40' BG. The pit was partially restored using pea gravel, and then converted to a "settling pond" where silts and clays were accumulated. The tank complex and shop structure of "Area 4" were built upon this former settling pond.

Initial samples collected from the base of the "Area 4" excavation identified up to 190 ppm TPH-D in sample KP-E4, collected in the southwest corner of the tank pit at an approximate depth of 11' BG. TPH-G and BTEX were not present above method detection limits. This area of the excavation was deepened to 25' BG at which point one bottom (KP-BOTTOM 1) and three (3) sidewall samples were collected. Up to 1600 ppm TPH-D was identified in the noted bottom sample, and 180 ppm TPH-D was identified in one of the sidewall samples collected at 8' BG.

A total of approximately 480 yds³ was reportedly excavated from the "Area 4" pit during initial and subsequent excavation activities. The excavation was restored to grade using clean gravel derived from elsewhere at this site. Excavated soil from "Area 4" and the remaining UST sites totalling some 832 tons was transported to Forward landfill (Stockton, CA) during May 1997 for disposal.

IV. CLOSURE

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

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

Does corrective action protect public health for current land use? YES
Site management requirements: NA

Should corrective action be reviewed if land use changes? YES

Monitoring wells Decommisioned: NO

Number Decommisioned: 0 Number Retained: 1 (pending case closure)

Leaking Underground Fuel Storage Tank Program


IV. CLOSURE (Continued)

List enforcement actions taken: None

List enforcement actions rescinded: None

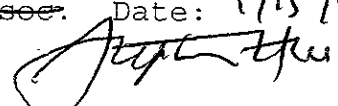
V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Scott Seery Title: Haz Mat Specialist
Signature:  Date: 1/6/98

Reviewed by
Name: Tom Peacock Title: Supervising Haz Mat Specialist
Signature:  Date: 1-5-98

Name: Eva Chu Title: Haz Mat Specialist
Signature:  Date: 1/5/98

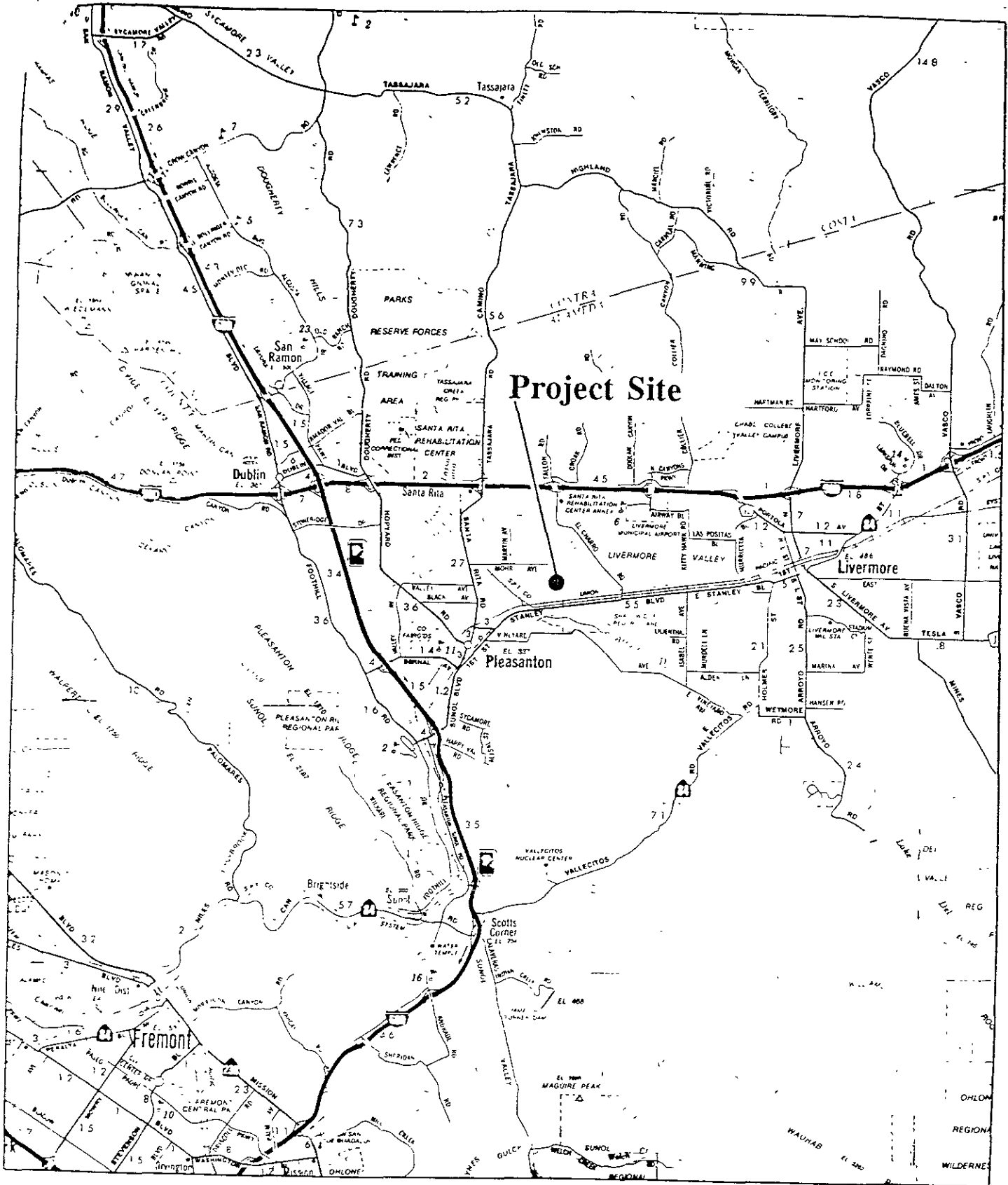
VI. RWQCB NOTIFICATION

Date Submitted to RB: 1/6/98 RB Response: *Concur*
RWQCB Staff Name: ~~Kevin Graves~~ Title: ~~San. Eng. Assoc.~~ Date: 1/15/98
Stephen Hill *ESR* 

VII. ADDITIONAL COMMENTS, DATA, ETC.

During March 1991, four soil borings were advanced through the former "Area 4" UST pit to depths ranging from 28 to 35.5' BG. A single monitoring well (MW-KP1) was installed within one of the borings. No detectable HC compounds were identified in soil samples collected from any of the borings to the depth explored (27.5 - 34' BG).

