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Chevron

August 3, 1994

Chevron U.S.A. Products Company
2410 Camino Ramon
San Ramon, CA 94583
P.O. Box 5004
San Ramon, CA 94583-0804

Marketing Department
Phone 510 842 9500

Ms. Susan Hugo
Alameda County Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

(510) 842-8252 fax

Re: Chevron Service Station #9-0338
5500 Telegraph Avenue, Oakland, CA

Dear Ms. Hugo:

Enclosed is the Request for Site Closure report dated July 6, 1994, prepared by our consultant Pacific Environmental Group for the above referenced site. The report addresses in detail each item outlined in the Format of Letter of Recommendation for UST Case Closure memorandum from the Regional Water Quality Control Board (RWQCB) dated February 26, 1992. As indicated in the report, site data collected to date clearly indicate that this site meets all requirements for closure.

We would appreciate your review and formal concurrence to the RWQCB of this closure recommendation. No further work is planned for this site.

If you have any questions or comments, please do not hesitate to call me at (510) 842-8134.

Sincerely,
CHEVRON U.S.A. PRODUCTS COMPANY

Mark A. Miller
Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Kevin Graves, RWQCB - Bay Area
Mr. S.A. Willer

File: 9-0338 CLOS1

PACIFIC
ENVIRONMENTAL
GROUP, INC.

July 6, 1994
Project 320-107.6A

Mr. Mark A. Miller
Chevron U.S.A. Products Company
P.O. Box 5004
San Ramon, California 94583

Re: Request for Site Closure
Chevron U.S.A. Service Station 9-0338
5500 Telegraph Avenue at 55th Street
Oakland, California

Dear Mr. Miller:

This letter was prepared by Pacific Environmental Group, Inc. (PACIFIC) for Chevron U.S.A. Products Company (Chevron) to present a review of current site conditions, and to evaluate the potential for site closure at the Chevron service station referenced above (Figure 1).

After a review of site data, site closure is deemed appropriate due to the long-term absence of hydrocarbons in groundwater and the minimal extent of hydrocarbon-affected soils initially found beneath the site. Hydrocarbons in groundwater have repeatedly been below method detection limits over the last 4 years with the exception of sporadic detections of trace concentrations. All wells have been below detection limits for benzene, toluene, ethylbenzene, and xylenes (BTEX compounds) since February 1992.

The following letter is formatted as recommended in the memorandum from the San Francisco Regional Water Quality Control Board dated February 26, 1992.

SITE DESCRIPTION

The site is located at the corner of Telegraph Avenue and 55th Street in Oakland, California (Figure 1). The property is currently occupied by a Chevron service station. The locations of site facilities are shown on Figure 2.

PREVIOUS WORK/SITE HISTORY

In October 1988, a 1,000-gallon waste oil tank was removed from the eastern portion of the site (Figure 2). A soil sample collected beneath the tank was below detection limits for total petroleum hydrocarbons calculated as diesel (TPH-d), total oil and grease (TOG), and EPA Method 8240 compounds. A sample from the excavation stockpile contained a TOG concentration of 81 parts per million (ppm).

In July 1989, a trench was excavated to hold new gasoline product lines. Initial sampling detected TPH concentrations up to 800 ppm in the trench area adjacent to the western side of the dispenser pump island located closest to Telegraph Avenue. Over several days a series of soil samples were taken from the trench at depths ranging from 4.5 to 6.75 feet. TPH calculated as gasoline (TPH-g) concentrations ranged from below detection limits to 480 ppm.

INVESTIGATIVE METHODS

In September 1989, Alameda County Health Care Services requested Chevron perform a preliminary assessment to determine the extent of groundwater contamination that resulted from the above described release of hydrocarbons to the soil.

In November 1989, three exploratory borings (Borings C-1, C-2, and C-3) were drilled on site by GeoStrategies, Inc. (Figure 3). The exploratory borings were drilled using a truck-mounted hollow-stem auger drilling rig and were subsequently converted to groundwater monitoring wells. Soil samples were collected at 5-foot depth intervals using a California-modified split-spoon sampler fitted with clean brass tube liners. Selected soil samples retained for chemical analysis were collected as described above, covered on both ends with aluminum foil, and sealed with plastic end caps. Samples were transported in a cooler with blue ice to a state-certified laboratory. Table 1 presents soil analytical data.

