



LETTER REPORT
SECOND QUARTER 1991
GROUNDWATER MONITORING
at
Exxon Service Station 7-7003
349 Main Street
Pleasanton, California

AGS/RESNA Job No. 19025-3

10-21-91

41674 Christy Street
Fremont, CA 94538
Phone: (510) 659-0404
Fax: (510) 651-4677

October 31, 1991
AGS/RESNA 19025-3

Mr. William Y. Wang
Exxon Company U.S.A.
2300 Clayton Road, Suite 1250
P.O. Box 4032
Concord, California 94520

Subject: Letter Report for Second Quarter 1991 Groundwater Monitoring at Exxon Service Station 7-7003, 349 Main Street, Pleasanton, California

References: Applied GeoSystems. October 1, 1989. Report on Limited Subsurface Environmental Investigation at Exxon Station No. 7-7003, 349 Main Street, Pleasanton, California. Job No. 19025-1.

Applied GeoSystems. August 1, 1990. Report on Supplemental Subsurface Environmental Investigation at Exxon Station No. 7-7003, 349 Main Street, Pleasanton, California. Job No. 19025-2.

State of California. May 1988. Leaking Underground Fuel Tank Field Manual. Leaking Underground Fuel Tank Task Force.

Dear Mr. Wang:

This letter report summarizes the second quarter 1991 groundwater monitoring for Exxon Service Station 7-7003. The Exxon site is located at 349 Main Street on the southwest corner of Angela and Main Streets in Pleasanton, California (Plate 1). Features of the site include a service station building and two service islands that dispense gasoline (Plate 2). New underground storage tanks (USTs) for gasoline are located northeast of the station building and a waste-oil UST is northwest of the station building.

Background

In June 1989, at the request of Exxon Company U.S.A. (Exxon), Applied GeoSystems (AGS) conducted a soil-vapor survey at the site prior to the removal and replacement of four USTs. In July 1989, Exxon removed three steel 8,000-gallon gasoline USTs and a waste-oil UST.

EXXON COMPANY, U.S.A.

POST OFFICE BOX 4032 • CONCORD, CA 94524-2032

ENVIRONMENTAL ENGINEERING

W. Y. WANG
SENIOR ENVIRONMENTAL ENGINEER

13 November, 1991

Exxon RAS 7-7003
349 Main Street
Pleasanton, California

Mr. Rick Mueller
City of Pleasanton Fire Department
4444 Railroad Street
Pleasanton, California 94566-0802

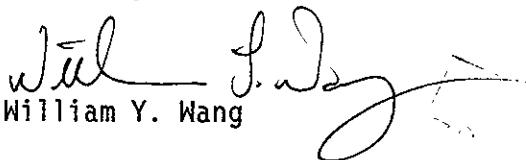
Dear Mr. Mueller:

Attached for your review and comment is the **Second Quarter 1991 Groundwater Monitoring Letter Report** for the above referenced Exxon station in Pleasanton. The report, prepared by RESNA/Applied GeoSystems of Fremont, California, details the results of the 27 June, 1991 ground water sampling event.

The results of this sampling event indicate that with the exception of well #MW-2, concentrations of dissolved petroleum hydrocarbons have generally decreased since the last sampling event.

Should you have any questions or require additional information, please do not hesitate to contact me at (510) 246-8768.

Sincerely,


William Y. Wang

WYW:ss
0331E.3
Attachment

c - w/attachment:
Mr. L. Feldman - San Francisco Bay Region Water Quality Control Board

w/o attachment:
Mr. D. J. Bertoch
Mr. P. J. Brininstool
Mr. G. DeMarzo
Mr. J. R. Hastings
Mr. M. Detterman - RESNA/Applied GeoSystems, Fremont

NOV 19

New fiberglass tanks were installed in August 1989. The new and former locations of the USTs are shown on Plate 2. Soil samples collected in the northern part of the tank excavation by AGS indicated the presence of up to 150 parts per million (ppm) TPHg (AGS Report No. 19025-1, October 1, 1989).

Between January and June 1990, AGS drilled 13 boreholes around the former UST locations, installed groundwater monitoring wells MW-1 through MW-5 in five of the boreholes, and analyzed soil and groundwater samples on behalf of Exxon. The results of soil analyses indicated TPHg concentrations greater than 100 ppm southwest of the former fuel UST excavation. Laboratory analytical results also indicated groundwater below the site was affected by petroleum hydrocarbons (AGS Report No. 19025-2, August 1, 1990). During February and March 1991, AGS drilled 6 boreholes north and northwest of the former USTs and installed groundwater monitoring wells MW-6 and MW-7 (AGS Draft Report No. 19025-2, October 1991).

Current Field and Laboratory Activities

On June 27, 1991, an AGS representative measured depth to water and subjectively evaluated groundwater in the monitoring wells. Groundwater in each well was then purged and sampled for laboratory analysis. Field activities were in accordance with the attached Field Procedures.

Groundwater samples were submitted to Applied Analytical Environmental Laboratory (State Certification No. 1211) in Fremont, California. The samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by modified Environmental Protection Agency (EPA) Method 8015, and for benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 602. Groundwater from well MW-3 was analyzed for total petroleum hydrocarbons as oil and grease (TOG) by Standard Method 5520B/F. In addition, groundwater from well MW-3 was submitted to Chromalab, Inc. (State Certification No. E694) in San Ramon, California, and analyzed for volatile organic compounds (VOCs) by EPA Method 601. A groundwater sample from each well was also submitted to Mobil Chem Labs, Inc. (State Certification No. 358) in Martinez, California, and analyzed for organic lead using the Leaking Underground Fuel Tank (LUFT) manual method (State of California, May 1988). The Chain of Custody Records and Analysis Reports are attached to this report.

Groundwater Gradient and Flow Direction

A hydrograph was prepared for wells MW-1 through MW-7 to show groundwater elevation differences in each well and to illustrate trends in the water level (Plate 3). The water level in wells MW-1 through MW-5 rose an average of 4.76 feet between June 1990 and June 1991, and rose in wells MW-1 through MW-7 an average of 1.43 feet between March and June 1991 (Table 1). No floating product or sheen was observed on groundwater in wells

MW-1 through MW-7 during the June 1991 visit. Cumulative results of subjective evaluations are presented in Table 1.

Depth to groundwater measurements and wellhead elevations were used to calculate the groundwater surface elevation in each well (Table 1). A plot of the groundwater surface elevation data indicates that groundwater below the site flows toward the northwest with a gradient of approximately 0.22 between MW-1 and MW-6 (Plate 2). Southeast of well MW-1 the northwest-ward gradient flattens to 0.006. The flow direction and gradients are consistent with the groundwater flow direction inferred from previous elevation data.

Analytical Results

In June 1991, concentrations of TPHg in the groundwater ranged from below the detection limit to 1,400 parts per billion (ppb). Benzene concentrations in the groundwater ranged from below the detection limit to 8.7 ppb. Concentrations of TPHg and benzene decreased in wells MW-1, MW-3, and MW-5. The TPHg concentration in well MW-6 remained below the detection limit, while the benzene concentration increased above the limits of detection. The TPHg concentration in well MW-7 decreased, and the benzene concentration increased. A significant increase in the TPHg concentration occurred in the groundwater sample from well MW-2, while the benzene concentration remained relatively stable. These results are summarized in Table 2. Distribution of the TPHg and benzene concentrations for June 1991 are presented on Plates 4 and 5 respectively.

Laboratory analytical results show no detectable organic lead or VOCs in the groundwater samples from wells MW-1 through MW-7 (Table 3). The VOC concentrations have decreased to below detection limits since March 1991 in MW-1, MW-5, and MW-7 and have remained below the detection limits in wells MW-2, MW-3, MW-4 and MW-6.

Recommendations

RESNA/AGS recommends continued quarterly monitoring of the groundwater in the wells. The next monitoring event is scheduled for September 1991. We also recommend that lead analyses be discontinued since no total lead or organic lead has been detected in groundwater at the site since March 1990.

RESNA/AGS recommends copies of this report be forwarded to:

- Mr. Lester Feldman, California Regional Water Quality Control Board, San Francisco Bay Region, 1800 Harrison Street, Suite 700, Oakland, California 94612; and
- Mr. Rick Mueller, Pleasanton Fire Department, 44 Railroad Street, Pleasanton, California 94566.



Please call if you have any questions.