Well MW-KP1 was sampled quarterly through February 1993 and then yearly through February 1996. No detectable target compounds were identified in the final 3 annual sampling events. BTEX were never identified in any of the water samples at any time during this ground water investigation.



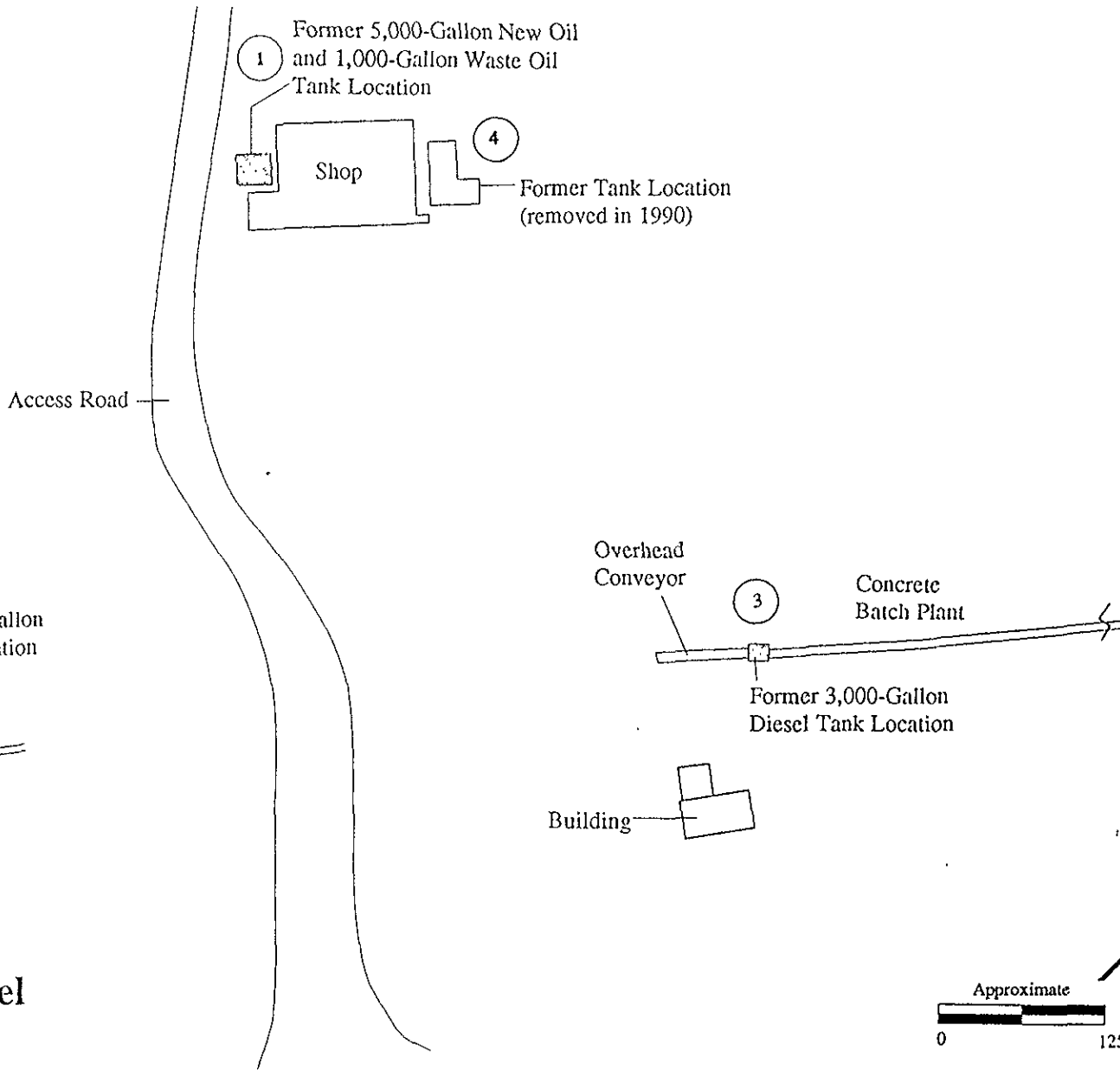
Kaiser Sand and Gravel
3000 Busch Road
Pleasanton, California



