

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY
DAVID J. KEARS, Agency Director

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

StID 2944

June 23, 1997

Ms. Virginia Garcia
2077 Vintage Ln
Livermore, CA 94550

Mr. Phil Briggs
Chevron
P.O. Box 5004
San Ramon, CA 94583

**Re: Fuel Leak Site Case Closure for the Former Chevron Service
Station 9-2864 at 1334 1st Street, Livermore, CA**

Dear Ms. Garcia and Mr. Briggs:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Protection Division is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed.

If you have any questions, please contact me at (510) 567-6762.

eva chu
Hazardous Materials Specialist

enclosure:

1. Case Closure Letter
2. Case Closure Summary

c: files (chvron2.8)

ALAMEDA COUNTY
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REMEDIAL ACTION COMPLETION CERTIFICATION

StID 2944 - 1334 1st Street, Livermore, CA
(3-10,000 gallon gasoline and 1-1,000 gallon waste oil
tank removed in March 16, 1994)

June 23, 1997

Ms. Virginia Garcia
2077 Vintage Ln
Livermore, CA 94550

Mr. Phil Briggs
Chevron
P.O. Box 5004
San Ramon, CA 94583

Dear Ms. Garcia and Mr. Briggs:

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
Danielle Stefani, LFD
files-ec (chvron2.7)

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: February 26, 1997

Agency name: **Alameda County-HazMat** Address: **1131 Harbor Bay Pkwy**
City/State/Zip: **Alameda, CA 94502** Phone: **(510) 567-6700**
Responsible staff person: **Eva Chu** Title: **Hazardous Materials Spec.**

II. CASE INFORMATION

Site facility name: **Former Chevron Service Station 9-2864**
Site facility address: **1334 1st Street, Livermore, CA 94550**
RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **2944**
URF filing date: **3/23/94** SWEEPS No: **N/A**

Responsible Parties: Addresses: Phone Numbers:

- 1. **Virginia Garcia** **2077 Vintage Ln, Livermore, CA 94550**
- 2. **Phil Briggs, Chevron** **P.O. Box 5004, San Ramon, CA 94583**

| <u>Tank No:</u> | <u>Size in gal.:</u> | <u>Contents:</u> | <u>Closed in-place or removed?:</u> | <u>Date:</u> |
|------------------------|-----------------------------|-------------------------|--|---------------------|
| 1 | 10,000 | Gasoline | Removed | 3/16/94 |
| 2 | 10,000 | " | " | " |
| 3 | 10,000 | " | " | " |
| 4 | 1,000 | Waste Oil | " | " |

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: **Overfilling**
Site characterization complete? **YES**
Date approved by oversight agency: **1/23/97**
Monitoring Wells installed? **Yes** Number: **4**
Proper screened interval? **Yes, 25' to 59' bgs**
Highest GW depth below ground surface: **15.61'** Lowest depth: **26.90'** in MW-3
Flow direction: **Northwest**
Most sensitive current use: **Commercial**
Are drinking water wells affected? **No** Aquifer name: **Mocho Subbasin**
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 | 4 USTs | Disposed by Erickson, Richmond, CA | 3/16/94 |
| Soil | ~200 cy | Disposed at BFI L.F., Livermore, CA | Unknown |

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

| Contaminant | Soil (ppm) | | Water (ppb) | |
|-----------------|---------------------|--------------------|---------------------|--------------------|
| | Before ¹ | After ² | Before ⁶ | After ⁷ |
| TPH (Gas) | <1.0 | 180 | 220 | ND |
| TPH (Diesel) | <10 | ND | NA | |
| Benzene | 0.11 | 1.7 | 67 | ND |
| Toluene | 0.10 | 5.9 | 2.4 | ND |
| Ethylbenzene | 0.34 ³ | 3.5 | 2.5 | ND |
| Xylenes | 3.7 ³ | 17 | 11 | ND |
| Oil & Grease | 7,600 ³ | 1,000 ⁴ | ND | |
| Heavy metals Pb | 120 ³ | 6 | 130 | ND |
| Other | 8010 | <.005 | ND | |
| | 8270 | 5.790 ⁵ | ND | |

- NOTE
- 1 soil sample collected beneath fuel USTs at time of removal, 3/16/94
 - 2 maximum hydrocarbon concentrations were detected in soil from boring B-5, at 36' bgs, 9/94. Levels of HCs in soil samples collected from waste oil pit after overexcavation were low or ND, 3/94
 - 3 soil sample collected beneath waste oil pit at time of removal, 3/16/94
 - 4 soil sample from waste oil pit after overexcavation, 3/22/94
 - 5 cumulative SVOCs (1.4ppm naphthalene, 1.8ppm 2-methylnaphthalene, 0.74ppm pyrene; 1.5ppm bis(2-Ethylhexyl)phthalate, 0.035ppm benzo(a)pyrene
 - 6 groundwater from well MW-3, 9/95
 - 7 groundwater from replacement well MW-3R which is closer to former waste oil UST

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: **Yes**

Number Decommissioned: 3 Number Retained: 1

List enforcement actions taken: **None**

List enforcement actions rescinded: **NA**

V. LOCAL AGENCY REPRESENTATIVE DATA

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

Signature: *Eva Chu* Date: **3/3/97**

Reviewed by

Name: **Barney Chan** Title: **Haz Mat Specialist**

Signature: *Barney Chan* Date: **2/28/97**

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

Signature: *Thomas Peacock* Date: **3-3-97**

VI. RWQCB NOTIFICATION

Date Submitted to RB: **3/4/97**

RB Response: *Approved*

RWQCB Staff Name: **Kevin Graves**

Title: **AWRCE**

Signature: *Kevin Graves*

Date: **3-18-97**

VII. ADDITIONAL COMMENTS, DATA, ETC.

A total of four USTs were removed from the former Chevron Station on March 16, 1994. Three 10K gallon gasoline USTs were in a common pit and a 1,000 gallon waste oil UST was in a separate pit. Some staining of pea gravel and surrounding soil was observed at the fill pipe end of the waste oil tank. Two soil samples were collected from native soil below each of the four USTs. Only soil sample UST4-2, collected from the waste oil pit at 9' bgs contained elevated levels of petroleum hydrocarbons (7,600 ppm TOG, 120 ppm lead, and 5.79 ppm cumulative semi-volatile organics). (See Figs 1, 2; Tables 1, 2)

The waste oil pit was overexcavated, removing ~200 cy of soil. Four confirmatory soil samples (WX-N-17, WX-S-18, WX-W-15, and WX-E-17) were collected at 15' to 20.0' bgs. Up to 1,000 ppm TOG was detected at 18' bgs. TPHg, TPHd, and BTEX, as well as 8010 and 8270 compounds were identified at low to non-detectable levels. (See Fig 3, Table 3)

In September 1994 five soil borings (B-1 through B-5) were drilled to further delineate the extent of soil contamination near the former waste oil tank and to determine if groundwater was impacted by the hydrocarbon release. Borings B-1 through B-3 were converted into groundwater monitoring wells MW-1 through MW-3, respectively. Sediments encountered consisted of silty sand, clayey silts, and gravelly sands. Groundwater was first encountered at ~35' to 41' bgs, and following well development, depth to water was at ~27' to 28' bgs. (See Fig 4 and Boring Logs)

Soil from boring B-4 contained 850 ppm TOG at 25.5' bgs; and soil from boring B-5 at 36' bgs contained 180 ppm TPHg, 182 ppm TOG, and 1.7, 5.9, 3.5, and 17 ppm BTEX, respectively. Initial groundwater sampling identified up to 81 ppb TPHg, 11 ppb benzene, and 130 ppb lead from well MW-3. Lead was not detected in a subsequent sampling event from well MW-3. (See Table 4)

After four sampling events, MW-3 continued to exhibit low levels of TPHg and BTEX. Benzene levels did not appear to be decreasing. However, due to the proposed development of the site all three monitoring wells were abandoned in September 1995. A replacement well MW-3R, for abandoned well MW-3, was installed in June 1996. Well MW-3R has been sampled twice (June and August 1996). No TPHg or BTEX was identified in the August 1996 sampling event. Continued groundwater sampling is not warranted. (See Fig 5, Table 5)