Sincerely,
RESNA/Applied GeoSystems

Clark A. Robertson
Project Geologist

Mark E. Detterman
Project Manager, R.G. 4799

Enclosures:

- Table 1, Cumulative results of Subjective Evaluations of Groundwater
- Table 2, Cumulative results of Groundwater Analysis for Gasoline Hydrocarbon Compounds
- Table 3, Results of Groundwater Analysis for Lead, TOG, and VOCs
- Plate 1, Site Vicinity Map
- Plate 2, Generalized Site Plan and Groundwater Elevation Map
- Plate 3, Hydrograph
- Plate 4, Concentration of TPHg in Groundwater (June 26, 1991)
- Plate 5, Concentration of Benzene in Groundwater (June 26, 1991)

Attachment I:

Field Procedures

Attachment II:

Chain of Custody Records and Analysis Reports

TABLE 1
CUMULATIVE RESULTS OF SUBJECTIVE EVALUATIONS OF GROUNDWATER
(page 1 of 2)

| Date | Depth to Water (ft) | Groundwater Elevation (ft) | Product Thickness (ft) | Sheen |
|--|---------------------|----------------------------|------------------------|-------|
| MW-1 (Wellhead Elevation = 343.83 ft) | | | | |
| 2/90 | 26.08 | 317.75 | None | None |
| 6/90 | 26.49 | 317.34 | None | None |
| 8/90 | 26.47 | 317.36 | None | None |
| 12/90 | 28.00 | 315.83 | None | None |
| 3/19/91 | 23.63 | 320.20 | None | None |
| 6/27/91 | 22.11 | 321.72 | None | None |
| MW-2 (Wellhead Elevation = 344.22 ft) | | | | |
| 2/90 | 26.31 | 317.31 | None | None |
| 6/90 | 26.25 | 317.97 | None | None |
| 8/90 | 26.15 | 318.07 | None | None |
| 12/90 | 27.94 | 316.28 | None | None |
| 3/19/91 | 23.41 | 320.81 | None | None |
| 6/27/91 | 21.63 | 322.59 | None | None |
| MW-3 (Wellhead Elevation = 342.90 ft) | | | | |
| 2/90 | 24.78 | 318.12 | None | None |
| 6/90 | 25.29 | 317.61 | None | None |
| 8/90 | 25.40 | 317.50 | None | None |
| 12/90 | 26.84 | 316.06 | None | None |
| 3/19/91 | 22.13 | 320.77 | None | None |
| 6/27/91 | 21.04 | 322.86 | None | None |
| MW-4 (Wellhead Elevation = 343.38 ft) | | | | |
| 6/90 | 30.94 | 312.44 | None | None |
| 8/90 | 31.21 | 312.17 | None | None |
| 12/90 | 32.86 | 310.52 | None | None |
| 3/19/91 | 26.76 | 316.62 | None | None |
| 6/27/91 | 25.91 | 317.47 | None | None |
| MW-5 (Wellhead Elevation = 345.20 ft) | | | | |
| 6/90 | 26.94 | 318.26 | None | None |
| 8/90 | 26.90 | 318.30 | None | None |
| 12/90 | 28.31 | 316.89 | None | None |
| 3/19/91 | 23.98 | 321.22 | None | None |
| 6/27/91 | 22.41 | 322.79 | None | None |

See notes on page 2 of 2

TABLE 1
CUMULATIVE RESULTS OF SUBJECTIVE EVALUATIONS OF GROUNDWATER
(page 2 of 2)

| Date | Depth to Water (ft) | Groundwater Elevation (ft) | Product Thickness (ft) | Sheen |
|--|---------------------|----------------------------|------------------------|-------|
| MW-6 (Wellhead Elevation = 342.25 ft) | | | | |
| 3/19/91 | 34.42 | 307.83 | None | None |
| 6/27/91 | 35.01 | 307.24 | None | None |
| MW-7 (Wellhead Elevation = 343.62 ft) | | | | |
| 3/19/91 | 24.68 | 318.94 | None | None |
| 6/27/91 | 23.10 | 320.52 | None | None |

Elevations relative to mean sea level datum. (Surveyed by Ron Archer Civil Engineer, Inc.)

TABLE 2
 CUMULATIVE RESULTS OF GROUNDWATER ANALYSES
 FOR GASOLINE HYDROCARBONS COMPOUNDS
 (Page 1 of 2)

| Sample Number | Date | TPHg ppb | Benzene ppb | Toluene ppb | Ethyl-benzene ppb | Total Xylenes ppb |
|---------------|---------|----------|-------------|-------------|-------------------|-------------------|
| MW-1 | | | | | | |
| W-28-MW1 | 3/90 | 3,300 | 21 | 9.2 | 59 | 19 |
| W-27-MW1 | 6/90 | 1,300 | 7.9 | 5.9 | 32 | 58 |
| W-29-MW1 | 8/90 | 2,500 | 77 | 280 | 50 | 250 |
| W-28-MW1 | 12/90 | 390 | 9 | 2 | 43 | 400 |
| W-23-MW1 | 3/19/91 | 4,500 | 45 | 12 | 240 | 300 |
| W-22-MW1 | 6/27/91 | 710 | 5.4 | 2.6 | 29 | 34 |
| MW-2 | | | | | | |
| W-29-MW2 | 3/90 | 650 | 3 | 2 | 0.98 | 6.5 |
| W-27-MW2 | 6/90 | 670 | <0.5 | 2.6 | <0.5 | <0.5 |
| W-28-MW2 | 8/90 | 1,300 | 24 | 130 | 37 | 170 |
| W-28-MW2 | 12/90 | 470 | <0.3 | 0.5 | 1 | 3 |
| W-23-MW2 | 3/19/91 | 700 | 10 | 3.4 | 6.1 | 3.8 |
| W-21-MW2 | 6/27/91 | 1,400 | 8.7 | 2.1 | 8.8 | 33 |
| MW-3 | | | | | | |
| W-27-MW3 | 3/90 | <20 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-27-MW3 | 6/90 | 200 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-27-MW3 | 8/90 | 3,200 | 54 | 380 | 23 | 400 |
| W-27-MW3 | 12/90 | 200 | 8 | 12 | 6 | 24 |
| W-22-MW3 | 3/19/91 | <50 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-21-MW3 | 6/27/91 | <50 | <0.5 | <0.5 | <0.5 | <0.5 |
| MW-4 | | | | | | |
| W-34-MW4 | 6/90 | <20 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-33-MW4 | 8/90 | 120 | 5.2 | 5.4 | 5.4 | 9.9 |
| W-33-MW4 | 12/90 | 50 | 7 | 1 | <0.3 | 2 |
| W-26-MW4 | 3/19/91 | 160 | 1.8 | 0.8 | 2.2 | 11 |
| W-25-MW4 | 6/27/91 | <50 | <0.5 | <0.5 | <0.5 | <0.5 |

See notes on page 2 of 2

TABLE 2
 CUMULATIVE RESULTS OF GROUNDWATER ANALYSES
 FOR GASOLINE HYDROCARBONS COMPOUNDS
 (Page 2 of 2)

| Sample Number | Date | TPHg ppb | Benzene ppb | Toluene ppb | Ethyl-benzene ppb | Total Xylenes ppb |
|---------------|---------|----------|-------------|-------------|-------------------|-------------------|
| MW-5 | | | | | | |
| W-26-MW5 | 6/90 | <20 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-28-MW5 | 8/90 | 210 | 9.7 | 12 | 7.6 | 17 |
| W-28-MW5 | 12/90 | 190 | 2 | 3.5 | 2 | 8 |
| W-23-MW5 | 3/19/91 | <50 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-22-MW5 | 6/27/91 | <50 | <0.5 | <0.5 | <0.5 | <0.5 |
| MW-6 | | | | | | |
| W-34-MW6 | 3/19/91 | <50 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-35-MW6 | 6/27/91 | <50 | 2.6 | 1.8 | 0.8 | <0.30 |
| MW-7 | | | | | | |
| W-24-MW7 | 3/19/91 | 140 | <0.5 | <0.5 | <0.5 | <0.5 |
| W-23-MW7 | 6/27/91 | 100 | 5.2 | 5.6 | 3.9 | 16 |

TPHg = total petroleum hydrocarbons.

ppb = parts per billion

< = below the detection limits of the analysis.

Sample designation = W-24-MW7

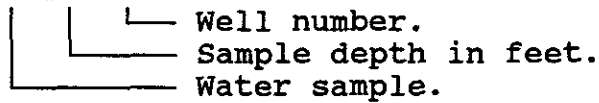


TABLE 3
RESULTS OF GROUNDWATER ANALYSIS FOR LEAD, TOG, AND VOCs
 (Page 1 of 2)

| Sample Number | Date | Lead ppm | TOG ppb | VOCs ppb |
|---------------|---------|-------------|------------|-------------------|
| MW-1 | | | | |
| W-28-MW1 | 3/90 | 0.01 | --- | --- |
| W-27-MW1 | 6/90 | <0.05 | --- | --- |
| W-29-MW1 | 8/90 | <0.05 | --- | --- |
| W-28-MW1 | 12/90 | <0.1* | --- | --- |
| W-23-MW1 | 3/19/91 | <0.1* | --- | 12.0 ¹ |
| W-22-MW1 | 6/27/91 | <0.1* | --- | <0.5 |
| MW-2 | | | | |
| W-29-MW2 | 3/90 | 0.008 | --- | --- |
| W-27-MW2 | 6/90 | <0.05 | --- | --- |
| W-28-MW2 | 8/90 | <0.05 | --- | --- |
| W-28-MW2 | 12/90 | <0.1* | --- | --- |
| W-23-MW2 | 3/19/91 | <0.1* | --- | <0.5 |
| W-21-MW2 | 6/27/91 | <0.1* | --- | <0.5 |
| MW-3 | | | | |
| W-27-MW3 | 3/90 | 0.01 | --- | --- |
| W-27-MW3 | 6/90 | <0.05 | --- | --- |
| W-27-MW3 | 8/90 | <0.05 | --- | --- |
| W-27-MW3 | 12/90 | <0.1* | <5,000 | 4.1 ³ |
| W-22-MW3 | 3/19/91 | <0.1* | <5,000 | <0.5 |
| W-21-MW3 | 6/27/91 | <0.1* | <5,000 | <0.5 |
| MW-4 | | | | |
| W-34-MW4 | 6/90 | <0.05 | --- | --- |
| W-33-MW4 | 8/90 | <0.05 | --- | --- |
| W-33-MW4 | 12/90 | <0.1* | --- | --- |
| W-26-MW4 | 3/19/91 | <0.1* | --- | <0.5 |
| W-25-MW4 | 6/27/91 | <0.1* | --- | <0.5 |
| MW-5 | | | | |
| W-26-MW5 | 6/90 | 0.06 | --- | --- |
| W-28-MW5 | 8/90 | <0.05 | --- | --- |
| W-28-MW5 | 12/90 | <0.1* | --- | --- |
| W-23-MW5 | 3/19/91 | <0.1* | --- | 0.5 ¹ |
| | | | | 1.0 ² |
| W-22-MW5 | 6/27/91 | <0.1* | --- | <0.5 |

