Weiss Associates

Environmental and Geologic Services

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December 21, 1995

Scott Seery
Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alemeda, California 94502-6577

RE: **Dispenser Replacement Sampling**
Shell Service Station
WIC #204-6138-0303
4226 First Street
Pleasanton, California
WA Job #81-0571-008

Dear Mr. Seery:

On behalf of Shell Oil Products Company (Shell), Weiss Associates (WA) submits this report documenting soil sampling and excavation for the recent fuel dispenser and product piping replacements at the above referenced service station (Figure 1 and 2). The former dispensers and piping were used to pump gasoline from the sites underground storage tanks. The objective of this sampling was to assess whether hydrocarbons are in soil beneath these structures. WA's scope of work, the site background, and the soil sampling results are presented below.

SCOPE OF WORK

WA's scope of work for this investigation was to:

- Collect soil samples from beneath the former dispensers and product piping joints for laboratory analysis;
- Analyze the soil samples for petroleum hydrocarbons;
- Direct overexcavation of hydrocarbon-bearing soil;
- Sample and dispose of the excavated soil; and
- Report the results.

SITE BACKGROUND

Location: The operating Shell service station is located at the southeast corner of First Street and Vineyard Avenue in Pleasanton, California (Figure 1).

Surroundings: Residential and commercial development.

Ground Water Depth: According to Chris Boykin of the Pleasanton Fire Department (PFD), ground water is about 60 ft below ground surface at this site.

INITIAL SAMPLING RESULTS

Parties Present: WA Geologist Faith Daverin collected the soil samples. PFD Inspector Chris Boykin observed and directed the soil sampling. Paradiso Mechanical of San Leandro, California excavated the trenches, removed the product lines, assisted with the sampling and replaced the dispensers and piping.

Sampling Dates: September 8 and 11, 1995.

Number of Initial Samples: Six: Four dispenser samples DP-1(3.0), DP-2(7.5), DP-3(8.0) and DP-4(8.5) were collected at various depths beneath the former dispensers. Product line samples PT-1 and PT-2 were collect beneath former piping joints at 4.0 and 4.5 ft below ground surface (bgs), respectively. PFD inspector Chris Boykin requested that "stained, odorous soil" that she observed be excavated to the extent feasible from beneath the former dispensers. Sample locations are presented on Figure 3.

Soil Sampling Method: Soil samples were collected by driving clean brass tubes into undisturbed soil from the backhoe bucket. All sample tubes were immediately sealed with Teflon sheeting and plastic caps and placed on ice in a cooler for transport to the state-certified analytical laboratory.

Analytical Laboratory: Sequoia Analytical in Redwood City, California.

Analytical Methods: Soil samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) by modified EPA Method 8015 and benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8020. The certified analytical reports and chain-of-custody forms are included in Attachment A.

Analytic Results: Only one sample contained more than 3 parts per million (ppm) TPH-G: 120 ppm TPH-G was detected in soil at 8 ft beneath the former eastern dispenser. No benzene was detected in any samples, except one where benzene was slightly above the laboratory method detection limit.

SOIL OVEREXCAVATION AND CONFIRMATION SAMPLING

Overexcavation Objective: To remove hydrocarbon-bearing soil to the maximum extent practical beneath the former dispensers.

Overexcavation Dates: September 8 and 11, 1995.

Volume Excavated: About 40 cubic yards of soil were excavated as shown in Figure 2. About 20 cubic yards of soil were removed in association with the dispenser and piping replacements. Approximately 20 cubic yards of hydrocarbon-bearing soil, including soil removed during the initial soil sampling, were overexcavated as shown in Figure 3.

Hydrocarbons Removed: Based on the average TPH-G concentration of the excavated soil, about 3.4 pounds of hydrocarbons were removed from beneath the site.

Maximum Excavation Depth: 8.5 ft below ground surface.

Lithology Encountered: Sandy clay to about 8.5 ft depth.

Ground Water Depth: No ground water was encountered.

Sampling Date: September 8 and 11, 1995.

Number of Confirmation Samples: Two: Samples DP-1(6.0) and DP-2-SW(4.0).

Analytic Results: No benzene and less than 3 ppm TPH-G were detected in the confirmation samples.

