

ERAS

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4800 Coliseum Way Outline for Presentation

March 3, 2008

- I) Introduction and Purpose
- II) Review of History of Property and AAA/Learner sites – American Construction Company operated asphalt plant at the current AAA and Learner site from at least 1939 to between 1951 and 1961. Petroleum product was shipped by rail car on a rail line that ran along the southwest side of AAA/Learner (along northeast side of 4800) and transferred to the rail line by underground pipelines (LFR, 2007). Between 1961 and 1969 the operation included storage sand blasting and pipe painting. CB uses includes dyes and pigments. Uses of 1,2-DCB includes uses in oils and asphalt.

Source →

There was no development on 4800 Coliseum until 1962 when warehouse was built (there was therefore at least 23 years of industrial activities before the first development on 4800). The site at 4800 contained a sporting goods warehouse, plaster casting and foundry with no indications of related hazardous materials used since the development.

- III) Review of History of Subsurface Investigation – Subsurface investigations at 4800 since 1991 indicated the presence of tars and solvents on the northeast edge of the Property. Simon, Woodward Clyde and ATC indicated that solvent contamination was likely from the up-gradient adjacent site.

Soil remediation was performed by ERAS in 2000 to dig out one hot spot near ATC-3 (only soil sample above groundwater that contained significant solvents). Concentrations in confirmation samples below and on sides after remediation were below ESLs). Observations of tar seeping in on up-gradient sidewall at same depth as tar described in nearby soil borings by other consultants.

Significant contamination was found at up-gradient sites AAA and Learner and at cross-gradient PG&E that could not have come from 4800. Obvious source was the asphalt plant at AAA, this process known to use chlorinated solvents. Pools of oil were identified in 1988 on Learner property across fence line from 4800 (see attached

photographs). Pipe painting was also conducted in the open yard across fence line from 4800 at Learner from prior to 1961.

IV) Review of Groundwater Gradient – Groundwater monitoring in all seasons between 2002 and 2007 show consistent gradient (within 20-30 degrees from S-SE to S-SW (**see attached maps**))

V) Review of Findings –

a. PG&E, 4930 Coliseum – high concentrations of solvents found in well OW-7, also in OW-5, located down-gradient of AAA. Free-floating oil reported in OW-5, OW-7 and borings and SB-6. Solvents reported in SB-1. AAA and Learner sites appear to have significant histories of dumping, spillage and industrial process using significant amounts of oils and solvents.

A metal pipeline was reported coming from AAA with tar at end and solvents in groundwater (B-11). Concentrations of oil in soil samples along northeast and northwest property lines of PG&E were all above cleanup targets. Note that pipeline reported at PG&E from one of the USTs appears to line up with southeastern sump pipeline at AAA (**see attached maps**).

b. 4800 Coliseum Way – elevated concentrations of petroleum hydrocarbons or tar and oil were reported in all borings along up-gradient Property line, ATC-3, ATC-5, ATC-7, ATC-8, ATC-9 (**see attached logs**). High concentrations of solvents (CB and DCB) were reported in ATC-3 in soil at 3 feet, lower conc. In WCC-1A at 6 feet and in ATC-2 at 4 feet (**see attached map**).

c. High concentrations of solvents were reported in up-gradient borings ATC-3, ATC-7, ATC-8, ATC-9, WCC-1A. High concentration bull's-eye near end of former sump on Learner property (**see attached map**).

VI) Discussion of Data Gaps and Questions

a. Much of the soil data, logs and excavation observations indicate a source to the northeast. No known uses of the chemicals at 4800 Coliseum and the solvent data in soil and in groundwater in particular point to an up-gradient offsite source. Dave Siegel discussed this contamination with a representative of the AAA owner in 2002.

b. Why was soil excavation and removal performed in September 2003 at the Learner site before it was listed as a SLIC case? See **attached** letter dated December 21, 2005 asking about disposition of excavated soil. As stated above, the owner of AAA knew in 2002

that there was oil and tar and solvents associated with the former asphalt plant or other uses of AAA/Learner.

- c. See attached **soil map** for lack of confirmation sampling in the excavated areas at AAA/Learner. Pertaining to the same map, there apparently was limited confirmation sampling along the northwestern underground supply line and near sump. This is important because this appears to be the source of solvents in groundwater, based on isoconcentration contouring by LFR.
- d. See attached **groundwater map** indicating that there apparently were no groundwater samples collected in the excavated area at the Learner site. Only two groundwater samples were collected on the entire AAA and Learner sites. In comparison, note that there are 8 groundwater samples that were collected in a limited area on the 4800 Coliseum site.
- e. CB and DCB were found in a groundwater sample beneath Small Tank Pit, see attached **groundwater map**. This data was apparently not used in contouring. There also was apparently no groundwater sampling performed down-gradient of the former underground product tanks at AAA/ Learner.
- f. The consultant for PG&E indicated in an e-mail to the County that there was still a source of solvent contamination at 4800 Coliseum Way. However, any remaining contamination appears to have migrated from off-site. The excavation samples collected by ERAS indicated no concentrations of solvents above the ESLs. Are there any other areas of known soil contamination that have been reported?

LAKEVIEW COAL YARD, 4500 SW, 1942
1/25/53

[Handwritten signature]

water
pond at feedlot oil



water
pond at feedlot oil, construction site

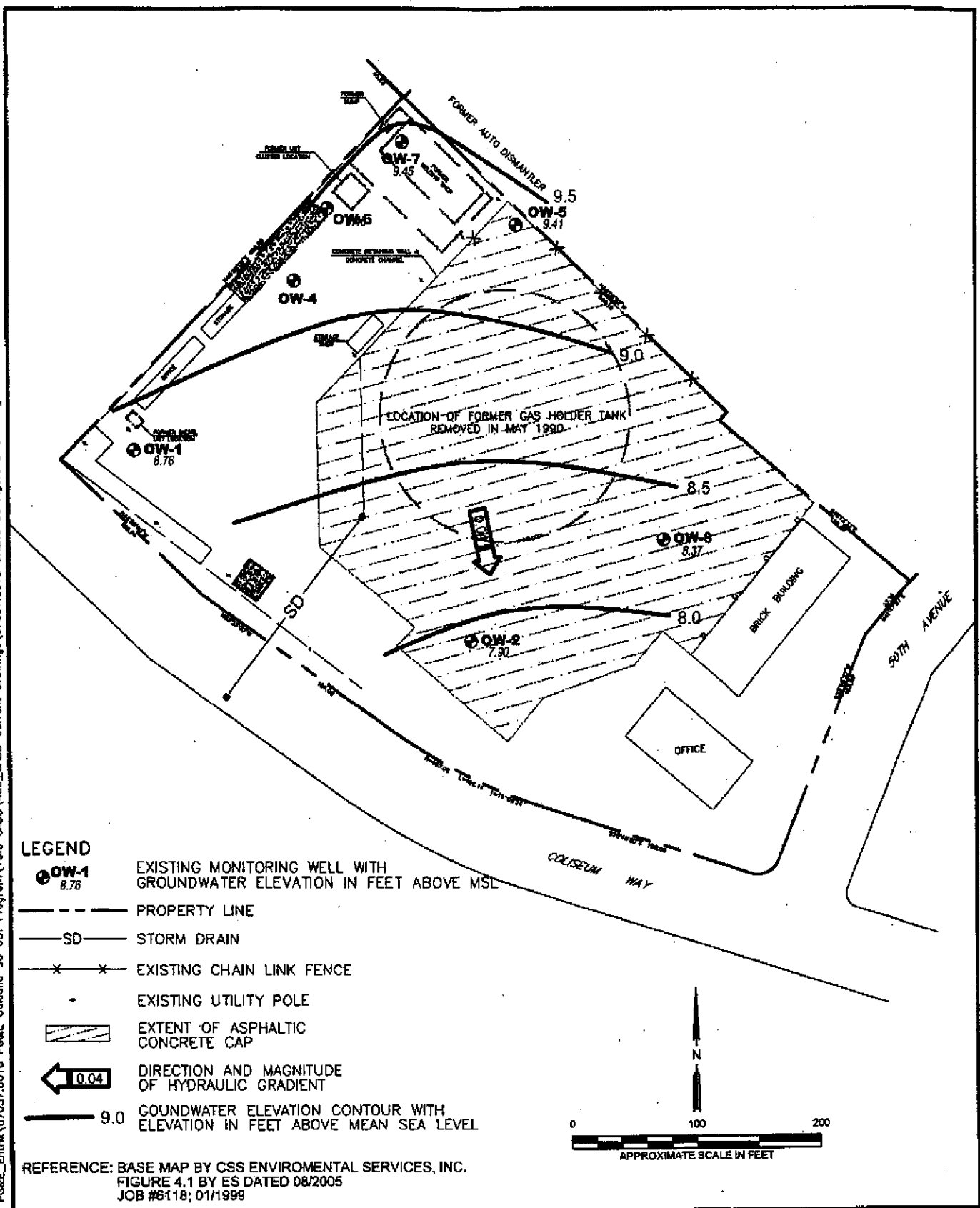


U.S. GOVERNMENT
LAND AND RECLAMATION

R0002478

EXD1K

FILENAME: P:\D7037 PG&E_Enter\07037.0018 PG&E Oakland SC UST Program\10.0 CADD\400_CADD Current Drawings\07037.0018 OKLND SC Figure 2-3-4.dwg