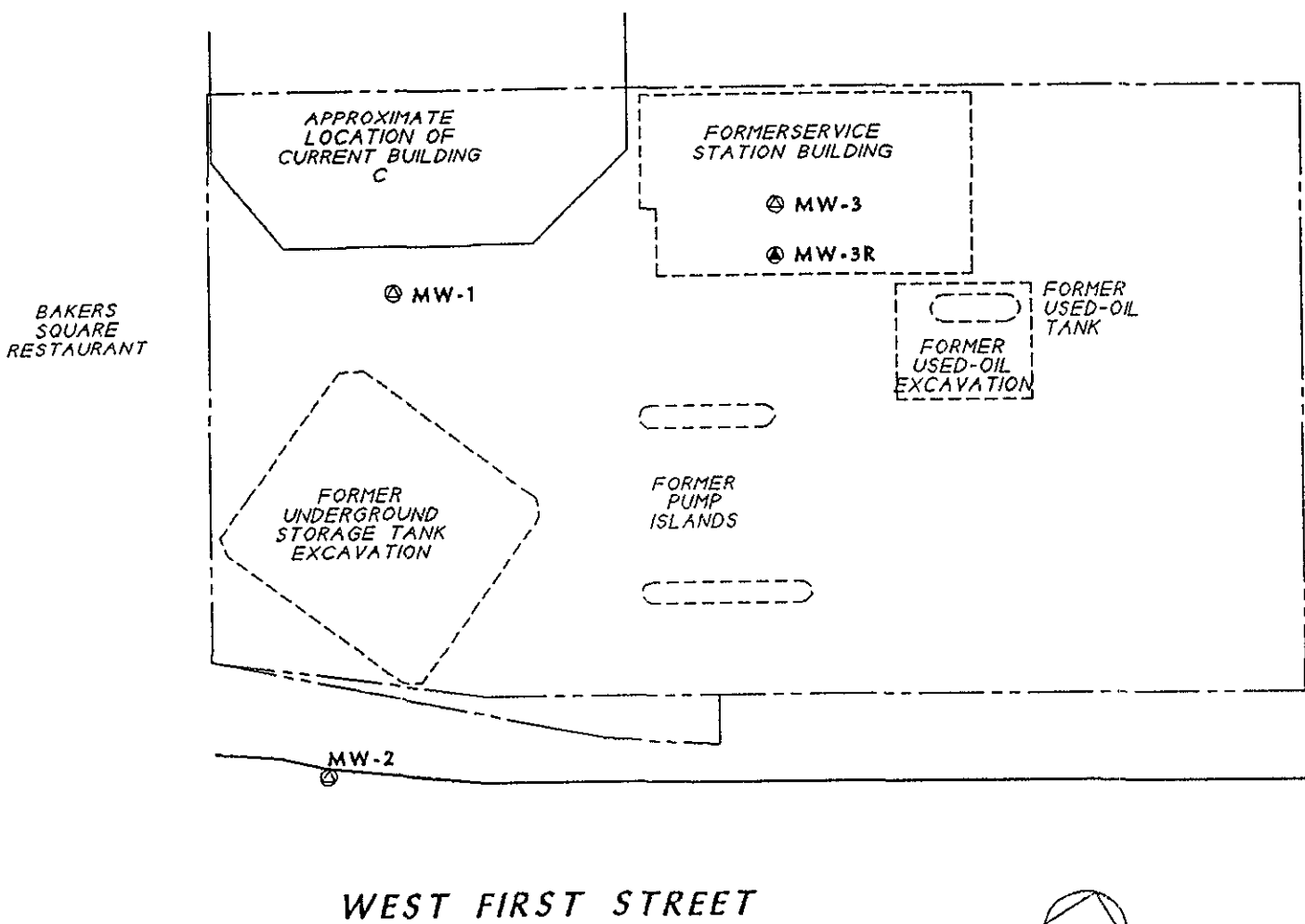
Although up to 67 ppb benzene was identified in groundwater from well MW-3, at ~20' bgs, and up to 1.7 ppm benzene was in soil from boring B-5 at 36' bgs, it should not pose a risk to human health based on ASTM's Tier 1 Risk-Based Screening Level Look-Up Table for soil and/or groundwater volatilization to outdoor air, the only potential exposure pathway.

In summary, case closure is recommended because:

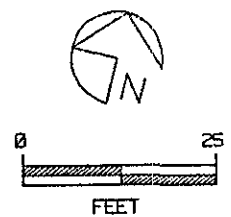
- o the leak and ongoing sources have been removed;
- o the site has been adequately characterized;
- o the dissolved plume is not migrating;
- o no water wells, surface water, or other sensitive receptors are likely to be impacted; and,
- o the site presents no significant risk to human health or the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


EXPLANATION

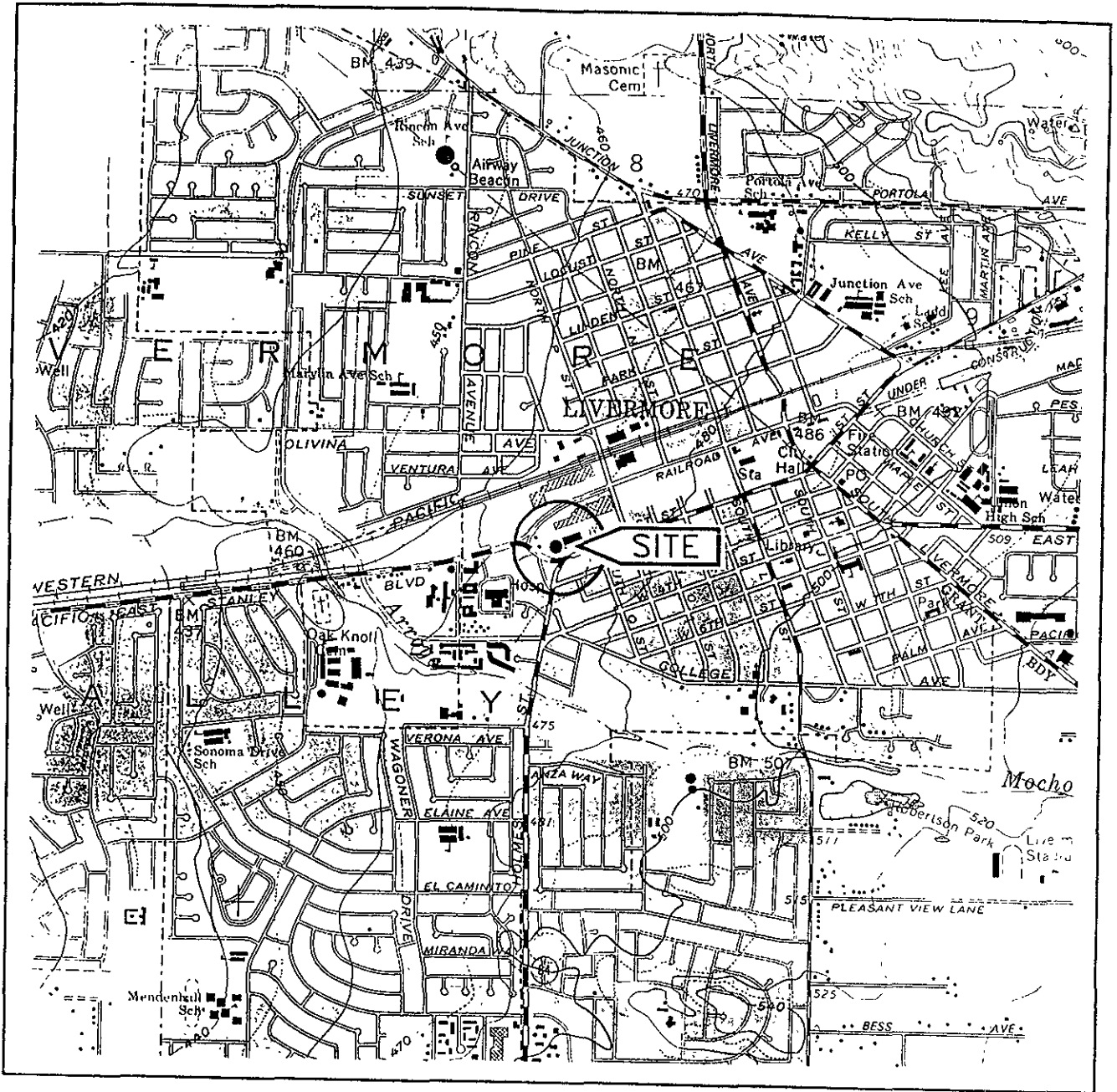
- ⊕ MW-3R APPROXIMATE LOCATION OF MONITORING WELL
- ⊙ MW-3 ABANDONED MONITORING WELL LOCATION



WEST FIRST STREET

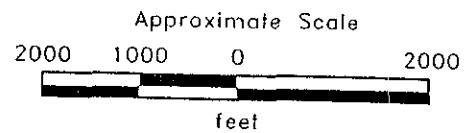


| | | |
|--|---|---|
| TITLE : SITE MAP |  | GEOCONSULTANTS, INC |
| LOCATION : CHEVRON SERVICE STATION No.: 9-2864 1334 FIRST STREET, LIVERMORE, CALIFORNIA | | SAN JOSE, CALIFORNIA Project No. 9758-09 |
| SOURCE : CAMBRIA ENVIRONMENTAL TECHNOLOGY, INC | | DRAWING NO. CHEVRON\9-2864\BASE |



