

## ENVIRONMENTAL RESOLUTIONS, INC.

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June 23, 1999  
ERI 200903.W02

Ms. Marla D. Guensler  
Exxon Company, U.S.A.  
P.O. Box 4032  
Concord, California 94524-4032

Subject: Sensitive Receptor Survey/Underground Utility Survey Letter Report and Work Plan  
Addendum for Off-Site Investigation, Former Exxon Service Station 7-0236,  
6600 East 14<sup>th</sup> Street, Oakland, California.

Ms. Guensler:

At the request of Exxon Company, U.S.A. (Exxon), Environmental Resolutions, Inc. (ERI) conducted a Sensitive Receptor Survey (SRS) and underground utility survey at the above-referenced site. The work was performed in accordance with ERI's *Work Plan for Utility Survey, Sensitive Receptor Survey and Baseline Risk Assessment for Case Closure*, dated February 18, 1999. The Work Plan was approved by the Alameda County Health Care Services Agency (The County) in a letter dated February 22, 1999 (Attachment A).

The site is located on the southwest corner of 66<sup>th</sup> Avenue and East 14<sup>th</sup> Street in Oakland, California, as shown on the Site Vicinity Map (Plate 1). The locations of the former underground storage tanks (USTs), former dispenser islands, and other select site features are shown on the Generalized Site Plan (Plate 2).

The SRS included a survey of municipal water wells within a 2,000-foot radius of the site and domestic water wells within a 1,000 foot radius of the site; surface bodies of water within a 2,500-foot radius of the site; and basements within a 1,000-foot radius of the subject site. The SRS also included locating and identifying utility vaults on and adjacent to the site.

### Sensitive Receptor Survey

#### Municipal and Private Water Wells

Based on review of available data provided by the California Department of Water Resources (DWR), there are no municipal water wells within a 2,000-foot radius of the site. No domestic water wells are located within a 1,000-foot radius of the site.

#### Surface Water Bodies

Based on visual reconnaissance of the site vicinity, there are no surface water bodies located within a 2,500-foot radius of the site.

#### Basements

Based on visual reconnaissance of buildings in the site vicinity, no basements were observed within a 1,000-foot radius of the site.

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Based on visual reconnaissance of buildings in the site vicinity, no basements were observed within a 1,000-foot radius of the site.

### Utility Vaults

The search identified eight utility vaults located in the sidewalks bordering the site. Vault identities and locations are shown on Plate 2. Utility vault photographs and site photographs are included in Attachment B.

### Underground Utility Search

The results of the underground utility search revealed that water, sewer, sewer interceptor, gas, storm drain, electric, cable, and telephone conduits exist beneath East 14<sup>th</sup> Street. Water, gas, cable, telephone, electric, and sewer conduits also exist beneath 66<sup>th</sup> Avenue. The approximate locations and depths of the underground utilities, as provided by the respective utility companies, are shown on the Underground Utility Map (Plate 3).

### PROPOSED WORK

Pursuant to an April 22, 1999, meeting with The County, Exxon, and ERI, The County requested Exxon perform an off-site investigation to evaluate whether concentrations of methyl tertiary butyl ether (MTBE) in groundwater have migrated from MW2 (located on site) towards MW5 (located offsite on 66<sup>th</sup> Avenue).

This investigation is being performed to evaluate the extent of MTBE in groundwater in the downgradient direction of the subject site. ? Rose Diagram  
~~The predominate groundwater flow direction is between due south and south 45° west, as shown on Plate 4. ERI proposes to hand-auger four soil borings (SB1 through SB4) and collect reconnaissance groundwater samples from each of the borings. The proposed boring locations are shown on Plate 3.~~

Specific tasks associated with this investigation include obtaining an encroachment permit from the City of Oakland Public Works Department (The City), obtaining drilling permits from the Alameda County Public Works Agency (Public Works), hand-augering four off-site soil borings approximately 2 feet below first encountered groundwater and collecting reconnaissance groundwater samples from each of the borings.

Field work will be performed in accordance with ERI's standard protocol (Attachment C) and ERI's site-specific Health and Safety Plan. ERI will perform the following tasks:

- Prepare and submit an encroachment permit application to The City to hand-auger two soil borings (SB1 and SB2) in the city sidewalk on East 14<sup>th</sup> Street and two soil borings (SB3 and SB4) in the city right-of-way on 66<sup>th</sup> Avenue.
- Prepare and submit drilling permit applications to Public Works.

- Hand-auger each boring and collect reconnaissance groundwater samples from the borings. ERI anticipates first encountered groundwater to be approximately 10 feet below ground surface (bgs). Groundwater samples will be analyzed for methyl tertiary butyl ether (MTBE) using Environmental Protection Agency (EPA) Method 8260.
- Abandon soil borings SB1 through SB4. The borings will be grouted from the total depth to the surface using Portland Cement.
- Soil cuttings generated during field activities will be stockpiled on plastic sheeting at the former Exxon site and a composite soil sample collected from the stockpile for laboratory analysis. Upon receipt of laboratory analytical results, ERI will profile the soil for disposal at Browning Ferris, Incorporated (BFI) Landfill-Vasco Road, Livermore, California.
- Decontamination (decon) water will be stored in drums at the former Exxon site pending disposal at Romic Environmental Technologies, Corp. of East Palo Alto, California.
- Prepare a report summarizing field data, results of laboratory analyses, and the proposed placement, if necessary, of additional off-site groundwater monitoring wells. The investigation report will also include a discussion of dissolved oxygen readings, transmissivity values, nitrate, sulfate, ferrous iron, and alkalinity data collected from on-site groundwater monitoring wells as requested in The County's letter dated February 22, 1999.

### IMPLEMENTATION SCHEDULE

ERI is prepared to implement this Work Plan upon approval from the County. The tentative implementation schedule is provided below:

- Within fifteen days of receiving written approval of the Work Plan from the County, ERI will prepare and submit drilling permit applications and an encroachment permit application.
- Within thirty days of receiving an approved drilling permit and encroachment permit, ERI will contact Underground Service Alert (USA) to locate underground utilities, mobilize to the subject site, hand-auger four soil borings (SB1 through SB4), collect groundwater samples from the borings, and abandon the borings.
- Within forty-five days of receiving the results of analysis of groundwater samples collected during the investigation, ERI will prepare and submit a report to the County.

