ADVANCED ENVIRONMENTAL CONCEPTS INC

June 29 1998

6089

Ms. Madhulia Logan
Alameda County Health Care Services
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: **Request for Site Closure**
Former Vogue Tyres Facility
240 West MacArthur Boulevard
Oakland California.

Dear Ms. Logan,

Advanced Environmental Concepts, Inc. (AEC) would like present, on the behalf of Mr. Warren Dodson (property owner), the following request and justification for granting a "site closure with no further action required" status from your department, for the above stated facility.

Site History

Historical records indicate that a Gulf service station existed at the subject property since at least 1950 and originally operated three 10,000 gallon gasoline underground storage tanks (USTs), and one 350 gallon waste oil UST. The three gasoline USTs were located at the northern portion of the property, (beneath the current storage building), the waste oil UST was west of the service bays and the two associated pump islands were west of the northern portion of the existing building. The 350 gallon waste oil UST was removed in October 1996 by All Environmental, Inc (AEI); the removal dates of the three gasoline USTs is unknown. Presently the site operates as an automobile repair shop. An active Shell Service Station is located adjacent to, and south, of the subject site and has been operating as a commercial fueling station since at least 1952.

During the removal of the waste oil tank visual staining of waste oil range hydrocarbons were identified on the floor and sidewalls of the excavation. Confirmation soil samples collected from the excavation indicated that soil beneath the former UST emplacement was impacted with minor concentrations of petroleum hydrocarbons. At the request of Alameda County Health Care Services (ACHCS), AEI expanded the size of the excavation, then collected additional confirmation soil samples which indicated the successful removal of the contamination. Groundwater was not encountered during this excavation phase, however, due to the estimated proximity of the contamination to groundwater, a subsurface investigation was required by the ACHCS.

On January 8, 1997 AEI conducted a subsurface investigation consisting of six borings using a Geoprobe. Borings BH-1, BH-2, BH-4, and BH-6 were advanced to 20 feet below grade level (BGL), and BH-3 and BH-5 were probed to 16 feet BGL. Soil samples were collected at intervals of 5 feet, and **"grab"** groundwater samples were collected from inside the borings. Groundwater was identified at approximately 16 feet BGL.

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Analytical results from the **"grab"** groundwater samples indicated that the underlying groundwater had been effected. This prompted ACHCS to require the installation of monitoring wells and additional soil samples for the purpose of evaluating the extent and magnitude of the contaminant plume.

Mr. Dodson contracted Advanced Environmental Concepts, Inc. (AEC) to perform the additional subsurface assessment. On August 7, 1997, supervised three Geoprobe soil borings (BH-7, BH-8, and BH-9), and the installation of four groundwater monitoring wells (MW-1, MW-2, MW-3, and MW-4) proximal to the dispenser islands, and south, west, and north of the former UST emplacement. The investigative groundwater wells and Geoprobe borings were positioned to assess the vertical and lateral migration of hydrocarbons in the subsurface and to evaluate groundwater quality. Groundwater samples were collected and analyzed for hydrocarbon constituents and biological parameters. Following the initial collection of groundwater samples quarterly samples were collected from the monitoring wells on 12/3/97 and 3/16/98.

The locations of the soil borings and monitoring wells are plotted on **Figure 2**. Laboratory results for the soil samples submitted for analysis are listed in **Table 1**. Hydrocarbon results for all groundwater samples collected, including quarterly monitoring, are presented in **Table 2.** Results for the biological parameters analyses are presented in **Table 3** . All analyses performed on soil and groundwater collected at the site were by a California Certified Laboratory.

Table 1
Analytical Results - Soil Samples
(ppm)

