



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

StID 3766 - 3032 Market Street, Oakland, CA
(3-8,000 gallon fuel tanks removed on October 30, 1989
and 2-550 gallon tanks removed on August 25, 1993)

April 16, 1997

Mr. Gary Jung
CHOC
16662 Columbia Dr
Castro Valley, CA 94552

Mr. Kenneth Williams
WSB Electric
3032 Market Street
Oakland, CA 94608

Dear Messrs. Jung and Williams:

This letter confirms the completion of 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 Title 23, 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

cc: Chief, Division of Environmental Protection
Kevin Graves, RWQCB
Lori Casias, SWRCB (with attachment-case closure summary)
Cheryl Gordon, UST Cleanup Fund
files-ec (wsbelect.3)

MAR 07 1997

QUALITY CONTROL BOARD

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: January 8, 1997

Agency name: Alameda County-HazMat Address: 1131 Harbor Bay Pkwy
City/State/Zip: Alameda, CA 94502 Phone: (510) 567-6700
Responsible staff person: T. Peacock Title: Supervisor

II. CASE INFORMATION

Site facility name: WSB Electric Co
Site facility address: 3032 Market St, Oakland, CA 94608
RB LUSTIS Case No: N/A Local Case No./LOP Case No.: 3766
URF filing date: 5/11/93 SWEEPS No: N/A

<u>Responsible Parties:</u>	<u>Addresses:</u>	<u>Phone Numbers:</u>
1. Cary Jung CHOC Inc	16662 Columbia Dr Castro Valley, CA 94552	
2. Kenneth Williams WSB Electric, Inc	3032 Market St Oakland, CA 94608	

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	8,000	Gasoline	Removed	10/30/89
2	8,000	Gasoline	"	"
3	8,000	Diesel	"	"
4	550	Waste Oil	"	8/25/93
5	550	Gasoline	"	"

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: **Unknown**
Site characterization complete? **YES**
Date approved by oversight agency: **11/22/96**
Monitoring Wells installed? **Yes** Number: **4**
Proper screened interval? **Yes, 6' to 19.5' bgs in well MW-3**
Highest GW depth below ground surface: **7.28'** Lowest depth: **9.25' in MW-3**
Flow direction: **Northwest**
Most sensitive current use: **Commercial/industrial**
Are drinking water wells affected? **No** Aquifer name: **Merritt Sand**
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(s) filed? **Alameda County**
1131 Harbor Bay Pkwy
Alameda, CA 94502

Treatment and Disposal of Affected Material:

<u>Material</u>	<u>Amount (include units)</u>	<u>Action (Treatment or Disposal w/destination)</u>	<u>Date</u>
Tank & Piping	3 USTs 2 USTs	Probably to H & H, San Francisco Erickson, in Richmond	10/30/89 8/25/93
Soil	~100 cy	Richmond L.F.	8/20/92

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	Before ¹	After	Before ³	After ⁵
TPH (Gas)	84	84	73,000	950
TPH (Diesel)	670	670	2,400	ND
Benzene	0.86	0.86	2,300	23
Toluene	3.8	3.8	5,000	1.5
Ethylbenzene	1.0	1.0	ND	1.1
Xylenes	9.5	9.5	6,800	2.9
MTBE				ND
Oil & Grease	3,300 ²	ND ⁴	NA	ND
Heavy metals				
Other	VOCs (8010)	ND	NA	
	SVOCs (8270)	NA	ND ⁴	

- NOTE: 1 soil collected from sidewalls of tank excavation (10/31/89)
 2 soil from beneath waste oil tank (12/21/93)
 3 grab water sample from tank excavation (10/31/89)
 4 soil from overexcavation of gasoline/waste oil tank pit (12/21/93)
 5 final water sample from well MW-3 (9/27/96)

Comments (Depth of Remediation, etc.):

See Section VII, Additional Comments, etc...

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: **None**
 Should corrective action be reviewed if land use changes? **YES**
 Monitoring wells Decommissioned: **None, pending site closure**
 Number Decommissioned: **0** Number Retained: **4**
 List enforcement actions taken: **None**
 List enforcement actions rescinded: **NA**

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: **Eva Chu** Title: **Haz Mat Specialist**

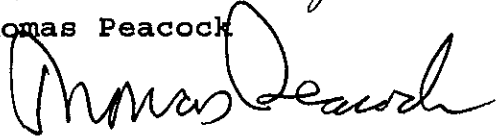
Signature:  Date: **3/4/97**

Reviewed by

Name: **Susan Hugo** Title: **Sr. Haz Mat Specialist**

Signature:  Date: **1/8/97**

Name: **Thomas Peacock** Title: **Supervisor**

Signature:  Date: **3-3-97**

VI. RWQCB NOTIFICATION

Date Submitted to RB: **3/15/97** RB Response: **Approved**

RWQCB Staff Name: **Kevin Graves** Title: **AWRCE**

Signature:  Date: **3/18/97**

VII. ADDITIONAL COMMENTS, DATA, ETC.

The site is currently an office and warehouse for an electrical contractor. It was previously used as an auto repair shop and refueling station for a car rental agency.

In October 1989 three USTs (2-8K gallon gasoline, 1-8K gallon diesel) were removed from a common pit in the center of the yard. Water was encountered in the excavation. Hydrocarbons were floating on the water. Water was pumped from the pit before a water sample was collected. A total of five soil samples (3 from northwall, 1 from east, and 1 from west sidewall) were collected. The grab water sample contained elevated levels of TPHg, TPHd, and BTEX. Low levels of the above constituents were also detected in the soil samples. (See Figs 1 and 2, and Table 1)

Two other USTs (1-550 gallon waste oil, 1-550 gallon gasoline) in a common pit (just south of the garage) were removed in August 1993. A soil sample was collected from native soil beneath each tank (at 8.5' bgs) and analyzed for TPHg, TPHd, BTEX, TOG, HVOCS, and 5 LUFT metals (Cd, Cr, Pb, Ni, Zn). Up to 3,300 ppm TOG and low levels of BTX were identified. HVOCS were not found above the detection limits. (See Fig 3, Table 1)