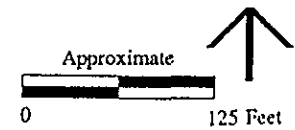
SITE PLAN

Figure 2

KEY
② = U.I. Areas



Kaiser Sand and Gravel
3000 Busch Road
Pleasanton, California



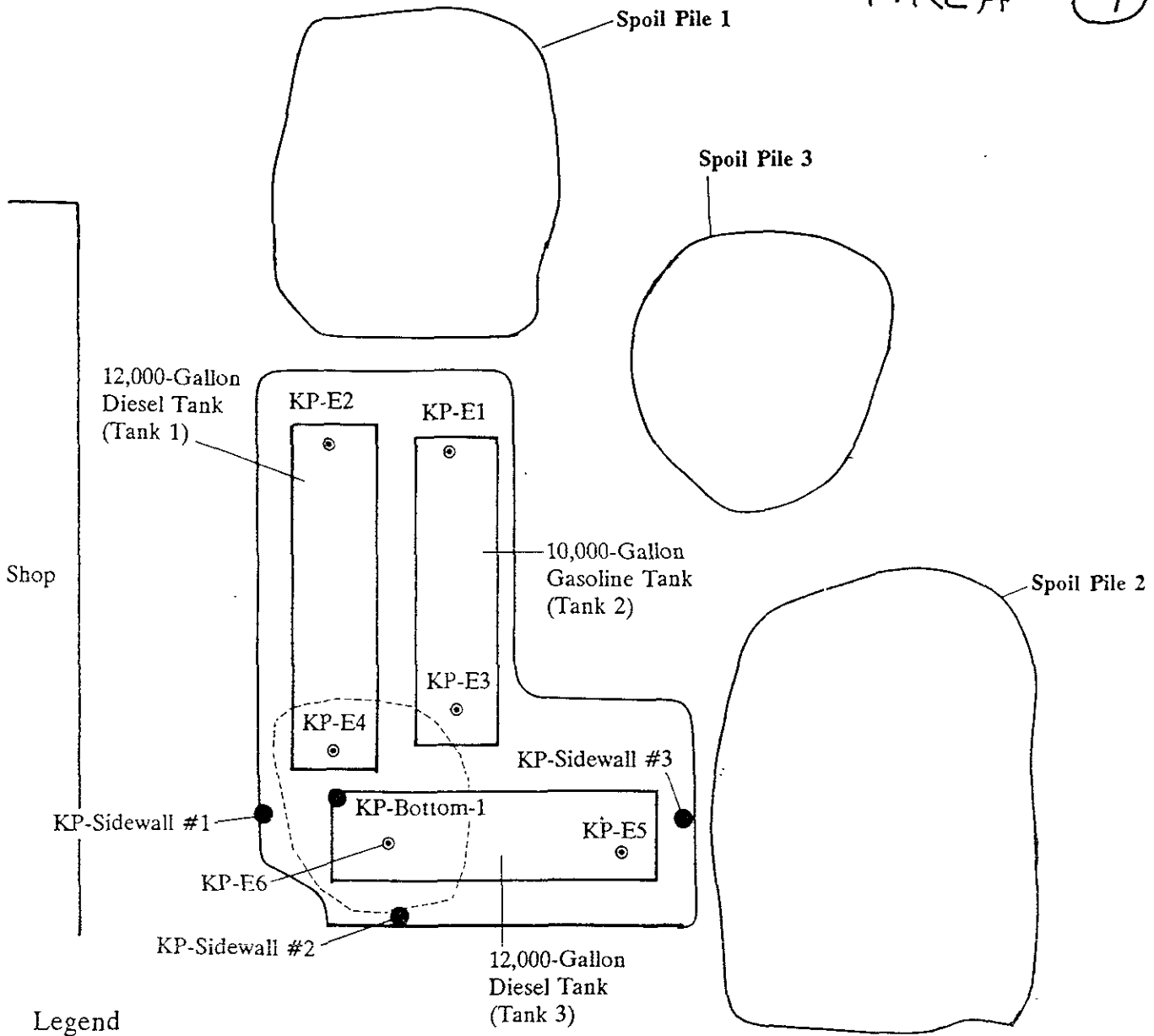
BASELINE

4-

UNDERGROUND TANK EXCAVATION AND SOIL SAMPLING LOCATIONS

Figure 3

AREA (4)

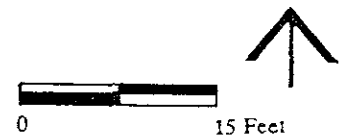


Legend

- KP-E2 ⊙ Sample Collected 11/2/90
- KP-1 ● Sample Collected 11/29/90

----- Limit of Additional Investigation

Kaiser Sand and Gravel
3000 Busch Road
Pleasanton, California



BASELINE

TABLE 1
 SUMMARY OF ANALYTICAL RESULTS
 Kaiser Sand and Gravel
 3000 Busch Road, Pleasanton, California

AREA ④

Location	Date	Depth (feet)	Gasoline	Diesel	Motor Oil	Benzene	Toluene	Xylenes	Ethyl- benzene	Lead
SOIL (mg/kg):										
<u>Tank Excavation</u>										
KP-E1	11/2/90	11.0	<0.2	--	--	<0.001	<0.001	<0.003	<0.001	<0.5
KP-E2	11/2/90	11.0	--	<10	<20	<0.001	<0.001	<0.001	<0.001	--
KP-E3	11/2/90	11.0	<1.0	20	60	<0.001	<0.001	<0.001	<0.001	<0.5
KP-E4	11/2/90	11.0	--	190	<20	<0.001	<0.001	<0.001	<0.001	--
KP-E5	11/2/90	11.0	--	10	<20	<0.001	<0.001	<0.001	<0.001	--
KP-E6	11/2/90	11.0	--	<10	<20	<0.005	<0.005	<0.020	<0.005	--
<u>Spoil Piles 1 and 2</u>										
KP-1	11/20/90	2.0	11	880	--	--	--	--	--	--
KP-2	11/20/90	2.0	<1.0	86	--	--	--	--	--	--
KP-3	11/20/90	3.0	9.2	490	--	--	--	--	--	--
KP-4	11/20/90	2.5	<1.0	34	--	--	--	--	--	--
KP-5	11/20/90	2.5	<1.0	1.2	--	--	--	--	--	--
KP-6	11/20/90	1.5	9.8	650	--	--	--	--	--	--
KP-7	11/20/90	2.5	12	79	--	--	--	--	--	--
KP-8	11/20/90	2.0	26	1,000	--	--	--	--	--	--
KP-9	11/20/90	2.0	38	1,500	--	--	--	--	--	--
KP-10	11/20/90	3.0	1.6	6.4	--	--	--	--	--	--
KP-11	11/20/90	2.5	74	6,100	--	--	--	--	--	<0.5
KP-12	11/20/90	1.0	6.7	43	--	--	--	--	--	--

(continued)

Table 1 - continued

AREA ④

Location	Date	Depth (feet)	Gasoline	Diesel	Motor Oil	Benzene	Toluene	Xylenes	Ethyl- benzene	Lead
SOIL - continued										
KP-13	11/20/90	1.5	27	810	--	--	--	--	--	--
KP-14	11/20/90	1.0	<1.0	180	--	--	--	--	--	--
KP-15	11/20/90	1.0	<1.0	7.1	--	--	--	--	--	--
KP-16	11/20/90	1.0	3.8	280	--	--	--	--	--	--
KP-17	11/20/90	2.0	5.0	300	--	--	--	--	--	--
KP-18	11/20/90	2.5	<1.0	4.7	--	--	--	--	--	--
KP-19	11/20/90	2.0	2.3	1,500	--	--	--	--	--	--
KP-20	11/20/90	1.0	4.3	810	--	--	--	--	--	--
KP-21	11/20/90	2.5	3.6	360	--	--	--	--	--	--
<u>Additional Excavation</u>										
<u>In-Place Samples</u>										
KP-SIDEWALL 1	11/29/90	8.0	<30	180	<20	<0.050	<0.050	<0.200	<0.050	<0.050
KP-SIDEWALL 2	11/29/90	8.0	<0.2	<10	<20	<0.001	<0.001	<0.003	<0.001	<0.001
KP-SIDEWALL 3	11/29/90	8.0	<0.2	<10	<20	<0.001	<0.001	<0.003	<0.001	<0.001
KP-BOTTOM 1	11/29/90	25.0	<100	1,600	<20	<0.050	<0.050	<0.200	<0.050	<0.050
<u>Spoil Pile 3</u>										
KP-AE-SP1	11/29/90	1.0	<30	80	<20	--	--	--	--	--
KP-AE-SP2	11/29/90	1.0	<30	50	<20	--	--	--	--	--
KP-AE-SP3	11/29/90	1.0	<30	400	<20	--	--	--	--	--
<u>Soil Borings</u>										
KP-B1	3/6/91	31.0	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	--
KP-B1	3/6/91	32.0	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	--
KP-B2	3/6/91	34.0	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	--

