FIRST QUARTER 1995 GROUNDWATER MONITORING REPORT

HOUSING AUTHORITY OF THE CITY OF ALAMEDA FACILITY
1916 Webster Street
Alameda, California

Prepared for:

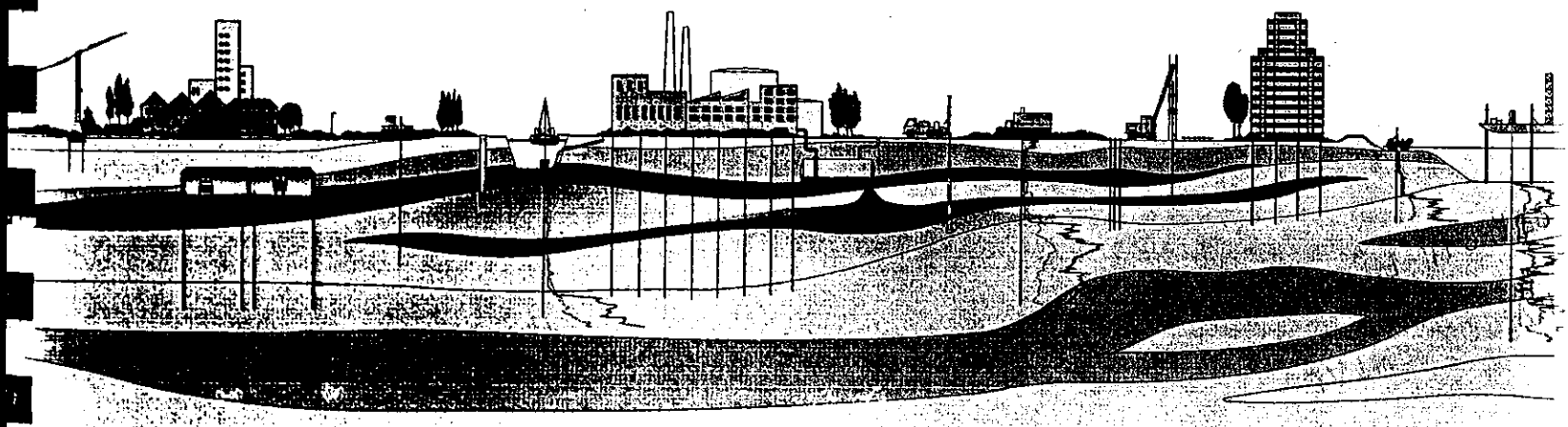
HOUSING AUTHORITY OF THE CITY OF ALAMEDA
701 Atlantic Avenue
Alameda, California

Prepared by:

FUGRO WEST, INC.
44 Montgomery, Suite 1010
San Francisco, California 94104

MAY 1995
Fugro Project No. 9437-7623

Elevated levels of TPH-G & benzene in MW-4 and 5 due to historic levels - Watch MW-1 to see if [illegible] Can add ORC to MW-4 and 5



FUGRO WEST, INC.

44 Montgomery Street, Suite 1010
San Francisco, California 94104
Tel: (415) 296-1041
FAX: (415) 296-0944

May 25, 1995
Project No. 9437-7623

Ms. Sasha George
Project Administrator
Housing Authority of the City of Alameda
701 Atlantic Avenue
Alameda, CA 94501

First Quarter 1995 Ground Water Monitoring Report
Housing Authority of the City of Alameda
1916 Webster Street
Alameda, California

Dear Ms. George:

This report represents the results of quarterly ground water monitoring and sampling conducted by Fugro West, Inc., (Fugro) on March 29, 1995, at the Housing Authority of the City of Alameda (HACA) facility located at 1916 Webster Street in Alameda, California (site). Figure 1 is a site location map.

BACKGROUND

The subject property consists of a warehouse building and adjacent parking lot located at the southeast corner of Webster Street and Atlantic Avenue in a commercial area of Alameda, California.

Tank Removal and Initial Investigation/Remediation

According to reports provided by HACA, a 280-gallon underground storage tank (UST) was removed from the site during July and August 1986. An environmental investigation was conducted to determine the extent of hydrocarbon-impacted soils. A series of soil borings were drilled at the site and soil samples were collected for laboratory analysis. Ground water monitoring wells MW-1 and MW-2 were installed in two of the borings. Hydrocarbons were identified in all soil and ground water samples analyzed. Additional soil excavation conducted during September 1986 failed to remove all of the impacted soil. Subsequent investigations included drilling additional boreholes and installing one additional ground water monitoring well (MW-3).

Additional Well Installation

On September 12, 1994, Fugro installed three additional ground water monitoring wells (MW-4, MW-5, and MW-6). Ground water monitoring/extraction well MW-4 was installed within ten feet downgradient of the former UST. Monitoring well MW-5 was installed

approximately 27 feet northeast of MW-4. Monitoring well MW-6 was installed south of the warehouse building (upgradient of the former UST).