See notes on page 2 of 2

TABLE 3
RESULTS OF GROUNDWATER ANALYSIS FOR LEAD, TOG, AND VOCs
(Page 2 of 2)

| Sample Number | Date | Lead ppm | TOG ppb | VOCs ppb |
|---------------|---------|-------------|------------|--------------------------------------|
| MW-6 | | | | |
| W-34-MW6 | 3/19/91 | <0.1* | --- | <0.5 |
| W-35-MW6 | 6/27/91 | <0.1* | --- | <0.5 |
| MW-7 | | | | |
| W-24-MW7 | 3/19/91 | <0.1* | --- | 0.7 ¹ 0.8 ² |
| W-23-MW7 | 6/27/91 | <0.1* | --- | <0.5 |

ppm = parts per million

ppb = parts per billion

TOG = Total oil and grease

VOCs = Volatile organic compounds (EPA Method 601)

* = Organic lead

1 = Chloroform

2 = Bromodichloromethane

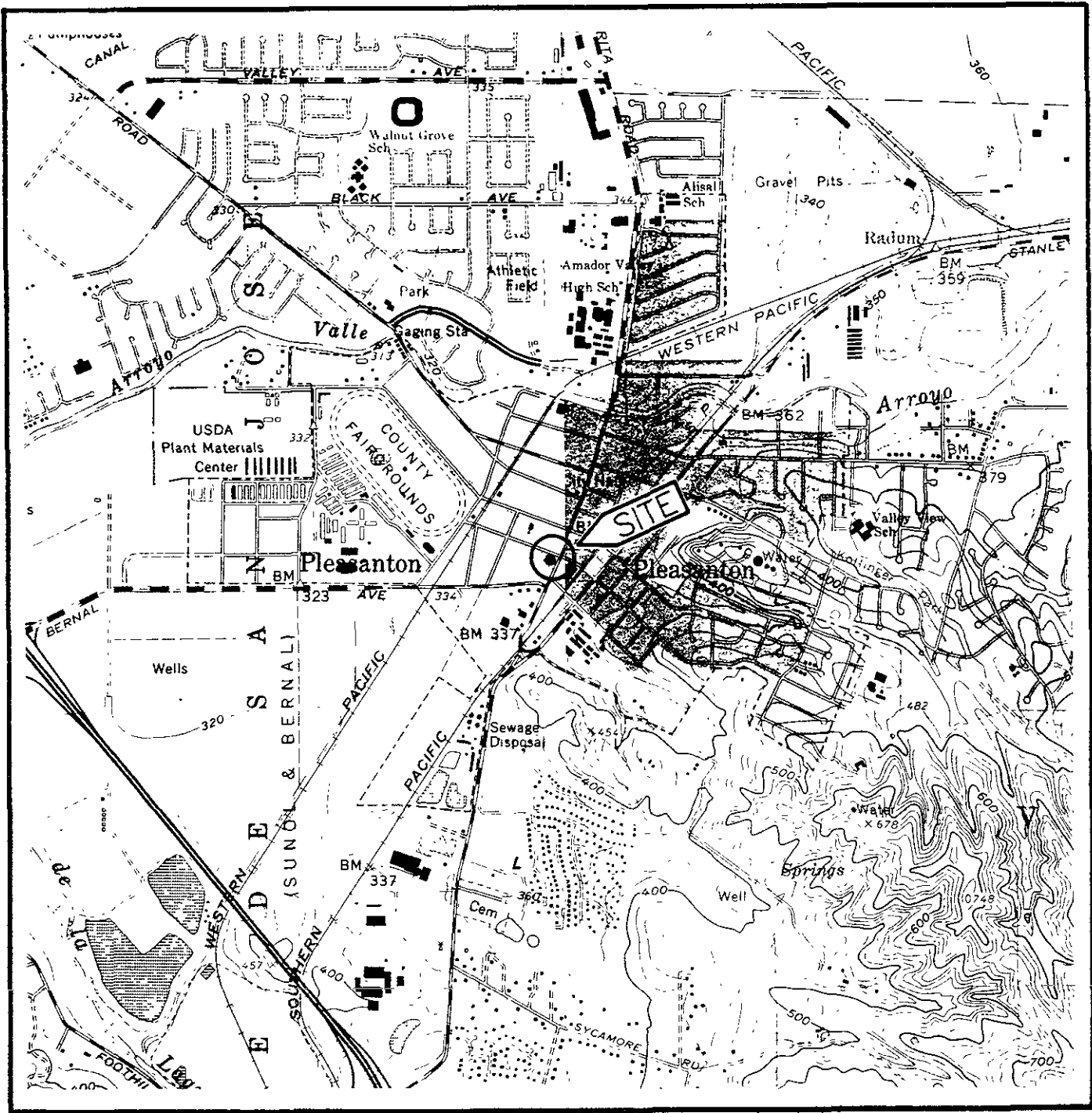
3 = Tetrachloroethene

< = Below the detection limits of the analysis.

--- = Not analyzed

Sample designation = W-24-MW7

W — Well number.
 24 — Sample depth in feet.
 MW7 — Water sample.



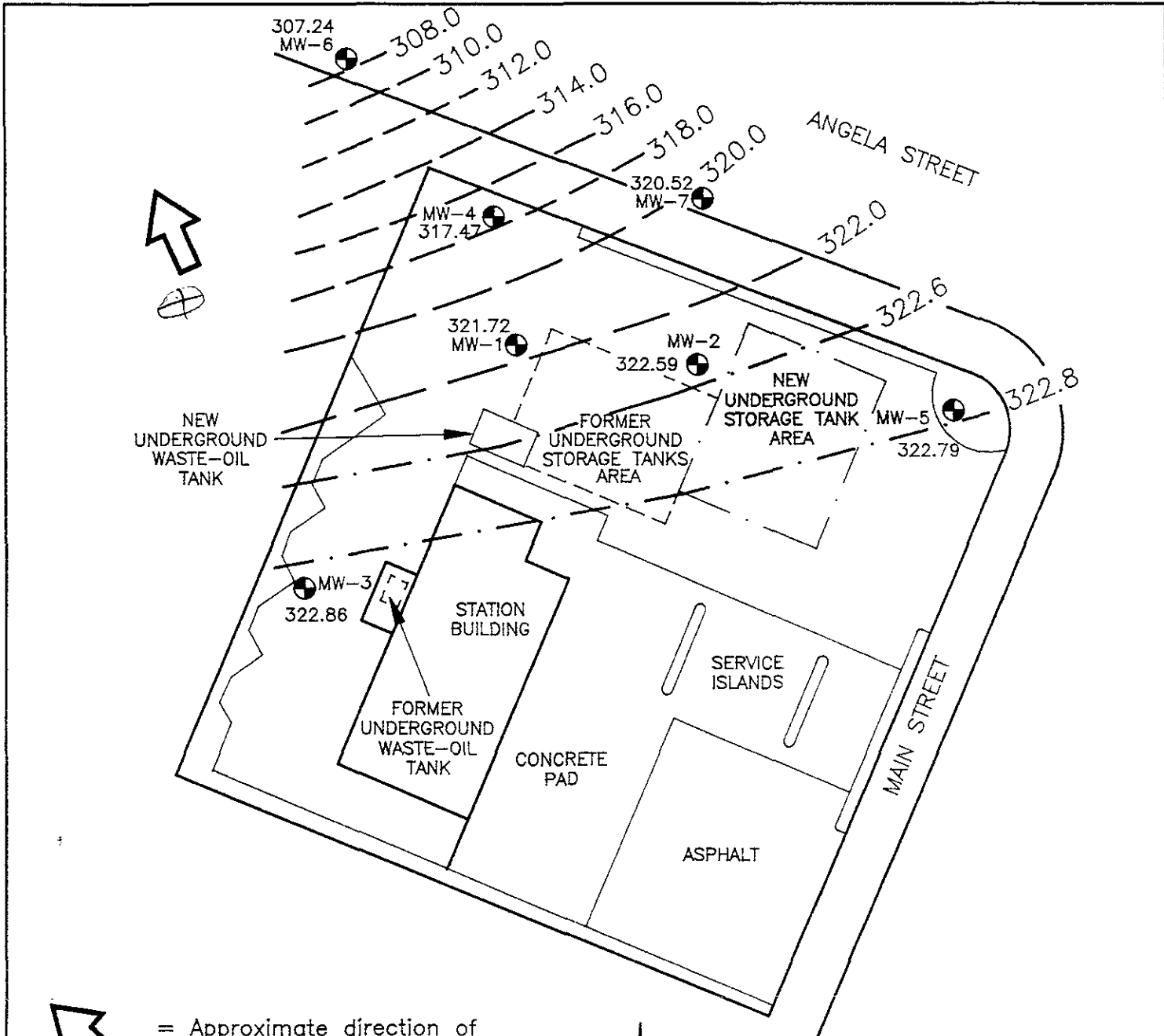
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 Dublin/Livermore, California
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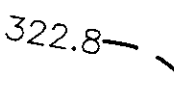



SITE VICINITY MAP
 Exxon Service Station 7-7003
 349 Main Street
 Pleasanton, California

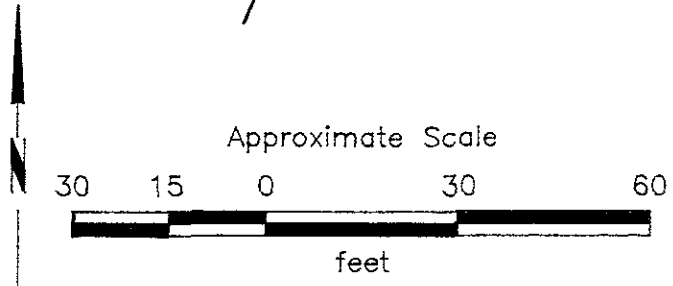
PLATE
 1

PROJECT NO. 19025-3



-  = Approximate direction of groundwater flow on June 27, 1991
-  = Line of equal elevation of groundwater in shallow saturated zone in feet above mean sea level
Note scale change at elevation 322.0
- MW-7  = Monitoring well

NOTE: Contours based on interpretation of available data. Contours are not intended to imply certainty.



