Applied GeoSystems 43255 Mission Boulevard, Fremont, CA 94539 (415) 651-1906

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LETTER REPORT
GROUND-WATER MONITORING REPORT
FOR THIRD QUARTER 1990
at
Exxon Service Station 7-7003
349 Main Street
Pleasanton, California

Oct 10, 1990

AGS Job No. 19025-3

1065 2395

Applied GeoSystems 43255 Mission Boulevard, Fremont, CA 94539 (415) 651-1906

• FREMONT • IRVINE • HOUSTON • BOSTON • SACRAMENTO • CULVER CITY • SAN JOSE

October 10, 1990
AGS 19025-3

Mr. Gary Gibson
Exxon Company U.S.A.
2300 Clayton Road
Suite 1250
Concord, California 94520

Subject: Letter Report of Third Quarter 1990 Ground-Water Monitoring at Exxon Service Station 7-7003, 349 Main Street, Pleasanton, California

Mr. Gibson:

This letter report summarizes the third quarter 1990 ground-water monitoring by Applied GeoSystems (AGS) at 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 P-1). Features of the site include a service station building and two service islands that dispense gasoline. 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 (Plate P-2).

Background

At the request of Exxon Company U.S.A. (Exxon), AGS became involved with the Exxon site in June 1989 to conduct a soil-vapor survey prior to the removal and replacement of the USTs. In July 1989, Exxon removed three 8,000-gallon steel gasoline USTs and a waste-oil UST, and in August 1989, new double-walled fiberglass tanks were installed. Soil sampling by AGS indicated the presence of petroleum hydrocarbon-impacted soil locally next to the former USTs.

Between January and June 1990, AGS drilled 13 boreholes around the former USTs, installed ground-water monitoring wells MW-1 through MW-5 in five of the boreholes, and analyzed soil and ground-water samples on behalf of Exxon. Laboratory analysis results indicated ground water below the site was impacted by petroleum hydrocarbons, and maximum hydrocarbon concentrations occurred below an area encompassing the former UST localities. The plume of hydrocarbon impacted ground water, however, was not delineated.

Ground-Water Monitoring

On August 9, 1990, an AGS representative measured depth to water, subjectively evaluated ground water, and purged and sampled ground-water monitoring wells MW-1 through MW-5 for laboratory analysis. Field activities were conducted in accordance with the attached Field Procedures.

Depth to water measurements and wellhead elevations were used to calculate the ground-water surface elevation in each well (Table 1). A plot of the ground-water surface elevation data suggests ground water below the site flows toward the northwest with a gradient of approximately 0.01 (Plate P-3). This flow direction is similar to the ground-water flow directions inferred from the February and June 1990 elevation data.

No floating product or sheen was observed on ground water in any of the wells during the August 1990 visit. Cumulative results of subjective evaluations are presented in Table 1.

Analytical Methods and Results

The ground-water 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 by EPA Method 602. In addition, ground-water samples were analyzed for total lead according to EPA Method 200.7; and the sample from well MW-3 was analyzed for total petroleum hydrocarbons as oil and grease (TOG) by Standard Method 503A/E. The water samples were submitted to state certified, Applied Analytical Environmental Laboratories (Hazardous Waste Testing Laboratory Certification No. 153) in Fremont, California. Samples of ground water from the wells were also submitted to state certified Chromalab, Inc. (Certification No. E694) of San Ramon, California, and analyzed for volatile organic compounds (VOC) by EPA Method 601. The Chain of Custody Record and Analysis Reports are attached to this report.

The highest concentrations of petroleum hydrocarbon compounds were found in ground water from monitoring wells MW-1 through MW-3 which are located next to former USTs. Concentrations of TPHg ranged from 1.3 to 3.2 parts per million (ppm), and BTEX constituents ranged from 0.023 to 0.400 ppm in these three wells. TPHg and BTEX were also detected in the remaining two wells, MW-4 and MW-5, but at approximately ten-fold lower concentrations.

Table 2 summarizes the analysis results of ground water samples from the Exxon site. The data suggested a general increase in gasoline hydrocarbon concentrations in ground water

below the site. TPHg and benzene concentration contours for August 1990 indicated a plume of hydrocarbon-impacted ground water which extends outward from a maxima which encompasses the former USTs and extends in the downgradient direction (Plates P-4 and P-5).

TOG was nondetectable in the water sample from well MW-3 (refer to attached Analysis Report). Analytical results indicated no detectable lead in the five ground water wells (Table 3). Organic lead analysis was not performed because total lead was nondetectable. No VOCs were detected in the ground water samples from the five wells (refer to the attached Chromalab Analysis Report). Results of ground-water analysis for the August 1990 sampling episode are shown in Table 4.

Recommendations

AGS recommends continued quarterly monitoring of the ground water in the wells. The next monitoring event is scheduled for December 1990.

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, 4444 Railroad Street, Pleasanton, California 94566.

Please call if you have any questions.

Sincerely,
Applied GeoSystems

Keith M. McVicker
Assistant Project Geologist

Joan E. Tiernan
Registered Civil Engineer
No. 044600

Enclosures:

Table 1, Results of Subjective Evaluations of Ground Water
Table 2, Results of Ground-Water Analysis for Gasoline Hydrocarbon Compounds
Table 3, Results of Ground-Water Analysis for Lead
Table 4, Results of Ground-Water Analysis for August 1990
Plate P-1, Site Vicinity Map
Plate P-2, Generalized Site Plan
Plate P-3, Ground-Water Surface Map (August 9, 1990)
Plate P-4, TPHg Concentration in Ground Water (August 9, 1990)
Plate P-5, Benzene Concentration in Ground Water (August 9, 1990)

Attachments:

Field Procedures
Chain of Custody Record and Analysis Reports

TABLE 1
RESULTS OF SUBJECTIVE EVALUATIONS OF GROUND WATER

Date	Depth to Water (ft)	Ground-Water 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
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
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
MW-4	(Wellhead Elevation = 343.38 ft)			
6/90	30.94	312.44	None	None
8/90	31.21	312.17	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