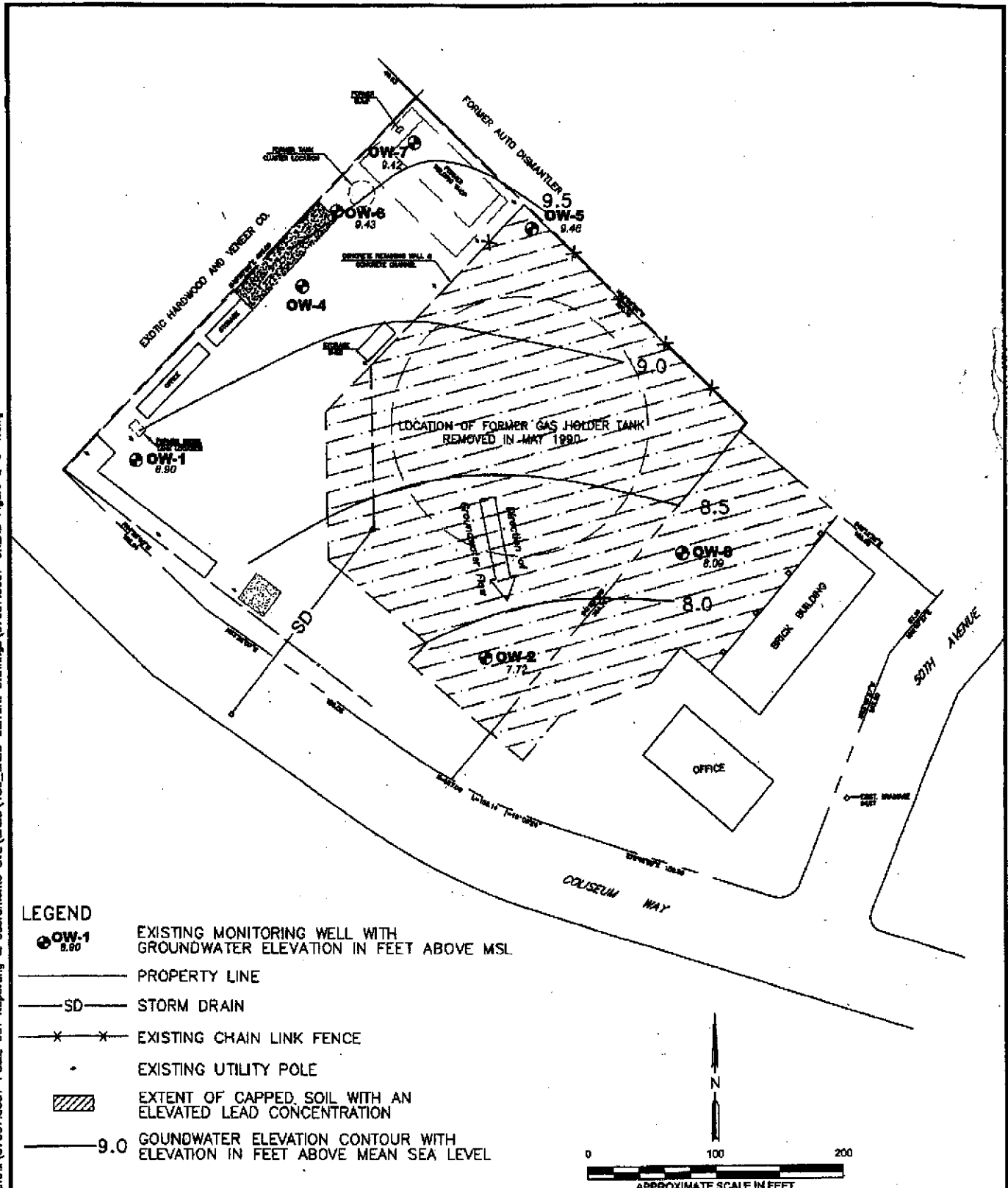
Pacific Gas and Electric
 Oakland General Construction Yard
 Oakland, California

FIGURE 3
 Groundwater Elevation
 Contours
 (April 12, 2007)

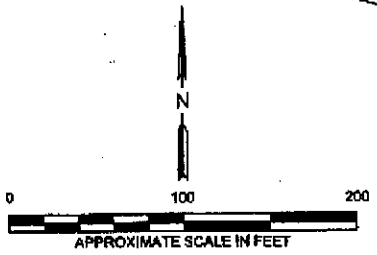
4/12/07

4012

FILENAME: P:\07037 PG&E_Enrich\07037.0007 PG&E_Enrich\07037.0007 OKLND Figure 2-3-4.dwg



- LEGEND**
- OW-1 8.60 EXISTING MONITORING WELL WITH GROUNDWATER ELEVATION IN FEET ABOVE MSL
 - PROPERTY LINE
 - SD STORM DRAIN
 - EXISTING CHAIN LINK FENCE
 - EXISTING UTILITY POLE
 - EXTENT OF CAPPED SOIL WITH AN ELEVATED LEAD CONCENTRATION
 - 9.0 GROUNDWATER ELEVATION CONTOUR WITH ELEVATION IN FEET ABOVE MEAN SEA LEVEL



REFERENCE: BASE MAP BY CSS ENVIRONMENTAL SERVICES, INC.
 FIGURE 4.1 BY ES DATED 08/2005
 JOB #6118; 01/1999

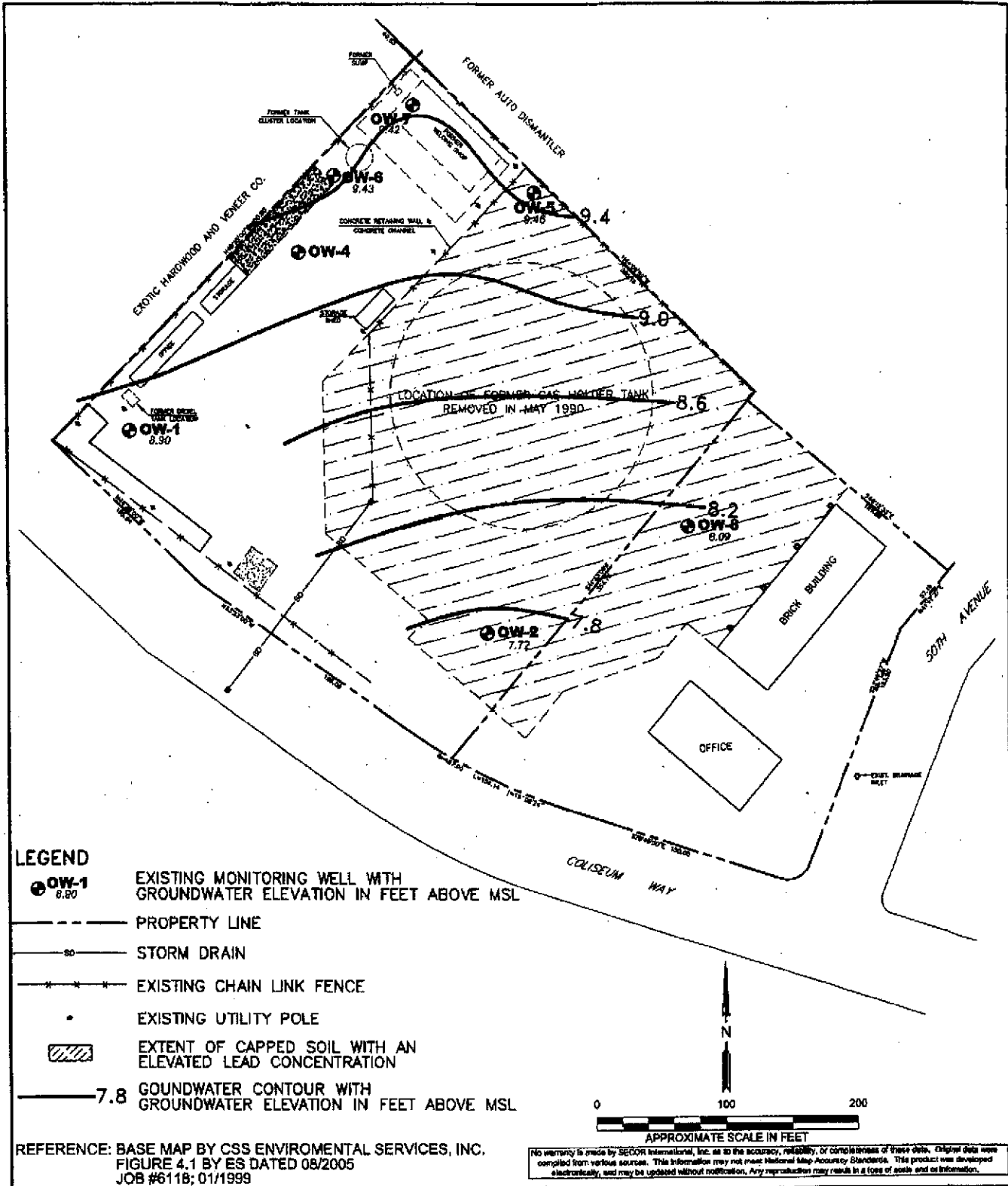


Pacific Gas and Electric
 Oakland General Construction Yard
 Oakland, California

FIGURE 3
 Groundwater Elevation
 Contours
 (December 20, 2006)

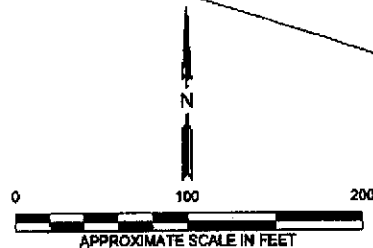
12/20/06

220712



LEGEND

- OW-1** 8.50 EXISTING MONITORING WELL WITH GROUNDWATER ELEVATION IN FEET ABOVE MSL
- PROPERTY LINE
- STORM DRAIN
- EXISTING CHAIN LINK FENCE
- EXISTING UTILITY POLE
- EXTENT OF CAPPED SOIL WITH AN ELEVATED LEAD CONCENTRATION
- 7.8 GROUNDWATER CONTOUR WITH GROUNDWATER ELEVATION IN FEET ABOVE MSL



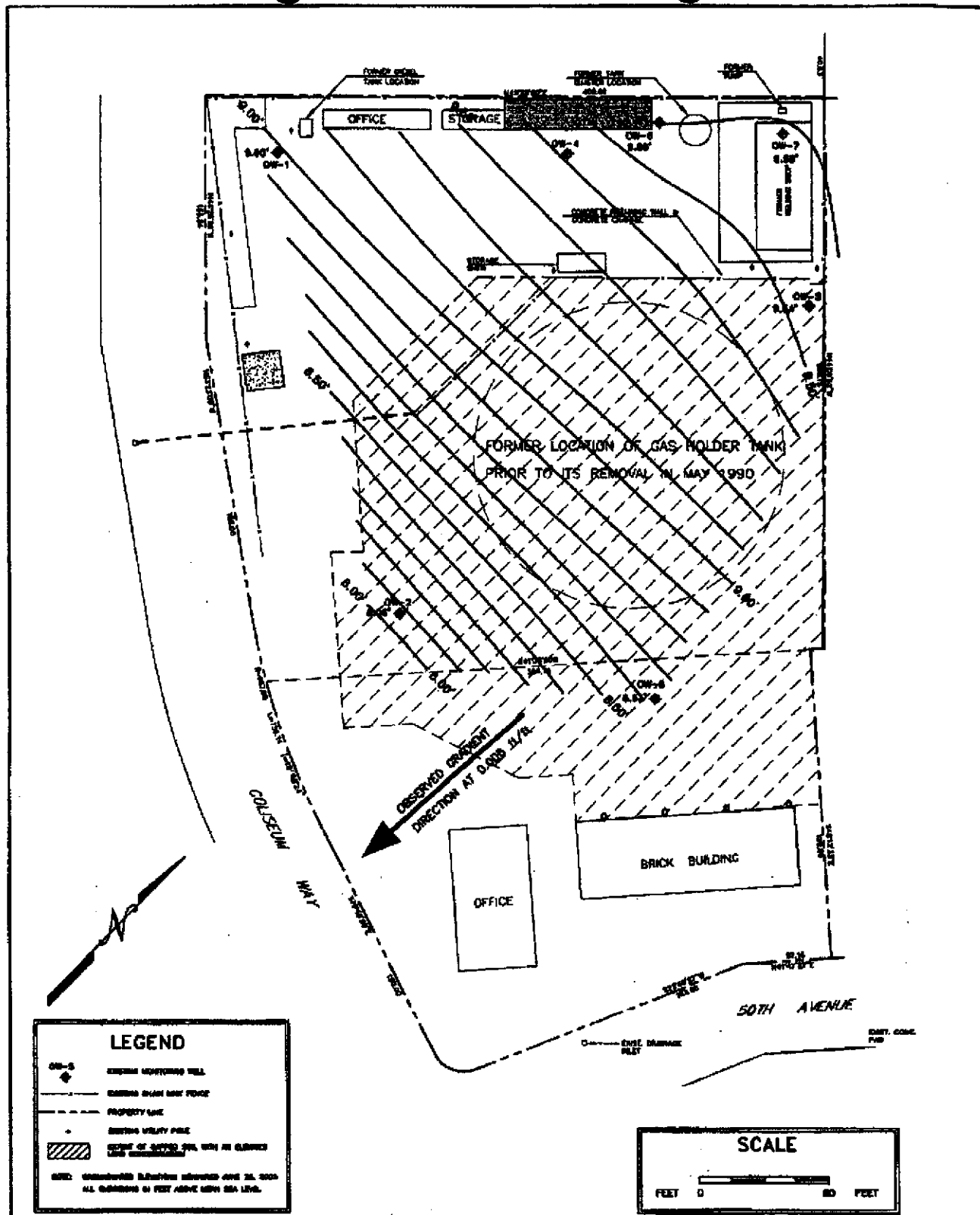
REFERENCE: BASE MAP BY CSS ENVIRONMENTAL SERVICES, INC.
 FIGURE 4.1 BY ES DATED 08/2005
 JOB #6118; 01/1999

No warranty is made by SECOR International, Inc. as to the accuracy, reliability, or completeness of these data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed electronically, and may be updated without notification. Any reproduction may result in a loss of scale and/or information.

