

3/30/89

ALAMEDA COUNTY
DEPT. OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS

Mobil Oil Corporation

3800 WEST ALAMEDA AVENUE, SUITE 700
BURBANK, CALIFORNIA 91505-4331

March 27, 1989

Ms. Lisa McCann
Regional Water Quality Control Board
1111 Jackson Street, Room 6000
Oakland, California 94607

MOBIL OIL CORPORATION
S/S #10-MGV
2220 98TH AVENUE
OAKLAND, CALIFORNIA 94603

Dear Ms. McCann:

Enclosed for your information and review is the latest quarterly monitoring report dated March 15, 1989 for the subject location.

Free product was encountered in monitoring well #1; further work will be done to define the extent of, and remove the contamination.

If you have any questions, please feel free to contact me at (818) 953-2519.

Sincerely,



D. M. Noe, P.E.
Environmental Advisor

DMN:ars
enclosure
24640

cc: ~~Mr. Rafat Shahid (w/attch)~~
Alameda County
Environmental Health Department
470 27th Street
Oakland, California 94612



KAPREALIAN ENGINEERING, INC.

Consulting Engineers

P. O. BOX 913

BENICIA, CA 94510

(415) 676-9100 (707) 746-6915

KEI-P87-0604.QR1

March 15, 1989

Mobil Oil Corporation
P.O. Box 127
Richmond, CA 94804

Attention: Mr. Steve Pao

ENVIRONMENTAL AFFAIRS
OPERATIONS DEPARTMENT

RE: Quarterly Report
Mobil Service Station #10-MGV
2220 98th Avenue
Oakland, California

MAR 22 1989

Dear Mr. Pao:

This report presents the results of the first quarter of monitoring and sampling of the monitoring wells at the referenced site by Kaprealian Engineering, Inc. (KEI), per KEI's proposal KEI-P87-064B dated October 11, 1988. The wells are currently monitored monthly and sampled on a quarterly basis. This report covers the work performed by KEI from December, 1988 through February, 1989.

BACKGROUND

On June 17, 1987, KEI collected five soil samples after removal of three underground gasoline storage tanks. Analytical results of the soil samples indicated levels of total petroleum hydrocarbon as gasoline (TPH) ranging from 12 ppm to 420 ppm. The results are summarized in KEI's report KEI-J87-064 dated July 2, 1987. KEI recommended the installation of three monitoring wells to determine if the shallow ground water had been impacted.

Three monitoring wells were installed on May 6, 1988. The water sample from MW-1 had a benzene level of 29,000 ppb, while the samples from MW-2 and MW-3 were at or below analytical detection limits for TPH and benzene, toluene, xylenes and ethylbenzene (BTX&E). KEI proposed a monitoring and sampling program of the existing wells. All soil and water samples to date have been analyzed at Sequoia Analytical Laboratory in Redwood City, California.

FIELD ACTIVITIES

The three wells were monitored three times and sampled once during the quarter. During monitoring, the wells were checked for depth to water and presence of free product and sheen. After monitoring, the wells were purged and allowed to recover. Free product (blackish color) was noted in and pumped from MW-1 throughout the quarter. No free product or sheen was noted in MW-2 and MW-3 during the quarter. Monitoring data are summarized in Table 1.

Water samples were taken from wells MW-2 and MW-3 on February 15, 1989. Prior to sampling, the wells were purged a minimum of eight casing volumes using an acrylic surface bailer. Samples were then collected using a clean Teflon bailer. No sample was collected from MW-1 due to the presence of free product. Samples were decanted into clean VOA vials which were sealed with Teflon-lined screw caps and stored on ice until delivery to the state certified laboratory.

HYDROLOGY

Based on the water level data gathered during the quarter, ground water flow direction appears to be westerly; however, the calculation is strongly influenced by a much higher water level in MW-1 compared to MW-2 and MW-3. Water levels have risen slightly during the quarter.

