



ENSR Consulting  
and Engineering  
1320 Harbor Bay Parkway  
Alameda, CA 94501  
(415) 865-1888

May 29, 1991

Mission Taylor Properties  
c/o Ms. Elona Lipschitz, Esq.  
Steefel, Levitt & Weiss  
One Embarcadero Center, 29th Floor  
San Francisco, CA 94111

Subject: Results of Quarterly Groundwater Sampling Conducted on April 12, 1991 at  
1410 - 64th Street in Emeryville, California

Dear Ms. Lipschitz:

ENSR Consulting and Engineering is pleased to submit the summary report for the quarterly groundwater sampling conducted at the above referenced property. A summary of the results of all quarterly groundwater monitoring events conducted at the site to-date is included. This project was authorized by Ms. Susan Lowenberg of Mission Taylor Properties on March 5, 1991, by accepting ENSR's Proposal No. 4682-A01 and its accompanying terms and conditions.

#### **Field Activities**

There are three monitoring wells located at this site. The wells are identified as TMW-1, TMW-2, and TMW-3. A site location map and site plan indicating the location of the monitoring wells are included as Figures 1 and 2 in Appendix A. Groundwater samples collected during the April 1991 quarterly monitoring were analyzed by Curtis & Tompkins, Ltd. Analytical Laboratories in Berkeley, California.

Pure product monitoring was conducted for each well by visual inspection using a new precleaned disposable polyethylene bailer and polypropylene rope. Depth-to-groundwater measurements were made using an electronic well sounder. Each well was purged prior to sample collection. The wells were purged by hand with a PVC bailer and polypropylene rope. The bailer and well sounder were decontaminated prior to and subsequent to their use in each well with TSP detergent and tap water, followed by a tap water rinse and then a distilled water rinse. A new length of rope was used for each well.

A minimum of five well casing volumes of water were removed from each monitoring well prior to sampling. Temperature, conductivity, and pH were measured during purging and prior to sampling.

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Groundwater samples collected from each of the three monitoring wells were analyzed for total volatile hydrocarbons (TVH) as gasoline using Environmental Protection Agency (EPA) Method 8015, and benzene, toluene, ethylbenzene, and total xylene using EPA Method 8020, as prescribed in the California Department of Health Services (DOHS) LUFT Manual. Laboratory analytical results and chain-of-custody forms can be found in Appendix B.

As part of field activities conducted during the April 1991 quarterly monitoring event, three 55 gallon drums containing development and purge water generated by Dames and Moore during the initial well installation, development, and sampling were sampled and analyzed for total volatile hydrocarbons as gasoline (EPA Method 8015) and benzene, toluene, ethylbenzene, and total xylenes (EPA Method 8020).

## Analytical Results

Groundwater beneath the site occurs at elevations of 12.5 to 13.0 feet above mean sea level under slightly confined conditions. The groundwater gradient measured during the April 1991 quarterly monitoring sloped to the northwest, indicating TMW-2 is downgradient. However, groundwater elevations measured by Dames and Moore in April 1990, indicated groundwater gradients sloping to the south. The cause of the fluctuations of the groundwater table is unknown at this time. Depth-to-groundwater and groundwater elevation data measured during the April 1991 quarterly monitoring and previous monitorings can be found in Table 1 in Appendix C.

Chemical analysis of the groundwater samples indicate the presence of gasoline in TMW-1 and TMW-2 at concentrations of 150 parts per billion (ppb) and 160 ppb, respectively. Benzene and ethylbenzene were also detected in these wells at concentrations of 3.2 ppb and 2.0 ppb in TMW-1, and 16 ppb and 1.7 ppb in TMW-2. The California DOHS primary maximum contaminant level (MCL) for benzene and ethylbenzene are 0.7 ppb and 680 ppb, respectively. No MCLs presently exist for gasoline. No contaminants were detected in TMW-3. No visible pure product or surface sheen was observed in any of the wells. A strong odor was encountered in MW-1, but not the other two wells. Groundwater analytical results for the April 1991 quarterly groundwater sampling and previous samplings are tabulated in Table 2 and included in Appendix C.

