ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
1131 Harbor Bay Parkway
Alameda CA 94502-6577
(510)567-6700

March 4, 1996

STID 4336

REMEDIAL ACTION COMPLETION CERTIFICATION

Mr. Brock Settlemeir
Bigge Crane and Rigging Company
10700 Bigge Avenue
San Leandro, CA 94577

RE: BIGGE CRANE AND RIGGING COMPANY, 10700 BIGGE AVENUE, SAN LEANDRO - PARCELS 1 AND 2

Dear Mr. Settlemeir:

This letter confirms the completion of site investigation and remedial action for the underground storage tanks formerly located on Parcels 1 and 2 at the above-described location. Enclosed is the Case Closure Summary for the referenced site for your records.

Based upon the available information, including current land use, 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 storage tank release is required.

This notice is issued pursuant to a regulation contained in Title 23, California Code of Regulations, Division 3, Chapter 16, Section 2721(e). If a change in land use is proposed, the owner must promptly notify this agency.

Please contact Scott Seery at (510) 567-6783 if you have any questions regarding this matter.

Sincerely,

Jun Makishima

Jun Makishima
Acting Director of Environmental Services

cc: Gordon Coleman, Acting Chief, Env. Protection Division
Kevin Graves, RWQCB
Mike Harper, SWRCB
Mike Bakaldin, San Leandro Fire Department
✓Files

- SIGNED COPY -

CALIFORNIA REGIONAL WATER

DEC 0 4 1995

QUALITY CONTROL BOARD

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION **Date: 12/01/95**

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: **Sr. Haz. Materials Spec.**

II. CASE INFORMATION

Site facility name: **Bigge Crane and Rigging Company**
Site facility address: **10700 Bigge Ave., San Leandro, CA 94577**
RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **4336**
URF filing date: **3/5/92** SWEEPS No: **N/A**

Responsible Parties:	Addresses:	Phone Numbers:
Bigge Development Company	10700 Bigge Street San Leandro, CA 94577	
Brock Settlemier Bigge Crane & Rigging Co.	10700 Bigge Street San Leandro, CA 94577	510-638-8100

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1	10,000	diesel	removed	9-30-91
2	10,000	"	"	"
3	10,000	gasoline	"	"
4	1000	virgin oil	"	"
5	500	waste oil	"	"

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: UNK

Site characterization complete? YES

Date approved by oversight agency: 12/94

Monitoring Wells installed? YES Number: 3 (+ 4 HP pts.)

Proper screened interval? YES - however 3rd MW construction unknown

Highest GW depth below ground surface: 6.94' Lowest depth: 8.58'

Flow direction: N to NE - towards San Leandro Creek

Most sensitive current use: commercial/industrial

Are drinking water wells affected? NO Aquifer name: San Leandro cone

Leaking Underground Fuel Storage Tank Program

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

Off-site beneficial use impacts (addresses/locations): NA

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

Treatment and Disposal of Affected Material:

Material	Amount (include units)	Action (Treatment of Disposal w/destination)	Date
Tank	3x10,000; 1000; 500 gal	disposal - Erickson Richmond, CA	9/30/91
Piping	UNK		
Free Product	NA		
Soil	~ 1720 yds^3	treatment/reuse on-site	1991-1995
	~ 635 yds^3	treatment/disposal - BFI Vasco Rd., Livermore	9/27/95 - 10/2/95
Groundwater	NA		
Barrels	NA		

III. RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued)
Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	Before[1]	After	Before[1]	After[4]
TPH (Gas)	350	ND	110,000	ND
TPH (Diesel)	720	160	NA	"
Benzene	10	ND	190	"
Toluene	16	"	67	1.0
Xylene	25	"	860	1.8
Ethylbenzene	5.1	"	36	ND
Oil & Grease[2]	1100	NA	ND[5]	NA
Heavy metals	*[SEE Note 3]*		"	"
Other: **HVOC**[2]	ND	NA	"	"

NOTES:

1) "Before" soil and water results for TPH-G/-D and BTEX from fuel UST complex, Parcel 1. Results are for *initial* post-UST closure samples, except where otherwise indicated.

2) "Before" O & G and HVOC results from virgin oil and waste oil UST pits, respectively, Parcel 2.

3) All metals concentrations in "before" soil sample from waste oil UST pit (Parcel 2) at apparent geogenic concentrations.

4) "After" water samples collected from temporary well points located adjacent to the former fuel UST complex, Parcel 1.

5) "Before" O & G result from initial water sample collected from MW-2, Parcel 2.

Comments (Depth of Remediation, etc.):

PARCEL 1 - During September 1991, three (3) fuel USTs (2 diesel, 1 gasoline) were removed from Parcel 1 under SLFD oversight. Ground water (GW) was present in the excavation at a depth of ~ 12' below grade (BG). Although it has been reported that the USTs appeared in "good shape," initial soil and water samples confirmed that an unauthorized release had occurred.

An initial round of overexcavation ensued, expanding the UST pit both laterally (primarily to the north) and vertically to GW. Approximately 2300 yds^3 of material was excavated in the process and stockpiled on-site for later "treatment." Hydrocarbon (HC) concentrations in sidewall soil samples collected at the overexcavation limits actually *increased* (up to 1000 ppm TPH-D, 15 ppm benzene) vs. those in initial post-closure samples.

As a result of the overexcavation sample results, a subsequent round of overexcavation occurred during May 1993 in an attempt to remove these apparent "hot spots" along the south flank and north corner of the excavation. An additional ~ 55 yds^3 were removed and stockpiled in the process. Confirmation sidewall samples indicate a marked decrease in residual (capillary fringe) soil concentrations, with a maximum of 160 ppm TPH-D with no detectable BTEX.

Following on-site "treatment" (passive bio), approximately 1720 yds^3 of previously-excavated material was placed back into the former fuel UST excavation. Following requirements of the RWQCB set forth in correspondence dated 1/6/93, only material with residual concentrations of <10 ppm TPH and nondetectable BTEX was allowed for reuse. Such material was to be placed at depths above GW levels to minimize contact with GW. It has been reported that porous media (ballast rock) was placed at the base of the excavation prior to introduction of the treated soil above. The remaining ~ 635 yds^3 were transported to the BFI Vasco Rd. landfill (Livermore) for disposal during the summer of 1995.

PARCEL 2 - Two oil USTs (1 waste oil, 1 virgin oil) were removed from Parcel 2 during September 1991 under SLFD oversight. No apparent release was associated with the waste oil UST. However, a release was apparent with the *virgin* oil UST: underlying soil was discolored and elevated O&G levels (1100 ppm) were identified in initial samples. Discolored soil was excavated (volume unreported) and the pit resampled: all samples were below detection limits for chosen target compounds (TPH-D, BTEX).