ANALYTICAL RESULTS

Water samples were analyzed at Sequoia Analytical Laboratory in Redwood City, California and were accompanied by properly executed Chain of Custody documentation. The samples were analyzed for TPH using EPA method 5030 in conjunction with modified 8015, and BTX&E using EPA methods 5030 and 8020.

The analytical results show non-detectable levels of TPH and BTX&E in wells MW-2 and MW-3. Results of the analyses are summarized in Table 2. Copies of the analytical results and Chain of Custody documentation are attached to this report.

KEI-P87-0604.QR1
March 15, 1989
Page 3

DISCUSSION AND RECOMMENDATIONS

No free product was present in MW-1 when it was initially installed in May, 1988. Free product (blackish color) has been present in the well throughout the quarter. Based on the presence of free product in MW-1, KEI recommends installation of an additional two monitoring wells and one recovery well. KEI also recommends the continuation of the current monitoring and sampling program, per KEI's proposal KEI-P87-064B dated October 11, 1988. KEI's proposal for installation of new wells is attached for your consideration.

A copy of this report should be sent to the Alameda County Flood Control District, and to the Regional Water Quality Control Board, San Francisco Bay Region.

LIMITATIONS

Environmental changes, either naturally-occurring or artificially-induced, may cause changes in ground water levels and flow paths, thereby changing the extent and concentration of any contaminants.

Our studies assume that the field and laboratory data are reasonably representative of the site as a whole, and assume that subsurface conditions are reasonably conducive to interpolation and extrapolation.

The results of this study are based on the data obtained from the field and laboratory investigations. We have analyzed this data using what we believe to be currently applicable engineering techniques and principles in the Northern California region. We make no warranty, either expressed or implied, except that our services have been performed in accordance with generally accepted professional principles and practices existing for such work.

KEI-P87-0604.QR1
March 15, 1989
Page 4

If you have any questions regarding this report, please do not hesitate to call me at (707) 746-6915.

Sincerely,

Kaprealian Engineering, Inc.



Gary S. Johnson
Registered Geologist

License #4315
Exp. Date 6/30/90



Mardo Kaprealian
President

Attachments: Tables 1 and 2
Location Map
Site Plan
Laboratory Analyses
Chain of Custody documentation
Proposal

KEI-P87-0604.QR1
March 15, 1989

TABLE 1
SUMMARY OF MONITORING DATA

| <u>Date</u> | <u>Well No.</u> | <u>Water Depth (feet)</u> | <u>Product Thickness</u> | <u>Sheen</u> | <u>Water Bailed (gallons)</u> |
|-------------|-----------------|-------------------------------|------------------------------|--------------|-----------------------------------|
| 2/15/89 | MW-1 | 15.47 | 1.08' | --- | 30 |
| | MW-2 | 25.25 | None | None | 12 |
| | MW-3 | 23.95 | None | None | 15 |
| 1/17/89 | MW-1 | 15.46 | 2.5' | --- | 12 |
| | MW-2 | 25.47 | None | None | 0 |
| | MW-3 | 23.28 | None | None | 0 |
| 12/21/89 | MW-1 | 15.86 | >3' | --- | 18 |
| | MW-2 | 28.06 | None | None | 0 |
| | MW-3 | 24.48 | None | None | 0 |

KEI-P87-0604.QR1
March 15, 1989

TABLE 2

SUMMARY OF LABORATORY ANALYSES

(All results in ppb)

| <u>Date</u> | <u>Sample Well #</u> | <u>Depth (feet)</u> | <u>TPH as Gasoline</u> | <u>Benzene</u> | <u>Toluene</u> | <u>Xylenes</u> | <u>Ethyl-benzene</u> | |
|-------------|----------------------|---------------------|---|----------------|----------------|----------------|----------------------|--|
| 2/15/89 | MW-1 | 15.17 | Not sampled due to presence of free product | | | | | |
| | MW-2 | 25.63 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | |
| | MW-3 | 25.54 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | |
| 5/27/88 | MW-1 | 16.58 | 76,000 | 29,000 | 23,000 | 12,000 | 2,600 | |
| | MW-2 | 23.83 | <50 | 0.55 | 0.66 | 0.58 | <0.5 | |
| | MW-3 | 23.67 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | |



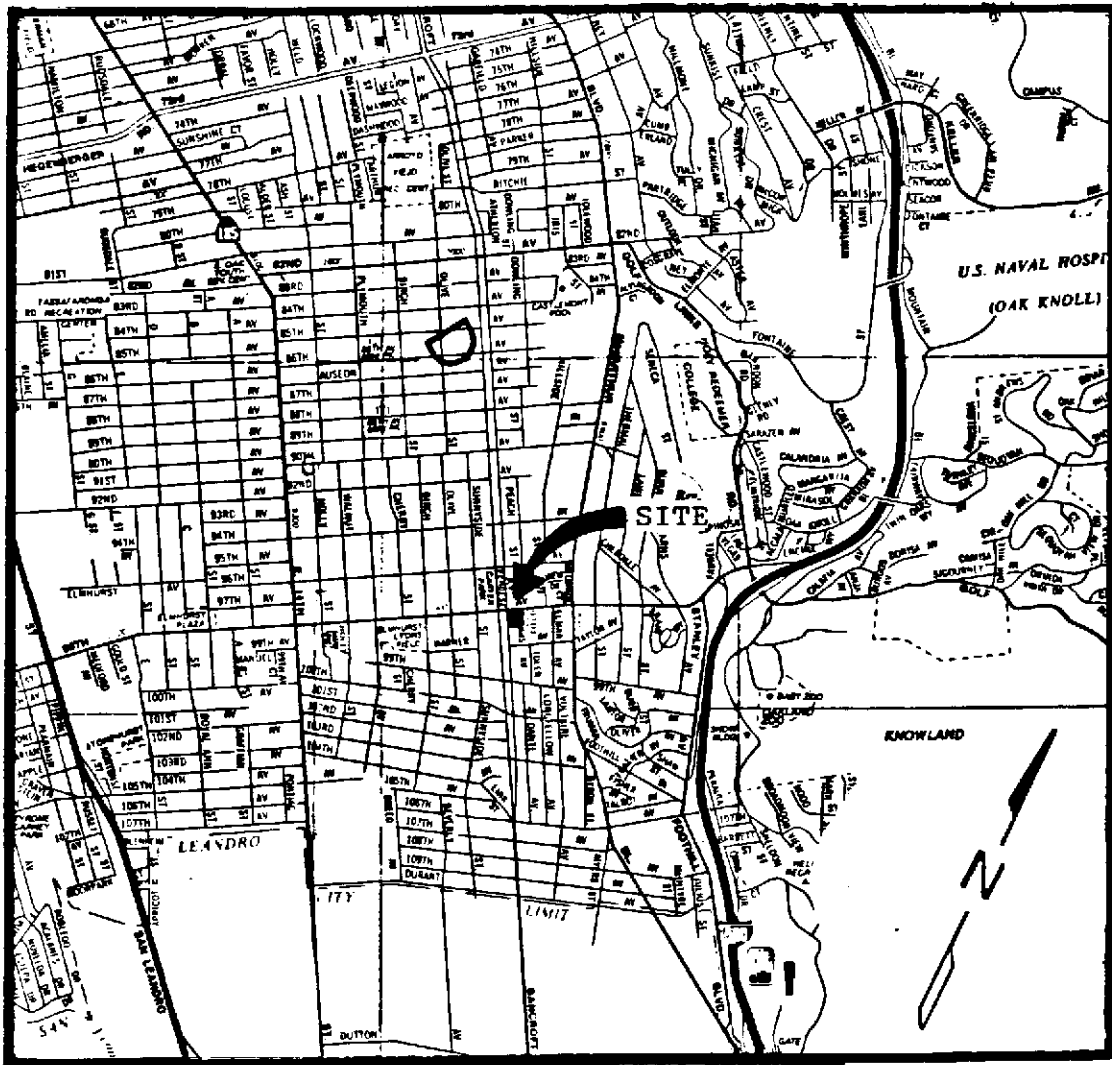
KAPREALIAN ENGINEERING, INC.