Analytical results of the drum samples indicate TVH and BTEX concentrations are below the method detection limit for samples collected from each drum.



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### Conclusions

The groundwater gradient appears to have shifted from the south the northwest.

Analytical results for groundwater monitoring conducted at the subject site between April 1990 and April 1991, indicate that concentrations of gasoline, benzene, and ethylbenzene in TMW-1 have decreased, while concentrations of gasoline and benzene appear to have increased slightly in TMW-2. Total xylenes were detected in TMW-1 and TMW-2 in the April 1990 quarterly monitoring but have not been detected in the following two sampling events. These issues will be further assessed during the next quarterly sampling event.

Results of analyses of water samples collected from the three drums containing development/purge water generated by Dames and Moore indicate that the water in these drums is nonhazardous. Mr. Dennis Byrne of the Alameda County Health Department has indicated in conversations with ENSR that the drums may be disposed to the local storm sewer system.

It has been a pleasure to provide this service for you. If you have any questions or comments about this report, please call me at (415) 865-1888.

Sincerely,

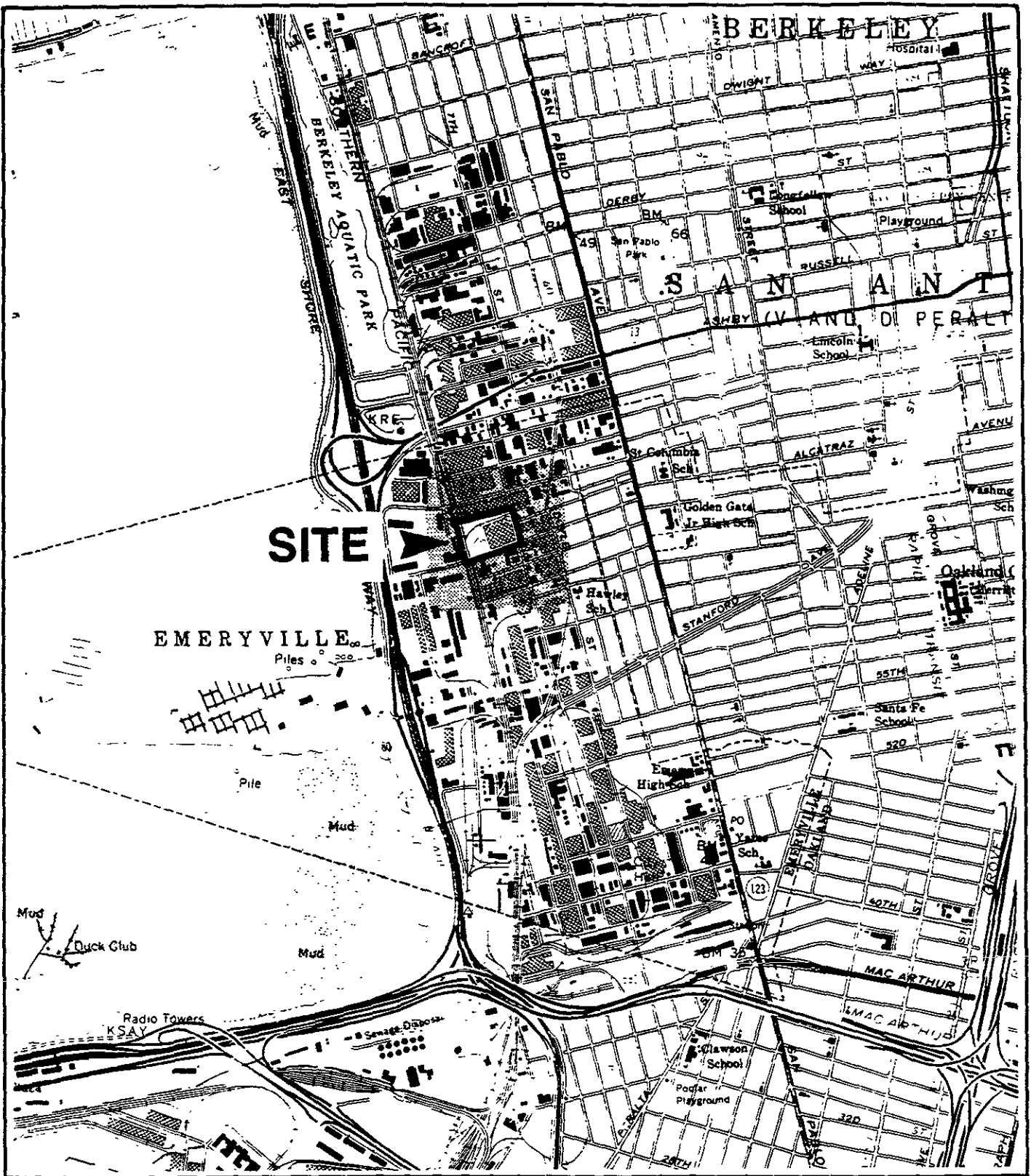