Borings were converted to monitoring wells using 2-inch diameter Schedule 40 PVC well casing and 0.020-inch factory-slotted well screen.

Groundwater samples have been recovered from the site wells 11 times since November 1989. Analyses have been for TPH-g according to EPA Method 8015 (modified) and BTEX compounds according to EPA Method 8020. Due to its close proximity to the waste oil tank, the initial groundwater sample from Well C-3 was also analyzed for TPH-d using EPA Method 8015 (modified), TOG using EPA Method 503E, ICAP metals and volatile organic compounds (VOCs) using EPA Method 8240. Table 2 presents groundwater analytical data.

EXTENT OF HYDROCARBONS IN SOIL AND GROUNDWATER

Hydrocarbon-affected soils were confined to a small area near one dispenser island. All soil boring samples submitted for analysis were reported below detection limits for TPH-g and BTEX compounds (Table 1). Soil samples collected from Boring C-3 were also below detection limits for TPH-d, TOG, and VOCs. ICAP metals concentrations were reported consistent with naturally existing levels.

Groundwater monitoring data for Wells C-1, C-2, and C-3 have consistently shown TPH-g and BTEX compound concentrations below or near the detection limit (Table 2). All wells have been below detection limits for BTEX compounds since February 1992. Benzene concentrations have never exceeded 1.0 part per billion.

SITE HYDROGEOLOGIC CONDITIONS

Soils beneath the site consist of the interlayering of silt, clay, and clayey gravel. Several layers of silty and gravelly sand were encountered within the generally fine-grained soil profile. Groundwater was first encountered in borings at a depth of 24 to 25 feet. The observed water levels rose to a depths of approximately 10 to 12 feet over a 24-hour period. It appears that groundwater beneath the site is at least partially confined. Depth to groundwater in wells has ranged from approximately 7 to 11 feet since November 1989 (Table 3).

Groundwater flow is from northeast to southwest across the site (Figure 3). Hydraulic gradient was reported in July 1990 as 0.013.

BENEFICIAL USES OF GROUNDWATER

Due to the lack of site impact on groundwater, no local well inventory was performed. Groundwater beneath the site and any nearby areas is protected by the clayey nature of local soils producing confined to semi-confined shallow groundwater conditions. All groundwater-bearing layers encountered beneath the site were underlain by at least 5 feet of clay, prohibiting downward migration to any deeper groundwater zones.

REMEDIATION ACTIVITIES AND EFFECTIVENESS

Soils within the only impacted area of the site were excavated to the satisfaction of Alameda County Hazardous Materials Division in 1989 (letter from County dated September 13, 1989.) No groundwater remediation has been required. Hydrocarbon levels have consistently been below or near detection limits.

SUMMARY AND CONCLUSIONS

Site data indicated that any hydrocarbon release was of a small areal extent. Soils capable of acting as a source of hydrocarbons to groundwater were removed in 1989. Any previous entry of hydrocarbons into groundwater beneath the site was minimal at most and can no longer be detected. The clayey nature of site soils isolates shallow groundwater from any deeper usable zones.

RECOMMENDATIONS

PACIFIC recommends site closure.

Please call if you have any questions regarding this letter.

Sincerely,

Pacific Environmental Group, Inc.