ERI recommends forwarding copies of this report to:

Mr. Barney Chan  
Alameda County Health Care Services Agency -  
Department of Environmental Health  
1131 Harbor Bay Parkway, Room 250  
Alameda, California 94502-6577

Mr. Stephen Hill  
California Regional Water Quality Control Board -  
San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, California 94612

*pages 415-458-0298*

Please call Ms. Tracy Faulkner at (415) 382-5985 should you have any questions regarding this report.

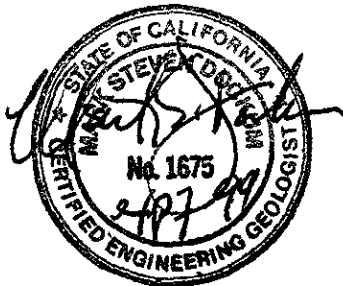
Sincerely,  
Environmental Resolutions, Inc.



Tracy A. Faulkner  
Program Manager



Mark S. Dockum  
R.G. 4412  
C.E.G. 1675

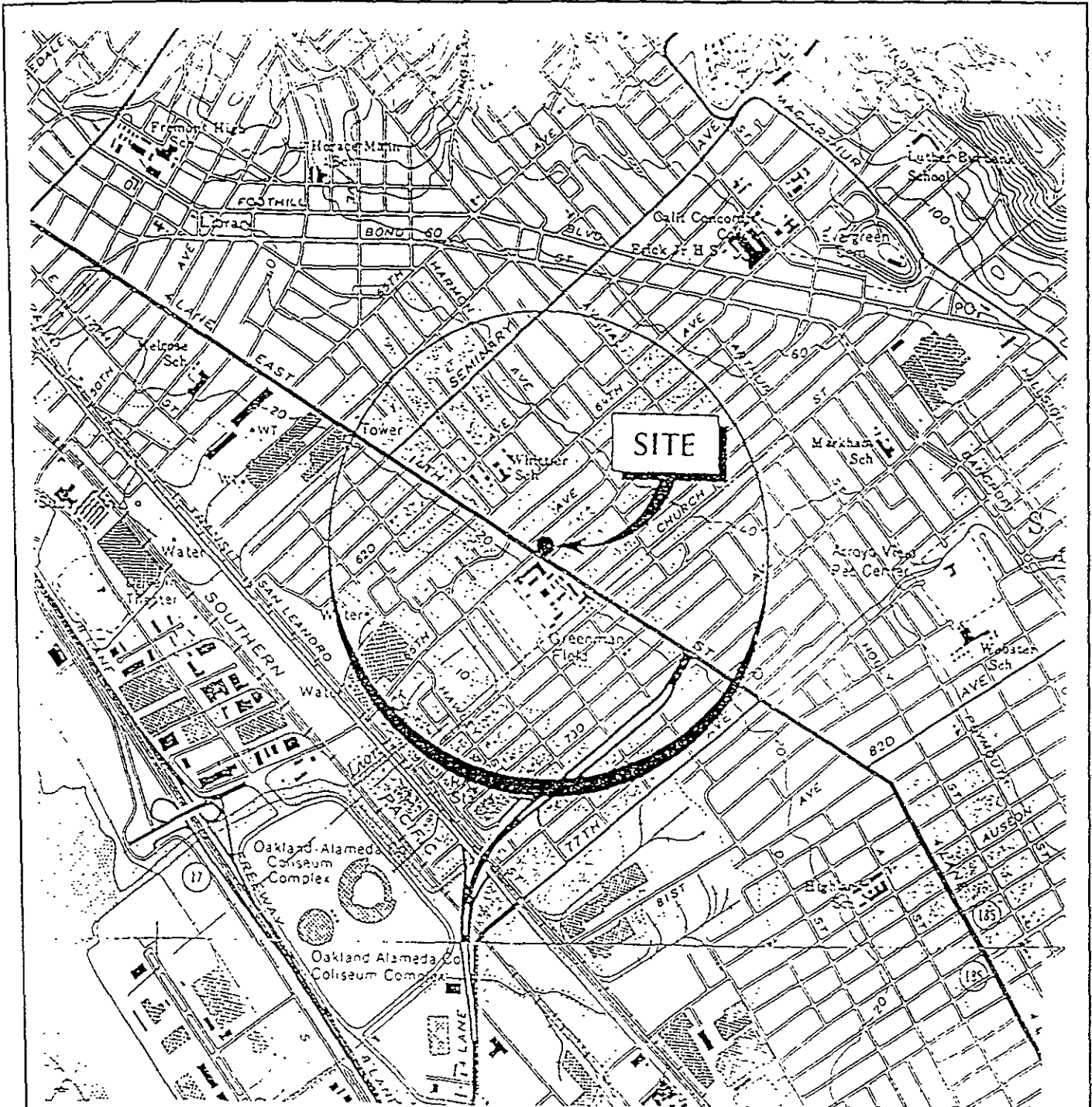


- Attachment: Plate 1: Site Vicinity Map
- Plate 2: Generalized Site Plan
- Plate 3: Underground Utility Map
- Plate 4: Groundwater Flow Direction, Rose Diagram

Attachment A: Alameda County Health Care Services Agency Letter, Dated February 22, 1999

Attachment B: Utility Vault Photographs/Site Photographs

Attachment C: ERI's Standard Protocol

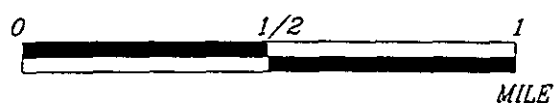


FN 20090001

**EXPLANATION**



APPROXIMATE SCALE



Source: U.S.G.S. 7.5 minute topographic quadrangle map Oakland East and San Leandro, Calif. (Photorevised 1980)