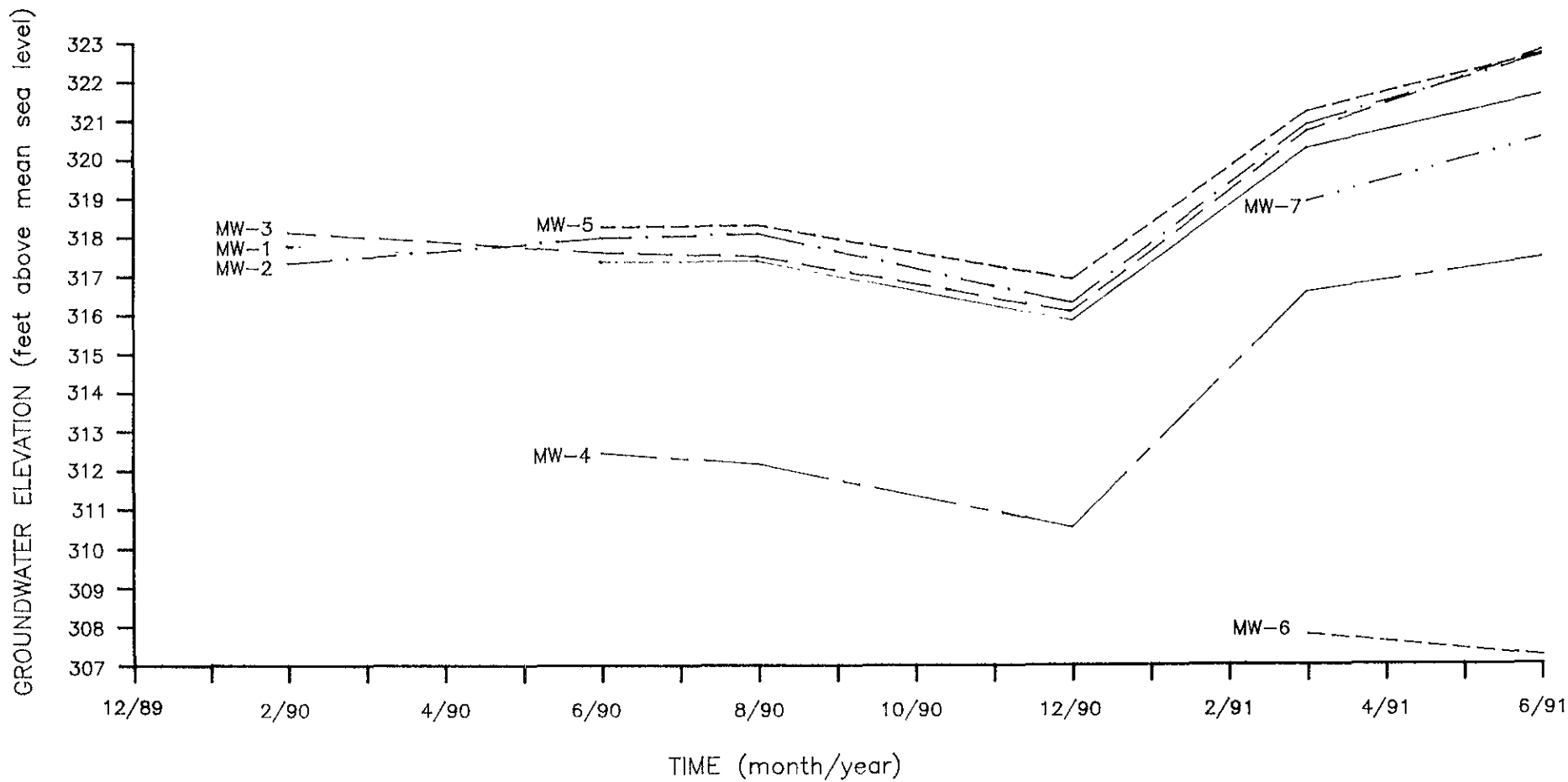
Source: Surveyed by Ron Archer
Civil Engineer, Inc.



**GENERALIZED SITE PLAN AND
GROUNDWATER ELEVATION MAP**
Exxon Service Station 7-7003
349 Main Street
Pleasanton, California

PLATE
2

PROJECT NO. 19025-3



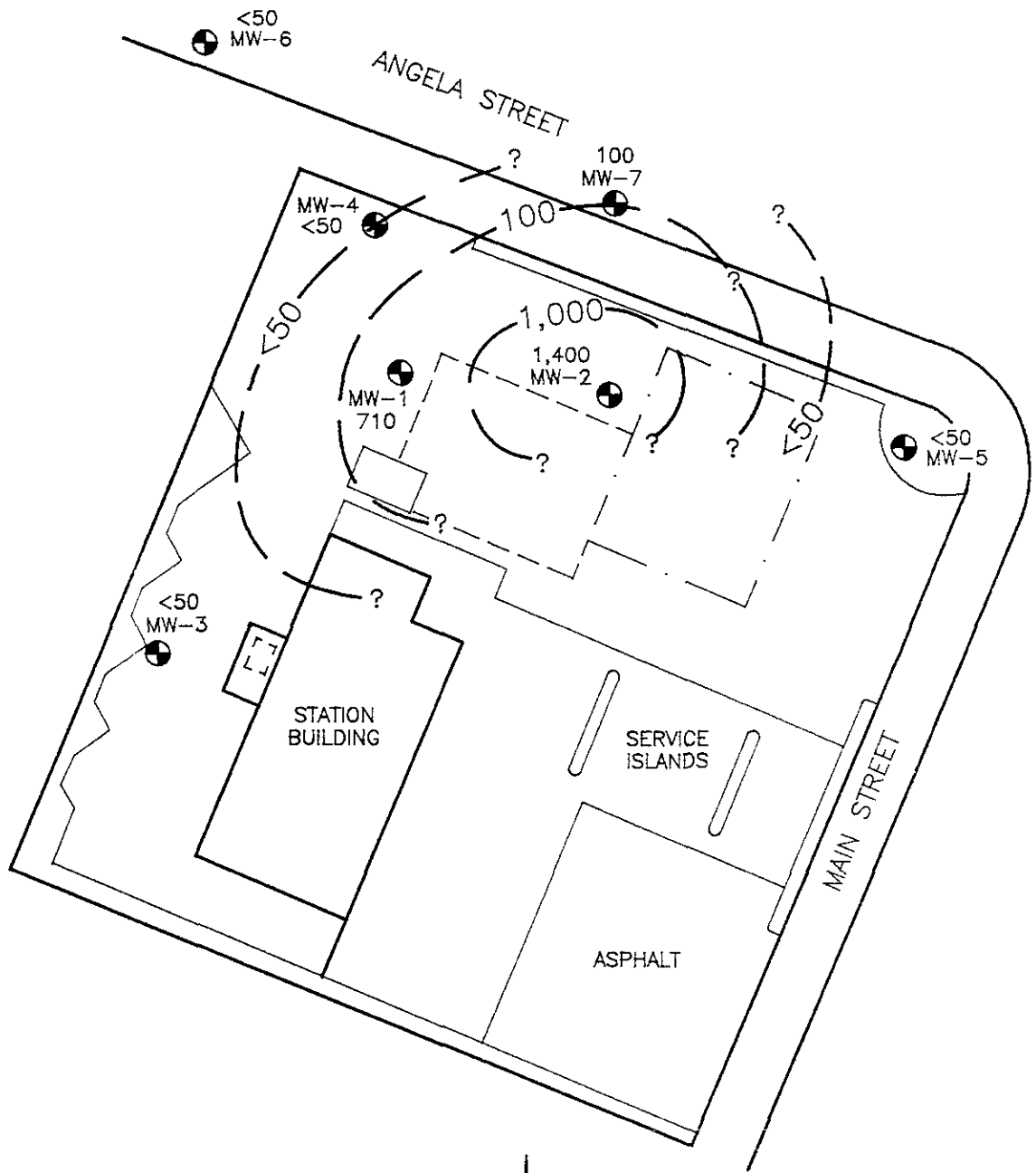
PLATE

3

HYDROGRAPH
Exxon Service Station 7-7003
349 Main Street
Pleasanton, California



PROJECT NO. 19025-3



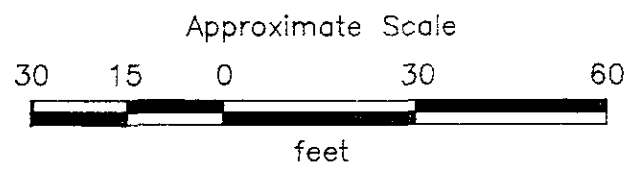
10,000 — = Line of equal concentration in parts per billion

1,400 = Concentration in parts per billion

MW-5 ● = Groundwater monitoring well

TPHg = Total petroleum hydrocarbons as gasoline

NOTE: Contours based on interpretation of available data. Contours are not to imply certainty.



