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

RAFAT A. SHAHID, DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
Alameda County
Environmental Protection Division
1131 Harbor Bay Parkway, Room 250
Alameda CA 94502-6577
(510) 567-6700

November 30, 1995
StID # 1495

REMEDIAL ACTION COMPLETION CERTIFICATION

Ms. Karen Sipher
Quarker Oats Company
5625 E. 14th St.
Oakland CA 94621

RE: Quaker Oats Company, 5625 E. 14th St., Oakland, 94621

Dear Ms. Sipher:

This letter confirms the completion of site investigation and remedial action for the two underground 12,000 gallon diesel tanks at the above described location.

Based upon the available information and with provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the undeground tank release is required.

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

Please contact Barney Chan at (510) 567-6765 if you have any questions regarding this matter.

Sincerely,

Jun Makishima

Jun Makishima
Acting Agency Director

c: G. Coleman, Acting Chief, Hazardous Materials Division-files
Kevin Graves, RWQCB
Mike Harper, SWRCB
files

RACC5625

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION **Date:** 6/27/95

Agency name: **Alameda County-HazMat** Address: **1131 Harbor Bay Parkway Rm 250, Alameda CA 94502**

City/State/Zip: **Alameda** Phone: **(510) 567-6700**

Responsible staff person:Barney Chan Title: **Hazardous Materials Spec.**

II. CASE INFORMATION

Site facility name: Quaker Oats Company

Site facility address: 5625 E. 14th St., Oakland CA 94621

RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: 1495

ULR filing date: 6/26/89 SWEEPS No: **N/A**

Responsible Parties:	Addresses:	Phone Numbers:
Quaker Oats Company Attn: Ms. Karen Sipher	5625 E. 14th St. Oakland CA 94621	(510) 261-5800

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1	12,000	diesel	Removed	5/31/89
2	12,000	diesel	Removed	5/31/89

III RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: unknown

Site characterization complete? Yes

Date approved by oversight agency: 6/9/95

Monitoring Wells installed? YES Number: 4

Proper screened interval? Yes, 5-20'

Leaking Underground Fuel Storage Program

Highest GW depth: 6.05'BGS Lowest depth: 10.34' BGS
Note: MW1 not used for DTW due to its likely influence from the tank pit water, MW4 not use for DTW due to its remote distance from the tank pit.

Flow direction: assumed westerly-northwesterly, based on regional flow and the likely influence of the groundwater extraction system at the adjacent site, General Electric.

Most sensitive current use: Deeper water may be used for industrial process water, however, no domestic wells exist in the shallow aquifer within a one mile radius of site.

Are drinking water wells affected? No Aquifer name:

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

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

Report(s) on file? **Yes** Where is report(s)? Alameda County
1131 Harbor Bay Parkway, Room 250, Alameda CA 94502-6577

Treatment and Disposal of Affected Material:

Material	Amount (include units)	Action (Treatment of Disposal w/destination)	Date
Tanks & Piping	1-12000 gallon diesel	Disposed H&H Shipping	5/31/89
	1-12000 gallon diesel	Disposed H&H Shipping 220 China Basin St., S.F.	5/31/89
Soil	approx 230 cy	Disposed at BFI, Livermore	4/24-25/91

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppm)	
	Before	After	Before	After
TPH (Diesel)	4200	4200	30,000 *	0.6-6
Benzene	0.18	0.18	ND	ND
Toluene	0.78	0.78	ND	ND
Ethylbenzene	1.6	1.6	ND	ND
Xylenes	5.5	5.5	0.075	ND
Oil and Grease	4400	4400	NA	

* grab GW sample

Comments (Depth of Remediation, etc.): see attachment

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

Leaking Underground Fuel Storage Tank Program

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: NO

Number Decommisioned: 0 Number Retained: 4

List enforcement actions taken: None

List enforcement actions rescinded:None

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Barney M. Chan Title: Hazardous Materials Specialist