It is unclear whether GW was encountered in either the waste oil or virgin oil UST pits, as there are conflicting data.

Leaking Underground Fuel Storage Tank Program

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? YES
Site management requirements: NA

Should corrective action be reviewed if land use changes? YES

Monitoring wells Decommisioned: NONE (pending case closure)

Number Decommisioned: 0 Number Retained: 3

List enforcement actions taken: NONE

List enforcement actions rescinded: NONE

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Scott Seery Title: Sr. Haz Mat Specialist
Signature: Date: 11-30-95

Reviewed by
Name: Juliet Shin Title: Sr. Haz Mat Specialist
Signature: Juliet Shin Date: 11/30/95

Name: Eva Chu Title: Haz Mat Specialist
Signature: Date: 12/1/95

VI. RWQCB NOTIFICATION

Date Submitted to RB: 12-1-95 RB Response: Approved
RWQCB Staff Name: Kevin Graves Title: San. Engineering Asso. Date: 12/27/95

VII. ADDITIONAL COMMENTS, DATA, ETC.

Subsequent to UST removals and overexcavation activities, two initial GW wells were constructed during February 1993. One well (MW-1) was installed next to the fuel UST pit, and the second (MW-2) next to the virgin oil UST

pit. Well locations were reportedly based on the anticipated *regional* GW flow direction (SW). The "anticipated" flow direction did not account, however, for the fact that San Leandro Creek lies ~ 250' north of the site, a likely controlling influence.

GW was encountered at an approximate depth of 14' (MW-1) and 10' BG (MW-2). Low (<30 ppm) concentrations of TPH-D and TPH-mo were noted in soil samples collected at the 10' depths in borings MW-1 and -2, respectively. BTEX were absent from these soil samples.

Both wells were sampled with no target compounds detected (SEE attached data tables).

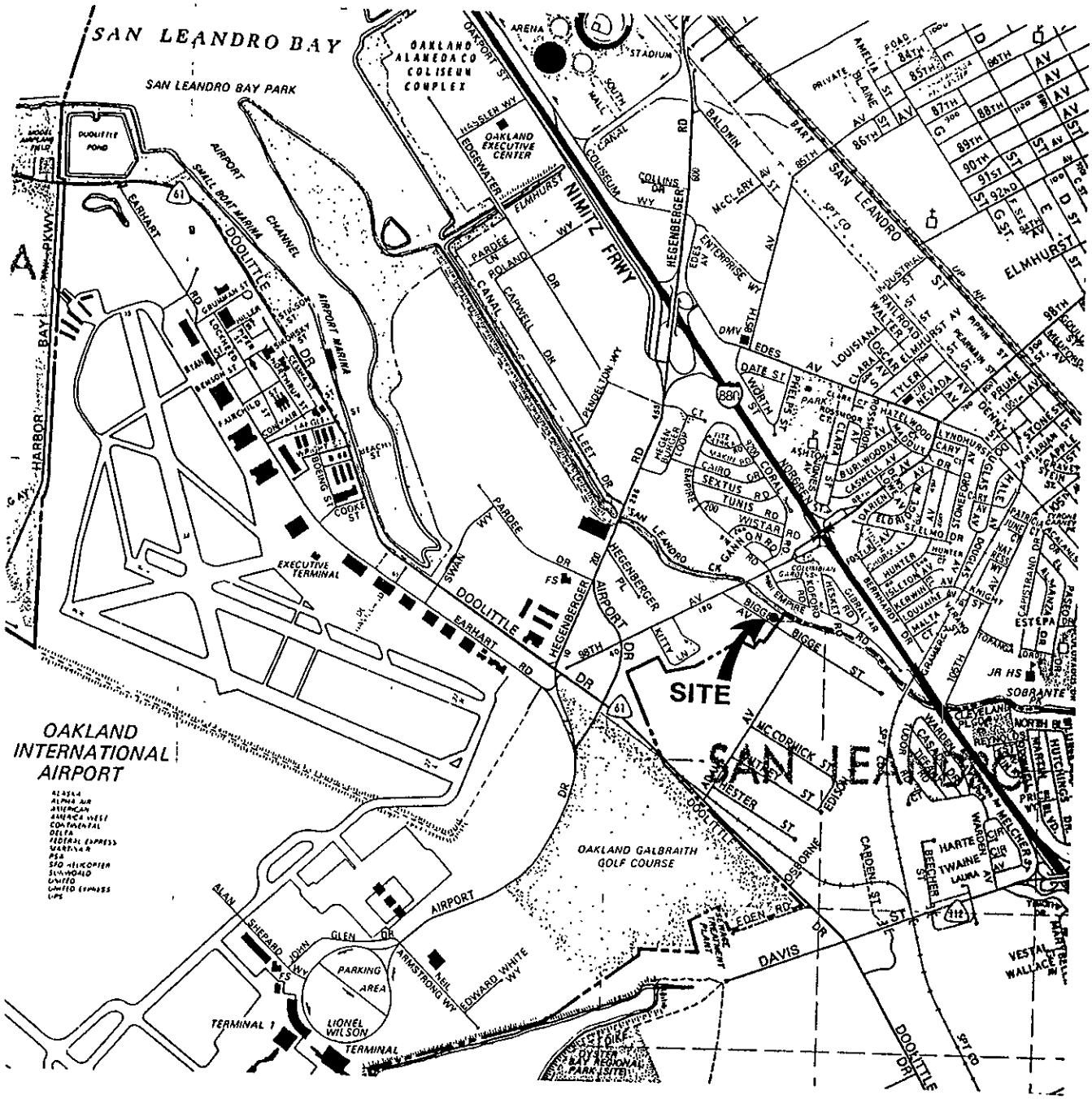
A third well (MW-3), or, rather, *piezometer*, was installed ~250' north of the fuel UST pit during May 1993. This task was performed absent oversight of either the consultant or ACDEH. Its construction, as indicated in the driller's report, appears to differ markedly from that of MW-1 and -2 with respect to screen interval and placement.

Both wells and the piezometer were surveyed relative to mean sea level (MSL). GW elevation measurements collected between July 1993 and February 1994 from the three points confirmed a GW flow direction consistently toward San Leandro Creek (north).

Wells MW-1 and -2 were again sampled during June and October 1993, and February 1994. Well MW-3 was sampled both during October 1993 and February 1994. All samples were "ND" for target compounds.

During July 1994, four temporary well points were installed along two diverging lines trending north from the fuel UST pit: two well points were located within 30' of the subject pit, the second two points "stepped-out" approximately 60' further. GW samples were collected from each temporary well point, although only the samples from the two points closest to the UST pit were analyzed. The results indicate low-to-nondetectable concentrations of TPH and BTEX in sampled GW.