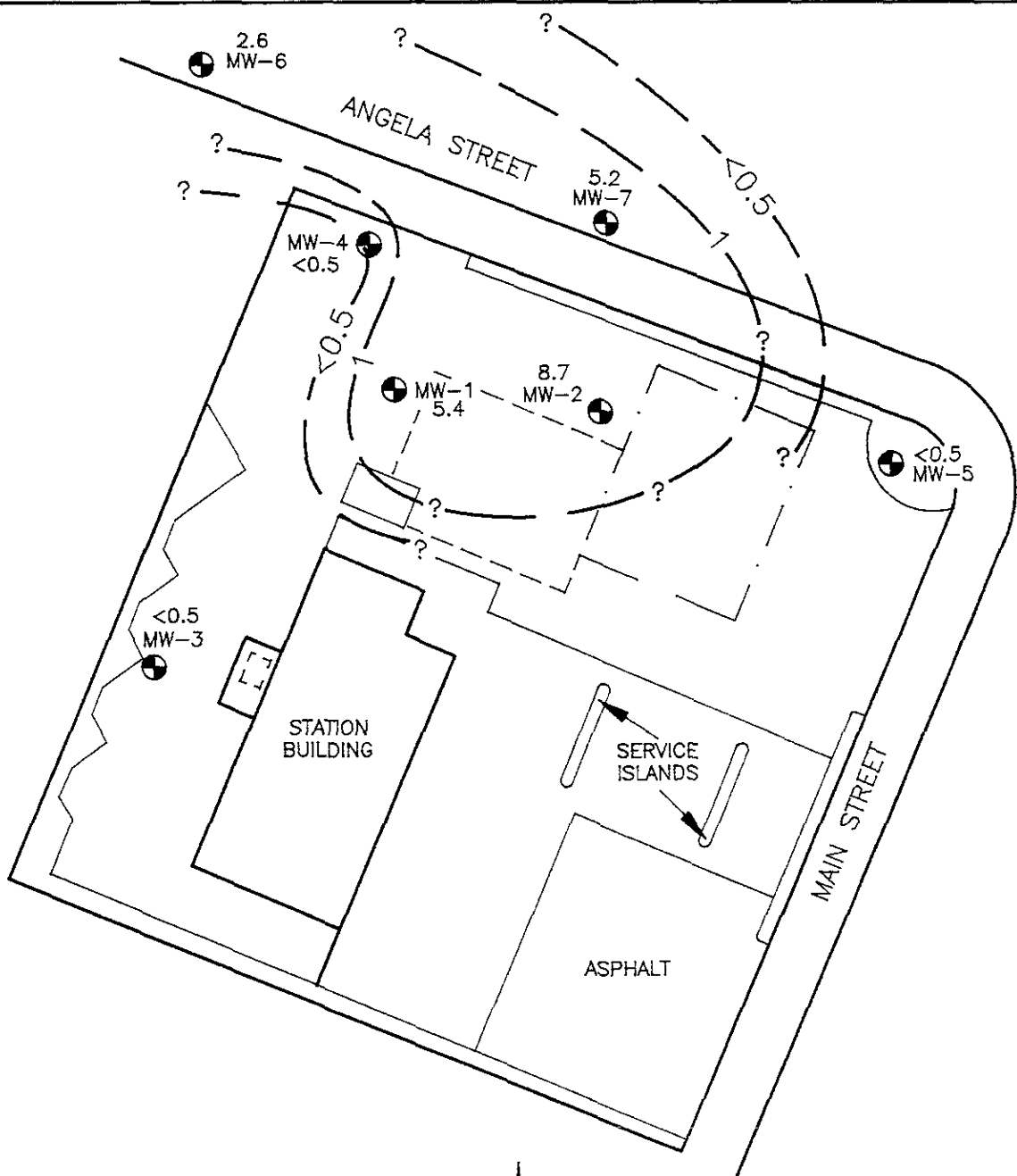
Source: Surveyed by Ron Archer
Civil Engineer, Inc.,
1990 and 1991



PROJECT NO. 19025-3

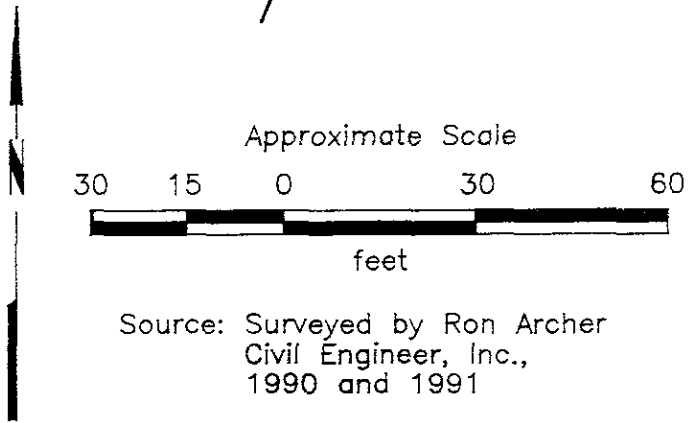
**CONCENTRATION OF TPHg IN
GROUNDWATER (June 26, 1991)**
Exxon Service Station 7-7003
349 Main Street
Pleasanton, California

PLATE
4



--- = Line of equal concentration in parts per billion
 8.7 = Concentration in parts per billion
 MW-7 \oplus = Groundwater monitoring well

NOTE: Contours based on interpretation of available data. Contours are not to imply certainty.



Source: Surveyed by Ron Archer
Civil Engineer, Inc.,
1990 and 1991



PROJECT NO. 19025-3

**CONCENTRATION OF BENZENE IN
 GROUNDWATER (June 26, 1991)**
 Exxon Service Station 7-7003
 349 Main Street
 Pleasanton, California

PLATE
 5

ATTACHMENT I
FIELD PROCEDURES

FIELD PROCEDURES



Subjective Evaluations

Before water samples were collected for subjective evaluations, the depth to static water level was measured in each well to the nearest 0.01 foot with a Solinst electronic water-level indicator. The groundwater samples were then collected from each well by gently lowering approximately half the length of a Teflon bailer past the air-water interface. The bailer was cleansed with Alconox, a commercial biodegradable detergent, and rinsed with distilled water prior to each use. The samples were retrieved and examined for evidence of floating product or sheen.

Groundwater Sampling

Prior to collecting groundwater samples, each well was purged of approximately 3 to 4 well volumes of water with a Teflon bailer that was cleansed with Alconox and rinsed with distilled water prior to each use. A water sample was collected from each well after the well had recharged to more than 80 percent of the static level. Half the length of the bailer was lowered past the air-water interface to retrieve the sample. The bailer was retrieved and water samples slowly decanted into laboratory-cleaned sample containers. For TPHg, BTEX, and VOC analyses, 40-milliliter, volatile organic analysis glass vials with Teflon-lined caps were used. Hydrochloric acid was added to the samples as a preservative. For organic lead and TOG analyses, the groundwater samples were collected in 1-liter glass bottles and sulfuric acid was added to the TOG sample until pH was less than 2. The sample containers were promptly capped, labeled, and placed in iced storage for transport to state certified analytical laboratories for analysis.

Purged Water

Purged water from the wells were stored onsite in 17E 55-gallon steel drums approved for this use by the Department of Transportation. The water was removed from the site by Erickson, Inc. of Richmond, California, on August 2, 1991.

ATTACHMENT II

CHAIN OF CUSTODY RECORDS AND ANALYSIS REPORTS



CHAIN-OF-CUSTODY RECORD

091722

| PROJ. NO. | | PROJECT NAME | | ANALYSIS | | | | | | | LABORATORY I.D. NUMBER |
|-----------|-------|----------------------|--|---------------------|-----------------|-------------------|-----------|--------------|--------|---------------------------------|------------------------|
| P.O. NO. | | SAMPLERS (Signature) | | TPH Gasoline (8015) | BTEX (802/8020) | TPH Diesel (8015) | VOC 601 X | ORGANIC IFAO | T.O.G. | Preserved? | |
| DATE | TIME | | | No. of Containers | | | | | | REMARKS | |
| MM/DD/YY | | | | | | | | | | | |
| 12/1/91 | 10:00 | W-35-MW6 | | 7 | ✓ | ✓ | ✓ | ✓ | ✓ | NO HCl IN VOC | |
| | 10:10 | W-22-MW5 | | 7 | ✓ | ✓ | ✓ | | | NO HCl IN TOC NO HCl IN Pb | |
| | 10:20 | W-21-MW3 | | 8 | ✓ | ✓ | ✓ | ✓ | | * EXCEPT FOR MW-3 ONLY | |
| | 10:30 | W-23-MW7 | | 7 | ✓ | ✓ | ✓ | | | ANALYZE FOR ED B ON VOC ON MW-3 | |
| | 10:40 | W-25-MW4 | | 7 | ✓ | ✓ | ✓ | | | DO ALL VOC'S | |
| | 10:50 | W-21-MW2 | | 7 | ✓ | ✓ | ✓ | | | | |
| | 11:00 | W-22-MW1 | | 7 | ✓ | ✓ | ✓ | | | | |

| | | | | |
|---|-------------------------------|---|--|---|
| RELINQUISHED BY (Signature): <i>LAURENCE</i> | DATE / TIME: 12/1/91 12:30 | RECEIVED BY (Signature): | Laboratory: APPLIED ANALYTICAL | SEND RESULTS TO: Applied GeoSystems 42501 Albrae Street Fremont, CA 94538 (415) 651-1906 |
| RELINQUISHED BY (Signature): | DATE / TIME: | RECEIVED BY (Signature): | | |
| RELINQUISHED BY (Signature): | DATE / TIME: | RECEIVED FOR LABORATORY BY (Signature): <i>Laurence</i> 6.27.91 1230 | | |
| | | | Turn Around: 2WK | Proj. Mgr.: CHUCK ROBERTSON |