SOURCE: U.S. GEOLOGICAL SURVEY
 7.5-MINUTE QUADRANGLE
 LIVERMORE, CALIFORNIA
 PHOTOREVISED 1980

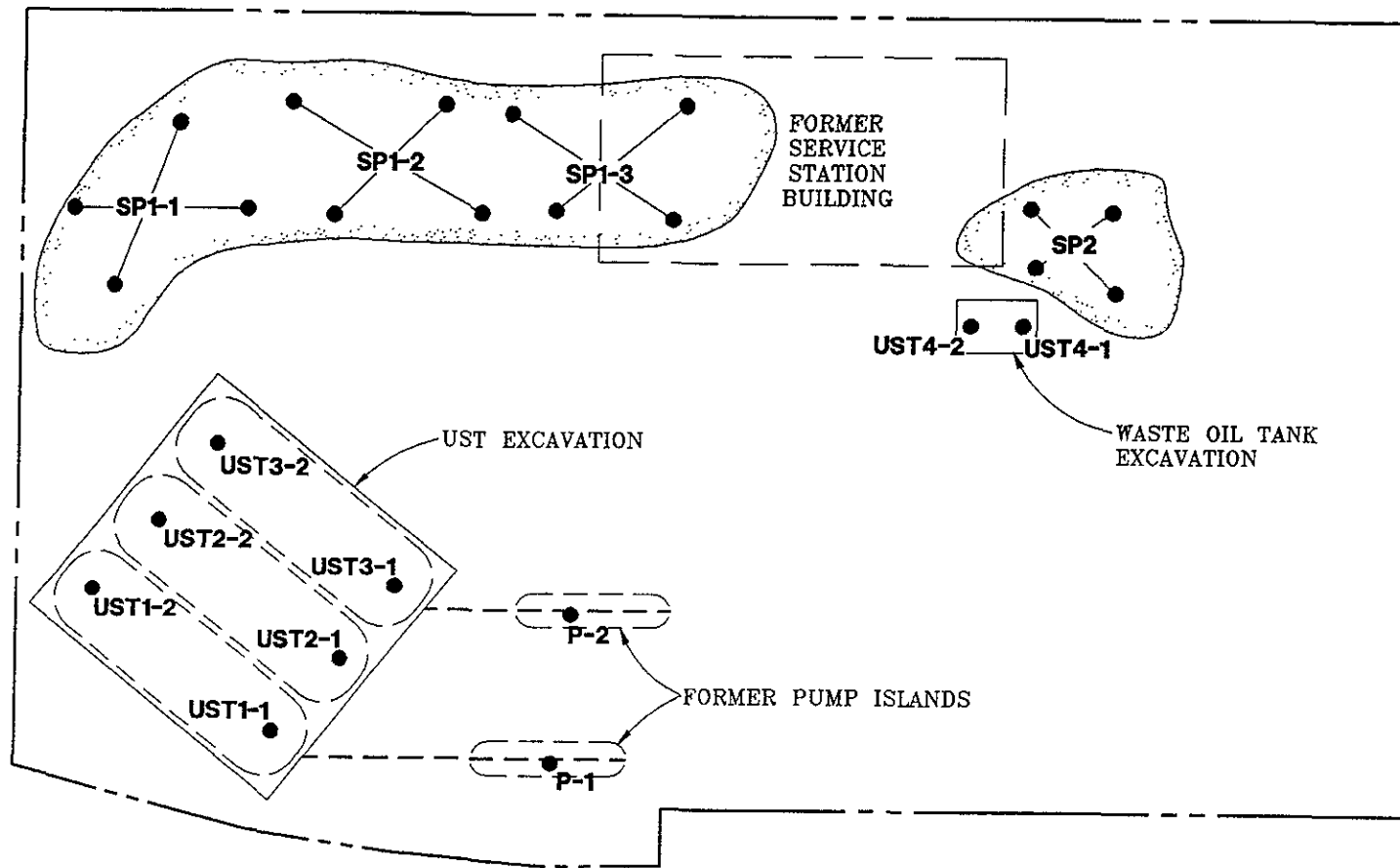
PLATE 1



Canonie Environmental

DRAWING NO. 94-223-A1

SITE VICINITY MAP
 CHEVRON STATION 9-2864
 1334 FIRST STREET
 LIVERMORE, CALIFORNIA



EXPLANATION

- UST1-2 APPROXIMATE LOCATION OF UST EXCAVATION SOIL SAMPLE
- P-1 APPROXIMATE LOCATION OF PIPING TRENCH SOIL SAMPLE
- - - FORMER PIPING TRENCH
- SP1-1-● COMPOSITE SOIL STOCKPILE SAMPLE

FIRST STREET



ENGEO
INCORPORATED

SITE PLAN
CHEVRON SS #9-2864
1334 FIRST STREET
LIVERMORE, CALIFORNIA

JOB NO.: 3841-F1

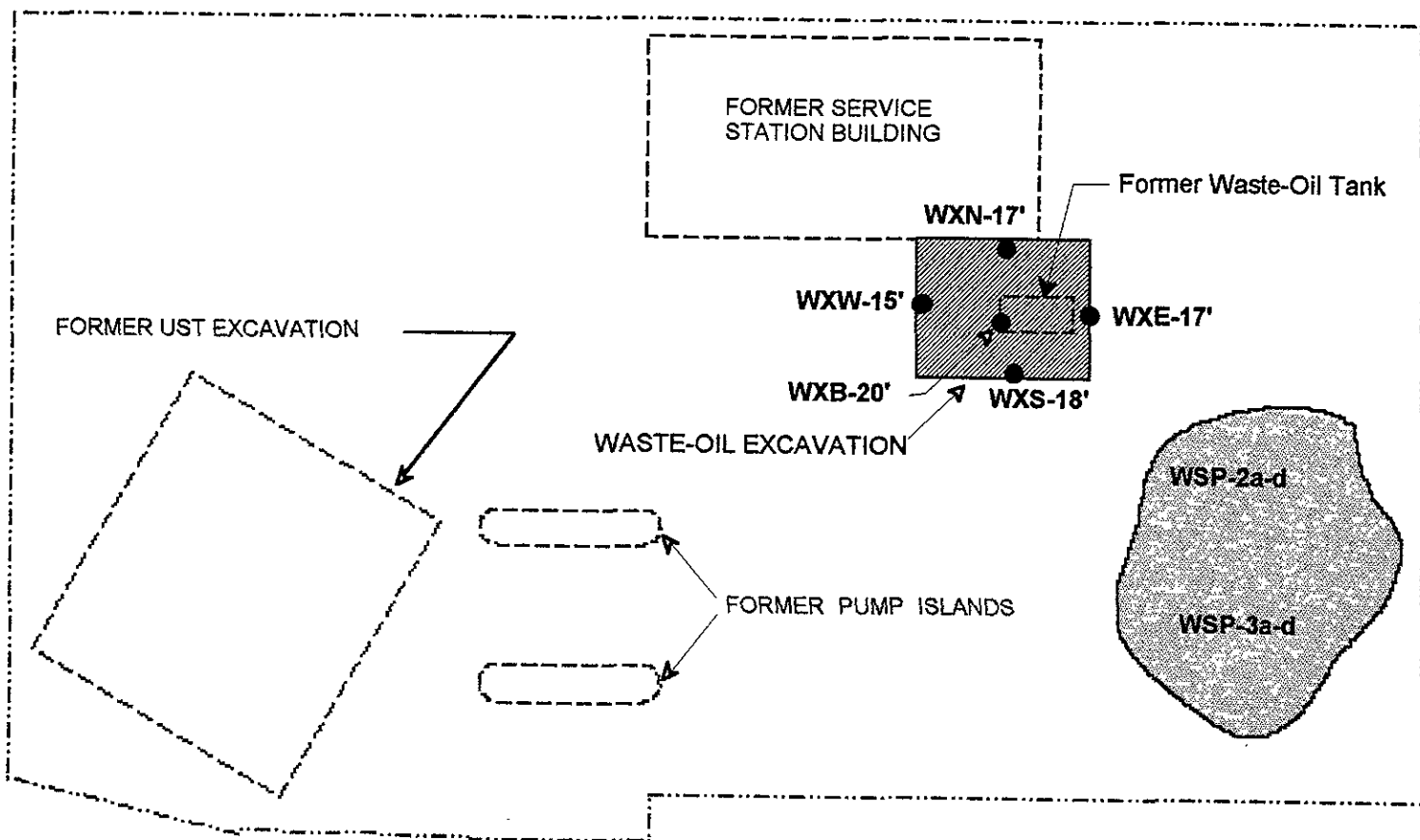
DATE: APRIL 1994

DRAWN BY: *DB*

CHECKED BY: *E.H.*

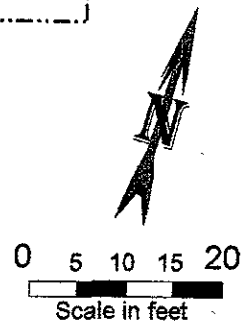
FIGURE NO.