Removal of fuel-impacted soil from the area surrounding the former UST complex appears to have ensured the long-term attenuation and migration control of dissolved fuel constituents in GW derived from the release at this site.



Site Location

10700 Bigge Ave., San Leandro, CA

CET Environmental Services, Inc.

Bigge Crane and Rigging		PLATE
JOB NUMBER	DATE	1
3535	3/94	

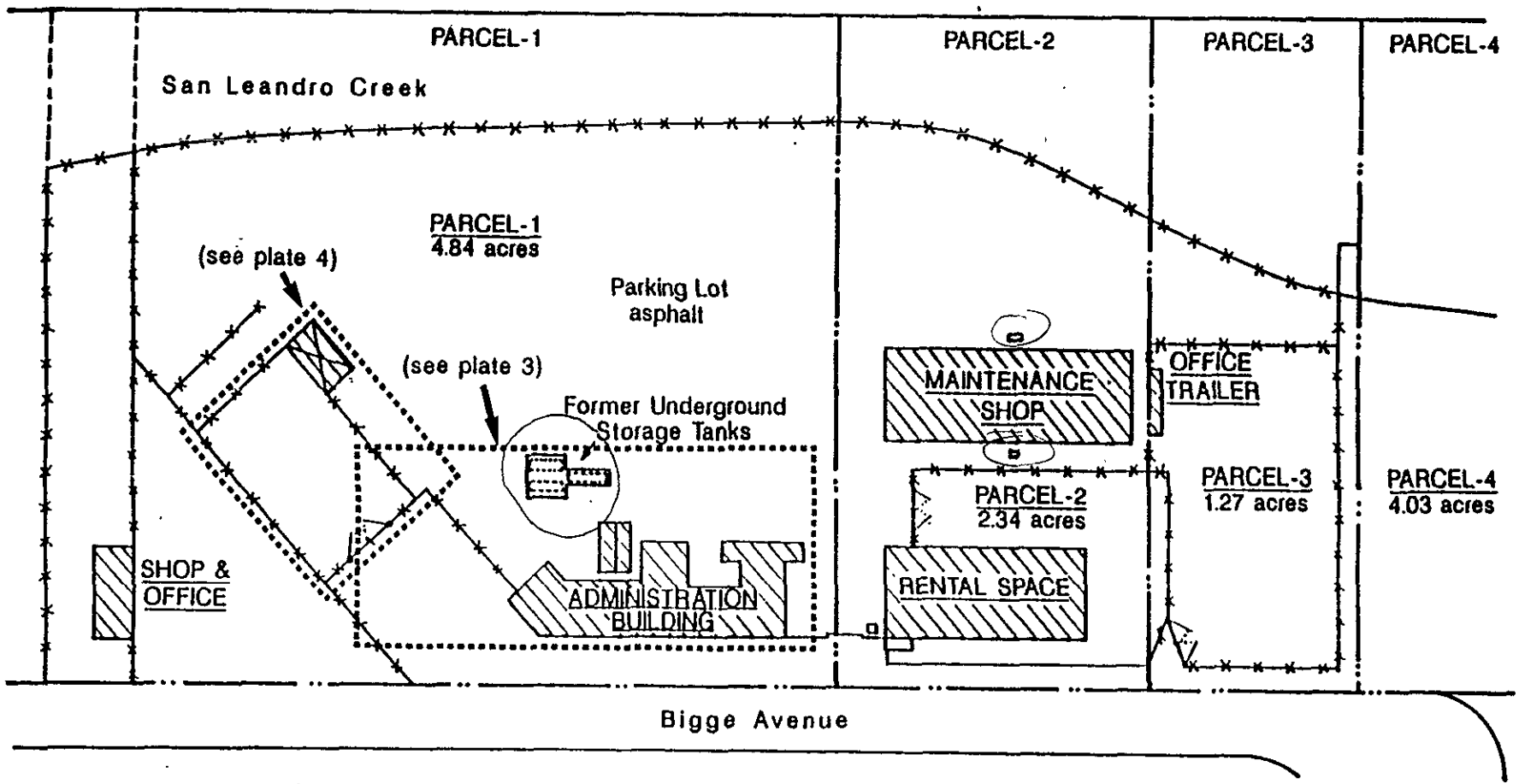


PLATE 2

ATT Aqua Terra Technologies Consulting Engineers & Scientists

Site Location Map

Bigge Crane and Rigging

JOB NUMBER 929328

DATE 4/92

PARCEL - 1

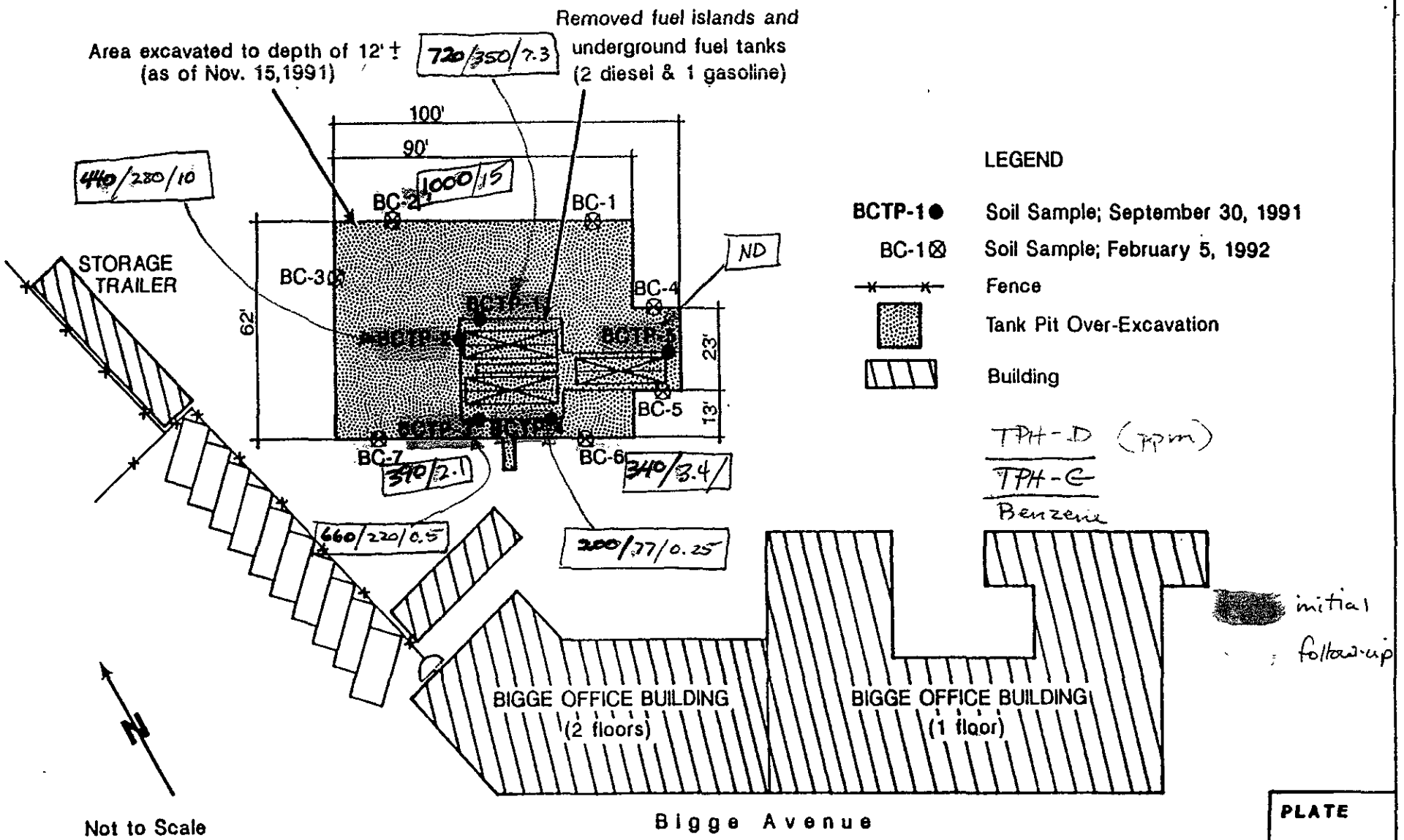


PLATE 3

ATT Aqua Terra Technologies Consulting Engineers & Scientists

Underground Storage Tank Locations

Bigge Crane and Rigging

JOB NUMBER	DATE
929328	4/92

FUEL USTs – PARCEL-1

INITIAL SAMPLES

Table 1. Chemical Data Summary - Soils
Sampling Date: 09/30/91
Bigge Crane & Rigging Company
San Leandro, California

Sample No.	Sample Location	TPH/d[a] (mg/Kg)[e]	TPH/g[b] (mg/Kg)[e]	B[c] (mg/Kg)[e]	T[c] (mg/Kg)[e]	E[c] (mg/Kg)[e]	X[e] (mg/Kg)[e]	TOG[d] (mg/Kg)[e]	Metals (mg/Kg)[e]
BCTP-1	Tank Pit	720	350	7.3	12	5	25	NA[f]	NA[f]
BCTP-2	Tank Pit	440	280	10	16	5.1	19	NA	NA
BCTP-3	Tank Pit	660	220	0.50	0.50	0.50	0.50	NA	NA
BCTP-4	Tank Pit	200	77	0.25	0.45	<0.25	0.35	NA	NA
BCTP-5	Tank Pit	<1	<1	<0.005	<0.005	<0.005	<0.005	<1	NA

Legend:

a. TPH/d = total petroleum hydrocarbons as diesel
b. TPH/g = total petroleum hydrocarbons as gasoline