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

TABLE 2
RESULTS OF GROUND-WATER ANALYSES
FOR GASOLINE HYDROCARBONS

Sample Number	Date	TPHg ppm	Benzene ppm	Toluene ppm	Ethyl-benzene ppm	Total Xylenes ppm
MW-1						
W-28-MW1	3/90	3.3	0.021	0.0092	0.059	0.0190
W-27-MW1	6/90	1.3	0.0079	0.0059	0.032	0.058
W-29-MW1	8/90	2.5	0.077	0.280	0.050	0.250
MW-2						
W-29-MW2	3/90	0.065	0.0030	0.0020	0.00098	0.0065
W-27-MW2	6/90	0.67	<0.0005	0.0026	<0.0005	<0.0005
W-28-MW2	8/90	1.3	0.024	0.130	0.037	0.170
MW-3						
W-27-MW3	3/90	<0.020	<0.0005	<0.0005	<0.0005	<0.0005
W-27-MW3	6/90	0.20	<0.0005	<0.0005	<0.0005	<0.0005
W-27-MW3	8/90	3.2	0.054	0.380	0.023	0.400
MW-4						
W-34-MW4	6/90	<0.020	<0.0005	<0.0005	<0.0005	<0.0005
W-33-MW4	8/90	0.120	0.0052	0.0054	0.0054	0.0099
MW-5						
W-26-MW5	6/90	<0.020	<0.0005	<0.0005	<0.0005	<0.0005
W-28-MW5	8/90	0.210	0.0097	0.012	0.0076	0.017

TPHg = total petroleum hydrocarbons.
ppm = parts per million
< = below the detection limits of the analysis.
Sample designation = W-26-MW5
- W = Water sample.
- 26 = Sample depth in feet.
- MW5 = Well number.

TABLE 3
RESULTS OF GROUND-WATER ANALYSIS FOR LEAD

Sample Number	Total Lead (ppm)
March 1990	
W-28-MW1	0.01
W-29-MW2	0.008
W-27-MW3	0.01
June 1990	
W-27-MW1	<0.05
W-27-MW2	<0.05
W-27-MW3	<0.05
W-34-MW4	<0.05
W-26-MW5	0.06
August 1990	
W-29-MW1	<0.05
W-28-MW2	<0.05
W-27-MW3	<0.05
W-33-MW4	<0.05
W-28-MW5	<0.05

< = below the detection limits of the analysis.

Sample designation = W-26-MW5

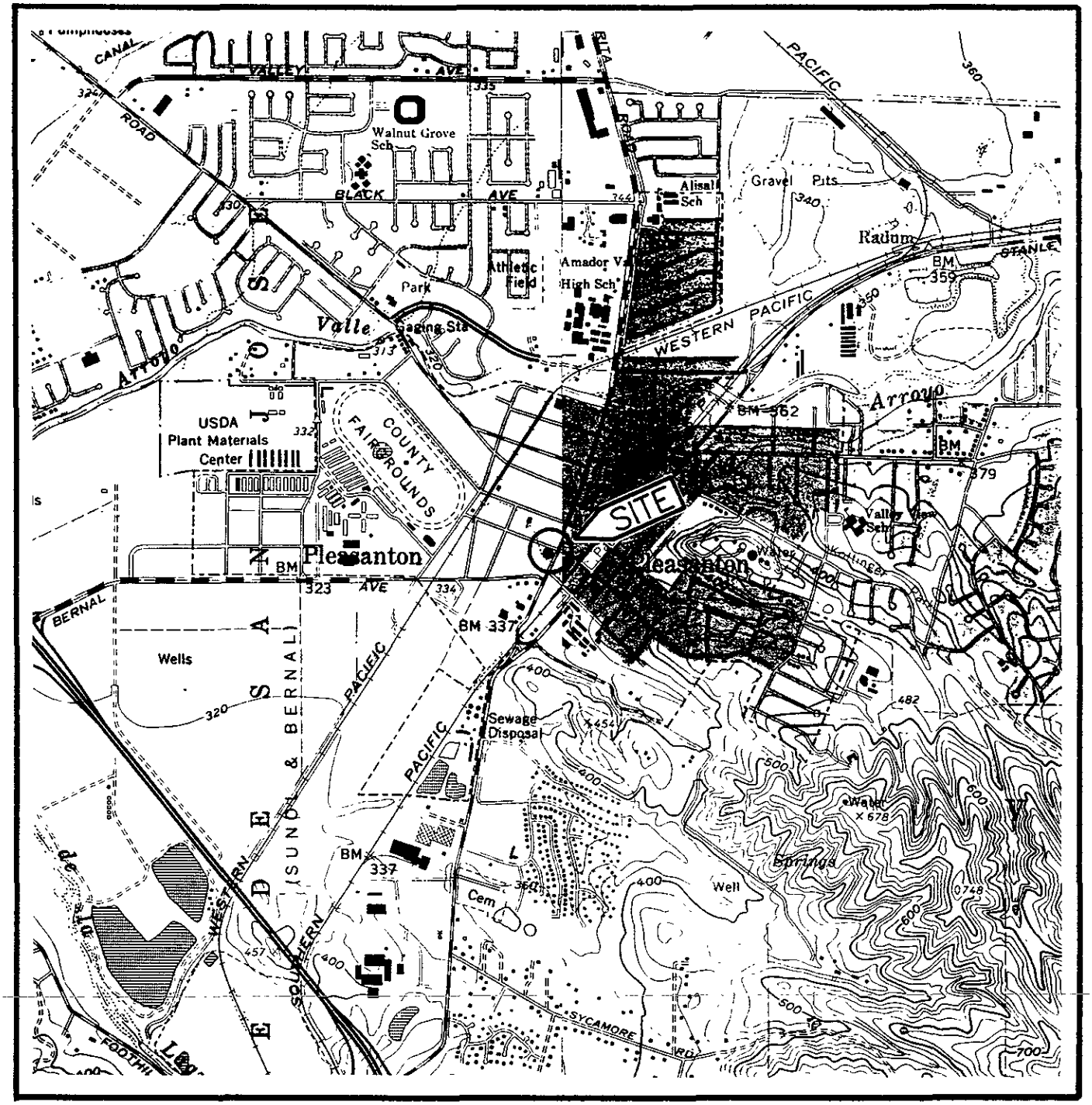
- W-26-MW5
  - W-26-MW5 — Well number.
  - W-26-MW5 — Sample depth in feet.
  - W-26-MW5 — Water sample.