Previous Ground Water Monitoring

Ground water monitoring and sampling has been conducted at the site since October 1992. Monitoring events prior to July 1994 were performed by consultants other than Fugro. Fugro conducted ground water monitoring and sampling of monitoring wells MW-1 through MW-3 on July 16, 1994. Following the installation of monitoring wells MW-4 through MW-6, Fugro conducted ground water monitoring and sampling on all six site wells on October 10, 1994. The results of these two monitoring events were presented in Fugro's report titled *"Revised Corrective Action Plan"*, dated November 9, 1994.

CURRENT GROUND WATER MONITORING

All field work documented in this report was conducted according to the Fugro standard operation procedures (SOP) included in Appendix A. Monitoring well MW-2 was inaccessible at the time of this event due to being covered by construction debris.

Ground Water Elevations

Between October 10, 1994, (the date of the previous monitoring event) and March 29, 1995, ground water elevations in wells MW-1 and MW-3 through MW-6 increased an average of 1.67 feet. No free product was detected in any of the wells. Based on field data, the calculated ground water gradient on March 29, 1995, was directed to the north at a magnitude of approximately 0.014 foot per foot. Figure 2 is a potentiometric surface map of the shallow water-bearing zone beneath the site on March 29, 1995. Current and previous ground water elevation data are summarized in Table 1.

Ground Water Sampling and Analysis

On March 19, 1995, Fugro personnel collected ground water samples from monitoring wells MW-1 and MW-3 through MW-6. The samples were submitted under chain-of-custody to the state-certified analytical laboratory and analyzed for concentrations of total petroleum hydrocarbons as gasoline (TPH-g) by EPA Method 8015M, and benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 602.

Results of laboratory analysis for TPH-g and BTEX are reported on Table 2. Benzene and TPH-g concentrations are shown on Figure 3. The laboratory analytical reports and chain-of-custody form are included in Appendix B.

REMARKS

The interpretations contained within this report represent our professional opinions. These opinions are based on available information, and were developed in accordance with currently accepted geologic, hydrogeologic, and engineering practices.

This report has been prepared solely for the use of the Housing Authority of the City of Alameda. Any reliance on this report by other parties shall be at such parties' own risk. This report was prepared under the review and supervision of the professional geologist, registered with the State of California, whose signature appears below.

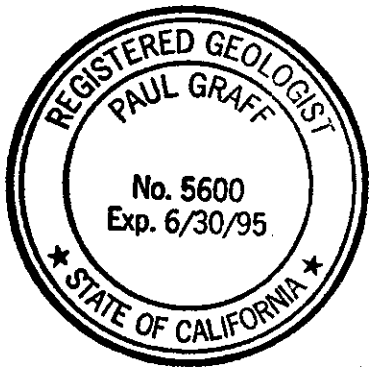
We appreciate the opportunity to provide the Housing Authority of the City of Alameda with environmental consulting services, and trust this report meets your needs. If you have any questions about this or any other matter, please call us at (916) 782-2110.

Sincerely,

FUGRO WEST, INC.