c. B = benzene; T = toluene; E = ethylbenzene; X = total xylenes
d. TOG = total oil and grease
e. mg/Kg = milligrams per kilogram, equal to parts per million (ppm)
f. NA = analysis not requested

FUEL USTS PARCEL-1

WATER

Table 2. Chemical Data Summary - Groundwater
Bigge Crane & Rigging Company
San Leandro, California

Sample No.	Sample Location	Sampling Date	TPH/d[a] (ug/L)[d]	TPH/g[b] (ug/L)[d]	B[c] (ug/L)[d]	T[c] (ug/L)[d]	E[c] (ug/L)[d]	X[c] (ug/L)[d]
BCW-1	Tank Pit	10/04/91	NA[e]	110,000	190	67	36	860

Legend:

a. TPH/d = total petroleum hydrocarbons as diesel
b. TPH/g = total petroleum hydrocarbons as gasoline
c. B = benzene; T = toluene; E = ethylbenzene; X = total xylenes
d. ug/L = micrograms per liter, equal to parts per billion (ppb)
e. NA = analysis not requested

FUEL USTs PARCEL -1

INITIAL OVEREXCAVATION

Table 3. Chemical Data Summary - Soils
Sampling Date: 02/05/92
Bigge Crane & Rigging Company
San Leandro, California

Sample No.	Sample Location	TPH/d[a] (mg/Kg)[d]	TPH/g[b] (mg/Kg)[d]	B[c] (mg/Kg)[e]	T[c] (mg/Kg)[e]	E[c] (ug/Kg)[e]	X[c] (mg/Kg)[e]
BC1	Excavation Pit	<1	<1	<5	<5	<5	<5
BC2	Excavation Pit	1,000	15	<5	<5	7.2	36
BC3	Excavation Pit	22	<1	<5	<5	<5	<5
BC4	Excavation Pit	<1	<1	<5	<5	<5	<5
BC5	Excavation Pit	<1	<1	<5	<5	<5	<5
BC6	Excavation Pit	340	3.4	<5	<5	<5	15
BC7	Excavation Pit	390	2.1	<5	<5	<5	11
BC1-1,2,3,4	Soil Stockpile	2.3	<1	<5	<5	<5	<5
BC2-1,2,3,4	Soil Stockpile	3.9	<1	<5	<5	<5	<5
BC3-1,2,3,4,5,6	Soil Stockpile	4.9	<1	<5	<5	<5	<5