Applied GeoSystems

TABLE 4
RESULTS OF GROUND-WATER ANALYSIS FOR AUGUST 1990

Sample Number	Date	TPHg ppm	Benzene ppm	Toluene ppm	Ethyl-benzene ppm	Total Xylenes ppm	Total Lead ppm	TOG ppm	VOC ppm
MW-1									
W-29-MW1	8/90	2.5	0.077	0.280	0.050	0.250	<0.050	<5	ND
MW-2									
W-28-MW2	8/90	1.3	0.024	0.130	0.037	0.170	<0.050	<5	ND
MW-3									
W-27-MW3	8/90	3.2	0.054	0.380	0.023	0.400	<0.050	<5	ND
MW-4									
W-33-MW4	8/90	0.120	0.0052	0.0054	0.0054	0.0099	<0.050	<5	ND
MW-5									
W-28-MW5	8/90	0.210	0.0097	0.012	0.0076	0.017	<0.050	<5	ND

TPHg = total petroleum hydrocarbons.
ppm = parts per million
< = below the detection limits of the analysis.
ND = nondetectable
Sample designation = W-26-MW5
- W — Water sample.
- 26 — Sample depth in feet.
- MW5 — Well number.

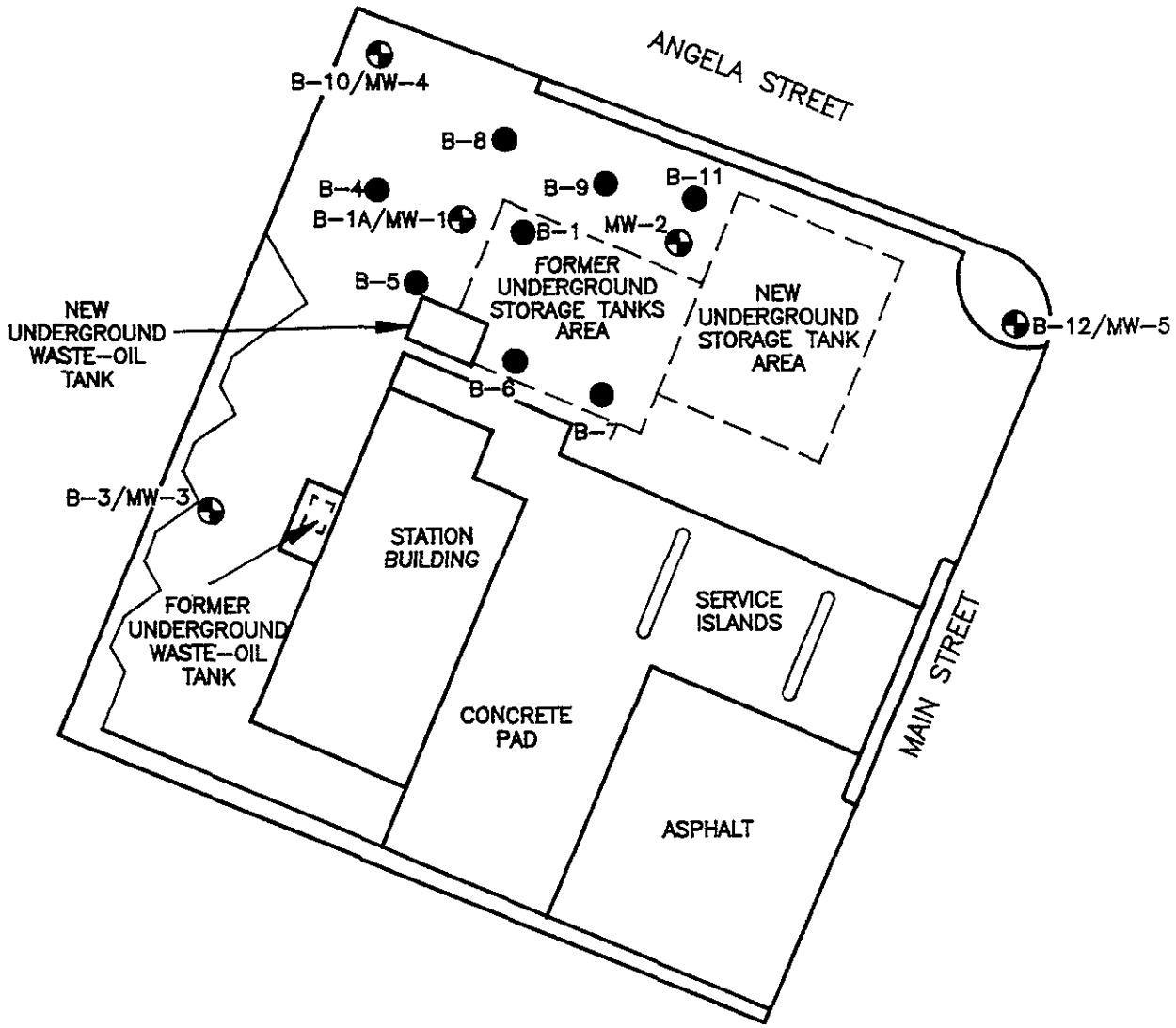


Source: U.S. Geological Survey
7.5-Minute Quadrangle
Dublin/Livermore, California
Photorevised 1980