William E. Bassett, Jr.
Environmental Scientist

Paul Graff
Senior Geologist
CRG No. 5600

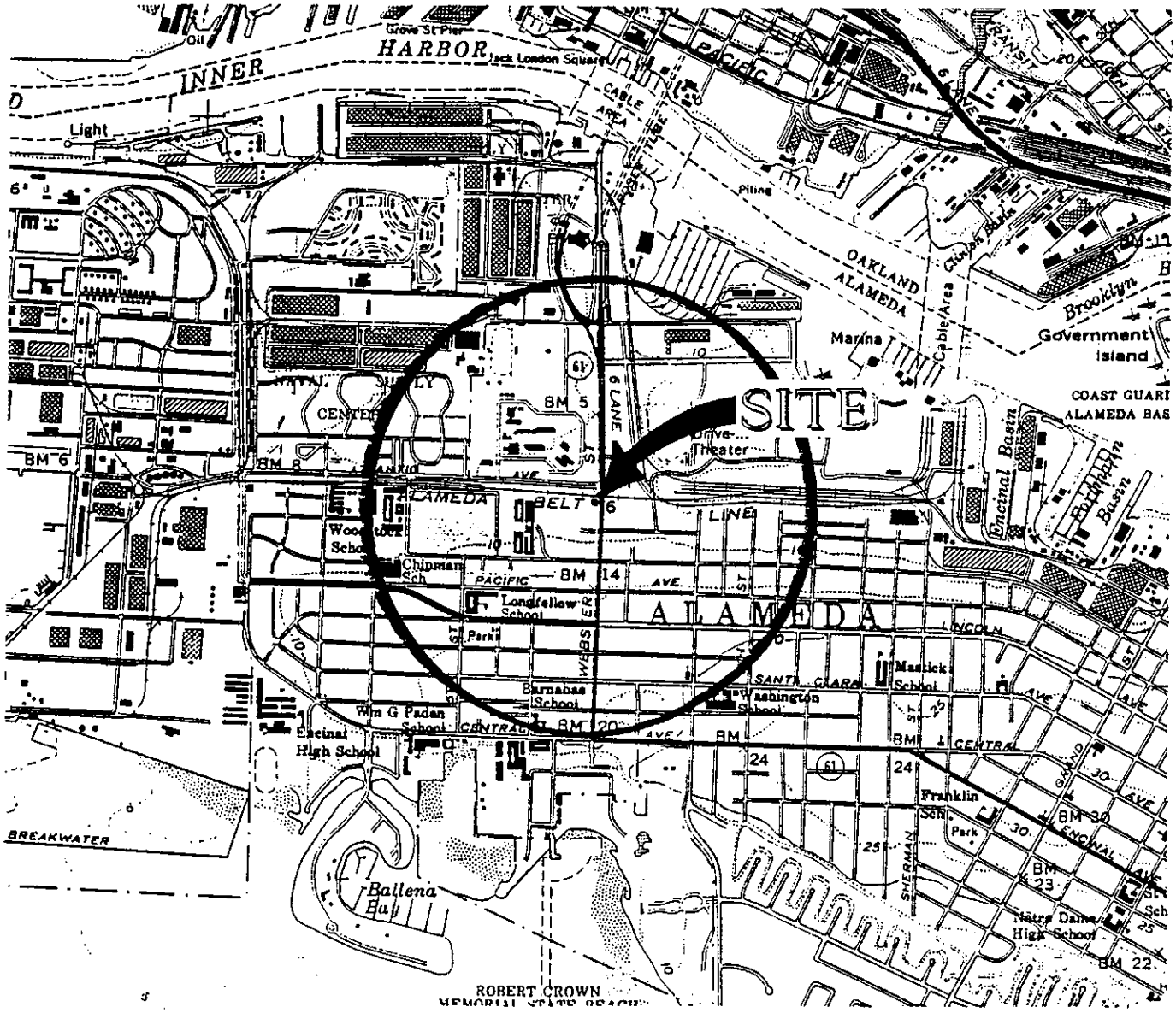


5/25/95
Date

Attachments

WEB:PKG:el

FIGURES

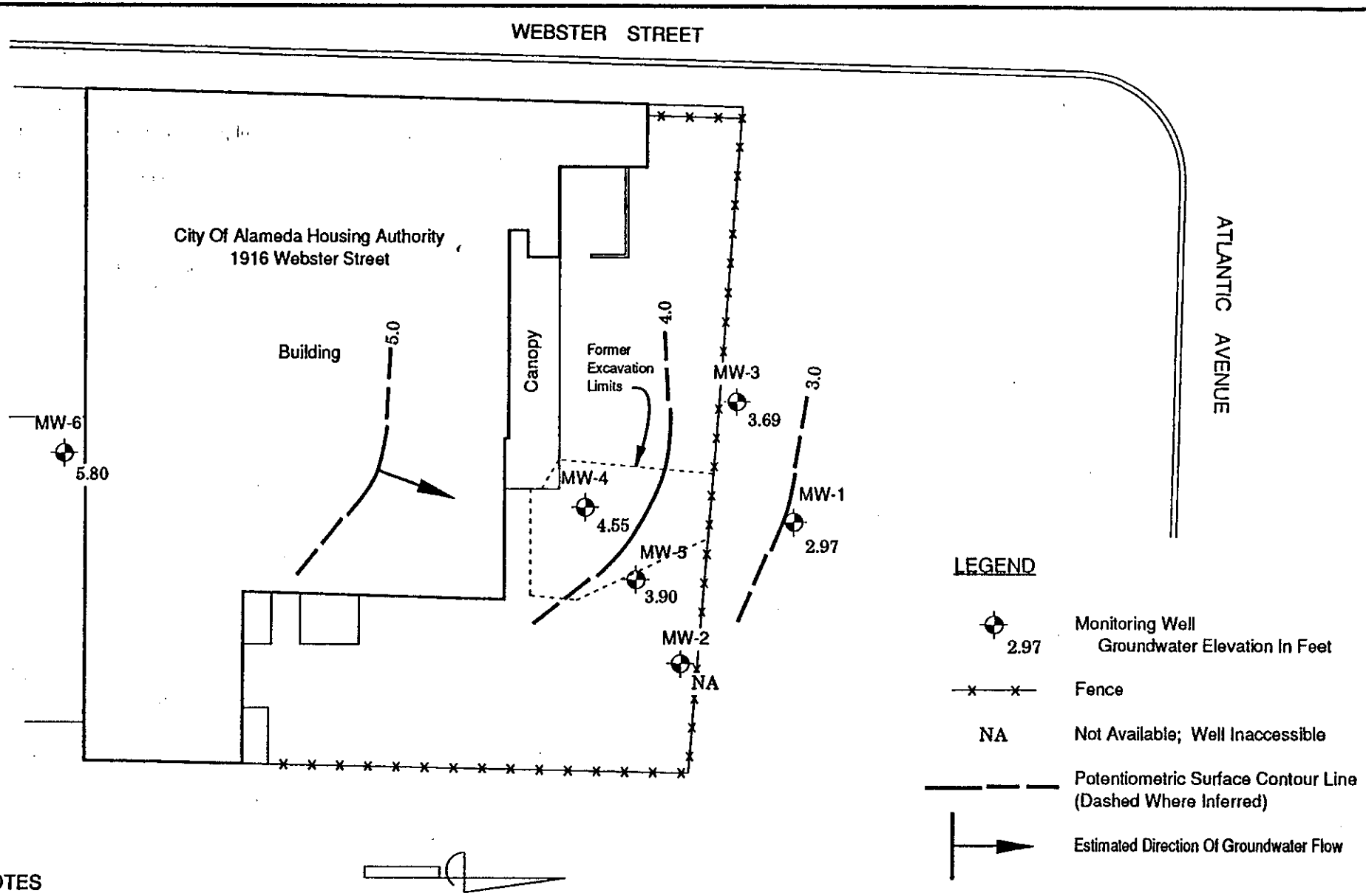


GENERAL NOTES:

BASE MAP FROM USGS
7.5 MINUTE TOPOGRAPHIC
OAKLAND WEST, CA

0 2000 4000
Approximate Scale in Feet

FUGRO	DRAWN BY: O. Haga	SITE LOCATION MAP	FIGURE 1