ENSR Consulting and Engineering

Jolynn Sheldon  
Senior Project Manager

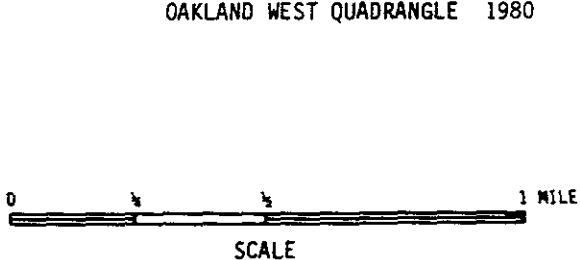
JS/hmt

Reference No. 4682-002-100

Attachments



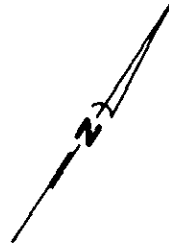
REFERENCE: USGS 7.5 MINUTE SERIES  
OAKLAND WEST QUADRANGLE 1980



**ENSR**

SITE LOCATION MAP  
MISSION TAYLOR PROPERTIES  
1410 64th STREET  
EMERYVILLE, CALIFORNIA

|                     |               |                       |
|---------------------|---------------|-----------------------|
| DRAWN BY: <i>mr</i> | DATE: 0110 91 | PROJECT NO.: 4682-001 |
| CHK'D BY: <i>cs</i> | REVISED:      | DWG. NO.: FIGURE 1    |



TMW-2 ⊕

BUILDING

SIDWALK

HOLLIS STREET

LIMITS OF EXCAVATION

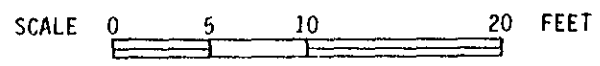
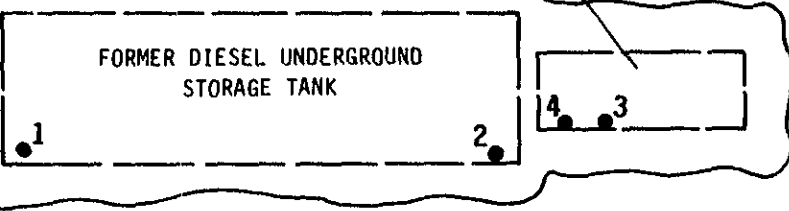
FUEL PUMP

FORMER GASOLINE UNDERGROUND STORAGE TANK

FORMER DIESEL UNDERGROUND STORAGE TANK

64th ⊕ TMW-3

TMW-1 ⊕ STREET



STREET

EXPLANATION

- 4 SOIL SAMPLE LOCATION
- ⊕ TMW-3 SOIL BORINGS/MONITORING WELLS



SITE PLAN  
 MISSION TAYLOR PROPERTIES  
 1410 64th STREET  
 EMERYVILLE, CALIFORNIA

|                      |                |                       |
|----------------------|----------------|-----------------------|
| DRAWN BY: <i>MLL</i> | DATE: 01/10/91 | PROJECT NO.: 4682-001 |
| CHK'D BY: <i>OS</i>  | REVISED:       | DWG. NO.: FIGURE 2    |