SOIL DISPOSAL

Stockpile Sampling: The soil stockpile was sampled by driving clean brass tubes at least 12 inches below the stockpile surface. The tubes were immediately capped and sealed with Teflon tape and refrigerated for transport to the analytical laboratory. The laboratory composited and analyzed the samples for TPH-G, BTEX and total characteristic leaching potential for metals by EPA Method 6010. The certified analytic report and chain-of-custody form are included in Attachment B.

Soil Transport and Disposal: On September 29, 1995, Manley and Sons Inc. of Sacramento, California transported about 40 cubic yards of soil to Forward Incorporated in Stockton, California for disposal. The soil disposal confirmation sheet is presented in Attachment B.

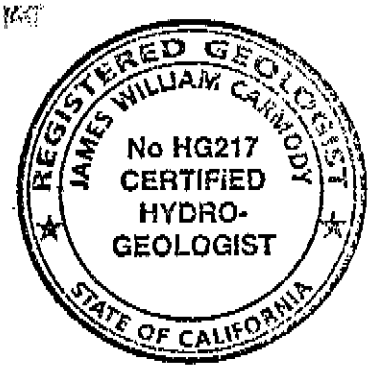
CONCLUSIONS

Based on the sampling results, WA concludes that:

- Only one of six soil samples collected from beneath the six former dispensers contained more than 3 ppm TPH-G. No benzene was detected in any of the samples.
- Most of the hydrocarbon-bearing soil was removed from the site. About 20 cubic yards of soil were overexcavated from the dispenser areas.
- 120 ppm TPH-G was left 8.0 ft beneath the south dispensers on the east fuel island. Benzene, however was below laboratory method detection limits in this sample. Further overexcavation was not possible due to the foundation of the canopy support column.
- Soil samples from beneath the product piping collected adjacent to the west fuel island contained 0.01 ppm benzene. Therefore, the former product piping was probably not a hydrocarbon source to the subsurface.
- Depth to ground water in the site vicinity is about 60 ft below ground surface. Due to the localized and shallow extent of hydrocarbons in soil, it is unlikely that hydrocarbons detected during this sampling event have impacted ground water.

WA trusts that this submittal meets your needs. Please call if you have any questions.

Sincerely,
Weiss Associates



Faith Morris Daverin
Staff Geologist

James W. Carmody, CHG
Senior Project Hydrogeologist

FMD/JWC:fmd

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Attachments: Figures
Table
A - Certified Analytical Reports and Chain-of-Custody Forms for Soil
B - Soil Disposal Confirmation and Certified Analytical Report for Stockpile Samples

cc: R. Jeff Granberry, Shell Oil Products Company, PO Box 4023, Concord, CA 94524
Jeff Byram, Shell Oil Products Company, PO Box 4023, Concord, CA 94524
Kevin Graves, Regional Water Quality Control Board - San Francisco Bay, 2101 Webster Street, Suite 500, Oakland, CA 94612
Chris Boykin, Pleasanton Fire Department, P.O. Box 520, Pleasanton, CA 94566