Element	TRPH	TPH-d	TPH-g	Benzene	Toluene	E.B.	Xylenes	MTBE	Pb	PNA
Sample I.D.										
BH-1-15'	NA	ND	ND	ND	ND	ND	ND	ND	15	19
BH-2-15	ND	ND	ND	ND	ND	ND	ND	ND	8.4	41
BH-3-15'	ND	ND	ND	ND	ND	ND	ND	ND	7.6	13
BH-4-15'	NA	370	1100	ND	ND	4.4	14	ND	6.2	1.1
BH-5-15'	NA	1.9	2.1	0.009	0.006	0.016	ND	ND	4.6	19
BH-6-15'	NA	140	190	.025	0.5	0.84	3.6	ND	23	0.27
BH-7-12'	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA
BH-7-16'	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA
BH-8-8'	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA
BH-8-12'	NA	ND	168	0.02	ND	0.45	5.1	NA	NA	NA
BH-8-16'	NA	ND	21	0.027	0.07	ND	0.75	NA	NA	NA
BH-9-8'	NA	ND	ND	ND	0.032	0.029	0.28	NA	NA	NA
BH-9-12'	NA	ND	ND	ND	0.012	ND	ND	NA	NA	NA
BH-9-16'	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA

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Element	TRPH	TPH-d	TPH-g	Benzene	Toluene	E.B.	Xylenes	MTBE	Pb	PNA
Sample I.D.										
MW-1-10'	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA
MW-1-17'	NA	ND	ND	ND	0.031	ND	ND	NA	NA	NA
MW-2-10'	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA
MW-2-17'	NA	ND	16	0.035	0.037	0.15	0.018	NA	NA	NA
MW-3-10'	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA
MW-3-17'	NA	ND	ND	0.027	ND	ND	ND	NA	NA	NA
MW-4-10'	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA
MW-4-17'	NA	ND	ND	ND	ND	ND	ND	NA	NA	NA
D.L.(mg/kg)	50.0	1.0	1.0	0.005	0.005	0.005	0.005	0.05	0.005	0.10

TABLE 2
Analytical Results - Groundwater Samples
(ppb)

	Constituent	TRPH	TPH-d	TPH-g	Benzene	Toluene	EB	Xylenes	MTBE	PNA	Pb
Sample I.D.	Date										
BH1W	1/10/97	ND	490	330	2.0	0.72	ND	1.3	220	NA	ND
BH2W	1/10/97	NA	320	ND	ND	ND	ND	ND	nd	ND	ND
BH4W	1/10/97	NA	NA	6600	58	13	110	270	170	NA	NA
BH6W	1/10/97	NA	450000	1300	870	65	130	570	320	NA	ND
MW-1	8/8/97	NA	NA	1140	110	16	15	112	NA	NA	NA
	12/3/97	NA	NA	ND	ND	ND	ND	31	NA	NA	NA
	3/16/98	NA	NA	370	8.9	ND	ND	2.2	18	NA	NA
MW-2	8/8/97	NA	NA	5350	108	36	33	144	NA	NA	NA
	12/3/97	NA	NA	1600	73	ND	ND	ND	NA	NA	NA
	3/16/98	NA	NA	3400	830	100	210	240	870	NA	NA
MW-3	8/8/97	NA	NA	8500	450	30	53	106	NA	NA	NA
	12/3/97	NA	NA	5200	180	6	5	9.3	NA	NA	NA
	3/16/98	NA	NA	1000	6.0	ND	ND	ND	810	NA	NA

	Constituent	TRPH	TPH-d	TPH-g	Benzene	Toluene	EB	Xylenes	MTBE	PNA	Pb
Sample I.D.	Date										
MW-4	8/8/97	NA	NA	ND	ND	ND	ND	ND	NA	NA	NA
	12/3/97	NA	NA	ND	ND	ND	ND	ND	NA	NA	NA
	3/16/98	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA
	D.L.	5.0	50.00	50.00	0.500	0.500	0.500	0.500	0.500		

Table 3
Analytical results - Biological results
(ppm)

Constituent	Redox	Nitrate	Sulfate	Alkalinity	Ferrous Iron	Oxygen
Sample I.D.						
MW-1	311	7.1	9.2	238	0.10	8.2
MW-2	331	0	43	398	0.50	6.3
MW-3	330	0	56	368	ND	7.9
MW-4	307	19.5	87	140	ND	7.8
Detection Limit	5.0 mg/l	5.0 mg/l	5.0 mg/l	0.10 mg/l	0.010 mg/l	0.10 mg/l

6.0 EXTENT OF HYDROCARBON MIGRATION

Based on analytical results the extent of soil contamination is restricted to the northwest corner of the site, has an approximate areal extent of 2,600 square feet, is primarily within the capillary fringe, and calculates to a maximum volume of about 1,400 cubic yards (worst case scenario) and a likely volume of 400 cubic yards. The ground water plume is centered in the northwest corner and has migrated off site, the down gradient extent of the plume not yet established.