PARCEL 1

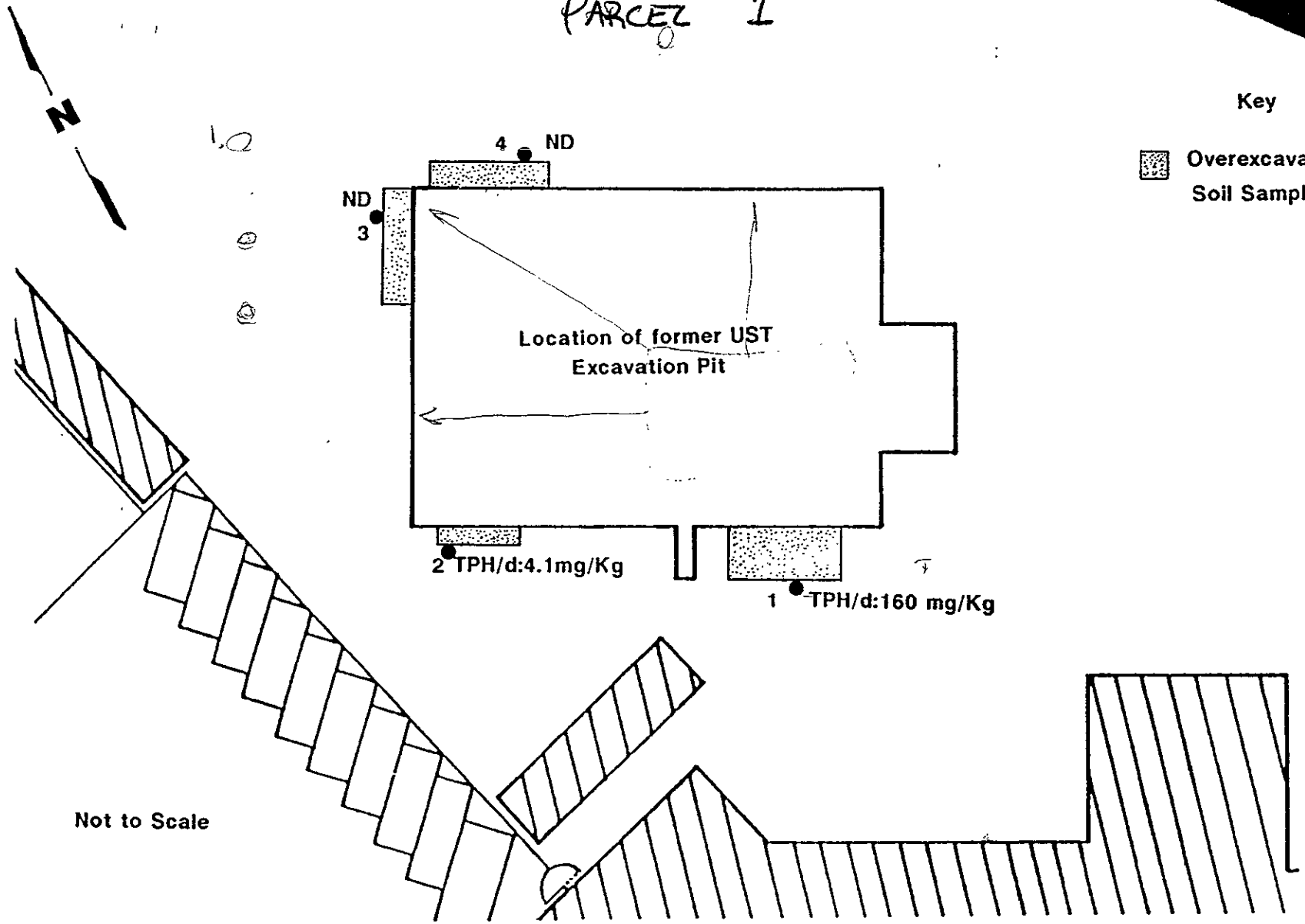


PLATE 3

ATT Aqua Terra Technologies Consulting Engineers & Scientists	FINAL Overexcavation and Soil Sample 05/04/93	Bigge Crane and Rigging JOB NUMBER 929328 DATE 07/93

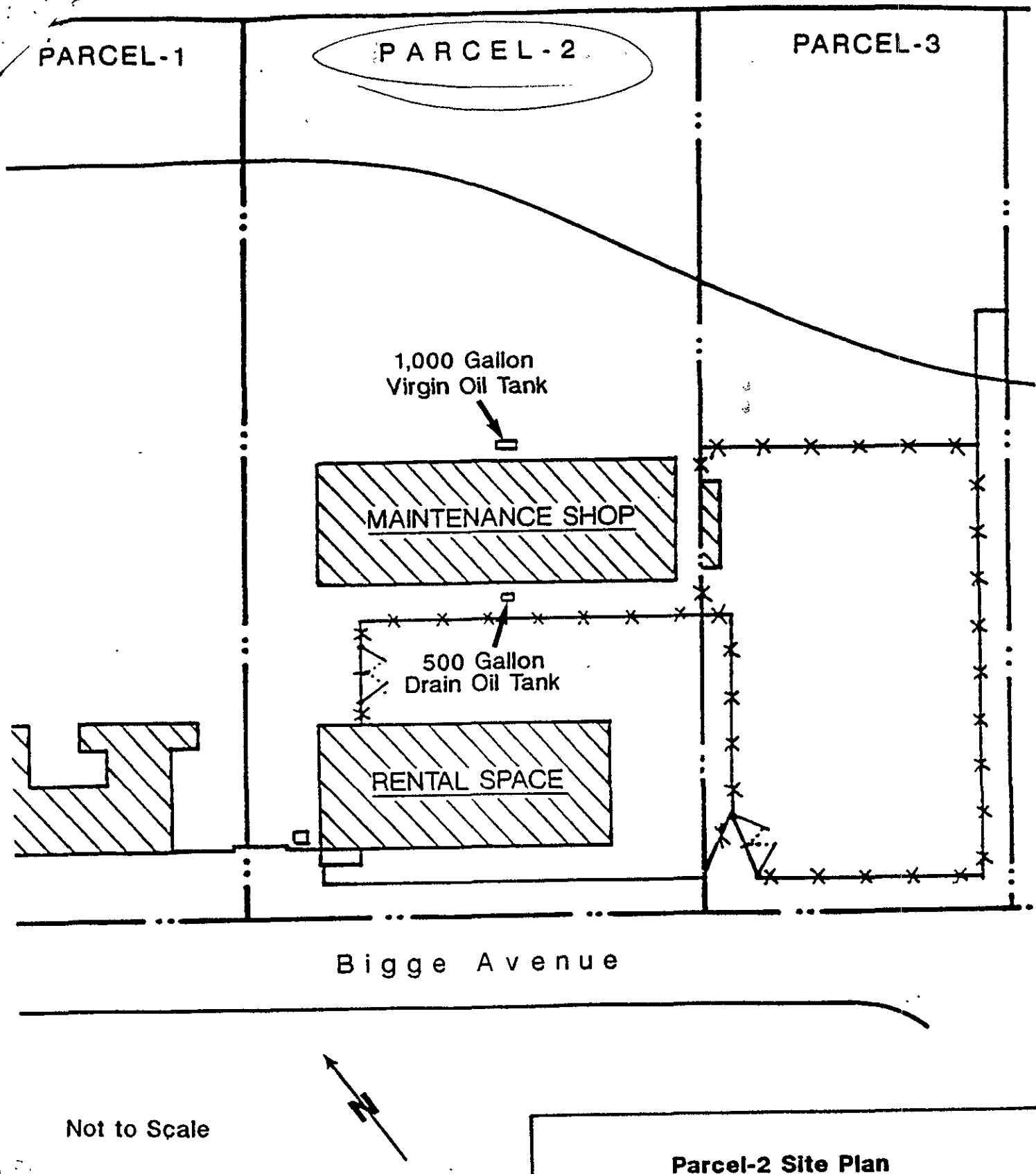
PARCEL - 1 FINAL OVEREXCAVATION

Table 3

Chemical Data Summary - Soils
Bigge Crane & Rigging Company
San Leandro, California