N

Approximate Scale
2000 1000 0 2000 4000
feet

Applied GeoSystems PROJECT NO. 19025-3	**SITE VICINITY MAP** **Exxon Service Station 7-7003** **349 Main Street** **Pleasanton, California**	**PLATE** **P - 1**



B-12/MW-5 = Monitoring well

B-11 = Soil boring

N

Approximate Scale

30 15 0 30 60

feet

Source : Modified from plan supplied by Exxon

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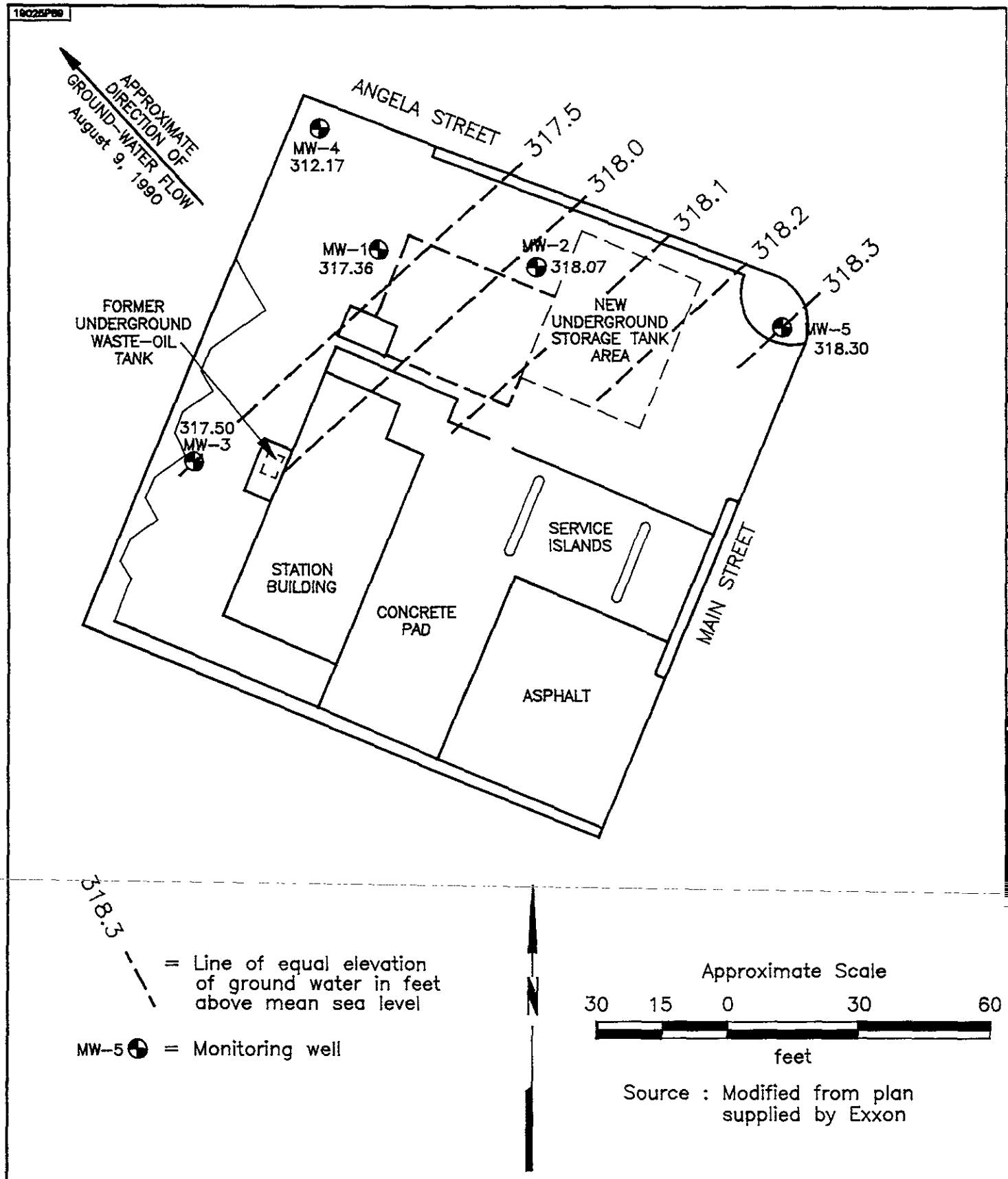
PROJECT NO. 19025-3

GENERALIZED SITE PLAN
Exxon Service Station 7-7003
349 Main Street
Pleasanton, California