This pit was overexcavated in two phases in December 1993. Confirmatory soil samples were collected at 8.5' to 10' bgs. Results of the second phase of overexcavation did not identify contaminants above the detection limits for TPHg, TPHd, BTEX, TOG, and SVOCs. (See Fig 4, Table 1)

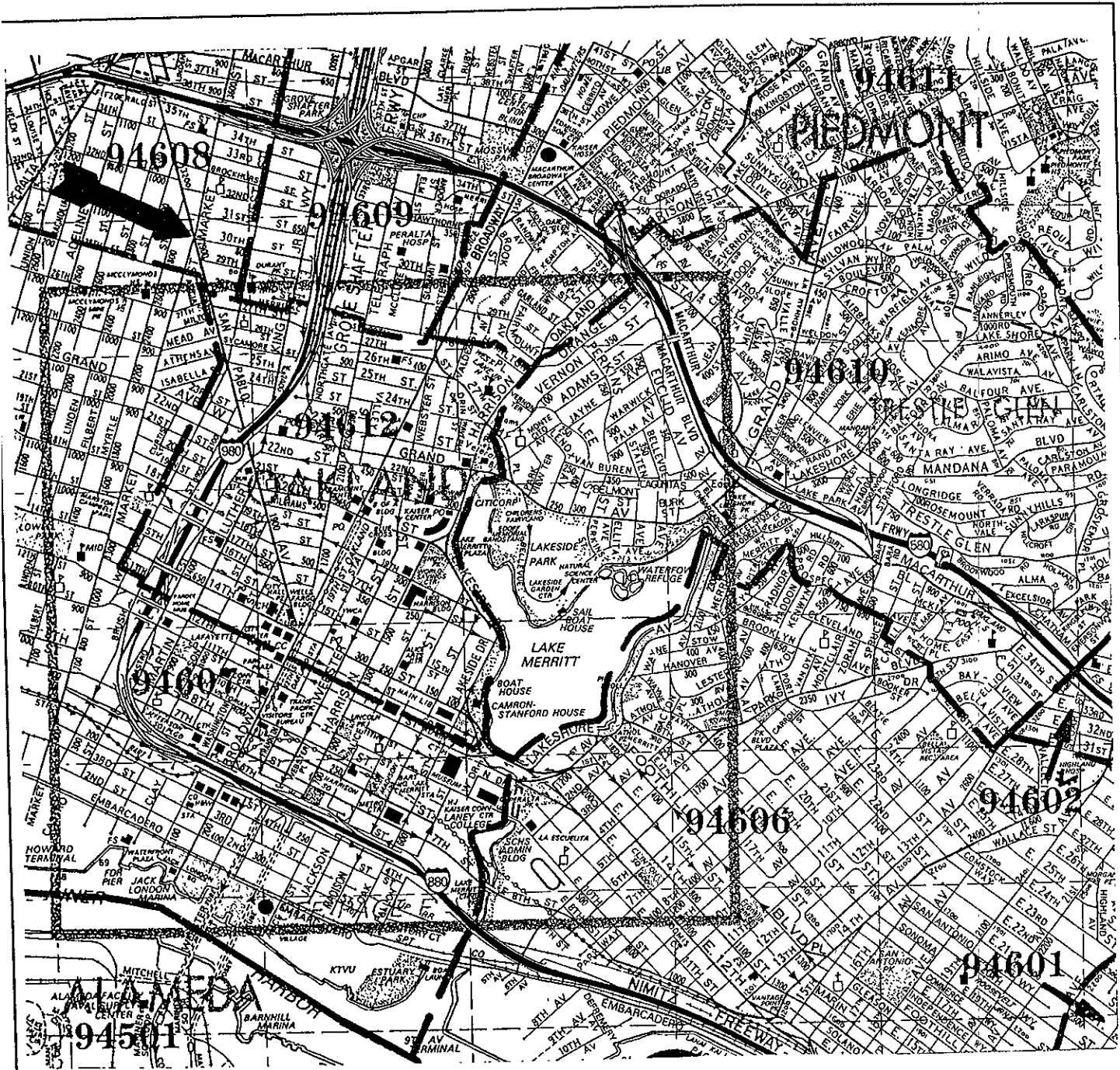
In June 1994 three monitoring wells (B1/MW-1 through B3/MW-3) were installed at the site. Well MW-2 is downgradient of the former gas/waste oil pit, and well MW-3 is downgradient of the gas/diesel pit. Soil samples collected at 9.5 to 10' bgs from each boring did not contain TPHg, TPHd, TOG, or BTEX. However the initial groundwater sampling event identified up to 6,100 ppb TPHg, 110 ppb TPHd, and 130 ppb benzene in well MW-3. (See Fig 5, Tables 2 and 3)

After three sampling events (6/94, 9/94, 12/94) only well MW-3 revealed elevated TPHg, TPHd, and benzene levels. Well MW-4 was installed further downgradient of well MW-3 to delineate the extent of the groundwater plume. This well has not shown detectable levels of TPHg or BTEX in the last four sampling events. (See Fig 6, Table 4)

Hydrocarbon concentration levels in well MW-3 appears to be decreasing. MTBE was not detected in the December 1996 sampling event. The contaminant plume is localized and has not migrated offsite. Continued monitoring is not warranted.

In summary, case closure is recommended because:

- o the leak and ongoing sources have been removed;
- o the site has been adequately characterized;
- o the dissolved plume is not migrating;
- o no water wells, surface water, or other sensitive receptors are likely to be impacted; and,
- o the site presents no significant risk to human health or the environment.