Signature: Barney M Chan Date: 8/3/95

Reviewed by

Name: Madhulla Logan Title: Hazardous Materials Specialist

Signature: Madhulla Logan Date: 7/27/95

Name: Eva Chu Title: Haz. Mat. Specialist

Signature: Eva Chu Date: 6/27/95

VI. RWQCB NOTIFICATION

Date Submitted to RB: RB Response: Approved

RWQCB Staff Name: K. Graves Title: AWRCE Date: 8/11/95

VII. ADDITIONAL COMMENTS, DATA, ETC.

Site Summary for Quaker Oats Co., 5625 E. 14th St., Oakland 94621, StID # 1495

Two 12k diesel underground storage tanks were removed from the southwest corner of this site on 5/31/89. Apparently there is no record that the removal was witnessed by anyone from Alameda County. The location of these tanks was very close to Quaker Oats' boundary with the former General Electric (GE) plant. The G.E. site has been under a Cleanup and Abatement Order from the RWQCB with both PCB and chlorinated solvent contamination in groundwater. It's closure is being overseen by DTSC who has required long term groundwater extraction. This has been accomplished with a series of french drains and groundwater extraction wells on the G.E. site. One such french drain is located very close to the Quaker Oats tank pit area and is likely having an affect in both the groundwater gradient and the extraction of the diesel release from Quaker Oats.(refer to Fig 4). Note, the groundwater extraction system at G.E. has been operating since 1981 and is expected to continue operating for at least five more years as part of G.E.'s closure requirement.

As much soil as possible, approximately 230 cubic yards, was removed from the tank excavation. Four monitoring wells and six borings were advanced around the excavation. Residual soil contamination up to 4200 ppm diesel and 4400 oil and grease was detected beneath the piping run of the southernmost tank. However, all other soil samples were less than 1000 ppm diesel.

Based on the existence of an underground gas line, an inactive RR track and the Quaker Oats building on three sides of the tank pit, no further excavation was done. (refer to Fig 2).

Based on the evaluation of excavation, enhanced bioremediation and natural biodegradation, the latter along with groundwater monitoring was decided as the appropriate remedial approach. Long term monitoring was instituted in 1990. (refer to both diesel and BTEX results). Although natural biodegradation does not appear to have occurred, the residual fuel concentrations do not pose a health risk.

In order to obtain site closure, a risk based evaluation using the RBSL values from ASTM ES 38 was performed. A Tier 1 evaluation showed that no human health threat exists. (see attached Table 3 from risk evaluation). Based on this comparison no further work is recommended. The exposure route chosen by the consultant for this comparison was commercial, soil and GW exposure via volatilization to outdoor as opposed to indoor.

This route is justified since the groundwater gradient is w-nw, away from the Quaker Oats building and the upgradient well, MW-4, has been ND for diesel and BTEX in all monitoring events. Also the extraction system on the G.E. site is pulling the groundwater away from the Quaker Oats building.

