

ENVIRONMENTAL
DETECTION

98 SEP 16 PH 4: 05



Chevron

September 13, 1996

Mr. Scott Seery
Alameda County Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Chevron U.S.A. Products Company
6001 Bollinger Canyon Road
Building L
San Ramon, CA 94583
P.O. Box 5004
San Ramon, CA 94583-0804

Marketing - Northwest Region
Phone 510 842 9500

Re: Chevron Service Station #9-0917
5820 Hopyard Road, Pleasanton, California

Dear Mr. Seery:

Per my letter of July 31, 1996 and supplemental phone conversation, I am enclosing a revised Work Plan that was prepared by our consultant Pacific Environmental Group Inc., showing the installation of three monitoring wells, in lieu of installing 6 geoprobes as originally proposed. This soil and groundwater investigation is to determine the lateral extent of petroleum hydrocarbons in the groundwater southerly of the above noted site.

Soil and water samples will be analyzed for TPH-g, BTEX and MtBE constituents. Additionally, physical parameters will be determined, which may include fractional organic carbon content, bulk density, porosity, and water content. These parameters may be utilized for the determination of a Risk Based Corrective Action at this site.

Your approval to this Work Plan is requested. If you have any questions, call me at (510) 842-9136.

Sincerely,
CHEVRON PRODUCTS COMPANY

Philip R. Briggs
Site Assessment and Remediation Project Manager

Enclosure

cc. Mr. Eddie So, RWQCB-San Francisco Bay Region
2101 Webster St., Suite 500, Oakland, CA 94612

Property Owners, C & H Development Co.
3744 Mt Diablo Blvd., Suite 301 Lafayette, CA 94549

Ms. Bette Owen, Chevron



PACIFIC
ENVIRONMENTAL
GROUP INC.

September 4, 1996
Project 320-164.1A

Mr. Phil Briggs
Chevron Products Company
P.O. Box 5004
San Ramon, California 94583-0804

Re: Revised Soil and Groundwater Investigation Work Plan
Chevron Service Station 9-0917
5820 Hopyard Road at Owens Drive
Pleasanton, California

Dear Mr. Briggs:

This letter, prepared by Pacific Environmental Group, Inc. (PACIFIC) on behalf of Chevron Products Company (Chevron), presents a revised work plan to perform a soil and groundwater investigation at the site referenced above (Figures 1 and 2). The original *Soil and Groundwater Investigation Work Plan* (PACIFIC, May 15, 1996) proposed the installation of six geoprobes to define the lateral extent of petroleum hydrocarbons in groundwater off site to the south and southeast. Then, based on the results, install groundwater monitoring wells.

The following revised work plan is based on the discussion and follow-up letter between Chevron and the Alameda County Health Care Services Agency on July 31, 1996. The work plan proposes the installation of three groundwater monitoring wells to define the lateral extent of petroleum hydrocarbons in groundwater off-site to the south and southeast. This work is being performed pursuant to provisions of Article 11, Corrective Action Requirements, Title 23, California Code of Regulations. Information generated from this investigation will be used for developing corrective action at the site.

This work plan includes a brief discussion of site background, proposed scope of work, and schedule. Field and laboratory procedures are presented as Attachment A.

SITE BACKGROUND

The site is an existing Chevron service station located at 5280 Hopyard Road at Owens Drive in Pleasanton, California. Groundwater Monitoring Wells MW-1, MW-2, and MW-3 were installed during August 1989 by Groundwater Technology, Inc. During

June 1991, five underground storage tanks (USTs), consisting of four 10,000-gallon fiberglass tanks used for gasoline and diesel and one 550-gallon steel tank for used oil, were removed and replaced with double-walled tanks. During July 1991, existing Wells MW-1, MW-2, and MW-3 were abandoned and replaced with groundwater Monitoring Wells MW-4, MW-5, and MW-6.

Quarterly groundwater gauging and sampling events have been performed at this site since July 1989. Presented below is a summary of these events:

- Depth to groundwater beneath the site ranges from approximately 8 to 10 feet below ground surface (bgs). Historically, groundwater flow direction has been variable. Gauging data from June 1996 indicate that groundwater flow beneath the site was westerly with an approximate gradient of 0.003 ft/ft.
- Historically, total purgeable petroleum hydrocarbons calculated as gasoline (TPPH-g) and benzene concentrations were non-detectable in Wells MW-1 through MW-4 except for sporadic low levels of hydrocarbons detected in Wells MW-1 and MW-4. TPPH-g and benzene concentrations have historically been reported in Wells MW-5 and MW-6. During the second quarter 1996 sampling event, Well MW-5 reported 26,000 parts per billion (ppb) TPPH-g and 4,300 ppb benzene. Well MW-6 reported 950 ppb TPPH-g and 110 ppb benzene during the second quarter 1996 monitoring event.