	DATE: September 19, 1994	Alameda Housing 1916 Webster Street Alameda, CA	PROJECT NUMBER: 94-37-7623
	REVISED BY:		
	DATE:		



NOTES

Site Sketch After Map
By Ron Archer, Civil Engineer, Inc.

All Locations Are Approximate

0 50 100
Approximate Scale In Feet

FUGRO

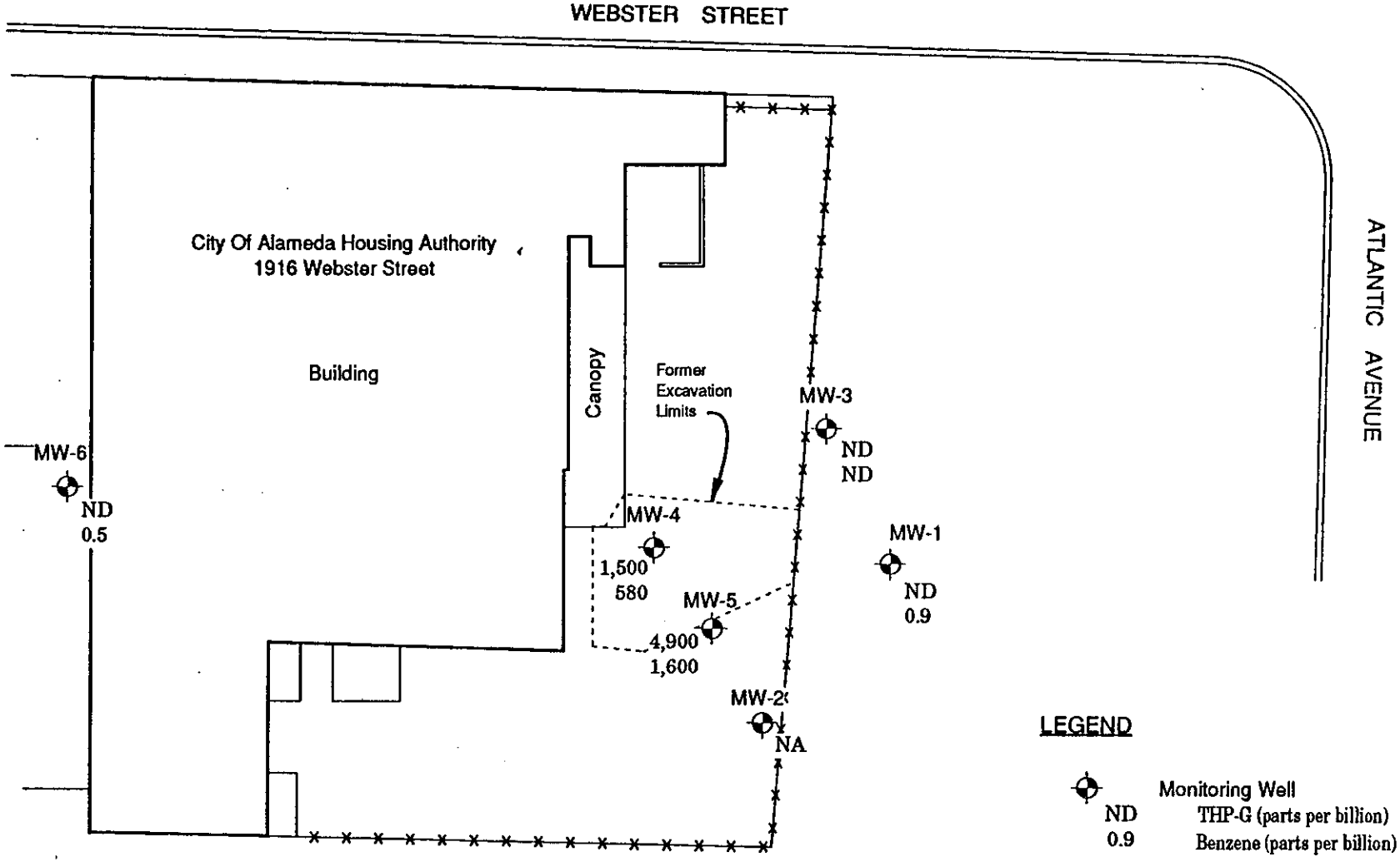
DRAWN BY:	D. Hada
DATE:	September 19, 1994
REVISED BY:	J. Paradis
DATE:	May 4, 1995