2



EXPLANATION

- UST UNDERGROUND STORAGE TANK
- WX ● APPROXIMATE LOCATION OF EXCAVATION SOIL SAMPLE
- SOIL STOCKPILE
- EXCAVATION LIMIT



SITE PLAN

CHEVRON SERVICE STATION NO. 9-2864
1334 West First Street
Livermore, California

FIGURE

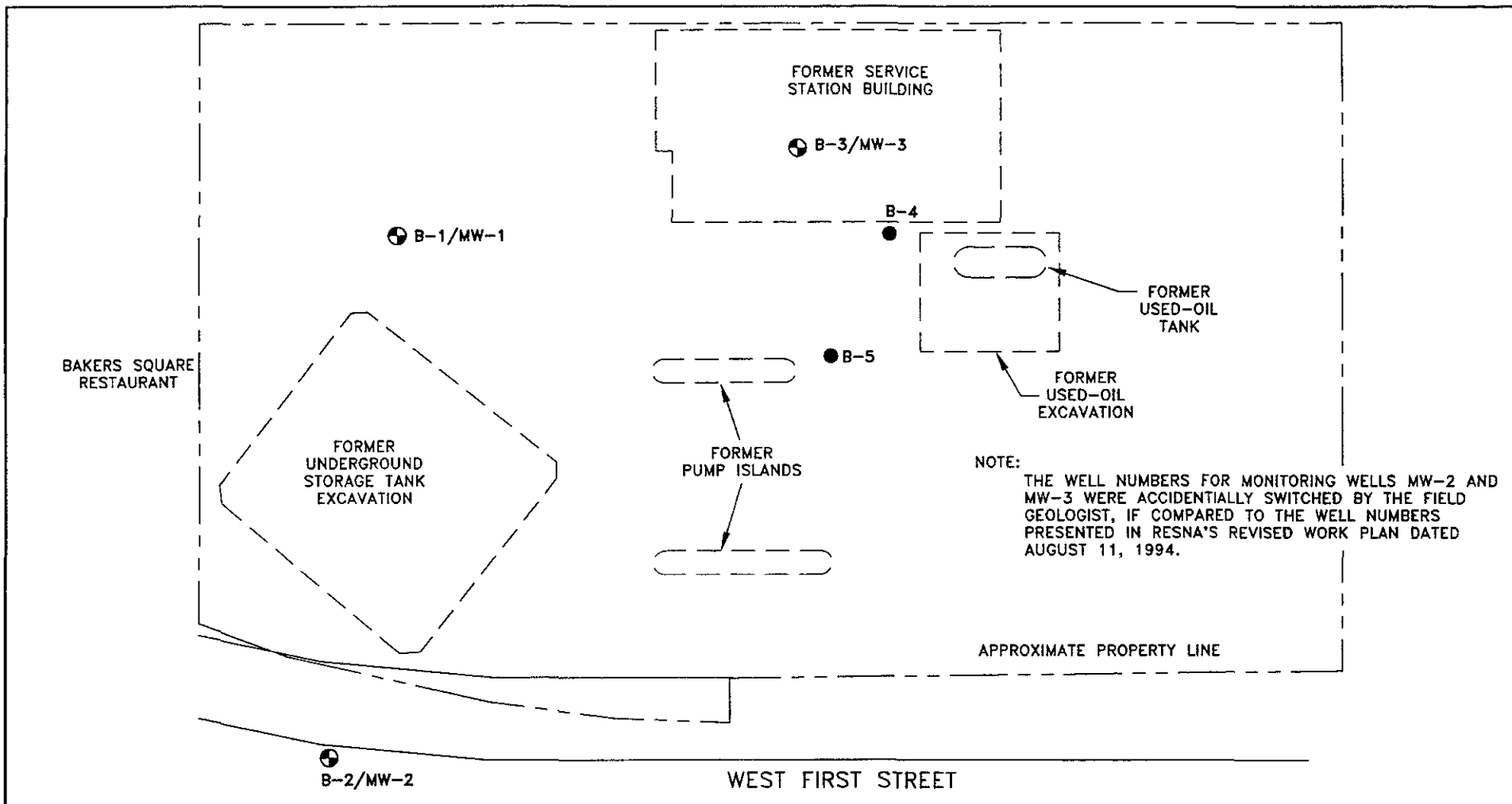
1

PROJECT NO.
2864-1

DRAWN BY:
wtj

DATE
4/94

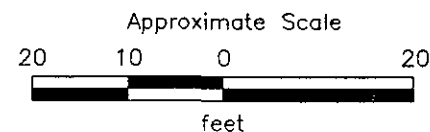
BASE MAP:
ENGEO INC SITE PLAN 3/94



LEGEND:

B-3/MW-3 = GROUNDWATER MONITORING WELL

B-5 = SOIL BORING



PLATE

2

GENERALIZED SITE PLAN
 FORMER CHEVRON STATION 9-2864
 1334 FIRST STREET
 LIVERMORE, CALIFORNIA

Canonie Environmental

DRAWING NO. 94-223-A2

TABLE I
UST EXCAVATION/PIPING SOIL SAMPLES
 Laboratory Analysis Results
 (Concentrations reported in parts per million)

| SAMPLE | TPH (gas) | BENZENE | TOLUENE | E.BENZENE | XYLENES | LEAD |
|-----------------|-----------|---------|---------|-----------|---------|------|
| UST1-1 (14 ft.) | <1.0 | 0.031 | 0.011 | <.005 | <.015 | <5 |
| UST1-2 (14 ft.) | <1.0 | <.005 | <.005 | <.005 | <.015 | 6 |
| UST2-1 (14 ft.) | <1.0 | 0.012 | 0.009 | <.005 | <.015 | --- |
| UST2-2 (14 ft.) | <1.0 | <.005 | <.005 | <.005 | <.015 | --- |
| UST3-1 (14 ft.) | <1.0 | 0.11 | 0.10 | <.005 | 0.038 | --- |
| UST3-2 (14 ft.) | <1.0 | <.005 | 0.006 | <.005 | 0.019 | --- |
| P-1 (4 ft.) | <1.0 | <.005 | <.005 | <.005 | <.015 | 7 |
| P-2 (3½ ft.) | <1.0 | <.005 | <.005 | <.005 | <.015 | --- |

3841-F1
 April 11, 1994

TABLE II
WASTE OIL UST SOIL SAMPLES
Laboratory Analysis Results
(Concentrations reported in parts per million)

| ANALYTE | UST4-1 (9 ft.) | UST4-2 (9 ft.) |
|---------------|----------------|----------------|
| TPH(gas) | <1.0 | <1.0 |
| TPH(diesel) | <10 | <10 |
| TOG | 5 | 7600 |
| Benzene | <.005 | <.020 |
| Toluene | <.005 | 0.096 |
| Ethyl Benzene | <.005 | 0.35 |
| Xylenes | <.015 | 3.7 |
| EPA 8010 | <.005 | <.005 |
| Σ EPA 8270 | ND | 5790* |
| Cadmium | <0.5 | <0.5 |
| Chromium | 31 | 31 |
| Lead | <5 | 120 |
| Nickel | 100 | 110 |
| Zinc | 26 | 26 |

ND: Not detected above laboratory reporting limit

*Cumulative semi-volatile organics in parts per billion (ppb) (see Appendix D)

TABLE A

WASTE-OIL OVEREXCAVATION SAMPLING SUMMARY

Results in mg/Kg (parts per million - ppm), unless noted.

WASTE-OIL OVEREXCAVATION RESULTS

| SAMPLE ID | DEPTH (FT.) | DATE | LAB | TPH-Gasoline | Benzene | Toluene | Ethyl-benzene | Xylenes | TPH-Diesel | TOG |
|-----------|-------------|-----------|------|--------------|---------|---------|---------------|---------|------------|------|
| WX-B-20' | 20 | 22-Mar-94 | GTEL | 2.9 | 0.042 | 0.010 | ND | 0.016 | ND | 550 |
| WX-E-17' | 17 | 22-Mar-94 | GTEL | ND | ND | ND | ND | ND | ND | 510 |
| WX-S-18' | 18 | 22-Mar-94 | GTEL | ND | ND | ND | ND | ND | ND | 1000 |
| WX-W-15' | 15 | 22-Mar-94 | GTEL | ND | ND | ND | ND | ND | ND | 22 |
| WX-N-17' | 17 | 22-Mar-94 | GTEL | ND | ND | ND | ND | ND | ND | 160 |

ADDITIONAL WASTE-OIL OVEREXCAVATION RESULTS

| SAMPLE ID | DEPTH (FT.) | DATE | LAB | Cadmium | Chromium | Lead | Nickel | Zinc | 8270 (ppb) |
|-----------|-------------|-----------|------|---------|----------|------|--------|------|------------|
| WX-B-20' | 20 | 22-Mar-94 | GTEL | ND | 32 | 6 | 94 | 31 | CAR (*) |
| WX-E-17' | 17 | 22-Mar-94 | GTEL | ND | 45 | 6 | 110 | 35 | CAR (&) |
| WX-S-18' | 18 | 22-Mar-94 | GTEL | ND | 37 | ND | 100 | 28 | ND |
| WX-W-15' | 15 | 22-Mar-94 | GTEL | ND | 26 | ND | 99 | 25 | ND |
| WX-N-17' | 17 | 22-Mar-94 | GTEL | ND | 46 | ND | 150 | 44 | ND |

WASTE-OIL STOCKPILE SAMPLING SUMMARY

Results in mg/Kg (parts per million - ppm), unless noted.