PROPOSED SCOPE OF WORK

The proposed scope of work for this investigation has been designed to define the extent of petroleum hydrocarbons in soil and groundwater off site to the south and southeast. The specific proposed scope of work is discussed below.

- **Access.** Prior to commencing field work, access to adjoining properties will be acquired.
- **Permits.** PACIFIC will obtain the appropriate groundwater monitoring well permits from Alameda County prior to initiating field work.
- **Well Installation.** Three groundwater monitoring wells (Wells MW-7 through MW-9) are proposed to delineate the extent of petroleum hydrocarbons in groundwater. Proposed well locations are shown on Figure 2.
- **Soil and Groundwater Analysis.** Selected soil samples and groundwater samples will be submitted to a California State-certified laboratory and analyzed for the presence of TPPH-g, benzene, toluene,

ethylbenzene, and xylenes (BTEX compounds), and methyl tertiary-butyl ether (MtBE). Additionally, physical parameters of each lithologic unit encountered will be determined. These physical parameters may include fractional organic carbon content, bulk density, porosity, and water content. These parameters may be utilized for the determination of Risk-Based Corrective Action at the site.

- **Groundwater Flow Direction Study.** PACIFIC will perform a study regarding regional and site groundwater flow direction for the site. This analysis will consist of a review of topographic and geologic maps, and a review of site reports and regional literature.
- **Report.** Upon completion of all field activities and receipt of laboratory data, a technical report will be prepared including boring logs, site map, soil and groundwater analytical results, chain-of-custody documentation, and findings.

SCHEDULE

Drilling at the site will be performed upon the approval of all necessary permits. Assuming standard laboratory turnaround time, the analytical results are expected to be received 2 weeks after completion of drilling activities. Based on the foregoing schedule, a technical assessment report should be completed 6 weeks after the drilling of the wells.

If you have any questions regarding the contents of this letter, please call.

Sincerely,

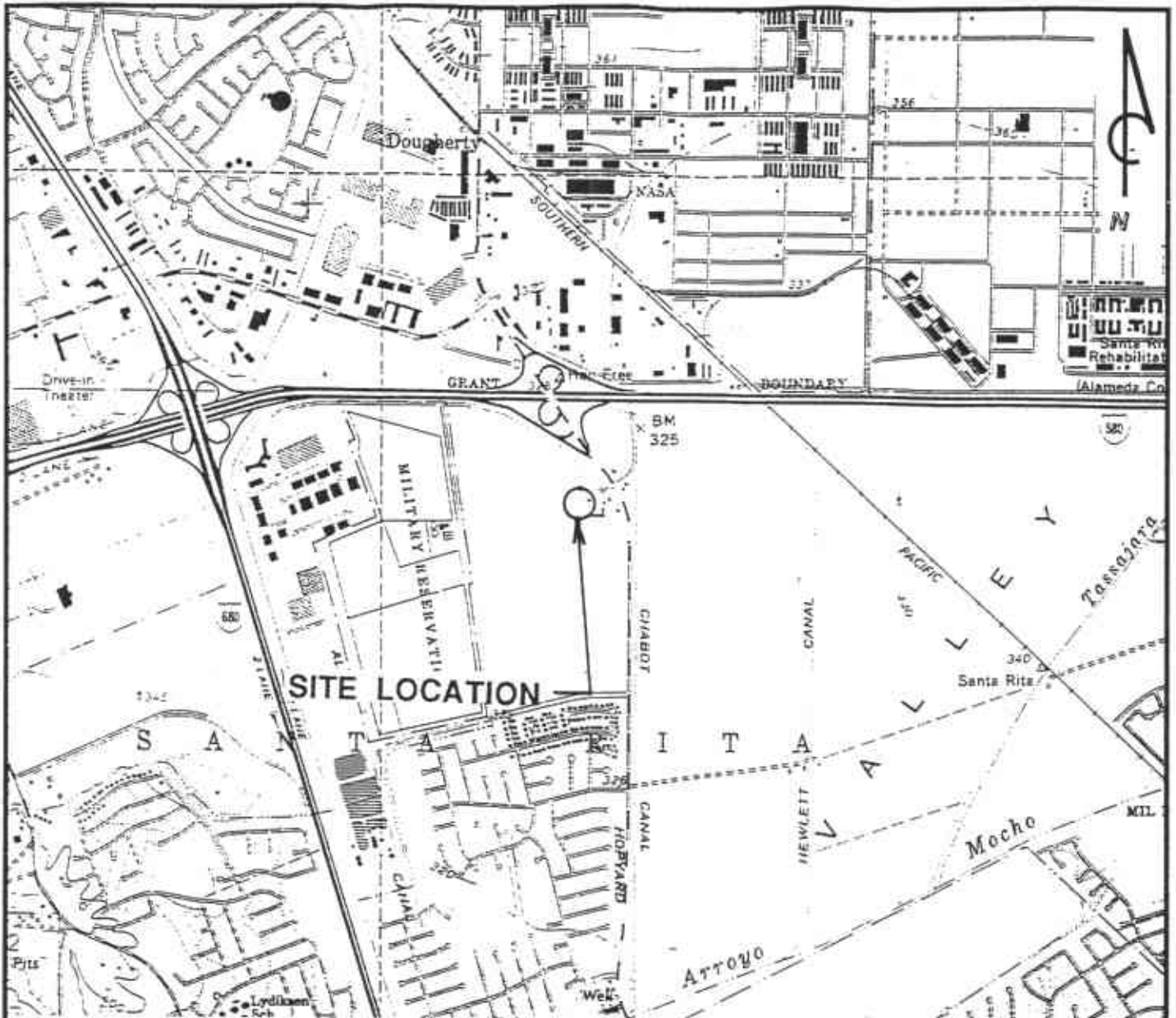
Pacific Environmental Group, Inc.