PLATE

P - 2



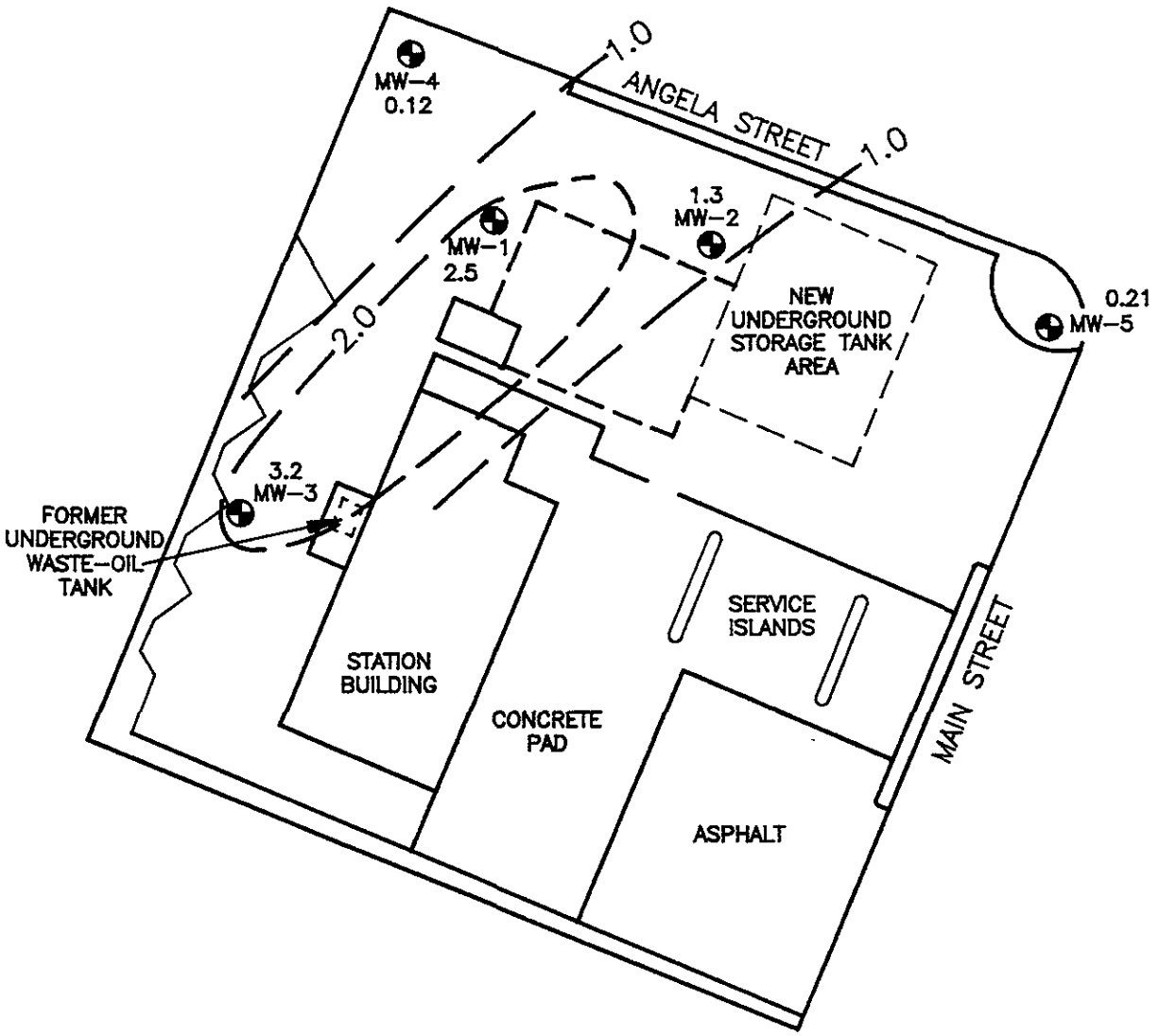
Applied GeoSystems

PROJECT NO. 19025-3

GROUND-WATER ELEVATION MAP
August 9, 1990
Exxon Service Station 7-7003
349 Main Street
Pleasanton, California

PLATE

P - 3



2.0 = Line of equal concentration in parts per million (ppm)