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 04/12/91

DATE REPORTED: 04/16/91

LAB NUMBER: 103524


CLIENT: ENSR CORPORATION

REPORT ON: 6 WATER SAMPLES

PROJECT ID: 4682-002-100  
LOCATION: MISSION BAY PROPERTIES

RESULTS: SEE ATTACHED

  
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QA/QC Approval

  
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Final Approval

LABORATORY NUMBER: 103524  
 CLIENT: ENSR CORPORATION  
 PROJECT ID: 4682-002-100  
 LOCATION: MISSION BAY PROPERTIES

DATE RECEIVED: 04/12/91  
 DATE ANALYZED: 04/15/91  
 DATE REPORTED: 04/16/91

Total Volatile Hydrocarbons with BTXE in Aqueous Solutions  
 TVH by California DOHS Method/LUFT Manual October 1989  
 BTXE by EPA 5030/8020

| LAB ID              | SAMPLE ID | TVH AS<br>GASOLINE<br>(ug/L) | BENZENE<br>(ug/L) | TOLUENE<br>(ug/L) | ETHYL<br>BENZENE<br>(ug/L) | TOTAL<br>XYLENES<br>(ug/L) |
|---------------------|-----------|------------------------------|-------------------|-------------------|----------------------------|----------------------------|
| 103524-1            | MW-1      | 150                          | 3.2               | ND(0.5)           | 2.0                        | ND(0.5)                    |
| 103524-2            | MW-3      | ND(50)                       | ND(0.5)           | ND(0.5)           | ND(0.5)                    | ND(0.5)                    |
| 103524-3            | MW-2      | 160                          | 16                | ND(0.5)           | 1.7                        | ND(0.5)                    |
| 103524-4            | WD-1      | ND(50)                       | ND(0.5)           | ND(0.5)           | ND(0.5)                    | ND(0.5)                    |
| 103524-5            | WD-2      | ND(50)                       | ND(0.5)           | ND(0.5)           | ND(0.5)                    | ND(0.5)                    |
| 103524-6            | WD-3      | ND(50)                       | ND(0.5)           | ND(0.5)           | ND(0.5)                    | ND(0.5)                    |
| 103524-METHOD BLANK |           | ND(50)                       | ND(0.5)           | ND(0.5)           | ND(0.5)                    | ND(0.5)                    |

ND = Not detected at or above reporting limit; Reporting limit  
 indicated in parentheses.

QA/QC SUMMARY

RPD, % 3  
 RECOVERY, % 100

CHAIN OF CUSTODY RECORD

1000

|  |  |                                    |      |                           |  |  |  |
|--|--|------------------------------------|------|---------------------------|--|--|--|
| Client/Project Name<br>Mission Bay Properties / 1410 64th St |  | Project Location<br>Emeryville, CA |      | ANALYSES                  |  |  |  |
| Project No<br>4682-002-100                                   |  | Field Logbook No                   |      |                           |  |  |  |
| Sample (Signature)<br><i>[Signature]</i>                     |  | Chain of Custody Tape No.          |      | TVH (2015-Gas) / BTEX (8) |  |  |  |
| Sample No. / Identification                                  |  | Date                               | Time |                           |  |  |  |