Sample No.	Date Sampled	TPH/d[a] (mg/Kg)[d]	TPH/g[b] (mg/Kg)[d]	B[c] (ug/Kg)[e]	T[c] (ug/Kg)[e]	E[c] (ug/Kg)[e]	X[c] (ug/Kg)[e]
1	05/04/93	160	<1	<5	<5	<5	<5
2		4.1	<1	<5	<5	<5	<5
3		<1.0	<1	<5	<5	<5	<5
4		<1.0	<1	<5	<5	<5	<5
stockpile samples: A, B, C, D, E[f]		120	<1	<5	<5	<5	<5
stockpile samples: F, G, H, I[f]		<1.0	<1	<5	<5	<5	15

a. TPH/d = total petroleum hydrocarbons as diesel
b. TPH/g = total petroleum hydrocarbons as gasoline
c. B = benzene; T = toluene; E = ethylbenzene; x = total xylenes
d. mg/Kg = milligrams per kilogram, equal to parts per million (ppm)
e. ug/Kg = micrograms per kilogram, equal to parts per billion (ppb)
f. Soil stockpile samples

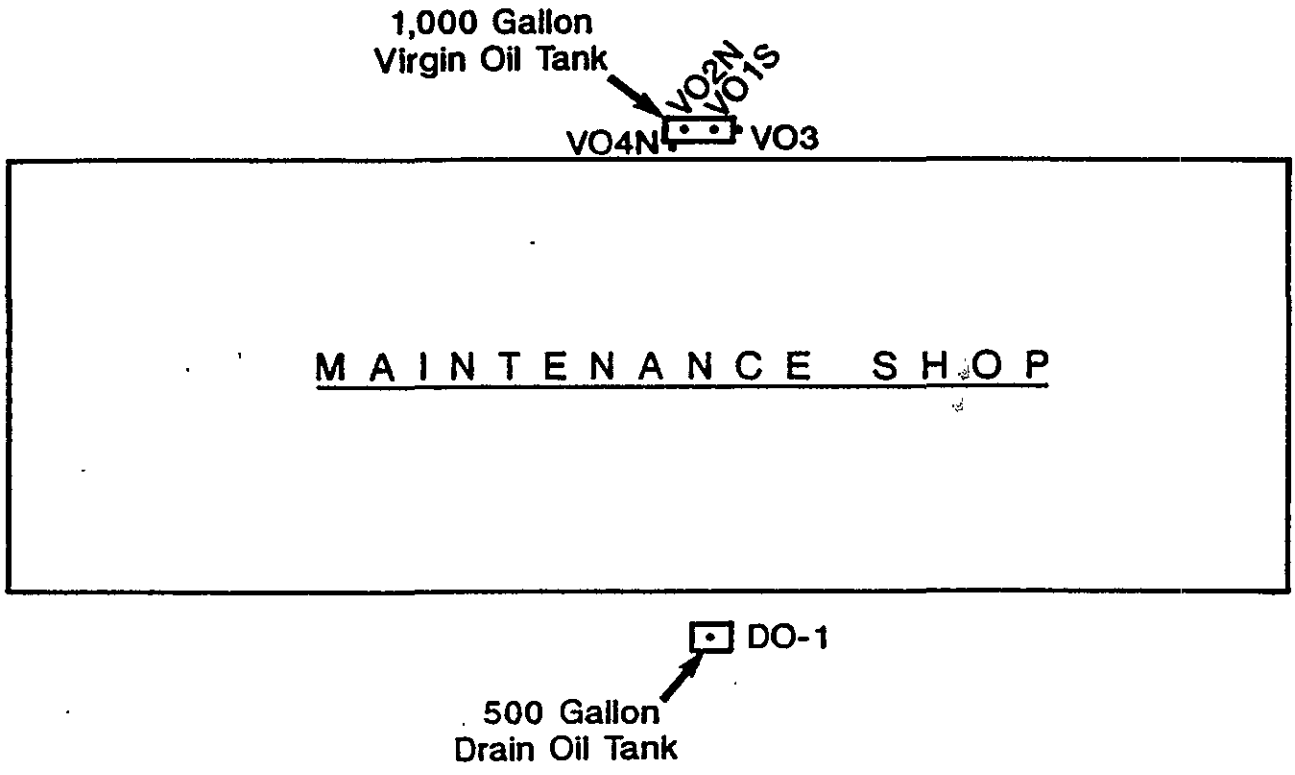


Not to Scale

Parcel-2 Site Plan

ATT Aqua Terra Technologies
Consulting Engineers
& Scientists

Bigge Crane and Rigging		PLATE
JOB NUMBER	DATE	2
929328	4/92	



LEGEND

Soil Sample Location

Note: Soils in vicinity of VO2N were excavated and added to spoils pile VO4N is a confirming sample.

Not to Scale

Sample Location Map

ATT Aqua Terra Technologies
Consulting Engineers
& Scientists

Bigge Crane and Rigging		PLATE
JOB NUMBER	DATE	3
929328	4/92	

PARCEL - A

Table 1. Chemical Data Summary - Soils
Sampling Date: 09/30/91
Bigge Crane & Rigging Company
San Leandro, California

Sample No.	Sample Location	TPH/d[a] (mg/Kg)[e]	TPH/g[b] (mg/Kg)[e]	B[c] (mg/Kg)[e]	T[c] (mg/Kg)[e]	E[c] (mg/Kg)[e]	X[e] (mg/Kg)[e]	TOG[d] (mg/Kg)[e]	Metals (mg/Kg)[e]
VO-1-S	Virgin Oil Tank Pit	NA[f]	NA[f]	NA[f]	NA[f]	NA[f]	NA[f]	7.8	NA
VO-2-N	Virgin Oil Tank Pit	NA	NA	NA	NA	NA	NA	1,100	NA
VO-3	Virgin Oil Tank Pit	NA	NA	NA	NA	NA	NA	<1	NA
VO-4-N (Sampled on 10/01/91)	Virgin Oil Tank Pit	ND	ND	ND	ND	ND	ND	<1	NA
DO-1*	Drain Oil Tank Pit	<1	<1	<0.005	<0.005	<0.005	<0.005	<1	Cadmium - 0.80 Chromium - 30 Nickel - 50 Lead - 12 Zinc - 48
SP-1-A	Soil Stockpile	22	3.4	<0.005	<0.005	<0.005	<0.005	880	NA

initial

over-excavation ?

lab reports suggest sample not analyzed for TOG!