3.2 = Concentration in ppm

MW-5 = Monitoring well

TPHg = Total petroleum hydrocarbons as gasoline

N

Approximate Scale

30 15 0 30 60

feet

Source : Modified from plan supplied by Exxon

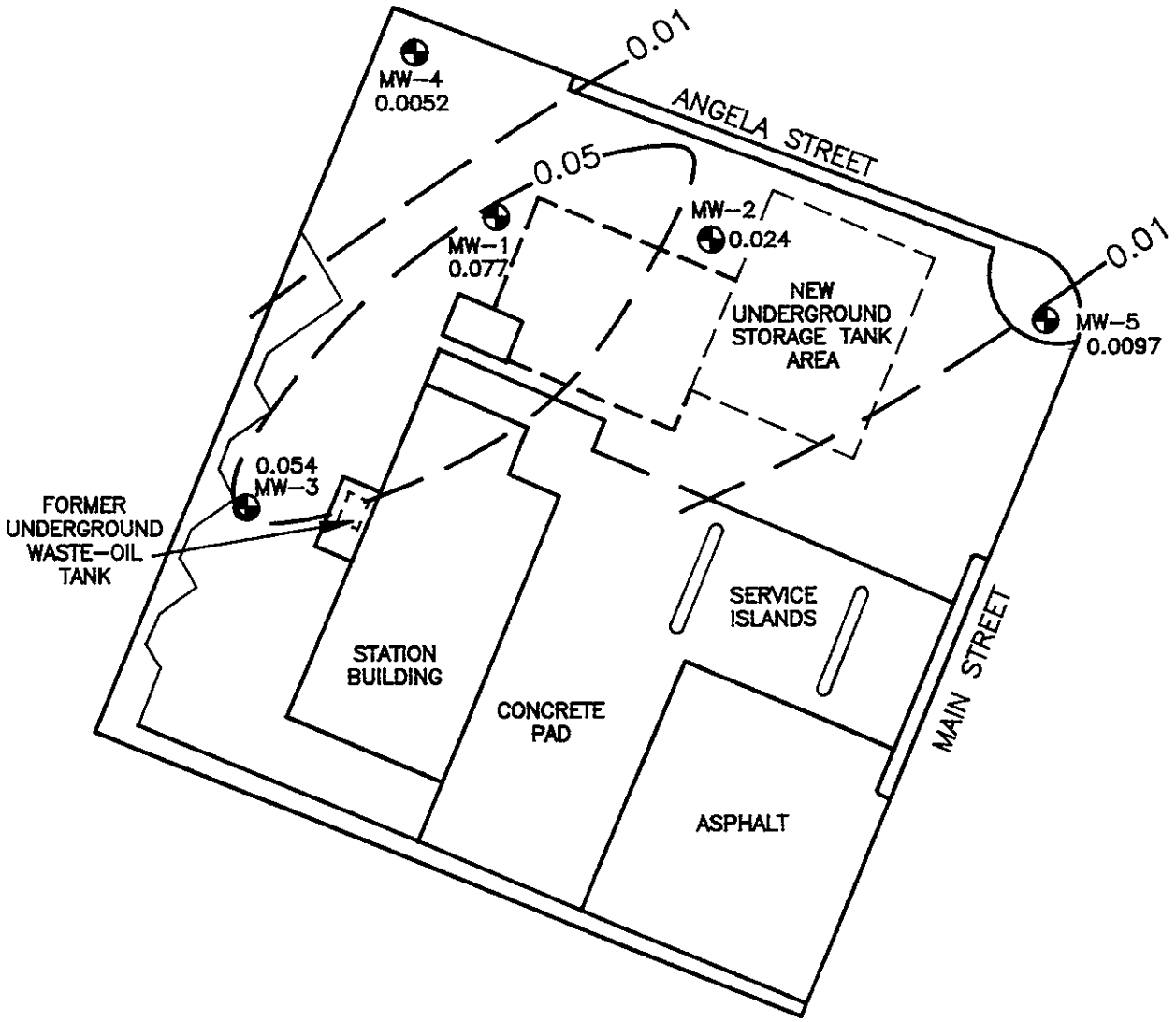
Applied GeoSystems

PROJECT NO. 19025-3

CONCENTRATION OF TPHg IN GROUND-WATER (August 9, 1990)
Exxon Service Station 7-7003
349 Main Street
Pleasanton, California

PLATE

P - 4



0.05 = Line of equal concentration in parts per million (ppm)

0.077 = Concentration in ppm

MW-5 = Monitoring well

N

Approximate Scale

30 15 0 30 60

feet

Source : Modified from plan supplied by Exxon

Applied GeoSystems

PROJECT NO. 19025-3

CONCENTRATION OF BENZENE IN GROUND-WATER (August 9, 1990)
Exxon Service Station 7-7003
349 Main Street
Pleasanton, California

PLATE

P - 5

ATTACHMENTS

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 ground-water 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 washed with Alconox, a commercial biodegradable detergent, and rinsed with water before each use. The samples were retrieved and examined for evidence of floating product, sheen, and emulsion.

Ground-Water Analysis

Before ground-water samples were taken, each well was purged of approximately 3 to 4 well volumes of water. A water sample was collected from each well after the well had recharged to more than 80 percent of the static level. A disposable bailer certified clean by the manufacturer was used to collect water. 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 and BTEX 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 lead analysis, the ground-water samples were filtered, placed in 500-milliliter glass bottles, and preserved with nitric acid. For TOG and VOC analysis, ground-water samples were collected in 1-liter glass bottles and preserved with nitric acid. 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 H & H Environmental of San Francisco, California.

Applied GeoSystems

CHAIN-OF-CUSTODY RECORD

PROJ. NO: 1905-3

PROJECT NAME: Exxon Main Street; Pleasanton

P.O. NO:

SAMPLERS (Signature): Russell Bak

DATE (MM/DD/YY)	TIME		No of Containers	TPHgasoline (8015)	BTEX (602/8020)	TPHdiesel (8015)	EDTA & Ferrous Iron	Arsenic, dissolved	Lead	VOC	Preserved?	REMARKS	LABORATORY I.D. NUMBER
8-9-90		W-25-MW1	9	✓	✓		✓	✓		✓	HCl/HNO3	TPH Investigation	
		W-28-MW2	9	✓	✓		✓	✓		✓			
		W-27-MW3	10	✓	✓		✓	✓	✓	✓			
		W-33-MW4	9	✓	✓		✓	✓		✓			
		W-28-MW5	9	✓	✓		✓	✓		✓			

RELINQUISHED BY (Signature): Russell Bak — DATE / TIME: 8-10-90

RELINQUISHED BY (Signature): — DATE / TIME:

RELINQUISHED BY (Signature): — DATE / TIME:

RECEIVED BY (Signature):

RECEIVED BY (Signature):

RECEIVED BY (Signature): 8-10-90 13:30

Laboratory: Approved Analytical

Turn Around: 2 weeks

SEND RESULTS TO:
Applied GeoSystems
42501 Albrae Street
Suite 100
Fremont, California 94639
(415) 651-1906

Proj. Mgr: Kurt Kistner

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. Keith McVicker
Applied GeoSystems
42501 Albrae Street
Fremont, CA 94538
Project: AGS 19025-3

Date Sampled: 08-09-90
Date Received: 08-10-90
BTEX Analyzed: 08-10-90
TPHg Analyzed: 08-10-90
TPHd Analyzed: NR
Matrix: Water

	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPHg	TPHd
	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit:	0.50	0.50	0.50	0.50	20	100
SAMPLE Laboratory Identification						
W-29-MW1 W1008099	77	280	50	250	2500	NR
W-28-MW2 W1008100	24	130	37	170	1300	NR
W-27-MW3 W1008101	54	380	23	400	3200	NR
W-33-MW4 W1008102	5.2	5.4	5.4	9.9	120	NR
W-28-MW5 W1008103	9.7	12	7.6	17	210	NR

ppb = parts per billion = µg/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.

Laura Kuck
Laboratory Representative

August 14, 1990
Date Reported

APPLIED ANALYTICAL LABORATORY IS CERTIFIED BY THE STATE OF CALIFORNIA DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY (Certification No. 153)

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. Keith McVicker
Applied GeoSystems
42501 Albrae Street
Fremont, CA 94538
Project: AGS 19025-3

Date Sampled: 08-09-90
Date Received: 08-10-90
BTEX Analyzed: 08-10-90
TPHg Analyzed: 08-10-90
TPHd Analyzed: NR
Matrix: Water

	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPHg	TPHd
	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit:	0.50	0.50	0.50	0.50	20	100
SAMPLE Laboratory Identification						
W-29-MW1 W1008099	77	280	50	250	2500	NR
W-28-MW2 W1008100	24	130	37	170	1300	NR
W-27-MW3 W1008101	54	380	23	400	3200	NR
W-33-MW4 W1008102	5.2	5.4	5.4	9.9	120	NR
W-28-MW5 W1008103	9.7	12	7.6	17	210	NR

ppb = parts per billion = µg/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

August 14, 1990
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. Keith McVicker	Date Sampled:	08-09-90
	Applied GeoSystems	Date Received:	08-10-90
	42501 Albrae Street	Date Extracted:	08-16-90
	Fremont, CA 94639	Date Analyzed:	08-16-90
Project:	AGS 19025-3	Matrix:	WATER

	Lead
	ppm
Detection Limit:	0.05

SAMPLE Laboratory Identification	
W-29-MW1 W1008099	ND
W-28-MW2 W1008100	ND
W-27-MW3 W1008101	ND
W-33-MW4 W1008102	ND

ppm = parts per million = mg/kg = milligrams per kilogram.
ND = Not detected. Compound(s) may be present at concentrations below the detection limit.
NR = Analysis not requested.