(continued)

Table 1 - continued

AREA ④

Location	Date	Depth (feet)	Gasoline	Diesel	Motor Oil	Benzene	Toluene	Xylenes	Ethyl- benzene	Lead
SOIL - continued										
KP-B3	3/7/91	25.5	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	--
KP-B3	3/7/91	27.5	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	--
MW-KP1	3/6/91	25.5	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	--
MW-KP1	3/6/91	34.0	<1.0	<1.0	--	<0.005	<0.005	<0.005	<0.005	--
GROUNDWATER (mg/L):										
<u>Monitoring Well</u>										
MW-KP1	3/11/91	N/A	<0.050	1.6	--	<0.0005	<0.0005	<0.0005	<0.0005	--

Notes: <xx.xx = Less than laboratory detection level.

-- = Not analyzed.

xx = Compounds identified above detection levels.

N/A = Not applicable.

Sampling locations are shown in Figure 3.

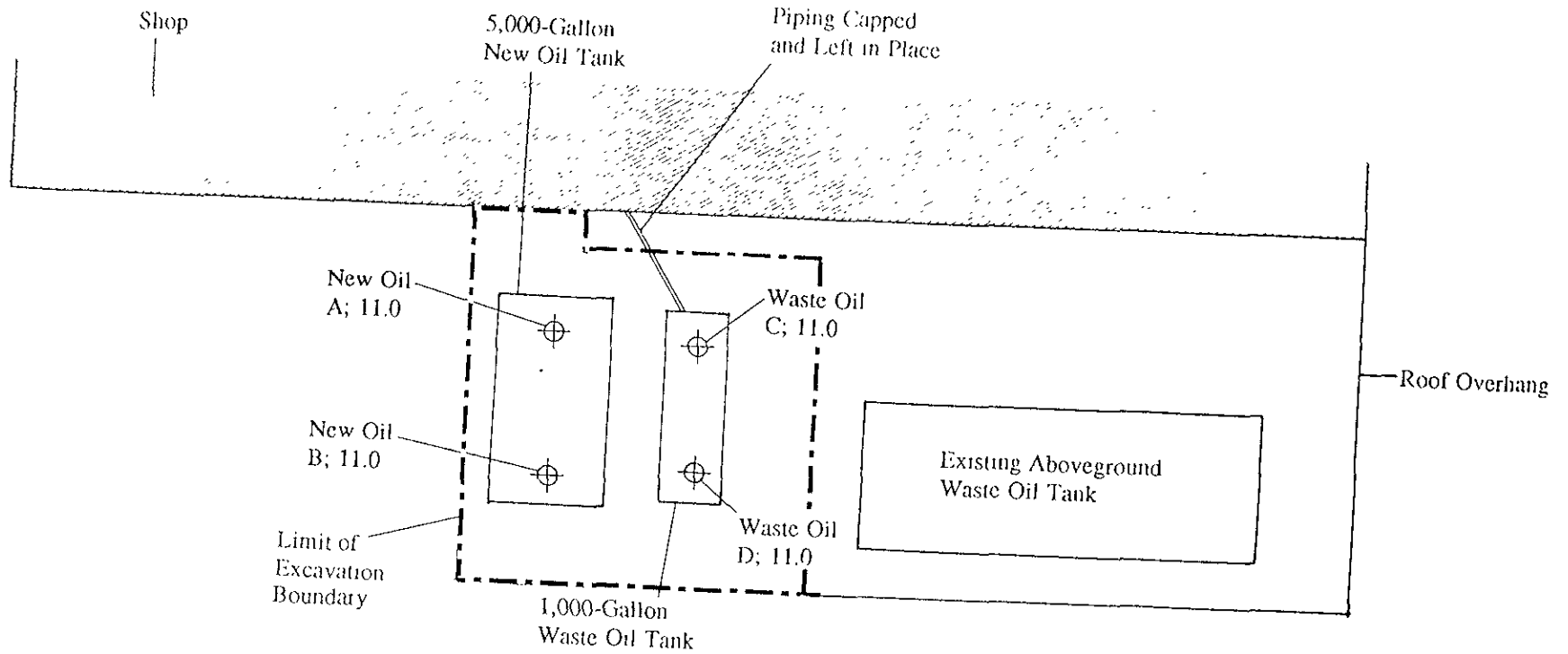
Laboratory reports for the March 1991 samples are included in Appendix C.