 SECOR 57 Lafayette Circle, 2nd Floor Lafayette, California PHONE: (925) 299-9300 FAX: (925) 299-9302	FOR: PG&E OAKLAND GENERAL SERVICE YARD 4930 COLISEUM WAY OAKLAND, CALIFORNIA		POTENTIOMETRIC SURFACE MAP DECEMBER 2005		DRAWING 3
	JOB NUMBER: 050T.50265.00.0003	DRAWN BY: RRR	CHECKED BY: AM	APPROVED BY: AM/GH	DATE: 02/08/06

FILEPATH:Q:\CADD-05\PG&E\PG&E - Oakland\4930 Coliseum Way-Oakland\PG&E - Oakland - 4930 Coliseum Way - SP GW POTENTIOMETRIC - Figure 2 3.dwg\mroqasgh\Dec 11, 2006 at 11:05\Layout

12/05



LEGEND

- OW-8 MONITORING WELL
- EXISTING DRAINAGE POLE
- PROPERTY LINE
- EXISTING VEGETY POLE
- AREA OF SATURATED SOIL WITH AN OBSERVED GROUNDWATER ELEVATION

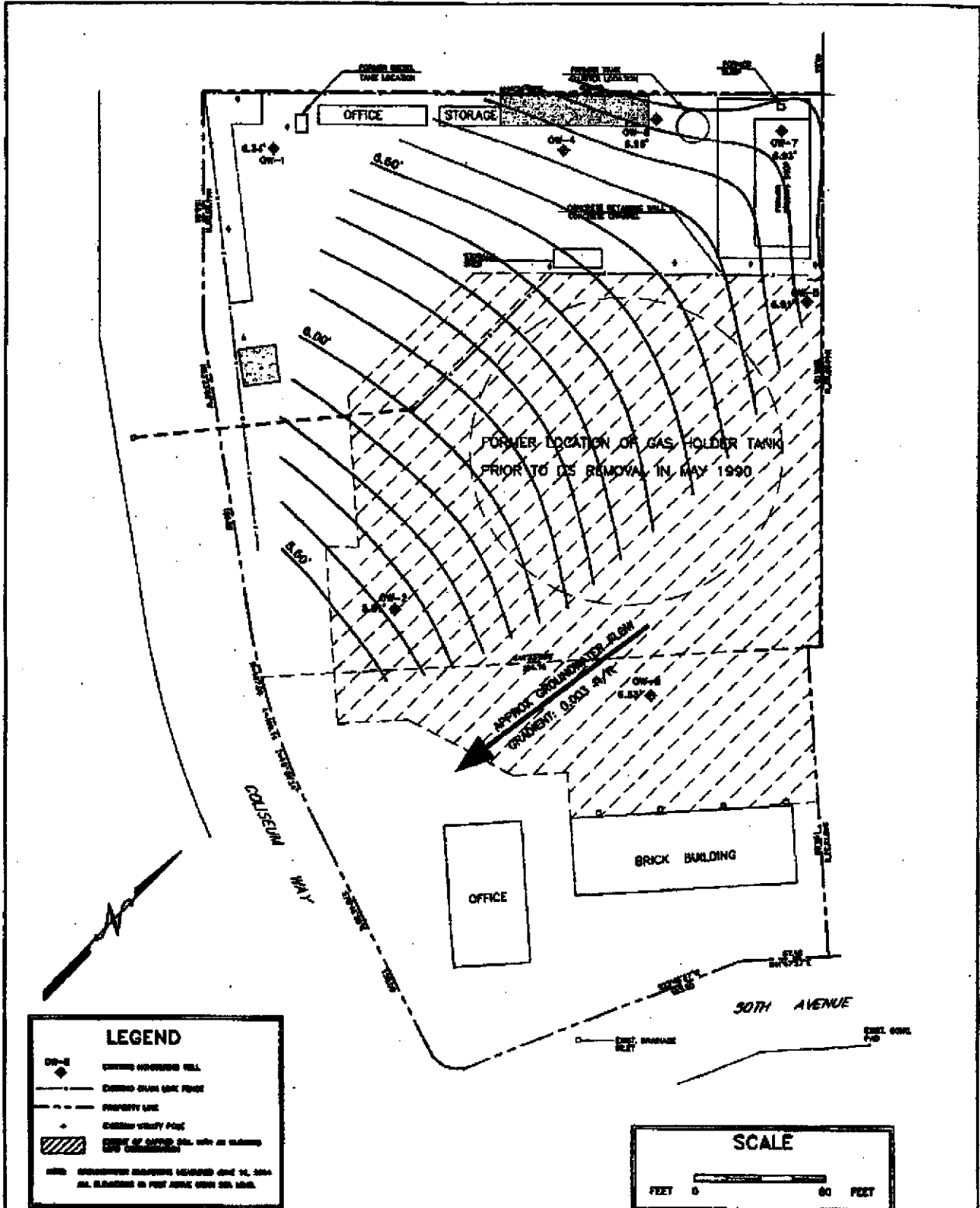
NOTE: UNSATURATED ELEVATIONS OBSERVED ON 26. 2000
ALL ELEVATIONS IN FEET ABOVE MEAN SEA LEVEL.

SCALE

FEET 0 80 FEET

<p>CSS</p> <p>CSS ENVIRONMENTAL SERVICES, INC.</p>	<p>SITE PLAN AND SITE RELATIVE GROUNDWATER ELEVATIONS OAKLAND GENERAL CONSTRUCTION YARD 4930 COLISEUM WAY OAKLAND, CA 94610</p>				<p>FIGURE 4.1</p>
	JOB NUMBER 6118	DATE 1/99	DRAWING GW06-05	BY ES/ZS/BD	

8/05



CSS ENVIRONMENTAL SERVICES, INC.

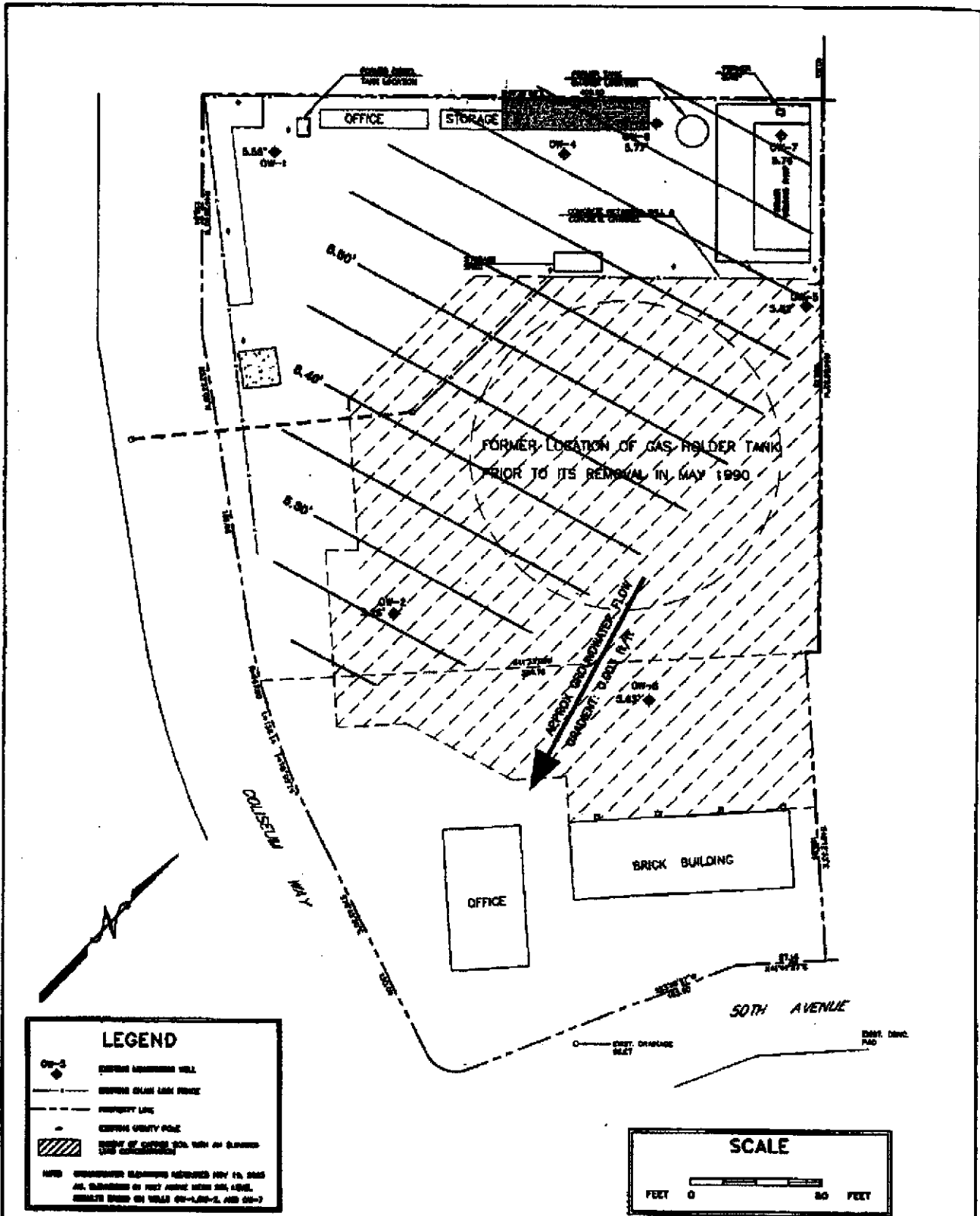
SITE PLAN AND SITE RELATIVE GROUNDWATER ELEVATIONS
PG&E DISTRIBUTION CONSTRUCTION SITE
4930 COLISEUM WAY
OAKLAND, CA 94610