WASTE-OIL STOCKPILE SAMPLING RESULTS

| SAMPLE ID | DATE | LAB | TPH-Gasoline | Benzene | Toluene | Ethyl-benzene | Xylenes | TPH-Diesel | TOG |
|-----------|-----------|------|--------------|---------|---------|---------------|---------|------------|-----|
| WSP-2A-D | 22-Mar-94 | GTEL | 1.2 | ND | ND | ND | 0.043 | ND | 170 |
| WSP-3A-D | 22-Mar-94 | GTEL | ND | ND | ND | ND | ND | ND | 7 |

ADDITIONAL WASTE-OIL STOCKPILE SAMPLING RESULTS

| SAMPLE ID | DATE | LAB | Cadmium | Chromium | Lead | Nickel | Zinc | 8270 (ppb) |
|-----------|-----------|------|---------|----------|------|--------|------|------------|
| WSP-2A-D | 22-Mar-94 | GTEL | ND | 31 | 76 | 110 | 43 | CAR (#) |
| WSP-3A-D | 22-Mar-94 | GTEL | NR | NR | NR | NR | NR | ND |

TPH-Gasoline = Total Petroleum Hydrocarbons calculated as Gasoline.

TPH-Diesel = Total Petroleum Hydrocarbons calculated as Diesel.

TOG = Total Oil & Grease

NR = Not Requested

ND = Not Detected at or above the laboratory detection limit.

CAR = See Certified Analytical Reports for Results

* = 340 ug/Kg (parts per billion) bis(2-Ethylhexyl)phthalate

& = 360 ug/Kg (parts per billion) bis(2-Ethylhexyl)phthalate

= 1400 ug/Kg (parts per billion) bis(2-Ethylhexyl)phthalate

Table 2
SOIL ANALYTICAL RESULTS ppm
 Former Chevron Service Station 9-2864
 1334 First Street
 Livermore, California
 (Page 1 of 2)

| Sample | Date | TPHg | Total Lead | Benzene | Toluene | Ethyl-benzene | Total Xylenes | O&G |
|-----------|---------|------|------------|---------|---------|---------------|---------------|-----|
| S-5.5-B1 | 9/29/94 | <1 | NA | <0.005 | <0.005 | <0.005 | <0.015 | NA |
| S-10.5-B1 | 9/29/94 | <1 | NA | <0.005 | <0.005 | <0.005 | <0.015 | NA |
| S-15.5-B1 | 9/29/94 | <1 | NA | <0.005 | <0.005 | <0.005 | <0.015 | NA |
| S-20.5-B1 | 9/29/94 | <1 | NA | <0.005 | <0.005 | <0.005 | <0.015 | NA |
| S-25.5-B1 | 9/29/94 | <1 | NA | 0.022 | <0.005 | 0.007 | 0.031 | NA |
| S-30.5-B1 | 9/29/94 | 1.2 | NA | 0.190 | <0.005 | 0.015 | 0.051 | NA |
| S-35.5-B1 | 9/29/94 | <1 | NA | 0.008 | <0.005 | <0.005 | <0.015 | NA |
| S-5.5-B2 | 9/29/94 | <1 | NA | <0.005 | <0.005 | <0.005 | <0.015 | NA |
| S-10.5-B2 | 9/29/94 | <1 | NA | <0.005 | <0.005 | <0.005 | <0.015 | NA |
| S-15.5-B2 | 9/29/94 | <1 | NA | <0.005 | <0.005 | <0.005 | <0.015 | NA |
| S-21.0-B2 | 9/29/94 | <1 | NA | <0.005 | <0.005 | <0.005 | <0.015 | NA |
| S-25.5-B2 | 9/29/94 | <1 | NA | <0.005 | <0.005 | <0.005 | <0.015 | NA |
| S-30.5-B2 | 9/29/94 | <1 | NA | <0.005 | <0.005 | <0.005 | <0.015 | NA |
| S-35.5-B2 | 9/29/94 | <1 | NA | <0.005 | <0.005 | <0.005 | <0.015 | NA |
| S-6.0-B3 | 9/28/94 | <1 | <5 | <0.005 | <0.005 | <0.005 | <0.015 | <10 |
| S-10.5-B3 | 9/28/94 | <1 | <5 | <0.005 | <0.005 | <0.005 | <0.015 | <10 |
| S-15.5-B3 | 9/28/94 | <1 | <5 | <0.005 | <0.005 | <0.005 | <0.015 | <10 |
| S-20.5-B3 | 9/28/94 | <1 | <5 | <0.005 | <0.005 | <0.005 | <0.015 | <10 |
| S-25.5-B3 | 9/28/94 | 40 | <5 | 0.830 | 2.1 | 0.780 | 4.4 | 24 |
| S-30.5-B3 | 9/28/94 | <1 | 7 | 0.081 | <0.005 | <0.005 | <0.015 | <10 |
| S-35.5-B3 | 9/28/94 | <1 | <5 | 0.007 | 0.007 | <0.005 | <0.015 | <10 |
| S-40.5-B3 | 9/28/94 | <1 | <5 | <0.005 | <0.005 | <0.005 | <0.015 | <10 |
| S-45.5-B3 | 9/28/94 | NA | <5 | NA | NA | NA | NA | NA |

Table 2
SOIL ANALYTICAL RESULTS *ppm*
 Former Chevron Service Station 9-2864
 1334 First Street
 Livermore, California
 (Page 2 of 2)

| Sample | Date | TPHg | Total Lead | Benzene | Toluene | Ethyl-benzene | Total Xylenes | O&G |
|-----------|---------|------|------------|---------|---------|---------------|---------------|-----|
| S-50.0-B3 | 9/28/94 | NA | <5 | NA | NA | NA | NA | NA |
| S-56.0-B3 | 9/28/94 | NA | <5 | NA | NA | NA | NA | NA |
| S-59.5-B3 | 9/28/94 | NA | <5 | NA | NA | NA | NA | NA |
| S-6.0-B4 | 9/28/94 | <1 | 21 | <0.005 | <0.005 | <0.005 | <0.015 | 39 |
| S-10.5-B4 | 9/28/94 | <1 | 6 | <0.005 | <0.005 | <0.005 | <0.015 | <10 |
| S-15.5-B4 | 9/28/94 | <1 | <5 | <0.005 | <0.005 | <0.005 | <0.015 | <10 |
| S-20.5-B4 | 9/28/94 | <1 | <5 | <0.005 | <0.005 | <0.005 | <0.015 | <10 |
| S-25.5-B4 | 9/28/94 | 2.6 | <5 | 0.066 | 0.006 | 0.029 | 0.051 | 850 |
| S-30.5-B4 | 9/28/94 | <1 | 6 | <0.005 | <0.005 | <0.005 | <0.015 | 10 |
| S-36.0-B4 | 9/28/94 | <1 | <5 | <0.005 | <0.005 | <0.005 | <0.015 | <10 |
| S-40.5-B4 | 9/28/94 | <1 | <5 | <0.005 | <0.005 | <0.005 | <0.015 | <10 |
| S-5.5-B5 | 9/28/94 | 2.2 | 8 | <0.005 | 0.018 | 0.014 | 0.023 | 18 |
| S-10.5-B5 | 9/28/94 | <1 | <5 | <0.005 | <0.005 | <0.005 | <0.015 | <10 |
| S-15.5-B5 | 9/28/94 | <1 | <5 | <0.005 | <0.005 | <0.005 | <0.015 | <10 |
| S-20.5-B5 | 9/28/94 | <1 | <5 | 0.030 | <0.005 | <0.005 | <0.015 | <10 |
| S-25.5-B5 | 9/28/94 | 69 | <5 | 0.340 | 2.5 | 1.1 | 6.5 | <10 |
| S-30.5-B5 | 9/28/94 | 15 | 8 | 0.130 | 0.110 | 0.130 | 0.350 | <10 |
| S-36.0-B5 | 9/28/94 | 180 | <5 | 1.7 | 5.9 | 3.5 | 17.0 | 182 |
| S-41.5-B5 | 9/28/94 | 19 | <5 | 0.028 | 0.130 | 0.340 | 1.3 | 26 |

Notes:

Results in parts per million

- TPHg = Total petroleum hydrocarbons as gasoline
 O&G = Oil and grease
 < = Less than indicated detection limit established by the laboratory
 NA = Not analyzed

