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August 21, 1995

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ENVIRONMENTAL

Wyman Hong
Alameda County Flood Control and Water
Conservation District
Zone 7 Water Agency
5997 Parkside Drive
Pleasanton, California 94588

RE: Ground Water Monitoring Well Abandonment
Shell Service Station
29 Wildwood Avenue
Piedmont, California
WIC #204-6001-0109
WA Job #81-0436-41

Dear Mr. Hong:

On behalf of Shell Oil Products Company (Shell), ~~Weiss Associates (WA)~~ directed the abandonment of ground water monitoring well E-4 on June 16, 1995 at the Shell site referenced above. This work was conducted with authorization from Alameda County Department of Environmental Health and under permit #95320 from your agency. Gregg Drilling and Testing, Inc. of Martinez, California (C-57 License #485165) abandoned the well according to specifications outlined in the California Department of Water Resources Bulletin 74.

Originally installed in an 8-inch diameter borehole, ground water monitoring well E-4 was drilled out using 10-inch O.D. hollow stem augers. By using the larger augers, an additional two inches of soil were removed from the sidewalls of the borehole, insuring that the filter pack and sanitary seal were completely removed. The well casing was also removed from the borehole.

Once the borehole was completely drilled out, the borehole was backfilled with neat cement grout. The grout consisted of Portland Type I/II cement mixed with 3 to 5% bentonite powder. The cement was pumped through a tremie hose so that the borehole was grouted from the bottom of the boring to ground surface in one continuous operation.

Drilled out well materials and soil cuttings were transported to Redwood Landfill in Novato, California on July 28, 1995 by Manley & Sons Trucking of Sacramento, California. The Department of Water Resources Well Completion Report, boring log, site map and the Zone 7 permit are included with this letter.

Wyman Hong
August 21, 1995

WA trusts that this submittal is complete and meets your needs. Please call Tom Fojut at (510) 450-6000 if you have any questions or comments regarding this project.

Sincerely,
Weiss Associates

Faith Morris Daverin

Faith Morris-Daverin
Geologist



James W. Carmody
James W. Carmody, C.E.G.
Senior Project Hydrogeologist

Enclosures: Figure
DWR Well Completion Report
Boring Logs
Zone 7 Permit

FMD/JWC:fmd
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cc: Dan Kirk, Shell Oil Company, P.O. Box 4023, Concord, California 94524
Jennifer Eberle, Alameda County Department of Environmental Health, 11311 Harbor Bay Parkway, Suite
-- 250, Alameda, California 94502