UNDERGROUND TANK EXCAVATION - SHOP

Area ①

Figure 7

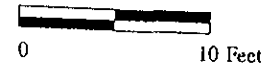
-10-



Legend

New Oil A; 11.0  Sample Collected 2/6/95

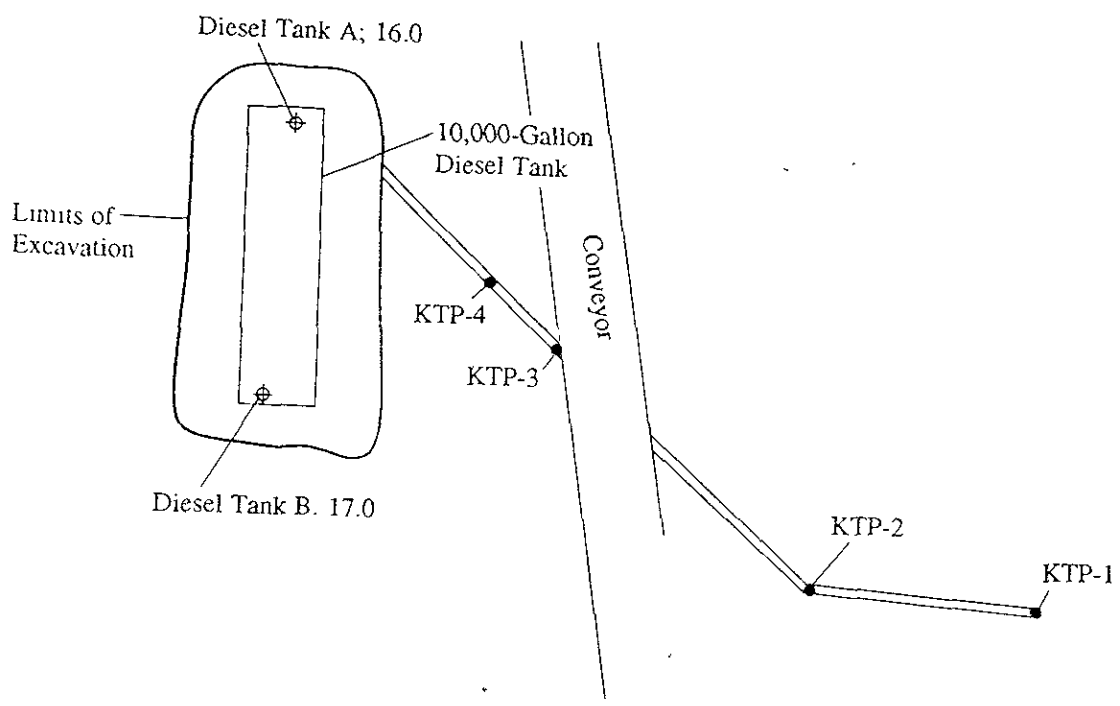
Kaiser Sand and Gravel
3000 Busch Road
Pleasanton, California



UNDERGROUND TANK EXCAVATION - HOT PLANT

Figure 6

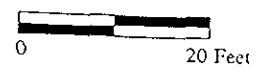
Area (2)



Legend

- Diesel Tank A; 16.0 ⊕ Sample Collected 2/6/95
- KTP-1 ● Sample Collected 3/27/95

Kaiser Sand and Gravel
3000 Busch Road
Pleasanton, California

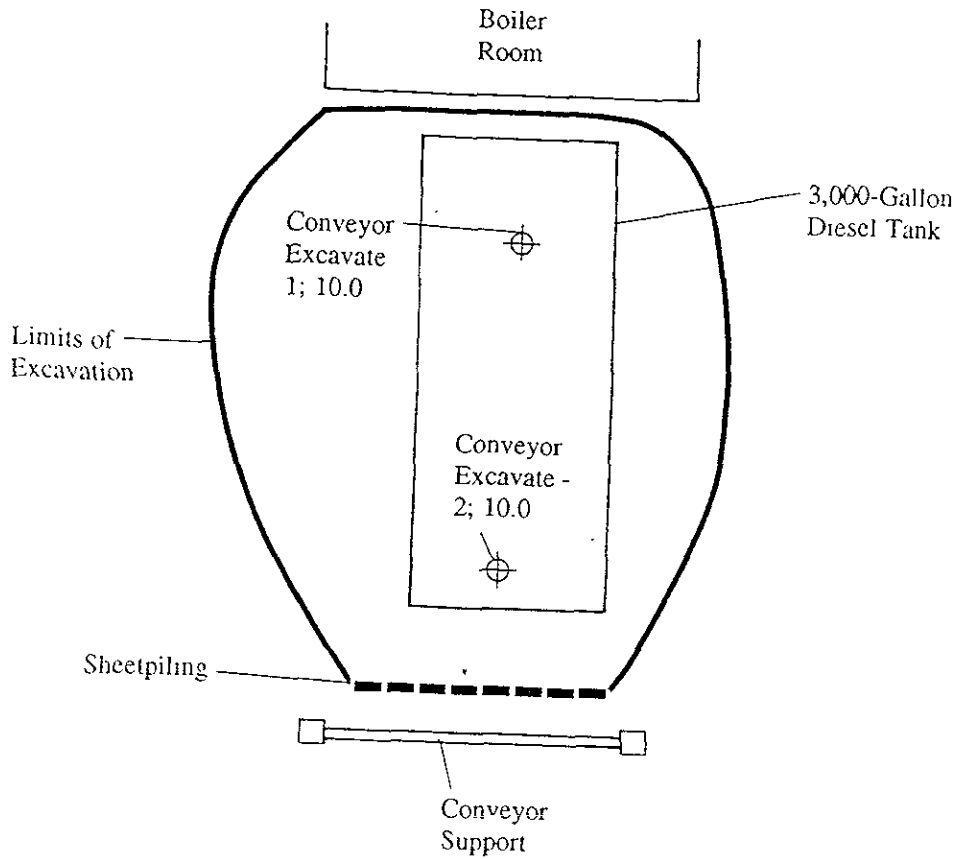


BASELINE

UNDERGROUND TANK EXCAVATION - BATCH PLANT

Figure 5

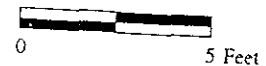
Area ③



Legend

Conveyor Excavate 1; 10.0 ⊕ Sample Collected
2/6/95

Kaiser Sand and Gravel
3000 Busch Road
Pleasanton, California



BASELINE

TABLE 2
 SUMMARY OF PETROLEUM HYDROCARBON AND VOLATILE ORGANIC COMPOUNDS ANALYSIS, SOIL
 Kaiser Sand & Gravel, Pleasanton, California
 (mg/kg)