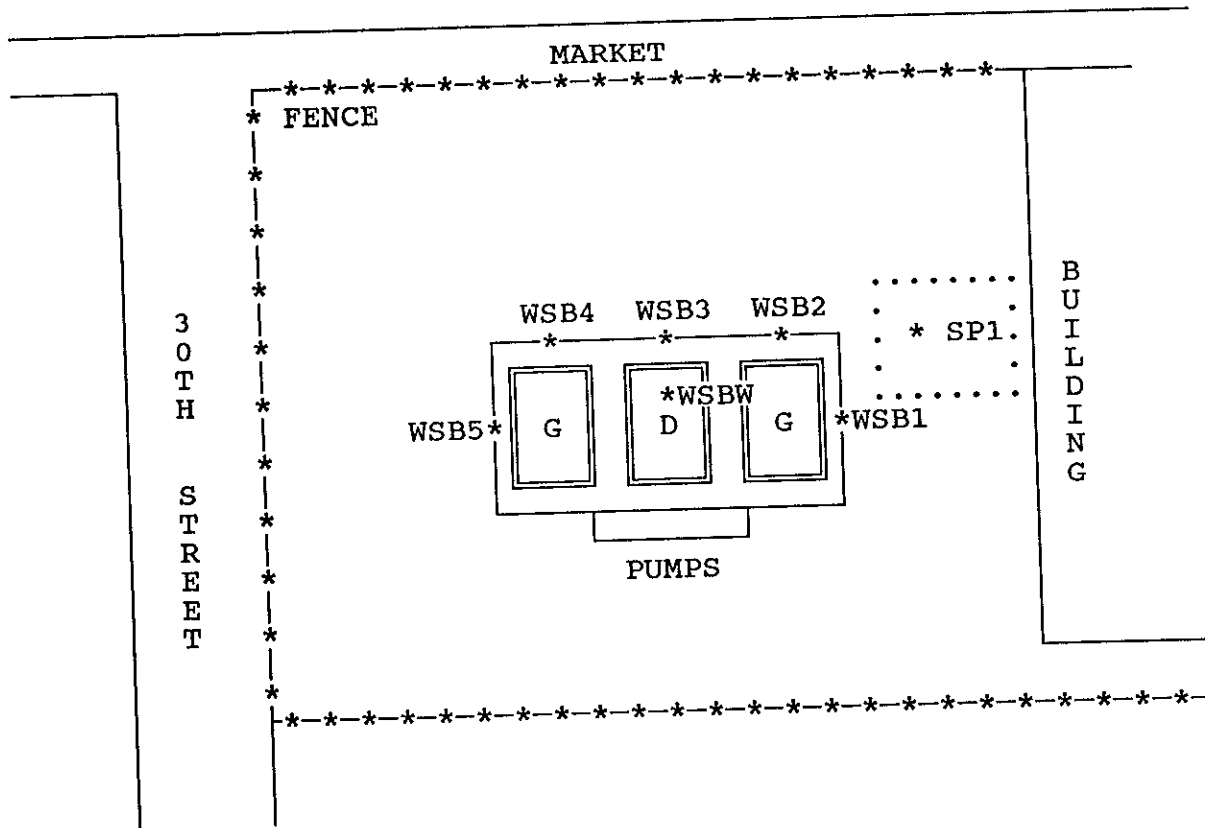


Source: Thomas Brothers Guide

Project No. 6169-1	Vicinity Map WSB Electric 3032 Market Street Oakland, California	Figure: 1
Date: 8/6/1995		ACC Environmental Consultants • 7977 Capwell Drive, Suite 100 • Oakland, CA 94621 • (510) 638-8400