Ross W.N. Tinline
Project Geologist
RG 5860



Attachments: Figure 1 - Site Location Map
Figure 2 - Proposed Well Location Map
Attachment A - Field and Laboratory Procedures



QUADRANGLE
LOCATION

REFERENCES:

USGS 7.5 MIN. TOPOGRAPHIC MAP
TITLED: DUBLIN, CALIFORNIA
DATED: 1965 REVISED: 1980

SCALE IN FEET

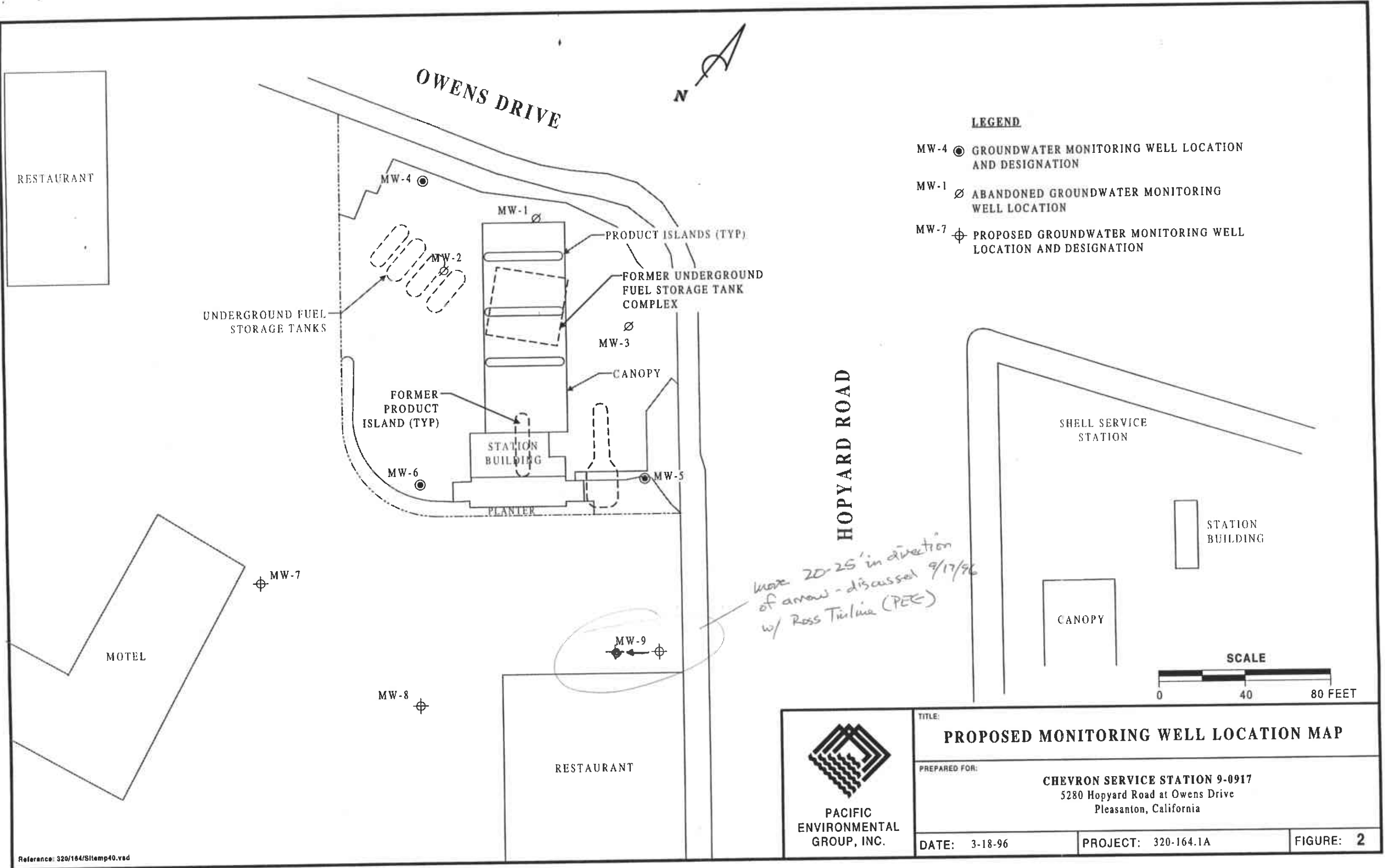


PACIFIC
ENVIRONMENTAL
GROUP, INC.