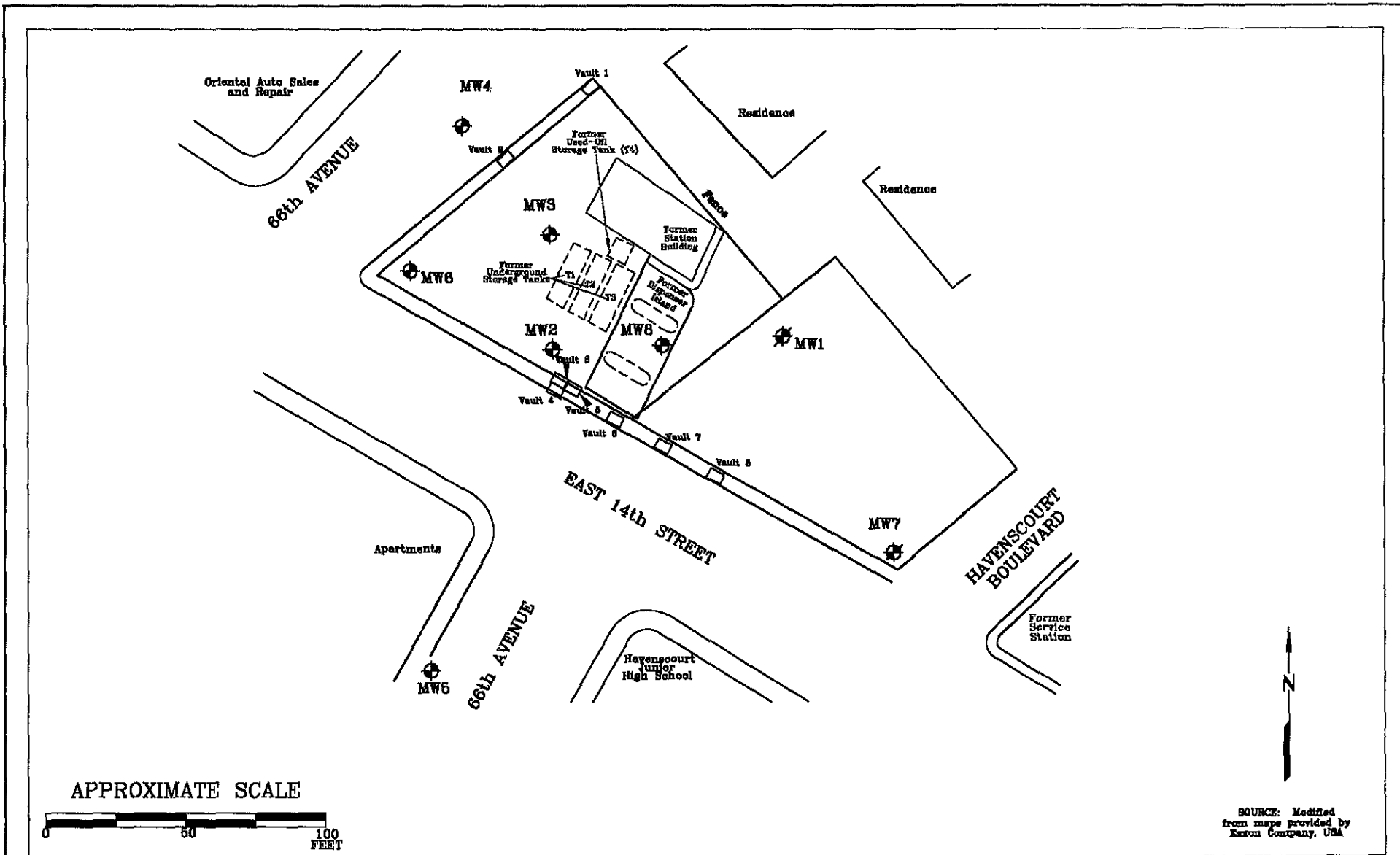
**PROJECT** ERI 2009

**SITE VICINITY MAP**

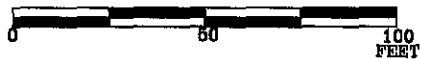
FORMER EXXON SERVICE STATION 7-0236  
6600 East 14th Street  
Oakland, California

**PLATE**

1



APPROXIMATE SCALE



SOURCE: Modified from maps provided by Exxon Company, USA

FN 2009003A



**GENERALIZED SITE PLAN**

FORMER  
 EXXON SERVICE STATION 7-0236  
 6600 East 14th Street  
 Oakland, California

EXPLANATION	
MW8	Groundwater Monitoring Well
MW7	Groundwater Monitoring Well (Destroyed)
Vault 1	Electric
Vault 2	Water
Vault 3	Electric
Vault 4	Electric
Vault 5	Electric
Vault 6	Water
Vault 7	Water
Vault 8	Unknown

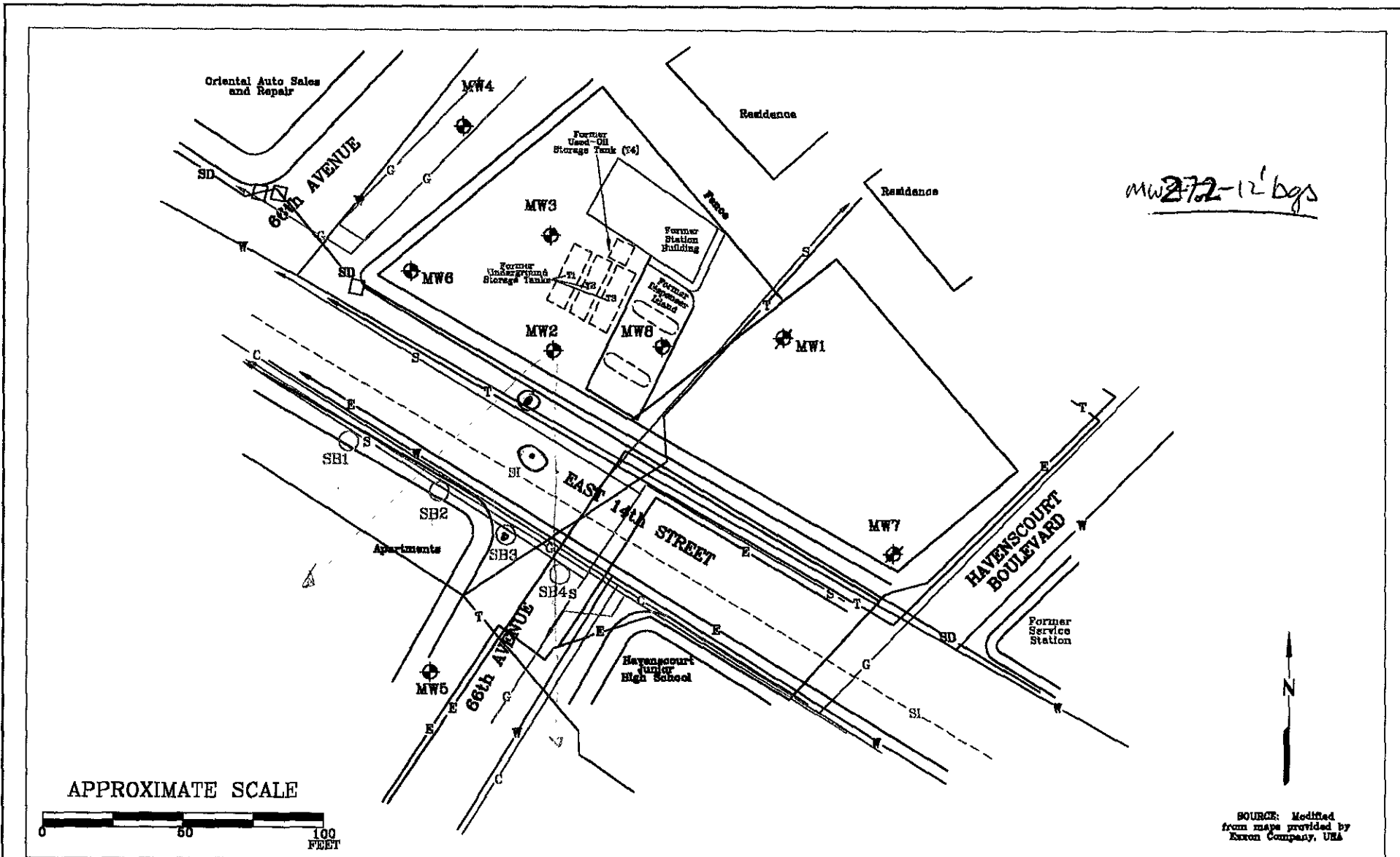
PROJECT NO.