SITE PLAN
WSB ELECTRIC - 3032 MARKET STREET, OAKLAND

FIG 2

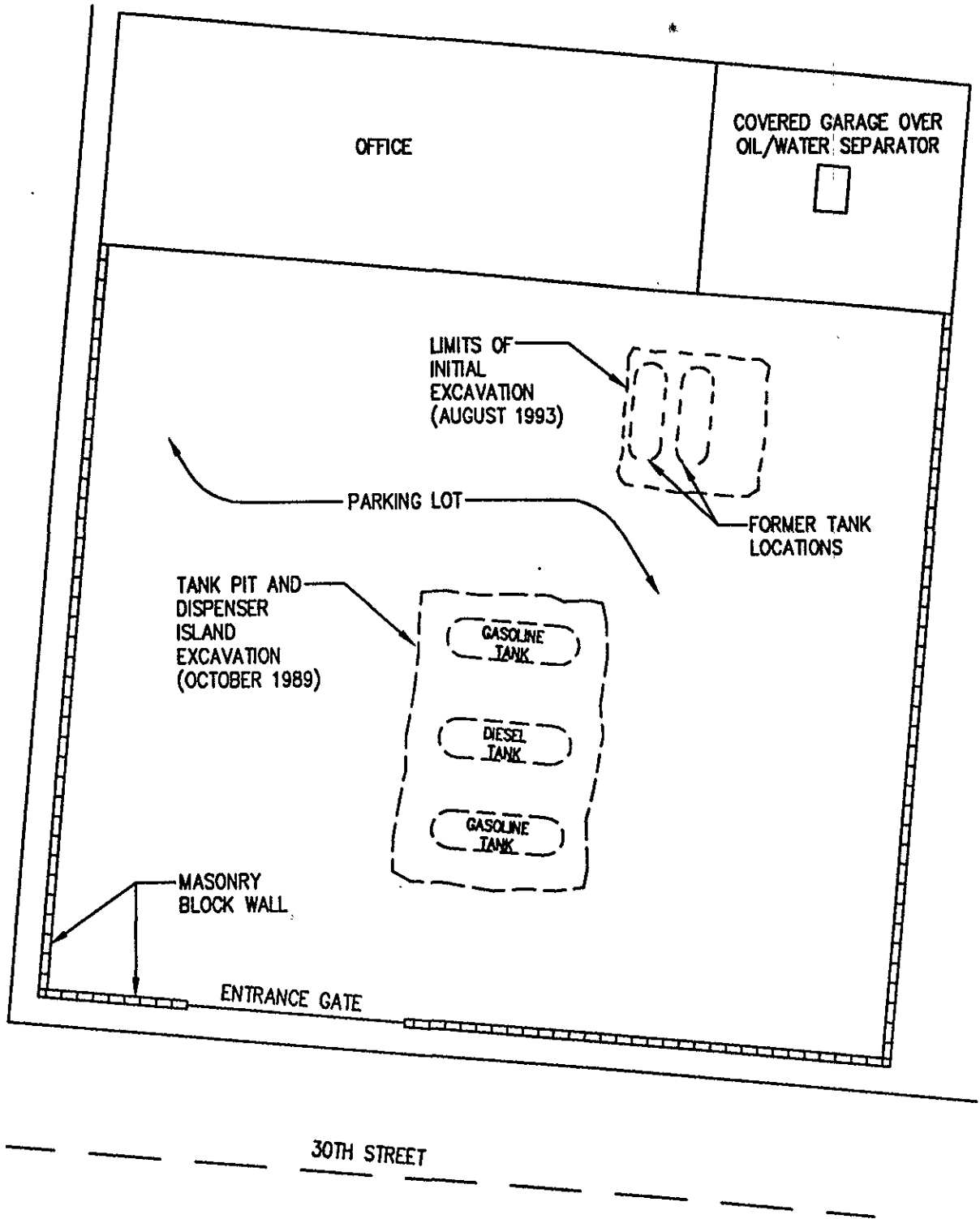


NOT TO SCALE

LOCATIONS ARE APPROXIMATE

* - SAMPLING LOCATION

MARKET STREET



NOT TO SCALE

DATE	MARCH 1994
JOB NO.	3289
DESC'D	
DRAWN	RV
CHK'D	GSH
APP'D	WAC

W. A. CRAIG, INC.

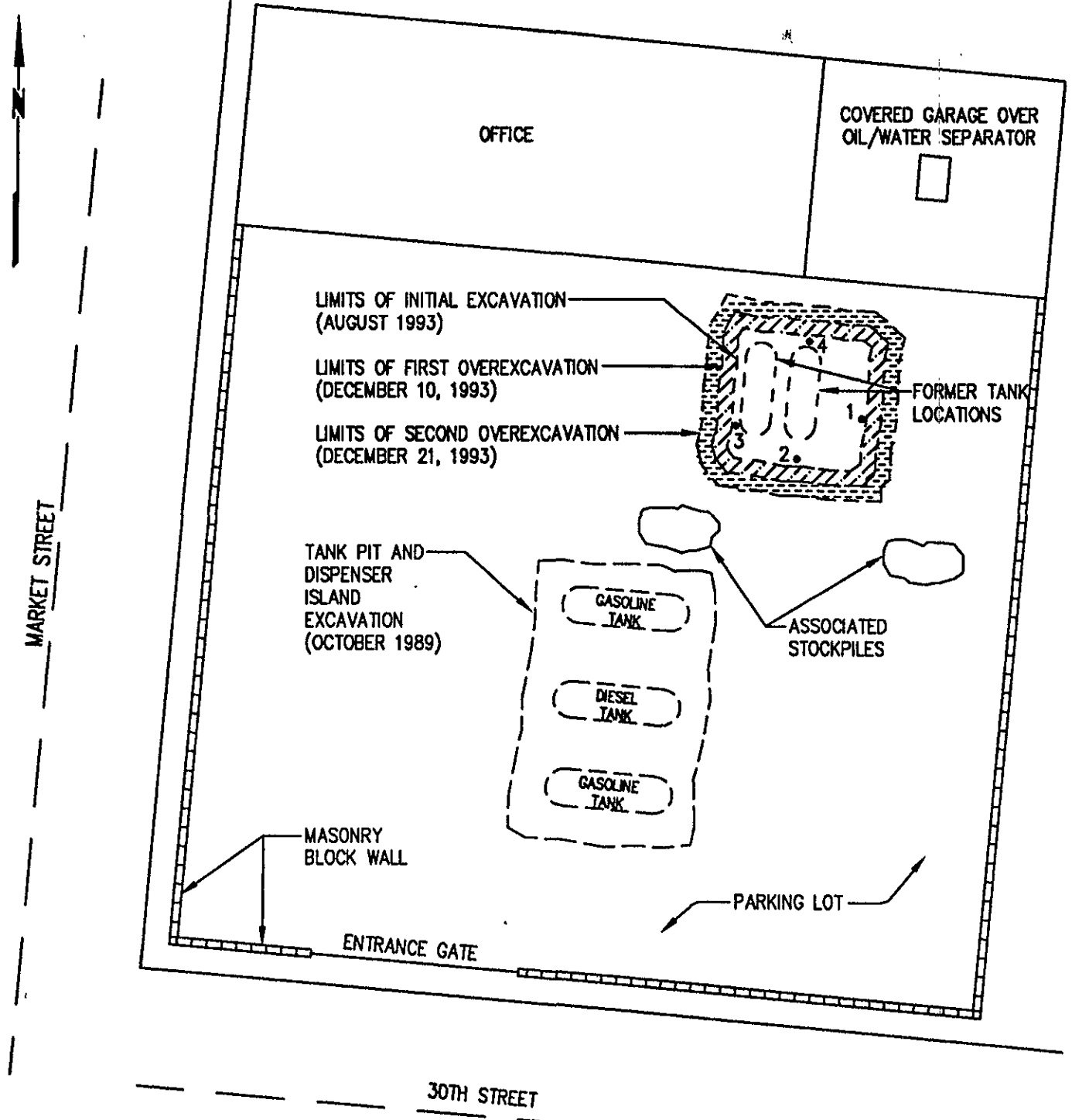
W.S.B. ELECTRIC
3032 MARKET STREET
OAKLAND, CALIFORNIA

FIGURE NO.

3

SKETCH OF SITE

REV.