ANALYTICAL PROCEDURES

All metals are extracted and analyzed according to EPA method 200.7.

Laura Kuk
Laboratory Representative

08-21-90
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. Keith McVicker	Date Sampled:	08-09-90
	Applied GeoSystems	Date Received:	08-10-90
	42501 Albrae Street	Date Extracted:	08-16-90
	Fremont, CA 94639	Date Analyzed:	08-16-90
Project:	AGS 19025-3	Matrix:	WATER

	Lead
	ppm
Detection Limit:	0.05

SAMPLE Laboratory Identification	
W-28-MW5	ND
W1008103	

ppm = parts per million = mg/kg = milligrams per kilogram.
ND = Not detected. Compound(s) may be present at concentrations below the detection limit.
NR = Analysis not requested.

ANALYTICAL PROCEDURES

All metals are extracted and analyzed according to EPA method 200.7.

Laura Kuck
Laboratory Representative

08-21-90
Date Reported

APPLIED ANALYTICAL

Environmental Laboratories

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

ANALYSIS REPORT

togwater.rpt

Report Prepared for:
Applied GeoSystems
42501 Albrae Street
Fremont, CA 94538
Attention: Keith McVicker

Date Received: 08-10-90
Laboratory #: W1008101
Project #: 19025-3
Sample #: W-27-MW3
Matrix: Water

Parameter	Result (µg/L)	Detection Limit (µg/L)	Date Analyzed
TPH as Oil and Grease	ND	5000	08-17-90

µg/L = micrograms per liter = ppb
ND = Not detected. Compound(s) may be present at concentrations below the detection limit.

PROCEDURES

TPH as Oil and Grease: Total Oil and Grease of mineral or petroleum origin are measured by extraction and gravimetric analysis according to Standard Method 503A/E.

Laura Kuck, Laboratory Manager

August 20, 1990
Date Reported

CHROMALAB, INC.

Analytical Laboratory
Specializing in GC-GC/MS

- Environmental Analysis
- Hazardous Waste (#E694)
- Drinking Water (#955)
- Waste Water
- Consultation

August 21, 1990
APPLIED GEOSYSTEMS, INC.
Project Name: EXXON - MAIN STREET
Project No.: 19025-3
Date Sampled: Aug. 9, 1990
Date of Analysis: Aug. 17, 1990

ChromaLab File No.: 0890059A
Attn: Keith McVicker
Sample No.: W-29-MW1
Date Submitted: Aug. 10, 1990
Detection Limit: 1 µg/L

601/8010	µg/L
Dichlorodifluoromethane	N.D.
Chloromethane	N.D.
Vinyl Chloride	N.D.
Bromomethane	N.D.
Chlorethane	N.D.
Trichlorofluoromethane	N.D.
1,1-Dichloroethene	N.D.
Methylene Chloride	N.D.
t-1,2-Dichloroethene	N.D.
c-1,2-Dichloroethene	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.
1,2-Dichloropropane	N.D.
Bromodichloromethane	N.D.
2-Chloroethylvinyl ether	N.D.
t-1,3-Dichloropropene	N.D.
Cis-1,3-Dichloropropene	N.D.
1,1,2-Trichloroethane	N.D.
1,1,2-Trichlorotrifluorethane	N.D.
Tetrachloroethene	N.D.
Dibromochloromethane	N.D.
Chlorobenzene	N.D.
Bromoform	N.D.
1,1,2,2-Tetrachloroethane	N.D.
1,3-Dichlorobenzene	N.D.
1,4-Dichlorobenzene	N.D.
1,2-Dichlorobenzene	N.D.

QA/QC:
*Sample blank concentration is none detected.
*Spiked recoveries for Chloroform are 90.5% and 100.1%, Trichloroethene are 88.7% and 96.2%, 1,1,2-Trichloroethane are 107.0% and 116.6%, 1,3-Dichlorobenzene are 98.8% and 100.9%

CHROMALAB, INC.

David Duong, Sr. Chemist

Eric Tam, Lab Director

2239 Omega Road, #1 • San Ramon, California 94583
415/831-1788 • Facsimile 415/831-8798
Federal ID #68-0140157

CHROMALAB, INC.

Analytical Laboratory
Specializing in GC-GC/MS

- Environmental Analysis
- Hazardous Waste (#E694)
- Drinking Water (#955)
- Waste Water
- Consultation

August 21, 1990
APPLIED GEOSYSTEMS, INC.
Project Name: EXXON - MAIN STREET
Project No.: 19025-3
Date Sampled: Aug. 9, 1990
Date of Analysis: Aug. 17, 1990

ChromaLab File No.: 0890059C
Attn: Keith McVicker

Sample No.: W-27-MW3
Date Submitted: Aug. 10, 1990
Detection Limit: 1µg/L

601/8010	µg/L
Dchlorodifluoromethane	N.D.
Chloromethane	N.D.
Vinyl Chloride	N.D.
Bbromomethane	N.D.
Chlorethane	N.D.
Trichlorofluoromethane	N.D.
1,1-Dichloroethene	N.D.
Methylene Chloride	N.D.
t-1,2-Dichloroethene	N.D.
c-1,2-Dichloroethene	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.
1,2-Dichloropropane	N.D.
Bromodichloromethane	N.D.
2-Chloroethylvinyl ether	N.D.
t-1,3-Dichloropropene	N.D.
Cis-1,3-Dichloropropene	N.D.
1,1,2-Trichloroethane	N.D.
1,1,2-Trichlorotrifluorethane	N.D.
Tetrachloroethene	N.D.
Dibromochloromethene	N.D.
Chlorobenzene	N.D.
Bromoform	N.D.
1,1,2,2-Tetrachloroethane	N.D.
1,3-Dichlorobenzene	N.D.
1,4-Dichlorobenzene	N.D.
1,2-Dichlorobenzene	N.D.