7.0 DISCUSSION

The source of the initial contamination has been removed (USTs) and a portion of the contaminated soil has been removed, therefore, there is little potential that additional degradation of groundwater will occur at the site. Biological factors (i.e. O2, redox, nitrates, sulfate, alkalinity, iron) measured at the site indicate that favorable conditions for passive degradation of hydrocarbons exists. Analytical data from groundwater sampling suggests that natural degradation is already occurring with test results exhibiting a ***percent change*** downward in TPH-g concentrations of 208%, 57%, and 750% for MW-1, MW-2, and MW-3, respectively. At present, recorded concentrations for toluene, ethylbenzene, and xylenes are all below the recommend action levels of 2000 ppb, 680 ppb, and 1,750 ppb. Given the above stated information it is probable that the groundwater plume beneath the subject site will not have a concentration increase of detected contaminants; has stabilized with the surrounding soil; migration slowed or ceased; and natural degradation of the contaminants will continue.

FINDINGS

- All underground storage tanks, dispensers, and associated piping are believed to have been removed from the subject site.

- Thirteen soil borings were advanced at the subject site and four of the borings were converted into monitoring wells.

- Following the removal of the waste oil tank, 20 cubic yards of hydrocarbon impacted soil were excavated and disposed, then the excavation was back filled with clean import.

- Results from the soil borings indicate that soil contamination occurs at about 15 feet BGL in borings BH-4, -5,-6, and -8, and in monitoring well MW-2 (capillary fringe). The soil plume is contained within the limits of the property, has an areal extent of 2,600 square feet, and an approximate likely volume of 400 cubic yards. The highest TPH-g concentration in soil, 1,100 ppm, was recorded in boring BH-4 at 15 feet BGL. All other detectable concentrations of TPH-g in soil were between 190 ppm and 2.1 ppm. Maximum BTEX concentrations in soil were 0.035 ppm, 0.5 ppm, 4.4 ppm, and 14 ppm, respectively. less than .05 ppm

- The last quarter of groundwater sampling indicated TPH-g concentrations of 370 ppm (MW-1), 3,400 ppm (MW-2), 1,000 ppm (MW-3), and below detectable limits for monitoring well (MW-4). The area effected by the groundwater plume is restricted to the northwest corner of the property with the down gradient extent of the plume extending to the northwest, across the intersection of West MacArthur Boulevard and Howe Street. The highest BTEX concentration recorded during the March 16, 1998 sampling event was 830 ppb, 100 ppb, 210 ppb, and 240 ppb, respectively and was recorded in MW-2. MW-4 recorded concentration below detectable limits for all constituents analyzed and MW-1 contained concentrations of 8.9 ppb and 2.2 ppm for benzene and xylenes, and below detectable limits for ethylbenzene and toluene. MW-3 recorded 6.0 ppb of benzene and was below detectable limits for toluene, ethylbenzene, and xylenes.

- Biological factors were assessed for and results indicate that conditions at the site are favorable for natural degradation of hydrocarbons.

- Quarterly results from groundwater sampling indicate that there has been a 208%, 57%, and 750% decrease in the TPH-g concentrations in MW-1, MW-2, and MW-3.

RECOMMENDATIONS

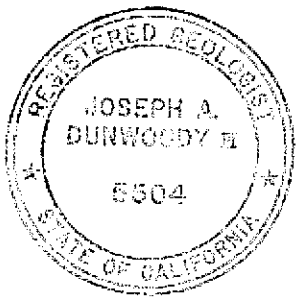
Based on the data collected during the assessment activities, quarterly monitoring events, and the information put forth in this document, **AEC**, in conjunction with Mr. Warren Dodson (owner), request that site closure with no further action be granted for the site.

Closing

Should there be any questions or additional information required, please do not hesitate to contact our office at your convenience.

Respectfully yours,

Advanced Environmental Concepts, Inc.



Joseph A. Dunwoody
California Registered Geologist #5504

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. This report has been technically reviewed by the undersigned.