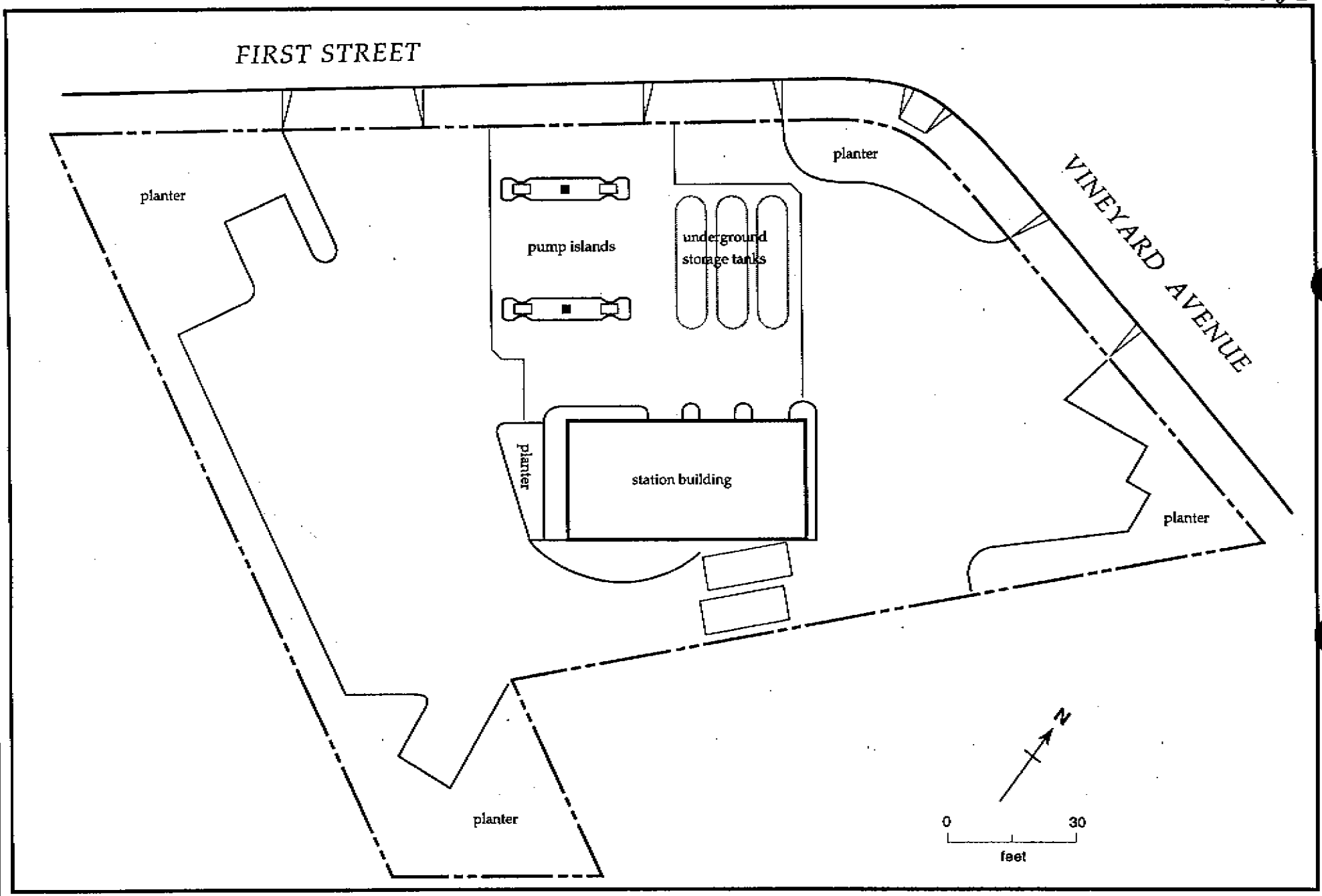

Figure 2. Site Layout - Shell Service Station WIC #204-6138-0303 - 4226 First Street, Pleasanton, California