2009

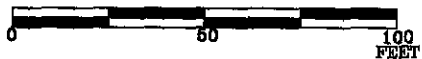
PLATE

2

June 14, 1999



APPROXIMATE SCALE



SOURCE: Modified from maps provided by Exxon Company, USA

FN 8009003A



**UNDERGROUND UTILITY MAP**

FORMER  
 EXXON SERVICE STATION 7-0236  
 6600 East 14th Street  
 Oakland, California

**EXPLANATION**

- MW8 Groundwater Monitoring Well
- MW7 Groundwater Monitoring Well (Destroyed)
- E— Electric (24")
- G— Gas 3"
- S— Sewer 14"
- T— Telephone 3"
- SD— Storm Drain
- SI— Sewer Interceptor 22"
- C— Cable 1.5"
- W— Water 3"
- Proposed Soil Boring Locations

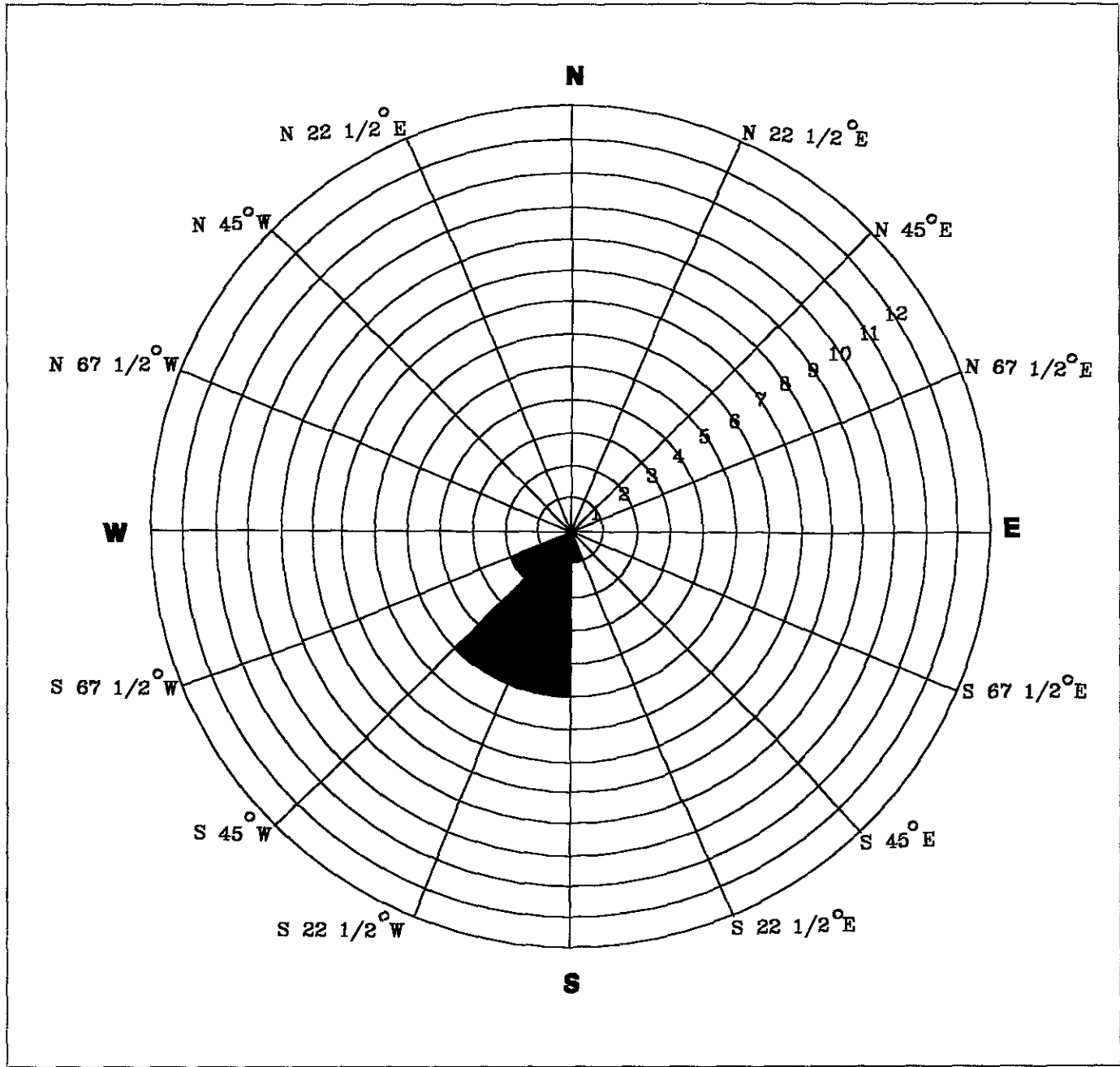
**PROJECT NO.**

2009

**PLATE**

3

June 14, 1989



FN 20090005

**EXPLANATION**

**N** Compass Direction  
Thirteen Data Points Shown

Rose diagram developed by evaluating the groundwater gradient direction from the quarterly monitoring data. Each circle on the rose diagram represents the number of monitoring events that the gradient plotted in that 22 1/2 degree sector. For example, five quarterly groundwater gradient directions plotted between due south and south 22 1/2 degrees west. Therefore, the dominant groundwater gradient direction as depicted by the rose diagram is between due south and south 45 degrees west.