Jonathan L. Buck
Senior Geologist

DOCDODSON

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Map Source: Thomas Maps

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ADVANCED ENVIRONMENTAL CONCEPTS
P.O. BOX 40672 BAKERSFIELD, CA 93384

- SITE AREA -

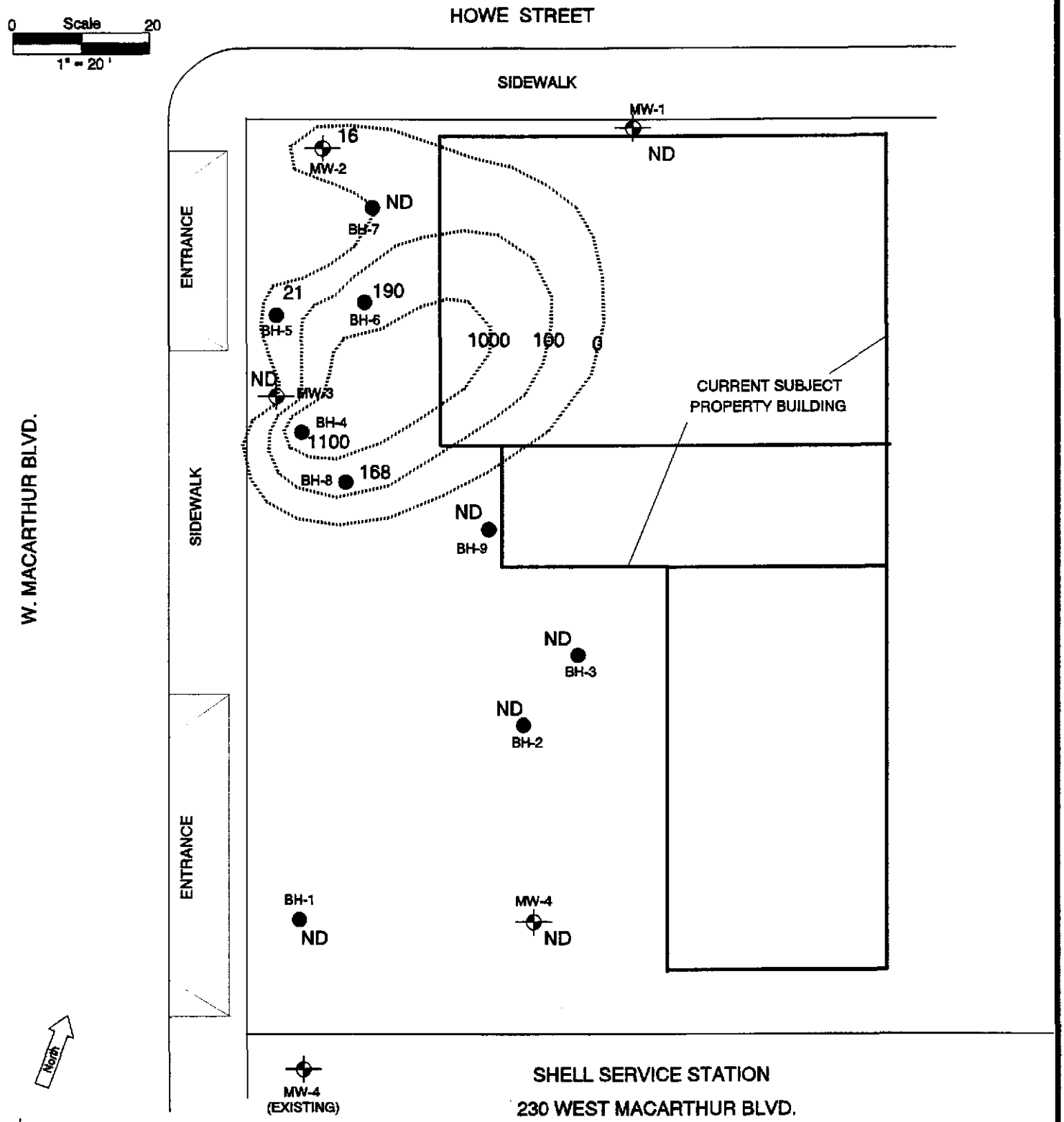
Prestige Products Corporation

240 West MacArthur Blvd.

County of Alameda - Oakland, California

FIGURE

1