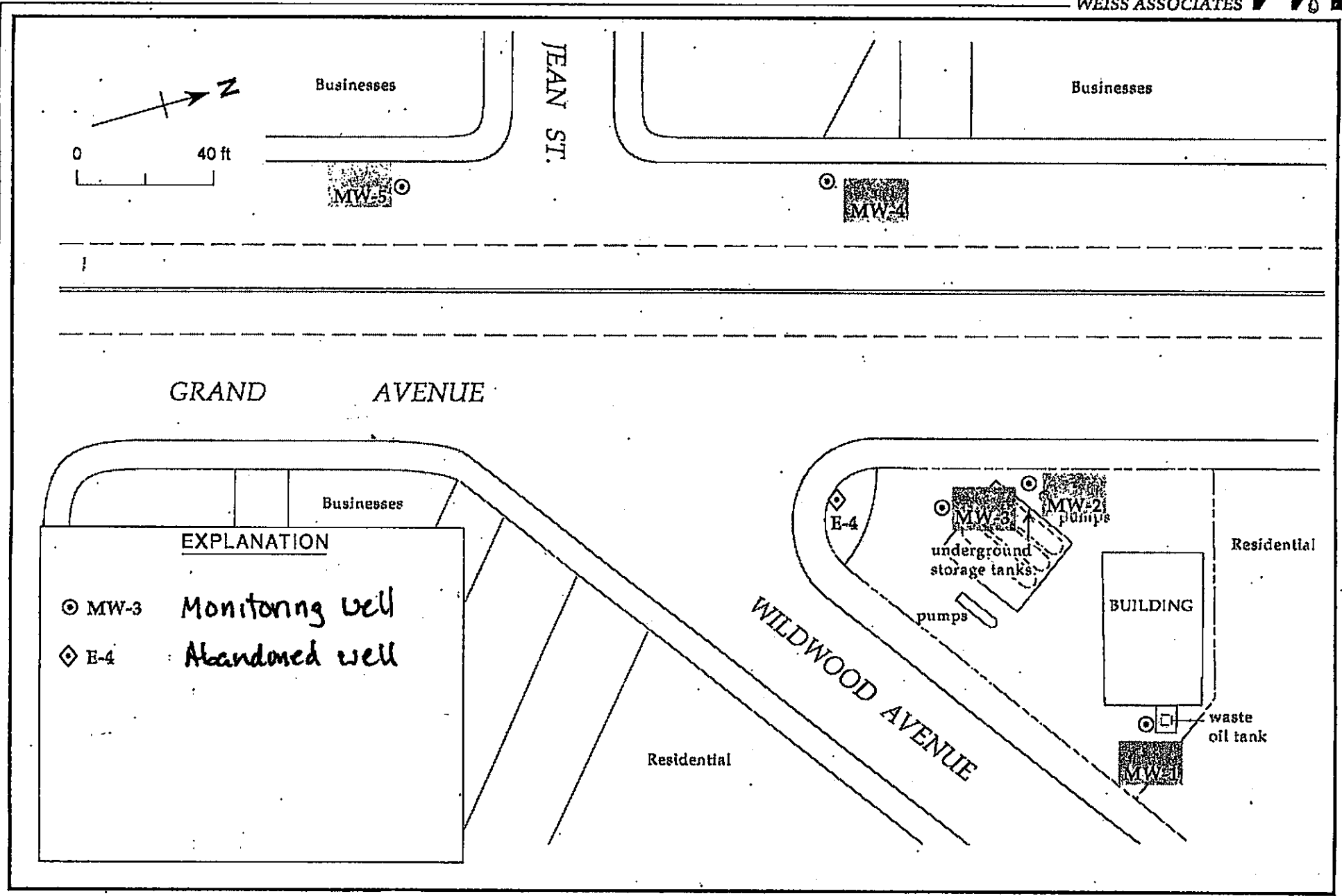


Figure 2. Monitoring Well Locations
29 Wildwood Avenue, Piedmont, California

-- Shell Service Station, WIC #204-6001-0109,

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

LOG OF EXPLORATORY BORING

PROJECT NUMBER 438-37.01

BORING NO. E-4

BY BH DATE 8/15/84

SURFACE ELEV. -

CLASSIFICATION DATA			FIELD DATA		Depth in Ft.	Ground Water Levels	Samples	DESCRIPTION
% Fines (-No.200)	Liquid Limit	Plasticity Index	Compressive Strength (TSF)	Penetration (Blows/Ft.)				
								2-inch Asphalt and 4-inch Baserock
					29	5		(SC)Very dark grayish brown (10YR 3/2) clayey SAND - damp
								(CL)Dark olive gray (5Y 3/2) sandy CLAY - damp
								(SC)Dark olive gray (5Y 3/2) clayey SAND - damp
					35	10		(CL)Dark yellowish brown (10YR 3/6) fine sandy CLAY - damp (brown (7.5YR 5/2) sandy - damp to dry) (contains thin gravelly interbeds)
					35	15		(dark brown (7.5YR 3/4) sandy damp)
					70	20		(gray (5Y 5/1) silty very fine sandy - damp to dry)
					58	25		(light olive gray (5Y 6/2) very fine sandy contains minor medium to coarse sand - damp to dry)
					55	30		(SM)Olive gray (5Y 5/2) silty fine SAND - wet
								(CL)Mottled brown (7.5YR 4/2) and dark yellowish brown (10YR 4/6) CLAY - damp to dry (mottled brown (7.5YR 4/2) and yellowish brown (10YR 5/6) sandy contains thin gravelly interbeds - damp to dry
					65	35		
								BOTTOM OF BORING

REMARKS: Boring was converted to a ground-water monitoring well with the installation of 35 feet of 3-inch PVC casing. The lower 12 feet of casing was slotted and the annular space backfilled to 15 feet with coarse aquarium sand. A bentonite-concrete seal was placed from 15 feet to 1 foot. The well was capped with a protective vault box and a locking device.





ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE

PLEASANTON, CALIFORNIA 94588

VOICE (510) 484-2600

FAX (510) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT Shell Service Station
29 Wildwood Avenue
Piedmont, CA

PERMIT NUMBER 95320
LOCATION NUMBER IS/3W 30D80

CLIENT
Name Shell Oil Company
Address P.O. Box 4023 Voice
Concord, CA Zip 94524

PERMIT CONDITIONS

Circled Permit Requirements Apply

APPLICANT
Name Weiss Associates
Address 550 Shellmound Street Fax (510) 547-5043
Emeryville Voice (510) 450-6161
Zip 94608

A. GENERAL

1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

TYPE OF PROJECT

all Construction	Geotechnical Investigation
Cathodic Protection	General
Water Supply	Contamination
Monitoring	Well Destruction <input checked="" type="checkbox"/>

B. WATER WELLS, INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

PROPOSED WATER SUPPLY WELL USE

Domestic	Industrial	Other
Municipal	Irrigation	

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

DRILLING METHOD:

Rotary	Air Rotary	Auger <input checked="" type="checkbox"/>
Other		

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

DRIILLER'S LICENSE NO. C57-485165
Gregg Drilling

E. WELL DESTRUCTION. See attached.

WELL PROJECTS

Drill Hole Diameter	in.	Maximum
Casing Diameter	<u>3</u> in.	Depth <u>~ 34'</u> ft.
Surface Seal Depth	ft.	Number <u>1</u>

GEOTECHNICAL PROJECTS

Number of Borings	Maximum
Hole Diameter	Depth

ESTIMATED STARTING DATE JUNE 1995
ESTIMATED COMPLETION DATE JUNE 1995

Approved Wyman Hong Date 22 May 95
Wyman Hong

Applicant hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-66.

APPLICANT'S SIGNATURE Janeth Davern Date 5/18/95

23 May 1995

ZONE 7
WATER RESOURCES ENGINEERING
DRILLING ORDINANCE

SHELL OIL COMPANY
29 WILDWOOD AVENUE
PIEDMONT
WELL 1S/3W 30D80
PERMIT 95320

Destruction Requirements:

1. Drill out the well so that the casing, seal, and gravel pack are removed to the bottom of the well.
2. Using a tremie pipe, fill the hole to 2 feet below the lower of finished grade or original ground with neat cement.
3. After the seal has set, backfill the remaining hole with compacted material.

These destruction requirements as proposed by Faith Daverin of Weiss Associates meet or exceed the Zone 7 minimum requirements.