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Analytical results are in parts per billion (ppb)

| DATE | Well Head Elev. | Ground Water Elev. | Depth To Water | Notes | TPH-Gasoline | Benzene | Toluene | Ethyl-Benzene | Xylene | Total Oil & Grease | Lead | MTBE | EPA 8270 |
|-------------|-----------------|--------------------|----------------|-----------|--------------|---------|---------|---------------|--------|--------------------|------|------|------------|
| MW-1 | | | | | | | | | | | | | |
| 10/05/94 | 464.71 | 436.21 | 28.50 | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | -- | -- |
| 03/29/95 | 464.71 | 448.15 | 16.56 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 04/14/95 | 464.71 | 448.51 | 16.20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05/11/95 | 464.71 | 448.44 | 16.27 | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | -- | -- |
| 08/10/95 | 464.71 | 445.26 | 19.45 | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | -- | -- |
| 09/19/95 | 464.71 | 443.46 | 21.25 | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | -- | -- |
| 09/25/95 | 464.71 | 443.51 | 21.20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | <0.5 - <10 |
| 06/19/96 | 464.71 | -- | -- | Abandoned | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | | | | | | | | | | | | | |
| 10/05/94 | 463.98 | 435.58 | 28.40 | * | <50 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | -- | -- |
| 03/29/95 | 463.98 | 448.56 | 15.42 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 04/14/95 | 463.98 | 448.80 | 15.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05/11/95 | 463.98 | 449.00 | 14.98 | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | -- | -- |
| 08/10/95 | 463.98 | 446.24 | 17.74 | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | -- | -- |
| 09/19/95 | 463.98 | 444.23 | 19.75 | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | -- | -- |
| 09/25/95 | 463.98 | 444.30 | 19.68 | -- | -- | -- | -- | -- | -- | -- | -- | -- | <0.5 - <10 |
| 06/19/96 | 463.98 | -- | -- | Abandoned | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | | | | | | | | | | | | | |
| 10/05/94 | 464.19 | 437.29 | 26.90 | * | 81 | 11 | 6.8 | <0.5 | 15 | <5000 | 130 | -- | -- |
| 03/29/95 | 464.19 | 448.19 | 16.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 04/14/95 | 464.19 | 448.58 | 15.61 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05/11/95 | 464.19 | 448.42 | 15.77 | -- | <50 | 2.2 | <0.5 | <0.5 | <0.5 | -- | <5.0 | -- | -- |
| 08/10/95 | 464.19 | 445.28 | 18.91 | -- | 150 | 64 | 0.51 | <0.5 | 4.0 | -- | -- | <2.5 | -- |
| 09/19/95 | 464.19 | 443.24 | 20.95 | -- | 220 | 67 | 2.4 | 2.5 | 11 | -- | -- | 5.7 | -- |
| 09/25/95 | 464.19 | 443.27 | 20.92 | -- | -- | -- | -- | -- | -- | -- | -- | -- | <0.5 - <10 |
| 06/19/96 | 464.19 | -- | -- | Abandoned | -- | -- | -- | -- | -- | -- | -- | -- | -- |

* It appears that the gradient information for wells MW-2 and MW-3 was switched on this date due to conflicting site markings.

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Analytical results are in parts per billion (ppb)

| DATE | Well Head Elev. | Ground Water Elev. | Depth To Water | Notes | TPH-Gasoline | Benzene | Toluene | Ethyl-Benzene | Xylene | Total Oil & Grease | Lead | MTBE | EPA 8270 |
|-------------------|-----------------|--------------------|----------------|-------|--------------|---------|---------|---------------|--------|--------------------|------|------|----------|
| MW-3R | | | | | | | | | | | | | |
| 06/19/96 | -- | -- | 19.32 | -- | <50 | <0.5 | 0.50 | <0.5 | 0.52 | -- | -- | 3.7 | -- |
| 08/14/96 | -- | -- | 21.56 | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <2.5 | -- |
| TRIP BLANK | | | | | | | | | | | | | |
| 05/11/95 | -- | -- | -- | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | -- | -- |
| 08/10/95 | -- | -- | -- | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | -- | -- |
| 09/19/95 | -- | -- | -- | -- | <50 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | -- | -- |
| 06/19/96 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 08/14/96 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Note: Blaine Tech Services, Inc. began routine monitoring of the groundwater wells at this site on March 29, 1995. Earlier field data and analytical results are drawn from the Canonic Environmental report.

ABBREVIATIONS:

TPH = Total Petroleum Hydrocarbons
 MTBE = Methyl t-Butyl Ether

Total depth of boring: 60 feet
 Diameter of boring: 8 inches
 Date drilled: 9-29-94
 Drilling Company: Woodward Drilling
 Driller: Eric and Mike
 Drilling method: Hollow-Stem Auger

Casing diameter: 2 inches
 Casing material: Sch 40 PVC
 Slot size: 0.020-inch
 Sand size: No. 3 Sand
 Screen Interval: 25 feet to 60 feet
 Field Geologist: Robin Adair

| P.I.D. | Sample No. | Blows | Depth | USCS Code | Description | Well Const. |
|--------|------------|----------------|----------------|-----------|--|-------------|
| 0 | S-5.5 | 13 15 17 | 2 4 6 | GM | Silty gravel, light brown, damp, loose; no odor. Dark brown. | |
| 0 | S-10.5 | 16 26 40 | 8 10 12 | GM | Silty sandy gravel, dark brown, damp, dense; no odor, gravel to 2". | |
| 0 | S-15.5 | 17 50 | 14 16 | GC | Clayey sandy gravel, brown with red mottling and green blebs, dense to very dense; no odor. Greenish-brown with red and black blebs; no odor. | |
| 0 | S-20.5 | 11 15 18 | 18 20 22 | | Moist. | |
| 0 | S-25.5 | 8 13 30 | 24 26 | CL | Sandy clay, reddish-brown, moist, medium plasticity, very stiff; no odor, uniform texture. | |
| | | | 28 | GC | Clayey sandy gravel, brown with green and black mottling, moist, very dense; no odor. | |
| | | | 30 | CL | Silty clay, reddish-brown, moist, medium plasticity, stiff; no odor, uniform texture. | |
| 0 | S-30.5 | 4 4 7 | 32 34 | | | |
| 0 | S-35.5 | 35 50 | 36 38 40 | GC | Clayey sandy gravel, brown with reddish-orange mottling, wet, very dense; no odor. | |

(Section continues downwards)

Canonie Environmental

DRAWING NO. 94-223-A5

LOG OF BORING B-1/MW-1
 CHEVRON STATION 9-2864
 1334 FIRST STREET
 LIVERMORE, CALIFORNIA

| P.I.D. | Sample No. | Blows | Depth | USCS Code | Description | Well Const. |
|--------|------------|------------------|-------|-----------|---|-------------|
| 0 | S-40.5 | 30 50/5 | 42 | GC | Clayey sandy gravel, brown with reddish-orange mottling, wet, very dense; no odor. | |
| | | | 44 | | | |
| 0 | S-45.5 | 27 33 50/3 | 46 | | | |
| | | | 48 | | | |
| 0 | S-50.5 | 12 21 30 | 50 | GW | Sandy gravel, brown, wet, very dense; no odor. | |
| | | | 52 | GC | Clayey sandy gravel, reddish-brown with green blebs, very dense. | |
| | | | 54 | CL | Silty clay, reddish-brown, damp, medium plasticity, hard; no odor. | |
| | | | 56 | | | |
| 0 | S-55.5 | 9 21 29 | 56 | CL | Sandy silty clay with some gravel, reddish-brown, damp, medium plasticity, hard; no odor, gravel to 1". | |
| | | | 58 | | | |
| 0 | S-59.5 | 15 25 32 | 60 | GC | Clayey sandy gravel, reddish-brown with black blebs, damp, very dense; no odor. | |
| | | | 62 | | Total Depth = 60 feet. | |
| | | | 64 | | | |
| | | | 66 | | | |
| | | | 68 | | | |
| | | | 70 | | | |
| | | | 72 | | | |
| | | | 74 | | | |
| | | | 76 | | | |
| | | | 78 | | | |
| | | | 80 | | | |
| | | | 82 | | | |
| | | | 84 | | | |
| | | | 86 | | | |
| | | | 88 | | | |
| | | | 90 | | | |

CanonleEnvironmental

DRAWING NO. 94-223-A6

LOG OF BORING B-1/MW-1
 CHEVRON STATION 9-2864
 1334 FIRST STREET
 LIVERMORE, CALIFORNIA

Total depth of boring: 60 feet
 Diameter of boring: 8 inches
 Date drilled: 9-29-94
 Drilling Company: Woodward Drilling
 Driller: Eric and Mike
 Drilling method: Hollow-Stem Auger