Level I COA + method Reg TAT blank

| Sample No. / Identification | Date    | Time  | Lab Sample Number | Type of Sample |   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|---------|-------|-------------------|----------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
| MW-1                        | 4/12/91 | 9:20  |                   | Water          | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MW-3                        | "       | 11:15 |                   | "              | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MW-2                        | "       | 12:25 |                   |                | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| WD-1                        | "       | 13:20 |                   |                | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| WD-2                        | "       | 13:25 |                   |                | X |  |  |  |  |  |  |  |  |  |  |  |  |  |
| WD-3                        | "       | 13:30 |                   |                | X |  |  |  |  |  |  |  |  |  |  |  |  |  |

|   |                            |               |  |                 |               |
|---|----------------------------|---------------|--|-----------------|---------------|
| Relinquished by (Signature)<br><i>[Signature]</i> | Date<br>4/12               | Time<br>13:42 | Received by (Signature)                                    | Date            | Time          |
| Relinquished by (Signature)                       | Date                       | Time          | Received by (Signature)                                    | Date            | Time          |
| Relinquished by (Signature)                       | Date                       | Time          | Received for Laboratory (Signature)<br><i>Nancy Wilson</i> | Date<br>4/12/91 | Time<br>13:42 |
| Sample Disposal Method                            | Disposed of by (Signature) |               |  | Date            | Time          |

|  |  |             |
|--|--|-------------|
| SAMPLE COLLECTOR<br>ENSR - Alameda<br>1320 Harbor Bay Parkway Ste 100<br>Alameda, CA 94501 | ANALYTICAL LABORATORY<br>Curtis & Tompkins, Ltd. | <b>ENSR</b> |
|  |  | (1)         |



**TABLE 1**  
**ANALYTICAL RESULTS**  
**at**  
**1410 - 64th Street**  
**Emeryville, California**  
**for**  
**Mission Taylor Properties**

| Chemical Parameter | Monitoring Wells - Parts Per Million (ppm) |          |          |          |          |          |          |          |          | Reporting Limit |
|--------------------|--|----------|----------|----------|----------|----------|----------|----------|----------|-----------------|
|                    | TMW-1                                      |          |          | TMW-2    |          |          | TMW-3    |          |          |                 |
|                    | 04/13/90                                   | 11/30/90 | 04/12/91 | 04/13/90 | 11/30/90 | 04/12/91 | 04/13/90 | 11/30/90 | 04/12/91 |                 |
| Gasoline           | 0.56                                       | ND       | 0.15     | 0.14     | ND       | 0.16     | ND       | ND       | ND       | (0.05)          |
| Diesel             | ND   | ND       | *        | ND       | ND       | *        | ND       | ND       | *        | (0.010)         |
| Benzene            | 0.01                                       | 0.0032   | 0.0032   | 0.01     | 0.0038   | 0.016    | ND       | ND       | ND       | (0.001)         |
| Toluene            | ND   | ND       | ND       | ND       | ND       | ND       | ND       | ND       | ND       | (0.001)         |
| Ethyl benzene      | 0.01                                       | 0.0032   | 0.002    | 0.002    | ND       | 0.0017   | ND       | ND       | ND       | (0.001)         |
| Total xylenes      | 0.03                                       | ND       | ND       | 0.007    | ND       | ND       | ND       | ND       | ND       | (0.001)         |

ND = Not detected above the reporting limit

\* = Not analyzed

**TABLE 2**  
**SUMMARY OF GROUNDWATER ELEVATIONS**  
**at**  
**1410 - 64th Street**  
**Emeryville, California**  
**for**  
**Mission Taylor Properties**

| Monitoring Well | Well Depth <sup>(1)</sup><br>(top of PVC) | Elevation<br>(top of PVC) | Depth-to-Water |          |          | Water Elevation |          |          |
|-----------------|---|---------------------------|----------------|----------|----------|-----------------|----------|----------|
|                 |   |                           | 04/25/90       | 11/30/90 | 04/29/91 | 04/25/90        | 11/30/90 | 04/29/91 |
| TMW-1           | 14.69                                     | 16.34                     | 3.48 ✓         | 3.57 ✓   | 3.41 ✓   | 12.86           | 12.77    | 12.93    |
| TMW-2           | 16.35                                     | 15.36                     | 2.59           | 2.57     | 2.78     | 12.77           | 12.79    | 12.58    |
| TMW-3           | 15.53                                     | 15.14                     | 2.54           | 2.27     | 2.36     | 12.60           | 12.78    | 12.78    |

<sup>(1)</sup> All depths and elevations recorded in feet.