Legend:

* EPA Method 5030/8010 not listed all results ND, see Attachment D
a. TPH/d = total petroleum hydrocarbons as diesel
b. TPH/g = total petroleum hydrocarbons as gasoline
c. B = benzene; T = toluene; E = ethylbenzene; X = total xylenes
d. TOG = total oil and grease
e. mg/Kg = milligrams per kilogram, equal to parts per million (ppm)
f. NA = analysis not requested

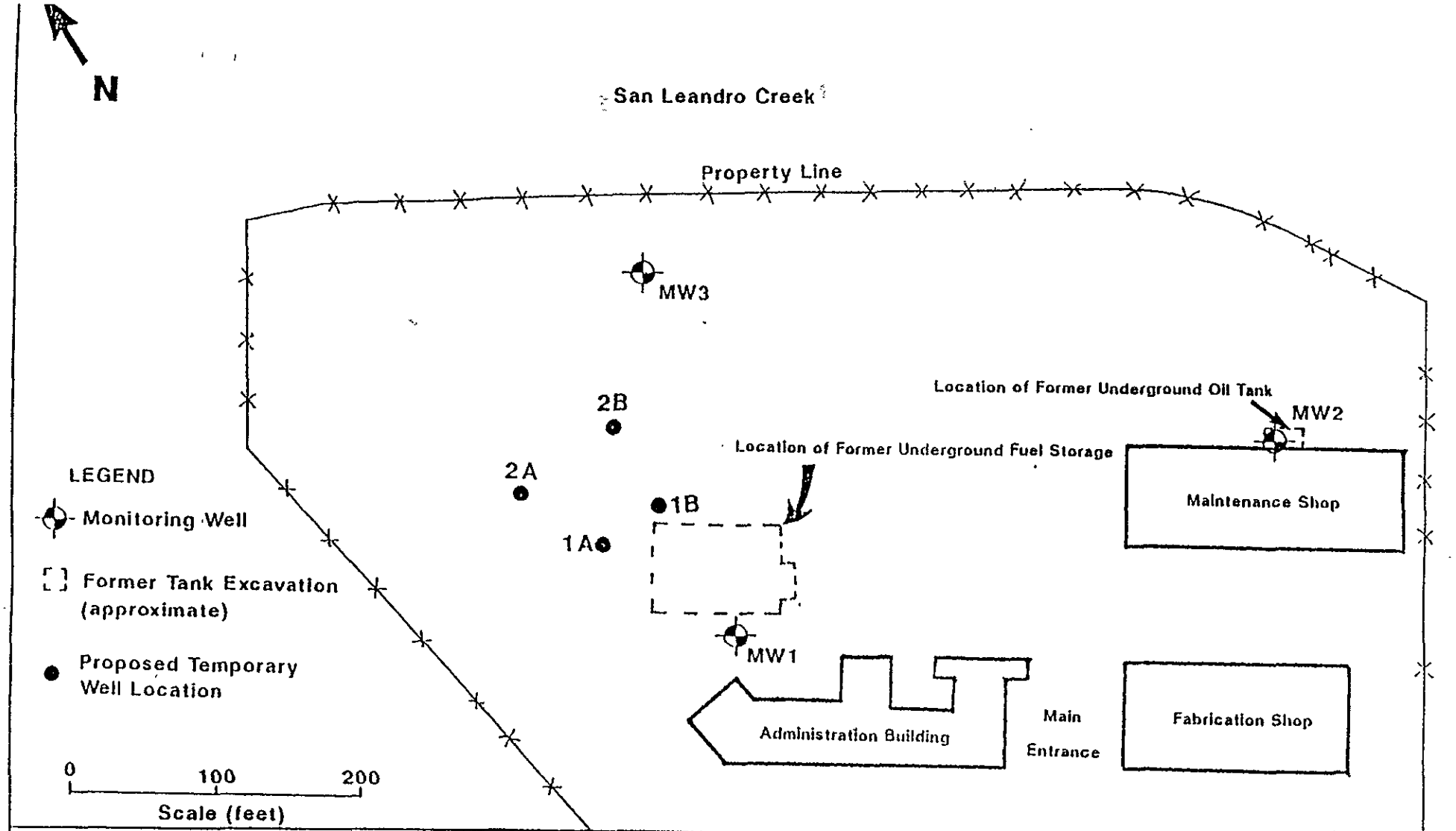


PLATE 1

CET Environmental Services, Inc.