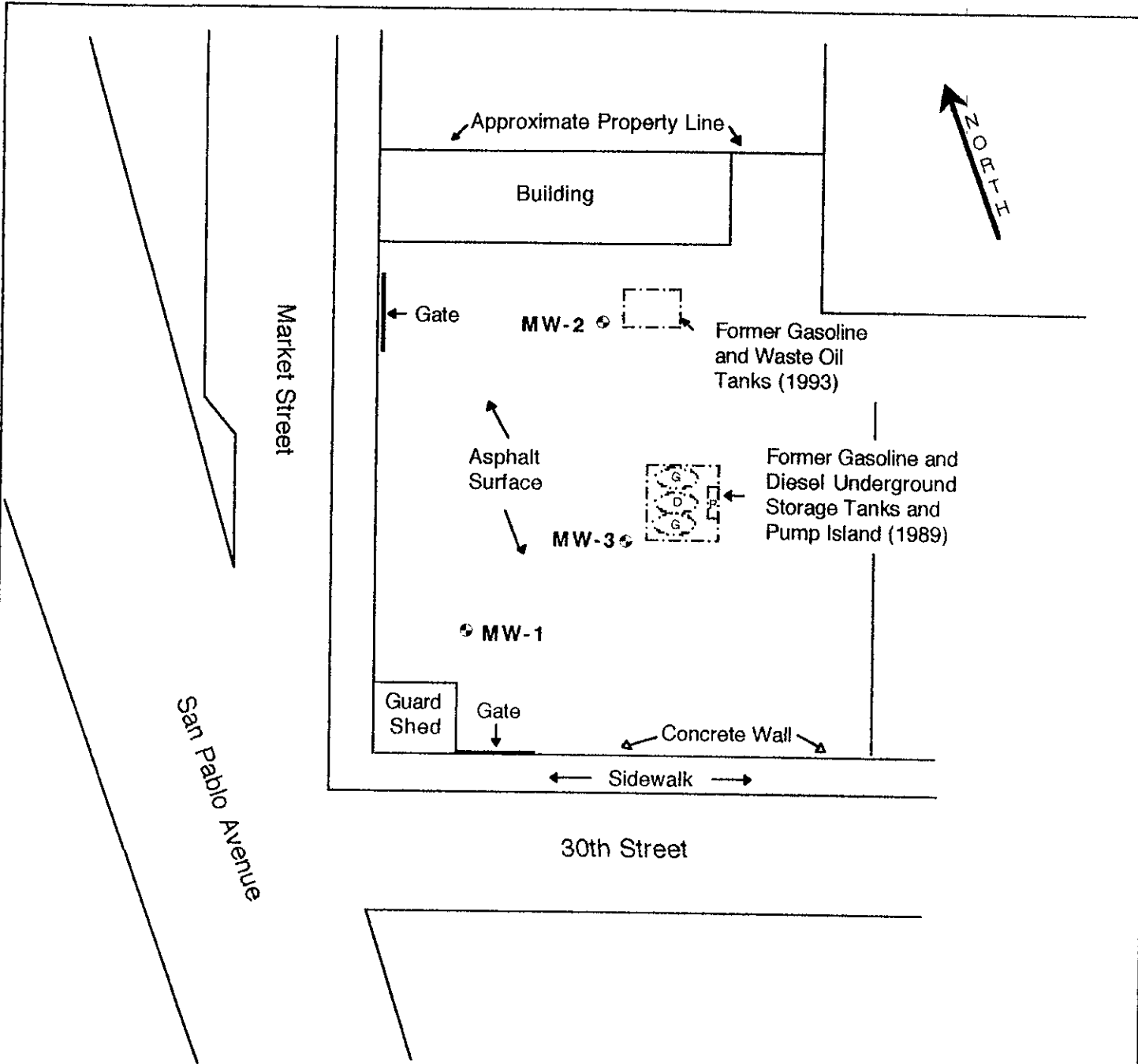


- LEGEND:**
- 4 SAMPLE LOCATION
 - 1 WSB-3-1 EAST WALL
 - 2 WSB-3-2 SOUTH WALL
 - 3 WSB-3-3 WEST WALL
 - 4 WSB-3-4 NORTH WALL

gradient?
← if west

NOT TO SCALE

NOTES	DATE	MARCH 1994	W. A. CRAIG, INC.	FIGURE NO. 34
	JOB NO.	3289		
	DES'G'D			
	DRAWN	RV	W.S.B. ELECTRIC 3032 MARKET STREET OAKLAND, CALIFORNIA	
	CHK'D	GSH	SKETCH OF SAMPLE LOCATIONS, SECOND OVEREXCAVATION	REV.
	APP'D	WAC		