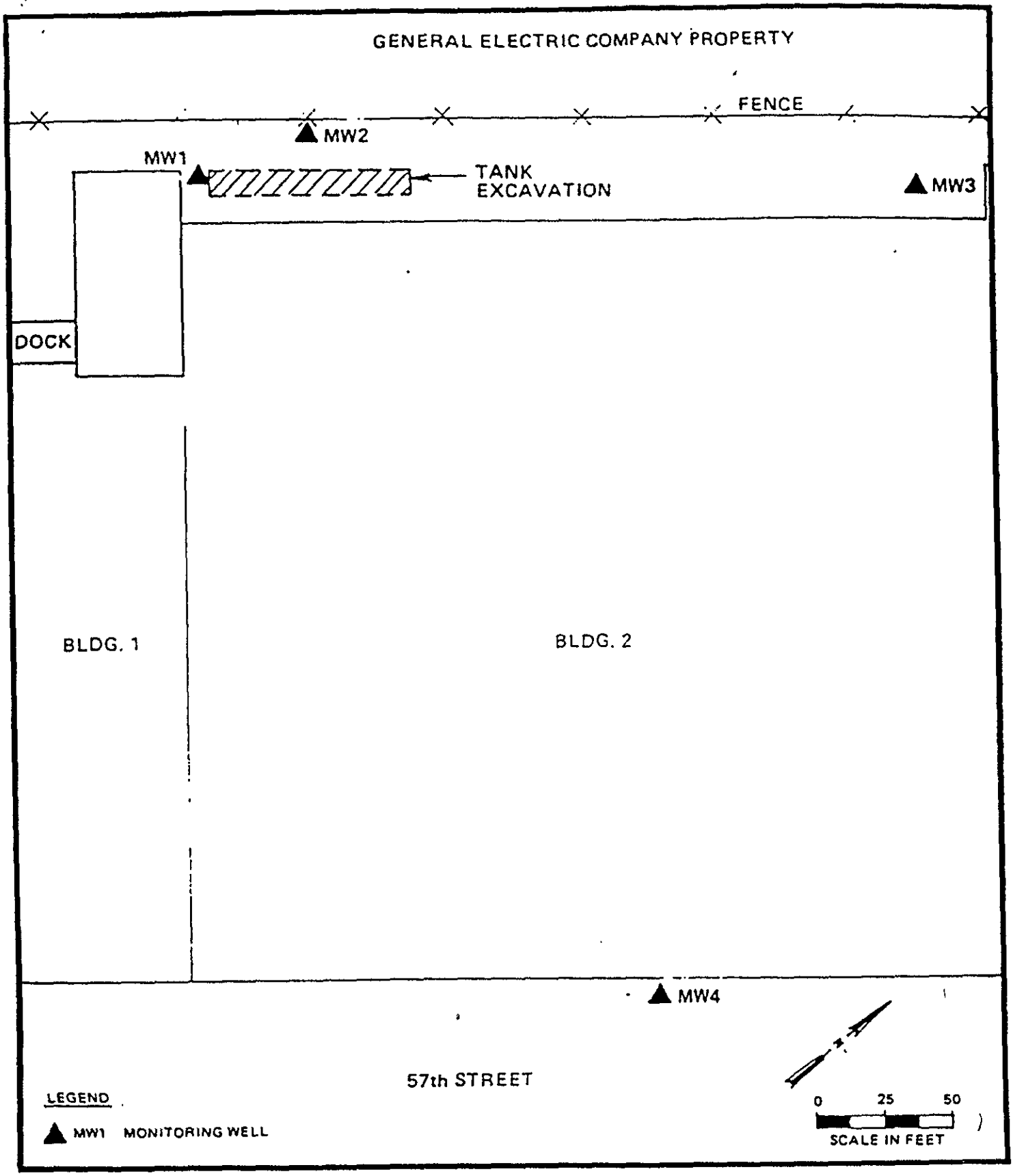
In summary, closure is recommended based on:

1. The risk evaluation of soil and groundwater left in place does not indicate a risk to human health;

2. There is no immediate sensitive environment or beneficial use for the groundwater;

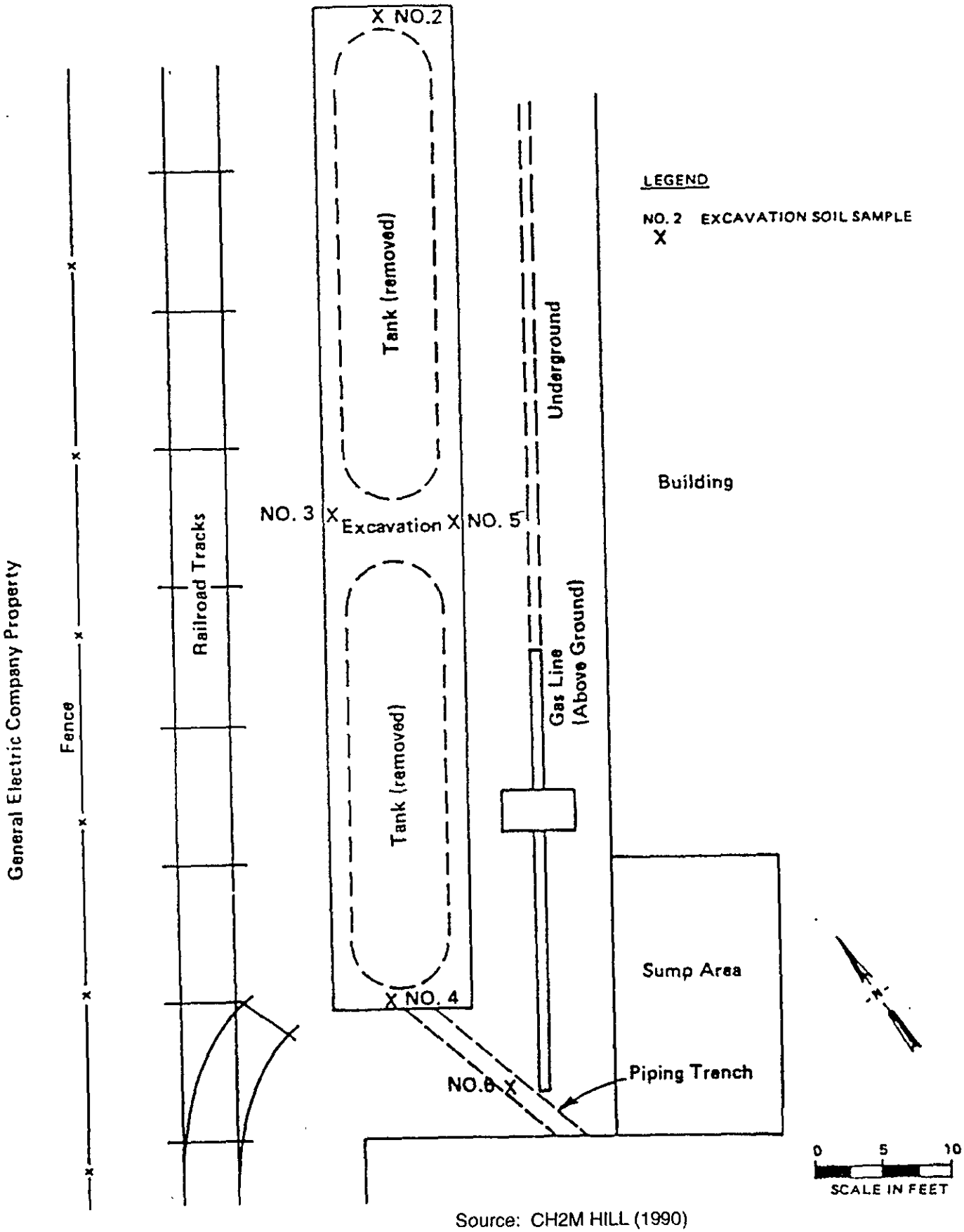
3. No BTEX has been seen in the groundwater samples and only very low concentrations in soil samples; and

4. The existing groundwater extraction system at the adjacent site, GE, is likely pulling groundwater towards its treatment system.