FIGURE

4.1

JOB NUMBER	DATE	ISSUED	BY	REVISED
6118	1/89	GW06-04	ES/ZS/BD	08/04

8/04



LEGEND

- MONITORING WELL
- CLEAN LINE FENCE
- PROPERTY LINE
- UTILITY POLE
- FORMER LOCATION OF GAS-HOLDER TANK PRIOR TO ITS REMOVAL IN MAY 1990

NOTE: GROUNDWATER SAMPLING PERFORMED NOV. 14, 1999
 ALL ELEVATIONS IN FEET ABOVE MEAN SEA LEVEL.
 RESULTS FOUND ON WELLS OW-1, OW-2, AND OW-3



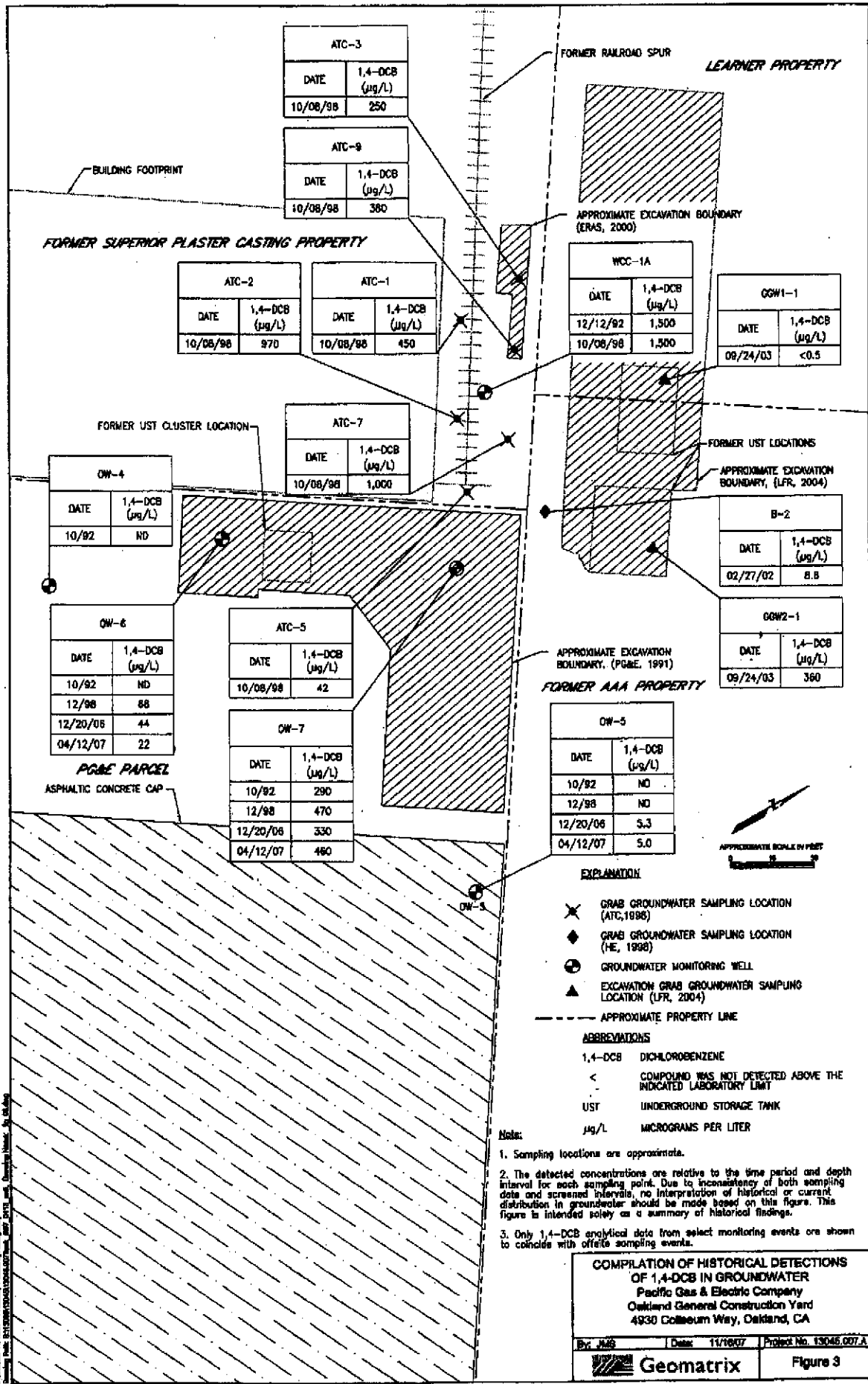
CSS
 CSS ENVIRONMENTAL SERVICES, INC.

SITE PLAN AND SITE RELATIVE GROUNDWATER ELEVATIONS
 PG&E DISTRIBUTION CONSTRUCTION SITE
 4930 COLISEUM WAY
 OAKLAND, CA 94610

FIGURE
 4.1

JOB NUMBER	DATE	DRAWING	BY	REVISION
6118	1/99	GW04-03	ES/TJ/BD	11/03

1103



ATC-3	
DATE	1,4-DCB (µg/L)
10/08/98	250

ATC-9	
DATE	1,4-DCB (µg/L)
10/08/98	380

ATC-2	
DATE	1,4-DCB (µg/L)
10/08/98	870

ATC-1	
DATE	1,4-DCB (µg/L)
10/08/98	450

WCC-1A	
DATE	1,4-DCB (µg/L)
12/12/92	1,500
10/08/98	1,500

GGW1-1	
DATE	1,4-DCB (µg/L)
08/24/03	<0.5

ATC-7	
DATE	1,4-DCB (µg/L)
10/08/98	1,000

OW-4	
DATE	1,4-DCB (µg/L)
10/92	ND

B-2	
DATE	1,4-DCB (µg/L)
02/27/02	8.8

OW-6	
DATE	1,4-DCB (µg/L)
10/92	ND
12/98	88
12/20/06	44
04/12/07	22

ATC-5	
DATE	1,4-DCB (µg/L)
10/08/98	42

GGW2-1	
DATE	1,4-DCB (µg/L)
08/24/03	360

OW-7	
DATE	1,4-DCB (µg/L)
10/92	290
12/98	470
12/20/06	330
04/12/07	480

OW-5	
DATE	1,4-DCB (µg/L)
10/92	ND
12/98	ND
12/20/06	5.3
04/12/07	5.0

EXPLANATION

- ✕ GRAB GROUNDWATER SAMPLING LOCATION (ATC, 1998)
- ◆ GRAB GROUNDWATER SAMPLING LOCATION (HE, 1998)
- ⊕ GROUNDWATER MONITORING WELL
- ▲ EXCAVATION GRAB GROUNDWATER SAMPLING LOCATION (LFR, 2004)
- APPROXIMATE PROPERTY LINE

ABBREVIATIONS

- 1,4-DCB DICHLOROBENZENE
- < COMPOUND WAS NOT DETECTED ABOVE THE INDICATED LABORATORY LIMIT
- USF UNDERGROUND STORAGE TANK
- µg/L MICROGRAMS PER LITER

Note:

1. Sampling locations are approximate.
2. The detected concentrations are relative to the time period and depth interval for each sampling point. Due to inconsistency of both sampling date and screened intervals, no interpretation of historical or current distribution in groundwater should be made based on this figure. This figure is intended solely as a summary of historical findings.
3. Only 1,4-DCB analytical data from select monitoring events are shown to coincide with offsite sampling events.

COMPILATION OF HISTORICAL DETECTIONS OF 1,4-DCB IN GROUNDWATER
 Pacific Gas & Electric Company
 Oakland General Construction Yard
 4930 Coliseum Way, Oakland, CA

Apr, 1992

AQUA RESOURCES, INC.



BORING LOG

LOCATION: Oakland	JOB NAME: PG&E	JOB NO: 90262.2
DRILLING COMPANY: Exceltech/Resna		BORING NO.: OW-7
DRILLER'S NAME: Don Jenkins		SHEET: 1 OF 2
DRILL BIT: <input type="checkbox"/> Solid Flight Auger <input checked="" type="checkbox"/> Hollow Auger <input type="checkbox"/> Rotary Wash		
SAMPLE TYPE: <input checked="" type="checkbox"/> 2.0" ID Split Barrel <input type="checkbox"/> 2.0" ID Shelby Tube <input type="checkbox"/> SPT		
DRIVE WEIGHT: 140 LB.	FALL: 30 IN.	START TIME: 9:55 AM
WATER LEVEL (Feet): 1.34		FINISH TIME: 10:00 AM
TIME: 12/19/91		DATE: 12/19/91
CASING ORIFICE (Feet): 17.5		
ELEVATION: 4.76 FEET	FIELD ENGINEER: H. Peterson	

LOCATION & NOTES

DATUM: Mean Sea Level OVM **OW-2**

SLIPS PER HALF FOOT	BLOW COUNT	MOISTURE CONTENT %	DRY UNIT WEIGHT (pcf)	DEPTH IN FEET	UNCS CLASSIFICATION
				0	
				1	
				2	
				3	
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				97	
				98	
				99	
				100	

SURFACE CONDITIONS: **A. Stessman**
 Graded surface of aggregate to base rock, nearly level - since well installation the surface has been paved with AC.

NOTE: No OVM = OVM reading of 0.0

Gravel backfill material.

Gravelly sand with minor silt and clay, greyish green (SG4/2), medium dense, wet, fine to coarse grained sand, poorly sorted, subangular gravel. Note tarry product visible. No OVM, slight hydrocarbon odor.