069 1226
2695

CHAIN-OF-CUSTODY RECORD

| PROJ. NO. <i>190253</i> | | PROJECT NAME <i>Exxon Main St.</i> | | ANALYSIS | | | | | | | | | | REMARKS | LABORATORY I.D. NUMBER | |
|--|------|---------------------------------------|--|-------------------|----------------------------------|-----------------|-------------------|-------------------|--|---|--|--|--|------------|------------------------|--|
| P.O. NO. | | SAMPLERS (Signature) | | | | | | | | | | | | | | |
| DATE <small>MM/DD/YY</small> | TIME | | | No. of Containers | TPH Gasoline (8015) | BTEX (802/8020) | TPH Diesel (8015) | <i>6011 (EDB)</i> | | | | | | Preserved? | | |
| <i>6/27/91</i> | | <i>W-35-MW6</i> | | 1 | | | X | | | | | | | | | |
| | | <i>W-22-MW5</i> | | 1 | | | X | | | | | | | | | |
| | | <i>W-21-MW3</i> | | 1 | | | X | | | | | | | | | |
| | | <i>W-23-MW7</i> | | 1 | | | X | | | | | | | | | |
| | | <i>W-25-MW4</i> | | 1 | | | X | | | | | | | | | |
| | | <i>W-21-MW2</i> | | 1 | | | X | | | | | | | | | |
| | | <i>W-22-MW1</i> | | 1 | | | X | | | | | | | | | |
| RELINQUISHED BY (Signature): <i>Anthony Greer</i> | | DATE / TIME <i>6/27/91 2:15</i> | RECEIVED BY (Signature): <i>T. Donovan</i> | | Laboratory: <i>Chromalabs</i> | | | | | SEND RESULTS TO: APPLIED ANALYTICAL 42501 Albrae Street #100 Fremont, CA 94538 <i>(CLARK ROBERTSON)</i> | | | | | | |
| RELINQUISHED BY (Signature): | | DATE / TIME | RECEIVED BY (Signature): | | | | | | | | | | | | | |
| RELINQUISHED BY (Signature): | | DATE / TIME <i>6/27/91 7:00</i> | RECEIVED FOR LABORATORY BY (Signature): <i>T. Donovan</i> | | | | | | | | | | | | | |
| | | | | | Turn Around: <i>Normal</i> | | | | | Proj. Mgr.: <i>Laura Kuck</i> | | | | | | |

APPLIED ANALYTICAL

Environmental Laboratories

42501 Albrae St., Suite 100
Fremont, CA 94538
Bus: (510) 623-0775
Fax: (510) 651-2233

ANALYSIS REPORT

1020lab.frm

Attention: Mr. Clark Robertson
Applied GeoSystems
42501 Albrae Street
Fremont, CA 94538
Project: AGS 19025-3

Date Sampled: 06-27-91
Date Received: 06-27-91
BTEX Analyzed: 07-10-91
TPHg Analyzed: 07-10-91
TPHd Analyzed: NR
Matrix: Water

| | Benzene | Toluene | Ethyl- benzene | Total Xylenes | TPHg | TPHd |
|------------------|------------|------------|-------------------|------------------|------------|------------|
| | <u>ppb</u> | <u>ppb</u> | <u>ppb</u> | <u>ppb</u> | <u>ppb</u> | <u>ppb</u> |
| Detection Limit: | 0.5 | 0.5 | 0.5 | 0.5 | 50 | 100 |

SAMPLE

Laboratory Identification

| | | | | | | |
|----------------------|-----|-----|-----|----|------|----|
| W-21-MW2 W1106466 | 8.7 | 2.1 | 8.8 | 33 | 1400 | NR |
| W-22-MW1 W1106467 | 5.4 | 2.6 | 29 | 34 | 710 | NR |

ppb = parts per billion = $\mu\text{g/L}$ = micrograms per liter.

ND = Not detected. Compound(s) may be present at concentrations below the detection limit.

NR = Analysis not requested.

ANALYTICAL PROCEDURES

BTEX-- Benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are measured by extraction using EPA Method 5030 followed by analysis using EPA Method 8020/602, which utilizes a gas chromatograph (GC) equipped with a photoionization detector (PID) and a flame-ionization detector (FID) in series.

TPHg--Total petroleum hydrocarbons as gasoline (low-to-medium boiling points) are measured by extraction using EPA Method 5030, followed by analysis using modified EPA Method 8015, which utilizes a GC equipped with an FID.

TPHd--Total petroleum hydrocarbons as diesel (high boiling points) are measured by extraction using EPA Method 3550 for soils and EPA Method 3510 for water, followed by modified EPA Method 8015 with direct sample injection into a GC equipped with an FID.



Laboratory Representative

November 7, 1991

Date Reported

APPLIED ANALYTICAL

Environmental Laboratories

42501 Albrae St., Suite 100

Fremont, CA 94538

Bus: (415) 623-0775

Fax: (415) 651-8647

ANALYSIS REPORT

1020lab.frm

Attention: Mr. Clark Robertson
Applied GeoSystems
42501 Albrae Street
Fremont, CA 94538

Project: AGS 19025-3

Date Sampled: 06-27-91
Date Received: 06-27-91
BTEX Analyzed: 07-10-91
TPHg Analyzed: 07-10-91
TPHd Analyzed: NR
Matrix: Water

| | Benzene | Toluene | Ethyl- benzene | Total Xylenes | TPHg | TPHd |
|------------------|------------|------------|-------------------|------------------|------------|------------|
| | <u>ppb</u> | <u>ppb</u> | <u>ppb</u> | <u>ppb</u> | <u>ppb</u> | <u>ppb</u> |
| Detection Limit: | 0.5 | 0.5 | 0.5 | 0.5 | 50 | 100 |

SAMPLE

Laboratory Identification

| | | | | | | |
|----------------------|-----|-----|-----|-----|-----|----|
| W-35-MW6 W1106461 | 2.6 | 1.8 | 0.8 | 3.0 | ND | NR |
| W-22-MW5 W1106462 | ND | ND | ND | ND | ND | NR |
| W-21-MW3 W1106463 | ND | ND | ND | ND | ND | NR |
| W-23-MW7 W1106464 | 5.2 | 5.6 | 3.9 | 16 | 100 | NR |
| W-25-MW4 W1106465 | 0.7 | ND | ND | ND | ND | NR |

ppb = parts per billion = $\mu\text{g/L}$ = micrograms per liter.

ND = Not detected. Compound(s) may be present at concentrations below the detection limit.

NR = Analysis not requested.

ANALYTICAL PROCEDURES

BTEX— Benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are measured by extraction using EPA Method 5030 followed by analysis using EPA Method 8020/602, which utilizes a gas chromatograph (GC) equipped with a photoionization detector (PID) and a flame-ionization detector (FID) in series.

TPHg—Total petroleum hydrocarbons as gasoline (low-to-medium boiling points) are measured by extraction using EPA Method 5030, followed by analysis using modified EPA Method 8015, which utilizes a GC equipped with an FID.

TPHd—Total petroleum hydrocarbons as diesel (high boiling points) are measured by extraction using EPA Method 3550 for soils and EPA Method 3510 for water, followed by modified EPA Method 8015 with direct sample injection into a GC equipped with an FID.


Laboratory Representative

July 15, 1991
Date Reported

APPLIED ANALYTICAL

Environmental Laboratories

42501 Albrae St., Suite 100
Fremont, CA 94538
Bus: (415) 623-0775
Fax: (415) 651-8647

ANALYSIS REPORT

1020lab.frm

Attention: Mr. Clark Robertson
Applied GeoSystems
42501 Albrae Street
Fremont, CA 94538
Project: AGS 19025-3

Date Sampled: 06-27-91
Date Received: 06-27-91
TOG Analyzed: 07-14-91
Matrix: Water
Detection Limit: 5000 µg/L

TOG
(µg/L)

SAMPLE

Laboratory Identification

W-21-MW3
W1106463

ND

µg/L = micrograms per liter = ppb = parts per billion

ND = Not detected. Compound(s) may be present at concentrations below the detection limit.

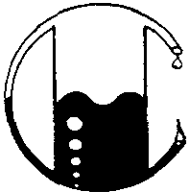
ANALYTICAL PROCEDURES

TPH as Oil and Grease – Total Oil and Grease (TOG) of mineral or petroleum origin are measured by extraction and gravimetric analysis according to Standard Method 5520 B/F.