CHEVRON U.S.A. SERVICE STATION 9-0917
5280 Hopyard Road at Owens Drive
Pleasanton, California

SITE LOCATION MAP

FIGURE:
1
PROJECT:
320-164.1A



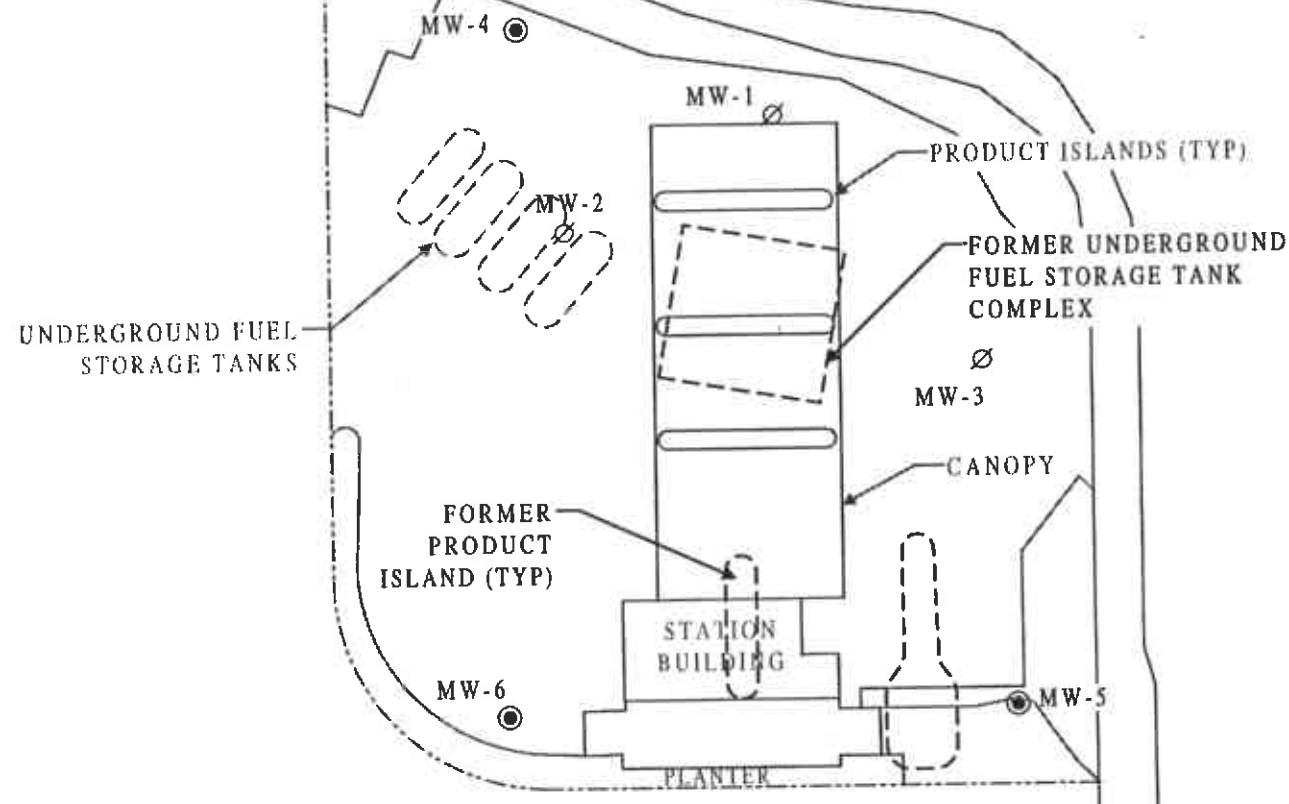
RESTAURANT

OWENS DRIVE



LEGEND

- MW-4 ● GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- MW-1 ∅ ABANDONED GROUNDWATER MONITORING WELL LOCATION
- MW-7 ⊕ PROPOSED GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION



HOPYARD ROAD

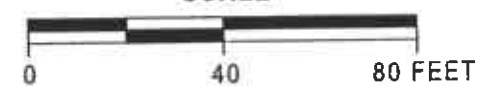
max 20-25' in direction of arrow - discussed 9/17/96 w/ Ross Turlina (PEE)

SHELL SERVICE STATION


STATION BUILDING

CANOPY

SCALE



Reference: 320/164/Sitamp40.vsd

 PACIFIC ENVIRONMENTAL GROUP, INC.	TITLE: PROPOSED MONITORING WELL LOCATION MAP		
	PREPARED FOR: CHEVRON SERVICE STATION 9-0917 5280 Hopyard Road at Owens Drive Pleasanton, California		
	DATE: 3-18-96	PROJECT: 320-164.1A	FIGURE: 2

ATTACHMENT A
FIELD AND LABORATORY PROCEDURES

ATTACHMENT A

FIELD AND LABORATORY PROCEDURES

Soil Boring Drilling Procedures

The boring for the monitoring well will be drilled using 8-inch diameter hollow-stem auger drilling equipment. The boring will be logged by a PACIFIC geologist using the Unified Soil Classification System and standard geologic techniques. Soil samples for logging and chemical analysis will be collected at a minimum of 5-foot depth intervals by advancing a California-modified split-spoon sampler with brass liners into undisturbed soil beyond the tip of the auger. The sampler is driven a maximum of 18 inches using a 140-pound hammer with a 30-inch drop. Soil samples will be analyzed in the field for volatile organic compounds using a photo-ionization detector (PID). Results of the PID tests will be used to assist in selection of samples for laboratory analysis. Up to two samples may be submitted for analyses as described below. Soil samples for chemical analysis will be retained in brass liners, capped with Teflon and plastic end caps, and sealed in zip-lock plastic bags. These samples will be placed in a cooler on ice for transport to the laboratory accompanied by chain-of-custody documentation. The temperature of the cooler will be recorded upon delivery to the laboratory.

All down-hole drilling equipment will be steam-cleaned prior to drilling and between boring locations.

Well Installation Procedures

The boring will be converted to a groundwater monitoring well with the installation of a minimum 2-inch diameter Schedule 40 PVC casing and 0.020-inch factory-slotted screen. Screen will be placed through the saturated zone and extend no more than 15 feet below first encountered groundwater. Graded sand pack (Lonestar 2 x 12) will be placed in the annular space across the screened interval, and will extend approximately 1 to 2 feet above the screen, depending on depth to groundwater. A maximum 1 foot of bentonite will be placed on the top of the sand pack. A neat cement grout will be placed by means of a tremie pipe lowered to within 3 feet of the bentonite layer. The sealing material will be placed in one continuous operation until the borehole is filled. The tremie pipe shall remain in place in the sealing

material until placement is complete. A waterproof locking cap with permanently attached appropriate identification will be completed within a waterproof protective vault box. The monitoring well will be surveyed for location and for elevation relative to mean sea level.

Organic Vapor Procedures

Soil samples collected during field work will be analyzed in the field for ionizable organic compounds using the HNU Model PI 101 PID with a 10.2 eV lamp. The test procedure involves measuring approximately 30 grams from an undisturbed soil sample, placing this subsample in a clean resealable plastic bag. The bag is sealed and then warmed for approximately 20 minutes, then pierced and the head-space within the bag is tested for total organic vapor measured in parts per million as benzene (ppm; volume/volume). The instrument is previously calibrated using a 100-ppm isobutylene standard (in air) and a sensitivity factor of 0.7, which relates the photo-ionization sensitivity of benzene (7.0 ppm) to that of isobutylene.

Laboratory Procedures

Selected soil samples from the soil borings will be analyzed in the laboratory for the presence of total petroleum hydrocarbons calculated as gasoline, benzene, toluene, ethylbenzene, and xylenes by modified EPA Methods 8015 and 8020. The samples will be examined using the purge and trap technique, with final detection by gas chromatography using a flame-ionization detector as well as a PID. All analyses will be performed by a California State-certified laboratory.