SP/SC

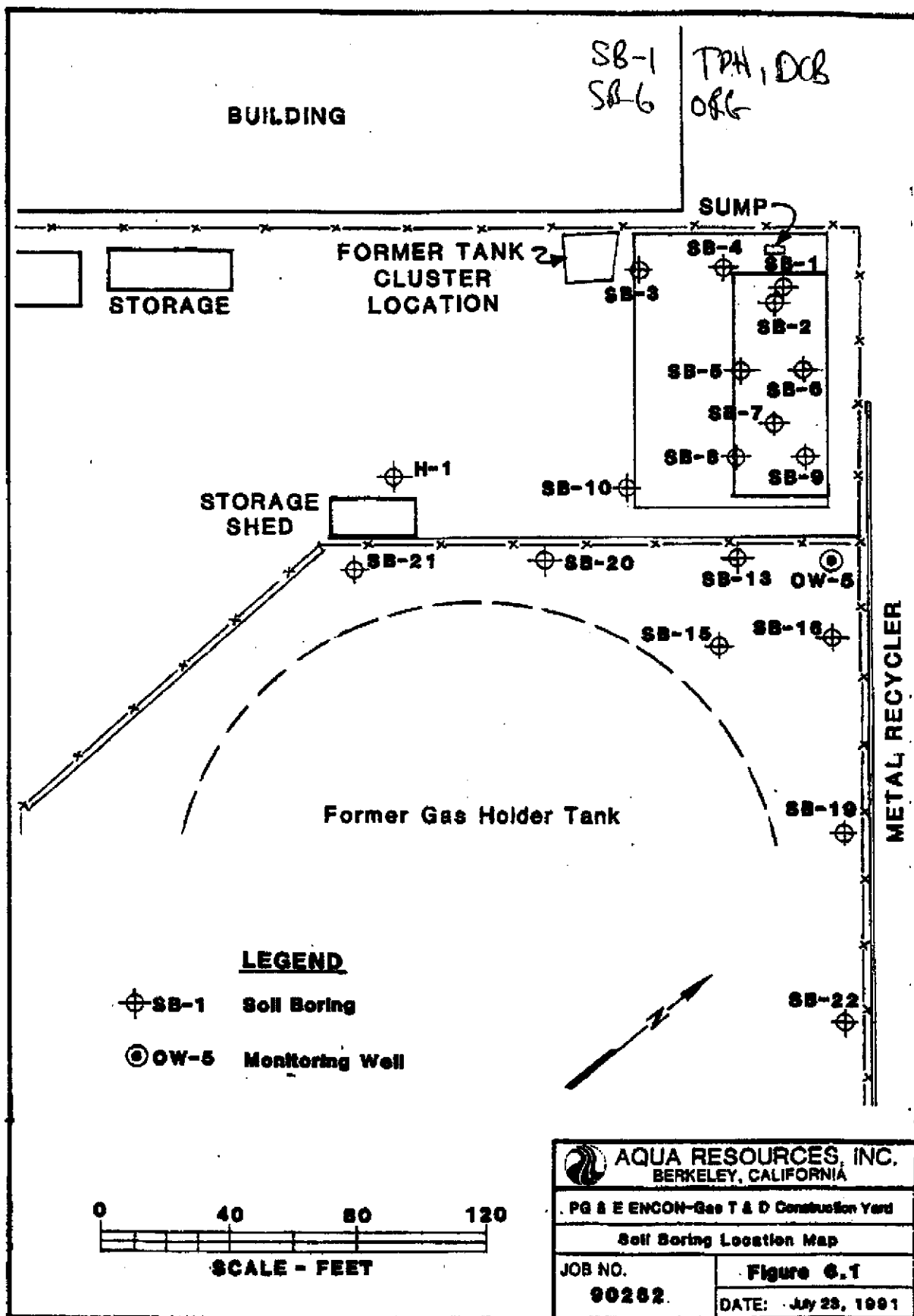


Table 6.1. Petroleum Hydrocarbons in Soil, in mg/kg

Sample ID	Depth [feet]	Oil and Grease	TPH	TEH Diesel	TVH Gasoline
SB-1-1b	4.0		32,000	8,900	
SB-1-2	5.0-5.5		11,000	2,100 (a)	
SB-1-3	10.0-10.5		11	< 2.5	
SB-2-1	4.0-4.5		47,000	1,600 (b)	
SB-2-2	8.0-8.5		8	< 2.5	
SB-4-1	5.75-6.25		14,000		
SB-4-2	7.25-7.75		5,800		
SB-4-3	8.0-8.5		6,900		
SB-5-1	2.75-3.25	9,200			
SB-5-2	5.0-5.5	3,500			
SB-5-3	8.0-8.5	<50			
SB-6-1	3.0-3.5	13,000		1,700	
SB-6-2	4.5-5.0	3,600			
SB-6-3	7.5-8.0	2,400			
SB-6-4	9.0-9.5	<50			
SB-7-1	0.5-1.0	96			
SB-7-1a	1.0-1.5 (disturbed)	3,900			
SB-7-2	6.0-6.5	<50			
SB-7-3	8.0-8.5	<50			
SB-8-1	0.0-0.5	<50			
SB-8-2	3.0-3.5	2,700		47	
SB-8-3	5.0-5.5	<50			
SB-8-4	8.0-8.5	<50			
SB-9-1	1.0-1.5	2,100		210	
SB-9-2	5.0-5.5	2,400			
SB-9-3	7.0-7.5	<50			
SB-10-1	2.5-3.0	770			
SB-10-2	5.0-5.5	58			
SB-10-3	8.0-8.5	<50			

(Continued ->)

Notes:

- 1) (a) = Sample contains a hydrocarbon fuel of approximately 3700 mg/kg, including 2149 mg/kg of diesel fuel
- 2) (b) = Sample contains a hydrocarbon fuel of approximately 2000 mg/kg, including 1571 mg/kg of diesel fuel
- 3) Blank = Not Analyzed
- 4) < = Not Detected at or above Reporting Limit
- 5) TPH = Total Petroleum Hydrocarbons (EPA method 418.1)
- 6) TEH-Diesel = Total Extractable Petroleum Hydrocarbons as Diesel (EPA method 8015 mod./3550)
- 7) TVH-Gasoline = Volatile Hydrocarbons as Gasoline (EPA method 8015 mod./3550)
- 8) Oil and Grease = Hydrocarbon Oil and Grease (SMWW 17.5520EF)

Table 6.1. Petroleum Hydrocarbons in Soil, in mg/kg (continued)

Sample ID	Depth (feet)	Oil and Grease	TPH	TEH-Diesel	TVH-Gasoline
SB-13-1	2.0-2.5	78			
SB-13-2	5.0-5.5	20			
SB-13-3	7.0-7.5	18			
SB-15-1	2.0-2.5	2,300			
SB-15-2	4.0-4.5	30			
SB-15-3	7.0-7.5	18			
SB-16-1	2.0-2.5	<5.0			
SB-16-2	4.0-4.5	8			
SB-16-3	7.0-7.5	110		510	
SB-19-1	~2.0 (cuttings)	66			
SB-19-2	5.0-5.5	6			
SB-19-3	7.0-7.5	22			
SB-20-1	2.5-3.0	82			
SB-20-2	4.0-4.5	120		66	
SB-20-3	7.0-7.5	34			
SB-21-1	2.0-2.5	24			
SB-21-2	5.0-5.5	< 50		< 1.0	
SB-21-3	7.0-7.5	< 50		< 1.0	
SB-22-1	3.75-4.25	28			
SB-22-2	5.0-5.5	< 50		< 1.0	
SB-22-3	7.0-7.5	< 50		< 1.0	
OW-5-5	2.5-3.0		450		
OW-5-9	4.5-5.0		600	< 50 (c)	2
OW-5-12	6.0-6.5		75		

Notes:

- 1) (c) = Sample contains a hydrocarbon fuel of approximately 3750 mg/kg, which does not match diesel fuel
- 2) Blank = Not Analyzed
- 3) < = Not Detected at or above Reporting Limit
- 4) TPH = Total Petroleum Hydrocarbons (EPA method 418.1)
- 5) TEH-Diesel = Total Extractable Petroleum Hydrocarbons as Diesel (EPA method 8015 mod./3550)
- 6) TVH-Gasoline = Volatile Hydrocarbons as Gasoline (EPA method 8015 mod./3550)
- 7) Oil and Grease = Hydrocarbon Oil and Grease (SMWW 17:5520EF)

Table 6.2. Volatile Organic Compounds In Soil, in ug/kg

PURGEABLE HALOCARBONS	Sample ID -> Depth [feet] ->	H-1	SB-1-1	SB-1-2	SB-1-3	SB-2-1	SB-2-2	SB-6-1	SB-8-2	SB-8-1
	MDL	0.0-0.5	4.0	5.0-5.5	10.0-10.	4.0-4.5	5.0-5.5	3.0-3.5	3.0-3.5	1.0-1.5
		(x1)	(x5)	(x5)	(x1)	(x5)	(x5)	(x2)	(x1)	(x1)
Dichlorodifluoromethane	5		ND	ND	ND	ND	ND			
Chloromethane	5	<10	ND	ND	ND	ND	ND	<20	<10	<10
Vinyl chloride	5	<10	ND	ND	ND	ND	ND	<20	<10	<10
Bromomethane	5	<10	ND	ND	ND	ND	ND	<20	<10	<10
Chloroethane	5	<10	ND	ND	ND	ND	ND	<20	<10	<10
Trichlorofluoromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	5	ND						ND	ND	ND
trans-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND	ND	230	13	ND
Chloroform	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	5	ND						ND	ND	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND	ND	310	9.3	ND
Carbon Tetrachloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinylether	10	ND								
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	44	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	100									
1,3-Dichlorobenzene	5	ND	ND	ND	19	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	5	ND	ND	ND	20	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
PURGEABLE AROMATICS	MDL	(x1)	(x5)	(x5)	(x1)	(x5)	(x1)	(x2)	(x1)	(x1)
Benzene	5	ND	ND	ND	ND	ND	ND	16	ND	ND
Toluene	5	30	ND	ND	ND	ND	ND	120	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	5	ND	45	ND	ND	30	ND	220	45	ND
P-&m-xylene	10									
O-xylene	5		25	ND	ND	ND	ND			
Total Xylenes	5	ND						730	ND	ND
1,3-Dichlorobenzene	5	ND	ND	ND	13	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	5	ND	ND	ND	14	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND

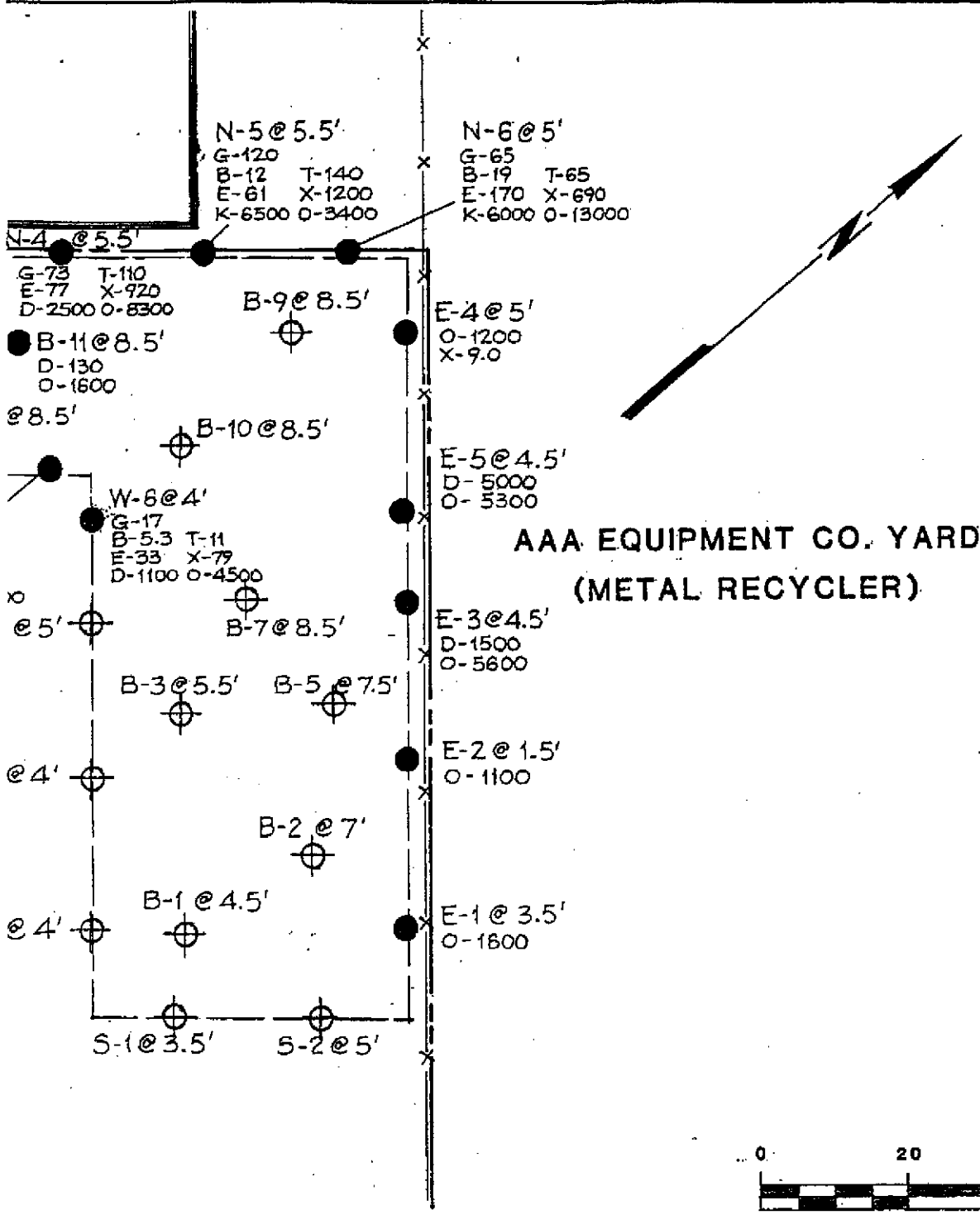
(continued ->)