Source: CH2M HILL (1990)

Project No. 93C0374A	Quaker Oats Co. Oakland, CA	SITE PLAN	Figure 1
Woodward-Clyde Consultants			



Source: CH2M HILL (1990)

Project No. 93C0374A	Quaker Oats Co. , Oakland, CA	LOCATIONS OF WELLS AND SOIL BORINGS AT THE FORMER UST AREA	Figure 2
Woodward-Clyde Consultants			

TABLE 1
Soil Sampling Results
(mg/kg)
The Quaker Oats Company
Oakland, California

SAMPLE LOCATION	SAMPLE DEPTH (ft.)	SAMPLE DATE	BENZENE	TOLUENE	ETHYL BENZENE	XYLENES	TPH DIESEL	Oil and GREASE
MW1	4.5-5.0	01/29/90	<0.10	<0.10	1.6	5.5	960	-
MW1	7.0-7.5	01/29/90	<0.05	<0.05	0.06	0.12	201	-
MW1	9.5-10.0	01/29/90	<0.05	<0.05	0.25	0.79	510	-
MW2	4.5-5.0	01/30/90	<0.05	<0.05	<0.05	<0.05	<10	-
MW2	9.5-10.0	01/30/90	<0.05	<0.05	0.32	1.3	330	-
No. 7 (c)	NA	05/31/89	<0.003	<0.003	<0.003	<0.003	-	-
COMP-A(c)	NA	01/31/90	<0.05	<0.05	<0.05	<0.05	170	-
COMP-B(c)	NA	01/31/90	<0.05	0.34	<0.05	0.17	220	-
COMP-C(c)	NA	01/31/90	<0.05	0.14	0.19	<0.05	190	-
COMP-D(c)	NA	01/31/90	<0.05	0.09	0.14	0.11	156	-
COMP-E(c)	NA	01/31/90	<0.05	0.47	<0.05	0.38	240	-
COMP-F(c)	NA	01/31/90	<0.05	0.3	0.28	1.3	580	-

Notes:
NA - Not applicable
MW - Monitoring well
SB - Soil boring
a) - Soil samples collected from tank excavation.
b) - duplicate sample
c) - Composite sample of excavated tank pit soils for waste disposal.
No. 6 - Sample collected from bottom of piping trench.

REFERENCE: CH2MHill 1990.

TABLE 1
Soil Sampling Results
(mg/kg)
The Quaker Oats Company
Oakland, California

SAMPLE LOCATION	SAMPLE DEPTH (ft.)	SAMPLE DATE	BENZENE	TOLUENE	ETHYL BENZENE	XYLENES	TPH DIESEL	OIL and GREASE
No. 2 (a)	12.0	05/31/89	<0.003	<0.003	<0.003	<0.003	<10	<20
No. 3 (a)	11.7	05/31/89	<0.003	<0.003	<0.004	0.026	490	<20
No. 4 (a)	11.5	05/31/89	<0.003	<0.003	<0.003	0.013	490	<20
No. 5 (a)	11.5	05/31/89	<0.003	<0.003	<0.003	<0.003	110	<20
No. 6 (a)	0.7	05/31/89	<0.003	0.280	<0.003	0.290	4,200	4,400
SB1	4.5-5.0	01/29/90	<0.05	<0.05	0.25	0.82	440	-
SB1	7.0-7.5	01/29/90	<0.10	<0.10	1.4	4.4	860	-
SB1	9.5-10.0	01/29/90	0.18	0.78	1.6	4.4	822	-
SB2	2.0-2.5	01/30/90	<0.05	<0.05	0.11	0.53	51	-
SB2	4.5-5.0	01/30/90	<0.05	<0.05	0.47	1.7	420	-
SB2	7.0-7.5	01/30/90	<0.10	<0.10	1.3	3.6	700	-
SB2	9.5-10.0	01/30/90	<0.05	<0.05	0.15	0.92	160	-
SB2D (b)	9.5-10.0	01/30/90	<0.05	<0.05	<0.05	0.14	109	-
SB3	2.0-2.5	01/29/90	0.08	<0.05	0.55	2	670	-
SB3	4.5-5.0	01/29/90	0.05	<0.05	<0.05	<0.05	<10	-
SB3	7.0-7.5	01/29/90	0.12	0.13	1.2	2.6	200	-
SB3	9.5-10.0	01/29/90	<0.05	<0.05	0.13	0.61	210	-
SB4	2.0-2.5	01/30/90	<0.05	<0.05	<0.05	<0.05	<10	-
SB4	4.5-5.0	01/30/90	<0.05	<0.05	<0.05	<0.05	<10	-
SB4	7.0-7.5	01/30/90	<0.10	<0.10	0.91	3.4	520	-
SB4D (b)	7.0-7.5	01/30/90	<0.05	<0.05	0.53	1.9	490	-
SB4	9.5-10.0	01/30/90	<0.05	<0.05	0.08	0.53	202	-
SB5	4.5-5.0	01/30/90	<0.05	<0.05	<0.05	<0.05	<10	-
SB5	9.5-10.0	01/30/90	<0.05	<0.05	0.16	0.66	118	-
SB6	2.0-2.5	01/30/90	<0.05	<0.05	<0.05	<0.05	<10	-
SB6	4.5-5.0	01/30/90	<0.05	<0.05	<0.05	<0.05	<10	-
SB6	7.0-7.5	01/30/90	<0.05	<0.05	<0.05	<0.05	<10	-
SB6	9.5-10.0	01/30/90	<0.05	<0.05	<0.05	<0.05	<10	-