**GROUNDWATER FLOW DIRECTION ROSE DIAGRAM**

FORMER EXXON SERVICE STATION 7-0236  
8600 East 14th Street  
Oakland, California

**PROJECT NO.**

2009

**PLATE**

4

June 21, 1999



**ATTACHMENT A**

**ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY LETTER,  
DATED FEBRUARY 22, 1999**

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



RECEIVED  
FEB 24 1999

February 22, 1999  
StID # 1068

Ms. Marla Guensler  
Exxon Company, USA  
P.O. Box 4032  
Concord, CA 94524-4032

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

Re: Work Plan for Former Exxon Station 7-0236, 6600 E. 14<sup>th</sup> St., Oakland CA 94621

Dear Ms. Guensler:

Our office has received and reviewed the February 18, 1999 Work Plan for Utility Survey, Sensitive Receptor Survey and Baseline Risk Assessment for the above referenced site as prepared by Environmental Resolutions, Inc (ERI). This work plan is in response to my January 7, 1999 letter and follows my November 19, 1998 meeting with your consultant.

In order to meet the conditions for site closure, additional tasks were recommended during the meeting and this work plan resulted. The presence of elevated MTBE at the site presented the major obstacle preventing closure. ERI, therefore, proposes in this work plan, to perform a utility and sensitive receptor survey and a baseline risk assessment. The baseline risk assessment will include a fate and transport estimate for the potential extent of migration of the groundwater contaminants. Off-site borings are not proposed at this time, though discussed in our prior meeting. Our office approves this work plan, however, we also have the additional requirements:

- As mentioned previously in my 1/7/99 letter, your consultant should investigate the inconsistent dissolved oxygen values reported in groundwater samples.
- The bio-remediation parameters; oxidation-reduction potential, nitrate, sulfate, ferrous iron and alkalinity should be run on monitoring wells MW3, MW2 and MW5.
- Oxygen releasing compound socks should be added to MW2, at a minimum.
- MTBE should be confirmed in MW2 using EPA Method 8240 or 8260.

Hopefully, these requirements were done in the recent 1/15/99, monitoring event. If not, please see that they are in all future events. You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M. Chan  
Hazardous Materials Specialist

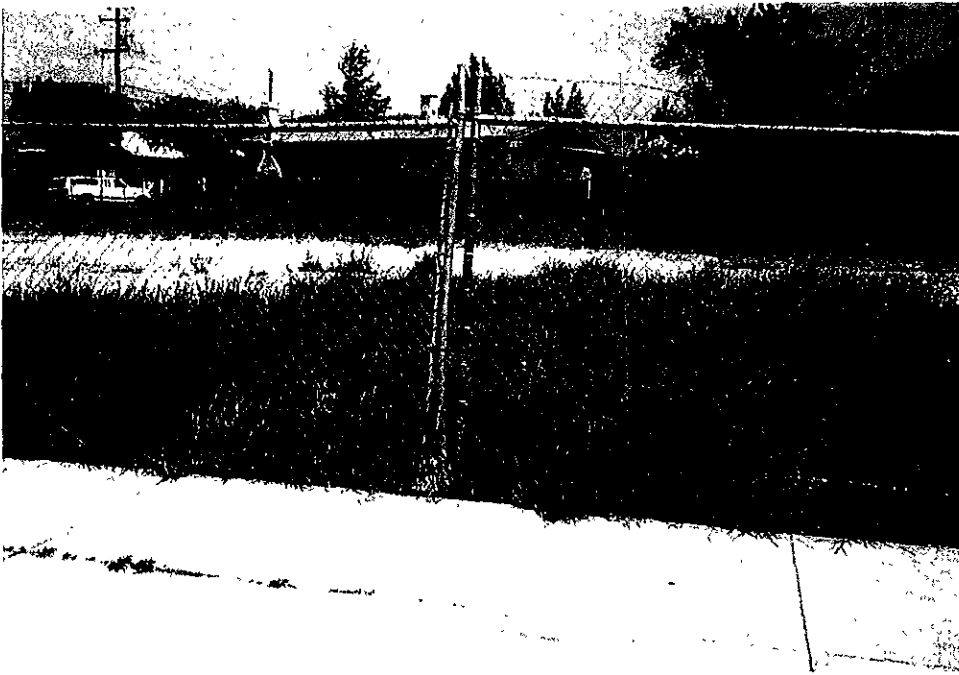
C: B. Chan, files

✓ Mr. M. Dockum, Environmental Resolutions, Inc., 74 Digital Drive, Suite 6, Novato,  
CA 94949