Table 6.2. Volatile Organic Compounds in Soil, in ug/kg (continued)

PURGEABLE HALO-CARBONS	Sample ID ->	SB-16-3	SB-20-2	SB-21-2	SB-22-3	OW-5-8
	Depth [feet] ->	7.0-7.5	4.0-4.5	5.0-5.5	7.0-7.5	4.5-5
	MDL	(x10)	(x1)	(x1)	(x1)	(x1)
Dichlorodifluoromethane	5					ND
Chloromethane	5	<100	<10	<10	<10	ND
Vinyl chloride	5	<100	<10	<10	<10	ND
Bromomethane	5	<100	<10	<10	<10	ND
Chloroethane	5	<100	<10	<10	<10	ND
Trichlorofluoromethane	5	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND
Dichloromethane	5	ND	ND	ND	ND	ND
cis-1,2-Dichloroethane	5	ND	ND	ND	ND	ND
trans-1,2-Dichloroethane	5	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	ND	ND	ND	ND	ND
Chloroform	5	ND	ND	ND	ND	ND
Freon 113	5	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	5	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	ND	ND	ND
1,2-Dichloroethane	5	ND	ND	ND	ND	ND
Trichloroethane	5	ND	ND	ND	ND	ND
1,2-Dichloropropane	5	ND	ND	ND	ND	ND
Bromodichloromethane	5	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	5	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	5	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	5	ND	ND	ND	ND	ND
Tetrachloroethane	5	ND	ND	ND	ND	ND
Dibromochloromethane	5	ND	ND	ND	ND	ND
2-Chloroethylvinylether	10	ND	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND
Bromoform	5	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	44					ND
2-Chlorotoluene	100					ND
1,3-Dichlorobenzene	5	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	5	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	5	ND	ND	ND	ND	ND
PURGEABLE AROMATICS	MDL	(x10)	(x1)	(x1)	(x1)	(x1)
Benzene	5	110	ND	ND	ND	ND
Toluene	5	79	ND	ND	ND	ND
Chlorobenzene	5	ND	ND	ND	ND	ND
Ethylbenzene	5	ND	ND	ND	ND	ND
P- & m-xylene	10					ND
O-xylene	5					ND
Total Xylenes	5	140	ND	ND	ND	ND
1,3-Dichlorobenzene	5	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	5	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	5	ND	ND	ND	ND	ND

Notes:

- 1) MDL = Method Detection Limit
- 2) (x5) = Factor to be multiplied with the MDL to determine the individual Reporting Limit
- 3) ND = Not Detected at or above Reporting Limit
- 4) Blank = Not Analyzed
- 5) Purgeable Halocarbons (EPA method 8010)
- 6) Purgeable Aromatics (EPA method 8020)




 AQUA RESOURCES, INC. BERKELEY, CALIFORNIA	
PG & E ENCON - GAS YARD	
Initial Confirmatory Samples	
JOB NO. 90262.2	Figure 4-4 DATE: February 1982

TABLE 5-1 COMPARISON OF DETECTED COMPOUNDS IN PRODUCT SAMPLE E-PIPE-2 AND SOIL SAMPLES E-6 AND B-11

Detected Compound	Analysis Method (EPA #)	Sample ID		
		E-PIPE-2	E-6	B-11
Xylene	¹ 8240, ² 8020	11 ug/kg ²	< 5 ug/kg ¹	< 5 ug/kg ¹
Chlorobenzene	¹ 8240, ² 8010	< 5 ug/kg	< 5 ug/kg ¹	130 ug/kg ¹
1,3-Dichlorobenzene	¹ 8240, ² 8010	< 5 ug/kg	< 5 ug/kg ¹	1100 ug/kg ¹
1,4-Dichlorobenzene	¹ 8240, ² 8010	< 5 ug/kg	< 5 ug/kg ¹	1800 ug/kg ¹
1,2-Dichlorobenzene	¹ 8240, ² 8010	< 5 ug/kg	< 5 ug/kg ¹	160 ug/kg ¹
Naphthalene	8270	< 5 mg/kg	0.5 mg/kg	< 1 mg/kg
Acenaphthene	8270	13 mg/kg	< 0.5 mg/kg	< 1 mg/kg
Fluorene	8270	52 mg/kg	0.9 mg/kg	< 1 mg/kg
Phenanthrene	8270	76 mg/kg	1.8 mg/kg	< 1 mg/kg
Anthracene	8270	13 mg/kg	< 0.5 mg/kg	< 1 mg/kg
Fluoranthene	8270	13 mg/kg	< 0.5 mg/kg	< 1 mg/kg
Pyrene	8270	72 mg/kg	3.0 mg/kg	1.9 mg/kg
Benzo(a)anthracene	8270	44 mg/kg	< 0.5 mg/kg	< 1 mg/kg
Chrysene	8270	30 mg/kg	< 0.5 mg/kg	< 1 mg/kg
Benzo(a)pyrene	8270	16 mg/kg	< 0.5 mg/kg	< 1 mg/kg
Gasoline	5030-8015	< 1 mg/kg	NA	< 1 mg/kg
Kerosene	3510-8015	< 1 mg/kg	< 1 mg/kg	< 1 mg/kg
Diesel	3510-8015	7000 mg/kg	3500 mg/kg	130 mg/kg
Motor Oil	3510-8015	< 10 mg/kg	6700 mg/kg	NA
Oil & Grease	5520 E&F	NA	NA	1600

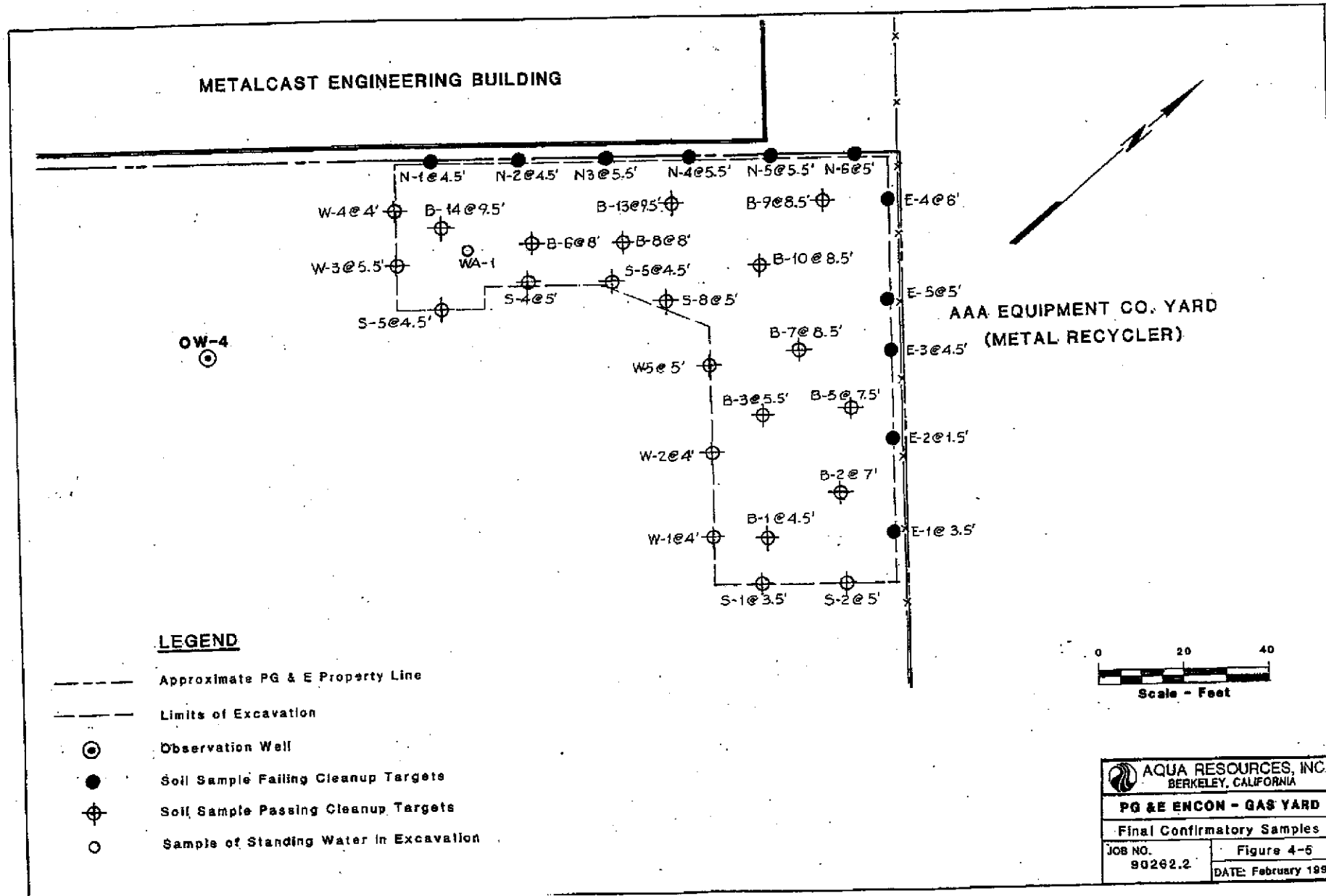
Notes: NA = Not Analyzed

No metal pipelines containing a heavy viscous oil or tar were uncovered. Each pipeline was oriented approx

In order to determine whether or not the two pipelines were the source of contaminants found in neighboring soils, the EPA 8270 analysis for semivolatile organics was repeated on two soil samples obtained from the vicinity of the pipelines. Sample E-6 was collected approximately 2 1/2 feet below the 12 inch diameter pipe from the excavation sidewall. Sample B-11 was collected at a depth of 8 1/2 feet approximately 35 feet from the observed original terminus of the 12 inch diameter pipe. These samples were additionally analyzed for volatile organic compounds by EPA 8240 and TEH as diesel. Total oil and grease was also tested in sample

damages to the 4 inch pipe was ~ 20 feet from the AAA present

The two pipes, one 12 inches in diameter w/ a 42 smaller 4 inch inner pipe were found buried at depths of 2 and 2 1/2 feet...