Notes:

NA - Not applicable
MW - Monitoring well
SB - Soil boring
a) - Soil samples collected from tank excavation.
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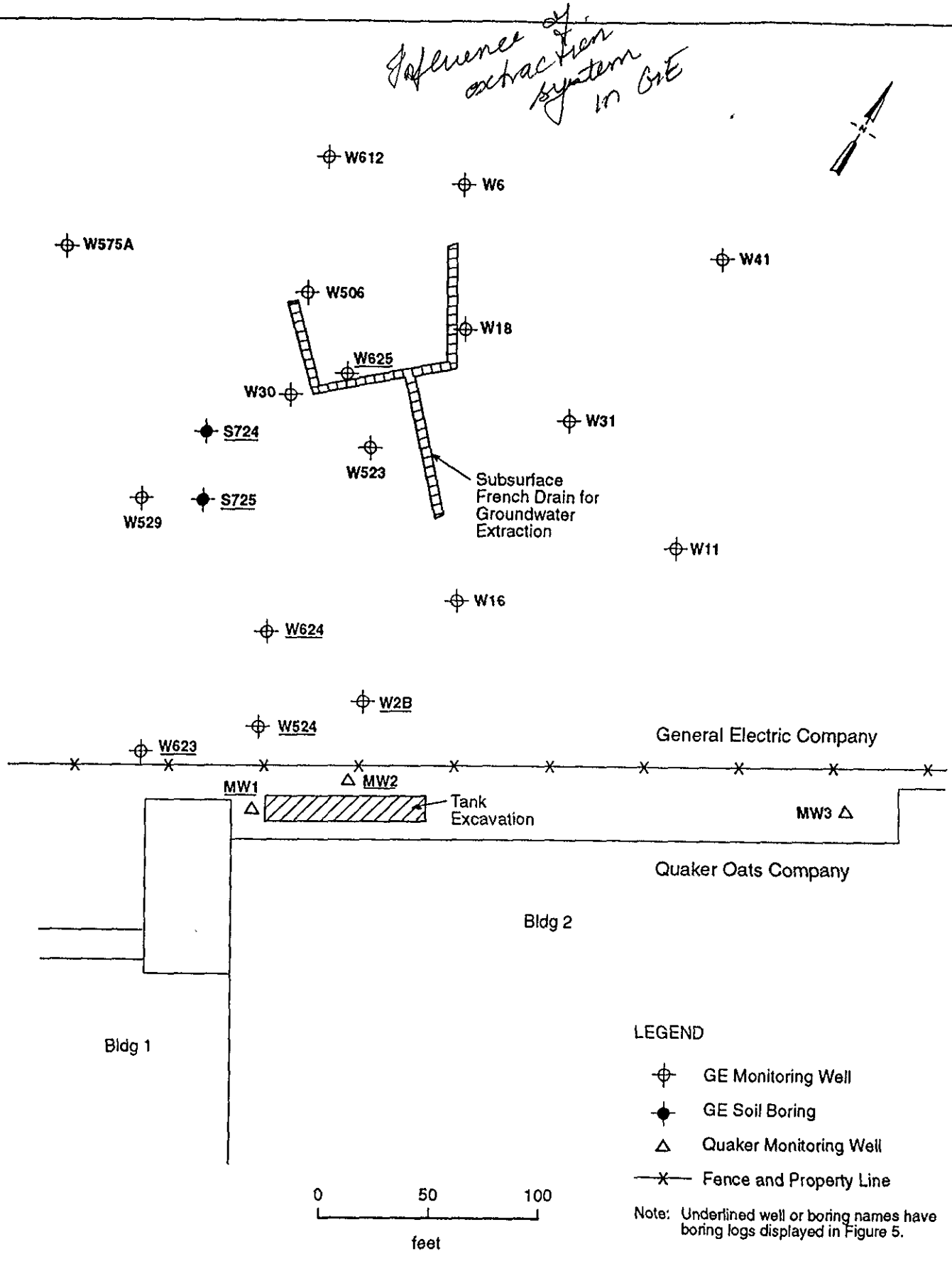

