ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Program
80 Swan Way, Rm. 200
Oakland, CA 94621
(415)

29 November 1990

William C. Robison
Buttner Properties Incorporated
600 West Grand Avenue
Oakland, CA 94612

Subject: Underground Storage Tank Removal Project being conducted at 4055 Hubbard Street, Oakland.

Dear Mr. Robison:

Thank you for the analytical data report prepared by Subsurface Consultants Incorporated, dated 27 November, 1990, in reference to the project listed above. A number of areas of concern to this agency were noted during a review of this report. This follow-up communication is being sent in response to these concerns.

Total Petroleum Hydrocarbon contamination as high as 10,000 parts per million was detected in a soil sample collected from under the fuel dispenser. Further excavation will be required in this area to ensure that no soil contamination exceeding 1,000 parts per million of TPH remains. Additional sampling will be necessary to verify that the excavation has been sufficiently thorough to meet this requirement.

The report states that all soil excavated from the former tank pit was returned to the excavation. The policies of the San Francisco Bay Regional Water Quality Control Board forbid the reintroduction of soil contaminated with petroleum hydrocarbons in excess of 10 parts per million. Consequently, this soil will have to be removed and subjected to a treatment process to lower it's level of contamination or replaced with clean fill material.

The Subsurface Consultants report proposes that the contaminated soil associated with this site be subjected to an on-site bioremediation treatment. This agency has no objection to the implementation of such a process, however, in accordance with Section 66693 of Title 22 of the California Code of Regulations, the contaminated soils in question will have to be subjected to an appropriate series of tests to determine whether or not the materials being treated constitute hazardous wastes. Should this characterization process indicate that these soils constitute hazardous wastes than a permit issued by the California Department of Health Services may be required prior to the implementation of

the proposed treatment process. Regardless of the hazardous waste characterization of this soil, Alameda County Haz Mat will serve as the direct overseeing authority during this project.

Guidelines established by the San Francisco Bay Regional Water Quality Control Board require that a ground water investigation be conducted whenever an unauthorized release of product is suspected from an underground storage tank. The levels of soil contamination associated with your project would indicate that such an event has occurred. The guidelines state that a ground water monitoring well must be installed within ten feet of a former underground storage tank oriented in a downgradient direction relative to ground water flow. The ground water gradient for a given site is to be determined by data derived from three wells. During the installation of these wells soil samples are to be collected at five foot depth intervals until ground water is reached. The installation of these wells is to be conducted under the direction of a registered engineer/geologist and a copy of all analytical data and boring logs must be submitted to this office for review and inclusion into our records.

The need for any follow-up investigative or remedial actions at this site will be based upon the data derived from this ground water investigation. You should anticipate that two years of quarterly ground water monitoring will be required prior to the Regional Board's consideration of the case for closure.

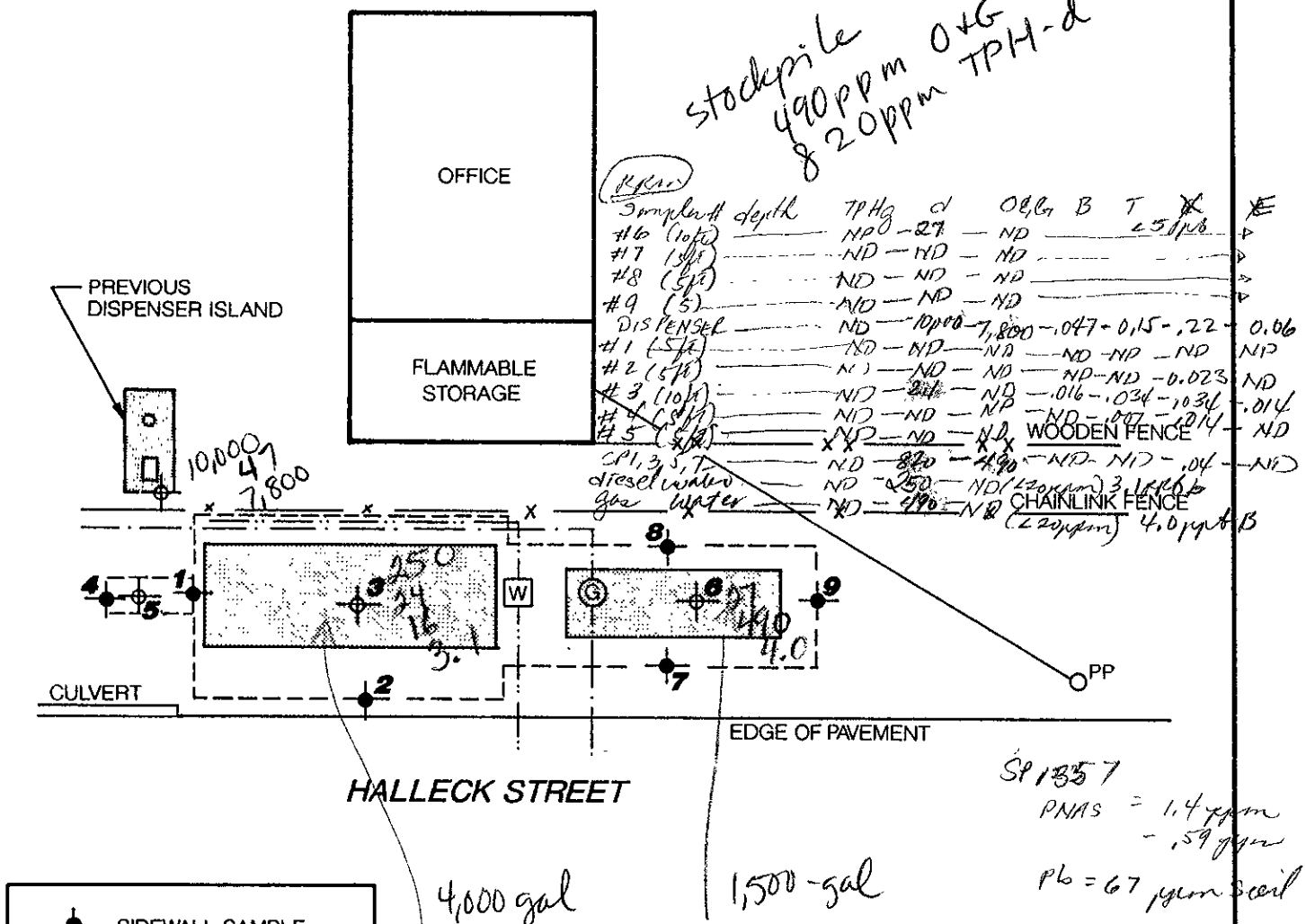
The contents of this letter have been discussed with Jeriann Alexander of Subsurface Consultants. Should you have any questions or require further clarification as to the actions which need to be taken concerning this matter, please feel free to contact me at (415) 271-4320.