Casing diameter: 2 inches
 Casing material: Sch 40 PVC
 Slot size: 0.020-inch
 Sand size: No. 3 Sand
 Screen interval: 25 feet to 60 feet
 Field Geologist: Robin Adair

| P.I.D. | Sample No. | Blows | Depth | USCS Code | Description | Well Const. |
|--------|------------|----------------|-------|-----------|---|-------------|
| | | | | GM | Asphalt (4-6 inches). | |
| | | | 2 | CL | Silty sandy gravel, brown, damp, loose; no odor. | |
| | | | 4 | | Silty clay with some sand, dark brown, damp, medium plasticity, medium dense; no odor. | |
| 0 | S-5.5 | 4 6 8 | 6 | GC | Clayey sandy gravel, reddish-brown with green blebs, damp, medium dense; no odor, gravel to 1-1/2". | |
| | | | 8 | | | |
| 0 | S-10.5 | 22 50 | 10 | | Reddish-orange mottling, moist, very dense. | |
| | | | 12 | | | |
| | | | 14 | | | |
| 0 | S-15.5 | 14 19 28 | 16 | | | |
| | | | 18 | | | |
| | | | 20 | | | |
| 0 | S-21 | 26 50 | 22 | | | |
| | | | 24 | | | |
| 0 | S-25.5 | 14 29 35 | 26 | | | |
| | | | 28 | | | |
| | | | 30 | CL | Silty clay with some sand, brown, moist, medium plasticity, hard; no odor, uniform texture. | |
| 0 | S-30.5 | 18 50 | 32 | GC | Clayey sandy gravel, reddish-brown with orange and green mottling, moist, very dense; no odor, gravel to 2". | |
| | | | 34 | | | |
| | | | 36 | SC | Wet. Clayey sand with some gravel, brown with reddish-orange mottling, wet, very dense; no odor, subangular gravel to 2", medium-grained sand. | |
| 0 | S-35.5 | 18 22 50 | 38 | | | |
| | | | 40 | | | |

(Section continues downward)

Canonie Environmental

DRAWING NO. 94-223-A7

LOG OF BORING B-2/MW-2
 CHEVRON STATION 9-2864
 1334 FIRST STREET
 LIVERMORE, CALIFORNIA

| P.I.D. | Sample No. | Blows | Depth | USCS Code | Description | Well Const. |
|--------|------------|----------------|-------|-----------|---|-------------|
| 0 | S-40.5 | 19 22 30 | 42 | SC | Clayey sand with some gravel, brown with reddish-orange mottling, wet, very dense; no odor, subangular gravel to 2", medium-grained sand. | |
| | | | 44 | | | |
| 0 | S-45.5 | 12 23 25 | 46 | | | |
| | | | 48 | | | |
| 0 | S-50.5 | 11 36 40 | 50 | | | |
| | | | 52 | | | |
| | | | 54 | | | |
| 0 | S-55.5 | 8 20 28 | 56 | CL | Silty clay, minor sand, reddish-brown, damp, medium plasticity, hard; no odor, uniform texture. | |
| | | | 58 | | | |
| 0 | S-59.5 | 8 15 25 | 60 | GC | Clayey sandy gravel, reddish-brown with black blebs, damp, very dense; no odor, gravel to 2". | |
| | | | 60 | | Total Depth = 60 feet. | |
| | | | 62 | | | |
| | | | 64 | | | |
| | | | 66 | | | |
| | | | 68 | | | |
| | | | 70 | | | |
| | | | 72 | | | |
| | | | 74 | | | |
| | | | 76 | | | |
| | | | 78 | | | |
| | | | 80 | | | |
| | | | 82 | | | |
| | | | 84 | | | |
| | | | 86 | | | |
| | | | 88 | | | |
| | | | 90 | | | |

CanonleEnvironmental

DRAWING NO. 94-223-A8

LOG OF BORING B-2/MW-2
 CHEVRON STATION 9-2864
 1334 FIRST STREET
 LIVERMORE, CALIFORNIA

Total depth of boring: 60 feet
 Diameter of boring: 8 inches
 Date drilled: 9-28-94
 Drilling Company: Woodward Drilling
 Driller: Eric and Mike
 Drilling method: Hollow-Stem Auger

Casing diameter: 2 inches
 Casing material: Sch 40 PVC
 Slot size: 0.020-inch
 Sand size: No. 3 Sand
 Screen Interval: 25 feet to 60 feet
 Field Geologist: Robin Adair

| P.I.D. | Sample No. | Blows | Depth | USCS Code | Description | Well Const. |
|-------------|------------|----------------|-------|-----------|--|-------------|
| 0 | | | 2 | GM | Silty gravel, light brown, damp, loose; no odor. | |
| | | | 4 | | | |
| 0 | S-6 | 9 8 10 | 6 | GC | Clayey sandy gravel, brown with reddish-orange mottling, damp, medium dense; no odor, gravel to 2". | |
| | | | 8 | | | |
| 0 | S-10.5 | 3 8 10 | 10 | | | |
| | | | 12 | | | |
| 0 | S-15.5 | 17 30 25 | 16 | | Moist, very dense. | |
| | | | 18 | | | |
| 320 | S-20.5 | 20 28 35 | 20 | | Some green mottling. | |
| | | | 22 | | | |
| OVER 10,000 | S-25.5 | 15 27 30 | 26 | | Greenish-brown lense; strong product odor. | |
| | | | 28 | | | |
| 278 | S-30.5 | 3 4 7 | 30 | CL | Silty clay, reddish-brown, moist, medium plasticity, stiff; no odor, uniform texture, some fine gravel to 3 cm. | |
| | | | 32 | | | |
| | | | 34 | | | |
| 120 | S-35.5 | 27 50 | 36 | GC | Clayey sandy gravel, brown with red and green mottling, moist, medium plasticity, very dense; no odor, gravel to 2". | |
| | | | 38 | | | |
| | | | 40 | | | |

(Section continues downward)

Canonle Environmental

DRAWING NO. 94-223-A9

LOG OF BORING B-3/MW-3
 CHEVRON STATION 9-2864
 1334 FIRST STREET
 LIVERMORE, CALIFORNIA

| P.I.D. | Sample No. | Blows | Depth | USCS Code | Description | Well Const. |
|--------|------------|----------------|-------|-----------|---|-------------|
| 0 | S-40.5 | 29 30 | 42 | GC | Clayey sandy gravel, brown with red and green mottling, wet, medium plasticity, dense; no odor, gravel to 2". | |
| | | | 44 | | | |
| 0 | S-45.5 | 11 12 30 | 46 | | | |
| | | | 48 | | | |
| 0 | S-50.5 | 11 17 25 | 50 | SW | Sand, medium-grained, brown, wet, dense; no odor. | |
| | | | 52 | GW | Sandy gravel, brown, wet, dense; no odor, gravel to 2". | |
| | | | 54 | | | |
| 0 | S-56 | 37 50 | 56 | CL | Silty clay with minor sand, reddish-brown, damp, medium plasticity, hard; no odor. | |
| | | | 58 | | | |
| 0 | S-59.5 | 22 27 30 | 60 | CL | Sandy clay, reddish-brown, damp, medium plasticity, hard; no odor. | |
| | | | 60 | | Total Depth = 60 feet. | |
| | | | 62 | | | |
| | | | 64 | | | |
| | | | 66 | | | |
| | | | 68 | | | |
| | | | 70 | | | |
| | | | 72 | | | |
| | | | 74 | | | |
| | | | 76 | | | |
| | | | 78 | | | |
| | | | 80 | | | |
| | | | 82 | | | |
| | | | 84 | | | |
| | | | 86 | | | |
| | | | 88 | | | |
| | | | 90 | | | |

Canonie Environmental

DRAWING NO. 94-223-A10

LOG OF BORING B-3/MW-3
 CHEVRON STATION 9-2864
 1334 FIRST STREET
 LIVERMORE, CALIFORNIA

Total depth of boring: 41.5 feet
 Diameter of boring: 8 inches
 Date drilled: 9-28-94
 Drilling Company: Woodward Drilling
 Driller: Eric and Mike
 Drilling method: Hollow-Stem Auger

Casing diameter: NA
 Casing material: NA
 Slot size: NA
 Sand size: NA
 Screen Interval: NA
 Field Geologist: Robin Adair

| P.I.D. | Sample No. | Blows | Depth | USCS Code | Description | Well Const. |
|--------|------------|----------------|-------|-----------|--|------------------------------|
| 197 | | | 2 | GM | Silty gravel, brown, damp, loose; no odor, <5-10% fine-grained sand, gravel to 1/2". | ▽▽▽▽ ▽▽▽▽ ▽▽▽▽ ▽▽▽▽ |
| | | | 4 | | | |
| 239 | S-6 | 6 7 9 | 6 | GC | Clayey sandy gravel, brown with some green and red mottling, damp, medium plasticity, medium dense; no odor. | ▽▽▽▽ ▽▽▽▽ ▽▽▽▽ ▽▽▽▽ |
| | | | 8 | | | |
| 196 | S-10.5 | 10 12 16 | 10 | | | ▽▽▽▽ ▽▽▽▽ ▽▽▽▽ ▽▽▽▽ |
| | | | 12 | | | |
| 181 | S-15.5 | 21 18 22 | 16 | | Moist, dense; gravel up to 2". | ▽▽▽▽ ▽▽▽▽ ▽▽▽▽ ▽▽▽▽ |
| | | | 18 | | | |
| 442 | S-20.5 | 20 25 21 | 20 | | | ▽▽▽▽ ▽▽▽▽ ▽▽▽▽ ▽▽▽▽ |
| | | | 22 | | | |
| 1533 | S-25.5 | 14 23 40 | 26 | | Greenish-brown with red mottling, very dense; slight odor. | ▽▽▽▽ ▽▽▽▽ ▽▽▽▽ ▽▽▽▽ |
| | | | 28 | | | |
| 149 | S-30.5 | 4 6 9 | 30 | CL | Silty clay with some gravel, reddish-brown, some black mottling, moist, medium plasticity, stiff; no odor, gravel to 1/2". | ▽▽▽▽ ▽▽▽▽ ▽▽▽▽ ▽▽▽▽ |
| | | | 32 | | | |
| 259 | S-36 | 17 60 | 36 | GC | Clayey sandy gravel, brown with red and black mottling, moist, very dense; no odor, gravel to 2". | ▽▽▽▽ ▽▽▽▽ ▽▽▽▽ ▽▽▽▽ |
| | | | 38 | | | |
| 366 | S-40.5 | 13 26 36 | 40 | CL GC | Clayey sandy gravel, brown with red-green mottling, wet, medium plasticity, very dense; no odor, gravel to 2". | ▽▽▽▽ ▽▽▽▽ ▽▽▽▽ ▽▽▽▽ |
| | | | 40 | | | |
| | | | | | Total Depth = 41-1/2 feet. | |