R. Lee Dooley
Senior Geologist
CEG 1006

Steven E. Krcik
Senior Geologist
RG 4976

Attachments:
- Table 1 - Soil Analytical Data - Total Petroleum Hydrocarbons (TPH as Gasoline, BTEX Compounds, TPH as Diesel, and Total Oil and Grease)
- Table 2 - Groundwater Analytical Data - Total Petroleum Hydrocarbons (TPH as Gasoline, BTEX Compounds, TPH as Diesel, and Total Oil and Grease)
- Table 3 - Groundwater Elevation Data
- Figure 1- Site Location Map
- Figure 2- Site Map
- Figure 3- Groundwater Elevation Contour Map

Table 1
Soil Analytical Data
Total Petroleum Hydrocarbons
(TPH as Gasoline, BTEX Compounds, TPH as Diesel, and Total Oil and Grease)

Chevron Service Station 9-0338
5500 Telegraph Avenue at 55th Street
Oakland, California

Sample ID	Date Sampled	Sample Depth (feet)	TPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Xylenes (ppm)	TPH as Diesel (ppm)	Total Oil and Grease (ppm)
Groundwater Monitoring Wells									
C-1	11/13/89	10.5	<1	<0.05	<0.05	<0.05	<0.05	NA	NA
		15.5	<1	<0.05	<0.05	<0.05	<0.05	NA	NA
		25.5	<1	<0.05	<0.05	<0.05	<0.05	NA	NA
C-2	11/13/89	10.5	<1	<0.05	<0.05	<0.05	<0.05	NA	NA
		15.5	<1	<0.05	<0.05	<0.05	<0.05	NA	NA
		25.5	<1	<0.05	<0.05	<0.05	<0.05	NA	NA
C-3	11/13/89	10.5	<1	<0.05	<0.05	<0.05	<0.05	<10	<20
		15.5	<1	<0.05	<0.05	<0.05	<0.05	<10	<20
		25.5	<1	<0.05	<0.05	<0.05	<0.05	<10	<20
Waste Oil Tank Excavation									
WOOP	10/05/88	8.0	NA	NA	NA	NA	NA	<10	<50
Pump Island and Product Line Excavation									
1	07/11/89	6.75	<1	<0.05	<0.1	<0.1	<0.1	NA	NA
2	07/11/89	6.75	130	<0.05	<0.1	2.2	3.0	NA	NA
3	07/11/89	6.25	<1	<0.05	<0.1	<0.1	<0.1	NA	NA
4	07/11/89	6.25	480	0.31	<0.1	10	28	NA	NA

ppm = Parts per million
< = Not detected at specified detection limit
NA = Not analyzed

Table 2
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPH as Gasoline, BTEX Compounds, TPH as Diesel, and Total Oil and Grease)

Chevron Service Station 9-0338
5500 Telegraph Avenue at 55th Street
Oakland, California

Well Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	TPH as Diesel (ppb)	Total Oil and Grease (ppb)
C-1	11/21/89	<500	<0.5	<0.5	<0.5	<0.5	NA	NA
	03/20/90	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	06/27/90	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	10/12/90	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	12/20/90	75	<0.5	0.9	0.8	3	NA	NA
	04/10/91	<50	0.9	1.5	<0.5	1.5	NA	NA
	02/26/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	02/04/93	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	07/27/93	<50	<0.5	<0.5	<0.5	<1.5	NA	NA
	09/22/93	79	<0.5	<0.5	<0.5	<1.5	NA	NA
	11/15/93	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
C-2	11/21/89	<500	<0.5	<0.5	<0.5	<0.5	NA	NA
	03/20/90	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	06/27/90	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	10/12/90	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	12/20/90	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	04/10/91	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	02/26/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	02/04/93	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	07/27/93	<50	<0.5	<0.5	<0.5	<1.5	NA	NA
	09/22/93	<50	<0.5	<0.5	<0.5	<1.5	NA	NA
	11/15/93	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
C-3	11/21/89	<500	<0.5	<0.5	<0.5	<0.5	NA	NA
	01/12/90	NA	NA	NA	NA	NA	<1,000	<5,000
	03/20/90	<50	<0.5	<0.5	<0.5	<0.5	<50	<5,000
	06/27/90	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	10/12/90	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	12/20/90	54	<0.5	<0.5	<0.5	0.7	NA	NA
	04/10/91	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	02/26/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	02/04/93	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	07/27/93	280 *	<0.5	<0.5	<0.5	<1.5	NA	NA
	09/22/93	<50	<0.5	<0.5	<0.5	<1.5	NA	NA
	11/15/93	<50	<0.5	<0.5	<0.5	<0.5	NA	NA