Consulting Engineers

P. O. BOX 913

BENICIA, CA 94510

(415) 676 - 9100 (707) 746 - 6915



LOCATION MAP

MOBIL SERVICE STATION #10-JV9
2220 98th Avenue
Oakland, California



KAPREALIAN ENGINEERING, INC.

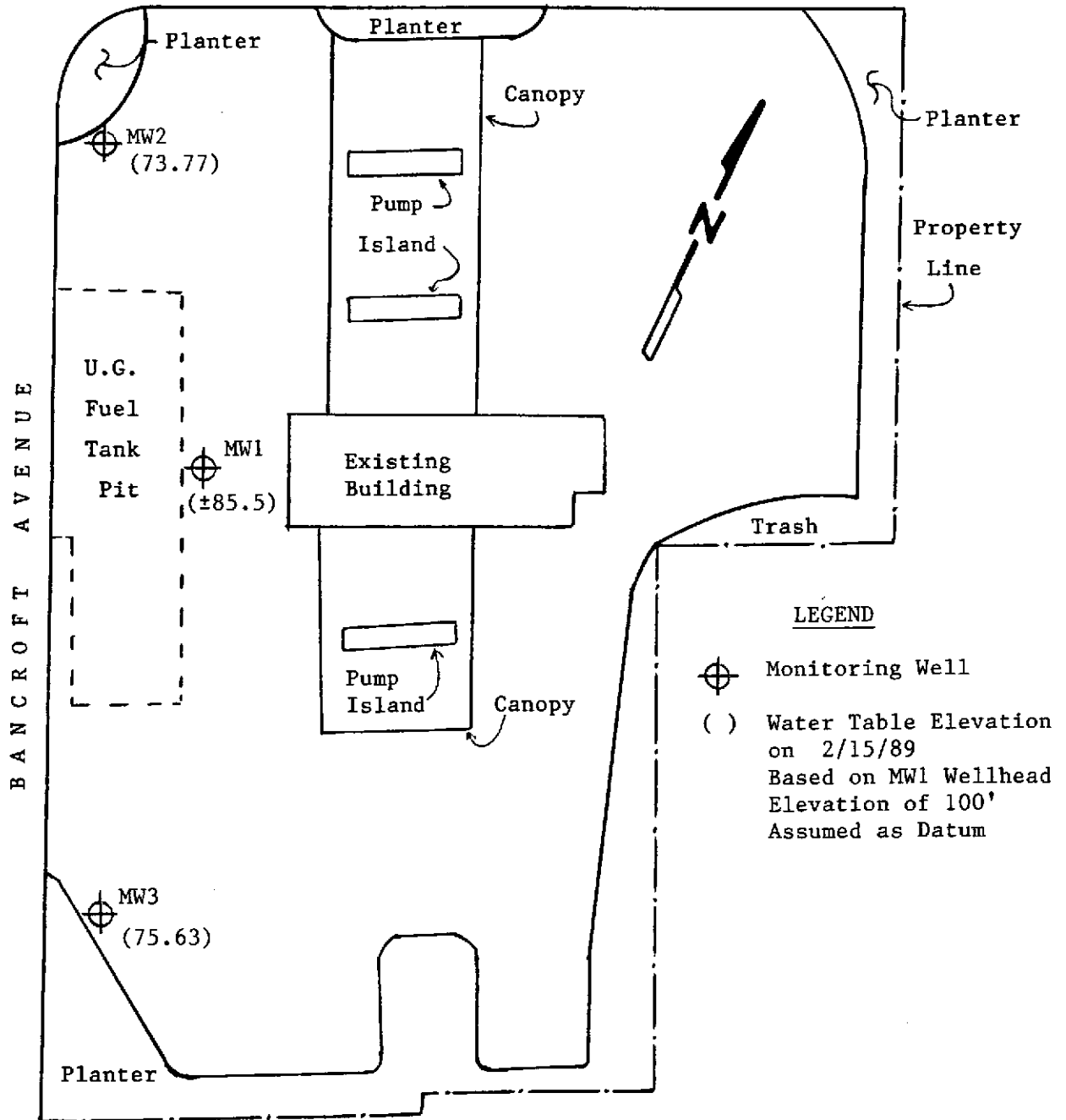
Consulting Engineers

P. O. BOX 913

BENICIA, CA 94510

(415) 676-9100 (707) 746-6915

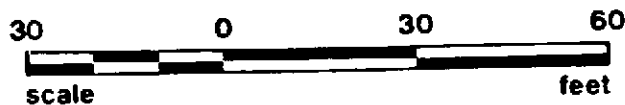
98TH AVENUE



LEGEND

- Monitoring Well
- Water Table Elevation on 2/15/89 Based on MW1 Wellhead Elevation of 100' Assumed as Datum

SITE PLAN



Mobil Station #10-MGV
2220 98th Avenue
Oakland, California

revised 3/8/89



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

| | | |
|-----------------------------------|--|------------------------|
| Kaprealian Engineering, Inc. | Client Project ID: Mobil, Oakland, 98th/Bancroft | Sampled: Feb 15, 1989 |
| P.O. Box 913 | Matrix Descript: Water | Received: Feb 15, 1989 |
| Benicia, CA 94510 | Analysis Method: EPA 5030/8015/8020 | Analyzed: Feb 28, 1989 |
| Attention: Mardo Kaprealian, P.E. | First Sample #: 902-1660 | Reported: Mar 2, 1989 |

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

| Sample Number | Sample Description | Low/Medium B.P. | Benzene | Toluene | Ethyl Benzene | Xylenes |
|---------------|--------------------|-------------------------------|---------------|---------------|---------------|---------------|
| | | Hydrocarbons ug/L (ppb) | ug/L (ppb) | ug/L (ppb) | ug/L (ppb) | ug/L (ppb) |
| 902-1660 | MW2 | N.D. | N.D. | N.D. | N.D. | N.D. |