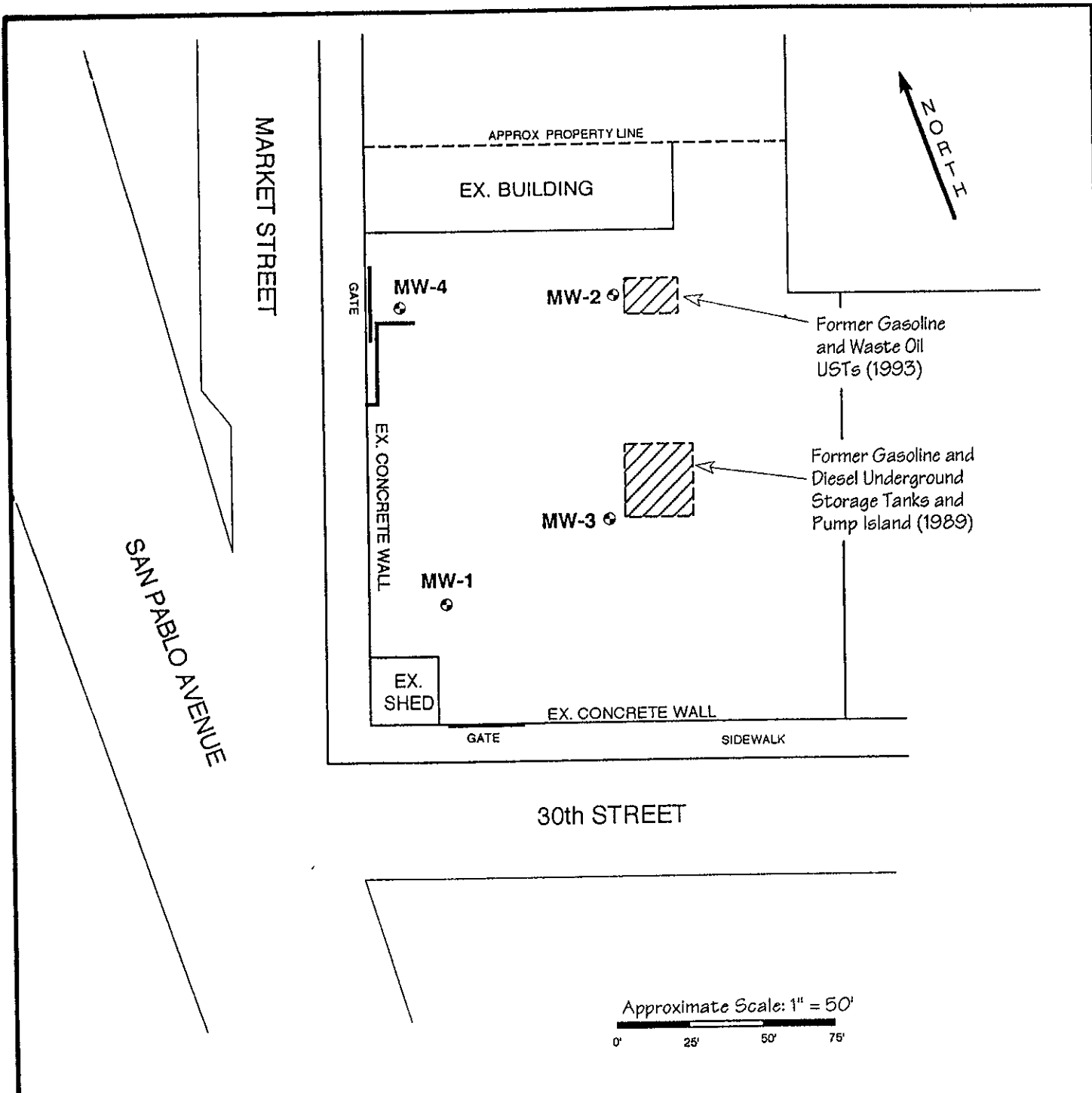
Approximate Scale: 1" = 50'
 0 25 50 75

LEGEND

- = Groundwater Monitoring Well
- ⊗ = Gasoline Underground Storage Tank

Source: Wells surveyed by Ron Archer,
 Civil Engineer, Inc., June 23, 1994

Project No. 6169-1	Generalized Site Plan WSB Electric 3032 Market Street Oakland, California	Figure: 6
Date: 07/28/1994		ACC Environmental Consultants • 1000 Atlantic Avenue, Suite 110 • Alameda, CA 94501 • (510) 522-8188 Fax (510) 865-5731



LEGEND

- ⊕ = Groundwater Monitoring Well
- ▨ = Former Tank Excavation

Source: Wells surveyed by Ron Archer, Civil Engineer, Inc., June 23, 1994 and March 8, 1995

Project No. 6169-1.0	Generalized Site Plan WSB Electric 3032 Market Street Oakland, California	Figure: 26
Date: 4/1/96		

TABLE 1
RESULTS OF CHEMICAL ANALYSES OF SAMPLES
W.S.B. Electric
3032 Market Street
Oakland, California

Sample Number	Location	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPHd	TRPH	Lead	Cadmium	Chromium	Nickel	Zinc
Soil Samples from Central Tank Pit Excavation (October 31, 1989--Sampling by Miller Environmental, Inc.)													
WSB-1	North Wall	73.0	0.17	1.2	0.40	4.84	25	---	---	---	---	---	---
WSB-2	West Wall, N	84.0	0.86	3.80	1.0	9.5	88	---	---	---	---	---	---
WSB-3	West Wall, C	11	<0.090	0.14	<0.090	0.88	<5.0	---	---	---	---	---	---
WSB-4	West Wall, S	13	<0.16	<0.16	<0.16	0.91	670	---	---	---	---	---	---
WSB-5	South Wall	52.0	0.20	0.20	0.20	0.20	110	---	---	---	---	---	---
SP-1	Stockpile	120	<0.16	<0.16	<0.16	1.90	74	---	---	---	---	---	---
WSB-W	Water	73	2.3	5.0	<0.1	6.8	2.4	---	---	---	---	---	---
Soil Samples from Northeastern Tank Pit Excavation (August 25, 1993--Sampling by W. A. Craig, Inc.)													
WSB-WO ¹	Waste-Oil Tank	<1.0 ^{1,*}	0.073	0.006	<0.005	0.024	72 ^g	3300	9.6	<1.0	78	57	68
WSB-G	Gas Tank	<1.0 ^d	0.009	<0.005	<0.005	<0.005	---	---	9.6	---	---	---	---
WSB-S ¹	Separator	<1.0 ^b	<0.005	0.006	<0.005	0.033	81 ^g	---	---	---	---	---	---
WSB-WOS ¹	Waste Stockpile	1.4 ^g	<0.005	<0.005	<0.005	<0.005	75 ^g	4300	80	<1.0	56	21	120
WSB-GS	Gas Stockpile	32 ^{b,d}	<0.02	0.062	0.065	0.64	---	---	39	---	---	---	---
Soil Samples from Northeastern Tank Pit Excavation (First Overexcavation, December 10, 1993--Sampling by W. A. Craig, Inc.)													
WSB-2-1	East Wall	1.4 ^d	<0.005	<0.005	<0.005	0.010	110 ^g	6800	<4.0	<1.0	46	36	62
WSB-2-2	South Wall	<1.0	<0.005	<0.005	<0.005	<0.005	59 ^g	620	<4.0	<1.0	49	54	60
WSB-2-3	West Wall	<1.0	<0.005	<0.005	<0.005	<0.005	25 ^g	750	<4.0	<1.0	56	63	63
WSB-2-4 ¹	Pit Bottom	<1.0	<0.005	<0.005	<0.005	<0.005	60 ^g	3200	<4.0	<1.0	56	43	66
Soil Samples from Northeastern Tank Pit Excavation (Second Overexcavation, December 21, 1993--Sampling by W. A. Craig, Inc.)													
WSB-3-1	East Wall	<1.0	<0.005	<0.005	<0.005	<0.005	<10	<50	---	---	---	---	---
WSB-3-2	South Wall	<1.0	<0.005	<0.005	<0.005	<0.005	<10	<50	---	---	---	---	---
WSB-3-3	West Wall	<1.0	<0.005	<0.005	<0.005	<0.005	<10	<50	---	---	---	---	---
WSB-3-4	North Wall	<1.0	<0.005	<0.005	<0.005	<0.005	<10	<50	---	---	---	---	---

Results in parts per million (ppm) for soil, parts per billion (ppb) for water.