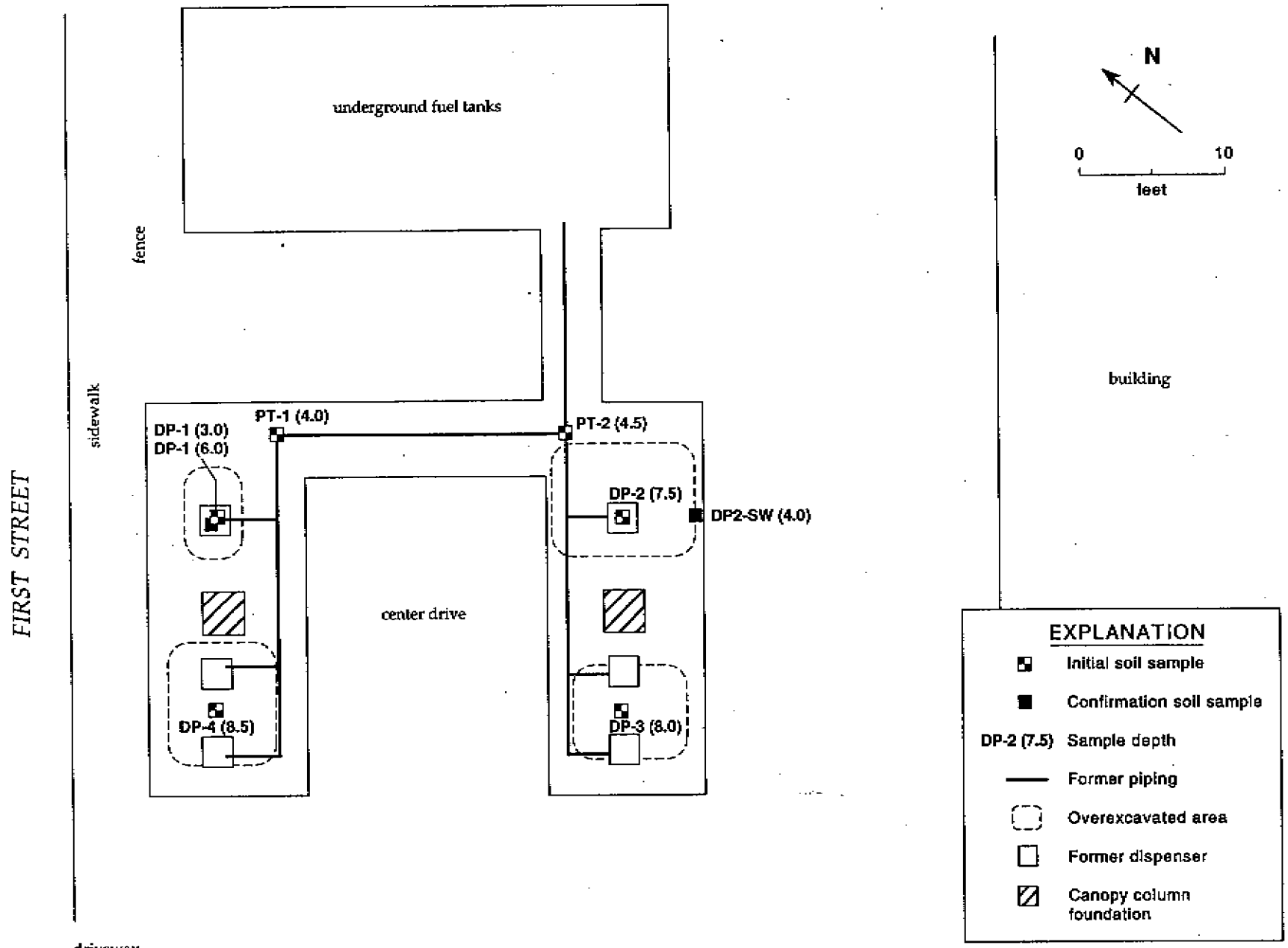

Figure 3. Soil Sample Locations - Shell Service Station WIC #204-6138-0303, 4226 First Street, Pleasanton, California

Table 1. Analytic Results for Soil - Shell Service Station, WIC #204-6138-0303, 4226 First Street, Pleasanton, California

Sample ID	Sample Depth (ft)	Date Sampled	TPH-G	B	T	E	X
			<——— parts per million (mg/kg) ———>				
Initial Soil Samples							
DP-1	3.0	09/08/95	1.3	<0.005	<0.005	<0.005	<0.005
DP-2	7.5	09/08/95	<1.0	<0.005	<0.005	<0.005	<0.005
DP-3	8.0	09/08/95	120	<0.12	<0.12	<0.12	<0.12
DP-4	8.5	09/08/95	<1.0	<0.005	<0.005	<0.005	<0.005
PT-1	4.0	09/08/95	2.5	0.0080	<0.005	0.038	0.19
PT-2	4.5	09/08/95	<1.0	<0.005	<0.005	<0.005	<0.005
Confirmation Soil Samples							
DP-1	6.0	09/11/95	2.5	<0.005	<0.005	0.020	0.035
DP-2-SW	4.0	09/08/95	1.7	<0.005	<0.005	0.0075	0.017

Abbreviations

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015
B = Benzene by EPA Method 8020
T = Toluene by EPA Method 8020
E = Ethylbenzene by EPA Method 8020
X = Xylenes by EPA Method 8020
<n = Not detected at detection limit of n ppm
DP = Soil Sample collected beneath former dispenser
PT = Soil Sample collected beneath former product line

Analytical Laboratory:

Sequoia Analytical of Redwood City, California