Site Plan

10700 Bigge Ave., San Leandro, CA

Bigge Crane & Rigging

JOB NUMBER	DATE
3535	05/94

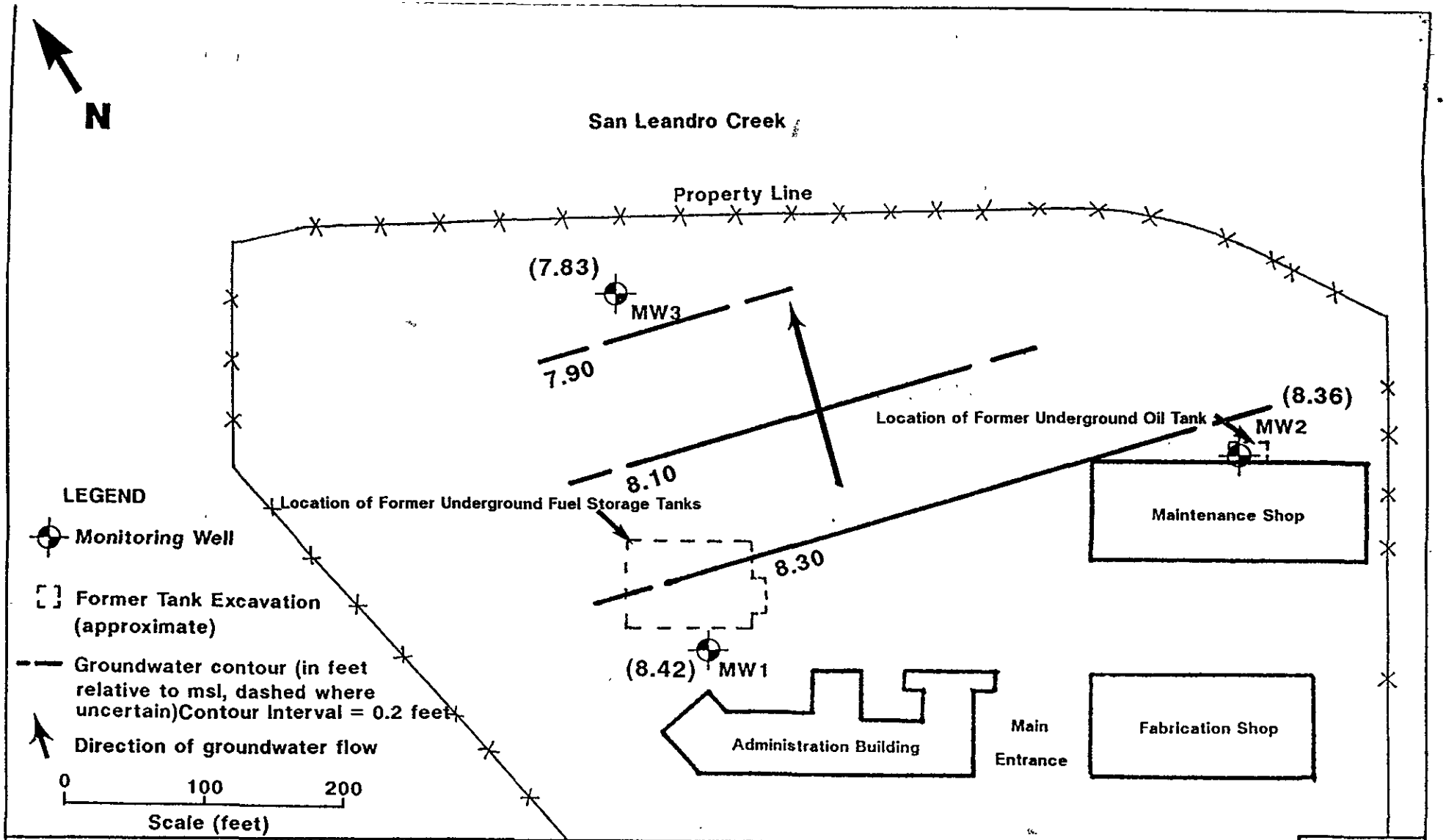


PLATE 6

CET Environmental Services, Inc.

Groundwater Elevations and Contours
02/07/94
10700 Bigge Ave., San Leandro, CA

Bigge Crane & Rigging

JOB NUMBER	DATE
3535	3/94

Table 1

Groundwater Elevation Data Summary
Bigge Crane & Rigging Company, San Leandro, CA

Well No.	TOC Elevation[a] (feet)	Groundwater Elevation[b] 1993 02/17	06/09	07/22	08	09/15	10/19	11/16	12/14	1994 01	02/07
MW1	16.04	9.55	8.27	7.94	___	7.93	8.08	8.27	7.68	___	8.42
MW2	16.63	9.37	8.38	8.11	___	8.05	8.58	8.75	8.18	___	8.36
MW3	13.94	___[c]	7.38	7.22	___	7.07	6.90	7.00	6.33	___	7.83

a. *TOC Elevation = Top of well casing elevation measured to mean-sea-level by a California certified land surveyor. Survey conducted on June 8, 1993.*
b. Groundwater elevation is equal to the difference between TOC elevation and groundwater depth. Groundwater elevations presented are relative to mean-sea-level.
c. - = not measured

8.36
8.58
7.61

Table 2

Groundwater Sample Chemical Data Summary
Bigge Crane & Rigging Company
San Leandro, California

Well No.	Sampling Date	TPH/d[a] µg/L[c]	TPH/g[a] µg/L[c]	B[b] µg/L[c]	T[b] µg/L[c]	E[b] µg/L[c]	X[b] µg/L[c]	TPH-MO
MW1	02/25/93	<50[d]	<50	<0.5[d]	<0.5	<0.5	<0.5	NA
	06/09/93	<50	<50	<0.5	<0.5	<0.5	<0.5	"
	10/19/93	<50	<50	<0.5	<0.5	<0.5	<0.5	"
	02/07/94	<50	<50	<0.5	<0.5	<0.5	<0.5	"
MW2	02/25/93	NA[e]	NA[e]	<0.5	<0.5	<0.5	<0.5	ND
	06/09/93	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
	10/19/93	<50	<50	<0.5	<0.5	<0.5	<0.5	"
	02/07/94	<50	<50	<0.5	<0.5	<0.5	<0.5	"
MW3	10/19/93	<50	<50	<0.5	<0.5	<0.5	<0.5	"
	02/07/94	<50	<50	<0.5	<0.5	<0.5	<0.5	"

a. TPH/d = total petroleum hydrocarbons as diesel, TPH/g = total petroleum hydrocarbons as gasoline
b. B = benzene; T = toluene; E = ethylbenzene; X = total xylenes
c. µg/L = micrograms per liter, equal to parts per billion
d. <50 and <0.5 = not detected at or above the method detection limit.
e. NA = Not Analyzed

Client Number: CET01CET01
Facility Number: 3535
Project ID: BZGGE
Work Order Number: C4-07-0138

ANALYTICAL RESULTS

Aromatic Volatile Organics and

Total Petroleum Hydrocarbons as Gasoline in Water

EPA Methods 5030, 8020, and Modified 8015[a]

GTEL Sample Number		01	03	E071194-1	
Client Identification		1A	1B	METHOD BLANK	
Date Sampled		07/08/94	07/08/94	--	
Date Analyzed		07/11/94	07/11/94	07/11/94	
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.3	<0.3	<0.3	<0.3	
Toluene	0.3	1.0	0.6	<0.3	
Ethylbenzene	0.3	<0.3	<0.3	<0.3	
Xylene, total	0.5	1.4	1.8	<0.5	
TPH as Gasoline	10	<10	<10	<10	
Detection Limit Multiplier		1	1	1	
BFB surrogate, % recovery		105	108	NA	

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Board LUFT Manual procedures. Bromofluorobenzene surrogate recovery acceptability limits are 70-130%. NA = Not Applicable.

"HYDRO PUNCH" RESULTS

GTEL ENVIRONMENTAL LABORATORIES, INC.

ANALYTICAL RESULTS

TPH as Diesel in Water

Method: Modified EPA 8015[a]

GTEL Sample Number		01	03	GCJ 0715	
Client Identification		1A	1B	METHOD BLANK	
Date Sampled		07/08/94	07/08/94	--	
Date Extracted		07/14/94	07/14/94	07/14/94	
Date Analyzed		07/17/94	07/16/94	07/15/94	
Analyte	Detection Limit, ug/L	Concentration, ug/L			
TPH as diesel	10	<10	<10	<10	
Detection Limit Multiplier		1	1	1	
OTP surrogate, % recovery		97.0	111	100	

a. Test Methods for Evaluating Solid Waste, SW-846, 3rd edition, Rev. O, U.S. EPA, November, 1986. Modification for TPH as diesel as per California State Water Resources Board LUFT Manual procedures. O-Terphenyl surrogate recovery acceptability limits are 50-150%.