POTENTIOMETRIC SURFACE MAP
March 29, 1995

Alameda Housing
1916 Webster Street
Alameda, CA

FIGURE
2

PROJECT NUMBER:
94-37-7623



LEGEND

⊕	Monitoring Well
ND 0.9	THP-G (parts per billion) Benzene (parts per billion)
—x—x—	Fence
ND	Not Detected At Or Above Laboratory Reporting Limits
NA	Not Available; Well Inaccessible

NOTES

Site Sketch After Map
By Ron Archer, Civil Engineer, Inc.

All Locations Are Approximate

0 50 100
Approximate Scale In Feet

FUGRO

DRAWN BY: D. Hada
DATE: September 19, 1994
REVISED BY: J. Paradis
DATE: May 4, 1995

DISTRIBUTION MAP OF TPH-G AND BENZENE IN GROUNDWATER March 29, 1995

Alameda Housing
1916 Webster Street
Alameda, CA

FIGURE
3

PROJECT NUMBER:
94-37-7623

TABLES

TABLE 1

GROUNDWATER ELEVATION DATA

Housing Authority of the City of Alameda Facility
1916 Webster Street
Alameda, California

Well No.	Date	Top of Casing Reference Elevation (feet above MSL)	Depth to Groundwater (feet)	Groundwater Elevation (feet above MSL)
MW-1	10/22/92	9.23(1)	4.94	4.29
	03/19/93		3.72	5.51
	04/19/93		3.91	4.92
	05/30/93		3.94	5.29
	06/29/93		4.36	4.87
	08/04/93		4.55	4.68
	01/26/94		4.14	5.09
	07/16/94		4.65	4.58
	10/10/94	6.51(2)	4.86	1.65
	03/29/95		3.54	2.97
MW-2	10/22/92	10.00(1)	5.22	4378
	03/19/93		3.39	6.61
	04/19/93		3.78	6.22
	05/30/93		3.86	6.14
	06/29/93		4.41	5.59
	08/04/93		4.72	5.28
	01/26/94		3.98	6.02
	07/16/94		4.86	5.14
	10/10/94	7.26(2)	5.02	2.24
	03/29/95		NA	NA
MW-3	10/22/92	9.44(1)	4.66	4.78
	03/19/93		3.18	6.26
	04/19/93		3.44	4.65
	05/30/93		3.45	5399
	06/29/93		3.95	5.49
	08/04/93		4.13	5.31
	01/26/94		3.7	5.74
	07/16/94		4.41	5.03
	10/10/94	6.71(2)	4.52	2.19
	03/29/95		3.02	3.69
MW-4	10/10/94	7.55(2)	4.94	2.61
	03/29/95		3.00	4.55
MW-5	10/10/94	7.31(2)	4.91	2.40
	03/29/95		3.41	3.90
MW-6	10/10/94	8.09(2)	4.37	3.72
	03/29/95		2.29	5.80

NOTES:

MSL = mean sea level

(1) = Top of casing reference elevations surveyed using an assumed elevation of 10.00 feet above MSL for MW-2.

(2) = Top of casing reference elevations were resurveyed on September 12, 1994 using a cut square benchmark in the top of the concrete curb at a storm inlet on the south side of Atlantic Avenue approximately 75 feet east of the intersection of Atlantic Avenue and Constitution Way. Benchmark elevation 7.50 feet above MSL.

NA = Not available; well inaccessible due to construction debris.

TABLE 2

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

Housing Authority of the City of Alameda Facility
1916 Webster Street
Alameda, California