Laboratory Representative

July 15, 1991
Date Reported



MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

19025-3\011779

Applied GeoSystems, Inc.
42501 Albrae Street, Suite 100
Fremont, CA 94639
ATTN: Laura Kuck
Project Manager

Date Sampled: 06-27-91
Date Received: 06-27-91
Date Reported: 07-08-91

ORGANIC LEAD

| Sample Number | Sample Description | Detection Limit ppm | WATER RESULTS ppm |
|---|--------------------|------------------------|----------------------|
| Project No.: 19025-3 EXXON - Main Street | | | |
| B061003 | W-35-MW6 | 0.1 | <0.1 |
| B061004 | W-22-MW5 | 0.1 | <0.1 |
| B061005 | W-21-MW3 | 0.1 | <0.1 |
| B061006 | W-23-MW7 | 0.1 | <0.1 |
| B061007 | W-25-MW4 | 0.1 | <0.1 |
| B061008 | W-21-MW2 | 0.1 | <0.1 |
| B061009 | W-22-MW1 | 0.1 | <0.1 |

QA/QC: Sample blank is none detected
Spike Recovery on B061003 is 86%
Duplicate Deviation on B061003 is 4.7%

Note: California LUFT 12/87
(ppm) = (mg/kg)

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

CHROMALAB, INC.

5 DAYS TURNAROUND

Analytical Laboratory (E694)

July 8, 1991

ChromaLab File # 0691221 D

Client: Applied Analytical
Date Sampled: June 27, 1991
Date of Analysis: July 01, 1991

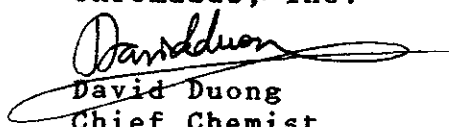
Attn: Laura Kuck
Date Submitted: June 27, 1991

Project Name: Exxon Main St.
Sample I.D.: W-23-MW7
Method of Analysis: EPA 601

Project Number: 190253
Detection Limit: 0.5 µg/l

| COMPOUND NAME | ug/l | Spike Recovery |
|----------------------------|------|----------------|
| CHLOROMETHANE | N.D. | --- |
| VINYL CHLORIDE | N.D. | --- |
| BROMOMETHANE | N.D. | --- |
| CHLOROETHANE | N.D. | --- |
| TRICHLOROFLUOROMETHANE | N.D. | --- |
| 1,1-DICHLOROETHENE | N.D. | 92.5% 88.5% |
| METHYLENE CHLORIDE | N.D. | --- |
| 1,2-DICHLOROETHENE (TOTAL) | N.D. | --- |
| 1,1-DICHLOROETHANE | N.D. | --- |
| CHLOROFORM | N.D. | --- |
| 1,1,1-TRICHLOROETHANE | N.D. | --- |
| CARBON TETRACHLORIDE | N.D. | --- |
| 1,2-DICHLOROETHANE | N.D. | --- |
| TRICHLOROETHENE | N.D. | 86.8% 89.7% |
| 1,2-DICHLOROPROPANE | N.D. | --- |
| BROMODICHLOROMETHANE | N.D. | --- |
| 2-CHLOROETHYL VINYLETHER | N.D. | --- |
| TRANS-1,3-DICHLOROPROPENE | N.D. | --- |
| CIS-1,3-DICHLOROPROPENE | N.D. | --- |
| 1,1,2-TRICHLOROETHANE | N.D. | --- |
| TETRACHLOROETHENE | N.D. | 96.3% 91.5% |
| DIBROMOCHLOROMETHANE | N.D. | --- |
| CHLORO BENZENE | N.D. | --- |
| BROMOFORM | N.D. | --- |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 89.7% 90.5% |
| 1,3-DICHLOROBENZENE | N.D. | --- |
| 1,4-DICHLOROBENZENE | N.D. | --- |
| 1,2-DICHLOROBENZENE | N.D. | --- |
| ETHYLENE DIBROMIDE | N.D. | --- |

ChromaLab, Inc.


David Duong
Chief Chemist


Eric Tam
Lab Director

CHROMALAB, INC.

5 DAYS TURNAROUND

Analytical Laboratory (E694)

July 8, 1991

ChromaLab File # 0691221 G

Client: Applied Analytical
Date Sampled: June 27, 1991
Date of Analysis: July 01, 1991


Attn: Laura Kuck
Date Submitted: June 27, 1991

Project Name: Exxon Main St.
Sample I.D.: W-22-MW1
Method of Analysis: EPA 601

Project Number: 190253
Detection Limit: 0.5 µg/l

| COMPOUND NAME | µg/l | Spike Recovery |
|----------------------------|------|----------------|
| CHLOROMETHANE | N.D. | --- |
| VINYL CHLORIDE | N.D. | --- |
| BROMOMETHANE | N.D. | --- |
| CHLOROETHANE | N.D. | --- |
| TRICHLOROFLUOROMETHANE | N.D. | --- |
| 1,1-DICHLOROETHENE | N.D. | 92.5% 88.5% |
| METHYLENE CHLORIDE | N.D. | --- |
| 1,2-DICHLOROETHENE (TOTAL) | N.D. | --- |
| 1,1-DICHLOROETHANE | N.D. | --- |
| CHLOROFORM | N.D. | --- |
| 1,1,1-TRICHLOROETHANE | N.D. | --- |
| CARBON TETRACHLORIDE | N.D. | --- |
| 1,2-DICHLOROETHANE | N.D. | --- |
| TRICHLOROETHENE | N.D. | 86.8% 89.7% |
| 1,2-DICHLOROPROPANE | N.D. | --- |
| BROMODICHLOROMETHANE | N.D. | --- |
| 2-CHLOROETHYL VINYLETHER | N.D. | --- |
| TRANS-1,3-DICHLOROPROPENE | N.D. | --- |
| CIS-1,3-DICHLOROPROPENE | N.D. | --- |
| 1,1,2-TRICHLOROETHANE | N.D. | --- |
| TETRACHLOROETHENE | N.D. | 96.3% 91.5% |
| DIBROMOCHLOROMETHANE | N.D. | --- |
| CHLORO BENZENE | N.D. | --- |
| BROMOFORM | N.D. | --- |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 89.7% 90.5% |
| 1,3-DICHLOROBENZENE | N.D. | --- |
| 1,4-DICHLOROBENZENE | N.D. | --- |
| 1,2-DICHLOROBENZENE | N.D. | --- |
| ETHYLENE DIBROMIDE | N.D. | --- |

ChromaLab, Inc.


David Duong
Chief Chemist


Eric Tam
Lab Director

CHROMALAB, INC.

5 DAYS TURNAROUND

Analytical Laboratory (E694)

July 8, 1991

ChromaLab File # 0691221 F

Client: Applied Analytical
Date Sampled: June 27, 1991
Date of Analysis: July 01, 1991


Attn: Laura Kuck
Date Submitted: June 27, 1991

Project Name: Exxon Main St.
Sample I.D.: W-21-MW2
Method of Analysis: EPA 601

Project Number: 190253
Detection Limit: 0.5 µg/l

| COMPOUND NAME | µg/l | Spike Recovery |
|----------------------------|------|----------------|
| CHLOROMETHANE | N.D. | --- |
| VINYL CHLORIDE | N.D. | --- |
| BROMOMETHANE | N.D. | --- |
| CHLOROETHANE | N.D. | --- |
| TRICHLOROFLUOROMETHANE | N.D. | --- |
| 1,1-DICHLOROETHENE | N.D. | 92.5% 88.5% |
| METHYLENE CHLORIDE | N.D. | --- |
| 1,2-DICHLOROETHENE (TOTAL) | N.D. | --- |
| 1,1-DICHLOROETHANE | N.D. | --- |
| CHLOROFORM | N.D. | --- |
| 1,1,1-TRICHLOROETHANE | N.D. | --- |
| CARBON TETRACHLORIDE | N.D. | --- |
| 1,2-DICHLOROETHANE | N.D. | --- |
| TRICHLOROETHENE | N.D. | 86.8% 89.7% |
| 1,2-DICHLOROPROPANE | N.D. | --- |
| BROMODICHLOROMETHANE | N.D. | --- |
| 2-CHLOROETHYL VINYLETHER | N.D. | --- |
| TRANS-1,3-DICHLOROPROPENE | N.D. | --- |
| CIS-1,3-DICHLOROPROPENE | N.D. | --- |
| 1,1,2-TRICHLOROETHANE | N.D. | --- |
| TETRACHLOROETHENE | N.D. | 96.3% 91.5% |
| DIBROMOCHLOROMETHANE | N.D. | --- |
| CHLOROBENZENE | N.D. | --- |
| BROMOFORM | N.D. | --- |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 89.7% 90.5% |
| 1,3-DICHLOROBENZENE | N.D. | --- |
| 1,4-DICHLOROBENZENE | N.D. | --- |
| 1,2-DICHLOROBENZENE | N.D. | --- |
| ETHYLENE DIBROMIDE | N.D. | --- |

ChromaLab, Inc.


David Duong
Chief Chemist


Eric Tam
Lab Director

CHROMALAB, INC.