Areas ①, ②, ③

Sample Location/ Identification	Sample Depth (ft, bgs)	TPH as Gasoline ¹	TPH as Diesel ²	TPH as Motor Oil ²	Nonpolar Oil & Grease ³	Benzene ⁴	Toluene ⁴	Ethyl- benzene ⁴	Xylene ⁴	VOCs ⁵
BATCH PLANT - Excavation Area ③										
Conveyor Excavate-1	10 0	--	2.2 ⁶	<25	--	<0.005	<0.005	<0.005	<0.005	--
Conveyor Excavate-2	10 0	--	<1.0	<25	--	<0.005	<0.005	<0.005	<0.005	--
BATCH PLANT - Stockpile										
Comp Conv S. Pile (A-D)	0.5-1.0	--	11 ⁶	56	--	<0.005	<0.005	<0.005	<0.005	--
HOT PLANT - Excavation Area ②										
Diesel Tank A	16 0	--	19 ⁶	59	--	<0.005	<0.005	<0.005	<0.005	--
Diesel Tank B	17 0	--	75	41	--	<0.005	<0.005	<0.005	<0.005	--
KTP-1		--	<1 0	--	--	<0.005	<0.005	<0.005	<0.005	--
KTP-2		--	<1 0	--	--	<0.005	<0.005	<0.005	<0.005	--
KTP-3		--	<1 0	--	--	<0.005	<0.005	<0.005	<0.005	--
KTP-4		--	<1.0	--	--	<0.005	<0.005	<0.005	<0.005	--
HOT PLANT - Stockpile										
Comp Hot Plant A-D	0.5-1 0	--	42 ⁶	<250	--	<0.005	<0.005	<0.005	<0.005	--
SHOP - Excavation Area ①										
New Oil A	11 0	--	<1.0	<25	--	<0.005	<0.005	<0.005	<0.005	--
New Oil B	11 0	--	<1.0	<25	--	<0.005	<0.005	<0.005	<0.005	--
Waste Oil C ⁷	11 0	<1	<1 0	<25	28	--	--	--	--	<0.005 to <0.05
Waste Oil D ⁷	11.0	<1	<1 0	<25	20	--	--	--	--	<0.005 to <0.05
SHOP - Stockpile										
Comp WO S. Pile ⁷ (A-D)	0.5-1.0	--	310 ⁶	5,000	370	--	--	--	--	<0.005 to <0.05

Notes: TPH = Total petroleum hydrocarbons
 bgs = below ground surface
 -- = Not analyzed
 <x x = Compound not identified above laboratory reporting limit of x.x
 VOCs = volatile organic compounds
 Sampling locations are shown in Figures 5 through 7
 Laboratory reports are included in Appendix C.
 Chromatograms are included in Appendix C.

¹ California LUFT 8015M/5030

² California LUFT 8015M

³ Method SMWW 17.5520EF

⁴ EPA Method 8020

⁵ EPA Method 8240

⁶ Sample chromatogram does not resemble hydrocarbon standard.

⁷ Sample also analyzed for semi-VOCs using EPA Method 8270/3550. None of the compounds were identified above the laboratory reporting limits.

TABLE 3

SUMMARY OF METALS ANALYSIS, SOIL
Kaiser Sand & Gravel, Pleasanton, California
(mg/kg)

Sample Location/ Identification	Sample Depth (ft, bgs)	Sb ¹	As ²	Ba ¹	Be ¹	Cd ¹	Cr ¹ (total)	Co ¹	Cu ¹	Pb ³	Hg ⁴	Mo ¹	Ni ¹	Se ⁵	Ag ¹	Tl ⁶	V ¹	Zn ¹	
SHOP - Excavation																			
Waste Oil C	11.0	--	--	--	--	<0.25	39	--	--	<5.0	--	--	59	--	--	--	--	--	32
Waste Oil D	11.0	--	--	--	--	<0.25	39	--	--	<5.0	--	--	57	--	--	--	--	--	32
SHOP - Stockpile																			
Comp WO S. Pile (A-D)	0.5-1.0	7.5	<2.5	180	0.17	<0.25	47	9.5	20	5.9	<0.095	1.0	70	<2.5	<0.50	<2.5	28	46	
TILC		500	500	10,000	75	100	2,500	8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000	
STLC		15	5	100	0.75	1	560	80	25	5	0.2	350	20	1	5	7	24	250	

Note: -- = Not analyzed.
<x.x = metal not identified above laboratory reporting limit of x.x
Sampling locations are shown in Figures 5 through 7
Laboratory reports are included in Appendix C.

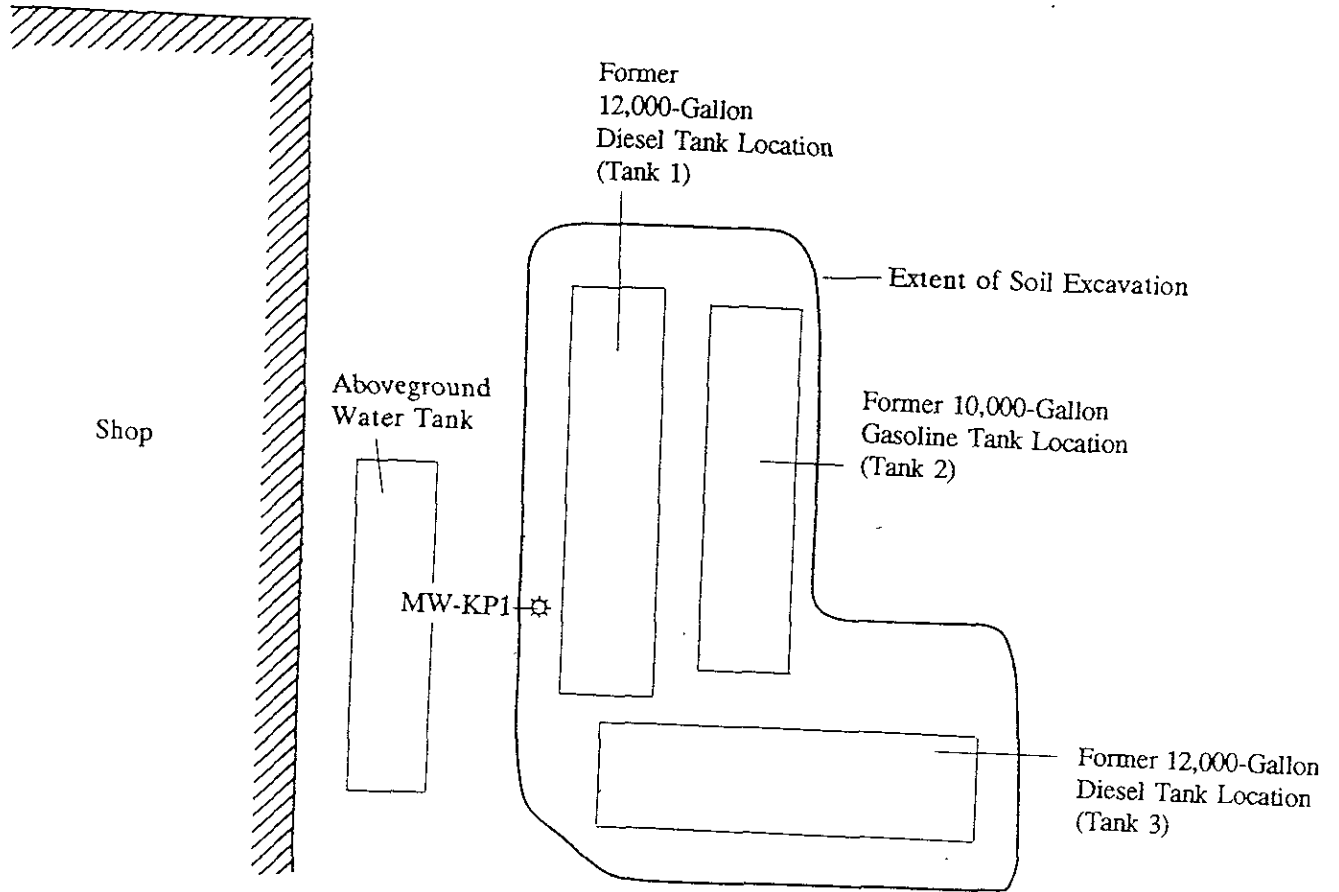
- ¹ EPA Method 6010A.
- ² EPA Method 7060.
- ³ EPA Method 7420/7421.
- ⁴ EPA Method 7471.
- ⁵ EPA Method 7740.
- ⁶ EPA Method 7841.