Wpap-6600E14

**ATTACHMENT B:**

**UTILITY VAULT PHOTOGRAPHS/SITE PHOTOGRAPHS**



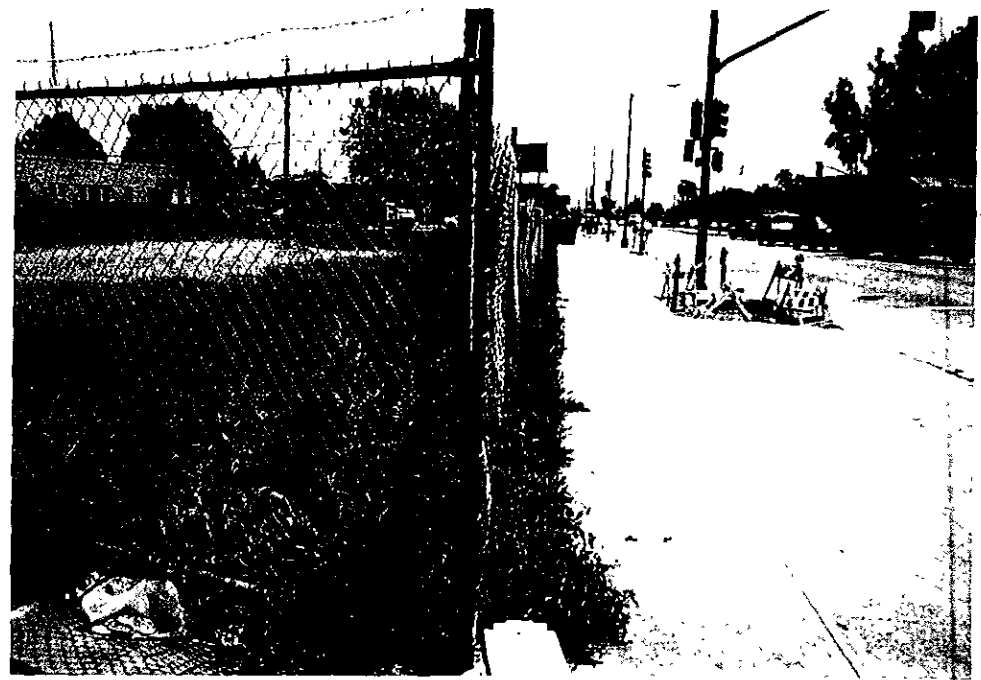
FRONTAGE VIEW OF LOT FACING NORTH



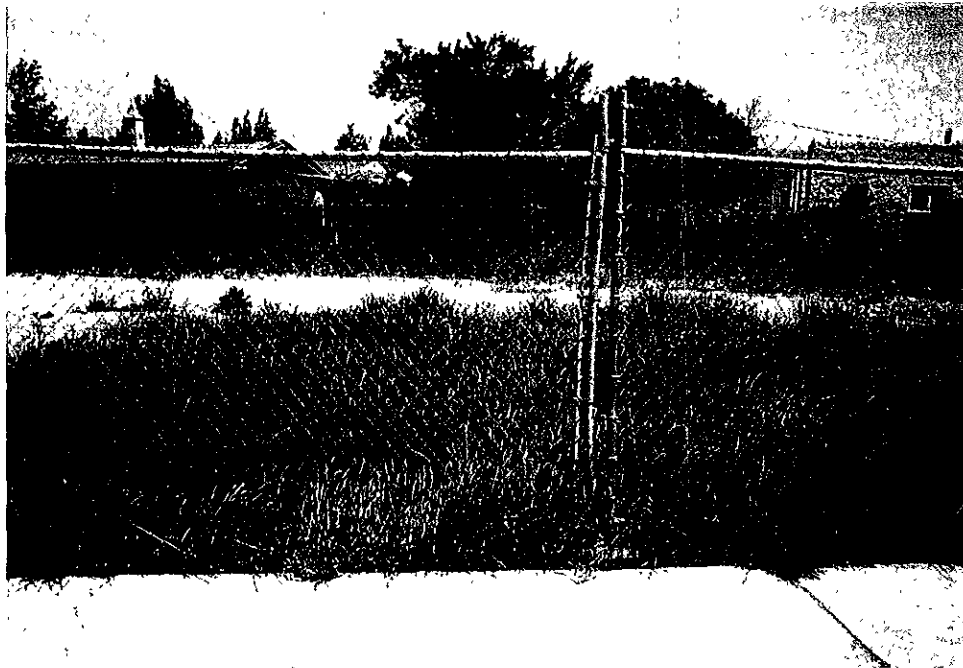
REAR VIEW OF LOT FACING SOUTH



WESTERN VIEW OF LOT FACING SOUTHWEST



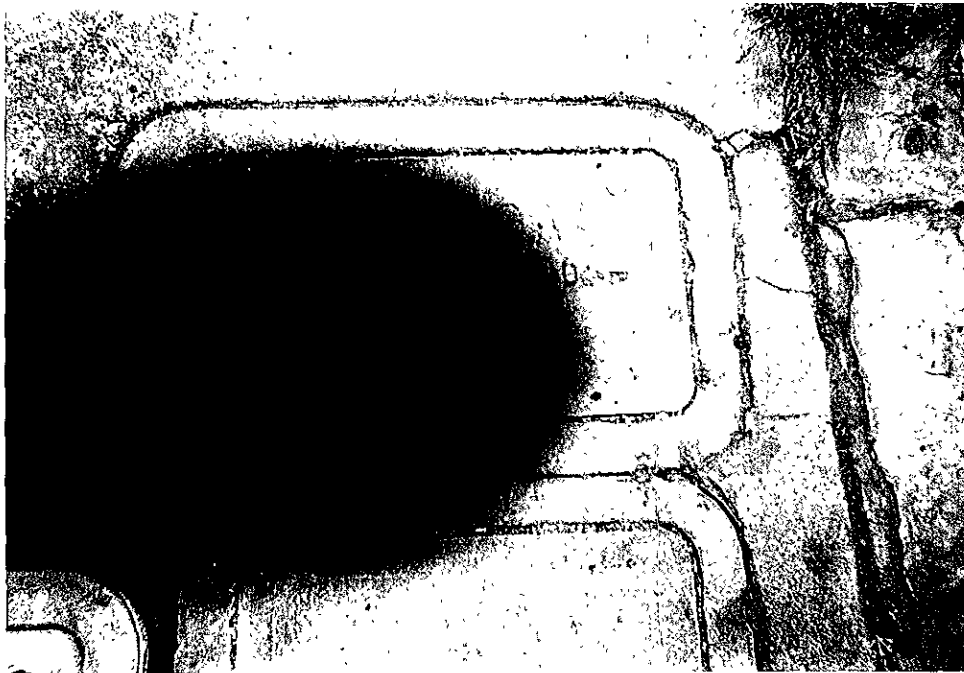
SOUTHERN VIEW OF LOT FACING SOUTHEAST



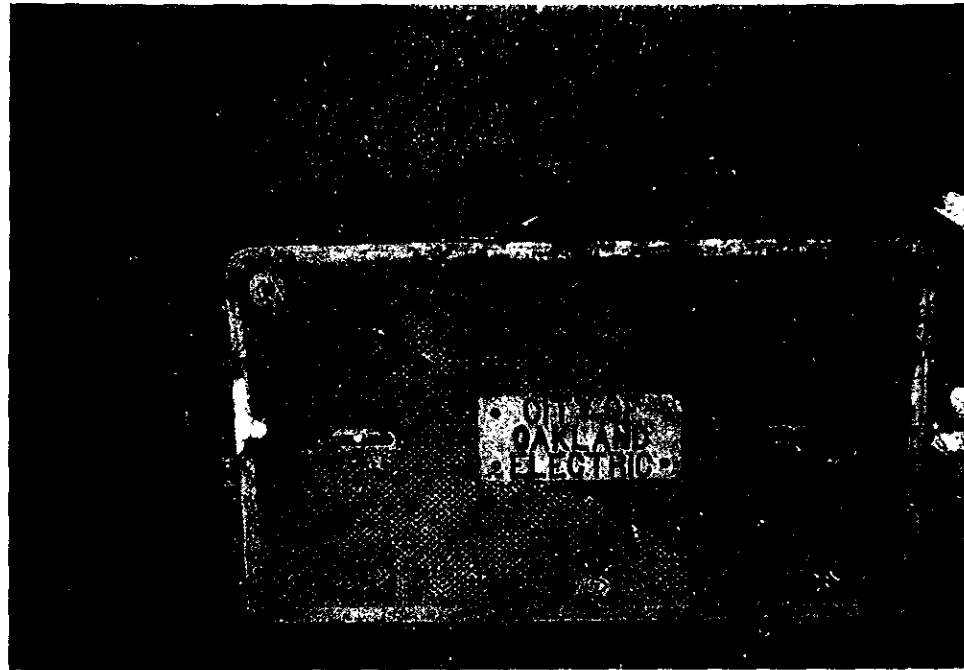
EASTERN VIEW OF LOT FACING NORTHEAST



NORTHERN VIEW OF LOT FACING NORTHWEST



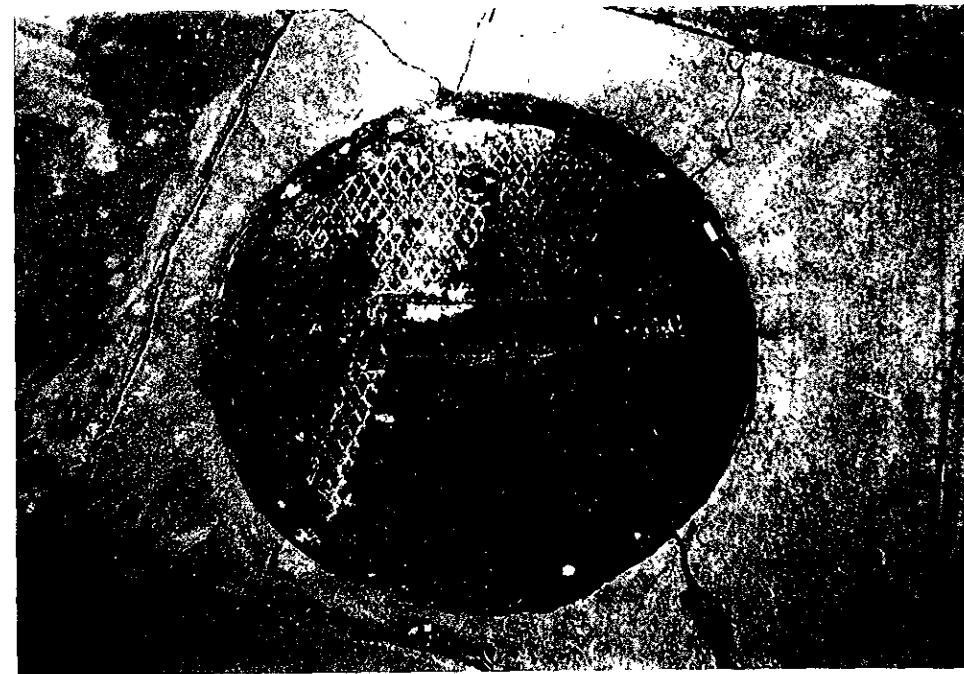
VAULT # 5 ELECTRIC



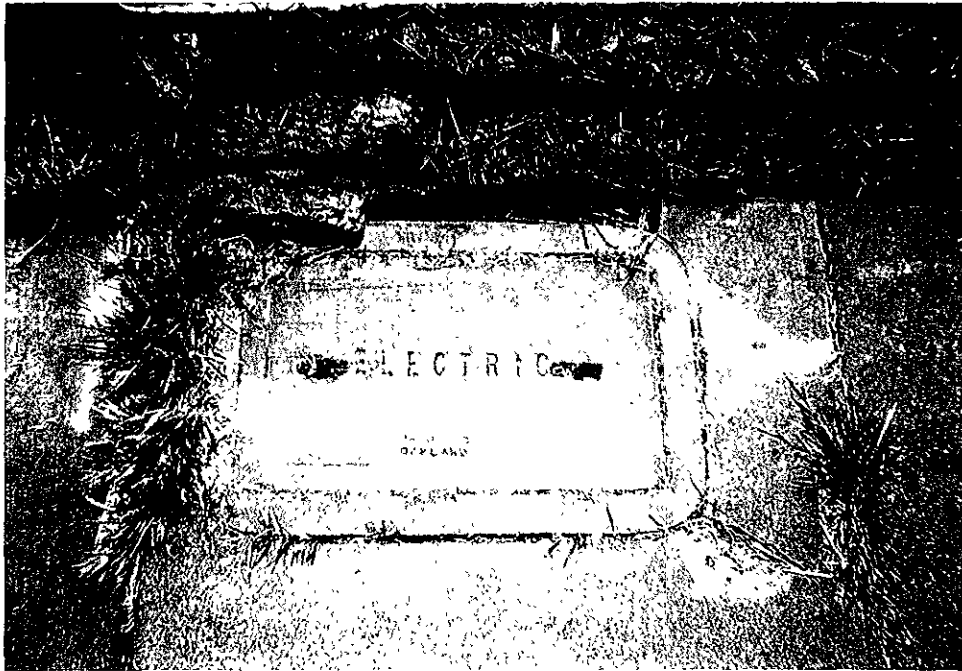
VAULT # 6 ELECTRIC



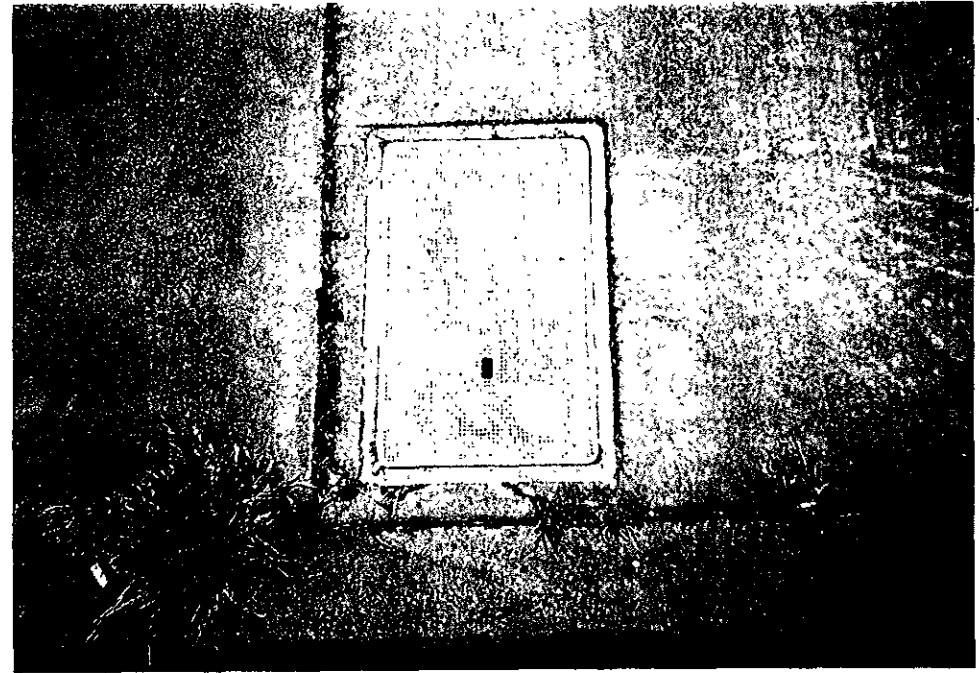
VAULT # 7 WATER



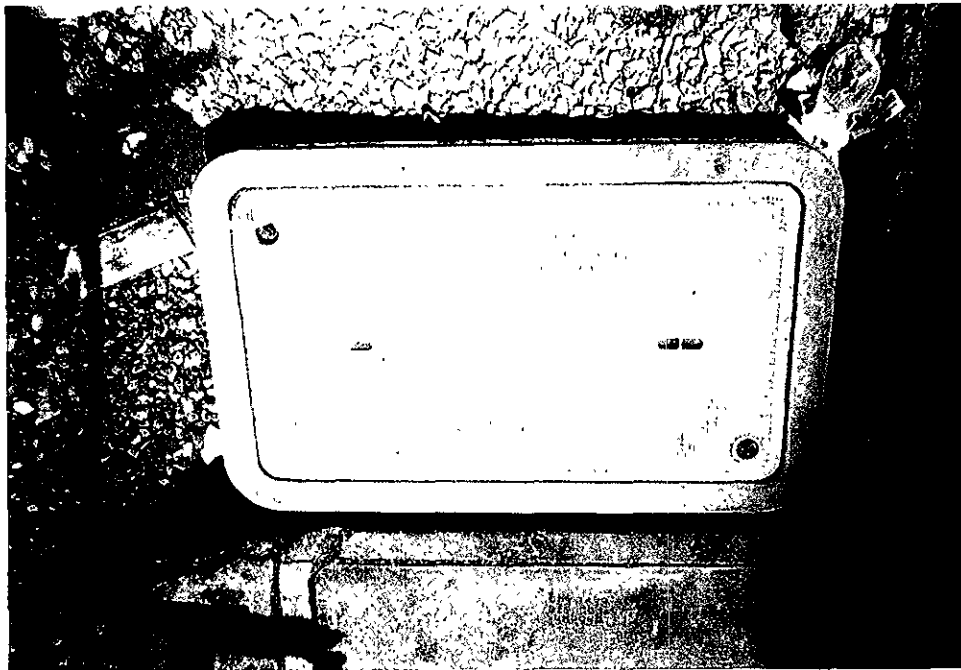
VAULT # 8 UNKNOWN



VAULT # 1 ELECTRIC



VAULT # 2 WATER



VAULT # 3 ELECTRIC



VAULT # 4 ELECTRIC

**ATTACHMENT C:**  
**ERI's STANDTARD PROTOCOL**



## FIELD PROTOCOL

### Site Safety Plan

Field work will be performed by ERI personnel in accordance with a site safety plan developed for the site. This plan describes the basic safety requirements for the subsurface investigation. The site safety plan is applicable to personnel and subcontractors of ERI. Personnel at the site are informed of