TPHg = Total Petroleum Hydrocarbons as gasoline; TPHd = Total Petroleum Hydrocarbons as diesel; TRPH = Total Recoverable Petroleum Hydrocarbons.

< = Less than the detection limit for the analytical method used; -- = analysis not requested.

^{a, b, c, d, f, g} = Refer to supplementary descriptions of the chromatograms provided by the laboratory. See appended laboratory analytical reports for descriptions.

¹ = Soil sample also analyzed for Total Halocarbons; none were detected; see appended laboratory analytical reports.

TABLE 2
SOIL ANALYTICAL RESULTS
W.S.B. Electric
3032 Market Street, Oakland, California
(page 1 of 1)

Sample Number	Date Sampled	TPHg	TPHd	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TOG
B1-10'	06/09/94	<1.0	<1.0	<0.005	<0.005	<0.005	<0.015	<50
B2-10'	06/09/94	<1.0	<1.0	<0.005	<0.005	<0.005	<0.015	<50
B3-9.5'	06/09/94	<1.0	<1.0	<0.005	<0.005	<0.005	<0.015	<50

All results in mg/kg \approx parts per million (ppm)

TPHg Total petroleum hydrocarbons as gasoline
TPHd Total petroleum hydrocarbons as diesel
TOG Total oil and grease
< Less than listed detection limit established by the laboratory
B1-10' Boring identification and sample depth (10 feet below ground surface)

TABLE 3
GROUNDWATER MONITORING DATA
AND ANALYTICAL RESULTS
W.S.B. Electric
3032 Market Street, Oakland, California
(page 1 of 1)

Well Number	Date	Depth to Water	Groundwater Elevation	TPHg	TPHd	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TOG
MW-1 (27.09)	06/27/94	13.33	13.76	<50	61	<0.5	<0.5	<0.5	<0.5	<1,000
MW-2 (29.34)	06/27/94	13.72	15.62	60	75	<0.5	<0.5	<0.5	0.90	<1,000
MW-3 (28.11)	06/27/94	8.70	19.41	6,100	110	130	7.6	25	69	<1,000

Depth to water measured in feet below top of casing.

All results in $\mu\text{g/L}$ \approx parts per billion (ppb)

TPHg Total petroleum hydrocarbons as gasoline
TPHd Total petroleum hydrocarbons as diesel
TOG Total oil and grease
< Less than listed detection limit established by laboratory
(28.11) Surveyed elevation of the top of the PVC casing as of June 23, 1994

Water purged during the development and sampling of the monitoring wells was temporarily stored on site in Department of Transportation approved 55-gallon drums pending laboratory analytical results and proper disposal.

4.0 RESULTS OF GROUNDWATER SAMPLING

Groundwater samples collected from specified wells were submitted to Chromalab, Inc., in Pleasanton, California, following chain of custody protocol. Groundwater samples collected from wells MW-1 through MW-4 were analyzed for TPHg and TPHd using EPA Method 8015M, and benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 8020. Copies of the chain of custody record and laboratory analytical reports are included as Appendix 2. Groundwater sample analytical results are summarized in Table 3.

TABLE 3 - GROUNDWATER SAMPLE ANALYTICAL RESULTS

Well No.	Date	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	TPHd (µg/L)
MW-1	06/27/94	<50	<0.5	<0.5	<0.5	<0.5	61
	09/23/94	<50	<0.5	<0.5	<0.5	<0.5	<50
	12/16/94	<50	<0.5	<0.5	<0.5	<0.5	<50
	03/13/95	<50	<0.5	<0.5	<0.5	<0.5	71
	06/13/95	<50	<0.5	<0.5	<0.5	<0.5	59
	09/15/95	<50	<0.5	<0.5	<0.5	<0.5	<50
	12/15/95	--	--	--	--	--	--
	03/14/96	--	--	--	--	--	--
	09/27/96	<50	<0.5	<0.5	<0.5	<0.5	<50
MW-2	06/27/94	<60	<0.5	<0.5	<0.5	0.90	75
	09/23/94	<50	<0.5	<0.5	<0.5	0.90	<50
	12/16/94	<50	<0.5	<0.5	<0.5	<0.5	88
	03/13/95	<50	<0.5	<0.5	<0.5	<0.5	230
	06/13/95	<50	<0.5	0.7	<0.5	0.6	<50
	09/15/95	<50	<0.5	<0.5	<0.5	<0.5	<50
	12/15/95	--	--	--	--	--	--
	03/14/96	--	--	--	--	--	--
	09/27/96	<50	<0.5	<0.5	<0.5	<0.5	<50

cont. Table 4

Well No.	Date	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	TPHd (µg/L)
MW-3	06/27/94	6,100	130	7.6	25	69	110
	09/23/94	2,500	19	1.4	0.80	3.3	<50
	12/16/94	6,500	79	<0.5	<0.5	160	1,800
	03/13/95	2,800	120	20	<0.5	46	860
	06/13/95	3,900	71	6.1	58	28	82
	09/15/95	2,700	41	2.9	1.4	5.6	140
	12/15/95	6,600	100	27	290	74	86*
MW-3B	12/15/95	5,300	64	6.1	170	73	64*
	03/14/96	3,200	64	5.5	<0.5	24	140*
	09/27/96	950	23	1.5	1.1	2.9	<50
MW-4	03/13/95	<50	<0.5	<0.5	<0.5	<0.5	220
	06/13/95	<50	<0.5	0.5	<0.5	0.9	620*
	09/15/95	<50	<0.5	<0.5	<0.5	<0.5	<50
	12/15/95	<50	<0.5	<0.5	<0.5	<0.5	61*
	03/14/96	<50	<0.5	<0.5	<0.5	<0.5	62*
	09/27/96	<50	<0.5	<0.5	<0.5	<0.5	<50

Notes: µg/L = micrograms per liter = parts per billion (ppb)
 < = Less than reporting limit indicated (see analytical reports)
 -- = Analysis not performed
 * Compounds in diesel range but do not match diesel standards
 MW-3B = Duplicate sample from well MW-3 collected on December 15, 1995.