Sincerely,

Dennis J. Byrne

Dennis J. Byrne
Senior Hazardous Materials Specialist

cc: Steve Luquire, SFBRWQCB
Howard Hatayama, DOHS
Rafat Shahid, Assistant Director, Alameda County Department of Environmental Health.
Jeriann Alexander, Subsurface Consultants Inc.



SITE PLAN

Subsurface Consultants

4055 HUBBARD STREET – OAKLAND, CA

JOB NUMBER	DATE	APPROVED
609.001	8/20/90	ja

PLATE 1

pit water was also sampled

Table 1. HYDROCARBON AND BTXE CONCENTRATION IN SOIL

Tank	Sample Designation	TEH[1] mg/kg[4] (TPH-d)	TOG[2] mg/kg	Benzene[3] ug/kg[5]	Toluene[3] ug/kg	Xylene[3] ug/kg	Ethyl-benzene[3] ug/kg
1	1 @ 5'	ND[6]	ND	ND	ND	ND	ND
	2 @ 5'	ND	ND	ND	ND	23	ND
	3 @ 10'	24	ND	16	34	34	14
	4 @ 3'	ND	ND	ND	ND	ND	ND
	5 @ 5'	ND	ND	ND	7.0	14	ND
2	6 @ 10'	27	ND	ND	ND	ND	ND
	7 @ 5'	ND	ND	ND	ND	ND	ND
	8 @ 5'	ND	ND	ND	ND	ND	ND
	9 @ 5'	ND	ND	ND	ND	ND	ND
	Dispenser[7]	10,000	7,800	47	150	220	60

---

1 TEH = Total Extractable Hydrocarbons, as determined by modified EPA Method 8015 after sonication extraction (EPA 3550), included quantification of gasoline

2 TOG = Total Oil and Grease, as determined by SMWW 17:5520F after gravimetric freon extraction (EPA 3550)

3 As determined by EPA 8020 after purge and trap extraction (EPA 5030)

4 mg/kg = milligrams per kilogram

5 ug/kg = microgram per kilogram

6 ND = None detected, chemicals not present at concentrations above detection limit

7 Sample taken 6 inches below dispenser piping at pump island

Table 2. HYDROCARBON AND BTXE CONCENTRATIONS IN WATER

Sample Designation	TEH[1] mg/kg[4]	TOG[2] mg/kg	Benzene[3] ug/kg[5]	Toluene[3] ug/kg	Xylene[3] ug/kg	Ethyl-benzene[3] ug/kg
Water in Tank 1 Excavation	250	ND[6]	3.1	ND	ND	ND
Water in Tank 2 Excavation	490	ND	4.0	ND	ND	ND

---

1 TEH = Total Extractable Hydrocarbons, as determined by modified EPA Method 8015 after sonication extraction (EPA 3550), included quantification for gasoline

2 TOG = Total Oil and Grease, as determined by SMWW503 after gravimetric freon extraction (EPA 3550)

3 As determined by EPA 8020 after purge and trap extraction (EPA 5030)

4 mg/kg = milligrams per liter

5 ug/kg = microgram per liter

6 ND = None detected, chemicals not present at concentrations above detection limit

Table 3. CHEMICAL CONCENTRATION IN EXCAVATED SOIL COMPOSITE[1]

Chemical/Chemical Analysis/Metal	Concentration PPM[2]
TOG[3]	490
TEH[4]	820
Benzene	ND[5]
Toluene	ND
Xylene	0.040
Ethylbenzene	ND
EPA Method 8240 Chemicals	ND
EPA Method 8270 Chemicals	
2 - Methylnaphthalene	1.4
Phenanthrene	0.59
Other EPA 8270 Chemicals	ND
Chlounated Pesticides	ND
Polychlorinated Biphenyls	ND
Total Metals	
Arsenic	6.2
Barium	95
Cadmium	3.8
Chromium	40
Copper	130
Lead	67
Nickel	37
Vanadium	26
Zinc	200
Other Metals	ND

---

1 Composite includes samples SP1, SP3, SP5 and SP7

2 ppm = parts per million

3 TOG = Total Oil and Grease, as determined by SMWW 17:5520F after gravimetric freon extraction EPA 3550

4 TEH = Total Extractable Hydrocarbons as determined by modified EPA Method 8015 after sonication extraction (EPA 3550)

5 ND = None detected, chemicals not present at concentrations above detection limits