5 DAYS TURNAROUND

Analytical Laboratory (E694)

July 8, 1991

ChromaLab File # 0691221 C

Client: Applied Analytical
Date Sampled: June 27, 1991
Date of Analysis: July 01, 1991

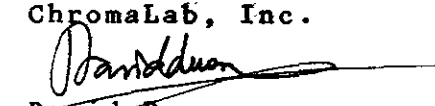
Attn: Laura Kuck
Date Submitted: June 27, 1991

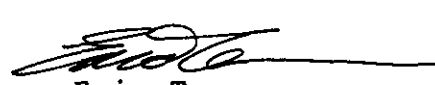
Project Name: Exxon Main St.
Sample I.D.: W-21-MW3
Method of Analysis: EPA 601

Project Number: 190253
Detection Limit: 0.5 µg/l

| COMPOUND NAME | µg/l | Spike Recovery |
|----------------------------|------|----------------|
| CHLOROMETHANE | N.D. | --- |
| VINYL CHLORIDE | N.D. | --- |
| BROMOMETHANE | N.D. | --- |
| CHLOROETHANE | N.D. | --- |
| TRICHLOROFLUOROMETHANE | N.D. | --- |
| 1,1-DICHLOROETHENE | N.D. | 92.5% 88.5% |
| METHYLENE CHLORIDE | N.D. | --- |
| 1,2-DICHLOROETHENE (TOTAL) | N.D. | --- |
| 1,1-DICHLOROETHANE | N.D. | --- |
| CHLOROFORM | N.D. | --- |
| 1,1,1-TRICHLOROETHANE | N.D. | --- |
| CARBON TETRACHLORIDE | N.D. | --- |
| 1,2-DICHLOROETHANE | N.D. | --- |
| TRICHLOROETHENE | N.D. | 86.8% 89.7% |
| 1,2-DICHLOROPROPANE | N.D. | --- |
| BROMODICHLOROMETHANE | N.D. | --- |
| 2-CHLOROETHYLVINYLEETHER | N.D. | --- |
| TRANS-1,3-DICHLOROPROPENE | N.D. | --- |
| CIS-1,3-DICHLOROPROPENE | N.D. | --- |
| 1,1,2-TRICHLOROETHANE | N.D. | --- |
| TETRACHLOROETHENE | N.D. | 96.3% 91.5% |
| DIBROMOCHLOROMETHANE | N.D. | --- |
| CHLOROBENZENE | N.D. | --- |
| BROMOFORM | N.D. | --- |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 89.7% 90.5% |
| 1,3-DICHLOROBENZENE | N.D. | --- |
| 1,4-DICHLOROBENZENE | N.D. | --- |
| 1,2-DICHLOROBENZENE | N.D. | --- |
| ETHYLENE DIBROMIDE | N.D. | --- |

ChromaLab, Inc.


David Duong
Chief Chemist


Eric Tam
Lab Director

CHROMALAB, INC.

5 DAYS TURNAROUND

Analytical Laboratory (E694)

July 8, 1991

ChromaLab File # 0691221 E

Client: Applied Analytical
Date Sampled: June 27, 1991
Date of Analysis: July 01, 1991

Attn: Laura Kuck
Date Submitted: June 27, 1991

Project Name: Exxon Main St.
Sample I.D.: W-25-MW4
Method of Analysis: EPA 601

Project Number: 190253
Detection Limit: 0.5 µg/l

| COMPOUND NAME | µg/l | Spike Recovery |
|----------------------------|------|----------------|
| CHLOROMETHANE | N.D. | --- |
| VINYL CHLORIDE | N.D. | --- |
| BROMOMETHANE | N.D. | --- |
| CHLOROETHANE | N.D. | --- |
| TRICHLOROFLUOROMETHANE | N.D. | --- |
| 1,1-DICHLOROETHENE | N.D. | 92.5% 88.5% |
| METHYLENE CHLORIDE | N.D. | --- |
| 1,2-DICHLOROETHENE (TOTAL) | N.D. | --- |
| 1,1-DICHLOROETHANE | N.D. | --- |
| CHLOROFORM | N.D. | --- |
| 1,1,1-TRICHLOROETHANE | N.D. | --- |
| CARBON TETRACHLORIDE | N.D. | --- |
| 1,2-DICHLOROETHANE | N.D. | --- |
| TRICHLOROETHENE | N.D. | 86.8% 89.7% |
| 1,2-DICHLOROPROPANE | N.D. | --- |
| BROMODICHLOROMETHANE | N.D. | --- |
| 2-CHLOROETHYLVINYLEETHER | N.D. | --- |
| TRANS-1,3-DICHLOROPROPENE | N.D. | --- |
| CIS-1,3-DICHLOROPROPENE | N.D. | --- |
| 1,1,2-TRICHLOROETHANE | N.D. | --- |
| TETRACHLOROETHENE | N.D. | 96.3% 91.5% |
| DIBROMOCHLOROMETHANE | N.D. | --- |
| CHLOROBENZENE | N.D. | --- |
| BROMOFORM | N.D. | --- |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 89.7% 90.5% |
| 1,3-DICHLOROBENZENE | N.D. | --- |
| 1,4-DICHLOROBENZENE | N.D. | --- |
| 1,2-DICHLOROBENZENE | N.D. | --- |
| ETHYLENE DIBROMIDE | N.D. | --- |

ChromaLab, Inc.


David Duong
Chief Chemist


Eric Tam
Lab Director

CHROMALAB, INC.

5 DAYS TURNAROUND

Analytical Laboratory (E694)

July 8, 1991

ChromaLab File # 0691221 B

Client: Applied Analytical
Date Sampled: June 27, 1991
Date of Analysis: July 01, 1991


Attn: Laura Kuck
Date Submitted: June 27, 1991

Project Name: Exxon Main St.
Sample I.D.: W-22-MW5
Method of Analysis: EPA 601

Project Number: 190253
Detection Limit: 0.5 µg/l

| COMPOUND NAME | µg/l | Spike Recovery |
|----------------------------|------|----------------|
| CHLOROMETHANE | N.D. | --- |
| VINYL CHLORIDE | N.D. | --- |
| BROMOMETHANE | N.D. | --- |
| CHLOROETHANE | N.D. | --- |
| TRICHLOROFLUOROMETHANE | N.D. | --- |
| 1,1-DICHLOROETHENE | N.D. | 92.5% 88.5% |
| METHYLENE CHLORIDE | N.D. | --- |
| 1,2-DICHLOROETHENE (TOTAL) | N.D. | --- |
| 1,1-DICHLOROETHANE | N.D. | --- |
| CHLOROFORM | N.D. | --- |
| 1,1,1-TRICHLOROETHANE | N.D. | --- |
| CARBON TETRACHLORIDE | N.D. | --- |
| 1,2-DICHLOROETHANE | N.D. | --- |
| TRICHLOROETHENE | N.D. | 86.8% 89.7% |
| 1,2-DICHLOROPROPANE | N.D. | --- |
| BROMODICHLOROMETHANE | N.D. | --- |
| 2-CHLOROETHYL VINYLETHER | N.D. | --- |
| TRANS-1,3-DICHLOROPROPENE | N.D. | --- |
| CIS-1,3-DICHLOROPROPENE | N.D. | --- |
| 1,1,2-TRICHLOROETHANE | N.D. | --- |
| TETRACHLOROETHENE | N.D. | 96.3% 91.5% |
| DIBROMOCHLOROMETHANE | N.D. | --- |
| CHLOROBENZENE | N.D. | --- |
| BROMOFORM | N.D. | --- |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 89.7% 90.5% |
| 1,3-DICHLOROBENZENE | N.D. | --- |
| 1,4-DICHLOROBENZENE | N.D. | --- |
| 1,2-DICHLOROBENZENE | N.D. | --- |
| ETHYLENE DIBROMIDE | N.D. | --- |

ChromaLab, Inc.


David Duong
Chief Chemist


Eric Tam
Lab Director

CHROMALAB, INC.

5 DAYS TURNAROUND

Analytical Laboratory (E694)

July 8, 1991

ChromaLab File # 0691221 A

Client: Applied Analytical
Date Sampled: June 27, 1991
Date of Analysis: July 01, 1991

Attn: Laura Kuck
Date Submitted: June 27, 1991

Project Name: Exxon Main St.
Sample I.D.: W-35-MW6
Method of Analysis: EPA 601

Project Number: 190253
Detection Limit: 0.5 µg/l

| COMPOUND NAME | µg/l | Spike Recovery |
|----------------------------|------|----------------|
| CHLOROMETHANE | N.D. | --- |
| VINYL CHLORIDE | N.D. | --- |
| BROMOMETHANE | N.D. | --- |
| CHLOROETHANE | N.D. | --- |
| TRICHLOROFLUOROMETHANE | N.D. | --- |
| 1,1-DICHLOROETHENE | N.D. | 92.5% 88.5% |
| METHYLENE CHLORIDE | N.D. | --- |
| 1,2-DICHLOROETHENE (TOTAL) | N.D. | --- |
| 1,1-DICHLOROETHANE | N.D. | --- |
| CHLOROFORM | N.D. | --- |
| 1,1,1-TRICHLOROETHANE | N.D. | --- |
| CARBON TETRACHLORIDE | N.D. | --- |
| 1,2-DICHLOROETHANE | N.D. | --- |
| TRICHLOROETHENE | N.D. | 86.8% 89.7% |
| 1,2-DICHLOROPROPANE | N.D. | --- |
| BROMODICHLOROMETHANE | N.D. | --- |
| 2-CHLOROETHYL VINYLETHER | N.D. | --- |
| TRANS-1,3-DICHLOROPROPENE | N.D. | --- |
| CIS-1,3-DICHLOROPROPENE | N.D. | --- |
| 1,1,2-TRICHLOROETHANE | N.D. | --- |
| TETRACHLOROETHENE | N.D. | 96.3% 91.5% |
| DIBROMOCHLOROMETHANE | N.D. | --- |
| CHLOROBENZENE | N.D. | --- |
| BROMOFORM | N.D. | --- |
| 1,1,2,2-TETRACHLOROETHANE | N.D. | 89.7% 90.5% |
| 1,3-DICHLOROBENZENE | N.D. | --- |
| 1,4-DICHLOROBENZENE | N.D. | --- |
| 1,2-DICHLOROBENZENE | N.D. | --- |
| ETHYLENE DIBROMIDE | N.D. | --- |

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