UNDERGROUND TANK LOCATIONS

Figure 3

WELL LOCATION

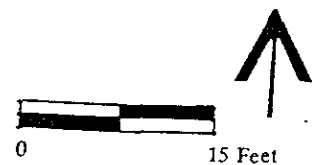
Area (4)



Legend

MW-KP1 * Monitoring Well

**Kaiser Sand and Gravel
3000 Busch Road
Pleasanton, California**



SOIL SAMPLE LOCATIONS

Figure 4

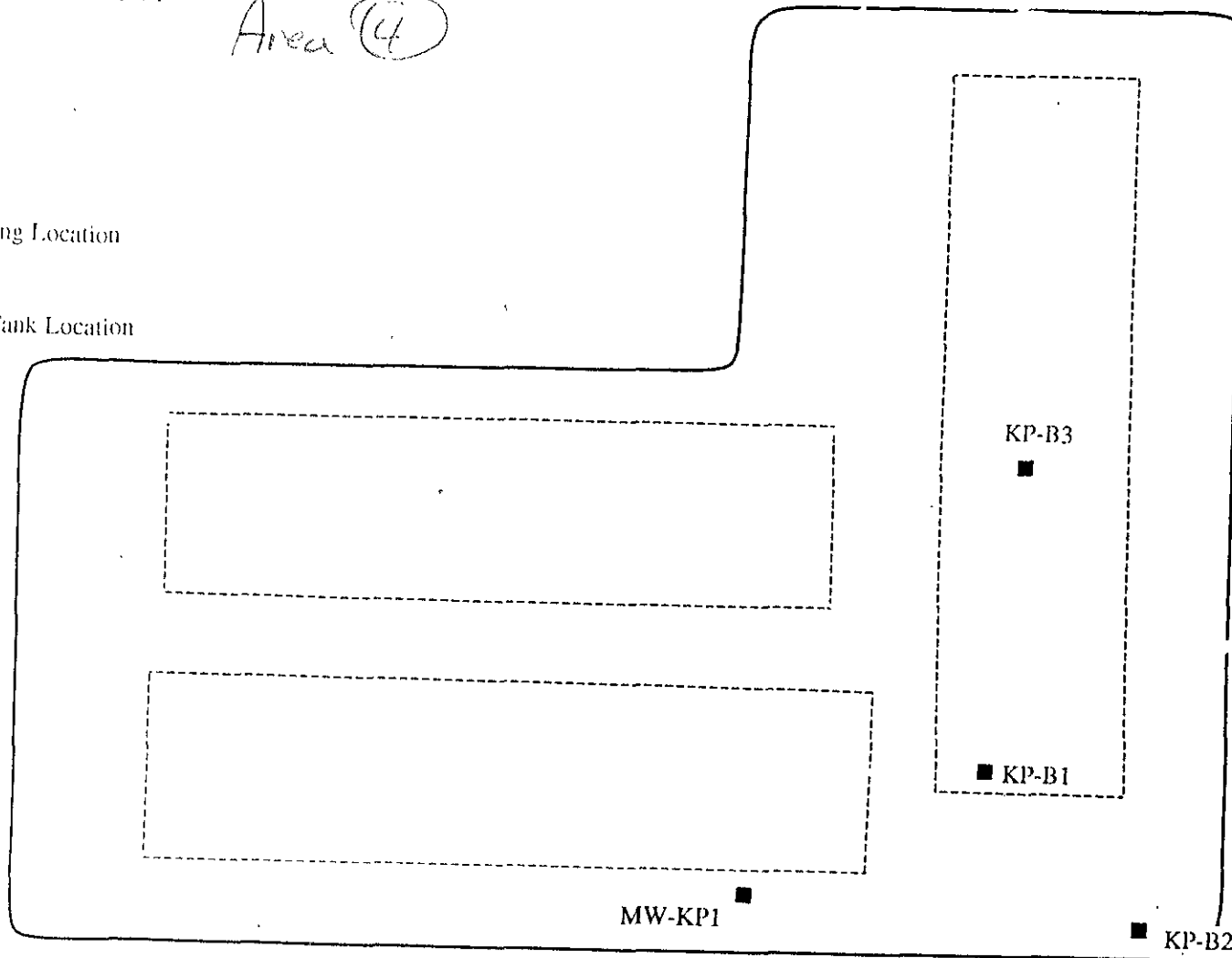
SOIL SAMPLE LOCATIONS

Area (4)

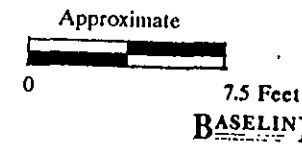
Legend

KP-B1 ■ Soil Boring Location

▭ Former Tank Location



Kaiser Sand and Gravel
3000 Busch Road
Plesanton, California



Area (4)

TABLE 2

SUMMARY OF ANALYTICAL RESULTS, GROUNDWATER
Kaiser Sand and Gravel
3000 Busch Road, Pleasanton, California

(mg/L)