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- Extent of Soil Plume -

TPH-g (ppm) at 15' -17' BGL

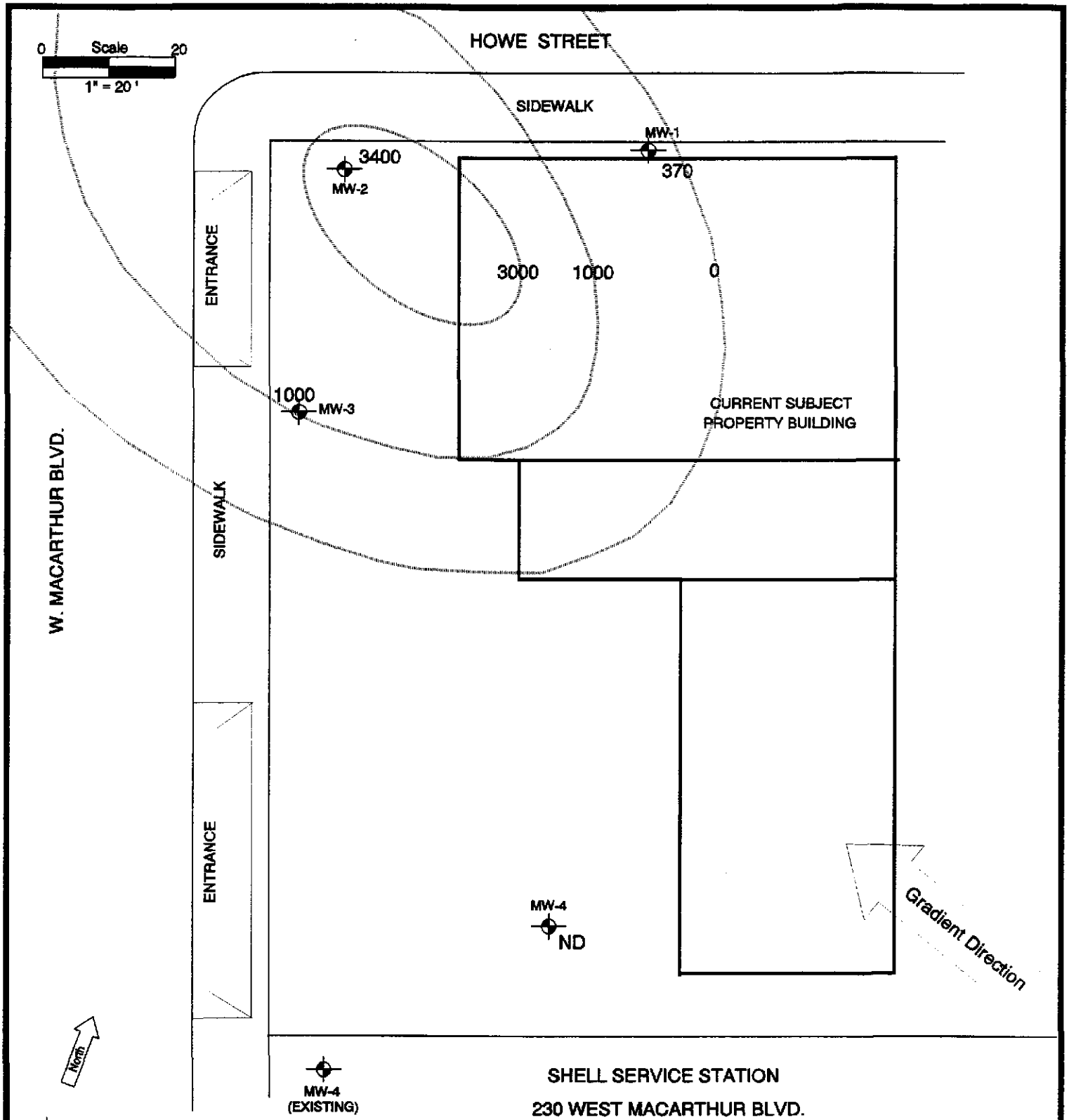
Prestige Products Corporation

240 West MacArthur Blvd.

County of Alameda - Oakland, California

FIGURE

2



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- Extent of Groundwater Plume -

TPH-g (ppb)

Prestige Products Corporation

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FIGURE

3