Sample I.D.	Date	TPH-G (μ/L)	Benzene (μ/L)	Toluene (μ/L)	Ethylbenzene (μ/L)	Xylenes (μ/L)	Organic Lead (μ/L)
MW-1	07/91	ND (50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (1.5)	NA
	11/91	ND (50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (1.5)	NA
	02/92	ND (50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (1.5)	NA
	07/92	ND (50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (1.5)	NA
	03/93	ND (50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (1.5)	NA
	04/93	NS	NS	NS	NS	NS	NA
	06/93	ND (50)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.50)	NA
	01/94	ND (50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (50)
	07/16/94	ND (50)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (20)
	10/10/94	ND (50)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	NA
	3/29/95	ND (50)	0.9	1.3	ND (0.5)	ND (0.5)	NA
MW-2	07/91	ND (50)	3.7	ND (0.50)	0.50	5.1	NA
	11/91	ND (50)	1.1	ND (0.50)	ND (0.50)	4.5	NA
	02/92	ND (50)	ND (0.50)	ND (0.50)	ND (0.50)	1.6	NA
	07/92	ND (50)	ND (0.50)	0.59	ND (0.50)	ND (1.5)	NA
	03/93	ND (250)	ND (52)	ND (50)	ND (59)	ND (150)	NA
	04/93	ND (50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (1.5)	NA
	06/93	ND (50)	ND (0.30)	ND (0.30)	ND (0.30)	.95	NA
	01/94	ND (50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (50)
	07/16/94	ND (50)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (20)
	10/10/94	ND (50)	0.5	ND (0.5)	ND (0.5)	1.2	NA
	3/29/95	NS	NS	NS	NS	NS	NA
MW-3	07/91	ND (50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (1.5)	NA
	11/91	ND (50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (1.5)	NA
	02/92	ND (50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (1.5)	NA
	07/92	ND (50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (1.5)	NA
	03/93	ND (250)	ND (52)	ND (50)	ND (59)	ND (152)	NA
	04/93	ND (50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (1.5)	NA
	06/93	ND (50)	ND (0.30)	ND (0.30)	ND (0.30)	ND (0.50)	NA
	01/94	ND (50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (50)
	07/16/94	ND (50)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (20)
	10/10/94	ND (50)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	NA
	3/29/95	ND (50)	ND (0.5)	0.9	ND (0.5)	ND (0.5)	NA
MW-4	10/10/94	2,400	900	44	12	80	NA
	3/29/95	1,500	580	4.9	4.3	7.0	NA
MW-5	10/10/94	2,000	840	4.8	0.6	110	NA
	3/29/95	4,900	1,600	61	20	76	NA
MW-6	10/10/94	ND (50)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	NA
	3/29/95	ND (50)	0.5	0.9	ND (0.5)	ND (0.5)	NA

NOTES:
μg/L = Micrograms per Liter (ppb)
NA = Not analyzed
NS = No sample collected
Data prior to 1/94 reported by Versar, Inc.

ATTACHMENT 1

STANDARD OPERATING PROCEDURES

SAMPLE IDENTIFICATION AND CHAIN-OF-CUSTODY PROCEDURES
SOP-4

Sample identification and chain-of-custody procedures ensure sample integrity, and document sample possession from the time of collection to its ultimate disposal. Each sample container submitted for analysis is labeled to identify the job number, date, time of sample collection, a sample number unique to the sample, any name(s) of on-site personnel and any other pertinent field observations also recorded on the field excavation or boring log.

Chain-of-custody forms are used to record possession of the sample from time of collection to its arrival at the laboratory. During shipment, the person with custody of the samples will relinquish them to the next person by signing the chain-of-custody form(s) and noting the date and time. The sample-control officer at the laboratory will verify sample integrity, correct preservation, confirm collection in the proper container(s), and ensure adequate volume for analysis.

If these conditions are met, the samples will be assigned unique laboratory log numbers for identification throughout analysis and reporting. The log numbers will be recorded on the chain-of-custody forms and in the legally-required log book maintained in the laboratory. The sample description, date received, client's name, and any other relevant information will also be recorded.

LABORATORY ANALYTICAL QUALITY ASSURANCE AND CONTROL
SOP-5

In addition to routine instrument calibration, replicates, spikes, blanks, spiked blanks, and certified reference materials are routinely analyzed at method-specific frequencies to monitor precision and bias. Additional components of the laboratory Quality Assurance/Quality Control program include:

1. Participation in state and federal laboratory accreditation/certification programs;
2. Participation in both U.S. EPA Performance Evaluation studies (WS and WP studies) and inter-laboratory performance evaluation programs;
3. Standard operating procedures describing routine and periodic instrument maintenance;
4. "Out-of-Control"/Corrective Action documentation procedures; and,
5. Multi-level review of raw data and client reports.

GROUNDWATER PURGING AND SAMPLING
SOP-7

Prior to water sampling, each well is purged by evacuating a minimum of three wetted well-casing volumes of groundwater. When required, purging will continue until either the discharge water temperature, conductivity, or pH stabilize to within 10% of previously measured values; and a maximum of ten wetted casing volumes of groundwater have been recovered, or the well is bailed dry. When practical, the groundwater sample should be collected when the water level in the well recovers to at least 80 percent of its static level. Field measurements, observations and procedures are noted.

The sampling equipment consists of a clean bailer, or stainless steel bladder pump with a "Teflon" bladder. If the sampling system is dedicated to the well, then the bailer is usually "Teflon," but the bladder pump may be PVC with a polypropylene bladder. Sample container type, preservation, and volume depends on the intended analyses.

The groundwater sample is decanted into each VOA vial in such a manner that there is no meniscus at the top of the vial. A cap is quickly secured to the top of the vial. The vial is then inverted and gently tapped to see if air bubbles are present. If none are present, the vial is labeled and refrigerated for delivery, under strict chain-of-custody, to the analytical laboratory. Label information should include a unique sample identification number, job identification number, date, time, and the sampler's initials.