Concentrations of TPHg and BTEX were not detected in the water samples collected from wells MW-1, MW-2, and MW-4. Dissolved gasoline compounds were detected in well MW-3 at a concentration of 950 ppb, and benzene, toluene, ethylbenzene, and total xylenes were detected at concentrations of 23, 1.5, 1.1, and 2.9 ppb, respectively. The TPHg concentration noted in well MW-3 has decreased approximately 70% since March 1996. No TPHd concentrations above reporting limits were detected in the water samples obtained from wells MW-1 through MW-4. Concentrations of TPHd have decreased in wells MW-3 and MW-4 since March 1996.

5.0 DISCUSSION

Because 1 year had elapsed since wells MW-1 and MW-2 had been sampled, all four wells were monitored and sampled for analysis. Concentrations of TPHd were not detected in any of the monitoring wells. The concentration of TPHg decreased in well MW-3 by approximately 70% since March 1996, and TPHg was not detected in any of the other three wells. BTEX constituents decreased at levels corresponding to the decrease in TPHg concentration. This sampling event represents the third consecutive decrease in TPHg concentration in well MW-3.

Groundwater gradient appears to vary across the site, averaging approximately 0.04 foot/foot. Flow direction is predominantly north-northwest (Figure 3). Groundwater gradient and flow direction continue to appear restricted in the northern portion of the site. This observation is reinforced by the

Gregg Drilling and Testing. 8" Hollow Stem Auger.	Blows/6"	HNu (ppm)	SAMPLE #	SAMPLE	Depth (feet)	Equipment: B-61 Drill Rig Logged By: K. McVicker PROJECT: 3032 Market Street Start Date: 6/9/94
					0	Asphalt: 4" lift. Silty Gravel (GM) & clayey gravel (GC), lt. brown, dense (baserock)
					2	
					4	Silty clay (CL), green-grey, <5% fined-grained sand, very stiff, slightly plastic, damp.
	23	0	S5B1		6	Clayey silt (ML), red-brown, <5% fined-grained sand, very stiff, slightly plastic, moist.
					8	
					10	Gravelly sand (SP), red-brown, fined-grained sand and gravel, 5-10% silt and clay, dense, very moist.
	50	0	S10B1		12	
					14	▼ (groundwater 6/27/94) ▽ (groundwater 6/9/94)
					16	Sandy silt (ML), red-brown mottled with black carbonaceous material, fine-grained sand, 15-20% clay, very stiff, slightly plastic, very moist - wet.
					18	
					20	Same as above
	37	0	S15B1		22	
					24	Gravelly sand (SP), red-brown mottled with black carbonaceous material, fine-grained sand, 15-20% clay, dense, wet.
					26	
	36				28	BOTTOM OF BORING @ 25.5 FEET Boring converted into 2"-inch diameter monitoring well

ACC ENVIRONMENTAL CONSULTANTS
1000 ATLANTIC AVENUE, SUITE 110
ALAMEDA, CA 94501

JOB NO. 6169-1

3032 Market Street
Oakland, CA

DATE: 8/30/94

LOG OF BORING B-1/MW-1

Gregg Drilling and Testing. 8" Hollow Stem Auger.	Blows/6"	HNu (ppm)	SAMPLE #	SAMPLE	Depth (feet)	Equipment: B-61 Drill Rig Logged By: K. McVicker PROJECT: 3032 Market Street Start Date: 6/9/94
					0	Asphalt: 4" lift. Silty Gravel (GM) & clayey gravel (GC), brown, dense (baserock).
		0			2	
					4	Silty clay (CL), dark brown, <5% fined-grained sand and gravel, stiff, slightly plastic, damp.
	23	0	S5B2		6	
					8	Clayey silt (ML), red-brown mottled with black carbonaceous material, <5% fined-grained sand and gravel, stiff, slightly plastic, moist.
					10	
	30	0	S10B2		12	Same as above, grey-brown, 10-15% fine-grained sand and gravel, very stiff, very moist.
					14	▼ (groundwater 6/27/94) ▽ (groundwater 6/9/94)
					16	Same as above, grey-brown, 10-15% rootholes, very moist-wet.
	21	0	S15B2		18	
					20	Same as above, 15-20% fine sand and gravel, stiff.
	16	0	S20B1		22	
					24	Gravelly sand (SP), grey-brown material, fine-grained sand, 10-15% clay, dense, wet.
	44				26	
					28	BOTTOM OF BORING @ 25.5 FEET Boring converted into 2"-inch diameter monitoring well.

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LOG OF BORING B-2/MW-2

Gregg Drilling and Testing. 8" Hollow Stem Auger.	Blows/6"	HNu (ppm)	SAMPLE #	SAMPLE	Depth (feet)	Equipment: B-61 Drill Rig Logged By: K. McVicker PROJECT: 3032 Market Street Start Date: 6/9/94
					0	Asphalt: 4" lift. Silty Gravel (GM) & clayey gravel (GC), lt. brown, dense (baserock)
					2	
		0			4	Silty clay (CL), black-brown, <5% fined-grained sand, stiff, slightly plastic, damp.
	18	0	S5B3		6	Clayey silt (ML), red-brown, <5% fined-grained sand and gravel, very stiff, slightly plastic, moist.
					8	
		0			10	▼ (groundwater 6/27/94)
	30	900 50	S9.5B3		10	▽ (groundwater 6/9/94)
					12	Gravelly sand (SP), grey-brown, fined-grained sand and gravel, 10-20% silt and clay, dense, very moist.
					14	
	27				16	Clayey silt (ML), red-brown, fine-grained sand, 5-10% fine-grained sand and gravel, very stiff, slightly plastic, wet.
					18	
					20	Same as above
	36				20.5	BOTTOM OF BORING @ 20.5 FEET Boring converted into 2"-inch diameter monitoring well.
					22	
					24	
					26	
					28	

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LOG OF BORING B-3/MW-3