METALCAST ENGINEERING BUILDING

AAA EQUIPMENT CO. YARD
(METAL RECYCLER)

LEGEND

- Approximate PG & E Property Line
- - - Limits of Excavation
- ⊙ Observation Well
- Soil Sample Failing Cleanup Targets
- ⊕ Soil Sample Passing Cleanup Targets
- Sample of Standing Water in Excavation



AQUA RESOURCES, INC.
BERKELEY, CALIFORNIA

PG & ENCON - GAS YARD

Final Confirmatory Samples

JOB NO. 90262.2 Figure 4-5
DATE: February 1992

ATC Environmental, Inc.

BORING LOG

BORING NO: ATC-3

PROJECT NO: 89775.0030

PROJECT NAME: Metal/Coat

CLIENT: Cosmar Bank

PROJECT LOCATION: 4800 Coliseum Way, Oakland

DRILLING CONTRACTOR: Viconex

DRILLING MTHD: Seecore

SAMPLE MTHD: Seecore

DATE STARTED: Oct 8, 1998

DATE FINISHED: Oct 8, 1998

DRILLER: Scott/Brian

INSPECTOR: None

DEPTH (FT)	CORRECTION (FT)	SPT BLOW PER FT	REC (%)	PID (ppm)	PHOTOGRAPH	SURFACE ELEVATION: NA	REMARKS
						LITHOLOGIC DESCRIPTION	
0.0						Clayey Gravel, GC, light brown, dry, loose, dense at 1ft, oil/tar globules visible, 2" layer of soft tar at 1.5ft	Soil sample ATC-3-3FT collected at 15:00 Soil sample ATC-3-4FT collected at 15:05 & archived at lab
1			90			Clayey Silt, ML, black, very moist, wet at 3.5ft, soft, slight petroleum odor	
5.0			100			Clay, CL, green, moist, very stiff, high plasticity, some brown discoloration, some gravels, slight sour odor	
						Gravelly Clay, CL, green with large orange-brown discoloration, very moist, slightly stiff, slight sour odor	Water sample ATC-3 collected at 15:10
10.0			100			Clayey/Sandy Gravel, GC, green, very moist, slightly loose, very slight sour odor. Brown at 11ft:8"-12ft: saturated, no odor	
15.0							
20.0							
25.0							
30.0							
BOTTOM OF TEST BORING: 12.00'							
SPT - STANDARD PENETRATION TEST REC - SAMPLE RECOVERY ND - NON-DETECTABLE PID - FLAME IONIZATION DETECTOR PFD - PHOTO-IONIZATION DETECTOR							

Geologist: Bahram Zangeneh-Azou

ATC Environmental, Inc.

BORING LOG

BORING NO: ATC-5

PROJECT NO: B9775.0030

PROJECT NAME: MetaCast CLIENT: Commerce Bank
 PROJECT LOCATION: 1800 Coliseum Way, Oakland DRILLING CONTRACTOR: Viconex
 DRILLING MTHD: Segecobs SAMPLE MTHD: Segecobs
 DATE STARTED: Oct 8, 1998 DATE FINISHED: Oct 8, 1998 DRILLER: Scott/Brien INSPECTOR: Nora

DEPTH (FT)	FEET TO LOG	SPT BLOWS PER 4"	REC (%)	PID (ppm)	PHOTO IONIZATION	SURFACE ELEVATION: NA	REMARKS
						LITHOLOGIC DESCRIPTION	
0.0						Clayey/Sandy Gravel, GC, red-brown, dry, very loose, black at 2.5ft, strong petroleum odor	Soil sample ATC-5-3.5FT collected at 08:25 Initial water level: 6ft bgs Water sample ATC-5 collected at 08:50 Geologist: Behrooz Zangeneh-Azom
1		60					
5.0			80			Gravely Clay, CL, black, moist, slightly stiff, med. plasticity, wet at 4ft, strong petroleum odor 4ft-8ft: gray-green, some sand, wet at 7ft, globules of black oil/tar visible, strong odor 8ft-9.5ft: saturated, amount of sand and clay increases: slight petroleum odor from 8ft	
3			100				
10.0			100			Clayey/Sandy Gravel, GC, green-grey, saturated, slightly loose, some oil globules, slight odor. 10ft-12ft: no odor, more sand, green-brown, very wet, dense	
15.0							
20.0							
25.0							
30.0							

BOTTOM OF TEST BORING: 12.00'

- SPT = STANDARD PENETRATION TEST
- REC = SAMPLE RECOVERY
- ND = NON-DETECTABLE
- PID = FLAME IONIZATION DETECTOR
- PHOTO IONIZATION DETECTOR

ATC Environmental, Inc.

BORING LOG

BORING NO: ATC-7
 PROJECT NO: 89775.0030

PROJECT NAME: MetalCoast CLIENT: Comerica Bank
 PROJECT LOCATION: 4900 Callisum Hwy, Oakland DRILLING CONTRACTOR: Vicorex
 DRILLING MTHD: Geoprobe SAMPLE MTHD: Geoprobe
 DATE STARTED: Oct 8, 1998 DATE FINISHED: Oct 8, 1998 DRILLER: Scott/Brian INSPECTOR: Norm

DEPTH (FT)	SPT BLows per ft	REC (%)	PID (ppm)	ALCOHOL	SURFACE ELEVATION: NA		REMARKS
					LITHOLOGIC DESCRIPTION		
0.0					Backfill/gravels 0ft-1ft. Sandy/Gravelly Tan, black, slightly soft to hard, very high plasticity, highly elastic, very strong petroleum odor, broken glass		Soil sample ATC-7-4FT collected at 11:03 Soil sample ATC-7-4.5FT collected at 11:10 & archived at lab Soil sample ATC-7-5.5FT collected at 11:15 & archived at lab
1		50			Clayey Silt, ML, black, very moist/wet, soft, strong petroleum odor		
5.0		100			Clay, CL, green, very moist/wet, stiff, high plasticity, some sand, very elastic, some gravels at 5ft		
					Gravelly/Sandy Clay, CL, green, very moist, stiff, high plasticity, no odor		Water sample ATC-7 collected at 11:40
10.0		100			Clayey/Sandy Gravel, GC, green, saturated, dense, orange at 12ft		
15.0							
20.0							Geologist: Bahram Zangeneh-Azou
25.0							
30.0							

BOTTOM OF TEST BORING: 12.00'

SPT = STANDARD PENETRATION TEST
 REC = SAMPLE RECOVERY
 ND = NON-DETECTABLE
 PID = FLAME IONIZATION DETECTOR
 PFD = PHOTO-IONIZATION DETECTOR

ATC Environmental, Inc.

BORING LOG

BORING NO: ATC-8

PROJECT NO: 69775.0030

PROJECT NAME: MetalCoast

CLIENT: Comeries Bank

PROJECT LOCATION: 1800 Coliseum Hwy, Oakland

DRILLING CONTRACTOR: Virecox

DRILLING MTHD: Geoprobe

SAMPLE MTHD: Geoprobe

DATE STARTED: Oct 8, 1998

DATE FINISHED: Oct 8, 1998

DRILLER: Scott/Ryan

INSPECTOR: None

DEPTH (FT)	SOIL CLASS	SPT BLOW PER 4"	REC (%)	PID (ppm)	ARCHIVAL	SURFACE ELEVATION: NA	REMARKS
						LITHOLOGIC DESCRIPTION	
0.0						Gravelly Clay, CL, dark brown/black, dry, stiff, high plasticity, petroleum odor	<p>Soil sample ATC-8-2FT collected at 11:55 & archived at lab</p> <p>Soil sample ATC-8-3FT collected at 12:00 & archived at lab</p> <p>Soil sample ATC-8-4FT collected at 12:10</p> <p>Soil sample ATC-8-8FT collected at 12:30 & archived at lab</p> <p>Soil sample ATC-8-9FT collected at 12:30 & archived at lab</p> <p>When retrieving the 4-8ft sample, the Geoprobe rods from 2-4ft were covered with oozing soft tar</p> <p>8-12ft sample: recovered approximately 1.5ft of the soft oozing tar which apparently dripped down from the 2-4ft interval</p> <p>Water sample ATC-8 collected at 12:50. Initially has odor, sweet floating product. 4th VOA has very slight to no odor and no sheen</p> <p>Geologist: Bahran Zangeneh-Azam</p>
1			80			Gravelly Tar, black, slightly stiff, very sticky, very elastic	
						Clayey/Gravelly Silt, ML, black, wet, soft, elastic, strong petroleum odor, globules of oil/tar visible	
5.0			100			Clay, CL, grey-green, very moist, stiff, high plasticity, very elastic, petroleum odor, oil/tar globules visible	
						Gravelly Clay, CL, green, moist, slightly stiff, med. plasticity, strong petroleum odor, globules of oil/tar visible	
10.0			100			Clayey Gravel, GC, green, saturated, slightly dense, orange-brown at 10.5ft	
						Clayey/Sandy Silt, ML, very wet, soft. Brown discolorations 11.3ft-11.5ft	
						Clayey Gravel, GC, brown, saturated, slightly loose, no odor	
15.0							
20.0							
25.0							
30.0							
BOTTOM OF TEST BORING: 12.00'							
SPT = STANDARD PENETRATION TEST REC = SAMPLE RECOVERY ND = NON-DETECTABLE FID = FLAME IONIZATION DETECTOR PID = PHOTO-IONIZATION DETECTOR							

ATC Environmental, Inc.