For quality control purposes, a duplicate water sample may be collected from a well. When required, a trip blank is prepared at the laboratory and placed in the transport cooler. It is labeled similar to the well samples, remains in the cooler during transport, and is analyzed by the laboratory along with the groundwater samples. In addition, a field blank may be prepared in the field when sampling equipment is not dedicated. The field blank is prepared after a pump or bailer has been either steam cleaned or properly washed, prior to use in the next well, and is analyzed along with the other samples. The field blank analysis demonstrates the effectiveness of in-field cleaning procedures to prevent cross-contamination.

To minimize the potential for cross-contamination between wells, all well development and water sampling equipment not dedicated to a well is either steam cleaned or properly washed between use. As a second precautionary measure, wells are sampled in order of lowest to highest concentrations as established by available previous analytical data.

In the event the water samples cannot be submitted to the analytical laboratory on the same day they are collected (e.g., due to weekends or holidays), the samples are temporarily stored until the first opportunity for submittal either on ice in a cooler, such as when in the field, or in a refrigerator.

MEASURING LIQUID LEVELS USING A WATER LEVEL INDICATOR OR INTERFACE PROBE
SOP-12

Field equipment used for liquid-level gauging typically includes the measuring probe (water level or interface) and a clean product bailer(s). The field kit also includes cleaning supplies (buckets, TSP, spray bottles, and deionized water) to be used in cleaning the equipment between wells.

Prior to measurement, the probe tip is lowered into the well until it touches bottom. Using the previously established top-of-casing or top-of-box (i.e., wellhead vault) point, the probe cord (or halyard) is marked and a measuring tape (graduated in hundredths of a foot) is used to determine the distance between the probe end and the marking on the cord. This measurement is then recorded on the liquid-level data sheet as the "Measured Total Depth" of the well.

When necessary in using the interface probe to measure liquid levels, the probe is first electrically grounded to either the metal stove pipe or another metal object nearby. When no ground is available, reproducible measurements can be obtained by clipping the ground lead to the handle of the interface probe case.

The probe tip is then lowered into the well and submerged in the groundwater. An oscillating (beeping) tone indicates the probe is in water. The probe is slowly raised until either the oscillating tone ceases or becomes a steady tone. In either case, this is the depth-to-water (DTW) indicator and the DTW measurement is made accordingly. The steady tone indicates floating hydrocarbons. In this case, the probe is slowly raised until the steady tone ceases. This is the depth-to-product (DTP) indicator and the measurement of DTP is recorded. A corrected depth to groundwater to account for floating hydrocarbons can be calculated by using the following formula:

CDTW = DTW - (SP.G x LHT).
CDTW = Corrected depth to groundwater.
DTW = Measured depth to groundwater.
SP.G = Specific gravity: unweathered gasoline = 0.75; diesel = 0.80
LHT = Measured liquid hydrocarbon thickness.

The corresponding groundwater elevation is the difference between a previously determined well reference elevation and either the depth to groundwater or the corrected depth to groundwater.

The process of lowering and raising the probe must be repeated several times to ensure accurate measurements. The DTW and DTP measurements are recorded on the liquid-level data sheet. When floating product is indicated by the probe's response, a product bailer is lowered partially through the product-water interface to confirm the product on the water surface, and as further indication of product thickness, particularly in cases where the product layer is quite thin. Either this measurement or the difference between DTW and DTP is recorded on the data sheet as "product thickness."

In order to avoid cross-contamination of wells during the liquid-level measurement process, wells are measured in the order of "clean" to "dirty" (where such information is available). In addition, all measurement equipment is cleaned with TSP or similar solution and thoroughly rinsed with deionized water before use, between measurements in respective wells, and at the completion of the day's activities.

Form: Vta.(7/93)

CHAIN OF CUSTODY RECORD

495023

FUGRO

9437-7623

LABORATORY: EXCEL CHEM	LABORATORY LOCATION: ROSEVILLE	DATE: 3/29/95	FM JOB No. [redacted]
CLIENT: ALAMEDA HOUSING AUTHORITY	PROJECT: 1916 WEBSTER		
PROJECT MANAGER: BILL BASSETT	SAMPLER (Signature):		

Laboratory No.	Sample No.	Location and Description	Date	Time	Vessel Type	No. of Vessels	Sample Matrix	Preservation Method	Tests Required
395325	MW-1		3/29	9:50	7	2	W	HCL	TPH AS GAS BTEX
395326	MW-2								
30395327	MW-4								
395328	MW-5								
395329	MW-6		3/29	9:50	7	2	W	HCL	TPH AS GAS BTEX