the contents of the site safety plan before work begins. A copy of the site safety plan is kept at the work site and is available for reference by appropriate parties during the work. The ERI geologist will act as the Site Safety Officer.

### Hand-Auger Procedures

Prior to the collection of reconnaissance groundwater samples, ERI will acquire necessary permits from the appropriate agency(ies). ERI will also contact Underground Service Alert (USA) and a private underground utility locator (per Exxon protocol) before field activities to help locate public utility lines at the site. ERI will clear the proposed locations to a depth of approximately 4 feet before hand-augering to reduce the risk of damaging underground structures.

Groundwater samples will be collected using a disposal bailer. Hand-auger and sampling equipment will be cleaned before use to minimize the possibility of crosshole contamination. The rinseate will be containerized and stored at the former Exxon site. ERI will coordinate with Exxon for appropriate disposal or recycling of the rinseate.

Field activities will be performed under the observation of a field geologist. Soil borings SB1 through SB4 will be hand-augered to approximately 2 feet below first encountered groundwater.

Cuttings generated during drilling will be placed on plastic sheeting and covered and left at the site. ERI will coordinate with Exxon for the soil to either be treated on site or removed to an appropriate disposal or recycling facility.

### Quality Assurance/Quality Control

The sampling and analysis procedures employed by ERI for groundwater sampling follow regulatory guidance documents for quality assurance/quality control (QA/QC). Quality control is maintained by site-specific field protocols and quality control checks performed by the laboratory. Laboratory and field handling of samples may be monitored by including QC samples for analysis. QC samples may include any combination of the following. The number and types of QC samples are selected and analyzed on a project-specific basis.

Trip Blanks - Trip blanks are sent to the project site, and travel with samples collected from the project site to the laboratory. They are not opened, and are returned from the project site with the samples for analysis.

Equipment Blank - Periodic QC samples are collected from field equipment rinseate to verify adequate cleaning procedures.