Location	Date	Gasoline ¹	Diesel ¹	Benzene ²	Toluene ²	Xylenes ²	Ethylbenzene ²
MW-KP1	03/11/91	<0.050	1.6	<0.0005	<0.0005	<0.0005	<0.0005
	06/27/91	<0.050	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	10/29/91	<0.050	0.66	<0.0005	<0.0005	<0.0005	<0.0005
	02/05/92	<0.050	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	05/11/92	<0.050	0.18 ³	<0.0005	<0.0005	<0.0005	<0.0005
	08/12/92	<0.050	<0.050	<0.0005	<0.0005	<0.0005	<0.0005
	11/23/92	--	0.33	--	--	--	--
	02/25/93	--	0.13	--	--	--	--
	02/15/94	--	<0.050	--	--	--	--
	02/07/95	--	<0.050	--	--	--	--
	02/16/96	--	<0.050	--	--	--	--
Travel Blank	05/11/92	<0.050	--	<0.0005	<0.0005	<0.0005	<0.0005

Notes: mg/L = Milligrams per liter.
 x.xx = Compounds identified above detection limit at the indicated concentration.
 <xx.xx = Compound not detected at stated reporting limit.
 -- = Not analyzed.
 Monitoring well location is shown on Figures 3 and 4.
 Groundwater sampling form and laboratory report for the 02/16/96 sampling event are included in Attachments A and B.

¹ Test Method = California DOHS Method/LUFT Manual, October 1989.
² Test Method = EPA Method 5030/8020.
³ Laboratory report indicates that compounds in the kerosene range were present in the sample, all hydrocarbons were quantified as if they were within the diesel range.

TABLE 3

**WATER LEVEL MEASUREMENTS
Kaiser Sand and Gravel
3000 Busch Road, Pleasanton, California**

Well Identification	Date	Depth to Water (feet below TOC)
MW-KP1	03/08/91	27.61
	03/11/91	27.62
	03/18/91	27.59
	06/27/91	27.70
	10/29/91	27.81
	02/05/92	27.77
	05/11/92	27.69
	08/12/92	27.79
	11/23/92	27.83
	02/25/93	26.54
	02/15/94	27.89
	02/07/95	27.61
	02/16/96	27.85

Notes: TOC = Top of casing.
Monitoring well location is shown on Figures 3 and 4.
Total depth of monitoring well is 32.1 feet below TOC.

DRILLING LOG

BASELINE
 5900 Hollis Street, Suite D
 Emeryville, CA 94608
 (415) 420-8686

Location	<u>Kaiser Sand and Gravel, Pleasanton</u>	Boring No.	<u>MW-KP1</u>
Driller	<u>Aqua Science Engineers</u>	Project No.	<u>UT10115-00</u>
Method	<u>Hollow-stem cont. flight</u>	Date	<u>3/6/91</u>
Logger	<u>WKS</u> Datum <u>NA</u> Bore size <u>8-inch</u>	Casing size	<u>N/A</u>

Depth	Graphic	Lithology	Notes	
0		Yellowish brown, sandy GRAVEL, moist (backfill). Subangular to subrounded clasts, 1/2-1/4" diameter.	≈ 20% sand	
1				
2				
3				
4				
5				
6				
7				Decrease in sand content.
8				
9				
10				

Scale 1 inch = 1.5 feet

Signature _____

(3/20/91)

DRILLING LOG

BASELINE
 5900 Hollis Street, Suite D
 Emeryville, CA 94608
 (415) 420-8686

Location	<u>Kaiser Sand and Gravel, Pleasanton</u>	Boring No.	<u>MW-KP1</u>
Driller	<u>Aqua Science Engineers</u>	Project No.	<u>UT10115-00</u>
Method	<u>Hollow-stem cont. flight</u>	Date	<u>3/6/91</u>
Logger	<u>WKS</u> Datum <u>NA</u> Bore size <u>8-inch</u>	Casing size	<u>N/A</u>

Depth	Graphic	Lithology	Notes
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

Scale. 1 inch = 1.5 feet

Signature _____

(3/20/91)

DRILLING LOG

BASELINE
 5900 Hollis Street, Suite D
 Emeryville, CA 94608
 (415) 420-8686

Location Kaiser Sand and Gravel, Pleasanton Boring No. MW-KP1
 Driller Aqua Science Engineers Project No. UT10115-00
 Method Hollow-stem cont. flight Date 3/6/91
 Logger WKS Datum NA Bore size 8-inch Casing size N/A

Depth	Graphic	Lithology	Notes	
20		<p>Brown to pale yellowish brown, silty, sandy GRAVEL, fine- to medium-grained sand, moist to becoming wet at 28.5 feet. Subangular to subrounded clasts, 1/4-1/2" diameter.</p>	<p>Used 5-foot continuous sampler, auger driven no recovery to 25 feet.</p>	
21			<p>Used California modified sampler (2.0 feet), no recovery for one foot.</p>	
22				
23				
24				
25				<p>7-7-10-8 (blow count) ≈5% silt ≈10% sand</p>
26				
27				<p>5-4-6 Some areas becoming wet at shoe end.</p>
28				
29				<p>4-6-8-</p>
30				

Scale: 1 inch = 1.5 feet

Signature _____

(3/20/91)

DRILLING LOG

BASELINE
 5900 Hollis Street, Suite D
 Emeryville, CA 94608
 (415) 420-8686

Location	<u>Kaiser Sand and Gravel, Pleasanton</u>	Boring No.	<u>MW-KP1</u>
Driller	<u>Aqua Science Engineers</u>	Project No.	<u>UT10115-00</u>
Method	<u>Hollow-stem cont. flight</u>	Date	<u>3/6/91</u>
Logger	<u>WKS</u> Datum <u>NA</u> Bore size <u>8-inch</u>	Casing size	<u>N/A</u>

Depth	Graphic	Lithology	Notes
30			
31			-5 (blow count) Used 1.5-foot sampler. 6-9-5 Slough material first foot; used 2-foot sampler.
32		Yellowish brown SAND, fine- to medium-grained, wet.	
33		Brown, silty, sandy GRAVEL, fine- to medium-grained sand, wet. Subangular-subrounded clasts, 1/4-1/2" diameter.	3-4-6-10 No recovery except for 1/2-foot.
34		Yellowish brown, clayey GRAVEL, medium to low plasticity, wet. Subrounded clasts, 1/4" diameter.	
35		Very dark gray, silty, sandy CLAY, low plasticity, rootlets, wet.	5-12-18-23 ≈10% silt ≈35% sand
		Total depth = 35.5 feet	
36			
37			
38			
39			
40			

Scale: 1 inch = 1.5 feet

Signature _____

(3/20/91)