VESSEL TYPE		SAMPLE MATRIX		TEST REQUIRED	
1	Brass or stainless steel sleeve, 2½-inch diameter by 1, 3, 4, or 6 inches long	A	Air	A	
2	Brass or stainless steel sleeve, 1¾-inch diameter by 4 inches long	S	Solid	B	
3	Stainless steel sleeve, 1 inch diameter by 6 inches long	W	Water	C	
4	Amber glass bottle with Teflon lined screw cap, 1,000 milliliters	O	Other	D	
5	Amber glass bottle with Teflon lined screw cap, 250 milliliters	PRESERVATION METHOD		E	
6	Clear glass jar with Teflon lined screw cap, 4 or 8 ounces	A	Artificial ice	F	
7	VOA vial, 40 milliliters	B	$NaHSO_4$	G	
8	Mason jar, 1 pint or 1 quart	C	HNO_3	H	
9	Plastic bottle, 1 liter	D	None	I	
10	Other	E	Other	J	

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature) Express - 7047	DATE: 3/30/95	TIME:
RELINQUISHED BY: (Signature) Diane Sloan Express-7004	RECEIVED BY: (Signature)	DATE:	TIME:
RELINQUISHED BY: (Signature)	RECEIVED FOR LABORATORY BY: (Signature)	DATE: 3/31/95	TIME: AM

METHOD OF SHIPMENT:

TURNAROUND TIME:

SAMPLE DISPOSAL: ☐ Return to FM ☐ Proper disposal by Lab after 60 days

SPECIAL INSTRUCTIONS:

HANDLING INFORMATION: STANDARD TURN AROUND

White - FM Copy Yellow - Laboratory Copy Pink - Return to FM with Results

5855 Olivas Park Drive • Ventura, California 93003-7672 • (805) 650-7000, FAX (805) 650-7010

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 9
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Mr. Bill Bassett
FUGRO-WEST, INC.
44 Montgomery St., Suite 1010
San Francisco, CA 94104

Project #: 1916 Webster

Date Sampled : 03-29-95
Date Received: 03-31-95
TPHg Analyzed: 04-12-95
BTEX Analyzed: 04-12-95
Matrix : Water

	Benzene PPB	Toluene PPB	Ethyl-benzene PPB	Total Xylenes PPB	TPHg PPB
Reporting Limit:	0.5	0.5	0.5	0.5	50
SAMPLE Laboratory Identification:					
MW-1 W0395325	0.9	1.3	ND	ND	ND
MW-3 W0395326	ND	0.9	ND	ND	ND
MW-4 W0395327	580	4.9	4.3	7.0	1500

ppb = Parts per billion = ug/L = micrograms per liter
ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.

ANALYTICAL PROCEDURES

BTEX– Benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are analyzed by using EPA Method 602 which utilizes a gas chromatograph (GC) equipped with a photoionization detector (PID).
TPHg–Total petroleum hydrocarbons as gasoline (low-to-medium boiling points) are analyzed by using modified EPA Method 8015, which utilizes a GC equipped with an FID.

Laboratory Representative

04-14-95
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 9
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Mr. Bill Bassett
FUGRO-WEST, INC.
44 Montgomery St., Suite 1010
San Francisco, CA 94104

Project #: 1916 Webster

Date Sampled : 03-29-95
Date Received: 03-31-95
TPHg Analyzed: 04-12-95
BTEX Analyzed: 04-12-95
Matrix : Water

	Benzene PPB	Toluene PPB	Ethyl-benzene PPB	Total Xylenes PPB	TPHg PPB
Reporting Limit:	0.5	0.5	0.5	0.5	50
SAMPLE Laboratory Identification:					
MW-6 W0395329	0.5	0.9	ND	ND	ND

ppb = Parts per billion = ug/L = micrograms per liter
ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.

ANALYTICAL PROCEDURES

BTEX– Benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are analyzed by using EPA Method 602 which utilizes a gas chromatograph (GC) equipped with a photoionization detector (PID).
TPHg–Total petroleum hydrocarbons as gasoline (low-to-medium boiling points) are analyzed by using modified EPA Method 8015, which utilizes a GC equipped with an FID.

Laboratory Representative

04-14-95
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 9
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Mr. Bill Bassett
FUGRO-WEST, INC.
44 Montgomery St., Suite 1010
San Francisco, CA 94104

Project #: 1916 Webster

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Date Received: 03-31-95
TPHg Analyzed: 04-12-95
BTEX Analyzed: 04-12-95
Matrix : Water

	Benzene PPB	Toluene PPB	Ethyl-benzene PPB	Total Xylenes PPB	TPHg PPB
Reporting Limit:	10	10	10	10	1000
SAMPLE Laboratory Identification:					
MW-5 W0395328	1600	61	20	76	4900

ppb = Parts per billion = ug/L = micrograms per liter
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ANALYTICAL PROCEDURES

BTEX-- Benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are analyzed by using EPA Method 602 which utilizes a gas chromatograph (GC) equipped with a photoionization detector (PID).
TPHg--Total petroleum hydrocarbons as gasoline (low-to-medium boiling points) are analyzed by using modified EPA Method 8015, which utilizes a GC equipped with an FID.

Laboratory Representative

04-14-95
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