QA/QC:
*Sample blank concentration is none detected.
*Spiked recoveries for Chloroform are 90.5% and 100.1%, Trichloroethene are 88.7% and 96.2%, 1,1,2-Trichloroethane are 107.0% and 116.6%, 1,3-Dichlorobenzene are 98.8% and 100.9%

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Analytical Laboratory
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- Environmental Analysis
- Hazardous Waste (#E694)
- Drinking Water (#955)
- Waste Water
- Consultation

August 21, 1990
APPLIED GEOSYSTEMS, INC.
Project Name: EXXON - MAIN STREET
Project No.: 19025-3
Date Sampled: Aug. 9, 1990
Date of Analysis: Aug. 17, 1990

ChromaLab File No.: 0890059D
Attn: Keith McVicker

Sample No.: W-33-MW4
Date Submitted: Aug. 10, 1990
Detection Limit: 1µg/L

601/8010	µg/L
Dchlorodifluoromethane	N.D.
Chloromethane	N.D.
Vinyl Chloride	N.D.
Bbromomethane	N.D.
Chlorethane	N.D.
Trichlorofluoromethane	N.D.
1,1-Dichloroethene	N.D.
Methylene Chloride	N.D.
t-1,2-Dichloroethene	N.D.
c-1,2-Dichloroethene	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.
1,2-Dichloropropane	N.D.
Bromodichloromethane	N.D.
2-Chloroethylvinyl ether	N.D.
t-1,3-Dichloropropene	N.D.
Cis-1,3-Dichloropropene	N.D.
1,1,2-Trichloroethane	N.D.
1,1,2-Trichlorotrifluorethane	N.D.
Tetrachloroethene	N.D.
Dibromochloromethene	N.D.
Chlorobenzene	N.D.
Bromoform	N.D.
1,1,2,2-Tetrachloroethane	N.D.
1,3-Dichlorobenzene	N.D.
1,4-Dichlorobenzene	N.D.
1,2-Dichlorobenzene	N.D.

QA/QC:
*Sample blank concentration is none detected.
*Spiked recoveries for Chloroform are 90.5% and 100.1%, Trichloroethene are 88.7% and 96.2%, 1,1,2-Trichloroethane are 107.0% and 116.6%, 1,3-Dichlorobenzene are 98.8% and 100.9%

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- Environmental Analysis
- Hazardous Waste (#E694)
- Drinking Water (#955)
- Waste Water
- Consultation

August 21, 1990
APPLIED GEOSYSTEMS, INC.
Project Name: EXXON - MAIN STREET
Project No.: 19025-3
Date Sampled: Aug. 9, 1990
Date of Analysis: Aug. 17, 1990

ChromaLab File No.: 0890059E
Attn: Keith McVicker

Sample No.: W-28-MW5
Date Submitted: Aug. 10, 1990
Detection Limit: 1µg/L

601/8010	µg/L
Dchlorodifluoromethane	N.D.
Chloromethane	N.D.
Vinyl Chloride	N.D.
Bbromomethane	N.D.
Chlorethane	N.D.
Trichlorofluoromethane	N.D.
1,1-Dichloroethene	N.D.
Methylene Chloride	N.D.
t-1,2-Dichloroethene	N.D.
c-1,2-Dichloroethene	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.
1,2-Dichloropropane	N.D.
Bromodichloromethane	N.D.
2-Chloroethylvinyl ether	N.D.
t-1,3-Dichloropropene	N.D.
Cis-1,3-Dichloropropene	N.D.
1,1,2-Trichloroethane	N.D.
1,1,2-Trichlorotrifluorethane	N.D.
Tetrachloroethene	N.D.
Dibromochloromethene	N.D.
Chlorobenzene	N.D.
Bromoform	N.D.
1,1,2,2-Tetrachloroethane	N.D.
1,3-Dichlorobenzene	N.D.
1,4-Dichlorobenzene	N.D.
1,2-Dichlorobenzene	N.D.

QA/QC:
*Sample blank concentration is none detected.
*Spiked recoveries for Chloroform are 90.5% and 100.1%, Trichloroethene are 88.7% and 96.2%, 1,1,2-Trichloroethane are 107.0% and 116.6%, 1,3-Dichlorobenzene are 98.8% and 100.9%

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EXXON COMPANY, U.S.A.

POST OFFICE BOX 4032 • CONCORD, CA 94524-2032

ENVIRONMENTAL ENGINEERING

G. D. GIBSON
SENIOR ENVIRONMENTAL ENGINEER

December 18, 1990

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 Letter Report on Third Quarter 1990 Groundwater Monitoring for the above referenced Exxon Company, U.S.A. facility in the City of Pleasanton. This report, by Applied GeoSystems of Fremont, California, details the sampling and monitoring activities performed during August, 1990. A work plan for additional work at this site, to include four soil borings and two monitoring wells, will be submitted in the near future.

Please contact me at (415) 246-8768 if you should have any questions or concerns about this report. Thank you.

Sincerely,

Gary D. Gibson

GDG:rh
1910E
Attachment

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

w/o attachment:
Ms. M. D. Baca
Mr. D. J. Bertoch
Mr. P. J. Brininstool
Mr. J. R. Hastings
Mr. R. C. Witham - Applied GeoSystems