BORING LOG

BORING NO: ATC-9
PROJECT NO: B9775.0030

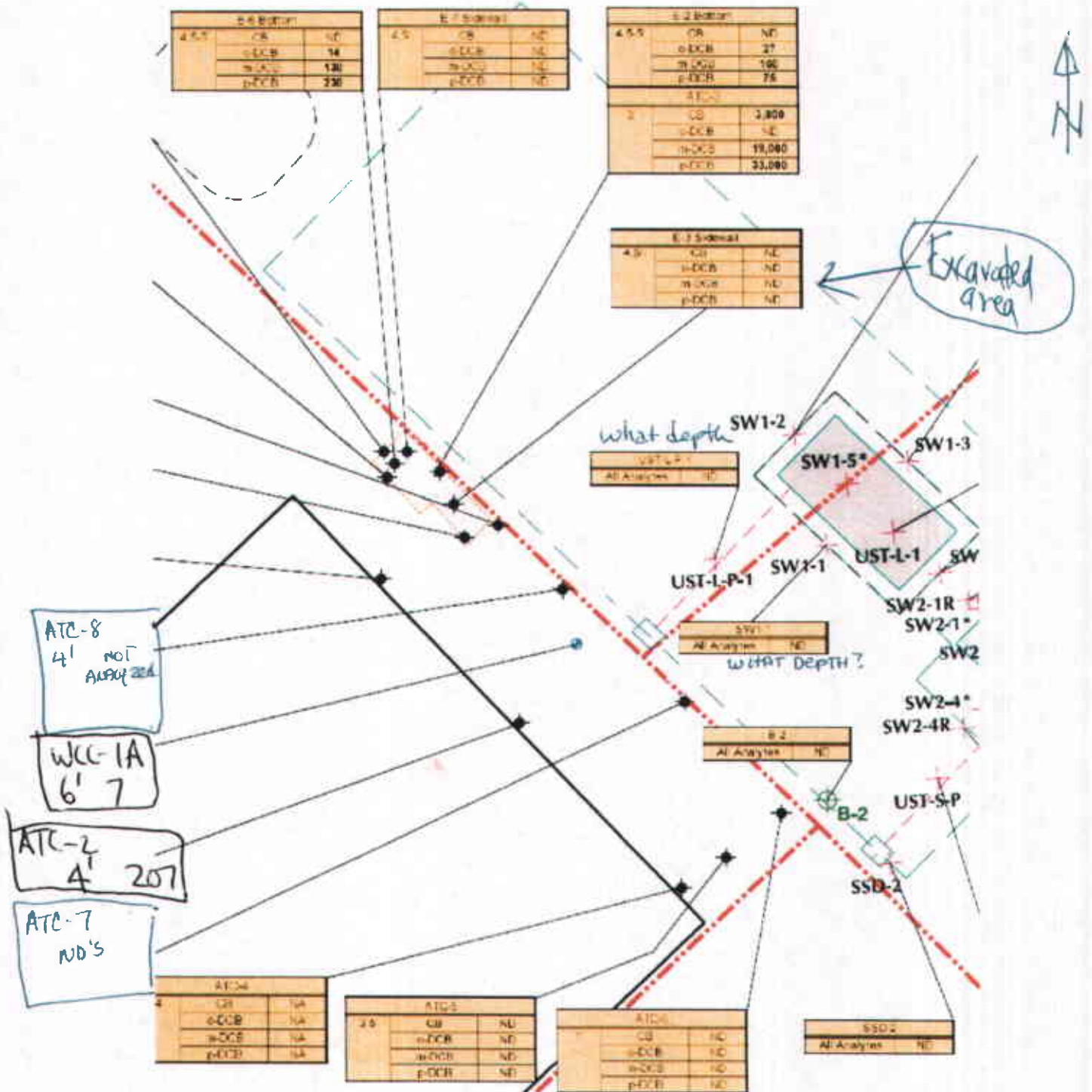
PROJECT NAME: MetalCast CLIENT: Comerica Bank
PROJECT LOCATION: 4800 Coliseum Way Oakland DRILLING CONTRACTOR: Viconex
DRILLING MTHD: Geoprobe SAMPLE MTHD: Geoprobe
DATE STARTED: Oct 8 1998 DATE FINISHED: Oct 8 1998 DRILLER: Scott/Brian INSPECTOR: Nana

DEPTH (FT)	SPT	REC (%)	PID (ppm)	PHOTO'S	SURFACE ELEVATION: NA	REMARKS
					LITHOLOGIC DESCRIPTION	
0.0					Gravelly Clay, CL, black, moist, stiff, very elastic, high plasticity, broken glass at 2ft, strong petroleum odor, oil/tar globules visible	Soil sample ATC-9-3FT collected at 13:55 & archived at lab Soil sample ATC-9-5FT collected at 14:00 & archived at lab Water sample ATC-9 collected at 14:15 Geologist: Bahran Zanganeh-Azam
1		90			Silty Clay, CL, black, very moist, slightly stiff, strong petroleum odor, oil/tar globules visible	
5.0		100			Clay, CL, gray-green, very moist, very stiff, high plasticity, some gravels, strong petroleum odor, oil/tar globules visible	
					Gravelly Clay, CL, green, wet, stiff, med plasticity, strong petroleum odor, oil/tar globules visible	
10.0		100			Clayey Gravel, GC, green, very wet, saturated at 7.5ft, loose, strong petroleum odor	
					Clayey/Sandy Gravel, GC, orange-brown, saturated, med. dense, sour odor, some 2" lenses of clay; 11.5ft-3" lens of coarse clayey sand	
15.0						
20.0						
25.0						
30.0						
BOTTOM OF TEST BORING: 12.00'						
SPT = STANDARD PENETRATION TEST REC = SAMPLE RECOVERY ND = NON-DETECTABLE FID = FLAME IONIZATION DETECTOR PID = PHOTO-IONIZATION DETECTOR						

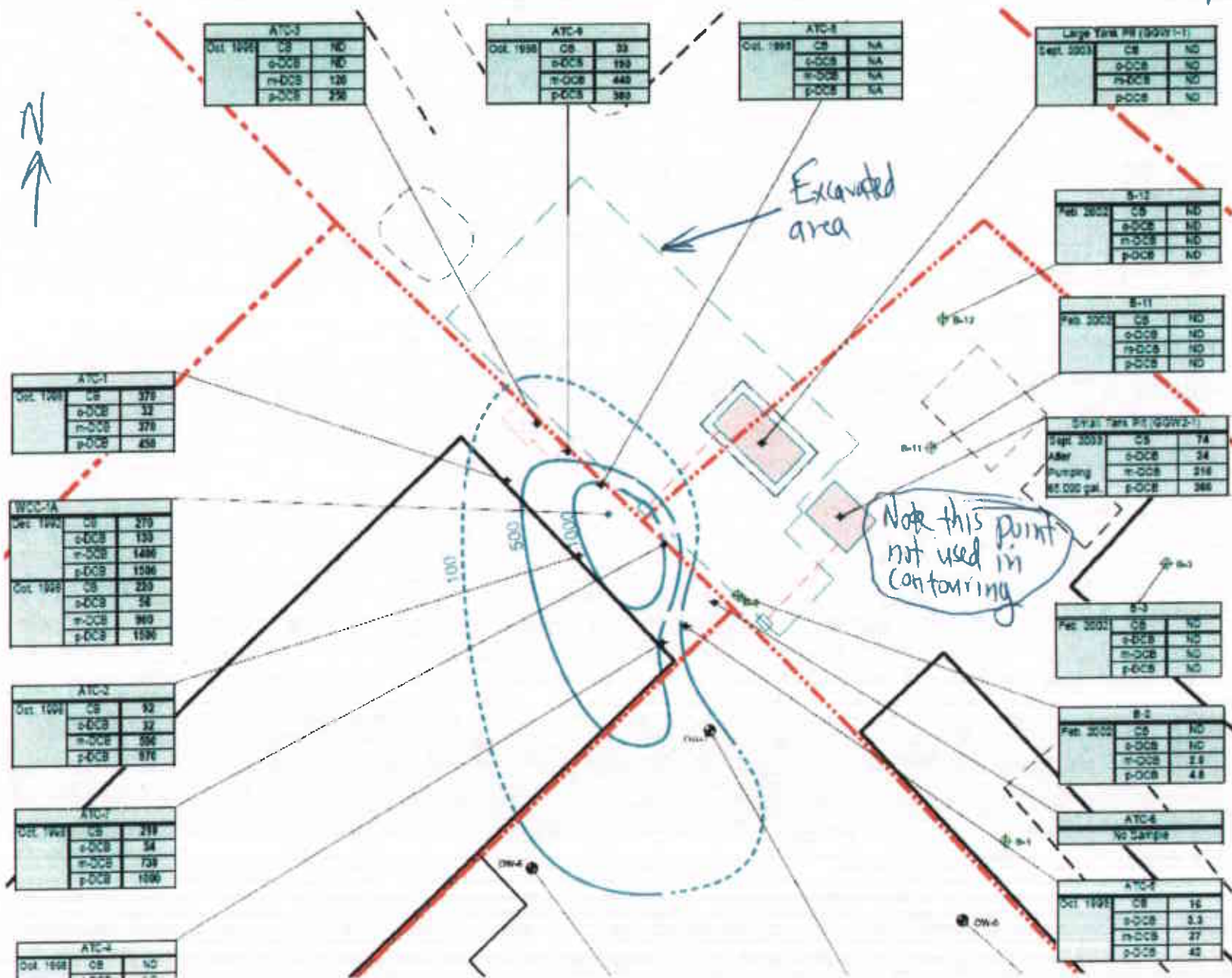
SOIL MAP

Workplace 745 50th Ave
10/30/2007

DOB no soil
LFR 795



GROUNDWATER-SAMPLE RESULTS fm Fig 6 LFR AAA
 MAP EQPT WORKPLAN
 745 50TH
 10/30/07



total in soil (6.8 mg/kg)
total in GW (2676 ug/L)



ATC-3		
Oct 1999	CS	ND
	o-DCB	ND
	m-DCB	128
	p-DCB	298

470

ATC-4		
Oct 1999	CS	33
	o-DCB	189
	m-DCB	448
	p-DCB	349

10/3

ATC-3		
Oct 1999	CS	NA
	o-DCB	NA
	m-DCB	NA
	p-DCB	NA

Large Tank PH (SOW-1)		
Sept 2003	CS	ND
	o-DCB	ND
	m-DCB	ND
	p-DCB	ND

Soil 55,800

Soil ND

Excavated Area

B-10		
Feb 2003	CS	ND
	o-DCB	ND
	m-DCB	ND
	p-DCB	ND

B-11		
Feb 2003	CS	ND
	o-DCB	ND
	m-DCB	ND
	p-DCB	ND

ATC-1		
Oct 1999	CS	378
	o-DCB	33
	m-DCB	378
	p-DCB	458

WDC-1A		
Oct 1999	CS	278
	o-DCB	198
	m-DCB	1488
	p-DCB	1588
Oct 1999	CS	228
	o-DCB	54
	m-DCB	988
	p-DCB	1288

Soil 3300
6.8
2676

Small Tank PH (SOW-2)		
Sept 2003	CS	74
After Pumping	o-DCB	34
	m-DCB	218
	p-DCB	268

B-3		
Feb 2003	CS	ND
	o-DCB	ND
	m-DCB	ND
	p-DCB	ND

B-2		
Feb 2003	CS	ND
	o-DCB	ND
	m-DCB	2.8
	p-DCB	4.8

ATC-2		
Oct 1999	CS	83
	o-DCB	33
	m-DCB	398
	p-DCB	578

ATC-7		
Oct 1999	CS	218
	o-DCB	54
	m-DCB	738
	p-DCB	1038

Soil ND
1994

ATC-8		
No Sample		

ATC-5		
Oct 1999	CS	16
	o-DCB	3.3
	m-DCB	27
	p-DCB	42



LFR workplan