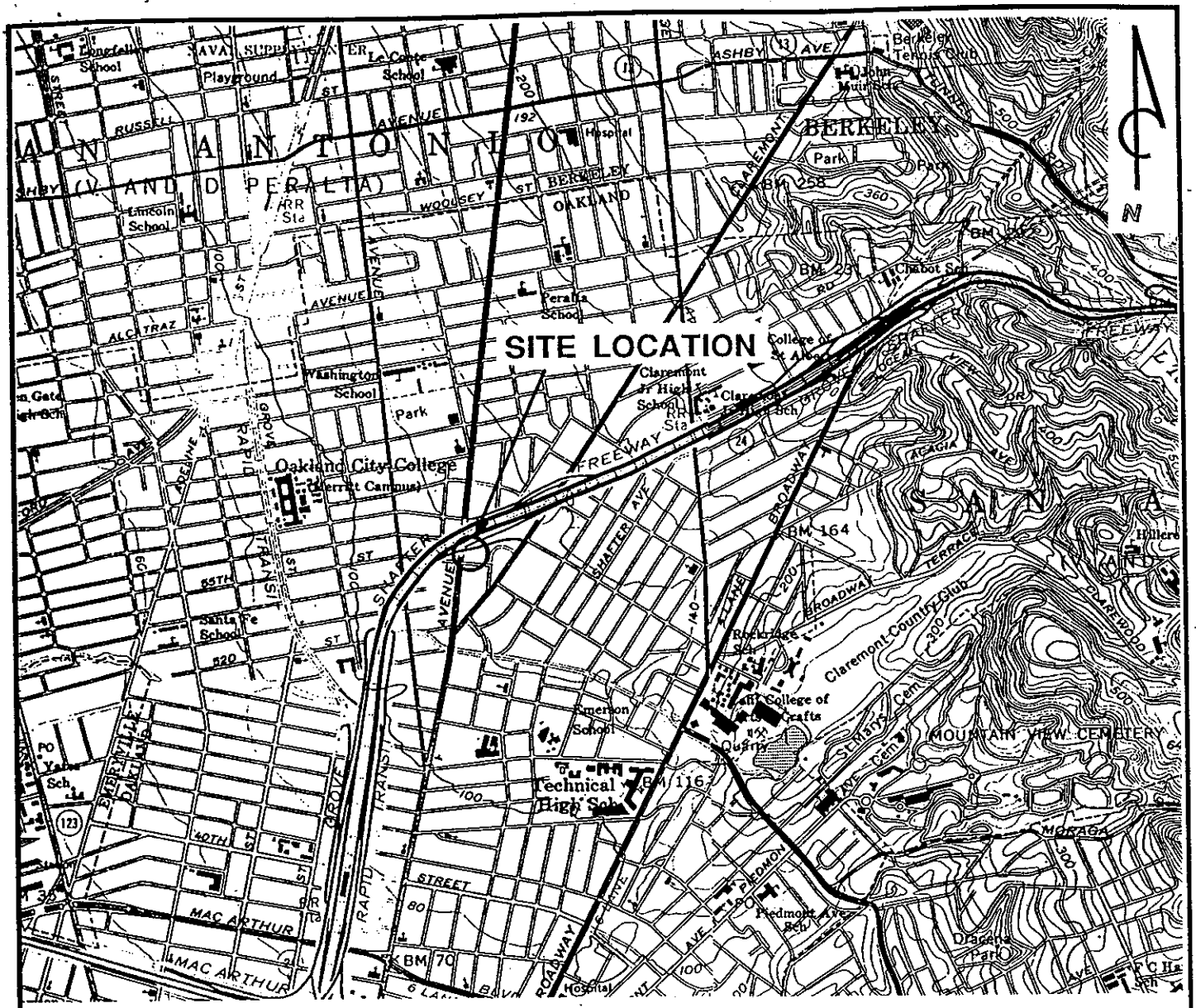
ppb = Parts per billion
NA = Not analyzed
* = Atypical chromatograph pattern reported by laboratory.