CanonleEnvironmental

DRAWING NO. 94-223-A11

LOG OF BORING B-4
 CHEVRON STATION 9-2864
 1334 FIRST STREET
 LIVERMORE, CALIFORNIA

Total depth of boring: 41.5 feet
 Diameter of boring: 8 inches
 Date drilled: 9-28-94
 Drilling Company: Woodward Drilling
 Driller: Eric and Mike
 Drilling method: Hollow-Stem Auger

Casing diameter: NA
 Casing material: NA
 Slot size: NA
 Sand size: NA
 Screen Interval: NA
 Field Geologist: Robin Adair

| P.I.D. | Sample No. | Blows | Depth | USCS Code | Description | Well Const. |
|-------------|------------|----------------|-------|-----------|--|-------------|
| 830 | | | 2 | GM | Silty gravel, brown, damp, loose; no odor. | ▽▽▽▽ |
| 630 | | | 4 | CL | Silty clay with some gravel, dark brown, damp, medium plasticity, stiff; <5-10% fine-grained sand. | ▽▽▽▽ |
| 115 | S-5.5 | 4 3 8 | 6 | GC | Clayey sandy gravel, reddish-brown, damp, medium dense; no odor; gravel to 1-1/2". | ▽▽▽▽ |
| | | | 8 | | | ▽▽▽▽ |
| 248 | S-10.5 | 21 22 28 | 10 | | Some red and green mottling, moist, dense; gravel to 2". | ▽▽▽▽ |
| | | | 12 | | | ▽▽▽▽ |
| | | | 14 | | | ▽▽▽▽ |
| 860 | S-15.5 | 24 33 34 | 16 | | Some black mottling, very dense. | ▽▽▽▽ |
| | | | 18 | | | ▽▽▽▽ |
| 622 | S-20.5 | 16 30 25 | 20 | | Greenish-brown with red mottling; gravel to 2". | ▽▽▽▽ |
| | | | 22 | | | ▽▽▽▽ |
| | | | 24 | | | ▽▽▽▽ |
| OVER 10,000 | S-25.5 | 24 18 33 | 26 | | Product odor. | ▽▽▽▽ |
| | | | 28 | | | ▽▽▽▽ |
| 1610 | S-30.5 | 8 10 11 | 30 | CL | Silty clay, reddish-brown, moist, medium plasticity, very stiff; slight odor. | ▽▽▽▽ |
| | | | 32 | | | ▽▽▽▽ |
| | | | 34 | | | ▽▽▽▽ |
| OVER 10,000 | S-36 | 12 50 | 36 | GC | Clayey sandy gravel, reddish-brown, orange mottling, moist, very dense; strong odor, gravel to 2". | ▽▽▽▽ |
| | | | 38 | | | ▽▽▽▽ |
| | | | 40 | | Some black mottling, moist to wet. | ▽▽▽▽ |
| 1450 | S-41.5 | 19 28 24 | | | Total Depth = 41-1/2 feet. | ▽▽▽▽ |

Canonle Environmental

LOG OF BORING B-5
 CHEVRON STATION 9-2864
 1334 FIRST STREET
 LIVERMORE, CALIFORNIA

DRAWING NO. 94-223-A12

EXPLORATORY BORING LOG

| | | | | |
|--|------------------------------|---------------|--------------|------------------------------|
| Field Location of Boring: See Figure 1 | Project No. 9-2864 | Date: 6.10.96 | Boring No. | |
| | Client: CHEVRON PRODUCTS CO. | | | MW-3R |
| | Location: 1334 First Street | | | |
| | City: Livermore, California | | | Sheet of <u>2</u> / <u>3</u> |
| | Logged By: wtj | | Driller: V&W | |
| Casing Installation data: | | | | |

| | | |
|---|-----------------------|--------|
| Drilling Method: Hollow Stem Auger | Top of Box Elevation: | Datum: |
| Hole Diameter: 8-inch | | |

| PID (ppm) | Blows Pressure (PSI) | Type of Sample | Sample Number | Depth (ft.) | Sample Interval | Well Detail | Soil Group Symbol (USCS) | Water Level | Time | Date |
|-----------|----------------------|----------------|---------------|-------------|-----------------|-------------|--------------------------|--|------|------|
| | 39 | S&H | MW-3R | 21 | X | | GM | AS ABOVE - COLOR CHANGE TO dark grayish brown (10YR 4/2), moist. | | |
| | 50 | | 20.5 | | | | | | | |
| | | | | 22 | | | | | | |
| | | | | 23 | | | | | | |
| | | | | 24 | | | | | | |
| | | | | 25 | | | | | | |
| | 34 | S&H | | 26 | X | | GM | AS ABOVE - very moist to saturated. | | |
| | 30 | | MW-3R | | | | | | | |
| | 10 | | 26.5 | | | | | | | |
| | | | | 27 | | | | | | |
| | | | | 28 | | | | | | |
| | | | | 29 | | | | | | |
| | 16 | S&H | | 30 | | | GC | CLAYEY GRAVEL (GC) - yellowish brown (10YR 5/4), saturated, dense, 60% fine to medium gravel, 20% fine to coarse sand, 20% clay. | | |
| | 20 | | MW-3R | | | | | | | |
| | 16 | | 31.0 | | | | | | | |
| | | | | 32 | | | | | | |
| | | | | 33 | | | | | | |
| | | | | 34 | | | | | | |
| | 14 | S&H | NR | 35 | | | GC | AS ABOVE - moist | | |
| | 18 | | | | | | | | | |
| | 20 | | | | | | | | | |
| | | | | 36 | | | | | | |
| | | | | 37 | | | | | | |
| | | | | 38 | | | | | | |
| | | | | 39 | | | | | | |
| | | | | 40 | | | | | | |

Remarks:

NR = No sample recovery



EXPLORATORY BORING LOG

| | | | | |
|---|------------------------------|---------------|--------------|--------|
| Field Location of Boring: <p style="font-size: 1.2em;">See Figure 1</p> | Project No. 9-2864 | Date: 6.10.96 | Boring No. | |
| | Client: CHEVRON PRODUCTS CO. | | MW-3R | |
| | Location: 1334 First Street | | | |
| | City: Livermore, California | | Sheet of | 3 3 |
| | Logged By: wtj | Driller: V&W | | |
| Casing Installation data: | | | | |

| | |
|---|-----------------------|
| Drilling Method: Hollow Stem Auger | Top of Box Elevation: |
| Hole Diameter: 8-inch | Datum: |

| PID (ppm) | Blows Pressure (PSI) | Type of Sample | Sample Number | Depth (ft.) | Sample Interval | Well Detail | Soil Group Symbol (USCS) | Remarks |
|-----------|----------------------|----------------|---------------|-------------|-----------------|-------------|--------------------------|---|
| | 27 | S&H | NR | 41 | | | GC | CLAYEY GRAVEL (GC) - yellowish brown (10YR 5/4), saturated, dense, 60% fine to medium gravel, 20% fine to coarse sand, 20% clay. |
| | 39 | | | 42 | | | | |
| | 49 | | | 43 | | | | |
| | | | | 44 | | | | BOTTOM OF BORING AT 43.0 FEET 6.10.96 |
| | | | | 45 | | | | |
| | | | | 46 | | | | |
| | | | | 47 | | | | |
| | | | | 48 | | | | |
| | | | | 49 | | | | |
| | | | | 50 | | | | |
| | | | | 51 | | | | |
| | | | | 52 | | | | |
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| | | | | 57 | | | | |
| | | | | 58 | | | | |
| | | | | 59 | | | | |
| | | | | 60 | | | | |

Remarks: **NR - No Recovery** **BOTTOM OF BORING AT 43.0 FEET
6.10.96**