| 902-1661 | MW3 | N.D. | N.D. | N.D. | N.D. | N.D. |

| | | | | | |
|-------------------|------|-----|-----|-----|-----|
| Detection Limits: | 50.0 | 0.5 | 0.5 | 0.5 | 0.5 |
|-------------------|------|-----|-----|-----|-----|

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Arthur G. Burton
Laboratory Director

9021660.KEI <1>



KAPREALIAN ENGINEERING, INC.

Consulting Engineers

P. O. BOX 913

BENICIA, CA 94510

(415) 676-9100 (707) 746-6915

CHAIN OF CUSTODY

SAMPLER: Ray (A/E) DATE/TIME OF COLLECTION: 2/15/89 TURN AROUND TIME: REGULAR
 (signature)

SAMPLE DESCRIPTION AND PROJECT NUMBER: MOBIL OAKLAND
98TH Ave / Braucioff

| <u>SAMPLE #</u> | <u>ANALYSES</u> | <u>GRAB OR COMP.</u> | <u>NUMBER OF CONTAINERS</u> | <u>SOIL/ WATER</u> |
|-----------------|------------------|----------------------|-----------------------------|--------------------|
| <u>MW2</u> | <u>TPHC BTXE</u> | <u>Grab</u> | <u>20</u> | <u>W</u> |
| <u>MW3</u> | <u>" "</u> | <u>"</u> | <u>"</u> | <u>"</u> |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| <u>RELINQUISHED BY*</u> | <u>TIME/DATE</u> | <u>RECEIVED BY*</u> | <u>TIME/DATE</u> |
|-------------------------|----------------------------------|---------------------|-------------------------------|
| <u>1. Ray (A/E)</u> | <u>6:30 PM</u> <u>2/15/89</u> | <u>Jack Newcomb</u> | <u>6:30</u> <u>2/15/89</u> |
| <u>2.</u> | | | |
| <u>3.</u> | | | |
| <u>4.</u> | | | |

* STATE AFFILIATION NEXT TO SIGNATURE

REMARKS: _____