Table 3
Groundwater Elevation Data

Chevron Service Station 9-0338
5500 Telegraph Avenue at 55th Street
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)
C-1	11/21/89	123.88	10.75	113.13
	03/20/90		9.93	113.95
	06/27/90		9.64	114.24
	10/12/90		10.91	112.97
	12/20/90		9.76	114.12
	04/10/91		8.76	115.12
	02/26/92		8.08	115.80
	02/04/93		8.26	115.62
	07/27/93		10.04	113.84
	09/22/93		10.32	113.56
	11/15/93		10.40	113.48
C-2	11/21/89	124.92	10.75	114.17
	03/20/90		9.44	115.48
	06/27/90		9.55	115.37
	10/12/90		10.89	114.03
	12/20/90		9.65	115.27
	04/10/91		8.04	116.88
	02/26/92		7.03	117.89
	02/04/93		7.06	117.86
	07/27/93		9.78	115.14
	09/22/93		9.97	114.95
	11/15/93		10.32	114.60
C-3	11/21/89	125.64	11.28	114.36
	01/12/90		--	--
	03/20/90		10.39	115.25
	06/27/90		10.32	115.32
	10/12/90		11.28	114.36
	12/20/90		10.25	115.39
	04/10/91		8.79	116.85
	02/26/92		7.83	117.81
	02/04/93		7.94	117.70
	07/27/93		10.59	115.05
	09/22/93		10.78	114.86
	11/15/93		11.06	114.58

MSL = Mean sea level
TOB = Top of box



QUADRANGLE LOCATION

REFERENCES:

USGS 7.5 MIN. TOPOGRAPHIC MAP
TITLED: OAKLAND EAST, CALIFORNIA
DATED: 1959 REVISED: 1980
TITLED: OAKLAND WEST, CALIFORNIA
DATED: 1959 REVISED: 1980

SCALE IN FEET

2000 0 2000

PACIFIC ENVIRONMENTAL GROUP, INC.

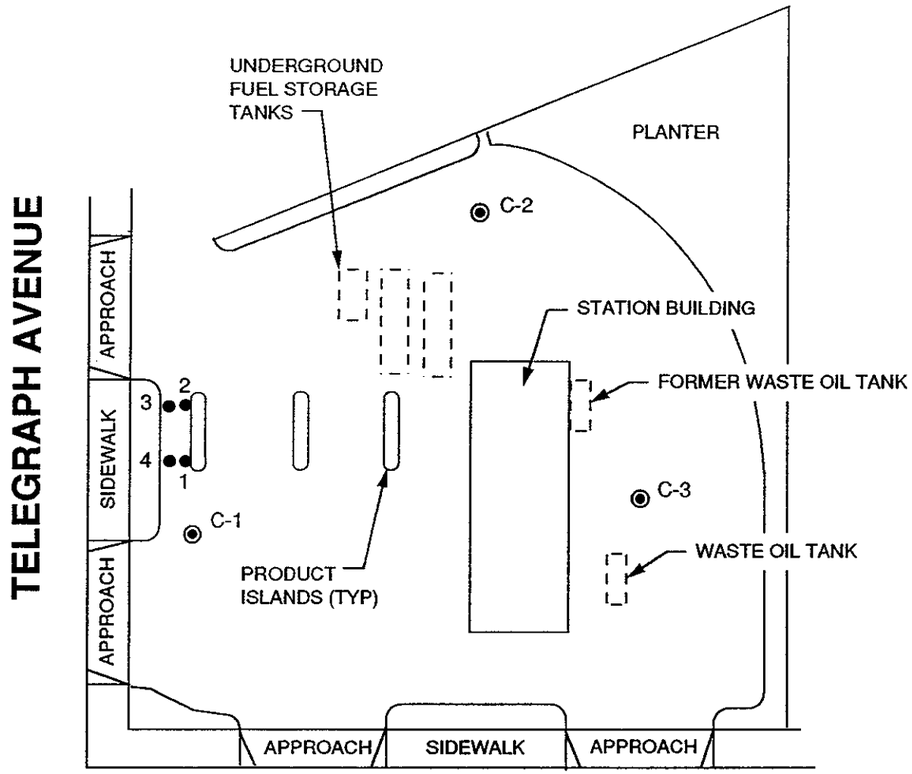
CHEVRON SERVICE STATION #0338
5500 Telegraph Avenue
Oakland, California