Project No. 93C0374A	Quaker Oats Co. Oakland, CA	QUAKER OATS CO. AND GENERAL ELECTRIC COMPANY SITE FEATURES	Figure 4
Woodward-Clyde Consultants			

93C0374A-0200/041294

TABLE 1

RESULTS FOR TPH-DIESEL IN GROUNDWATER AT QUAKER OATS SITE

Date Sampled	TPH as Diesel Concentrations (mg/L) MW-1	MW-2	MW-3	MW-4	Reporting Limit (mg/L)	Reference
2/23/90	9.0	2.5	ND	ND	0.50	CH2M Hill, 1990
8/11/92	NS	1.0	NS	ND	0.050	Blaine Tech Svcs., Aug. 21, 1992
10/23/92	NS	2.7 (a)	NS	ND	0.050	Blaine Tech Svcs., Nov. 12, 1992
1/28/93 (c)	NS	0.77	NS	ND	0.050	Blaine Tech Svcs., Feb. 16, 1993
5/10/93	NS	0.80	NS	ND	0.050	Blaine Tech Svcs., June 4, 1993
6/10/93	8.3	NS	ND	NS	0.050	Blaine Tech Svcs., June 30, 1993
7/21/93	7.9	0.55	ND	ND	0.050	Blaine Tech Svcs., Aug. 17, 1993
10/15/93	1.6	1.9	ND	ND	0.050	Blaine Tech Svcs., Nov. 12, 1993
1/31/94	3.3 (b)	0.7	ND	ND	0.050	Blaine Tech Svcs., Feb. 14, 1994
4/21/94	6.4 (d)	1.9	ND	ND	0.050	Blaine Tech Svcs., May 9, 1994

ND = Not detected at or above reporting limit shown.
NS = Well not sampled.
(a) Reported by the lab as a non-diesel mix, C13 - C20
(b) Reported by the lab as a non-diesel mix, C11 - C17
(c) Samples taken 1/28/93 from MW-2 and MW-4 were also analyzed for TPH as gasoline. The results were:
MW-2: 0.33 mg/L (reported by the lab as a non-gas mix, >C8)
MW-4: ND, detection limit = 0.050 mg/L
(d) Reported by the lab as a non-diesel mix, C10 - C22

TABLE 2

RESULTS FOR BTEX IN GROUNDWATER AT QUAKER OATS SITE

Date Sampled	BTEX Concentrations (µg/L) MW-1	MW-2	MW-3	MW-4	Reporting Limit (µg/L)	Reference
2/23/90	X: 3	ND	ND	ND	1	CH2M Hill, 1990
8/11/92	NS	ND	NS	ND	MW-2: 2.5 MW-4: 0.50	Blaine Tech Svcs., Aug. 21, 1992
10/23/92	NS	ND	NS	ND	MW-2: 1.0 MW-4: 0.50	Blaine Tech Svcs., Nov. 12, 1992
1/28/93	NS	ND	NS	ND	0.50	Blaine Tech Svcs., Feb. 16, 1993
5/10/93	NS	ND	NS	ND	0.50	Blaine Tech Svcs., June 4, 1993
6/10/93	ND	NS	ND	NS	0.50 (a)	Blaine Tech Svcs., June 30, 1993
7/21/93	X: 1.1	ND	ND	ND	0.50	Blaine Tech Svcs., Aug. 17, 1993
10/15/93	ND	ND	ND	ND	0.50	Blaine Tech Svcs., Nov. 12, 1993
1/31/94	ND	ND	ND	ND	0.50	Blaine Tech Svcs., Feb. 14, 1994
4/21/94	ND	ND	ND	ND	0.50	Blaine Tech Svcs., May 9, 1994

X: Xylenes detected at the concentration shown; benzene, toluene, and ethylbenzene not detected.
ND = Benzene, toluene, ethylbenzene and xylene (BTEX) not detected
NS = Well not sampled.
(a) The reporting limit for xylenes is 1.0 µg/L

TABLE 3
COMPARISON OF MAXIMUM DETECTED SOIL AND GROUNDWATER CONCENTRATIONS
WITH RBCA TIER I STANDARDS

CHEMICAL OF CONCERN IN SOIL	MAXIMUM DETECTED CONCENTRATION [mg/kg]	RBCA TIER I THRESHOLD * CONCENTRATION [mg/kg]	RBCA TIER I THRESHOLD EXCEEDED ?
Benzene	0.18	4.57	*Not Exceeded*
Ethylbenzene	1.6	90.8	*Not Exceeded*
Toluene	0.78	54.5	*Not Exceeded*
Xylenes	4.4	> SATUR (498)	*Not Exceeded*
Naphthalene **	5.46	1500	*Not Exceeded*
Benzo(a)pyrene ***	0.000000294	3.04	*Not Exceeded*

CHEMICAL OF CONCERN IN GROUNDWATER	MAXIMUM DETECTED CONCENTRATION [mg/L]	RBCA TIER I THRESHOLD * CONCENTRATION [mg/L]	RBCA TIER I THRESHOLD EXCEEDED ?
Benzene	< 0.5 - < 2.5	1.84	*Not Exceeded*
Ethylbenzene	< 0.5 - < 2.5	> SOLUB (152)	*Not Exceeded*
Toluene	0.61	> SOLUB (535)	*Not Exceeded*
Xylenes	3	> SOLUB (198)	*Not Exceeded*
Naphthalene **	0.0117	> SOLUB (31)	*Not Exceeded*
Benzo(a)pyrene ***	6.3E-10	> SOLUB (1.2e-3)	*Not Exceeded*

Note: Maximum detected TPHdiesel conc.: 4,200 mg/kg in soil, and 9.0 mg/L in groundwater

* Based on 10e-5 risk for carcinogens and a hazard index of 1 for non-carcinogens, commercial setting, exposure for soil and groundwater via volatilization to outdoor air.
** Assumed as 0.13% of TPHdiesel concentration (Calabrese et. al., 1993).
*** Assumed as 0.07 ug/kg of TPHdiesel (Calabrese et. al., 1993).
> SATUR = Selected risk level is not exceeded at saturated soil concentration (shown in parenthesis)
> SOLUB = Selected risk level is not exceeded in water at solubility (shown in parenthesis)
Benzene and ethylbenzene were not detection in groundwater therefore a range of reported detection limits is provided.