SITE LOCATION MAP

FIGURE: 1

PROJECT: 320-107.6A

N



55th AVENUE

LEGEND

C-1 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

1 ● SOIL SAMPLE LOCATION AND DESIGNATION, JULY 11, 1989

REFERENCE: BASEMAP FROM GROUNDWATER TECHNOLOGIES, DECEMBER, 1993

PACIFIC ENVIRONMENTAL GROUP, INC.

SCALE
0 40 80 FEET

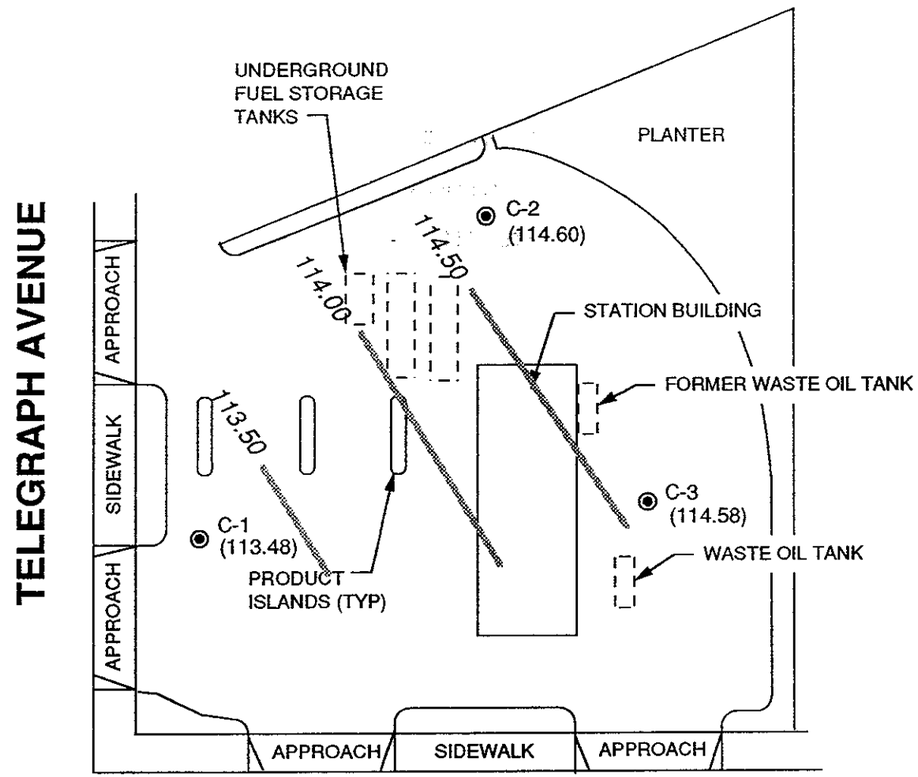
CHEVRON USA SERVICE STATION 9-0338
5500 Telegraph Avenue at 55th Avenue
Oakland, California

SITE MAP

FIGURE:
2
PROJECT:
320-107.6A

07/06/94

N



LEGEND

C-1 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

(114.60) GROUNDWATER ELEVATION IN FEET - MSL, 11-5-93

114.50 GROUNDWATER ELEVATION CONTOUR IN FEET - MSL, 11-5-93

REFERENCE: BASEMAP FROM GROUNDWATER TECHNOLOGIES, DECEMBER, 1993

PACIFIC ENVIRONMENTAL GROUP, INC.

SCALE
0 40 80 FEET

CHEVRON USA SERVICE STATION 9-0338
5500 Telegraph Avenue at 55th Avenue
Oakland, California

GROUNDWATER ELEVATION CONTOUR MAP

FIGURE:
3
PROJECT:
320-107.6A

07/06/94